STANDARDISATION LANDSCAPE

D8.11: Report on the standardisation landscape.

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Abstract

The main objective of this task is to contribute to the generation of new standards that can facilitate the acceptance and utilisation by the market of the developed solutions and products.

An initial analysis of the standardisation landscape will be performed, about existing standards that can be related as well as the related standardisation committees and organisations involved.

The availability of this information at the very early stage of the projects will allow using already existing material and the alignment with current and underdevelopment standardisation works facilitating the compatibility of the outcomes with the current market practises.

This information will be particularly useful to task T1.3 technical and legal requirements.

Keywords

Standard, technical committee.

Copyright statement

Executive summary

The Spanish Association for Standarisation (UNE), as a European standardisation body, is a partner in the USER-CHI project to provide support regarding the standardisation tasks included in the project. In order to fulfil this commitment, this deliverable D8.11 "Report on the standardisation landscape" has been prepared to guide the partners about the published standards and standards under development that can be applicable to USER-CHI.

This deliverable contains the fields of interest related to USER-CHI project, given by its consortium, and, from this starting point, an identification and analysis of the standardisation technical committees (TCs) related with the project as well as of the published standards and standards under development that can be useful and relevant for the project activities. Furthermore, it can help in the future to identify standardisation gaps that can be covered by the results of the project.

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1.Introduction

1.1 Project presentation overview

The main objective of USER-CHI is to unlock the massive potential of electromobility in Europe developing integrated smart solutions, novel business models and new regulatory framework conditions.

This will be achieved by integrating different innovative charging technologies with a holistic perspective, putting the user at the centre and empowering it, exploiting the synergies between electromobility and the process of greening and smartification of the grid which is taking place to achieve the energy transition in Europe, integrating the technological tools, business models and regulatory measures which will transform the elements cited above into an actual, working ecosystem which improves the user experience of EV drivers beyond the current levels of ICE vehicles drivers, whilst at the same time makes financially attractive for the relevant private and public actors the large scale deployment of Europe's required user-centric charging infrastructure.

USER-CHI will be demonstrated and validated in 5 urban areas all along the European territory: Barcelona metropolitan area (Spain), Rome (Italy), Berlin (Germany), Budapest (Hungary), and Turku (Finland). These 5 sites act as connecting nodes of the key Mediterranean and Scandinavian-Mediterranean TEN-T corridors, while their different sizes, complementary contexts and e-mobility maturity level offer a holistic view of e-mobility in Europe, facilitating the scalability and replicability of the demonstrated solutions.

Furthermore, in order to validate a large scale replication and transferability of USER-CHI results, a replication city has been included in each of the TEN-T corridors involved: Murcia (Spain) in Mediterranean corridor and Florence (Italy) in Scandinavian-Mediterranean corridor.

1.2 Short introduction about standardisation

Standards are voluntary technical documents that set out requirements for a specific item, material, component, system or service, or they describe in detail a particular method, procedure or best practice. Standards are developed and defined through a process of sharing knowledge and building consensus among technical experts nominated by interested parties and other stakeholders - including businesses, consumers and environmental groups, among others. These experts are organised in Technical Committees (TCs), which are subdivided in subcommittees (SCs) or working groups (WGs). These TCs are included in the structure of the standardisation

organizations (National, European and International, with the respective mirror committees) and work following their internal regulations.

The standardisation bodies operate at National (UNE, AFNOR, BSI, DIN, etc.), Regional (CEN, CENELEC, ETSI) or International (ISO, IEC, ITU) level. Sometimes there are different standardisation bodies at the same level, but covering different fields. This is the case of ISO (general), IEC (electrical) and ITU (telecommunications) at International level, or CEN, CENELEC and ETSI at European level in the same way.

There are also different kinds of standarisation documents. The most widespread is the standard, which has a different code depending on the organization under which it was developed; e.g. EN for European Standards, ISO or IEC for International standards. Other types of documents are technical specifications (TS), technical reports (TR) and workshop agreements (CWA). Further amendments to the standards are identified by adding A1, A2, etc. at the end of the standard code.

At European level, all the members of CEN and CENELEC shall adopt EN standards as national standards and have to withdraw any existing national standards which could conflict with them. A summary of the characteristics of the different standarisation documents could be found in the following Table 1-1.

TABLE 1-1 CHARACTERISTICS OF DIFFERENT STANDARISATION DOCUMENTS

Type	International code	European code	National code	Main characteristics
Standard	ISO IEC	EN	UNE, NF, BS, DIN, etc. When adopting: UNE-EN, NF-EN, UNE ISO, NF-ISO, etc.	• Elaboration: 3 years • 2 steps of member approval • European: compulsory national adoption • Revision: every 5 years
Technical Specification	ISO/TS IEC/TS	CEN/TS CLC/TS	When adopting: UNE-CEN/TS, NF-CEN/TS, UNE-ISO/TS, NF-ISO/TS, etc.	• Elaboration: 21 months • 1 step of member approval or internal approval in TC • European: optional national adoption • Revision: at 3 years (upgrading to EN or deletion)
Technical Report	ISO/TR IEC/TR	CEN/TR CLC/TR	When adopting: UNE-CEN/TR, NF-	• Elaboration: free timeframe

Type	International code	European code	National code	Main characteristics
			CEN/TR, UNE-ISO/TR, NF-ISO/TR, etc.	• Internal approval in TC • European: optional national adoption • No revision required
Workshop Agreement	IWA	CWA	Variable	• Elaboration: free timeframe (usually few months) • Internal approval in the Workshop • European: optional national adoption • Revision: at 3 years (upgrading to EN or deletion)

European and International standarisation organizations (e.g. CEN and ISO) have signed formal agreements in order to avoid duplication of efforts and promote global relevance of standards, which allow to adopt or develop in parallel each other's standards with the same content and code.

The technical collaboration between ISO and CEN was formalized through the Vienna Agreement (VA).

European standards developed through the Vienna Agreement have EN ISO codification while International Standards developed through the Vienna Agreement remain only with ISO code.

Concerning CENELEC, it has close cooperation with its international counterpart, the International Electrotechnical Commission (IEC) through the Frankfurt Agreement (FA).

As a result, new electrical standards projects are jointly planned between CENELEC and IEC, and where possible most are carried out at international level. This means that CENELEC will first offer a New Work Item (NWI) to its international counterpart. If accepted, CENELEC will cease working on the NWI. If IEC refuses, CENELEC will work on the standards content development, keeping IEC closely informed and giving IEC the opportunity to comment at the public enquiry stage. CENELEC and IEC vote in parallel (both organizations are voting at the same time) during the standarisation process. If the outcome of the parallel voting is positive, CENELEC will ratify the European standard and the IEC will publish the international standard. Close to 80% of CENELEC standards are identical to or based on IEC publications.

National standards could also be proposed as a base for new European or International standards.

The following Picture 1-1 shows the possible tracks of the standards.

PICTURE 1-1 – POSSIBLE TRACKS OF STANDARDS ADOPTION
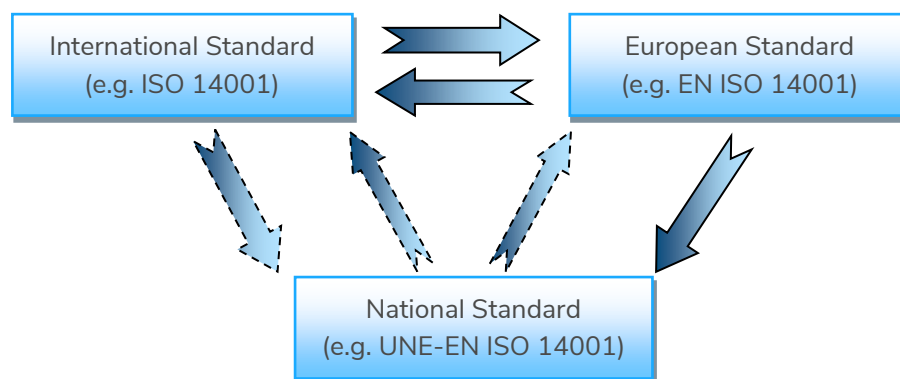
Therefore, the code of any standard is the combination of the above mentioned issues, and could be explained as shown in Picture 1-2:

PICTURE 1-2 – EXAMPLE OF IDENTIFICATION OF ELEMENTS IN THE CODE OF A STANDARD
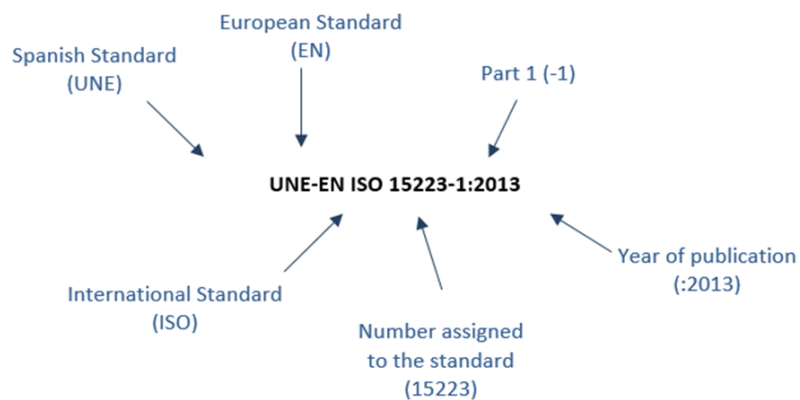
2. Methodology

For the identification of standards and standards under development relevant for USER-CHI project, the following methodology has been followed:

1. A list of key concepts was prepared to act as a starting point for the identification of standarisation areas.

2. For the selection of the key concepts, the aims and goals of the project and the levels in which the project should integrate were taken into account. In addition, the use cases' needs were considered. The list was agreed by UNE and USER-CHI partners.

The final list of key concepts used for the search is shown in Table 2-1.

TABLE 2-1 LIST OF KEY CONCEPTS ACTING AS A STARTING POINT FOR THE IDENTIFICATION OF STANDARISATION AREAS

Key concepts
Electro-Mobility
Smart Grids
Smart Cities
Electrical energy supply
Cybersecurity
Data Protection
Road vehicles
Intelligent transport systems
Data Model
Mobile Telecommunications
Interoperability
Clean Energy for transportation
Availability and information
Civil engineering
Calibration of chargers
E-Roaming

Key concepts
Smart Charging
Dynamic charge management
Vehicle-to-Grid (V2G)
RFID cards
Charging speed
Electric Vehicle Supply Equipment (EVSE)

3. Both standards and standards under development were identified for each standarisation area, together with the technical committee responsible for the respective standards.

   The search covered the European standarisation developed by the European Committee for Standarisation (CEN), European Committee for Standarisation in the Electrical field CENELEC (CLC), European Telecommunications Standards Institute (ETSI) and International standarisation developed by the International Organization for Standarisation (ISO) and IEC (electro technical). The databases and websites used for the search are referred in Chapter 6.

   As a result of the searching process a first draft was prepared by UNE including developed standards and standards under development and technical bodies.

   The draft was filtered in order to refine the information and enable the development of a simplified second draft.

   Information with the standards and standards under development that were circulated to USER-CHI partners is shown in Annex A.

4. As a final stage, USER-CHI partners were asked to identify those references that should really be considered for the project, specifying in what WP they would be used, how the standard would influence/impact the project implementation and risks/opportunities from technical and business perspective.

   They were also asked to indicate if any contribution to the respective standard was expected and whether they considered relevant to contact the technical committee responsible for the standard development.

   The interaction with the identified standarisation technical committee could take place through:

- The participation of one or more USER-CHI partners in the technical body (standarisation is an open activity and all interested parties may participate in a CEN/CENELEC/ISO/IEC technical committee through the designation of National Standarisation Bodies/National Mirror Committee or as organization liaison representative in a CEN/TC).

- The participation through the formal liaison of the USER-CHI project with main CEN/TC(s) to participate directly as liaison organization which intend to make technical contributions to their works.

- The dissemination of the USER-CHI project progress by delivering reports to the relevant TCs secretaries or by attending relevant technical committees meetings.

5. As a result of all the process described above a list of technical committees and standards relevant for USER-CHI has been identified (see Chapter 3).

   They have been classified as:

   - Relevant technical committees for the project.

   - Relevant standards for the project: it should be decided whether the standards will represent a requirement for the WP developments at design/development phases or it would be interesting to keep them in mind as they could be helpful, but they will not represent a requirement.

   Annex B shows the scopes for the standards in Chapter 3.

3. Relevant standards for USER-CHI

3.1 Relevant technical committees

With the feedback received by the partners, other technical committees were added that might be related to the project. The partners also found additional technical committees that were not included in the previous list and they were also added.

The information of the new technical committees detected by the partners is shown in Annex C.

The list of the identified technical committees is shown in Table 3-1.

TABLE 3-1 RELEVANT TECHNICAL BODIES FOR USER-CHI

Technical body	Committee Title	Relating WP	Contribution to standarisation
Electro-Mobility			
CEN/TC 278	Intelligent transport systems	Generic	
ISO/TC 204	Intelligent transport systems	Generic	
TC ITS	Intelligent transport systems	Generic	
Smart Grids			
CEN/CLC/ETSI/SEG-CG	CEN-CENELEC-ETSI Coordination Group on Smart Energy Grids	WP4	
ISO/IEC JTC 1/SC 41	Internet of Things and related technologies	WP3-WP4	
ISO/IEC JTC 1/SC 27	Information security, cybersecurity and privacy protection	WP3	
CLC/TC 205	Home and Building Electronic Systems (HBES)	WP4	
PC 118	Smart grid user interface	WP4	
TC SMARTM2M	Technical Committee (TC) Smart Machine-To-Machine Communications (SMARTM2M)	WP3-WP4	
Smart Cities			

Technical body	Committee Title	Relating WP	Contribution to standarisation
CEN/TC 465	Sustainable and Smart Cities and Communities	Generic	
SyC Smart Energy	Smart Energy	WP4	
CEN/TC 278	Intelligent transport systems	Generic	
ISO/TC 204	Intelligent transport systems	Generic	
TC ITS	Intelligent transport systems	Generic	
TC SMARTM2M	Technical Committee (TC) Smart Machine-To-Machine Communications (SMARTM2M)	WP3-WP4	
Electrical energy supply			
CLC/TC 13	Electrical energy measurement and control	WP3-WP4	
CLC/SR 120	Electrical Energy Storage (EES) Systems	WP4 T4.1	
*TC 64	Electrical installations and protection against electric shock	WP4	* New technical committee (Annex C)
*CLC/TC 64	Electrical installations and protection against electric shock	WP4	* New technical committee (Annex C)
CEN/CLC/ETSI/SEG-CG	CEN-CENELEC-ETSI Coordination Group on Smart Energy Grids	WP4	
CEN/TC 465	Sustainable and Smart Cities and Communities	Generic	
TC 69	Electrical power/energy transfer systems for electrically propelled road vehicles and industrial trucks	WP3-WP4	Functional requirements (e.g. charging modes); communication between the EV and the EV supply equipment; electrical power/energy transfer between EV and supply network (G2V and V2G);

Technical body	Committee Title	Relating WP	Contribution to standarisation
Cybersecurity			
CEN/CLC/JTC 13	Cybersecurity and Data Protection	WP3	
ISO/TC 22/SC 32/WG 11	Cybersecurity	WP3	
ISO/IEC JTC 1/SC 27	Information security, cybersecurity and privacy protection	WP3	
Data Protection			
ISO/TC 22/SC 31	Data communication	WP3 – WP4	
ISO/TC 204	Intelligent transport systems	Generic	
ISO/IEC JTC 1/SC 27	Information security, cybersecurity and privacy protection	WP3	
CEN/CLC/JTC 13	Cybersecurity and Data Protection	WP3	
Road vehicles			
TC 21	Secondary cells and batteries	WP3 – WP4	
*CLC/TC 21X	Secondary cells and batteries	WP3 – WP4	* New technical committee (Annex C)
CEN/TC 278	Intelligent transport systems	Generic	
ISO/TC 204	Intelligent transport systems	Generic	
TC ITS	Intelligent transport systems	Generic	
TC 69	Electrical power/energy transfer systems for electrically propelled road vehicles and industrial trucks	WP3-WP4	Functional requirements (e.g. charging modes); communication between the EV and the EV supply equipment; electrical power/energy transfer between EV and supply network (G2V and V2G);

Technical body	Committee Title	Relating WP	Contribution to standarisation
CLC/TC 69X	Electrical systems for electric road vehicles	WP3-WP4	
Data Model			
TA 6	Storage media, storage data structures, storage systems and equipment	WP3	
Mobile Telecommunications			
CEN/TC 294	Communication systems for meters	WP3	
ISO/IEC JTC 1/SC 6	Telecommunications and information exchange between systems	WP3	
CLC/TC 57	Power systems management and associated information exchange	WP3 – WP4	
TC 57	Power systems management and associated information exchange	WP3-WP4	
Interoperability			
CEN/TC 225	AIDC technologies	WP3	
ISO/IEC JTC 1	Information technology	Generic	
TC 57	Power systems management and associated information exchange	WP3-WP4	
TC-INT	Technical Committee (TC) Core Network and Interoperability Testing (INT)	WP3	
CEN/TC 278	Intelligent transport systems	Generic	
ISO/TC 204	Intelligent transport systems	Generic	
CLC/TC 57	Power systems management and associated information exchange	WP3 – WP4	
Availability and information			
CEN/TC 287	Geographic Information	WP3	
CLC/TC 57	Power systems management and associated information exchange	WP3 – WP4	
TC 57	Power systems management and associated information exchange	WP3-WP4	

Technical body	Committee Title	Relating WP	Contribution to standarisation
TA 6	Storage media, storage data structures, storage systems and equipment	WP3	
Civil engineering			
CLC/TC 205	Home and Building Electronic Systems (HBES)	WP4	
Calibration of chargers			
TC 69	Electrical power/energy transfer systems for electrically propelled road vehicles and industrial trucks	WP3-WP4	Functional requirements (e.g. charging modes); communication between the EV and the EV supply equipment; electrical power/energy transfer between EV and supply network (G2V and V2G);
E-Roaming			
TC 69	Electrical power/energy transfer systems for electrically propelled road vehicles and industrial trucks	WP3-WP4	Functional requirements (e.g. charging modes); communication between the EV and the EV supply equipment; electrical power/energy transfer between EV and supply network (G2V and V2G);
Smart Charging			
TC 69	Electrical power/energy transfer systems for electrically propelled road vehicles and industrial trucks	WP3-WP4	Functional requirements (e.g. charging modes);

Technical body	Committee Title	Relating WP	Contribution to standarisation
			communication between the EV and the EV supply equipment; electrical power/energy transfer between EV and supply network (G2V and V2G);
Dynamic charge management			
TC 69	Electrical power/energy transfer systems for electrically propelled road vehicles and industrial trucks	WP4	Functional requirements (e.g. charging modes); communication between the EV and the EV supply equipment; electrical power/energy transfer between EV and supply network (G2V and V2G);
Vehicle-to-Grid (V2G)			
TC 69	Electrical power/energy transfer systems for electrically propelled road vehicles and industrial trucks	WP4	Functional requirements (e.g. charging modes); communication between the EV and the EV supply equipment; electrical power/energy transfer between EV and supply network (G2V and V2G);
RFID cards			
CEN/TC 225	AIDC technologies	WP3	

Technical body	Committee Title	Relating WP	Contribution to standarisation
Charging speed			
TC 69	Electrical power/energy transfer systems for electrically propelled road vehicles and industrial trucks	WP3-WP4	Functional requirements (e.g. charging modes); communication between the EV and the EV supply equipment; electrical power/energy transfer between EV and supply network (G2V and V2G);
Electric Vehicle Supply Equipment (EVSE)			
TC 69	Electrical power/energy transfer systems for electrically propelled road vehicles and industrial trucks	WP3-WP4	Functional requirements (e.g. charging modes); communication between the EV and the EV supply equipment; electrical power/energy transfer between EV and supply network (G2V and V2G);

3.2 Relevant standards

Thanks to the feedback received from partners, additional standards potentially related to the project were included. Further standards not comprised in the previous list were identified by partners and so added to the revised catalogue.

The complete list of the relevant standards is shown in Table 3-2.

TABLE 3-2 RELEVANT STANDARDS FOR USER-CHI

Standard code	Standard Title	Relating WP
Electro-Mobility		
EN 61851-1:2011	Electric vehicle conductive charging system - Part 1: General requirements	WP3-WP4
EN 61851-22:2002	Electric vehicle conductive charging system - Part 22: AC electric vehicle charging station.	WP3-WP4
EN 61851-23:2014/ AC:2016-06	Conductive charging systems for electric vehicles - Part 23: DC charging stations for electric vehicles	WP3-WP4
EN 60038:2011	CENELEC standard voltages	WP3-WP4
EN 60529:1991/A2:2013/AC:2019-02	Degrees of protection provided by cases (IP code)	WP3-WP4
EN 61439-1:2011	Low-voltage switchgear and control gear assemblies - Part 1: General requirements	WP3-WP4
EN 61439-2:2011	Low-voltage switchgear and control gear assemblies Part 2: Energy switchgear assemblies	WP3-WP4
EN 60664-1:2007	Insulation coordination for electrical equipment in low voltage systems - Part 1: Principles, requirements, and tests	WP3-WP4
EN 61140:2016	Protection against electric shock – Common requirements for installations and equipment	WP3-WP4
EN 62196-1:2014	Plugs, socket-outlets, vehicle connectors and vehicle inlets - Conductive charging of electric vehicles - Part 1: General requirements	WP3-WP4
EN 62196-2:2017	Plugs, socket-outlets, vehicle connectors and vehicle inlets - Conductive charging of electric vehicles - Part 2: Dimensional compatibility and interchangeability requirements for AC pin and contact-tube accessories	WP3-WP4

Standard code	Standard Title	Relating WP
EN 62196-3:2014	Plugs, socket-outlets, vehicle connectors and vehicle inlets - Conductive charging of electric vehicles - Part 3: Dimensional compatibility and interchangeability requirements for DC and AC/DC pin and contact-tube vehicle couplers.	WP3-WP4
EN 50178:1997	Electronic equipment for use in power installations	WP3-WP4
EN 60947-1:2007/A2:2014	Low-voltage switchgear and controlgear - Part 1: General rules	WP3-WP4
EN 60947-3:2009/A2:2015	Low-voltage switchgear and controlgear - Part 3: Switches, disconnectors, switch-disconnectors and fuse-combination units	WP3-WP4
EN 60947-6-1:2005/A1:2014	Low-voltage switchgear and controlgear - Part 6-1: Multiple function equipment - Transfer switching equipment	WP3-WP4
EN 60947-6-2:2003/A1:2007	Low-voltage switchgear and controlgear - Part 6-2: Multiple function equipment - Control and protective switching devices (or equipment) (CPS)	WP3-WP4
EN 60950-1:2006/A2:2013	Information technology equipment - Safety - Part 1: General requirements	WP3-WP4
EN IEC 61000-6-1:2007	Electromagnetic compatibility (EMC) - Part 6-1: Generic standards - Immunity standard for residential, commercial and light-industrial environments	WP3-WP4
EN 61000-6-3:2007/A1:2011/AC:2012	Electromagnetic compatibility (EMC) - Part 6-3: Generic standards - Emission standard for residential, commercial and light-industrial environments	WP3-WP4
EN 61140:2016	Protection against electric shock - Common aspects for installation and equipment	WP3-WP4
HD 60364-4-41:2017/A12:2019	Low-voltage electrical installations - Part 4-41: Protection for safety - Protection against electric shock	WP3-WP4
HD 60364-6:2007	Low-voltage electrical installations - Part 6: Verification	WP3-WP4
Smart Grids		
ISO 17800:2017	Facility smart grid information model	WP3-WP4

Standard code	Standard Title	Relating WP
ISO/IEC 30101:2014	Information technology -- Sensor networks: Sensor network and its interfaces for smart grid system	WP3-WP4
IEC 62746-10-3:2018	Systems interface between customer energy management system and the power management system - Part 10-3: Open automated demand response - Adapting smart grid user interfaces to the IEC common information model	WP3-WP4
EN ISO 15118-1:2019	Road vehicles - Vehicle to grid communication interface - Part 1: General information and use-case definition (ISO 15118-1:2019)	WP3-WP4
EN ISO 15118-2:2016	Road vehicles - Vehicle-to-grid communication Interface - Part 2: Network and application protocol requirements (ISO 15118-2:2014)	WP3-WP4
EN ISO 15118-3:2016	Road vehicles - Vehicle to grid Communication interface - Part 3: Physical and data link layer requirements (ISO 15118-3:2015)	WP3-WP4
EN ISO 15118-4:2019	Road vehicles - Vehicle to grid communication interface - Part 4: Network and application protocol conformance test (ISO 15118-4:2018)	WP3-WP4
EN ISO 15118-5:2019	Road vehicles - Vehicle to grid communication interface - Part 5: Physical layer and data link layer conformance test (ISO 15118-5:2018)	WP3-WP4
EN ISO 15118-8:2019	Road vehicles - Vehicle to grid communication interface - Part 8: Physical layer and data link layer requirements for wireless communication (ISO 15118-8:2018)	WP3-WP4
Smart Cities		
ISO 37106:2018	Sustainable cities and communities — Guidance on establishing smart city operating models for sustainable communities	Generic-WP3-WP4
ISO/CD 37166	Smart community infrastructures —Urban data integration framework for smart city planning (SCP)	Generic-WP3-WP4
ISO/IEC 21972:2020	Information technology — Upper level ontology for smart city indicators	Generic-WP3-WP4
ISO/IEC 30146:2019	Information technology — Smart city ICT indicators	Generic-WP3-WP4

Standard code	Standard Title	Relating WP
ISO/IEC AWI 24039	Information Technology - Smart city digital platform	Generic-WP3-WP4
ISO/IEC DIS 30145-1	Information technology — Smart City ICT reference framework — Part 1: Smart city business process framework	Generic-WP3-WP4
ISO/IEC DIS 30145-2	Information technology — Smart City ICT reference framework — Part 2: Smart city knowledge management framework	Generic-WP3-WP4
ISO/IEC DIS 30145-3	Information technology — Smart City ICT reference framework — Part 3: Smart city engineering framework	Generic-WP3-WP4
Electrical energy supply		
ISO 1185:2003	Road vehicles — Connectors for the electrical connection of towing and towed vehicles — 7-pole connector type 24 N (normal) for vehicles with 24 V nominal supply voltage	WP3-WP4
ISO 1724:2003	Road vehicles — Connectors for the electrical connection of towing and towed vehicles — 7-pole connector type 12 N (normal) for vehicles with 12 V nominal supply voltage	WP3-WP4
ISO 3731:2003	Road vehicles — Connectors for the electrical connection of towing and towed vehicles — 7-pole connector type 24 S (supplementary) for vehicles with 24 V nominal supply voltage	WP3-WP4
ISO 3732:2003	Road vehicles — Connectors for the electrical connection of towing and towed vehicles — 7-pole connector type 12 S (supplementary) for vehicles with 12 V nominal supply voltage	WP3-WP4
ISO 21848:2005	Road vehicles — Electrical and electronic equipment for a supply voltage of 42 V — Electrical loads	WP3-WP4
ISO/FDIS 21780	Road vehicles — Supply voltage of 48 V — Electrical requirements and tests	WP3-WP4
ISO 18246:2015	Electrically propelled mopeds and motorcycles — Safety requirements for conductive connection to an external electric power supply	WP3-WP4
HD 472 S1:1989/AC:2013	Nominal voltages for low-voltage public electricity supply systems	WP3-WP4

Standard code	Standard Title	Relating WP
EN 61851-21:2002	Electric vehicle conductive charging system - Part 21: Electric vehicle requirements for conductive connection to an AC/DC supply	WP3-WP4
EN 61851-21-1:2017/AC:2017-11	Electric vehicle conductive charging system - Part 21-1: Electric vehicle on-board charger EMC requirements for conductive connection to an AC/DC supply	WP3-WP4
ISO 17409:2015	Electrically propelled road vehicles -- Connection to an external electric power supply -- Safety requirements	WP3-WP4
Cybersecurity		
ISO/IEC 27007:2020	Information security, cybersecurity and privacy protection — Guidelines for information security management systems auditing	Generic-WP3-WP4
ISO/IEC 27009:2020	Information security, cybersecurity and privacy protection — Sector-specific application of ISO/IEC 27001 — Requirements	Generic-WP3-WP4
ISO/IEC 27032:2012	Information technology — Security techniques — Guidelines for cybersecurity	Generic-WP3-WP4
ISO/IEC DIS 15408-1	Information security, cybersecurity and privacy protection — Evaluation criteria for IT security — Part 1: Introduction and general model	Generic-WP3-WP4
ISO/IEC DIS 15408-2	Information security, cybersecurity and privacy protection — Evaluation criteria for IT security — Part 2: Security functional components	Generic-WP3-WP4
ISO/IEC DIS 15408-3	Information security, cybersecurity and privacy protection — Evaluation criteria for IT security — Part 3: Security assurance components	Generic-WP3-WP4
ISO/IEC DIS 15408-4	Information security, cybersecurity and privacy protection — Evaluation criteria for IT security — Part 4: Framework for the specification of evaluation methods and activities	Generic-WP3-WP4
ISO/IEC DIS 15408-5	Information security, cybersecurity and privacy protection — Evaluation criteria for IT security — Part 5: Pre-defined packages of security requirements	Generic-WP3-WP4

Standard code	Standard Title	Relating WP
ISO/IEC WD 27032	IT Security Techniques — Cybersecurity — Guidelines for Internet Security	Generic-WP3-WP4
ISO/SAE DIS 21434	Road vehicles — Cybersecurity engineering	Generic-WP3-WP4
IEC 63119-4 ED1	Information exchange for Electric Vehicle charging roaming service - Part 4: Cybersecurity and information privacy	Generic-WP3-WP4
Data Protection		
ISO 24100:2010	Intelligent transport systems — Basic principles for personal data protection in probe vehicle information services	WP3-WP4
ISO/IEC TS 20748-4:2019	Information technology for learning, education and training — Learning analytics interoperability — Part 4: Privacy and data protection policies	WP3-WP4
Road vehicles		
IEC 62660-1:2018	Secondary lithium-ion cells for the propulsion of electric road vehicles - Part 1: Performance testing	WP3-WP4
IEC 62660-2:2018	Secondary lithium-ion cells for the propulsion of electric road vehicles - Part 2: Reliability and abuse testing	WP3-WP4
IEC 62660-3:2016	Secondary lithium-ion cells for the propulsion of electric road vehicles - Part 3: Safety requirements	WP3-WP4
IEC TR 62660-4:2017	Secondary lithium-ion cells for the propulsion of electric road vehicles - Part 4: Candidate alternative test methods for the internal short circuit test of IEC 62660-3	WP3-WP4
ISO 8715:2001	Electric road vehicles — Road operating characteristics	WP3-WP4
ISO/PAS 16898:2012	Electrically propelled road vehicles — Dimensions and designation of secondary lithium-ion cells	WP3-WP4
ISO 20762:2018	Electrically propelled road vehicles — Determination of power for propulsion of hybrid electric vehicle	WP3-WP4
Data Model		

Standard code	Standard Title	Relating WP
EN 12896-1:2016	Public transport - Reference data model - Part 1: Common concepts	WP3
EN 12896-2:2016	Public transport - Reference data model - Part 2: Public transport network	WP3
EN 12896-3:2016	Public transport - Reference data model - Part 3: Timing information and vehicle scheduling	WP3
EN 12896-4:2019	Public transport - Reference data model - Part 4: Operations monitoring and control	WP3
EN 12896-5:2019	Public transport - Reference data model - Part 5: Fare management	WP3
EN 12896-6:2019	Public transport - Reference data model - Part 6: Passenger information	WP3
EN 12896-7:2019	Public transport - Reference data model - Part 7: Driver management	WP3
EN 12896-8:2019	Public transport - Reference data model - Part 8: Management information & statistics	WP3
ISO/TS 20452:2007	Requirements and Logical Data Model for a Physical Storage Format (PSF) and an Application Program Interface (API) and Logical Data Organization for PSF used in Intelligent Transport Systems (ITS) Database Technology	WP3
ISO/TR 25104:2008	Intelligent transport systems — System architecture, taxonomy, terminology and data modelling — Training requirements for ITS architecture	WP3
Mobile Telecommunications		
ETSI TS 102 735 V7.1.0 (2010-01)	Universal Mobile Telecommunications System (UMTS); Band-specific requirements for UMTS Frequency Division Duplex (FDD) operation in the bands 1 900 MHz to 1 920 MHz paired with 2 600 MHz to 2 620 MHz and 2 010 MHz to 2 025 MHz paired with 2 585 MHz to 2 600 MHz	WP3
ETSI TR 102 736 V7.0.0 (2007-09)	Universal Mobile Telecommunications System (UMTS); 2,6 GHz Frequency Division Duplex (FDD) downlink external	WP3
Interoperability		

Standard code	Standard Title	Relating WP
prEN ISO 1936	Electrically propelled vehicles - Magnetic field wireless power transfer - Safety and interoperability requirements	Generic-WP3-WP4
ISO/IEC 19500-2:2012	Information technology — Object Management Group — Common Object Request Broker Architecture (CORBA) — Part 2: Interoperability	Generic-WP3-WP4
ISO/IEC 24727-6:2010	Identification cards — Integrated circuit card programming interfaces — Part 6: Registration authority procedures for the authentication protocols for interoperability	Generic-WP3-WP4
ISO/IEC 21823-1:2019	Internet of Things (IoT) - Interoperability for IoT systems - Part 1: Framework	Generic-WP3-WP4
ISO/IEC 21823-2:2020	Internet of Things (IoT) - Interoperability for IoT systems - Part 2: Transport interoperability	Generic-WP3-WP4
IEC 63243 ED1	Interoperability and safety of dynamic wireless power transfer (WPT) for electric vehicles	Generic-WP3-WP4
Availability and information		
EN ISO 19133:2007	Geographic information - Location-based services - Tracking and navigation	WP3-WP4
EN ISO 19128:2008	Geographic information - Web map server interface (ISO 19128:2005)	WP3-WP4
EN ISO 19134:2008	Geographic information - Location-based services - Multimodal routing and navigation (ISO 19134:2007	WP3-WP4
EN IEC 63119-1:2019	Information exchange for electric vehicle charging roaming service - Part 1: General	WP3-WP4
IEC 63119-2 ED1	Information exchange for Electric Vehicle charging roaming service - Part 2: Use cases	WP3-WP4
IEC 63119-3 ED1	Information exchange for Electric Vehicle charging roaming service - Part 3: Message structure	WP3-WP4
IEC 63119-4 ED1	Information exchange for Electric Vehicle charging roaming service - Part 4: Cybersecurity and information privacy	WP3-WP4
Calibration of chargers		

Standard code	Standard Title	Relating WP
IEC 61851-21-2:2018	Electric vehicle conductive charging system - Part 21-2: Electric vehicle requirements for conductive connection to an AC/DC supply - EMC requirements for off board electric vehicle charging systems	WP3
IEC 61000-6-2:2016	Electromagnetic compatibility (EMC) - Part 6-2: Generic standards - Immunity standard for industrial environments	WP3
EN 62311.2008	Assessment of electronic and electrical equipment related to human exposure restrictions for electromagnetic fields (0 Hz - 300 GHz)	WP3
IEC 61439-7:2018	Low-voltage switchgear and controlgear assemblies - Part 7: Assemblies for specific applications such as marinas, camping sites, market squares, electric vehicle charging stations	WP3
IEC 61439-1:2020	Low-voltage switchgear and controlgear assemblies - Part 1: General rules	WP3
IEC 61851-1:2017	Electric vehicle conductive charging system - Part 1: General requirements	WP3
IEC 60529:1989+AMD1:1999+AMD2:2013	Degrees of protection provided by enclosures (IP Code)	WP3
IEC 62196-2:2016	Plugs, socket-outlets, vehicle connectors and vehicle inlets - Conductive charging of electric vehicles - Part 2: Dimensional compatibility requirements for AC pin and contact-tube accessories	WP3
EN 50620:2017	Electric cables - Charging cables for electric vehicles	WP3
ETSI EN 301 489-1 V2.2.3 (2019-11)	ElectroMagnetic Compatibility (EMC) standard for radio equipment and services - Part 1: Common technical requirements - Harmonised Standard for ElectroMagnetic Compatibility	WP3
ETSI EN 301 489-3 V2.1.1 (2019-03)	ElectroMagnetic Compatibility (EMC) standard for radio equipment and services - Part 3: Specific conditions for Short-Range Devices (SRD) operating on frequencies between 9 kHz and 246 GHz - Harmonised Standard covering the essential	WP3

Standard code	Standard Title	Relating WP
	requirements of article 3.1(b) of Directive 2014/53/EU	
ETSI EN 301 489-17 V3.2.2 (2019-12)	ElectroMagnetic Compatibility (EMC) standard for radio equipment and services - Part 17: Specific conditions for Broadband Data Transmission Systems - Harmonised Standard for ElectroMagnetic Compatibility	WP3
ETSI EN 301 489-52 V1.1.0 (2016-11)	Electromagnetic Compatibility (EMC) standard for radio equipment and services - Part 52: Specific conditions for Cellular Communication Mobile and portable (UE) radio and ancillary equipment - Harmonised Standard for ElectroMagnetic Compatibility	WP3
E-Roaming		
IEC 63119-1:2019	Information exchange for electric vehicle charging roaming service - Part 1: General	WP3-WP4
IEC 63119-2 ED1	Information exchange for electric vehicle charging roaming service - Part 2: Use cases	WP3-WP4
IEC 63119-3 ED1	Information exchange for electric vehicle charging roaming service - Part 3: Message structure	WP3-WP4
IEC 63119-4 ED1	Information exchange for electric vehicle charging roaming service - Part 4: Cybersecurity and information privacy	WP3-WP4
Smart Charging		
IEC 61980-1:2015	Electric vehicle wireless power transfer (WPT) systems - Part 1: General requirement	WP3-WP4
Dynamic charge management		
EN 61851-21-1:2017/AC:2017-11	Electric vehicle conductive charging system - Part 21-1: Electric vehicle on-board charger EMC requirements for conductive connection to an AC/DC supply	WP4
IEC 61851-1:2017	Electric vehicle conductive charging system - Part 1: General requirements	WP4
IEC 61851-23:2014	Electric vehicle conductive charging systems - Part 23: DC electric vehicle charging station	WP4

Standard code	Standard Title	Relating WP
Vehicle-to-Grid (V2G)		
EN ISO 15118-1:2019	Road vehicles - Vehicle to grid communication interface - Part 1: General information and use-case definition (ISO 15118-1:2019)	WP4
EN ISO 15118-2:2016	Road vehicles - Vehicle-to-grid communication Interface - Part 2: Network and application protocol requirements (ISO 15118-2:2014)	WP4
EN ISO 15118-3:2016	Road vehicles - Vehicle to grid Communication interface - Part 3: Physical and data link layer requirements (ISO 15118-3:2015)	WP4
EN ISO 15118-4:2019	Road vehicles - Vehicle to grid communication interface - Part 4: Network and application protocol conformance test (ISO 15118-4:2018)	WP4
EN ISO 15118-5:2019	Road vehicles - Vehicle to grid communication interface - Part 5: Physical layer and data link layer conformance test (ISO 15118-5:2018)	WP4
EN ISO 15118-8:2019	Road vehicles - Vehicle to grid communication interface - Part 8: Physical layer and data link layer requirements for wireless communication (ISO 15118-8:2018)	WP4
RFID cards		
EN ISO/IEC 19762-3:2012	Information technology - Automatic identification and data capture (AIDC) techniques - Harmonized vocabulary - Part 3: Radio frequency identification (RFID) (ISO/IEC 19762-3:2008)	WP3
ISO/IEC 24791-1:2010	Information technology — Radio frequency identification (RFID) for item management — Software system infrastructure — Part 1: Architecture	WP3
ISO/IEC 24791-2:2011	Information technology — Radio frequency identification (RFID) for item management — Software system infrastructure — Part 2: Data management	WP3
ISO/IEC 24791-3:2014	Information technology — Radio frequency identification (RFID) for item management — Software system infrastructure — Part 3: Device management	WP3

Standard code	Standard Title	Relating WP
ISO/IEC 24791-5:2012	Information technology — Radio frequency identification (RFID) for item management — Software system infrastructure — Part 5: Device interface	WP3
ISO/IEC 15961-1:2013	Information technology — Radio frequency identification (RFID) for item management: Data protocol — Part 1: Application interface	WP3
ISO/IEC 15961-2:2019	Information technology — Data protocol for radio frequency identification (RFID) for item management — Part 2: Registration of RFID data constructs	WP3
ISO/IEC 15961-3:2019	Information technology — Data protocol for radio frequency identification (RFID) for item management — Part 3: RFID data constructs	WP3
ISO/IEC 15961-4:2016	Information technology — Radio frequency identification (RFID) for item management: Data protocol — Part 4: Application interface commands for battery assist and sensor functionality	WP3
ISO/IEC 15962:2013	Information technology — Radio frequency identification (RFID) for item management — Data protocol: data encoding rules and logical memory functions	WP3
ISO/IEC 15963-1:2020	Information technology — Radio frequency identification for item management — Part 1: Unique identification for RF tags numbering systems	WP3
ISO/IEC 15963-2:2020	Information technology — Radio frequency identification for item management — Part 2: Unique identification for RF tags registration procedures	WP3
ETSI EN 300 330 V2.1.1 (2017-02)	Short Range Devices (SRD)-Radio equipment in the frequency range 9 kHz to 25 MHz and inductive loop systems in the frequency range 9 kHz to 30 MHz -Harmonised Standard covering the essential requirements of article 3.2 of Directive 2014/53/EU	WP3
Charging speed		

Standard code	Standard Title	Relating WP
EN 61851-21-1:2017/AC:2017-11	Electric vehicle conductive charging system - Part 21-1: Electric vehicle on-board charger EMC requirements for conductive connection to an AC/DC supply	WP3-WP4
IEC 61851-1:2017	Electric vehicle conductive charging system - Part 1: General requirements	WP3-WP4
IEC 61851-23:2014	Electric vehicle conductive charging systems - Part 23: DC electric vehicle charging station	WP3-WP4
Electric Vehicle Supply Equipment (EVSE)		
EN 62196-1:2014	Plugs, socket-outlets, vehicle connectors and vehicle inlets - Conductive charging of electric vehicles - Part 1: General requirements	WP3-WP4
EN 62196-2:2017	Plugs, socket-outlets, vehicle connectors and vehicle inlets - Conductive charging of electric vehicles - Part 2: Dimensional compatibility and interchangeability requirements for AC pin and contact-tube accessories	WP3-WP4
EN 62196-3:2014	Plugs, socket-outlets, vehicle connectors and vehicle inlets - Conductive charging of electric vehicles - Part 3: Dimensional compatibility and interchangeability requirements for DC and AC/DC pin and contact-tube vehicle couplers	WP3-WP4

4. Conclusions

As a result of the study of the standardisation landscape through the methodology explained above, several standards relevant for the USER-CHI project have been found. They are specially linked to WP3 and WP4 and they refer to interoperability, smart grids, charging infrastructure and electro-mobility.

These standards might be considered as a compliance requirement for the outputs of the project or they could be used as guidelines since they could be useful for the WPs.

There is a large number of European and international technical committees, as well as of standards and standards under development related to USER-CHI project that may be useful for its development and for its future dissemination. Despite there is not a specific standarisation technical committee whose activity affects directly USER-CHI project, specific tasks to be addressed in the project are related to standarisation works. Depending on the assessment by USER-CHI partners on the impact of the identified standarisation committees on their tasks and the level of contribution that their results can represent for these committees, several actions can be performed, like:

- the follow up of the standarisation activity through updates reported by UNE;

- the follow up through one or more USER-CHI representatives joining this standarisationcommittees. Standarisation is an open activity and all interested parties may participate in a CEN/CENELEC/ISO/IEC technical committee through its National Mirror Committee and National Standarisation Body;

- the dissemination of the USER-CHI project progress by delivering reports to the relevant TCs secretaries or by attending relevant technical committees' meetings.

To use the standardisation system as a tool for dissemination of the project results, an interaction with the market stakeholders will be necessary to decide the type of USER-CHI´s engagement with relevant standarisation technical committees. UNE will provide the necessary technical support required for that interaction.

Acronyms

In this document the following abbreviations and acronyms are used, and in this list they are indicated with its meaning:

Acronym	Description
AC	Alternating Current
AFNOR	Association Française de Normalisation (in English: French Standarisation Association)
BSI	British Standards Institution
CEN	European Committee for Standarisation
CENELEC (CLC)	European Committee for Standarisation in the Electrical field
CWA	CEN or CENELEC Workshop Agreement
DC	Direct Current
DIN	Deutsches Institut für Normung (in English: German Institute for Standarisation)
EN	European Standard
ETSI	European Telecommunications Standards Institute
EV	Electric Vehicle
HEN	Harmonised European Standard
ICE	Internal Combustion Engine
IEC	International Electrotechnical Commission
ISO	International Organization for Standarisation; International Standard
ITS	Intelligent Transport System
JTC	Joint Technical Committee
NSB	National Standarisation Body
NWI	New Work Item
PAS	Publicly Available Specification
SC	Subcommittee
TC	Technical Committee
TEN-T	Trans European Transport Network

TR	Technical Report
TS	Technical Specification
UNE	Asociación Española de Normalización (in English: Spanish Association for Standardisation)
VA	Vienna Agreement
WG	Working Group
WI	Work Item
WP	Work Package

References

For the elaboration of this report, the following sources have been consulted:

- CEN Website (www.cen.eu)

- CENELEC Website (www.cenelec.eu)

- CEN/CENELEC Projex Online database (projex.cen.eu) (restricted to authorized users)

- ETSI Website (www.etsi.org)

- ISO Website (www.iso.org)

- ISO Project Portal (isotc.iso.org) (restricted to authorized users)

- IEC Website (www.iec.ch)

ANNEX A. Standarisation areas relevant for USER-CHI

This Annex contains the first document with information about the standards and standards under development that were circulated to USER-CHI partners.

STANDARDISATION LANDSCAPE

Version 1

Date: **12/05/2020**
Author(s): **UNE (Spanish Association for Standarisation)**

Table of Contents

1. Introduction

This document collects information on the standarisation landscape to provide input for other WP, ensure compatibility and interoperability of USER-CHI and facilitate the acceptance and market uptake of the developed solutions.

The purpose of this document is to provide information on the standarisation landscape and applicable standards relevant for USER-CHI Project. It pretends to provide starting information for the work packages ensuring compatibility and interoperability with already existing solutions by identifying existing standards and standards under development at European and international levels as well as the standarisation technical committees.

It is expected that partners complete this document identifying those standards/standards under development/technical committees that are specifically related to their WP or the project and those that are obviously not related.

In order to provide help in the search of the standards/standards under development/technical committees, a table (table 1) is included. Such a list connects the key concept with the technical committees and it also includes a set of keywords within the technical committees description.

The document "Relevant standards for USER-CHI" is annexed in order to gather partners' feedback. In this document there is a table where the technical committee, the standard (existing o under development), the relating WP should be completed as well as the comments or the contribution to standarisation.

If some topics are missing, please let us know as soon as possible in order to increase the searching activity and send the new standards/standards under development/technical committees for feedback.

2. Methodology

For the identification of standards and standards under development relevant for USECR-CHI project, the following methodology has been followed:

1- With the key concept list, both standards and standards under development have been identified for each standarisation area, together with the technical committee responsible for the respective standards.

The search has covered the European standarisation developed by the European Committee for Standarisation (CEN), European Committee for Standarisation in the Electrical field CENELEC (CLC) and European Telecommunications Standards Institute (ETSI) and International standarisation developed by the International Organization for Standarisation (ISO) and IEC (electro technical).

2- As a result of the searching process this document has been prepared by UNE including developed standards, standards under development and technical bodies.

This draft should be filtered in order to refine the information and enable the development of a simplified new draft.

3- As a final stage, USER-CHI partners are asked to identify those references that really should be considered for the project, specifying in what WP it could be used.

Furthermore, they are asked to indicate if any contribution to the respective standard is expected and whether they consider relevant to contact the technical committee responsible for the standard development.

3. Relevant standards for USER-CHI project

3.1 European and international committees related to USER-CHI project

TABLE 3-1 EUROPEAN AND INTERNATIONAL COMMITTEES RELATED TO USER-CHI PROJECT AND THEIR CONNECTION WITH THE KEY CONCEPTS

Key concept	Technical committee
Electro-Mobility	CEN/TC 278 - Intelligent transport systems
	ISO/TC 204 - Intelligent transport systems
	TC ITS - TECHNICAL COMMITTEE (TC) INTELLIGENT TRANSPORT SYSTEMS (ITS)
Smart Grids	CEN/CLC/ETSI/SEG-CG - CEN-CENELEC-ETSI Coordination Group on Smart Energy Grids
	ISO/TC 205 - Building environment design
	ISO/IEC JTC 1/SC 41 - Internet of Things and related technologies
	ISO/IEC JTC 1/SC 27 - Information security, cybersecurity and privacy protection
	CLC/TC 8X - System aspects of electrical energy supply
	CLC/TC 205 - Home and Building Electronic Systems (HBES)
	PC 118 - Smart grid user interface
	SC 8A - Grid Integration of Renewable Energy Generation
	TC SMARTM2M - TECHNICAL COMMITTEE (TC) SMART MACHINE-TO-MACHINE COMMUNICATIONS (SMARTM2M)
Smart Cities	CEN/TC 465 - Sustainable and Smart Cities and Communities
	CEN/TC 278 - Intelligent transport systems

Key concept	Technical committee
	CEN/WS SCS - Description and Assessment of Good Practices for Smart City Solutions
	ISO/TC 268 - Sustainable cities and communities
	ISO/TC 204 - Intelligent transport systems
	ISO/IEC JTC 1/WG 11 - Smart cities
	SyC Smart Cities - Electrotechnical aspects of Smart Cities
	SyC Smart Energy- Smart Energy
	TC EE- TECHNICAL COMMITTEE (TC) ENVIRONMENTAL ENGINEERING (EE)
	TC ITS - TECHNICAL COMMITTEE (TC) INTELLIGENT TRANSPORT SYSTEMS (ITS)
	TC SMARTM2M - TECHNICAL COMMITTEE (TC) SMART MACHINE-TO-MACHINE COMMUNICATIONS (SMARTM2M)
Electrical energy supply	CEN/CLC/ETSI/SEG-CG - CEN-CENELEC-ETSI Coordination Group on Smart Energy Grids
	CEN/CLC/JTC 6 - Hydrogen in energy systems
	CLC/TC 8X - System aspects of electrical energy supply
	CLC/TC 13 - Electrical energy measurement and control
	CLC/SR 23K - Electrical energy efficiency products
	CLC/TC 82 - Solar photovoltaic energy systems
	CLC/SR 120 - Electrical Energy Storage (EES) Systems
	CLC/SR 96 - Transformers, reactors, power supply units, and combinations thereof
	TC 8 - System aspects of electrical energy supply
	TC 13 - Electrical energy measurement and control
	TC 69 - Electrical power/energy transfer systems for electrically propelled road vehicles and industrial trucks
	TC 96 - Transformers, reactors, power supply units, and combinations thereof
	TC 120 - Electrical Energy Storage (EES) Systems
	SyC Smart Energy - Smart Energy
	TC EE- TECHNICAL COMMITTEE (TC) ENVIRONMENTAL ENGINEERING (EE)

Key concept	Technical committee
Cybersecurity	CEN/CLC/JTC 13 - Cybersecurity and Data Protection
	ISO/IEC JTC 1/SC 27 - Information security, cybersecurity and privacy protection
	ISO/TC 22/SC 32/WG 11 - Cybersecurity
	TC CYBERSECURITY - TECHNICAL COMMITTEE (TC) CYBER (CYBERSECURITY)
Data Protection	CEN/CLC/JTC 13 - Cybersecurity and Data Protection
	ISO/IEC JTC 1/SC 27 - Information security, cybersecurity and privacy protection
	ISO/TC 22/SC 31 - Data communication
	ISO/TC 204 - Intelligent transport systems
	CLC/SC 46XC - Multicore, multipair and quad data communication cables
Road vehicles	CEN/TC 278 - Intelligent transport systems
	CEN/TC 301 - Road vehicles
	CEN/TC 333 - Cycles
	CEN/TC 337 - Road operation equipment and products
	CEN/TC 354 - Light motorized vehicles for the transportation of persons and goods and related facilities and not subject to type-approval for on-road use
	ISO/TC 22 - Road vehicles
	ISO/TC 149 - Cycles
	ISO/TC 204 - Intelligent transport systems
	ISO/TC 241 - Road traffic safety management systems
	CLC/TC 23H - Plugs, Socket-outlets and Couplers for industrial and similar applications, and for Electric Vehicles
	CLC/BTTF 69-3 - Road traffic signal systems
	CLC/TC 69X - Electrical systems for electric road vehicles
	TA 17 - Multimedia systems and equipment for vehicles
	TC 21 - Secondary cells and batteries
	TC 69 - Electrical power/energy transfer systems for electrically propelled road vehicles and industrial trucks
	TC 125 - Personal e-Transporters (PeTs)

Key concept	Technical committee
	CIS/D - Electromagnetic disturbances related to electric/electronic equipment on vehicles and internal combustion engine powered devices
	TC ITS - TECHNICAL COMMITTEE (TC) INTELLIGENT TRANSPORT SYSTEMS (ITS)
Data Model	ISO/IEC JTC 1/SC 24 - Computer graphics, image processing and environmental data representation
	ISO/IEC JTC 1/SC 31 - Automatic identification and data capture techniques
	ISO/IEC JTC 1/SC 32 - Data management and interchange
	ISO/TC 154 - Processes, data elements and documents in commerce, industry and administration
	CLC/SC 46XC - Multicore, multipair and quad data communication cables
	TA 6 - Storage media, storage data structures, storage systems and equipment
Mobile Telecommunications	CEN/TC 294 - Communication systems for meters
	CEN/TC 353 - Information and Communication Technologies for Learning, Education and Training
	ISO/IEC JTC 1/SC 6 - Telecommunications and information exchange between systems
	CLC/SC 205A - Mains communicating systems
	CLC/SR 3 - Information structures, documentation and graphical symbols
	CLC/SR 103 - Transmitting equipment for radiocommunication
	CLC/TC 46X -Communication cables
	CLC/TC 57 - Power systems management and associated information exchange
	CLC/TC 108X - Safety of electronic equipment within the fields of Audio/Video, Information Technology and Communication Technology
	CLC/TC 215 - Electrotechnical aspects of telecommunication equipment
	TC 57 - Power systems management and associated information exchange
	TC 103 - Transmitting equipment for radiocommunication
	TC 108 - Safety of electronic equipment within the field of audio/video, information technology and communication technology
	CIS/I - Electromagnetic compatibility of information technology equipment, multimedia equipment and receivers

Key concept	Technical committee
	TC-CABLE - TECHNICAL COMMITTEE (TC) INTEGRATED BROADBAND CABLE TELECOMMUNICATION NETWORKS (CABLE)
	TC-DECT - TECHNICAL COMMITTEE (TC) DIGITAL ENHANCED CORDLESS TELECOMMUNICATIONS (DECT)
	TC-EMTEL - SPECIAL COMMITTEE (SC) EMERGENCY TELECOMMUNICATIONS (EMTEL)
	TC-MSG - TECHNICAL COMMITTEE (TC) MOBILE STANDARDS GROUP (MSG)
	TC-TCCE - TECHNICAL COMMITTEE (TC) TERRESTRIAL TRUNKED RADIO AND CRITICAL COMMUNICATIONS EVOLUTION (TCCE)
Interoperability	CEN/TC 225 - AIDC technologies
	CEN/TC 278 - Intelligent transport systems
	ISO/IEC JTC 1 - Information technology
	ISO/TC 204 - Intelligent transport systems
	TC 57 - Power systems management and associated information exchange
	TC-INT - TECHNICAL COMMITTEE (TC) CORE NETWORK AND INTEROPERABILITY TESTING (INT)
Clean Energy for transportation	CEN/CLC/JTC 6 - Hydrogen in energy systems
	CEN/TC 326 - Natural gas vehicles - Fuelling and operation
	CEN/TC 335 - Solid biofuels
	ISO/TC 197 - Hydrogen technologies
	ISO/TC 238 - Solid biofuels
	ISO/TC 301 - Energy management and energy savings
	CLC/TC 82 - Solar photovoltaic energy systems
	SC 8A - Grid Integration of Renewable Energy Generation
	SC 8B - Decentralized Electrical Energy Systems
	TC 13 -Electrical energy measurement and control
	TC 69 - Electrical power/energy transfer systems for electrically propelled road vehicles and industrial trucks
	TC 82 - Solar photovoltaic energy systems
	TC 88 - Wind energy generation systems

Key concept	Technical committee
	TC 120 - Electrical Energy Storage (EES) Systems
	SyC Smart Energy - Smart Energy
Availability and information	CEN/TC 287 - Geographic Information
	ISO/IEC JTC 1/SC 24 - Computer graphics, image processing and environmental data representation
	ISO/TC 211 - Geographic information/Geomatics
	CLC/SR 3 - Information structures, documentation and graphical symbols
	CLC/TC 57 - Power systems management and associated information exchange
	TA 6 - Storage media, storage data structures, storage systems and equipment
	TC 3 - Documentation, graphical symbols and representations of technical information
Civil engineering	CEN/TC 442 - Building Information Modelling (BIM)
	ISO/TC 59 - Buildings and civil engineering works
	ISO/TC 205 - Building environment design
	CLC/TC 205 - Home and Building Electronic Systems (HBES)
Calibration of chargers	TC 69 - Electrical power/energy transfer systems for electrically propelled road vehicles and industrial trucks
E-Roaming	TC 69 - Electrical power/energy transfer systems for electrically propelled road vehicles and industrial trucks
Smart Charging	TA 15 - Wireless Power Transfer
	TC 69 - Electrical power/energy transfer systems for electrically propelled road vehicles and industrial trucks
Dynamic charge management	TA 15 - Wireless Power Transfer
	TC 69 - Electrical power/energy transfer systems for electrically propelled road vehicles and industrial trucks
Vehicle-to-Grid (V2G)	ISO/TC 22/SC 37 - Electrically propelled vehicles
	TC 69 - Electrical power/energy transfer systems for electrically propelled road vehicles and industrial trucks
RFID cards	CEN/TC 225 - AIDC technologies
	CLC/SR 103 - Transmitting equipment for radiocommunication

Key concept	Technical committee
	TC 103 - Transmitting equipment for radiocommunication
Charging speed	TC 69 - Electrical power/energy transfer systems for electrically propelled road vehicles and industrial trucks
Electric Vehicle Supply Equipment (EVSE)	TC 69 - Electrical power/energy transfer systems for electrically propelled road vehicles and industrial trucks

3.2 Technical committees overview

3.2.1 CEN/TC 278 - Intelligent transport systems

Keywords:

Electro-Mobility, Smart Cities, Road vehicles, Interoperability, Electronic fee collection and access control (EFC), Public transport, Traffic and traveller information, Traffic control, ITS spatial data, Road traffic data, After theft systems for the recovery of stolen vehicles, eSafety, Cooperative ITS, Mobility integration, Public transport

Scope:

Standarisation in the field of telematics to be applied to road traffic and transport, including those elements that need technical harmonization for intermodal operation in the case of other means of transport. It shall support a.o.:

- vehicle, container, swap body and goods wagon identification;
- communication between vehicles and road infrastructure;
- communication between vehicles;
- vehicle man machine interfacing as far as telematics is concerned;
- traffic and parking management;
- user fee collection;
- public transport management;
- user information.

Standards:

ENV 12313-4:2000

Traffic and Traveller Information (TTI) - TTI Messages via Traffic Message Coding - Part 4: Coding Protocol for Radio Data System - Traffic Message Channel (RDS-TMC) - RDS-TMC using ALERT Plus with ALERT C

EN ISO 14814:2006

Road transport and traffic telematics - Automatic vehicle and equipment identification - Reference architecture and terminology (ISO 14814:2006)

CEN ISO/TS 18234-4:2006

Traffic and Travel Information (TTI) - TTI via Transport Protocol Expert Group (TPEG) data-streams - Part 4: Road Traffic Message (RTM) application (ISO/TS 18234-4:2006)

EN ISO 14819-6:2006

Traffic and Traveller Information (TTI) - TTI messages via traffic message coding - Part 6: Encryption and conditional access for the Radio Data System - Traffic Message Channel ALERT C coding (ISO 14819-6:2006)

CEN ISO/TS 18234-5:2006

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EN ISO 24978:2009

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EN ISO 17262:2012

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EN ISO 15006:2011

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CEN/TR 16742:2014   Intelligent transport systems - Privacy aspects in ITS standards and systems in Europe

EN ISO 14819-2:2013

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EN ISO 14819-1:2013

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EN 12896-1:2016

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EN 12896-2:2016

Public transport - Reference data model - Part 2: Public transport network

EN ISO 17575-1:2016

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EN 15722:2015

Intelligent transport systems - ESafety - ECall minimum set of data

CEN/TR 16968:2016

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Public transport - Service interface for real-time information relating to public transport operations - Part 5: Functional service interfaces situation exchange: Situation Exchange

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Public transport - Road vehicle scheduling and control systems - Part 6: CAN message content

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Electronic fee collection - Evaluation of on-board and roadside equipment for conformity to ISO 12813 - Part 1: Test suite structure and test purposes (ISO 13143-1:2016)

EN ISO 13143-2:2016

Electronic fee collection - Evaluation of on-board and roadside equipment for conformity to ISO 12813 - Part 2: Abstract test suite (ISO 13143-2:2016)

EN 15876-1:2016

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EN 16157-3:2018

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CEN ISO/TR 16401-1:2018

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CEN/ISO TR 16401-2:2018

Electronic fee collection - Evaluation of equipment for conformity to ISO/TS 17575-2 - Part 2: Abstract test suite (ISO/TR 16401-2:2018)

EN ISO 16407-2:2018

Electronic fee collection - Evaluation of equipment for conformity to ISO 17575-1 - Part 2: Abstract test suite (ISO 16407-2:2018)

CEN/TS 17154-1:2019

Electronic fee collection - Evaluation of implementation for conformity to CEN/TS 16986 - Part 1: Test suite structure and purposes

CEN/TS 17378:2019

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EN 16157-1:2018

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EN 16157-7:2018

Intelligent transport systems - DATEX II data exchange specifications for traffic management and information - Part 7: Common data elements

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CEN/TR 17311:2019

Public transport - Interoperable fare management system - Bluetooth low energy ticketing use cases and guidelines

CEN ISO/TS 21719-2:2018

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CEN/TS 17240:2018

Intelligent transport systems - ESafety - ECall end to end conformance testing for IMS packet switched based systems

CEN ISO/TS 19091:2019

Intelligent transport systems - Cooperative ITS - Using V2I and I2V communications for applications related to signalized intersections (ISO/TS 19091:2019)

EN 12896-4:2019

Public transport - Reference data model - Part 4: Operations monitoring and control

CEN/TS 17249-2:2018

Intelligent transport systems - eSafety - Part 2 : eCall for HGVs and other commercial vehicles

CEN/TS 17249-3:2018

Intelligent transport systems - eSafety - Part 3: eCall for Coaches and buses

CEN/TS 17249-4:2019

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CEN/TS 16614-3:2020

Public transport - Network and Timetable Exchange (NeTEx) - Part 3: Public transport fares exchange format

CEN/TS 16614-1:2020

Public transport - Network and Timetable Exchange (NeTEx) - Part 1: Public transport network topology exchange format

CEN/TS 13149-8:2013

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CEN/TS 16406:2013

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CEN/TS 16614-2:2014

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Intelligent transport systems - After-theft systems for the recovery of stolen vehicles - Part 2: Common status message elements

EN 15213-3:2013

Intelligent transport systems - After-theft systems for the recovery of stolen vehicles - Part 3: Interface and system requirements in terms of short range communication system

EN 15213-4:2013

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EN 15213-5:2013

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CEN/TS 13149-11:2020

Public transport - Road vehicle scheduling and control systems - Part 11: Vehicle platform interface service

CEN/TR 17401:2020

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CEN/TS 17402:2020

Intelligent transport systems - Urban ITS - Use of regional traffic standards in a mixed vendor environment

CEN/TR 17370:2019

Public transport - Operating raw data and statistics Exchange

CEN/TS 17241:2019

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CEN/TS 16794-1:2019

Public transport - Communication between contactless readers and fare media - Part 1: Implementation requirements for ISO/IEC 14443

EN 16157-2:2019

Intelligent transport systems - DATEX II data exchange specifications for traffic management and information - Part 2: Location referencing

CEN/TS 17249-6:2019

Intelligent transport systems - eSafety - Part 6: eCall for UNECE Category L2, L4, L5, L6 and L7 tricycles and quadricycles

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CEN/TS 17184:2018

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CEN/TS 16405:2017

Intelligent transport systems - Ecall - Additional data concept specification for heavy goods vehicles

CEN/TS 13149-7:2020

Public transport - Road vehicle scheduling and control systems - Part 7: System and network architecture

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Road vehicles - Ergonomic aspects of transport information and control systems - Specifications and test procedures for in-vehicle visual presentation (ISO 15008:2017)

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CEN/TS 17118:2017

Intelligent transport systems - Public transport - Open API for distributed journey planning

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CEN ISO/TS 17444-1:2017

Electronic fee collection - Charging performance - Part 1: Metrics (ISO/TS 17444-1:2017)

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EN ISO 14815:2005

Road transport and traffic telematics - Automatic vehicle and equipment identification - System specifications (ISO 14815:2005)

EN 12896-3:2016

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EN ISO 15005:2017

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CEN/TS 16986:2016/AC:2017

Electronic Fee Collection - Interoperable application profiles for information exchange between Service Provision and Toll Charging

CEN ISO/TS 21719-1:2018

Electronic fee collection - Personalization of on-board equipment (OBE) - Part 1: Framework (ISO/TS 21719-1:2018)

EN ISO 17573-1:2019

Electronic fee collection - System architecture for vehicle-related tolling - Part 1: Reference model (ISO 17573-1:2019)

EN ISO 17423:2018

Intelligent transport systems - Cooperative systems - Application requirements and objectives (ISO 17423:2018)

EN ISO 17264:2009

Intelligent transport systems - Automatic vehicle and equipment identification - Interfaces (ISO 17264:2009)

CEN ISO/TS 18234-2:2013

Intelligent transport systems - Traffic and travel information via transport protocol experts group, generation 1 (TPEG1) binary data format - Part 2: Syntax, semantics and framing structure (TPEG1-SSF) (ISO/TS 18234-2:2013)

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Electronic fee collection - Application interface definition for autonomous systems - Part 2: Communication and connection to the lower layers (ISO 17575-2:2016)

EN ISO 18750:2018

Intelligent transport systems - Co-operative ITS - Local dynamic map (ISO 18750:2018)

EN ISO 14906:2018/A1:2020

Electronic fee collection - Application interface definition for dedicated short-range communication - Amendment 1 (ISO 14906:2018/Amd 1:2020)

CEN ISO/TR 24014-2:2013

Public transport - Interoperable fare management system - Part 2: Business practices (ISO/TR 24014-2:2013)

CEN/TS 17234:2018

Intelligent transport systems - eSafety - eCall: Tests to enable PSAPs to demonstrate conformance and performance

EN 16062:2015

Intelligent transport systems - ESafety - eCall high level application requirements (HLAP) using GSM/UMTS circuit switched networks

CEN/TR 16040:2010

Electronic fee collection - Requirements for urban dedicated short-range communication

CEN/TS 13149-3:2007

Public transport - Road vehicle scheduling and control systems - Part 3: WorldFIP message content

CEN/TS 16614-4:2020

Public transport - Network and Timetable Exchange (NeTEx) - Part 4: Passenger Information European Profile

CEN ISO/TS 21177:2019

Intelligent transport systems - ITS station security services for secure session establishment and authentication between trusted devices (ISO/TS 21177:2019)

CEN/TS 17312:2019

Intelligent transport systems - eSafety - eCall via satellite

CEN/TS 13149-9:2020

Public transport - Road vehicle scheduling and control systems - Part 9: Time service

EN ISO 17287:2003

Road vehicles - Ergonomic aspects of transport information and control systems - Procedure for assessing suitability for use while driving (ISO 17287:2003)

CEN/TR 16427:2013

Intelligent transport systems - Public transport - Traveller Information for Visually Impaired People (TI-VIP)

CEN ISO/TS 18234-10:2013

Intelligent transport systems - Traffic and travel information via transport protocol experts group, generation 1 (TPEG1) binary data format - Part 10: Conditional access information (TPEG1-CAI) (ISO/TS 18234-10:2013)

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Intelligent transport systems - Automatic vehicle and equipment identification - System parameters - Technical Corrigendum 1 (ISO 17263:2012/Cor 1:2013)

CEN/TS 15531-4:2011

Public transport - Service interface for real-time information relating to public transport operations - Part 4: Functional service interfaces: Facility Monitoring

CEN/TS 15213-6:2011

Road transport and traffic telematics - After-theft services for the recovery of stolen vehicles - Part 6: Test procedures

EN ISO 13140-1:2016

Electronic fee collection - Evaluation of on-board and roadside equipment for conformity to ISO 13141 - Part 1: Test suite structure and test purposes (ISO 13140-1:2016)

CEN/TR 17143:2017

Intelligent transport systems - Standards and actions necessary to enable urban infrastructure coordination to support Urban-ITS

CEN/TS 17413:2020

Intelligent transport systems - Urban ITS - Models and definitions for new modes

CEN/TS 16702-2:2020

Electronic fee collection - Secure monitoring for autonomous toll systems - Part 2: Trusted recorder

EN 12896-5:2019

Public transport - Reference data model - Part 5: Fare management

CEN/TS 16157-9:2020

Intelligent transport systems - DATEX II data exchange specifications for traffic management and information - Part 9: Traffic signal management publications dedicated to the urban environment

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Intelligent transport systems - eSafety - Part 5: eCall for UNECE Category L1 and L3 powered two-wheeled vehicles

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EN ISO 14819-3:2013

Intelligent transport systems - Traffic and travel information messages via traffic message coding - Part 3: Location referencing for Radio Data System - Traffic Message Channel (RDS-TMC) using ALERT-C (ISO 14819-3:2013)

CEN ISO/TS 18234-3:2013

Intelligent transport systems - Traffic and travel information via transport protocol experts group, generation 1 (TPEG1) binary data format - Part 3: Service and network information (TPEG1-SNI) (ISO/TS 18234-3:2013)

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Public transport - Road vehicles - Visible variable passenger information devices inside the vehicle

CEN ISO/TS 14907-2:2016

Electronic fee collection - Test procedures for user and fixed equipment - Part 2: Conformance test for the on-board unit application interface (ISO/TS 14907-2:2016)

EN ISO 16410-2:2018

Electronic fee collection - Evaluation of equipment for conformity to ISO 17575-3 - Part 2: Abstract test suite (ISO 16410-2:2018)

EN ISO 12813:2019

Electronic fee collection - Compliance check communication for autonomous systems (ISO 12813:2019)

CEN/TS 13149-10:2020

Public transport - Road vehicle scheduling and control systems - Part 10: Location service

CEN ISO/TS 24530-3:2006

Traffic and Travel Information (TTI) - TTI via Transport Protocol Experts Group (TPEG) Extensible Markup Language (XML) - Part 3: tpeg-rtmML (ISO/TS 24530-3:2006)

CEN/TR 16092:2011

Electronic fee collection - Requirements for pre-payment systems

EN ISO 24534-4:2010

Automatic vehicle and equipment identification - Electronic Registration Identification (ERI) for vehicles - Part 4: Secure communications using asymmetrical techniques (ISO 24534-4:2010)

EN ISO 14825:2011

Intelligent transport systems - Geographic Data Files (GDF) - GDF5.0 (ISO 14825:2011)

EN ISO 17262:2012/A1:2019

Intelligent transport systems - Automatic vehicle and equipment identification - Numbering and data structures - Amendment 1 (ISO 17262:2012/Amd 1:2019)

CEN ISO/TS 17574:2017

Electronic fee collection - Guidelines for security protection profiles (ISO/TS 17574:2017)

CEN/TS 17400:2020

Intelligent transport systems - Urban ITS - Mixed vendor environments, methodologies & translators

EN ISO 24534-4:2010/A1:2019

Automatic vehicle and equipment identification - Electronic registration identification (ERI) for vehicles - Part 4: Secure communications using asymmetrical techniques - Amendment 1 (ISO 24534-4:2010/Amd 1:2019)

CEN/TS 16331:2012

Electronic fee collection - Interoperable application profiles for autonomous systems

EN ISO 17263:2012

Intelligent transport systems - Automatic vehicle and equipment identification - System parameters (ISO 17263:2012)

CEN/TR 16219:2011

Electronic Fee Collection - Value added services based on EFC on-board equipment

EN ISO 15007-1:2014

Road vehicles - Measurement of driver visual behaviour with respect to transport information and control systems - Part 1: Definitions and parameters (ISO 15007-1:2014)

CEN ISO/TS 18234-11:2013

Intelligent transport systems - Traffic and Travel Information (TTI) via transport protocol experts group, generation 1 (TPEG1) binary data format - Part 11: Location Referencing Container (TPEG1-LRC) (ISO/TS 18234-11:2013)

CEN/TR 16959:2016

Public transport - Network and Timetable Exchange (NeTEx) - Examples, guidelines and explanatory materials

CEN/TS 16157-8:2020

Intelligent transport systems - DATEX II data exchange specifications for traffic management and information - Part 8: Traffic management publications and extensions dedicated to the urban environment

CEN/TS 17380:2019

Intelligent transport systems - Urban-ITS - 'Controlled Zone' management for UVARs using C-ITS

EN ISO 24534-3:2016

Intelligent transport systems - Automatic vehicle and equipment identification - Electronic registration identification (ERI) for vehicles - Part 3: Vehicle data (ISO 24534-3:2016)

CEN ISO/TS 18234-7:2013

Intelligent transport systems - Traffic and travel information via transport protocol experts group, generation 1 (TPEG1) binary data format - Part 7: Parking information (TPEG1-PKI) (ISO/TS 18234-7.2013)

CEN ISO/TR 24014-3:2013

Public transport - Interoperable fare management system - Part 3: Complementary concepts to Part 1 for multi-application media (ISO/TR 24014-3:2013)

CEN/TS 16702-1:2020

Electronic fee collection - Secure monitoring for autonomous toll systems - Part 1: Compliance checking

EN ISO 24534-2:2010

Automatic vehicle and equipment identification - Electronic Registration Identification (ERI) for vehicles - Part 2: Operational requirements (ISO 24534-2:2010)

EN ISO 13141:2015

Electronic fee collection - Localisation augmentation communication for autonomous systems (ISO 13141:2015)

EN ISO 14906:2018

Electronic fee collection - Application interface definition for dedicated short-range communication (ISO 14906:2018)

EN ISO 25110:2017

Electronic fee collection - Interface definition for on-board account using integrated circuit card (ICC) (ISO 25110:2017)

CEN/TR 12896-9:2019

Public transport - Reference data model - Part 9: Informative documentation

CEN ISO/TS 24530-2:2006

Traffic and Travel Information (TTI) - TTI via Transport Protocol Experts Group (TPEG) Extensible Markup Language (XML) - Part 2: tpeg-locML (ISO/TS 24530-2:2006)

CEN/TR 16152:2011

Electronic fee collection - Personalisation and mounting of first mount OBE

CEN ISO/TS 18234-1:2013

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EN ISO 24014-1:2015

Public transport - Interoperable fare management system - Part 1: Architecture (ISO 24014-1:2015)

CEN ISO/TS 17425:2016

Intelligent transport systems - Cooperative systems - Data exchange specification for in-vehicle presentation of external road and traffic related data (ISO/TS 17425:2016)

CEN ISO/TS 14907-1:2015

Electronic fee collection - Test procedures for user and fixed equipment - Part 1: Description of test procedures (ISO/TS 14907-1:2015)

EN 15876-2:2016

Electronic fee collection - Evaluation of on-board and roadside equipment for conformity to EN 15509 - Part 2: Abstract test suite

CEN/TS 16794-2:2019

Public transport - Communication between contactless readers and fare media - Part 2: Test plan for ISO/IEC 14443

CEN/TS 17313:2019

Intelligent transport systems - ESafety - Interoperability and user choice in eCall aftermarket and third party eCall services

CEN ISO/TS 21189:2019

Intelligent transport systems - Cooperative ITS - Test requirements and Protocol Implementation Conformance Statement (PICS) pro forma for CEN ISO/TS 17426 (ISO/TS 21189:2019)

EN 12896-7:2019

Public transport - Reference data model - Part 7: Driver management

EN 12896-8:2019

Public transport - Reference data model - Part 8: Management information & statistics

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Automatic vehicle and equipment identification - Electronic Registration Identification (ERI) for vehicles - Part 1: Architecture (ISO 24534-1:2010)

EN ISO 17264:2009/A1:2019

Intelligent transport systems - Automatic vehicle and equipment identification - Interfaces - Amendment 1 (ISO 17264:2009/Amd 1:2019)

CEN/TS 17154-2:2019

Electronic fee collection - Evaluation of implementation for conformity to CEN/TS 16986 - Part 2: Abstract test suite

CEN/TR 17249-1:2018

Intelligent transport systems - eSafety - Part 1: Extending eCall to other categories of vehicle

ENV 13093:1998

Public transport - Road vehicles - Driver's console mechanical interface requirements - Minimum display and keypad parameters

EN 12896-6:2019

Public transport - Reference data model - Part 6: Passenger information

EN ISO 17427-1:2018

Intelligent transport systems - Cooperative ITS - Part 1: Roles and responsibilities in the context of co-operative ITS architecture(s) (ISO 17427-1:2018)

EN 15531-3:2015

Public transport - Service interface for real-time information relating to public transport operations - Part 3: Functional service interfaces

EN ISO 17575-3:2016

Electronic fee collection - Application interface definition for autonomous systems - Part 3: Context data (ISO 17575-3:2016)

EN ISO 14823:2017

Intelligent transport systems - Graphic data dictionary (ISO 14823:2017)

EN ISO 17419:2018

Intelligent transport systems - Cooperative systems - Globally unique identification (ISO 17419:2018)

CEN/TR 17297-1:2019

Intelligent transport systems - Location referencing harmonization for Urban ITS - Part 1: State of the art and guidelines

CEN/TS 16157-4:2014

Intelligent transport systems - DATEX II data exchange specifications for traffic management and information - Part 4: Variable Message Sign (VMS) Publications

CEN/TR 16690:2014

Electronic fee collection - Guidelines for EFC applications based on in-vehicle ITS stations

EN ISO 13140-2:2016

Electronic fee collection - Evaluation of on-board and roadside equipment for conformity to ISO 13141 - Part 2: Abstract test suite (ISO 13140-2:2016)

CEN/TS 17297-2:2019

Intelligent transport systems - Location Referencing Harmonisation for Urban-ITS - Part 2: Transformation methods

EN ISO 16407-1:2017

Electronic fee collection - Evaluation of equipment for conformity to ISO 17575-1 - Part 1: Test suite structure and test purposes (ISO 16407-1:2017)

EN 15531-1:2015

Public transport - Service interface for real-time information relating to public transport operations - Part 1: Context and framework

CEN ISO/TS 17426:2016

Intelligent transport systems - Cooperative systems - Contextual speeds (ISO/TS 17426:2016)

CEN/TS 17363:2019

Intelligent transport systems - ECall optional additional data - Linked mobile phone number data concept

CEN ISO/TS 19468:2019

Intelligent transport systems - Data interfaces between centres for transport information and control systems - Platform independent model specifications for data exchange protocols for transport information and control systems (ISO/TS 19468:2019)

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EN 13149-4:2004

Public transport - Road vehicle scheduling and control systems - Part 4: General application rules for CANopen transmission buses

EN 12834:2003

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EN 12253:2004

Road transport and traffic telematics - Dedicated short-range communication - Physical layer using microwave at 5,8 GHz

EN 15509:2014

Electronic fee collection - Interoperability application profile for DSRC

EN 13149-5:2004

Public transport - Road vehicle scheduling and control systems - Part 5: CANopen cabling specifications

EN 13149-2:2004

Public transport - Road vehicle scheduling and control systems - Part 2: WORLDFIP cabling specifications

EN 13149-1:2004

Public transport - Road vehicle scheduling and control systems - Part 1: WORLDFIP definition and application rules for onboard data transmission

CEN/TS 16157-6:2015

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EN 16102:2011

Intelligent transport systems - eCall - Operating requirements for third party support

CEN/TS 16986:2016

Electronic Fee Collection - Interoperable application profiles for information exchange between Service Provision and Toll Charging

EN 12795:2003

Road transport and traffic telematics - Dedicated Short Range Communication (DSRC) - DSRC data link layer: medium access and logical link control

EN 16312:2013

Intelligent transport systems - Automatic Vehicle and Equipment Registration (AVI/AEI) - Interoperable application profile for AVI/AEI and Electronic Register Identification using dedicated short range communication

Standards under development:

CEN/TS 13149-10:2020(WI=00278514)

Public transport - Road vehicle scheduling and control systems - Part 10: Location service

CEN/TS 13149-11:2020(WI=00278515)

Public transport - Road vehicle scheduling and control systems - Part 11: Vehicle platform interface service

CEN/TS 13149-9:2020(WI=00278516)

Public transport - Road vehicle scheduling and control systems - Part 9: Time service

CEN/TS 16614-2:2020(WI=00278490)

Public transport - Network and Timetable Exchange (NeTEx) - Part 2: Public transport scheduled timetables exchange format

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Intelligent transport systems - Urban ITS - Communication interfaces and profiles for traffic management

FprCEN ISO/TS 19321(WI=00278509)

Intelligent transport systems - Cooperative ITS - Dictionary of in-vehicle information (IVI) data structures (ISO/DTS 19321:2020)

FprCEN ISO/TS 21176(WI=00278437)

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FprEN 15722(WI=00278493)

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FprEN 17358(WI=00278494)

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prCEN ISO/TR 21186-1(WI=00278545)

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prCEN ISO/TR 21186-3(WI=00278547)

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prCEN ISO/TS 17429-2 rev(WI=00278549)

Cooperative intelligent transport systems (C-ITS) - ITS station facility services - Part 2: Facility services handler

prCEN ISO/TS 17429-3 rev(WI=00278550)

Cooperative intelligent transport systems (C-ITS) - ITS station facility services - Part 3: Content subscription handler

prCEN ISO/TS 21184(WI=00278439)

Cooperative intelligent transport systems (C-ITS) - Global transport data management (GTDM) framework

prCEN/TR XXX(WI=00278543)

Electronic fee collection - EETS gap analysis and proposed standards roadmap

prCEN/TS 15531-4 rev(WI=00278553)

Public transport - Service interface for real-time information relating to public transport operations - Part 4: Functional service interfaces: Facility monitoring

prCEN/TS 15531-5 rev(WI=00278483)

Public transport - Service interface for real-time information relating to public transport operations - Part 5: Functional service interfaces: Situation exchange

prCEN/TS 15531-5 rev(WI=00278554)

Public transport - Service interface for real-time information relating to public transport operations - Part 5: Functional service interfaces: Situation exchange

prCEN/TS 16157-6 rev(WI=00278533)

Intelligent transport systems - DATEX II data exchange specifications for traffic management and information - Part 6: Parking publications

prCEN/TS 17249-6 rev(WI=00278538)

Intelligent transport systems - eSafety - Part 6: eCall for UNECE Category L2, L4, L5, L6 and L7 tricycles and quadricycles

prCEN/TS 17496(WI=00278440)

Cooperative intelligent transport systems - Communication profiles

prEN 15509 rev(WI=00278559)

Electronic fee collection - Interoperability application profile for DSRC

prEN 15531-1 rev(WI=00278556)

Public transport - Service interface for real-time information relating to public transport operations - Part 1: Context and framework

prEN 15531-2 rev(WI=00278555)

Public transport - Service interface for real-time information relating to public transport operations - Part 2: Communications infrastructure

prEN 15531-3 rev(WI=00278557)

Public transport - Service interface for real-time information relating to public transport operations - Part 3: Functional service interfaces

prEN 16062 rev(WI=00278560)

Intelligent transport systems - ESafety - eCall high level application requirements (HLAP) using GSM/UMTS circuit switched networks (2020)

prEN 16072 rev(WI=00278561)

Intelligent transport systems - ESafety - Pan-European eCall operating requirements (2020)

prEN 16157-4(WI=00278503)

Intelligent transport systems - DATEX II data exchange specifications for traffic management and information - Part 4: VMS publication

prEN ISO 12855 rev(WI=00278527)

Electronic fee collection - Information exchange between service provision and toll charging

prEN ISO 13143-1(WI=00278529)

Electronic fee collection - Evaluation of on-board and roadside equipment for conformity to ISO 12813 - Part 1: Test suite structure and test purposes (ISO/DIS 13143-1:2019)

prEN ISO 14819-1(WI=00278504)

Intelligent transport systems - Traffic and travel information messages via traffic message coding - Part 1: Coding protocol for Radio Data System - Traffic Message Channel (RDS-TMC) using ALERT-C (ISO/DIS 14819-1:2019)

prEN ISO 14819-2(WI=00278505)

Intelligent transport systems - Traffic and travel information messages via traffic message coding - Part 2: Event and information codes for Radio Data System - Traffic Message Channel (RDS-TMC) using ALERT-C (ISO/DIS 14819-2:2019)

prEN ISO 14819-3(WI=00278506)

Intelligent transport systems - Traffic and travel information messages via traffic message coding - Part 3: Location referencing for Radio Data System - Traffic Message Channel (RDS-TMC) using ALERT-C (ISO/DIS 14819-3:2019)

prEN ISO 14823-1 rev(WI=00278510)

Intelligent transport systems - Graphic data dictionary - Part 1: Specification

prEN ISO 14907-1(WI=00278531)

Electronic fee collection - Test procedures for user and fixed equipment - Part 1: Description of test procedures (ISO/DIS 14907-1:2019)

prEN ISO 19299(WI=00278532)

Electronic fee collection - Security framework (ISO/DIS 19299:2019)

prEN ISO 22418(WI=00278508)

Intelligent transport systems - Fast service announcement protocol (FSAP) for general purposes in ITS (ISO/DIS 22418:2019)

prEN ISO 24014-1(WI=00278435)

Public transport - Interoperable fare management system - Part 1: Architecture (ISO/DIS 24014-1:2020)

(WI=00278541) XXXXX-6

Intelligent transport systems - eSafety - Aftermarket eCall for L vehicle categories (Powered 2/3/4 Wheel) vehicles -rider based

(WI=00278450)

Public transport - Interoperable fare management system - Back Office Interface

(WI=00278558)

Intelligent transport systems - DATEX II data exchange specifications for traffic management and information - Part 11: Management of Electronic Traffic Regulations (METR) publication

(WI=00278472)

Intelligent transport systems - Management for Electronic Traffic Regulations (METR) - Part 1: General concept and architecture

(WI=00278536) XXXXX-3

Intelligent transport systems – eSafety - Aftermarket eCall for M2 and M3 vehicle categories buses and coaches

(WI=00278512)

Intelligent transport systems - eSafety – eCall TPSP-PSAP CAP data format

(WI=00278519)

Intelligent transport systems - eSafety - eCall end to end conformance tests for P2WV, quadricycles and tricycles

(WI=00278552)

Intelligent transport systems - DATEX II data exchange specifications for traffic management and information - Part 10: Energy infrastructure publication

(WI=00278517)

Intelligent transport systems - eSafety - eCall interface between PSAPS and dangerous goods or transport databases

(WI=00278511)

Intelligent transport systems - eSafety – eCall TPSP-PSAP data sharing exchange mechanism

(WI=00278427)

Intelligent transport systems - Urban ITS - European ITS communications and information protocols

(WI=00278430)

Intelligent transport systems - Aftermarket eCall

(WI=00278542) CEN ISO 14827-4

Transport information and control systems - Data interfaces between centres for transport information and control systems - Part 4: Data interfaces between centres for intelligent transport systems (ITS) using XML (Profile B)

(WI=00278539) XXXXX-4

Intelligent transport systems - eSafety - Aftermarket eCall for UNECE categories for agricultural and forestry vehicles and equipment

(WI=00278540)

Electronic fee collection – Pre-study on the use of vehicle license plate information and automatic number plate recognition (ANPR) technologies

(WI=00278534) XXXXX-5

Intelligent transport systems - eSafety - Aftermarket eCall for category L1 & L3 (P2WV) vehicles

(WI=00278535) XXXXX-1

Intelligent transport systems - eSafety - Aftermarket eCall for UNECE category M1/N1 vehicles

(WI=00278537) XXXXX-2

Intelligent transport systems - eSafety - Aftermarket eCall for large goods vehicles (UNECE Category N2 and N3) and other commercial vehicles

3.2.2 CEN/CLC/ETSI/SEG-CG - CEN-CENELEC-ETSI Coordination Group on Smart Energy Grids

Keywords:

Smart Grids, Electrical energy supply, Clean Energy Package, Interoperability, Dissemination, Smart Grid Information Security, Sustainable Processes

Scope:

There is no information on the website.

Standards:

There are not any published standards.

Standards under development:

CEN/CLC/ETSI/prTR 50690 (WI=65707)
Set of Standards

CEN/CLC/ETSI/prTR 50691 (WI=65708)
Cyber Security and Privacy

3.2.3 CEN/TC 465 - Sustainable and Smart Cities and Communities

Keywords:

Smart Cities

Scope:

Standarisation in the field of Sustainable and Smart Cities and Communities covering the development of requirements, frameworks, guidance and supporting tools and techniques. The proposed series of standards will support the development and implementation of a holistic and integrated approach to the achievement of sustainable development and sustainability in response to the needs of European cities and communities. It is proposed that the series of standards rely on: (1) ISO's six purposes of urban development sustainability, namely resilience, attractiveness, well-being, social cohesion, preservation and improvement of environment, responsible resource use; (2) provisions for all Cities and Communities and their interested parties in both rural and urban areas; (3) the use of smart solutions as a means to achieve the sustainability of urban development.

Standards:

There are not any published standards.

Standards under development:

There are not any standards under development.

3.2.4 CEN/CLC/JTC 6 - Hydrogen in energy systems

Keywords:

Electrical energy supply, Clean Energy for transportation

Scope:

Standarisation in the field of systems, devices and connections for the production, storage, transport and distribution, measurement and use of hydrogen from renewable energy sources and other sources, in the context of the European strategy for the development and acceptance of the hydrogen market. The scope includes cross cutting items such as: terminology, Guarantee of Origin, interfaces, operational management, relevant hydrogen safety issues, training and education. Excluded are: - Storage and transport of liquid hydrogen which is covered in the scope of CEN/TC 268. - Storage and transport of compressed hydrogen, which is covered in the scope of CEN/TC 23. - Vehicle refueling stations and associated equipment and procedures as related to the standarisation Request M/533. - The injection of hydrogen and the mixture of hydrogen with natural gas (H2NG) in the gas infrastructure, which is covered in the scope of CEN/TC 234. - The use of mixtures of natural gas with hydrogen (H2NG).

Standards:

There are not any published standards

Standards under development:

There are not any standards under development.

3.2.5 CEN/CLC/JTC 13 - Cybersecurity and Data Protection

Keywords:

Cybersecurity services, **Data Protection**, Management systems and controls sets, Security evaluation and assessment, Cybersecurity services, Data Protection, Privacy and Identity Management, Product security

Scope:

Development of standards for cybersecurity and data protection covering all aspects of the evolving information society including but not limited to: - Management systems, frameworks, methodologies - Data protection and privacy - Services and products evaluation standards suitable for security assessment for large companies and small and medium enterprises (SMEs) - Competence requirements for cybersecurity and data protection - Security requirements, services, techniques and guidelines for ICT systems, services, networks and devices, including smart objects and distributed computing devices Included in the scope is the identification and possible adoption of documents already published or under development by ISO/IEC JTC 1and other SDOs and international bodies such as ISO, IEC, ITU-T, and industrial fora. Where not being developed by other SDO's, the development of cybersecurity and data protection CEN/CENELEC publications for safeguarding information such as organizational frameworks, management systems, techniques, guidelines, and products and services, including those in support of the EU Digital Single Market.

Standards:

EN ISO/IEC 27041:2016
Information technology - Security techniques - Guidance on assuring suitability and adequacy of incident investigative method (ISO/IEC 27041:2015)

EN ISO/IEC 27043:2016
Information technology - Security techniques - Incident investigation principles and processes (ISO/IEC 27043:2015)

EN ISO/IEC 27037:2016
Information technology - Security techniques - Guidelines for identification, collection, acquisition and preservation of digital evidence (ISO/IEC 27037:2012)

EN ISO/IEC 27002:2017
Information technology - Security techniques - Code of practice for information security controls (ISO/IEC 27002:2013 including Cor 1:2014 and Cor 2:2015)

EN ISO/IEC 27000:2020

Information technology - Security techniques - Information security management systems - Overview and vocabulary (ISO/IEC 27000:2018)

EN ISO/IEC 15408-3:2020
Information technology - Security techniques - Evaluation criteria for IT security - Part 3: Security assurance components (ISO/IEC 15408-3:2008)

EN ISO/IEC 18045:2020
Information technology - Security techniques - Methodology for IT security evaluation (ISO/IEC 18045:2008)
EN ISO/IEC 27019:2020
Information technology - Security techniques - Information security controls for the energy utility industry (ISO/IEC 27019:2017, Corrected version 2019-08)

EN ISO/IEC 27001:2017
Information technology - Security techniques - Information security management systems - Requirements (ISO/IEC 27001:2013 including Cor 1:2014 and Cor 2:2015)

EN ISO/IEC 15408-1:2020
Information technology - Security techniques - Evaluation criteria for IT security - Part 1: Introduction and general model (ISO/IEC 15408-1:2009)

EN ISO/IEC 15408-2:2020
Information technology - Security techniques - Evaluation criteria for IT security - Part 2: Security functional components (ISO/IEC 15408-2:2008)

EN ISO/IEC 27042:2016
Information technology - Security techniques - Guidelines for the analysis and interpretation of digital evidence (ISO/IEC 27042:2015)

EN ISO/IEC 29134:2020
Information technology - Security techniques - Guidelines for privacy impact assessment (ISO/IEC 29134:2017)

EN ISO/IEC 27038:2016
Information technology - Security techniques - Specification for digital redaction (ISO/IEC 27038:2014)

EN ISO/IEC 19790:2020
Information technology - Security techniques - Security requirements for cryptographic modules (ISO/IEC 19790:2012)

Standards under development:

EN ISO/IEC 27007:2020(WI=JT013016)

Information technology - Security techniques - Guidelines for information security management systems auditing (ISO/IEC 27007:2017)

prCEN/TR 1(WI=JT013026)
Videosurveillance

prCEN/TR 2(WI=JT013027)
Biometric for access control including face recognition

prEN 17529(WI=JT013025)
Data protection and privacy by design and by default

prEN ISO/IEC 27006(WI=JT013015)
Information technology - Security techniques - Requirements for bodies providing audit and certification of information security management systems

prEN ISO/IEC 27010(WI=JT013017)
Information technology - Security techniques - Information security management for inter-sector and inter-organizational communications (ISO/IEC 27010:2015)

prEN ISO/IEC 27011(WI=JT013018)
Information technology - Security techniques - Code of practice for Information security controls based on ISO/IEC 27002 for telecommunications organizations (ISO/IEC 27011:2016)

prEN ISO/IEC 27017(WI=JT013019)
Information technology - Security techniques - Code of practice for information security controls based on ISO/IEC 27002 for cloud services

prEN ISO/IEC 27018(WI=JT013023)
Information technology - Security techniques - Code of practice for protection of personally identifiable information (PII) in public clouds acting as PII processors (ISO/IEC 27018:2019)

prEN ISO/IEC 27701(WI=JT013030)
Security techniques - Extension to ISO/IEC 27001 and ISO/IEC 27002 for privacy information management - Requirements and guidelines

prEN ISO/IEC 29100(WI=JT013028)
Information technology - Security techniques - Privacy framework (ISO/IEC 29100:2011, including Amd 1:2018)

prEN ISO/IEC 29147(WI=JT013021)
Information technology - Security techniques - Vulnerability disclosure (ISO/IEC 29147:2018)

prEN ISO/IEC 30111(WI=JT013022)

Information technology - Security techniques - Vulnerability handling processes (ISO/IEC 30111:2019)

prEN XXX(WI=JT013031)
Managed Security Services Providers Requirements

prEN XXX(WI=JT013032)
Requirements for professional profiles related to personal data processing and protection

prEN XXXXX(WI=JT013029)
Cybersecurity evaluation methodology for ICT products

3.2.6 CEN/TC 301 - Road vehicles

Keywords:

Road vehicles, Safety of roller brake testers, Safety of machines for mounting and demounting vehicles tyres, Performance assessment of the Portable Emission Measuring Systems (PEMS), Vehicle OBD, repair and maintenance information, Supplementary grip devices

Scope:

Preparation of road vehicle European Standards answering essentially to European mandates. Since the automotive industry is acting globally, the international level (ISO/TC 22 Road vehicles) shall have top priority for any other standarisation projects.

Standards:

EN ISO 18541-1:2014
Road vehicles - StandardisedStandardised access to automotive repair and maintenance information (RMI) - Part 1: General information and use case definition (ISO 18541-1:2014)

EN ISO 18541-2:2014
Road vehicles - StandardisedStandardised access to automotive repair and maintenance information (RMI) - Part 2: Technical requirements (ISO 18541-2:2014)

EN ISO 18541-4:2015
Road vehicles - StandardisedStandardised access to automotive repair and maintenance information (RMI) - Part 4: Conformance test (ISO 18541-4:2015)

EN ISO 15118-2:2016 Road vehicles - Vehicle-to-grid communication Interface - Part 2: Network and applic
ation protocol requirements (ISO 15118-2:2014)

EN ISO 15118-3:2016
Road vehicles - Vehicle to grid Communication interface - Part 3: Physical and data link layer requirements (ISO 15118-3:2015)

EN ISO 14469:2017
Road vehicles - Compressed natural gas (CNG) refuelling connector (ISO 14469:2017)

EN ISO 18246:2017
Electrically propelled mopeds and motorcycles - Safety requirements for conductive connection to an external electric power supply (ISO 18246:2015)

EN ISO 12617:2017

Road vehicles - Liquefied natural gas (LNG) refuelling connector - 3,1 MPa connector (ISO 12617:2015, Corrected version 2016-01-15)

EN ISO 15118-4:2019
Road vehicles - Vehicle to grid communication interface - Part 4: Network and application protocol conformance test (ISO 15118-4:2018)

EN ISO 17409:2020
Electrically propelled road vehicles - Conductive power transfer - Safety requirements (ISO 17409:2020)

EN ISO 15118-8:2019
Road vehicles - Vehicle to grid communication interface - Part 8: Physical layer and data link layer requirements for wireless communication (ISO 15118-8:2018)

EN ISO 18243:2019
Electrically propelled mopeds and motorcycles - Test specifications and safety requirements for lithium-ion battery systems (ISO 18243:2017)

EN 17186:2019
Identification of vehicles and infrastructures compatibility - Graphical expression for consumer information on EV power supply

EN ISO 15118-5:2019
Road vehicles - Vehicle to grid communication interface - Part 5: Physical layer and data link layer conformance test (ISO 15118-5:2018)

EN ISO 18541-6:2018
Road vehicles - Standardised access to automotive repair and maintenance information (RMI) - Part 6: L-Category vehicle specific RMI use cases and requirements (ISO 18541-6:2018, Corrected version 2018-05)

EN ISO 18541-5:2018
Road vehicles - Standardised access to automotive repair and maintenance information (RMI) - Part 5: Heavy duty specific provision (ISO 18541-5:2018)

EN ISO 15118-1:2019
Road vehicles - Vehicle to grid communication interface - Part 1: General information and use-case definition (ISO 15118-1:2019)

EN 12645:2014
Tyre pressure measuring instruments - Devices for inspection of pressure and/or inflation / deflation of tyres for motor vehicles - Metrology, requirements and testing

EN ISO 16380:2018

Road vehicles - Blended fuels refuelling connector (ISO 16380:2014, including Amd 1:2016)

EN 16882:2016
Road vehicles - Security of the mechanical seals used on tachographs - Requirements and test procedures

EN ISO 18542-1:2012
Road vehicles - Standardised repair and maintenance information (RMI) terminology - Part 1: General information and use case definition (ISO 18542-1:2012)

EN ISO 18541-3:2014
Road vehicles - Standardised access to automotive repair and maintenance information (RMI) - Part 3: Functional user interface requirements (ISO 18541-3:2014)

EN ISO 18542-2:2014
Road vehicles - Standardised repair and maintenance information (RMI) terminology - Part 2: Standardised process implementation requirements, Registration Authority (ISO 18542-2:2014)

EN 16661:2015
Road vehicles and Tyre Pressure Gauges (TPG) - Interoperability between Tyre Information Systems (TIS) and TPG - Interfaces and Requirements

Standards under development:
EN 16662-1:2020(WI=00301058)
Road vehicles - Supplementary grip devices for tyres of passenger cars and light duty vehicles - Part 1: General safety and performance requirements

EN ISO 18243:2019/prA1(WI=00301075)
Electrically propelled mopeds and motorcycles - Test specifications and safety requirements for lithium-ion battery systems - Amendment 1 (ISO 18243:2017/DAM 1:2019)

FprEN 17003(WI=00301043)
Road vehicles - Roller brake testers for vehicles of more than 3,5 tons GVW - Safety requirements

FprEN 17347(WI=00301066)
Road vehicles - Machines for mounting and demounting vehicle tyres - Safety requirements

prEN 17507(WI=00301067)
Road Vehicles - Portable Emission Measuring Systems (PEMS) - Performance Assessment
prEN ISO 15118-20(WI=00301072)
Road vehicles - Vehicle to grid communication interface - Part 20: 2nd generation network and application protocol requirements

prEN ISO 15118-4 rev(WI=00301077)

Road vehicles - Vehicle to grid communication interface - Part 4: Network and application protocol conformance test

prEN ISO 15118-8 rev(WI=00301076)
Road vehicles - Vehicle to grid communication interface - Part 8: Physical layer and data link layer requirements for wireless communication

prEN ISO 18246 rev(WI=00301074)
Electrically propelled mopeds and motorcycles - Safety requirements for conductive connection to an external electric power supply

prEN ISO 18541-1 rev(WI=00301068)
Road vehicles - Standardised access to automotive repair and maintenance information (RMI) - Part 1: General information and use case definition

prEN ISO 18541-2 rev(WI=00301069)
Road vehicles - Standardised access to automotive repair and maintenance information (RMI) - Part 2: Technical requirements

prEN ISO 18541-3 rev(WI=00301070)
Road vehicles - Standardised access to automotive repair and maintenance information (RMI) - Part 3: Functional user interface requirements

prEN ISO 18541-4 rev(WI=00301071)
Road vehicles - Standardised access to automotive repair and maintenance information (RMI) - Part 4: Conformance test

prEN ISO 19363(WI=00301048)
Electrically propelled vehicles - Magnetic field wireless power transfer - Safety and interoperability requirements

prEN ISO 21058(WI=00301078)
Road vehicles -- Dimethyl Ether (DME) refuelling connector

(WI=00301061)
Road vehicles - Supplementary grip devices for tyres of passenger cars and light duty vehicles - Part 4 : Specific test procedures for net Supplementary grip devices

(WI=00301059)
Road vehicles - Supplementary grip devices for tyres of passenger cars and light duty vehicles - Part 2 : Specific test procedures for metallic SGDs - prEN 16662-2

(WI=00301062)

Road vehicles - Supplementary grip devices for tyres of passenger cars and light duty vehicles - Part 5: Specific test procedures for polymer/polymer hybrid Supplementary grip devices - prEN 16662-5

(WI=00301060)
Road vehicles - Supplementary grip devices for tyres of passenger cars and light duty vehicles - Part 3 : Specific test procedures for fabric Supplementary grip devices

3.2.7 CEN/TC 337 - Road operation equipment and products

Keywords:

Road vehicles, Winter service equipment and products, Road service area maintenance equipment, Interface between vehicles and equipment, Road surface cleaning equipment

Scope:

European standardisation on the terminology and functional specifications of winter maintenance equipment and road service maintenance equipment for roads, motorways, airbases and their testing for assessment of the equipment performance, excluding safety aspects.

Standards:

CEN/TS 15366:2009
Winter and road service area maintenance equipment - Solid absorbents intended for road usage

EN 16811-1:2016
Winter service equipment and products - De-icing agents - Part 1: Sodium chloride - Requirements and test methods

EN 16811-2:2016
Winter service equipment and products - De-icing agents - Part 2: Calcium chloride and Magnesium chloride - Requirements and test methods

EN 15430-1:2015
Winter and road service area maintenance equipment - Data acquisition and transmission - Part 1: In-vehicle data acquisition

EN 15436-2:2015
Road service area maintenance equipment - Part 2: Performance assessment

EN 15436-3:2015
Road service area maintenance equipment - Part 3: Classification

CEN/TS 15518-4:2013
Winter maintenance equipment - Road weather information systems - Part 4: Test methods for stationary equipment

EN 15429-4:2015
Sweepers - Part 4: Symbols for operator controls and other displays

CEN/TS 15430-2:2012

Winter and road service area maintenance equipment - Data acquisition and transmission - Part 2: Protocol for data transfer between information supplier and client application server

EN 15597-1:2020
Winter maintenance equipment - Spreading and spraying machines - Part 1: General requirements and definitions

EN 15597-2:2019
Winter maintenance equipment - Spreading and spraying machines - Part 2: Requirements for distribution and their test

EN 15518-3:2011
Winter maintenance equipment - Road weather information systems - Part 3: Requirements on measured values of stationary equipments

EN 15429-3:2015
Sweepers - Part 3: Efficiency of particulate matter collection - Testing and Evaluation

CEN/TS 16811-3:2015
Winter service equipment and products - De-icing agents - Part 3: Other solid and liquid de-icing agents - Requirements and test methods

EN 15431:2008
Winter and road service area maintenance equipments - Power system and related controls - Interchangeability and performance requirements

EN 15432-1:2011
Winter and road service area maintenance equipments - Front-mounted equipments - Part 1: Fixed front mounting plates

EN 15436-4:2009
Road service area maintenance equipment - Part 4: Delivery acceptance of the machines by the users

EN 15436-1:2008
Road service area maintenance equipment - Part 1: Terminology

EN 15518-2:2011
Winter maintenance equipment - Road weather information systems - Part 2: Road weather - Recommended observation and forecast

EN 15583-2:2012
Winter maintenance equipment - Snow ploughs - Part 2: Testing criteria and their requirements

EN 15144:2007

Winter maintenance equipment - Terminology - Terms for winter maintenance

EN 15583-1:2009
Winter maintenance equipment - Snow ploughs - Part 1: Product description and requirements

EN 15518-1:2011
Winter maintenance equipment - Road weather information systems - Part 1: Global definitions and components

EN 15429-1:2007
Sweepers - Part 1: Classification and Terminology

EN 15432-2:2013
Winter and road service area maintenance equipments - Front-mounted equipments - Part 2: Interchangeability on lifting systems

EN 15906:2011
Winter maintenance equipment - Snow removal machines with rotating tools - Specification and clearing capacity

EN 16330:2013
Winter and road service area equipment - Power system and related controls - Power hydraulic system and electric interfaces

EN 15429-2:2012
Sweepers - Part 2: Performance requirements and test methods

Standards under development:

prCEN/TS 15518-6(WI=00337055)
Winter maintenance equipment - Road weather information systems - Part 6: Requirements on mobile equipment

prEN 15518-3 rev(WI=00337057)
Winter maintenance equipment - Road weather information systems - Part 3: Requirements on measured values of stationary equipments

prEN 17443(WI=00337060)
Winter service equipment - Brine production systems - Requirements and test methods

(WI=00337058)
Road weather information systems - Verification of the freezing temperature of test solutions - Estimation of the uncertainties of the test method for determining the permissible deviations for the freezing temperatura

3.2.8 CEN/TC 354 - Light motorized vehicles for the transportation of persons and goods and related facilities and not subject to type-approval for on-road use

Keywords:

Road vehicles, Single- track two wheeled motor vehicles, All Terrain Vehicles (ATV s -Quads) and Side by Side Vehicles - Safety requirements and test methods, Karts, Light electric vehicles and self-balancing vehicles

Scope:

Standarisation concerning safety, testing and performance requirements in the field of light motorized vehicles (with combustion engine or electric motor) intended for the transportation of persons and goods: go-karts, recreational and utility quads, mini quads, powered two wheelers, mini-motorcycles, dirt bikes, side-by-side vehicles, light electric vehicles and self-balancing vehicles when not subject to type-approval (i.e. covered by Machinery Directive 2006/42/EC). This Technical Committee also covers safety requirements for infrastructures when these vehicles are used, for leisure, in specific environments and protected under the responsibility of circuit operator (e.g. karting facilities). With the exclusion of: - Vehicles intended exclusively for competition, - Vehicles subject to a type-approval, - Amusement devices (e.g. rollercoasters) and toys vehicles (CEN/TC 52 "Safety of toys" and CEN/TC 152 "Fairground and amusement park machinery and structures - Safety"), - Playground equipment (CEN/TC 136 "Sports, playground and other recreational facilities and equipment"), - Vehicles designed for medical use or under medical supervision, - Cycles, their components and accessories (covered by CEN/TC 333 "Cycles").

Standards:

EN 15997:2011 (WI=00354002)
All terrain vehicles (ATVs - Quads) - Safety requirements and test methods

EN 15997:2011/AC:2012 (WI=00354C01)
All terrain vehicles (ATVs - Quads) - Safety requirements and test methods

EN 16029:2012 (WI=00354001)
Ride-on, motorized vehicles intended for the transportation of persons and not intended for use on public roads - Single-track two-wheel motor vehicles - Safety requirements and test methods

EN 16230-1:2013+A1:2014 (WI=00354008)
Leisure karts - Part 1: Safety requirements and test methods for karts

EN 16230-2:2016 (WI=00354005)
Leisure karts - Part 2: Safety requirements for karting facilities

Standards under development:

EN 16990:2020 (WI=00354004)
Light motorized vehicles for the transportation of persons and goods and related facilities and not subject to type-approval for on-road use - Side by Side Vehicles - Safety requirements and test methods

FprEN 17128 (WI=00354006)
Light motorized vehicles for the transportation of persons and goods and related facilities and not subject to type-approval for on-road use - Personal light electric vehicles (PLEV) - Safety requirements and test methods

3.2.9 CEN/TC 333 - Cycles

Keywords:

Road vehicles, Cycles for common use and bicycle trailers, Cycle locks,   Electric power assisted cycles, BMX – bicycles, Innovative materials used in the manufacturing of bicycles, Cargo bikes

Scope:

Standarisation in the field of cycles, their components and accessories with particular reference to requirements for safety, testing methods and terminology, excluding toy cycles (covered by CEN/TC 52). "Cycle" means any vehicle which has at least two wheels and is propelled by means of pedals and or hand-cranks

Standards:

EN 15532:2008/AC:2009
Cycles - Terminology

CEN/TR 16041:2010
Bicycles - Replies to requests for interpretation of EN 14764

CEN/TR 16043:2010
Bicycles - Replies to requests for interpretation of EN 14766

EN ISO 4210-3:2014
Cycles - Safety requirements for bicycles - Part 3: Common test methods (ISO 4210-3:2014)

EN ISO 4210-4:2014
Cycles - Safety requirements for bicycles - Part 4: Braking test methods (ISO 4210-4:2014)

EN ISO 4210-7:2014
Cycles - Safety requirements for bicycles - Part 7: Wheels and rims test methods (ISO 4210-7:2014)

EN ISO 4210-8:2014
Cycles - Safety requirements for bicycles - Part 8: Pedal and drive system test methods (ISO 4210-8:2014)

EN ISO 4210-9:2014
Cycles - Safety requirements for bicycles - Part 9: Saddles and seat-post test methods (ISO 4210-9:2014)

EN ISO 4210-1:2014

Cycles - Safety requirements for bicycles - Part 1: Terms and definitions (ISO 4210-1:2014)

EN ISO 4210-2:2015
Cycles - Safety requirements for bicycles - Part 2: Requirements for city and trekking, young adult, mountain and racing bicycles (ISO 4210-2:2015)

EN ISO 4210-6:2015
Cycles - Safety requirements for bicycles - Part 6: Frame and fork test methods (ISO 4210-6:2015)

CEN/TR 16042:2010
Bicycles - Replies to requests for interpretation of EN 14765

EN 15532:2008
Cycles - Terminology

EN 15918:2011+A2:2017
Cycles - Cycle trailers - Safety requirements and test methods

EN ISO 11243:2016
Cycles - Luggage carriers for bicycles - Requirements and test methods (ISO 11243:2016)

CEN/TR 16044:2010
Bicycles - Replies to requests for interpretation of EN 14781

EN 16054:2012
BMX bicycles - Safety requirements and test methods

EN ISO 4210-5:2014
Cycles - Safety requirements for bicycles - Part 5: Steering test methods (ISO 4210-5:2014, Corrected version 2015-02-01)

CEN/TR 17112:2017
Cycles - Composite material used in bicycles - Specific tests suitable for components manufactured from composite materials

EN ISO 8098:2014
Cycles - Safety requirements for bicycles for young children (ISO 8098:2014)

EN 15194:2017
Cycles - Electrically power assisted cycles - EPAC Bicycles

EN 15496:2008
Cycles - Requirements and test methods for cycle locks

Standards under development:

EN 17406:2020(WI=00333044)
Classification for bicycles usage

prCEN/TR(WI=00333058)
Cycles - Composite material used in bicycles - New specific tests suitable for components manufactured from composite materials

prEN 15496 rev(WI=00333047)
Cycles - Requirements and test methods for cycle locks

prEN 17404(WI=00333043)
Cycles - Electrically power assisted cycles - EPAC Mountain bikes

prEN ISO 11243 rev(WI=00333046)
Cycles - Luggage carriers for bicycles - Requirements and test methods

prEN ISO 4210-1 rev(WI=00333048)
Cycles - Safety requirements for bicycles - Part 1: Terms and definitions

prEN ISO 4210-2 rev(WI=00333049)
Cycles - Safety requirements for bicycles - Part 2: Requirements for city and trekking, young adult, mountain and racing bicycles

prEN ISO 4210-3 rev(WI=00333050)
Cycles - Safety requirements for bicycles - Part 3: Common test methods

prEN ISO 4210-4 rev(WI=00333051)
Cycles - Safety requirements for bicycles - Part 4: Braking test methods

prEN ISO 4210-5 rev(WI=00333052)
Cycles - Safety requirements for bicycles - Part 5: Steering test methods

prEN ISO 4210-6 rev(WI=00333053)
Cycles - Safety requirements for bicycles - Part 6: Frame and fork test methods

prEN ISO 4210-7 rev(WI=00333054)
Cycles - Safety requirements for bicycles - Part 7: Wheels and rims test methods

prEN ISO 4210-8 rev(WI=00333055)
Cycles - Safety requirements for bicycles - Part 8: Pedal and drive system test methods

prEN ISO 4210-9 rev(WI=00333056)
Cycles - Safety requirements for bicycles - Part 9: Saddles and seat-post test methods

prEN ISO 8098 rev(WI=00333057)
Cycles - Safety requirements for bicycles for young children

(WI=00333045)
Cargo bikes - Safety requirements and tests methods

3.2.10 CEN/TC 294 - Communication systems for meters

Keywords:

Mobile Telecommunications, Application layer for communication systems for and remote reading of all meters within the scope, Data exchange for meters on bus-systems and interface, Radio meter data Exchange, Wireless mesh networking - Communication systems for meter data Exchange

Scope:

Standarisation of communication interfaces for systems with meters and remote reading of meters for all kind of fluids and energies distributed by network. Secure communication covering data privacy as an inherent property, providing a scalable mechanism for security services, data integrity, authentication and confidentiality. Cooperation with CENELEC and ETSI for consistent interface definitions as essential condition for achieving interoperability between entities in systems.

Standards:

CEN/TR 17167:2018 (WI=00294026)
Communication system for meters - Accompanying TR to EN 13757-2,-3 and -7, Examples and supplementary information

EN 13757-1:2014 (WI=00294013)
Communication systems for meters - Part 1: Data exchange

EN 13757-2:2018 (WI=00294024)
Communication systems for meters - Part 2: Wired M-Bus communication

EN 13757-3:2018 (WI=00294023)
Communication systems for meters - Part 3: Application protocols

EN 13757-4:2019 (WI=00294022)
Communication systems for meters - Part 4: Wireless M-Bus communication

EN 13757-5:2015 (WI=00294015)
Communication systems for meters - Part 5: Wireless M-Bus relaying

EN 13757-6:2015 (WI=00294019)
Communication systems for meters - Part 6: Local Bus

EN 13757-7:2018 (WI=00294025)
Communication systems for meters - Part 7: Transport and security services

EN 1434-3:2015 (WI=00294020)
Heat meters - Part 3: Data exchange and interfaces

EN 16836-1:2016 (WI=00294016)
Communication systems for meters - Wireless mesh networking for meter data exchange - Part 1: Introduction and standarisation framework   2016-11-16

EN 16836-2:2016 (WI=00294017)
Communication systems for meters - Wireless mesh networking for meter data exchange - Part 2: Networking layer and stack specification   2016-11-16

EN 16836-3:2016 (WI=00294018)
Communication systems for meters - Wireless mesh networking for meter data exchange - Part 3: Energy profile specification dedicated application layer

Standards under development:
prEN 13757-1 (WI=00294027)
Communication systems for meters - Part 1: Data exchange

3.2.11 CEN/TC 225 - AIDC technologies

Keywords:

Information technology, **RFID**, Automatic ID applications, **Interoperability**

Scope:

Standarisation of data carriers for automatic identification and data capture, of the data element architecture therefore, of the necessary test specifications and of technical features for the harmonization of cross-sector applications. Establishment of an appropriate system of registration authorities, and of means to ensure the necessary maintenance of standards.

Standards:

EN ISO/IEC 15423:2010
Information technology - Automatic identification and data capture techniques - Bar code scanner and decoder performance testing (ISO/IEC 15423:2009)

EN ISO/IEC 15419:2010
Information technology - Automatic identification and data capture techniques - Bar code digital imaging and printing performance testing (ISO/IEC 15419:2009)

CEN/TR 16669:2014
Information technology - Device interface to support ISO/IEC 18000-3

CEN/TR 16670:2014
Information technology - RFID threat and vulnerability analysis

CEN/TR 16684:2014
Information technology - Notification of RFID - Additional information to be provided by operators

CEN/TS 16685:2014
Information technology - Notification of RFID - The information sign to be displayed in areas where RFID interrogators are deployed

CEN/TR 16673:2014
Information technology - RFID privacy impact assessment analysis for specific sectors

EN 1573:2015
Bar code - Multi industry transport label

EN ISO/IEC 15421:2001

Information technology - Automatic identification and data capture techniques - Bar code master test specifications (ISO/IEC 15421:2000)

CEN/TR 16671:2014
Information technology - Authorization of mobile phones when used as RFID interrogators

EN 17071:2019
Information technology - Automatic identification and data capture techniques - Electronic identification plate

EN 17099:2020
Information technology - Fishery and aquaculture products - Requirements for labelling of distribution units and pallets in the trade of fishery and aquaculture products

CEN/TR 16674:2014
Information technology - Analysis of privacy impact assessment methodologies relevant to RFID

EN ISO/IEC 19762-1:2012
Information technology - Automatic identification and data capture (AIDC) techniques - Harmonized vocabulary - Part 1: General terms relating to AIDC (ISO/IEC 19762-1:2008)

EN ISO/IEC 15416:2001
Information technology - Automatic identification and data capture techniques - Bar code print quality test specification - Linear symbols (ISO/IEC 15416:2000)

EN ISO/IEC 15438:2010
Information technology - Automatic identification and data capture techniques - PDF417 bar code symbology specification (ISO/IEC 15438:2006)

EN ISO/IEC 19762-3:2012
Information technology - Automatic identification and data capture (AIDC) techniques - Harmonized vocabulary - Part 3: Radio frequency identification (RFID) (ISO/IEC 19762-3:2008)

EN ISO/IEC 15426-2:2006
Information technology - Automatic identification and data capture techniques - Bar code verifier conformance specification - Part 2: Two-dimensional symbols (ISO/IEC 15426-2:2005)

EN ISO/IEC 15426-2:2006/AC:2011
Information technology - Automatic identification and data capture techniques - Bar code verifier conformance specification - Part 2: Two-dimensional symbols - Technical Corrigendum 1 (ISO/IEC 15426-2:2005/Cor 1:2008)

CEN/TR 16672:2014
Information technology - Privacy capability features of current RFID technologies

EN 606:2004
Bar coding - Transport and handling labels for steel products

EN 16570:2014
Information technology - Notification of RFID - The information sign and additional information to be provided by operators of RFID application systems

EN 841:1995
Bar coding - Symbology specifications - Format Description

EN 1649:2004
AIDC technologies - Operational aspects affecting the reading of bar code symbols

EN 1556:1998
Bar coding - Terminology

EN 16656:2014
Information technology - Radio frequency identification for item management - RFID Emblem (ISO/IEC 29160:2012, modified)

EN 12323:2005
AIDC technologies - Symbology specifications - Code 16K

EN 16571:2014
Information technology - RFID privacy impact assessment process

Standards under development:
EN 17230:2020 (WI=00225085)
Information technology - RFID in rail

3.2.12 CEN/WS SCS - Description and Assessment of Good Practices for Smart City Solutions

Keywords:

Smart Cities

Scope:

This Workshop will develop a CEN Workshop Agreement (CWA), which will define requirements to describe and evaluate good practices of Smart City Solutions. This document shall support the decision making of stakeholders of (Smart) Cities (e.g. municipalities, municipal service companies, investors, politics). Finding an adequate terminology. Identifying good practice description criteria. Classifying description criteria. Creating a template based on this set of criteria

Standards:

CWA 17381:2019 (WI=WSSCS001)
The Description and Assessment of Good Practices for Smart City solutions

Standards under development:

There are not any standards under development.

3.2.13 CEN/TC 353 - Information and Communication Technologies for Learning, Education and Training

Keywords:

Mobile Telecommunications

Scope:

Produce standards in the field of information and communication technologies relating to learning, education and training. The European Standards (EN), Technical Specifications (TS) and Technical Reports (TR) that are developed will have a well-defined European scope. These may include: - Development of CWAs and other specifications into standards, if appropriate - Developments of national standards into European Standards

Standards:

EN ISO/IEC 19796-1:2009
Information technology - Learning, education and training - Quality management, assurance and metrics - Part 1: General approach (ISO/IEC 19796-1:2005)

EN ISO/IEC 19788-1:2012
Information technology - Learning, education and training - Metadata for learning resources - Part 1: Framework (ISO/IEC 19788-1:2011)

EN 15981:2011/AC:2013
European Learner Mobility - Achievement information (EuroLMAI)

EN ISO/IEC 19788-3:2013
Information technology - Learning, education and training - Metadata for learning resources - Part 3: Basic application profile (ISO/IEC 19788-3:2011)

EN 15981:2011
European Learner Mobility - Achievement information (EuroLMAI)

EN 15982:2011
Metadata for Learning Opportunities (MLO) - Advertising

EN ISO/IEC 19788-5:2014
Information technology - Learning, education and training - Metadata for learning resources - Part 5: Educational elements (ISO/IEC 19788-5:2012)

EN ISO/IEC 19788-2:2012

Information technology - Learning, education and training - Metadata for learning resources - Part 2: Dublin Core elements (ISO/IEC 19788-2:2011)

EN 15943:2011
Curriculum Exchange Format (CEF) - Data model

EN 16425:2014
Simple Publishing Interface

Standards under development:

There are not any standards under development.

3.2.14 CEN/TC 326 - Natural gas vehicles - Fuelling and operation

Keywords:

Clean Energy for transportation, CNG fuelling stations, CNG vehicle use and operation, LNG fuelling stations, LNG vehicle use and operation, NGV fuelling appliances

Scope:

The work covers the design, construction, operation, inspection, safety and maintenance of fuelling stations and facilities for natural gas vehicles (NGV's). It includes natural gas and biomethane in compressed (CNG) or liquefied (LNG) form and covers the operational aspects of NGV's during their life cycle.

Standards:

CEN/TR 17452:2020
Natural gas fuelling stations — Guidance for implementation of European standards on CNG and LNG stations for fuelling vehicles

EN 13423:2000
Compressed natural gas vehicle operations

EN ISO 16923:2018
Natural gas fuelling stations - CNG stations for fuelling vehicles (ISO 16923:2016)

EN ISO 16924:2018
Natural gas fuelling stations - LNG stations for fuelling vehicles (ISO 16924:2016)

Standards under development:

prEN 13423 (WI=00326010)
Natural gas vehicles - Requirements for NGV workshops and the management of compressed natural gas (CNG) vehicles

prEN 17278 (WI=00326012)
Natural gas vehicles - Vehicle fuelling appliances

3.2.15 CEN/TC 335 - Solid biofuels

Keywords:

Clean Energy for transportation

Scope:

The standarisation work on solid biofuels shall be within the following scope, in line with the EC mandate: - products from agriculture and forestry; - vegetable waste from agriculture and forestry; - vegetable waste from the food processing industry; - wood waste, with the exception of wood waste which may contain halogenated organic compounds or heavy metals as a result of treatment with wood preservatives or coating and which includes in particular such wood originating from construction and demolition waste; - cork waste. It is noted that peat is not included within the scope of the mandate and work programme.

Standards:

CEN/TR 15569:2009
Solid biofuels - A guide for a quality assurance system

CEN/TR 15149-3:2014
Solid biofuels - Determination of particle size distribution - Part 3: Rotary screen method

EN ISO 17225-4:2014
Solid biofuels - Fuel specifications and classes - Part 4: Graded wood chips (ISO 17225-4:2014)

EN ISO 17225-7:2014
Solid biofuels - Fuel specifications and classes - Part 7: Graded non-woody briquettes (ISO 17225-7:2014)

EN ISO 17225-5:2014
Solid biofuels - Fuel specifications and classes - Part 5: Graded firewood (ISO 17225-5:2014)

EN ISO 16967:2015
Solid biofuels - Determination of major elements - Al, Ca, Fe, Mg, P, K, Si, Na and Ti (ISO 16967:2015)

EN ISO 16968:2015
Solid biofuels - Determination of minor elements (ISO 16968:2015)

EN ISO 18134-3:2015
Solid biofuels - Determination of moisture content - Oven dry method - Part 3: Moisture in general analysis sample (ISO 18134-3:2015)

EN ISO 18123:2015
Solid biofuels - Determination of the content of volatile matter (ISO 18123:2015)

EN ISO 17831-1:2015
Solid biofuels - Determination of mechanical durability of pellets and briquettes - Part 1: Pellets
(ISO 17831-1:2015)

EN ISO 18122:2015
Solid biofuels - Determination of ash content (ISO 18122:2015)

EN ISO 17829:2015
Solid biofuels - Determination of length and diameter of pellets (ISO 17829:2015)

EN ISO 17831-2:2015
Solid biofuels - Determination of mechanical durability of pellets and briquettes - Part 2:
Briquettes (ISO 17831-2:2015)

EN ISO 18847:2016
Solid biofuels - Determination of particle density of pellets and briquettes (ISO 18847:2016)

EN ISO 17830:2016
Solid biofuels - Particle size distribution of disintegrated pellets (ISO 17830:2016)

EN ISO 17827-1:2016
Solid biofuels - Determination of particle size distribution for uncompressed fuels - Part 1:
Oscillating screen method using sieves with apertures of 3,15 mm and above (ISO 17827-
1:2016)

EN ISO 18846:2016
Solid biofuels - Determination of fines content in quantities of pellets (ISO 18846:2016)

EN ISO 14780:2017
Solid biofuels - Sample preparation (ISO 14780:2017)

EN ISO 18135:2017
Solid Biofuels - Sampling (ISO 18135:2017)

EN ISO 20024:2020
Solid biofuels - Safe handling and storage of solid biofuel pellets in commercial and industrial
applications (ISO 20024:2020)

EN 15234-1:2011
Solid biofuels - Fuel quality assurance - Part 1: General requirements

EN ISO 16993:2016
Solid biofuels - Conversion of analytical results from one basis to another (ISO 16993:2016)

EN ISO 18134-2:2017
Solid biofuels - Determination of moisture content - Oven dry method - Part 2: Total moisture - Simplified method (ISO 18134-2:2017)

EN ISO 14780:2017/A1:2019
Solid biofuels - Sample preparation - Amendment 1 (ISO 14780:2017/Amd 1:2019)

EN ISO 21945:2020
Solid biofuels - Simplified sampling method for small scale applications (ISO 21945:2020)

EN 15234-4:2012
Solid biofuels - Fuel quality assurance - Part 4: Wood chips for non-industrial use

EN ISO 17225-3:2014
Solid biofuels - Fuel specifications and classes - Part 3: Graded wood briquettes (ISO 17225-3:2014)

EN ISO 17225-1:2014
Solid biofuels - Fuel specifications and classes - Part 1: General requirements (ISO 17225-1:2014)

EN ISO 19743:2017
Solid biofuels - Determination of content of heavy extraneous materials larger than 3,15 mm (ISO 19743:2017)

EN 15234-3:2012
Solid biofuels - Fuel quality assurance - Part 3: Wood briquettes for non-industrial use

EN ISO 18134-1:2015
Solid biofuels - Determination of moisture content - Oven dry method - Part 1: Total moisture - Reference method (ISO 18134-1:2015)

EN ISO 16559:2014
Solid biofuels - Terminology, definitions and descriptions (ISO 16559:2014)

EN ISO 16948:2015
Solid biofuels - Determination of total content of carbon, hydrogen and nitrogen (ISO 16948:2015)

EN ISO 16994:2016
Solid biofuels - Determination of total content of sulfur and chlorine (ISO 16994:2016)

EN ISO 20023:2018
Solid biofuels - Safety of solid biofuel pellets - Safe handling and storage of wood pellets in residential and other small-scale applications (ISO 20023:2018)

EN ISO 17225-6:2014
Solid biofuels - Fuel specifications and classes - Part 6: Graded non-woody pellets (ISO 17225-6:2014)

EN ISO 17827-2:2016
Solid biofuels - Determination of particle size distribution for uncompressed fuels - Part 2: Vibrating screen method using sieves with aperture of 3,15 mm and below (ISO 17827-2:2016)

EN 15234-2:2012
Solid biofuels - Fuel quality assurance - Part 2: Wood pellets for non-industrial use

EN ISO 21404:2020
Solid biofuels - Determination of ash melting behaviour (ISO 21404:2020)

EN ISO 17225-2:2014
Solid biofuels - Fuel specifications and classes - Part 2: Graded wood pellets (ISO 17225-2:2014)

EN ISO 18125:2017
Solid biofuels - Determination of calorific value (ISO 18125:2017)

EN ISO 16995:2015
Solid biofuels - Determination of the water soluble chloride, sodium and potassium content (ISO 16995:2015)

EN ISO 17828:2015
Solid biofuels - Determination of bulk density (ISO 17828:2015)

EN 15234-5:2012
Solid biofuels - Fuel quality assurance - Part 5: Firewood for non-industrial use

EN 15234-6:2012
Solid biofuels - Fuel quality assurance - Part 6: Non-woody pellets for non-industrial use

Standards under development:
EN ISO 18135:2017/prA1(WI=00335144)
Solid Biofuels - Sampling - Amendment 1

FprEN ISO 20049-1(WI=00335132)
Solid biofuels - Determination of self-heating of pelletized biofuels - Part 1: Isothermal calorimetry (ISO/FDIS 20049-1:2020)

prCEN ISO/TS 20048-1(WI=00335157)
Solid biofuels - Determination of off-gassing and oxygen depletion characteristics - Part 1: Laboratory method for the determination of off-gassing and oxygen depletion using closed containers

prCEN ISO/TS 20049-2(WI=00335154)
Solid biofuels - Determination of self-heating of pelletized biofuels - Part 2: Basket heating tests

prEN ISO 16559(WI=00335151)
Solid biofuels - Terminology, definitions and descriptions (ISO/DIS 16559:2020)

prEN ISO 17225-1(WI=00335145)
Solid biofuels - Fuel specifications and classes - Part 1: General requirements (ISO/DIS 17225-1:2020)

prEN ISO 17225-2(WI=00335146)
Solid biofuels - Fuel specifications and classes - Part 2: Graded wood pellets (ISO/DIS 17225-2:2020)

prEN ISO 17225-3(WI=00335147)
Solid biofuels - Fuel specifications and classes - Part 3: Graded wood briquettes (ISO/DIS 17225-3:2020)

prEN ISO 17225-4(WI=00335148)
Solid biofuels - Fuel specifications and classes - Part 4: Graded wood chips (ISO/DIS 17225-4:2020)

prEN ISO 17225-5 rev(WI=00335149)
Solid biofuels - Fuel specifications and classes - Part 5: Graded firewood

prEN ISO 17225-6 rev(WI=00335150)
Solid biofuels - Fuel specifications and classes - Part 6: Graded non-woody pellets

prEN ISO 17225-7 rev(WI=00335142)
Solid biofuels - Fuel specifications and classes - Part 7: Graded non-woody briquettes

prEN ISO 18846-2(WI=00335143)
Solid biofuels - Determination of fines content in quantities of pellets - Part 2: Simplified method

prEN ISO 20048-2(WI=00335155)
Solid biofuels - Determination of off-gassing and oxygen depletion characteristics - Part 2: Operational method for screening of carbon monoxide off-gassing

prEN ISO 21596(WI=00335156)

Solid biofuels — Determination of grindability — Hardgrove type method for thermally treated biomass fuels

prEN ISO 23343-1(WI=00335153)
Solid Biofuels -- Determination of sorption and its effect on durability of thermally treated biomass fuelS -- Part 1: Part 1 Pellets

(WI=00335152)   Solid biofuels — Determination of total content of sulfur and chlorine

3.2.16 CEN/TC 287 - Geographic Information

Keywords:

Availability and information

Scope:

Standardisation in the field of digital geographic information for Europe: The committee will produce a structured framework of standards and guidelines, which specify a methodology to define, describe and transfer geographic data and services. This work will be carried out in close co-operation with ISO/TC 211 in order to avoid duplication of work. The standards will support the consistent use of geographic information throughout Europe in a manner that is compatible with international usage. They will support a spatial data infrastructure at all levels in Europe.

Standards:

EN ISO 19106:2006
Geographic information - Profiles (ISO 19106:2004)

EN ISO 19133:2007
Geographic information - Location-based services - Tracking and navigation (ISO 19133:2005)

EN ISO 19128:2008
Geographic information - Web map server interface (ISO 19128:2005)

EN ISO 19126:2009
Geographic information - Feature concept dictionaries and registers (ISO 19126:2009)

EN ISO 19134:2008
Geographic information - Location-based services - Multimodal routing and navigation (ISO 19134:2007)

EN ISO 19131:2008
Geographic information - Data product specifications (ISO 19131:2007)

EN ISO 19132:2008
Geographic information - Location-based services - Reference model (ISO 19132:2007)

EN ISO 19148:2012
Geographic information - Linear referencing (ISO 19148:2012)

EN ISO 19141:2009
Geographic information - Schema for moving features (ISO 19141:2008)

EN ISO 19101-1:2014
Geographic information - Reference model - Part 1: Fundamentals (ISO 19101-1:2014)

EN ISO 6709:2009
Standard representation of geographic point location by coordinates (ISO 6709:2008, including Cor 1:2009)

EN ISO 19108:2005/AC:2008
Geographic information - Temporal schema (ISO 19108:2002/Cor 1:2006)

EN ISO 19105:2005
Geographic information - Conformance and testing (ISO 19105:2000)

EN ISO 19152:2012
Geographic information - Land Administration Domain Model (LADM) (ISO 19152:2012)

EN ISO 19157:2013
Geographic information - Data quality (ISO 19157:2013)

CEN/TR 15449-1:2012
Geographic information - Spatial data infrastructures - Part 1: Reference model

EN ISO 19143:2012
Geographic information - Filter encoding (ISO 19143:2010)

EN ISO 19144-1:2012
Geographic information - Classification systems - Part 1: Classification system structure (ISO 19144-1:2009)

CEN/TR 15449-3:2012
Geographic information - Spatial data infrastructures - Part 3: Data centric view

CEN/TR 15449-2:2012
Geographic information - Spatial data infrastructures - Part 2: Best practices

EN ISO 19156:2013
Geographic information - Observations and measurements (ISO 19156:2011)

CEN/TR 15449-4:2013
Geographic information - Spatial Data Infrastructure - Part 4: Service centric view

CEN ISO/TS 19139-1:2019
Geographic information - XML schema implementation - Part 1: Encoding rules (ISO/TS 19139-1:2019)

EN ISO 19115-2:2019
Geographic information - Metadata - Part 2: Extensions for acquisition and processing (ISO 19115-2:2019)

EN ISO 19157:2013/A1:2018
Geographic information - Data quality - Amendment 1: Describing data quality using coverages (ISO 19157:2013/Amd 1:2018)

EN ISO 19111:2020
Geographic information - Referencing by coordinates (ISO 19111:2019)

EN ISO 19136-1:2020
Geographic information - Geography Markup Language (GML) - Part 1: Fundamentals (ISO 19136-1:2020)

EN ISO 19146:2018
Geographic information - Cross-domain vocabularies (ISO 19146:2018)

EN ISO 19115-1:2014/A1:2018
Geographic information - Metadata - Part 1: Fundamentals - Amendment 1 (ISO 19115-1:2014/Amd 1:2018)

EN ISO 19144-1:2012/AC:2012
Geographic information - Classification systems - Part 1: Classification system structure - Technical Corrigendum 1 (ISO 19144-1:2009/Cor 1:2012)

EN ISO 19123:2007
Geographic information - Schema for coverage geometry and functions (ISO 19123:2005)

EN ISO 19142:2010
Geographic information - Web Feature Service (ISO 19142:2010)

EN ISO 19116:2019
Geographic information - Positioning services (ISO 19116:2019)

EN ISO 19137:2008
Geographic information - Core profile of the spatial schema (ISO 19137:2007)

EN ISO 19118:2011
Geographic information - Encoding (ISO 19118:2011)

EN ISO 19110:2016
Geographic information - Methodology for feature cataloguing (ISO 19110:2016)

EN ISO 19117:2014
Geographic information - Portrayal (ISO 19117:2012)

EN ISO 19136-2:2018
Geographic information - Geography Markup Language (GML) - Part 2: Extended schemas and encoding rules (ISO 19136-2:2015)

CEN/TR 15449-5:2015
Geographic information - Spatial data infrastructures - Part 5: Validation and testing

EN ISO 19109:2015
Geographic information - Rules for application schema (ISO 19109:2015)

EN ISO 19115-1:2014
Geographic information - Metadata - Part 1: Fundamentals (ISO 19115-1:2014)

EN ISO 19107:2019
Geographic information - Spatial schema (ISO 19107:2019)

EN ISO 19119:2016
Geographic information - Services (ISO 19119:2016)

EN ISO 19135-1:2015
Geographic information - Procedures for item registration - Part 1: Fundamentals (ISO 19135-1:2015)

EN ISO 19131:2008/A1:2011
Geographic information - Data product specifications - Amendment 1: Requirements relating to the inclusion of an application schema and feature catalogue and the treatment of coverages in an application schema (ISO 19131:2007/Amd 1:2011)

EN ISO 19112:2019
Geographic information - Spatial referencing by geographic identifiers (ISO 19112:2019)

EN ISO 19108:2005
Geographic information - Temporal schema (ISO 19108:2002)

EN ISO 19125-1:2006
Geographic information - Simple feature access - Part 1: Common architecture (ISO 19125-1:2004)

Standards under development:
EN ISO 19115-1:2014/prA2(WI=00287110)
Geographic information - Metadata - Part 1: Fundamentals (ISO 19115-1:2014/DAmd 2)

EN ISO 19115-2:2019/prA1(WI=00287105)
Geographic information - Metadata - Part 2: Extensions for acquisition and processing - Amendment 1 (ISO 19115-2:2019/DAM 1:2020)

EN ISO 19135-1:2015/prA1(WI=00287107)
Geographic information - Procedures for item registration - Part 1: Fundamentals - Amendment 1

prEN ISO 19105 rev(WI=00287099)
Geographic information - Conformance and testing

prEN ISO 19123 rev(WI=00287092)
Geographic information - Schema for coverage geometry and functions

prEN ISO 19126 rev(WI=00287108)
Geographic information - Feature concept dictionaries and registers

prEN ISO 19148 rev(WI=00287102)
Geographic information - Linear referencing

prEN ISO 19156 rev(WI=00287104)
Geographic information - Observations and measurements

prEN ISO 19157-1 rev(WI=00287109)
Geographic information - Data quality - Part 1: General requirements

prEN ISO 6709 rev(WI=00287101)
Standard representation of geographic point location by coordinates

3.2.17 CEN/TC 442 - Building Information Modelling (BIM)

Keywords:

Civil engineering, Exchange information, Information Delivery Specification, Infrastructure

Scope:

Standarisation in the field of structured semantic life-cycle information for the built environment. The committee will develop a structured set of standards, specifications and reports which specify methodologies to define, describe, exchange, monitor, record and securely handle asset data, semantics and processes with links to geospatial and other external data.

Standards:

EN ISO 12006-3:2016
Building construction - Organization of information about construction works - Part 3: Framework for object-oriented information (ISO 12006-3:2007)

EN ISO 19650-2:2018
Organization and digitization of information about buildings and civil engineering works, including building information modelling (BIM) - Information management using building information modelling - Part 2: Delivery phase of the assets (ISO 19650-2:2018)

EN ISO 29481-1:2017
Building information models - Information delivery manual - Part 1: Methodology and format (ISO 29481-1:2016)

EN ISO 21597-1:2020
Information container for linked document delivery - Exchange specification - Part 1: Container (ISO 21597-1:2020)

EN ISO 16757-2:2019
Data structures for electronic product catalogues for building services - Part 2: Geometry (ISO 16757-2:2016)

EN ISO 23386:2020
Building information modelling and other digital processes used in construction - Methodology to describe, author and maintain properties in interconnected data dictionaries (ISO 23386:2020)

EN ISO 16739-1:2020
Industry Foundation Classes (IFC) for data sharing in the construction and facility management industries - Part 1: Data schema (ISO 16739-1:2018)

EN ISO 29481-2:2016
Building information models - Information delivery manual - Part 2: Interaction framework (ISO 29481-2:2012)

EN ISO 16757-1:2019
Data structures for electronic product catalogues for building services - Part 1: Concepts, architecture and model (ISO 16757-1:2015)

EN ISO 12006-2:2020
Building construction - Organization of information about construction works - Part 2: Framework for classification (ISO 12006-2:2015)

EN ISO 19650-1:2018
Organization and digitization of information about buildings and civil engineering works, including building information modelling (BIM) - Information management using building information modelling - Part 1: Concepts and principles (ISO 19650-1:2018)

Standards under development:
FprCEN/TR 17439(WI=00442022)
Guidance on how to implement EN ISO 19650-1 and -2 in Europe

FprEN ISO 19650-3(WI=00442020)
Organization and digitization of information about buildings and civil engineering works, including building information modelling (BIM) - Information management using building information modelling - Part 3: Operational phase of the assets (ISO/FDIS 19650-3:2020)

FprEN ISO 19650-5(WI=00442017)
Organization and digitization of information about buildings and civil engineering works, including building information modelling (BIM) — Information management using building information modelling - Part 5: Security-minded approach to information management (ISO/FDIS 19650-5:2020)

FprEN ISO 23387(WI=00442010)
Building information modelling (BIM) - Data templates for construction objects used in the life cycle of any built asset - Concepts and principles (ISO/FDIS 23387:2020)

prCEN/TR(WI=00442031)
Framework and Implementation of Common Data Environment Solutions, in accordance with EN ISO 19650

prCEN/TR XXX(WI=00442024)
Guideline for the implementation of BIM Execution Plans (BEP) and Exchange Information Requirements (EIR) on European level based on EN ISO 19650-1 and -2

prCEN/TR XXX(WI=00442023)

Guideline on how to understand and utilize EN/ISO 29481 Building information models - Information delivery manual - Part 1: Methodology and format and Part 2: Interaction framework

prEN(WI=00442033)
Building information modelling - Exchange structure for product data templates and product data sheets based on ISO 16739-1 - Part 2: Requirements and configurable products

prEN 17412(WI=00442009)
Building Information Modelling - Level of Information Need - Concepts and principles

prEN 17473(WI=00442008)
        Building information modelling (BIM) - Data templates for construction objects used in the life cycle of any built asset - Data templates based on harmonised technical specifications under the Construction Products Regulation (CPR)

prEN ISO 12006-3 rev(WI=00442019)
Building construction -- Organization of information about construction works -- Part 3: Framework for object-oriented information

prEN ISO 19650-4(WI=00442028)
Organization and digitization of information about buildings and civil engineering works, including building information modelling (BIM) - Information management using building information modelling — Part 4 : Information exchange

prEN ISO 21597-2(WI=00442016)
Information container for data drop - Exchange specification - Part 2: Dynamic semantics (ISO/DIS 21597-2:2018)

prEN XXX(WI=00442018)
Exchange structure for product data templates and product data sheets based on ISO 16739-1 Part 1: Basic structures

(WI=00442029)
"Building Information Modelling – Level of information need – Part 3: Data Schema"

(WI=00442021)
Semantic Modelling and Linking Standard (SMLS) for data integration in the built environment

(WI=00442027)
BIM in infrastructure – standarisation need and recommendations

(WI=00442030)
Building Information Modelling – Level of information need – Part 2: Guidance for application

(WI=00442032)

Common Data Environments (CDE) for BIM projects –Open data exchange between platforms of different vendors via an open CDE API

3.2.18 ISO/TC 204 - Intelligent transport systems

Keywords:

Electro-Mobility, Smart Cities, Data Protection, Road vehicles, Interoperability, Big data and artificial intelligence, Architecture, ITS database technology, Fee and toll collection, General fleet management and commercial/freight, Public transport/emergency, Integrated transport information, management and control, Traveller information systems, Vehicle/roadway warning and control systems,   Communications, Nomadic Devices in ITS Systems

Scope:

Standarisation of information, communication and control systems in the field of urban and rural surface transportation, including intermodal and multimodal aspects thereof, traveller information, traffic management, public transport, commercial transport, emergency services and commercial services in the intelligent transport systems (ITS) field.

Excluded:

in-vehicle transport information and control systems (ISO / TC 22).

Note:

ISO / TC 204 is responsible for the overall system aspects and infrastructure aspects of intelligent transport systems (ITS), as well as the coordination of the overall ISO work programme in this field including the schedule for standards development, taking into account the work of existing international standarisation bodies.

Standards:

ISO 10711:2012
Intelligent Transport Systems — Interface Protocol and Message Set Definition between Traffic Signal Controllers and Detectors

ISO/TR 10992-2:2017
Intelligent transport systems — Use of nomadic and portable devices to support ITS service and multimedia provision in vehicles — Part 2: Definition and use cases for mobile service convergence

ISO/TR 10992:2011
Intelligent transport systems — Use of nomadic and portable devices to support ITS service and multimedia provision in vehicles

ISO 11067:2015
Intelligent transport systems — Curve speed warning systems (CSWS) — Performance requirements and test procedures

ISO 11270:2014
Intelligent transport systems — Lane keeping assistance systems (LKAS) — Performance requirements and test procedures

ISO/TR 11766:2010
Intelligent transport systems — Communications access for land mobiles (CALM) — Security considerations for lawful interception

ISO/TR 11769:2010
Intelligent transport systems — Communications access for land mobiles (CALM) — Data retention for law enforcement

ISO 12813:2019
Electronic fee collection — Compliance check communication for autonomous systems

ISO 12855:2015
Electronic fee collection — Information exchange between service provision and toll charging

ISO/TR 12859:2009
Intelligent transport systems — System architecture — Privacy aspects in ITS standards and systems

ISO 13111-1:2017
Intelligent transport systems (ITS) — The use of personal ITS station to support ITS service provision for travellers — Part 1: General information and use case definitions

ISO 13140-1:2016
Electronic fee collection — Evaluation of on-board and roadside equipment for conformity to ISO 13141 — Part 1: Test suite structure and test purposes

ISO 13140-2:2016
Electronic fee collection — Evaluation of on-board and roadside equipment for conformity to ISO 13141 — Part 2: Abstract test suite

ISO 13141:2015
Electronic fee collection — Localisation augmentation communication for autonomous systems

ISO 13141:2015/AMD 1:2017
Electronic fee collection — Localisation augmentation communication for autonomous systems — Amendment 1

ISO 13143-1:2016
Electronic fee collection — Evaluation of on-board and roadside equipment for conformity to ISO 12813 — Part 1: Test suite structure and test purposes

ISO 13143-2:2016
Electronic fee collection — Evaluation of on-board and roadside equipment for conformity to ISO 12813 — Part 2: Abstract test suite

ISO 13183:2012
Intelligent transport systems — Communications access for land mobiles (CALM) — Using broadcast communications

ISO/TR 13184-1:2013
Intelligent transport systems (ITS) — Guidance protocol via personal ITS station for advisory safety systems — Part 1: General information and use case definitions

ISO 13184-2:2016
Intelligent transport systems (ITS) — Guidance protocol via personal ITS station for advisory safety systems — Part 2: Road guidance protocol (RGP) requirements and specification

ISO 13184-3:2017
Intelligent transport systems (ITS) — Guidance protocol via personal ITS station for advisory safety systems — Part 3: Road guidance protocol (RGP) conformance test specification

ISO/TR 13185-1:2012
Intelligent transport systems — Vehicle interface for provisioning and support of ITS services — Part 1: General information and use case definition

ISO 13185-2:2015
Intelligent transport systems — Vehicle interface for provisioning and support of ITS services — Part 2: Unified gateway protocol (UGP) requirements and specification for vehicle ITS station gateway (V-ITS-SG) interface

ISO 13185-3:2018
Intelligent transport systems — Vehicle interface for provisioning and support of ITS Services — Part 3: Unified vehicle interface protocol (UVIP) server and client API specification

ISO 14296:2016
Intelligent transport systems — Extension of map database specifications for applications of cooperative ITS

ISO/TR 14806:2013
Intelligent transport systems — Public transport requirements for the use of payment applications for fare media

ISO 14813-1:2015
Intelligent transport systems — Reference model architecture(s) for the ITS sector — Part 1: ITS service domains, service groups and services

ISO 14813-5:2020
Intelligent transport systems — Reference model architecture(s) for the ITS sector — Part 5: Requirements for architecture description in ITS standards

ISO 14813-6:2017
Intelligent transport systems — Reference model architecture(s) for the ITS sector — Part 6: Use of ASN.1

ISO 14814:2006
Road transport and traffic telematics — Automatic vehicle and equipment identification — Reference architecture and terminology

ISO 14815:2005
Road transport and traffic telematics — Automatic vehicle and equipment identification — System specifications

ISO 14816:2005
Road transport and traffic telematics — Automatic vehicle and equipment identification — Numbering and data structure

ISO 14816:2005/AMD 1:2019
Road transport and traffic telematics — Automatic vehicle and equipment identification — Numbering and data structure — Amendment 1

ISO 14817-1:2015
Intelligent transport systems — ITS central data dictionaries — Part 1: Requirements for ITS data definitions

ISO 14817-2:2015
Intelligent transport systems — ITS central data dictionaries — Part 2: Governance of the Central ITS Data Concept Registry

ISO 14817-3:2017
Intelligent transport systems — ITS data dictionaries — Part 3: Object identifier assignments for ITS data concepts

ISO 14819-1:2013
Intelligent transport systems — Traffic and travel information messages via traffic message coding — Part 1: Coding protocol for Radio Data System — Traffic Message Channel (RDS-TMC) using ALERT-C

ISO 14819-2:2013
Intelligent transport systems — Traffic and travel information messages via traffic message coding — Part 2: Event and information codes for Radio Data System — Traffic Message Channel (RDS-TMC) using ALERT-C

ISO 14819-3:2013
Intelligent transport systems — Traffic and travel information messages via traffic message coding — Part 3: Location referencing for Radio Data System — Traffic Message Channel (RDS-TMC) using ALERT-C

ISO 14819-6:2006
Traffic and Traveller Information (TTI) — TTI messages via traffic message coding — Part 6: Encryption and conditional access for the Radio Data System — Traffic Message Channel ALERT C coding

ISO/TR 14823-2:2019
Intelligent transport systems — Graphic data dictionary — Part 2: Examples

ISO 14823:2017
Intelligent transport systems — Graphic data dictionary

ISO 14825:2011
Intelligent transport systems — Geographic Data Files (GDF) — GDF5.0

ISO 14827-1:2005
Transport information and control systems — Data interfaces between centres for transport information and control systems — Part 1: Message definition requirements

ISO 14827-2:2005
Transport information and control systems — Data interfaces between centres for transport information and control systems — Part 2: DATEX-ASN

ISO 14827-3:2019
Transport information and control systems — Data interfaces between centres for transport information and control systems — Part 3: Data interfaces between centres for intelligent transport sytems (ITS) using XML (Profile A)

ISO 14906:2018
Electronic fee collection — Application interface definition for dedicated short-range communication

ISO 14906:2018/AMD 1:2020
Electronic fee collection — Application interface definition for dedicated short-range communication — Amendment 1

ISO 14907-1:2020
Electronic fee collection — Test procedures for user and fixed equipment — Part 1: Description of test procedures

ISO/TS 14907-2:2016
Electronic fee collection — Test procedures for user and fixed equipment — Part 2: Conformance test for the on-board unit application interface

ISO 15075:2003
Transport information and control systems — In-vehicle navigation systems — Communications message set requirements

ISO 15622:2018
Intelligent transport systems — Adaptive cruise control systems — Performance requirements and test procedures

ISO 15623:2013
Intelligent transport systems — Forward vehicle collision warning systems — Performance requirements and test procedures

ISO/TS 15624:2001
Transport information and control systems — Traffic Impediment Warning Systems (TIWS) — System requirements

ISO 15628:2013
Intelligent transport systems — Dedicated short range communication (DSRC) — DSRC application layer

ISO 15638-1:2012
Intelligent transport systems — Framework for collaborative Telematics Applications for Regulated commercial freight Vehicles (TARV) — Part 1: Framework and architecture

ISO 15638-2:2013
Intelligent transport systems — Framework for collaborative Telematics Applications for Regulated commercial freight Vehicles (TARV) — Part 2: Common platform parameters using CALM

ISO 15638-3:2013
Intelligent transport systems — Framework for collaborative telematics applications for regulated commercial freight vehicles (TARV) — Part 3: Operating requirements, 'Approval Authority' procedures, and enforcement provisions for the providers of regulated services

ISO/TS 15638-4:2020
Intelligent transport systems — Framework for cooperative telematics applications for regulated commercial freight vehicles (TARV) — Part 4: System security requirements

ISO 15638-5:2013
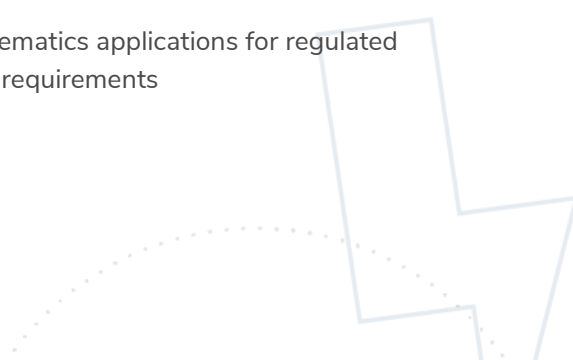
Intelligent transport systems — Framework for collaborative Telematics Applications for Regulated commercial freight Vehicles (TARV) — Part 5: Generic vehicle information

ISO 15638-6:2014
Intelligent transport systems — Framework for collaborative Telematics Applications for Regulated commercial freight Vehicles (TARV) — Part 6: Regulated applications

ISO 15638-7:2013
Intelligent transport systems — Framework for collaborative Telematics Applications for Regulated commercial freight Vehicles (TARV) — Part 7: Other applications

ISO 15638-8:2014
Intelligent transport systems — Framework for cooperative telematics applications for regulated vehicles (TARV) — Part 8: Vehicle access management

ISO/TS 15638-9:2013
Intelligent transport systems — Framework for collaborative Telematics Applications for Regulated commercial freight Vehicles (TARV) — Part 9: Remote electronic tachograph monitoring (RTM)

ISO 15638-10:2017
Intelligent transport systems — Framework for cooperative telematics applications for regulated commercial freight vehicles (TARV) — Part 10: Emergency messaging system/eCall

ISO 15638-11:2014
Intelligent transport systems — Framework for cooperative telematics applications for regulated vehicles (TARV) — Part 11: Driver work records

ISO 15638-12:2014
Intelligent transport systems — Framework for cooperative telematics applications for regulated vehicles (TARV) — Part 12: Vehicle mass monitoring

ISO/TS 15638-13:2015
Intelligent transport systems — Framework for cooperative telematics applications for regulated commercial freight vehicles (TARV) — Part 13: "Mass" information for jurisdictional control and enforcement

ISO 15638-14:2014
Intelligent transport systems — Framework for cooperative telematics applications for regulated vehicles (TARV) — Part 14: Vehicle access control

ISO 15638-15:2014
Intelligent transport systems — Framework for cooperative telematics applications for regulated vehicles (TARV) — Part 15: Vehicle location monitoring

ISO 15638-16:2014
Intelligent transport systems — Framework for cooperative telematics applications for regulated vehicles (TARV) — Part 16: Vehicle speed monitoring

ISO 15638-17:2014
Intelligent transport systems — Framework for cooperative telematics applications for regulated vehicles (TARV) — Part 17: Consignment and location monitoring

ISO 15638-18:2017
Intelligent transport systems — Framework for cooperative telematics applications for regulated commercial freight vehicles (TARV) — Part 18: ADR (Dangerous Goods)

ISO/TS 15638-19:2013
Intelligent transport systems — Framework for collaborative Telematics Applications for Regulated commercial freight Vehicles (TARV) — Part 19: Vehicle parking facilities (VPF)

ISO 15638-21:2018
Intelligent transport systems — Framework for cooperative telematics applications for regulated commercial freight vehicles (TARV) — Part 21: Monitoring of regulated vehicles using roadside sensors and data collected from the vehicle for enforcement and other purposes

ISO 15638-22:2019
Intelligent transport systems — Framework for collaborative telematics applications for regulated commercial freight vehicles (TARV) — Part 22: Freight vehicle stability monitoring

ISO 15662:2006
Intelligent transport systems — Wide area communication — Protocol management information

ISO 15784-1:2008
Intelligent transport systems (ITS) — Data exchange involving roadside modules communication — Part 1: General principles and documentation framework of application profiles

ISO 15784-2:2015
Intelligent transport systems (ITS) — Data exchange involving roadside modules communication — Part 2: Centre to field device communications using SNMP

ISO 15784-2:2015/AMD 1:2020
Intelligent transport systems (ITS) — Data exchange involving roadside modules communication — Part 2: Centre to field device communications using SNMP — Amendment 1: Support for SHA2 encryption

ISO 15784-3:2008
Intelligent transport systems (ITS) — Data exchange involving roadside modules communication — Part 3: Application profile-data exchange (AP-DATEX)

ISO/TR 16401-1:2018
Electronic fee collection — Evaluation of equipment for conformity to ISO/TS 17575-2 — Part 1:
Test suite structure and test purposes

ISO/TR 16401-2:2018
Electronic fee collection — Evaluation of equipment for conformity to ISO 17575-2 — Part 2:
Abstract test suite

ISO 16407-1:2017
Electronic fee collection — Evaluation of equipment for conformity to ISO 17575-1 — Part 1: Test
suite structure and test purposes

ISO 16407-2:2018
Electronic fee collection — Evaluation of equipment for conformity to ISO 17575-1 — Part 2:
Abstract test suite

ISO 16410-1:2017
Electronic fee collection — Evaluation of equipment for conformity to ISO 17575-3 — Part 1: Test
suite structure and test purposes

ISO 16410-2:2018
Electronic fee collection — Evaluation of equipment for conformity to ISO 17575-3 — Part 2:
Abstract test suite

ISO/TS 16460:2016
Intelligent transport systems — Communications access for land mobiles (CALM) —
Communication protocol messages for global usage

ISO 16461:2018
Intelligent transport systems — Criteria for privacy and integrity protection in probe vehicle
information systems

ISO/TS 16785:2020
Electronic Fee Collection (EFC) — Application interface definition between DSRC-OBE and
external in-vehicle devices

ISO/TR 16786:2015
Intelligent transport systems — The use of simulation models for evaluation of traffic
management systems — Input parameters and reporting template for simulation of traffic signal
control systems

ISO 16787:2017
Intelligent transport systems — Assisted parking system (APS) — Performance requirements
and test procedures

ISO 17185-1:2014
Intelligent transport systems — Public transport user information — Part 1: Standards framework for public information systems

ISO/TR 17185-2:2015
Intelligent transport systems — Public transport user information — Part 2: Public transport data and interface standards catalogue and cross references

ISO/TR 17185-3:2015
Intelligent transport systems — Public transport user information — Part 3: Use cases for journey planning systems and their interoperation

ISO/TS 17187:2019
Intelligent transport systems — Electronic information exchange to facilitate the movement of freight and its intermodal transfer — Governance rules to sustain electronic information exchange methods

ISO 17261:2012
Intelligent transport systems — Automatic vehicle and equipment identification — Intermodal goods transport architecture and terminology

ISO 17262:2012
Intelligent transport systems — Automatic vehicle and equipment identification — Numbering and data structures

ISO 17262:2012/AMD 1:2019
Intelligent transport systems — Automatic vehicle and equipment identification — Numbering and data structures — Amendment 1

ISO 17262:2012/COR 1:2013
Intelligent transport systems — Automatic vehicle and equipment identification — Numbering and data structures — Technical Corrigendum 1

ISO 17263:2012
Intelligent transport systems — Automatic vehicle and equipment identification — System parameters

ISO 17263:2012/COR 1:2013
Intelligent transport systems — Automatic vehicle and equipment identification — System parameters — Technical Corrigendum 1

ISO 17264:2009
Intelligent transport systems — Automatic vehicle and equipment identification — Interfaces

ISO 17264:2009/AMD 1:2019

Intelligent transport systems — Automatic vehicle and equipment identification — Interfaces — Amendment 1

ISO 17267:2009
Intelligent transport systems — Navigation systems — Application programming interface (API)

ISO 17361:2017
Intelligent transport systems — Lane departure warning systems — Performance requirements and test procedures

ISO/TR 17384:2008
Intelligent transport systems — Interactive centrally determined route guidance (CDRG) — Air interface message set, contents and format

ISO 17386:2010
Transport information and control systems — Manoeuvring Aids for Low Speed Operation (MALSO) — Performance requirements and test procedures

ISO 17387:2008
Intelligent transport systems — Lane change decision aid systems (LCDAS) — Performance requirements and test procedures

ISO 17419:2018
Intelligent transport systems — Cooperative systems — Globally unique identification

ISO 17423:2018
Intelligent transport systems — Cooperative systems — Application requirements and objectives

ISO/TR 17424:2015
Intelligent transport systems — Cooperative systems — State of the art of Local Dynamic Maps concepts

ISO/TS 17425:2016
Intelligent transport systems — Cooperative systems — Data exchange specification for in-vehicle presentation of external road and traffic related data

ISO/TS 17426:2016
Intelligent transport systems — Cooperative systems — Contextual speeds

ISO 17427-1:2018
Intelligent transport systems — Cooperative ITS — Part 1: Roles and responsibilities in the context of co-operative ITS architecture(s)

ISO/TR 17427-2:2015
Intelligent transport systems — Cooperative ITS — Part 2: Framework overview

ISO/TR 17427-3:2015
Intelligent transport systems — Cooperative ITS — Part 3: Concept of operations (ConOps) for 'core' systems

ISO/TR 17427-4:2015
Intelligent transport systems — Cooperative ITS — Part 4: Minimum system requirements and behaviour for core systems

ISO/TR 17427-6:2015
Intelligent transport systems — Cooperative ITS — Part 6: 'Core system' risk assessment methodology

ISO/TR 17427-7:2015
Intelligent transport systems — Cooperative ITS — Part 7: Privacy aspects

ISO/TR 17427-8:2015
Intelligent transport systems — Cooperative ITS — Part 8: Liability aspects

ISO/TR 17427-9:2015
Intelligent transport systems — Cooperative ITS — Part 9: Compliance and enforcement aspects

ISO/TR 17427-10:2015
Intelligent transport systems — Cooperative ITS — Part 10: Driver distraction and information display

ISO/TS 17429:2017
Intelligent transport systems — Cooperative ITS — ITS station facilities for the transfer of information between ITS stations

ISO 17438-1:2016
Intelligent transport systems — Indoor navigation for personal and vehicle ITS station — Part 1: General information and use case definition

ISO 17438-4:2019
Intelligent transport systems — Indoor navigation for personal and vehicle ITS station — Part 4: Requirements and specifications for interface between personal/vehicle and central ITS stations

ISO/TS 17444-1:2017
Electronic fee collection — Charging performance — Part 1: Metrics

ISO/TS 17444-2:2017

Electronic fee collection — Charging performance — Part 2: Examination framework

ISO/TR 17452:2007
Intelligent transport systems — Using UML for defining and documenting ITS/TICS interfaces

ISO/TR 17465-1:2014
Intelligent transport systems — Cooperative ITS — Part 1: Terms and definitions

ISO/TR 17465-2:2015
Intelligent transport systems — Cooperative ITS — Part 2: Guidelines for standards documents

ISO/TR 17465-3:2015
Intelligent transport systems — Cooperative ITS — Part 3: Release procedures for standards documents

ISO 17515-1:2015
Intelligent transport systems — Communications access for land mobiles (CALM) — Evolved universal terrestrial radio access network (E-UTRAN) — Part 1: General usage

ISO 17515-3:2019
Intelligent transport systems — Evolved-universal terrestrial radio access network — Part 3: LTE-V2X

ISO 17572-1:2015
Intelligent transport systems (ITS) — Location referencing for geographic databases — Part 1: General requirements and conceptual model

ISO 17572-2:2018
Intelligent transport systems (ITS) — Location referencing for geographic databases — Part 2: Pre-coded location references (pre-coded profile)

ISO 17572-3:2015
Intelligent transport systems (ITS) — Location referencing for geographic databases — Part 3: Dynamic location references (dynamic profile)

ISO 17572-4:2020
Intelligent transport systems (ITS) — Location referencing for geographic databases — Part 4: Precise relative location references (precise relative profile)

ISO 17573-1:2019
Electronic fee collection — System architecture for vehicle-related tolling — Part 1: Reference model

ISO/TS 17574:2017
Electronic fee collection — Guidelines for security protection profiles

ISO 17575-1:2016
Electronic fee collection — Application interface definition for autonomous systems — Part 1: Charging

ISO 17575-2:2016
Electronic fee collection — Application interface definition for autonomous systems — Part 2: Communication and connection to the lower layers

ISO 17575-3:2016
Electronic fee collection — Application interface definition for autonomous systems — Part 3: Context data

ISO 17687:2007
Transport Information and Control Systems (TICS) — General fleet management and commercial freight operations — Data dictionary and message sets for electronic identification and monitoring of hazardous materials/dangerous goods transportation

ISO/TS 18234-1:2013
Intelligent transport systems — Traffic and travel information via transport protocol experts group, generation 1 (TPEG1) binary data format — Part 1: Introduction, numbering and versions (TPEG1-INV)

ISO/TS 18234-2:2013
Intelligent transport systems — Traffic and travel information via transport protocol experts group, generation 1 (TPEG1) binary data format — Part 2: Syntax, semantics and framing structure (TPEG1-SSF)

ISO/TS 18234-3:2013
Intelligent transport systems — Traffic and travel information via transport protocol experts group, generation 1 (TPEG1) binary data format — Part 3: Service and network information (TPEG1-SNI)

ISO/TS 18234-4:2006
Traffic and Travel Information (TTI) — TTI via Transport Protocol Expert Group (TPEG) data-streams — Part 4: Road Traffic Message (RTM) application

ISO/TS 18234-5:2006
Traffic and Travel Information (TTI) — TTI via Transport Protocol Expert Group (TPEG) data-streams — Part 5: Public Transport Information (PTI) application

ISO/TS 18234-6:2006
Traffic and Travel Information (TTI) - TTI via Transport Protocol Expert Group (TPEG) data-streams — Part 6: Location referencing applications

ISO/TS 18234-7:2013
Intelligent transport systems — Traffic and travel information via transport protocol experts group, generation 1 (TPEG1) binary data format — Part 7: Parking information (TPEG1-PKI)

ISO/TS 18234-8:2012
Intelligent transport systems — Traffic and travel information via transport protocol experts group, generation 1 (TPEG1) binary data format — Part 8: Congestion and Travel Time application (TPEG1-CTT)

ISO/TS 18234-9:2013
Intelligent transport systems — Traffic and travel information via transport protocol experts group, generation 1 (TPEG1) binary data format — Part 9: Traffic event compact (TPEG1-TEC)

ISO/TS 18234-10:2013
Intelligent transport systems — Traffic and travel information via transport protocol experts group, generation 1 (TPEG1) binary data format — Part 10: Conditional access information (TPEG1-CAI)

ISO/TS 18234-11:2013
Intelligent transport systems — Traffic and Travel Information (TTI) via transport protocol experts group, generation 1 (TPEG1) binary data format — Part 11: Location Referencing Container (TPEG1-LRC)

ISO/TR 18317:2017
Intelligent transport systems — Pre-emption of ITS communication networks for disaster and emergency communication — Use case scenarios

ISO 18495-1:2016
Intelligent transport systems — Commercial freight — Automotive visibility in the distribution supply chain — Part 1: Architecture and data definitions

ISO 18682:2016
Intelligent transport systems — External hazard detection and notification systems — Basic requirements

ISO 18750:2018
Intelligent transport systems — Co-operative ITS — Local dynamic map

ISO 19079:2016
Intelligent transport systems — Communications access for land mobiles (CALM) — 6LoWPAN networking

ISO 19080:2016

Intelligent transport systems — Communications access for land mobiles (CALM) — CoAP facilityISO/TS 19082:2020
Intelligent transport systems — Definition of data elements and data frames between roadside modules and signal controllers for cooperative signal control

ISO/TR 19083-1:2016
Intelligent transport systems — Emergency evacuation and disaster response and recovery — Part 1: Framework and concept of operation

ISO/TS 19091:2019
Intelligent transport systems — Cooperative ITS — Using V2I and I2V communications for applications related to signalized intersections

ISO 19237:2017
Intelligent transport systems — Pedestrian detection and collision mitigation systems (PDCMS) — Performance requirements and test procedures

ISO 19297-1:2019
Intelligent transport systems — Shareable geospatial databases for ITS applications — Part 1: Framework

ISO/TS 19299:2015
Electronic fee collection — Security framework

ISO/TS 19321:2015
Intelligent transport systems — Cooperative ITS — Dictionary of in-vehicle information (IVI) data structures

ISO 19414:2020
Intelligent transport systems — Service architecture of probe vehicle systems

ISO/TS 19468:2019
Intelligent transport systems — Data interfaces between centres for transport information and control systems — Platform independent model specifications for data exchange protocols for transport information and control systems

ISO 19638:2018
Intelligent transport systems — Road boundary departure prevention systems (RBDPS) — Performance requirements and test procedures

ISO/TR 19639:2015
Electronic fee collection — Investigation of EFC standards for common payment schemes for multi-modal transport services

ISO/TS 20026:2017

Intelligent transport systems — Cooperative ITS — Test architecture

ISO 20035:2019
Intelligent transport systems — Cooperative adaptive cruise control systems (CACC) — Performance requirements and test procedures

ISO/TS 20452:2007
Requirements and Logical Data Model for a Physical Storage Format (PSF) and an Application Program Interface (API) and Logical Data Organization for PSF used in Intelligent Transport Systems (ITS) Database Technology

ISO 20524-1:2020
Intelligent transport systems — Geographic Data Files (GDF) GDF5.1 — Part 1: Application independent map data shared between multiple sources

ISO/TR 20526:2017
Account-based ticketing state of the art report

ISO/TR 20529-1:2017
Intelligent transport systems — Framework for green ITS (G-ITS) standards — Part 1: General information and use case definitions

ISO/TR 20545:2017
Intelligent transport systems — Vehicle/roadway warning and control systems — Report on standardisation for vehicle automated driving systems (RoVAS)/Beyond driver assistance systems

ISO 20900:2019
Intelligent transport systems — Partially automated parking systems (PAPS) — Performance requirements and test procedures

ISO 20901:2020
Intelligent transport systems — Emergency electronic brake light systems (EEBL) — Performance requirements and test procedures

ISO/TS 21177:2019
Intelligent transport systems — ITS station security services for secure session establishment and authentication between trusted devices

ISO/TS 21185:2019
Intelligent transport systems — Communication profiles for secure connections between trusted devices

ISO/TS 21189:2019

Intelligent transport systems — Cooperative ITS — Test requirements and protocol implementation conformance statement (PICS) pro forma for ISO/TS 17426

ISO/TR 21190:2018
Electronic fee collection — Investigation of charging policies and technologies for future standarisation

ISO/TS 21192:2019
Electronic fee collection — Support for traffic management

ISO/TS 21193:2019
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ISO 21202:2020
Intelligent transport systems — Partially automated lane change systems (PALS) — Functional / operational requirements and test procedures

ISO 21210:2012
Intelligent transport systems — Communications access for land mobiles (CALM) — IPv6 Networking

ISO 21210:2012/AMD 1:2017
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ISO 21212:2008
Intelligent transport systems — Communications access for land mobiles (CALM) — 2G Cellular systems

ISO 21213:2008
Intelligent transport systems — Communications access for land mobiles (CALM) — 3G Cellular systems

ISO 21214:2015
Intelligent transport systems — Communications access for land mobiles (CALM) — Infra-red systems

ISO 21215:2018
Intelligent transport systems — Localized communications — ITS-M5

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Intelligent transport systems — Communication access for land mobiles (CALM) — Millimetre wave air interface

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Intelligent transport systems — Communications access for land mobiles (CALM) — Architecture

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Intelligent transport systems — Hybrid communications — Access technology support

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Intelligent transport systems — Traffic and travel information (TTI) via transport protocol experts group, generation 2 (TPEG2) — Part 1: Introduction, numbering and versions (TPEG2-INV)

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Intelligent transport systems — Traffic and travel information (TTI) via transport protocol experts group, generation 2 (TPEG2) — Part 2: UML modelling rules (TPEG2-UMR)

ISO 21219-3:2019
Intelligent transport systems — Traffic and travel information (TTI) via transport protocol experts group, generation 2 (TPEG2) — Part 3: UML to binary conversion rules (TPEG2-UBCR)

ISO 21219-4:2019
Intelligent transport systems — Traffic and travel information (TTI) via transport protocol experts group, generation 2 (TPEG2) — Part 4: UML to XML conversion rules

ISO 21219-5:2019
Intelligent transport systems — Traffic and travel information (TTI) via transport protocol experts group, generation 2 (TPEG2) — Part 5: Service framework (TPEG2-SFW)

ISO 21219-6:2019
Intelligent transport systems — Traffic and travel information(TTI) via transport protocol experts group, generation 2 (TPEG2) — Part 6: Message management container (TPEG2-MMC)

ISO/TS 21219-7:2017
Intelligent transport systems — Traffic and travel information (TTI) via transport protocol experts group, generation 2 (TPEG2) — Part 7: Location referencing container (TPEG2-LRC)

ISO/TS 21219-9:2016
Intelligent transport systems — Traffic and travel information (TTI) via transport protocol experts group, generation 2 (TPEG2) — Part 9: Service and network information (TPEG2-SNI)

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Intelligent transport systems — Traffic and travel information (TTI) via transport protocol experts group, generation 2 (TPEG2) — Part 10: Conditional access information (TPEG2-CAI)

ISO/TS 21219-14:2016
Intelligent transport systems — Traffic and travel information (TTI) via transport protocol experts group, generation 2 (TPEG2) — Part 14: Parking information application (TPEG2-PKI)

ISO/TS 21219-15:2016
Intelligent transport systems — Traffic and travel information (TTI) via transport protocol experts group, generation 2 (TPEG2) — Part 15: Traffic event compact (TPEG2-TEC)

ISO/TS 21219-16:2016
Intelligent transport systems — Traffic and travel information via transport protocol exports group, generation 2 (TPEG2) — Part 16: Fuel price information and availability (TPEG2-FPI)

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Intelligent transport systems — Traffic and travel information (TTI) via transport protocol experts group, generation 2 (TPEG2) — Part 18: Traffic flow and prediction application (TPEG2-TFP)

ISO/TS 21219-19:2016
Intelligent transport systems — Traffic and travel information (TTI) via transport protocol experts group, generation 2 (TPEG2) — Part 19: Weather information (TPEG2-WEA)

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Intelligent transport systems — Traffic and travel information via transport protocol experts group, generation 2 (TPEG2) — Part 21: Geographic location referencing (TPEG-GLR)

ISO/TS 21219-22:2017
Intelligent transport systems — Traffic and travel information (TTI) via transport protocol experts group, generation 2 (TPEG2) — Part 22: OpenLR location referencing (TPEG2-OLR)

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Performance requirements and test procedures

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Intelligent transport systems — Spatio-temporal data dictionary for cooperative ITS and
automated driving systems 2.0

ISO/TS 21719-1:2018
Electronic fee collection — Personalization of on-board equipment (OBE) — Part 1: Framework

ISO/TS 21719-2:2018
Electronic fee collection — Personalization of on-board equipment (OBE) — Part 2: Using
dedicated short-range communication

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Intelligent transport systems — Framework architecture for plug and play (PnP) functionality in
vehicles utilizing nomadic devices

ISO 22078:2020
Intelligent transport systems — Bicyclist detection and collision mitigation systems (BDCMS) —
Performance requirements and test procedures

ISO/TR 22085-1:2019
Intelligent transport systems (ITS) — Nomadic device service platform for micro-mobility — Part
1: General information and use case definitions

ISO/TR 22086-1:2019
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Intelligent transport systems — Low speed following (LSF) systems — Performance
requirements and test procedures

ISO 22418:2018
Intelligent transport systems — Fast service announcement protocol (FSAP)

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Vehicle probe data for wide area communications

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Intelligent transport systems — Forward vehicle collision mitigation systems — Operation,
performance, and verification requirements

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Intelligent transport systems — Devices to aid reverse manoeuvres — Extended-range backing aid systems (ERBA)

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Intelligent transport systems — Using web services (machine-machine delivery) for ITS service delivery — Part 1: Realization of interoperable web services

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Intelligent transport systems — Using web services (machine-machine delivery) for ITS service delivery — Part 2: Elaboration of interoperable web services' interfaces

ISO/TR 24097-3:2019
Intelligent transport systems — Using web services (machine-machine delivery) for ITS service delivery — Part 3: Quality of service

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Intelligent transport systems — System architecture, taxonomy and terminology — Procedures for developing ITS deployment plans utilizing ITS system architecture

ISO 24099:2011
Navigation data delivery structures and protocols

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Intelligent transport systems — Basic principles for personal data protection in probe vehicle information services

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Intelligent transport systems — Communications access for land mobiles (CALM) — Application management — Part 1: General requirements

ISO 24101-2:2010
Intelligent transport systems — Communications access for land mobiles (CALM) — Application management — Part 2: Conformance test

ISO 24102-1:2018
Intelligent transport systems — ITS station management — Part 1: Local management

ISO 24102-2:2018
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ISO 24102-3:2018
Intelligent transport systems — ITS station management — Part 3: Service access points

ISO 24102-4:2018
Intelligent transport systems — ITS station management — Part 4: Station-internal management communications

ISO 24102-6:2018
Intelligent transport systems — Communications access for land mobiles (CALM) — ITS station management — Part 6: Path and flow management

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Intelligent transport systems — Systems architecture — Use of unified modelling language (UML) in ITS International Standards and deliverables

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ISO/TS 24530-2:2006
Traffic and Travel Information (TTI) — TTI via Transport Protocol Experts Group (TPEG) Extensible Markup Language (XML) — Part 2: tpeg-locML

ISO/TS 24530-3:2006
Traffic and Travel Information (TTI) — TTI via Transport Protocol Experts Group (TPEG) Extensible Markup Language (XML) — Part 3: tpeg-rtmML

ISO/TS 24530-4:2006

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Intelligent transport systems — System architecture, taxonomy and terminology — Using XML in ITS standards, data registries and data dictionaries

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Intelligent transport systems — Electronic information exchange to facilitate the movement of freight and its intermodal transfer — Road transport information exchange methodology

ISO 24534-1:2010
Automatic vehicle and equipment identification — Electronic registration identification (ERI) for vehicles — Part 1: Architecture

ISO 24534-2:2010
Automatic vehicle and equipment identification — Electronic registration identification (ERI) for vehicles — Part 2: Operational requirements

ISO 24534-3:2016
Intelligent transport systems — Automatic vehicle and equipment identification — Electronic registration identification (ERI) for vehicles — Part 3: Vehicle data

ISO 24534-4:2010
Automatic vehicle and equipment identification — Electronic registration identification (ERI) for vehicles — Part 4: Secure communications using asymmetrical techniques

ISO 24534-4:2010/AMD 1:2019
Automatic vehicle and equipment identification — Electronic registration identification (ERI) for vehicles — Part 4: Secure communications using asymmetrical techniques — Amendment 1

ISO 24534-5:2011
Intelligent transport systems — Automatic vehicle and equipment identification — Electronic Registration Identification (ERI) for vehicles — Part 5: Secure communications using symmetrical techniques

ISO 24534-5:2011/AMD 1:2019
Intelligent transport systems — Automatic vehicle and equipment identification — Electronic Registration Identification (ERI) for vehicles — Part 5: Secure communications using symmetrical techniques — Amendment 1

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Intelligent transport systems — Automatic vehicle identification — Basic electronic registration identification (Basic ERI)

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Intelligent transport systems — ITS Safety and emergency messages using any available wireless media — Data registry procedures

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Intelligent transport systems — Systems architecture — Harmonization of ITS data concepts

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Intelligent transport systems — System architecture — 'Use Case' pro-forma template

ISO/TR 25104:2008
Intelligent transport systems — System architecture, taxonomy, terminology and data modelling — Training requirements for ITS architecture

ISO 25110:2017
Electronic fee collection — Interface definition for on-board account using integrated circuit card (ICC)

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Intelligent transport systems — Communications access for land mobiles (CALM) — General requirements for using public networks

ISO 25112:2010
Intelligent transport systems — Communications access for land mobiles (CALM) — Mobile wireless broadband using IEEE 802.16

ISO 25113:2010
Intelligent transport systems — Communications access for land mobiles (CALM) — Mobile wireless broadband using HC-SDMA

ISO/TS 25114:2010
Intelligent transport systems — Probe data reporting management (PDRM)

ISO 26683-1:2013
Intelligent transport systems — Freight land conveyance content identification and communication — Part 1: Context, architecture and referenced standards

ISO 26683-2:2013
Intelligent transport systems — Freight land conveyance content identification and communication — Part 2: Application interface profiles

ISO 26683-3:2019
Intelligent transport systems — Freight land conveyance content identification and communication — Part 3: Monitoring cargo condition information during transport

ISO 26684:2015
Intelligent transport systems (ITS) — Cooperative intersection signal information and violation warning systems (CIWS) — Performance requirements and test procedures

ISO/TR 26999:2012
Intelligent transport systems — Systems architecture — Use of process-oriented methodology in ITS International Standards and other deliverables

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Intelligent transport systems — Joint APEC-ISO study of progress to develop and deploy ITS standards

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Intelligent transport systems — Localized communications — Part 1: Fast networking & transport layer protocol (FNTP)

ISO 29281-2:2019
Intelligent transport systems — Localized communications — Part 2: Legacy system support

ISO 29282:2011
Intelligent transport systems — Communications access for land mobiles (CALM) — Satellite networks

ISO 29283:2011
ITS CALM Mobile Wireless Broadband applications using Communications in accordance with IEEE 802.20

ISO/TS 29284:2012
Intelligent transport systems — Event-based probe vehicle data

Standards under develpoment:

ISO/WD 4398
Intelligent transport systems — Guided transportation service planning data exchange

ISO/CD 12855
Electronic fee collection — Information exchange between service provision and toll charging

ISO/WD 13111-2
Intelligent transport systems (ITS) — The use of personal ITS station to support ITS service provision for travelers — Part 2: General requirements for data exchange between personal ITS station and other ITS stations

ISO 13143-1

Electronic fee collection — Evaluation of on-board and roadside equipment for conformity to ISO 12813 — Part 1: Test suite structure and test purposes

ISO 13185-4
Intelligent transport systems — Vehicle interface for provisioning and support of ITS Services — Part 4: Unified vehicle interface protocol (UVIP) conformance test specification

ISO/DIS 14819-1
Intelligent transport systems — Traffic and travel information messages via traffic message coding — Part 1: Coding protocol for Radio Data System — Traffic Message Channel (RDS-TMC) using ALERT-C

ISO/DIS 14819-2
Intelligent transport systems — Traffic and travel information messages via traffic message coding — Part 2: Event and information codes for Radio Data System — Traffic Message Channel (RDS-TMC) using ALERT-C

ISO/DIS 14819-3
Intelligent transport systems — Traffic and travel information messages via traffic message coding — Part 3: Location referencing for Radio Data System — Traffic Message Channel (RDS-TMC) using ALERT-C

ISO/CD 14823-1
Intelligent transport systems — Graphic data dictionary — Part 1: Specification

ISO/FDIS 15638-9
Intelligent transport systems — Framework for cooperative telematics applications for regulated commercial freight vehicles (TARV) — Part 9: Remote digital tachograph monitoring

ISO/PRF 15638-20
Intelligent transport systems — Framework for cooperative telematics applications for regulated commercial freight vehicles (TARV) — Part 20: Weigh-in-motion monitoring

ISO/WD 15638-24
Intelligent transport systems — Framework for collaborative telematics applications for regulated commercial freight vehicles (TARV) — Part 24: Safety information provisioning

ISO/CD 17419-2
Intelligent transport systems — Identifiers — Part 2: Management and operation of registries

ISO/AWI 17419-3
Intelligent transport systems — Identifiers — Part 3: Architecture requirements for ITS-AID requests

ISO/AWI TS 17429-1

Cooperative intelligent transport systems (C-ITS) — ITS station facility services — Part 1: Communication profile handler

ISO/AWI TS 17429-2
Cooperative intelligent transport systems (C-ITS) — ITS station facility services — Part 2: Facility services handler

ISO/AWI TS 17429-3
Cooperative intelligent transport systems (C-ITS) — ITS station facility services — Part 3: Content subscription handler

ISO/DIS 17515-2
Intelligent transport systems — Evolved universal terrestrial radio access network (E-UTRAN) — Part 2: Device to device communications (D2D)

ISO/PRF TS 17573-2
Electronic fee collection — System architecture for vehicle related tolling — Part 2: Vocabulary

ISO/DIS 18561-1
Intelligent transport systems (ITS) — Urban mobility applications via nomadic device for green transport management — Part 1: General requirements for data exchange between ITS stations

ISO/WD 18561-2
Intelligent transport systems — Urban mobility applications via nomadic device for green transport management — Part 2: Trip and modal choice applications and specification

ISO/AWI 19297-4
Intelligent transport systems — Shareable geospatial databases for ITS applications — Part 4: Common data structure

ISO/FDIS 19299
Electronic fee collection — Security framework

ISO/PRF TS 19321
Intelligent transport systems — Cooperative ITS — Dictionary of in-vehicle information (IVI) data structures

ISO/PRF 20524-2
Intelligent transport systems — Geographic Data Files (GDF) GDF5.1 — Part 2: Map data used in automated driving systems, Cooperative ITS, and multi-modal transport

ISO/AWI TR 20527
Intelligent transport systems — Interoperability between IFM systems and NFC mobile devices

ISO/DIS 20529-2

Intelligent transport systems — Framework for Green ITS (G-ITS) standards — Part 2: Integrated mobile service applications

ISO/DIS 20530
Intelligent transport systems — Information for emergency service support via personal ITS station — General requirements and technical definition

ISO/DIS 20684-1
Intelligent transport systems — Roadside modules SNMP data interface — Part 1: Overview

ISO/DIS 20684-2
Intelligent transport systems — Roadside modules SNMP data interface — Part 2: Generalized field device — Basic management

ISO/AWI 20684-3
Intelligent transport systems — Roadside modules SNMP data interface — Part 3: Generalized field device — Scheduler

ISO/AWI 20684-4
Intelligent transport systems — Roadside modules SNMP data interface — Part 4: Generalized field device — Exceptions

ISO/CD TS 20684-10
Intelligent transport systems — Roadside modules SNMP data interface — Part 10: Variable message signs

ISO/PRF TS 21176
Cooperative intelligent transport systems (C-ITS) — Position, velocity and time functionality in the ITS station

ISO/CD TS 21184
Cooperative intelligent transport systems (C-ITS) — Global transport data management (GTDM) framework

ISO/CD TR 21186-1
Cooperative intelligent transport systems (C-ITS) — Guidelines on the usage of standards — Part 1: Standarisation landscape and releases

ISO/CD TR 21186-2
Cooperative intelligent transport systems (C-ITS) — Guidelines on the usage of standards — Part 2: Hybrid communications

ISO/CD TR 21186-3
Cooperative intelligent transport systems (C-ITS) — Guidelines on the usage of standards — Part 3: Security

ISO/WD 21210-1
Intelligent transport systems — IPv6 Networking — Part 1: Common terms, definitions and requirements

ISO/WD 21210-2
Intelligent transport systems — IPv6 Networking — Part 2: Addressing and forwarding

ISO/WD 21210-3
Intelligent transport systems — IPv6 Networking — Part 3: Mobility management

ISO/WD 21210-4
Intelligent transport systems — IPv6 Networking — Part 4: ITS station management adaptation entity

ISO/DIS 21217
Intelligent transport systems — Station and communication architecture

ISO/CD 21219-1
Intelligent transport systems — Traffic and travel information (TTI) via transport protocol experts group, generation 2 (TPEG2) — Part 1: Introduction, numbering and versions (TPEG2-INV)

ISO/CD 21219-9
Intelligent transport systems — Traffic and travel information (TTI) via transport protocol experts group, generation 2 (TPEG2) — Part 9: Service and network information (TPEG2-SNI)

ISO/CD 21219-10
Intelligent transport systems — Traffic and travel information (TTI) via transport protocol experts group, generation 2 (TPEG2) — Part 10: Conditional access information (TPEG2-CAI)

ISO/CD 21219-14
Intelligent transport systems — Traffic and travel information (TTI) via transport protocol experts group, generation 2 (TPEG2) — Part 14: Parking information application (TPEG2-PKI)

ISO/CD 21219-15
Intelligent transport systems — Traffic and travel information (TTI) via transport protocol experts group, generation 2 (TPEG2) — Part 15: Traffic event compact (TPEG2-TEC)

ISO/CD 21219-16
Intelligent transport systems — Traffic and travel information (TTI) via transport protocol exports group, generation 2 (TPEG2) — Part 16: Fuel price information and availability application (TPEG2-FPI)

ISO/CD 21219-17

Intelligent transport systems — Traffic and travel information via transport protocol experts group, generation 2 (TPEG2) — Part 17: Speed information (TPEG2-SPI)

ISO/CD 21219-19
Intelligent transport systems — Traffic and travel information (TTI) via transport protocol experts group, generation 2 (TPEG2) — Part 19: Weather information (TPEG2-WEA)

ISO/PRF TR 21724-1
Intelligent transport systems — Common transport service account systems — Part 1: Framework and use cases

ISO/AWI 21734-1
Public transport — Performance testing for connectivity and safety functions of automated driving bus — Part 1: General framework

ISO/DIS 22085-2
Intelligent transport systems (ITS) — Nomadic device service platform for micro mobility — Part 2: Functional requirements and dataset definitions

ISO/CD 22085-3
Intelligent transport systems — Nomadic device service platform for micro mobility — Part 3: Data structure and data exchange procedures

ISO/PRF 22418
Intelligent transport systems — Fast service announcement protocol (FSAP) for general purposes in ITS

ISO/AWI TS 22726-1
Intelligent transport systems — Dynamic data and map database specification for connected and automated driving system applications — Part 1: Architecture and logical data model for harmonization of static map data

ISO/AWI TS 22726-2
Intelligent transport systems — Dynamic data and map database specification for connected and automated driving system applications — Part 2: Logical data model of dynamic data

ISO/SAE AWI PAS 22736
Intelligent transport systems — Taxonomy and definitions for terms related to driving automation systems for on-road motor vehicles

ISO/CD 22737
Intelligent transport systems — Low-speed automated driving (LSAD) systems for predefined routes — Performance requirements, system requirements and performance test procedures

ISO/DIS 22738

Intelligent transport systems — Localized communications — Optical camera communication

ISO/CD 22741-1
Intelligent transport systems — Roadside modules AP-DATEX data interface — Part 1: Overview

ISO/AWI TR 23254
Intelligent transport systems — Architecture — Use cases and high-level reference architecture for connected, automated vehicles

ISO/AWI TR 23255
Intelligent transport systems — Architecture — Applicability of data distribution technologies within ITS

ISO/AWI 23374
Intelligent transport systems — Automated valet parking systems (AVPS) — System framework, communication interface, and vehicle operation

ISO/AWI 23375
Intelligent transport systems — Collision evasive lateral manoeuvre systems (CELM) — Performance requirements and test procedures

ISO/AWI 23376
Intelligent transport systems — Vehicle-to-vehicle intersection collision warning systems (VVICW) — Performance requirements and test procedures

ISO/WD 23792-1
Intelligent transport systems — Motorway chauffeur systems (MCS) — Part 1: Framework and general requirements

ISO/CD 23795-1
Intelligent transport systems — Extracting trip data via nomadic device for estimating CO_2 emissions — Part 1: Fuel consumption determination for fleet management

ISO/CD 23795-2
Intelligent transport systems — Extracting trip data via nomadic device for estimating CO_2 emissions — Part 2: Information provision for eco-friendly driving behaviour

ISO/DIS 24014-1
Public transport — Interoperable fare management system — Part 1: Architecture

ISO/CD 24102-6
Intelligent transport systems — ITS station management — Part 6: Path and flow management

ISO/WD 24533-1

Intelligent transport systems — Electronic information exchange to facilitate the movement of freight and its intermodal

ISO/CD 24533-2
Intelligent transport systems — Electronic information exchange to facilitate the movement of freight and its intermodal transfer — Part 2: Common Reporting System

3.2.19 ISO/TC 205 Building environment design

Keywords:

Smart Grids, Civil engineering, Moisture damage, Design of energy-efficient buildings, Building Automation and Control System (BACS) Design, Indoor thermal environment,   Indoor   visual environment, Radiant heating and cooling systems, Heating and cooling systems, Commissioning

Scope:

Standarisation in the design of new buildings and retrofit of existing buildings for acceptable indoor environment and practicable energy conservation and efficiency. Building environment design addresses the technical building systems and related architectural aspects, and includes the related design processes, design methods, design outcomes, and design-phase building commissioning. Indoor environment includes air quality, and thermal, acoustic, and visual factors.

Covering and including:

- aspects of sustainability related to indoor environmental quality and energy that can be addressed in the design of buildings and the design of retrofits of existing buildings;
- general principles of building environment design;
- design of energy-efficient buildings;
- building automation and control systems in building and retrofit design;
- indoor air quality in building and retrofit design;
- indoor thermal environment in building and retrofit design;
- indoor acoustical environment in building and retrofit design;
- indoor visual environment in building and retrofit design;
- design of heating and cooling systems including radiant; and
- application of methods of testing and rating the performance of building environmental equipment in the design of new buildings and retrofits.

Excluded:

- other ergonomic factors;
- methods of measurement of air pollutants and of thermal, acoustic and lighting properties;
- thermal performance and energy use in the built environment (ISO TC 163);
- methods of testing for performance and rating of building environmental equipment in existing buildings;
- inspecting or rating existing buildings; and,
- construction.

Covering also:

Standarisation of the holistic assessment of the energy performance of new and existing buildings as well as building retrofits, in close collaboration with ISO/TC 163 by means of the ISO/TC163/WG4 Joint working group TC 163 & TC 205 Energy performance using holistic approach, including:

- terms and definitions;
- system boundaries for buildings and technical systems;
- assessment of the overall energy performance of buildings, taking into account
- the energy performance of building elements;
- building related systems (heating, cooling, domestic hot water, ventilation, lighting, system controls, transport, and other energy related systems);
- indoor and outdoor conditions;
- local energy production (on site and at district level);
- (use of) energy sources (including renewable);
- building commissioning;
- assessment of overall energy efficiency; and
- means of expressing the energy performance and energy performance certification of buildings.

Standards:

ISO 11855-1:2012
Building environment design — Design, dimensioning, installation and control of embedded radiant heating and cooling systems — Part 1: Definition, symbols, and comfort criteria

ISO 11855-2:2012
Building environment design — Design, dimensioning, installation and control of embedded radiant heating and cooling systems — Part 2: Determination of the design heating and cooling capacity

ISO 11855-3:2012
Building environment design — Design, dimensioning, installation and control of embedded radiant heating and cooling systems — Part 3: Design and dimensioning

ISO 11855-4:2012
Building environment design — Design, dimensioning, installation and control of embedded radiant heating and cooling systems — Part 4: Dimensioning and calculation of the dynamic heating and cooling capacity of Thermo Active Building Systems (TABS)

ISO 11855-5:2012
Building environment design — Design , dimensioning, installation and control of embedded radiant heating and cooling systems — Part 5: Installation

ISO 11855-6:2018
Building environment design — Design, dimensioning, installation and control of embedded radiant heating and cooling systems — Part 6: Control

ISO 11855-7:2019

Building environment design — Design, dimensioning, installation and control of embedded radiant heating and cooling systems — Part 7: Input parameters for the energy calculation

ISO 13153:2012
Framework of the design process for energy-saving single-family residential and small commercial buildings

ISO 13612-1:2014
Heating and cooling systems in buildings — Method for calculation of the system performance and system design for heat pump systems — Part 1: Design and dimensioning

ISO 13612-2:2014
Heating and cooling systems in buildings — Method for calculation of the system performance and system design for heat pump systems — Part 2: Energy calculation

ISO 13675:2013
Heating systems in buildings — Method and design for calculation of the system energy performance — Combustion systems (boilers)

ISO 16484-1:2010
Building automation and control systems (BACS) — Part 1: Project specification and implementation

ISO 16484-2:2004
Building automation and control systems (BACS) — Part 2: Hardware

ISO 16484-3:2005
Building automation and control systems (BACS) — Part 3: Functions

ISO 16484-5:2017
Building automation and control systems (BACS) — Part 5: Data communication protocol

ISO 16484-5:2017/AMD 1:2020
Building automation and control systems (BACS) — Part 5: Data communication protocol — Amendment 1

ISO 16484-6:2020
Building automation and control systems (BACS) — Part 6: Data communication conformance testing

ISO 16813:2006
Building environment design — Indoor environment — General principles

ISO 16814:2008

Building environment design — Indoor air quality — Methods of expressing the quality of indoor air for human occupancy

ISO 16817:2017
Building environment design — Indoor environment — Design process for the visual environment

ISO 16818:2008
Building environment design — Energy efficiency — Terminology

ISO/TR 16822:2016
Building environment design — List of test procedures for heating, ventilating, air-conditioning and domestic hot water equipment related to energy efficiency

ISO 17800:2017
Facility smart grid information model

ISO 18566-1:2017
Building environment design — Design, test methods and control of hydronic radiant heating and cooling panel systems — Part 1: Vocabulary, symbols, technical specifications and requirements

ISO 18566-2:2017
Building environment design — Design, test methods and control of hydronic radiant heating and cooling panel systems — Part 2: Determination of heating and cooling capacity of ceiling mounted radiant panels

ISO 18566-3:2017
Building environment design — Design, test methods and control of hydronic radiant heating and cooling panel systems — Part 3: Design of ceiling mounted radiant panels

ISO 18566-4:2017
Building environment design — Design, test methods and control of hydronic radiant heating and cooling panel systems — Part 4: Control of ceiling mounted radiant heating and cooling panels

ISO 18566-6:2019
Building environment design — Design, test methods and control of hydronic radiant heating and cooling panel systems — Part 6: Input parameters for the energy calculation

ISO 19454:2019
Building environment design — Indoor environment — Daylight opening design for sustainability principles in visual environment

ISO 19455-1:2019
Planning for functional performance testing for building commissioning — Part 1: Secondary hydronic pump, system and associated controls

ISO 22510:2019
Open data communication in building automation, controls and building management — Home and building electronic systems — KNXnet/IP communication

ISO 23045:2008
Building environment design — Guidelines to assess energy efficiency of new buildings

ISO 52031:2020
Energy performance of buildings — Method for calculation of system energy requirements and system efficiencies — Space emission systems (heating and cooling)

Standards under development:

ISO/AWI TR 5242
Technical analysis for a new perspective on thermal comfort

ISO/DIS 11855-1
Building environment design — Embedded radiant heating and cooling systems — Part 1: Definitions, symbols, and comfort criteria

ISO/DIS 11855-2
Building environment design — Embedded radiant heating and cooling systems — Part 2: Determination of the design heating and cooling capacity

ISO/DIS 11855-3
Building environment design — Embedded radiant heating and cooling systems — Part 3: Design and dimensioning

ISO/DIS 11855-4
Building environment design — Embedded radiant heating and cooling systems — Part 4: Dimensioning and calculation of the dynamic heating and cooling capacity of Thermo Active Building Systems (TABS)

ISO/DIS 11855-5
Building environment design — Embedded radiant heating and cooling systems — Part 5: Installation

ISO/WD TR 18566-5
Building environment design — Design, test methods and control of hydronic radiant heating and cooling panel systems — Part 5: Ceiling mounted radiant panels

ISO/DIS 22185-1
Diagnosing moisture damage in buildings and implementing countermeasures — Part 1: Principles, nomenclature and moisture transport mechanisms

ISO/WD 24359-1

Building commissioning process planning — Part 1: New buildings

ISO/WD 24365

Radiators and convectors — Methods and rating for determining the heat output

ISO/DIS 52032

Energy performance of buildings — Method for calculation of system energy requirements and system efficiencies — Space distribution systems (DHW, heating and cooling), Module M3-6, M4-6, M8-6

ISO/DIS 52120-1

Energy performance of buildings — Contribution of building automation and controls and building management — Part 1: Modules M10-4,5,6,7,8,9,10

ISO/PRF TR 52120-2

Energy performance of buildings — Contribution of building automation, controls and building management — Part 2: Explanation and justification of ISO 52120-1

ISO/DIS 52127-1

Energy performance of buildings — Building management system — Part 1: Module M10-12

ISO/PRF TR 52127-2

Energy performance of buildings — Building automation, controls and building management — Part 2: Explanation and justification of ISO 52127-1

3.2.20 ISO/TC 268 - Sustainable cities and communities

Keywords:

Smart Cities, Smart community infrastructures, Smart Community Infrastructure - Pilot Testing, Infrastructure metrics, Integration and interaction framework for smart community infrastructures, Smart transportation, Data exchange and sharing for smart community infrastructures, Power plant, Awareness-raising, communication and promotion, Collection of cities good practices and needs, City indicators, City anatomy and sustainability terms, Smart processes and operating models for sustainable communities

Scope:

Standarisation in the field of Sustainable Cities and Communities will include the development of requirements, frameworks, guidance and supporting techniques and tools related to the achievement of sustainable development considering smartness and resilience, to help all Cities and Communities and their interested parties in both rural and urban areas become more sustainable.

Note: TC 268 will contribute to the UN Sustainable Development Goals through its standarisation work.

The proposed series of International Standards will encourage the development and implementation of holistic and integrated approaches to sustainable development and sustainability.

Standards:

ISO 37100:2016
Sustainable cities and communities — Vocabulary

ISO 37101:2016
Sustainable development in communities — Management system for sustainable development — Requirements with guidance for use

ISO 37104:2019
Sustainable cities and communities — Transforming our cities — Guidance for practical local implementation of ISO 37101

ISO 37105:2019
Sustainable cities and communities — Descriptive framework for cities and communities

ISO 37106:2018
Sustainable cities and communities — Guidance on establishing smart city operating models for sustainable communities

ISO/TS 37107:2019
Sustainable cities and communities — Maturity model for smart sustainable communities

ISO 37120:2018
Sustainable cities and communities — Indicators for city services and quality of life

ISO/TR 37121:2017
Sustainable development in communities — Inventory of existing guidelines and approaches on sustainable development and resilience in cities

ISO 37122:2019
Sustainable cities and communities — Indicators for smart cities

ISO 37123:2019
Sustainable cities and communities — Indicators for resilient cities

ISO/TR 37150:2014
Smart community infrastructures — Review of existing activities relevant to metrics

ISO/TS 37151:2015
Smart community infrastructures — Principles and requirements for performance metrics

ISO/TR 37152:2016
Smart community infrastructures — Common framework for development and operation

ISO 37153:2017
Smart community infrastructures — Maturity model for assessment and improvement

ISO 37154:2017
Smart community infrastructures — Best practice guidelines for transportation

ISO 37155-1:2020
Framework for integration and operation of smart community infrastructures — Part 1: Recommendations for considering opportunities and challenges from interactions in smart community infrastructures from relevant aspects through the life cycle

ISO 37156:2020
Smart community infrastructures — Guidelines on data exchange and sharing for smart community infrastructures

ISO 37157:2018
Smart community infrastructures — Smart transportation for compact cities

ISO 37158:2019

Smart community infrastructures — Smart transportation using battery-powered buses for passenger services

ISO 37159:2019
Smart community infrastructures — Smart transportation for rapid transit in and between large city zones and their surrounding areas

ISO 37160:2020
Smart community infrastructure — Electric power infrastructure — Measurement methods for the quality of thermal power infrastructure and requirements for plant operations and management

ISO 37161:2020
Smart community infrastructures — Guidance on smart transportation for energy saving in transportation services

ISO 37162:2020
Smart community infrastructures — Smart transportation for newly developing áreas

Standards under development:

ISO 37106:2018/CD AMD 1
Sustainable cities and communities — Guidance on establishing smart city operating models for sustainable communities — Amendment 1

ISO/AWI 37108
Sustainable cities and communities — Business districts — Guidance for practical local implementation of ISO 37101

ISO/WD 37109
Sustainable development and communities — Practical guidance for project developers — Meeting ISO 37101 framework principles

ISO/WD 37110
Sustainable cities and communities — Management guidelines of open data for smart cities and communities — Part 1: Overview and general principles

ISO/CD 37155-2
Framework for integration and operation of smart community infrastructures — Part 2: Holistic approach and the strategy for development, operation and maintenance of smart community infrastructures

ISO/FDIS 37163

Smart community infrastructures — Guidance on smart transportation for parking lot allocation in cities

ISO/DIS 37164
Smart community infrastructures — Smart transportation using fuel cell LRT

ISO/FDIS 37165
Smart community infrastructures — Guidance on smart transportation by non-cash payment for fare/fees in transportation and its related or additional services

ISO/CD 37166
Smart community infrastructures —Urban data integration framework for smart city planning (SCP)

ISO/DIS 37167
Smart community infrastructures — Smart transportation for energy saving operation by slowly driving intentionally

ISO/CD 37168
Smart community infrastructures — Guidance on smart transportation for autonomous shuttle services using Connected Autonomous electric Vehicles (eCAVs)

ISO/CD 37169
Smart community infrastructures — Smart transportation by run-through train/bus operation in/between cities

ISO/WD 37170
Smart community infrastructures — Data framework of infrastructure governance base on digital technology

ISO/PRF TR 37171
Report of pilot testing on the application of ISO smart community infrastructures standards

ISO/AWI TR 37172
Data exchange and sharing for community infrastructure based on geo-information

ISO/WD 37173
Smart Community Infrastructures : Development Guidelines for Information-based Systems of Smart Buildings

3.2.21 ISO/IEC JTC 1 - Information technology

Keywords:

Smart Grids, Smart Cities, Cybersecurity, Data Protection, Mobile Telecommunications, Interoperability, Availability and information

Scope:

Standarisation in the field of information technology.

Structure:

ISO/IEC JTC 1/SC 2	Coded character sets
ISO/IEC JTC 1/SC 6	Telecommunications and information exchange between systems
ISO/IEC JTC 1/SC 7	Software and systems engineering
ISO/IEC JTC 1/SC 17	Cards and security devices for personal identification
ISO/IEC JTC 1/SC 22 interfaces	Programming languages, their environments and system software
ISO/IEC JTC 1/SC 23	Digitally Recorded Media for Information Interchange and Storage
ISO/IEC JTC 1/SC 24 representation	Computer graphics, image processing and environmental data
ISO/IEC JTC 1/SC 25	Interconnection of information technology equipment
ISO/IEC JTC 1/SC 27	Information security, cybersecurity and privacy protection
ISO/IEC JTC 1/SC 28	Office equipment
ISO/IEC JTC 1/SC 29	Coding of audio, picture, multimedia and hypermedia information
ISO/IEC JTC 1/SC 31	Automatic identification and data capture techniques
ISO/IEC JTC 1/SC 32	Data management and interchange
ISO/IEC JTC 1/SC 34	Document description and processing languages
ISO/IEC JTC 1/SC 35	User interfaces
ISO/IEC JTC 1/SC 36	Information technology for learning, education and training
ISO/IEC JTC 1/SC 37	Biometrics
ISO/IEC JTC 1/SC 38	Cloud Computing and Distributed Platforms
ISO/IEC JTC 1/SC 39	Sustainability, IT & Data Centres
ISO/IEC JTC 1/SC 40	IT Service Management and IT Governance

ISO/IEC JTC 1/SC 41   Internet of Things and related technologies

ISO/IEC JTC 1/SC 42   Artificial intelligence

ISO/IEC JTC 1/AG 1   Advisory Group on Communications

ISO/IEC JTC 1/AG 2   Advisory Group on JTC 1 Emerging Technology and Innovation (JETI)

ISO/IEC JTC 1/AG 3   Open Source Software

ISO/IEC JTC 1/AG 4   Quantum Computing

ISO/IEC JTC 1/AG 6   Autonomous and Data Rich Vehicles

ISO/IEC JTC 1/AG 7   Trustworthiness

ISO/IEC JTC 1/AG 8   Meta Reference Architecture and Reference Architecture for Systems
Integration

ISO/IEC JTC 1/AG 9   Data Usage

ISO/IEC JTC 1/AG 10   Outreach

ISO/IEC JTC 1/AG 11   Digital Twin

ISO/IEC JTC 1/AG 12   Technical Corrigenda

ISO/IEC JTC 1/AG 13   Use Cases for VR and AR based ICT Integration Systems

ISO/IEC JTC 1/AG 14   Systems Integration Facilitation (SIF)

ISO/IEC JTC 1/AG 15   Standards and Regulations

ISO/IEC JTC 1/AG 16   Brain-computer interface

ISO/IEC JTC 1/JAG   JTC 1 Advisory Group

ISO/IEC JTC 1/WG 11   Smart cities

ISO/IEC JTC 1/WG 12   3D Printing and scanning

ISO/IEC JTC 1/WG 13   Trustworthiness

Standards:

There are 492 published standards in this technical committee. In order to make this document briefer, the last published standards (01/01/2019-12/05/2020) are listed:

ISO/IEC 14165-226:2020

Information technology — Fibre channel — Part 226: Single-byte command code sets mapping protocol - 6 (FC-SB-6)

ISO/IEC 19516:2020

Information technology — Object management group — Interface definition language (IDL) 4.2

ISO/IEC 21972:2020

Information technology — Upper level ontology for smart city indicators

ISO/IEC 23736-1:2020

Information technology — Digital publishing — EPUB 3.0.1 — Part 1: Overview

ISO/IEC 23736-2:2020

Information technology — Digital publishing — EPUB 3.0.1 — Part 2: Publications

ISO/IEC 23736-4:2020

Information technology — Digital publishing — EPUB 3.0.1 — Part 4: Open container format

ISO/IEC 23736-5:2020

Information technology — Digital publishing — EPUB 3.0.1 — Part 5: Media overlays

ISO/IEC 23736-6:2020

Information technology — Digital publishing — EPUB 3.0.1 — Part 6: Canonical fragment identifiers

ISO/IEC 14165-246:2019

Information technology — Fibre channel — Part 246: Backbone — 6 (FC-BB-6)

ISO/IEC 19515:2019

Information technology — Object Management Group Automated Function Points (AFP), 1.0

ISO/IEC 20933:2019

Information technology — Distributed application platforms and services (DAPS) — Framework for distributed real-time access systems

ISO/IEC 23681:2019

Information technology — Self-contained Information Retention Format (SIRF) Specification

ISO/IEC 24091:2019

Information technology — Power efficiency measurement specification for data center storage

ISO/IEC 30146:2019

Information technology — Smart city ICT indicators

In any case, for further information, the website link with all the published standards is the following:

https://www.iso.org/committee/45020/x/catalogue/p/1/u/0/w/0/d/0#projects

Standards under development:

ISO/IEC CD 4994

Information technology - Software measurement - Software quality measurement - Automated source code quality measures

ISO/IEC DIS 5055
Information technology — Software measurement — Software quality measurement — Automated source code quality measures

ISO/IEC DIS 5230
Information technology — OpenChain Specification

ISO/IEC DIS 14165-147
Information technology – Fibre channel — Part 147: Physical interfaces - 7 (FC-PI-7)

ISO/IEC DIS 20919
Information technology — Linear tape file system (LTFS) Format specification

ISO/IEC CD 23510
Information technology — 3D Printing and Scanning — Framework for Additive Manufacturing Service Platform (AMSP)

ISO/IEC AWI 24039
Information Technology - Smart city digital platform

ISO/IEC WD TS 24462
Ontology for ICT Trustworthiness Assessment

ISO/IEC DIS 24643
Architecture for a distributed real-time access system

ISO/IEC DIS 24824-4
Information technology — Generic applications of ASN.1 — Part 4: Cryptographic message syntax

ISO/IEC DIS 30145-1
Information technology — Smart City ICT reference framework — Part 1: Smart city business process framework

ISO/IEC DIS 30145-2
Information technology — Smart City ICT reference framework — Part 2: Smart city knowledge management framework

ISO/IEC DIS 30145-3
Information technology — Smart City ICT reference framework — Part 3: Smart city engineering framework

3.2.22 ISO/IEC JTC 1/SC 2 Coded character sets

Scope:

Standarisation of graphic character sets and their characteristics, including string ordering, associated control functions, their coded representation for information interchange and code extension techniques. Excluded: audio and picture coding.

Standards:

ISO/IEC 646:1991
Information technology — ISO 7-bit coded character set for information interchange

ISO 962:1974
Information processing — Implementation of the 7- bit coded character set and its 7- bit and 8-bit extensions on 9- track 12,7 mm (0.5 in) magnetic tape

ISO 1113:1979
Information processing — Representation of the 7- bit coded character set on punched tape

ISO 1154:1975
Information processing — Punched paper tape — Dimensions and location of feed holes and code holes

ISO 1681:1973
Information processing — Unpunched paper cards — Specification

ISO/IEC 2022:1994/COR 1:1999
Information technology — Character code structure and extension techniques — Technical Corrigendum 1

ISO/IEC 2022:1994
Information technology — Character code structure and extension techniques

ISO 2033:1983
Information processing — Coding of machine readable characters (MICR and OCR)

ISO 2047:1975
Information processing — Graphical representations for the control characters of the 7- bit coded character set

ISO/IEC 2375:2003
Information technology — Procedure for registration of escape sequences and coded character sets

ISO 3275:1974

Information processing — Implementation of the 7- bit coded character set and its 7- bit and 8- bit extensions on 3,81 mm magnetic cassette for data interchange

ISO/IEC 4873:1991

Information technology — ISO 8-bit code for information interchange — Structure and rules for implementation

ISO 5426-2:1996

Information and documentation — Extension of the Latin alphabet coded character set for bibliographic information interchange — Part 2: Latin characters used in minor European languages and obsolete typography

ISO 5426:1983

Extension of the Latin alphabet coded character set for bibliographic information interchange

ISO 5427:1984

Extension of the Cyrillic alphabet coded character set for bibliographic information interchange

ISO 5428:1984

Greek alphabet coded character set for bibliographic information interchange

ISO/IEC 6429:1992

Information technology — Control functions for coded character sets

ISO 6438:1983

Documentation — African coded character set for bibliographic information interchange

ISO 6586:1980

Data processing — Implementation of the ISO 7- bit and 8- bit coded character sets on punched cards

ISO 6861:1996

Information and documentation — Glagolitic alphabet coded character set for bibliographic information interchange

ISO 6862:1996

Information and documentation — Mathematical coded character set for bibliographic information interchange

ISO 6936:1988

Information processing — Conversion between the two coded character sets of ISO 646 and ISO 6937-2 and the CCITT international telegraph alphabet No. 2 (ITA 2)

ISO/IEC 6937:2001
Information technology — Coded graphic character set for text communication — Latin alphabet

ISO/IEC 7350:1991
Information technology — Registration of repertoires of graphic characters from ISO/IEC 10367

ISO/IEC 8859-1:1998
Information technology — 8-bit single-byte coded graphic character sets — Part 1: Latin alphabet No. 1

ISO/IEC 8859-2:1999
Information technology — 8-bit single-byte coded graphic character sets — Part 2: Latin alphabet No. 2

ISO/IEC 8859-3:1999
Information technology — 8-bit single-byte coded graphic character sets — Part 3: Latin alphabet No. 3

ISO/IEC 8859-4:1998
Information technology — 8-bit single-byte coded graphic character sets — Part 4: Latin alphabet No. 4

ISO/IEC 8859-5:1999
Information technology — 8-bit single-byte coded graphic character sets — Part 5: Latin/Cyrillic alphabet

ISO/IEC 8859-6:1999
Information technology — 8-bit single-byte coded graphic character sets — Part 6: Latin/Arabic alphabet

ISO/IEC 8859-7:2003
Information technology — 8-bit single-byte coded graphic character sets — Part 7: Latin/Greek alphabet

ISO/IEC 8859-8:1999
Information technology — 8-bit single-byte coded graphic character sets — Part 8: Latin/Hebrew alphabet

ISO/IEC 8859-9:1999
Information technology — 8-bit single-byte coded graphic character sets — Part 9: Latin alphabet No. 5

ISO/IEC 8859-10:1998
Information technology — 8-bit single-byte coded graphic character sets — Part 10: Latin alphabet No. 6

ISO/IEC 8859-11:2001
Information technology — 8-bit single-byte coded graphic character sets — Part 11: Latin/Thai alphabet

ISO/IEC 8859-13:1998
Information technology — 8-bit single-byte coded graphic character sets — Part 13: Latin alphabet No. 7

ISO/IEC 8859-14:1998
Information technology — 8-bit single-byte coded graphic character sets — Part 14: Latin alphabet No. 8 (Celtic)

ISO/IEC 8859-15:1999
Information technology — 8-bit single-byte coded graphic character sets — Part 15: Latin alphabet No. 9

ISO/IEC 8859-16:2001
Information technology — 8-bit single-byte coded graphic character sets — Part 16: Latin alphabet No. 10

ISO 8957:1996
Information and documentation — Hebrew alphabet coded character sets for bibliographic information interchange

ISO 9036:1987
Information processing — Arabic 7-bit coded character set for information interchange

ISO/IEC 10367:1991
Information technology — Standardised coded graphic character sets for use in 8-bit codes

ISO/IEC 10367:1991/COR 1:2001
Information technology — Standardised coded graphic character sets for use in 8-bit codes — Technical Corrigendum 1

ISO/IEC 10538:1991
Information technology — Control functions for text communication

ISO 10585:1996
Information and documentation — Armenian alphabet coded character set for bibliographic information interchange

ISO 10586:1996
Information and documentation — Georgian alphabet coded character set for bibliographic information interchange

ISO/IEC 10646:2017
Information technology — Universal Coded Character Set (UCS)

ISO/IEC 10646:2017/AMD 1:2019
Information technology — Universal Coded Character Set (UCS) — Amendment 1: Dogra, Gunjala Gondi, Makasar, Medefaidrin, Indic Siyaq Numbers and other characters

ISO/IEC 10646:2017/AMD 2:2019
Information technology — Universal Coded Character Set (UCS) — Amendment 2: Nandinagari, Georgian extension, and other characters

ISO 11822:1996
Information and documentation — Extension of the Arabic alphabet coded character set for bibliographic information interchange

ISO/IEC 14651:2019
Information technology — International string ordering and comparison — Method for comparing character strings and description of the common template tailorable ordering

ISO/IEC TR 15285:1998
Information technology — An operational model for characters and glyphs

Standards under develpoment:

ISO/IEC DIS 10646
Information technology — Universal coded character set (UCS)

ISO/IEC DIS 14651
Information technology — International string ordering and comparison — Method for comparing character strings and description of the common template tailorable ordering

3.2.23 ISO/IEC JTC 1/SC 6 Telecommunications and information exchange between systems

Scope:

Since SC6 was established in 1964, SC6 has worked on standarisation in the field of telecommunications dealing with the exchange of information between open systems, including system functions, procedures, parameters as well as the conditions for their use. This standarisation encompasses protocols and services of lower layers including physical, data link, network, and transport as well as those of upper layers including but not limited to Directory and ASN.1: MFAN, NFC, PLC, Future Networks and OID.

Structure:

ISO/IEC JTC 1/SC 6/AG 1	Wearable devices
ISO/IEC JTC 1/SC 6/AG 2	Concepts and terminology
ISO/IEC JTC 1/SC 6/AHG 1	Networking for blockchain (AHG-NB)
ISO/IEC JTC 1/SC 6/AHG 2	Trustworthiness
ISO/IEC JTC 1/SC 6/WG 1	Physical and data link layers
ISO/IEC JTC 1/SC 6/WG 7	Network, transport and future network
ISO/IEC JTC 1/SC 6/WG 10	Directory, ASN.1 and Registration

Standards:

There are 397 published standards in this technical committee. In order to make this document briefer, the last published standards (01/01/2019-12/05/2020) are listed:

ISO/IEC/IEEE 8802-1AC:2018/COR 1:2020

Information technology — Telecommunications and information exchange between systems — Local and metropolitan area networks — Part 1AC: Media access control (MAC) service definition — Technical Corrigendum 1: Logical Link Control (LLC) Encpsulation EtherType

ISO/IEC/IEEE 8802-1AR:2020

Telecommunications and exchange between information technology systems — Requirements for local and metropolitan area networks — Part 1AR: Secure device identity

ISO/IEC/IEEE 8802-1CB:2019

Information technology — Telecommunications and information exchange between systems — Local and metropolitan area networks — Specific requirements — Part 1CB: Frame replication and elimination for reliability

ISO/IEC/IEEE 8802-1CM:2019

Telecommunications and information exchange between information technology systems — Requirements for local and metropolitan area networks — Part 1CM: Time-sensitive networking for fronthaul

ISO/IEC/IEEE 8802-1Q:2016/AMD 6:2019

Information technology — Telecommunications and information exchange between systems — Local and metropolitan area networks — Specific requirements — Part 1Q: Bridges and bridged networks — Amendment 6: Per-stream filtering and policing

ISO/IEC/IEEE 8802-1Q:2016/AMD 7:2019

Information technology — Telecommunications and information exchange between systems — Local and metropolitan area networks — Specific requirements — Part 1Q: Bridges and bridged networks — Amendment 7: Cyclic queuing and forwarding

ISO/IEC/IEEE 8802-3:2017/AMD 10:2019

Information technology — Telecommunications and information exchange between systems — Local and metropolitan area networks — Specific requirements — Part 3: Standard for Ethernet — Amendment 10: Media access control parameters, physical layers, and management parameters for 200 Gb/s and 400 Gb/s operation

ISO/IEC/IEEE 8802-3:2017/AMD 11:2019

Information technology — Telecommunications and information exchange between systems — Local and metropolitan area networks — Specific requirements — Part 3: Standard for Ethernet — Amendment 11: Physical layer and management parameters for serial 25 Gb/s ethernet operation over single-mode fiber

ISO/IEC/IEEE 8802-11:2018/AMD 1:2019

Information technology — Telecommunications and information exchange between systems — Local and metropolitan area networks — Specific requirements — Part 11: Wireless LAN medium access control (MAC) and physical layer (PHY) specifications — Amendment 1: Fast initial link setup

ISO/IEC/IEEE 8802-11:2018/AMD 2:2019

Information technology — Telecommunications and information exchange between systems — Local and metropolitan area networks — Specific requirements — Part 11: Wireless LAN medium access control (MAC) and physical layer (PHY) specifications — Amendment 2: Sub 1 GHz license exempt operation

ISO/IEC/IEEE 8802-A:2015/AMD 2:2019

Information technology — Telecommunications and information exchange between systems — Local and metropolitan area networks — Part A: Overview and architecture — Amendment 2: Local medium access control (MAC) address usage

ISO/IEC 8824-1:2015/AMD 1:2019

Information technology — Abstract Syntax Notation One (ASN.1): Specification of basic notation — Part 1: — Amendment 1: Relaxing imports clause to allow importation of definitions from new versions of a given module

ISO/IEC 21228:2019

Information technology — Telecommunications and information exchange between systems — Coexistence mechanism for broadband powerline communication technologies

In any case, for further information, the website link with all the published standards is the following:

https://www.iso.org/contents/data/committee/04/50/45072/x/catalogue/p/1/u/0/w/0/d/0

Standards under development:

ISO/IEC WD 4005-1
Telecommunications and information exchange between systems — Low altitude drone area network (LADAN) — Part 1: Communication model and requirements

ISO/IEC WD 4005-2
Telecommunications and information exchange between systems — Low altitude drone area network (LADAN) — Part 2: Physical and data link protocols for shared communication

ISO/IEC WD 4005-3
Telecommunications and information exchange between systems — Low altitude drone area network (LADAN) — Part 3: Physical and data link protocols for control communication

ISO/IEC AWI 4005-4
Telecommunications and information exchange between systems — Low altitude drone area network (LADAN) — Part 4: Physical and data link protocols for video communication

ISO/IEC CD 4396-1
Telecommunications and information exchange between systems — Future network recursive inter-network architecture and protocols — Part 1: Reference model

ISO/IEC CD 4396-2
Telecommunications and information exchange between systems — Future network recursive inter-network architecture and protocols — Part 2: Common application connection establishment protocol

ISO/IEC CD 4396-3
Telecommunications and information exchange between systems — Future network recursive inter-network architecture and protocols — Part 3: Common distributed application protocol

ISO/IEC CD 4396-4
Telecommunications and information exchange between systems — Future network recursive inter-network architecture and protocols — Part 4: Flow allocator protocol

ISO/IEC CD 4396-5
Telecommunications and information exchange between systems — Future network recursive inter-network architecture and protocols — Part 5: Error and flow control protocol

ISO/IEC/IEEE 8802-1X:2013/FDAMD 2
Information technology — Telecommunications and information exchange between systems — Local and metropolitan area networks — Part 1X: Port-based network access control — Amendment 2: YANG data model

ISO/IEC/IEEE FDIS 8802-1AE
Telecommunications and exchange between information technology systems — Requirements for local and metropolitan area networks — Part 1AE: Media access control (MAC) security

ISO/IEC/IEEE FDIS 8802-1Q
Telecommunications and exchange between information technology systems — Requirements for local and metropolitan area networks — Part 1Q: Bridges and bridged networks

ISO/IEC/IEEE FDIS 8802-3
Telecommunications and exchange between information technology systems — Requirements for local and metropolitan area networks — Part 3: Standard for Ethernet

ISO/IEC/IEEE 8802-3/DAMD 1
Telecommunications and information exchange between systems — Specific requirements for local and metropolitan area networks — Part 3: Standard for Ethernet — Amendment 1: Physical layer specifications and management parameters for 2.5 Gb/s and 5 Gb/s operation over backplane

ISO/IEC/IEEE 8802-11:2018/FDAMD 3
Information technology — Telecommunications and information exchange between systems — Local and metropolitan area networks — Specific requirements — Part 11: Wireless LAN medium access control (MAC) and physical layer (PHY) specifications — Amendment 3: Enhancements for very high throughput to support Chinese millimeter wave frequency bands (60 GHz and 45 GHz)

ISO/IEC/IEEE 8802-11:2018/FDAMD 4
Information technology — Telecommunications and information exchange between systems — Local and metropolitan area networks — Specific requirements — Part 11: Wireless LAN medium access control (MAC) and physical layer (PHY) specifications — Amendment 4: Enhancements for transit links within bridged network

ISO/IEC/IEEE 8802-11:2018/FDAMD 5
Information technology — Telecommunications and information exchange between systems — Local and metropolitan area networks — Specific requirements — Part 11: Wireless LAN medium access control (MAC) and physical layer (PHY) specifications — Amendment 5: Preassociation discovery

ISO/IEC 8825-5:2015/CD COR 1
Information technology — ASN.1 encoding rules: Mapping W3C XML schema definitions into ASN.1 — Part 5: — Technical Corrigendum 1

ISO/IEC DIS 9594-1
Information technology — Open systems interconnection — Part 1: The Directory: Overview of concepts, models and services

ISO/IEC DIS 9594-2
Information technology — Open systems interconnection — Part 2: The Directory: Models

ISO/IEC DIS 9594-3
Information technology — Open systems interconnection — Part 3: The Directory: Abstract service definition

ISO/IEC DIS 9594-4
Information technology — Open systems interconnection — Part 4: The Directory: Procedures for distributed operation

ISO/IEC DIS 9594-5
Information technology — Open systems interconnection — Part 5: The Directory: Protocol specifications

ISO/IEC DIS 9594-6
Information technology — Open systems interconnection — Part 6: The Directory: Selected attribute types

ISO/IEC DIS 9594-7
Information technology — Open systems interconnection — Part 7: The Directory: Selected object classes

ISO/IEC 9594-8:2017/CD COR 1
Information technology — Open Systems Interconnection — The Directory — Part 8: Public-key and attribute certificate frameworks — Technical Corrigendum 1: corrigendum1

ISO/IEC DIS 9594-8
Information technology — Open systems interconnection — Part 8: The Directory: Public-key and attribute certificate frameworks

ISO/IEC DIS 9594-9
Information technology — Open systems interconnection — Part 9: The Directory: Replication

ISO/IEC DIS 9594-11
Information technology — Open systems interconnection directory — Part 11: Protocol specifications for secure operations

ISO/IEC CD 17982
Information technology — Telecommunications and information exchange between systems — Close Capacitive Coupling Communication Physical Layer (CCCC PHY)

ISO/IEC DIS 21481
Information technology — Telecommunications and information exchange between systems — Near Field Communication Interface and Protocol -2 (NFCIP-2)

ISO/IEC CD 21558-1
Telecommunications and information exchange between systems — Future network architecture — Part 1: Reference model of recursive inter-network architecture

ISO/IEC CD 21558-2
Telecommunications and information exchange between systems — Future network architecture — Part 2: Switching and Routing

ISO/IEC CD 21558-3
Telecommunications and information exchange between systems — Future network architecture — Part 3: Proxy model based quality of service

ISO/IEC CD 21558-4
Telecommunications and information exchange between systems — Future network architecture — Part 4: Networking of everything

ISO/IEC CD 21559-1
Telecommunications and information exchange between systems — Future network protocols and mechanisms — Part 1: Recursive inter-network architecture error and flow control protocol

ISO/IEC CD 21559-2
Telecommunications and information exchange between systems — Future network protocols and mechanisms — Part 2: Recursive inter-network architecture flow allocator

ISO/IEC CD 21559-3
Telecommunications and information exchange between systems — Future network protocols and mechanisms — Part 3: Recursive inter-network architecture common application connection establishment

ISO/IEC CD 21559-4

Telecommunications and information exchange between systems — Future network protocols and mechanisms — Part 4: Recursive inter-network architecture common distributed application

ISO/IEC CD 21559-5
Telecommunications and information exchange between systems — Future network protocols and mechanisms — Part 5: Switching and routing

ISO/IEC CD 21559-6
Telecommunications and information exchange between systems — Future network protocols and mechanisms — Part 6: Proxy based quality of service

ISO/IEC CD 21559-7
Telecommunications and information exchange between systems — Future network protocols and mechanisms — Part 7: Networking of everything

ISO/IEC WD 23917
Information technology — Telecommunications and information exchange between systems — NFCIP-1 Protocol Test Methods

ISO/IEC WD 29168-2
Information technology — Open systems interconnection — Part 2: Procedures for the object identifier resolution system operational agency

3.2.24 ISO/IEC JTC 1/SC 7 Software and systems engineering

Scope:

SC7 delivers standards in the area of software and systems engineering that meet market and professional requirements. These standards convers the processes, supporting tools and supporting technologies for the engineering of software products and systems. Systems engineering, whose origin is traceable to industrial engineering, is defined as an interdisciplinary approach governing the total technical and managerial effort required to transform a set of customer needs, expectations, and constraints into a solution and to support that solution throughout its life. SC7, whose scope is Software and Systems Engineering, can thus be described as a horizontal committee who produce generic standards that are technology agnostics and independent of the application domain. These standards are principally focused on process models and good practices (Methods and techniques).

Structure:

ISO/IEC JTC 1/SC 7/AG 1   Chair's Advisory Group

ISO/IEC JTC 1/SC 7/AG 2   Business planning group

ISO/IEC JTC 1/SC 7/AG 3   Communications and outreach

ISO/IEC JTC 1/SC 7/AG 4   Standards management

ISO/IEC JTC 1/SC 7/AG 5   Architecture and future watch

ISO/IEC JTC 1/SC 7/AHG 1   Agile and DevOps

ISO/IEC JTC 1/SC 7/AHG 2   Standards architecture review

ISO/IEC JTC 1/SC 7/JWG 28   Joint ISO/IEC JTC 1/SC 7 - ISO/TC 159/SC 4 WG: Common Industry Formats for Usability Reports

ISO/IEC JTC 1/SC 7/SG 6   Specification techniques standarisation

ISO/IEC JTC 1/SC 7/STTF   Spanish translation task force

ISO/IEC JTC 1/SC 7/WG 2   System software documentation

ISO/IEC JTC 1/SC 7/WG 4   Tools and environment

ISO/IEC JTC 1/SC 7/WG 6   Software Product and System Quality

ISO/IEC JTC 1/SC 7/WG 7   Life cycle management

ISO/IEC JTC 1/SC 7/WG 10   Process assessment

ISO/IEC JTC 1/SC 7/WG 19   Techniques for Specifying IT Systems

ISO/IEC JTC 1/SC 7/WG 20   Software and systems bodies of knowledge and professionalization

ISO/IEC JTC 1/SC 7/WG 21   Information technology asset management

ISO/IEC JTC 1/SC 7/WG 22   Vocabulary validation

ISO/IEC JTC 1/SC 7/WG 24   SLC Profile and guidelines for VSE

ISO/IEC JTC 1/SC 7/WG 26   Software testing

ISO/IEC JTC 1/SC 7/WG 42   Architecture

Standards:

ISO 5806:1984
Information processing — Specification of single-hit decision tables

ISO 5807:1985
Information processing — Documentation symbols and conventions for data, program and system flowcharts, program network charts and system resources charts

ISO/IEC 8631:1989
Information technology — Program constructs and conventions for their representation

ISO 8790:1987
Information processing systems — Computer system configuration diagram symbols and conventions

ISO 8807:1989
Information processing systems — Open Systems Interconnection — LOTOS — A formal description technique based on the temporal ordering of observational behaviour

ISO/IEC TR 10000-1:1998
Information technology — Framework and taxonomy of International Standardised Profiles — Part 1: General principles and documentation framework

ISO/IEC 10746-1:1998
Information technology — Open Distributed Processing — Reference model: Overview — Part 1:

ISO/IEC 10746-2:2009
Information technology — Open distributed processing — Reference model: Foundations — Part 2:

ISO/IEC 10746-3:2009
Information technology — Open distributed processing — Reference model: Architecture — Part 3:

ISO/IEC 10746-4:1998
Information technology — Open Distributed Processing — Reference Model: Architectural semantics — Part 4:

ISO/IEC 10746-4:1998/AMD 1:2001

Information technology — Open Distributed Processing — Reference Model: Architectural semantics — Part 4: — Amendment 1: Computational formalization

ISO/IEC 11411:1995

Information technology — Representation for human communication of state transition of software

ISO/IEC TR 12182:2015

Systems and software engineering — Framework for categorization of IT systems and software, and guide for applying it

ISO/IEC/IEEE 12207:2017

Systems and software engineering — Software life cycle processes

ISO/IEC 13235-1:1998

Information technology — Open Distributed Processing — Trading function: Specification — Part 1:

ISO/IEC 13235-3:1998

Information technology — Open Distributed Processing — Trading Function — Part 3: Provision of Trading Function using OSI Directory service

ISO/IEC 13235-3:1998/COR 1:2006

Information technology — Open Distributed Processing — Trading Function — Part 3: Provision of Trading Function using OSI Directory service — Technical Corrigendum 1

ISO/IEC 14102:2008

Information technology — Guideline for the evaluation and selection of CASE tools

ISO/IEC 14143-1:2007

Information technology — Software measurement — Functional size measurement — Part 1: Definition of concepts

ISO/IEC 14143-1:2007/COR 1:2011

Information technology — Software measurement — Functional size measurement — Part 1: Definition of concepts — Technical Corrigendum 1

ISO/IEC 14143-2:2011

Information technology — Software measurement — Functional size measurement — Part 2: Conformity evaluation of software size measurement methods to ISO/IEC 14143-1

ISO/IEC TR 14143-3:2003

Information technology — Software measurement — Functional size measurement — Part 3: Verification of functional size measurement methods

ISO/IEC TR 14143-4:2002
Information technology — Software measurement — Functional size measurement — Part 4: Reference model

ISO/IEC TR 14143-5:2004
Information technology — Software measurement — Functional size measurement — Part 5: Determination of functional domains for use with functional size measurement

ISO/IEC 14143-6:2012
Information technology — Software measurement — Functional size measurement — Part 6: Guide for use of ISO/IEC 14143 series and related International Standards

ISO/IEC TR 14471:2007
Information technology — Software engineering — Guidelines for the adoption of CASE tools

ISO/IEC 14568:1997
Information technology — DXL: Diagram eXchange Language for tree-structured charts

ISO/IEC 14598-5:1998
Information technology — Software product evaluation — Part 5: Process for evaluators

ISO/IEC 14598-6:2001
Software engineering — Product evaluation — Part 6: Documentation of evaluation modules

ISO/IEC 14750:1999
Information technology — Open Distributed Processing — Interface Definition Language

ISO/IEC 14752:2000
Information technology — Open Distributed Processing — Protocol support for computational interactions

ISO/IEC 14753:1999
Information technology — Open Distributed Processing — Interface references and binding

ISO/IEC 14756:1999
Information technology — Measurement and rating of performance of computer-based software systems

ISO/IEC 14764:2006
Software Engineering — Software Life Cycle Processes — Maintenance

ISO/IEC 14769:2001

Information technology — Open Distributed Processing — Type Repository Function

ISO/IEC 14771:1999
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Systems and software engineering — Systems and software assurance — Part 1: Concepts and vocabulary

ISO/IEC 15026-2:2011
Systems and software engineering — Systems and software assurance — Part 2: Assurance case

ISO/IEC 15026-3:2015
Systems and software engineering — Systems and software assurance — Part 3: System integrity levels

ISO/IEC 15026-4:2012
Systems and software engineering — Systems and software assurance — Part 4: Assurance in the life cycle

ISO/IEC/IEEE 15288:2015
Systems and software engineering — System life cycle processes

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Systems and software engineering — Content of life-cycle information items (documentation)

ISO/IEC 15414:2015
Information technology — Open distributed processing — Reference model — Enterprise language

ISO/IEC 15437:2001
Information technology — Enhancements to LOTOS (E-LOTOS)

ISO/IEC 15474-1:2002
Information technology — CDIF framework — Part 1: Overview

ISO/IEC 15474-2:2002
Information technology — CDIF framework — Part 2: Modelling and extensibility

ISO/IEC 15475-1:2002
Information technology — CDIF transfer format — Part 1: General rules for syntaxes and encodings

ISO/IEC 15475-2:2002

Information technology — CDIF transfer format — Part 2: Syntax SYNTAX.1

ISO/IEC 15475-3:2002
Information technology — CDIF transfer format — Part 3: Encoding ENCODING.1

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Information technology — CDIF semantic metamodel — Part 1: Foundation

ISO/IEC 15476-2:2002
Information technology — CDIF semantic metamodel — Part 2: Common

ISO/IEC 15476-3:2006
Information technology — CDIF semantic metamodel — Part 3: Data definitions

ISO/IEC 15476-4:2005
Information technology — CDIF semantic metamodel — Part 4: Data models

ISO/IEC 15476-6:2006
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ISO/IEC 15504-5:2012
Information technology — Process assessment — Part 5: An exemplar software life cycle process assessment model

ISO/IEC TS 15504-8:2012
Information technology — Process assessment — Part 8: An exemplar process assessment model for IT service management

ISO/IEC TS 15504-10:2011
Information technology — Process assessment — Part 10: Safety extension

ISO/IEC 15909-1:2019
Systems and software engineering — High-level Petri nets — Part 1: Concepts, definitions and graphical notation

ISO/IEC 15909-2:2011
Systems and software engineering — High-level Petri nets — Part 2: Transfer format

ISO/IEC 15909-2:2011/COR 1:2013
Systems and software engineering — High-level Petri nets — Part 2: Transfer format — Technical Corrigendum 1

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Systems and software engineering — Measurement process

ISO/IEC 15940:2013
Systems and software engineering — Software Engineering Environment Services

ISO/IEC 16085:2006
Systems and software engineering — Life cycle processes — Risk management

ISO/IEC/IEEE 16326:2019
Systems and software engineering — Life cycle processes — Project management

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Information technology — Systems and software engineering — Application management

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Information technology — Systems and software engineering — Application management guidance on the relationship between ISO/IEC 16350:2015 and Application Service Library®

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Information technology — Systems and software engineering — Guide for configuration management tool capabilities

ISO/IEC 19500-1:2012
Information technology — Object Management Group — Common Object Request Broker Architecture (CORBA) — Part 1: Interfaces

ISO/IEC 19500-2:2012
Information technology — Object Management Group — Common Object Request Broker Architecture (CORBA) — Part 2: Interoperability

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Information technology — Object Management Group — Common Object Request Broker Architecture (CORBA) — Part 3: Components

ISO/IEC 19501:2005
Information technology — Open Distributed Processing — Unified Modeling Language (UML) Version 1.4.2

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Information technology — Object Management Group Unified Modeling Language (OMG UML) — Part 1: Infrastructure

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Information technology — Object Management Group Unified Modeling Language (OMG UML) — Part 2: Superstructure

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Information technology — Object Management Group Architecture-Driven Modernization (ADM) — Knowledge Discovery Meta-Model (KDM)

ISO/IEC TR 19759:2015
Software Engineering — Guide to the software engineering body of knowledge (SWEBOK)

ISO/IEC 19761:2011
Software engineering — COSMIC: a functional size measurement method

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ISO/IEC 19770-2:2015
Information technology — IT asset management — Part 2: Software identification tag

ISO/IEC 19770-3:2016
Information technology — IT asset management — Part 3: Entitlement schema

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Information technology — IT asset management — Part 4: Resource utilization measurement

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Information technology — IT asset management — Part 5: Overview and vocabulary

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Information technology — IT asset management — Part 8: Guidelines for mapping of industry practices to/from the ISO/IEC 19770 family of standards

ISO/IEC 19793:2015
Information technology — Open Distributed Processing — Use of UML for ODP system specifications

ISO/IEC 20246:2017
Software and systems engineering — Work product reviews

ISO/IEC 20741:2017
Systems and software engineering — Guideline for the evaluation and selection of software engineering tools

ISO/IEC 20926:2009
Software and systems engineering — Software measurement — IFPUG functional size measurement method 2009

ISO/IEC 20968:2002

Software engineering — Mk II Function Point Analysis — Counting Practices Manual

ISO/IEC/IEEE 21839:2019
Systems and software engineering — System of systems (SoS) considerations in life cycle stages of a system

ISO/IEC/IEEE 21840:2019
Systems and software engineering — Guidelines for the utilization of ISO/IEC/IEEE 15288 in the context of system of systems (SoS)

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Systems and software engineering — Taxonomy of systems of systems

ISO/IEC/IEEE 23026:2015
Systems and software engineering — Engineering and management of websites for systems, software, and services information

ISO/IEC 24744:2014
Software engineering — Metamodel for development methodologies

ISO/IEC/IEEE 24748-1:2018
Systems and software engineering — Life cycle management — Part 1: Guidelines for life cycle management

ISO/IEC/IEEE 24748-2:2018
Systems and software engineering — Life cycle management — Part 2: Guidelines for the application of ISO/IEC/IEEE 15288 (System life cycle processes)

ISO/IEC TR 24748-3:2011
Systems and software engineering — Life cycle management — Part 3: Guide to the application of ISO/IEC 12207 (Software life cycle processes)

ISO/IEC/IEEE 24748-4:2016
Systems and software engineering — Life cycle management — Part 4: Systems engineering planning

ISO/IEC/IEEE 24748-5:2017
Systems and software engineering — Life cycle management — Part 5: Software development planning

ISO/IEC TS 24748-6:2016
Systems and software engineering — Life cycle management — Part 6: System integration engineering

ISO/IEC/IEEE 24748-7:2019

Systems and software engineering — Life cycle management — Part 7: Application of systems engineering on defense programs

ISO/IEC/IEEE 24748-8:2019
Systems and software engineering — Life cycle management — Part 8: Technical reviews and audits on defense programs

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Systems and software engineering — Vocabulary

ISO/IEC TR 24766:2009
Information technology — Systems and software engineering — Guide for requirements engineering tool capabilities

ISO/IEC 24773-1:2019
Software and systems engineering — Certification of software and systems engineering professionals — Part 1: General requirements

ISO/IEC TR 24774:2010
Systems and software engineering — Life cycle management — Guidelines for process description

ISO/IEC 25000:2014
Systems and software engineering — Systems and software Quality Requirements and Evaluation (SQuaRE) — Guide to SQuaRE

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Systems and software engineering — Systems and software Quality Requirements and Evaluation (SQuaRE) — Planning and management

ISO/IEC 25010:2011
Systems and software engineering — Systems and software Quality Requirements and Evaluation (SQuaRE) — System and software quality models

ISO/IEC TS 25011:2017
Information technology — Systems and software Quality Requirements and Evaluation (SQuaRE) — Service quality models

ISO/IEC 25012:2008
Software engineering — Software product Quality Requirements and Evaluation (SQuaRE) — Data quality model

ISO/IEC 25020:2019
Systems and software engineering — Systems and software Quality Requirements and Evaluation (SQuaRE) — Quality measurement framework

ISO/IEC 25021:2012
Systems and software engineering — Systems and software Quality Requirements and Evaluation (SQuaRE) — Quality measure elements

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Systems and software engineering — Systems and software quality requirements and evaluation (SQuaRE) — Measurement of quality in use

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Systems and software engineering — Systems and software Quality Requirements and Evaluation (SQuaRE) — Measurement of system and software product quality

ISO/IEC 25024:2015
Systems and software engineering — Systems and software Quality Requirements and Evaluation (SQuaRE) — Measurement of data quality

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Systems and software engineering — Systems and software quality requirements and evaluation (SQuaRE) — Quality requirements framework

ISO/IEC 25040:2011
Systems and software engineering — Systems and software Quality Requirements and Evaluation (SQuaRE) — Evaluation process

ISO/IEC 25041:2012
Systems and software engineering — Systems and software Quality Requirements and Evaluation (SQuaRE) — Evaluation guide for developers, acquirers and independent evaluators

ISO/IEC 25045:2010
Systems and software engineering — Systems and software Quality Requirements and Evaluation (SQuaRE) — Evaluation module for recoverability

ISO/IEC 25051:2014
Software engineering — Systems and software Quality Requirements and Evaluation (SQuaRE) — Requirements for quality of Ready to Use Software Product (RUSP) and instructions for testing

ISO/IEC TR 25060:2010
Systems and software engineering — Systems and software product Quality Requirements and Evaluation (SQuaRE) — Common Industry Format (CIF) for usability: General framework for usability-related information

ISO/IEC 25062:2006
Software engineering — Software product Quality Requirements and Evaluation (SQuaRE) — Common Industry Format (CIF) for usability test reports

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Systems and software engineering — Systems and software product Quality Requirements and Evaluation (SQuaRE) — Common Industry Format (CIF) for usability: Context of use description

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ISO/IEC/IEEE 26512:2018
Systems and software engineering — Requirements for acquirers and suppliers of information for users

ISO/IEC/IEEE 26513:2017
Systems and software engineering — Requirements for testers and reviewers of information for users

ISO/IEC 26514:2008
Systems and software engineering — Requirements for designers and developers of user documentation

ISO/IEC/IEEE 26515:2018
Systems and software engineering — Developing information for users in an agile environment

ISO/IEC/IEEE 26531:2015
Systems and software engineering — Content management for product life-cycle, user and service management documentation

ISO/IEC 26550:2015
Software and systems engineering — Reference model for product line engineering and management

ISO/IEC 26551:2016
Software and systems engineering — Tools and methods for product line requirements engineering

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Software and systems engineering — Tools and methods for product line architecture design

ISO/IEC 26553:2018
Information technology — Software and systems engineering — Tools and methods for product line realization

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Information technology — Software and systems engineering — Tools and methods for product line testing

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Software and systems engineering — Tools and methods for product line technical management

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Software and systems engineering — Methods and tools for variability mechanisms in software and systems product line

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Software and systems engineering — Tools and methods for product line product management

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Systems and software engineering — Lifecycle profiles for Very Small Entities (VSEs) — Part 1: Overview

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Systems and software engineering — Lifecycle profiles for very small entities (VSEs) — Part 4-3: Service delivery — Profile specification

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Systems and software engineering — Lifecycle profiles for Very Small Entities (VSEs) — Part 2-2: Guide for the development of domain-specific profiles

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Systems and software engineering — Lifecycle profiles for Very Small Entities (VSEs) — Part 3-4: Autonomy-based improvement method

ISO/IEC TR 29110-5-1-1:2012
Software engineering — Lifecycle profiles for Very Small Entities (VSEs) — Part 5-1-1: Management and engineering guide: Generic profile group: Entry profile

ISO/IEC TR 29110-5-1-2:2011
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Systems and software engineering — Lifecycle profiles for Very Small Entities (VSEs) — Part 5-1-3: Software engineering — Management and engineering guide: Generic profile group — Intermediate profile

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ISO/IEC/IEEE 29119-1:2013
Software and systems engineering — Software testing — Part 1: Concepts and definitions

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Software and Systems Engineering — Lifecycle Processes — Framework for Product Quality Achievement

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Information technology — Process assessment — Process assessment model for system life cycle processes

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Software engineering — Guidelines for the application of ISO 9001:2015 to computer software

Standards under development:
ISO/IEC/IEEE DIS 12207-2
Systems and software engineering — Software life cycle processes — Part 2: Relation and mapping between ISO/IEC/IEEE 12207-1:2017 and ISO/IEC/IEEE 12207:2008

ISO/IEC/IEEE DIS 15026-4
Systems and software engineering — Systems and software assurance — Part 4: Assurance in the life cycle

ISO/IEC/IEEE DIS 16085
Systems and software engineering — Life cycle processes — Risk management

ISO/IEC CD 19770-6
Information technology — IT asset management — Part 6: Hardware schema

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Systems and software engineering — Capabilities of review tools

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ISO/IEC FDIS 23643
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ISO/IEC AWI TR 24586
Software and systems engineering — Agile and DevOps principles and practices

ISO/IEC AWI TR 24587
Software and systems engineering — Agile readiness and success criteria
ISO/IEC CD 24641
Systems and Software engineering — Methods and tools for model-based systems and software engineering

ISO/IEC/IEEE FDIS 24748-3
Systems and software engineering — Life cycle management — Part 3: Guidelines for the application of ISO/IEC/IEEE 12207 (software life cycle processes)

ISO/IEC CD 24773-3.2
Software and systems engineering — Certification of software and systems engineering professionals — Part 3: Systems Engineering

ISO/IEC CD 24773-4
Software and Systems Engineering — Certification of software and systems engineering professionals — Part 4: Software engineering

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Systems and software engineering — Systems and software Quality Requirements and Evaluation (SQuaRE) — System and software quality models — Part 1: Quality models overview and usage

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Systems and software engineering — Systems and software Quality Requirements and Evaluation (SQuaRE) — System and software quality models — Part 2: Product quality model

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ISO/IEC CD TS 25025.3
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ISO/IEC/IEEE CD 26514
Systems and software engineering — Design and development of information for users

ISO/IEC CD 26580
Software and systems engineering — Methods and tools for the feature-based approach to software and systems product line engineering

ISO/IEC AWI 29110-4-4
Systems and software engineering — Lifecycle profiles for Very Small Entities (VSEs) — Part 4-4: Agile software development — Profile specifications — Generic profile

ISO/IEC AWI 29110-4-5
Systems and software engineering — Lifecycle profiles for Very Small Entities (VSEs) — Part 4-5: DevOps — Profile specifications: Generic profile

ISO/IEC AWI TR 29110-5-4
Systems and software engineering — Lifecycle profiles for Very Small Entities (VSEs) — Part 5-4: Agile software development guidelines

ISO/IEC AWI TR 29110-5-5
Systems and software engineering — Lifecycle profiles for Very Small Entities (VSEs) — Part 5-5: DevOps guidelines

ISO/IEC CD 29110-6-1
Systems and software engineering — Lifecycle profiles for Very Small Entities (VSEs) — Part 6-1: Software engineering — Specific profile specifications: space profiles

ISO/IEC DIS 29110-4-2
Systems and software engineering — Lifecycle profiles for Very Small Entities (VSEs) — Part 4-2: Software engineering — Profile specifications: Organizational management profile group

ISO/IEC/IEEE CD 29119-2
Software and systems engineering — Software testing — Part 2: Test processes

ISO/IEC/IEEE CD 29119-3
Software and systems engineering — Software testing — Part 3: Test documentation

ISO/IEC/IEEE CD 29119-4
Software and systems engineering — Software testing — Part 4: Test techniques

ISO/IEC CD TR 29119-11
Software and systems engineering — Software testing — Part 11: Testing of AI-based systems

ISO/IEC PDTR 33017
Information technology — Process assessment — Guidance for assessor training

ISO/IEC PRF TS 33054
Information technology — Process assessment — Process reference model for service management

ISO/IEC TS 33074
Information technology — Process assessment — Process capability assessment model for service management

ISO/IEC/IEEE CD 42010
Software, systems and enterprise — Architecture description

3.2.25 ISO/IEC JTC 1/SC 17 Cards and security devices for personal identification

Scope:

The current area of work for JTC 1/SC 17 consists of:

- Identification and related documents,
- Cards,
- Security devices and tokens
- and interface associated with their use in inter-industry applications and international interchange

Structure:

ISO/IEC JTC 1/SC 17/AG 1	Registration Management Group (RMG)
ISO/IEC JTC 1/SC 17/AG 2	Virtual ID and related technologies
ISO/IEC JTC 1/SC 17/CAG 1	Chairman advisory group
ISO/IEC JTC 1/SC 17/WG 1	Physical characteristics and test methods for ID-cards
ISO/IEC JTC 1/SC 17/WG 3	Identification cards - Machine readable travel documents
ISO/IEC JTC 1/SC 17/WG 4	Generic interfaces and protocols for security devices
ISO/IEC JTC 1/SC 17/WG 5	Identification cards — Identification of issuers
ISO/IEC JTC 1/SC 17/WG 8	Integrated circuit cards without contacts
ISO/IEC JTC 1/SC 17/WG 10	Motor vehicle driver licence and related documents
ISO/IEC JTC 1/SC 17/WG 11	Application of biometrics to cards and personal identification
ISO/IEC JTC 1/SC 17/WG 12	Drone license and drone identity module

Standards:

ISO/IEC 4909:2006
Identification cards — Financial transaction cards — Magnetic stripe data content for track 3

ISO/IEC 7501-1:2008
Identification cards — Machine readable travel documents — Part 1: Machine readable passport

ISO/IEC 7501-2:1997
Identification cards — Machine readable travel documents — Part 2: Machine readable visa

ISO/IEC 7501-3:2005

Identification cards — Machine readable travel documents — Part 3: Machine readable official travel documents

ISO/IEC 7810:2019
Identification cards — Physical characteristics

ISO/IEC 7811-1:2018
Identification cards — Recording technique — Part 1: Embossing

ISO/IEC 7811-2:2018
Identification cards — Recording technique — Part 2: Magnetic stripe: Low coercivity

ISO/IEC 7811-6:2018
Identification cards — Recording technique — Part 6: Magnetic stripe: High coercivity

ISO/IEC 7811-7:2018
Identification cards — Recording technique — Part 7: Magnetic stripe: High coercivity, high density

ISO/IEC 7811-8:2014
Identification cards — Recording technique — Part 8: Magnetic stripe — Coercivity of 51,7 kA/m (650 Oe)

ISO/IEC 7811-9:2015
Identification cards — Recording technique — Part 9: Tactile identifier mark

ISO/IEC 7812-1:2017
Identification cards — Identification of issuers — Part 1: Numbering system

ISO/IEC 7812-2:2017
Identification cards — Identification of issuers — Part 2: Application and registration procedures

ISO/IEC 7813:2006
Information technology — Identification cards — Financial transaction cards

ISO/IEC 7816-1:2011
Identification cards — Integrated circuit cards — Part 1: Cards with contacts — Physical characteristics

ISO/IEC 7816-2:2007
Identification cards — Integrated circuit cards — Part 2: Cards with contacts — Dimensions and location of the contacts

ISO/IEC 7816-3:2006

Identification cards — Integrated circuit cards — Part 3: Cards with contacts — Electrical interface and transmission protocols

ISO/IEC 7816-4:2013
Identification cards — Integrated circuit cards — Part 4: Organization, security and commands for interchange

ISO/IEC 7816-4:2013/AMD 1:2018
Identification cards — Integrated circuit cards — Part 4: Organization, security and commands for interchange — Amendment 1: Multiple record handling

ISO/IEC 7816-4:2013/COR 1:2014
Identification cards — Integrated circuit cards — Part 4: Organization, security and commands for interchange — Technical Corrigendum 1

ISO/IEC 7816-4:2013/AMD 2:2018
Identification cards — Integrated circuit cards — Part 4: Organization, security and commands for interchange — Amendment 2: Waiting time management

ISO/IEC 7816-5:2004
Identification cards — Integrated circuit cards — Part 5: Registration of application providers

ISO/IEC 7816-6:2016
Identification cards — Integrated circuit cards — Part 6: Interindustry data elements for interchange

ISO/IEC 7816-7:1999
Identification cards — Integrated circuit(s) cards with contacts — Part 7: Interindustry commands for Structured Card Query Language (SCQL)

ISO/IEC 7816-8:2019
Identification cards — Integrated circuit cards — Part 8: Commands and mechanisms for security operations

ISO/IEC 7816-9:2017
Identification cards — Integrated circuit cards — Part 9: Commands for card management

ISO/IEC 7816-10:1999
Identification cards — Integrated circuit(s) cards with contacts — Part 10: Electronic signals and answer to reset for synchronous cards

ISO/IEC 7816-11:2017
Identification cards — Integrated circuit cards — Part 11: Personal verification through biometric methods

ISO/IEC 7816-12:2005
Identification cards - Integrated circuit cards — Part 12: Cards with contacts — USB electrical interface and operating procedures

ISO/IEC 7816-12:2005/COR 1:2014
Identification cards - Integrated circuit cards — Part 12: Cards with contacts — USB electrical interface and operating procedures — Technical Corrigendum 1

ISO/IEC 7816-13:2007
Identification cards — Integrated circuit cards — Part 13: Commands for application management in a multi-application environment

ISO/IEC 7816-15:2016
Identification cards — Integrated circuit cards — Part 15: Cryptographic information application

ISO/IEC 7816-15:2016/AMD 1:2018
Identification cards — Integrated circuit cards — Part 15: Cryptographic information application — Amendment 1

ISO/IEC 8484:2014
Information technology — Magnetic stripes on savingsbooks

ISO/IEC 10373-1:2006
Identification cards — Test methods — Part 1: General characteristics

ISO/IEC 10373-1:2006/AMD 1:2012
Identification cards — Test methods — Part 1: General characteristics — Amendment 1

ISO/IEC 10373-2:2015
Identification cards — Test methods — Part 2: Cards with magnetic stripes

ISO/IEC 10373-3:2018
Identification cards — Test methods — Part 3: Integrated circuit cards with contacts and related interface devices

ISO/IEC 10373-5:2014
Identification cards — Test methods — Part 5: Optical memory cards

ISO/IEC 10373-6:2016
Identification cards — Test methods — Part 6: Proximity cards

ISO/IEC 10373-6:2016/AMD 3:2018
Identification cards — Test methods — Part 6: Proximity cards — Amendment 3: PICC loading effect

ISO/IEC 10373-7:2019
Cards and security devices for personal identification — Test methods — Part 7: Contactless vicinity objects

ISO/IEC 10373-8:2011
Identification cards — Test methods — Part 8: USB-ICC

ISO/IEC 10373-9:2011
Identification cards — Test methods — Part 9: Optical memory cards — Holographic recording method

ISO/IEC 10536-1:2000
Identification cards — Contactless integrated circuit(s) cards — Close-coupled cards — Part 1: Physical characteristics

ISO/IEC 10536-2:1995
Identification cards — Contactless integrated circuit(s) cards — Part 2: Dimensions and location of coupling areas

ISO/IEC 10536-3:1996
Identification cards — Contactless integrated circuit(s) cards — Part 3: Electronic signals and reset procedures

ISO/IEC 11693-1:2012
Identification cards — Optical memory cards — Part 1: General characteristics

ISO/IEC 11693-2:2009
Identification cards — Optical memory cards — Part 2: Co-existence of optical memory with other machine readable technologies

ISO/IEC 11693-3:2015
Identification cards — Optical memory cards — Part 3: Authentication techniques

ISO/IEC 11694-1:2012
Identification cards — Optical memory cards — Linear recording method — Part 1: Physical characteristics

ISO/IEC 11694-2:2012
Identification cards — Optical memory cards — Linear recording method — Part 2: Dimensions and location of the accessible optical area

ISO/IEC 11694-3:2015
Identification cards — Optical memory cards — Linear recording method — Part 3: Optical properties and characteristics

ISO/IEC 11694-4:2008
Identification cards — Optical memory cards — Linear recording method — Part 4: Logical data structures

ISO/IEC 11694-5:2014
Identification cards — Optical memory cards — Linear recording method — Part 5: Data format for information interchange for applications using ISO/IEC 11694-4

ISO/IEC 11694-6:2014
Identification cards — Optical memory cards — Linear recording method — Part 6: Use of biometrics on an optical memory card

ISO/IEC 11695-1:2015
Identification cards — Optical memory cards — Holographic recording method — Part 1: Physical characteristics

ISO/IEC 11695-2:2015
Identification cards — Optical memory cards — Holographic recording method — Part 2: Dimensions and location of accessible optical area

ISO/IEC 11695-3:2017
Identification cards — Optical memory cards — Holographic recording method — Part 3: Optical properties and characteristics

ISO/IEC 12905:2011
Integrated circuit cards — Enhanced terminal accessibility using cardholder preference interface

ISO/IEC 12905:2011/COR 1:2013
Integrated circuit cards — Enhanced terminal accessibility using cardholder preference interface — Technical Corrigendum 1

ISO/IEC 14443-1:2018
Cards and security devices for personal identification — Contactless proximity objects — Part 1: Physical characteristics

ISO/IEC 14443-2:2016
Identification cards — Contactless integrated circuit cards — Proximity cards — Part 2: Radio frequency power and signal interface

ISO/IEC 14443-3:2018
Cards and security devices for personal identification — Contactless proximity objects — Part 3: Initialization and anticollision

ISO/IEC 14443-4:2018

Cards and security devices for personal identification — Contactless proximity objects — Part 4: Transmission protocol

ISO/IEC 15457-1:2008
Identification cards — Thin flexible cards — Part 1: Physical characteristics

ISO/IEC 15457-2:2007
Identification cards — Thin flexible cards — Part 2: Magnetic recording technique

ISO/IEC 15457-3:2008
Identification cards — Thin flexible cards — Part 3: Test methods

ISO/IEC 15693-1:2018
Cards and security devices for personal identification — Contactless vicinity objects — Part 1: Physical characteristics

ISO/IEC 15693-2:2019
Cards and security devices for personal identification — Contactless vicinity objects — Part 2: Air interface and initialization

ISO/IEC 15693-3:2019
Cards and security devices for personal identification — Contactless vicinity objects — Part 3: Anticollision and transmission protocol

ISO/IEC 17839-1:2014
Information technology — Biometric System-on-Card — Part 1: Core requirements

ISO/IEC 17839-2:2015
Information technology — Biometric System-on-Card — Part 2: Physical characteristics

ISO/IEC 17839-3:2016
Information technology — Identification cards — Biometric System-on-Card — Part 3: Logical information interchange mechanism

ISO/IEC 18013-1:2018
Information technology — Personal identification — ISO-compliant driving licence — Part 1: Physical characteristics and basic data set

ISO/IEC 18013-2:2008
Information technology — Personal identification — ISO-compliant driving licence — Part 2: Machine-readable technologies

ISO/IEC 18013-2:2008/COR 1:2011
Information technology — Personal identification — ISO-compliant driving licence — Part 2: Machine-readable technologies — Technical Corrigendum 1

ISO/IEC 18013-3:2017
Information technology — Personal identification — ISO-compliant driving licence — Part 3: Access control, authentication and integrity validation

ISO/IEC 18013-4:2019
Personal identification — ISO-compliant driving licence — Part 4: Test methods

ISO/IEC TR 18268:2013
Identification cards — Contactless integrated circuit cards — Proximity cards — Multiple PICCs in a single PCD field

ISO/IEC 18328-1:2015
Identification cards — ICC-managed devices — Part 1: General framework

ISO/IEC 18328-2:2015
Identification cards — ICC-managed devices — Part 2: Physical characteristics and test methods for cards with devices

ISO/IEC 18328-3:2016
Identification cards — ICC-managed devices — Part 3: Organization, security and commands for interchange

ISO/IEC 18328-4:2018
Identification cards — ICC-managed devices — Part 4: Test methods for logical characteristics

ISO/IEC 18584:2015
Information technology — Identification cards — Conformance test requirements for on-card biometric comparison applications

ISO/IEC 18745-1:2018
Test methods for machine readable travel documents (MRTD) and associated devices — Part 1: Physical test methods for passport books (durability)

ISO/IEC 18745-2:2016
Information technology — Test methods for machine readable travel documents (MRTD) and associated devices — Part 2: Test methods for the contactless interface

ISO/IEC TR 18781:2015
Identification cards — Laundry testing of ID Cards

ISO/IEC 19286:2018
Identification cards — Integrated circuit cards — Privacy-enhancing protocols and services

ISO/IEC TR 19446:2015

Differences between the driving licences based on the ISO/IEC 18013 series and the European Union specifications

ISO/IEC 20060:2010
Information technology — Open Terminal Architecture (OTA) — Virtual machine

ISO/IEC 24727-1:2014
Identification cards — Integrated circuit card programming interfaces — Part 1: Architecture

ISO/IEC 24727-2:2008
Identification cards — Integrated circuit card programming interfaces — Part 2: Generic card interface

ISO/IEC 24727-2:2008/AMD 1:2014
Identification cards — Integrated circuit card programming interfaces — Part 2: Generic card interface — Amendment 1

ISO/IEC 24727-3:2008
Identification cards — Integrated circuit card programming interfaces — Part 3: Application interface

ISO/IEC 24727-3:2008/AMD 1:2014
Identification cards — Integrated circuit card programming interfaces — Part 3: Application interface — Amendment 1: .

ISO/IEC 24727-3:2008/COR 1:2010
Identification cards — Integrated circuit card programming interfaces — Part 3: Application interface — Technical Corrigendum 1

ISO/IEC 24727-4:2008
Identification cards — Integrated circuit card programming interfaces — Part 4: Application programming interface (API) administration

ISO/IEC 24727-4:2008/AMD 1:2014
Identification cards — Integrated circuit card programming interfaces — Part 4: Application programming interface (API) administration — Amendment 1: .

ISO/IEC 24727-4:2008/COR 1:2011
Identification cards — Integrated circuit card programming interfaces — Part 4: Application programming interface (API) administration — Technical Corrigendum 1

ISO/IEC 24727-5:2011
Identification cards — Integrated circuit card programming interfaces — Part 5: Testing procedures

ISO/IEC 24727-6:2010
Identification cards — Integrated circuit card programming interfaces — Part 6: Registration authority procedures for the authentication protocols for interoperability

ISO/IEC 24787:2018
Information technology — Identification cards — On-card biometric comparison

ISO/IEC 24789-1:2012
Identification cards — Card service life — Part 1: Application profiles and requirements

ISO/IEC 24789-2:2011
Identification cards — Card service life — Part 2: Methods of evaluation

ISO/IEC TR 29123:2007
Identification Cards — Proximity Cards — Requirements for the enhancement of interoperability

ISO/IEC TR 30117:2014
Information technology — Guide to on-card biometric comparison standards and applications

Standards under development:

ISO/IEC 7816-4
Identification cards — Integrated circuit cards — Part 4: Organization, security and commands for interchange

ISO/IEC FDIS 7816-6
Identification cards — Integrated circuit cards — Part 6: Interindustry data elements for interchange

ISO/IEC CD 7816-8
Identification cards — Integrated circuit cards — Part 8: Commands and mechanisms for security operations

ISO/IEC CD 7816-11
Identification cards — Integrated circuit cards — Part 11: Personal verification through biometric methods

ISO/IEC DIS 10373-1
Cards and security devices for personal identification — Test methods — Part 1: General characteristics

ISO/IEC FDIS 10373-6
Cards and security devices for personal identification — Test methods — Part 6: Contactless proximity objects

ISO/IEC 10373-6/DAMD 1
Cards and security devices for personal identification — Test methods — Part 6: Contactless proximity objects — Amendment 1: Dynamic power level management

ISO/IEC 10373-6/DAMD 2
Cards and security devices for personal identification — Test methods — Part 6: Contactless proximity objects — Amendment 2: Enhancements for harmonization

ISO/IEC FDIS 14443-2
Cards and security devices for personal identification — Contactless proximity objects — Part 2: Radio frequency power and signal interface

ISO/IEC 14443-3:2018/DAMD 1
Cards and security devices for personal identification — Contactless proximity objects — Part 3: Initialization and anticollision — Amendment 1: Dynamic power level management

ISO/IEC 14443-3:2018/DAMD 2
Cards and security devices for personal identification — Contactless proximity objects — Part 3: Initialization and anticollision — Amendment 2: Enhancements for harmonization

ISO/IEC 14443-4:2018/DAMD 1
Cards and security devices for personal identification — Contactless proximity objects — Part 4: Transmission protocol — Amendment 1: Dynamic power level management

ISO/IEC 14443-4:2018/PRF AMD 2
Cards and security devices for personal identification — Contactless proximity objects — Part 4: Transmission protocol — Amendment 2: Enhancements for harmonization

ISO/IEC 17839-2:2015/DAMD 1
Information technology — Biometric System-on-Card — Part 2: Physical characteristics — Amendment 1: Additional specifications

ISO/IEC FDIS 18013-2
Personal identification — ISO-compliant driving licence — Part 2: Machine-readable technologies

ISO/IEC 18013-3:2017/FDAMD 1
Information technology — Personal identification — ISO-compliant driving licence — Part 3: Access control, authentication and integrity validation — Amendment 1: PACE protocol

ISO/IEC DIS 18013-5
Personal identification — ISO-compliant driving licence — Part 5: Mobile driving licence (mDL) application

ISO/IEC DIS 18328-2

Identification cards — ICC-managed devices — Part 2: Physical characteristics and test methods for cards with devices

ISO/IEC WD 18584
Information technology — Identification cards — Conformance test requirements for on-card biometric comparison applications

ISO/IEC WD 18745-2
Information technology — Test methods for machine readable travel documents (MRTD) and associated devices — Part 2: Test methods for the contactless interface

ISO/IEC CD 22460-1
ISO license and drone identity module for drone (Ultra light vehicle or unmanned aircraft system) — Part 1: Physical characteristics and basic data sets for drone licence

ISO/IEC AWI 22460-2
ISO license and drone identity module for drone (Ultra light vehicle or unmanned aircraft system) — Part 2: Drone identity module (DIM)

ISO/IEC AWI 22460-3
ISO license and drone identity module for drone (Ultra Light Vehicle or unmanned aircraft system) — Part 3: Logical data structure, access control, authentication and integrity validation for drone licence

ISO/IEC CD TS 22924
Identification Cards — Portability — Configurations for HCI/HCP interchange

ISO/IEC AWI 23220-1
Card and security devices for personal identification — Building blocks for identity management on mobile devices — Part 1: Generic system architectures and transaction flows of mobile eID systems

ISO/IEC AWI TS 23220-2
Card and security devices for personal identification — Building blocks for identity management on mobile devices — Part 2: Data objects and encoding rules for generic eID systems

ISO/IEC AWI TS 23220-3
Card and security devices for personal identification — Building blocks for identity management on mobile devices — Part 3: Protocols and services for issuing phase

ISO/IEC AWI TS 23220-4
Card and security devices for personal identification — Building blocks for identity management on mobile devices — Part 4: Protocols and services for operational phase

ISO/IEC AWI TS 23220-5

Card and security devices for personal identification — Building blocks for identity management on mobile devices — Part 5: Trust models and confidence level assessment

ISO/IEC AWI 23465-1
Card and security devices for personal identification — Programming interface for security devices — Part 1: Introduction and architecture description

ISO/IEC AWI 23465-2
Card and security devices for personal identification — Programming interface for security devices — Part 2: API definition

ISO/IEC WD TS 23465-3
Card and security devices for personal identification — Programming interface for security devices — Part 3: Proxy

ISO/IEC CD TS 24192-1
Cards and security devices for personal identification — Communication between contactless readers and fare media used in public transport — Part 1: Implementation requirements for ISO/IEC 14443

ISO/IEC CD TS 24192-2
Cards and security devices for personal identification — Communication between contactless readers and fare media used in public transport — Part 2: Test plan for ISO/IEC 14443

ISO/IEC AWI 24787
Information technology — Identification cards — On-card biometric comparison

ISO/IEC CD 24789-1
Identification cards — Card service life — Part 1: Application profiles and requirements

ISO/IEC CD 24789-2
Identification cards — Card service life — Part 2: Methods of evaluation

ISO/IEC AWI TR 30117
Information technology — Guide to standards and applications for the integration of biometrics and ICC

3.2.26 ISO/IEC JTC 1/SC 22 - Programming languages, their environments and system software interfaces

Scope:

JTC1/SC 22 is the international standarisation subcommittee for programming languages, their environments and system software interfaces. SC 22 is oftentimes called the "portability subcommittee".

Structure:

ISO/IEC JTC 1/SC 22/AHG 1   OWG LSB

ISO/IEC JTC 1/SC 22/WG 4   COBOL

ISO/IEC JTC 1/SC 22/WG 5   Fortran

ISO/IEC JTC 1/SC 22/WG 9   Ada

ISO/IEC JTC 1/SC 22/WG 14   C

ISO/IEC JTC 1/SC 22/WG 17   Prolog

ISO/IEC JTC 1/SC 22/WG 21   C++

ISO/IEC JTC 1/SC 22/WG 23   Programming Language Vulnerabilities

ISO/IEC JTC 1/SC 22/WG 24   Linux Standard Base (LSB)

Standards:

ISO/IEC 1539-1:2018
Information technology — Programming languages — Fortran — Part 1: Base language

ISO/IEC 1539-2:2000
Information technology — Programming languages — Fortran — Part 2: Varying length character strings

ISO/IEC 1989:2014
Information technology — Programming languages, their environments and system software interfaces — Programming language COBOL

ISO 6160:1979
Programming languages — PL/1

ISO/IEC 6522:1992
Information technology — Programming languages — PL/1 general purpose subset

ISO 7185:1990
Information technology — Programming languages — Pascal

ISO 8485:1989
Programming languages — APL

ISO/IEC 8652:2012
Information technology — Programming languages — Ada

ISO/IEC 8652:2012/COR 1:2016
Information technology — Programming languages — Ada — Technical Corrigendum 1

ISO/IEC 9496:2003
CHILL — The ITU-T programming language

ISO/TR 9547:1988
Programming language processors — Test methods — Guidelines for their development and acceptability

ISO/IEC 9899:2018
Information technology — Programming languages — C

ISO/IEC/IEEE 9945:2009
Information technology — Portable Operating System Interface (POSIX®) Base Specifications, Issue 7

ISO/IEC/IEEE 9945:2009/COR 1:2013
Information technology — Portable Operating System Interface (POSIX®) Base Specifications, Issue 7 — Technical Corrigendum 1

ISO/IEC/IEEE 9945:2009/COR 2:2017
Information technology — Portable Operating System Interface (POSIX®) Base Specifications, Issue 7 — Technical Corrigendum 2

ISO/IEC TR 10034:1990
Guidelines for the preparation of conformity clauses in programming language standards

ISO/IEC TR 10176:2003
Information technology — Guidelines for the preparation of programming language standards

ISO/IEC TR 10182:2016
Information technology — Programming languages, their environments and system software interfaces — Guidelines for language bindings

ISO/IEC 10206:1991

Information technology — Progamming languages — Extended Pascal

ISO/IEC 10279:1991
Information technology — Programming languages — Full BASIC

ISO/IEC 10279:1991/AMD 1:1994
Information technology — Programming languages — Full BASIC — Amendment 1: Modules and single character input enhancement

ISO/IEC 10514-1:1996
Information technology — Programming languages — Part 1: Modula-2, Base Language

ISO/IEC 10514-2:1998
Information technology — Programming languages — Part 2: Generics Modula-2

ISO/IEC 10514-3:1998
Information technology — Programming languages — Part 3: Object Oriented Modula-2

ISO/IEC 10967-1:2012
Information technology — Language independent arithmetic — Part 1: Integer and floating point arithmetic

ISO/IEC 10967-2:2001
Information technology — Language independent arithmetic — Part 2: Elementary numerical functions

ISO/IEC 10967-3:2006
Information technology — Language independent arithmetic — Part 3: Complex integer and floating point arithmetic and complex elementary numerical functions

ISO/IEC TR 11017:1998
Information technology — Framework for internationalization

ISO/IEC 11756:1999
Information technology — Programming languages — M

ISO/IEC 13210:1999
Information technology — Requirements and Guidelines for Test Methods Specifications and Test Method Implementations for Measuring Conformance to POSIX Standards

ISO/IEC 13211-1:1995
Information technology — Programming languages — Prolog — Part 1: General core

ISO/IEC 13211-1:1995/COR 1:2007

Information technology — Programming languages — Prolog — Part 1: General core — Technical Corrigendum 1

ISO/IEC 13211-1:1995/COR 2:2012
Information technology — Programming languages — Prolog — Part 1: General core — Technical Corrigendum 2

ISO/IEC 13211-1:1995/COR 3:2017
Information technology — Programming languages — Prolog — Part 1: General core — Technical Corrigendum 3

ISO/IEC 13211-2:2000
Information technology — Programming languages — Prolog — Part 2: Modules

ISO/IEC 13568:2002
Information technology — Z formal specification notation — Syntax, type system and semantics

ISO/IEC 13568:2002/COR 1:2007
Information technology — Z formal specification notation — Syntax, type system and semantics — Technical Corrigendum 1

ISO/IEC 13719-1:1998
Information technology — Portable Common Tool Environment (PCTE) — Part 1: Abstract specification

ISO/IEC 13719-2:1998
Information technology — Portable Common Tool Environment (PCTE) — Part 2: C programming language binding

ISO/IEC 13719-3:1998
Information technology — Portable common tool environment (PCTE) — Part 3: Ada programming language binding

ISO/IEC 13719-4:1998
Information technology — Portable Common Tool Environment (PCTE) — Part 4: IDL binding (Interface Definition Language)

ISO/IEC 13751:2001
Information technology — Programming languages, their environments and system software interfaces — Programming language Extended APL

ISO/IEC 13816:2007
Information technology — Programming languages, their environments and system software interfaces — Programming language ISLISP

ISO/IEC 13817-1:1996
Information technology — Programming languages, their environments and system software interfaces — Vienna Development Method — Specification Language — Part 1: Base language

ISO/IEC 13886:1996
Information technology — Language-Independent Procedure Calling (LIPC)

ISO/IEC TR 14369:2018
Information technology — Programming languages, their environments and system software interfaces — Guidelines for the preparation of language-independent service specifications (LISS)

ISO/IEC 14515-1:2000
Information technology — Portable Operating System Interface (POSIX®) — Test methods for measuring conformance to POSIX — Part 1: System interfaces

ISO/IEC 14515-1:2000/AMD 1:2003
Information technology — Portable Operating System Interface (POSIX®) — Test methods for measuring conformance to POSIX — Part 1: System interfaces — Amendment 1: Realtime Extension (C Language)

ISO/IEC 14519:2001
Information technology — POSIX Ada Language Interfaces — Binding for System Application Program Interface (API)

ISO/IEC 14882:2017
Programming languages — C++

ISO/IEC 14977:1996
Information technology — Syntactic metalanguage — Extended BNF

ISO/IEC 15145:1997
Information technology — Programming languages — FORTH

ISO/IEC 15291:1999
Information technology — Programming languages — Ada Semantic Interface Specification (ASIS)

ISO/IEC 15851:1999
Information technology — Communication protocol — Open MUMPS Interconnect

ISO/IEC 15852:1999
Information technology — Programming languages — M Windowing API

ISO/IEC TR 15942:2000

Information technology — Programming languages — Guide for the use of the Ada programming language in high integrity systems

ISO/IEC 16509:1999
Information technology — Year 2000 terminology

ISO/IEC 17960:2015
Information technology — Programming languages, their environments and system software interfaces — Code signing for source code

ISO/IEC TS 17961:2013
Information technology — Programming languages, their environments and system software interfaces — C secure coding rules

ISO/IEC TS 17961:2013/COR 1:2016
Information technology — Programming languages, their environments and system software interfaces — C secure coding rules — Technical Corrigendum 1

ISO/IEC 18009:1999
Information technology — Programming languages — Ada: Conformity assessment of a language processor

ISO/IEC TR 18015:2006
Information technology — Programming languages, their environments and system software interfaces — Technical Report on C++ Performance

ISO/IEC TR 18037:2008
Programming languages — C — Extensions to support embedded processors

ISO/IEC TS 18661-1:2014
Information technology — Programming languages, their environments, and system software interfaces — Floating-point extensions for C — Part 1: Binary floating-point arithmetic

ISO/IEC TS 18661-2:2015
Information Technology — Programming languages, their environments, and system software interfaces — Floating-point extensions for C — Part 2: Decimal floating-point arithmetic

ISO/IEC TS 18661-3:2015
Information Technology — Programming languages, their environments, and system software interfaces — Floating-point extensions for C — Part 3: Interchange and extended types

ISO/IEC TS 18661-4:2015
Information Technology — Programming languages, their environments, and system software interfaces — Floating-point extensions for C — Part 4: Supplementary functions

ISO/IEC TS 18661-5:2016
Information Technology — Programming languages, their environments, and system software interfaces — Floating-point extensions for C — Part 5: Supplementary attributes

ISO/IEC TS 19216:2018
Programming Languages — C++ Extensions for Networking

ISO/IEC TS 19217:2015
Information technology — Programming languages — C++ Extensions for concepts

ISO/IEC TS 19568:2017
Programming Languages — C++ Extensions for Library Fundamentals

ISO/IEC TS 19570:2018
Programming Languages — Technical Specification for C++ Extensions for Parallelism

ISO/IEC TS 19571:2016
Programming Languages — Technical specification for C++ extensions for concurrency

ISO/IEC TR 19755:2003
Information technology — Programming languages, their environments and system software interfaces — Object finalization for programming language COBOL

ISO/IEC TR 19768:2007
Information technology — Programming languages — Technical Report on C++ Library Extensions

ISO/IEC TS 19841:2015
Technical Specification for C++ Extensions for Transactional Memory

ISO/IEC 20970:2002
Information technology — Programming languages, their environments and system software interfaces — JEFF file format

ISO/IEC TS 21425:2017
Programming languages — C++ Extensions for ranges

ISO/IEC TS 21544:2018
Programming languages — Extensions to C++ for modules

ISO/IEC 21778:2017
Information technology — The JSON data interchange syntax

ISO/IEC TS 22277:2017

Technical Specification — C++ Extensions for Coroutines

ISO/IEC 22537:2006
Information technology — ECMAScript for XML (E4X) specification

ISO/IEC 23270:2018
Information technology — Programming languages — C#

ISO/IEC 23271:2012
Information technology — Common Language Infrastructure (CLI)

ISO/IEC TR 23272:2011
Information technology — Common Language Infrastructure (CLI) — Information Derived from Partition IV XML File

ISO/IEC 23360-1:2006
Linux Standard Base (LSB) core specification 3.1 — Part 1: Generic specification

ISO/IEC 23360-2:2006
Linux Standard Base (LSB) core specification 3.1 — Part 2: Specification for IA32 architecture

ISO/IEC 23360-3:2006
Linux Standard Base (LSB) core specification 3.1 — Part 3: Specification for IA64 architecture

ISO/IEC 23360-4:2006
Linux Standard Base (LSB) core specification 3.1 — Part 4: Specification for AMD64 architecture

ISO/IEC 23360-5:2006
Linux Standard Base (LSB) core specification 3.1 — Part 5: Specification for PPC32 architecture

ISO/IEC 23360-6:2006
Linux Standard Base (LSB) core specification 3.1 — Part 6: Specification for PPC64 architecture

ISO/IEC 23360-7:2006
Linux Standard Base (LSB) core specification 3.1 — Part 7: Specification for S390 architecture

ISO/IEC 23360-8:2006
Linux Standard Base (LSB) core specification 3.1 — Part 8: Specification for S390X architecture

ISO/IEC TR 24715:2006
Information technology — Programming languages, their environments and system software interfaces — Technical Report on the Conflicts between the ISO/IEC 9945 (POSIX) and the Linux Standard Base (ISO/IEC 23360)

ISO/IEC TR 24716:2007

Information technology — Programming languages, their environment and system software interfaces — Native COBOL Syntax for XML Support

ISO/IEC TR 24717:2009
Information technology — Programming languages, their environments and system software interfaces — Collection classes for programming language COBOL

ISO/IEC TR 24718:2005
Information technology — Programming languages — Guide for the use of the Ada Ravenscar Profile in high integrity systems

ISO/IEC TR 24731-1:2007
Information technology — Programming languages, their environments and system software interfaces — Extensions to the C library — Part 1: Bounds-checking interfaces

ISO/IEC TR 24731-2:2010
Information technology — Programming languages, their environments and system software interfaces — Extensions to the C library — Part 2: Dynamic Allocation Functions

ISO/IEC TR 24732:2009
Information technology — Programming languages, their environments and system software interfaces — Extension for the programming language C to support decimal floating-point arithmetic

ISO/IEC TR 24733:2011
Information technology — Programming languages, their environments and system software interfaces — Extensions for the programming language C++ to support decimal floating-point arithmetic

ISO/IEC 24747:2009
Information technology — Programming languages, their environments and system software interfaces — Extensions to the C Library to support mathematical special functions

ISO/IEC TR 24772-1:2019
Programming languages — Guidance to avoiding vulnerabilities in programming languages — Part 1: Language-independent guidance

ISO/IEC TR 24772-2:2020
Programming languages — Guidance to avoiding vulnerabilities in programming languages — Part 2: Ada

ISO/IEC 25436:2006
Information technology — Eiffel: Analysis, Design and Programming Language

ISO/IEC TR 25438:2006

Information technology — Common Language Infrastructure (CLI) — Technical Report: Common Generics

ISO/IEC 29124:2010
Information technology — Programming languages, their environments and system software interfaces — Extensions to the C++ Library to support mathematical special functions

ISO/IEC 30170:2012
Information technology — Programming languages — Ruby

Standards under development:
ISO/IEC CD 1989
Information technology — Programming languages, their environments and system software interfaces — Programming language COBOL

ISO/IEC DIS 14882
Programming languages — C++

ISO/IEC AWI TS 19568
Programming Languages — C++ Extensions for Library Fundamentals

ISO/IEC AWI TS 23360-1-6
Linux Standard Base (LSB) — Part 1-6: Graphic specification

ISO/IEC DIS 23360-1-1
Linux Standard Base (LSB) — Part 1-1: Common definitions

ISO/IEC DIS 23360-1-2
Linux Standard Base (LSB) — Part 1-2: Core specification generic part

ISO/IEC DIS 23360-1-3
Linux Standard Base (LSB) — Part 1-3: Desktop specification generic part

ISO/IEC DIS 23360-1-4
Linux Standard Base (LSB) — Part 1-4: Languages specification

ISO/IEC DIS 23360-1-5
Linux Standard Base (LSB) — Part 1-5: Imaging specification

ISO/IEC DIS 23360-2-2
Linux Standard Base (LSB) — Part 2-2: Core specification for X86-32 architecture

ISO/IEC DIS 23360-2-3
Linux Standard Base (LSB) — Part 2-3: Desktop specification for X86-32 architecture

ISO/IEC DIS 23360-3-2
Linux Standard Base (LSB) — Part 3-2: Core specification for IA64 (Itanium™) architecture

ISO/IEC DIS 23360-3-3
Linux Standard Base (LSB) — Part 3-3: Desktop specification for IA64 (Itanium) architecture

ISO/IEC DIS 23360-4-2
Linux Standard Base (LSB) — Part 4-2: Core specification for AMD64 (X86-64) architecture

ISO/IEC DIS 23360-4-3
Linux Standard Base (LSB) — Part 4-3: Desktop specification for AMD64 (X86-64) architecture

ISO/IEC DIS 23360-5-2
Linux Standard Base (LSB) — Part 5-2: Core specification for PowerPC 32 architecture

ISO/IEC DIS 23360-5-3
Linux Standard Base (LSB) — Part 5-3: Desktop specification for PowerPC 32 architecture

ISO/IEC DIS 23360-6-2
Linux Standard Base (LSB) — Part 6-2: Core specification for PowerPC 64 architecture

ISO/IEC DIS 23360-6-3
Linux Standard Base (LSB) — Part 6-3: Desktop specification for PowerPC 64 architecture

ISO/IEC DIS 23360-7-2
Linux Standard Base (LSB) — Part 7-2: Core specification for S390 architecture

ISO/IEC DIS 23360-7-3
Linux Standard Base (LSB) — Part 7-3: Desktop specification for S390 architecture

ISO/IEC DIS 23360-8-2
Linux Standard Base (LSB) — Part 8-2: Core specification for S390X architecture

ISO/IEC DIS 23360-8-3
Linux Standard Base (LSB) — Part 8-3: Desktop specification for S390X architecture

ISO/IEC CD TS 23619
Technical Specification — C++ Extensions for Reflection

ISO/IEC PDTR 24718
Information technology — Programming languages — Guide for the use of the Ada Ravenscar Profile in high integrity systems

ISO/IEC TR 24772-3

Programming languages — Guidance to avoiding vulnerabilities in programming languages — Part 3: C

ISO/IEC WD TR 24772-4
Information technology — Programming languages — Guidance to avoiding vulnerabilities in programming languages — Part 4: Python

ISO/IEC WD TR 24772-6
Information technology — Programming languages — Guidance to avoiding vulnerabilities in programming languages — Part 6: Spark

ISO/IEC WD TR 24772-10
Information technology — Programming languages — Guidance to avoiding vulnerabilities in programming languages — Part 10: Guidance for programming language C++

ISO/IEC WD TR 24772-11
Information technology — Programming languages — Guidance to avoiding vulnerabilities in programming languages — Part 11: Guidance for programming language Java

3.2.27 ISO/IEC JTC 1/SC 23 - Digitally Recorded Media for Information Interchange and Storage

Scope:

Standarisation in the field of removable digital storage media utilizing optical, holographic and magnetic recording technologies, and flash memory technologies for digital information interchange, including;

- algorithms for the lossless compression of data
- volume and file structure
- methods for determining the life expectancy of digital storage media
- methods for error monitoring of digital storage media

Standards:

ISO/IEC 1001:2012
Information technology — File structure and labelling of magnetic tapes for information interchange

ISO 1862:1975
Information processing — 9- track, 12,7 mm (0.5 in) wide magnetic tape for information interchange recorded at 8 rpmm (200 rpi)

ISO/IEC 1863:1990
Information processing — 9-track, 12,7 mm (0,5 in) wide magnetic tape for information interchange using NRZ1 at 32 ftpmm (800 ftpi) — 32 cpmm (800 cpi)

ISO/IEC 1864:1992
Information technology — Unrecorded 12,7 mm (0,5 in) wide magnetic tape for information interchange — 32 ftpmm (800 ftpi), NRZ1, 126 ftpmm (3 200 ftpi) phase encoded and 356 ftpmm (9 042 ftpi), NRZ1

ISO 3407:1983
Information processing — Information interchange on 3,81 mm (0.150 in) magnetic tape cassette at 4 cpmm (100 cpi), phase encoded at 63 ftpmm (1 600 ftpi)

ISO 3561:1976
Information processing — Interchangeable magnetic six-disk pack — Track format

ISO 3562:1976
Information processing — Interchangeable magnetic single-disk cartridge (top loaded) — Physical and magnetic characteristics

ISO 3563:1976
Information processing — Interchangeable magnetic single-disk cartridge (top loaded) — Track format

ISO 3564:1976
Information processing — Interchangeable magnetic eleven-disk pack — Physical and magnetic characteristics

ISO 3692:1976
Information processing — Reels and cores for 25,4 mm (1 in) perforated paper tape for information interchange — Dimensions

ISO/IEC 3788:1990
Information processing — 9-track, 12,7 mm (0,5 in) wide magnetic tape for information interchange using phase encoding at 126 ftpmm (3 200 ftpi), 63 cpmm (1 600 cpi)

ISO 4337:1977
Information processing — Interchangeable magnetic twelve-disk pack (100 Mbytes)

ISO 5652:1984
Information processing — 9-Track, 12,7 mm (0.5 in) wide magnetic tape for information interchange — Format and recording, using group coding at 246 cpmm (6 250 cpi)

ISO 5653:1980
Information processing — Interchangeable magnetic twelve-disk pack (200 Mbytes)

ISO 5654-1:1984
Information processing — Data interchange on 200 mm (8 in) flexible disk cartridges using two-frequency recording at 13 262 ftprad, 1,9 tpmm (48 tpi), on one side — Part 1: Dimensional, physical and magnetic characteristics

ISO 5654-2:1985
Information processing — Data interchange on 200 mm (8 in) flexible disk cartridges using two-frequency recording at 13 262 ftprad, 1.9 tpmm (48 tpi), on one side — Part 2: Track format

ISO 6098:1984
Information processing — Self-loading cartridges for 12,7 mm (0.5 in) wide magnetic tape

ISO 6596-1:1985
Information processing — Data interchange on 130 mm (5.25 in) flexible disk cartridges using two-frequency recording at 7 958 ftprad, 1.9 tpmm (48 tpi), on one side — Part 1: Dimensional, physical and magnetic characteristics

ISO 6596-2:1985

Information processing — Data interchange on 130 mm (5.25 in) flexible disk cartridges using two-frequency recording at 7 958 ftprad, 1,9 tpmm (48 tpi), on one side — Part 2: Track format

ISO 7065-1:1985
Information processing — Data interchange on 200 mm (8 in) flexible disk cartridges using modified frequency modulation recording at 13 262 ftprad, 1,9 tpmm (48 tpi), on both sides — Part 1: Dimensional, physical and magnetic characteristics

ISO 7065-2:1985
Information processing — Data interchange on 200 mm (8 in) flexible disk cartridges using modified frequency modulation recording at 13 262 ftprad, 1,9 tpmm (48 tpi), on both sides — Part 2: Track format

ISO/IEC 7487-1:1993
Information technology — Data interchange on 130 mm (5,25 in) flexible disk cartridges using modified frequency modulation recording at 7 958 ftprad, 1,9 tpmm (48 tpi), on both sides — ISO type 202 — Part 1: Dimensional, physical and magnetic characteristics

ISO 7487-2:1985
Information processing — Data interchange on 130 mm (5.25 in) flexible disk cartridges using modified frequency modulation recording at 7 958 ftprad, 1,9 tpmm (48 tpi), on both sides — Part 2: Track format A

ISO 7487-3:1986
Information processing — Data interchange on 130 mm (5.25 in) flexible disk cartridges using modified frequency modulation recording at 7 958 ftprad, 1,9 tpmm (48 tpi), on both sides — Part 3: Track format B

ISO 8064:1985
Information processing — Reels for 12,7 mm (0,5 in) wide magnetic tapes — Sizes 16, 18 and 22

ISO 8630-1:1987
Information processing — Data interchange on 130 mm (5.25 in) flexible disk cartridges using modified frequency modulation recording at 13 262 ftprad, on 80 tracks on each side — Part 1: Dimensional, physical and magnetic characteristics

ISO 8630-3:1987
Information processing — Data interchange on 130 mm (5.25 in) flexible disk cartridges using modified frequency modulation recording at 13 262 ftprad, on 80 tracks on each side — Part 3: Track format B for 80 tracks

ISO 8860-1:1987

Information processing — Data interchange on 90 mm (3.5 in) flexible disk cartridges using modified frequency modulation recording at 7 958 ftprad on 80 tracks on each side — Part 1: Dimensional, physical and magnetic characteristics

ISO 8860-2:1987
Information processing — Data interchange on 90 mm (3.5 in) flexible disk cartridges using modified frequency modulation recording at 7 958 ftprad on 80 tracks on each side — Part 2: Track format

ISO/IEC 9171-1:1990
Information technology — 130 mm optical disk cartridge, write once, for information interchange — Part 1: Unrecorded optical disk cartridge

ISO/IEC 9171-2:1990
Information technology — 130 mm optical disk cartridge, write once, for information interchange — Part 2: Recording format

ISO/IEC 9529-1:1989
Information processing systems — Data interchange on 90 mm (3,5 in) flexible disk cartridges using modified frequency modulation recording at 15 916 ftprad, on 80 tracks on each side — Part 1: Dimensional, physical and magnetic characteristics

ISO/IEC 9529-2:1989
Information processing systems — Data interchange on 90 mm (3,5 in) flexible disk cartridges using modified frequency modulation recording at 15 916 ftprad, on 80 tracks on each side — Part 2: Track format

ISO 9660:1988
Information processing — Volume and file structure of CD-ROM for information interchange

ISO 9660:1988/AMD 1:2013
Information processing — Volume and file structure of CD-ROM for information interchange — Amendment 1

ISO 9660:1988/AMD 2:2020
Information processing — Volume and file structure of CD-ROM for information interchange — Amendment 2

ISO/IEC 9661:1994
Information technology — Data interchange on 12,7 mm wide magnetic tape cartridges — 18 tracks, 1 491 data bytes per millimetre

ISO/IEC 10089:1991
Information technology — 130 mm rewritable optical disk cartridge for information interchange

ISO/IEC 10090:1992
Information technology — 90 mm optical disk cartridges, rewritable and read only, for data interchange

ISO/IEC TR 10091:1995
Information technology — Technical aspects of 130 mm optical disk cartridge write-once recording format

ISO/IEC 10149:1995
Information technology — Data interchange on read-only 120 mm optical data disks (CD-ROM)

ISO/IEC 10885:1993
Information technology — 356 mm optical disk cartridge for information interchange — Write once

ISO/IEC 10994:1992
Information technology — Data interchange on 90 mm flexible disk cartridges using modified frequency modulation recording at 31 831 ftprad on 80 tracks on each side — ISO Type 303

ISO/IEC 10995:2011
Information technology — Digitally recorded media for information interchange and storage — Test method for the estimation of the archival lifetime of optical media

ISO/IEC 11319:1993
Information technology — 8 mm wide magnetic tape cartridge for information interchange — Helical scan recording

ISO/IEC 11321:1992
Information technology — 3,81 mm wide magnetic tape cartridge for information interchange — Helical scan recording — DATA/DAT format

ISO/IEC 11557:1992
Information technology — 3,81 mm wide magnetic tape cartridge for information interchange — Helical scan recording — DDS-DC format using 60 m and 90 m length tapes

ISO/IEC 11558:1992
Information technology — Data compression for information interchange — Adaptive coding with embedded dictionary — DCLZ Algorithm

ISO/IEC 11559:1993
Information technology — Data interchange on 12,7 mm wide 18-track magnetic tape cartridges — Extended format

ISO/IEC 11560:1992

Information technology — Information interchange on 130 mm optical disk cartridges using the magneto-optical effect, for write once, read multiple functionality

ISO/IEC 11576:1994
Information technology — Procedure for the registration of algorithms for the lossless compression of data

ISO/IEC 11976:2008
Information technology — Data interchange on 130 mm rewritable and write-once-read-many ultra density optical (UDO) disk cartridges — Capacity: 60 Gbytes per cartridge — Second generation

ISO/IEC 12042:1993
Information technology — Data compression for information interchange — Binary arithmetic coding algorithm

ISO/IEC 12246:1993
Information technology — 8 mm wide magnetic tape cartridge dual azimuth format for information interchange — Helical scan recording

ISO/IEC 12247:1993
Information technology — 3,81 mm wide magnetic tape cartridge for information interchange — Helical scan recording — DDS format using 60 m and 90 m length tapes

ISO/IEC 12248:1993
Information technology — 3,81 mm wide magnetic tape cartridge for information interchange — Helical scan recording — DATA/DAT-DC format using 60 m and 90 m length tapes

ISO/IEC 12862:2011
Information technology — 120 mm (8,54 Gbytes per side) and 80 mm (2,66 Gbytes per side) DVD recordable disk for dual layer (DVD-R for DL)

ISO/IEC 13170:2009
Information technology — 120 mm (8,54 Gbytes per side) and 80 mm (2,66 Gbytes per side) DVD re-recordable disk for dual layer (DVD-RW for DL)

ISO/IEC 13403:1995
Information technology — Information interchange on 300 mm optical disk cartridges of the write once, read multiple (WORM) type using the CCS method

ISO/IEC 13421:1993
Information technology — Data Interchange on 12,7 mm, 48-track magnetic tape cartridges — DLT 1 format

ISO/IEC 13422:1994

Information technology — Data interchange on 90 mm Flexible Disk Cartridges 10 MByte capacity using sector servo tracking — ISO Type 304

ISO/IEC 13481:1993
Information technology — Data interchange on 130 mm optical disk cartridges — Capacity: 1 gigabyte per cartridge

ISO/IEC 13549:1993
Information technology — Data interchange on 130 mm optical disk cartridges — Capacity: 1,3 gigabytes per cartridge

ISO/IEC TR 13561:1994
Information technology — Guidelines for effective use of optical disk cartridges conforming to ISO/IEC 10090

ISO/IEC 13614:1995
Information technology — Interchange on 300 mm optical disk cartridges of the write once, read multiple (WORM) type using the SSF method

ISO/IEC TR 13841:1995
Information technology — Guidance on measurement techniques for 90 mm optical disk cartridges

ISO/IEC 13842:1995
Information technology — 130 mm optical disk cartridges for information interchange — Capacity: 2 Gbytes per cartridge

ISO/IEC 13923:1996
Information technology — 3,81 mm wide magnetic tape cartridge for information interchange — Helical scan recording — DDS-2 format using 120 m length tape

ISO/IEC 13962:1995
Information technology — Data interchange on 12,7 mm, 112-track magnetic tape cartridges — DLT 2 format

ISO/IEC 13963:1995
Information technology — Data interchange on 90 mm optical disk cartridges — Capacity: 230 megabytes per cartridge

ISO/IEC 14169:1995
Information technology — 90 mm flexible disk cartridges — 21 MBytes formatted capacity — ISO Type 305

ISO/IEC 14251:1995
Information technology — Data interchange on 12,7 mm 36-track magnetic tape cartridges

ISO/IEC 14417:1999
Information technology — Data recording format DD-1 for magnetic tape cassette conforming to IEC 1016

ISO/IEC 14517:1996
Information technology — 130 mm optical disk cartridges for information interchange — Capacity: 2,6 Gbytes per cartridge

ISO/IEC 14760:1997
Information technology — Data interchange on 90 mm overwritable and read only optical disk cartridges using phase change — Capacity: 1,3 Gbytes per cartridge

ISO/IEC 14833:1996
Information technology — Data interchange on 12,7 mm 128-Track magnetic tape cartridges — DLT 3 format

ISO/IEC 14840:1996
Information technology — 12,65 mm wide magnetic tape cartridge for information interchange — Helical scan recording — Data-D3-1 format

ISO/IEC 15041:1997
Information technology — Data interchange on 90 mm optical disk cartridges — Capacity: 640 Mbytes per cartridge

ISO/IEC 15200:1996
Information technology — Adaptive Lossless Data Compression algorithm (ALDC)

ISO/IEC 15286:1999
Information technology — 130 mm optical disk cartridges for information interchange — Capacity: 5,2 Gbytes per cartridge

ISO/IEC 15307:1997
Information technology — Data interchange on 12,7 mm 128-track magnetic tape cartridges — DLT 4 format

ISO/IEC 15485:1997
Information technology — Data interchange on 120 mm optical disk cartridges using phase change PD format — Capacity: 650 Mbytes per cartridge

ISO/IEC 15486:1998
Information technology — Data interchange on 130 mm optical disk cartridges of type WORM (Write Once Read Many) using irreversible effects — Capacity: 2,6 Gbytes per cartridge

ISO/IEC 15498:1997

Information technology — Data interchange on 90 mm optical disk cartridges — HS-1 format — Capacity: 650 Mbytes per cartridge

ISO/IEC 15521:1998
Information technology — 3,81 mm wide magnetic tape cartridge for information interchange — Helical scan recording — DDS-3 format using 125 m length tapes

ISO/IEC 15718:1998
Information technology — Data interchange on 8 mm wide magnetic tape cartridge — Helical scan recording — HH-1 format

ISO/IEC 15731:1998
Information technology — 12,65 mm wide magnetic tape cassette for information interchange — Helical scan recording — DTF-1 format

ISO/IEC 15757:1998
Information technology — Data interchange on 8 mm wide magnetic tape cartridge — Helical scan recording — DA-2 format

ISO/IEC 15780:1998
Information technology — 8 mm wide magnetic tape cartridge — Helical scan recording — AIT-1 format

ISO/IEC 15895:1999
Information technology — Data interchange on 12,7 mm 128-track magnetic tape cartridges — DLT 3-XT format

ISO/IEC 15896:1999
Information technology — Data interchange on 12,7 mm 208-track magnetic tape cartridges — DLT 5 format

ISO/IEC 15898:1998
Information technology — Data interchange on 356 mm optical disk cartridges — WORM, using phase change technology — Capacity: 14,8 Gbytes and 25 Gbytes per cartridge

ISO/IEC 16382:2000
Information technology — Data interchange on 12,7 mm 208-track magnetic tape cartridges — DLT 6 format

ISO/IEC 16448:2002
Information technology — 120 mm DVD — Read-only disk

ISO/IEC 16449:2002
Information technology — 80 mm DVD — Read-only disk

ISO/IEC 16824:1999
Information technology — 120 mm DVD rewritable disk (DVD-RAM)

ISO/IEC 16825:1999
Information technology — Case for 120 mm DVD-RAM disks

ISO/IEC 16963:2017
Information technology — Digitally recorded media for information interchange and storage — Test method for the estimation of lifetime of optical disks for long-term data storage

ISO/IEC 16969:1999
Information technology — Data interchange on 120 mm optical disk cartridges using +RW format — Capacity: 3,0 Gbytes and 6,0 Gbytes

ISO/IEC 17341:2009
Information technology — Data interchange on 120 mm and 80 mm optical disk using +RW format — Capacity: 4,7 Gbytes and 1,46 Gbytes per side (recording speed up to 4X)

ISO/IEC 17342:2004
Information technology — 80 mm (1,46 Gbytes per side) and 120 mm (4,70 Gbytes per side) DVD re-recordable disk (DVD-RW)

ISO/IEC 17344:2009
Information technology — Data interchange on 120 mm and 80 mm optical disk using +R format — Capacity: 4,7 Gbytes and 1,46 Gbytes per side (recording speed up to 16X)

ISO/IEC 17345:2006
Information technology — Data Interchange on 130 mm Rewritable and Write Once Read Many Ultra Density Optical (UDO) Disk Cartridges — Capacity: 30 Gbytes per Cartridge — First Generation

ISO/IEC 17346:2005
Information technology — Data interchange on 90 mm optical disk cartridges — Capacity: 1,3 Gbytes per cartridge

ISO/IEC 17462:2000
Information technology — 3,81 mm wide magnetic tape cartridge for information interchange — Helical scan recording — DDS-4 format

ISO/IEC 17592:2004
Information technology — 120 mm (4,7 Gbytes per side) and 80 mm (1,46 Gbytes per side) DVD rewritable disk (DVD-RAM)

ISO/IEC 17594:2004
Information technology — Cases for 120 mm and 80 mm DVD-RAM disks

ISO/IEC 17913:2000
Information technology — 12,7mm 128-track magnetic tape cartridge for information interchange — Parallel serpentine format

ISO/IEC 18093:1999
Information technology — Data interchange on 130 mm optical disk cartridges of type WORM (Write Once Read Many) using irreversible effects — Capacity: 5,2 Gbytes per cartridge

ISO/IEC 18809:2000
Information technology — 8 mm wide magnetic tape cartridge for information interchange — Helical scan recording AIT-1 with MIC format

ISO/IEC 18810:2001
Information technology — 8 mm wide magnetic tape cartridge for information interchange — Helical scan recording AIT-2 with MIC format

ISO/IEC 18836:2001
Information technology — 8 mm wide magnetic tape cartridge for information interchange — Helical scan recording — MammothTape-2 format

ISO/IEC 20061:2001
Information technology — 12,65 mm wide magnetic tape cassette for information interchange — Helical scan recording — DTF-2

ISO/IEC 20062:2001
Information technology — 8 mm wide magnetic tape cartridge for information interchange — Helical scan recording — VXA-1 format

ISO/IEC 20162:2001
Information technology — Data interchange on 300 mm optical disk cartridges of type WORM (Write Once Read Many) using irreversible effects — Capacity: 30 Gbytes per cartridge

ISO/IEC 20563:2001
Information technology — 80 mm (1,23 Gbytes per side) and 120 mm (3,95 Gbytes per side) DVD-recordable disk (DVD-R)

ISO/IEC 22050:2002
Information technology — Data interchange on 12,7 mm, 384-track magnetic tape cartridges — Ultrium-1 format

ISO/IEC 22051:2002
Information technology — Data interchange on 12,7 mm, 448-track magnetic tape cartridges — SDLT1 format

ISO/IEC 22091:2002
Information technology — Streaming Lossless Data Compression algorithm (SLDC)

ISO/IEC 22092:2002
Information technology — Data interchange on 130 mm magneto-optical disk cartridges — Capacity: 9,1 Gbytes per cartridge

ISO/IEC 22533:2005
Information technology — Data interchange on 90 mm optical disk cartridges — Capacity: 2,3 Gbytes per cartridge

ISO/IEC 23651:2003
Information technology — 8 mm wide magnetic tape cartridge for information interchange — Helical scan recording — AIT-3 format

ISO/IEC 23912:2005
Information technology — 80 mm (1,46 Gbytes per side) and 120 mm (4,70 Gbytes per side) DVD Recordable Disk (DVD-R)

ISO/IEC 25434:2008
Information technology — Data interchange on 120 mm and 80 mm optical disk using +R DL format — Capacity: 8,55 Gbytes and 2,66 Gbytes per side (recording speed up to 16X)

ISO/IEC 25435:2006
Data Interchange on 60 mm Read-Only ODC — Capacity: 1,8 Gbytes (UMDTM)

ISO/IEC 26925:2009
Information technology — Data interchange on 120 mm and 80 mm optical disk using +RW HS format — Capacity: 4,7 Gbytes and 1,46 Gbytes per side (recording speed 8X)

ISO/IEC 29121:2018
Information technology — Digitally recorded media for information interchange and storage — Data migration method for optical disks for long-term data storage

ISO/IEC 29171:2009
Information technology — Digitally recorded media for information interchange and storage — Information Versatile Disk for Removable usage (iVDR) cartridge

ISO/IEC 29642:2009
Information technology — Data interchange on 120 mm and 80 mm optical disk using +RW DL format — Capacity: 8,55 Gbytes and 2,66 Gbytes per side (recording speed 2,4X)

ISO/IEC 30190:2016

Information technology — Digitally recorded media for information interchange and storage — 120 mm Single Layer (25,0 Gbytes per disk) and Dual Layer (50,0 Gbytes per disk) BD Recordable disk

ISO/IEC 30190:2016/AMD 1:2019
Information technology — Digitally recorded media for information interchange and storage — 120 mm Single Layer (25,0 Gbytes per disk) and Dual Layer (50,0 Gbytes per disk) BD Recordable disk — Amendment 1

ISO/IEC 30191:2015
Information technology — Digitally recorded media for information interchange and storage — 120 mm Triple Layer (100,0 Gbytes single sided disk and 200,0 Gbytes double sided disk) and Quadruple Layer (128,0 Gbytes single sided disk) BD Recordable disk

ISO/IEC 30191:2015/AMD 1:2019
Information technology — Digitally recorded media for information interchange and storage — 120 mm Triple Layer (100,0 Gbytes single sided disk and 200,0 Gbytes double sided disk) and Quadruple Layer (128,0 Gbytes single sided disk) BD Recordable disk — Amendment 1

ISO/IEC 30192:2016
Information technology — Digitally recorded media for information interchange and storage — 120 mm Single Layer (25,0 Gbytes per disk) and Dual Layer (50,0 Gbytes per disk) BD Rewritable disk

ISO/IEC 30192:2016/AMD 1:2019
Information technology — Digitally recorded media for information interchange and storage — 120 mm Single Layer (25,0 Gbytes per disk) and Dual Layer (50,0 Gbytes per disk) BD Rewritable disk — Amendment 1

ISO/IEC 30193:2020
Information technology — Digitally recorded media for information interchange and storage — 120 mm Triple Layer (100,0 Gbytes per disk) BD Rewritable disk

Standards under development:

ISO/IEC DIS 29121
Information technology — Digitally recorded media for information interchange and storage — Data migration method for optical disks for long-term data storage

ISO/IEC DIS 30190
Information technology — Digitally recorded media for information interchange and storage — 120 mm Single Layer (25,0 Gbytes per disk) and Dual Layer (50,0 Gbytes per disk) BD Recordable disk

ISO/IEC DIS 30191

Information technology — Digitally recorded media for information interchange and storage — 120 mm Triple Layer (100,0 Gbytes single sided disk and 200,0 Gbytes double sided disk) and Quadruple Layer (128,0 Gbytes single sided disk) BD Recordable disk

ISO/IEC DIS 30192
Information technology — Digitally recorded media for information interchange and storage — 120 mm Single Layer (25,0 Gbytes per disk) and Dual Layer (50,0 Gbytes per disk) BD Rewritable disk

3.2.28 ISO/IEC JTC 1/SC 24 - Computer graphics, image processing and environmental data representation

Scope:

The current area of work for JTC 1/SC 24 consists of:

- standarisation of interfaces for information technology based applications relating to computer graphics and virtual reality,
- image processing,
- environmental data representation,
- support for Mixed and Augmented Reality (MAR), and
- interaction with, and visual presentation of, information

Structure:

ISO/IEC JTC 1/SC 24/WG 6   Augmented reality continuum presentation and interchange

ISO/IEC JTC 1/SC 24/WG 7   Image processing and interchange

ISO/IEC JTC 1/SC 24/WG 8   Environmental representation

ISO/IEC JTC 1/SC 24/WG 9   Augmented reality continuum concepts and reference model

Standards:

ISO/IEC 19777-2:2006
Information technology — Computer graphics and image processing — Extensible 3D (X3D) language bindings — Part 2: Java

ISO/IEC 19777-1:2006
Information technology — Computer graphics and image processing — Extensible 3D (X3D) language bindings — Part 1: ECMAScript

ISO/IEC 19776-3:2015
Information technology — Computer graphics, image processing and environmental data representation — Extensible 3D (X3D) encodings — Part 3: Compressed binary encoding

ISO/IEC 19776-2:2015
Information technology — Computer graphics, image processing and environmental data representation — Extensible 3D (X3D) encodings — Part 2: Classic VRML encoding

ISO/IEC 19776-1:2015
Information technology — Computer graphics, image processing and environmental data representation — Extensible 3D (X3D) encodings — Part 1: Extensible Markup Language (XML) encoding

ISO/IEC 19775-2:2015

Information technology — Computer graphics, image processing and environmental data representation — Extensible 3D (X3D) — Part 2: Scene access interface (SAI)

ISO/IEC 19775-1:2013
Information technology — Computer graphics, image processing and environmental data representation — Extensible 3D (X3D) — Part 1: Architecture and base components

ISO/IEC 19774-2:2019
Information technology — Computer graphics, image processing and environmental data representation — Part 2: Humanoid animation (HAnim) motion data animation

ISO/IEC 19774-1:2019
Information technology — Computer graphics, image processing and environmental data representation — Part 1: Humanoid animation (HAnim) architecture

ISO/IEC 18520:2019
Information technology — Computer graphics, image processing and environmental data representation — Benchmarking of vision-based spatial registration and tracking methods for mixed and augmented reality (MAR)

ISO/IEC 18042-4:2006/AMD 1:2011
Information technology — Computer graphics and image processing — Spatial Reference Model (SRM) language bindings — Part 4: C — Amendment 1: .

ISO/IEC 18042-4:2006
Information technology — Computer graphics and image processing — Spatial Reference Model (SRM) language bindings — Part 4: C

ISO/IEC 18041-4:2016
Information technology — Computer graphics, image processing and environmental data representation — Environmental Data Coding Specification (EDCS) language bindings — Part 4: C

ISO/IEC 18040:2019
Information technology — Computer graphics, image processing and environmental data representation — Live actor and entity representation in mixed and augmented reality (MAR)

ISO/IEC 18039:2019
Information technology — Computer graphics, image processing and environmental data representation — Mixed and augmented reality (MAR) reference model

ISO/IEC 18038:2020
Information technology — Computer graphics, image processing and environmental representation — Sensor representation in mixed and augmented reality

ISO/IEC 18026:2009
Information technology — Spatial Reference Model (SRM)

ISO/IEC 18025:2014
Information technology — Environmental Data Coding Specification (EDCS)

ISO/IEC 18024-4:2006/AMD 1:2012
Information technology — SEDRIS language bindings — Part 4: C — Amendment 1

ISO/IEC 18024-4:2006
Information technology — SEDRIS language bindings — Part 4: C

ISO/IEC 18023-3:2006/AMD 1:2012
Information technology — SEDRIS — Part 3: Transmittal format binary encoding — Amendment 1

ISO/IEC 18023-3:2006
Information technology — SEDRIS — Part 3: Transmittal format binary encoding

ISO/IEC 18023-2:2006
Information technology — SEDRIS — Part 2: Abstract transmittal format

ISO/IEC 18023-1:2006/AMD 1:2012
Information technology — SEDRIS — Part 1: Functional specification — Amendment 1

ISO/IEC 18023-1:2006
Information technology — SEDRIS — Part 1: Functional specification

ISO/IEC 15948:2004
Information technology — Computer graphics and image processing — Portable Network Graphics (PNG): Functional specification

ISO/IEC 14772-2:2004
Information technology — Computer graphics and image processing — The Virtual Reality Modeling Language (VRML) — Part 2: External authoring interface (EAI)

ISO/IEC 14772-1:1997/AMD 1:2003
Information technology — Computer graphics and image processing — The Virtual Reality Modeling Language — Part 1: Functional specification and UTF-8 encoding — Amendment 1: Enhanced interoperability

ISO/IEC 14772-1:1997
Information technology — Computer graphics and image processing — The Virtual Reality Modeling Language — Part 1: Functional specification and UTF-8 encoding

ISO/IEC 14478-4:1998
Information technology — Computer graphics and image processing — Presentation Environment for Multimedia Objects (PREMO) — Part 4: Modelling, rendering and interaction component

ISO/IEC 14478-3:1998
Information technology — Computer graphics and image processing — Presentation Environment for Multimedia Objects (PREMO) — Part 3: Multimedia Systems Services

ISO/IEC 14478-2:1998
Information technology — Computer graphics and image processing — Presentation Environment for Multimedia Objects (PREMO) — Part 2: Foundation Component

ISO/IEC 14478-1:1998
Information technology — Computer graphics and image processing — Presentation Environment for Multimedia Objects (PREMO) — Part 1: Fundamentals of PREMO

ISO/IEC 12089:1997
Information technology — Computer graphics and image processing — Encoding for the Image Interchange Facility (IIF)

ISO/IEC 12088-4:1995
Information technology — Computer graphics and image processing — Image processing and interchange — Application program interface language bindings — Part 4:

ISO/IEC 12087-5:1998/COR 2:2002
Information technology — Computer graphics and image processing — Image Processing and Interchange (IPI) — Functional specification — Part 5: Basic Image Interchange Format (BIIF) — Technical Corrigendum 2

ISO/IEC 12087-5:1998/COR 1:2001
Information technology — Computer graphics and image processing — Image Processing and Interchange (IPI) — Functional specification — Part 5: Basic Image Interchange Format (BIIF) — Technical Corrigendum 1

ISO/IEC 12087-5:1998
Information technology — Computer graphics and image processing — Image Processing and Interchange (IPI) — Functional specification — Part 5: Basic Image Interchange Format (BIIF)

ISO/IEC 12087-3:1995/AMD 1:1996
Information technology — Computer graphics and image processing — Image Processing and Interchange (IPI) — Functional specification — Part 3: Image Interchange Facility (IIF) — Amendment 1: Type definition, scoping, and logical views for image interchange facility

ISO/IEC 12087-3:1995
Information technology — Computer graphics and image processing — Image Processing and Interchange (IPI) — Functional specification — Part 3: Image Interchange Facility (IIF)

ISO/IEC 12087-2:1994/COR 1:1997
Information technology — Computer graphics and image processing — Image Processing and Interchange (IPI) — Functional specification — Part 2: Programmer's imaging kernel system application programme interface — Technical Corrigendum 1

ISO/IEC 12087-2:1994
Information technology — Computer graphics and image processing — Image Processing and Interchange (IPI) — Functional specification — Part 2: Programmer's imaging kernel system application programme interface

ISO/IEC 12087-1:1995
Information technology — Computer graphics and image processing — Image Processing and Interchange (IPI) — Functional specification — Part 1: Common architecture for imaging

ISO/IEC 11072:1992
Information technology — Computer graphics — Computer Graphics Reference Model

ISO/IEC 10641:1993
Information technology — Computer graphics and image processing — Conformance testing of implementations of graphics standards

ISO/IEC 9973:2013
Information technology — Computer graphics, image processing and environmental data representation — Procedures for registration of items

ISO/IEC 9638-3:1994
Information technology — Computer graphics — Interfacing techniques for dialogues with graphical devices (CGI) — Language bindings — Part 3: Ada

ISO/IEC 9637-2:1992
Information technology — Computer graphics — Interfacing techniques for dialogues with graphical devices (CGI) — Data stream binding — Part 2: Binary encoding

ISO/IEC 9637-1:1994
Information technology — Computer graphics — Interfacing techniques for dialogues with graphical devices (CGI) — Data stream binding — Part 1: Character encoding

ISO/IEC 9636-6:1991
Information technology — Computer graphics — Interfacing techniques for dialogues with graphical devices (CGI) — Functional specification — Part 6: Raster

ISO/IEC 9636-5:1991
Information technology — Computer graphics — Interfacing techniques for dialogues with graphical devices (CGI) — Functional specification — Part 5: Input and echoing

ISO/IEC 9636-4:1991
Information technology — Computer graphics — Interfacing techniques for dialogues with graphical devices (CGI) — Functional specification — Part 4: Segments

ISO/IEC 9636-3:1991
Information technology — Computer graphics — Interfacing techniques for dialogues with graphical devices (CGI) — Functional specification — Part 3: Output

ISO/IEC 9636-2:1991
Information technology — Computer graphics — Interfacing techniques for dialogues with graphical devices (CGI) — Functional specification — Part 2: Control

ISO/IEC 9636-1:1991
Information technology — Computer graphics — Interfacing techniques for dialogues with graphical devices (CGI) — Functional specification — Part 1: Overview, profiles, and conformance

ISO/IEC 9593-4:1991/AMD 2:1998
Information technology — Computer graphics — Programmer's Hierarchical Interactive Graphics System (PHIGS) language bindings — Part 4: C — Amendment 2: Incorporation of PHIGS amendments

ISO/IEC 9593-4:1991/COR 1:1994
Information technology — Computer graphics — Programmer's Hierarchical Interactive Graphics System (PHIGS) language bindings — Part 4: C — Technical Corrigendum 1

ISO/IEC 9593-4:1991/AMD 1:1994
Information technology — Computer graphics — Programmer's Hierarchical Interactive Graphics System (PHIGS) language bindings — Part 4: C — Amendment 1

ISO/IEC 9593-4:1991
Information technology — Computer graphics — Programmer's Hierarchical Interactive Graphics System (PHIGS) language bindings — Part 4: C

ISO/IEC 9593-3:1990/COR 2:1994
Information technology — Computer graphics — Programmer's Hierarchical Interactive Graphics System (PHIGS) language bindings — Part 3: ADA — Technical Corrigendum 2

ISO/IEC 9593-3:1990/COR 1:1993
Information technology — Computer graphics — Programmer's Hierarchical Interactive Graphics System (PHIGS) language bindings — Part 3: ADA — Technical Corrigendum 1

ISO/IEC 9593-3:1990/AMD 1:1994

Information technology — Computer graphics — Programmer's Hierarchical Interactive Graphics System (PHIGS) language bindings — Part 3: ADA — Amendment 1: Incorporation of PHIGS PLUS

ISO/IEC 9593-3:1990

Information technology — Computer graphics — Programmer's Hierarchical Interactive Graphics System (PHIGS) language bindings — Part 3: ADA

ISO/IEC 9593-1:1990/COR 2:1994

Information processing systems — Computer graphics — Programmer's Hierarchical Interactive Graphics System (PHIGS) language bindings — Part 1: FORTRAN — Technical Corrigendum 2

ISO/IEC 9593-1:1990/COR 1:1993

Information processing systems — Computer graphics — Programmer's Hierarchical Interactive Graphics System (PHIGS) language bindings — Part 1: FORTRAN — Technical Corrigendum 1

ISO/IEC 9593-1:1990/AMD 1:1995

Information processing systems — Computer graphics — Programmer's Hierarchical Interactive Graphics System (PHIGS) language bindings — Part 1: FORTRAN — Amendment 1

ISO/IEC 9593-1:1990

Information processing systems — Computer graphics — Programmer's Hierarchical Interactive Graphics System (PHIGS) language bindings — Part 1: FORTRAN

ISO/IEC 9592-3:1997

Information technology — Computer graphics and image processing — Programmer's Hierarchical Interactive Graphics System (PHIGS) — Part 3: Specification for clear-text encoding of archive file

ISO/IEC 9592-2:1997

Information technology — Computer graphics and image processing — Programmer's Hierarchical Interactive Graphics System (PHIGS) — Part 2: Archive file format

ISO/IEC 9592-1:1997

Information technology — Computer graphics and image processing — Programmer's Hierarchical Interactive Graphics System (PHIGS) — Part 1: Functional description

ISO/IEC 8806-4:1991

Information technology — Computer graphics — Graphical Kernel System for Three Dimensions (GKS-3D) language bindings — Part 4: C

ISO 8805:1988

Information processing systems — Computer graphics — Graphical Kernel System for Three Dimensions (GKS-3D) functional description

ISO/IEC 8651-4:1995
Information technology — Computer graphics — Graphical Kernel System (GKS) language bindings — Part 4: C

ISO 8651-3:1988
Information processing systems — Computer graphics — Graphical Kernel System (GKS) language bindings — Part 3: Ada

ISO 8651-2:1988
Information processing systems — Computer graphics — Graphical Kernel System (GKS) language bindings — Part 2: Pascal

ISO 8651-1:1988
Information processing systems — Computer graphics — Graphical Kernel System (GKS) language bindings — Part 1: FORTRAN

ISO/IEC 8632-4:1999
Information technology — Computer graphics — Metafile for the storage and transfer of picture description information — Part 4: Clear text encoding

ISO/IEC 8632-3:1999
Information technology — Computer graphics — Metafile for the storage and transfer of picture description information — Part 3: Binary encoding

ISO/IEC 8632-1:1999/COR 2:2007
Information technology — Computer graphics — Metafile for the storage and transfer of picture description information — Part 1: Functional specification — Technical Corrigendum 2

ISO/IEC 8632-1:1999/COR 1:2006
Information technology — Computer graphics — Metafile for the storage and transfer of picture description information — Part 1: Functional specification — Technical Corrigendum 1

ISO/IEC 8632-1:1999
Information technology — Computer graphics — Metafile for the storage and transfer of picture description information — Part 1: Functional specification

ISO/IEC 7942-4:1998
Information technology — Computer graphics and image processing — Graphical Kernel System (GKS) — Part 4: Picture part archive

ISO/IEC 7942-3:1999

Information technology — Computer graphics and image processing — Graphical Kernel System (GKS) — Part 3: Audit trail

ISO/IEC 7942-2:1997
Information technology — Computer graphics and image processing — Graphical Kernel System (GKS) — Part 2: NDC metafile

ISO/IEC 7942-1:1994
Information technology — Computer graphics and image processing — Graphical Kernel System (GKS) — Part 1: Functional description

Standards under development:
ISO/IEC AWI 19777-3
Information technology — Computer graphics and image processing — Extensible 3D (X3D) language bindings — Part 3: Extensible 3D (X3D) language bindings — C

ISO/IEC AWI 19777-4
Information technology — Computer graphics and image processing — Extensible 3D (X3D) language bindings — Part 4: X3D language bindings — C++

ISO/IEC AWI 19777-5
Information technology — Computer graphics and image processing — Extensible 3D (X3D) language bindings — Part 5: C#

ISO/IEC AWI 23488
Information technology — Computer graphics, image processing and environmental data representation — Image based Object/Environmental for Virtual/Mixed and Augmented Reality (VR/MAR)

ISO/IEC AWI 23490
Information technology — Computer graphics, image processing and environmental data representation — Information Model for Live Actor and Entity in Mixed Augmented Reality

ISO/IEC AWI 23763
Information technology — Computer graphics, image processing and environmental data representation — Display device interface for mixed and augmented reality

ISO/IEC WD TS 23884
Information technology — Computer graphics, image processing and environmental data representation — Material Property and Parameter Representation for Model based Haptic Simulation of Objects in Virtual, Mixed and Augmented Reality (VR, MAR)

3.2.29 ISO/IEC JTC 1/SC 25 Interconnection of information technology equipment

ISO/IEC JTC 1/SC 25 is being supported administratively by IEC. All information related to ISO/IEC JTC 1/SC 25 is available on the IEC web site

Scope:

Standarisation of microprocessor systems; and of interfaces, protocols, architectures and associated interconnecting media for information technology equipment and networks, generally for commercial and residential environments, to support embedded and distributed computing environments, storage systems, other input/output components, home and building electronic systems including customer premises smart grid applications for electricity, gas, water and heat. NOTE: This scope includes requirements for components, assemblies and subsystems. However, standarisation of cables, waveguides and connectors remains within the relevant product technical committees and subcommittees of IEC. The scope includes the development of network interfaces, in liaison with committees for external utility networks, to support smart grid applications at the customer premises.

Structure:

ISO/IEC JTC 1/SC 25/WG 1   Home electronic systems

ISO/IEC JTC 1/SC 25/WG 3   Customer premises cabling

ISO/IEC JTC 1/SC 25/WG 4   Interconnection of computer systems and attached equipment

Standards:

IEC 60796-1:1990

Microprocessor system bus - 8-bit and 16-bit data (MULTIBUS I) - Part 1: Functional description with electrical and timing specifications

IEC 60796-2:1990

Microprocessor system bus - 8-bit and 16-bit data (MULTIBUS I) - Part 2: Mechanical and pin descriptions for the system BUS configuration, with edge connectors (direct)

IEC 60796-3:1990

Microprocessor system bus - 8-bit and 16-bit data (MULTIBUS I) - Part 3: Mechanical and pin descriptions for the Eurocard configuration with pin and socket (indirect) connectors

IEC 60821:1991

VMEbus - Microprocessor system bus for 1 byte to 4 byte data

IEC 60821:1991/AMD1:1999

Amendment 1 - VMEbus - Microprocessor system bus for 1 byte to 4 byte data

IEC 60822:1988

VSB - Parallel Sub-system Bus of the IEC 60821 VMEbus

IEC 60824:1988

Terminology related to microprocessors

IEC TR 60828:1988

Pin allocations for microprocessor systems using the IEC 60603-2connector

IEC 60948:1988

Numeric keyboard for home electronic systems (HES)

ISO/IEC 9314-3:1990

Information processing systems - Fibre Distributed Data Interface (FDDI) - Part 3: Physical Layer Medium Dependent (PMD)

ISO/IEC 9314-4:1999

Information technology - Fibre distributed data interface (FDDI) - Part 4: Single-mode fibre physical layer medium dependent (SMF-PMD)

ISO/IEC 9314-5:1995

Information technology - Fibre Distributed Data Interface (FDDI) - Part 5: Hybrid Ring Control (HRC)

ISO/IEC 9314-6:1998

Information technology - Fibre distributed data interface (FDDI) - Part 6: Station Management (SMT)

ISO/IEC 9314-7:1998

Information technology - Fibre distributed data interface (FDDI) - Part 7: Physical layer protocol (PHY-2)

ISO/IEC 9314-8:1998

Information technology - Fibre Distributed Data Interface (FDDI) - Part 8: Media Access Control-2 (MAC-2)

ISO/IEC 9314-9:2000

Information technology - Fibre Distributed Data Interface (FDDI) - Part 9: Low-cost fibre physical layer medium dependent (LCF-PMD)

ISO/IEC 9314-13:1998

Information technology - Fibre Distributed Data Interface (FDDI) - Part 13: Conformance Test Protocol Implementation - Conformance Statement (CT-PICS) Proforma

ISO/IEC 9314-20:2001

Information technology - Fibre distributed data interface (FDDI) - Part 20: Abstract test suite for FDDI physical medium dependent conformance testing (PMD ATS)

ISO/IEC 9314-21:2000

Information technology - Fibre Distributed Data Interface (FDDI) - Part 21: Abstract test suite for FDDI physical layer protocol conformance testing (PHY ATS)

ISO/IEC 9314-25:1998

Information technology - Fibre distributed data interface (FDDI) - Part 25: Abstract test suite for FDDI - Station Management conformance testing (FDDI-SMT-ATS)

ISO/IEC 9314-26:2001

Information technology - Fibre Distributed Data Interface (FDDI)- Part 26: Media Access Control Conformance Testing (MAC-ATS)

ISO/IEC 9316:1995

Information technology - Small Computer System Interface-2

ISO/IEC 9316-2:2000

Information technology - Small computer system interface - 2 (SCSI-2) - Part 2: Common Access Method (CAM) Transport and SCSI interface module

ISO/IEC 9318-2:1990

Information technology - Intelligent Peripheral Interface Part 2: Device specific command set for magnetic disk drives

ISO/IEC 9318-3:1990

Information technology - Intelligent Peripheral Interface Part 3: Device generic command set for magnetic and optical disk drives

ISO/IEC 9318-4:2002

Information technology - Intelligent peripheral interface - Part 4: Device generic command set for magnetic tape drives (IPI-3 tape)

ISO/IEC 10192-1:2002

Information technology - Home electronic system (HES) interfaces - Part 1: Universal Interface (UI) Class 1

ISO/IEC TR 10192-2:2000

Information technology - Home Electronic System (HES) interfaces - Part 2: Simple Interface Type 1

ISO/IEC 10192-3:2017

Information technology - Home electronic system (HES) interfaces - Part 3: Modular communications interface for energy management

ISO/IEC 10859:1997

Information technology- 8-bit backplane interface: STEbus and mechanical core specifications for microcomputers-First edition 1997-06

ISO/IEC 10861:1994

Information technology - Microprocessor systems - High-performance synchronous 32-bit bus: MULTIBUS II

ISO/IEC 11002:2008

Information technology - Multipath Management API

ISO/IEC 11458:1993

Information technology - Microprocessor systems - VICbus: Inter-crate cable bus

ISO/IEC 11458:1993/AMD1:2000

Amendment 1 - Information technology - Microprocessor systems - VICbus: Inter-crate cable bus

ISO/IEC 11518-1:1995

Information technology - High-Performance Parallel Interface - Part 1: Mechanical, electrical and signalling protocol specification (HIPPI-PH)

ISO/IEC 11518-2:2000

Information technology - High-Performance Parallel Interface - Part 2: Framing Protocol (HIPPI-FP)

ISO/IEC 11518-3:1996

Information technology - High-Performance Parallel Interface - Part 3: Encapsulation of ISO/IEC 8802-2 (IEEE Std 802.2) Logical Link Control Protocol Data Units (HIPPI-LE)

ISO/IEC 11518-6:2000

Information technology - High-Performance Parallel Interface - Part 6: Physical Switch Control (HIPPI-SC)

ISO/IEC 11518-9:1999

Information technology - High-Performance Parallel Interface - Part 9: Serial Specification (HIPPI-SERIAL)

ISO/IEC 11518-10:2001

Information technology - High-performance parallel interface - Part 10: 6 400 Mbit/s Physical Layer (HIPPI-6400-PH)

ISO/IEC 11801-1:2017 I

nformation technology - Generic cabling for customer premises - Part 1: General requirements

ISO/IEC 11801-1:2017/COR1:2018

Corrigendum 1 - Information technology - Generic cabling for customer premises - Part 1: General requirements

ISO/IEC 11801-2:2017

Information technology - Generic cabling for customer premises - Part 2: Office premises

ISO/IEC 11801-2:2017/COR1:2018

Corrigendum 1 - Information technology - Generic cabling for customer premises - Part 2: Office premises

ISO/IEC 11801-3:2017

Information technology - Generic cabling for customer premises - Part 3: Industrial premises

ISO/IEC 11801-3:2017/COR1:2018

Corrigendum 1 - Information technology - Generic cabling for customer premises - Part 3: Industrial premises

ISO/IEC 11801-4:2017

Information technology - Generic cabling for customer premises - Part 4: Single-tenant homes

ISO/IEC 11801-4:2017/COR1:2018

Corrigendum 1 - Information technology - Generic cabling for customer premises - Part 4: Single-tenant homes

ISO/IEC 11801-5:2017

Information technology - Generic cabling for customer premises - Part 5: Data centres

ISO/IEC 11801-5:2017/COR1:2018

Corrigendum 1 - Information technology - Generic cabling for customer premises - Part 5: Data centres

ISO/IEC 11801-6:2017

Information technology - Generic cabling for customer premises - Part 6: Distributed building services

ISO/IEC 11801-6:2017/COR1:2018

Corrigendum 1 - Information technology - Generic cabling for customer premises - Part 6: Distributed building services

ISO/IEC TR 11801-9901:2014

Information technology - Generic cabling for customer premises - Part 9901: Guidance for balanced cabling in support of at least 40 Gbit/s data transmission

ISO/IEC TR 11801-9902:2017

Information technology - Generic cabling for customer premises - Part 99-2: End-to-end link configurations

ISO/IEC TR 11801-9903:2015

Information technology - Generic cabling systems for customer premises - Part 9903: Matrix modelling of channels and links

ISO/IEC TR 11801-9904:2017

Information technology - Generic cabling for customer premises - Part 9904: Assessment and mitigation of installed balanced cabling channels to support 2,5GBASE-T and 5GBASE-T

ISO/IEC TR 11801-9905:2018

Information technology - Generic cabling systems for customer premises - Part 9905: Guidelines for the use of installed cabling to support 25GBASE-T application

ISO/IEC TR 11801-9906:2020

Information technology - Generic cabling for customer premises - Part 9906: Balanced 1-pair cabling channels up to 600 MHz for single pair Ethernet (SPE)

ISO/IEC TR 11801-9907:2019

Information technology - Generic cabling for customer premises - Part 9907: Specifications for direct attach cabling

ISO/IEC 11989:2010

Information technology - ISCSI management API

ISO/IEC 13187:2011

Information technology - Server management command line protocol (SM CLP) specification

ISO/IEC 13213:1994

Information technology - Microprocessor systems - Control and Status Registers (CSR) Architecture for microcomputer buses

ISO/IEC 13961:2000

Information technology - Scalable Coherent Interface (SCI)

ISO/IEC 14165-114:2005

Information technology - Fibre Channel - Part 114: 100 MB/s balanced copper physical interface (FC-100-DF-EL-S)

ISO/IEC 14165-115:2006

Information technology - Fibre channel - Part 115: Physical interfaces (FC-PI)

ISO/IEC 14165-116:2005

Information technology - Fibre channel - Part 116: 10 Gigabit Fibre Channel (10GFC)

ISO/IEC 14165-116:2005/AMD1:2009

Amendment 1 - Information technology - Fibre channel - Part 116: 10 Gigabit Fibre Channel (10GFC)

ISO/IEC TR 14165-117:2007

Information technology - Fibre channel - Part 117: Methodologies for jitter and signal quality (MJSQ)

ISO/IEC 14165-122:2005+AMD1:2008 CSV

Information technology - Fibre channel - Part 122: Arbitrated loop-2 (FC-AL-2)

ISO/IEC 14165-122:2005

Information technology - Fibre channel - Part 122: Arbitrated loop-2 (FC-AL-2)

ISO/IEC 14165-122:2005/AMD1:2008

Amendment 1 - Information technology - Fibre channel - Part 122: Arbitrated loop-2 (FC-AL-2)

ISO/IEC 14165-131:2000

Information technology - Fibre Channel - Part 131: Switch Fabric Requirements (FC-SW)

ISO/IEC 14165-133:2010

Information technology - Fibre channel - Part 133: Fibre channel switch fabric-3 (FC-SW-3)

ISO/IEC 14165-141:2001

Information technology - Fibre Channel - Part 141: Fabric Generic Requirements (FC-FG)

ISO/IEC 14165-151:2017

Information technology - Fibre channel - Part 151: Fibre Channel BaseT (FC-BaseT)

ISO/IEC 14165-211:1999

Information technology - Fibre channel - Part 211: Mapping to HIPPI-FP (FC-FP)

ISO/IEC 14165-222:2005

Information technology - Fibre channel - Part 222: Single-byte command sets-2 mapping protocol (FC-SB-2)

ISO/IEC 14165-241:2005

Information technology - Fibre channel - Part 241: Backbone 2 (FC-BB-2)

ISO/IEC 14165-243:2012

Information technology - Fibre channel - Part 243: Fibre channel backbone-3 (FC-BB-3)

ISO/IEC 14165-251:2008

Information technology - Fibre channel - Part 251: Framing and signaling (FC-FS)

ISO/IEC TR 14165-312:2009

Information technology - Fibre channel - Part 312: Avionics environment upper layer protocol (FC-AE 1553)

ISO/IEC TR 14165-313:2013

Information technology - Fibre channel - Part 313: Avionics environment - Anonymous synchronous messaging (FC-AE-ASM)

ISO/IEC TR 14165-314:2013

Information technology - Fibre channel - Part 314: Avionics environment - Remote direct memory access (FC-AE-RDMA)

ISO/IEC 14165-321:2009

Information technology - Fibre channel - Part 321: Audio video (FC-AV)

ISO/IEC 14165-331:2007

Information technology - Fibre channel - Part 331: Virtual interface (FC-VI)

ISO/IEC TR 14165-372:2011

Information technology - Part 372: Fibre channel methodologies for interconnects-2 (FC-MI-2)

ISO/IEC 14165-414:2007

Information technology - Fibre channel - Part 414: Generic services-4 (FC-GS-4)

ISO/IEC 14165-521:2009

Information technology - Fibre channel - Part 521: Fabric application interface standard (FAIS)

ISO/IEC 14543-2-1:2006

Information technology - Home electronic system (HES) architecture - Part 2-1: Introduction and device modularity

ISO/IEC 14543-3-1:2006

Information technology - Home electronic system (HES) architecture - Part 3-1: Communication layers - Application layer for network based control of HES Class 1

ISO/IEC 14543-3-2:2006

Information technology - Home electronic system (HES) architecture - Part 3-2: Communication layers - Transport, network and general parts of data link layer for network based control of HES Class 1

ISO/IEC 14543-3-3:2007

Information technology - Home electronic system (HES) architecture - Part 3-3: User process for network based control of HES Class 1

ISO/IEC 14543-3-4:2007

Information technology - Home electronic system (HES) architecture - Part 3-4: System management - Management procedures for network based control of HES Class 1

ISO/IEC 14543-3-5:2007

Information technology - Home electronic system (HES) architecture - Part 3-5: Media and media dependent layers - Powerline for network based control of HES Class 1

ISO/IEC 14543-3-6:2007

Information technology - Home electronic system (HES) architecture - Part 3-6: Media and media dependent layers - Twisted pair for network based control of HES Class 1

ISO/IEC 14543-3-7:2007

Information technology - Home electronic system (HES) architecture - Part 3-7: Media and media dependent layers - Radio frequency for network based control of HES Class 1

ISO/IEC 14543-3-10:2020   Information technology - Home electronic system (HES) architecture - Part 3-10: Amplitude modulated wireless short-packet (AMWSP) protocol optimized for energy harvesting - Architecture and lower layer protocols

ISO/IEC 14543-3-11:2016

Information technology - Home electronic system (HES) architecture - Part 3-11: Frequency modulated wireless short-packet (FMWSP) protocol optimised for energy harvesting - Architecture and lower layer protocols

ISO/IEC TR 14543-4:2002

Information technology - Home electronic system (HES) architecture - Part 4: Home and building automation in a mixed-use building

ISO/IEC 14543-4-1:2008

Information technology - Home electronic system (HES) architecture - Part 4-1: Communication layers - Application layer for network enhanced control devices of HES Class 1

ISO/IEC 14543-4-2:2008

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Information technology - Storage management - Part 5: Filesystems

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Amendment 1 - Information technology - Generic cabling - Introduction to the MICE environmental classification

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Information technology - Home network resource management - Part 3: Management application

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Information technology - Telecommunications bonding networks for buildings and other structures

ISO/IEC 30129:2015

Information technology - Telecommunications bonding networks for buildings and other structures

ISO/IEC 30129:2015/AMD1:2019

Amendment 1 - Information technology - Telecommunications bonding networks for buildings and other structures

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Floating-point arithmetic

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Information processing - Processor system bus interface (Eurobus A)

ISO 9314-1:1989

Information processing systems - Fibre Distributed Data Interface (FDDI) - Part 1: Token Ring Physical Layer Protocol (PHY)

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Information processing systems - Interface between flexible disk cartridge drives and their host controllers

Standards under development:

PNW JTC1-SC25-2937 ED1

Information technology - Home Electronic System (HES) application model - Part 51: Framework of a Protected On-Premises AI Engine for an Energy Management System using Energy Management Agents (EMAs)

PNW JTC1-SC25-2946

"Information technology - Home Electronic System (HES) application model –Protocol of Energy Management Agents for demand response energy management and interactions among these agents"

ISO/IEC 10192-4-1 ED1

ISO/IEC 10192-4-1: Information technology – Home Electronic System (HES) interfaces – Part 4-1: Common user interface and interoperability among home systems –Architecture

ISO/IEC 11801-1/AMD1 ED1

Amendment 1 - Information technology - Generic cabling for customer premises - Part 1: General requirements

ISO/IEC 11801-3/AMD1 ED1

Amendment 1 - Information technology - Generic cabling for customer premises - Part 3: Industrial premises

ISO/IEC 11801-6/AMD1 ED1

Amendment 1 - Information technology - Generic cabling for customer premises - Part 6: Distributed building services

ISO/IEC TS 11801-9903 ED1

Information technology – Generic cabling for customer premises – Part 9903: Matrix modelling of channels and links

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Information technology - Generic cabling for customer premises - Part 9908: Guidance for the support of higher speed applications over optical fibre channels

ISO/IEC TR 11801-9909 ED1

Information technology - Generic cabling for customer premises - Part 9909: Evaluation of balanced cabling in support of 25 Gb/s for reach greater than 30 meters

ISO/IEC TR 11801-9910 ED1

Information technology - Generic cabling for customer premises - Part 9910: Specifications for modular plug terminated link cabling

ISO/IEC 14165-432 ED1

ISO/IEC 14165-432 : Information technology – Fibre channel – Part 432: Security protocols – 2 (FC-SP-2)

ISO/IEC 14543-4-301 ED1

Information technology – Home Electronic System (HES) architecture - Part-4- 301 Application Protocols for Home Air Conditioners and Controllers

ISO/IEC 14763-4 ED2

Information technology - Implementation and operation of customer premises cabling - Part 4: Measurement of end-to-end (E2E) links, Modular Plug Terminated Links (MPTL) and Direct Attach Cabling

ISO/IEC 14763-5 ED1

Information technology – Implementation and operation of customer premises cabling – Part 5 Sustainability

ISO/IEC 15045-3-1 ED1

15045-3-1: Information technology — Home Electronic System (HES) gateway — Part 3-1: Introduction to privacy, security, and safety

ISO/IEC 15045-3-2 ED1

15045-3-2 Information technology — Home Electronic System — HES Gateway Privacy Framework

ISO/IEC TR 15067-3-7 ED1

ISO/IEC 15067-3-7, Information technology - Home Electronic System (HES) application model – GridWise Transactive Energy systems research, development and deployment roadmap

ISO/IEC TR 15067-3-8 ED1   Information technology – Home Electronic System (HES) application model – GridWise Transactive Energy Framework

ISO/IEC 17760-103 ED1

ISO/IEC 17760-103: Information technology – AT Attachment – Part 103: ATA/ATAPI Command Set – 3 (ACS-3)

ISO/IEC 18598/AMD1 ED1

Amendment 1 - Information technology - Automated infrastructure management (AIM) systems - Requirements, data exchange and applications

ISO/IEC 24383 ED1

Information technology - Physical network security for the accommodation of customer premises cabling infrastructure and information technology equipment

ISO/IEC TS 29125/AMD1 ED1

Amendment 1 - Information technology - Telecommunications cabling requirements for remote powering of terminal equipment

ISO/IEC 60559 ED2

Floating-Point arithmetic

3.2.30 ISO/IEC JTC 1/SC 27 - Information security, cybersecurity and privacy protection

Scope:

The development of standards for the protection of information and ICT. This includes generic methods, techniques and guidelines to address both security and privacy aspects, such as:

- Security requirements capture methodology;
- Management of information and ICT security; in particular information security management systems, security processes, and security controls and services;
- Cryptographic and other security mechanisms, including but not limited to mechanisms for protecting the accountability, availability, integrity and confidentiality of information;
- Security management support documentation including terminology, guidelines as well as procedures for the registration of security components;
- Security aspects of identity management, biometrics and privacy;
- Conformance assessment, accreditation and auditing requirements in the area of information security management systems;
- Security evaluation criteria and methodology.

SC 27 engages in active liaison and collaboration with appropriate bodies to ensure the proper development and application of SC 27 standards and technical reports in relevant áreas

Structure:

ISO/IEC JTC 1/SC 27/AG 1	Management Advisory Group
ISO/IEC JTC 1/SC 27/AG 2	Trustworthiness
ISO/IEC JTC 1/SC 27/AG 3	Concepts and Terminology
ISO/IEC JTC 1/SC 27/AG 4	Data security
ISO/IEC JTC 1/SC 27/WG 1	Information security management systems
ISO/IEC JTC 1/SC 27/WG 2	Cryptography and security mechanisms
ISO/IEC JTC 1/SC 27/WG 3	Security evaluation, testing and specification
ISO/IEC JTC 1/SC 27/WG 4	Security controls and services
ISO/IEC JTC 1/SC 27/WG 5	Identity management and privacy technologies

Standards:

ISO/IEC 7064:2003

Information technology — Security techniques — Check character systems

ISO/IEC 9796-2:2010

Information technology — Security techniques — Digital signature schemes giving message recovery — Part 2: Integer factorization based mechanisms

ISO/IEC 9796-3:2006

Information technology — Security techniques — Digital signature schemes giving message recovery — Part 3: Discrete logarithm based mechanisms

ISO/IEC 9797-1:2011

Information technology — Security techniques — Message Authentication Codes (MACs) — Part 1: Mechanisms using a block cipher

ISO/IEC 9797-2:2011

Information technology — Security techniques — Message Authentication Codes (MACs) — Part 2: Mechanisms using a dedicated hash-function

ISO/IEC 9797-3:2011

Information technology — Security techniques — Message Authentication Codes (MACs) — Part 3: Mechanisms using a universal hash-function

ISO/IEC 9797-3:2011/AMD 1:2020

Information technology — Security techniques — Message Authentication Codes (MACs) — Part 3: Mechanisms using a universal hash-function — Amendment 1

ISO/IEC 9798-1:2010

Information technology — Security techniques — Entity authentication — Part 1: General

ISO/IEC 9798-2:2019

IT Security techniques — Entity authentication — Part 2: Mechanisms using authenticated encryption

ISO/IEC 9798-3:2019

IT Security techniques — Entity authentication — Part 3: Mechanisms using digital signature techniques

ISO/IEC 9798-4:1999

Information technology — Security techniques — Entity authentication — Part 4: Mechanisms using a cryptographic check function

ISO/IEC 9798-4:1999/COR 1:2009

Information technology — Security techniques — Entity authentication — Part 4: Mechanisms using a cryptographic check function — Technical Corrigendum 1

ISO/IEC 9798-4:1999/COR 2:2012

Information technology — Security techniques — Entity authentication — Part 4: Mechanisms using a cryptographic check function — Technical Corrigendum 2

ISO/IEC 9798-5:2009

Information technology — Security techniques — Entity authentication — Part 5: Mechanisms using zero-knowledge techniques

ISO/IEC 9798-6:2010

Information technology — Security techniques — Entity authentication — Part 6: Mechanisms using manual data transfer

ISO/IEC 10116:2017

Information technology — Security techniques — Modes of operation for an n-bit block cipher

ISO/IEC 10118-1:2016

Information technology — Security techniques — Hash-functions — Part 1: General

ISO/IEC 10118-2:2010

Information technology — Security techniques — Hash-functions — Part 2: Hash-functions using an n-bit block cipher

ISO/IEC 10118-2:2010/COR 1:2011

Information technology — Security techniques — Hash-functions — Part 2: Hash-functions using an n-bit block cipher — Technical Corrigendum 1

ISO/IEC 10118-3:2018

IT Security techniques — Hash-functions — Part 3: Dedicated hash-functions

ISO/IEC 10118-4:1998

Information technology — Security techniques — Hash-functions — Part 4: Hash-functions using modular arithmetic

ISO/IEC 10118-4:1998/AMD 1:2014

Information technology — Security techniques — Hash-functions — Part 4: Hash-functions using modular arithmetic — Amendment 1: Object identifiers

ISO/IEC 10118-4:1998/COR 1:2014

Information technology — Security techniques — Hash-functions — Part 4: Hash-functions using modular arithmetic — Technical Corrigendum 1

ISO/IEC 11770-1:2010

Information technology — Security techniques — Key management — Part 1: Framework

ISO/IEC 11770-2:2018

IT Security techniques — Key management — Part 2: Mechanisms using symmetric techniques

ISO/IEC 11770-3:2015

Information technology — Security techniques — Key management — Part 3: Mechanisms using asymmetric techniques

ISO/IEC 11770-3:2015/AMD 1:2017

Information technology — Security techniques — Key management — Part 3: Mechanisms using asymmetric techniques — Amendment 1: Blinded Diffie-Hellman key agreement

ISO/IEC 11770-3:2015/COR 1:2016

Information technology — Security techniques — Key management — Part 3: Mechanisms using asymmetric techniques — Technical Corrigendum 1

ISO/IEC 11770-4:2017

Information technology — Security techniques — Key management — Part 4: Mechanisms based on weak secrets

ISO/IEC 11770-4:2017/AMD 1:2019

Information technology — Security techniques — Key management — Part 4: Mechanisms based on weak secrets — Amendment 1: Unbalanced Password-Authenticated Key Agreement with Identity-Based Cryptosystems (UPAKA-IBC)

ISO/IEC 11770-5:2011

Information technology — Security techniques — Key management — Part 5: Group key management

ISO/IEC 11770-6:2016

Information technology — Security techniques — Key management — Part 6: Key derivation

ISO/IEC 13888-1:2009

Information technology — Security techniques — Non-repudiation — Part 1: General

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Information technology — Security techniques — Non-repudiation — Part 2: Mechanisms using symmetric techniques

ISO/IEC 13888-2:2010/COR 1:2012

Information technology — Security techniques — Non-repudiation — Part 2: Mechanisms using symmetric techniques — Technical Corrigendum 1

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Information technology — Security techniques — Non-repudiation — Part 3: Mechanisms using asymmetric techniques

ISO/IEC TR 14516:2002

Information technology — Security techniques — Guidelines for the use and management of Trusted Third Party services

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Information technology — Security techniques — Digital signatures with appendix — Part 1: General

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Information technology — Security techniques — Digital signatures with appendix — Part 2: Integer factorization based mechanisms

ISO/IEC 14888-2:2008/COR 1:2015

Information technology — Security techniques — Digital signatures with appendix — Part 2: Integer factorization based mechanisms — Technical Corrigendum 1: To ISO/IEC 14888-2:2008

ISO/IEC 14888-3:2018

IT Security techniques — Digital signatures with appendix — Part 3: Discrete logarithm based mechanisms

ISO/IEC 15408-1:2009

Information technology — Security techniques — Evaluation criteria for IT security — Part 1: Introduction and general model

ISO/IEC 15408-2:2008

Information technology — Security techniques — Evaluation criteria for IT security — Part 2: Security functional components

ISO/IEC 15408-3:2008

Information technology — Security techniques — Evaluation criteria for IT security — Part 3: Security assurance components

ISO/IEC TR 15443-1:2012

Information technology — Security techniques — Security assurance framework — Part 1: Introduction and concepts

ISO/IEC TR 15443-2:2012

Information technology — Security techniques — Security assurance framework — Part 2: Analysis

ISO/IEC TR 15446:2017

Information technology — Security techniques — Guidance for the production of protection profiles and security targets

ISO/IEC 15816:2002

Information technology — Security techniques — Security information objects for access control

ISO/IEC 15945:2002

Information technology — Security techniques — Specification of TTP services to support the application of digital signatures

ISO/IEC 15946-1:2016

Information technology — Security techniques — Cryptographic techniques based on elliptic curves — Part 1: General

ISO/IEC 15946-5:2017

Information technology — Security techniques — Cryptographic techniques based on elliptic curves — Part 5: Elliptic curve generation

ISO/IEC 17825:2016

Information technology — Security techniques — Testing methods for the mitigation of non-invasive attack classes against cryptographic modules

ISO/IEC 17922:2017

Information technology — Security techniques — Telebiometric authentication framework using biometric hardware security module

ISO/IEC 18014-1:2008

Information technology — Security techniques — Time-stamping services — Part 1: Framework

ISO/IEC 18014-2:2009

Information technology — Security techniques — Time-stamping services — Part 2: Mechanisms producing independent tokens

ISO/IEC 18014-3:2009

Information technology — Security techniques — Time-stamping services — Part 3: Mechanisms producing linked tokens

ISO/IEC 18014-4:2015

Information technology — Security techniques — Time-stamping services — Part 4: Traceability of time sources

ISO/IEC 18031:2011

Information technology — Security techniques — Random bit generation

ISO/IEC 18031:2011/AMD 1:2017

Information technology — Security techniques — Random bit generation — Amendment 1: Deterministic random bit generation

ISO/IEC 18031:2011/COR 1:2014

Information technology — Security techniques — Random bit generation — Technical Corrigendum 1

ISO/IEC 18032:2005

Information technology — Security techniques — Prime number generation

ISO/IEC 18033-1:2015

Information technology — Security techniques — Encryption algorithms — Part 1: General

ISO/IEC 18033-2:2006

Information technology — Security techniques — Encryption algorithms — Part 2: Asymmetric ciphers

ISO/IEC 18033-2:2006/AMD 1:2017

Information technology — Security techniques — Encryption algorithms — Part 2: Asymmetric ciphers — Amendment 1: FACE

ISO/IEC 18033-3:2010

Information technology — Security techniques — Encryption algorithms — Part 3: Block ciphers

ISO/IEC 18033-4:2011

Information technology — Security techniques — Encryption algorithms — Part 4: Stream ciphers

ISO/IEC 18033-5:2015

Information technology — Security techniques — Encryption algorithms — Part 5: Identity-based ciphers

ISO/IEC 18033-6:2019

IT Security techniques — Encryption algorithms — Part 6: Homomorphic encryption

ISO/IEC 18045:2008

Information technology — Security techniques — Methodology for IT security evaluation

ISO/IEC 18367:2016

Information technology — Security techniques — Cryptographic algorithms and security mechanisms conformance testing

ISO/IEC 18370-1:2016

Information technology — Security techniques — Blind digital signatures — Part 1: General

ISO/IEC 18370-2:2016

Information technology — Security techniques — Blind digital signatures — Part 2: Discrete logarithm based mechanisms

ISO/IEC 19086-4:2019

Cloud computing — Service level agreement (SLA) framework — Part 4: Components of security and of protection of PII

ISO/IEC TS 19249:2017

Information technology — Security techniques — Catalogue of architectural and design principles for secure products, systems and applications

ISO/IEC 19592-1:2016

Information technology — Security techniques — Secret sharing — Part 1: General

ISO/IEC 19592-2:2017

Information technology — Security techniques — Secret sharing — Part 2: Fundamental mechanisms

ISO/IEC TS 19608:2018

Guidance for developing security and privacy functional requirements based on ISO/IEC 15408

ISO/IEC 19772:2009

Information technology — Security techniques — Authenticated encryption

ISO/IEC 19772:2009/COR 1:2014

Information technology — Security techniques — Authenticated encryption — Technical Corrigendum 1

ISO/IEC 19790:2012

Information technology — Security techniques — Security requirements for cryptographic modules

ISO/IEC TR 19791:2010

Information technology — Security techniques — Security assessment of operational systems

ISO/IEC 19792:2009

Information technology — Security techniques — Security evaluation of biometrics

ISO/IEC 19896-1:2018

IT security techniques — Competence requirements for information security testers and evaluators — Part 1: Introduction, concepts and general requirements

ISO/IEC 19896-2:2018

IT security techniques — Competence requirements for information security testers and evaluators — Part 2: Knowledge, skills and effectiveness requirements for ISO/IEC 19790 testers

ISO/IEC 19896-3:2018

IT security techniques — Competence requirements for information security testers and evaluators — Part 3: Knowledge, skills and effectiveness requirements for ISO/IEC 15408 evaluators

ISO/IEC TR 20004:2015

Information technology — Security techniques — Refining software vulnerability analysis under ISO/IEC 15408 and ISO/IEC 18045

ISO/IEC 20008-1:2013

Information technology — Security techniques — Anonymous digital signatures — Part 1: General

ISO/IEC 20008-2:2013

Information technology — Security techniques — Anonymous digital signatures — Part 2: Mechanisms using a group public key

ISO/IEC 20009-1:2013

Information technology — Security techniques — Anonymous entity authentication — Part 1: General

ISO/IEC 20009-2:2013

Information technology — Security techniques — Anonymous entity authentication — Part 2: Mechanisms based on signatures using a group public key

ISO/IEC 20009-4:2017

Information technology — Security techniques — Anonymous entity authentication — Part 4: Mechanisms based on weak secrets

ISO/IEC 20085-1:2019

IT Security techniques — Test tool requirements and test tool calibration methods for use in testing non-invasive attack mitigation techniques in cryptographic modules — Part 1: Test tools and techniques

ISO/IEC 20085-2:2020

IT Security techniques — Test tool requirements and test tool calibration methods for use in testing non-invasive attack mitigation techniques in cryptographic modules — Part 2: Test calibration methods and apparatus

ISO/IEC TS 20540:2018

Information technology — Security techniques — Testing cryptographic modules in their operational environment

ISO/IEC 20543:2019

Information technology — Security techniques — Test and analysis methods for random bit generators within ISO/IEC 19790 and ISO/IEC 15408

ISO/IEC 20889:2018

Privacy enhancing data de-identification terminology and classification of techniques

ISO/IEC 21827:2008

Information technology — Security techniques — Systems Security Engineering — Capability Maturity Model® (SSE-CMM®)

ISO/IEC 21878:2018

Information technology — Security techniques — Security guidelines for design and implementation of virtualized servers

ISO/IEC 24745:2011

Information technology — Security techniques — Biometric information protection

ISO/IEC 24759:2017

Information technology — Security techniques — Test requirements for cryptographic modules

ISO/IEC 24760-1:2019

IT Security and Privacy — A framework for identity management — Part 1: Terminology and concepts

ISO/IEC 24760-2:2015

Information technology — Security techniques — A framework for identity management — Part 2: Reference architecture and requirements

ISO/IEC 24760-3:2016

Information technology — Security techniques — A framework for identity management — Part 3: Practice

ISO/IEC 24761:2019

Information technology — Security techniques — Authentication context for biometrics

ISO/IEC 27000:2018

Information technology — Security techniques — Information security management systems — Overview and vocabulary

ISO/IEC 27001:2013

Information technology — Security techniques — Information security management systems — Requirements

ISO/IEC 27001:2013/COR 1:2014

Information technology — Security techniques — Information security management systems — Requirements — Technical Corrigendum 1

ISO/IEC 27001:2013/COR 2:2015

Information technology — Security techniques — Information security management systems — Requirements — Technical Corrigendum 2

ISO/IEC 27002:2013

Information technology — Security techniques — Code of practice for information security controls

ISO/IEC 27002:2013/COR 1:2014

Information technology — Security techniques — Code of practice for information security controls — Technical Corrigendum 1

ISO/IEC 27002:2013/COR 2:2015

Information technology — Security techniques — Code of practice for information security controls — Technical Corrigendum 2

ISO/IEC 27003:2017

Information technology — Security techniques — Information security management systems — Guidance

ISO/IEC 27004:2016

Information technology — Security techniques — Information security management — Monitoring, measurement, analysis and evaluation

ISO/IEC 27005:2018

Information technology — Security techniques — Information security risk management

ISO/IEC 27006:2015

Information technology — Security techniques — Requirements for bodies providing audit and certification of information security management systems

ISO/IEC 27006:2015/AMD 1:2020

Information technology — Security techniques — Requirements for bodies providing audit and certification of information security management systems — Amendment 1

ISO/IEC 27007:2020

Information security, cybersecurity and privacy protection — Guidelines for information security management systems auditing

ISO/IEC TS 27008:2019

Information technology — Security techniques — Guidelines for the assessment of information security controls

ISO/IEC 27009:2020

Information security, cybersecurity and privacy protection — Sector-specific application of ISO/IEC 27001 — Requirements

ISO/IEC 27010:2015

Information technology — Security techniques — Information security management for inter-sector and inter-organizational communications

ISO/IEC 27011:2016

Information technology — Security techniques — Code of practice for Information security controls based on ISO/IEC 27002 for telecommunications organizations

ISO/IEC 27011:2016/COR 1:2018

Information technology — Security techniques — Code of practice for Information security controls based on ISO/IEC 27002 for telecommunications organizations — Technical Corrigendum 1

ISO/IEC 27013:2015

Information technology — Security techniques — Guidance on the integrated implementation of ISO/IEC 27001 and ISO/IEC 20000-1

ISO/IEC 27014:2013

Information technology — Security techniques — Governance of information security

ISO/IEC TR 27016:2014

Information technology — Security techniques — Information security management — Organizational economics

ISO/IEC 27017:2015

Information technology — Security techniques — Code of practice for information security controls based on ISO/IEC 27002 for cloud services

ISO/IEC 27018:2019

Information technology — Security techniques — Code of practice for protection of personally identifiable information (PII) in public clouds acting as PII processors

ISO/IEC 27019:2017

Information technology — Security techniques — Information security controls for the energy utility industry

ISO/IEC 27021:2017

Information technology — Security techniques — Competence requirements for information security management systems professionals

ISO/IEC TR 27023:2015

Information technology — Security techniques — Mapping the revised editions of ISO/IEC 27001 and ISO/IEC 27002

ISO/IEC 27031:2011

Information technology — Security techniques — Guidelines for information and communication technology readiness for business continuity

ISO/IEC 27032:2012

Information technology — Security techniques — Guidelines for cybersecurity

ISO/IEC 27033-1:2015

Information technology — Security techniques — Network security — Part 1: Overview and concepts

ISO/IEC 27033-2:2012

Information technology — Security techniques — Network security — Part 2: Guidelines for the design and implementation of network security

ISO/IEC 27033-3:2010

Information technology — Security techniques — Network security — Part 3: Reference networking scenarios — Threats, design techniques and control issues

ISO/IEC 27033-4:2014

Information technology — Security techniques — Network security — Part 4: Securing communications between networks using security gateways

ISO/IEC 27033-5:2013

Information technology — Security techniques — Network security — Part 5: Securing communications across networks using Virtual Private Networks (VPNs)

ISO/IEC 27033-6:2016

Information technology — Security techniques — Network security — Part 6: Securing wireless IP network access

ISO/IEC 27034-1:2011

Information technology — Security techniques — Application security — Part 1: Overview and concepts

ISO/IEC 27034-1:2011/COR 1:2014

Information technology — Security techniques — Application security — Part 1: Overview and concepts — Technical Corrigendum 1

ISO/IEC 27034-2:2015

Information technology — Security techniques — Application security — Part 2: Organization normative framework

ISO/IEC 27034-3:2018

Information technology — Application security — Part 3: Application security management process

ISO/IEC 27034-5:2017

Information technology — Security techniques — Application security — Part 5: Protocols and application security controls data structure

ISO/IEC 27034-6:2016

Information technology — Security techniques — Application security — Part 6: Case studies

ISO/IEC 27034-7:2018

Information technology — Application security — Part 7: Assurance prediction framework

ISO/IEC TS 27034-5-1:2018

Information technology — Application security — Part 5-1: Protocols and application security controls data structure, XML schemas

ISO/IEC 27035-1:2016

Information technology — Security techniques — Information security incident management — Part 1: Principles of incident management

ISO/IEC 27035-2:2016

Information technology — Security techniques — Information security incident management — Part 2: Guidelines to plan and prepare for incident response

ISO/IEC 27036-1:2014

Information technology — Security techniques — Information security for supplier relationships — Part 1: Overview and concepts

ISO/IEC 27036-2:2014

Information technology — Security techniques — Information security for supplier relationships — Part 2: Requirements

ISO/IEC 27036-3:2013

Information technology — Security techniques — Information security for supplier relationships — Part 3: Guidelines for information and communication technology supply chain security

ISO/IEC 27036-4:2016

Information technology — Security techniques — Information security for supplier relationships — Part 4: Guidelines for security of cloud services

ISO/IEC 27037:2012

Information technology — Security techniques — Guidelines for identification, collection, acquisition and preservation of digital evidence

ISO/IEC 27038:2014

Information technology — Security techniques — Specification for digital redaction

ISO/IEC 27039:2015

Information technology — Security techniques — Selection, deployment and operations of intrusion detection and prevention systems (IDPS)

ISO/IEC 27040:2015

Information technology — Security techniques — Storage security

ISO/IEC 27041:2015

Information technology — Security techniques — Guidance on assuring suitability and adequacy of incident investigative method

ISO/IEC 27042:2015

Information technology — Security techniques — Guidelines for the analysis and interpretation of digital evidence

ISO/IEC 27043:2015

Information technology — Security techniques — Incident investigation principles and processes

ISO/IEC 27050-1:2019

Information technology — Electronic discovery — Part 1: Overview and concepts

ISO/IEC 27050-2:2018

Information technology — Electronic discovery — Part 2: Guidance for governance and management of electronic discovery

ISO/IEC 27050-3:2020

Information technology — Electronic discovery — Part 3: Code of practice for electronic discovery

ISO/IEC 27102:2019

Information security management — Guidelines for cyber-insurance

ISO/IEC TR 27103:2018

Information technology — Security techniques — Cybersecurity and ISO and IEC Standards

ISO/IEC TR 27550:2019

Information technology — Security techniques — Privacy engineering for system life cycle processes

ISO/IEC 27701:2019

Security techniques — Extension to ISO/IEC 27001 and ISO/IEC 27002 for privacy information management — Requirements and guidelines

ISO/IEC TS 29003:2018

Information technology — Security techniques — Identity proofing

ISO/IEC 29100:2011

Information technology — Security techniques — Privacy framework

ISO/IEC 29100:2011/AMD 1:2018

Information technology — Security techniques — Privacy framework — Amendment 1: Clarifications

ISO/IEC 29101:2018

Information technology — Security techniques — Privacy architecture framework

ISO/IEC 29115:2013

Information technology — Security techniques — Entity authentication assurance framework

ISO/IEC 29128:2011

Information technology — Security techniques — Verification of cryptographic protocols

ISO/IEC 29134:2017

Information technology — Security techniques — Guidelines for privacy impact assessment

ISO/IEC 29146:2016

Information technology — Security techniques — A framework for access management

ISO/IEC 29147:2018

Information technology — Security techniques — Vulnerability disclosure

ISO/IEC TR 29149:2012

Information technology — Security techniques — Best practices for the provision and use of time-stamping services

ISO/IEC 29150:2011

Information technology — Security techniques — Signcryption

ISO/IEC 29150:2011/COR 1:2014

Information technology — Security techniques — Signcryption — Technical Corrigendum 1

ISO/IEC 29151:2017

Information technology — Security techniques — Code of practice for personally identifiable information protection

ISO/IEC 29190:2015

Information technology — Security techniques — Privacy capability assessment model

ISO/IEC 29191:2012

Information technology — Security techniques — Requirements for partially anonymous, partially unlinkable authentication.

ISO/IEC 29192-1:2012

Information technology — Security techniques — Lightweight cryptography — Part 1: General

ISO/IEC 29192-2:2019

Information security — Lightweight cryptography — Part 2: Block ciphers

ISO/IEC 29192-3:2012

Information technology — Security techniques — Lightweight cryptography — Part 3: Stream ciphers

ISO/IEC 29192-4:2013

Information technology — Security techniques — Lightweight cryptography — Part 4: Mechanisms using asymmetric techniques

ISO/IEC 29192-4:2013/AMD 1:2016

Information technology — Security techniques — Lightweight cryptography — Part 4: Mechanisms using asymmetric techniques — Amendment 1

ISO/IEC 29192-5:2016

Information technology — Security techniques — Lightweight cryptography — Part 5: Hash-functions

ISO/IEC 29192-6:2019

Information technology — Lightweight cryptography — Part 6: Message authentication codes (MACs)

ISO/IEC 29192-7:2019

Information security — Lightweight cryptography — Part 7: Broadcast authentication protocols

ISO/IEC TS 30104:2015

Information Technology — Security Techniques — Physical Security Attacks, Mitigation Techniques and Security Requirements

ISO/IEC 30111:2019

Information technology — Security techniques — Vulnerability handling processes

Standards under development:

ISO/IEC 9797-1:2011/AWI AMD 1

Information technology — Security techniques — Message Authentication Codes (MACs) — Part 1: Mechanisms using a block cipher — Amendment 1

ISO/IEC CD 9797-2

Information security — Message Authentication Codes (MACs) — Part 2: Mechanisms using a dedicated hash-function

ISO/IEC AWI 9798-5

Information technology — Security techniques — Entity authentication — Part 5: Mechanisms using zero-knowledge techniques

ISO/IEC 10116:2017/CD AMD 1

Information technology — Security techniques — Modes of operation for an n-bit block cipher — Amendment 1

ISO/IEC 10118-1:2016/CD AMD 1

Information technology — Security techniques — Hash-functions — Part 1: General — Amendment 1

ISO/IEC 11770-3:2015/CD AMD 2

Information technology — Security techniques — Key management — Part 3: Mechanisms using asymmetric techniques — Amendment 2

ISO/IEC 11770-4:2017/DAMD 2

Information technology — Security techniques — Key management — Part 4: Mechanisms based on weak secrets — Amendment 2: Leakage-resilient password-authenticated key agreement with additional stored secrets

ISO/IEC DIS 11770-5

Information technology — Security techniques — Key management — Part 5: Group key management

ISO/IEC DIS 13888-1

Information technology — Non-repudiation — Part 1: General

ISO/IEC DIS 13888-3

Information technology — Non-repudiation — Part 3: Mechanisms using asymmetric techniques

ISO/IEC DIS 15408-1

Information security, cybersecurity and privacy protection — Evaluation criteria for IT security — Part 1: Introduction and general model

ISO/IEC DIS 15408-2

Information security, cybersecurity and privacy protection — Evaluation criteria for IT security — Part 2: Security functional components

ISO/IEC DIS 15408-3

Information security, cybersecurity and privacy protection — Evaluation criteria for IT security — Part 3: Security assurance components

ISO/IEC DIS 15408-4

Information security, cybersecurity and privacy protection — Evaluation criteria for IT security — Part 4: Framework for the specification of evaluation methods and activities

ISO/IEC DIS 15408-5

Information security, cybersecurity and privacy protection — Evaluation criteria for IT security — Part 5: Pre-defined packages of security requirements

ISO/IEC WD 15946-5

Information technology — Security techniques — Cryptographic techniques based on elliptic curves — Part 5: Elliptic curve generation

ISO/IEC CD 18014-2

Information security, cybersecurity and privacy protection — Time-stamping services — Part 2: Mechanisms producing independent tokens

ISO/IEC DIS 18032

Information technology — Security techniques — Prime number generation

ISO/IEC CD 18033-1.2

Information security — Encryption algorithms — Part 1: General

ISO/IEC 18033-4:2011/DAMD 1

Information technology — Security techniques — Encryption algorithms — Part 4: Stream ciphers — Amendment 1: ZUC

ISO/IEC 18033-5:2015/CD AMD 1

Information technology — Security techniques — Encryption algorithms — Part 5: Identity-based ciphers — Amendment 1

ISO/IEC DIS 18045

Information security, cybersecurity and privacy protection — Evaluation criteria for IT security — Methodology for IT security evaluation

ISO/IEC 19772:2009/DAMD 1

Information technology — Security techniques — Authenticated encryption — Amendment 1

ISO/IEC DIS 19989-1

Information security — Criteria and methodology for security evaluation of biometric systems — Part 1: Framework

ISO/IEC DIS 19989-2

Information security — Criteria and methodology for security evaluation of biometric systems — Part 2: Biometric recognition performance

ISO/IEC DIS 19989-3

Information security — Criteria and methodology for security evaluation of biometric systems — Part 3: Presentation attack detection

ISO/IEC 20008-2:2013/CD AMD 1

Information technology — Security techniques — Anonymous digital signatures — Part 2: Mechanisms using a group public key — Amendment 1: Information security — Anonymous digital signatures — Part 2: Mechanisms using a group public key — Amendment 1

ISO/IEC CD 20009-3

Information security — Anonymous entity authentication — Part 3: Mechanisms based on blind signatures

ISO/IEC DIS 20547-4

Information technology — Big data reference architecture — Part 4: Security and privacy

ISO/IEC DIS 20897-1

Information technology — Information security, cybersecurity and privacy protection — Security requirements and test methods for physically unclonable functions for generating non-stored security parameters — Part 1: Security requirements

ISO/IEC CD 20897-2

Information technology — Information security, cybersecurity and privacy protection — Security requirements and test methods for physically unclonable functions for generating non-stored security parameters — Part 2: Test and evaluation methods

ISO/IEC WD TR 22216

Information technology — Security techniques — Introductory guidance on evaluation for IT security

ISO/IEC DIS 23264-1

Information security — Redaction of authentic data — Part 1: General

ISO/IEC WD 23264-2

Information security — Redaction of authentic data — Part 2: Redactable signature schemes based on asymmetric mechanisms

ISO/IEC WD 23837-1

Information technology security techniques — Security requirements, test and evaluation methods for quantum key distribution — Part 1: Requirements

ISO/IEC WD 23837-2

Information technology security techniques — Security requirements, test and evaluation methods for quantum key distribution — Part 2: Evaluation and testing methods

ISO/IEC WD 24391

Information technology — Security techniques — Guidelines for IoT-domotics security and privacy

ISO/IEC WD 24392

Information technology — Security techniques —Security reference model for Industrial Internet Platform (IIP)

ISO/IEC CD TR 24485.2

Information technology — Security techniques — Security properties, test and evaluation guidance for white box cryptography

ISO/IEC CD 24745

Information technology — Security techniques — Biometric information protection

ISO/IEC CD 27002

Information security controls

ISO/IEC WD 27005

Information technology — Security techniques — Information security risk management

ISO/IEC WD 27011

Information technology — Security techniques — Code of practice for Information security controls based on ISO/IEC 27002 for telecommunications organizations

ISO/IEC WD 27013.2

Information technology — Security techniques — Guidance on the integrated implementation of ISO/IEC 27001 and ISO/IEC 20000-1

ISO/IEC DIS 27014

Information security, cybersecurity and privacy protection — Governance of information security

ISO/IEC 27021:2017/CD AMD 1

Information technology — Security techniques — Competence requirements for information security management systems professionals — Amendment 1

ISO/IEC CD 27022

Information technology — Security techniques — Guidance on ISMS processes

ISO/IEC CD 27030

Information technology — Security techniques — Guidelines for security and privacy in Internet of Things (IoT)Title missing

ISO/IEC WD 27032

IT Security Techniques — Cybersecurity — Guidelines for Internet Security

ISO/IEC DIS 27034-4

Information technology — Security techniques — Application security — Part 4: Validation and verification

ISO/IEC WD 27035-1

Information technology — Security techniques — Information security incident management — Part 1: Principles of incident management

ISO/IEC WD 27035-2

Information technology — Security techniques — Information security incident management — Part 2: Guidelines to plan and prepare for incident management

ISO/IEC DIS 27035-3

Information technology — Information security incident management — Part 3: Guidelines for ICT incident response operations

ISO/IEC WD 27045

Information technology — Big data security and privacy — Processes

ISO/IEC WD 27046

Information technology — Big data security and privacy — Implementation guidelines

ISO/IEC CD 27050-4

Information technology — Electronic discovery — Part 4: Technical readiness

ISO/IEC CD 27070

Information technology — Security techniques — Security requirements for virtualized roots of trust

ISO/IEC AWI 27071

Information technology — Security techniques — Security recommendations for establishing trusted connection between device and service

ISO/IEC CD 27099

Information Technology — Security techniques — Public key infrastructure — Practices and policy framework

ISO/IEC WD TS 27100.3

Information technology — Cybersecurity — Overview and concepts

ISO/IEC CD TS 27101

Information technology — Security techniques — Cybersecurity — Framework development guidelines

ISO/IEC DIS 27551

Information technology — Requirements for attribute-based unlinkable entity authentication

ISO/IEC WD 27553

Information technology — Security techniques — Security requirements for authentication using biometrics on mobile devices

ISO/IEC WD 27554

Application of ISO 31000 for assessment of identity management-related risk

ISO/IEC CD 27555

Guidelines on personally identifiable information deletion

ISO/IEC WD 27556.2

Information technology — User-centric framework for the handling of personally identifiable information (PII) based on privacy preferences

ISO/IEC CD TS 27570.2

Information Technology — Security Techniques — Privacy guidelines for Smart Cities

ISO/IEC WD 29115.4

Information technology — Security techniques — Entity authentication assurance framework

ISO/IEC WD 29128

Information technology — Security techniques — Verification of cryptographic protocols

ISO/IEC FDIS 29184

Information technology — Online privacy notices and consent

3.2.31 ISO/IEC JTC 1/SC 29 - Coding of audio, picture, multimedia and hypermedia information

Scope:

Standarisation in the field of

- Efficient coding of digital representations of images, audio and moving pictures, including
- Conventional (natural, computer-generated and immersive) images, moving pictures and audio
- Invisible light and other sensory (such as medical and satellite) images
- Static and dynamic graphic objects
- Efficient coding of other digital information, including
- Multimedia, environment and user related metadata
- Sensor and actuator information related to audiovisual information
- Other digital data in agreement with the relevant committee, such as genomics
- Digital information support, including
- Synchronization, presentation, storage and transport of single or combinations of media
- Media security and privacy management
- Quality of Experience evaluation and system performance metrics

Structure:

ISO/IEC JTC 1/SC 29/AG 1   Advisory group on management

ISO/IEC JTC 1/SC 29/WG 1   Coding of digital representations of images

ISO/IEC JTC 1/SC 29/WG 11 Coding of moving pictures and audio

Standards:

There are 586 published standards in this technical committee. In order to make this document briefer, the last published standards (01/01/2019-12/05/2020) are listed:

ISO/IEC 13818-1:2019/AMD 1:2020

Information technology — Generic coding of moving pictures and associated audio information — Part 1: Systems — Amendment 1: Carriage of JPEG XS in MPEG-2 TS

ISO/IEC 14496-14:2020

Information technology — Coding of audio-visual objects — Part 14: MP4 file format

ISO/IEC 19566-4:2020

Information technologies — JPEG systems — Part 4: Privacy and security

ISO/IEC 23000-19:2020

Information technology — Multimedia application format (MPEG-A) — Part 19: Common media application format (CMAF) for segmented media

ISO/IEC 23001-10:2020

Information technology — MPEG systems technologies — Part 10: Carriage of timed metadata metrics of media in ISO base media file format

ISO/IEC 23003-5:2020

Information technology — MPEG audio technologies — Part 5: Uncompressed audio in MPEG-4 file format

ISO/IEC 23008-12:2017/COR 1:2020

Information technology — High efficiency coding and media delivery in heterogeneous environments — Part 12: Image File Format — Technical Corrigendum 1

ISO/IEC 23009-5:2017/AMD 1:2020

Information technology — Dynamic adaptive streaming over HTTP (DASH) — Part 5: Server and network assisted DASH (SAND) — Amendment 1: Improvements on SAND messages

ISO/IEC 23092-3:2020

Information technology — Genomic information representation — Part 3: Metadata and application programming interfaces (APIs)

ISO/IEC 23093-1:2020

Information technology — Internet of media things — Part 1: Architecture

ISO/IEC 29170-2:2015/AMD 1:2020

Information technology — Advanced image coding and evaluation — Part 2: Evaluation procedure for nearly lossless coding — Amendment 1: Evaluation procedure parameters for nearly lossless coding of high dynamic range media and image sequences

ISO/IEC 10918-7:2019

Information technology — Digital compression and coding of continuous-tone still images — Part 7: Reference software

ISO/IEC 13818-1:2019

Information technology — Generic coding of moving pictures and associated audio information — Part 1: Systems

ISO/IEC 14492:2019

Information technology — Lossy/lossless coding of bi-level images

ISO/IEC 14496-3:2019

Information technology — Coding of audio-visual objects — Part 3: Audio

ISO/IEC 14496-4:2004/AMD 46:2019

Information technology — Coding of audio-visual objects — Part 4: Conformance testing — Amendment 46: Conformance testing for internet video coding

ISO/IEC 14496-5:2001/AMD 40:2019

Information technology — Coding of audio-visual objects — Part 5: Reference software — Amendment 40: Printing material and 3D graphics coding for browsers reference software

ISO/IEC 14496-5:2001/AMD 41:2019

Information technology — Coding of audio-visual objects — Part 5: Reference software — Amendment 41: Reference software for internet video coding

ISO/IEC 14496-15:2019

Information technology — Coding of audio-visual objects — Part 15: Carriage of network abstraction layer (NAL) unit structured video in the ISO base media file format

ISO/IEC 14496-22:2019

Information technology — Coding of audio-visual objects — Part 22: Open Font Format

ISO/IEC 14496-33:2019

Information technology — Coding of audio-visual objects — Part 33: Internet video coding

ISO/IEC 15444-1:2019

Information technology — JPEG 2000 image coding system — Part 1: Core coding system

ISO/IEC 15444-15:2019

Information technology — JPEG 2000 image coding system — Part 15: High-Throughput JPEG 2000

ISO/IEC 15444-16:2019

Information technology — JPEG 2000 image coding system — Part 16: Encapsulation of JPEG 2000 Images into ISO/IEC 23008-12

ISO/IEC 15938-15:2019

Information technology — Multimedia content description interface — Part 15: Compact descriptors for video analysis

ISO/IEC 19566-5:2019

Information technologies — JPEG systems — Part 5: JPEG universal metadata box format (JUMBF)

ISO/IEC 19566-6:2019

Information technologies — JPEG systems — Part 6: JPEG 360

ISO/IEC 21000-22:2019

Information technology — Multimedia framework (MPEG-21) — Part 22: User Description

ISO/IEC 21122-1:2019

Information technology — JPEG XS low-latency lightweight image coding system — Part 1: Core coding system

ISO/IEC 21122-2:2019

Information technology — JPEG XS low-latency lightweight image coding system — Part 2: Profiles and buffer models

ISO/IEC 21122-3:2019

Information technology — JPEG XS low-latency lightweight image coding system — Part 3: Transport and container formats

ISO/IEC 23000-21:2019

Information technology — Multimedia application format (MPEG-A) — Part 21: Visual identity management application format

ISO/IEC 23000-22:2019

Information technology — Multimedia application format (MPEG-A) — Part 22: Multi-image application format (MIAF)

ISO/IEC 23001-7:2016/AMD 1:2019

Information technology — MPEG systems technologies — Part 7: Common encryption in ISO base media file format files — Amendment 1: AES-CBC-128 and key rotation

ISO/IEC 23001-11:2019

Information technology — MPEG systems technologies — Part 11: Energy-efficient media consumption (green metadata)

ISO/IEC 23001-13:2019

Information technology — MPEG systems technologies — Part 13: Media orchestration

ISO/IEC 23001-14:2019

Information technology — MPEG systems technologies — Part 14: Partial file format

ISO/IEC 23001-15:2019

Information technology — MPEG systems technologies — Part 15: Carriage of web resources in ISOBMFF

ISO/IEC 23005-3:2019

Information technology — Media context and control — Part 3: Sensory information

ISO/IEC 23005-5:2019

Information technology — Media context and control — Part 5: Data formats for interaction devices

ISO/IEC 23005-6:2019

Information technology — Media context and control — Part 6: Common types and tools

ISO/IEC 23005-7:2019

Information technology — Media context and control — Part 7: Conformance and reference software

ISO/IEC 23008-3:2019

Information technology — High efficiency coding and media delivery in heterogeneous environments — Part 3: 3D audio

ISO/IEC 23008-3:2019/AMD 1:2019

Information technology — High efficiency coding and media delivery in heterogeneous environments — Part 3: 3D audio — Amendment 1: Audio metadata enhancements

ISO/IEC 23008-8:2018/AMD 1:2019

Information technology — High efficiency coding and media delivery in heterogeneous environments — Part 8: Conformance specification for HEVC — Amendment 1: Conformance testing for HEVC screen content coding (SCC) extensions and non-intra high throughput profiles

ISO/IEC 23008-9:2019

Information technology — High efficiency coding and media delivery in heterogeneous environments — Part 9: 3D Audio conformance testing

ISO/IEC 23009-1:2019

Information technology — Dynamic adaptive streaming over HTTP (DASH) — Part 1: Media presentation description and segment formats

ISO/IEC 23090-2:2019

Information technology — Coded representation of immersive media — Part 2: Omnidirectional media format

ISO/IEC 23091-2:2019

Information technology — Coding-independent code points — Part 2: Video

ISO/IEC TR 23091-4:2019

Information technology — Coding-independent code points — Part 4: Usage of video signal type code points

ISO/IEC 23092-1:2019

Information technology — Genomic information representation — Part 1: Transport and storage of genomic information

ISO/IEC 23092-2:2019

Information technology — Genomic information representation — Part 2: Coding of genomic information

ISO/IEC 23093-2:2019

Information technology — Internet of media things — Part 2: Discovery and communication API

ISO/IEC 23093-3:2019

Information technology — Internet of media things — Part 3: Media data formats and APIs

In any case, for further information, the website link with all the published standards is the following:

https://www.iso.org/committee/45316/x/catalogue/p/1/u/0/w/0/d/0

Standards under development:

ISO/IEC WD 10918-7

Information technology — Digital compression and coding of continuous-tone still images — Part 7: Reference software

ISO/IEC 13818-1:2019/CD COR 1

Information technology — Generic coding of moving pictures and associated audio information — Part 1: Systems — Technical Corrigendum 1

ISO/IEC 13818-1:2019/CD AMD 2

Information technology — Generic coding of moving pictures and associated audio information — Part 1: Systems — Amendment 2: Carriage of VVC in MPEG-2 Systems

ISO/IEC FDIS 14496-10

Information technology — Coding of audio-visual objects — Part 10: Advanced video coding

ISO/IEC FDIS 14496-12

Information technology — Coding of audio-visual objects — Part 12: ISO base media file format

ISO/IEC FDIS 14496-12/DAMD 4

Information technology — Coding of audio-visual objects — Part 12: ISO base media file format — Amendment 4: Compact movie fragments

ISO/IEC 14496-15:2019/DAMD 1

Information technology — Coding of audio-visual objects — Part 15: Carriage of network abstraction layer (NAL) unit structured video in the ISO base media file format — Amendment 1: Improved support for tiling and layering

ISO/IEC 14496-15:2019/CD AMD 2

Information technology — Coding of audio-visual objects — Part 15: Carriage of network abstraction layer (NAL) unit structured video in the ISO base media file format — Amendment 2: Carriage of VVC in ISOBMFF

ISO/IEC DIS 14496-16

Information technology — Coding of audio-visual objects — Part 16: Animation Framework eXtension (AFX)

ISO/IEC 14496-22:2019/FDAMD 1

Information technology — Coding of audio-visual objects — Part 22: Open Font Format — Amendment 1: Color font technology and other updates

ISO/IEC CD TR 14496-24

Information technology — Coding of audio-visual objects — Part 24: Audio and systems interaction

ISO/IEC DIS 14496-27

Information technology — Coding of audio-visual objects — Part 27: 3D Graphics conformance

ISO/IEC DIS 14496-32

Information technology — Coding of audio-visual objects — Part 32: File format reference software and conformance

ISO/IEC 15444-4:2004/DAMD 1

Information technology — JPEG 2000 image coding system: Conformance testing — Part 4: — Amendment 1: High-throughput JPEG 2000 conformance testing

ISO/IEC 15444-5:2015/DAMD 1

Information technology — JPEG 2000 image coding system: Reference software — Part 5: — Amendment 1: Additional reference software for HTJ2K

ISO/IEC CD 15444-16

Information technology — JPEG 2000 image coding system — Part 16: Encapsulation of JPEG 2000 Images into ISO/IEC 23008-12

ISO/IEC WD 15444-17

Information technology — JPEG 2000 image coding system — Part 17: Extensions for coding of discontinuous media

ISO/IEC 15938-6

Information technology — Multimedia content description interface — Part 6: Reference software

ISO/IEC DIS 15938-16

Information technology — Multimedia content description interface — Part 16: Conformance and reference software for compact descriptors for video analysis

ISO/IEC WD 15938-17

Information technology — Multimedia content description interface — Part 17: Compression of neural networks for multimedia content description and analysis

ISO/IEC DIS 18181-1

Information technology — JPEG XL Image Coding System — Part 1: Core coding system

ISO/IEC CD 18181-2

Information technology — JPEG XL Image Coding System — Part 2: File format

ISO/IEC WD 18181-3

Information technology — JPEG XL Image Coding System — Part 3: Conformance testing

ISO/IEC WD 18181-4

Information technology — JPEG XL Image Coding System — Part 4: Reference software

ISO/IEC 18477-1

Information technology — Scalable compression and coding of continuous-tone still images — Part 1: Core coding system specification

ISO/IEC 18477-8

Information technology — Scalable compression and coding of continuous-tone still images — Part 8: Lossless and near-lossless coding

ISO/IEC 19566-5:2019/CD AMD 1

Information technologies — JPEG systems — Part 5: JPEG universal metadata box format (JUMBF) — Amendment 1: Support for embedding mixed code streams

ISO/IEC 19566-6:2019/CD AMD 1

Information technologies — JPEG systems — Part 6: JPEG 360 — Amendment 1: Addition of new JPEG 360 image types and accelerated ROI rendering

ISO/IEC AWI 19566-7

Information technologies — JPEG systems — Part 7: JPEG linked media format (JLINK)

ISO/IEC 21122-1:2019/WD AMD 1

Information technology — JPEG XS low-latency lightweight image coding system — Part 1: Core coding system — Amendment 1: Extended capabilities for JPEG XS core coding system

ISO/IEC 21122-2:2019/AWI AMD 1

Information technology — JPEG XS low-latency lightweight image coding system — Part 2: Profiles and buffer models — Amendment 1: Profiles extensions

ISO/IEC 21122-3:2019/CD COR 1

Information technology — JPEG XS low-latency lightweight image coding system — Part 3: Transport and container formats — Technical Corrigendum 1

ISO/IEC 21122-4

Information technology — JPEG XS low-latency lightweight image coding system — Part 4: Conformance testing

ISO/IEC DIS 21122-5

Information technology — JPEG XS low-latency lightweight image coding system — Part 5: Reference software

ISO/IEC FDIS 21794-1

Information technology — Plenoptic image coding system (JPEG Pleno) — Part 1: Framework

ISO/IEC DIS 21794-2

Information technology — Plenoptic image coding system (JPEG Pleno) — Part 2: Light field coding

ISO/IEC DIS 21794-2/AWI AMD 1

Information technology — Plenoptic image coding system (JPEG Pleno) — Part 2: Light field coding — Amendment 1: Profiles and Levels for JPEG Pleno Light Field Coding System

ISO/IEC AWI 21794-3

Information technology — Plenoptic image coding system (JPEG Pleno) — Part 3: Conformance testing

ISO/IEC AWI 21794-4

Information technology — Plenoptic image coding system (JPEG Pleno) — Part 4: Reference software

ISO/IEC 23000-19:2020/DAMD 1

Information technology — Multimedia application format (MPEG-A) — Part 19: Common media application format (CMAF) for segmented media — Amendment 1: Additional CMAF HEVC media profiles

ISO/IEC 23000-21:2019/DAMD 1

Information technology — Multimedia application format (MPEG-A) — Part 21: Visual identity management application format — Amendment 1: Conformance and reference software

ISO/IEC 23000-22:2019/DAMD 1

Information technology — Multimedia application format (MPEG-A) — Part 22: Multi-image application format (MIAF) — Amendment 1: Reference software and conformance for multi image application format

ISO/IEC 23001-10:2020/CD AMD 1

Information technology — MPEG systems technologies — Part 10: Carriage of timed metadata metrics of media in ISO base media file format — Amendment 1: Support for Content-Guided Transcoding and Spatial Relationship of Immersive Media

ISO/IEC 23001-14:2019/WD AMD 1

Information technology — MPEG systems technologies — Part 14: Partial file format — Amendment 1: Support for HTTP entities, enhanced file type and byte-range priorities

ISO/IEC DIS 23002-7

Information technology — MPEG video technologies — Part 7: Supplemental enhancement information messages for coded video bitstreams

ISO/IEC 23003-3

Information technology — MPEG audio technologies — Part 3: Unified speech and audio coding

ISO/IEC 23003-4

Information technology — MPEG audio technologies — Part 4: Dynamic range control

ISO/IEC FDIS 23005-1

Information technology — Media context and control — Part 1: Architecture

ISO/IEC DIS 23008-1

Information technology — High efficiency coding and media delivery in heterogeneous environments — Part 1: MPEG media transport (MMT)

ISO/IEC DIS 23008-1/CD AMD 1

Information technology — High efficiency coding and media delivery in heterogeneous environments — Part 1: MPEG media transport (MMT) — Amendment 1: Support of FCAST

ISO/IEC FDIS 23008-2

Information technology — High efficiency coding and media delivery in heterogeneous environments — Part 2: High efficiency video coding

ISO/IEC FDIS 23008-2/DAMD 2

Information technology — High efficiency coding and media delivery in heterogeneous environments — Part 2: High efficiency video coding — Amendment 2: Shutter interval information SEI message

ISO/IEC 23008-3:2019/DAMD 2

Information technology — High efficiency coding and media delivery in heterogeneous environments — Part 3: 3D audio — Amendment 2: Corrections and improvements

ISO/IEC 23008-4

Information technology — High efficiency coding and media delivery in heterogeneous environments — Part 4: MMT reference software

ISO/IEC FDIS 23008-4/CD AMD 2

Information technology — High efficiency coding and media delivery in heterogeneous environments — Part 4: MMT reference software — Amendment 2: Information technology — High efficiency coding and media delivery in heterogeneous environments — Part 4: MMT reference and conformance software — Amendment 2: Support for MMTP extensions

ISO/IEC 23008-6

Information technology — High efficiency coding and media delivery in heterogeneous environments — Part 6: 3D audio reference software

ISO/IEC CD 23008-7

Information technology — High efficiency coding and media delivery in heterogeneous environments — Part 7: MMT Conformance

ISO/IEC 23008-10:2015/CD AMD 1

Information technology — High efficiency coding and media delivery in heterogeneous environments — Part 10: MPEG media transport forward error correction (FEC) codes — Amendment 1: Window-based FEC code

ISO/IEC 23008-11:2015/DAMD 1

Information technology — High efficiency coding and media delivery in heterogeneous environments — Part 11: MPEG media transport composition information — Amendment 1: Customization in composition information

ISO/IEC 23008-12:2017/DAMD 2

Information technology — High efficiency coding and media delivery in heterogeneous environments — Part 12: Image File Format — Amendment 2: Support for predictive image coding, bursts, bracketing, and other improvements

ISO/IEC PRF TR 23008-13

Information technology — High efficiency coding and media delivery in heterogeneous environments — Part 13: MMT implementation guidance

ISO/IEC 23009-1:2019/DAMD 1

Information technology — Dynamic adaptive streaming over HTTP (DASH) — Part 1: Media presentation description and segment formats — Amendment 1: CMAF support, events processing model and other extensions

ISO/IEC FDIS 23009-2

Information technology — Dynamic adaptive streaming over HTTP (DASH) — Part 2: Conformance and reference software

ISO/IEC AWI TR 23009-3

Information technology — Dynamic adaptive streaming over HTTP (DASH) — Part 3: Implementation guidelines

ISO/IEC WD TR 23009-7

Information technology — Dynamic adaptive streaming over HTTP (DASH) — Part 7: Delivery of CMAF contents with DASH

ISO/IEC CD 23009-8

Information technology — Dynamic adaptive streaming over HTTP (DASH) — Part 8: Session-based DASH operations

ISO/IEC PDTR 23090-1

Information technology - Coded representation of immersive media — Part 1: Immersive media

ISO/IEC DIS 23090-2

Information technology — Coded representation of immersive media — Part 2: Omnidirectional media format

ISO/IEC DIS 23090-3

Information technology — Coded representation of immersive media — Part 3: Versatile video coding

ISO/IEC DIS 23090-5

Information technology — Coded representation of immersive media — Part 5: Video-based point cloud compression

ISO/IEC DIS 23090-6

Information technology — Coded representation of immersive media — Part 6: Immersive media metrics

ISO/IEC WD 23090-7

Information technology — Coded representation of immersive media — Part 7: Immersive media metadata

ISO/IEC DIS 23090-8

Information technology — Coded representation of immersive media — Part 8: Network based media processing

ISO/IEC DIS 23090-8/CD AMD 1

Information technology — Coded representation of immersive media — Part 8: Network based media processing — Amendment 1: NBMP function templates

ISO/IEC DIS 23090-9

Information technology — MPEG-I (Coded Representation of Immersive Media) — Part 9: Geometry-based Point Cloud Compression

ISO/IEC CD 23090-10

Information technology — Coded representation of immersive media — Part 10: Carriage of Video-based Point Cloud Compression Data

ISO/IEC WD 23090-11

Information technology — Coded representation of immersive media — Part 11: Network-based media processing implementation guidelines

ISO/IEC WD 23090-12

Information technology — Coded representation of immersive media — Part 12: Immersive Video

ISO/IEC WD 23090-13

Information technology — Coded representation of immersive media — Part 13: Video Decoding Interface for Immersive Media

ISO/IEC WD 23090-14

Information technology — Coded representation of immersive media — Part 14: Scene Description for MPEG Media

ISO/IEC CD 23090-17

Information technology — Coded representation of immersive media — Part 17: Reference Software and Conformance for OMAF

ISO/IEC WD 23090-18

Information technology — Coded representation of immersive media — Part 18: Carriage of Geometry-based Point Cloud Compression Data

ISO/IEC TR 23091-4

Information technology — Coding-independent code points — Part 4: Usage of video signal type code points

ISO/IEC DIS 23092-1

Information technology — Genomic information representation — Part 1: Transport and storage of genomic information

ISO/IEC DIS 23092-2

Information technology — Genomic information representation — Part 2: Coding of genomic information

ISO/IEC DIS 23092-4

Information technology — Genomic information representation — Part 4: Reference software

ISO/IEC DIS 23092-5

Information technology — Genomic information representation — Part 5: Conformance

ISO/IEC AWI 23092-6

Information technology — Genomic information representation — Part 6: Coding of genomic annotations

ISO/IEC FDIS 23093-4

Information technology — Internet of media things — Part 4: Reference software and conformance

ISO/IEC DIS 23094-1

Information technology — General video coding — Part 1: Essential video coding

ISO/IEC DIS 23094-2

Information technology – General video coding — Part 2: Low complexity enhancement video coding

ISO/IEC WD 23094-3

formation technology — General video coding — Part 3: Carriage of EVC

ISO/IEC FDIS 24800-2

Information technology — JPSearch — Part 2: Registration, identification and management of schema and ontology

ISO/IEC 29199-2

Information technology — JPEG XR image coding system — Part 2: Image coding specification

3.2.32 ISO/IEC JTC 1/SC 31 - Automatic identification and data capture techniques

Scope:

Standarisation of data formats, data syntax, data structures, data encoding, and technologies for the process of automatic identification and data capture and of associated devices utilized in inter-industry applications and international business interchanges and for mobile applications.

Structure:

ISO/IEC JTC 1/SC 31/WG 1   Data carrier

ISO/IEC JTC 1/SC 31/WG 2   Data and structure

ISO/IEC JTC 1/SC 31/WG 4   Radio communications

ISO/IEC JTC 1/SC 31/WG 8   Application of AIDC standards

Standards:

ISO 1073-1:1976

Alphanumeric character sets for optical recognition — Part 1: Character set OCR-A — Shapes and dimensions of the printed image

ISO 1073-2:1976

Alphanumeric character sets for optical recognition — Part 2: Character set OCR-B — Shapes and dimensions of the printed image

ISO 1831:1980

Printing specifications for optical character recognition

ISO/IEC 15415:2011

Information technology — Automatic identification and data capture techniques — Bar code symbol print quality test specification — Two-dimensional symbols

ISO/IEC 15416:2016

Automatic identification and data capture techniques — Bar code print quality test specification — Linear symbols

ISO/IEC 15417:2007

Information technology — Automatic identification and data capture techniques — Code 128 bar code symbology specification

ISO/IEC 15418:2016

Information technology — Automatic identification and data capture techniques — GS1 Application Identifiers and ASC MH10 Data Identifiers and maintenance

ISO/IEC 15419:2009

Information technology — Automatic identification and data capture techniques — Bar code digital imaging and printing performance testing

ISO/IEC 15420:2009

Information technology — Automatic identification and data capture techniques — EAN/UPC bar code symbology specification

ISO/IEC 15421:2010

Information technology — Automatic identification and data capture techniques — Bar code master test specifications

ISO/IEC 15423:2009

Information technology — Automatic identification and data capture techniques — Bar code scanner and decoder performance testing

ISO/IEC 15424:2008

Information technology — Automatic identification and data capture techniques — Data Carrier Identifiers (including Symbology Identifiers)

ISO/IEC 15426-1:2006

Information technology — Automatic identification and data capture techniques — Bar code verifier conformance specification — Part 1: Linear symbols

ISO/IEC 15426-2:2015

Information technology — Automatic identification and data capture techniques — Bar code verifier conformance specification — Part 2: Two-dimensional symbols

ISO/IEC 15434:2019

Information technology — Automatic identification and data capture techniques — Syntax for high-capacity ADC media

ISO/IEC 15438:2015

Information technology — Automatic identification and data capture techniques — PDF417 bar code symbology specification

ISO/IEC 15459-1:2014

Information technology — Automatic identification and data capture techniques — Unique identification — Part 1: Individual transport units

ISO/IEC 15459-2:2015

Information technology — Automatic identification and data capture techniques — Unique identification — Part 2: Registration procedures

ISO/IEC 15459-3:2014

Information technology — Automatic identification and data capture techniques — Unique identification — Part 3: Common rules

ISO/IEC 15459-4:2014

Information technology — Automatic identification and data capture techniques — Unique identification — Part 4: Individual products and product packages

ISO/IEC 15459-5:2014

Information technology — Automatic identification and data capture techniques — Unique identification — Part 5: Individual returnable transport items (RTIs)

ISO/IEC 15459-6:2014

Information technology — Automatic identification and data capture techniques — Unique identification — Part 6: Groupings

ISO/IEC 15961-1:2013

Information technology — Radio frequency identification (RFID) for item management: Data protocol — Part 1: Application interface

ISO/IEC 15961-2:2019

Information technology — Data protocol for radio frequency identification (RFID) for item management — Part 2: Registration of RFID data constructs

ISO/IEC 15961-3:2019

Information technology — Data protocol for radio frequency identification (RFID) for item management — Part 3: RFID data constructs

ISO/IEC 15961-4:2016

Information technology — Radio frequency identification (RFID) for item management: Data protocol — Part 4: Application interface commands for battery assist and sensor functionality

ISO/IEC 15962:2013

Information technology — Radio frequency identification (RFID) for item management — Data protocol: data encoding rules and logical memory functions

ISO/IEC 15963-1:2020

Information technology — Radio frequency identification for item management — Part 1: Unique identification for RF tags numbering systems

ISO/IEC 15963-2:2020

Information technology — Radio frequency identification for item management — Part 2: Unique identification for RF tags registration procedures

ISO/IEC 16022:2006

Information technology — Automatic identification and data capture techniques — Data Matrix bar code symbology specification

ISO/IEC 16022:2006/COR 1:2008

Information technology — Automatic identification and data capture techniques — Data Matrix bar code symbology specification — Technical Corrigendum 1

ISO/IEC 16022:2006/COR 2:2011

Information technology — Automatic identification and data capture techniques — Data Matrix bar code symbology specification — Technical Corrigendum 2

ISO/IEC 16023:2000

Information technology — International symbology specification — MaxiCode

ISO/IEC 16388:2007

Information technology — Automatic identification and data capture techniques — Code 39 bar code symbology specification

ISO/IEC 16390:2007

Information technology — Automatic identification and data capture techniques — Interleaved 2 of 5 bar code symbology specification

ISO/IEC 16480:2015

Information technology — Automatic identification and data capture techniques — Reading and display of ORM by mobile devices

ISO 17363:2013

Supply chain applications of RFID — Freight containers

ISO 17364:2013

Supply chain applications of RFID — Returnable transport items (RTIs) and returnable packaging items (RPIs)

ISO 17365:2013

Supply chain applications of RFID — Transport units

ISO 17366:2013

Supply chain applications of RFID — Product packaging

ISO 17367:2013

Supply chain applications of RFID — Product tagging

ISO/IEC 18000-2:2009

Information technology — Radio frequency identification for item management — Part 2: Parameters for air interface communications below 135 kHz

ISO/IEC 18000-3:2010

Information technology — Radio frequency identification for item management — Part 3: Parameters for air interface communications at 13,56 MHz

ISO/IEC 18000-4:2018

Information technology — Radio frequency identification for item management — Part 4: Parameters for air interface communications at 2,45 GHz

ISO/IEC 18000-6:2013

Information technology — Radio frequency identification for item management — Part 6: Parameters for air interface communications at 860 MHz to 960 MHz General

ISO/IEC 18000-7:2014

Information technology — Radio frequency identification for item management — Part 7: Parameters for active air interface communications at 433 MHz

ISO/IEC 18000-61:2012

Information technology — Radio frequency identification for item management — Part 61: Parameters for air interface communications at 860 MHz to 960 MHz Type A

ISO/IEC 18000-62:2012

Information technology — Radio frequency identification for item management — Part 62: Parameters for air interface communications at 860 MHz to 960 MHz Type B

ISO/IEC 18000-63:2015

Information technology — Radio frequency identification for item management — Part 63: Parameters for air interface communications at 860 MHz to 960 MHz Type C

ISO/IEC 18000-64:2012

Information technology — Radio frequency identification for item management — Part 64: Parameters for air interface communications at 860 MHz to 960 MHz Type D

ISO/IEC TR 18001:2004

Information technology — Radio frequency identification for item management — Application requirements profiles

ISO/IEC 18004:2015

Information technology — Automatic identification and data capture techniques — QR Code bar code symbology specification

ISO/IEC 18046-1:2011

Information technology — Radio frequency identification device performance test methods — Part 1: Test methods for system performance

ISO/IEC 18046-2:2020

Information technology — Radio frequency identification device performance test methods — Part 2: Test methods for interrogator performance

ISO/IEC 18046-3:2012

Information technology — Radio frequency identification device performance test methods — Part 3: Test methods for tag performance

ISO/IEC 18046-4:2015

Information technology — Radio frequency identification device performance test methods — Part 4: Test methods for performance of RFID gates in libraries

ISO/IEC 18047-2:2012

Information technology — Radio frequency identification device conformance test methods — Part 2: Test methods for air interface communications below 135 kHz

ISO/IEC TR 18047-3:2011

Information technology — Radio frequency identification device conformance test methods — Part 3: Test methods for air interface communications at 13,56 MHz

ISO/IEC TR 18047-4:2004

Information technology — Radio frequency identification device conformance test methods — Part 4: Test methods for air interface communications at 2,45 GHz

ISO/IEC 18047-6:2017

Information technology — Radio frequency identification device conformance test methods — Part 6: Test methods for air interface communications at 860 MHz to 960 MHz

ISO/IEC TR 18047-7:2010

Information technology — Radio frequency identification device conformance test methods — Part 7: Test methods for active air interface communications at 433 MHz

ISO/IEC 18305:2016

Information technology — Real time locating systems — Test and evaluation of localization and tracking systems

ISO/IEC 19762:2016

Information technology — Automatic identification and data capture (AIDC) techniques — Harmonized vocabulary

ISO/IEC TR 19782:2006

Information technology — Automatic identification and data capture techniques — Effects of gloss and low substrate opacity on reading of bar code symbols

ISO/IEC 19823-10:2020

Information technology — Conformance test methods for security service crypto suites — Part 10: Crypto suite AES-128

ISO/IEC 19823-13:2018

Information technology — Conformance test methods for security service crypto suites — Part 13: Cryptographic Suite Grain-128A

ISO/IEC 19823-19:2018

Information technology — Conformance test methods for security service crypto suites — Part 19: Crypto suite RAMON

ISO/IEC 19823-21:2019

Information technology — Conformance test methods for security service crypto suites — Part 21: Crypto suite SIMON

ISO/IEC 19823-22:2019

Information technology — Conformance test methods for security service crypto suites — Part 22: Crypto suite SPECK

ISO/IEC TR 20017:2011

Information technology — Radio frequency identification for item management — Electromagnetic interference impact of ISO/IEC 18000 interrogator emitters on implantable pacemakers and implantable cardioverter defibrillators

ISO/IEC 20248:2018

Information technology — Automatic identification and data capture techniques — Data structures — Digital signature meta structure

ISO/IEC 21277:2018

Information technology — Radio frequency identification device performance test methods — Crypto suite

ISO/IEC/IEEE 21450:2010

Information technology — Smart transducer interface for sensors and actuators — Common functions, communication protocols, and Transducer Electronic Data Sheet (TEDS) formats

ISO/IEC/IEEE 21451-1:2010

Information technology — Smart transducer interface for sensors and actuators — Part 1: Network Capable Application Processor (NCAP) information model

ISO/IEC/IEEE 21451-2:2010

Information technology — Smart transducer interface for sensors and actuators — Part 2: Transducer to microprocessor communication protocols and Transducer Electronic Data Sheet (TEDS) formats

ISO/IEC/IEEE 21451-4:2010

Information technology — Smart transducer interface for sensors and actuators — Part 4: Mixed-mode communication protocols and Transducer Electronic Data Sheet (TEDS) formats

ISO/IEC/IEEE 21451-7:2011

Information technology — Smart transducer interface for sensors and actuators — Part 7: Transducer to radio frequency identification (RFID) systems communication protocols and Transducer Electronic Data Sheet (TEDS) formats

ISO/IEC 21471:2020

Information technology — Automatic identification and data capture techniques — Extended rectangular data matrix (DMRE) bar code symbology specification

ISO/IEC 22243:2019

Information technology — Radio frequency identification for item management — Methods for localization of RFID tags

ISO/IEC TR 24720:2008

Information technology — Automatic identification and data capture techniques — Guidelines for direct part marking (DPM)

ISO/IEC 24723:2010

Information technology — Automatic identification and data capture techniques — GS1 Composite bar code symbology specification

ISO/IEC 24724:2011

Information technology — Automatic identification and data capture techniques — GS1 DataBar bar code symbology specification

ISO/IEC 24728:2006

Information technology — Automatic identification and data capture techniques — MicroPDF417 bar code symbology specification

ISO/IEC TR 24729-1:2008

Information technology — Radio frequency identification for item management — Implementation guidelines — Part 1: RFID-enabled labels and packaging supporting ISO/IEC 18000-6C

ISO/IEC TR 24729-2:2008

Information technology — Radio frequency identification for item management — Implementation guidelines — Part 2: Recycling and RFID tags

ISO/IEC TR 24729-3:2009

Information technology — Radio frequency identification for item management — Implementation guidelines — Part 3: Implementation and operation of UHF RFID Interrogator systems in logistics applications

ISO/IEC TR 24729-4:2009

Information technology — Radio frequency identification for item management — Implementation guidelines — Part 4: Tag data security

ISO/IEC 24730-1:2014

Information technology — Real-time locating systems (RTLS) — Part 1: Application programming interface (API)

ISO/IEC 24730-2:2012

Information technology — Real time locating systems (RTLS) — Part 2: Direct Sequence Spread Spectrum (DSSS) 2,4 GHz air interface protocol

ISO/IEC 24730-5:2010

Information technology — Real-time locating systems (RTLS) — Part 5: Chirp spread spectrum (CSS) at 2,4 GHz air interface

ISO/IEC 24730-21:2012

Information technology — Real time locating systems (RTLS) — Part 21: Direct Sequence Spread Spectrum (DSSS) 2,4 GHz air interface protocol: Transmitters operating with a single spread code and employing a DBPSK data encoding and BPSK spreading scheme

ISO/IEC 24730-22:2012

Information technology — Real time locating systems (RTLS) — Part 22: Direct Sequence Spread Spectrum (DSSS) 2,4 GHz air interface protocol: Transmitters operating with multiple spread codes and employing a QPSK data encoding and Walsh offset QPSK (WOQPSK) spreading scheme

ISO/IEC 24730-61:2013

Information technology — Real time locating systems (RTLS) — Part 61: Low rate pulse repetition frequency Ultra Wide Band (UWB) air interface

ISO/IEC 24730-62:2013

Information technology — Real time locating systems (RTLS) — Part 62: High rate pulse repetition frequency Ultra Wide Band (UWB) air interface

ISO/IEC 24753:2011

Information technology — Radio frequency identification (RFID) for item management — Application protocol: encoding and processing rules for sensors and batteries

ISO/IEC 24769-2:2013

Information technology — Real-time locating systems (RTLS) device conformance test methods — Part 2: Test methods for air interface communication at 2,4 GHz

ISO/IEC 24769-5:2012

Information technology — Automatic identification and data capture techniques — Real time locating systems (RTLS) device conformance test methods — Part 5: Test methods for chirp spread spectrum (CSS) at 2,4 GHz air interface

ISO/IEC 24769-61:2015

Information Technology — Real Time Locating System (RTLS) Device Conformance Test Methods — Part 61: Low rate pulse repetition frequency Ultra Wide Band (UWB) air interface

ISO/IEC 24769-62:2015

Information Technology — Real Time Locating System (RTLS) Device Conformance Test Methods — Part 62: High rate pulse repetition frequency Ultra Wide Band (UWB) air interface

ISO/IEC 24770-5:2019

Information technology —Real-time locating system (RTLS) device performance test methods — Part 5: Test methods for chirp spread spectrum (CSS) air interface

ISO/IEC 24770-61:2015

Information technology — Real Time Locating System (RTLS) device performance test methods — Part 61: Low rate pulse repetition frequency Ultra Wide Band (UWB) air interface

ISO/IEC 24770-62:2015

Information technology — Real-time locating system (RTLS) device performance test methods — Part 62: High rate pulse repetition frequency Ultra Wide Band (UWB) air interface

ISO/IEC 24770:2012

Information technology — Real-time locating system (RTLS) device performance test methods — Test methods for air interface communication at 2,4 GHz

ISO/IEC 24778:2008

Information technology — Automatic identification and data capture techniques — Aztec Code bar code symbology specification

ISO/IEC 24791-1:2010

Information technology — Radio frequency identification (RFID) for item management — Software system infrastructure — Part 1: Architecture

ISO/IEC 24791-2:2011

Information technology — Radio frequency identification (RFID) for item management — Software system infrastructure — Part 2: Data management

ISO/IEC 24791-3:2014

Information technology — Radio frequency identification (RFID) for item management — Software system infrastructure — Part 3: Device management

ISO/IEC 24791-5:2012

Information technology — Radio frequency identification (RFID) for item management — Software system infrastructure — Part 5: Device interface

ISO/IEC 29133:2010

Information technology — Automatic identification and data capture techniques — Quality test specification for rewritable hybrid media data carriers

ISO/IEC 29143:2011

Information technology — Automatic identification and data capture techniques — Air interface specification for Mobile RFID interrogators

ISO/IEC TR 29158:2011

Information technology — Automatic identification and data capture techniques — Direct Part Mark (DPM) Quality Guideline

ISO/IEC 29160:2012

Information technology — Radio frequency identification for item management — RFID Emblem

ISO/IEC 29161:2016

Information technology — Data structure — Unique identification for the Internet of Things

ISO/IEC TR 29162:2012

Information technology — Guidelines for using data structures in AIDC media

ISO/IEC 29167-1:2014

Information technology — Automatic identification and data capture techniques — Part 1: Security services for RFID air interfaces

ISO/IEC 29167-10:2017

Information technology — Automatic identification and data capture techniques — Part 10: Crypto suite AES-128 security services for air interface communications

ISO/IEC 29167-11:2014

Information technology — Automatic identification and data capture techniques — Part 11: Crypto suite PRESENT-80 security services for air interface communications

ISO/IEC 29167-12:2015

Information technology — Automatic identification and data capture techniques — Part 12: Crypto suite ECC-DH security services for air interface communications

ISO/IEC 29167-13:2015

Information technology — Automatic identification and data capture techniques — Part 13: Crypto suite Grain-128A security services for air interface communications

ISO/IEC 29167-14:2015

Information technology — Automatic identification and data capture techniques — Part 14: Crypto suite AES OFB security services for air interface communications

ISO/IEC TS 29167-15:2017

Information technology — Automatic identification and data capture techniques — Part 15: Crypto suite XOR security services for air interface communications

ISO/IEC 29167-16:2015

Information technology — Automatic identification and data capture techniques — Part 16: Crypto suite ECDSA-ECDH security services for air interface communications

ISO/IEC 29167-17:2015

Information technology — Automatic identification and data capture techniques — Part 17: Crypto suite cryptoGPS security services for air interface communications

ISO/IEC 29167-19:2019

Information technology — Automatic identification and data capture techniques — Part 19: Crypto suite RAMON security services for air interface communications

ISO/IEC 29167-21:2018

Information technology — Automatic identification and data capture techniques — Part 21: Crypto suite SIMON security services for air interface communications

ISO/IEC 29167-22:2018

Information technology — Automatic identification and data capture techniques — Part 22: Crypto suite SPECK security services for air interface communications

ISO/IEC 30116:2016

Information technology — Automatic identification and data capture techniques — Optical Character Recognition (OCR) quality testing

Standards under development:

ISO/IEC CD 15961-1

Information technology — Data protocol for radio frequency identification (RFID) for item management — Part 1: Application interface

ISO/IEC DIS 15962

Information technology — Radio frequency identification (RFID) for item management — Data protocol: data encoding rules and logical memory functions

ISO/IEC AWI 16022

Information technology — Automatic identification and data capture techniques — Data Matrix bar code symbology specification

ISO/IEC WD 17363

Supply chain applications of RFID — Freight containers

ISO/IEC WD 17364

Supply chain applications of RFID — Returnable transport items (RTIs) and returnable packaging items (RPIs)

ISO/IEC WD 17365

Supply chain applications of RFID — Transport units

ISO/IEC WD 17366

Supply chain applications of RFID — Product packaging

ISO/IEC WD 17367

Supply chain applications of RFID — Product tagging

ISO/IEC DIS 18000-63

Information technology — Radio frequency identification for item management — Part 63: Parameters for air interface communications at 860 MHz to 960 MHz Type C

ISO/IEC DIS 18046-3

Information technology — Radio frequency identification device performance test methods — Part 3: Test methods for tag performance

ISO/IEC DIS 19823-16

Information technology — Conformance test methods for security service crypto suites — Part 16: Crypto suite ECDSA-ECDH security services for air interface communications

ISO/IEC DIS 20830

Information technology — Automatic identification and data capture techniques — Han Xin Code bar code symbology specification

ISO/IEC CD 22603-1

Information Technology — Digital representation of product information — Part 1: General requirements

ISO/IEC DIS 23200

Information technology — Interference rejection performance test method between tags as defined in ISO/IEC 18000-63 and a heterogeneous wireless system

ISO/IEC CD 23634

Information technology — Automatic identification and data capture techniques — Polychrome bar code symbology (JAB-Code)

ISO/IEC CD 23941.2

Information technology — Automatic identification and data capture techniques — Rectangular Micro QR (rMQR) bar code symbology specification

ISO/IEC WD TR 24244

Automatic identification and data capture techniques — Bar code print quality test specification — Evolution of linear symbols in ISO/IEC 15416

ISO/IEC WD 24458

Information technology -Automatic identification and data capture techniques-Bar code printer and bar code reader performance testing

ISO/IEC WD 24791-3

Information technology — Radio frequency identification (RFID) for item management — Software system infrastructure — Part 3: Device management

ISO/IEC DIS 29158

Information technology — Automatic identification and data capture techniques — Direct Part Mark (DPM) Quality Guideline

ISO/IEC DIS 29160

Information technology — Radio frequency identification for item management — RFID Emblem

3.2.33 ISO/IEC JTC 1/SC 32 - Data management and interchange

Scope:

Standards for data management within and among local and distributed information systems environments. SC 32 provides enabling technologies to promote harmonization of data management facilities across sector-specific areas. Specifically, SC 32 standards include:

- reference models and frameworks for the coordination of existing and emerging standards;
- definition of data domains, data types, and data structures, and their associated semantics;
- languages, services, and protocols for persistent storage, concurrent access, concurrent update, and interchange of data;
- methods, languages, services, and protocols to structure, organize, and register metadata and other information resources associated with sharing and interoperability, including electronic commerce.

Structure:

ISO/IEC JTC 1/SC 32/WG 1   eBusiness

ISO/IEC JTC 1/SC 32/WG 2   MetaData

ISO/IEC JTC 1/SC 32/WG 3   Database language

Standards:

ISO/IEC 5218:2004

Information technology — Codes for the representation of human sexes

ISO/IEC 6523-1:1998

Information technology — Structure for the identification of organizations and organization parts — Part 1: Identification of organization identification schemes

ISO/IEC 6523-2:1998

Information technology — Structure for the identification of organizations and organization parts — Part 2: Registration of organization identification schemes

ISO/TR 9007:1987

Information processing systems — Concepts and terminology for the conceptual schema and the information base

ISO/IEC 9075-1:2016

Information technology — Database languages — SQL — Part 1: Framework (SQL/Framework)

ISO/IEC 9075-2:2016

Information technology — Database languages — SQL — Part 2: Foundation (SQL/Foundation)

ISO/IEC 9075-2:2016/COR 1:2019

Information technology — Database languages — SQL — Part 2: Foundation (SQL/Foundation) — Technical Corrigendum 1

ISO/IEC 9075-3:2016

Information technology — Database languages — SQL — Part 3: Call-Level Interface (SQL/CLI)

ISO/IEC 9075-4:2016

Information technology — Database languages — SQL — Part 4: Persistent stored modules (SQL/PSM)

ISO/IEC 9075-4:2016/COR 1:2019

Information technology — Database languages — SQL — Part 4: Persistent stored modules (SQL/PSM) — Technical Corrigendum 1

ISO/IEC 9075-9:2016

Information technology — Database languages — SQL — Part 9: Management of External Data (SQL/MED)

ISO/IEC 9075-9:2016/COR 1:2019

Information technology — Database languages — SQL — Part 9: Management of External Data (SQL/MED) — Technical Corrigendum 1

ISO/IEC 9075-10:2016

Information technology — Database languages — SQL — Part 10: Object language bindings (SQL/OLB)

ISO/IEC 9075-11:2016

Information technology — Database languages — SQL — Part 11: Information and definition schemas (SQL/Schemata)

ISO/IEC 9075-11:2016/COR 1:2019

Information technology — Database languages — SQL — Part 11: Information and definition schemas (SQL/Schemata) — Technical Corrigendum 1

ISO/IEC 9075-13:2016

Information technology — Database languages — SQL — Part 13: SQL Routines and types using the Java TM programming language (SQL/JRT)

ISO/IEC 9075-13:2016/COR 1:2019

Information technology — Database languages — SQL — Part 13: SQL Routines and types using the Java TM programming language (SQL/JRT) — Technical Corrigendum 1

ISO/IEC 9075-14:2016

Information technology — Database languages — SQL — Part 14: XML-Related Specifications (SQL/XML)

ISO/IEC 9075-14:2016/COR 1:2019

Information technology — Database languages — SQL — Part 14: XML-Related Specifications (SQL/XML) — Technical Corrigendum 1

ISO/IEC 9075-15:2019

Information technology database languages — SQL — Part 15: Multi-dimensional arrays (SQL/MDA)

ISO/IEC 9579:2000

Information technology — Remote database access for SQL with security enhancement

ISO/IEC TR 9789:1994

Information technology — Guidelines for the organization and representation of data elements for data interchange — Coding methods and principles

ISO/IEC 10027:1990

Information technology — Information Resource Dictionary System (IRDS) framework

ISO/IEC TR 10032:2003

Information technology — Reference Model of Data Management

ISO/IEC 10728:1993/AMD 1:1995

Information technology — Information Resource Dictionary System (IRDS) Services Interface — Amendment 1: C language binding

ISO/IEC 10728:1993/AMD 3:1996

Information technology — Information Resource Dictionary System (IRDS) Services Interface — Amendment 3: CORBA IDL binding

ISO/IEC 10728:1993/AMD 4:1998

Information technology — Information Resource Dictionary System (IRDS) Services Interface — Amendment 4: RPC IDL binding

ISO/IEC 10728:1993

Information technology — Information Resource Dictionary System (IRDS) Services Interface

ISO/IEC 10728:1993/AMD 2:1996

Information technology — Information Resource Dictionary System (IRDS) Services Interface — Amendment 2: Ada language binding

ISO/IEC 11179-1:2015

Information technology — Metadata registries (MDR) — Part 1: Framework

ISO/IEC TR 11179-2:2019

Information technology — Metadata registries (MDR) — Part 2: Classification

ISO/IEC 11179-3:2013

Information technology — Metadata registries (MDR) — Part 3: Registry metamodel and basic attributes

ISO/IEC 11179-3:2013/AMD 1:2020

Information technology — Metadata registries (MDR) — Part 3: Registry metamodel and basic attributes — Amendment 1

ISO/IEC 11179-4:2004

Information technology — Metadata registries (MDR) — Part 4: Formulation of data definitions

ISO/IEC 11179-5:2015

Information technology — Metadata registries (MDR) — Part 5: Naming principles

ISO/IEC 11179-6:2015

Information technology — Metadata registries (MDR) — Part 6: Registration

ISO/IEC 11179-7:2019

Information technology — Metadata registries (MDR) — Part 7: Metamodel for data set registration

ISO/IEC TS 11179-30:2019

Information technology — Metadata registries (MDR) — Part 30: Basic attributes of metadata

ISO/IEC 11404:2007

Information technology — General-Purpose Datatypes (GPD)

ISO/IEC 13238-3:1998

Information technology — Data Management — Part 3: IRDS export/import facility

ISO/IEC 13249-1:2016

Information technology — Database languages — SQL multimedia and application packages — Part 1: Framework

ISO/IEC 13249-2:2003

Information technology — Database languages — SQL multimedia and application packages — Part 2: Full-Text

ISO/IEC 13249-3:2016

Information technology — Database languages — SQL multimedia and application packages — Part 3: Spatial

ISO/IEC 13249-5:2003

Information technology — Database languages — SQL multimedia and application packages — Part 5: Still image

ISO/IEC 13249-6:2006

Information technology — Database languages — SQL multimedia and application packages — Part 6: Data mining

ISO/IEC TS 13249-7:2013

Information technology — Database languages — SQL multimedia and application packages — Part 7: History

ISO/IEC 14662:2010

Information technology — Open-edi reference model

ISO/IEC 14957:2010

Information technology — Representation of data element values — Notation of the format

ISO/IEC 15944-1:2011

Information technology — Business operational view — Part 1: Operational aspects of open-edi for implementation

ISO/IEC 15944-2:2015

Information technology — Business operational view — Part 2: Registration of scenarios and their components as business objects

ISO/IEC 15944-4:2015

Information technology — Business operational view — Part 4: Business transaction scenarios — Accounting and economic ontology

ISO/IEC 15944-5:2008

Information technology — Business operational view — Part 5: Identification and referencing of requirements of jurisdictional domains as sources of external constraints

ISO/IEC TR 15944-6:2015

Information technology — Business operational view — Part 6: Technical introduction to e-Business modelling

ISO/IEC 15944-7:2009

Information technology — Business operational view — Part 7: eBusiness vocabulary

ISO/IEC 15944-8:2012

Information technology — Business operational view — Part 8: Identification of privacy protection requirements as external constraints on business transactions

ISO/IEC 15944-9:2015

Information technology — Business operational view — Part 9: Business transaction traceability framework for commitment exchange

ISO/IEC 15944-10:2013

Information technology — Business operational view — Part 10: IT-enabled coded domains as semantic components in business transactions

ISO/IEC 15944-20:2015

Information technology — Business operational view — Part 20: Linking business operational view to functional service view

ISO/IEC TR 19075-1:2011

Information technology — Database languages — SQL Technical Reports — Part 1: XQuery Regular Expression Support in SQL

ISO/IEC TR 19075-2:2015

Information technology — Database languages — SQL Technical Reports — Part 2: SQL Support for Time-Related Information

ISO/IEC TR 19075-3:2015

Information technology — Database languages — SQL Technical Reports — Part 3: SQL Embedded in Programs using the JavaTM programming language

ISO/IEC TR 19075-4:2015

Information technology — Database languages — SQL Technical Reports — Part 4: SQL with Routines and types using the JavaTM programming language

ISO/IEC TR 19075-5:2016

Information technology — Database languages — SQL Technical Reports — Part 5: Row Pattern Recognition in SQL

ISO/IEC TR 19075-6:2017

Information technology — Database languages — SQL Technical Reports — Part 6: SQL support for JavaScript Object Notation (JSON)

ISO/IEC TR 19075-7:2017

Information technology — Database languages — SQL Technical Reports — Part 7: Polymorphic table functions in SQL

ISO/IEC TR 19075-8:2019

Information technology database languages — SQL technical reports — Part 8: Multi-dimensional arrays (SQL/MDA)

ISO/IEC 19502:2005

Information technology — Meta Object Facility (MOF)

ISO/IEC 19503:2005

Information technology — XML Metadata Interchange (XMI)

ISO/IEC TR 19583-1:2019

Information technology — Concepts and usage of metadata — Part 1: Metadata concepts

ISO/IEC TR 19583-22:2018

Information technology — Concepts and usage of metadata — Part 22: Registering and mapping development processes using ISO/IEC 19763

ISO/IEC 19763-1:2015

Information technology — Metamodel framework for interoperability (MFI) — Part 1: Framework

ISO/IEC 19763-3:2010

Information technology — Metamodel framework for interoperability (MFI) — Part 3: Metamodel for ontology registration

ISO/IEC 19763-5:2015

Information technology — Metamodel framework for interoperability (MFI) — Part 5: Metamodel for process model registration

ISO/IEC 19763-6:2015

Information technology — Metamodel framework for interoperability (MFI) — Part 6: Registry Summary

ISO/IEC 19763-7:2015

Information technology — Metamodel framework for interoperability (MFI) — Part 7: Metamodel for service model registration

ISO/IEC 19763-8:2015

Information technology — Metamodel framework for interoperability (MFI) — Part 8: Metamodel for role and goal model registration

ISO/IEC TR 19763-9:2015

Information technology — Metamodel framework for interoperability (MFI) — Part 9: On demand model selection

ISO/IEC 19763-10:2014

Information technology — Metamodel framework for interoperability (MFI) — Part 10: Core model and basic mapping

ISO/IEC 19763-12:2015

Information technology — Metamodel framework for interoperability (MFI) — Part 12: Metamodel for information model registration

ISO/IEC TS 19763-13:2016

Information technology — Metamodel framework for interoperability (MFI) — Part 13: Metamodel for form design registration

ISO/IEC 19773:2011

Information technology — Metadata Registries (MDR) modules

ISO/IEC TR 20943-1:2003

Information technology — Procedures for achieving metadata registry content consistency — Part 1: Data elements

ISO/IEC TR 20943-3:2004

Information technology — Procedures for achieving metadata registry content consistency — Part 3: Value domains

ISO/IEC TR 20943-5:2013

Information technology — Procedures for achieving metadata registry content consistency — Part 5: Metadata mapping procedure

ISO/IEC TR 20943-6:2013

Information technology — Procedures for achieving metadata registry content consistency — Part 6: Framework for generating ontologies

ISO/IEC 20944-1:2013

Information technology — Metadata Registries Interoperability and Bindings (MDR-IB) — Part 1: Framework, common vocabulary, and common provisions for conformance

ISO/IEC 20944-2:2013

Information technology — Metadata Registries Interoperability and Bindings (MDR-IB) — Part 2: Coding bindings

ISO/IEC 20944-3:2013

Information technology — Metadata Registries Interoperability and Bindings (MDR-IB) — Part 3: API bindings

ISO/IEC 20944-4:2013

Information technology — Metadata Registries Interoperability and Bindings (MDR-IB) — Part 4: Protocol bindings

ISO/IEC 20944-5:2013

Information technology — Metadata Registries Interoperability and Bindings (MDR-IB) — Part 5: Profiles

ISO/IEC 24707:2018

Information technology — Common Logic (CL) — A framework for a family of logic-based languages

Standards under development:

ISO/IEC AWI 9075-1

Information technology — Database languages — SQL — Part 1: Framework (SQL/Framework)

ISO/IEC AWI 9075-2

Information technology — Database languages — SQL — Part 2: Foundation (SQL/Foundation)

ISO/IEC AWI 9075-4

Information technology — Database languages — SQL — Part 4: Persistent stored modules (SQL/PSM)

ISO/IEC AWI 9075-11

Information technology — Database languages — SQL — Part 11: Information and definition schemas (SQL/Schemata)

ISO/IEC AWI 9075-14

Information technology — Database languages — SQL — Part 14: XML-Related Specifications (SQL/XML)

ISO/IEC WD 9075-16

Information technology — Database languages SQL — Part 16: SQL Property Graph Queries (SQL/PGQ)

ISO/IEC CD 11179-1

Information technology — Metadata registries (MDR) — Part 1: Framework

ISO/IEC CD 11179-3

Information technology — Metadata registries (MDR) — Part 3: Registry metamodel and basic attributes

ISO/IEC AWI 11179-6

Information technology — Metadata registries (MDR) — Part 6: Registration

ISO/IEC AWI 11179-31

Information technology — Metadata registries (MDR) — Part 31: Metamodel for data specification registration

ISO/IEC CD 11179-32

Information technology — Metadata registries (MDR) — Part 32: Metamodel for concept system registration

ISO/IEC DIS 15944-1

Information technology — Business operational view — Part 1: Operational aspects of open-edi for implementation

ISO/IEC DIS 15944-8

Information technology — Business operational view — Part 8: Identification of privacy protection requirements as external constraints on business transactions

ISO/IEC DIS 15944-9

Information technology — Business operational view — Part 9: Business transaction traceability framework for commitment exchange

ISO/IEC DIS 15944-10

Information technology — Business operational view — Part 10: IT-enabled coded domains as semantic components in business transactions

ISO/IEC 15944-12

Information technology — Business operational view — Part 12: Privacy protection requirements (PPR) on information life cycle management (ILCM) and EDI of personal information (PI)

ISO/IEC CD TR 15944-14

Information technology — Business operational view — Part 14: Open-edi, model and cloud computing architecture

ISO/IEC CD 15944-16

Information technology — Business operational view — Part 16: Consolidated set of the rules and guidelines identified in ISO/IEC 15944 Business Operational View standards and their IT-enablement

ISO/IEC CD 15944-17

Information technology — Business operational view — Part 17: Fundamental principles and rules governing Privacy-by-Design (PbD) requirements in EDI and collaboration space context

ISO/IEC CD 15944-18

Information technology — Business operational view — Part 18: Common principles for identification and rules for use of identifiers in business transaction

ISO/IEC CD 15944-19

Information technology — Business operational view — Part 19: Open-edi, jurisdictional domains, and cross-border data flows (CBDF)

ISO/IEC CD 15944-21

Information technology — Business operational view — Part 21: Guidance on the application of the open-edi business transaction ontology to distributed business transaction repositories and open value networks

ISO/IEC DIS 19075-1

Information technology — Guidance for the use of database language SQL — Part 1: XQuery regular expressions

ISO/IEC DIS 19075-2

Information technology — Guidance for the use of database language SQL — Part 2: Time-related information

ISO/IEC DIS 19075-3

Information technology — Guidance for the use of database language SQL — Part 3: SQL embedded in programs using the JavaTM programming language

ISO/IEC DIS 19075-4

Information technology — Guidance for the use of database language SQL — Part 4: Routines and types using the JavaTM programming language

ISO/IEC DIS 19075-5

Information technology — Guidance for the use of database language SQL — Part 5: Row pattern recognition

ISO/IEC DIS 19075-6

Information technology — Guidance for the use of database language SQL — Part 6: Support for JSON

ISO/IEC DIS 19075-7

Information technology — Guidance for the use of database language SQL — Part 7: Polymorphic table functions

ISO/IEC DIS 19075-8

Information technology — Guidance for the use of database language SQL — Part 8: Multidimensional arrays

ISO/IEC CD TR 19075-9

Information technology database languages — SQL technical reports — Part 9: SQL TR OLAP

ISO/IEC PRF TR 19583-2

Information technology — Concepts and usage of metadata — Part 2: Metadata usage

ISO/IEC CD TR 19583-21.2

Information technology — Concepts and usage of metadata — Part 21: 11179-3 Data model in SQL

ISO/IEC PRF TR 19583-23

Information technology — Concepts and usage of metadata — Part 23: Data Element Exchange (DEX)

ISO/IEC DIS 19763-3

Information technology — Metamodel framework for interoperability (MFI) — Part 3: Metamodel for ontology registration

ISO/IEC CD 19763-16

Information technology — Metamodel framework for interoperability (MFI) — Part 16: Metamodel for document model registration

ISO/IEC 21838-1

Information technology — Top-level ontologies (TLO) — Part 1: Requirements

ISO/IEC 21838-2

Information technology — Top-level ontologies (TLO) — Part 2: Basic Formal Ontology (BFO)

ISO/IEC AWI 21838-3

Information technology — Top-level ontologies — Part 3: Descriptive ontology for linguistic and cognitive engineering (DOLCE)

ISO/IEC AWI 21838-4

Information technology — Top-level ontologies — Part 4: TUpper

ISO/IEC AWI TR 29075-1

Information technology — Data management and interchange — Design notes for new database language technologies — Part 1: SQL support for streaming data

ISO/IEC WD 39075

Information Technology — Database Languages — GQL

3.2.34 ISO/IEC JTC 1/SC 34 - Document description and processing languages

Scope:

Standarisation in the field of document structures, languages and related facilities for the description and processing of compound and hypermedia documents, including:

- languages for describing document logical structures and their support facilities
- languages for describing document-like objects in web environments facilities
- document processing architecture and formatting for logical documents facilities
- languages for describing interactive documents facilities
- multilingual font information interchange and related services facilities
- final-form document architecture and page information interchange facilities
- hypermedia document structuring language and application resources facilities
- API's for document processing

Structure:

ISO/IEC JTC 1/SC 34/JWG 7 Joint JTC 1/SC 34-TC 46/SC 4-IEC/TC 100/TA 10 WG: EPUB

ISO/IEC JTC 1/SC 34/SG 1   Document semantic support

ISO/IEC JTC 1/SC 34/WG 4   Office Open XML

ISO/IEC JTC 1/SC 34/WG 6   OpenDocument Format

ISO/IEC JTC 1/SC 34/WG 8   Document processing and presentation

Standards:

ISO 8879:1986

Information processing — Text and office systems — Standard Generalized Markup Language (SGML)

ISO 8879:1986/AMD 1:1988

Information processing — Text and office systems — Standard Generalized Markup Language (SGML) — Amendment 1

ISO 8879:1986/COR 1:1996

Information processing — Text and office systems — Standard Generalized Markup Language (SGML) — Technical Corrigendum 1

ISO 8879:1986/COR 2:1999

Information processing — Text and office systems — Standard Generalized Markup Language (SGML) — Technical Corrigendum 2

ISO/IEC 9070:1991

Information technology — SGML support facilities — Registration procedures for public text owner identifiers

ISO/IEC 9541-1:2012

Information technology — Font information interchange — Part 1: Architecture

ISO/IEC 9541-1:2012/AMD 1:2016

Information technology — Font information interchange — Part 1: Architecture — Amendment 1

ISO/IEC 9541-2:2012

Information technology — Font information interchange — Part 2: Interchange format

ISO/IEC 9541-3:2012

Information technology — Font information interchange — Part 3: Glyph shape representation

ISO/IEC 9541-4:2009

Information technology — Font information interchange — Part 4: Harmonization to Open Font Format

ISO/IEC 9541-4:2009/COR 1:2009

Information technology — Font information interchange — Part 4: Harmonization to Open Font Format — Technical Corrigendum 1

ISO/IEC TR 9573-11:2004

Information processing — SGML support facilities — Part 11: Structure descriptions and style specifications for standards document interchange

ISO/IEC TR 9573-13:1991

Information technology — SGML support facilities — Techniques for using SGML — Part 13: Public entity sets for mathematics and science

ISO/IEC TR 9573:1988

Information processing — SGML support facilities — Techniques for using SGML

ISO/IEC 10036:1996

Information technology — Font information interchange — Procedures for registration of font-related identifiers

ISO/IEC 10036:1996/COR 1:2001

Information technology — Font information interchange — Procedures for registration of font-related identifiers — Technical Corrigendum 1

ISO/IEC 10036:1996/COR 2:2002

Information technology — Font information interchange — Procedures for registration of font-related identifiers — Technical Corrigendum 2

ISO/IEC 10179:1996

Information technology — Processing languages — Document Style Semantics and Specification Language (DSSSL)

ISO/IEC 10179:1996/AMD 1:2003

Information technology — Processing languages — Document Style Semantics and Specification Language (DSSSL) — Amendment 1: Extensions to DSSSL

ISO/IEC 10179:1996/COR 1:2001

Information technology — Processing languages — Document Style Semantics and Specification Language (DSSSL) — Technical Corrigendum 1

ISO/IEC 10179:1996/AMD 2:2005

Information technology — Processing languages — Document Style Semantics and Specification Language (DSSSL) — Amendment 2: Extensions to multilingual and complicated document styles

ISO/IEC 10180:1995

Information technology — Processing languages — Standard Page Description Language (SPDL)

ISO/IEC 10180:1995/COR 1:2001

Information technology — Processing languages — Standard Page Description Language (SPDL) — Technical Corrigendum 1

ISO/IEC 10744:1997

Information technology — Hypermedia/Time-based Structuring Language (HyTime)

ISO/IEC 13240:2001

Information technology — Document description and processing languages — Interchange Standard for Multimedia Interactive Documents (ISMID)

ISO/IEC 13240:2001/COR 1:2003

Information technology — Document description and processing languages — Interchange Standard for Multimedia Interactive Documents (ISMID) — Technical Corrigendum 1

ISO/IEC 13250-2:2006

Information technology — Topic Maps — Part 2: Data model

ISO/IEC 13250-3:2013

Information technology — Topic Maps — Part 3: XML syntax

ISO/IEC 13250-4:2009

Information technology — Topic Maps — Part 4: Canonicalization

ISO/IEC 13250-5:2015

Information technology — Topic Maps — Part 5: Reference model

ISO/IEC 13250-6:2010

Information technology — Topic Maps — Part 6: Compact syntax

ISO/IEC 13250:2003

Information technology — SGML applications — Topic maps

ISO/IEC 13673:2000

Information technology — Document processing and related communication — Conformance testing for Standard Generalized Markup Language (SGML) systems

ISO/IEC TR 15413:2001

Information technology — Font services — Abstract service definition

ISO/IEC 15445:2000

Information technology — Document description and processing languages — HyperText Markup Language (HTML)

ISO/IEC 19756:2011

Information technology — Topic Maps — Constraint Language (TMCL)

ISO/IEC 19757-2:2008

Information technology — Document Schema Definition Language (DSDL) — Part 2: Regular-grammar-based validation — RELAX NG

ISO/IEC 19757-3:2016

Information technology — Document Schema Definition Languages (DSDL) — Part 3: Rule-based validation — Schematron

ISO/IEC 19757-4:2006

Information technology — Document Schema Definition Languages (DSDL) — Part 4: Namespace-based Validation Dispatching Language (NVDL)

ISO/IEC 19757-4:2006/COR 1:2008

Information technology — Document Schema Definition Languages (DSDL) — Part 4: Namespace-based Validation Dispatching Language (NVDL) — Technical Corrigendum 1

ISO/IEC 19757-5:2011

Information technology — Document Schema Definition Languages (DSDL) — Part 5: Extensible Datatypes

ISO/IEC 19757-7:2009

Information technology — Document Schema Definition Languages (DSDL) — Part 7: Character Repertoire Description Language (CREPDL)

ISO/IEC 19757-7:2009/COR 1:2015

Information technology — Document Schema Definition Languages (DSDL) — Part 7: Character Repertoire Description Language (CREPDL) — Technical Corrigendum 1

ISO/IEC 19757-8:2008

Information technology — Document Schema Definition Languages (DSDL) — Part 8: Document Semantics Renaming Language (DSRL)

ISO/IEC 19757-8:2008/COR 1:2011

Information technology — Document Schema Definition Languages (DSDL) — Part 8: Document Semantics Renaming Language (DSRL) — Technical Corrigendum 1

ISO/IEC 19757-11:2011

Information technology — Document Schema Definition Languages (DSDL) — Part 11: Schema association

ISO/IEC TR 19758:2003

Information technology — Document description and processing languages — DSSSL library for complex compositions

ISO/IEC TR 19758:2003/AMD 1:2005

Information technology — Document description and processing languages — DSSSL library for complex compositions — Amendment 1: Extensions to basic composition styles and tables

ISO/IEC TR 19758:2003/AMD 2:2005

Information technology — Document description and processing languages — DSSSL library for complex compositions — Amendment 2: Extensions to multilingual compositions (South-East Asian compositions)

ISO/IEC TR 19758:2003/AMD 3:2005

Information technology — Document description and processing languages — DSSSL library for complex compositions — Amendment 3: Extensions to Multilingual Compositions (North and South Asian Compositions)

ISO/IEC 21320-1:2015

Information technology — Document Container File — Part 1: Core

ISO/IEC TR 22250-1:2002

Information technology — Document description and processing languages — Regular Language Description for XML (RELAX) — Part 1: RELAX Core

ISO/IEC TS 22424-1:2020

Digital publishing — EPUB3 preservation — Part 1: Principles

ISO/IEC TS 22424-2:2020

Digital publishing — EPUB3 preservation — Part 2: Metadata requirements

ISO/IEC 23736-3:2020

Information technology — Digital publishing — EPUB 3.0.1 — Part 3: Content documents

ISO/IEC TR 24754-2:2011

Information technology — Document description and processing languages — Minimum requirements for specifying document rendering systems — Part 2: Formatting specifications for document rendering systems

ISO/IEC 24754-1:2008/COR 1:2011

Information technology — Document description and processing languages — Minimum requirements for specifying document rendering systems — Part 1: Feature specifications for document rendering systems — Technical Corrigendum 1

ISO/IEC 26300-1:2015

Information technology — Open Document Format for Office Applications (OpenDocument) v1.2 — Part 1: OpenDocument Schema

ISO/IEC 26300-2:2015

Information technology — Open Document Format for Office Applications (OpenDocument) v1.2 — Part 2: Recalculated Formula (OpenFormula) Format

ISO/IEC 26300-3:2015

Information technology — Open Document Format for Office Applications (OpenDocument) v1.2 — Part 3: Packages

ISO/IEC 26300:2006

Information technology — Open Document Format for Office Applications (OpenDocument) v1.0

ISO/IEC 26300:2006/AMD 1:2012

Information technology — Open Document Format for Office Applications (OpenDocument) v1.0 — Amendment 1: Open Document Format for Office Applications (OpenDocument) v1.1

ISO/IEC 26300:2006/AMD 1:2012/COR 1:2014

Information technology — Open Document Format for Office Applications (OpenDocument) v1.0 — Amendment 1: Open Document Format for Office Applications (OpenDocument) v1.1 — Technical Corrigendum 1

ISO/IEC 26300:2006/COR 1:2010

Information technology — Open Document Format for Office Applications (OpenDocument) v1.0 — Technical Corrigendum 1

ISO/IEC 26300:2006/COR 2:2011

Information technology — Open Document Format for Office Applications (OpenDocument) v1.0 — Technical Corrigendum 2

ISO/IEC 26300:2006/COR 3:2014

The image shows a signpost or signage.

Information technology — Digital publishing — EPUB3 — Part 6: EPUB Canonical Fragment Identifier

ISO/IEC TS 30135-7:2014

Information technology — Digital publishing — EPUB3 — Part 7: EPUB3 Fixed-Layout Documents

Standards under development:

ISO/IEC AWI TR 10036

Information technology — Font information — Predefined glyph identifiers

ISO/IEC FDIS 19757-3

Information technology — Document Schema Definition Languages (DSDL) — Part 3: Rule-based validation using Schematron

ISO/IEC FDIS 19757-7

Information technology — Document Schema Definition Languages (DSDL) — Part 7: Character Repertoire Description Language (CREPDL)

ISO/IEC CD TS 23078-1

Specification of DRM technology for digital publications — Part 1: Overview of copyright protection technologies in use in the publishing industry

ISO/IEC CD TS 23078-2

Specification of DRM technology for digital publications — Part 2: User key-based protection

ISO/IEC CD TS 23078-3

Specification of DRM technology for digital publications — Part 3: Device key-based protection

ISO/IEC DIS 23761

Digital Publishing — EPUB Accessibility — Conformance and discoverability Requirements for EPUB Publications

ISO/IEC DIS 29500-2

Document description and processing languages — Office Open XML file formats — Part 2: Open packaging conventions

3.2.35 ISO/IEC JTC 1/SC 35 - User interfaces

Scope:

Standarisation in the field of user-system interfaces in information and communication technology (ICT) environments and support for these interfaces to serve all users, including people having accessibility or other specific needs, with a priority of meeting the JTC 1 requirements for cultural and linguistic adaptability.

This includes:

- user interface accessibility (requirements, needs, methods, techniques and enablers);
- cultural and linguistic adaptability and accessibility (such as evaluation of cultural and linguistic adaptability of ICT products, harmonized human language equivalents, localization parameters, voice messaging menus);
- user interface objects, actions and attributes;
- methods and technologies for controlling and navigating within systems, devices and applications in visual, auditory, tactile and other sensorial modalities (such as by voice, vision, movement, gestures);
- symbols, functionality and interactions of user interfaces (such as graphical, tactile and auditory icons, graphical symbols and other user interface elements);
- visual, auditory, tactile and other sensorial input and output devices and methods in ICT environments (for devices such as keyboards, displays, mice);
- user interfaces for mobile devices, hand-held devices and remote interactions.

Structure:

ISO/IEC JTC 1/SC 35/AG 1   Study group on Accessibility within immersive environments

ISO/IEC JTC 1/SC 35/AHG 1 Internet of Things (IoT) User interfaces

ISO/IEC JTC 1/SC 35/AHG 2 Affective computing

ISO/IEC JTC 1/SC 35/SG 1   Accessibility aspects of Active Assisted Living (AAL) use cases

ISO/IEC JTC 1/SC 35/WG 1   Keyboards, methods and devices related to input and its feedback

ISO/IEC JTC 1/SC 35/WG 2   Graphical user interface and interaction

ISO/IEC JTC 1/SC 35/WG 4   User interfaces for mobile devices

ISO/IEC JTC 1/SC 35/WG 5   Cultural and linguistic adaptability

ISO/IEC JTC 1/SC 35/WG 6   User interfaces accessibility

ISO/IEC JTC 1/SC 35/WG 9   Natural user interfaces and interactions

Standards:

ISO/IEC 9995-1:2009

Information technology — Keyboard layouts for text and office systems — Part 1: General principles governing keyboard layouts

ISO/IEC 9995-2:2009

Information technology — Keyboard layouts for text and office systems — Part 2: Alphanumeric section

ISO/IEC 9995-2:2009/AMD 1:2012

Information technology — Keyboard layouts for text and office systems — Part 2: Alphanumeric section — Amendment 1: Numeric keypad emulation

ISO/IEC 9995-3:2010

Information technology — Keyboard layouts for text and office systems — Part 3: Complementary layouts of the alphanumeric zone of the alphanumeric section

ISO/IEC 9995-4:2009

Information technology — Keyboard layouts for text and office systems — Part 4: Numeric section

ISO/IEC 9995-5:2009

Information technology — Keyboard layouts for text and office systems — Part 5: Editing and function section

ISO/IEC 9995-7:2009

Information technology — Keyboard layouts for text and office systems — Part 7: Symbols used to represent functions

ISO/IEC 9995-7:2009/AMD 1:2012

Information technology — Keyboard layouts for text and office systems — Part 7: Symbols used to represent functions — Amendment 1

ISO/IEC 9995-8:2009

Information technology — Keyboard layouts for text and office systems — Part 8: Allocation of letters to the keys of a numeric keypad

ISO/IEC 9995-9:2016

Information technology — Keyboard layouts for text and office systems — Part 9: Multi-lingual, multiscript keyboard layouts

ISO/IEC 9995-9:2016/AMD 1:2019

Information technology — Keyboard layouts for text and office systems — Part 9: Multi-lingual, multiscript keyboard layouts — Amendment 1

ISO/IEC 9995-10:2013

Information technology — Keyboard layouts for text and office systems — Part 10: Conventional symbols and methods to represent graphic characters not uniquely recognizable by their glyph on keyboards and in documentation

ISO/IEC 9995-11:2015

Information technology — Keyboard layouts for office systems — Part 11: Functionality of dead keys and repertoires of characters entered by dead keys

ISO/IEC 10741-1:1995

Information technology — User system interfaces — Dialogue interaction — Part 1: Cursor control for text editing

ISO/IEC 10741-1:1995/AMD 1:1996

Information technology — User system interfaces — Dialogue interaction — Part 1: Cursor control for text editing — Amendment 1: Macro cursor control

ISO/IEC TR 11580:2007

Information technology — Framework for describing user interface objects, actions and attributes

ISO/IEC 11581-1:2000

Information technology — User system interfaces and symbols — Icon symbols and functions — Part 1: Icons — General

ISO/IEC TR 11581-1:2011

Information technology — User interface icons — Part 1: Introduction to and overview of icon standards

ISO/IEC 11581-2:2000

Information technology — User system interfaces and symbols — Icon symbols and functions — Part 2: Object icons

ISO/IEC 11581-3:2000

Information technology — User system interfaces and symbols — Icon symbols and functions — Part 3: Pointer icons

ISO/IEC 11581-5:2004

Information technology — User system interfaces and symbols — Icon symbols and functions — Part 5: Tool icons

ISO/IEC 11581-6:1999

Information technology — User system interfaces and symbols — Icon symbols and functions — Part 6: Action icons

ISO/IEC 11581-10:2010

Information technology — User interface icons — Part 10: Framework and general guidance

ISO/IEC 11581-40:2011

Information technology — User interface icons — Part 40: Management of icon registration

ISO/IEC TS 11581-41:2014

Information technology — User interface icons — Part 41: Data structure to be used by the ISO/IEC JTC 1/SC 35 icon database

ISO/IEC 13066-1:2011

Information technology — Interoperability with assistive technology (AT) — Part 1: Requirements and recommendations for interoperability

ISO/IEC TR 13066-2:2016

Information technology — Interoperability with assistive technology (AT) — Part 2: Windows accessibility application programming interface (API)

ISO/IEC TR 13066-3:2012

Information technology — Interoperability with assistive technology (AT) — Part 3: IAccessible2 accessibility application programming interface (API)

ISO/IEC TR 13066-4:2015

Information technology — Interoperability with assistive technology (AT) — Part 4: Linux/UNIX graphical environments accessibility API

ISO/IEC TR 13066-6:2014

Information technology — Interoperability with Assistive Technology (AT) — Part 6: Java accessibility application programming interface (API)

ISO/IEC 13251:2019

Information technology — Collection of graphical symbols for office equipment

ISO/IEC 14754:1999

Information technology — Pen-Based Interfaces — Common gestures for Text Editing with Pen-Based Systems

ISO/IEC 14755:1997

Information technology — Input methods to enter characters from the repertoire of ISO/IEC 10646 with a keyboard or other input device

ISO/IEC 15411:1999

Information technology — Segmented keyboard layouts

ISO/IEC 15412:1999

Information technology — Portable computer keyboard layouts

ISO/IEC TR 15440:2016

Information technology — Future keyboards and other input devices and entry methods

ISO/IEC 15897:2011

Information technology — User interfaces — Procedures for the registration of cultural elements

ISO/IEC 15897:2011/COR 1:2013

Information technology — User interfaces — Procedures for the registration of cultural elements — Technical Corrigendum 1

ISO/IEC 17549-2:2020

Information technology — User interface guidelines on menu navigation — Part 2: Navigation with 4-direction devices

ISO/IEC 18021:2002

Information technology — User interfaces for mobile tools for management of database communications in a client-server model

ISO/IEC 18035:2003

Information technology — Icon symbols and functions for controlling multimedia software applications

ISO/IEC 18036:2003

Information technology — Icon symbols and functions for World Wide Web browser toolbars

ISO/IEC TR 19764:2005

Information technology — Guidelines, methodology and reference criteria for cultural and linguistic adaptability in information technology products

ISO/IEC TR 20007:2014

Information technology — Cultural and linguistic interoperability — Definitions and relationship between symbols, icons, animated icons, pictograms, characters and glyphs

ISO/IEC 20071-11:2019

Information technology — User interface component accessibility — Part 11: Guidance on text alternatives for images

ISO/IEC TS 20071-15:2017

Information technology — User interface component accessibility — Part 15: Guidance on scanning visual information for presentation as text in various modalities

ISO/IEC TS 20071-21:2015

Information technology — User interface component accessibility — Part 21: Guidance on audio descriptions

ISO/IEC 20071-23:2018

Information technology — User interface component accessibility — Part 23: Visual presentation of audio information (including captions and subtitles)

ISO/IEC TS 20071-25:2017

Information technology — User interface component accessibility — Part 25: Guidance on the audio presentation of text in videos, including captions, subtitles and other on-screen text

ISO/IEC 20382-1:2017

Information technology — User interfaces — Face-to-face speech translation — Part 1: User interface

ISO/IEC 20382-2:2017

Information technology — User interface — Face-to-face speech translation — Part 2: System architecture and functional components

ISO/IEC 24738:2006

Information technology — Icon symbols and functions for multimedia link attributes

ISO/IEC 24752-1:2014

Information technology — User interfaces — Universal remote console — Part 1: General framework

ISO/IEC 24752-2:2014

Information technology — User interfaces — Universal remote console — Part 2: User interface socket description

ISO/IEC 24752-4:2014

Information technology — User interfaces — Universal remote console — Part 4: Target description

ISO/IEC 24752-5:2014

Information technology — User interfaces — Universal remote console — Part 5: Resource description

ISO/IEC 24752-6:2014

Information technology — User interfaces — Universal remote console — Part 6: Web service integration

ISO/IEC 24752-8:2018

Information technology — User interfaces — Universal remote console — Part 8: User interface resource framework

ISO/IEC 24755:2007

Information technology — Screen icons and symbols for personal mobile communication devices

ISO/IEC 24756:2009

Information technology — Framework for specifying a common access profile (CAP) of needs and capabilities of users, systems, and their environments

ISO/IEC 24757:2008

Information technology — Keyboard interaction model — Machine-readable keyboard description

ISO/IEC TR 24785:2009

Information technology — Taxonomy of cultural and linguistic adaptability user requirements

ISO/IEC 24786:2009

Information technology — User interfaces — Accessible user interface for accessibility settings

ISO/IEC 29136:2012

Information technology — User interfaces — Accessibility of personal computer hardware

ISO/IEC 29138-1:2018

Information technology — User interface accessibility — Part 1: User accessibility needs

ISO/IEC TR 29138-2:2009

Information technology — Accessibility considerations for people with disabilities — Part 2: Standards inventory

ISO/IEC TR 29138-3:2009

Information technology — Accessibility considerations for people with disabilities — Part 3: Guidance on user needs mapping

ISO/IEC 30071-1:2019

Information technology — Development of user interface accessibility — Part 1: Code of practice for creating accessible ICT products and services

ISO/IEC TR 30109:2015

Information technology — User interfaces — Worldwide availability of personalized computer environments

ISO/IEC TR 30112:2014

Information technology — Specification methods for cultural conventions

ISO/IEC 30113-1:2015

Information technology — User interface — Gesture-based interfaces across devices and methods — Part 1: Framework

ISO/IEC 30113-5:2019

Information technology — User interface — Gesture-based interfaces across devices and methods — Part 5: Gesture Interface Markup Language (GIML)

ISO/IEC 30113-11:2017

Information technology — Gesture-based interfaces across devices and methods — Part 11: Single-point gestures for common system actions

ISO/IEC 30113-12:2019

Information technology — User interfaces — Gesture-based interfaces across devices and methods — Part 12: Multi-point gestures for common system actions

ISO/IEC 30122-1:2016

Information technology — User interfaces — Voice commands — Part 1: Framework and general guidance

ISO/IEC 30122-2:2017

Information technology — User interfaces — Voice commands — Part 2: Constructing and testing

ISO/IEC 30122-3:2017

Information technology — User interfaces — Voice commands — Part 3: Translation and localization

ISO/IEC 30122-4:2016

Information technology — User interfaces — Voice commands — Part 4: Management of voice command registration

Standards under development:

ISO/IEC WD 9995-3

Information technology — Keyboard layouts for text and office systems — Part 3: Complementary layouts of the alphanumeric zone of the alphanumeric section

ISO/IEC WD 9995-7

Information technology — Keyboard layouts for text and office systems — Part 7: Symbols used to represent functions

ISO/IEC WD 9995-11

Information technology — Keyboard layouts for office systems — Part 11: Functionality of dead keys and repertoires of characters entered by dead keys

ISO/IEC DIS 9995-12

Information technology — Keyboard layouts for text and office systems — Part 12: Keyboard group selection

ISO/IEC WD 11581-7

Information technology — User interface icons — Part 7: Icons for setting interaction mode

ISO/IEC DIS 17549-1

Information technology — User interface guidelines on menu navigation — Part 1: Framework

ISO/IEC CD 17549-3

Information technology — User interface guidelines on menu navigation — Part 3: Navigation with 1-direction devices

ISO/IEC CD 20071-5

Information technology — User interface component accessibility — Part 5: Accessible user interface for accessibility settings on information devices

ISO/IEC DIS 22121-2

Information technology — Virtual keyboards user interfaces — Part 2: On-screen keyboards with direct touch interface

ISO/IEC WD 23773-1

User interface — Simultaneous interpretation system — Part 1: General

ISO/IEC AWI 23773-2

User interface — Simultaneous Interpretation System — Part 2: Requirements and functional description

ISO/IEC AWI 23773-3

User interface — Simultaneous interpretation system — Part 3: System architecture

ISO/IEC DIS 23836

Information technology — User interfaces — Universal interface for human language selection

ISO/IEC WD 23859-1

Information technology — Part 1: Guidance on making content EGuidance on making written text easy-to-read and easy-to-understandasy To Read

ISO/IEC WD 24661

Information technology — User interfaces — Full duplex speech interaction user interfaces

ISO/IEC DIS 30112

Information technology — Specification methods for cultural conventions

ISO/IEC DIS 30113-60

Information technology — Gesture-based interfaces across devices and methods — Part 60: General guidance on gestures for screen readers

ISO/IEC DIS 30113-61

Information technology — User interfaces — Gesture-based interfaces across devices and methods — Part 61: Single-point gestures for screen readers

ISO/IEC DIS 30150-1

Information technology — Affective computing user interface (AUI) — Part 1: Model

3.2.36 ISO/IEC JTC 1/SC 36 - Information technology for learning, education and training

Scope:

Standarisation in the field of information technologies for learning, education, and training to support individuals, groups, or organizations, and to enable interoperability and reusability of resources and tool.

Excluded from this scope are:

- standards or technical reports that define educational standards (competencies), cultural conventions, learning objectives, or specific learning content.
- work done by other ISO or IEC TCs, SCs, or WGs with respect to their component, specialty, or domain. Instead, when appropriate, normative or informative references to other standards shall be included. Examples include documents on special topics such as multimedia, web content, cultural adaptation, and security.

Structure:

ISO/IEC JTC 1/SC 36/AG 1   Business planning and communications

ISO/IEC JTC 1/SC 36/AG 2   Emerging Technologies (AGET)

ISO/IEC JTC 1/SC 36/AG 3   Study group on online course standards

ISO/IEC JTC 1/SC 36/AHG 5 Blockchain in Education

ISO/IEC JTC 1/SC 36/TCG   Terminology Coordination Group

ISO/IEC JTC 1/SC 36/WG 1   Vocabulary

ISO/IEC JTC 1/SC 36/WG 3   Learner information

ISO/IEC JTC 1/SC 36/WG 4   Management and delivery

ISO/IEC JTC 1/SC 36/WG 7   ITLET - Culture, language and individual needs

ISO/IEC JTC 1/SC 36/WG 8   Learning Analytics Interoperability

Standards:

ISO/IEC 2382-36:2019

Information technology — Vocabulary — Part 36: Learning, education and training

ISO/IEC 12785-1:2009

Information technology — Learning, education, and training — Content packaging — Part 1: Information model

ISO/IEC 12785-1:2009/COR 1:2013

Information technology — Learning, education, and training — Content packaging — Part 1: Information model — Technical Corrigendum 1

ISO/IEC 12785-2:2011

Information technology — Learning, education, and training — Content packaging — Part 2: XML binding

ISO/IEC TR 12785-3:2012

Information technology — Learning, education, and training — Content packaging — Part 3: Best practice and implementation guide

ISO/IEC TR 18120:2016

Information technology — Learning, education, and training — Requirements for e-textbooks in education

ISO/IEC TR 18121:2015

Information technology — Learning, education and training — Virtual experiment framework

ISO/IEC 19479:2019

Information technology for learning, education, and training — Learner mobility achievement information (LMAI)

ISO/IEC 19778-1:2015

Information technology — Learning, education and training — Collaborative technology — Collaborative workplace — Part 1: Collaborative workplace data model

ISO/IEC 19778-2:2015

Information technology — Learning, education and training — Collaborative technology — Collaborative workplace — Part 2: Collaborative environment data model

ISO/IEC 19778-3:2015

Information technology — Learning, education and training — Collaborative technology — Collaborative workplace — Part 3: Collaborative group data model

ISO/IEC 19780-1:2015

Information technology — Learning, education and training — Collaborative technology — Collaborative learning communication — Part 1: Text-based communication

ISO/IEC 19788-1:2011

Information technology — Learning, education and training — Metadata for learning resources — Part 1: Framework

ISO/IEC 19788-1:2011/AMD 1:2014

Information technology — Learning, education and training — Metadata for learning resources — Part 1: Framework — Amendment 1

ISO/IEC 19788-2:2011

Information technology — Learning, education and training — Metadata for learning resources — Part 2: Dublin Core elements

ISO/IEC 19788-2:2011/AMD 1:2016

Information technology — Learning, education and training — Metadata for learning resources — Part 2: Dublin Core elements — Amendment 1: Non-literal content value data elements

ISO/IEC 19788-3:2011

Information technology — Learning, education and training — Metadata for learning resources — Part 3: Basic application profile

ISO/IEC 19788-3:2011/AMD 1:2016

Information technology — Learning, education and training — Metadata for learning resources — Part 3: Basic application profile — Amendment 1

ISO/IEC 19788-4:2014

Information technology — Learning, education and training — Metadata for learning resources — Part 4: Technical elements

ISO/IEC 19788-5:2012

Information technology — Learning, education and training — Metadata for learning resources — Part 5: Educational elements

ISO/IEC 19788-7:2019

Information technology — Learning, education and training — Metadata for learning resources — Part 7: Bindings

ISO/IEC 19788-8:2015

Information technology — Learning, education and training — Metadata for learning resources — Part 8: Data elements for MLR records

ISO/IEC 19788-9:2015

Information technology — Learning, education and training — Metadata for learning resources — Part 9: Data elements for persons

ISO/IEC TR 19788-11:2017

Information technology — Learning, education and training — Metadata for learning resources — Part 11: Migration from LOM to MLR

ISO/IEC 19796-3:2009

Information technology — Learning, education and training — Quality management, assurance and metrics — Part 3: Reference methods and metrics

ISO/IEC 20006-1:2014

Information technology for learning, education and training — Information model for competency — Part 1: Competency general framework and information model

ISO/IEC 20006-2:2015

Information technology for learning, education and training — Information model for competency — Part 2: Proficiency level information model

ISO/IEC TS 20013:2015

Information technology for learning, education and training — A reference framework of e-Portfolio information

ISO/IEC 20016-1:2014

Information technology for learning, education and training — Language accessibility and human interface equivalencies (HIEs) in e-learning applications — Part 1: Framework and reference model for semantic interoperability

ISO/IEC TR 20748-1:2016

Information technology for learning, education and training — Learning analytics interoperability — Part 1: Reference model

ISO/IEC TR 20748-2:2017

Information technology for learning, education and training — Learning analytics interoperability — Part 2: System requirements

ISO/IEC TS 20748-3:2020

Information technology for learning, education and training — Learning analytics interoperability — Part 3: Guidelines for data interoperability

ISO/IEC TS 20748-4:2019

Information technology for learning, education and training — Learning analytics interoperability — Part 4: Privacy and data protection policies

ISO/IEC TR 20821:2018

Information technology — Learning, education and training — Learning environment components for automated contents adaptation

ISO/IEC 22602:2019

Information technology — Learning, education and training — Competency models expressed in MLR

ISO/IEC 23988:2007

Information technology — A code of practice for the use of information technology (IT) in the delivery of assessments

ISO/IEC 24703:2004

Information technology — Participant Identifiers

ISO/IEC 24751-1:2008

Information technology — Individualized adaptability and accessibility in e-learning, education and training — Part 1: Framework and reference model

ISO/IEC 24751-2:2008

Information technology — Individualized adaptability and accessibility in e-learning, education and training — Part 2: "Access for all" personal needs and preferences for digital delivery

ISO/IEC 24751-3:2008

Information technology — Individualized adaptability and accessibility in e-learning, education and training — Part 3: "Access for all" digital resource description

ISO/IEC TS 24751-4:2019

Information technology for learning, education and training — AccessForAll framework for individualized accessibility — Part 4: Registry server API

ISO/IEC TR 24763:2011

Information technology — Learning, education and training — Conceptual Reference Model for Competency Information and Related Objects

ISO/IEC TR 29127:2011

Information technology — System Process and Architecture for Multilingual Semantic Reverse Query Expansion

ISO/IEC TS 29140-1:2011

Information technology for learning, education and training — Nomadicity and mobile technologies — Part 1: Nomadicity reference model

ISO/IEC TS 29140-2:2011

Information technology for learning, education and training — Nomadicity and mobile technologies — Part 2: Learner information model for mobile learning

ISO/IEC TR 29163-1:2009

Information technology — Sharable Content Object Reference Model (SCORM®) 2004 3rd Edition — Part 1: Overview Version 1.1

ISO/IEC TR 29163-2:2009

Information technology — Sharable Content Object Reference Model (SCORM®) 2004 3rd Edition — Part 2: Content Aggregation Model Version 1.1

ISO/IEC TR 29163-3:2009

Information technology — Sharable Content Object Reference Model (SCORM®) 2004 3rd Edition — Part 3: Run-Time Environment Version 1.1

ISO/IEC TR 29163-4:2009

Information technology — Sharable Content Object Reference Model (SCORM®) 2004 3rd Edition — Part 4: Sequencing and Navigation Version 1.1

ISO/IEC 29187-1:2013

Information technology — Identification of privacy protection requirements pertaining to learning, education and training (LET) — Part 1: Framework and reference model

ISO/IEC 40180:2017

Information technology — Quality for learning, education and training — Fundamentals and reference framework

Standards under development:

ISO/IEC CD TR 4338

Conceptual model and system architecture of smart classroom

ISO/IEC CD TR 4339

Reference Model for ICT Evaluation in Education

ISO/IEC DIS 20013

Information technology for learning, education and training — A reference framework of e-Portfolio information

ISO/IEC DIS 20016-1

Information technology for learning, education and training — Language accessibility and human interface equivalencies (HIEs) in e-learning applications — Part 1: Framework and reference model for semantic interoperability

ISO/IEC DIS 23126

Information technology for learning, education and training — Ubiquitous learning resource organization and description framework

ISO/IEC DIS 23127-1

Information technology — Learning, education, and training — Metadata for facilitators of online learning — Part 1: Framework

ISO/IEC AWI 23428

Information Technology for Learning, Education and Training — Metadata elements for describing aspects of curricula

ISO/IEC PDTR 23842-1

Information technology for learning, education, and training — Human factor guidelines for utilization of virtual reality content in LET domain — Part 1: Considerations when using VR content

ISO/IEC PDTR 23842-2

Information technology for learning, education, and training — Human factor guidelines for utilization of virtual reality content in LET domain — Part 2: Considerations when making VR content

ISO/IEC PDTR 23843

Information technology for learning, education, and training — Catalogue information model for utilization of virtual reality and mixed reality content

ISO/IEC PDTR 23844

Information technology for learning, education, and training — Immersive content and technology in LET domain

ISO/IEC AWI 23988

Information technology — A code of practice for the use of information technology (IT) in the delivery of assessments

ISO/IEC PDTS 29140

Information technology for learning, education and training — Nomadicity and mobile technologies

ISO/IEC AWI 29187-1

Information technology — Identification of privacy protection requirements pertaining to learning, education and training (LET) — Part 1: Framework and reference model

3.2.37 ISO/IEC JTC 1/SC 38 - Cloud Computing and Distributed Platforms

Scope:

Standarisation in the areas of Cloud Computing and Distributed Platforms including:

- Foundational concepts and technologies,
- Operational issues, and
- Interactions among Cloud Computing systems and with other distributed systems

SC 38 serves as the focus, proponent, and systems integration entity on Cloud Computing, Distributed Platforms, and the application of these technologies. SC 38 provides guidance to JTC 1, IEC, ISO and other entities developing standards in these areas.

Structure:

ISO/IEC JTC 1/SC 38/AG 1   Communications committee

ISO/IEC JTC 1/SC 38/AG 2   JTC1/SC38 Officers group

ISO/IEC JTC 1/SC 38/AG 3   Multi-cloud

ISO/IEC JTC 1/SC 38/AG 4   Cloud service connectivity

ISO/IEC JTC 1/SC 38/AG 5   Long-term standards roadmap

ISO/IEC JTC 1/SC 38/CG 1   Liaison coordination group for JTC1/SC27

ISO/IEC JTC 1/SC 38/CG 2   Liaison coordination group for JTC1/SC41

ISO/IEC JTC 1/SC 38/CG 3   Liaison coordination group for JTC1/SC42

ISO/IEC JTC 1/SC 38/WG 3   Cloud Computing Fundamentals (CCF)

ISO/IEC JTC 1/SC 38/WG 5   Data in cloud computing and related technologies

Standards:

ISO/IEC 17203:2017

Information technology — Open Virtualization Format (OVF) specification

ISO/IEC 17788:2014

Information technology — Cloud computing — Overview and vocabulary

ISO/IEC 17789:2014

Information technology — Cloud computing — Reference architecture

ISO/IEC 17963:2013

Web Services for Management (WS-Management) Specification

ISO/IEC 18384-1:2016

Information technology — Reference Architecture for Service Oriented Architecture (SOA RA) — Part 1: Terminology and concepts for SOA

ISO/IEC 18384-2:2016

Information technology — Reference Architecture for Service Oriented Architecture (SOA RA) — Part 2: Reference Architecture for SOA Solutions

ISO/IEC 18384-3:2016

Information technology — Reference Architecture for Service Oriented Architecture (SOA RA) — Part 3: Service Oriented Architecture ontology

ISO/IEC 19086-1:2016

Information technology — Cloud computing — Service level agreement (SLA) framework — Part 1: Overview and concepts

ISO/IEC 19086-2:2018

Cloud computing — Service level agreement (SLA) framework — Part 2: Metric model

ISO/IEC 19086-3:2017

Information technology — Cloud computing — Service level agreement (SLA) framework — Part 3: Core conformance requirements

ISO/IEC 19941:2017

Information technology — Cloud computing — Interoperability and portability

ISO/IEC 19944:2017

Information technology — Cloud computing — Cloud services and devices: Data flow, data categories and data use

ISO/IEC 22624:2020

Information technology — Cloud computing — Taxonomy based data handling for cloud services

ISO/IEC TR 22678:2019

Information technology — Cloud computing — Guidance for policy development

ISO/IEC TS 23167:2020

Information technology — Cloud computing — Common technologies and techniques

ISO/IEC TR 23186:2018

Information technology — Cloud computing — Framework of trust for processing of multi-sourced data

ISO/IEC TR 23188:2020

Information technology — Cloud computing — Edge computing landscape

ISO/IEC TR 30102:2012

Information technology — Distributed Application Platforms and Services (DAPS) — General technical principles of Service Oriented Architecture

<u>Standards under development:</u>

ISO/IEC AWI TR 3445

Information technology - Cloud computing - Audit of cloud services

ISO/IEC DIS 19944-1

Cloud computing – Cloud services and devices: data flow, data categories and data use — Part 1: Fundamentals

ISO/IEC DIS 22123-1

Information technology — Cloud computing — Part 1: Terminology

ISO/IEC CD 22123-2

Information technology — Cloud computing — Part 2: Concepts

ISO/IEC TR 23187

Information technology — Cloud computing — Interacting with cloud service partners (CSNs)

ISO/IEC TR 23613

Information technology — Cloud computing — Cloud service metering elements and billing modes

ISO/IEC CD 23751

Information technology — Cloud computing and distributed platforms — Data sharing agreement (DSA) framework

ISO/IEC PRF TR 23951

Information technology — Cloud computing — Guidance for using the cloud SLA metric model

3.2.38 ISO/IEC JTC 1/SC 39 - Sustainability, IT & Data Centres

Scope:

Standarisation of assessment methods, design practices, operation and management aspects to support resource efficiency, resilience and environmental sustainability for and by information, data centres and other facilities and infrastructure necessary for service provisioning

Structure:

ISO/IEC JTC 1/SC 39/AHG 1 Potential scope and/or title change for SC 39

ISO/IEC JTC 1/SC 39/WG 1   Resource Efficient Data Centres

ISO/IEC JTC 1/SC 39/WG 3   Sustainable facilities and infrastructures

Standards:

ISO/IEC 19395:2015

Information technology — Sustainability for and by information technology — Smart data centre resource monitoring and control

ISO/IEC TR 20913:2016

Information technology — Data centres — Guidelines on holistic investigation methodology for data centre key performance indicators

ISO/IEC TS 22237-1:2018

Information technology — Data centre facilities and infrastructures — Part 1: General concepts

ISO/IEC TS 22237-2:2018

Information technology — Data centre facilities and infrastructures — Part 2: Building construction

ISO/IEC TS 22237-3:2018

Information technology — Data centre facilities and infrastructures — Part 3: Power distribution

ISO/IEC TS 22237-4:2018

Information technology — Data centre facilities and infrastructures — Part 4: Environmental control

ISO/IEC TS 22237-5:2018

Information technology — Data centre facilities and infrastructures — Part 5: Telecommunications cabling infrastructure

ISO/IEC TS 22237-6:2018

Information technology — Data centre facilities and infrastructures — Part 6: Security systems

ISO/IEC TS 22237-7:2018

Information technology — Data centre facilities and infrastructures — Part 7: Management and operational information

ISO/IEC TR 23050:2019

Information technology — Data centres — Impact on data centre resource metrics of electrical energy storage and export

ISO/IEC TR 30132-1:2016

Information technology — Information technology sustainability — Energy efficient computing models — Part 1: Guidelines for energy effectiveness evaluation

ISO/IEC 30134-1:2016

Information technology — Data centres — Key performance indicators — Part 1: Overview and general requirements

ISO/IEC 30134-1:2016/AMD 1:2018

Information technology — Data centres — Key performance indicators — Part 1: Overview and general requirements — Amendment 1

ISO/IEC 30134-2:2016

Information technology — Data centres — Key performance indicators — Part 2: Power usage effectiveness (PUE)

ISO/IEC 30134-2:2016/AMD 1:2018

Information technology — Data centres — Key performance indicators — Part 2: Power usage effectiveness (PUE) — Amendment 1

ISO/IEC 30134-3:2016

Information technology — Data centres — Key performance indicators — Part 3: Renewable energy factor (REF)

ISO/IEC 30134-3:2016/AMD 1:2018

Information technology — Data centres — Key performance indicators — Part 3: Renewable energy factor (REF) — Amendment 1

ISO/IEC 30134-4:2017

Information technology — Data centres — Key performance indicators — Part 4: IT Equipment Energy Efficiency for servers (ITEEsv)

ISO/IEC 30134-5:2017

Information technology — Data centres — Key performance indicators — Part 5: IT Equipment Utilization for servers (ITEUsv)

Standards under development:

ISO/IEC FDIS 21836

Information technology — Data centres — Server energy effectiveness metric

ISO/IEC CD TR 21897.2

Information technology - Data centres - Impact of ISO 52000 standards for energy performance of buildings

ISO/IEC CD 22237-1.2

Information technology — Data centre facilities and infrastructures — Part 1: General concepts

ISO/IEC CD 22237-3.2

Information technology — Data centre facilities and infrastructures — Part 3: Power distribution

ISO/IEC CD 22237-4.2

Information technology — Data centre facilities and infrastructures — Part 4: Environmental control

ISO/IEC CD 23544.2

Information Technology — Data Centres — Application Platform Energy Effectiveness(APEE)

ISO/IEC PDTR 30133

Information technology — Data centres — Guidelines for resource efficient data centres

ISO/IEC DIS 30134-6

Information technology — Data centres — Key performance indicators — Part 6: Energy Reuse Factor (ERF)

ISO/IEC CD 30134-8.2

Information technology — Data centres — Key performance indicators — Part 8: Carbon Usage Effectiveness (CUE)

ISO/IEC CD 30134-9.2

Information technology — Data centres — Key performance indicators — Part 9: Water Usage Effectiveness (WUE)

3.2.39 ISO/IEC JTC 1/SC 40 - IT Service Management and IT Governance

Scope:

Standarisation of IT Service Management and IT Governance.

Develop standards, tools, frameworks, best practices and related documents for IT Service Management and IT Governance, including areas of IT activity such as audit, digital forensics, governance, risk management, outsourcing, service operations and service maintenance, but excluding subject matter covered under the scope and existing work programs of JTC 1/SC 27 and JTC 1/SC 38.

The work will initially cover:

- Governance of IT, including the development of the ISO/IEC 38500 series standards and related documents.
- Operational aspects of Governance of IT, including ISO/IEC 30121 Information Technology — Governance of digital forensic risk framework, and interfaces with the management of IT as well as the role of governance in the area of business innovation.
- All aspects relating to IT service management, including the development of the ISO/IEC 20000 series standards and related documents.
- All aspects relating to IT-Enabled Services — Business Process Outsourcing, including the development of the ISO/IEC 30105 series standards and related documents.

Structure:

ISO/IEC JTC 1/SC 40/AHG 1   Review of ISO/IEC 38500 family

ISO/IEC JTC 1/SC 40/CAG 1   Chairman Advisory Group

ISO/IEC JTC 1/SC 40/WG 1   Governance of InformationTechnology

ISO/IEC JTC 1/SC 40/WG 2   Maintenance and development of ISO/IEC 20000 - Information technology - Service management

ISO/IEC JTC 1/SC 40/WG 3   IT-enabled services / Business process outsourcing

ISO/IEC JTC 1/SC 40/WG 4   IT Service management of infrastructure

Standards:

ISO/IEC 20000-1:2018

Information technology — Service management — Part 1: Service management system requirements

ISO/IEC 20000-2:2019

Information technology — Service management — Part 2: Guidance on the application of service management systems

ISO/IEC 20000-3:2019

Information technology — Service management — Part 3: Guidance on scope definition and applicability of ISO/IEC 20000-1

ISO/IEC TR 20000-5:2013

Information technology — Service management — Part 5: Exemplar implementation plan for ISO/IEC 20000-1

ISO/IEC 20000-6:2017

Information technology — Service management — Part 6: Requirements for bodies providing audit and certification of service management systems

ISO/IEC TR 20000-7:2019

Information technology — Service management — Part 7: Guidance on the integration and correlation of ISO/IEC 20000-1:2018 to ISO 9001:2015 and ISO/IEC 27001:2013

ISO/IEC 20000-10:2018

Information technology — Service management — Part 10: Concepts and vocabulary

ISO/IEC TR 20000-11:2015

Information technology — Service management — Part 11: Guidance on the relationship between ISO/IEC 20000-1:2011 and service management frameworks: ITIL®

ISO/IEC TR 20000-12:2016

Information technology — Service management — Part 12: Guidance on the relationship between ISO/IEC 20000-1:2011 and service management frameworks: CMMI-SVC

ISO/IEC TR 22446:2017

Information technology — Continual performance improvement of IT enabled services

ISO/IEC 30105-1:2016

Information technology — IT Enabled Services-Business Process Outsourcing (ITES-BPO) lifecycle processes — Part 1: Process reference model (PRM)

ISO/IEC 30105-2:2016

Information technology — IT Enabled Services-Business Process Outsourcing (ITES-BPO) lifecycle processes — Part 2: Process assessment model (PAM)

ISO/IEC 30105-3:2016

Information technology — IT Enabled Services-Business Process Outsourcing (ITES-BPO) lifecycle processes — Part 3: Measurement framework (MF) and organization maturity model (OMM)

ISO/IEC 30105-3:2016/AMD 1:2020

Information technology — IT Enabled Services-Business Process Outsourcing (ITES-BPO) lifecycle processes — Part 3: Measurement framework (MF) and organization maturity model (OMM) — Amendment 1

ISO/IEC 30105-4:2016

Information technology — IT Enabled Services-Business Process Outsourcing (ITES-BPO) lifecycle processes — Part 4: Terms and concepts

ISO/IEC 30105-5:2016

Information technology — IT Enabled Services-Business Process Outsourcing (ITES-BPO) lifecycle processes — Part 5: Guidelines

ISO/IEC TR 30105-7:2019

Information technology — IT Enabled Services-Business Process Outsourcing (ITES-BPO) lifecycle processes — Part 7: Exemplar for maturity assessment

ISO/IEC 30121:2015

Information technology — Governance of digital forensic risk framework

ISO/IEC 38500:2015

Information technology — Governance of IT for the organization

ISO/IEC TS 38501:2015

Information technology — Governance of IT — Implementation guide

ISO/IEC TR 38502:2017

Information technology — Governance of IT — Framework and model

ISO/IEC TR 38504:2016

Governance of information technology — Guidance for principles-based standards in the governance of information technology

ISO/IEC 38505-1:2017

Information technology — Governance of IT — Governance of data — Part 1: Application of ISO/IEC 38500 to the governance of data

ISO/IEC TR 38505-2:2018

Information technology — Governance of IT — Governance of data — Part 2: Implications of ISO/IEC 38505-1 for data management

ISO/IEC 38506:2020

Information technology — Governance of IT — Application of ISO/IEC 38500 to the governance of IT enabled investments

Standards under development:

ISO/IEC 20000-2:2019/DAMD 1

Information technology — Service management — Part 2: Guidance on the application of service management systems — Amendment 1

ISO/IEC WD TR 20000-5

Information technology — Service management — Part 5: Implementation guidance for ISO/IEC 20000-1

ISO/IEC WD TR 20000-11

Information technology — Service management — Part 11: Guidance on the relationship between ISO/IEC 20000-1 and service management frameworks: ITIL®

ISO/IEC AWI TR 20000-12

Information technology — Service management — Part 12: Guidance on the relationship between ISO/IEC 20000-1 and service management frameworks: CMMI-SVC

ISO/IEC WD TR 20000-13

Information technology — Service management — Part 13: Guidance on the relationship between ISO/IEC 20000-1:2018 and service management frameworks: COBIT

ISO/IEC TR 22564-1

Information technology — Service management of infrastructure — Part 1: Process reference model (PRM) for data centre services

ISO/IEC WD 24286

Information technology — Continual Performance Improvement — Concepts and Terminology

ISO/IEC WD 30105-4

Information technology — IT Enabled Services-Business Process Outsourcing (ITES-BPO) lifecycle processes — Part 4: Terms and concepts

ISO/IEC CD TR 30105-6

Information technology — IT Enabled Services-Business Process Outsourcing (ITES-BPO) lifecycle processes — Part 6: Guidelines on risk management

ISO/IEC AWI 30105-8

Information technology — IT Enabled Services-Business Process Outsourcing (ITES-BPO) lifecycle processes — Part 8: Continual Performance Improvement (CPI) of ITES-BPO

ISO/IEC CD 38503.2

Information technology — Governance of IT — Assessment of governance of IT

ISO/IEC WD TS 38508

Information technology — Governance of data — Guidelines for data classification

3.2.40 ISO/IEC JTC 1/SC 41 - Internet of Things and related technologies

ISO/IEC JTC 1/SC 41 is being supported administratively by IEC. All information related to ISO/IEC JTC 1/SC 41 is available on the IEC web site

Scope:

Standarisation in the area of Internet of Things and related technologies.

Serve as the focus and proponent for JTC 1's standarisation programme on the Internet of Things and related technologies, including Sensor Networks and Wearables technologies.

Provide guidance to JTC 1, IEC, ISO and other entities developing Internet of Things related applications.

Structure:

ISO/IEC JTC 1/SC 41/WG 3   IoT Architecture

ISO/IEC JTC 1/SC 41/WG 4   IoT Interoperability

ISO/IEC JTC 1/SC 41/WG 5   IoT Applications

Standards:

ISO/IEC 19637:2016

Information technology - Sensor network testing framework

ISO/IEC 20005:2013

Information technology - Sensor networks - Services and interfaces supporting collaborative information processing in intelligent sensor networks

ISO/IEC 20924:2018

Internet of Things (IoT) - Vocabulary

ISO/IEC 21823-1:2019

Internet of Things (IoT) - Interoperability for IoT systems - Part 1: Framework

ISO/IEC 21823-2:2020

Internet of Things (IoT) - Interoperability for IoT systems - Part 2: Transport interoperability

ISO/IEC TR 22417:2017

Information technology - Internet of things (IoT) - IoT use cases

ISO/IEC TR 22560:2017

Information technology - Sensor network - Guidelines for design in the aeronautics industry: Active air-flow control

ISO/IEC 29182-1:2013

Information technology - Sensor networks: Sensor Network Reference Architecture (SNRA) - Part 1: General overview and requirements

ISO/IEC 29182-2:2013

Information technology - Sensor networks: Sensor Network Reference Architecture (SNRA) - Part 2: Vocabulary and terminology

ISO/IEC 29182-3:2014

Information technology - Sensor networks: Sensor Network Reference Architecture (SNRA) - Part 3: Reference architecture views

ISO/IEC 29182-4:2013

Information technology - Sensor networks: Sensor Network Reference Architecture (SNRA) - Part 4: Entity models

ISO/IEC 29182-5:2013

Information technology -- Sensor networks: Sensor Network Reference Architecture (SNRA) -- Part 5: Interface definitions

ISO/IEC 29182-6:2014

Information technology -- Sensor networks: Sensor Network Reference Architecture (SNRA) -- Part 6: Applications

ISO/IEC 29182-7:2015

Information technology -- Sensor networks: Sensor Network Reference Architecture (SNRA) -- Part 7: Interoperability guidelines

ISO/IEC 30101:2014

Information technology -- Sensor networks: Sensor network and its interfaces for smart grid system

ISO/IEC 30128:2014

Information technology -- Sensor networks -- Generic Sensor Network Application Interface

ISO/IEC 30140-1:2018

Information technology - Underwater acoustic sensor network (UWASN) - Part 1: Overview and requirements

ISO/IEC 30140-2:2017

Information technology - Underwater acoustic sensor network (UWASN) - Part 2: Reference architecture

ISO/IEC 30140-3:2018

Information technology - Underwater Acoustic Sensor Network (UWASN) - Part 3: Entities and interfaces

ISO/IEC 30140-4:2018

Information technology - Underwater Acoustic Sensor Network (UWASN) - Part 4: Interoperability

ISO/IEC 30141:2018

Internet of Things (IoT) - Reference architecture

ISO/IEC TR 30148:2019

Internet of things (IoT) - Application of sensor network for wireless gas meters

ISO/IEC TR 30164:2020

Internet of Things (IoT) - Edge computing

ISO/IEC TR 30166:2020

Internet of Things (IoT) - Industrial IoT

Standards under development:

PWI TR JTC1-SC41-1

Internet of Things (IoT) - Underwater Communication Technologies for IoT

PWI TR JTC1-SC41-2

Internet of Things (IoT) - Guidance on the application of the IoT Reference Architecture to Wearables and Implantables based IoT Systems

PWI JTC1-SC41-3

Internet of Things (IoT) – Socialized IoT system resembling human social interaction dynamics

PWI TR JTC1-SC41-4

Internet of Things (ioT) - Integration of IoT and DLT/Blockchain: Use Cases

PNW TS JTC1-SC41-142

Internet of Things (IoT) - Generic Trust Anchor Application Programming Interface for Industrial IoT Devices

PNW JTC1-SC41-148

Internet of things (IoT) - IoT applications for electronic label system (ELS)

PNW JTC1-SC41-157

Internet of Things (IoT) - Base station based underwater acoustic network (B-UWAN) - Overview and requirements

ISO/IEC 20924 ED2

Internet of Things (IoT) - Vocabulary

ISO/IEC 21823-3 ED1

Internet of Things (IoT) - Interoperability for IoT Systems - Part 3: Semantic interoperability

ISO/IEC 21823-4 ED1

Internet of Things (IoT) - Interoperability for Internet of Things Systems –Part 4: Syntactic interoperability

ISO/IEC 30141 ED2

Internet of Things (IoT) - Reference architecture

ISO/IEC 30142 ED1

Internet of Things (IoT) - Underwater acoustic sensor network (UWASN) - Network management system overview and requirements

ISO/IEC 30143 ED1

Internet of Things (IoT) - Underwater acoustic sensor network (UWASN) - Application profiles

ISO/IEC 30144 ED1

Internet of Things (IoT) – Wireless sensor network system supporting electrical power substation

ISO/IEC 30147 ED1

Internet of Things (IoT) – Integration of IoT trustworthiness activities in ISO/IEC/IEEE 15288 systems engineering processes

ISO/IEC 30149 ED1

Internet of Things (IoT) — Trustworthiness framework

ISO/IEC 30161 ED1

Internet of Things (IoT) - Requirements of IoT data exchange platform for various IoT services

ISO/IEC 30162 ED1

Internet of Things (IoT) - Compatibility requirements and model for devices within industrial IoT systems

ISO/IEC 30163 ED1

Internet of Things (IoT) - System requirements of IoT/SN technology-based integrated platform for chattel asset monitoring

ISO/IEC 30165 ED1

Internet of Things (IoT) — Real-time IoT framework

3.2.41 ISO/IEC JTC 1/SC 42 - Artificial intelligence

Scope:

Standarisation in the area of Artificial Intelligence

Structure:

ISO/IEC JTC 1/SC 42/AG 1   AI Management Systems Standard

ISO/IEC JTC 1/SC 42/AG 2   AI Systems Engineering

ISO/IEC JTC 1/SC 42/AHG 1 Dissemination and outreach

ISO/IEC JTC 1/SC 42/AHG 2 Liaison with SC 38

ISO/IEC JTC 1/SC 42/AHG 3 Intelligent systems engineering

ISO/IEC JTC 1/SC 42/JWG 1 Joint Working Group ISO/IEC JTC1/SC 42 - ISO/IEC JTC1/SC 40: Governance implications of AI

ISO/IEC JTC 1/SC 42/WG 1   Foundational standards

ISO/IEC JTC 1/SC 42/WG 2   Big Data

ISO/IEC JTC 1/SC 42/WG 3   Trustworthiness

ISO/IEC JTC 1/SC 42/WG 4   Use cases and applications

ISO/IEC JTC 1/SC 42/WG 5   Computational approaches and computational characteristics of AI systems

Standards:

ISO/IEC 20546:2019

Information technology — Big data — Overview and vocabulary

ISO/IEC TR 20547-2:2018

Information technology — Big data reference architecture — Part 2: Use cases and derived requirements

ISO/IEC 20547-3:2020

Information technology — Big data reference architecture — Part 3: Reference architecture

ISO/IEC TR 20547-5:2018

Information technology — Big data reference architecture — Part 5: Standards roadmap

Standards under development:

ISO/IEC CD TR 20547-1

Information technology — Big data reference architecture — Part 1: Framework and application process

ISO/IEC CD 22989

Artificial intelligence — Concepts and terminology

ISO/IEC CD 23053

Framework for Artificial Intelligence (AI) Systems Using Machine Learning (ML)

ISO/IEC AWI 23894

Information Technology — Artificial Intelligence — Risk Management

ISO/IEC AWI TR 24027

Information technology — Artificial Intelligence (AI) — Bias in AI systems and AI aided decision making

ISO/IEC PRF TR 24028

Information technology — Artificial intelligence — Overview of trustworthiness in artificial intelligence

ISO/IEC CD TR 24029-1

Artificial Intelligence (AI) — Assessment of the robustness of neural networks — Part 1: Overview

ISO/IEC CD TR 24030

Information technology — Artificial Intelligence (AI) — Use cases

ISO/IEC AWI TR 24368

Information technology — Artificial intelligence — Overview of ethical and societal concerns

ISO/IEC AWI TR 24372

Information technology — Artificial intelligence (AI) — Overview of computational approaches for AI systems

ISO/IEC AWI 24668

Information technology — Artificial intelligence —Process management framework for Big data analytics

ISO/IEC AWI 38507

Information technology — Governance of IT — Governance implications of the use of artificial intelligence by organizations

3.2.42 ISO/TC 22 - Road vehicles

Keywords:

Cybersecurity, Data Protection, Road vehicles, Vehicle-to-Grid (V2G), Data communication, Electrical and electronic components and general system aspects, Vehicle dynamics and chassis components, Propulsion, powertrain and powertrain fluids, Lighting and visibility, Safety and impact testing, Electrically propelled vehicles, Motorcycles and mopeds, Ergonomics, Specific aspects for light and heavy commercial vehicles, busses and trailers, Specific aspects for gaseous fuels

Scope:

All questions of standarisation concerning compatibility, interchangeability and safety, with particular reference to terminology and test procedures (including the characteristics of instrumentation) for evaluating the performance of the following types of road vehicles and their equipment as defined in the relevant items of Article 1 of the convention on Road Traffic, Vienna in 1968 concluded under the auspices of the United Nations:

-   mopeds (item m);
-   motor cycles (item n);
-   motor vehicles (item p);
-   trailers (item q);
-   semi-trailers (item r);
-   light trailers (item s);
-   combination vehicles (item t);
-   articulated vehicles (item u).

Structure:

ISO/TC 22/SC 31	Data communication
ISO/TC 22/SC 32	Electrical and electronic components and general system aspects
ISO/TC 22/SC 33	Vehicle dynamics and chassis components
ISO/TC 22/SC 34	Propulsion, powertrain and powertrain fluids
ISO/TC 22/SC 35	Lighting and visibility
ISO/TC 22/SC 36	Safety and impact testing
ISO/TC 22/SC 37	Electrically propelled vehicles
ISO/TC 22/SC 38	Motorcycles and mopeds
ISO/TC 22/SC 39	Ergonomics
ISO/TC 22/SC 40	Specific aspects for light and heavy commercial vehicles, busses and trailers

ISO/TC 22/SC 41   Specific aspects for gaseous fuels

Standards:

ISO 612:1978

Road vehicles — Dimensions of motor vehicles and towed vehicles — Terms and definitions

ISO 1176:1990

Road vehicles — Masses — Vocabulary and codes

ISO 2416:1992

Passenger cars — Mass distribution

ISO 2958:1973

Road vehicles — Exterior protection for passenger cars

ISO 3208:1974

Road vehicles — Evaluation of protrusions inside passenger cars

ISO 3779:2009

Road vehicles — Vehicle identification number (VIN) — Content and structure

ISO 3780:2009

Road vehicles — World manufacturer identifier (WMI) code

ISO 3780:2009/COR 1:2010

Road vehicles — World manufacturer identifier (WMI) code — Technical Corrigendum 1

ISO 3795:1989

Road vehicles, and tractors and machinery for agriculture and forestry — Determination of burning behaviour of interior materials

ISO 3832:2002

Passenger cars — Luggage compartments — Method of measuring reference volume

ISO 3833:1977

Road vehicles — Types — Terms and definitions

ISO 4030:1983

Road vehicles — Vehicle identification number (VIN) — Location and attachment

ISO 4100:1980

Road vehicles — World parts manufacturer identifier (WPMI) code

ISO 4130:1978

Road vehicles — Three-dimensional reference system and fiducial marks — Definitions

ISO 4131:1979

Road vehicles — Dimensional codes for passenger cars

ISO/TR 8357:1996

Road vehicles — Instructions for the implementation of the assignment of world manufacturer identifier (WMI) codes for vehicle identification number (VIN) systems and for world parts manufacturer identifier (WPMI) codes

ISO 22628:2002

Road vehicles — Recyclability and recoverability — Calculation method

Standards under development:

ISO/CD TR 4609

Road vehicles — Report on standarisation prospective for automated vehicles (RoSPAV)

ISO/CD TR 4804

Road vehicles — Safety and security for automated driving systems — Design, verification and validation methods

3.2.43 ISO/TC 22/SC 31 - Data communication

<u>Scope:</u>

Data communication for vehicle applications

This includes

- Data buses and protocols (including dedicated sensor communication)
- V2X communication (including V2G)
- Diagnostics
- Test protocols
- Interfaces and gateways (including those for nomadic devices)
- Data formats
- Standardised data content

<u>Structure:</u>

ISO/TC 22/SC 31/JWG 1   Joint ISO/TC 22/SC 31 - IEC/TC 69 WG: Vehicle to grid communication interface (V2G CI)

ISO/TC 22/SC 31/WG 2   Vehicle diagnostic protocols

ISO/TC 22/SC 31/WG 3   In-vehicle networks

ISO/TC 22/SC 31/WG 4   Network applications

ISO/TC 22/SC 31/WG 5   Test equipment/Data eXchange Formats

ISO/TC 22/SC 31/WG 6   Extended vehicle/Remote diagnostics

ISO/TC 22/SC 31/WG 7   Electronic periodic technical inspection (ePTI)

ISO/TC 22/SC 31/WG 8   Vehicle domain service (VDS)

ISO/TC 22/SC 31/WG 9   Sensor data interface for automated driving functions

ISO/TC 22/SC 31/WG 10   Extended vehicle time critical applications

<u>Standards:</u>

ISO 7639:1985

Road vehicles — Diagnostic systems — Graphical symbols

ISO 9141-2:1994

Road vehicles — Diagnostic systems — Part 2: CARB requirements for interchange of digital information

ISO 9141-2:1994/AMD 1:1996

Road vehicles — Diagnostic systems — Part 2: CARB requirements for interchange of digital information — Amendment 1

ISO 9141-3:1998

Road vehicles — Diagnostic systems — Part 3: Verification of the communication between vehicle and OBD II scan tool

ISO 9141:1989

Road vehicles — Diagnostic systems — Requirements for interchange of digital information

ISO 10681-1:2010

Road vehicles — Communication on FlexRay — Part 1: General information and use case definition

ISO 10681-2:2010

Road vehicles — Communication on FlexRay — Part 2: Communication layer services

ISO 11519-1:1994

Road vehicles — Low-speed serial data communication — Part 1: General and definitions

ISO 11519-3:1994

Road vehicles — Low-speed serial data communication — Part 3: Vehicle area network (VAN)

ISO 11519-3:1994/AMD 1:1995

Road vehicles — Low-speed serial data communication — Part 3: Vehicle area network (VAN) — Amendment 1

ISO 11898-1:2015

Road vehicles — Controller area network (CAN) — Part 1: Data link layer and physical signalling

ISO 11898-2:2016

Road vehicles — Controller area network (CAN) — Part 2: High-speed medium access unit

ISO 11898-3:2006

Road vehicles — Controller area network (CAN) — Part 3: Low-speed, fault-tolerant, medium-dependent interface

ISO 11898-3:2006/COR 1:2006

Road vehicles — Controller area network (CAN) — Part 3: Low-speed, fault-tolerant, medium-dependent interface — Technical Corrigendum 1

ISO 11898-4:2004

Road vehicles — Controller area network (CAN) — Part 4: Time-triggered communication

ISO 11992-1:2019

Road vehicles — Interchange of digital information on electrical connections between towing and towed vehicles — Part 1: Physical and data-link layers

ISO 11992-2:2014

Road vehicles — Interchange of digital information on electrical connections between towing and towed vehicles — Part 2: Application layer for brakes and running gear

ISO 11992-3:2003

Road vehicles — Interchange of digital information on electrical connections between towing and towed vehicles — Part 3: Application layer for equipment other than brakes and running gear

ISO 11992-3:2003/AMD 1:2008

Road vehicles — Interchange of digital information on electrical connections between towing and towed vehicles — Part 3: Application layer for equipment other than brakes and running gear — Amendment 1

ISO 11992-4:2014

Road vehicles — Interchange of digital information on electrical connections between towing and towed vehicles — Part 4: Diagnostic communication

ISO 13209-1:2011

Road vehicles — Open Test sequence eXchange format (OTX) — Part 1: General information and use cases

ISO 13209-2:2012

Road vehicles — Open Test sequence eXchange format (OTX) — Part 2: Core data model specification and requirements

ISO 13209-3:2012

Road vehicles — Open Test sequence eXchange format (OTX) — Part 3: Standard extensions and requirements

ISO 13400-2:2019

Road vehicles — Diagnostic communication over Internet Protocol (DoIP) — Part 2: Transport protocol and network layer services

ISO 13400-3:2016

Road vehicles — Diagnostic communication over Internet Protocol (DoIP) — Part 3: Wired vehicle interface based on IEEE 802.3

ISO 13400-4:2016

Road vehicles — Diagnostic communication over Internet Protocol (DoIP) — Part 4: Ethernet-based high-speed data link connector

ISO 14229-1:2020

Road vehicles — Unified diagnostic services (UDS) — Part 1: Application layer

ISO 14229-2:2013

Road vehicles — Unified diagnostic services (UDS) — Part 2: Session layer services

ISO 14229-3:2012

Road vehicles — Unified diagnostic services (UDS) — Part 3: Unified diagnostic services on CAN implementation (UDSonCAN)

ISO 14229-4:2012

Road vehicles — Unified diagnostic services (UDS) — Part 4: Unified diagnostic services on FlexRay implementation (UDSonFR)

ISO 14229-5:2013

Road vehicles — Unified diagnostic services (UDS) — Part 5: Unified diagnostic services on Internet Protocol implementation (UDSonIP)

ISO 14229-6:2013

Road vehicles — Unified diagnostic services (UDS) — Part 6: Unified diagnostic services on K-Line implementation (UDSonK-Line)

ISO 14229-7:2015

Road vehicles — Unified diagnostic services (UDS) — Part 7: UDS on local interconnect network (UDSonLIN)

ISO 14229-8:2020

Road vehicles — Unified diagnostic services (UDS) — Part 8: UDS on Clock eXtension Peripheral Interface (UDSonCXPI)

ISO 14230-1:2012

Road vehicles — Diagnostic communication over K-Line (DoK-Line) — Part 1: Physical layer

ISO 14230-2:2016

Road vehicles — Diagnostic communication over K-Line (DoK-Line) — Part 2: Data link layer

ISO 14230-3:1999

Road vehicles — Diagnostic systems — Keyword Protocol 2000 — Part 3: Application layer

ISO 14230-4:2000

Road vehicles — Diagnostic systems — Keyword Protocol 2000 — Part 4: Requirements for emission-related systems

ISO 15031-1:2010

Road vehicles — Communication between vehicle and external equipment for emissions-related diagnostics — Part 1: General information and use case definition

ISO 15031-2:2010

Road vehicles — Communication between vehicle and external equipment for emissions-related diagnostics — Part 2: Guidance on terms, definitions, abbreviations and acronyms

ISO 15031-3:2016

Road vehicles — Communication between vehicle and external equipment for emissions-related diagnostics — Part 3: Diagnostic connector and related electrical circuits: Specification and use

ISO 15031-4:2014

Road vehicles — Communication between vehicle and external equipment for emissions-related diagnostics — Part 4: External test equipment

ISO 15031-5:2015

Road vehicles — Communication between vehicle and external equipment for emissions-related diagnostics — Part 5: Emissions-related diagnostic services

ISO 15031-6:2015

Road vehicles — Communication between vehicle and external equipment for emissions-related diagnostics — Part 6: Diagnostic trouble code definitions

ISO 15031-7:2013

Road vehicles — Communication between vehicle and external equipment for emissions-related diagnostics — Part 7: Data link security

ISO 15118-1:2019

Road vehicles — Vehicle to grid communication interface — Part 1: General information and use-case definition

ISO 15118-2:2014

Road vehicles — Vehicle-to-Grid Communication Interface — Part 2: Network and application protocol requirements

ISO 15118-3:2015

Road vehicles — Vehicle to grid communication interface — Part 3: Physical and data link layer requirements

ISO 15118-4:2018

Road vehicles — Vehicle to grid communication interface — Part 4: Network and application protocol conformance test

ISO 15118-5:2018

Road vehicles — Vehicle to grid communication interface — Part 5: Physical layer and data link layer conformance test

ISO 15118-8:2018

Road vehicles — Vehicle to grid communication interface — Part 8: Physical layer and data link layer requirements for wireless communication

ISO 15765-2:2016

Road vehicles — Diagnostic communication over Controller Area Network (DoCAN) — Part 2: Transport protocol and network layer services

ISO 15765-4:2016

Road vehicles — Diagnostic communication over Controller Area Network (DoCAN) — Part 4: Requirements for emissions-related systems

ISO 16844-1:2013

Road vehicles — Tachograph systems — Part 1: Electrical connectors

ISO 16844-2:2011

Road vehicles — Tachograph systems — Part 2: Electrical interface with recording unit

ISO 16844-3:2004

Road vehicles — Tachograph systems — Part 3: Motion sensor interface

ISO 16844-3:2004/COR 1:2006

Road vehicles — Tachograph systems — Part 3: Motion sensor interface — Technical Corrigendum 1

ISO 16844-4:2015

Road vehicles — Tachograph systems — Part 4: CAN interface

ISO 16844-6:2015

Road vehicles — Tachograph systems — Part 6: Diagnostics

ISO 16844-7:2015

Road vehicles — Tachograph systems — Part 7: Parameters

ISO 16845-1:2016

Road vehicles — Controller area network (CAN) conformance test plan — Part 1: Data link layer and physical signalling

ISO 16845-2:2018

Road vehicles — Controller area network (CAN) conformance test plan — Part 2: High-speed medium access unit — Conformance test plan

ISO 17215-1:2014

Road vehicles — Video communication interface for cameras (VCIC) — Part 1: General information and use case definition

ISO 17215-2:2014

Road vehicles — Video communication interface for cameras (VCIC) — Part 2: Service discovery and control

ISO 17215-3:2014

Road vehicles — Video communication interface for cameras (VCIC) — Part 3: Camera message dictionary

ISO 17215-4:2014

Road vehicles — Video communication interface for cameras (VCIC) — Part 4: Implementation of communication requirements

ISO 17356-1:2005

Road vehicles — Open interface for embedded automotive applications — Part 1: General structure and terms, definitions and abbreviated terms

ISO 17356-2:2005

Road vehicles — Open interface for embedded automotive applications — Part 2: OSEK/VDX specifications for binding OS, COM and NM

ISO 17356-3:2005

Road vehicles — Open interface for embedded automotive applications — Part 3: OSEK/VDX Operating System (OS)

ISO 17356-4:2005

Road vehicles — Open interface for embedded automotive applications — Part 4: OSEK/VDX Communication (COM)

ISO 17356-5:2006

Road vehicles — Open interface for embedded automotive applications — Part 5: OSEK/VDX Network Management (NM)

ISO 17356-6:2006

Road vehicles — Open interface for embedded automotive applications — Part 6: OSEK/VDX Implementation Language (OIL)

ISO 17458-1:2013

Road vehicles — FlexRay communications system — Part 1: General information and use case definition

ISO 17458-2:2013

Road vehicles — FlexRay communications system — Part 2: Data link layer specification

ISO 17458-3:2013

Road vehicles — FlexRay communications system — Part 3: Data link layer conformance test specification

ISO 17458-4:2013

Road vehicles — FlexRay communications system — Part 4: Electrical physical layer specification

ISO 17458-5:2013

Road vehicles — FlexRay communications system — Part 5: Electrical physical layer conformance test specification

ISO 17987-1:2016

Road vehicles — Local Interconnect Network (LIN) — Part 1: General information and use case definition

ISO 17987-2:2016

Road vehicles — Local Interconnect Network (LIN) — Part 2: Transport protocol and network layer services

ISO 17987-3:2016

Road vehicles — Local Interconnect Network (LIN) — Part 3: Protocol specification

ISO 17987-4:2016

Road vehicles — Local Interconnect Network (LIN) — Part 4: Electrical physical layer (EPL) specification 12 V/24 V

ISO/TR 17987-5:2016

Road vehicles — Local Interconnect Network (LIN) — Part 5: Application programmers interface (API)

ISO 17987-6:2016

Road vehicles — Local Interconnect Network (LIN) — Part 6: Protocol conformance test specification

ISO 17987-7:2016

Road vehicles — Local Interconnect Network (LIN) — Part 7: Electrical Physical Layer (EPL) conformance test specification

ISO 17987-8:2019

Road vehicles — Local Interconnect Network (LIN) — Part 8: Electrical physical layer (EPL) specification: LIN over DC powerline (DC-LIN)

ISO 18541-1:2014

Road vehicles — Standardised access to automotive repair and maintenance information (RMI) — Part 1: General information and use case definition

ISO 18541-2:2014

Road vehicles — Standardised access to automotive repair and maintenance information (RMI) — Part 2: Technical requirements

ISO 18541-3:2014

Road vehicles — Standardised access to automotive repair and maintenance information (RMI) — Part 3: Functional user interface requirements

ISO 18541-4:2015

Road vehicles — Standardised access to automotive repair and maintenance information (RMI) — Part 4: Conformance test

ISO 18541-5:2018

Road vehicles — Standardised access to automotive repair and maintenance information (RMI) — Part 5: Heavy duty specific provision

ISO 18541-6:2018

Road vehicles — Standardised access to automotive repair and maintenance information (RMI) — Part 6: L-Category vehicle specific RMI use cases and requirements

ISO 18542-1:2012

Road vehicles — Standardised repair and maintenance information (RMI) terminology — Part 1: General information and use case definition

ISO 18542-2:2014

Road vehicles — Standardised repair and maintenance information (RMI) terminology — Part 2: Standardised process implementation requirements, Registration Authority

43.040.15

ISO 20077-1:2017

Road Vehicles — Extended vehicle (ExVe) methodology — Part 1: General information

ISO 20077-2:2018

Road Vehicles — Extended vehicle (ExVe) methodology — Part 2: Methodology for designing the extended vehicle

ISO 20078-1:2019

Road vehicles — Extended vehicle (ExVe) web services — Part 1: Content

ISO 20078-2:2019

Road vehicles — Extended vehicle (ExVe) web services — Part 2: Access

ISO 20078-3:2019

Road vehicles — Extended vehicle (ExVe) web services — Part 3: Security

ISO/TR 20078-4:2019

Road vehicles — Extended vehicle (ExVe) web services — Part 4: Control

ISO 20080:2019

Road vehicles — Information for remote diagnostic support — General requirements, definitions and use cases

ISO 20794-2:2020

Road vehicles — Clock extension peripheral interface (CXPI) — Part 2: Application layer

ISO 20794-3:2020

Road vehicles — Clock extension peripheral interface (CXPI) — Part 3: Transport and network layer

ISO 20794-4:2020

Road vehicles — Clock extension peripheral interface (CXPI) — Part 4: Data link layer and physical layer

ISO 20828:2006

Road vehicles — Security certificate management

ISO 22896:2006

Road vehicles — Deployment and sensor bus for occupant safety systems

ISO 22900-1:2008

Road vehicles — Modular vehicle communication interface (MVCI) — Part 1: Hardware design requirements

ISO 22900-2:2017

Road vehicles — Modular vehicle communication interface (MVCI) — Part 2: Diagnostic protocol data unit (D-PDU API)

ISO 22900-3:2012

Road vehicles — Modular vehicle communication interface (MVCI) — Part 3: Diagnostic server application programming interface (D-Server API)

ISO 22901-1:2008

Road vehicles — Open diagnostic data exchange (ODX) — Part 1: Data model specification

ISO 22901-2:2011

Road vehicles — Open diagnostic data exchange (ODX) — Part 2: Emissions-related diagnostic data

ISO 22901-3:2018

Road vehicles — Open diagnostic data exchange (ODX) — Part 3: Fault symptom exchange description (FXD)

ISO 22902-1:2006

Road vehicles — Automotive multimedia interface — Part 1: General technical overview

ISO 22902-2:2006

Road vehicles — Automotive multimedia interface — Part 2: Use cases

ISO 22902-3:2006

Road vehicles — Automotive multimedia interface — Part 3: System requirements

ISO 22902-4:2006

Road vehicles — Automotive multimedia interface — Part 4: Network protocol requirements for vehicle interface access

ISO 22902-5:2006

Road vehicles — Automotive multimedia interface — Part 5: Common message set

ISO 22902-6:2006

Road vehicles — Automotive multimedia interface — Part 6: Vehicle interface requirements

ISO 22902-7:2006

Road vehicles — Automotive multimedia interface — Part 7: Physical specification

ISO/TR 23786:2019

Road vehicles — Solutions for remote access to vehicle — Criteria for risk assessment

ISO/TR 23791:2019

Road vehicles — Extended vehicle (ExVe) web services — Result of the risk assessment on ISO 20078 series

ISO 26021-1:2008

Road vehicles — End-of-life activation of on-board pyrotechnic devices — Part 1: General information and use case definitions

ISO 26021-2:2008

Road vehicles — End-of-life activation of on-board pyrotechnic devices — Part 2: Communication requirements

ISO 26021-2:2008/COR 1:2009

Road vehicles — End-of-life activation of on-board pyrotechnic devices — Part 2: Communication requirements — Technical Corrigendum 1

ISO 26021-3:2009

Road vehicles — End-of-life activation of on-board pyrotechnic devices — Part 3: Tool requirements

ISO 26021-4:2009

Road vehicles — End-of-life activation of on-board pyrotechnic devices — Part 4: Additional communication line with bidirectional communication

ISO 26021-5:2009

Road vehicles — End-of-life activation of on-board pyrotechnic devices — Part 5: Additional communication line with pulse width modulated signal

ISO 27145-1:2012

Road vehicles — Implementation of World-Wide Harmonized On-Board Diagnostics (WWH-OBD) communication requirements — Part 1: General information and use case definition

ISO 27145-2:2012

Road vehicles — Implementation of World-Wide Harmonized On-Board Diagnostics (WWH-OBD) communication requirements — Part 2: Common data dictionary

ISO 27145-3:2012

Road vehicles — Implementation of World-Wide Harmonized On-Board Diagnostics (WWH-OBD) communication requirements — Part 3: Common message dictionary

ISO 27145-4:2016

Road vehicles — Implementation of World-Wide Harmonized On-Board Diagnostics (WWH-OBD) communication requirements — Part 4: Connection between vehicle and test equipment

ISO 27145-6:2015

Road vehicles — Implementation of World-Wide Harmonized On-Board Diagnostics (WWH-OBD) communication requirements — Part 6: External test equipment

Standards under development:

ISO/WD 11992-2

Road vehicles — Interchange of digital information on electrical connections between towing and towed vehicles — Part 2: Application layer for brakes and running gear

ISO/DIS 11992-3

Road vehicles — Interchange of digital information on electrical connections between towing and towed vehicles — Part 3: Application layer for equipment other than brakes and running gear

ISO/WD 11992-4

Road vehicles — Interchange of digital information on electrical connections between towing and towed vehicles — Part 4: Diagnostic communication

ISO/CD 13209-2

Road vehicles — Open Test sequence eXchange format (OTX) — Part 2: Core data model specification and requirements

ISO/CD 13209-3

Road vehicles — Open Test sequence eXchange format (OTX) — Part 3: Standard extensions and requirements

ISO/DIS 13209-4

Road vehicles — Open test sequence eXchange format (OTX) — Part 4: Expanded extensions interface definition

ISO/CD 14229-2

Road vehicles — Unified diagnostic services (UDS) — Part 2: Session layer services

ISO/CD 14229-3

Road vehicles — Unified diagnostic services (UDS) — Part 3: Unified diagnostic services on CAN implementation (UDSonCAN)

ISO/CD 14229-5

Road vehicles — Unified diagnostic services (UDS) — Part 5: Unified diagnostic services on Internet Protocol implementation (UDSonIP)

ISO/CD 15118-4

Road vehicles — Vehicle to grid communication interface — Part 4: Network and application protocol conformance test

ISO/FDIS 15118-8

Road vehicles — Vehicle to grid communication interface — Part 8: Physical layer and data link layer requirements for wireless communication

ISO/AWI 15118-9

Road vehicles — Vehicle to grid communication interface — Part 9: Physical and data link layer conformance test for wireless communication

ISO/DIS 15118-20

Road vehicles — Vehicle to grid communication interface — Part 20: 2nd generation network and application protocol requirements

ISO/CD 15765-4

Road vehicles — Diagnostic communication over Controller Area Network (DoCAN) — Part 4: Requirements for emissions-related systems

ISO/DIS 15765-5

Road vehicles — Diagnostic communication over Controller Area Network (DoCAN) — Part 5: Specification for an in-vehicle network connected to the diagnostic link connector

ISO/AWI 16844-1

Road vehicles — Tachograph systems — Part 1: Electromechanical components

ISO/AWI 16844-2

Road vehicles — Tachograph systems — Part 2: Recording unit communication interface

ISO/AWI 16844-3

Road vehicles — Tachograph systems — Part 3: Motion sensor communication interface

ISO/AWI 16844-4

Road vehicles — Tachograph systems — Part 4: Display unit communication interface

ISO/AWI 16844-6

Road vehicles — Tachograph systems — Part 6: Diagnostic communication interfaces

ISO/AWI 16844-7

Road vehicles — Tachograph systems — Part 7: Parameters

ISO/DIS 17215-3

Road vehicles — Video communication interface for cameras (VCIC) — Part 3: Camera message dictionary

ISO/DIS 18541-1

Road vehicles — Standardised access to automotive repair and maintenance information (RMI) — Part 1: General information and use case definition

ISO/DIS 18541-2

Road vehicles — Standardised access to automotive repair and maintenance information (RMI) — Part 2: Technical requirements

ISO/DIS 18541-3

Road vehicles — Standardised access to automotive repair and maintenance information (RMI) — Part 3: Functional user interface requirements

ISO/DIS 18541-4

Road vehicles — Standardised access to automotive repair and maintenance information (RMI) — Part 4: Conformance test

ISO/CD 20078-1

Road vehicles — Extended vehicle (ExVe) web services — Part 1: Content

ISO/CD 20078-2

Road vehicles — Extended vehicle (ExVe) web services — Part 2: Access

ISO/CD 20078-3

Road vehicles — Extended vehicle (ExVe) web services — Part 3: Security

ISO/CD TR 20078-4

Road vehicles — Extended vehicle (ExVe) web services — Part 4: Control

ISO/CD 20730-3

Road vehicles — Vehicle interface for electronic Periodic Technical Inspection (ePTI) — Part 3: Data definitions

ISO/DIS 20794-5

Road vehicles — Clock extension peripheral interface (CXPI) — Part 5: Application layer conformance test plan

ISO/DIS 20794-6

Road vehicles — Clock extension peripheral interface (CXPI) — Part 6: Transport and network layer conformance test plan

ISO/DIS 20794-7

Road vehicles — Clock extension peripheral interface (CXPI) — Part 7: Data link and physical layer conformance test plan

ISO/DIS 21111-1

Road vehicles — In-vehicle Ethernet — Part 1: General information and definitions

ISO/DIS 21111-2

Road vehicles — In-vehicle Ethernet — Part 2: Common physical entity requirements

ISO/FDIS 21111-3

Road vehicles — In-vehicle Ethernet — Part 3: Optical 1-Gbit/s physical entity requirements and conformance test plan

ISO/FDIS 21111-5

Road vehicles — In-vehicle Ethernet — Part 5: Optical 1-Gbit/s physical layer system requirements and test plans

ISO/CD 21111-6

Road vehicles — In-vehicle Ethernet — Part 6: Electrical 100-Mbit/s physical entity requirements and conformance test plan

ISO/CD 21111-7

Road vehicles — In-vehicle Ethernet — Part 7: Electrical 100-Mbit/s physical layer system requirements and test plans

ISO/CD 21111-9

Road vehicles — In-vehicle Ethernet — Part 9: Data link layer requirements and conformance test plan

ISO/CD 21111-10

Road vehicles — In-vehicle Ethernet — Part 10: Application to network layer requirements and test plans

ISO/DIS 21806-1

Road vehicles — Media Oriented Systems Transport (MOST) — Part 1: General information and definitions

ISO/DIS 21806-2

Road vehicles — Media Oriented Systems Transport (MOST) — Part 2: Application layer

ISO/DIS 21806-3

Road vehicles — Media Oriented Systems Transport (MOST) — Part 3: Application layer conformance test plan

ISO/DIS 21806-4

Road vehicles — Media Oriented Systems Transport (MOST) — Part 4: Transport layer and network layer

ISO/DIS 21806-5

Road vehicles — Media Oriented Systems Transport (MOST) — Part 5: Transport layer and network layer conformance test plan

ISO/DIS 21806-6

Road vehicles — Media Oriented Systems Transport (MOST) — Part 6: Data link layer

ISO/DIS 21806-7

Road vehicles — Media Oriented Systems Transport (MOST) — Part 7: Data link layer conformance test plan

ISO/DIS 21806-8

Road vehicles — Media Oriented Systems Transport (MOST) — Part 8: 150-Mbit/s optical physical layer

ISO/DIS 21806-9

Road vehicles — Media Oriented Systems Transport (MOST) — Part 9: 150-Mbit/s optical physical layer conformance test plan

ISO/CD 21806-10

Road vehicles — Media Oriented Systems Transport (MOST) — Part 10: 150-Mbit/s coaxial physical layer

ISO/CD 21806-11

Road vehicles — Media Oriented Systems Transport (MOST) — Part 11: 150-Mbit/s coaxial physical layer conformance test plan

ISO/CD 21806-12

Road vehicles — Media Oriented Systems Transport (MOST) — Part 12: 50-Mbit/s balanced media physical layer

ISO/CD 21806-13

Road vehicles — Media Oriented Systems Transport (MOST) — Part 13: 50-Mbit/s balanced media physical layer conformance test plan

ISO/CD 21806-14

Road vehicles — Media Oriented Systems Transport (MOST) — Part 14: Lean application layer

ISO/CD 21806-15

Road vehicles — Media Oriented Systems Transport (MOST) — Part 15: Lean application layer conformance test plan

ISO/AWI 22900-2

Road vehicles — Modular vehicle communication interface (MVCI) — Part 2: Diagnostic protocol data unit (D-PDU API)

ISO/FDIS 23132

Road vehicles — Extended Vehicle (ExVe) time critical applications — General requirements, definitions and classification methodology of time-constrained situations related to Road and ExVe Safety (RExVeS)

ISO/DIS 23150

Road vehicles — Data communication between sensors and data fusion unit for automated driving functions — Logical interface

ISO/DIS 23239-1

Road vehicles — Vehicle domain service — Part 1: General information and use case definitions

ISO/AWI TR 23841

Road vehicles — Guidelines for the structure and layout of data communication standards

3.2.44 ISO/TC 22/SC 32 - Electrical and electronic components and general system aspects

Scope:

Electrical and electronic (E/E) components and cross-sectional specifications for E/E systems and components

This includes:

- Wiring harness (e.g cables, connectors, interconnections)
- Dedicated connectors (e.g trailer connectors, OBD-connector)
- Dedicated E/E components and parts (e.g. alternators, fuses, ignition equipment)
- EMC
- Environmental conditions
- Functional safety
- Cybersecurity
- Dedicated optical components
- Software update

Structure:

ISO/TC 22/SC 32/WG 1   Ignition Equipment

ISO/TC 22/SC 32/WG 2   Environmental conditions

ISO/TC 22/SC 32/WG 3   Electromagnetic compatibility

ISO/TC 22/SC 32/WG 4   Automotive electrical cables

ISO/TC 22/SC 32/WG 5   Fuses and circuit breakers

ISO/TC 22/SC 32/WG 6   On-board electrical connections

ISO/TC 22/SC 32/WG 7   Functional characteristics of starting devices and electrical generators

ISO/TC 22/SC 32/WG 8   Functional safety

ISO/TC 22/SC 32/WG 9   Electrical connections between towing and towed vehicles

ISO/TC 22/SC 32/WG 10   Optical components - Test methods and requirements

ISO/TC 22/SC 32/WG 11   Cybersecurity   Working group

ISO/TC 22/SC 32/WG 12   Software update

Standards:

ISO 1185:2003

Road vehicles — Connectors for the electrical connection of towing and towed vehicles — 7-pole connector type 24 N (normal) for vehicles with 24 V nominal supply voltage

ISO 1724:2003

Road vehicles — Connectors for the electrical connection of towing and towed vehicles — 7-pole connector type 12 N (normal) for vehicles with 12 V nominal supply voltage

ISO 3412:1992

Road vehicles — Screened and waterproof spark-plugs and their connections — Types 1A and 1B

ISO 3553-1:1987

Road vehicles — High-tension connections for ignition coils and distributors — Part 1: Socket-type

ISO 3553-2:1997

Road vehicles — High-tension connectors for ignition coils and distributors — Part 2: Plug-types

ISO 3731:2003

Road vehicles — Connectors for the electrical connection of towing and towed vehicles — 7-pole connector type 24 S (supplementary) for vehicles with 24 V nominal supply voltage

ISO 3732:2003

Road vehicles — Connectors for the electrical connection of towing and towed vehicles — 7-pole connector type 12 S (supplementary) for vehicles with 12 V nominal supply voltage

ISO 3808:2002

Road vehicles — Unscreened high-voltage ignition cables — General specifications, test methods and requirements

ISO 3895:1986

Road vehicles — Screened and waterproof spark-plug and its connection — Type 2

ISO 3896:1986

Road vehicles — Screened and waterproof spark-plug and its connection — Type 3

ISO 4024:1992

Road vehicles — Ignition coils — Low-tension cable connections

ISO 4091:2003

Road vehicles — Connectors for the electrical connection of towing and towed vehicles — Definitions, tests and requirements

ISO 4141-1:2019

Road vehicles — Multi-core connecting cables — Part 1: Test methods and requirements for basic performance sheathed cables

ISO 4141-2:2019

Road vehicles — Multi-core connecting cables — Part 2: Test methods and requirements for high performance sheathed cables

ISO 4141-3:2019

Road vehicles — Multi-core connecting cables — Part 3: Construction, dimensions and marking of unscreened sheathed low-voltage cables

ISO 4141-4:2009

Road vehicles — Multi-core connecting cables — Part 4: Test methods and requirements for coiled cable assemblies

ISO 4165:2001

Road vehicles — Electrical connections — Double-pole connection

ISO 6518-1:2002

Road vehicles — Ignition systems — Part 1: Vocabulary

ISO 6518-2:1995

Road vehicles — Ignition systems — Part 2: Electrical performance and function test methods

ISO 6518-2:1995/COR 1:1997

Road vehicles — Ignition systems — Part 2: Electrical performance and function test methods — Technical Corrigendum 1

ISO 6722-1:2011

Road vehicles — 60 V and 600 V single-core cables — Part 1: Dimensions, test methods and requirements for copper conductor cables

ISO 6722-1:2011/COR 1:2012

Road vehicles — 60 V and 600 V single-core cables — Part 1: Dimensions, test methods and requirements for copper conductor cables — Technical Corrigendum 1

ISO 6722-2:2013

Road vehicles — 60 V and 600 V single-core cables — Part 2: Dimensions, test methods and requirements for aluminium conductor cables

ISO 6856:2005

Road vehicles — Unscreened high-voltage ignition cable assemblies — Test methods and general requirements

ISO 6969:2004

Road vehicles — Sound signalling devices — Tests after mounting on vehicle

ISO 7588-1:1998

Road vehicles — Electrical/electronic switching devices — Part 1: Relays and flashers

ISO 7588-2:1998

Road vehicles — Electrical/electronic switching devices — Part 2: Electronic devices

ISO 7588-3:1998

Road vehicles — Electrical/electronic switching devices — Part 3: Microrelays

ISO 7637-1:2015

Road vehicles — Electrical disturbances from conduction and coupling — Part 1: Definitions and general considerations

ISO 7637-2:2011

Road vehicles — Electrical disturbances from conduction and coupling — Part 2: Electrical transient conduction along supply lines only

ISO 7637-3:2016

Road vehicles — Electrical disturbances from conduction and coupling — Part 3: Electrical transient transmission by capacitive and inductive coupling via lines other than supply lines

ISO/TS 7637-4:2020

Road Vehicles — Electrical disturbance by conduction and coupling — Part 4: Electrical transient conduction along shielded high voltage supply lines only

ISO/TR 7637-5:2016

Road vehicles — Electrical disturbances from conduction and coupling — Part 5: Enhanced definitions and verification methods for harmonization of pulse generators according to ISO 7637

ISO 7638-1:2018

Road vehicles — Connectors for the electrical connection of towing and towed vehicles — Part 1: Connectors for braking systems and running gear of vehicles with 24 V nominal supply voltage

ISO 7638-2:2018

Road vehicles — Connectors for the electrical connection of towing and towed vehicles — Part 2: Connectors for braking systems and running gear of vehicles with 12 V nominal supply voltage

ISO 7736:1984

Road vehicles — Car radio for front installation — Installation space including connections

ISO 8092-1:1996

Road vehicles — Connections for on-board electrical wiring harnesses — Part 1: Tabs for single-pole connections — Dimensions and specific requirements

ISO 8092-2:2005

Road vehicles — Connections for on-board electrical wiring harnesses — Part 2: Definitions, test methods and general performance requirements

ISO 8092-3:1996

Road vehicles — Connections for on-board electrical wiring harnesses — Part 3: Tabs for multi-pole connections — Dimensions and specific requirements

ISO 8092-4:1997

Road vehicles — Connections for on-board electrical wiring harnesses — Part 4: Pins for single- and multi-pole connections — Dimensions and specific requirements

ISO 8820-1:2014

Road vehicles — Fuse-links — Part 1: Definitions and general test requirements

ISO 8820-2:2014

Road vehicles — Fuse-links — Part 2: User guidelines

ISO 8820-3:2015

Road vehicles — Fuse-links — Part 3: Fuse-links with tabs (blade type) Type C (medium), Type E (high current) and Type F (miniature)

ISO 8820-4:2016

Road vehicles — Fuse-links — Part 4: Fuse-links with female contacts (type A) and bolt-in contacts (type B) and their test fixtures

ISO 8820-5:2015

Road vehicles — Fuse-links — Part 5: Fuse-links with axial terminals (Strip fuse-links) Types SF 30 and SF 51 and test fixtures

ISO 8820-6:2019

Road vehicles — Fuse-links — Part 6: Single-bolt fuse-links

ISO 8820-8:2019

Road vehicles — Fuse-links — Part 8: Fuse-links with bolt-in contacts (Type H and J) with rated voltage of 450 V

ISO 8820-9:2014

Road vehicles — Fuse-links — Part 9: Fuse-links with shortened tabs (Type K)

ISO 8820-10:2015

Road vehicles — Fuse-links — Part 10: Fuse-links with tabs Type L (high current miniature)

ISO 8820-12:2020

Road vehicles — Fuse-links — Part 12: Fuse-links with tabs (blade type) Type N (sub miniature)

ISO 8820-13:2020

Road vehicles — Fuse-links — Part 13: Fuse-links with tabs (blade type) Type P (sub miniature three tabs)

ISO 8854:2012

Road vehicles — Alternators with regulators — Test methods and general requirements

ISO 8856:2014

Road vehicles — Electrical performance of starter motors — Test methods and general requirements

ISO 9534:1989

Road vehicles — Fuel pump electric connections

ISO/TR 10305-1:2003

Road vehicles — Calibration of electromagnetic field strength measuring devices — Part 1: Devices for measurement of electromagnetic fields at frequencies > 0 Hz

ISO/TR 10305-2:2003

Road vehicles — Calibration of electromagnetic field strength measuring devices — Part 2: IEEE standard for calibration of electromagnetic field sensors and probes, excluding antennas, from 9 kHz to 40 GHz

ISO 10455:1992

Road vehicles — Dry ignition coils using rotating high-voltage distributor

ISO 10483-1:2004

Road vehicles — Intelligent power switches — Part 1: High-side intelligent power switch

ISO 10483-2:1996

Road vehicles — Intelligent power switches — Part 2: Low-side intelligent power switch

ISO 10486:1992

Passenger cars — Car radio identification number (CRIN)

ISO 10487-1:1992

Passenger car radio connections — Part 1: Dimensions and general requirements

ISO 10487-2:1995

Passenger cars — Connections for car radios — Part 2: Performance requirements

ISO 10599-1:1992

Car radios — Coaxial aerial connectors — Part 1: Dimensions

ISO 10599-2:1997

Car radios — Coaxial aerial connectors — Part 2: Characteristic values, performance requirements and tests

ISO 10599-2:1997/COR 1:2005

Car radios — Coaxial aerial connectors — Part 2: Characteristic values, performance requirements and tests — Technical Corrigendum 1

ISO 10605:2008

Road vehicles — Test methods for electrical disturbances from electrostatic discharge

ISO 10605:2008/AMD 1:2014

Road vehicles — Test methods for electrical disturbances from electrostatic discharge — Amendment 1

ISO 10605:2008/COR 1:2010

Road vehicles — Test methods for electrical disturbances from electrostatic discharge — Technical Corrigendum 1

ISO 10924-1:2016

Road vehicles — Circuit breakers — Part 1: Definitions and general test requirements

ISO 10924-2:2014

Road vehicles — Circuit breakers — Part 2: User's guide

ISO 10924-3:2015

Road vehicles — Circuit breakers — Part 3: Miniature circuit breakers with tabs (Blade type), Form CB11

ISO 10924-4:2015

Road vehicles — Circuit breakers — Part 4: Medium circuit breakers with tabs (Blade type), Form CB15

ISO 10924-5:2016

Road vehicles — Circuit breakers — Part 5: Circuit breakers with bolt with rated voltage of 450 V

ISO 11446-1:2012

Road vehicles — Connectors for the electrical connection of towing and towed vehicles — Part 1: 13-pole connectors for vehicles with 12 V nominal supply voltage not intended to cross water fords

ISO 11446-2:2012

Road vehicles — Connectors for the electrical connection of towing and towed vehicles — Part 2: 13-pole connectors for vehicles with 12 V nominal supply voltage intended to cross water fords

ISO 11451-1:2015

Road vehicles — Vehicle test methods for electrical disturbances from narrowband radiated electromagnetic energy — Part 1: General principles and terminology

ISO 11451-2:2015

Road vehicles — Vehicle test methods for electrical disturbances from narrowband radiated electromagnetic energy — Part 2: Off-vehicle radiation sources

ISO 11451-3:2015

Road vehicles — Vehicle test methods for electrical disturbances from narrowband radiated electromagnetic energy — Part 3: On-board transmitter simulation

ISO 11451-4:2013

Road vehicles — Vehicle test methods for electrical disturbances from narrowband radiated electromagnetic energy — Part 4: Bulk current injection (BCI)

ISO 11452-1:2015

Road vehicles — Component test methods for electrical disturbances from narrowband radiated electromagnetic energy — Part 1: General principles and terminology

ISO 11452-2:2019

Road vehicles — Component test methods for electrical disturbances from narrowband radiated electromagnetic energy — Part 2: Absorber-lined shielded enclosure

ISO 11452-3:2016

Road vehicles — Component test methods for electrical disturbances from narrowband radiated electromagnetic energy — Part 3: Transverse electromagnetic (TEM) cell

ISO 11452-4:2020

Road vehicles — Component test methods for electrical disturbances from narrowband radiated electromagnetic energy — Part 4: Harness excitation methods

ISO 11452-5:2002

Road vehicles — Component test methods for electrical disturbances from narrowband radiated electromagnetic energy — Part 5: Stripline

ISO 11452-7:2003

Road vehicles — Component test methods for electrical disturbances from narrowband radiated electromagnetic energy — Part 7: Direct radio frequency (RF) power injection

ISO 11452-7:2003/AMD 1:2013

Road vehicles — Component test methods for electrical disturbances from narrowband radiated electromagnetic energy — Part 7: Direct radio frequency (RF) power injection — Amendment 1

ISO 11452-8:2015

Road vehicles — Component test methods for electrical disturbances from narrowband radiated electromagnetic energy — Part 8: Immunity to magnetic fields

ISO 11452-9:2012

Road vehicles — Component test methods for electrical disturbances from narrowband radiated electromagnetic energy — Part 9: Portable transmitters

ISO 11452-10:2009

Road vehicles — Component test methods for electrical disturbances from narrowband radiated electromagnetic energy — Part 10: Immunity to conducted disturbances in the extended audio frequency range

ISO 11452-11:2010

Road vehicles — Component test methods for electrical disturbances from narrowband radiated electromagnetic energy — Part 11: Reverberation chamber

ISO 11565:2006

Road vehicles — Spark-plugs — Test methods and requirements

ISO 11565:2006/COR 1:2007

Road vehicles — Spark-plugs — Test methods and requirements — Technical Corrigendum 1

ISO 11748-1:2001

Road vehicles — Technical documentation of electrical and electronic systems — Part 1: Content of exchanged documents

ISO 11748-2:2001

Road vehicles — Technical documentation of electrical and electronic systems — Part 2: Documentation agreement

ISO 11748-3:2002

Road vehicles — Technical documentation of electrical and electronic systems — Part 3: Application example

ISO 12098:2004

Road vehicles — Connectors for the electrical connection of towing and towed vehicles — 15-pole connector for vehicles with 24 V nominal supply voltage

ISO 13207-1:2012

Road vehicles — LED lamp characteristics for bulb compatible failure detection — Part 1: LED lamps used as direction indicators

ISO 13476:1997

Road vehicles — Ignition coils — Electrical characteristics and test methods

ISO 13476:1997/COR 1:1999

Road vehicles — Ignition coils — Electrical characteristics and test methods — Technical Corrigendum 1

ISO 14572:2011

Road vehicles — Round, sheathed, 60 V and 600 V screened and unscreened single- or multi-core cables — Test methods and requirements for basic- and high-performance cables

ISO 15170-1:2001

Road vehicles — Four-pole electrical connectors with pins and twist lock — Part 1: Dimensions and classes of application

ISO 15170-2:2001

Road vehicles — Four-pole electrical connectors with pins and twist lock — Part 2: Tests and requirements

ISO 15170-2:2001/COR 1:2013

Road vehicles — Four-pole electrical connectors with pins and twist lock — Part 2: Tests and requirements — Technical Corrigendum 1

ISO/TR 15409:2002

Road vehicles — Heat rating of spark plugs

ISO/TR 15497:2000

Road vehicles — Development guidelines for vehicle based software

ISO 15763:2002

Road vehicles — Alarm systems for buses and commercial vehicles of maximum authorized total mass greater than 3,5 t

ISO 16750-1:2018

Road vehicles — Environmental conditions and testing for electrical and electronic equipment — Part 1: General

ISO 16750-2:2012

Road vehicles — Environmental conditions and testing for electrical and electronic equipment — Part 2: Electrical loads

ISO 16750-3:2012

Road vehicles — Environmental conditions and testing for electrical and electronic equipment — Part 3: Mechanical loads

ISO 16750-4:2010

Road vehicles — Environmental conditions and testing for electrical and electronic equipment — Part 4: Climatic loads

ISO 16750-5:2010

Road vehicles — Environmental conditions and testing for electrical and electronic equipment — Part 5: Chemical loads

ISO 17447-1:2015

Road Vehicles — Glow-plugs with conical seating and their cylinder head housing — Part 1: Basic characteristics and dimensions for metal-sheath-type glow-plugs

ISO 17447-2:2015

Road Vehicles — Glow-plugs with conical seating and their cylinder head housing — Part 2: Basic characteristics and dimensions for ceramic-sheath-type glow-plugs

ISO 17447-3:2015

Road Vehicles — Glow-plugs with conical seating and their cylinder head housing — Part 3: Tests and requirements

ISO 19072-1:2019

Road vehicles — Connection interface for pyrotechnic devices, two-way and three-way connections — Part 1: Pocket interface definition

ISO 19072-2:2019

Road vehicles — Connection interface for pyrotechnic devices, two-way and three-way connections — Part 2: Test methods and general performance requirements

ISO 19072-4:2019

Road vehicles — Connection interface for pyrotechnic devices, two-way and three-way connections — Part 4: Pyrotechnic device and harness connector assembly - type 2

ISO/TS 19072-5:2019

Road vehicles — Connection interface for pyrotechnic devices, two-way and three-way connections — Part 5: Pyrotechnic device and harness connector assembly - type 3 (only two-way)

ISO 19453-1:2018

Road vehicles — Environmental conditions and testing for electrical and electronic equipment for drive system of electric propulsion vehicles — Part 1: General

ISO 19453-3:2018

Road vehicles — Environmental conditions and testing for electrical and electronic equipment for drive system of electric propulsion vehicles — Part 3: Mechanical loads

ISO 19453-4:2018

Road vehicles — Environmental conditions and testing for electrical and electronic equipment for drive system of electric propulsion vehicles — Part 4: Climatic loads

ISO 19453-5:2018

Road vehicles — Environmental conditions and testing for electrical and electronic equipment for drive system of electric propulsion vehicles — Part 5: Chemical loads

ISO 19642-1:2019

Road vehicles — Automotive cables — Part 1: Vocabulary and design guidelines

ISO 19642-2:2019

Road vehicles — Automotive cables — Part 2: Test methods

ISO 19642-3:2019

Road vehicles — Automotive cables — Part 3: Dimensions and requirements for 30 V AC or 60 V DC single core copper conductor cables

ISO 19642-4:2019

Road vehicles — Automotive cables — Part 4: Dimensions and requirements for 30 V AC and 60 V DC single core aluminium conductor cables

ISO 19642-5:2019

Road vehicles — Automotive cables — Part 5: Dimensions and requirements for 600 V AC or 900 V DC and 1 000 V AC or 1 500 V DC single core copper conductor cables

ISO 19642-6:2019

Road vehicles — Automotive cables — Part 6: Dimensions and requirements for 600 V AC or 900 V DC and 1 000 V AC or 1 500 V DC single core aluminium conductor cables

ISO 19642-7:2019

Road vehicles — Automotive cables — Part 7: Dimensions and requirements for 30 V AC or 60 V DC round, sheathed, screened or unscreened multi or single core copper conductor cables

ISO 19642-8:2019

Road vehicles — Automotive cables — Part 8: Dimensions and requirements for 30 V AC or 60 V DC round, sheathed, screened or unscreened multi or single core aluminium conductor cables

ISO 19642-9:2019

Road vehicles — Automotive cables — Part 9: Dimensions and requirements for 600 V AC or 900 V DC and 1 000 V AC or 1 500 V DC round, sheathed, screened or unscreened multi or single core copper conductor cables

ISO 19642-10:2019

Road vehicles — Automotive cables — Part 10: Dimensions and requirements for 600 V AC or 900 V DC and 1 000 V AC or 1 500 V DC round, sheathed, screened or unscreened multi or single core aluminium conductor cables

ISO 19813:2006

Road vehicles — Ignition systems — Test methods and requirements for high voltage boots on plug-top coils and pencil coils

ISO 20076:2019

Road vehicles — Test methods and performance requirements for voltage class B connectors

ISO 20574:2019

Road vehicles — Durability test method for starter motor for stop and start system

ISO 20653:2013

Road vehicles — Degrees of protection (IP code) — Protection of electrical equipment against foreign objects, water and access

ISO 20860-1:2008

Road vehicles — 50 ohms impedance radio frequency connection system interface — Part 1: Dimensions and electrical requirements

ISO 20860-2:2009

Road vehicles — 50 ohms impedance radio frequency connection system interface — Part 2: Test procedures

ISO 20934:2019

Road vehicles — Fuse-links with axial terminals for use in 48V networks — Types SF36-70V, SF51-70V and SF56-70V

ISO 21111-4:2020

Road vehicles — In-vehicle Ethernet — Part 4: General requirements and test methods of optical gigabit Ethernet components

ISO/PAS 21448:2019

Road vehicles — Safety of the intended functionality

ISO/TS 21609:2014

Road vehicles — (EMC) guidelines for installation of aftermarket radio frequency transmitting equipment

ISO 21848:2005

Road vehicles — Electrical and electronic equipment for a supply voltage of 42 V — Electrical loads

ISO 22565:2019

Road vehicles — Durability test method of starter relay for stop and start system

ISO 25981:2008

Road vehicles — Connectors for the electrical connection of towing and towed vehicles — Connectors for electronically monitored charging systems with 12 V or 24 V nominal supply voltage

ISO 25981:2008/COR 1:2008

Road vehicles — Connectors for the electrical connection of towing and towed vehicles — Connectors for electronically monitored charging systems with 12 V or 24 V nominal supply voltage — Technical Corrigendum 1

ISO 26262-1:2018

Road vehicles — Functional safety — Part 1: Vocabulary

ISO 26262-2:2018

Road vehicles — Functional safety — Part 2: Management of functional safety

ISO 26262-3:2018

Road vehicles — Functional safety — Part 3: Concept phase

ISO 26262-4:2018

Road vehicles — Functional safety — Part 4: Product development at the system level

ISO 26262-5:2018

Road vehicles — Functional safety — Part 5: Product development at the hardware level

ISO 26262-6:2018

Road vehicles — Functional safety — Part 6: Product development at the software level

ISO 26262-7:2018

Road vehicles — Functional safety — Part 7: Production, operation, service and decommissioning

ISO 26262-8:2018

Road vehicles — Functional safety — Part 8: Supporting processes

ISO 26262-9:2018

Road vehicles — Functional safety — Part 9: Automotive safety integrity level (ASIL)-oriented and safety-oriented analyses

ISO 26262-10:2018

Road vehicles — Functional safety — Part 10: Guidelines on ISO 26262

ISO 26262-11:2018

Road vehicles — Functional safety — Part 11: Guidelines on application of ISO 26262 to semiconductors

ISO 26262-12:2018

Road vehicles — Functional safety — Part 12: Adaptation of ISO 26262 for motorcycles

ISO 28741:2013

Road vehicles — Spark-plugs and their cylinder head housings — Basic characteristics and dimensions

Standards under development:

ISO 6969:2004/DAMD 1

Road vehicles — Sound signalling devices — Tests after mounting on vehicle — Amendment 1

ISO/CD 7637-2

Road vehicles — Electrical disturbances by conduction and coupling — Part 2: Electrical transient conduction along supply lines

ISO/TS 7637-4

Road Vehicles — Electrical disturbance by conduction and coupling — Part 4: Electrical transient conduction along shielded high voltage supply lines only

ISO/AWI 8092-2

Road vehicles — Connections for on-board electrical wiring harnesses — Part 2: Definitions, test methods and general performance requirements

ISO/DIS 8092-5

Road vehicles — Connections for on-board electrical wiring harnesses — Part 5: Test methods and general performance requirements for wiring harness connector operation

ISO/WD 8092-6

Road vehicles — Connections for on-board electrical wiring harnesses — Part 6: In-vehicle Ethernet, general performance requirements and interface definitions

ISO/DIS 8820-10

Road vehicles — Fuse-links — Part 10: Fuse-links with tabs Type L (high current miniature)

ISO 8820-11

Road vehicles — Fuse-links — Part 11: Fuse-links with tabs (blade type) Type M (medium-high current)

ISO/WD 10605

Road vehicles — Test methods for electrical disturbances from electrostatic discharge

ISO/WD 11451-4

Road vehicles — Vehicle test methods for electrical disturbances from narrowband radiated electromagnetic energy — Part 4: Harness excitation method

ISO/AWI 11451-5

Road vehicles — Vehicle test methods for electrical disturbances from narrowband radiated electromagnetic energy — Part 5: Reverberation chamber

ISO/CD 11452-9.2

Road vehicles — Component test methods for electrical disturbances from narrowband radiated electromagnetic energy — Part 9: Portable transmitters

ISO/AWI 11452-10

Road vehicles — Component test methods for electrical disturbances from narrowband radiated electromagnetic energy — Part 10: Immunity to conducted disturbances in the extended audio frequency range

ISO 12098

Road vehicles — Connectors for the electrical connection of towing and towed vehicles — 15-pole connector for vehicles with 24 V nominal supply voltage

ISO/AWI 16750-1

Road vehicles — Environmental conditions and testing for electrical and electronic equipment — Part 1: General

ISO/AWI 16750-2

Road vehicles — Environmental conditions and testing for electrical and electronic equipment — Part 2: Electrical loads

ISO/AWI 16750-3

Road vehicles — Environmental conditions and testing for electrical and electronic equipment — Part 3: Mechanical loads

ISO/AWI 16750-4

Road vehicles — Environmental conditions and testing for electrical and electronic equipment — Part 4: Climatic loads

ISO/AWI 16750-5

Road vehicles — Environmental conditions and testing for electrical and electronic equipment — Part 5: Chemical loads

ISO/CD 17447-1

Road Vehicles — Glow-plugs with conical seating and their cylinder head housing — Part 1: Basic characteristics and dimensions for metal-sheath-type glow-plugs

ISO/FDIS 19453-6

Road vehicles — Environmental conditions and testing for electrical and electronic equipment for drive system of electric propulsion vehicles — Part 6: Traction battery packs and systems

ISO/AWI 19642-11

Road vehicles — Automotive cables — Part 11: Dimensions and requirements for coaxial RF cables with a specified analog bandwidth up to 6 GHz (20 GHZ)

ISO/AWI 19642-12

Road vehicles — Automotive cables — Part 12: Unscreened paired or quad RF cables with a specified analog bandwidth up to 1 GHz

ISO/AWI 20653

Road vehicles — Degrees of protection (IP code) — Protection of electrical equipment against foreign objects, water and access

ISO/CD 21111-8

Road vehicles — In-vehicle Ethernet — Part 8: Electrical 100-Mbit/s Ethernet transmission media, components and tests

ISO/SAE DIS 21434

Road vehicles — Cybersecurity engineering

ISO/CD 21448

Road vehicles — Safety of the intended functionality

ISO/FDIS 21780

Road vehicles — Supply voltage of 48 V — Electrical requirements and tests

ISO/AWI 24089

Road vehicles — Software update engineering

ISO/AWI 24195

Road vehicles — Vocabulary for engineering of starting devices and electrical generators

ISO/FDIS 25981

Road vehicles — Connectors for the electrical connection of towing and towed vehicles — Connectors for electronically monitored charging systems with 12 V or 24 V nominal supply voltage

ISO/AWI 28741

Road vehicles — Spark-plugs and their cylinder head housings — Basic characteristics and dimensions

3.2.45 ISO/TC 22/SC 33 - Vehicle dynamics and chassis components

Scope:

Lateral and longitudinal vehicle dynamics and controls/ systems/ functions affecting vehicle dynamics, such as chassis components, wheels, steering, brakes and suspension. This includes automated driving, means and performance of collision avoidance and mitigation.

Structure:

ISO/TC 22/SC 33/WG 2	Vehicle dynamics of passenger cars
ISO/TC 22/SC 33/WG 3	Driver assistance and active safety functions
ISO/TC 22/SC 33/WG 5	Wheels
ISO/TC 22/SC 33/WG 6	Vehicle dynamics of heavy commercial vehicles and buses
ISO/TC 22/SC 33/WG 9	Test scenarios of automated driving systems
ISO/TC 22/SC 33/WG 10	Brake linings and friction couples
ISO/TC 22/SC 33/WG 11	Simulation
ISO/TC 22/SC 33/WG 14	Brake fluids
ISO/TC 22/SC 33/WG 16	Active Safety test equipment

Standards:

ISO 611:2003

Road vehicles — Braking of automotive vehicles and their trailers — Vocabulary

ISO 1728:2006

Road vehicles — Pneumatic braking connections between motor vehicles and towed vehicles — Interchangeability

ISO 3006:2015

Road vehicles — Passenger car wheels for road use — Test methods

ISO 3583:1984

Road vehicles — Pressure test connection for compressed-air pneumatic braking equipment

ISO 3803:1984

Road vehicles — Hydraulic pressure test connection for braking equipment

ISO 3871:2000

Road vehicles — Labelling of containers for petroleum-based or non-petroleum-based brake fluid

ISO 3888-1:2018

Passenger cars — Test track for a severe lane-change manoeuvre — Part 1: Double lane-change

ISO 3888-2:2011

Passenger cars — Test track for a severe lane-change manoeuvre — Part 2: Obstacle avoidance

ISO 3894:2015

Road vehicles — Wheels/rims for commercial vehicles — Test methods

ISO 3911:2004

Wheels and rims for pneumatic tyres — Vocabulary, designation and marking

ISO 3996:1995

Road vehicles — Brake hose assemblies for hydraulic braking systems used with non-petroleum-base brake fluid

ISO 4038:1996

Road vehicles — Hydraulic braking systems — Simple flare pipes, tapped holes, male fittings and hose end fittings

ISO 4039-1:1998

Road vehicles — Pneumatic braking systems — Part 1: Pipes, male fittings and tapped holes with facial sealing surface

ISO 4039-2:1998

Road vehicles — Pneumatic braking systems — Part 2: Pipes, male fittings and holes with conical sealing surface

ISO 4107:2010

Commercial vehicles — Wheel-hub attachment dimensions

ISO 4138:2012

Passenger cars — Steady-state circular driving behaviour — Open-loop test methods

ISO 4925:2005

Road vehicles — Specification of non-petroleum-base brake fluids for hydraulic systems

ISO 4926:2006

Road vehicles — Hydraulic braking systems — Non-petroleum-base reference fluids

ISO 4927:2005

Road vehicles — Elastomeric boots for cylinders for drum type hydraulic brake wheel cylinders using a non-petroleum base hydraulic brake fluid (Service temperature 120 degrees C max.)

ISO 4928:2006

Road vehicles — Elastomeric cups and seals for cylinders for hydraulic braking systems using a non-petroleum base hydraulic brake fluid (Service temperature 120 degrees C max.)

ISO 4929:1978

Road vehicles — Diaphragm gaskets for hydraulic brake master cylinder reservoirs using a non-petroleum base hydraulic brake fluid

ISO 4930:2006

Road vehicles — Elastomeric seals for hydraulic disc brake cylinders using a non-petroleum base hydraulic brake fluid (Service temperature 150 degrees C max.)

ISO 6117:2005

Road vehicles — Elastomeric boots for drum-type, hydraulic brake wheel cylinders using a non-petroleum base hydraulic brake fluid (service temperature 100 degrees C max.)

ISO 6118:2006

Road vehicles — Elastomeric cups and seals for cylinders for hydraulic braking systems using a non-petroleum base hydraulic brake fluid (service temperature 70 degrees C max.)

ISO 6119:2006

Road vehicles — Elastomeric seals for hydraulic disc brake cylinders using a non-petroleum base hydraulic brake fluid (Service temperature 120 degrees C max.)

ISO 6120:1995

Road vehicles — Brake hose assemblies for hydraulic braking systems used with petroleum-base brake fluid

ISO 6310:2009

Road vehicles — Brake linings — Compressive strain test methods

ISO 6311:1980

Road vehicles — Brake linings — Internal shear strength of lining material — Test procedure

ISO 6312:2010

Road vehicles — Brake linings — Shear test procedure for disc brake pad and drum brake shoe assemblies

ISO 6313:1980

Road vehicles — Brake linings — Effects of heat on dimensions and form of disc brake pads — Test procedure

ISO 6314:1980

Road vehicles — Brake linings — Resistance to water, saline solution, oil and brake fluid — Test procedure

ISO 6315:1980

Road vehicles — Brake linings — Seizure to ferrous mating surface due to corrosion — Test procedure

ISO 6597:2005

Road vehicles — Hydraulic braking systems, including those with electronic control functions, for motor vehicles — Test procedures

ISO 6786:1980

Road vehicles — Air braking systems — Identification of connections on units

ISO 7141:2005

Road vehicles — Light alloy wheels — Impact test

ISO 7308:1987

Road vehicles — Petroleum-based brake-fluid for stored-energy hydraulic brakes

ISO 7309:1985

Road vehicles — Hydraulic braking systems — ISO reference petroleum base fluid

ISO 7375-1:1986

Road vehicles — Coiled pipe assemblies for pneumatic braking connection between motor vehicles and towed vehicles — Part 1: Dimensions

ISO 7375-2:1998

Road vehicles — Coiled tube assemblies for air brake connection between towing and towed vehicles — Part 2: Performance requirements

ISO 7401:2011

Road vehicles — Lateral transient response test methods — Open-loop test methods

ISO 7575:1993

Commercial road vehicles — Flat attachment wheel fixing nuts

ISO 7628:2010

Road vehicles — Thermoplastics tubing for air braking systems

ISO 7629:1987

Road vehicles — Brake linings — Disc brake pads — Evaluation of surface and material flaws after testing

ISO 7630:1985

Road vehicles — Elastomeric O-rings for hydraulic drum brake wheel cylinders using a petroleum base hydraulic brake fluid (service temperature 120 degrees C max.)

ISO 7631:1985

Road vehicles — Elastomeric cups and seals for cylinders for hydraulic braking systems using a petroleum base hydraulic brake fluid (service temperature 120 degrees C max.)

ISO 7632:1985

Road vehicles — Elastomeric seals for hydraulic disc brake cylinders using a petroleum base hydraulic brake fluid (service temperature 120 degrees C max.)

ISO 7633:1985

Road vehicles — Elastomeric boots for drum type hydraulic brake wheel cylinders using a petroleum base hydraulic brake fluid (service temperature 120 degrees C max.)

ISO 7634:2007

Road vehicles — Compressed air braking systems for towed vehicles including those with electronic braking control functions — Test procedures

ISO 7635:2006

Road vehicles — Air and air/hydraulic braking systems of motor vehicles, including those with electronic control functions — Test procedures

ISO 7975:2019

Passenger cars — Braking in a turn — Open-loop test method

ISO 8349:2002

Road vehicles — Measurement of road surface friction

ISO 8720:1991

Passenger cars — Specifications for mechanical jacks

ISO 8855:2011

Road vehicles — Vehicle dynamics and road-holding ability — Vocabulary

ISO 9128:2006

Road vehicles — Graphical symbols to designate brake fluid types

ISO 9815:2010

Road vehicles — Passenger-car and trailer combinations — Lateral stability test

ISO 9816:2018

Passenger cars — Power-off reaction of a vehicle in a turn — Open-loop test method

ISO 10392:2011

Road vehicles — Determination of centre of gravity

ISO 10597:2012

Road vehicles — Flat attachment fixing nuts for commercial vehicles — Test methods

ISO 11012:2009

Heavy commercial vehicles and buses — Open-loop test methods for the quantification of on-centre handling — Weave test and transition test

ISO 11026:2010

Heavy commercial vehicles and buses — Test method for roll stability — Closing-curve test

ISO 11157:2005

Road vehicles — Brake lining assemblies — Inertia dynamometer test method

ISO 11530:1993

Road vehicles — Hydraulic jacks — Specifications

ISO 12021:2010

Road vehicles — Sensitivity to lateral wind — Open-loop test method using wind generator input

ISO 12161:2006

Road vehicles — Endurance braking systems of motor vehicles and towed vehicles — Test procedures

ISO 13486-1:1999

Road vehicles — Hydraulic braking systems — Part 1: Double-flare pipes, tapped holes, male fittings and tube seats

ISO/TR 13487:1997

Braking of road vehicles — Considerations on the definition of mean fully developed deceleration

ISO 13674-1:2010

Road vehicles — Test method for the quantification of on-centre handling — Part 1: Weave test

ISO 13674-2:2016

Road vehicles — Test method for the quantification of on-centre handling — Part 2: Transition test

ISO 13988:2008

Passenger vehicle wheels — Clip balance weight and rim flange nomenclature, test procedures and performance requirements

ISO 14400:2005

Road vehicles — Wheels and rims — Use, general maintenance and safety requirements and out-of-service conditions

ISO 14512:1999

Passenger cars — Straight-ahead braking on surfaces with split coefficient of friction — Open-loop test procedure

ISO 14791:2000

Road vehicles — Heavy commercial vehicle combinations and articulated buses — Lateral stability test methods

ISO 14792:2011

Road vehicles — Heavy commercial vehicles and buses — Steady-state circular tests

ISO 14793:2011

Road vehicles — Heavy commercial vehicles and buses — Lateral transient response test methods

ISO 14794:2011

Heavy commercial vehicles and buses — Braking in a turn — Open-loop test methods

ISO 15037-1:2019

Road vehicles — Vehicle dynamics test methods — Part 1: General conditions for passenger cars

ISO 15037-2:2002

Road vehicles — Vehicle dynamics test methods — Part 2: General conditions for heavy vehicles and buses

ISO 15172:2005

Road vehicles — Wheels — Nut seat strength tests

ISO 15484:2008

Road vehicles — Brake lining friction materials — Product definition and quality assurance

ISO 16234:2006

Heavy commercial vehicles and buses — Straight-ahead braking on surfaces with split coefficient of friction — Open-loop test method

ISO 16333:2011

Heavy commercial vehicles and buses — Steady-state rollover threshold — Tilt-table test method

ISO 16552:2014

Heavy commercial vehicles and buses — Stopping distance in straight-line braking with ABS — Open loop and closed loop test methods

ISO 16833:2006

Road vehicles — Wheels — Measurement of radial and lateral run-out

ISO 17288-1:2011

Passenger cars — Free-steer behaviour — Part 1: Steering-release open-loop test method

ISO 17288-2:2011

Passenger cars — Free-steer behaviour — Part 2: Steering-pulse open-loop test method

ISO 18375:2016

Heavy commercial vehicles and buses — Test method for yaw stability — Sine with dwell test

ISO 19206-1:2018

Road vehicles — Test devices for target vehicles, vulnerable road users and other objects, for assessment of active safety functions — Part 1: Requirements for passenger vehicle rear-end targets

ISO 19206-2:2018

Road vehicles — Test devices for target vehicles, vulnerable road users and other objects, for assessment of active safety functions — Part 2: Requirements for pedestrian targets

ISO 19364:2016

Passenger cars — Vehicle dynamic simulation and validation — Steady-state circular driving behaviour

ISO 19365:2016

Passenger cars — Validation of vehicle dynamic simulation — Sine with dwell stability control testing

ISO 19377:2017

Heavy commercial vehicles and buses — Emergency braking on a defined path — Test method for trajectory measurement

ISO 19380:2019

Heavy commercial vehicles and buses — Centre of gravity measurements — Axle lift, tilt-table and stable pendulum test methods

ISO 19585:2019

Heavy commercial vehicles and buses — Vehicle dynamics simulation and validation — Steady-state circular driving behavior

ISO 19586:2019

Heavy commercial vehicles and buses — Vehicle dynamics simulation and validation — Lateral dynamic stability of vehicle combinations

ISO 20918:2007

Road vehicles — Braking threshold pressures for heavy commercial vehicle combinations with fully pneumatic braking systems — Test with roller brake tester

ISO 21069-1:2004

Road vehicles — Test of braking systems on vehicles with a maximum authorized total mass of over 3,5 t using a roller brake tester — Part 1: Pneumatic braking systems

ISO 21069-2:2008

Road vehicles — Test of braking systems on vehicles with a maximum authorized total mass of over 3,5 t using a roller brake tester — Part 2: Air over hydraulic and purely hydraulic braking systems

ISO 21750:2006

Road vehicles — Safety enhancement in conjunction with tyre inflation pressure monitoring

ISO 21994:2007

Passenger cars — Stopping distance at straight-line braking with ABS — Open-loop test method

ISO 21995:2008

Road vehicles — Test of vehicle air braking systems with a permissible mass of over 3,5 t — Acquisition and use of reference values using a roller brake tester

ISO/PAS 22574:2007

Road vehicles — Brake linings frictions materials — Visual inspection

ISO 26865:2009

Road vehicles — Brake lining friction materials — Standard performance test procedure for commercial vehicles with air brakes

ISO 26866:2009

Road vehicles — Brake lining friction materials — Standard wear test procedure for commercial vehicles with air brakes

ISO 26867:2009

Road vehicles — Brake lining friction materials — Friction behaviour assessment for automotive brake systems

ISO 27667:2011

Road vehicles — Brake lining friction materials — Evaluation of corrosion effects on painted backing plates and brake shoes

Standards under development:

ISO/CD 3894

Road vehicles — Wheels/rims for commercial vehicles — Test methods

ISO/CD 3911

Wheels and rims for pneumatic tyres — Vocabulary, designation and marking

ISO/CD 4107

Commercial vehicles — Wheel-hub attachment dimensions

ISO/PRF 4925

Road vehicles — Specification of non-petroleum-base brake fluids for hydraulic systems

ISO/PRF 4926

Road vehicles — Hydraulic braking systems — Non-petroleum-base reference fluid

ISO/WD PAS 5101

Road vehicles — Field load specification for brake actuation and modulation systems

ISO/WD 6310

Road vehicles — Brake linings — Compressive strain test methods

ISO/AWI 7141

Road vehicles — Light alloy wheels — Impact test

ISO/AWI 7575

Commercial road vehicles — Flat attachment wheel fixing nuts

ISO/CD 11010-1

Passenger cars — Simulation model taxonomy — Part 1: Vehicle dynamics maneuver

ISO/CD 13988

Passenger vehicle wheels — Clip balance weight and rim flange nomenclature, test procedures and performance requirements

ISO/CD 14400

Road vehicles — Wheels and rims — Use, general maintenance and safety requirements and out-of-service conditions

ISO/CD 16833

Road vehicles — Wheels — Measurement of radial and lateral run-out

ISO/DIS 19206-3

Road vehicles — Test devices for target vehicles, vulnerable road users and other objects, for assessment of active safety functions — Part 3: Requirements for passenger vehicle 3D targets

ISO/DIS 19206-4

Road vehicles — Test devices for target vehicles, vulnerable road users and other objects, for assessment of active safety functions — Part 4: Requirements for bicyclist targets

ISO/DIS 21233

Heavy commercial vehicles and buses — Vehicle dynamics simulation and validation — Closing-curve test

ISO/CD 21234

Road vehicles — Heavy commercial vehicles and buses — Moment of inertia measurement

ISO/WD TS 22133-1

Road vehicles — Test object monitoring and control for active safety and automated/autonomous vehicle testing — Part 1: Functional requirements, specifications and communication protocol

ISO/AWI 22135

Road vehicles- Heavy commercial vehicles and buses — Calculation for steady state roll-over threshold

ISO/WD 22138

Heavy commercial vehicles — Vehicle stability during tipper body operation — Tilt table test method

ISO/WD 22139

Heavy commercial vehicles and buses — Test method for steering effort measurement when manoeuvring at low speed or with stationary vehicle

ISO/CD 22140

Road vehicles —Passenger cars — Vehicle dynamic simulation and validation — Lateral transient response test methods

ISO/AWI 22596

Road vehicles — Dynamometer metal pick-up generation procedure for disc brakes

ISO/CD 22733-1

Road vehicles — Test method to evaluate the performance of autonomous emergency braking systems — Part 1: Car-to-car

ISO/CD 22735

Road vehicles —Test method to evaluate the performance of lane-keeping assistance systems

ISO/WD 23365

Heavy commercial vehicles and buses — Definitions of properties for the determination of suspension kinematic and compliance characteristics

ISO/AWI 26867

Road vehicles — Brake lining friction materials — Friction behaviour assessment for automotive brake systems

ISO/WD 34501

Road vehicles — Terms and definitions of test scenarios for automated driving systems

ISO/WD 34502

Road vehicles — Engineering framework and process of scenario-based safety evaluation

ISO/WD 34503

Road vehicles — Taxonomy for operational design domain for automated driving systems

ISO/WD 34504

Road vehicles — Scenario attributes and categorization

3.2.46 ISO/TC 22/SC 34 - Propulsion, powertrain and powertrain fluids

Scope:

Systems and components for combustion based propulsion (such as; coolant, engines, filters, piston pins/rings, powertrain, testing methods, testing procedures, measurement testing apparatus, fuel injection equipment, as well as characteristics and additive fluids definitions (e.g. (AUS32), except lubricants, brake fluids, and fuels.

Structure:

ISO/TC 22/SC 34/AG 1 Paraffinic Fuel Lubricity

ISO/TC 22/SC 34/WG 1	Fuel filters
ISO/TC 22/SC 34/WG 2	Injection equipment
ISO/TC 22/SC 34/WG 3	Air filters
ISO/TC 22/SC 34/WG 4	Piston rings
ISO/TC 22/SC 34/WG 5	Engine test code
ISO/TC 22/SC 34/WG 6	Water injection
ISO/TC 22/SC 34/WG 9	Piston Pins
ISO/TC 22/SC 34/WG 11 crankcase ventilation systems	Separator performance, laboratory and engine test methods for
ISO/TC 22/SC 34/WG 14	NOx reduction additive
ISO/TC 22/SC 34/WG 17	Road vehicles – Cleanliness of components

Standards:

ISO 1585:1992

Road vehicles — Engine test code — Net power

ISO 2534:1998

Road vehicles — Engine test code — Gross power

ISO 2697:1999

Diesel engines — Fuel nozzles — Size "S"

ISO 2698:2016

Diesel engines — Clamp-mounted fuel injectors, types 7 and 28

ISO 2699:1994

Diesel engines — Flange-mounted fuel injectors, size "S" — Types 2, 3, 4, 5 and 6

ISO 2974:2018

Diesel engines — 60° female cones for high-pressure fuel injection components

ISO 3539:1975

Road vehicles — Injection nozzle holder with body, types 8 and 10, and injection nozzle holder with fixing flats, types 9 and 11

ISO 3929:2003

Road vehicles — Measurement methods for exhaust gas emissions during inspection or maintenance

ISO 4008-1:1980

Road vehicles — Fuel injection pump testing — Part 1: Dynamic conditions

ISO 4008-2:1983

Road vehicles — Fuel injection pump testing — Part 2: Static conditions

ISO 4008-3:1987

Road vehicles — Fuel injection pump testing — Part 3: Application and test procedures

ISO 4008-3:1987/AMD 1:2002

Road vehicles — Fuel injection pump testing — Part 3: Application and test procedures — Amendment 1

ISO 4010:1998

Diesel engines — Calibrating nozzle, delay pintle type

ISO 4020:2001

Road vehicles — Fuel filters for diesel engines — Test methods

ISO 4093:1999

Diesel engines — Fuel injection pumps — High-pressure pipes for testing

ISO 4113:2010

Road vehicles — Calibration fluids for diesel injection equipment

ISO 5011:2014

Inlet air cleaning equipment for internal combustion engines and compressors — Performance testing

ISO 5011:2014/AMD 1:2018

Inlet air cleaning equipment for internal combustion engines and compressors — Performance testing — Amendment 1

ISO 6519:2015

Diesel engines — Fuel injection pumps — Tapers for shaft ends and hubs

ISO 6621-1:2018

Internal combustion engines — Piston rings — Part 1: Vocabulary

ISO 6621-2:2020

Internal combustion engines — Piston rings — Part 2: Inspection measuring principles

ISO 6621-3:2000

Internal combustion engines — Piston rings — Part 3: Material specifications

ISO 6621-4:2015

Internal combustion engines — Piston rings — Part 4: General specifications

ISO 6621-5:2020

Internal combustion engines — Piston rings — Part 5: Quality requirements

ISO 6622-1:2003

Internal combustion engines — Piston rings — Part 1: Rectangular rings made of cast iron

ISO 6622-2:2013

Internal combustion engines — Piston rings — Part 2: Rectangular rings made of steel

ISO 6623:2013

Internal combustion engines — Piston rings — Scraper rings made of cast iron

ISO 6624-1:2017

Internal combustion engines — Piston rings — Part 1: Keystone rings made of cast iron

ISO 6624-2:2016

Internal combustion engines — Piston rings — Part 2: Half keystone rings made of cast iron

ISO 6624-3:2017

Internal combustion engines — Piston rings — Part 3: Keystone rings made of steel

ISO 6624-4:2016

Internal combustion engines — Piston rings — Part 4: Half keystone rings made of steel

ISO 6625:1986

Internal combustion engines — Piston rings — Oil control rings

ISO 6626-2:2013

Internal combustion engines — Piston rings — Part 2: Coil-spring-loaded oil control rings of narrow width made of cast iron

ISO 6626-3:2019

Internal combustion engines — Piston rings — Part 3: Coil-spring-loaded oil control rings made of steel

ISO 6626:1989

Internal combustion engines — Piston rings — Coil-spring-loaded oil control rings

ISO 6627:2011

Internal combustion engines — Piston rings — Expander/segment oil-control rings

ISO 7026:1997

Diesel engines — Screw-in injection nozzle holders, types 20, 21, 21.1 and 27 for pintle nozzle size "S", type "B"

ISO 7030:1987

Road vehicles — Screw-mounted injection nozzle holders, types 12, 13, 14, 15, 16, 17, 18 and 19

ISO 7299-1:2007

Diesel engines — End-mounting flanges for pumps — Part 1: Fuel injection pumps

ISO 7299-2:2009

Diesel engines — End-mounting flanges for pumps — Part 2: High-pressure supply pumps for common rail fuel injection systems

ISO 7310:1993

Diesel engines — Heads for spin-on fuel filters with horizontal flange — Mounting and connecting dimensions

ISO 7311:1993

Diesel engines — Heads for fuel filters with vertical flange — Mounting and connecting dimensions

ISO 7440-1:1991

Road vehicles — Fuel injection equipment testing — Part 1: Calibrating nozzle and holder assemblies

ISO 7440-2:1991

Road vehicles — Fuel injection equipment testing — Part 2: Orifice plate flow-measurement

ISO 7612:2018

Diesel engines — Base-mounted in-line fuel injection pumps and high-pressure supply pumps for common rail fuel injection systems — Mounting dimensions

ISO 7654:1998

Road vehicles — Spin-on fuel filters for diesel engines — Mounting and connecting dimensions

ISO 7876-1:1990

Fuel injection equipment — Vocabulary — Part 1: Fuel injection pumps

ISO 7876-1:1990/AMD 1:1999

Fuel injection equipment — Vocabulary — Part 1: Fuel injection pumps — Amendment 1

ISO 7876-2:1991

Fuel injection equipment — Vocabulary — Part 2: Fuel injectors

ISO 7876-2:1991/AMD 1:1999

Fuel injection equipment — Vocabulary — Part 2: Fuel injectors — Amendment 1

ISO 7876-3:1993

Fuel injection equipment — Vocabulary — Part 3: Unit injectors

ISO 7876-4:2004

Fuel injection equipment — Vocabulary — Part 4: High-pressure pipes and end-connections

ISO 7876-5:2004

Fuel injection equipment — Vocabulary — Part 5: Common rail fuel injection system

ISO 7879:1997

Diesel engines — Cradle-mounted in-line fuel injection pumps — Mounting dimensions

ISO 8356:1984

Road vehicles — Diesel engines — Screw-in injector, type 22

ISO 8535-1:2016

Diesel engines — Steel tubes for high-pressure fuel injection pipes — Part 1: Requirements for seamless cold-drawn single-wall tubes

ISO 8535-2:2003

Compression-ignition engines — Steel tubes for high-pressure fuel injection pipes — Part 2: Requirements for composite tubes

ISO 8984-1:1993

Diesel engines — Testing of fuel injectors — Part 1: Hand-lever-operated testing and setting apparatus

ISO 8984-2:1993

Diesel engines — Testing of fuel injectors — Part 2: Test methods

ISO 9102:1997

Diesel engines — Screw-in injection nozzle holders, types 24, 25, 26 and 26.1

ISO 9103:1987

Road vehicles — Compression-ignition engines — Screw-in injection nozzle holder, type 23

ISO 9158:1988

Road vehicles — Nozzle spouts for unleaded gasoline

ISO 9159:1988

Road vehicles — Nozzle spouts for leaded gasoline and diesel fuel

ISO 9817:1991

Passenger cars — Engine cooling systems — Dimensions of pressure caps and their ramp seats on filler necks

ISO 9818:1991

Passenger cars — Engine cooling systems — Test methods and marking of pressure caps

ISO 10054:1998

Internal combustion compression-ignition engines — Measurement apparatus for smoke from engines operating under steady-state conditions — Filter-type smokemeter

ISO 10521-1:2006

Road vehicles — Road load — Part 1: Determination under reference atmospheric conditions

ISO 10521-2:2006

Road vehicles — Road load — Part 2: Reproduction on chassis dynamometer

ISO/TS 11155-1:2001

Road vehicles — Air filters for passenger compartments — Part 1: Test for particulate filtration

ISO 11155-2:2009

Road vehicles — Air filters for passenger compartments — Part 2: Test for gaseous filtration

ISO 11841-1:2000

Road vehicles and internal combustion engines — Filter vocabulary — Part 1: Definitions of filters and filter components

ISO 11841-2:2000

Road vehicles and internal combustion engines — Filter vocabulary — Part 2: Definitions of characteristics of filters and their components

ISO 12103-1:2016

Road vehicles — Test contaminants for filter evaluation — Part 1: Arizona test dust

ISO 12103-2:1997

Road vehicles — Test dust for filter evaluation — Part 2: Aluminium oxide test dust

ISO 12156-2:2017

Diesel fuel — Assessment of lubricity using the high-frequency reciprocating rig (HFRR) — Part 2: Limit

ISO 12251:2017

Diesel engines — Clamp mounted CR fuel injectors — Mounting dimensions

ISO 12345:2013

Diesel engines — Cleanliness assessment of fuel injection equipment

ISO 13043:2011

Road vehicles — Refrigerant systems used in mobile air conditioning systems (MAC) — Safety requirements

ISO 13296:2016

Diesel engines — High-pressure fuel injection pipe assemblies — General requirements and dimensions

ISO 13331:1995

Road vehicles — Filler pipes and openings of motor vehicle fuel tanks — Vapour recovery system

ISO 13556:1998

Road vehicles — Localization of exhaust system leaks and equipment specifications

ISO 13948-1:2015

Diesel engines — Fuel injection pumps and fuel injector low-pressure connections — Part 1: Threaded connections

ISO 13948-2:2016

Diesel engines — Fuel injection pumps and fuel injector low-pressure connections — Part 2: Non-threaded (push-on) connections

ISO 14681:1998

Diesel engines — Fuel injection pump testing — Calibrating fuel injectors

ISO 16183:2002

Heavy duty engines — Measurement of gaseous emissions from raw exhaust gas and of particulate emissions using partial flow dilution systems under transient test conditions

ISO 16185:2000

Road vehicles — Engine families for certification of heavy-duty vehicles by Exhaust emission

ISO 16232:2018

Road vehicles — Cleanliness of components and systems

ISO 16247:2004

Road vehicles — Detection of exhaust system leaks — Helium test method and detection device specification

ISO 16332:2018

Diesel engines — Fuel filters — Method for evaluating fuel/water separation efficiency

ISO 17536-1:2015

Road vehicles — Aerosol separator performance test for internal combustion engines — Part 1: General

ISO/TS 17536-2:2017

Road vehicles — Aerosol separator performance test for internal combustion engines — Part 2: Laboratory test method

ISO/TS 17536-3:2014

Road vehicles — Aerosol separator performance test for internal combustion engines — Part 3: Method to perform engine gravimetric test

ISO 17536-4:2019

Road Vehicles — Aerosol separator performance test for internal combustion engines — Part 4: Laboratory fractional efficiency test method

ISO/TS 17536-5:2018

Road Vehicles — Aerosol separator performance test for internal combustion engines — Part 5: Engine fractional efficiency test method and upstream distribution sampling method

ISO 18418-1:2016

Gasoline engines — Medium pressure liquid fuel supply connections — Part 1: 60° female cone connectors

ISO 18418-2:2014

Gasoline engines — Medium pressure liquid fuel supply connections — Part 2: Pipe assemblies

ISO 18669-1:2013

Internal combustion engines — Piston pins — Part 1: General specifications

ISO 18669-2:2020

Internal combustion engines — Piston pins — Part 2: Inspection measuring principles

ISO 19438:2003

Diesel fuel and petrol filters for internal combustion engines — Filtration efficiency using particle counting and contaminant retention capacity

ISO/TS 19713-1:2010

Road vehicles — Inlet air cleaning equipment for internal combustion engines and compressors — Part 1: Fractional efficiency testing with fine particles (0,3 µm to 5 µm optical diameter)

ISO/TS 19713-2:2010

Road vehicles — Inlet air cleaning equipment for internal combustion engines and compressors — Part 2: Fractional efficiency testing with coarse particles (5 µm to 40 µm optical diameter)

ISO 19724:2016

Gasoline engines with direct injection — Cleanliness assessment of fuel injection equipment

ISO 21042:2018

Gasoline engines with direct fuel injection (GDI engines) — Installation of the high pressure fuel pump to the engine

ISO 21441:2019

Road vehicles — Engine EGR cooler — Heat dissipation test methods

ISO 22241-1:2019

Diesel engines — NOx reduction agent AUS 32 — Part 1: Quality requirements

ISO 22241-1:2019/AMD 1:2019

Diesel engines — NOx reduction agent AUS 32 — Part 1: Quality requirements — Amendment 1

ISO 22241-2:2019

Diesel engines — NOx reduction agent AUS 32 — Part 2: Test methods

ISO 22241-3:2017

Diesel engines — NOx reduction agent AUS 32 — Part 3: Handling, transportation, and storage

ISO 22241-4:2019

Diesel engines — NOx reduction agent AUS 32 — Part 4: Refilling interface

ISO 22241-5:2019

Diesel engines — NOx reduction agent AUS 32 — Part 5: Refilling interface for passenger cars

Standards under development:

ISO/FDIS 1585

Road vehicles — Engine test code — Net power

ISO 2534

Road vehicles — Engine test code — Gross power

ISO/AWI 4020

Road vehicles — Fuel filters for diesel engines — Test methods

ISO/FDIS 5011

Inlet air cleaning equipment for internal combustion engines and compressors — Performance testing

ISO/DIS 6621-3

Internal combustion engines — Piston rings — Part 3: Material specifications

ISO/DIS 6622-1

Internal combustion engines — Piston rings — Part 1: Rectangular rings made of cast iron

ISO/WD 6622-2

Internal combustion engines — Piston rings — Part 2: Rectangular rings made of steel

ISO/AWI 6627

Internal combustion engines — Piston rings — Expander/segment oil-control rings

ISO/DIS 7299-2

Diesel engines — End-mounting flanges for pumps — Part 2: High-pressure supply pumps for common rail fuel injection systems

ISO/PRF TS 12103-3

Road vehicles — Test contaminants for filter evaluation — Part 3: Soot contaminant

ISO/DIS 12345

Diesel engines — Cleanliness assessment of fuel injection equipment

ISO 17536-1:2015/DAMD 1

Road vehicles — Aerosol separator performance test for internal combustion engines — Part 1: General — Amendment 1

ISO/DIS 18669-1

Internal combustion engines — Piston pins — Part 1: General specifications

ISO/AWI 19612

Road vehicles — Diesel engine fuel filters — Single pass method of evaluating filtration performance of a fuel filter under cyclic flow conditions in combination with mechanical vibration

ISO 19724

Gasoline engines with direct injection — Cleanliness assessment of fuel injection equipment

ISO/CD 20724

Road vehicles — Inlet air filters for internal combustion engines, compressor inlet and passenger compartments — Test for sub-micron filtration

ISO/DIS 22561.2

Gasoline engines with direct fuel injection (GDI engines) — Installation of the injectors to the engine

ISO/WD 23820

Road vehicles — Determination of the filtration efficiency of urea filter modules

ISO/CD 31120-1

Road vehicles — Demineralized water — Part 1: Quality requirements

3.2.47 ISO/TC 22/SC 35 - Lighting and visibility

Scope:

Visibility and Conspicuity; Lighting and light-signalling and safety glazing materials.

Structure:

ISO/TC 22/SC 35/WG 1   Lighting and light-signalling

ISO/TC 22/SC 35/WG 2   Safety glazing

ISO/TC 22/SC 35/WG 3   Visibility

Standards:

ISO 3468:2014

Passenger cars — Windscreen defrosting and demisting systems — Test method

ISO 3469:1989

Passenger cars — Windscreen washing systems — Test methods

ISO 3469:1989/AMD 1:2006

Passenger cars — Windscreen washing systems — Test methods — Amendment 1

ISO 3536:2016

Road vehicles — Safety glazing materials — Vocabulary

ISO 3537:2015

Road vehicles — Safety glazing materials — Mechanical tests

ISO 3538:1997

Road vehicles — Safety glazing materials — Test methods for optical properties

ISO 3917:2016

Road vehicles — Safety glazing materials — Test methods for resistance to radiation, high temperature, humidity, fire and simulated weathering

ISO 4082:1981

Road vehicles — Motor vehicles — Flasher units

ISO 4148:2004

Road vehicles — Special warning lamps — Dimensions

ISO 4513:2010

Road vehicles — Visibility — Method for establishment of eyellipses for driver's eye location

ISO 5740:1982

Road vehicles — Rear view mirrors — Test method for determining reflectance

ISO 5898:1997

Passenger cars — Rear-window defrosting system — Test method

ISO 6255:1997

Passenger cars — Rear-window washing and wiping systems — Test methods

ISO 6797:1982

Road vehicles — Motor vehicles — Production conformity requirements for flasher units

ISO 7397-1:1993

Passenger cars — Verification of driver's direct field of view — Part 1: Vehicle positioning for static measurement

ISO 7397-2:1993

Passenger cars — Verification of driver's direct field of view — Part 2: Test method

ISO 7591:1982

Road vehicles — Retro-reflective registration plates for motor vehicles and trailers — Specification

ISO 9258:1989

Passenger cars — Wiper systems — Wiper blade length

ISO 9259:1991

Passenger cars — Windscreen wiper systems — Wiper arm-to-blade connections

ISO 9259:1991/AMD 1:2001

Passenger cars — Windscreen wiper systems — Wiper arm-to-blade connections — Amendment 1

ISO 9619:1992

Passenger cars — Windscreen wiping systems — Test method

ISO 9619:1992/AMD 1:2002

Passenger cars — Windscreen wiping systems — Test method — Amendment 1

ISO 9704:1990

Passenger cars — Wiper systems — Shaft ends and arm-holes

ISO/TR 9819:1991

Road vehicles — Comparison tables of regulations on photometric requirements of light signalling devices

ISO/TR 10603:1992

Road vehicles — Legal situation concerning lighting and light-signalling devices

ISO 10604:1993

Road vehicles — Measurement equipment for orientation of headlamp luminous beams

ISO/TR 11842:1997

Road vehicles — Comparison of statutory photometric requirements in various countries for lighting devices

ISO 13837:2008

Road vehicles — Safety glazing materials — Method for the determination of solar transmittance

ISO 15082:2016

Road vehicles — Tests for rigid plastic safety glazing materials

ISO 16505:2019

Road vehicles — Ergonomic and performance aspects of Camera Monitor Systems — Requirements and test procedures

ISO 17449:2015

Road vehicles — Safety glazing materials — Test methods for properties of electrically heated glazing

ISO 23013:2016

Road vehicles — Determination of resistance to forced entry of security glass constructions used in vehicle glazing — Test of glazing systems

Standards under development:

ISO/DIS 4513

Road vehicles — Visibility — Method for establishment of eyellipses for driver's eye location

ISO/CD 13837

Road vehicles — Safety glazing materials — Method for the determination of solar transmittance

ISO 16505:2019/WD AMD 1

Road vehicles — Ergonomic and performance aspects of Camera Monitor Systems — Requirements and test procedures — Amendment 1

ISO/AWI TS 21957

Road vehicles — Visibility — Specifications and test procedures for Head-up displays (HUD)

ISO/WD 24650

Road Vehicles — Sensors for automated driving under adverse weather conditions — Assessment of the cleaning system

3.2.48 ISO/TC 22/SC 36 - Safety and impact testing

Scope:

Protection of occupants and vulnerable road users, including

- Passive safety assessment (including vehicle safety preconditioning) :
- Functional analysis
- Evaluation of devices and systems
- Virtual testing
- Accident analysis
- Post crash safety

Structure:

ISO/TC 22/SC 36/WG 1   Car collision test procedures

ISO/TC 22/SC 36/WG 2   Child restraint systems

ISO/TC 22/SC 36/WG 3   Instrumentation

ISO/TC 22/SC 36/WG 5   Anthropomorphic test devices

ISO/TC 22/SC 36/WG 6   Performance criteria expressed in biomechanical terms

ISO/TC 22/SC 36/WG 7   Traffic accident analysis methodology

Standards:

ISO 3560:2013

Road vehicles — Frontal fixed barrier or pole impact test procedure

ISO 3784:1976

Road vehicles — Measurement of impact velocity in collision tests

ISO 6487:2015

Road vehicles — Measurement techniques in impact tests — Instrumentation

ISO 6487:2015/AMD 1:2017

Road vehicles — Measurement techniques in impact tests — Instrumentation — Amendment 1

ISO 6546:2018

Road vehicles — Collection of accident data for evaluation of occupant restraint performance

ISO 6813:1998

Road vehicles — Collision classification — Terminology

ISO/TR 7861:2003

Road vehicles — Injury risk curves for evaluation of occupant protection in frontal impact

ISO 7862:2004

Road vehicles — Sled test procedure for the evaluation of restraint systems by simulation of frontal collisions

ISO 8721:2018

Road vehicles — Measurement techniques in impact tests — Optical instrumentation

ISO 8853:1989

Safety harnesses for competition drivers — Requirements and test methods

ISO/TR 9790:1999

Road vehicles — Anthropomorphic side impact dummy — Lateral impact response requirements to assess the biofidelity of the dummy

ISO/TR 10982:2013

Road vehicles — Test procedures for evaluating out-of-position vehicle occupant interactions with deploying air bags

ISO 11096:2011

Road vehicles — Pedestrian protection — Impact test method for pedestrian thigh, leg and knee

ISO 12097-1:2002

Road vehicles — Airbag components — Part 1: Vocabulary

ISO 12097-2:1996

Road vehicles — Airbag components — Part 2: Testing of airbag modules

ISO 12097-3:2002

Road vehicles — Airbag components — Part 3: Testing of inflator assemblies

ISO/TR 12349-1:2015

Road vehicles — Dummies for restraint system testing — Part 1: Adult dummies

ISO/TR 12349-2:2015

Road vehicles — Dummies for restraint system testing — Part 2: Child dummies

ISO/TR 12350:2013

Road vehicles — Injury risk curves for the evaluation of occupant protection in side impact tests

ISO/TR 12351:1999

Road vehicles — Determination of head contact and duration in impact tests

ISO 12353-1:2020

Road vehicles — Traffic accident analysis — Part 1: Vocabulary

ISO 12353-2:2003

Road vehicles — Traffic accident analysis — Part 2: Guidelines for the use of impact severity measures

ISO/TR 12353-3:2013

Road vehicles — Traffic accident analysis — Part 3: Guidelines for the interpretation of recorded crash pulse data to determine impact severity

ISO 13215-1:2006

Road vehicles — Reduction of misuse risk of child restraint systems — Part 1: Forms for field studies

ISO 13215-2:1999

Road vehicles — Reduction of misuse risk of child restraint systems — Part 2: Requirements and test procedures for correct installation (panel method)

ISO 13215-3:1999

Road vehicles — Reduction of misuse risk of child restraint systems — Part 3: Prediction and assessment of misuse by Misuse Mode and Effect Analysis (MMEA)

ISO 13216-1:1999

Road vehicles — Anchorages in vehicles and attachments to anchorages for child restraint systems — Part 1: Seat bight anchorages and attachments

ISO 13216-1:1999/AMD 1:2006

Road vehicles — Anchorages in vehicles and attachments to anchorages for child restraint systems — Part 1: Seat bight anchorages and attachments — Amendment 1: CRF reduced height specification

ISO 13216-1:1999/AMD 3:2006

Road vehicles — Anchorages in vehicles and attachments to anchorages for child restraint systems — Part 1: Seat bight anchorages and attachments — Amendment 3: Specifications for the detection of use of ISOFIX CRS

ISO 13216-2:2004

Road vehicles — Anchorages in vehicles and attachments to anchorages for child restraint systems — Part 2: Top tether anchorages and attachments

ISO 13216-3:2018

Road vehicles — Anchorages in vehicles and attachments to anchorages for child restraint systems — Part 3: Classification of child restraint system and space in vehicle

ISO 13218:1998

Road vehicles — Child restraint systems — Report form for accidents involving child passengers

ISO/TR 13219:1995

Road vehicles — Risk of thoracic injury associated with Hybrid III sternal deflection due to shoulder belt loading

ISO/TR 13330:2013

Road vehicles — Calculation processes for the neck injury criteria in rear impact

ISO/PAS 13396:2009

Road vehicles - Sled test method to enable the evaluation of side impact protection of child restraint systems - Essential parameters

ISO/TS 13499:2019

Road vehicles — Multimedia data exchange format for impact tests

ISO 14451-1:2013

Pyrotechnic articles — Pyrotechnic articles for vehicles — Part 1: Terminology

ISO 14451-2:2013

Pyrotechnic articles — Pyrotechnic articles for vehicles — Part 2: Test methods

ISO 14451-3:2013

Pyrotechnic articles — Pyrotechnic articles for vehicles — Part 3: Labelling

ISO 14451-4:2013

Pyrotechnic articles — Pyrotechnic articles for vehicles — Part 4: Requirements and categorization for micro gas generators

ISO 14451-5:2013

Pyrotechnic articles — Pyrotechnic articles for vehicles — Part 5: Requirements and categorization for airbag gas generators

ISO 14451-6:2013

Pyrotechnic articles — Pyrotechnic articles for vehicles — Part 6: Requirements and categorization for airbag modules

ISO 14451-7:2013

Pyrotechnic articles — Pyrotechnic articles for vehicles — Part 7: Requirements and categorization for seatbelt pretensioners

ISO 14451-8:2013

Pyrotechnic articles — Pyrotechnic articles for vehicles — Part 8: Requirements and categorization for igniters

ISO 14451-9:2013

Pyrotechnic articles — Pyrotechnic articles for vehicles — Part 9: Requirements and categorization for actuators

ISO 14451-10:2013

Pyrotechnic articles — Pyrotechnic articles for vehicles — Part 10: Requirements and categorization for semi-finished products

ISO 14513:2016

Road vehicles — Pedestrian protection — Head impact test method

ISO/TR 14645:2015

Road vehicles — Test procedures for evaluating child restraint system interactions with deploying air bags

ISO/TR 14646:2007

Road vehicles — Side impact testing of child restraint systems — Review of background data and test methods, and conclusions from the ISO work as of November 2005

ISO/TR 14933:2012

Road vehicles — Test procedures for evaluating out-of-position vehicle occupant interactions with deploying side air bags

ISO/TR 15766:2000

Road vehicles — Pedestrian protection — Targets for the assessment of the biofidelity of pedestrian-leg test devices

ISO/TS 15827:2007

Road vehicles — Test procedures — Evaluating small female dummy arm and forearm interactions with driver frontal airbags and side airbags

ISO 15828:2004

Road vehicles — Offset frontal impact test procedure

ISO 15829:2013

Road vehicles — Side impact test procedures for the evaluation of occupant interactions with side airbags by pole impact simulation

ISO 15830-1:2013

Road vehicles — Design and performance specifications for the WorldSID 50th percentile male side-impact dummy — Part 1: Terminology and rationale

ISO 15830-2:2013

Road vehicles — Design and performance specifications for the WorldSID 50th percentile male side-impact dummy — Part 2: Mechanical subsystems

ISO 15830-3:2013

Road vehicles — Design and performance specifications for the WorldSID 50th percentile male side-impact dummy — Part 3: Electronic subsystems

ISO 15830-4:2013

Road vehicles — Design and performance specifications for the WorldSID 50th percentile male side impact dummy — Part 4: User's manual

ISO/TS 15830-5:2018

Road vehicles — Design and performance specifications for the WorldSID 50th percentile male side-impact dummy — Part 5: Dummy design updates

ISO/TR 16250:2013

Road vehicles — Objective rating metrics for dynamic systems

ISO 16850:2007

Road vehicles — Pedestrian protection — Child head impact test method

ISO 16850:2007/AMD 1:2013

Road vehicles — Pedestrian protection — Child head impact test method — Amendment 1

ISO/TS 17242:2014

Quasi-static calibration procedure for belt force transducers

ISO/TS 17242:2014/AMD 1:2017

Quasi-static calibration procedure for belt force transducers — Amendment 1

ISO 17840-1:2015

Road vehicles — Information for first and second responders — Part 1: Rescue sheet for passenger cars and light commercial vehicles

ISO 17840-2:2019

Road vehicles — Information for first and second responders — Part 2: Rescue sheet for buses, coaches and heavy commercial vehicles

ISO 17840-3:2019

Road vehicles — Information for first and second responders — Part 3: Emergency response guide template

ISO 17840-4:2018

Road vehicles — Information for first and second responders — Part 4: Propulsion energy identification

ISO 17949:2013

Impact test procedures for road vehicles — Seating and positioning procedures for anthropomorphic test devices — Procedure for the WorldSID 5Oth percentile male side-impact dummy in front outboard seating positions

ISO 17949:2013/AMD 1:2017

Impact test procedures for road vehicles — Seating and positioning procedures for anthropomorphic test devices — Procedure for the WorldSID 5Oth percentile male side-impact dummy in front outboard seating positions — Amendment 1

ISO 17949:2013/AMD 2:2018

Impact test procedures for road vehicles — Seating and positioning procedures for anthropomorphic test devices — Procedure for the WorldSID 5Oth percentile male side-impact dummy in front outboard seating positions — Amendment 2

ISO/TR 17950:2016

Impact test procedures for road vehicles — Rear seat positioning procedures for Hybrid III 5th percentile female dummy

ISO/TS 18506:2014

Procedure to construct injury risk curves for the evaluation of road user protection in crash tests

ISO/TS 18571:2014

Road vehicles — Objective rating metric for non-ambiguous signals

ISO/TS 21476:2018

Road vehicles — Displacement calibration method of IR-TRACC devices

ISO/TS 22239-1:2018

Road vehicles — Child seat presence and orientation detection system (CPOD) — Part 1: Specifications and test methods

ISO/TS 22239-2:2018

Road vehicles — Child seat presence and orientation detection system (CPOD) — Part 2: Resonator specification

ISO/TS 22239-3:2017

Road vehicles — Child seat presence and orientation detection system (CPOD) — Part 3: Labelling

ISO/TS 22240:2008

Road vehicles — Vehicles safety information model (VSIM)

ISO 27955:2010

Road vehicles — Securing of cargo in passenger cars, station wagons and multi-purpose vehicles — Requirements and test methods

ISO 27956:2009

Road vehicles — Securing of cargo in delivery vans — Requirements and test methods

ISO/TR 27957:2020

Road vehicles — Temperature measurement in anthropomorphic test devices — Definition of the temperature sensor locations

ISO 29061-1:2010

Road vehicles — Methods and criteria for usability evaluation of child restraint systems and their interface with vehicle anchorage systems — Part 1: Vehicles and child restraint systems equipped with ISOFIX anchorages and attachments

ISO 29061-3:2017

Road vehicles — Methods and criteria for usability evaluation of child restraint systems and their interface with vehicle anchorage systems — Part 3: Installation of child restraint systems using vehicle seat belts

ISO 29061-4:2017

Road vehicles — Methods and criteria for usability evaluation of child restraint systems and their interface with vehicle anchorage systems — Part 4: Securing of child in child restraint system and daily handling aspects

ISO 29061-5:2017

Road vehicles — Methods and criteria for usability evaluation of child restraint systems and their interface with vehicle anchorage systems — Part 5: Installation and securing of child in a booster system

ISO/TS 29062:2009

Road vehicles - Child restraint systems - Sled test method to enable the evaluation of side impact protection

Standards under development:

ISO/AWI 13215-2

Road vehicles — Reduction of misuse risk of child restraint systems — Part 2: Requirements and test procedures for correct installation (panel method)

ISO/AWI 13215-3

Road vehicles — Reduction of misuse risk of child restraint systems — Part 3: Prediction and assessment of misuse by Misuse Mode and Effect Analysis (MMEA)

ISO 13216-3:2018/AWI AMD 1

Road vehicles — Anchorages in vehicles and attachments to anchorages for child restraint systems — Part 3: Classification of child restraint system and space in vehicle — Amendment 1

ISO/DIS 13216-4

Road vehicles — Anchorages in vehicles and attachments to anchorages for child restraint systems — Part 4: Lower tether anchorages

ISO/AWI TS 13396

Road vehicles — Sled test method to enable the evaluation of side impact protection of child restraint systems — Essential parameters

ISO/AWI TR 14933

Road vehicles — Test procedures for evaluating out-of-position vehicle occupant interactions with deploying side air bags

ISO/AWI 15830-1

Road vehicles — Design and performance specifications for the WorldSID 50th percentile male side-impact dummy — Part 1: Terminology and rationale

ISO/AWI 15830-2

Road vehicles — Design and performance specifications for the WorldSID 50th percentile male side-impact dummy — Part 2: Mechanical subsystems

ISO/AWI 15830-3

Road vehicles — Design and performance specifications for the WorldSID 50th percentile male side-impact dummy — Part 3: Electronic subsystems

ISO/AWI 15830-4

Road vehicles — Design and performance specifications for the WorldSID 50th percentile male side impact dummy — Part 4: User's manual

ISO/AWI 17840-1

Road vehicles — Information for first and second responders — Part 1: Rescue sheet for passenger cars and light commercial vehicles

ISO/AWI TR 19222

Road vehicles — Injury risk curves for the THOR dummy

ISO/AWI TS 20458

Road vehicles — Design and performance specifications for advanced Pedestrian Legform Impactor (aPLI)

ISO/AWI TS 20459

Road vehicles — Injury risk functions for advanced Pedestrian Legform Impactor (aPLI)

ISO/DIS 21612

Road vehicles — Crosstalk determination for multi-axis load cell

ISO/AWI TR 21934-1

Road vehicles — Prospective safety performance assessment of pre-crash technology by virtual simulation — Part 1: State-of-the-art and general method overview

ISO/AWI TS 23520

Road vehicles — EQuipment eXchange — data format specification for operational information relevant for equipment exchange and test conduction

ISO/AWI TS 23521

Road vehicles — Calibration procedure for displacement devices

3.2.49 ISO/TC 22/SC 37 - Electrically propelled vehicles

Scope:

Specific aspects of electrically propelled road vehicles, electric propulsion systems, related components and their vehicle integration.

Structure:

ISO/TC 22/SC 37/WG 1   Safety aspects and terminology

ISO/TC 22/SC 37/WG 2   Performance and energy consumption

ISO/TC 22/SC 37/WG 3   Rechargeable energy storage

ISO/TC 22/SC 37/WG 4   Systems and components connected to electric propulsion systems

Standards:

ISO 6469-1:2019

Electrically propelled road vehicles — Safety specifications — Part 1: Rechargeable energy storage system (RESS)

ISO 6469-2:2018

Electrically propelled road vehicles — Safety specifications — Part 2: Vehicle operational safety

ISO 6469-3:2018

Electrically propelled road vehicles — Safety specifications — Part 3: Electrical safety

ISO 6469-3:2018/AMD 1:2020

Electrically propelled road vehicles — Safety specifications — Part 3: Electrical safety — Amendment 1: Withstand voltage test for electric power sources

ISO 6469-4:2015

Electrically propelled road vehicles — Safety specifications — Part 4: Post crash electrical safety

ISO/TR 8713:2019

Electrically propelled road vehicles — Vocabulary

ISO 8714:2002

Electric road vehicles — Reference energy consumption and range — Test procedures for passenger cars and light commercial vehicles

ISO 8715:2001

Electric road vehicles — Road operating characteristics

ISO/TR 11954:2008

Fuel cell road vehicles — Maximum speed measurement

ISO/TR 11955:2008

Hybrid-electric road vehicles — Guidelines for charge balance measurement

ISO 12405-4:2018

Electrically propelled road vehicles —Test specification for lithium-ion traction battery packs and systems — Part 4: Performance testing

ISO/PAS 16898:2012

Electrically propelled road vehicles — Dimensions and designation of secondary lithium-ion cells

ISO 17409:2020

Electrically propelled road vehicles — Conductive power transfer — Safety requirements

ISO 18300:2016

Electrically propelled vehicles — Test specifications for lithium-ion battery systems combined with lead acid battery or capacitor

ISO/PAS 19295:2016

Electrically propelled road vehicles — Specification of voltage sub-classes for voltage class B

ISO 19363:2020

Electrically propelled road vehicles — Magnetic field wireless power transfer — Safety and interoperability requirements

ISO 20762:2018

Electrically propelled road vehicles — Determination of power for propulsion of hybrid electric vehicle

ISO 21782-1:2019

Electrically propelled road vehicles — Test specification for electric propulsion components — Part 1: General test conditions and definitions

ISO 21782-2:2019

Electrically propelled road vehicles — Test specification for electric propulsion components — Part 2: Performance testing of the motor system

ISO 21782-3:2019

Electrically propelled road vehicles — Test specification for electric propulsion components — Part 3: Performance testing of the motor and the inverter

ISO 21782-6:2019

Electrically propelled road vehicles — Test specification for electric propulsion components — Part 6: Operating load testing of motor and inverter

ISO 23273:2013

Fuel cell road vehicles — Safety specifications — Protection against hydrogen hazards for vehicles fuelled with compressed hydrogen

ISO 23274-1:2019

Hybrid-electric road vehicles — Exhaust emissions and fuel consumption measurements — Part 1: Non-externally chargeable vehicles

ISO 23274-2:2012

Hybrid-electric road vehicles — Exhaust emissions and fuel consumption measurements — Part 2: Externally chargeable vehicles

ISO 23828:2013

Fuel cell road vehicles — Energy consumption measurement — Vehicles fuelled with compressed hydrogen

IEC 62752:2016

In-Cable Control and Protection Device for mode 2 charging of electric road vehicles (IC-CPD)

Standards under development:

ISO 6469-1:2019/AWI AMD 1

Electrically propelled road vehicles — Safety specifications — Part 1: Rechargeable energy storage system (RESS) — Amendment 1

ISO/DIS 21498-1

Electrically propelled road vehicles — Electrical specifications and tests for voltage class B systems and components — Part 1: Voltage sub-classes and characteristics

ISO/DIS 21498-2

Electrically propelled road vehicles — Electrical specifications and tests for voltage class B systems and components — Part 2: Electrical tests for components

ISO/CD 21782-4

Electrically propelled road vehicles — Test specification for electric propulsion components — Part 4: Performance testing of the DC/DC converter

ISO/CD 21782-5

Electrically propelled road vehicles — Test specification for electric propulsion components — Part 5: Operating load testing of the motor system

ISO/CD 21782-7

Electrically propelled road vehicles — Test specification for electric propulsion components — Part 7: Operating load testing of the DC/DC converter

ISO/CD 23274-2

Hybrid-electric road vehicles — Exhaust emissions and fuel consumption measurements — Part 2: Externally chargeable vehicles

ISO/CD 23828

Fuel cell road vehicles — Energy consumption measurement — Vehicles fuelled with compressed hydrogen

3.2.50 ISO/TC 22/SC 38 - Motorcycles and mopeds

Scope:

Standarisation of motorcycles, mopeds and their components, concerning compatibility, interchangeability, safety, terminology and test procedures (including the characteristics of instrumentation), in order to evaluate their performances.

Motorcycles and mopeds are to be intended as defined in the relevant definition of ISO 3833.

Structure:

ISO/TC 22/SC 38/WG 1	Pollution and energy
ISO/TC 22/SC 38/WG 2	Electric mopeds and motorcycles
ISO/TC 22/SC 38/WG 3	Functional safety
ISO/TC 22/SC 38/WG 5	Controls

Standards:

ISO 4106:2012

Motorcycles — Engine test code — Net power

ISO 4129:2012

Road vehicles — Mopeds — Symbols for controls, indicators and tell-tales

ISO 4151:1987

Road vehicles — Mopeds — Type, location and functions of controls

ISO 4164:2012

Mopeds — Engine test code — Net power

ISO 6460-1:2007

Motorcycles — Measurement method for gaseous exhaust emissions and fuel consumption — Part 1: General test requirements

ISO 6460-1:2007/AMD 1:2015

Motorcycles — Measurement method for gaseous exhaust emissions and fuel consumption — Part 1: General test requirements — Amendment 1

ISO 6460-2:2014

Motorcycles — Measurement method for gaseous exhaust emissions and fuel consumption — Part 2: Test cycles and specific test conditions

ISO 6460-3:2007

Motorcycles — Measurement method for gaseous exhaust emissions and fuel consumption — Part 3: Fuel consumption measurement at a constant speed

ISO 6460-3:2007/AMD 1:2015

Motorcycles — Measurement method for gaseous exhaust emissions and fuel consumption — Part 3: Fuel consumption measurement at a constant speed — Amendment 1

ISO 6725:1981

Road vehicles — Dimensions of two-wheeled mopeds and motorcycles — Terms and definitions

ISO 6726:1988

Mopeds and motorcycles with two wheels — Masses — Vocabulary

ISO 6727:2012

Road vehicles — Motorcycles — Symbols for controls, indicators and tell-tales

ISO 6855-1:2012

Mopeds — Measurement method for gaseous exhaust emissions and fuel consumption — Part 1: General test requirements

ISO 6855-2:2012

Mopeds — Measurement method for gaseous exhaust emissions and fuel consumption — Part 2: Test cycles and specific test conditions

ISO 6855-3:2012

Mopeds — Measurement method for gaseous exhaust emissions and fuel consumption — Part 3: Fuel consumption measurement at a constant speed

ISO 7116:2011

Mopeds — Measurement method for determining maximum speed

ISO 7117:2010

Motorcycles — Measurement method for determining maximum speed

ISO 7398:1990

Motorcycles — Direct current flasher units

ISO 7399:1990

Motorcycles — Alternating current flasher units

ISO 7400:1990

Mopeds — Alternating current flasher units

ISO 8052:1990

Mopeds — Direct current flasher units

ISO 8644:2006

Motorcycles — Light-alloy wheels — Test method

ISO 8645:1988

Mopeds — Light-alloy wheels — Test method

ISO 8705:2005

Mopeds — Measurement method for location of centre of gravity

ISO 8706:1990

Two-wheeled mopeds — Parking stability of side- and centre-stands

ISO 8709:2010

Mopeds — Brakes and brake systems — Tests and measurement methods

ISO 8710:2010

Motorcycles — Brakes and brake systems — Tests and measurement methods

ISO 9021:2020

Motorcycles and mopeds — Controls — Types, positions and functions

ISO 9043:2008

Mopeds — Measurement method for moments of inertia

ISO 9129:2008

Motorcycles — Measurement methods for moments of inertia

ISO 9130:2005

Motorcycles — Measurement method for location of centre of gravity

ISO 9131:1993

Three-wheeled mopeds and motorcycles — Dimensions — Vocabulary

ISO 9132:1990

Three-wheeled mopeds and motorcycles — Masses — Vocabulary

ISO 9565:1990

Two-wheeled motorcycles — Parking stability of side- and centre-stands

ISO 9987:1990

Motorcycles — Measurement of variation of dipped beam inclination as a function of load

ISO 10355:2004

Mopeds — Positioning of lighting and light-signalling devices

ISO 11460:2007

Two-wheeled motorcycles — Positioning of lighting and light-signalling devices

ISO 11486:2006

Motorcycles — Methods for setting running resistance on a chassis dynamometer

ISO 11486:2006/AMD 1:2012

Motorcycles — Methods for setting running resistance on a chassis dynamometer — Amendment 1

ISO 11838:1997

Motorcycle and motorcycle-rider kinematics — Vocabulary

ISO 11838:1997/AMD 1:2011

Motorcycle and motorcycle-rider kinematics — Vocabulary — Amendment 1

ISO 12364:2001

Two-wheeled motorcycles — Antilock braking systems (ABS) — Tests and measurement methods

ISO 12366:2001

Two-wheeled mopeds — Antilock braking systems (ABS) — Tests and measurement methods

ISO/TR 13062:2015

Electric mopeds and motorcycles - Terminology and classification

ISO 13063:2012

Electrically propelled mopeds and motorcycles — Safety specifications

ISO 13064-1:2012

Battery-electric mopeds and motorcycles — Performance — Part 1: Reference energy consumption and range

ISO 13064-2:2012

Battery-electric mopeds and motorcycles — Performance — Part 2: Road operating characteristics

ISO 13232-1:2005

Motorcycles — Test and analysis procedures for research evaluation of rider crash protective devices fitted to motorcycles — Part 1: Definitions, symbols and general considerations

ISO 13232-1:2005/AMD 1:2012

Motorcycles — Test and analysis procedures for research evaluation of rider crash protective devices fitted to motorcycles — Part 1: Definitions, symbols and general considerations — Amendment 1: MATD test helmet, ground impact, and injury costs

ISO 13232-2:2005

Motorcycles — Test and analysis procedures for research evaluation of rider crash protective devices fitted to motorcycles — Part 2: Definition of impact conditions in relation to accident data

ISO 13232-3:2005

Motorcycles — Test and analysis procedures for research evaluation of rider crash protective devices fitted to motorcycles — Part 3: Motorcyclist anthropometric impact dummy

ISO 13232-3:2005/AMD 1:2012

Motorcycles — Test and analysis procedures for research evaluation of rider crash protective devices fitted to motorcycles — Part 3: Motorcyclist anthropometric impact dummy — Amendment 1: MATD test helmet

ISO 13232-4:2005

Motorcycles — Test and analysis procedures for research evaluation of rider crash protective devices fitted to motorcycles — Part 4: Variables to be measured, instrumentation and measurement procedures

ISO 13232-5:2005

Motorcycles — Test and analysis procedures for research evaluation of rider crash protective devices fitted to motorcycles — Part 5: Injury indices and risk/benefit analysis

ISO 13232-5:2005/AMD 1:2012

Motorcycles — Test and analysis procedures for research evaluation of rider crash protective devices fitted to motorcycles — Part 5: Injury indices and risk/benefit analysis — Amendment 1: Ground impact and injury costs

ISO 13232-6:2005

Motorcycles — Test and analysis procedures for research evaluation of rider crash protective devices fitted to motorcycles — Part 6: Full-scale impact-test procedures

ISO 13232-6:2005/AMD 1:2012

Motorcycles — Test and analysis procedures for research evaluation of rider crash protective devices fitted to motorcycles — Part 6: Full-scale impact-test procedures — Amendment 1: MATD test helmet

ISO 13232-7:2005

Motorcycles — Test and analysis procedures for research evaluation of rider crash protective devices fitted to motorcycles — Part 7: Standardised procedures for performing computer simulations of motorcycle impact tests

ISO 13232-7:2005/AMD 1:2012

Motorcycles — Test and analysis procedures for research evaluation of rider crash protective devices fitted to motorcycles — Part 7: Standardised procedures for performing computer simulations of motorcycle impact tests — Amendment 1: Ground impact

ISO 13232-8:2005

Motorcycles — Test and analysis procedures for research evaluation of rider crash protective devices fitted to motorcycles — Part 8: Documentation and reports

ISO 13232-8:2005/AMD 1:2012

Motorcycles — Test and analysis procedures for research evaluation of rider crash protective devices fitted to motorcycles — Part 8: Documentation and reports — Amendment 1: Ground impact and injury costs

ISO 14722:1998

Moped and moped-rider kinematics — Vocabulary

ISO 14722:1998/AMD 1:2011

Moped and moped-rider kinematics — Vocabulary — Amendment 1

ISO 17479:2013

Motorcycles — Measurement methods for gaseous exhaust emissions during inspection or maintenance

ISO 17479:2013/AMD 1:2020

Motorcycles — Measurement methods for gaseous exhaust emissions during inspection or maintenance — Amendment 1

ISO 18243:2017

Electrically propelled mopeds and motorcycles — Test specifications and safety requirements for lithium-ion battery systems

ISO 18246:2015

Electrically propelled mopeds and motorcycles — Safety requirements for conductive connection to an external electric power supply

ISO 18580:2015

Motorcycles — Verification of total running resistance force during mode running on a chassis dynamometer

ISO 19449:2015

Mopeds — Measurement methods for gaseous exhaust emissions during inspection or maintenance

ISO/TS 19466:2017

Electrically propelled mopeds and motorcycles — Test method for evaluating performance of regenerative braking systems

ISO 19689:2016

Motorcycles and mopeds — Communication between vehicle and external equipment for diagnostics — Diagnostic connector and related electrical circuits, specification and use

ISO 21755-1:2019

Motorcycles — Measurement method for evaporative emissions — Part 1: SHED test procedure

ISO 21755-2:2020

Motorcycles — Measurement method for evaporative emissions — Part 2: Permeation test procedure

ISO 28981:2009

Mopeds - Methods for setting the running resistance on a chassis dynamometer

ISO 28981:2009/AMD 1:2015

Mopeds - Methods for setting the running resistance on a chassis dynamometer — Amendment 1

Standards under development:

ISO/WD TR 3152

Road vehicles — Comparison of Part 12 with other parts of ISO 26262

ISO/WD TR 5262

Motorcycles — Guideline for verification of total running resistance force during mode running on a chassis dynamometer

ISO/WD 6460-1

Motorcycles — Measurement method for gaseous exhaust emissions and fuel consumption — Part 1: General test requirements

ISO 6727

Road vehicles — Motorcycles and mopeds — Symbols for controls, indicators and tell-tales

ISO/DIS 13063-1

Electrically propelled mopeds and motorcycles — Safety specifications — Part 1: On-board rechargeable energy storage system (RESS)

ISO/DIS 13063-2

Electrically propelled mopeds and motorcycles — Safety specifications — Part 2: Vehicle operational safety

ISO/DIS 13063-3

Electrically propelled mopeds and motorcycles — Safety specifications — Part 3: Electrical safety

ISO 18243:2017/PRF AMD 1

Electrically propelled mopeds and motorcycles — Test specifications and safety requirements for lithium-ion battery systems — Amendment 1

ISO/CD 18246

Electrically propelled mopeds and motorcycles — Safety requirements for conductive connection to an external electric power supply

ISO/CD 23280

Electrically propelled mopeds and motorcycles — Test method for performance measurement of traction motor system

3.2.51 ISO/TC 22/SC 39 - Ergonomics

Scope:

Driver interaction with driver environment and driver systems

Structure:

ISO/TC 22/SC 39/WG 3   Controls, displays, and tell-tale localization

ISO/TC 22/SC 39/WG 5   Symbols

ISO/TC 22/SC 39/WG 7   Hand reach and R and H point determination

ISO/TC 22/SC 39/WG 8   TICS on-board-MMI

Standards:

ISO 2575:2010

Road vehicles — Symbols for controls, indicators and tell-tales

ISO 2575:2010/AMD 1:2011

Road vehicles — Symbols for controls, indicators and tell-tales — Amendment 1

ISO 2575:2010/AMD 3:2014

Road vehicles — Symbols for controls, indicators and tell-tales — Amendment 3

ISO 2575:2010/AMD 5:2016

Road vehicles — Symbols for controls, indicators and tell-tales — Amendment 5

ISO 2575:2010/AMD 6:2017

Road vehicles — Symbols for controls, indicators and tell-tales — Amendment 6

ISO 2575:2010/AMD 7:2017

Road vehicles — Symbols for controls, indicators and tell-tales — Amendment 7

ISO 3409:1975

Passenger cars — Lateral spacing of foot controls

ISO 3958:1996

Passenger cars — Driver hand-control reach

ISO 4040:2009

Road vehicles — Location of hand controls, indicators and tell-tales in motor vehicles

ISO/TR 12204:2012

Road vehicles — Ergonomic aspects of transport information and control systems — Introduction to integrating safety critical and time critical warning signals

ISO 12214:2018

Road vehicles — Direction-of-motion stereotypes for automotive hand controls

ISO/TS 14198:2019

Road vehicles — Ergonomic aspects of transport information and control systems — Calibration tasks for methods which assess driver demand due to the use of in-vehicle systems

ISO 15005:2017

Road vehicles — Ergonomic aspects of transportation and control systems — Dialogue management principles and compliance procedures

ISO 15006:2011

Road vehicles — Ergonomic aspects of transport information and control systems — Specifications for in-vehicle auditory presentation

ISO 15007-1:2014

Road vehicles — Measurement of driver visual behaviour with respect to transport information and control systems — Part 1: Definitions and parameters

ISO/TS 15007-2:2014

Road vehicles — Measurement of driver visual behaviour with respect to transport information and control systems — Part 2: Equipment and procedures

ISO 15008:2017

Road vehicles — Ergonomic aspects of transport information and control systems — Specifications and test procedures for in-vehicle visual presentation

ISO 16121-1:2012

Road vehicles — Ergonomic requirements for the driver's workplace in line-service buses — Part 1: General description, basic requirements

ISO 16121-2:2011

Road vehicles — Ergonomic requirements for the driver's workplace in line-service buses — Part 2: Visibility

ISO 16121-3:2011

Road vehicles — Ergonomic requirements for the driver's workplace in line-service buses — Part 3: Information devices and controls

ISO 16121-4:2011

Road vehicles — Ergonomic requirements for the driver's workplace in line-service buses — Part 4: Cabin environment

ISO/TR 16352:2005

Road vehicles — Ergonomic aspects of in-vehicle presentation for transport information and control systems — Warning systems

ISO 16673:2017

Road vehicles — Ergonomic aspects of transport information and control systems — Occlusion method to assess visual demand due to the use of in-vehicle systems

ISO/TS 16951:2004

Road vehicles — Ergonomic aspects of transport information and control systems (TICS) — Procedures for determining priority of on-board messages presented to drivers

ISO 17287:2003

Road vehicles — Ergonomic aspects of transport information and control systems — Procedure for assessing suitability for use while driving

ISO 17488:2016

Road vehicles — Transport information and control systems — Detection-response task (DRT) for assessing attentional effects of cognitive load in driving

ISO 20176:2011

Road vehicles — H-point machine (HPM-II) — Specifications and procedure for H-point determination

ISO 21956:2019

Road vehicles — Ergonomics aspects of transport information and control systems — Human machine interface specifications for keyless ignition systems

ISO/TR 21959-1:2020

Road vehicles — Human performance and state in the context of automated driving — Part 1: Common underlying concepts

ISO/TR 21959-2:2020

Road vehicles — Human performance and state in the context of automated driving — Part 2: Considerations in designing experiments to investigate transition processes

ISO/TR 21974-1:2018

Naturalistic driving studies — Vocabulary — Part 1: Safety critical events

ISO/TR 23049:2018

Road Vehicles — Ergonomic aspects of external visual communication from automated vehicles to other road users

ISO 26022:2010

Road vehicles — Ergonomic aspects of transport information and control systems — Simulated lane change test to assess in-vehicle secondary task demand

Standards under development:

ISO/DIS 2575

Road vehicles — Symbols for controls, indicators and tell-tales

ISO/FDIS 15007

Road vehicles — Measurement and analysis of driver visual behaviour with respect to transport information and control systems

ISO/FDIS 20176

Road vehicles — H-point machine (HPM-II) — Specifications and procedure for H-point determination

ISO/AWI 23408

Road Vehicles — Ergonomic aspects of foot control layout,location, spacing and clearance

ISO/AWI TR 23720

Road Vehicles — Methods for evaluating other road user behavior in the presence of automated vehicle external communication.

ISO/AWI TR 23735

Road vehicles — Ergonomic design guidance for external visual communication from automated vehicles to other road users

3.2.52 ISO/TC 22/SC 41 - Specific aspects for gaseous fuels

Scope:

Specifications of construction, installation and test of components for vehicles using gaseous fuels, including their assemblies and the interface with refuelling systems

Structure:

ISO/TC 22/SC 41/JWG 5   Joint ISO/TC 22/SC 41 - ISO/TC 197 WG: Fuel system components and refuelling connector for vehicles propelled by blends of natural gas and hydrogen

ISO/TC 22/SC 41/WG 3   Fuel system components and refuelling connector for vehicles propelled by gaseous fuel

ISO/TC 22/SC 41/WG 4   Fuel system components and refuelling connector for vehicles propelled by Liquefied Natural Gas (LNG)

ISO/TC 22/SC 41/WG 6   Fuel system components and refuelling connector for vehicles propelled by Liquefied Petroleum Gas (LPG)

ISO/TC 22/SC 41/WG 7   General safety requirements for gaseous fuelled vehicles and terminology

ISO/TC 22/SC 41/WG 8   Fuel system components and refueling connector for vehicles propelled by Dimethyl Ether (DME)

ISO/TC 22/SC 41/WG 9   Training, competence and conformity assessment

Standards:

ISO 12614-1:2014

Road vehicles — Liquefied natural gas (LNG) fuel system components — Part 1: General requirements and definitions

ISO 12614-2:2014

Road vehicles — Liquefied natural gas (LNG) fuel system components — Part 2: Performance and general test methods

ISO 12614-3:2014

Road vehicles — Liquefied natural gas (LNG) fuel system components — Part 3: Check valve

ISO 12614-4:2014

Road vehicles — Liquefied natural gas (LNG) fuel system components — Part 4: Manual valve

ISO 12614-5:2014

Road vehicles — Liquefied natural gas (LNG) fuel system components — Part 5: Tank pressure gauge

ISO 12614-7:2014

Road vehicles — Liquefied natural gas (LNG) fuel system components — Part 7: Pressure relief valve

ISO 12614-8:2014

Road vehicles — Liquefied natural gas (LNG) fuel system components — Part 8: Excess flow valve

ISO 12614-9:2014

Road vehicles — Liquefied natural gas (LNG) fuel system components — Part 9: Gas-tight housing and ventilation hose

ISO 12614-10:2014

Road vehicles — Liquefied natural gas (LNG) fuel system components — Part 10: Rigid fuel line in stainless steel

ISO 12614-11:2014

Road vehicles — Liquefied natural gas (LNG) fuel system components — Part 11: Fittings

ISO 12614-12:2014

Road vehicles — Liquefied natural gas (LNG) fuel system components — Part 12: Rigid fuel line in copper and its alloys

ISO 12614-13:2014

Road vehicles — Liquefied natural gas (LNG) fuel system components — Part 13: Tank pressure control regulator

ISO 12614-14:2014

Road vehicles — Liquefied natural gas (LNG) fuel system components — Part 14: Differential pressure fuel content gauge

ISO 12614-15:2014

Road vehicles — Liquefied natural gas (LNG) fuel system components — Part 15: Capacitance fuel content gauge

ISO 12614-16:2014

Road vehicles — Liquefied natural gas (LNG) fuel system components — Part 16: Heat exchanger - vaporizer

ISO 12614-17:2014

Road vehicles — Liquefied natural gas (LNG) fuel system components — Part 17: Natural gas detector

ISO 12614-18:2014

Road vehicles — Liquefied natural gas (LNG) fuel system components — Part 18: Gas temperature sensor

ISO 12614-19:2017

Road vehicles — Liquefied natural gas (LNG) fuel system components — Part 19: Automatic valve

ISO 12617:2015

Road vehicles — Liquefied natural gas (LNG) refuelling connector — 3,1 MPa connector

ISO 12619-1:2014

Road vehicles — Compressed gaseous hydrogen (CGH2) and hydrogen/natural gas blends fuel system components — Part 1: General requirements and definitions

ISO 12619-2:2014

Road vehicles — Compressed gaseous hydrogen (CGH2) and hydrogen/natural gas blends fuel system components — Part 2: Performance and general test methods

ISO 12619-2:2014/AMD 1:2016

Road vehicles — Compressed gaseous hydrogen (CGH2) and hydrogen/natural gas blends fuel system components — Part 2: Performance and general test methods — Amendment 1

ISO 12619-3:2014

Road vehicles — Compressed gaseous hydrogen (CGH2) and hydrogen/natural gas blends fuel system components — Part 3: Pressure regulator

ISO 12619-3:2014/AMD 1:2016

Road vehicles — Compressed gaseous hydrogen (CGH2) and hydrogen/natural gas blends fuel system components — Part 3: Pressure regulator — Amendment 1

ISO 12619-4:2016

Road vehicles — Compressed gaseous hydrogen (CGH2) and hydrogen/natural gas blends fuel system components — Part 4: Check valve

ISO 12619-5:2016

Road vehicles — Compressed gaseous hydrogen (CGH2) and hydrogen/natural gas blends fuel system components — Part 5: Manual cylinder valve

ISO 12619-6:2017

Road vehicles — Compressed gaseous hydrogen (CGH2) and hydrogen/natural gas blends fuel system components — Part 6: Automatic valve

ISO 12619-7:2017

Road vehicles — Compressed gaseous hydrogen (CGH2) and hydrogen/natural gas blends fuel system components — Part 7: Gas injector

ISO 12619-8:2017

Road vehicles — Compressed gaseous hydrogen (CGH2) and hydrogen/natural gas blends fuel system components — Part 8: Pressure indicator

ISO 12619-9:2017

Road vehicles — Compressed gaseous hydrogen (CGH2) and hydrogen/natural gas blends fuel system components — Part 9: Pressure relief valve (PRV)

ISO 12619-10:2017

Road vehicles — Compressed gaseous hydrogen (CGH2) and hydrogen/natural gas blends fuel system components — Part 10: Pressure relief device (PRD)

ISO 12619-11:2017

Road vehicles — Compressed gaseous hydrogen (CGH2) and hydrogen/natural gas blends fuel system components — Part 11: Excess flow valve

ISO 12619-12:2017

Road vehicles — Compressed gaseous hydrogen (CGH2) and hydrogen/natural gas blends fuel system components — Part 12: Gas-tight housing and ventilation hoses

ISO 12619-13:2017

Road vehicles — Compressed gaseous hydrogen (CGH2) and hydrogen/natural gas blends fuel system components — Part 13: Rigid fuel line in stainless steel

ISO 12619-14:2017

Road vehicles — Compressed gaseous hydrogen (CGH2) and hydrogen/natural gas blends fuel system components — Part 14: Flexible fuel line

ISO 12619-15:2017

Road vehicles — Compressed gaseous hydrogen (CGH2) and hydrogen/natural gas blends fuel system components — Part 15: Filter

ISO 12619-16:2017

Road vehicles — Compressed gaseous hydrogen (CGH2) and hydrogen/natural gas blends fuel system components — Part 16: Fittings

ISO 14469:2017

Road vehicles — Compressed natural gas (CNG) refuelling connector

ISO 15500-1:2015

Road vehicles — Compressed natural gas (CNG) fuel system components — Part 1: General requirements and definitions

ISO 15500-2:2016

Road vehicles — Compressed natural gas (CNG) fuel system components — Part 2: Performance and general test methods

ISO 15500-3:2012

Road vehicles — Compressed natural gas (CNG) fuel system components — Part 3: Check valve

ISO 15500-3:2012/AMD 1:2016

Road vehicles — Compressed natural gas (CNG) fuel system components — Part 3: Check valve — Amendment 1

ISO 15500-4:2012

Road vehicles — Compressed natural gas (CNG) fuel system components — Part 4: Manual valve

ISO 15500-4:2012/AMD 1:2016

Road vehicles — Compressed natural gas (CNG) fuel system components — Part 4: Manual valve — Amendment 1

ISO 15500-5:2012

Road vehicles — Compressed natural gas (CNG) fuel system components — Part 5: Manual cylinder valve

ISO 15500-5:2012/AMD 1:2016

Road vehicles — Compressed natural gas (CNG) fuel system components — Part 5: Manual cylinder valve — Amendment 1

ISO 15500-6:2012

Road vehicles — Compressed natural gas (CNG) fuel system components — Part 6: Automatic valve

ISO 15500-6:2012/AMD 1:2016

Road vehicles — Compressed natural gas (CNG) fuel system components — Part 6: Automatic valve — Amendment 1

ISO 15500-7:2015

Road vehicles — Compressed natural gas (CNG) fuel system components — Part 7: Gas injector

ISO 15500-8:2015

Road vehicles — Compressed natural gas (CNG) fuel system components — Part 8: Pressure indicator

ISO 15500-9:2012

Road vehicles — Compressed natural gas (CNG) fuel system components — Part 9: Pressure regulator

ISO 15500-9:2012/AMD 1:2016

Road vehicles — Compressed natural gas (CNG) fuel system components — Part 9: Pressure regulator — Amendment 1

ISO 15500-10:2015

Road vehicles — Compressed natural gas (CNG) fuel system components — Part 10: Gas-flow adjuster

ISO 15500-11:2015

Road vehicles — Compressed natural gas (CNG) fuel system components — Part 11: Gas/air mixer

ISO 15500-12:2015

Road vehicles — Compressed natural gas (CNG) fuel system components — Part 12: Pressure relief valve (PRV)

ISO 15500-13:2012

Road vehicles — Compressed natural gas (CNG) fuel system components — Part 13: Pressure relief device (PRD)

ISO 15500-13:2012/AMD 1:2016

Road vehicles — Compressed natural gas (CNG) fuel system components — Part 13: Pressure relief device (PRD) — Amendment 1

ISO 15500-14:2012

Road vehicles — Compressed natural gas (CNG) fuel system components — Part 14: Excess flow valve

ISO 15500-14:2012/AMD 1:2016

Road vehicles — Compressed natural gas (CNG) fuel system components — Part 14: Excess flow valve — Amendment 1

ISO 15500-15:2015

Road vehicles — Compressed natural gas (CNG) fuel system components — Part 15: Gas-tight housing and ventilation hose

ISO 15500-16:2012

Road vehicles — Compressed natural gas (CNG) fuel system components — Part 16: Rigid fuel line in stainless steel

ISO 15500-16:2012/AMD 1:2016

Road vehicles — Compressed natural gas (CNG) fuel system components — Part 16: Rigid fuel line in stainless steel — Amendment 1

ISO 15500-17:2012

Road vehicles — Compressed natural gas (CNG) fuel system components — Part 17: Flexible fuel line

ISO 15500-17:2012/AMD 1:2016

Road vehicles — Compressed natural gas (CNG) fuel system components — Part 17: Flexible fuel line — Amendment 1

ISO 15500-18:2012

Road vehicles — Compressed natural gas (CNG) fuel system components — Part 18: Filter

ISO 15500-18:2012/AMD 1:2016

Road vehicles — Compressed natural gas (CNG) fuel system components — Part 18: Filter — Amendment 1

ISO 15500-19:2012

Road vehicles — Compressed natural gas (CNG) fuel system components — Part 19: Fittings

ISO 15500-19:2012/AMD 1:2016

Road vehicles — Compressed natural gas (CNG) fuel system components — Part 19: Fittings — Amendment 1

ISO 15500-20:2015

Road vehicles — Compressed natural gas (CNG) fuel system components — Part 20: Rigid fuel line in material other than stainless steel

ISO 15501-1:2016

Road vehicles — Compressed natural gas (CNG) fuel systems — Part 1: Safety requirements

ISO 15501-2:2016

Road vehicles — Compressed natural gas (CNG) fuel systems — Part 2: Test methods

ISO 16380:2014

Road vehicles — Blended fuels refuelling connector

ISO 16380:2014/AMD 1:2016

Road vehicles — Blended fuels refuelling connector — Amendment 1

ISO 19723-1:2018

Road vehicles — Liquefied natural gas (LNG) fuel systems — Part 1: Safety requirements

ISO 19723-2:2018

Road vehicles — Liquefied natural gas (LNG) fuel systems — Part 2: Test methods

ISO 19825:2018

Road vehicles — Liquefied petroleum gas (LPG) refuelling connector

ISO 20766-1:2018

Road vehicles — Liquefied petroleum gas (LPG) fuel systems components — Part 1: General requirements and definitions

ISO 20766-2:2018

Road vehicles — Liquefied petroleum gas (LPG) fuel systems components — Part 2: Performance and general test methods

ISO 20766-3:2018

Road vehicles — Liquefied petroleum gas (LPG) fuel systems components — Part 3: 80% stop valve

ISO 20766-4:2018

Road vehicles — Liquefied petroleum gas (LPG) fuel system components — Part 4: Level indicator

ISO 20766-6:2019

Road vehicles — Liquefied petroleum gas (LPG) fuel systems components — Part 6: Pressure relief valves (PRV)

ISO 20766-9:2019

Road vehicles — Liquefied petroleum gas (LPG) fuel systems components — Part 9: Pressure relieve device (PRD)

ISO 20766-10:2019

Road vehicles — Liquefied petroleum gas (LPG) fuel systems components — Part 10: Gas-tight housing

ISO 20766-11:2020

Road vehicles — Liquefied petroleum gas (LPG) fuel systems components — Part 11: Manual shut-off valve

ISO 20766-12:2019

Road vehicles — Liquefied petroleum gas (LPG) fuel systems components — Part 12: Non-return valve

ISO 20766-18:2019

Road vehicles — Liquefied petroleum gas (LPG) fuel systems components — Part 18: Hose

ISO 20766-20:2019

Road vehicles — Liquefied petroleum gas (LPG) fuel systems components — Part 20: Filter unit

ISO 20826:2006

Automotive LPG components — Containers

ISO 21058:2019

Road vehicles — Dimethyl Ether (DME) refuelling connector

ISO/TS 21104:2019

Road vehicles — Liquefied natural gas (LNG) integrated low pressure refuelling and venting connector — 1,8 MPa connector

ISO 21266-1:2018

Road vehicles — Compressed gaseous hydrogen (CGH2) and hydrogen/natural gas blends fuel systems — Part 1: Safety requirements

ISO 21266-2:2018

Road vehicles — Compressed gaseous hydrogen (CGH2) and hydrogen/natural gas blends fuel systems — Part 2: Test methods

ISO 22760-1:2019

Road vehicles — Dimethyl Ether (DME) fuel system components — Part 1: General requirements and definitions

ISO 22760-2:2019

Road vehicles — Dimethyl Ether (DME) fuel system components — Part 2: Performance and general test methods

Standards under development:

ISO/DIS 12614-1

Road vehicles — Liquefied natural gas (LNG) fuel system components — Part 1: General requirements and definitions

ISO/DIS 12614-2

Road vehicles — Liquefied natural gas (LNG) fuel system components — Part 2: Performance and general test methods

ISO/DIS 12614-3

Road vehicles — Liquefied natural gas (LNG) fuel system components — Part 3: Check valve

ISO/DIS 12614-4

Road vehicles — Liquefied natural gas (LNG) fuel system components — Part 4: Manual valve

ISO/DIS 12614-5

Road vehicles — Liquefied natural gas (LNG) fuel system components — Part 5: Tank pressure gauge

ISO/DIS 12614-7

Road vehicles — Liquefied natural gas (LNG) fuel system components — Part 7: Pressure relief valve (PRV)

ISO/DIS 12614-8

Road vehicles — Liquefied natural gas (LNG) fuel system components — Part 8: Excess flow valve

ISO/DIS 12614-9

Road vehicles — Liquefied natural gas (LNG) fuel system components — Part 9: Gas-tight housing and ventilation hose

ISO/DIS 12614-10

Road vehicles — Liquefied natural gas (LNG) fuel system components — Part 10: Rigid fuel line in stainless steel

ISO/DIS 12614-11

Road vehicles — Liquefied natural gas (LNG) fuel system components — Part 11: Fittings

ISO/DIS 12614-12

Road vehicles — Liquefied natural gas (LNG) fuel system components — Part 12: Rigid fuel line in copper and its alloys

ISO/DIS 12614-13

Road vehicles — Liquefied natural gas (LNG) fuel system components — Part 13: Tank pressure control regulator

ISO/DIS 12614-14

Road vehicles — Liquefied natural gas (LNG) fuel system components — Part 14: Differential pressure fuel content gauge

ISO/DIS 12614-15

Road vehicles — Liquefied natural gas (LNG) fuel system components — Part 15: Capacitance fuel content gauge

ISO/DIS 12614-16

Road vehicles — Liquefied natural gas (LNG) fuel system components — Part 16: Heat exchanger-vaporizer

ISO/DIS 12614-17

Road vehicles — Liquefied natural gas (LNG) fuel system components — Part 17: Natural gas detector

ISO/DIS 12614-18

Road vehicles — Liquefied natural gas (LNG) fuel system components — Part 18: Gas temperature sensor

ISO/DIS 12614-19

Road vehicles — Liquefied natural gas (LNG) fuel system components — Part 19: Automatic valve

ISO/AWI 12614-20

Road vehicles — Liquefied natural gas (LNG) fuel system components — Part 20: Flexible fuel line

ISO/WD 12619-1

Road vehicles — Compressed gaseous hydrogen (CGH2) and hydrogen/natural gas blends fuel system components — Part 1: General requirements and definitions

ISO/WD 12619-2

Road vehicles — Compressed gaseous hydrogen (CGH2) and hydrogen/natural gas blends fuel system components — Part 2: Performance and general test methods

ISO/WD 12619-3

Road vehicles — Compressed gaseous hydrogen (CGH2) and hydrogen/natural gas blends fuel system components — Part 3: Pressure regulator

ISO/WD 12619-4

Road vehicles — Compressed gaseous hydrogen (CGH2) and hydrogen/natural gas blends fuel system components — Part 4: Check valve

ISO/WD 12619-5

Road vehicles — Compressed gaseous hydrogen (CGH2) and hydrogen/natural gas blends fuel system components — Part 5: Manual cylinder valve

ISO/WD 12619-6

Road vehicles — Compressed gaseous hydrogen (CGH2) and hydrogen/natural gas blends fuel system components — Part 6: Automatic valve

ISO/WD 12619-7

Road vehicles — Compressed gaseous hydrogen (CGH2) and hydrogen/natural gas blends fuel system components — Part 7: Gas injector

ISO/WD 12619-8

Road vehicles — Compressed gaseous hydrogen (CGH2) and hydrogen/natural gas blends fuel system components — Part 8: Pressure indicator

ISO/WD 12619-9

Road vehicles — Compressed gaseous hydrogen (CGH2) and hydrogen/natural gas blends fuel system components — Part 9: Pressure relief valve (PRV)

ISO/WD 12619-10

Road vehicles — Compressed gaseous hydrogen (CGH2) and hydrogen/natural gas blends fuel system components — Part 10: Pressure relief device (PRD)

ISO/WD 12619-11

Road vehicles — Compressed gaseous hydrogen (CGH2) and hydrogen/natural gas blends fuel system components — Part 11: Excess flow valve

ISO/WD 12619-12

Road vehicles — Compressed gaseous hydrogen (CGH2) and hydrogen/natural gas blends fuel system components — Part 12: Gas-tight housing and ventilation hoses

ISO/WD 12619-13

Road vehicles — Compressed gaseous hydrogen (CGH2) and hydrogen/natural gas blends fuel system components — Part 13: Rigid fuel line in stainless steel

ISO/WD 12619-14

Road vehicles — Compressed gaseous hydrogen (CGH2) and hydrogen/natural gas blends fuel system components — Part 14: Flexible fuel line

ISO/WD 12619-15

Road vehicles — Compressed gaseous hydrogen (CGH2) and hydrogen/natural gas blends fuel system components — Part 15: Filter

ISO/WD 12619-16

Road vehicles — Compressed gaseous hydrogen (CGH2) and hydrogen/natural gas blends fuel system components — Part 16: Fittings

ISO/FDIS 15500-3

Road vehicles — Compressed natural gas (CNG) fuel system components — Part 3: Check valve

ISO/DIS 15500-4

Road vehicles — Compressed natural gas (CNG) fuel system components — Part 4: Manual valve

ISO/DIS 15500-5

Road vehicles — Compressed natural gas (CNG) fuel system components — Part 5: Manual cylinder valve

ISO/FDIS 15500-6

Road vehicles — Compressed natural gas (CNG) fuel system components — Part 6: Automatic valve

ISO/FDIS 15500-9

Road vehicles — Compressed natural gas (CNG) fuel system components — Part 9: Pressure regulator

ISO/CD 15500-13

Road vehicles — Compressed natural gas (CNG) fuel system components — Part 13: Pressure relief device (PRD)

ISO/FDIS 15500-14

Road vehicles — Compressed natural gas (CNG) fuel system components — Part 14: Excess flow valve

ISO/FDIS 15500-16

Road vehicles — Compressed natural gas (CNG) fuel system components — Part 16: Rigid fuel line in stainless steel

ISO/DIS 15500-17

Road vehicles — Compressed natural gas (CNG) fuel system components — Part 17: Flexible fuel line

ISO/FDIS 15500-18

Road vehicles — Compressed natural gas (CNG) fuel system components — Part 18: Filter

ISO/FDIS 15500-19

Road vehicles — Compressed natural gas (CNG) fuel system components — Part 19: Fittings

ISO/AWI 15500-21

Road vehicles — Compressed natural gas (CNG) fuel system components — Part 21: Vent line closures

ISO 15501-1:2016/DAMD 1

Road vehicles — Compressed natural gas (CNG) fuel systems — Part 1: Safety requirements — Amendment 1

ISO 19723-1:2018/DAMD 1

Road vehicles — Liquefied natural gas (LNG) fuel systems — Part 1: Safety requirements — Amendment 1

ISO/WD 20766-5

Road vehicles — Liquefied petroleum gas (LPG) fuel system components — Part 5: Fuel selection system and electrical installations

ISO 20766-6:2019/AWI AMD 1

Road vehicles — Liquefied petroleum gas (LPG) fuel systems components — Part 6: Pressure relief valves (PRV) — Amendment 1

ISO/AWI 20766-7

Road vehicles — Liquefied petroleum gas (LPG) fuel system components — Part 7: Remotely controlled shut-off valve

ISO/AWI 20766-8

Road vehicles — Liquefied petroleum gas (LPG) fuel system components — Part 8: Fuel pump

ISO/DIS 20766-13

Road vehicles — Liquefied petroleum gas (LPG) fuel system components — Part 13: Multivalve

ISO/DIS 20766-14

Road vehicles — Liquefied petroleum gas (LPG) fuel system components — Part 14: Vaporizer/Pressure regulator

ISO/WD 20766-15

Road vehicles — Liquefied petroleum gas (LPG) fuel system components — Part 15: Excess flow valve

ISO/DIS 20766-16

Road vehicles — Liquefied petroleum gas (LPG) fuel system components — Part 16: Injectors and gas mixing device/fuel rail

ISO/WD 20766-17

Road vehicles — Liquefied petroleum gas (LPG) fuel system components — Part 17: Gas dosage unit

ISO/WD 20766-21

Road vehicles — Liquefied petroleum gas (LPG) fuel system components — Part 21: Pressure and/or temperature sensor

ISO/DIS 20766-24

Road vehicles — Liquefied petroleum gas (LPG) fuel system components — Part 24: Gas tubes

ISO/DIS 20766-25

Road vehicles — Liquefied petroleum gas (LPG) fuel system components — Part 25: Gas connections

ISO/WD 21059

Road vehicles — Specific aspects for gaseous fuels — Terminology

ISO 21266-1:2018/AWI AMD 1

Road vehicles — Compressed gaseous hydrogen (CGH2) and hydrogen/natural gas blends fuel systems — Part 1: Safety requirements — Amendment 1

ISO/WD 22760-3

Road vehicles — Dimethyl Ether (DME) fuel system components — Part 3: 85% stop valve

ISO/WD 22760-4

Road vehicles — Dimethyl Ether (DME) fuel system components — Part 4: Level indicator

ISO/WD 22760-6

Road vehicles — Dimethyl Ether (DME) fuel system components — Part 6: Pressure relief valve (PRV)

ISO/WD 22760-9

Road vehicles — Dimethyl Ether (DME) fuel system components — Part 9: Pressure relief device (PRD)

ISO/WD 23684

Road vehicles — Requirements for the provision of technical Personnel dealing with Natural Gas Vehicles (NGVs) — Training and qualification programmes

ISO/WD 24605

Road vehicles — Dimethyl Ether (DME) Refuelling Connector with Pressure Equalization Port

3.2.53 ISO/TC 241 - Road traffic safety management systems

Keywords:

Road vehicles, Good practices for commuting safety systems, Guidance on safety ethical considerations for autonomous vehicles.

Scope:

Standarisation in the field of RTS, Road traffic safety, management standards, needs, to be effective, to consist of:

- a requirement standard (which ISO 39001 will be)
- RTS specific auditing requirements in third party certification, and
- implementation and guidance documents.

Standards:

ISO 39001:2012

Road traffic safety (RTS) management systems — Requirements with guidance for use

ISO 39002:2020

Road traffic safety — Good practices for implementing commuting safety management

Standards under development:

ISO/AWI 39003

Road Traffic Safety (RTS) — Guidance on safety ethical considerations for autonomous vehicles

3.2.54 ISO/TC 149 - Cycles

Keywords:

Road vehicles, Cycles and major sub-assemblies

Scope:

Standarisation in the field of cycles, their components and accessories with particular reference to terminology, testing methods and requirements for performance and safety, and interchangeability.

Excluded :

- chains and tooth profile;
- tyres, rims and valves;
- toy cycles.

Note:

"Cycle" means any vehicle which has at least two wheels and is propelled solely or mainly by the muscular energy of the persons on that vehicle, in particular by means of pedals or hand-cranks.

Standards:

ISO 6692:1981

Cycles — Marking of cycle components

ISO 6695:2015

Cycles — Pedal axle and crank assembly with square end fitting — Assembly dimensions

ISO 6696:1989

Cycles — Screw threads used in bottom bracket assemblies

ISO 6697:1994

Cycles — Hubs and freewheels — Assembly dimensions

ISO 6698:1989

Cycles — Screw threads used to assemble freewheels on bicycle hubs

ISO 6699:2016

Cycles — Handlebar centre and stem dimensions

ISO 6701:1991

Cycles — External dimensions of spoke nipples

ISO 8488:1986

Cycles — Screw threads used to assemble head fittings on bicycle forks

ISO 8562:1990

Cycles — Stem wedge angle

ISO 10230:1990

Cycles — Splined hub and sprocket — Mating dimensions

Standards under development:

ISO/AWI 8562

Cycles — Stem wedge angle

3.2.55 ISO/TC 154 - Processes, data elements and documents in commerce, industry and administration

Keywords:

Data Model, Joint logistic data contents and process, e-document, Representation of dates and times, Trusted eCommunications, Digital business

Scope:

International standarisation and registration of business, and administration processes and supporting data used for information interchange between and within individual organizations and support for standarisation activities in the field of industrial data.

Development and maintenance of application specific meta standards for:

- process specification (in the absence of development by other technical committees);
- data specification with content;
- forms-layout (paper / electronic).

Development and maintenance of standards for

- process identification (in the absence of development by other technical committees);
- data identification.

Maintenance of the EDIFACT-Syntax.

Standards:

ISO 6422-1:2010

Layout key for trade documents — Part 1: Paper-based documents

ISO 7372:2005

Trade data interchange — Trade data elements directory

ISO 8439:1990

Forms design — Basic layout

ISO 8440:1986

Location of codes in trade documents

ISO 8440:1986/COR 1:2000

Location of codes in trade documents — Technical Corrigendum 1

ISO 8601-1:2019

Date and time — Representations for information interchange — Part 1: Basic rules

ISO 8601-2:2019

Date and time — Representations for information interchange — Part 2: Extensions

ISO 9735-1:2002

Electronic data interchange for administration, commerce and transport (EDIFACT) — Application level syntax rules (Syntax version number: 4, Syntax release number: 1) — Part 1: Syntax rules common to all parts

ISO 9735-2:2002

Electronic data interchange for administration, commerce and transport (EDIFACT) — Application level syntax rules (Syntax version number: 4, Syntax release number: 1) — Part 2: Syntax rules specific to batch EDI

ISO 9735-3:2002

Electronic data interchange for administration, commerce and transport (EDIFACT) — Application level syntax rules (Syntax version number: 4, Syntax release number: 1) — Part 3: Syntax rules specific to interactive EDI

ISO 9735-4:2002

Electronic data interchange for administration, commerce and transport (EDIFACT) — Application level syntax rules (Syntax version number: 4, Syntax release number: 1) — Part 4: Syntax and service report message for batch EDI (message type — CONTRL)

ISO 9735-5:2002

Electronic data interchange for administration, commerce and transport (EDIFACT) — Application level syntax rules (Syntax version number: 4, Syntax release number: 1) — Part 5: Security rules for batch EDI (authenticity, integrity and non-repudiation of origin)

ISO 9735-6:2002

Electronic data interchange for administration, commerce and transport (EDIFACT) — Application level syntax rules (Syntax version number: 4, Syntax release number: 1) — Part 6: Secure authentication and acknowledgement message (message type - AUTACK)

ISO 9735-7:2002

Electronic data interchange for administration, commerce and transport (EDIFACT) — Application level syntax rules (Syntax version number: 4, Syntax release number: 1) — Part 7: Security rules for batch EDI (confidentiality)

ISO 9735-8:2002

Electronic data interchange for administration, commerce and transport (EDIFACT) — Application level syntax rules (Syntax version number: 4, Syntax release number: 1) — Part 8: Associated data in EDI

ISO 9735-9:2002

Electronic data interchange for administration, commerce and transport (EDIFACT) — Application level syntax rules (Syntax version number: 4, Syntax release number: 1) — Part 9: Security key and certificate management message (message type- KEYMAN)

ISO 9735-10:2014

Electronic data interchange for administration, commerce and transport (EDIFACT) — Application level syntax rules (Syntax version number: 4, Syntax release number: 2) — Part 10: Syntax service directories

ISO 9735:1988

Electronic data interchange for administration, commerce and transport (EDIFACT) — Application level syntax rules

ISO 9735:1988/AMD 1:1992

Electronic data interchange for administration, commerce and transport (EDIFACT) — Application level syntax rules — Amendment 1: .

ISO 14533-1:2014

Processes, data elements and documents in commerce, industry and administration — Long term signature profiles — Part 1: Long term signature profiles for CMS Advanced Electronic Signatures (CAdES)

ISO 14533-2:2012

Processes, data elements and documents in commerce, industry and administration — Long term signature profiles — Part 2: Long term signature profiles for XML Advanced Electronic Signatures (XAdES)

ISO 14533-3:2017

Processes, data elements and documents in commerce, industry and administration — Long term signature profiles — Part 3: Long term signature profiles for PDF Advanced Electronic Signatures (PAdES)

ISO 14533-4:2019

Processes, data elements and documents in commerce, industry and administration — Long term signature profiles — Part 4: Attributes pointing to (external) proof of existence objects used in long term signature formats (PoEAttributes)

ISO 15000-5:2014

Electronic Business Extensible Markup Language (ebXML) — Part 5: Core Components Specification (CCS)

ISO 17369:2013

Statistical data and metadata exchange (SDMX)

ISO 19626-1:2020

Processes, data elements and documents in commerce, industry and administration — Trusted communication platforms for electronic documents — Part 1: Fundamentals

ISO 20415:2019

Trusted mobile e-document framework — Requirements, functionality and criteria for ensuring reliable and safe mobile e-business

ISO/TS 20625:2002

Electronic data interchange for administration, commerce and transport (EDIFACT) — Rules for generation of XML scheme files (XSD) on the basis of EDI(FACT) implementation guidelines

ISO 22468:2020

Value stream management (VSM)

ISO 23354:2020

Business requirements for end-to-end visibility of logistics Flow

Standards under development:

ISO/AWI 9735-11

Electronic data interchange for administration, commerce and transport (EDIFACT) — Application level syntax rules (Syntax version number: 4, Syntax release number: 1) — Part 11: Version 3 compatible profile for Version 4 of ISO 9735

ISO/CD 14533-2

Processes, data elements and documents in commerce, industry and administration — Long term signature profiles — Part 2: Long term signature profiles for XML Advanced Electronic Signatures (XAdES)

ISO/DIS 15000-1

Electronic business eXtensible Markup Language (ebXML) — Part 1: Messaging service core specification

ISO/DIS 15000-2

Electronic business eXtensible Markup Language (ebXML) — Part 2: Applicability Statement (AS) profile of ebXML messaging service

ISO/DIS 19626-2

Processes, data elements and documents in commerce, industry and administration — Trusted communication platform for electronic documents — Part 2: Applications

ISO/AWI 34000

Date and time — Concepts and vocabulary

ISO/AWI 34300.2

Date and time — Codes for calendar systems

ISO/AWI 36100

Standarisation documents — Document metamodel

3.2.56 ISO/TC 301 - Energy management and energy savings

Keywords:

Clean Energy for transportation, Measurement of energy management progress, Energy management, Metrics and measurement internal to the organization, Energy savings in regions, Zero Net Energy

Scope:

Standarisation in the field of energy management and energy savings

Standards:

ISO/IEC 13273-1:2015

Energy efficiency and renewable energy sources — Common international terminology — Part 1: Energy efficiency

ISO/IEC 13273-2:2015

Energy efficiency and renewable energy sources — Common international terminology — Part 2: Renewable energy sources

ISO 17741:2016

General technical rules for measurement, calculation and verification of energy savings of projects

ISO 17742:2015

Energy efficiency and savings calculation for countries, regions and cities

ISO 17743:2016

Energy savings — Definition of a methodological framework applicable to calculation and reporting on energy savings

ISO 50001:2018

Energy management systems — Requirements with guidance for use

ISO 50002:2014

Energy audits — Requirements with guidance for use

ISO 50003:2014

Energy management systems — Requirements for bodies providing audit and certification of energy management systems

ISO 50004:2014

Energy management systems — Guidance for the implementation, maintenance and improvement of an energy management system

ISO 50006:2014

Energy management systems — Measuring energy performance using energy baselines (EnB) and energy performance indicators (EnPI) — General principles and guidance

ISO 50007:2017

Energy services — Guidelines for the assessment and improvement of the energy service to users

ISO/TS 50008:2018

Energy management and energy savings — Building energy data management for energy performance — Guidance for a systemic data exchange approach

ISO 50015:2014

Energy management systems — Measurement and verification of energy performance of organizations — General principles and guidance

ISO 50021:2019

Energy management and energy savings — General guidelines for selecting energy savings evaluators

ISO/TS 50044:2019

Energy saving projects (EnSPs) — Guidelines for economic and financial evaluation

ISO 50045:2019

Technical guidelines for the evaluation of energy savings of thermal power plants

ISO 50046:2019

General methods for predicting energy savings

ISO 50047:2016

Energy savings — Determination of energy savings in organizations

Standards under development:

ISO/DIS 50003

Energy management systems — Requirements for bodies providing audit and certification of energy management systems

ISO 50004

Energy management systems — Guidance for the implementation, maintenance and improvement of an ISO 50001 energy management system

ISO/CD 50005.2

Energy management systems — Modular implementation of the energy management system ISO 50001 including the use of energy performance evaluation techniques

ISO/CD 50006

ISO 50006 Energy management systems — Evaluating Energy Performance using Energy Baselines and Energy Performance Indicators

ISO/DIS 50009

Energy management systems – Guidance for multiple organizations implementing a common energy management system

ISO/AWI 50010

Energy management and energy savings - Guidance for zero net energy in operations

ISO/FDIS 50049

Calculation methods for energy efficiency and energy consumption variations at country, region and city levels

3.2.57 ISO/TC 197 - Hydrogen technologies

Keywords:

Clean Energy for transportation, Gaseous hydrogen land vehicle refuelling connection devices. Gaseous hydrogen land vehicle fuel tanks and TPRDs, Gaseous hydrogen fueling station dispensers   , Gaseous hydrogen fueling station compressors, Gaseous hydrogen fueling station hoses, Gaseous hydrogen fueling station fitting, Gaseous hydrogen fueling stations,   Hydrogen fuel quality, Hydrogen quality control, Basic considerations for the safety of hydrogen systems

Scope:

Standarisation in the field of systems and devices for the production, storage, transport, measurement and use of hydrogen.

Standards:

ISO 13984:1999

Liquid hydrogen — Land vehicle fuelling system interface

ISO 13985:2006

Liquid hydrogen — Land vehicle fuel tanks

ISO 14687:2019

Hydrogen fuel quality — Product specification

ISO/TR 15916:2015

Basic considerations for the safety of hydrogen systems

ISO 16110-1:2007

Hydrogen generators using fuel processing technologies — Part 1: Safety

ISO 16110-2:2010

Hydrogen generators using fuel processing technologies — Part 2: Test methods for performance

ISO 16111:2018

Transportable gas storage devices — Hydrogen absorbed in reversible metal hydride

ISO 17268:2020

Gaseous hydrogen land vehicle refuelling connection devices

ISO 19880-1:2020

Gaseous hydrogen — Fuelling stations — Part 1: General requirements

ISO 19880-3:2018

Gaseous hydrogen — Fuelling stations — Part 3: Valves

ISO 19880-5:2019

Gaseous hydrogen — Fuelling stations — Part 5: Dispenser hoses and hose assemblies

ISO 19880-8:2019

Gaseous hydrogen — Fuelling stations — Part 8: Fuel quality control

ISO 19881:2018

Gaseous hydrogen — Land vehicle fuel containers

ISO 19882:2018

Gaseous hydrogen — Thermally activated pressure relief devices for compressed hydrogen vehicle fuel containers

ISO/TS 19883:2017

Safety of pressure swing adsorption systems for hydrogen separation and purification

ISO 22734:2019

Hydrogen generators using water electrolysis — Industrial, commercial, and residential applications

ISO 26142:2010

Hydrogen detection apparatus — Stationary applications

Standards under development:

ISO/WD TR 15916

Basic considerations for the safety of hydrogen systems

ISO 19880-5:2019/DAMD 1

Gaseous hydrogen — Fuelling stations — Part 5: Dispenser hoses and hose assemblies — Amendment 1: Clarification regarding electrical properties of lining materials

ISO 19880-8:2019/DAMD 1

Gaseous hydrogen — Fuelling stations — Part 8: Fuel quality control — Amendment 1

3.2.58 ISO/TC 238 - Solid biofuels

Keywords:

Clean Energy for transportation, Fuel specifications and classes, Physical and mechanical test methods, Chemical test methods, Sampling and sample preparation, Safety of solid biofuels

Scope:

Standarisation of terminology, specifications and classes, quality assurance, sampling and sample preparation and test methods in the field of raw and processed materials originating from arboriculture, agriculture, aquaculture, horticulture and forestry to be used as a source for solid biofuels

Excluded: areas covered by ISO/TC 28/SC 7 Liquid biofuels, ISO/TC 193 Natural gas.

Standards:

ISO 14780:2017

Solid biofuels — Sample preparation

ISO 14780:2017/AMD 1:2019

Solid biofuels — Sample preparation — Amendment 1

ISO 16559:2014

Solid biofuels — Terminology, definitions and descriptions

ISO 16948:2015

Solid biofuels — Determination of total content of carbon, hydrogen and nitrogen

ISO 16967:2015

Solid biofuels — Determination of major elements — Al, Ca, Fe, Mg, P, K, Si, Na and Ti

ISO 16968:2015

Solid biofuels — Determination of minor elements

ISO 16993:2016

Solid biofuels — Conversion of analytical results from one basis to another

ISO 16994:2016

Solid biofuels — Determination of total content of sulfur and chlorine

ISO 16995:2015

Solid biofuels — Determination of the water soluble chloride, sodium and potassium content

ISO/TS 16996:2015

Solid biofuels — Determination of elemental composition by X-ray fluorescence

ISO 17225-1:2014

Solid biofuels — Fuel specifications and classes — Part 1: General requirements

ISO 17225-2:2014

Solid biofuels — Fuel specifications and classes — Part 2: Graded wood pellets

ISO 17225-3:2014

Solid biofuels — Fuel specifications and classes — Part 3: Graded wood briquettes

ISO 17225-4:2014

Solid biofuels — Fuel specifications and classes — Part 4: Graded wood chips

ISO 17225-5:2014

Solid biofuels — Fuel specifications and classes — Part 5: Graded firewood

ISO 17225-6:2014

Solid biofuels — Fuel specifications and classes — Part 6: Graded non-woody pellets

ISO 17225-7:2014

Solid biofuels — Fuel specifications and classes — Part 7: Graded non-woody briquettes

ISO/TS 17225-8:2016

Solid biofuels — Fuel specifications and classes — Part 8: Graded thermally treated and densified biomass fuels

ISO/TS 17225-9:2020

Solid biofuels — Fuel specifications and classes — Part 9: Graded hog fuel and wood chips for industrial use

ISO 17827-1:2016

Solid biofuels — Determination of particle size distribution for uncompressed fuels — Part 1: Oscillating screen method using sieves with apertures of 3,15 mm and above

ISO 17827-2:2016

Solid biofuels — Determination of particle size distribution for uncompressed fuels — Part 2: Vibrating screen method using sieves with aperture of 3,15 mm and below

ISO 17828:2015

Solid biofuels — Determination of bulk density

ISO 17829:2015

Solid Biofuels — Determination of length and diameter of pellets

ISO 17830:2016

Solid biofuels — Particle size distribution of disintegrated pellets

ISO 17831-1:2015

Solid biofuels — Determination of mechanical durability of pellets and briquettes — Part 1: Pellets

ISO 17831-2:2015

Solid biofuels — Determination of mechanical durability of pellets and briquettes — Part 2: Briquettes

ISO 18122:2015

Solid biofuels — Determination of ash content

ISO 18123:2015

Solid biofuels — Determination of the content of volatile matter

ISO 18125:2017

Solid biofuels — Determination of calorific value

ISO 18134-1:2015

Solid biofuels — Determination of moisture content — Oven dry method — Part 1: Total moisture — Reference method

ISO 18134-2:2017

Solid biofuels — Determination of moisture content — Oven dry method — Part 2: Total moisture — Simplified method

ISO 18134-3:2015

Solid biofuels — Determination of moisture content — Oven dry method — Part 3: Moisture in general analysis sample

ISO 18135:2017

Solid Biofuels — Sampling

ISO 18846:2016

Solid biofuels — Determination of fines content in quantities of pellets

ISO 18847:2016

Solid biofuels — Determination of particle density of pellets and briquettes

ISO 19743:2017

Solid biofuels — Determination of content of heavy extraneous materials larger than 3,15 mm

ISO 20023:2018

Solid biofuels — Safety of solid biofuel pellets — Safe handling and storage of wood pellets in residential and other small-scale applications

ISO 20024:2020

Solid biofuels — Safe handling and storage of solid biofuel pellets in commercial and industrial applications

ISO/TS 20048-1:2020

Solid biofuels — Determination of off-gassing and oxygen depletion characteristics — Part 1: Laboratory method for the determination of off-gassing and oxygen depletion using closed containers

ISO 20049-1:2020

Solid biofuels — Determination of self-heating of pelletized biofuels — Part 1: Isothermal calorimetry

ISO 21404:2020

Solid biofuels — Determination of ash melting behaviour

ISO 21945:2020

Solid biofuels — Simplified sampling method for small scale applications

Standards under development:

ISO/DIS 16559

Solid biofuels — Terminology, definitions and descriptions

ISO/DIS 17225-1

Solid biofuels — Fuel specifications and classes — Part 1: General requirements

ISO/DIS 17225-2

Solid biofuels — Fuel specifications and classes — Part 2: Graded wood pellets

ISO/DIS 17225-3

Solid biofuels — Fuel specifications and classes — Part 3: Graded wood briquettes

ISO/DIS 17225-4

Solid biofuels — Fuel specifications and classes — Part 4: Graded wood chips

ISO/CD 17225-5

Solid biofuels — Fuel specifications and classes — Part 5: Graded firewood

ISO/CD 17225-6

Solid biofuels — Fuel specifications and classes — Part 6: Graded non-woody pellets

ISO/CD 17225-7

Solid biofuels — Fuel specifications and classes — Part 7: Graded non-woody briquettes

ISO 18135:2017/AWI AMD 1

Solid Biofuels — Sampling — Amendment 1

ISO/CD 18846-2

Solid biofuels — Determination of fines content in quantities of pellets — Part 2: Simplified method

ISO/CD 20048-2

Solid biofuels — Determination of off-gassing and oxygen depletion characteristics — Part 2: Operational method for screening of carbon monoxide off-gassing

ISO/CD TS 20049-2

Solid biofuels — Determination of self-heating of pelletized biofuels — Part 2: Basket heating tests

ISO/AWI 21596

Solid biofuels — Determination of grindability — Hardgrove type method for thermally treated biomass fuels

ISO/CD 23343-1

Solid biofuels — Determination of water sorption and its effect on durability of thermally treated biomass fuels — Part 1: Pellets

ISO/CD TR 23437

Solid biofuels — Determination of bridging behaviour of bulk biofuels

3.2.59 ISO/TC 211 - Geographic information/Geomatics

Keywords:

Availability and information, XML, geodetic register, Geospatial services, Imagery, Information communities, Information management, Ubiquitous public access

Scope:

Standarisation in the field of digital geographic information. Note: This work aims to establish a structured set of standards for information concerning objects or phenomena that are directly or indirectly associated with a location relative to the Earth.

These standards may specify, for geographic information, methods, tools and services for data management (including definition and description), acquiring, processing, analyzing, accessing, presenting and transferring such data in digital / electronic form between different users, systems and locations.

The work shall link to appropriate standards for information technology and data where possible, and provide a framework for the development of sector-specific applications using geographic data.

Standards:

ISO 6709:2008

Standard representation of geographic point location by coordinates

ISO 6709:2008/COR 1:2009

Standard representation of geographic point location by coordinates — Technical Corrigendum 1

ISO 19101-1:2014

Geographic information — Reference model — Part 1: Fundamentals

ISO 19101-2:2018

Geographic information — Reference model — Part 2: Imagery

ISO 19103:2015

Geographic information — Conceptual schema language

ISO 19104:2016

Geographic information — Terminology

ISO 19105:2000

Geographic information — Conformance and testing

ISO 19106:2004

Geographic information — Profiles

ISO 19107:2019

Geographic information — Spatial schema

ISO 19108:2002

Geographic information — Temporal schema

ISO 19108:2002/COR 1:2006

Geographic information — Temporal schema — Technical Corrigendum 1

ISO 19109:2015

Geographic information — Rules for application schema

ISO 19110:2016

Geographic information — Methodology for feature cataloguing

ISO 19111:2019

Geographic information — Referencing by coordinates

ISO 19112:2019

Geographic information — Spatial referencing by geographic identifiers

ISO 19115-1:2014

Geographic information — Metadata — Part 1: Fundamentals

ISO 19115-1:2014/AMD 1:2018

Geographic information — Metadata — Part 1: Fundamentals — Amendment 1

ISO 19115-2:2019

Geographic information — Metadata — Part 2: Extensions for acquisition and processing

ISO/TS 19115-3:2016

Geographic information — Metadata — Part 3: XML schema implementation for fundamental concepts

ISO 19116:2019

Geographic information — Positioning services

ISO 19117:2012

Geographic information — Portrayal

ISO 19118:2011

Geographic information — Encoding

ISO 19119:2016

Geographic information — Services

ISO/TR 19121:2000

Geographic information — Imagery and gridded data

ISO 19123-2:2018

Geographic information — Schema for coverage geometry and functions — Part 2: Coverage implementation schema

ISO 19123:2005

Geographic information — Schema for coverage geometry and functions

ISO 19125-1:2004

Geographic information — Simple feature access — Part 1: Common architecture

ISO 19126:2009

Geographic information — Feature concept dictionaries and registers

ISO 19127:2019

Geographic information — Geodetic register

ISO 19128:2005

Geographic information — Web map server interface

ISO/TS 19129:2009

Geographic information — Imagery, gridded and coverage data framework

ISO 19130-1:2018

Geographic information — Imagery sensor models for geopositioning — Part 1: Fundamentals

ISO/TS 19130-2:2014

Geographic information — Imagery sensor models for geopositioning — Part 2: SAR, InSAR, lidar and sonar

ISO 19131:2007

Geographic information — Data product specifications

ISO 19131:2007/AMD 1:2011

Geographic information — Data product specifications — Amendment 1: Requirements relating to the inclusion of an application schema and feature catalogue and the treatment of coverages in an application schema.

ISO 19132:2007

Geographic information — Location-based services — Reference model

ISO 19133:2005

Geographic information — Location-based services — Tracking and navigation

ISO 19134:2007

Geographic information — Location-based services — Multimodal routing and navigation

ISO 19135-1:2015

Geographic information — Procedures for item registration — Part 1: Fundamentals

ISO 19136-1:2020

Geographic information — Geography Markup Language (GML) — Part 1: Fundamentals

ISO 19136-2:2015

Geographic information — Geography Markup Language (GML) — Part 2: Extended schemas and encoding rules

ISO 19137:2007

Geographic information — Core profile of the spatial schema

ISO/TS 19139-1:2019

Geographic information — XML schema implementation — Part 1: Encoding rules

ISO 19141:2008

Geographic information — Schema for moving features

ISO 19142:2010

Geographic information — Web Feature Service

ISO 19143:2010

Geographic information — Filter encoding

ISO 19144-1:2009

Geographic information — Classification systems — Part 1: Classification system structure

ISO 19144-1:2009/COR 1:2012

Geographic information — Classification systems — Part 1: Classification system structure — Technical Corrigendum 1

ISO 19144-2:2012

Geographic information - Classification systems — Part 2: Land Cover Meta Language (LCML)

ISO 19145:2013

Geographic information — Registry of representations of geographic point location

ISO 19146:2018

Geographic information — Cross-domain vocabularies

ISO 19147:2015

Geographic information — Transfer Nodes

ISO 19148:2012

Geographic information — Linear referencing

ISO 19149:2011

Geographic information — Rights expression language for geographic information — GeoREL

ISO/TS 19150-1:2012

Geographic information — Ontology — Part 1: Framework

ISO 19150-2:2015

Geographic information — Ontology — Part 2: Rules for developing ontologies in the Web Ontology Language (OWL)

ISO 19150-2:2015/AMD 1:2019

Geographic information — Ontology — Part 2: Rules for developing ontologies in the Web Ontology Language (OWL) — Amendment 1

ISO 19150-4:2019

Geographic information — Ontology — Part 4: Service ontology

ISO 19152:2012

Geographic information — Land Administration Domain Model (LADM)

ISO 19154:2014

Geographic information — Ubiquitous public access — Reference model

ISO 19155-2:2017

Geographic information — Place Identifier (PI) architecture — Part 2: Place Identifier (PI) linking

ISO 19155:2012

Geographic information — Place Identifier (PI) architecture

ISO 19156:2011

Geographic information — Observations and measurements

ISO/TS 19157-2:2016

Geographic information — Data quality — Part 2: XML schema implementation

ISO 19157:2013

Geographic information — Data quality

ISO 19157:2013/AMD 1:2018

Geographic information — Data quality — Amendment 1: Describing data quality using coverages

ISO/TS 19158:2012

Geographic information — Quality assurance of data supply

ISO/TS 19159-1:2014

Geographic information — Calibration and validation of remote sensing imagery sensors and data — Part 1: Optical sensors

ISO/TS 19159-2:2016

Geographic information — Calibration and validation of remote sensing imagery sensors and data — Part 2: Lidar

ISO/TS 19159-3:2018

Geographic information — Calibration and validation of remote sensing imagery sensors and data — Part 3: SAR/InSAR

ISO 19160-1:2015

Addressing — Part 1: Conceptual model

ISO 19160-3:2020

Addressing — Part 3: Address data quality

ISO 19160-4:2017

Addressing — Part 4: International postal address components and template language

ISO 19161-1:2020

Geographic information — Geodetic references — Part 1: International terrestrial reference system (ITRS)

ISO 19162:2019

Geographic information — Well-known text representation of coordinate reference systems

ISO/TS 19163-1:2016

Geographic information — Content components and encoding rules for imagery and gridded data — Part 1: Content model

ISO 19165-1:2018

Geographic information — Preservation of digital data and metadata — Part 1: Fundamentals

ISO/TR 19167:2019

Application of ubiquitous public access to-geographic information to an air quality information service

Standards under development:

ISO/CD 6709

Standard representation of geographic point location by coordinates

ISO/CD 19105

Geographic information — Conformance and testing

ISO 19115-1:2014/DAMD 2

Geographic information — Metadata — Part 1: Fundamentals — Amendment 2

ISO 19115-2:2019/DAMD 1

Geographic information — Metadata — Part 2: Extensions for acquisition and processing — Amendment 1

ISO/WD 19115-3

Geographic information — Metadata — Part 3: XML schema implementation for fundamental concepts

ISO/WD 19123-1

Geographic information — Schema for coverage geometry and functions — Part 1: Fundamentals

ISO/WD TS 19124-1

Geographic information — Calibration and validation of remote sensing data and derived products — Part 1: Fundamentals

ISO/DIS 19126

Geographic information — Feature concept dictionaries and registers

ISO/CD TS 19130-3

Geographic information — Imagery sensor models for geopositioning — Part 3: Implementation Schema

ISO/FDIS 19131

Geographic information — Data product specifications

ISO 19135-1:2015/DAMD 1

Geographic information — Procedures for item registration — Part 1: Fundamentals — Amendment 1

ISO/DIS 19148

Geographic information — Linear referencing

ISO/AWI 19156

Geographic information — Observations and measurements

ISO/AWI 19157-1

Geographic information — Data quality — Part 1: General requirements

ISO/CD TS 19159-4

Geographic information — Calibration and validation of remote sensing imagery sensors — Part 4: Space-borne passive microwave radiometers

ISO/AWI 19160-6

Addressing — Part 6: Digital interchange models

ISO/PRF TS 19163-2

Geographic information — Content components and encoding rules for imagery and gridded data — Part 2: Implementation schema

ISO/FDIS 19165-2

Geographic information — Preservation of digital data and metadata — Part 2: Content specifications for Earth observation data and derived digital products

ISO/CD TS 19166

Geographic information — BIM to GIS conceptual mapping (B2GM)

ISO/FDIS 19168-1

Geographic information — Geospatial API for features — Part 1: Core

ISO/CD TR 19169

Geographic Information — Gap-analysis: To map and describe the differences between the current GDF and ISO/TC211 conceptual models to suggest ways harmonize and resolve conflicting issues

ISO/CD 19170-1

Geographic information — Discrete global grid systems — Part 1: Core operations and equal area earth reference systems

3.2.60 ISO/TC 59 - Buildings and civil engineering works

Keywords:

Civil engineering, Sealants

Organization and digitization of information about buildings and civil engineering works, including building information modelling (BIM), Design life, Framework for the description of housing performance, Accessibility and usability of the built environment, Sustainability in buildings and civil engineering Works, Construction procurement, Modular coordination, Resilience of buildings and civil engineering works, Security in the built environment

Scope:

Standarisation in the field of buildings and civil engineering works, of:

- general terminology;
- organization of information in the processes of design, manufacture and construction;
- general geometric requirements for buildings, building elements and components including modular coordination and its basic principles, general rules for joints, tolerances and fits, performance and test standards for sealants;
- general rules for other performance requirements, including functional and user requirements related to service life, sustainability, accessibility and usability;
- general rules and guidelines for addressing the economic, environmental and social impacts and aspects related to sustainable development;
- geometric and performance requirements for components that are not in the scope of separate ISO technical committees;
- procurement processes, methods and procedures.

Excluded:

- standarisation and coordination of technical product documentation (ISO/TC 10);
- acoustic requirements (ISO / TC 43);
- bases for design of concrete structures (ISO/TC 71/SC 4);
- fire tests and fire safety engineering related to building materials, components and structures (ISO/TC 92);
- bases for design of structures (ISO / TC 98);
- construction machinery (ISO/TC 127 and ISO/TC 195);
- performance requirements for glass in buildings (ISO/TC 160);
- performance requirements for doors, doorsets and windows (ISO/TC 162);
- calculation of thermal properties (ISO / TC 163);
- bases for design of timber structures (ISO/TC 165);
- bases for design of steel and aluminium structures (ISO/TC 167);
- geotechnical aspects and soil quality (ISO/TC 182 and ISO/TC 190);
- standarisation in the design and retrofit buildings regarding acceptable indoor environment and practicable energy use (ISO/TC 205).

Standards:

ISO 2445:1972

Joints in building — Fundamental principles for design

ISO 2848:1984

Building construction — Modular coordination — Principles and rules

ISO 3443-1:1979

Tolerances for building — Part 1: Basic principles for evaluation and specification

ISO 3443-2:1979

Tolerances for building — Part 2: Statistical basis for predicting fit between components having a normal distribution of sizes

ISO 3443-3:1987

Tolerances for building — Part 3: Procedures for selecting target size and predicting fit

ISO 3443-4:1986

Tolerances for building — Part 4: Method for predicting deviations of assemblies and for allocation of tolerances

ISO 3443-5:1982

Building construction — Tolerances for building — Part 5: Series of values to be used for specification of tolerances

ISO 3443-6:1986

Tolerances for building — Part 6: General principles for approval criteria, control of conformity with dimensional tolerance specifications and statistical control — Method 1

ISO 3443-7:1988

Tolerances for building — Part 7: General principles for approval criteria, control of conformity with dimensional tolerance specifications and statistical control — Method 2 (Statistical control method)

ISO 3443-8:1989

Tolerances for building — Part 8: Dimensional inspection and control of construction work

ISO 3447:1975

Joints in building — General check-list of joint functions

ISO 3881:1977

Building construction — Modular co-ordination — Stairs and stair openings — Co-ordinating dimensions

ISO 4463-1:1989

Measurement methods for building — Setting-out and measurement — Part 1: Planning and organization, measuring procedures, acceptance criteria

ISO 4463-2:1995

Measurement methods for building — Setting-out and measurement — Part 2: Measuring stations and targets

ISO 4463-3:1995

Measurement methods for building — Setting-out and measurement — Part 3: Check-lists for the procurement of surveys and measurement services

ISO 6511:1982

Building construction — Modular coordination — Modular floor plane for vertical dimensions

ISO 6589:1983

Joints in building — Laboratory method of test for air permeability of joints

ISO 7077:1981

Measuring methods for building — General principles and procedures for the verification of dimensional compliance

ISO 7361:1986

Performance standards in building — Presentation of performance levels of facades made of same-source components

ISO 7727:1984

Joints in building — Principles for jointing of building components — Accommodation of dimensional deviations during construction

ISO 7728:1985

Typical horizontal joints between an external wall of prefabricated ordinary concrete components and a concrete floor — Properties. characteristics and classification criteria

ISO 7729:1985

Typical vertical joints between two prefabricated ordinary concrete external wall components — Properties, characteristics and classification criteria

ISO 7737:1986

Tolerances for building — Presentation of dimensional accuracy data

ISO 7844:1985

Grooved vertical joints with connecting bars and concrete infill between large reinforced concrete panels — Laboratory mechanical tests — Effect of tangential loading

ISO 7845:1985

Horizontal joints between load-bearing walls and concrete floors — Laboratory mechanical tests — Effect of vertical loading and of moments transmitted by the floors

ISO 7892:1988

Vertical building elements — Impact resistance tests — Impact bodies and general test procedures

ISO 7976-1:1989

Tolerances for building — Methods of measurement of buildings and building products — Part 1: Methods and instruments

ISO 7976-2:1989

Tolerances for building — Methods of measurement of buildings and building products — Part 2: Position of measuring points

ISO 9882:1993

Performance standards in building — Performance test for precast concrete floors — Behaviour under non-concentrated load

ISO 9883:1993

Performance standards in building — Performance test for precast concrete floors — Behaviour under concentrated load

ISO 21723:2019

Buildings and civil engineering works — Modular coordination — Module

ISO 1791:1983

Building construction — Modular co-ordination — Vocabulary

ISO 1803:1997

Building construction — Tolerances — Expression of dimensional accuracy — Principles and terminology

ISO 6707-1:2017

Buildings and civil engineering works — Vocabulary — Part 1: General terms

ISO 6707-2:2017

Buildings and civil engineering works — Vocabulary — Part 2: Contract and communication terms

ISO 6707-3:2017

Buildings and civil engineering works — Vocabulary — Part 3: Sustainability terms

ISO 7078:2020

Buildings and civil engineering works — Procedures for setting out, measurement and surveying — Vocabulary

ISO 6927:2012

Buildings and civil engineering works — Sealants — Vocabulary

ISO 7389:2002

Building construction — Jointing products — Determination of elastic recovery of sealants

ISO 7390:2002

Building construction — Jointing products — Determination of resistance to flow of sealants

ISO 8339:2005

Building construction — Sealants — Determination of tensile properties (Extension to break)

ISO 8340:2005

Building construction — Sealants — Determination of tensile properties at maintained extension

ISO 8394-1:2010

Building construction — Jointing products — Part 1: Determination of extrudability of sealants

ISO 8394-2:2017

Buildings and civil engineering works — Determination of extrudability of sealants — Part 2: Using standardised apparatus

ISO 9046:2002

Building construction — Jointing products — Determination of adhesion/cohesion properties of sealants at constant temperature

ISO 9047:2001

Building construction — Jointing products — Determination of adhesion/cohesion properties of sealants at variable temperatures

ISO 9047:2001/COR 1:2009

Building construction — Jointing products — Determination of adhesion/cohesion properties of sealants at variable temperatures — Technical Corrigendum 1

ISO 10563:2017

Buildings and civil engineering works — Sealants — Determination of change in mass and volume

ISO 10590:2005

Building construction — Sealants —- Determination of tensile properties of sealants at maintained extension after immersion in water

ISO 10591:2005

Building construction — Sealants — Determination of adhesion/cohesion properties of sealants after immersion in water

ISO 11431:2002

Building construction — Jointing products — Determination of adhesion/cohesion properties of sealants after exposure to heat, water and artificial light through glass

ISO 11432:2005

Building construction — Sealants — Determination of resistance to compression

ISO 11527:2018

Buildings and civil engineering works — Sealants — Test method for the determination of stringiness

ISO 11528:2016

Buildings and civil engineering works — Sealants — Determination of crazing and cracking following exposure to artificial or natural weathering

ISO 11600:2002

Building construction — Jointing products — Classification and requirements for sealants

ISO 11600:2002/AMD 1:2011

Building construction — Jointing products — Classification and requirements for sealants — Amendment 1

ISO 11617:2014

Buildings and civil engineering works — Sealants — Determination of changes in cohesion and appearance of elastic weatherproofing sealants after exposure of statically cured specimens to artificial weathering and mechanical cycling

ISO 11618:2015

Buildings and Civil Engineering Works — Sealants — Classification and requirements for pedestrian walkway sealants

ISO 13638:1996

Building construction — Sealants — Determination of resistance to prolonged exposure to water

ISO 13640:2018

Buildings and civil engineering works — Sealants — Specifications for test substrates

ISO 16938-1:2019

Buildings and civil engineering works — Determination of the staining of porous substrates by sealants used in joints — Part 1: Test with compression

ISO 16938-2:2019

Buildings and civil engineering works — Determination of the staining of porous substrates by sealants used in joints — Part 2: Test without compression

ISO 19861:2015

Buildings and civil engineering works — Sealants — Determination of curing behaviour

ISO 19862:2015

Buildings and civil engineering works — Sealants — Durability to extension compression cycling under accelerated weathering

ISO 19863:2016

Buildings and civil engineering works — Sealants — Determination of tear resistance

ISO/TR 20436:2017

Buildings and civil engineering works — Sealants — Paintability and paint compatibility of sealants

ISO 12006-2:2015

Building construction — Organization of information about construction works — Part 2: Framework for classification

ISO 12006-3:2007

Building construction — Organization of information about construction works — Part 3: Framework for object-oriented information

ISO/TS 12911:2012

Framework for building information modelling (BIM) guidance

ISO 16354:2013

Guidelines for knowledge libraries and object libraries

ISO 16739-1:2018

Industry Foundation Classes (IFC) for data sharing in the construction and facility management industries — Part 1: Data schema

ISO 16757-1:2015

Data structures for electronic product catalogues for building services — Part 1: Concepts, architecture and model

ISO 16757-2:2016

Data structures for electronic product catalogues for building services — Part 2: Geometry

ISO 19650-1:2018

Organization and digitization of information about buildings and civil engineering works, including building information modelling (BIM) — Information management using building information modelling — Part 1: Concepts and principles

ISO 19650-2:2018

Organization and digitization of information about buildings and civil engineering works, including building information modelling (BIM) — Information management using building information modelling — Part 2: Delivery phase of the assets

ISO 21597-1:2020

Information container for linked document delivery — Exchange specification — Part 1: Container

ISO 22263:2008

Organization of information about construction works — Framework for management of project information

ISO 23386:2020

Building information modelling and other digital processes used in construction — Methodology to describe, author and maintain properties in interconnected data dictionaries

ISO 29481-1:2016

Building information models — Information delivery manual — Part 1: Methodology and format

ISO 29481-2:2012

Building information models — Information delivery manual — Part 2: Interaction framework

ISO 15686-1:2011

Buildings and constructed assets — Service life planning — Part 1: General principles and framework

ISO 15686-2:2012

Buildings and constructed assets — Service life planning — Part 2: Service life prediction procedures

ISO 15686-3:2002

Buildings and constructed assets — Service life planning — Part 3: Performance audits and reviews

ISO 15686-4:2014

Building Construction — Service Life Planning — Part 4: Service Life Planning using Building Information Modelling

ISO 15686-5:2017

Buildings and constructed assets — Service life planning — Part 5: Life-cycle costing

ISO 15686-7:2017

Buildings and constructed assets — Service life planning — Part 7: Performance evaluation for feedback of service life data from practice

ISO 15686-8:2008

Buildings and constructed assets — Service-life planning — Part 8: Reference service life and service-life estimation

ISO/TS 15686-9:2008

Buildings and constructed assets — Service-life planning — Part 9: Guidance on assessment of service-life data

ISO 15686-10:2010

Buildings and constructed assets — Service life planning — Part 10: When to assess functional performance

ISO/TR 15686-11:2014

Buildings and constructed assets — Service life planning — Part 11: Terminology

ISO 9836:2017

Performance standards in building — Definition and calculation of area and space indicators

ISO 11863:2011

Buildings and building-related facilities — Functional and user requirements and performance — Tools for assessment and comparison

ISO 15928-1:2015

Houses — Description of performance — Part 1: Structural safety

ISO 15928-2:2015

Houses — Description of performance — Part 2: Structural serviceability

ISO 15928-3:2015

Houses — Description of performance — Part 3: Structural durability

ISO 15928-4:2017

Houses — Description of performance — Part 4: Fire safety

ISO 15928-5:2013

Houses — Description of performance — Part 5: Operating energy

ISO 19208:2016

Framework for specifying performance in buildings

ISO 21542:2011

Building construction — Accessibility and usability of the built environment

ISO/TS 12720:2014

Sustainability in buildings and civil engineering works — Guidelines on the application of the general principles in ISO 15392

ISO 15392:2019

Sustainability in buildings and civil engineering works — General principles

ISO 16745-1:2017

Sustainability in buildings and civil engineering works — Carbon metric of an existing building during use stage — Part 1: Calculation, reporting and communication

ISO 16745-2:2017

Sustainability in buildings and civil engineering works — Carbon metric of an existing building during use stage — Part 2: Verification

ISO 20887:2020

Sustainability in buildings and civil engineering works — Design for disassembly and adaptability — Principles, requirements and guidance

ISO 21929-1:2011

Sustainability in building construction — Sustainability indicators — Part 1: Framework for the development of indicators and a core set of indicators for buildings

ISO/TS 21929-2:2015

Sustainability in building construction — Sustainability indicators — Part 2: Framework for the development of indicators for civil engineering works

ISO 21930:2017

Sustainability in buildings and civil engineering works — Core rules for environmental product declarations of construction products and services

ISO 21931-1:2010

Sustainability in building construction — Framework for methods of assessment of the environmental performance of construction works — Part 1: Buildings

ISO 21931-2:2019

Sustainability in buildings and civil engineering works — Framework for methods of assessment of the environmental, social and economic performance of construction works as a basis for sustainability assessment — Part 2: Civil engineering works

ISO/TR 21932:2013

Sustainability in buildings and civil engineering works — A review of terminology

ISO 10845-1:2010

Construction procurement — Part 1: Processes, methods and procedures

ISO 10845-2:2011

Construction procurement — Part 2: Formatting and compilation of procurement documentation

ISO 10845-3:2011

Construction procurement — Part 3: Standard conditions of tender

ISO 10845-4:2011

Construction procurement — Part 4: Standard conditions for the calling for expressions of interest

ISO 10845-5:2011

Construction procurement — Part 5: Participation of targeted enterprises in contracts

ISO 10845-6:2011

Construction procurement — Part 6: Participation of targeted partners in joint ventures in contracts

ISO 10845-7:2011

Construction procurement — Part 7: Participation of local enterprises and labour in contracts

ISO 10845-8:2011

Construction procurement — Part 8: Participation of targeted labour in contracts

Standards under development:

ISO/WD TR 5202

Buildings and civil engineering works — Building resilience strategies related to public health emergencies — Compilation of relevant information

ISO/CD TR 22845

Resilience of buildings and civil engineering works

ISO/DIS 23234

Buildings and civil engineering works — Security — Planning of security measures in the built environment

ISO/PRF 6707-1

Buildings and civil engineering works — Vocabulary — Part 1: General terms

ISO/AWI 6707-3

Buildings and civil engineering works — Vocabulary — Part 3: Sustainability terms

ISO/CD 6707-4

Buildings and civil engineering works — Vocabulary — Part 4: Facility management terms

ISO/WD 4781

Building and civil engineering works — Sealants — Determination of application life

ISO/WD 4784

Building and civil engineering works — Sealants — Determination of surface cure time

ISO/CD 6927

Buildings and civil engineering works — Sealants — Vocabulary

ISO/CD 9046

Building construction — Jointing products — Determination of adhesion/cohesion properties of sealants at constant temperature

ISO/WD 11617

Buildings and civil engineering works — Sealants — Determination of changes in cohesion and appearance of elastic weatherproofing sealants after exposure of statically cured specimens to artificial weathering and mechanical cycling

ISO/CD 13638

Buildings and civil engineering works — Sealants — Determination of resistance to prolonged exposure to water

ISO/CD 21265

Buildings and civil engineering works — Sealants — Test method for fungicidal (mould) resistance of sanitary sealants

ISO 23658

Buildings and civil engineering works — Sealants — Testing of adhesion properties using a bead peel test

ISO/WD 23869

Determination of Self-leveling Properties of Sealant

ISO/WD 24068-1

Building and civil engineering works — Determination of the degree of cure of sealants — Part 1: Build-up of tensile properties in dumbbell-shaped specimens

ISO/WD 24068-2

Building and civil engineering works — Determination of the degree of cure of sealants — Part 2: Build-up of tensile and adhesion properties in test joint specimens

ISO/WD 24070-1

Building and civil engineering works — Determination of cured thickness of one-component sealants — Part 1: Taper-shaped groove test method

ISO/WD 24070-2

Building and civil engineering works — Determination of cured thickness of one-component sealants — Part 2: Cylindrical cup test method

ISO/WD 12006-3

Building construction — Organization of information about construction works — Part 3: Framework for object-oriented information

ISO/WD 12911

Framework for building information modelling (BIM) guidance

ISO/FDIS 19650-3

Organization and digitization of information about buildings and civil engineering works, including building information modelling (BIM) — Information management using building information modelling — Part 3: Operational phase of the assets

ISO/WD 19650-4

Organization and digitization of information about buildings and civil engineering works, including building information modelling (BIM) — Information management using building information modelling — Part 4: Information exchange

ISO/FDIS 19650-5

Organization and digitization of information about buildings and civil engineering works, including building information modelling (BIM) — Information management using building information modelling — Part 5: Security-minded approach to information management

ISO/DIS 21597-2

Information container for linked document delivery — Exchange specification — Part 2: Dynamic semantics

ISO/CD TR 23262

GIS (Geospatial) / BIM interoperability

ISO/FDIS 23387

Building information modelling (BIM) — Data templates for construction objects used in the life cycle of any built asset — Concepts and principles

ISO/WD 15686-10

Buildings and constructed assets — Service life planning — Part 10: When to assess functional performance

ISO/CD 15928-6

Houses — Description of performance — Part 6: Contribution to sustainable development

ISO/CD 15928-7

Houses — Description of performance — Part 7: Accessibility and usability

ISO/DIS 21542

Building construction — Accessibility and usability of the built environment

ISO 21678

Sustainability in buildings and civil engineering works — Indicators and benchmarks — Principles, requirements and guidelines

ISO/WD 21928-2

Sustainability in buildings and civil engineering works — Sustainability indicators — Part 2: Framework for the development of indicators for civil engineering works

ISO/WD 21931-1

Sustainability in buildings and civil engineering works — Framework for methods of assessment of the environmental, social and economic performance of construction works as a basis for sustainability assessment — Part 1: Buildings

ISO/CD 22057

Enabling use of Environmental Product Declarations (EPD) at construction works level using building information modelling (BIM)

ISO/DIS 10845-1

Construction procurement — Part 1: Processes, methods and procedures

ISO/DIS 10845-2

Construction procurement — Part 2: Formatting and compilation of procurement documentation

ISO/DIS 10845-3

Construction procurement — Part 3: Standard conditions of tender

ISO/DIS 10845-4

Construction procurement — Part 4: Standard conditions for the calling for expressions of interest

3.2.61 CLC/BTTF 69-3 Road traffic signal systems

Keywords:

Road vehicles, Road traffic signal systems

Scope:

To prepare a standard, as described in BT(DE/NOT)141 (Road traffic signal systems).

Standards:

EN 50293:2012 (pr=22902)

Road traffic signal systems - Electromagnetic compatibility

CLC/TS 50509:2007 (pr=16585)

Use of LED signal heads in road traffic signal systems

EN 50556:2018 (pr=60533)

Road traffic signal systems

Standards under development:

There are not any standards under development.

3.2.62 CLC/TC 8X- System aspects of electrical energy supply

Keywords:

Electrical energy supply, **Smart grid**, Physical characteristics of electrical energy, Requirements for connection of generators to distribution networksm, Smart grid requirements, System aspects for HVDC grid

Scope:

To prepare the necessary standards framework and coordinate the development, in cooperation with other TC/SCs, of CENELEC standards needed to facilitate the functioning of electricity supply systems in open markets.

Standards:

CLC/TR 50555:2010/AC:2011

Interruption indexes

CLC/TS 50549-2:2015

Requirements for generating plants to be connected in parallel with distribution networks - Part 2: Connection to a MV distribution network

EN 60059:1999

IEC standard current ratings

EN 50160:2010/AC:2012

Voltage characteristics of electricity supplied by public electricity networks

CLC/TR 50422:2013

Guide for the application of the European Standard EN 50160

HD 472 S1:1989/AC:2013

Nominal voltages for low-voltage public electricity supply systems

CLC/TR 50555:2010

Interruption indexes

CLC/TR 50609:2014

Technical Guidelines for Radial HVDC Networks

EN 62559-2:2015

Use case methodology - Part 2: Definition of the template for use cases, actor list and requirements list

CLC/TR 50403:2002

Standarisation and the liberalization of the energy market

EN 60196:2009

IEC standard frequencies

EN 50438:2013/IS1:2015

Requirements for micro-generating plants to be connected in parallel with public low-voltage distribution networks

EN 50160:2010/A1:2015

Voltage characteristics of electricity supplied by public electricity networks

EN IEC 62559-3:2018

Use case methodology - Part 3: Definition of use case template artefacts into an XML serialized format

EN 50549-1:2019

Requirements for generating plants to be connected in parallel with distribution networks - Part 1: Connection to a LV distribution network - Generating plants up to and including Type B

EN 50549-2:2019

Requirements for generating plants to be connected in parallel with distribution networks - Part 2: Connection to a MV distribution network - Generating plants up to and including Type B

EN 50549-1:2019/AC:2019-04

Requirements for generating plants to be connected in parallel with distribution networks - Part 1: Connection to a LV distribution network - Generating plants up to and including Type B

CLC/TS 50654-1:2018

HVDC Grid Systems and connected Converter Stations - Guideline and Parameter Lists for Functional Specifications - Part 1: Guidelines

EN 50160:2010/A3:2019

Voltage characteristics of electricity supplied by public electricity networks

EN 50438:2013

Requirements for micro-generating plants to be connected in parallel with public low-voltage distribution networks

EN 50549-2:2019/AC:2019-03

Requirements for generating plants to be connected in parallel with distribution networks - Part 2: Connection to a MV distribution network - Generating plants up to and including Type B

CLC/TS 50654-2:2018

HVDC Grid Systems and connected Converter Stations - Guideline and Parameter Lists for Functional Specifications - Part 2: Parameter Lists

EN 50160:2010/A2:2019

Voltage characteristics of electricity supplied by public electricity networks

EN 60038:2011

CENELEC standard voltages

CLC/TR 50608:2013

Smart grid projects in Europe

CLC/TS 50549-1:2015

Requirements for generating plants to be connected in parallel with distribution networks - Part 1: Connection to a LV distribution network above 16 A

EN 60059:1999/A1:2009

IEC standard current ratings

EN 50160:2010

Voltage characteristics of electricity supplied by public electricity networks

EN 50160:2010/corrigendum Dec. 2010

Voltage characteristics of electricity supplied by public electricity networks

Standards under development:

prEN 50160(71003)

Voltage characteristics of electricity supplied by public distribution networks

prEN 50549-10(68548)

Requirements for generating plants to be connected in parallel with distribution networks - Part 10 Tests demonstrating compliance of units

CLC/TS 50654-1:2020(69274)

HVDC Grid Systems and connected Converter Stations - Guideline and Parameter Lists for Functional Specifications - Part 1: Guidelines

CLC/TS 50654-2(69275)

HVDC Grid Systems and connected Converter Stations - Guideline and Parameter Lists for Functional Specifications - Part 2: Parameter Lists

prEN 62559-1:2017(64322)

Use Case Methodology - Part 1: Concept and Processes in Standarisation

prEN IEC 62934:2020(68691)

Grid integration of renewable energy generation - Terms, definitions and symbols

prEN IEC 63189-1(70356)

Virtual Power Plants - Part 1: Architecture and Functional Requirements

EN 60038:2011/prA1 {frag3}(69964)

Standard voltages for DC and AC traction systems (Proposed horizontal standard)

EN 60038:2011/prA1 {fragment 1}(63051)

Standard voltages for LVDC supply and LVDC equipment (Proposed horizontal standard)

EN 60038:2011/prA1 {fragment 2}(63052)

Standard voltages for AC supply and AC equipment (Proposed horizontal standard)

3.2.63 CLC/TC 13 - Electrical energy measurement and control

Keywords:

Electrical energy supply, Electricity meters for active energy of class a, b and c

Scope:

Standarisation in the field for metering equipment and systems (using whenever possible IEC standards), including smart metering systems, for electrical energy measurement, tariff- and load control, customer information and payment, for use in power stations, along the network and at energy end users, as well as to prepare international standards for meter test equipment and methods. Excluded: Standarisation for the interface of metering equipment for interconnection lines and industrial consumers and producers requiring energy management type interfaces to the control system, covered by IEC/TC 57

Standards:

EN 62056-9-7:2013

Electricity metering data exchange - The DLMS/COSEM suite - Part 9-7: Communication profile for TCP-UDP/IP networks

EN 62052-21:2004

Electricity metering equipment (AC) - General requirements, tests and test conditions - Part 21: Tariff and load control equipment

EN 62053-24:2015

Electricity metering equipment (AC) - Particular requirements - Part 24: Static meters for reactive energy at fundamental frequency (classes 0,5 S, 1 S and 1)

CLC/TR 50579:2012

Electricity metering equipment (AC) - Severity levels, immunity requirements and test methods for conducted disturbances in the frequency range 2 kHz - 150 kHz

CLC/TS 50568-8:2015

Electricity metering data exchange - The DLMS/COSEM suite - Part 8: SMITP B-PSK PLC communication profile for neighbourhood networks - Including: The Original-SMITP PLC B-PSK communication profile, The Original-SMITP Local data exchange profile and The Original-SMITP IP communication profile

EN 62053-11:2003

Electricity metering equipment (AC) - Particular requirements - Part 11: Electromechanical meters for active energy (classes 0,5, 1 and 2)

EN 62053-52:2005

Electricity metering equipment (AC) - Particular requirements - Part 52: Symbols

EN 62053-61:1998

Electricity metering equipment (AC) - Particular requirements - Part 61: Power consumption and voltage requirements

EN 62056-8-3:2013

Electricity metering data exchange - The DLMS/COSEM suite - Part 8-3: Communication profile for PLC S-FSK neighbourhood networks

EN 62059-31-1:2008

Electricity metering equipment - Dependability - Part 31-1: Accelerated reliability testing - Elevated temperature and humidity

EN 62056-42:2002

Electricity metering - Data exchange for meter reading, tariff and load control - Part 42: Physical layer services and procedures for connection-oriented asynchronous data exchange

EN 62059-41:2006

Electricity metering equipment - Dependability - Part 41: Reliability prediction

CLC/TS 50590:2015

Electricity metering data exchange - Lower layer PLC profile using Adaptive Multi Carrier Spread-Spectrum (AMC-SS) modulation

EN 50470-2:2006

Electricity metering equipment (AC) - Part 2: Particular requirements - Electromechanical meters for active energy (class indexes A and B)

EN 62056-5-3:2016

Electricity metering data exchange - The DLMS/COSEM suite - Part 5-3: DLMS/COSEM application layer

EN 62056-7-6:2013

Electricity metering data exchange - The DLMS/COSEM suite - Part 7-6: The 3-layer, connection-oriented HDLC based communication profile

CLC/TS 50568-4:2015

Electricity metering data exchange - Part 4: Lower layer PLC profile using SMITP B-PSK modulation

EN 62053-31:1998

Electricity metering equipment (AC) - Particular requirements - Part 31: Pulse output devices for electromechanical and electronic meters (two wires only)

EN 62056-3-1:2014

Electricity metering data exchange - The DLMS/COSEM suite - Part 3-1: Use of local area networks on twisted pair with carrier signalling

EN 62052-21:2004/A1:2017

Electricity metering equipment (AC) - General requirements, tests and test conditions - Part 21: Tariff and load control equipment

EN 62053-11:2003/A1:2017

Electricity metering equipment (AC) - Particular requirements - Part 11: Electromechanical meters for active energy (classes 0,5, 1 and 2)

EN 62053-22:2003/A1:2017

Electricity metering equipment (AC) - Particular requirements - Part 22: Static meters for active energy (classes 0,2 S and 0,5 S)

EN 62053-24:2015/A1:2017

Electricity metering equipment (AC) - Particular requirements - Part 24: Static meters for reactive energy at fundamental frequency (classes 0,5 S, 1 S and 1)

EN 62054-11:2004/A1:2017

Electricity metering (AC) - Tariff and load control - Part 11: Particular requirements for electronic ripple control receivers

EN 62054-21:2004/A1:2017

Electricity metering (AC) - Tariff and load control - Part 21: Particular requirements for time switches

EN 62056-7-3:2017

Electricity metering data exchange - The DLMS/COSEM suite - Part 7-3: Wired and wireless M-Bus communication profiles for local and neighbourhood networks

EN IEC 62056-6-2:2018

Electricity metering data exchange - The DLMS/COSEM suite - Part 6-2: COSEM interface classes

EN 62056-8-5:2017

Electricity metering data exchange - The DLMS/COSEM suite - Part 8-5: Narrow-band OFDM G3-PLC communication profile for neighbourhood networks

EN 50470-3:2006/A1:2018

Electricity metering equipment (AC) - Part 3: Particular requirements - Static meters for active energy (class indexes A, B and C)

EN IEC 62056-8-4:2019

Electricity metering data exchange - the DLMS/COSEM suite - Part 8-4: Communication profiles for narrow-band OFDM PLC PRIME neighbourhood networks

EN 62053-24:2015/A1:2017/AC:2018-05

Electricity metering equipment (AC) - Particular requirements - Part 24: Static meters for reactive energy at fundamental frequency (classes 0,5 S, 1 S and 1)

EN 62054-21:2004/A1:2017/AC:2018-04

Electricity metering (AC) - Tariff and load control - Part 21: Particular requirements for time switches

EN 62053-23:2003/A1:2017/AC:2018-05

Electricity metering equipment (AC) - Particular requirements - Part 23: Static meters for reactive energy (classes 2 and 3)

EN 62053-22:2003/A1:2017/AC:2018-05

Electricity metering equipment (AC) - Particular requirements - Part 22: Static meters for active energy (classes 0,2 S and 0,5 S)

EN 62056-8-5:2017/AC:2018-01

Electricity metering data exchange - The DLMS/COSEM suite - Part 8-5: Narrow-band OFDM G3-PLC communication profile for neighbourhood networks

EN 50470-2:2006/A1:2018

Electricity metering equipment (AC) - Part 2: Particular requirements - Electromechanical meters for active energy (class indexes A and B)

EN 62052-11:2003

Electricity metering equipment (AC) - General requirements, tests and test conditions - Part 11: Metering equipment

EN 62056-1-0:2015

Electricity metering data exchange - The DLMS/COSEM suite - Part 1-0: Smart metering standarisation framework

EN 62052-11:2003/A1:2017

Electricity metering equipment (AC) - General requirements, tests and test conditions - Part 11: Metering equipment

EN 62056-7-5:2016

Electricity metering data exchange - The DLMS/COSEM suite - Part 7-5: Local data transmission profiles for Local Networks (LN)

EN 62052-11:2003/A1:2017/AC:2018-04

Electricity metering equipment (AC) - General requirements, tests and test conditions - Part 11: Metering equipment

EN 50470-1:2006/A1:2018

Electricity metering equipment (AC) - Part 1: General requirements, tests and test conditions - Metering equipment (class indexes A, B and C)

EN 62059-32-1:2012

Electricity metering equipment - Dependability - Part 32-1: Durability - Testing of the stability of metrological characteristics by applying elevated temperature

EN 62052-31:2016

Electricity metering equipment (AC) - General requirements, tests and test conditions - Part 31: Product safety requirements and tests

EN 62056-21:2002

Electricity metering - Data exchange for meter reading, tariff and load control - Part 21: Direct local data exchange

EN 62058-11:2010

Electricity metering equipment (AC) - Acceptance inspection - Part 11: General acceptance inspection methods

EN 50470-3:2006

Electricity metering equipment (AC) - Part 3: Particular requirements - Static meters for active energy (class indexes A, B and C)

EN 62055-31:2005

Electricity metering - Payment systems - Part 31: Particular requirements - Static payment meters for active energy (classes 1 and 2)

EN 62054-21:2004

Electricity metering (AC) - Tariff and load control - Part 21: Particular requirements for time switches

EN 62056-8-6:2017

Electricity metering data exchange - The DLMS/COSEM suite - Part 8-6: High speed PLC ISO/IEC 12139-1 profile for neighbourhood networks

EN 62056-5-3:2017

Electricity metering data exchange - The DLMS/COSEM suite - Part 5-3: DLMS/COSEM application layer

CLC/TS 52056-8-7:2015

Electricity metering data exchange - The DLMS/COSEM suite - Part 8-7: AMC-SS PLC communication profile for neighbourhood networks

EN 62058-21:2010

Electricity metering equipment (AC) - Acceptance inspection - Part 21: Particular requirements for electromechanical meters for active energy (classes 0,5, 1 and 2 and class indexes A and B)

EN 62053-21:2003/A1:2017

Electricity metering equipment (AC) - Particular requirements - Part 21: Static meters for active energy (classes 1 and 2)

EN 62058-31:2010

Electricity metering equipment (AC) - Acceptance inspection - Part 31: Particular requirements for static meters for active energy (classes 0,2 S, 0,5 S, 1 and 2, and class indexes A, B and C)

EN 62053-21:2003/A1:2017/AC:2018-05

Electricity metering equipment (AC) - Particular requirements - Part 21: Static meters for active energy (classes 1 and 2)

EN 62052-21:2004/A1:2017/AC:2018-04

Electricity metering equipment (AC) - General requirements, tests and test conditions - Part 21: Tariff and load control equipment

EN 62056-46:2002

Electricity metering - Data exchange for meter reading, tariff and load control - Part 46: Data link layer using HDLC protocol

EN 62053-23:2003

Electricity metering equipment (AC) - Particular requirements - Part 23: Static meters for reactive energy (classes 2 and 3)

EN 62054-11:2004

Electricity metering (AC) - Tariff and load control - Part 11: Particular requirements for electronic ripple control receivers

EN 62056-6-1:2017

Electricity metering data exchange - The DLMS/COSEM suite - Part 6-1: Object Identification System (OBIS)

EN 62056-4-7:2016

Electricity metering data exchange - The DLMS/COSEM suite - Part 4-7: DLMS/COSEM transport layer for IP networks

EN 62056-6-1:2016

Electricity metering data exchange - The DLMS/COSEM suite - Part 6-1: Object Identification System (OBIS)

EN 62053-22:2003

Electricity metering equipment (AC) - Particular requirements - Part 22: Static meters for active energy (classes 0,2 S and 0,5 S)

EN 50470-1:2006

Electricity metering equipment (AC) - Part 1: General requirements, tests and test conditions - Metering equipment (class indexes A, B and C)

EN 62056-46:2002/A1:2007

Electricity metering - Data exchange for meter reading, tariff and load control - Part 46: Data link layer using HDLC protocol

EN 62054-11:2004/A1:2017/AC:2018-04

Electricity metering (AC) - Tariff and load control - Part 11: Particular requirements for electronic ripple control receivers

EN 62053-11:2003/A1:2017/AC:2018-05

Electricity metering equipment (AC) - Particular requirements - Part 11: Electromechanical meters for active energy (classes 0,5, 1 and 2)

EN 62053-23:2003/A1:2017

Electricity metering equipment (AC) - Particular requirements - Part 23: Static meters for reactive energy (classes 2 and 3)

CLC/TS 50586:2019

Open Smart Grid Protocol (OSGP)

EN 62053-21:2003

Electricity metering equipment (AC) - Particular requirements - Part 21: Static meters for active energy (classes 1 and 2)

Standards under development:

prEN 50470-3(65802)

Electricity metering equipment (AC) - Part 3: Particular requirements - Static meters for active energy (class indexes A, B and C)

FprEN IEC 62052-11:2020(63672)

Electricity metering equipment - General requirements, tests and test conditions - Part 11: Metering equipment

FprEN IEC 62053-21:2020(63673)

Electricity metering equipment - Particular requirements - Part 21: Static meters for AC active energy (classes 0,5, 1 and 2)

FprEN IEC 62053-22:2020(63674)

Electricity metering equipment - Particular requirements - Part 22: Static meters for AC active energy (classes 0,1S, 0,2S and 0,5S)

FprEN IEC 62053-23:2020(63675)

Electricity metering equipment - Particular requirements - Part 23: Static meters for reactive energy (classes 2 and 3)

FprEN IEC 62053-24:2020(63676)

Electricity metering equipment - Particular requirements - Part 24: Static meters for fundamental component reactive energy (classes 0, 5S, 1S, 1, 2 and 3)

prEN IEC 62053-41:2020(71580)

Electricity metering equipment (DC direct current) - Particular requirements - Part 41 - Static meter for active energy (class 0.5 and 1)

prEN IEC 62055-31(71813)

Electricity metering - Payment systems - Part 31: Particular requirements - Static payment meters for active energy (classes 1 and 2)

prEN IEC 62056-3-1:2019(68539)

Electricity metering data exchange - The DLMS/COSEM suite - Part 3-1: Use of local area networks on twisted pair with carrier signalling

prEN IEC 62056-8-8:2019(64966)

Electricity metering data exchange - The DLMS/COSEM suite - Part 8-8: Communication profile for ISO/IEC 14908 series networks

3.2.64 CLC/SR 23K - Electrical energy efficiency products

Keywords:

Electrical energy supply

Standards:

EN IEC 62962:2019 (pr=62738)

Particular requirements for load-shedding equipment (LSE)

Standards under development:

prEN IEC 62991 (pr=69744)

Particular requirements for Source-Switching Equipment (SSE)

3.2.65 CLC/TC 82 - Solar photovoltaic energy systems

Keywords:

Electrical energy supply, **Clean Energy for transportation**, Wafers, cells and modules, Bos components and systems

Scope:

To prepare European Standards for systems of and components for photovoltaic conversion of solar energy into electrical energy and for all elements in the entire photovoltaic energy system. The standards will deal with EMC, Machine, CPD and LVD directives. The CLC/TC 82 will especially develop standards in areas where there are special European concerns. The CLC/TC 82 will cooperate closely with IEC TC 82 and the National Committees. The aim will be to support the accelerated market introduction by harmonization of standards.

Standards:

EN 61215-1:2016

Terrestrial photovoltaic (PV) modules - Design qualification and type approval - Part 1: Test requirements

EN 61730-1:2007/A1:2012

Photovoltaic (PV) module safety qualification - Part 1: Requirements for construction

EN 60904-1:2006

Photovoltaic devices - Part 1: Measurement of photovoltaic current-voltage characteristics

EN 62109-2:2011

Safety of power converters for use in photovoltaic power systems - Part 2: Particular requirements for inverters

EN 61724:1998

Photovoltaic system performance monitoring - Guidelines for measurement, data exchange and analysis

EN 60904-8:2014

Photovoltaic devices - Part 8: Measurement of spectral responsivity of a photovoltaic (PV) device

EN 61730-2:2007

Photovoltaic (PV) module safety qualification - Part 2: Requirements for testing

EN 61730-1:2007

Photovoltaic (PV) module safety qualification - Part 1: Requirements for construction

EN 62817:2015

Photovoltaic systems - Design qualification of solar trackers

EN 62716:2013

Photovoltaic (PV) modules - Ammonia corrosion testing

EN 61215-1-1:2016

Terrestrial photovoltaic (PV) modules - Design qualification and type approval - Part 1-1: Special requirements for testing of crystalline silicon photovoltaic (PV) Modules

EN 62093:2005

Balance-of-system components for photovoltaic systems - Design qualification natural environments

EN 61853-1:2011

Photovoltaic (PV) module performance testing and energy rating - Part 1: Irradiance and temperature performance measurements and power rating

CLC/TS 61836:2009

Solar photovoltaic energy systems - Terms, definitions and symbols

EN 61829:2016

Photovoltaic (PV) array - On-site measurement of current-voltage characteristics

EN 62670-1:2014

Photovoltaic concentrators (CPV) - Performance testing - Part 1: Standard conditions

EN 61683:2000

Photovoltaic systems - Power conditioners - Procedure for measuring efficiency

EN 61646:2008

Thin-film terrestrial photovoltaic (PV) modules - Design qualification and type approval

EN 61853-2:2016

Photovoltaic (PV) module performance testing and energy rating - Part 2: Spectral responsivity, incidence angle and module operating temperature measurements

EN 50583-2:2016

Photovoltaics in buildings - Part 2: BIPV systems

EN 62670-2:2015

Photovoltaic concentrators (CPV) - Performance testing - Part 2: Energy measurement

EN 62116:2014

Utility-interconnected photovoltaic inverters - Test procedure of islanding prevention measures

EN 50524:2009

Data sheet and name plate for photovoltaic inverters

EN 50380:2003

Datasheet and nameplate information for photovoltaic modules

EN 62759-1:2015

Photovoltaic (PV) modules - Transportation testing - Part 1: Transportation and shipping of module package units

EN 62253:2011

Photovoltaic pumping systems - Design qualification and performance measurements

EN 62446-1:2016

Photovoltaic (PV) systems - Requirements for testing, documentation and maintenance - Part 1: Grid connected systems - Documentation, commissioning tests and inspection

EN 61730-1:2007/A11:2014

Photovoltaic (PV) module safety qualification - Part 1: Requirements for construction

EN 62852:2015

Connectors for DC-application in photovoltaic systems - Safety requirements and tests

EN 61702:1999

Rating of direct coupled photovoltaic (PV) pumping systems

EN 62788-1-2:2016

Measurement procedures for materials used in photovoltaic modules - Part 1-2: Encapsulants - Measurement of volume resistivity of photovoltaic encapsulants and other polymeric materials

EN 62108:2016

Concentrator photovoltaic (CPV) modules and assemblies - Design qualification and type approval

EN 62788-1-6:2017

Measurement procedures for materials used in photovoltaic modules - Part 1-6: Encapsulants - Test methods for determining the degree of cure in Ethylene-Vinyl Acetate

EN 61215-1-2:2017

Terrestrial photovoltaic (PV) modules - Design qualification and type approval - Part 1-2: Special requirements for testing of thin-film Cadmium Telluride (CdTe) based photovoltaic (PV) modules

EN 61215-1-4:2017

Terrestrial photovoltaic (PV) modules - Design qualification and type approval - Part 1-4: Special requirements for testing of thin-film Cu(In,Ga)(S,Se)2 based photovoltaic (PV) modules

EN 62788-1-5:2016

Measurement procedures for materials used in photovoltaic modules - Part 1-5: Encapsulants - Measurement of change in linear dimensions of sheet encapsulation material resulting from applied thermal conditions

EN 62670-3:2017

Photovoltaic concentrators (CPV) - Performance testing - Part 3: Performance measurements and power rating

EN 60904-1-1:2017

Photovoltaic devices - Part 1-1: Measurement of current-voltage characteristics of multi-junction photovoltaic (PV) devices

EN 62920:2017

Photovoltaic power generating systems - EMC requirements and test methods for power conversion equipment

EN IEC 60904-3:2019

Photovoltaic devices - Part 3: Measurement principles for terrestrial photovoltaic (PV) solar devices with reference spectral irradiance data

EN 62788-1-5:2016/AC:2017-11

Measurement procedures for materials used in photovoltaic modules - Part 1-5: Encapsulants - Measurement of change in linear dimensions of sheet encapsulation material resulting from applied thermal conditions

EN 62446-1:2016/A1:2018

Photovoltaic (PV) systems - Requirements for testing, documentation and maintenance - Part 1: Grid connected systems - Documentation, commissioning tests and inspection

EN IEC 61730-2:2018/AC:2018-06

Photovoltaic (PV) module safety qualification - Part 2: Requirements for testing

EN 50530:2010

Overall efficiency of grid connected photovoltaic inverters

EN IEC 60904-4:2019

Photovoltaic devices - Part 4: Reference solar devices - Procedures for establishing calibration traceability

EN IEC 63202-1:2019

Photovoltaic cells - Part 1: Measurement of light-induced degradation of crystalline silicon photovoltaic cells

EN 62805-1:2017

Method for measuring photovoltaic (PV) glass - Part 1: Measurement of total haze and spectral distribution of haze

EN IEC 61730-2:2018

Photovoltaic (PV) module safety qualification - Part 2: Requirements for testing

EN 60904-7:2009

Photovoltaic devices - Part 7: Computation of the spectral mismatch correction for measurements of photovoltaic devices

EN 60904-4:2009

Photovoltaic devices - Part 4: Reference solar devices - Procedures for establishing calibration traceability

EN 62852:2015/AC:2019-02

Connectors for DC-application in photovoltaic systems - Safety requirements and tests

EN 60904-10:2010

Photovoltaic devices - Part 10: Methods of linearity measurement

EN 60904-2:2015

Photovoltaic devices - Part 2: Requirements for photovoltaic reference devices

EN 61215-2:2017

Terrestrial photovoltaic (PV) modules - Design qualification and type approval - Part 2: Test procedures

EN 62788-1-4:2016

Measurement procedures for materials used in photovoltaic modules - Part 1-4: Encapsulants - Measurement of optical transmittance and calculation of the solar-weighted photon transmittance, yellowness index, and UV cut-off wavelength

EN 60904-8-1:2017

Photovoltaic devices - Part 8-1: Measurement of spectral responsivity of multi-junction photovoltaic (PV) devices

EN IEC 62941:2020

Terrestrial photovoltaic (PV) modules - Quality system for PV module manufacturing

EN 50530:2010/A1:2013

Overall efficiency of grid connected photovoltaic inverters

EN 62109-1:2010

Safety of power converters for use in photovoltaic power systems - Part 1: General requirements

EN 61215-2:2017/AC:2017-07

Terrestrial photovoltaic (PV) modules - Design qualification and type approval - Part 2: Test procedures

EN 50461:2006

Solar cells - Datasheet information and product data for crystalline silicon solar cells

EN 62979:2017

Photovoltaic module - Bypass diode - Thermal runaway test

EN 50583-1:2016

Photovoltaics in buildings - Part 1: BIPV modules

EN 61725:1997

Analytical expression for daily solar profiles

EN 61194:1995

Characteristic parameters of stand-alone photovoltaic (PV) systems

EN IEC 61730-1:2018

Photovoltaic (PV) module safety qualification - Part 1: Requirements for construction

EN IEC 61730-1:2018/AC:2018-06

Photovoltaic (PV) module safety qualification - Part 1: Requirements for construction

EN 60904-9:2007

Photovoltaic devices - Part 9: Solar simulator performance requirements

EN 60891:2010

Photovoltaic devices - Procedures for temperature and irradiance corrections to measured I-V characteristics

EN 60904-3:2016   P

hotovoltaic devices - Part 3: Measurement principles for terrestrial photovoltaic (PV) solar devices with reference spectral irradiance data

EN 61701:2012

Salt mist corrosion testing of photovoltaic (PV) modules

EN 61724-1:2017

Photovoltaic system performance - Part 1: Monitoring

EN IEC 60904-7:2019

Photovoltaic devices - Part 7: Computation of the spectral mismatch correction for measurements of photovoltaic devices

EN IEC 62688:2018

Concentrator photovoltaic (CPV) modules and assemblies - Safety qualification

EN 61215-1-3:2017

Terrestrial photovoltaic (PV) modules - Design qualification and type approval - Part 1-3: Special requirements for testing of thin-film amorphous silicon based photovoltaic (PV) modules

EN 62124:2005

Photovoltaic (PV) stand-alone systems - Design verification

EN 50380:2017

Marking and documentation requirements for Photovoltaic Modules

EN 61730-2:2007/A1:2012

Photovoltaic (PV) module safety qualification - Part 2: Requirements for testing

EN 60904-5:2011

Photovoltaic devices - Part 5: Determination of the equivalent cell temperature (ECT) of photovoltaic (PV) devices by the open-circuit voltage method

EN IEC 61853-3:2018

Photovoltaic (PV) module performance testing and energy rating - Part 3: Energy rating of PV modules

EN 62790:2015

Junction boxes for photovoltaic modules - Safety requirements and tests

EN 61215-2:2017/AC:2018-04

Terrestrial photovoltaic (PV) modules - Design qualification and type approval - Part 2: Test procedures

EN 62817:2015/A1:2017

Photovoltaic systems - Design qualification of solar trackers

EN 62509:2011

Battery charge controllers for photovoltaic systems - Performance and functioning

EN 50513:2009

Solar wafers - Data sheet and product information for crystalline silicon wafers for solar cell manufacturing

EN 62805-2:2017

Method for measuring photovoltaic (PV) glass - Part 2: Measurement of transmittance and reflectance

EN 61730-1:2007/A2:2013

Photovoltaic (PV) module safety qualification - Part 1: Requirements for construction

CLC/TR 50670:2016

External fire exposure to roofs in combination with photovoltaic (PV) arrays - Test method(s)

EN IEC 62892:2019

Extended thermal cycling of PV modules - Test procedure

EN 62716:2013/AC:2014

Photovoltaic (PV) modules - Ammonia corrosion testing

EN 62925:2017

Concentrator photovoltaic (CPV) modules - Thermal cycling test to differentiate increased thermal fatigue durability

EN IEC 61853-4:2018

Photovoltaic (PV) module performance testing and energy rating - Part 4: Standard reference climatic profiles

Standards under development:

prEN 50524(67585)

Data sheet for photovoltaic inverters

prEN IEC 60891(68855)

Photovoltaic devices - Procedures for temperature and irradiance corrections to measured I-V characteristics

prEN IEC 60904-1:2019(68875)

Photovoltaic devices - Part 1: Measurement of photovoltaic current-voltage characteristics

prEN IEC 60904-9:2019(68803)

Photovoltaic devices - Part 9: Classification of solar simulator characteristics

prEN IEC 60904-10:2019(67989)

Photovoltaic devices - Part 10: Methods of linear dependence and linearity measurements

prEN IEC 61215-1-1:2019(67863)

Terrestrial photovoltaic (PV) modules - Design qualification and type approval - Part 1-1: Special requirements for testing of crystalline silicon photovoltaic (PV) modules

prEN IEC 61215-1-2:2019(67861)

Terrestrial photovoltaic (PV) modules - Design qualification and type approval - Part 1-2: Special requirements for testing of thin-film Cadmium Telluride (CdTe) based photovoltaic (PV) modules

prEN 61215-1-3:2019(67853)

Terrestrial photovoltaic (PV) modules - Design qualification and type approval - Part 1-3: Special requirements for testing of thin-film amorphous silicon based photovoltaic (PV) modules

prEN IEC 61215-1-4:2019(67856)

Terrestrial photovoltaic (PV) modules - Design qualification and type approval - Part 1-4: Special requirements for testing of thin-film Cu(In,GA)(S,Se)2 based photovoltaic (PV) modules

prEN IEC 61215-1:2019(67860)

Terrestrial photovoltaic (PV) modules - Design qualification and type approval - Part 1: Test requirements

prEN IEC 61215-2(67859)

Terrestrial photovoltaic (PV) modules - Design qualification and type approval - Part 2: Test procedures

FprEN IEC 61701:2020(67984)

Photovoltaic (PV) modules - Salt mist corrosion testing

prEN IEC 61724-1(71147)

Photovoltaic system performance - Part 1: Monitoring

EN IEC 61730-1:2018/prA1(71230)

Photovoltaic (PV) module safety qualification - Part 1: Requirements for construction

EN IEC 61730-2:2018/prA1(71075)

Photovoltaic (PV) module safety qualification - Part 2: Requirements for testing

prEN 62093(65868)

Power conversion equipment for photovoltaic systems - Design qualification testing

prEN IEC 62108(71556)

Concentrator photovoltaic (CPV) modules and assemblies - Design qualification and type approval

FprEN IEC 62109-3:2020(64484)

Safety of power converters for use in photovoltaic power systems - Part 3: Particular requirements for electronic devices in combination with photovoltaic elements

EN IEC 62446-2:2020(63431)

Photovoltaic (PV) systems - Requirements for testing, documentation and maintenance - Part 2: Grid connected systems - Maintenance of PV systems

prEN IEC 62548(71724)

Photovoltaic (PV) arrays - Design requirements

prEN IEC 62759-1(71664)

Photovoltaic (PV) modules - Transportation testing - Part 1: Transportation and shipping of module package units

prEN IEC 62787:2019(68392)

Concentrator photovoltaic (CPV) solar cells and cell-on-carrier (COC) assemblies - Reliability qualification

prEN IEC 62788-1-1(71074)

Measurement procedures for materials used in photovoltaic modules – Part 1-1: Encapsulants – Polymeric materials used for encapsulants

EN 62788-1-4:2016/prA1:2019(68703)

Measurement procedures for materials used in photovoltaic modules - Part 1-4: Encapsulants - Measurement of optical transmittance and calculation of the solar-weighted photon transmittance, yellowness index, and UV cut-off wavelength

EN 62788-1-6:2017/FprA1:2020(66674)

Measurement procedures for materials used in photovoltaic modules - Part 1-6: Encapsulants - Test methods for determining the degree of cure in Ethylene-Vinyl Acetate

FprEN IEC 62788-1-7:2020(66138)

Measurement procedures for materials used in photovoltaic modules - Part 1-7: Encapsulants - Test procedure of optical durability

prEN IEC 62788-2-1(71012)

Measurement procedures for materials used in photovoltaic modules - Part 2-1: Polymeric materials - Frontsheet and backsheet - Safety requirements

EN IEC 62788-5-1:2020(66406)

Measurement procedures for materials used in photovoltaic modules - Part 5-1: Edge seals - Suggested test methods for use with edge seal materials

EN IEC 62788-6-2:2020(66408)

Measurement procedures for materials used in photovoltaic modules - Part 6-2: General tests - Moisture permeation testing of polymeric materials

prEN IEC 62788-7-3(69699)

Measurement procedures for materials used in photovoltaic modules - Part 7-3: Environmental exposures - Accelerated abrasion tests of PV module external surfaces

FprEN IEC 62790:2020(65337)

Junction boxes for photovoltaic modules - Safety requirements and tests

EN 62852:2015/A1:2020(68391)

Connectors for DC-application in photovoltaic systems - Safety requirements and tests

EN 62920:2017/prA1(71241)

Photovoltaic power generating systems - EMC requirements and test methods for power conversion equipment

EN 62920:2017/A11:2020(70376)

Photovoltaic power generating systems - EMC requirements and test methods for power conversion equipment

FprEN IEC 62938:2020(63755)

Photovoltaic (PV) modules - Non-uniform snow load testing

prEN IEC 63027:2019(65609)

DC arc detection and interruption in photovoltaic power systems

prEN IEC 63104(67256)

Solar trackers - Safety requirements

prEN IEC 63112(70347)

Safety, functionality and classification of Photovoltaic Earth Fault Protection (PV EFP) equipment

prEN IEC 63163(70966)

Terrestrial photovoltaic (PV) modules for consumer products - Design qualification and type approval

3.2.66 CLC/SR 120 - Electrical Energy Storage (EES) Systems

Keywords:

Electrical energy supply, Electrical Energy Storage

Scope:

There is no information on the website.

Standards:

EN IEC 62933-1:2018 (pr=63986)

Electrical Energy Storage (EES) systems - Part 1: Vocabulary

EN IEC 62933-2-1:2018/AC:2019-02 (pr=68958)

Electrical energy storage (EES) systems - Part 2-1: Unit parameters and testing methods - General specification

EN IEC 62933-2-1:2018 (pr=63071)

Electrical energy storage (EES) systems - Part 2-1: Unit parameters and testing methods - General specification

Standards under development:

prEN IEC 62933-1 (pr=69701)

Electrical energy storage (EES) systems - Part 1: Vocabulary

EN IEC 62933-5-2:2020 (pr=66821)

Electrical energy storage (EES) systems - Part 5-2: Safety requirements for grid-integrated EES systems - Electrochemical-based systems

3.2.67 CLC/SR 96 - Transformers, reactors, power supply units, and combinations thereof

Keywords:

Electrical energy supply, Transformers, reactors, power supply units

Scope:

There is no information on the website.

Standards:

EN 61558-2-12:2011

Safety of transformers, reactors, power supply units and combinations thereof - Part 2-12: Particular requirements and tests for constant voltage transformers and power supply units for constant voltage

EN 61558-2-23:2010

Safety of transformers, reactors, power supply units and combinations thereof - Part 2-23: Particular requirements and tests for transformers and power supply units for construction sites

EN 61558-2-4:2009

Safety of transformers, reactors, power supply units and similar products for supply voltages up to 1 100 V - Part 2-4: Particular requirements and tests for isolating transformers and power supply units incorporating isolating transformers

EN 61558-1:2005/corrigendum Aug. 2006

Safety of power transformers, power supplies, reactors and similar products - Part 1: General requirements and tests

EN 61558-2-5:2010

Safety of transformers, reactors, power supply units and combinations thereof - Part 2-5: Particular requirements and tests for transformer for shavers, power supply units for shavers and shaver supply units

EN 62041:2010

Safety of transformers, reactors, power supply units and combinations thereof - EMC requirements

EN 61558-2-1:2007

Safety of power transformers, power supplies, reactors and similar products - Part 2-1: Particular requirements and tests for separating transformers and power supplies incorporating separating transformers for general applications

EN 61558-2-6:2009

Safety of transformers, reactors, power supply units and similar products for supply voltages up to 1 100 V - Part 2-6: Particular requirements and tests for safety isolating transformers and power supply units incorporating safety isolating transformers

EN 61558-2-10:2014

Safety of transformers, reactors, power supply units and combinations thereof - Part 2-10: Particular requirements and tests for separating transformers with high insulation level and separating transformers with output voltages exceeding 1 000 V

EN 61558-2-15:2012

Safety of transformers, reactors, power supply units and combinations thereof - Part 2-15: Particular requirements and tests for isolating transformers for the supply of medical locations

EN 61558-2-7:2007

Safety of power transformers, power supplies, reactors and similar products - Part 2-7: Particular requirements and tests for transformers and power supplies for toys

EN IEC 61558-1:2019

Safety of transformers, reactors, power supply units and combinations thereof - Part 1: General requirements and tests

EN IEC 62041:2020

Transformers, power supplies, reactors and similar products - EMC requirements

EN 61558-2-2:2007

Safety of power transformers, power supplies, reactors and similar products - Part 2-2: Particular requirements and tests for control transformers and power supplies incorporating control transformers

EN 61558-2-26:2013

Safety of transformers, reactors, power supply units and combinations thereof - Part 2-26: Particular requirements and tests for transformers and power supply units for saving energy and other purposes

EN 61558-2-20:2011

Safety of transformers, reactors, power supply units and combinations thereof - Part 2-20: Particular requirements and tests for small reactors

EN 61558-2-13:2009

Safety of transformers, reactors, power supply units and similar products for supply voltages up to 1 100 V - Part 2-13: Particular requirements and tests for auto transformers and power supply units incorporating auto transformers

EN 61558-1:2005/A1:2009

Safety of power transformers, power supplies, reactors and similar products - Part 1: General requirements and tests

EN 61558-2-9:2011

Safety of transformers, reactors, power supply units and combinations thereof - Part 2-9: Particular requirements and tests for transformers and power supply units for class III handlamps for tungsten filament lamps

EN 61558-1:2005

Safety of power transformers, power supplies, reactors and similar products - Part 1: General requirements and tests

EN 61558-2-3:2010

Safety of transformers, reactors, power supply units and combinations thereof - Part 2-3: Particular requirements and tests for ignition transformers for gas and oil burners

EN 61558-2-16:2009

Safety of transformers, reactors, power supply units and similar products for supply voltages up to 1 100 V - Part 2-16: Particular requirements and tests for switch mode power supply units and transformers for switch mode power supply units

EN 61558-2-8:2010

Safety of transformers, reactors, power supply units and combinations thereof - Part 2-8: Particular requirements and tests for transformers and power supply units for bells and chimes

EN 61558-2-14:2013

Safety of transformers, reactors, power supply units and combination thereof - Part 2-14: Particular requirements and tests for variable transformers and power supply units incorporating variable transformers

EN 61558-2-16:2009/A1:2013

Safety of transformers, reactors, power supply units and similar products for supply voltages up to 1 100 V - Part 2-16: Particular requirements and tests for switch mode power supply units and transformers for switch mode power supply units

Standards under development:

prEN IEC 61558-2-1:2019 (pr=70077)

Safety of transformers, reactors, power supply units and combinations thereof - Part 2-1: Particular requirements and tests for separating transformers and power supplies incorporating separating transformers for general applications

prEN IEC 61558-2-4:2019 (pr=70072)

Safety of transformers, reactors, power supply units and combinations thereof - Part 2-4: Particular requirements and tests for isolating transformers and power supply units incorporating isolating transformers for general applications

prEN IEC 61558-2-6:2019 (pr=70076)

Safety of transformers, reactors, power supply units and combinations thereof - Part 2-6: Particular requirements and tests for safety isolating transformers and power supply units incorporating safety isolating transformers for general applications

prEN IEC 61558-2-16:2019 (pr=70069)

Safety of transformers, reactors, power supply units and combinations thereof - Part 2-16: Particular requirements and tests for switch mode power supply units and transformers for switch mode power supply units for general applications

3.2.68 CLC/SC 46XC - Multicore, multipair and quad data communication cables

Keywords:

Data Protection, Data Model, Instrumentation and field bus cables, Data cables: To prepare and advise on the drafting of multi-core and multi-pair data and communications cable standards

Scope:

To produce European Cable Specifications for multicore and symmetrical pair/quad cables used in digital and analogue communication systems such as ISDN, LAN and data communication systems. According to the installation considerations, five categories of cables are to be considered: 1. equipment cables, 2. work area cables, 3. horizontal floor wiring cables, 4. riser cables, 5. campus cables.

Standards:

EN 50441-4:2012

Cables for indoor residential telecommunication installations - Part 4: Cables up to 1 200 MHz - Grade 3

EN 50109-2-3:1995

Hand crimping tools - Tools for the crimp termination of electric cables and wires for low frequency and radio frequency applications - Part 2-3: Particular requirements for contacts of electrical connectors

EN 50288-1:2013

Multi-element metallic cables used in analogue and digital communication and control - Part 1: Generic specification

EN 60708:2005

Low-frequency cables with polyolefin insulation and moisture barrier polyolefin sheath

EN 50288-9-1:2012

Multi-element metallic cables used in analogue and digital communication and control - Part 9-1: Sectional specification for screened cables characterised up to 1 000 MHz - Horizontal and building backbone cables

EN 50109-2-4:1995

Hand crimping tools - Tools for the crimp termination of electric cables and wires for low frequency and radio frequency applications - Part 2-4: Particular requirements for centre contacts of RF connectors, series SMZ

EN 50288-7:2005

Multi-element metallic cables used in analogue and digital communication and control - Part 7: Sectional specification for instrumentation and control cables

EN 50288-3-2:2013

Multi-element metallic cables used in analogue and digital communication and control - Part 3-2: Sectional specification for unscreened cables characterised up to 100 MHz - Work area and patch cord cables

EN 50441-2:2012

Cables for indoor residential telecommunication installations - Part 2: Screened cables - Grade 1

EN 50288-11-1:2012

Multi-element metallic cables used in analogue and digital communication and control - Part 11-1: Sectional specification for un-screened cables characterised up to 500 MHz - Horizontal and building backbone cables

EN 50288-2-2:2013

Multi-element metallic cables used in analogue and digital communication and control - Part 2-2: Sectional specification for screened cables characterised up to 100 MHz - Work area and patch cord cables

EN 50288-10-1:2012

Multi-element metallic cables used in analogue and digital communication and control - Part 10-1: Sectional specification for screened cables characterized up to 500 MHz - Horizontal floor and building backbone cables

EN 50288-9-2:2015

Multi-element metallic cables used in analogue and digital communication and control - Part 9-2: Sectional specification for screened cables characterized from 1 MHz up to 1 000 MHz for work area, patch cord and data centre applications

EN 50288-3-1:2013

Multi-element metallic cables used in analogue and digital communication and control - Part 3-1: Sectional specification for unscreened cables characterised up to 100 MHz - Horizontal and building backbone cables

HD 402 S2:1984

Standard colours for insulation for low-frequency cables and wires

EN 50288-5-2:2013

Multi-element metallic cables used in analogue and digital communication and control - Part 5-2: Sectional specification for screened cables characterized up to 250 MHz - Work area and patch cord cables

EN 50288-4-2:2013

Multi-element metallic cables used in analogue and digital communication and control - Part 4-2: Sectional specification for screened cables characterised up to 600 MHz - Work area and patch cord cables

EN 50288-10-2:2015

Multi-element metallic cables used in analogue and digital communication and control - Part 10-2: Sectional specification for screened cables characterized from 1 MHz up to 500 MHz for work area, patch cord and data centre applications

EN 62012-1:2002

Multicore and symmetrical pair/quad cables for digital communications to be used in harsh environments - Part 1: Generic specification

EN 50109-1:1995

Hand crimping tools - Tools for the crimp termination of electric cables and wires for low frequency and radio frequency applications - Part 1: General requirements and tests

EN 50288-8:2012

Multi-element metallic cables used in analogue and digital communication and control - Part 8: Specification for type 1 cables characterised up to 2 MHz

EN 50441-1:2012

Cables for indoor residential telecommunication installations - Part 1: Unscreened cables - Grade 1

EN 50441-3:2006

Cables for indoor residential telecommunication installations - Part 3: Screened cables - Grade 3

EN 50288-11-2:2015

Multi-element metallic cables used in analogue and digital communication and control - Part 11-2: Sectional specification for un-screened cables, characterized from 1 MHz up to 500 MHz for work area, patch cord and data centre applications

EN 50288-6-2:2013

Multi-element metallic cables used in analogue and digital communication and control - Part 6-2: Sectional specification for unscreened cables characterised up to 250 MHz - Work area and patch cord cables

EN 50288-5-1:2013

Multi-element metallic cables used in analogue and digital communication and control - Part 5-1: Sectional specification for screened cables characterized up to 250 MHz - Horizontal and building backbone cables

EN 50109-2-2:1995/AC:2012

Hand crimping tools - Tools for the crimp termination of electric cables and wires for low frequency and radio frequency applications - Part 2-2: Particular requirements for radio

frequency connectors and concentric contacts - Open throat tools with removable and interchangeable dies, sizes A to G, Q to T, V and W

EN 50289-1-17:2015

Communication cables - Specifications for test methods - Part 1-17: Electrical test methods - Exogenous Crosstalk ExNEXT and ExFEXT

EN 50109-2-5:1995

Hand crimping tools - Tools for the crimp termination of electric cables and wires for low frequency and radio frequency applications - Part 2-5: Particular requirements for the termination of twin-ax cable for databus applications

EN 50407-3:2014

Multi-pair cables used in high bit rate digital access telecommunications networks - Part 3: Indoor multi-pair/quad riser cables up to 100 MHz for maximum length of connection 100 m supporting universal services, xDSL and applications up to 100 Mbit/s over IP

EN 50288-12-1:2017

Multi-element metallic cables used in analogue and digital communications and control - Part 12-1: Sectional specification for screened cables characterised from 1 MHz up to 2 000 MHz - Horizontal and building backbone cables

EN 50109-2-2:1995

Hand crimping tools - Tools for the crimp termination of electric cables and wires for low frequency and radio frequency applications - Part 2-2: Particular requirements for radio frequency connectors and concentric contacts - Open throat tools with removable and interchangeable dies, sizes A to G, Q to T, V and W

EN 50288-6-1:2013

Multi-element metallic cables used in analogue and digital communication and control - Part 6-1: Sectional specification for unscreened cables characterised up to 250 MHz - Horizontal and building backbone cables

EN 50288-4-1:2013

Multi-element metallic cables used in analogue and digital communication and control - Part 4-1: Sectional specification for screened cables characterised up to 600 MHz - Horizontal and building backbone cables

EN 50109-2-1:1995

Hand crimping tools - Tools for the crimp termination of electric cables and wires for low frequency and radio frequency applications - Part 2-1: Particular requirements for radio frequency connectors and concentric contacts - Open throat tools with fixed dies, sizes A to E, V and W

EN 50288-2-1:2013

Multi-element metallic cables used in analogue and digital communication and control - Part 2-1: Sectional specification for screened cables characterised up to 100 MHz - Horizontal and building backbone cables

Standards under development:

prEN 50288-7 (pr=67768)

Multi-element metallic cables used in analogue and digital communication and control - Part 7: Sectional specification for instrumentation and control cables

prEN 50288-12-2 (pr=65673)

Multi-element metallic cables used in analogue and digital communication and control - Part 12-2: Sectional specification for screened cables characterised from 1 MHz up to 2000 MHz - Work Area cables

prEN 50288-13-1 (pr=65674)

Multi-element metallic cables used in analogue and digital communication and control - Part 13-1: Sectional specification for outer screened cables characterised up to 2000 MHz - Horizontal and building backbone cables

prEN 50288-13-2 (pr=65675)

Multi-element metallic cables used in analogue and digital communication and control - Part 13-2: Sectional specification for outer screened cables characterised from 1 MHz up to 2000 MHz - Work Area cables

CLC/TC 69X - Electrical systems for electric road vehicles

Keywords:

Road vehicles, AC charging, DC charging, Inductive charging, EMC, Light Electric Vehicles, Battery swap systems

Scope:

To prepare European standards related to electrical systems for road vehicles, totally or partly propelled from self-contained power sources

Standards:

EN 61851-21:2002

Electric vehicle conductive charging system - Part 21: Electric vehicle requirements for conductive connection to an AC/DC supply

EN 61851-24:2014

Electric vehicle conductive charging system - Part 24: Digital communication between a DC EV charging station and an electric vehicle for control of DC charging

EN IEC 61851-1:2019

Electric vehicle conductive charging system - Part 1: General requirements

EN 62576:2010

Electric double-layer capacitors for use in hybrid electric vehicles - Test methods for electrical characteristics

EN 61851-23:2014

Electric vehicle conductive charging system - Part 23: DC electric vehicle charging station

EN IEC 63119-1:2019

Information exchange for electric vehicle charging roaming service - Part 1: General

EN IEC 62576:2018

Electric double-layer capacitors for use in hybrid electric vehicles - Test methods for electrical characteristics

EN 61851-21-1:2017/AC:2017-11

Electric vehicle conductive charging system - Part 21-1: Electric vehicle on-board charger EMC requirements for conductive connection to an AC/DC supply

EN 61851-1:2011

Electric vehicle conductive charging system - Part 1: General requirements

EN 61851-21-1:2017

Electric vehicle conductive charging system - Part 21-1: Electric vehicle on-board charger EMC requirements for conductive connection to an AC/DC supply

EN 61851-23:2014/AC:2016-06

Electric vehicle conductive charging system - Part 23: DC electric vehicle charging station

EN 61851-22:2002

Electric vehicle conductive charging system - Part 22: AC electric vehicle charging station

EN IEC 62840-2:2019

Electric vehicle battery swap system - Part 2: Safety requirements

EN 61851-24:2014/AC:2015

Electric vehicle conductive charging system - Part 24: Digital communication between a DC EV charging station and an electric vehicle for control of DC charging

Standards under development:

EN 61851-1:2011/prA(23552)

Electric vehicle conductive charging system - Part 1: General requirements

CLC/prTS 61851-3-1(61602)

Electric Vehicles conductive power supply system - Part 3-1: General Requirements for EV supply equipment where protection relies on double or reinforced insulation - AC and DC conductive power supply systems

CLC/prTS 61851-3-2(61603)

Electric Vehicles conductive power supply system - Part 3-2: Particular requirements EV supply equipment where protection relies on double or reinforced insulation - Voltage converter unit

CLC/prTS 61851-3-3(61604)

Electric vehicles conductive power supply system - Part 3-3: Requirements for light electric vehicles - Battery swap systems

CLC/prTS 61851-3-4(61605)

Electric Vehicles conductive power supply system - Part 3-2: Particular requirements EV supply equipment where protection relies on double or reinforced insulation - General definitions and requirements for CANopen communications

CLC/prTS 61851-3-5(61606)

Electric Vehicles conductive power supply system - Part 3-5: Particular requirements EV supply equipment where protection relies on double or reinforced insulation - Pre-defined communication parameters and general application objects

CLC/prTS 61851-3-6(61607)

Electric Vehicles conductive power supply system - Part 3-6: Particular requirements for EV supply equipment where protection relies on double or reinforced insulation - Voltage converter and communication

CLC/prTS 61851-3-7(61608)

Electric vehicles conductive power supply system - Part 3-7: Particular requirements for EV supply equipment where protection relies on double or reinforced insulation – Battery system communication

FprEN 61851-21-2:2017(24401)

Electric vehicle conductive charging system - Part 21-2: Electric vehicle requirements for conductive connection to an AC/DC supply - EMC requirements for off board electric vehicle charging systems

prEN 61851-23-1(64601)

Electric vehicle conductive charging system - Part 23-1: DC Charging with an automatic connection system

prEN IEC 61851-23-2:2018(66404)

Electric vehicle conductive charging system - Part 23-2: DC EV supply equipment where protection relies on electrical separation

prEN IEC 61851-23:2020(63680)

Electric vehicle conductive charging system - Part 23: DC electric vehicle supply equipment

prEN IEC 61851-24:2020(63679)

Electric vehicle conductive charging system - Part 24: Digital communication between a DC EV charging station and an electric vehicle for control of DC charging

prEN 61980-1:2014(25038)

Electric vehicle wireless power transfer systems (WPT) - Part 1: General requirements

prEN IEC 61980-1:2019(69603)

Electric vehicle wireless power transfer (WPT) systems - Part 1: General requirements

prEN IEC 61980-2(71011)

Electric vehicle wireless power transfer (WPT) systems - Part 2: Specific requirements for communication between electric road vehicle (EV) and infrastructure

CLC IEC/FprTS 61980-2:2020(61609)

Electric vehicle wireless power transfer (wpt) systems - Part 2: Specific requirements for communication between electric road vehicle (EV) and infrastructure with respect to wireless power transfer (WPT) systems

prEN IEC 61980-3(71010)

Electric vehicle wireless power transfer (WPT) systems - Part 3: Specific requirements for the magnetic field wireless power transfer systems

CLC IEC/FprTS 61980-3:2020(61610)

Electric vehicle wireless power transfer (wpt) systems - Part 3: Specific requirements for the magnetic field wireless power transfer systems

prEN IEC 62576-2(70967)

Electrical characteristics test methods of EDLC Module for Electric road vehicles

prEN IEC 62840-1(71464)

Electric vehicle battery swap system - Part 1: General and guidance

prEN IEC 63110-1(67796)

Protocol for Management of Electric Vehicles charging and discharging infrastructures - Part 1: Basic Definitions, Use Cases and architectures

3.2.69 CLC/TC 23H - Plugs, Socket-outlets and Couplers for industrial and similar applications, and for Electric Vehicles

Keywords:

Road vehicles, Low voltage plugs, socket-outlets and couplers for industrial purpose, industrial cable reels, and conversion adapters for industrial use, Plugs, socket-outlets and couplers for electric vehicles, High-voltage accessories, Contact interface for automated connection devices (ACD)

Scope:

To prepare standards for industrial plugs, socket-outlets and couplers suitable for use in industrial, commercial, private or public locations, either indoors or outdoors. To prepare standards for other accessories, such as industrial cable reels among others, intended for use with industrial plugs, socket-outlets and couplers. To prepare standards for connection products intended for the connection of electric vehicles to the supply network and/or to dedicated supply equipment. The rated voltages of products covered by these standards lie within IEC 60038

Standards:

EN 62196-3:2014

Plugs, socket-outlets, vehicle connectors and vehicle inlets - Conductive charging of electric vehicles - Part 3: Dimensional compatibility and interchangeability requirements for DC and AC/DC pin and contact-tube vehicle couplers

EN 60309-1:1999/A2:2012

Plugs, socket-outlets and couplers for industrial purposes - Part 1: General requirements

EN 60309-1:1999

Plugs, socket-outlets and couplers for industrial purposes - Part 1: General requirements

EN 50250:2002/corrigendum Aug. 2007

Conversion adaptors for industrial use

EN 60309-1:1999/A1:2007

Plugs, socket-outlets and couplers for industrial purposes - Part 1: General requirements

EN 60309-1:1999/A1:2007/AC:2014

Plugs, socket-outlets and couplers for industrial purposes - Part 1: General requirements

EN 50250:2002/A1:2015

Conversion adaptors for industrial use

EN IEC 60309-5:2019

Plugs, socket-outlets and couplers for industrial purposes - Part 5: Dimensional compatibility and interchangeability requirements for plugs, socket-outlets, ship connectors and ship inlets for low-voltage shore connection systems (LVSC)

EN IEC 62613-1:2018

Plugs, socket-outlets and ship couplers for high-voltage shore connection systems (HVSC-Systems) - Part 1: General requirements

EN IEC 62613-2:2018

Plugs, socket-outlets and ship couplers for high-voltage shore connection systems (HVSC-systems) - Part 2: Dimensional compatibility and interchangeability requirements for accessories to be used by various types of ships

EN 50250:2002

Conversion adaptors for industrial use

EN 60309-4:2007/A1:2012

Plugs, socket-outlets and couplers for industrial purposes - Part 4: Switched socket-outlets and connectors with or without interlock

EN 62196-2:2017

Plugs, socket-outlets, vehicle connectors and vehicle inlets - Conductive charging of electric vehicles - Part 2: Dimensional compatibility and interchangeability requirements for AC pin and contact-tube accessories

EN 60309-2:1999

Plugs, socket-outlets and couplers for industrial purposes - Part 2: Dimensional interchangeability requirements for pin and contact-tube accessories

EN 60309-4:2007

Plugs, socket-outlets and couplers for industrial purposes - Part 4: Switched socket-outlets and connectors with or without interlock

EN 60309-2:1999/A2:2012

Plugs, socket-outlets and couplers for industrial purposes - Part 2: Dimensional interchangeability requirements for pin and contact-tube accessories

EN 60309-2:1999/A1:2007

Plugs, socket-outlets and couplers for industrial purposes - Part 2: Dimensional interchangeability requirements for pin and contact-tube accessories

EN 61316:1999

Industrial cable reels

EN 62196-1:2014

Plugs, socket-outlets, vehicle connectors and vehicle inlets - Conductive charging of electric vehicles - Part 1: General requirements

Standards under development:

prEN 50696(64494)

Contact Interface for Automated Connection Device

prEN IEC 60309-1:2019(65965)

Plugs, fixed or portable socket- outlets and appliance inlets for industrial purposes - Part 1: General requirements

prEN IEC 60309-2:2019(65966)

Plugs, fixed or portable socket- outlets and appliance inlets for industrial purposes - Part 2: Dimensional interchangeability requirements for pin and contact-tube accessories

prEN IEC 60309-4:2019(65967)

Plugs, fixed or portable socket- outlets and appliance inlets for industrial purposes - Part 4: Switched socket-outlets and connectors with or without interlock

prEN IEC 61316:2019(66681)

Industrial cable reels

prEN IEC 62196-1:2020(65915)

Plugs, socket-outlets, vehicle connectors and vehicle inlets - Conductive charging of electric vehicles - Part 1: General requirements

EN 62196-2:2017/prA(68146)

Plugs, socket-outlets, vehicle connectors and vehicle inlets - Conductive charging of electric vehicles - Part 2: Dimensional compatibility and interchangeability requirements for AC pin and contact-tube accessories

prEN IEC 62196-2:2020(69396)

Plugs, socket-outlets, vehicle connectors and vehicle inlets - Conductive charging of electric vehicles - Part 2: Dimensional compatibility requirements for AC pin and contact-tube accessories

prEN IEC 62196-3:2020(65916)

Plugs, socket-outlets, vehicle connectors and vehicle inlets - Conductive charging of electric vehicles - Part 3: Dimensional compatibility and interchangeability requirements for DC and AC/DC pin and contact-tube vehicle couplers

prEN IEC 62196-6:2020(68947)

Plugs, socket-outlets, vehicle connectors and vehicle inlets - Conductive charging of electric vehicles - Part 6: Dimensional compatibility requirements for DC pin and contact-tube vehicle couplers for DC EV supply equipment where protection relies on electrical separation

3.2.70 CLC/SR 103 -Transmitting equipment for radiocommunication

Keywords:

Mobile Telecommunications, RFID cards

Scope:

There is no information on the website.

Standards:

EN 62273-1:2007

Methods of measurement for radio transmitters - Part 1: Performance characteristics of terrestrial digital television transmitters

EN 60215:1989/A2:1994

Safety requirements for radio transmitting equipment

EN 60864-2:1997

Standarisation of interconnections between broadcasting transmitters or transmitter systems and supervisory equipment - Part 2: Interface standards for systems using data bus type interconnections

EN 60244-15:2000

Methods of measurement for radio transmitters - Part 15: Amplitude-modulated transmitters for sound broadcasting

EN 60215:1989/A1:1992

Safety requirements for radio transmitting equipment

EN 60215:1989

Safety requirements for radio transmitting equipment

EN 60244-5:1994

Methods of measurement for radio transmitters - Part 5: Performance characteristics for television transmitters

EN 60244-13:1993

Methods of measurement for radio transmitters - Part 13: Performance characteristics for FM sound broadcasting

EN 60244-8:1994

Methods of measurement for radio transmitters - Part 8: Performance characteristics of vestigial-sideband demodulators used for testing television transmitters and transposers

EN 60244-1:2000

Methods of measurement for radio transmitters - Part 1: General characteristics for broadcast transmitters

EN 62803:2016

Transmitting equipment for radiocommunication - Frequency response of optical-to-electric conversion device in high-frequency radio over fibre systems - Measurement method

EN 62802:2017

Measurement methods of a half-wavelength voltage and a chirp parameter for Mach-Zehnder optical modulators in high-frequency radio on fibre (RoF) Systems

EN 60244-11:1993

Methods of measurement for radio transmitters - Part 11: Transposers for FM sound broadcasting

EN 60244-12-1:1993

Methods of measurement for radio transmitters - Part 12: Guideline for drawing up descriptive leaflets for transmitters and transposers for sound and television broadcasting - Characteristics to be specified

EN 60244-10:1993

Methods of measurement for radio transmitters - Part 10: Methods of measurement for television transmitters and transposers employing insertion test signals

HD 577 S1:1990

Standarisation of interconnections between broadcasting transmitters or transmitter systems and supervisory equipment - Part 1: Interface standards for systems using dedicated interconnections

EN 61566:1997

Measurement of exposure to radio-frequency electromagnetic fields - Field strength in the frequency range 100 kHz to 1 GHz

EN 62553:2013

Methods of measurement for digital network - Performance characteristics of terrestrial digital multimedia transmission network

EN 60244-14:1997

Methods of measurement for radio transmitters - Part 14: External intermodulation products caused by two or more transmitters using the same or adjacent antennas

EN 60244-12-2:1993

Methods of measurement for radio transmitters - Part 12: Guideline for drawing up descriptive leaflets for transmitters and transposers for sound and television broadcasting - Specification sheets

EN 62272-2:2007

Digital radio mondiale (DRM) - Part 2: Digital radio in the bands below 30 MHz - Methods of measurement for DRM transmitters

EN 60244-9:1994

Methods of measurement for radio transmitters - Part 9: Performance characteristics for television transposers

Standards under development:

FprEN IEC 60215:201X (pr=25180)

Safety requirements for radio transmitting equipment - General requirements and terminology

FprEN IEC 60215:201X/prAA (pr=68767)

Safety requirements for radio transmitting equipment - General requirements and terminology

FprEN 62801:2013 (pr=24923)

Measurement method of a half-wavelength voltage for Mach-Zehnder optical modulator in wireless communication and broadcasting systems

3.2.71 CLC/TC 108X - Safety of electronic equipment within the fields of Audio/Video, Information Technology and Communication Technology

Keywords:

Mobile Telecommunications

Scope:

- To deal with the adoption in CENELEC of technical work of IEC/TC 108 and to coordinate the work with other technical bodies at European level e.g. ETSI. To make own standards where a particular need arises. NOTE The field of application of IEC/TC 108 is as follows: Standarisation in the field of safety for audio/video and similar technology, information technology and communication technology equipment.

- To ensure that any deviation from the IEC standards, such as common modifications, special national conditions and A-deviations, is only in response to a clear and justifiable European need, such as European and national legislative needs.

- To resolve application questions e.g. raised by CCA Operational Staff Meetings relative to standards within the responsibility of CLC/TC 108X. -To keep IEC/TC 108 informed of European requirements so that they may be considered for inclusion in IEC standards within the responsibility of IEC/TC 108.

Standards:

EN 60950-1:2006/AC:2011

Information technology equipment - Safety - Part 1: General requirements

CLC/TR 62102:2006

Electrical safety - Classification of interfaces for equipment to be connected to information and communications technology networks

EN 60950-23:2006/corrigendum Oct. 2008

Information technology equipment - Safety - Part 23: Large data storage equipment

EN 60065:2014

Audio, video and similar electronic apparatus - Safety requirements

EN 50332-2:2013

Sound system equipment: Headphones and earphones associated with personal music players - Maximum sound pressure level measurement methodology - Part 2: Matching of sets with headphones if either or both are offered separately, or are offered as one package equipment but with standardised connectors between the two allowing to combine components of different manufacturers or different design

CLC/TS 62367:2005

Safety aspects for xDSL signals on circuits connected to telecommunication networks (DSL: Digital Subscriber Line)

EN 62368-1:2014/AC:2015

Audio/video, information and communication technology equipment - Part 1: Safety requirements

EN 62911:2016

Audio, video and information technology equipment - Routine electrical safety testing in production

EN IEC 62368-3:2020

Audio/video, information and communication technology equipment - Part 3: Safety aspects for DC power transfer through communication cables and ports

EN IEC 62368-1:2020

Audio/video, information and communication technology equipment - Part 1: Safety requirements

EN 60065:2014/AC:2018-12

Audio, video and similar electronic apparatus - Safety requirements

EN 60065:2014/A11:2017

Audio, video and similar electronic apparatus - Safety requirements

EN 62368-1:2014

Audio/video, information and communication technology equipment - Part 1: Safety requirements (IEC 62368-1:2014, modified)

EN 62368-1:2014/AC:2015

Audio/video, information and communication technology equipment - Part 1: Safety requirements (IEC 62368-1:2014, modified)

EN 62368-1:2014/AC:2015

Audio/video, information and communication technology equipment - Part 1: Safety requirements (IEC 62368-1:2014, modified)

EN 60950-1:2006/A12:2011

Information technology equipment - Safety - Part 1: General requirements

EN 50332-1:2013

Sound system equipment: Headphones and earphones associated with personal music players - Maximum sound pressure level measurement methodology - Part 1: General method for "one package equipment"

EN 60950-21:2003

Information technology equipment - Safety - Part 21: Remote power feeding

EN 60950-23:2006

Information technology equipment - Safety - Part 23: Large data storage equipment

EN 60950-22:2017

Information technology equipment - Safety - Part 22: Equipment to be installed outdoors

EN 60950-1:2006/A1:2010

Information technology equipment - Safety - Part 1: General requirements

EN 62368-1:2014/A11:2017

Audio/video, information and communication technology equipment - Part 1: Safety requirements (IEC 62368-1:2014, modified)

CLC/TS 62441:2012

Safeguards against accidentally caused candle flame ignition for audio/video, communication and information technology equipment

EN 60990:2016

Methods of measurement of touch current and protective conductor current

EN 60950-1:2006/A2:2013

Information technology equipment - Safety - Part 1: General requirements

EN 62949:2017

Particular safety requirements for equipment to be connected to information and communication networks

EN 60065:2014/AC:2017-01

Audio, video and similar electronic apparatus - Safety requirements

EN 60950-1:2006

Information technology equipment - Safety - Part 1: General requirements

EN 50332-3:2017

Sound system equipment: headphones and earphones associated with personal music players - Maximum sound pressure level measurement methodology - Part 3: Measurement method for sound dose management

EN 60950-1:2006/A11:2009

Information technology equipment - Safety - Part 1: General requirements

EN IEC 62368-1:2020/A11:2020

Audio/video, information and communication technology equipment - Part 1: Safety requirements

EN 60065:2014/AC:2016

Audio, video and similar electronic apparatus - Safety requirements

EN 62368-1:2014/AC:2017-03

Audio/video, information and communication technology equipment - Part 1: Safety requirements (IEC 62368-1:2014, modified)

Standards under development:

EN IEC 62368-1:2020/prAB (pr=70412)

Audio/video, information and communication technology equipment - Part 1: Safety requirements

prEN 62441 (pr=59451)

Safeguards against accidentally caused candle flame ignition

3.2.72 CLC/TC 46X -Communication cables

Keywords:

Mobile Telecommunications, Coaxial cables, Multicore, multipair and quad data communication cables, Electrical Test method (excepting EMC and Raw materials), Mechanical and Environmental Test Procedures

Scope:

To establish standards related to wires, symmetric cables, coaxial cables and waveguides with metallic conductors for use in telecommunication, data transmission, radio frequency, video communication and signalling equipment to satisfy the advances in developing technologies. Particular requirements for materials, if necessary, will be evaluated in liaison with other technical committees.

Standards:

EN 50289-4-5:2008

Communication cables - Specifications for test methods - Part 4-5: Environmental test methods - Climatic sequence

EN 50289-1-16:2007

Communication cables - Specifications for test methods - Part 1-16: Electromagnetic performance - Coupling attenuation of cable assemblies (Field conditions)

EN 61580-4:1998

Methods of measurement for waveguides - Part 4: Attenuation of waveguide and waveguide assemblies

EN 50289-3-5:2001

Communication cables - Specifications for test methods - Part 3-5: Mechanical test methods - Crush resistance of the cable

EN 50290-2-24:2002

Communication cables - Part 2-24: Common design rules and construction - PE sheathing

EN 50289-3-2:2001

Communication cables - Specifications for test methods - Part 3-2: Mechanical test methods - Tensile strength and elongation for conductor

EN 50290-2-36:2016

Communication cables - Part 2-36: Common design rules and construction - Crosslinked Silicone rubber insulation compound

EN 61935-1:2009

Specification for the testing of balanced and coaxial information technology cabling - Part 1: Installed balanced cabling as specified in the standards series EN 50173

EN 50290-2-27:2002

Communication cables - Part 2-27: Common design rules and construction - Halogen free flame retardant thermoplastic sheathing compounds

EN 50290-2-21:2001/corrigendum Jan. 2003

Communication cables - Part 2-21: Common design rules and construction - PVC insulation compounds

EN 50290-2-23:2013

Communication cables - Part 2-23: Common design rules and construction - Polyethylene insulation for multi-pair cables used in access telecommunication networks: Outdoor cables

EN 50290-4-2:2014

Communication cables - Part 4-2: General considerations for the use of cables - Guide to use

EN 50601:2014

Generic cabling systems - Specification for the testing of balanced communication cabling in accordance with EN 50173-4 - Unscreened straight patch cords and straight work area cords for class D applications - Detail specification

EN 50289-1-7:2001

Communication cables - Specifications for test methods - Part 1-7: Electrical test methods - Velocity of propagation

EN 50602:2014

Generic cabling systems - Specification for the testing of balanced communication cabling in accordance with EN 50173-4 - Unscreened straight patch cords and straight work area cords for class E applications - Detail specification

EN 50289-3-11:2001

Communication cables - Specifications for test methods - Part 3-11: Mechanical test methods - Cable cut-through resistance

EN 50290-2-26:2002/A1:2007

Communication cables - Part 2-26: Common design rules and construction - Halogen free flame retardant insulation compounds

EN 50290-4-1:2014

Communication cables - Part 4-1: General considerations for the use of cables - Environmental conditions and safety aspects

EN 61580-3:1997

Methods of measurement for waveguides - Part 3: Variation of group delay

EN 50289-3-8:2013

Communication cables - Specifications for test methods - Part 3-8: Mechanical test methods - Abrasion resistance of cable sheath markings

EN 50290-2-22:2001

Communication cables - Part 2-22: Common design rules and construction - PVC sheathing compounds

EN 50290-2-25:2013

Communication cables - Part 2-25: Common design rules and construction - Polypropylene insulation compounds

EN 50289-3-6:2001

Communication cables - Specifications for test methods - Part 3-6: Mechanical test methods - Impact resistance of the cable

EN 50289-1-13:2004

Communication cables - Specifications for test methods - Part 1-13: Electrical test methods - Coupling attenuation or screening attenuation of patch cords / coaxial cable assemblies / pre-connectorised cables

EN 50289-1-14:2004

Communication cables - Specifications for test methods - Part 1-14: Electrical test methods - Coupling attenuation or screening attenuation of connecting hardware

EN 50289-1-15:2004

Communication cables - Specifications for test methods - Part 1-15: Electromagnetic performance - Coupling attenuation of links and channels (Laboratory conditions)

EN 61935-2-20:2009

Testing of balanced communication cabling in accordance with series EN 50173 - Part 2-20: Patch cords and work area cords - Blank detail specification for class D applications

EN 62037-5:2013

Passive RF and microwave devices, intermodulation level measurement - Part 5: Measurement of passive intermodulation in filters

EN 50290-2-21:2001

Communication cables - Part 2-21: Common design rules and construction - PVC insulation compounds

EN 50289-3-17:2002

Communication cables - Specifications for test methods - Part 3-17: Mechanical test methods - Adhesion of dielectric and sheath

EN 50290-2-27:2002/A1:2007/corrigendum May 2010

Communication cables - Part 2-27: Common design rules and construction - Halogen free flame retardant thermoplastic sheathing compounds

EN 62037-6:2013

Passive RF and microwave devices, intermodulation level measurement - Part 6: Measurement of passive intermodulation in antennas

EN 50599:2014

Generic cabling systems - Specification for the testing of balanced communication cabling in accordance with EN 50173-4 - Screened straight patch cords and straight work area cords for class D applications - Detail specification

EN 60966-2-5:2017

Radio frequency and coaxial cable assemblies - Part 2-5: Detail specification for cable assemblies for radio and TV receivers - Frequency range 0 MHz to 1 000 MHz, IEC 61169-2 connectors

EN 50289-4-17:2015

Communication cables - Specifications for test methods - Part 4-17: Test methods for UV resistance evaluation of the sheath of electrical and optical fibre cable

EN 50290-2-20:2016

Communication cables - Part 2-20: Common design rules and construction - General

EN 50289-1-8:2017

Communication cables - Specifications for test methods - Part 1-8: Electrical test methods - Attenuation

EN 50289-1-11:2016

Communication cables - Specifications for test methods - Part 1-11: Electrical test methods - Characteristic impedance, input impedance, return loss

EN 50289-4-16:2016

Communication cables - Specifications for test methods - Part 4-16: Environmental test methods - Circuit integrity under fire conditions

EN 60708:2005/AC:2016-08

Low-frequency cables with polyolefin insulation and moisture barrier polyolefin sheath

EN 62153-4-7:2016/AC:2016-05

Metallic communication cable test methods - Part 4-7: Electromagnetic compatibility (EMC) - Test method for measuring of transfer impedance ZT and screening attenuation as or coupling attenuation ac of connectors and assemblies up to and above 3 GHz - Triaxial tube in tube method

EN 50289-3-10:2004

Communication cables - Specifications for tests methods - Part 3-10: Mechanical test methods - Torsion and twisting

EN 50289-3-13:2003

Communication cables - Specifications for test methods - Part 3-13: Mechanical test methods - Aeolian vibration

EN 50289-3-15:2003

Communication cables - Specifications for test methods - Part 3-15: Mechanical test methods - Underwater cable resistance to hydrostatic pressure

EN 50289-4-7:2008

Communication cables - Specifications for test methods - Part 4-7: Environmental test methods - Damp heat, steady state

EN 50406-1:2004

End user multi-pair cables used in high bit rate telecommunication networks - Part 1: Aerial cables

EN 50406-2:2004

End user multi-pair cables used in high bit rate telecommunication networks - Part 2: Duct and buried cables

EN 50289-1-12:2005

Communication cables - Specifications for test methods - Part 1-12: Electrical test methods - Inductance

EN 50289-1-3:2001

Communication cables - Specifications for test methods - Part 1-3: Electrical test methods - Dielectric strength

EN 50289-1-5:2001

Communication cables - Specifications for test methods - Part 1-5: Electrical test methods - Capacitance

EN 50289-3-1:2001

Communication cables - Specifications for test methods - Part 3-1: Mechanical test methods - General requirements

EN 50289-4-9:2001

Communication cables - Specifications for test methods - Part 4-9: Environmental test methods - Pneumatic resistance

EN 50289-3-16:2001

Communication cables - Specifications for test methods - Part 3-16: Mechanical test methods - Cable tensile performance

EN 61580-2:1996

Methods of measurement for waveguides - Part 2: Level of intermodulation products

EN 62037-1:2012

Passive RF and microwave devices, intermodulation level measurement - Part 1: General requirements and measuring methods

EN 50290-2-37:2016

Communication cables - Part 2-37: Common design rules and construction - Polyethylene insulation for coaxial cables

EN 50290-2-27:2002/A1:2007

Communication cables - Part 2-27: Common design rules and construction - Halogen free flame retardant thermoplastic sheathing compounds

EN 50289-1-10:2001

Communication cables - Specifications for test methods - Part 1-10: Electrical test methods - Crosstalk

EN 50603:2014

Generic cabling systems - Specification for the testing of balanced communication cabling in accordance with EN 50173-4 - Screened straight patch cords and straight work area cords for class E applications - Detail specification

EN 61935-3:2009

Testing of balanced and coaxial information technology cabling - Part 3: Installed cabling as specified in EN 50173-4 and related standards

EN 50290-2-21:2001/A1:2007/AC:2016

Communication cables - Part 2-21: Common design rules and construction - PVC insulation compounds

EN 62037-2:2013

Passive RF and microwave devices, intermodulation level measurement - Part 2: Measurement of passive intermodulation in coaxial cable assemblies

EN 50289-3-4:2001

Communication cables - Specifications for test methods - Part 3-4: Mechanical test methods - Tensile strength, elongation and shrinkage of insulation and sheath

EN 61580-1:1996

Methods of measurement for waveguides - Part 1: Decoupling and rotation of the plane of polarization

EN 50290-2-33:2016

Communication cables - Part 2-33: Common design rules and construction - Polyethylene insulation compounds for multi element metallic cables for indoor installation (data cable)

EN 61580-9:1996

Methods of measurement for waveguides - Part 9: Reflection coefficient at rectangular waveguide interfaces

EN 50289-4-14:2003

Communication cables - Specifications for test methods - Part 4-14: Environmental test methods - Lightning

EN 50290-2-22:2001/A1:2007

Communication cables - Part 2-22: Common design rules and construction - PVC sheathing compounds

EN 50289-1-2:2001

Communication cables - Specifications for test methods - Part 1-2: Electrical test methods - DC resistance

EN 62153-4-7:2016/A1:2018

Metallic communication cable test methods - Part 4-7: Electromagnetic compatibility (EMC) - Test method for measuring of transfer impedance ZT and screening attenuation as or coupling attenuation aC of connectors and assemblies up to and above 3 GHz - Triaxial tube in tube method

EN 50290-2-26:2002

Communication cables - Part 2-26: Common design rules and construction - Halogen free flame retardant insulation compounds

EN 50290-2-24:2002/A1:2008

Communication cables - Part 2-24: Common design rules and construction - PE sheathing

EN 62037-3:2012

Passive RF and microwave devices, intermodulation level measurement - Part 3: Measurement of passive intermodulation in coaxial connectors

EN 50290-2-1:2005

Communication cables - Part 2-1: Common design rules and construction

EN 61580-7:1996

Methods of measurement for waveguides - Part 7: Graphical method for the determination of waveguide performance

EN 50289-4-11:2002

Communication cables - Specifications for test methods - Part 4-11: Environmental test methods - A horizontal integrated fire test method

EN 50290-1-1:2001

Communication cables - Part 1-1: General

EN 50289-4-12:2004

Communication cables - Specifications for test methods - Part 4-12: Environmental test methods - Vertical flame spread test on bunched small communication cables

EN 60966-2-6:2017

Radio frequency and coaxial cable assemblies - Part 2-6: Detail specification for cable assemblies for radio and TV receivers - Frequency range 0 MHz to 3 000 MHz, IEC 61169-24 connectors

EN 50289-3-12:2001

Communication cables - Specifications for test methods - Part 3-12: Mechanical test methods - Shot gun damage

EN 50290-2-35:2016

Communication cables - Part 2-35: Common design rules and construction - Polyamide sheathing compound

EN 61580-8:1996

Methods of measurement for waveguides - Part 8: Waveguide power holding capability

EN 60966-2-4:2016

Radio Frequency and coaxial cable assemblies - Part 2-4: Detail specification for cable assemblies for radio and TV receivers - Frequency range 0 MHz to 3 000 MHz, IEC 61169-2 connectors

EN 50407-1:2004

Multi-pair cables used in high bit rate digital access telecommunication networks - Part 1: Outdoor cables

EN 50289-1-4:2001

Communication cables - Specifications for test methods - Part 1-4: Electrical test methods - Insulation resistance

EN 50289-1-6:2002

Communication cables - Specifications for test methods - Part 1-6: Electrical test methods - Electromagnetic performance

EN 50290-2-38:2016

Communication cables - Part 2-38: Common design rules and construction - Polypropylene insulation for coaxial cables

EN 50290-1-2:2004

Communication cables - Part 1-2: Definitions

EN 50289-4-2:2001

Communication cables - Specifications for test methods - Part 4-2: Environmental test methods - Water penetration

EN 50289-4-6:2001

Communication cables - Specifications for test methods - Part 4-6: Environmental test methods - Temperature cycling

EN 50289-4-1:2001

Communication cables - Specifications for test methods - Part 4-1: Environmental test methods - General requirements

EN 50290-2-29:2016

Communication cables - Part 2-29: Common design rules and construction - Crosslinked polyethylene insulation compounds: instrumentation, control and field bus cables

EN 61580-6:1997

Methods of measurement for waveguides - Part 6: Return loss on waveguide and waveguide assemblies

EN 62037-4:2012

Passive RF and microwave devices, intermodulation level measurement - Part 4: Measurement of passive intermodulation in coaxial cables

EN 50290-2-28:2002

Communication cables - Part 2-28: Common design rules and construction - Filling compounds for filled cables

EN 50290-2-21:2001/A1:2007

Communication cables - Part 2-21: Common design rules and construction - PVC insulation compounds

EN 50289-3-9:2001

Communication cables - Specifications for test methods - Part 3-9: Mechanical test methods - Bending tests

EN 50289-1-9:2017

Communication cables - Specifications for test methods - Part 1-9: Electrical test methods - Unbalance attenuation (transverse conversion loss TCL transverse conversion transfer loss TCTL)

EN 50289-4-4:2008

Communication cables - Specifications for test methods - Part 4-4: Environmental test methods - Resistance to solvents and contaminating fluids

EN 50290-2-30:2002

Communication cables - Part 2-30: Common design rules and construction - Poly(tetrafluoroethylene-hexafluoropropylene) (FEP) insulation and sheathing

EN 50289-3-7:2001

Communication cables - Specifications for test methods - Part 3-7: Mechanical test methods - Abrasion resistance of the cable sheath

EN 50289-1-1:2017

Communication cables - Specifications for test methods - Part 1-1: Electrical test methods - General requirements

Standards under development:

prEN 50290-2-24(68421)

Communication cables - Part 2-24: Common design rules and construction - PE sheathing

prEN 50290-2-27(68455)

Communication cables - Part 2-27: Common design rules and construction - Halogenfree polyolefin based sheathing compounds for cables having improved flame and fire properties

prEN IEC 60966-2-8(70963)

Radio frequency and coaxial cable assemblies - Part 2-8: Detail specification for cable assemblies for radio and TV receivers - Frequency range up to 3000MHz, Screening class A++, IEC61169-47 connectors

prEN IEC 60966-4-2(70965)

Radio frequency and coaxial cable assemblies – Part 4-2: Detail specification for semi rigid cable assemblies (jumper), Frequency range up to 6000MHz, Type 50-9 semi-rigid coaxial cable, applicable to ISO/IEC 11801-1

prEN IEC 60966-4-3(70962)

Radio frequency and coaxial cable assemblies – Part 4-3: Detail specification for semi-rigid cable assemblies, Frequency range up to 6000MHz, Type 50-12 low loss semi-rigid coaxial cable, applicable to ISO/IEC 11801-1

prEN IEC 62037-1:2020(71240)

Passive RF and microwave devices, intermodulation level measurement - Part 1: General requirements and measuring methods

prEN IEC 62037-2:2020(71184)

Passive RF and microwave devices, intermodulation level measurement - Part 2: Measurement of passive intermodulation in coaxial cable assemblies

prEN IEC 62037-3:2020(71239)

Passive RF and microwave devices, intermodulation level measurement - Part 3: Measurement of passive intermodulation in coaxial connectors

prEN IEC 62037-5:2020(71244)

Passive RF and microwave devices, intermodulation level measurement - Part 5: Measurement of passive intermodulation in filters

prEN IEC 62037-6:2020(71243)

Passive RF and microwave devices, intermodulation level measurement - Part 6: Measurement of passive intermodulation in antennas

prEN IEC 62037-8(70781)

Measurement of passive intermodulation generated by objects exposed to RF radiation

prEN IEC 62153-4-5(70382)

Metallic cables and other passive components test methods - Part 4-5: Electromagnetic compatibility (EMC) - Coupling or screening attenuation - Absorbing clamp method

prEN IEC 62153-4-7:2020(70318)

Metallic cables and other passive components test methods - Part 4-7: Electromagnetic compatibility (EMC) -Test method for measuring of transfer impedance Z_T and screening attenuation a_S or coupling attenuation a_C of connectors and assemblies – Triaxial tube in tube method

prEN IEC 62153-4-15:2019(68567)

Metallic cables and other passive components test methods - Part 4-15: Electromagnetic compatibility (EMC) - Test method for measuring transfer impedance and screening attenuation - or coupling attenuation with triaxial cell

prEN IEC 62153-4-16:2020(70348)

Metallic cables and other passive components test methods - Part 4-16: Electromagnetic compatibility (EMC) - Extension of the frequency range to higher frequencies for transfer impedance and to lower frequencies for screening attenuation measurements using the triaxial set-up

3.2.73 CLC/SC 205A - Mains communicating systems

Keywords:

Mobile Telecommunications, High frequency power lines, Immunity, Filters

Scope:

To establish standards related to wires, symmetric cables, coaxial cables and waveguides with metallic conductors for use in telecommunication, data transmission, radio frequency, video communication and signalling equipment to satisfy the advances in developing technologies. Particular requirements for materials, if necessary, will be evaluated in liaison with other technical committees.

Standards:

EN 50289-4-5:2008

Communication cables - Specifications for test methods - Part 4-5: Environmental test methods - Climatic sequence

EN 50289-1-16:2007

Communication cables - Specifications for test methods - Part 1-16: Electromagnetic performance - Coupling attenuation of cable assemblies (Field conditions)

EN 61580-4:1998

Methods of measurement for waveguides - Part 4: Attenuation of waveguide and waveguide assemblies

EN 50289-3-5:2001

Communication cables - Specifications for test methods - Part 3-5: Mechanical test methods - Crush resistance of the cable

EN 50290-2-24:2002

Communication cables - Part 2-24: Common design rules and construction - PE sheathing

EN 50289-3-2:2001

Communication cables - Specifications for test methods - Part 3-2: Mechanical test methods - Tensile strength and elongation for conductor

EN 50290-2-36:2016

Communication cables - Part 2-36: Common design rules and construction - Crosslinked Silicone rubber insulation compound

EN 61935-1:2009

Specification for the testing of balanced and coaxial information technology cabling - Part 1: Installed balanced cabling as specified in the standards series EN 50173

EN 50290-2-27:2002

Communication cables - Part 2-27: Common design rules and construction - Halogen free flame retardant thermoplastic sheathing compounds

EN 50290-2-21:2001/corrigendum Jan. 2003

Communication cables - Part 2-21: Common design rules and construction - PVC insulation compounds

EN 50290-2-23:2013

Communication cables - Part 2-23: Common design rules and construction - Polyethylene insulation for multi-pair cables used in access telecommunication networks: Outdoor cables

EN 50290-4-2:2014

Communication cables - Part 4-2: General considerations for the use of cables - Guide to use

EN 50601:2014

Generic cabling systems - Specification for the testing of balanced communication cabling in accordance with EN 50173-4 - Unscreened straight patch cords and straight work area cords for class D applications - Detail specification

EN 50289-1-7:2001

Communication cables - Specifications for test methods - Part 1-7: Electrical test methods - Velocity of propagation

EN 50602:2014

Generic cabling systems - Specification for the testing of balanced communication cabling in accordance with EN 50173-4 - Unscreened straight patch cords and straight work area cords for class E applications - Detail specification

EN 50289-3-11:2001

Communication cables - Specifications for test methods - Part 3-11: Mechanical test methods - Cable cut-through resistance

EN 50290-2-26:2002/A1:2007

Communication cables - Part 2-26: Common design rules and construction - Halogen free flame retardant insulation compounds

EN 50290-4-1:2014

Communication cables - Part 4-1: General considerations for the use of cables - Environmental conditions and safety aspects

EN 61580-3:1997

Methods of measurement for waveguides - Part 3: Variation of group delay

EN 50289-3-8:2013

Communication cables - Specifications for test methods - Part 3-8: Mechanical test methods - Abrasion resistance of cable sheath markings

EN 50290-2-22:2001

Communication cables - Part 2-22: Common design rules and construction - PVC sheathing compounds

EN 50290-2-25:2013

Communication cables - Part 2-25: Common design rules and construction - Polypropylene insulation compounds

EN 50289-3-6:2001

Communication cables - Specifications for test methods - Part 3-6: Mechanical test methods - Impact resistance of the cable

EN 50289-1-13:2004

Communication cables - Specifications for test methods - Part 1-13: Electrical test methods - Coupling attenuation or screening attenuation of patch cords / coaxial cable assemblies / pre-connectorised cables

EN 50289-1-14:2004

Communication cables - Specifications for test methods - Part 1-14: Electrical test methods - Coupling attenuation or screening attenuation of connecting hardware

EN 50289-1-15:2004

Communication cables - Specifications for test methods - Part 1-15: Electromagnetic performance - Coupling attenuation of links and channels (Laboratory conditions)

EN 61935-2-20:2009

Testing of balanced communication cabling in accordance with series EN 50173 - Part 2-20: Patch cords and work area cords - Blank detail specification for class D applications

EN 62037-5:2013

Passive RF and microwave devices, intermodulation level measurement - Part 5: Measurement of passive intermodulation in filters

EN 50290-2-21:2001

Communication cables - Part 2-21: Common design rules and construction - PVC insulation compounds

EN 50289-3-17:2002

Communication cables - Specifications for test methods - Part 3-17: Mechanical test methods - Adhesion of dielectric and sheath

EN 50290-2-27:2002/A1:2007/corrigendum May 2010

Communication cables - Part 2-27: Common design rules and construction - Halogen free flame retardant thermoplastic sheathing compounds

EN 62037-6:2013

Passive RF and microwave devices, intermodulation level measurement - Part 6: Measurement of passive intermodulation in antennas

EN 50599:2014

Generic cabling systems - Specification for the testing of balanced communication cabling in accordance with EN 50173-4 - Screened straight patch cords and straight work area cords for class D applications - Detail specification

EN 60966-2-5:2017

Radio frequency and coaxial cable assemblies - Part 2-5: Detail specification for cable assemblies for radio and TV receivers - Frequency range 0 MHz to 1 000 MHz, IEC 61169-2 connectors

EN 50289-4-17:2015

Communication cables - Specifications for test methods - Part 4-17: Test methods for UV resistance evaluation of the sheath of electrical and optical fibre cable

EN 50290-2-20:2016

Communication cables - Part 2-20: Common design rules and construction - General

EN 50289-1-8:2017

Communication cables - Specifications for test methods - Part 1-8: Electrical test methods - Attenuation

EN 50289-1-11:2016

Communication cables - Specifications for test methods - Part 1-11: Electrical test methods - Characteristic impedance, input impedance, return loss

EN 50289-4-16:2016

Communication cables - Specifications for test methods - Part 4-16: Environmental test methods - Circuit integrity under fire conditions

EN 60708:2005/AC:2016-08

Low-frequency cables with polyolefin insulation and moisture barrier polyolefin sheath

EN 62153-4-7:2016/AC:2016-05

Metallic communication cable test methods - Part 4-7: Electromagnetic compatibility (EMC) - Test method for measuring of transfer impedance Z_T and screening attenuation as or coupling attenuation ac of connectors and assemblies up to and above 3 GHz - Triaxial tube in tube method

EN 50289-3-10:2004

Communication cables - Specifications for tests methods - Part 3-10: Mechanical test methods - Torsion and twisting

EN 50289-3-13:2003

Communication cables - Specifications for test methods - Part 3-13: Mechanical test methods - Aeolian vibration

EN 50289-3-15:2003

Communication cables - Specifications for test methods - Part 3-15: Mechanical test methods - Underwater cable resistance to hydrostatic pressure

EN 50289-4-7:2008

Communication cables - Specifications for test methods - Part 4-7: Environmental test methods - Damp heat, steady state

EN 50406-1:2004

End user multi-pair cables used in high bit rate telecommunication networks - Part 1: Aerial cables

EN 50406-2:2004

End user multi-pair cables used in high bit rate telecommunication networks - Part 2: Duct and buried cables

EN 50289-1-12:2005

Communication cables - Specifications for test methods - Part 1-12: Electrical test methods - Inductance

EN 50289-1-3:2001

Communication cables - Specifications for test methods - Part 1-3: Electrical test methods - Dielectric strength

EN 50289-1-5:2001

Communication cables - Specifications for test methods - Part 1-5: Electrical test methods - Capacitance

EN 50289-3-1:2001

Communication cables - Specifications for test methods - Part 3-1: Mechanical test methods - General requirements

EN 50289-4-9:2001

Communication cables - Specifications for test methods - Part 4-9: Environmental test methods - Pneumatic resistance

EN 50289-3-16:2001

Communication cables - Specifications for test methods - Part 3-16: Mechanical test methods - Cable tensile performance

EN 61580-2:1996

Methods of measurement for waveguides - Part 2: Level of intermodulation products

EN 62037-1:2012

Passive RF and microwave devices, intermodulation level measurement - Part 1: General requirements and measuring methods

EN 50290-2-37:2016

Communication cables - Part 2-37: Common design rules and construction - Polyethylene insulation for coaxial cables

EN 50290-2-27:2002/A1:2007

Communication cables - Part 2-27: Common design rules and construction - Halogen free flame retardant thermoplastic sheathing compounds

EN 50289-1-10:2001

Communication cables - Specifications for test methods - Part 1-10: Electrical test methods - Crosstalk

EN 50603:2014

Generic cabling systems - Specification for the testing of balanced communication cabling in accordance with EN 50173-4 - Screened straight patch cords and straight work area cords for class E applications - Detail specification

EN 61935-3:2009

Testing of balanced and coaxial information technology cabling - Part 3: Installed cabling as specified in EN 50173-4 and related standards

EN 50290-2-21:2001/A1:2007/AC:2016

Communication cables - Part 2-21: Common design rules and construction - PVC insulation compounds

EN 62037-2:2013

Passive RF and microwave devices, intermodulation level measurement - Part 2: Measurement of passive intermodulation in coaxial cable assemblies

EN 50289-3-4:2001

Communication cables - Specifications for test methods - Part 3-4: Mechanical test methods - Tensile strength, elongation and shrinkage of insulation and sheath

EN 61580-1:1996

Methods of measurement for waveguides - Part 1: Decoupling and rotation of the plane of polarization

EN 50290-2-33:2016

Communication cables - Part 2-33: Common design rules and construction - Polyethylene insulation compounds for multi element metallic cables for indoor installation (data cable)

EN 61580-9:1996

Methods of measurement for waveguides - Part 9: Reflection coefficient at rectangular waveguide interfaces

EN 50289-4-14:2003

Communication cables - Specifications for test methods - Part 4-14: Environmental test methods - Lightning

EN 50290-2-22:2001/A1:2007

Communication cables - Part 2-22: Common design rules and construction - PVC sheathing compounds

EN 50289-1-2:2001

Communication cables - Specifications for test methods - Part 1-2: Electrical test methods - DC resistance

EN 62153-4-7:2016/A1:2018

Metallic communication cable test methods - Part 4-7: Electromagnetic compatibility (EMC) - Test method for measuring of transfer impedance ZT and screening attenuation as or coupling attenuation aC of connectors and assemblies up to and above 3 GHz - Triaxial tube in tube method

EN 50290-2-26:2002

Communication cables - Part 2-26: Common design rules and construction - Halogen free flame retardant insulation compounds

EN 50290-2-24:2002/A1:2008

Communication cables - Part 2-24: Common design rules and construction - PE sheathing

EN 62037-3:2012

Passive RF and microwave devices, intermodulation level measurement - Part 3: Measurement of passive intermodulation in coaxial connectors

EN 50290-2-1:2005

Communication cables - Part 2-1: Common design rules and construction

EN 61580-7:1996

Methods of measurement for waveguides - Part 7: Graphical method for the determination of waveguide performance

EN 50289-4-11:2002

Communication cables - Specifications for test methods - Part 4-11: Environmental test methods - A horizontal integrated fire test method

EN 50290-1-1:2001

Communication cables - Part 1-1: General

EN 50289-4-12:2004

Communication cables - Specifications for test methods - Part 4-12: Environmental test methods - Vertical flame spread test on bunched small communication cables

EN 60966-2-6:2017

Radio frequency and coaxial cable assemblies - Part 2-6: Detail specification for cable assemblies for radio and TV receivers - Frequency range 0 MHz to 3 000 MHz, IEC 61169-24 connectors

EN 50289-3-12:2001

Communication cables - Specifications for test methods - Part 3-12: Mechanical test methods - Shot gun damage

EN 50290-2-35:2016

Communication cables - Part 2-35: Common design rules and construction - Polyamide sheathing compound

EN 61580-8:1996

Methods of measurement for waveguides - Part 8: Waveguide power holding capability

EN 60966-2-4:2016

Radio Frequency and coaxial cable assemblies - Part 2-4: Detail specification for cable assemblies for radio and TV receivers - Frequency range 0 MHz to 3 000 MHz, IEC 61169-2 connectors

EN 50407-1:2004

Multi-pair cables used in high bit rate digital access telecommunication networks - Part 1: Outdoor cables

EN 50289-1-4:2001

Communication cables - Specifications for test methods - Part 1-4: Electrical test methods - Insulation resistance

EN 50289-1-6:2002

Communication cables - Specifications for test methods - Part 1-6: Electrical test methods - Electromagnetic performance

EN 50290-2-38:2016

Communication cables - Part 2-38: Common design rules and construction - Polypropylene insulation for coaxial cables

EN 50290-1-2:2004

Communication cables - Part 1-2: Definitions

EN 50289-4-2:2001

Communication cables - Specifications for test methods - Part 4-2: Environmental test methods - Water penetration

EN 50289-4-6:2001

Communication cables - Specifications for test methods - Part 4-6: Environmental test methods - Temperature cycling

EN 50289-4-1:2001

Communication cables - Specifications for test methods - Part 4-1: Environmental test methods - General requirements

EN 50290-2-29:2016

Communication cables - Part 2-29: Common design rules and construction - Crosslinked polyethylene insulation compounds: instrumentation, control and field bus cables

EN 61580-6:1997

Methods of measurement for waveguides - Part 6: Return loss on waveguide and waveguide assemblies

EN 62037-4:2012

Passive RF and microwave devices, intermodulation level measurement - Part 4: Measurement of passive intermodulation in coaxial cables

EN 50290-2-28:2002

Communication cables - Part 2-28: Common design rules and construction - Filling compounds for filled cables

EN 50290-2-21:2001/A1:2007

Communication cables - Part 2-21: Common design rules and construction - PVC insulation compounds

EN 50289-3-9:2001

Communication cables - Specifications for test methods - Part 3-9: Mechanical test methods - Bending tests

EN 50289-1-9:2017

Communication cables - Specifications for test methods - Part 1-9: Electrical test methods - Unbalance attenuation (transverse conversion loss TCL transverse conversion transfer loss TCTL)

EN 50289-4-4:2008

Communication cables - Specifications for test methods - Part 4-4: Environmental test methods - Resistance to solvents and contaminating fluids

EN 50290-2-30:2002

Communication cables - Part 2-30: Common design rules and construction - Poly(tetrafluoroethylene-hexafluoropropylene) (FEP) insulation and sheathing

EN 50289-3-7:2001

Communication cables - Specifications for test methods - Part 3-7: Mechanical test methods - Abrasion resistance of the cable sheath

EN 50289-1-1:2017

Communication cables - Specifications for test methods - Part 1-1: Electrical test methods - General requirements

Standards under development:

prEN 50290-2-24(68421)

Communication cables - Part 2-24: Common design rules and construction - PE sheathing

prEN 50290-2-27(68455)

Communication cables - Part 2-27: Common design rules and construction - Halogenfree polyolefin based sheathing compounds for cables having improved flame and fire properties

prEN IEC 60966-2-8(70963)

Radio frequency and coaxial cable assemblies - Part 2-8: Detail specification for cable assemblies for radio and TV receivers - Frequency range up to 3000MHz, Screening class A++, IEC61169-47 connectors

prEN IEC 60966-4-2(70965)

Radio frequency and coaxial cable assemblies – Part 4-2: Detail specification for semi rigid cable assemblies (jumper), Frequency range up to 6000MHz, Type 50-9 semi-rigid coaxial cable, applicable to ISO/IEC 11801-1

prEN IEC 60966-4-3(70962)

Radio frequency and coaxial cable assemblies – Part 4-3: Detail specification for semi-rigid cable assemblies, Frequency range up to 6000MHz, Type 50-12 low loss semi-rigid coaxial cable, applicable to ISO/IEC 11801-1

prEN IEC 62037-1:2020(71240)

Passive RF and microwave devices, intermodulation level measurement - Part 1: General requirements and measuring methods

prEN IEC 62037-2:2020(71184)

Passive RF and microwave devices, intermodulation level measurement - Part 2: Measurement of passive intermodulation in coaxial cable assemblies

prEN IEC 62037-3:2020(71239)

Passive RF and microwave devices, intermodulation level measurement - Part 3: Measurement of passive intermodulation in coaxial connectors

prEN IEC 62037-5:2020(71244)

Passive RF and microwave devices, intermodulation level measurement - Part 5: Measurement of passive intermodulation in filters

prEN IEC 62037-6:2020(71243)

Passive RF and microwave devices, intermodulation level measurement - Part 6: Measurement of passive intermodulation in antennas

prEN IEC 62037-8(70781)

Measurement of passive intermodulation generated by objects exposed to RF radiation

prEN IEC 62153-4-5(70382)

Metallic cables and other passive components test methods - Part 4-5: Electromagnetic compatibility (EMC) - Coupling or screening attenuation - Absorbing clamp method

prEN IEC 62153-4-7(70318)

Metallic cables and other passive components test methods - Part 4-7: Electromagnetic compatibility (EMC) -Test method for measuring of transfer impedance Z_T and screening attenuation a_S or coupling attenuation a_C of connectors and assemblies – Triaxial tube in tube method

prEN IEC 62153-4-15:2019(68567)

Metallic cables and other passive components test methods - Part 4-15: Electromagnetic compatibility (EMC) - Test method for measuring transfer impedance and screening attenuation - or coupling attenuation with triaxial cell

prEN IEC 62153-4-16:2020(70348)

Metallic cables and other passive components test methods - Part 4-16: Electromagnetic compatibility (EMC) - Extension of the frequency range to higher frequencies for transfer impedance and to lower frequencies for screening attenuation measurements using the triaxial set-up

3.2.74 CLC/TC 215 - Electrotechnical aspects of telecommunication equipment

Keywords:

Mobile Telecommunications, Cabling design, Testing of installed cabling, Cabling installation - Quality assurance and installation practices, Facilities and infrastructures

Scope:

- To address standarisation in the field of electrotechnical aspects of telecommunication equipment and associated infrastructures and liaise with other standarisation bodies as appropriate.

- To prepare harmonized standards (EN, TS or TR) covering all aspects of generic and application-specific telecommunications cabling (e.g. ISDN, LAN and others) within all types of premises.

- These documents also cover the requirements and recommendations for building infrastructures related to the effective installation and operation of associated telecommunication equipment by reference to the existing or forthcoming standards provided by the relevant committees or using technical inputs from them.

- To provide contributions to ETSI standards (EN and/or other deliverables) in areas related to those detailed above.

- To serve as a mediator in those cases where in accordance with the CENELEC-ETSI-Agreement ETSI indicates to CENELEC the need of standarisation activities (EN/TS/TR or contributions to ETSI deliverables) of electrotechnical aspects related to its work.

- Identification of the appropriate TC within CENELEC, thereby providing proper assignment of the technical work to the responsible group of experts.

- Where an appropriate TC within CENELEC cannot be identified, TC 215 may decide to establish a Working Group to resolve a specific task.

- To review international standarisation results of ISO/IEC JTC 1 as far as telecommunication equipment with respect to Customer Premises Cabling and Energy Efficient Data Centres are concerned. This includes coordination of harmonization and assignment to the responsible organisation in close cooperation with CEN bearing in mind JTC 1 being a joint ISO/IEC-Committee.

Standards:

EN 50346:2002/A2:2009

Information technology - Cabling installation - Testing of installed cabling

EN 50173-4:2007

Information technology - Generic cabling systems - Part 4: Homes

CLC/TR 50173-99-3:2012

Information technology - Generic cabling systems - Part 99-3: Home cabling infrastructures up to 50 m in length to support simultaneous and non simultaneous provision of applications

EN 50600-2-1:2014

Information technology - Data centre facilities and infrastructures - Part 2-1: Building construction

EN 50174-2:2009/A2:2014

Information technology - Cabling installation - Part 2: Installation planning and practices inside buildings

EN 50173-5:2007

Information technology - Generic cabling systems - Part 5: Data centres

EN 50600-1:2012

 Information technology - Data centre facilities and infrastructures - Part 1: General concepts

EN 50173-3:2007

Information technology - Generic cabling systems - Part 3: Industrial premises

EN 50173-2:2007/A1:2010

Information technology - Generic cabling systems - Part 2: Office premises

EN 50174-1:2009/A1:2011

Information technology - Cabling installation - Part 1: Installation specification and quality assurance

EN 50173-6:2013

Information technology - Generic cabling systems - Part 6: Distributed building services

EN 50600-2-5:2016

Information technology - Data centre facilities and infrastructures - Part 2-5: Security systems

EN 50173-3:2007/A1:2010

Information technology - Generic cabling systems - Part 3: Industrial premises

CLC/TR 50450:2006

Resistibility requirements for equipment having (a) telecommunication port(s)

CLC/TR 50173-99-1:2007

Cabling guidelines in support of 10 GBASE-T

EN 50173-5:2007/A1:2010

Information technology - Generic cabling systems - Part 5: Data centres

EN 50600-4-3:2016

Information technology - Data centre facilities and infrastructures - Part 4-3: Renewable Energy Factor

EN 50310:2016

Telecommunications bonding networks for buildings and other structures

EN 50174-3:2013/A1:2017

Information technology - Cabling installation - Part 3: Installation planning and practices outside buildings

EN 50600-4-2:2016/AC:2017-02

Information technology - Data centre facilities and infrastructures - Part 4-2: Power Usage Effectiveness

EN 50173-2:2018

Information technology - Generic cabling systems - Part 2: Office spaces

EN 50098-2:1996

Customer premises cabling for Information Technology - Part 2: 2048 kbit/s ISDN primary access and leased line network interface

EN 50346:2002

Information technology - Cabling installation - Testing of installed cabling

EN 50600-4-2:2016/A1:2019

Information technology - Data centre facilities and infrastructures - Part 4-2: Power Usage Effectiveness

EN 50600-4-3:2016/A1:2019

Information technology - Data centre facilities and infrastructures - Part 4-3: Renewable Energy Factor

EN 50697:2019

Information technology - Measurement of end-to-end (E2E) links

EN 50310:2016/A1:2020

Telecommunications bonding networks for buildings and other structures

EN 50174-3:2013

Information technology - Cabling installation - Part 3: Installation planning and practices outside buildings

CLC/TR 50173-99-2:2020

Information technology - Implementation of BCT applications using cabling in accordance with EN 50173-4

EN 50600-4-7:2020

Information technology - Data centre facilities and infrastructures - Part 4-7: Cooling Efficiency Ratio

EN 50173-3:2018

Information technology - Generic cabling systems - Part 3: Industrial spaces

EN 50173-4:2018

Information technology - Generic cabling systems - Part 4: Homes

EN 50173-5:2018

Information technology - Generic cabling systems - Part 5: Data centre spaces

EN 50173-6:2018

Information technology - Generic cabling systems - Part 6: Distributed building services

EN 50346:2002/A1:2007

Information technology - Cabling installation - Testing of installed cabling

EN 50098-1:1998

Customer premises cabling for Information Technology - Part 1: ISDN basic access

EN 50173-1:2011

Information technology - Generic cabling systems - Part 1: General requirements

CLC/TR 50584:2014

Information technology - CENELEC/ETSI Glossary of terms and definitions for broadband deployment including sustainability aspects

EN 50173-5:2007/A2:2012

Information technology - Generic cabling systems - Part 5: Data centres

EN 50174-2:2009/A1:2011

Information technology - Cabling installation - Part 2: Installation planning and practices inside buildings

EN 50600-4-2:2016

Information technology - Data centre facilities and infrastructures - Part 4-2: Power Usage Effectiveness

CLC/TR 50174-99-2:2020

Information technology - Cabling installation - Part 99-2: Mitigation and protection from electrical interference

EN 50600-2-2:2019

Information technology - Data centre facilities and infrastructures - Part 2-2: Power supply and distribution

CLC/TR 50600-99-2:2019

Information technology - Data centre facilities and infrastructures - Part 99-2: Recommended practices for environmental sustainability

EN 50173-2:2007/A1:2010/AC:2011

Information technology - Generic cabling systems - Part 2: Office premises

EN 50174-2:2009/A1:2011/AC:2011

Information technology - Cabling installation - Part 2: Installation planning and practices inside buildings

EN 50173-4:2007/A2:2012

Information technology - Generic cabling systems - Part 4: Homes

EN 50600-4-1:2016

Information technology - Data centre facilities and infrastructures - Part 4-1: Overview of and general requirements for key performance indicators

CLC/TR 50600-99-1:2019

Information technology - Data centre facilities and infrastructures - Part 99-1: Recommended practices for energy management

EN 50174-1:2018

Information technology - Cabling installation - Part 1: Installation specification and quality assurance

EN 50600-2-4:2015

Information technology - Data centre facilities and infrastructures - Part 2-4: Telecommunications cabling infrastructure

EN 50700:2014

Information technology - Premises distribution access network (PDAN) cabling to support deployment of optical broadband networks

EN 50600-1:2019

Information technology - Data centre facilities and infrastructures - Part 1: General concepts

EN 50173-1:2018

Information technology - Generic cabling systems - Part 1: General requirements

EN 50667:2016

Information technology - Automated infrastructure management (AIM) systems - Requirements, data exchange and applications

EN 50174-2:2009

Information technology - Cabling installation - Part 2: Installation planning and practices inside buildings

CLC/TR 50600-99-3:2018

Information technology - Data centre facilities and infrastructures - Part 99-3: Guidance to the application of EN 50600 series

EN 50174-1:2009/A2:2014

Information technology - Cabling installation - Part 1: Installation specification and quality assurance

EN 50098-1:1998/A1:2002/corrigendum Jan. 2003

Customer premises cabling for Information Technology - Part 1: ISDN basic access

EN 50173-4:2007/A1:2010

Information technology - Generic cabling systems - Part 4: Homes

EN 50173-4:2007/A1:2010/AC:2011

Information technology - Generic cabling systems - Part 4: Homes

EN 50600-2-3:2019

Information technology - Data centre facilities and infrastructures - Part 2-3: Environmental control

EN 50173-5:2007/A1:2010/AC:2011

Information technology - Generic cabling systems - Part 5: Data centres

EN 50600-2-3:2014

Information technology - Data centre facilities and infrastructures - Part 2-3: Environmental control

EN 50173-2:2007

Information technology - Generic cabling systems - Part 2: Office premises

EN 50600-2-2:2014

Information technology - Data centre facilities and infrastructures - Part 2-2: Power distribution

CLC/TR 50174-99-1:2015

Information technology - Cabling installation - Part 99-1: Remote powering

EN 50174-2:2018

Information technology - Cabling installation - Part 2: Installation planning and practices inside buildings

EN 50098-1:1998/A1:2002

Customer premises cabling for Information Technology - Part 1: ISDN basic access

EN 50600-3-1:2016

Information technology - Data centre facilities and infrastructures - Part 3-1: Management and operational information

EN 50174-1:2009

Information technology - Cabling installation - Part 1: Installation specification and quality assurance

Standards under development:

EN 50174-1:2018/prA1 (pr=69947)

Information technology - Cabling installation - Part 1: Installation specification and quality assurance

prEN 50600-2-1 (pr=65129)

Information technology - Data centre facilities and infrastructures - Part 2-1: Building construction

prEN 50600-2-5 (pr=71007)

Information technology - Data centre facilities and infrastructures - Part 2-5: Security systems

EN 50600-4-6:2020 (pr=67912)

Information technology - Data centre facilities and infrastructures - Part 4-6: Energy Reuse Factor

CLC/FprTR 50600-99-1 (pr=71450)

Information technology - Data centre facilities and infrastructures - Part 99-1: Recommended practices for energy management

3.2.75 CLC/TC 57 - Power systems management and associated information Exchange

Keywords:

Mobile Telecommunications, Availability and information

Scope:

To prepare international standards for power systems control equipment and systems including EMS (Energy Management Systems), SCADA (Supervisory Control And Data Acquisition), distribution automation, teleprotection, and associated information exchange for real-time and non-real-time information, used in the planning, operation and maintenance of power systems. Power systems management comprises control within control centres, substations and individual pieces of primary equipment including telecontrol and interfaces to equipment, systems and databases, which may be outside the scope of TC 57. The special conditions in a high voltage environment have to be taken into consideration.

NOTE 1: Standards prepared by other technical committees of the IEC and organizations such as ITU and ISO shall be used where applicable.

NOTE 2: Although the work of TC 57 is chiefly concerned with standards for electric power systems, these standards may also be useful for application by the relevant bodies to other geographical widespread processes.

NOTE3: Whereas standards related to measuring and protection relays and to the control and monitoring equipment used with these systems are treated by TC 95, TC 57 deals with the interface to the control systems and the transmission aspects for teleprotection systems. Whereas standards related to equipment for electrical measurement and load control are treated by TC 13, TC 57 deals with the interface of equipment for interconnection lines and industrial consumers and producers requiring energy management type interfaces to the control system

Standards:

EN 61968-100:2013

Application integration at electric utilities - System interfaces for distribution management - Part 100: Implementation profiles

EN 61850-4:2011

Communication networks and systems for power utility automation - Part 4: System and project management

EN 60870-5-5:1995

Telecontrol equipment and systems - Part 5: Transmission protocols - Section 5: Basic application functions

EN 60870-5-101:2003

Telecontrol equipment and systems - Part 5-101: Transmission protocols - Companion standard for basic telecontrol tasks

EN 60870-5-102:1996

Telecontrol equipment and systems - Part 5: Transmission protocols - Section 102: Companion standard for the transmission of integrated totals in electric power systems

EN 61970-452:2015

Energy management system application program interface (EMS-API) - Part 452: CIM model exchange specification

EN 61334-6:2000

Distribution automation using distribution line carrier systems - Part 6: A-XDR encoding rule

EN 61850-6:2010

Communication networks and systems for power utility automation - Part 6: Configuration description language for communication in electrical substations related to IEDs

CLC/TS 61850-80-1:2010

Communication networks and systems for power utility automation - Part 80-1: Guideline to exchanging information from a CDC-based data model using IEC 60870-5-101 or IEC 60870-5-104

EN 61334-4-41:1996

Distribution automation using distribution line carrier systems - Part 4: Data communication protocols - Section 41: Application protocols - Distribution line message specification

EN 61334-4-33:1998

Distribution automation using distribution line carrier systems - Part 4-33: Data communication protocols - Data link layer - Connection oriented protocol

EN 61334-4-512:2002

Distribution automation using distribution line carrier systems - Part 4-512: Data communication protocols - System management using profile 61334-5-1 - Management Information Base (MIB)

EN 61970-456:2013

Energy management system application program interface (EMS-API) - Part 456: Solved power system state profiles

EN 61334-4-32:1996

Distribution automation using distribution line carrier systems - Part 4: Data communication protocols - Section 32: Data link layer - Logical link control (LLC)

EN 62325-450:2013

Framework for energy market communications - Part 450: Profile and context modelling rules

EN 60870-6-601:1995

Telecontrol equipment and systems - Part 6: Telecontrol protocols compatible with ISO standards and ITU-T recommendations - Section 601: Functional Profile for providing the Connection-Oriented Transport Service in End System connected via permanent access to a Packet Switched Data Network

EN 61970-453:2014

Energy management system application program interface (EMS-API) - Part 453: Diagram layout profile

EN 61968-4:2007

Application integration at electric utilities - System interfaces for distribution management - Part 4: Interfaces for records and asset management

EN 62325-451-5:2015

Framework for energy market communications - Part 451-5: Problem statement and status request business processes, contextual and assembly models for European market

CLC/TS 61970-2:2005

Energy management system application program interface (EMS-API) - Part 2: Glossary

EN 60870-2-1:1996

Telecontrol equipment and systems - Part 2: Operating conditions - Section 1: Power supply and electromagnetic compatibility

EN 61850-7-410:2013

Communication networks and systems for power utility automation - Part 7-410: Basic communication structure - Hydroelectric power plants - Communication for monitoring and control

EN 62325-451-2:2014

Framework for energy market communications - Part 451-2: Scheduling business process and contextual model for CIM European market

EN 60870-5-1:1993

Telecontrol equipment and systems - Part 5: Transmission protocols - Section 1: Transmission frame formats

EN 60870-6-702:2014

Telecontrol equipment and systems - Part 6-702: Telecontrol protocols compatible with ISO standards and ITU-T recommendations - Functional profile for providing the TASE.2 application service in end systems

EN 61850-10:2013

Communication networks and systems for power utility automation - Part 10: Conformance testing

EN 60870-6-802:2014

Telecontrol equipment and systems - Part 6-802: Telecontrol protocols compatible with ISO standards and ITU-T recommendations - TASE.2 Object models

EN 62361-100:2016

Power systems management and associated information exchange - Interoperability in the long term - Part 100: CIM profiles to XML schema mapping

EN 60870-5-3:1992

Telecontrol equipment and systems - Part 5: Transmission protocols - Section 3: General structure of application data

EN 60870-5-4:1993

Telecontrol equipment and systems - Part 5: Transmission protocols - Section 4: Definition and coding of application information elements

EN 61334-4-42:1996

Distribution automation using distribution line carrier systems - Part 4: Data communication protocols - Section 42: Application protocols - Application layer

HD 546.4 S1:1992

Telecontrol equipment and systems - Part 4: Performance requirements

EN 62325-451-4:2015

Framework for energy market communications - Part 451-4: Settlement and reconciliation business process, contextual and assembly models for European market

EN 61334-3-22:2001

Distribution automation using distribution line carrier systems - Part 3-22: Mains signaling requirements - MV phase-to-earth and screen-to-earth intrusive coupling devices

EN 61970-456:2013/A1:2016

Energy management system application program interface (EMS-API) - Part 456: Solved power system state profiles

EN 61850-7-410:2013/A1:2016

Communication networks and systems for power utility automation - Part 7-410: Basic communication structure - Hydroelectric power plants - Communication for monitoring and control

EN 60870-5-101:2003/A1:2016

Telecontrol equipment and systems - Part 5-101: Transmission protocols - Companion standard for basic telecontrol tasks

EN 62325-351:2016

Framework for energy market communications - Part 351: CIM European market model exchange profile

EN 60870-5-104:2006/A1:2016

Telecontrol equipment and systems - Part 5-104: Transmission protocols - Network access for IEC 60870-5-101 using standard transport profiles

EN 61850-7-4:2010/A1:2020

Communication networks and systems for power utility automation - Part 7-4: Basic communication structure - Compatible logical node classes and data object classes

EN 62325-451-1:2017

Framework for energy market communications - Part 451-1: Acknowledgement business process and contextual model for CIM European market

EN 62325-451-3:2014/A1:2017

Framework for energy market communications - Part 451-3: Transmission capacity allocation business process (explicit or implicit auction) and contextual models for European market

EN 61850-6:2010/A1:2018

Communication networks and systems for power utility automation - Part 6: Configuration description language for communication in power utility automation systems related to IEDs

EN 62351-9:2017

Power systems management and associated information exchange - Data and communications security - Part 9: Cyber security key management for power system equipment

EN 61850-7-2:2010/A1:2020

Communication networks and systems for power utility automation - Part 7-2: Basic information and communication structure - Abstract communication service interface (ACSI)

EN IEC 61850-8-2:2019

Communication networks and systems for power utility automation - Part 8-2: Specific Communication Service Mapping (SCSM) - Mapping to Extensible Messaging Presence Protocol (XMPP)

EN 62351-3:2014/A2:2020

Power systems management and associated information exchange - Data and communications security - Part 3: Communication network and system security - Profiles including TCP/IP

EN 61850-9-2:2011/A1:2020

Communication networks and systems for power utility automation - Part 9-2: Specific communication service mapping (SCSM) - Sampled values over ISO/IEC 8802-3

EN 61850-7-420:2009

Communication networks and systems for power utility automation - Part 7-420: Basic communication structure - Distributed energy resources logical nodes

EN 61850-7-3:2011

Communication networks and systems for power utility automation - Part 7-3: Basic communication structure - Common data classes

EN 60870-6-501:1996

Telecontrol equipment and systems - Part 6: Telecontrol protocols compatible with ISO standards and ITU-T recommendations - Section 501: TASE.1 Service definitions

EN 61850-7-1:2011

Communication networks and systems for power utility automation - Part 7-1: Basic communication structure - Principles and models

EN 61970-453:2014/A1:2019

Energy management system application program interface (EMS-API) - Part 453: Diagram layout profile

EN 61850-7-2:2010

Communication networks and systems for power utility automation - Part 7-2: Basic information and communication structure - Abstract communication service interface (ACSI)

EN 61850-8-1:2011

Communication networks and systems for power utility automation - Part 8-1: Specific communication service mapping (SCSM) - Mappings to MMS (ISO 9506-1 and ISO 9506-2) and to ISO/IEC 8802-3

EN IEC 61970-302:2018

Energy management system application program interface (EMS-API) - Part 302: Common information model (CIM) dynamics

HD 546.3 S1:1991

Telecontrol equipment and systems - Part 3: Interfaces (electrical characteristics)

EN IEC 62325-301:2018

Framework for energy market communications - Part 301: Common information model (CIM) extensions for markets

EN 61850-8-1:2011/A1:2020

Communication networks and systems for power utility automation - Part 8-1: Specific communication service mapping (SCSM) - Mappings to MMS (ISO 9506-1 and ISO 9506-2) and to ISO/IEC 8802-3

EN IEC 62325-503:2018

Framework for energy market communications - Part 503: Market data exchanges guidelines for the IEC 62325-351 profile

EN IEC 62325-451-6:2018

Framework for energy market communications - Part 451-6: Publication of information on market, contextual and assembly models for European-style markets

EN IEC 61968-4:2019

Application integration at electric utilities - System interfaces for distribution management - Part 4: Interfaces for records and asset management

EN 62488-1:2013

Power line communication systems for power utility applications - Part 1: Planning of analogue and digital power line carrier systems operating over EHV/HV/MV electricity grids

EN 61850-3:2014

Communication networks and systems for power utility automation - Part 3: General requirements

EN 61970-301:2017

Energy management system application program interface (EMS-API) - Part 301: Common information model (CIM) base

EN 62351-7:2017

Power systems management and associated information exchange - Data and communications security - Part 7: Network and System Management (NSM) data object models

EN 61334-4-1:1996

Distribution automation using distribution line carrier systems - Part 4: Data communication protocols - Section 1: Reference model of the communication system

EN 61968-8:2016

Application integration at electric utilities - System interfaces for distribution management - Part 8: Interfaces for customer operations

EN 60870-5-103:1998

Telecontrol equipment and systems - Part 5-103: Transmission protocols - Companion standard for the informative interface of protection equipment

EN 61968-6:2016

Application integration at electric utilities - System interfaces for distribution management - Part 6: Interfaces for maintenance and construction

EN IEC 61970-456:2018

Energy management system application program interface (EMS-API) - Part 456: Solved power system state profiles

EN 60870-6-503:2014

Telecontrol equipment and systems - Part 6-503: Telecontrol protocols compatible with ISO standards and ITU-T recommendations - TASE.2 Services and protocol

EN 60870-5-6:2009

Telecontrol equipment and systems - Part 5-6: Guidelines for conformance testing for the EN 60870-5 companion standards

EN 61850-7-4:2010

Communication networks and systems for power utility automation - Part 7-4: Basic communication structure - Compatible logical node classes and data object classes

EN 60870-6-2:1995

Telecontrol equipment and systems - Part 6: Telecontrol protocols compatible with ISO standards and ITU-T recommendations - Section 2: Use of basic standards (OSI layers 1-4)

EN 61334-4-61:1998

Distribution automation using distribution line carrier systems - Part 4-61: Data communication protocols - Network layer - Connectionless protocol

EN IEC 62351-4:2018

Power systems management and associated information exchange - Data and communications security - Part 4: Profiles including MMS and derivatives

EN 61970-1:2006

Energy management system application program interface (EMS-API) - Part 1: Guidelines and general requirements

EN 62488-2:2017/AC:2020-02

Power line communication systems for power utility applications - Part 2: Analogue power line carrier terminals or APLC

EN 60870-6-502:1996

Telecontrol equipment and systems - Part 6: Telecontrol protocols compatible with ISO standards and ITU-T recommendations - Section 502: TASE.1 Protocol definitions

EN 62351-3:2014/A1:2018

Power systems management and associated information exchange - Data and communications security - Part 3: Communication network and system security - Profiles including TCP/IP

EN 62488-2:2017

Power line communication systems for power utility applications - Part 2: Analogue power line carrier terminals or APLC

EN 62325-451-3:2014

Framework for energy market communications - Part 451-3: Transmission capacity allocation business process (explicit or implicit auction) and contextual models for European market

EN 62325-301:2014

Framework for energy market communications - Part 301: Common information model (CIM) extensions for markets

EN 60870-2-2:1996

Telecontrol equipment and systems - Part 2: Operating conditions - Section 2: Environmental conditions (climatic, mechanical and other non-electrical influences)

EN 61334-4-511:2000

Distribution automation using distribution line carrier systems - Part 4-511: Data communication protocols - Systems management - CIASE protocol

EN 61970-552:2016

Energy management system application program interface (EMS-API) - Part 552: CIMXML Model exchange format

EN 60870-6-701:1998

Telecontrol equipment and systems - Part 6-701: Telecontrol protocols compatible with ISO standards and ITU-T recommendations - Functional profile for providing the TASE.1 application service in end systems

EN 62351-3:2014

Power systems management and associated information exchange - Data and communications security - Part 3: Communication network and system security - Profiles including TCP/IP

EN 61850-5:2013

Communication networks and systems for power utility automation - Part 5: Communication requirements for functions and device models

EN 60870-5-104:2006

Telecontrol equipment and systems - Part 5-104: Transmission protocols - Network access for IEC 60870-5-101 using standard transport profiles

EN 61968-9:2014

Application integration at electric utilities - System interfaces for distribution management - Part 9: Interfaces for meter reading and control

EN 62361-2:2013

Power systems management and associated information exchange - Interoperability in the long term - Part 2: End to end quality codes for supervisory control and data acquisition (SCADA)

EN 61970-501:2006

Energy management system application program interface (EMS-API) - Part 501: Common Information Model Resource Description Framework (CIM RDF) schema

EN 61334-3-21:1996

Distribution automation using distribution line carrier systems - Part 3: Mains signaling requirements - Section 21: MV phase-to-phase isolated capacitive coupling device

HD 543.2 S1:1995

Performance and testing of teleprotection equipment of power systems - Part 2: Analogue comparison systems

EN 61850-9-2:2011

Communication networks and systems for power utility automation - Part 9-2: Specific communication service mapping (SCSM) - Sampled values over ISO/IEC 8802-3

EN 62351-11:2017

Power systems management and associated information exchange – Data and communications security - Part 11: Security for XML documents

EN 62325-451-2:2014/AC:2016-08

Framework for energy market communications - Part 451-2: Scheduling business process and contextual model for CIM European market

EN 61850-7-3:2011/A1:2020

Communication networks and systems for power utility automation - Part 7-3: Basic communication structure - Common data classes

EN 61968-1:2013

Application integration at electric utilities - System interfaces for distribution management - Part 1: Interface architecture and general recommendations

EN 61968-13:2008

Application integration at electric utilities - System interfaces for distribution management - Part 13: CIM RDF Model exchange format for distribution

EN 60834-1:1999

Teleprotection equipment of power systems - Performance and testing - Part 1: Command systems

EN 60870-5-2:1993

Telecontrol equipment and systems - Part 5: Transmission protocols - Section 2: Link transmission procedures

EN 61970-452:2017

Energy management system application program interface (EMS-API) - Part 452: CIM static transmission network model profiles

EN 61968-3:2004

Application integration at electric utilities - System interfaces for distribution management - Part 3: Interface for network operations

EN 61968-11:2013

Application integration at electric utilities - System interfaces for distribution management - Part 11: Common information model (CIM) extensions for distribution

EN 62325-451-4:2017

Framework for energy market communications - Part 451-4: Settlement and reconciliation business process, contextual and assembly models for European market

EN 61334-5-1:2001

Distribution automation using distribution line carrier systems - Part 5-1: Lower layer profiles - The spread frequency shift keying (S-FSK) profile

EN IEC 61968-3:2018

Application integration at electric utilities - System interfaces for distribution management - Part 3: Interface for network operations

Standards under development:

EN 61850-4:2011/prA1:2017(65792)

Communication networks and systems for power utility automation - Part 4: System and project management

EN 61850-5:2013/prA1:2019(69040)

Communication networks and systems for power utility automation - Part 5: Communication requirements for functions and device models

prEN 61850-6-2(67012)

Communication networks and systems for power utility automation - Part 6-2: Configuration description language for extensions for human machine interfaces

EN 61850-7-1:2011/FprA1:2020(67988)

Communication networks and systems for power utility automation - Part 7-1: Basic communication structure - Principles and models

prEN IEC 61850-7-420:2020(67307)

Communication networks and systems for power utility automation - Part 7-420: Basic communication structure - Distributed energy resources and distribution automation logical nodes

FprEN IEC 61968-1:2019(68142)

Application integration at electric utilities - System interfaces for distribution management - Part 1: Interface architecture and general recommendations

FprEN IEC 61968-5:2019(67138)

Application integration at electric utilities - System interfaces for distribution management - Part 5: Distributed energy optimization

prEN 61968-11:2017(63983)

Application integration at electric utilities - System interfaces for distribution management - Part 11: Common information model (CIM) extensions for distribution

prEN IEC 61968-13:2019(62602)

Application integration at electric utilities - System interfaces for distribution management - Part 13: Common distribution power system model profiles

FprEN IEC 61970-301:2020(69441)

Energy management system application program interface (EMS-API) - Part 301: Common information model (CIM) base

prEN IEC 61970-401(71347)

Energy management system application program interface (EMS-API) - Part 401: Profile framework

FprEN 61970-555:2015(61151)

Energy management system application program interface (EMS-API) - Part 555: CIM based efficient model exchange format (CIM/E)

prEN IEC 61970-600-1:2020(71072)

Energy management system application program interface (EMS-API) - Part 600-1: Common Grid Model Exchange Specification (CGMES) - Structure and rules

prEN IEC 61970-600-2:2020(71073)

Energy management system application program interface (EMS-API) - Part 600-2: Common Grid Model Exchange Specification (CGMES) - Exchange profiles specification

prEN IEC 62325-451-7(70572)

Framework for energy market communications - Part 451-7: Balancing processes, contextual and assembly models for European style market

prEN IEC 62325-451-10:2020(67956)

Framework for energy market communications - Part 451-10: Profiles for energy consumption data ("My Energy Data")

EN IEC 62351-4:2018/FprA1:2020(70074)

Power systems management and associated information exchange - Data and communications security - Part 4: Profiles including MMS and derivatives

prEN IEC 62351-6:2018(67980)

Power systems management and associated information exchange - Data and communications security - Part 6: Security for IEC 61850

FprEN IEC 62351-8:2020(67696)

Power systems management and associated information exchange - Data and communications security - Part 8: Role-based access control for power system management

prEN IEC 62351-14(70961)

Power systems management and associated information exchange - Data and communications security - Part 14: Cyber security event logging

prEN IEC 62488-3:2019(67563)

Power line communication systems for power utility applications - Part 3: Digital Power Line Carrier (DPLC) terminals and hybrid ADPLC terminals

3.2.76 CLC/SR 3 - Information structures, documentation and graphical symbols

Keywords:

Mobile Telecommunications, Availability and information

Scope:

There is no information on the website.

Standards:

EN 82045-1:2001

Document management - Part 1: Principles and methods

EN 61286:2002

Information technology - Coded graphic character set for use in the preparation of documents used in electrotechnology and for information interchange

EN 60445:2010

Basic and safety principles for man-machine interface, marking and identification - Identification of equipment terminals, conductor terminations and conductors

EN 60447:2004

Basic and safety principles for man-machine interface, marking and identification - Actuating principles

EN 62023:2012

Structuring of technical information and documentation

EN 62027:2012

Preparation of object lists, including parts lists

EN 61175-1:2015

Industrial systems, installations and equipment and industrial products - Designation of signals - Part 1: Basic rules

EN 62569-1:2017

Generic specification of information on products by properties - Part 1: Principles and method

EN IEC 61293:2020

Marking of electrical equipment with ratings related to electrical supply - Safety requirements

EN 82079-1:2012

Preparation of instructions for use - Structuring, content and presentation - Part 1: General principles and detailed requirements

EN 61293:1994

Marking of electrical equipment with ratings related to electrical supply - Safety requirements

EN 81346-2:2009

Industrial systems, installations and equipment and industrial products - Structuring principles and reference designations - Part 2: Classification of objects and codes for classes

EN 62491:2008

Industrial systems, installations and equipment and industrial products - Labelling of cables and cores

EN 81714-3:2001

Design of graphical symbols for use in the technical documentation of products - Part 3: Classification of connect nodes, networks and their encoding

EN 81714-2:2007

Design of graphical symbols for use in the technical documentation of products - Part 2: Specification for graphical symbols in a computer sensible form, including graphical symbols for a reference library, and requirements for their interchange

EN 62507-1:2011

Identification systems enabling unambiguous information interchange - Requirements - Part 1: Principles and methods

EN 62744:2015

Representation of states of objects by graphical symbols

EN 61355-1:2008

Classification and designation of documents for plants, systems and equipment - Part 1: Rules and classification tables

EN 61666:2010/corrigendum Oct. 2010

Industrial systems, installations and equipment and industrial products - Identification of terminals within a system

EN 81346-1:2009

Industrial systems, installations and equipment and industrial products - Structuring principles and reference designations - Part 1: Basic rules

EN 61082-1:2015

Preparation of documents used in electrotechnology - Part 1: Rules

EN 60848:2013

GRAFCET specification language for sequential function charts

HD 457 S1:1985

Code for designation of colours

EN 82045-2:2005

Document management - Part 2: Metadata elements and information reference model

EN 61666:2010

Industrial systems, installations and equipment and industrial products - Identification of terminals within a system

EN 60073:2002

Basic and safety principles for man-machine interface, marking and identification - Coding principles for indicators and actuators

EN IEC/IEEE 82079-1:2020

Preparation of information for use (instructions for use) of products - Part 1: Principles and general requirements

EN 60445:2017

Basic and safety principles for man-machine interface, marking and identification - Identification of equipment terminals, conductor terminations and conductors

EN IEC 81346-2:2019

Industrial systems, installations and equipment and industrial products - Structuring principles and reference designations - Part 2: Classification of objects and codes for classes

Standards under development:

prEN IEC 60757 (pr=71836)

Code for designation of colours

EN 61666:2010/prA1 (pr=71407)

Industrial systems, installations and equipment and industrial products - Identification of terminals within a system

prEN IEC 81346-1 (pr=71146)

Industrial systems, installations and equipment and industrial products - Structuring principles and reference designations - Part 1: Basic rules

3.2.77 CLC/TC 205 - Home and Building Electronic Systems (HBES)

Keywords:

Civil engineering, Home and building automation and control systems - General safety requirements and environmental conditions, General safety requirements and environmental conditions, Residential gateways guidelines for connection to other networks, Planing design and installation of hbes, Guidelines on requirements for functional safety of products intended to be integrated in a home control system, Intelligent home and building/smart houses ictsb, Definition of levels for hbesinstallations, **Smart grids,** Energy management ontology, Security and data protection

Scope:

To prepare standards for all aspects of home and building electronic systems in relation to the Information Society. In more detail: To prepare standards to ensure integration of a wide spectrum of control applications and the control and management aspects of other applications in and around homes and buildings, including the gateways to different transmission media and public networks taking into account all matters of EMC and electrical and functional safety. TC 205 will not prepare device standards but the necessary performance requirements and necessary hardware and software interfaces. The standards should specify conformity tests. TC 205 will perform the work in close co-operation with relevant CENELEC TCs and those in CEN and ETSI.

Standards:

EN 50491-11:2015

General requirements for Home and Building Electronic Systems (HBES) and Building Automation and Control Systems (BACS) - Part 11: Smart Metering - Application Specifications - Simple External Consumer Display

EN 60948:1990

Numeric keyboard for home electronic systems (HES)

EN 50491-5-1:2010

General requirements for Home and Building Electronic Systems (HBES) and Building Automation and Control Systems (BACS) - Part 5-1: EMC requirements, conditions and test set-up

EN 50491-5-2:2010

General requirements for Home and Building Electronic Systems (HBES) and Building Automation and Control Systems (BACS) - Part 5-2: EMC requirements for HBES/BACS used in residential, commercial and light industry environment

EN 50491-2:2010/A1:2015

General requirements for Home and Building Electronic Systems (HBES) and Building Automation and Control Systems (BACS) - Part 2: Environmental conditions

CLC/TR 50491-6-3:2011

General requirements for Home and Building Electronic Systems (HBES) and Building Automation and Control Systems (BACS) - Part 6-3: HBES installations - Assessment and definition of levels

EN 50491-3:2009

General requirements for Home and Building Electronic Systems (HBES) and Building Automation and Control Systems (BACS) - Part 3: Electrical safety requirements

CWA 50487:2005

SmartHouse Code of Practice

EN 50090-6-1:2017

Home and Building Electronic Systems (HBES) - Part 6-1: Interfaces - Webservice interface

EN IEC 63044-5-3:2019

Home and Building Electronic Systems (HBES) and Building Automation and Control Systems (BACS) - Part 5-3: EMC requirements for HBES/BACS used in industrial environments

EN 50090-5-1:2020

Home and Building Electronic Systems (HBES) - Part 5-1: Media and media dependent layers - Power line for HBES Class 1

EN 50090-5-2:2020

Home and Building Electronic Systems (HBES) Part 5-2: Media and media dependent layers - Network based on HBES Class 1, Twisted Pair

EN 50090-1:2011

Home and Building Electronic Systems (HBES) - Part 1: Standarisation structure

EN 50090-3-1:1994

Home and Building Electronic Systems (HBES) - Part 3-1: Aspects of application - Introduction to the application structure

EN 50090-3-2:2004

Home and Building Electronic Systems (HBES) - Part 3-2: Aspects of application - User process for HBES Class 1

EN 50090-4-1:2004

Home and Building Electronic Systems (HBES) - Part 4-1: Media independent layers - Application layer for HBES Class 1

EN 50090-4-3:2015

Home and Building Electronic Systems (HBES) - Part 4-3: Media independent layers - Communication over IP (EN 13321-2)

EN 50491-4-1:2012

General requirements for Home and Building Electronic Systems (HBES) and Building Automation and Control Systems (BACS) - Part 4-1: General functional safety requirements for products intended to be integrated in Building Electronic Systems (HBES) and Building Automation and Control Systems (BACS)

EN 50491-11:2015/A1:2020

General requirements for Home and Building Electronic Systems (HBES) and Building Automation and Control Systems (BACS) - Part 11: Smart Metering - Application Specifications - Simple External Consumer Display

EN 50090-5-1:2005

Home and Building Electronic Systems (HBES) - Part 5-1: Media and media dependent layers - Power line for HBES Class 1

EN IEC 63044-3:2018

Home and Building Electronic Systems (HBES) and Building Automation and Control Systems (BACS) - Part 3: Electrical safety requirements

EN 63044-1:2017

Home and Building Electronic Systems (HBES) and Building Automation and Control Systems (BACS) - Part 1: General requirements

EN 50090-5-2:2004

Home and Building Electronic Systems (HBES) - Part 5-2: Media and media dependent layers - Network based on HBES Class 1, Twisted Pair

EN 50090-3-4:2017

Home and Building Electronic Systems (HBES) - Part 3-4: Secure Application Layer, Secure Service, Secure configuration and security Resources

EN 50491-5-3:2010

General requirements for Home and Building Electronic Systems (HBES) and Building Automation and Control Systems (BACS) - Part 5-3: EMC requirements for HBES/BACS used in industry environment

EN IEC 63044-5-1:2019

Home and Building Electronic Systems (HBES) and Building Automation and Control Systems (BACS) - Part 5-1: EMC requirements, conditions and test set-up

EN 50090-4-2:2004

Home and Building Electronic Systems (HBES) - Part 4-2: Media independent layers - Transport layer, network layer and general parts of data link layer for HBES Class 1

EN 50090-3-3:2009

Home and Building Electronic Systems (HBES) - Part 3-3: Aspects of application - HBES Interworking model and common HBES data types

EN 50090-3-4:2017/AC:2018-05

Home and Building Electronic Systems (HBES) - Part 3-4: Secure Application Layer, Secure Service, Secure configuration and security Resources

CWA 50487:2005/corrigendum Jan. 2006

SmartHouse Code of Practice

EN 50090-7-1:2004

Home and Building Electronic Systems (HBES) - Part 7-1: System management - Management procedures

EN IEC 63044-5-2:2019

Home and Building Electronic Systems (HBES) and Building Automation and Control Systems (BACS) - Part 5-2: EMC requirements for HBES/BACS used in residential, commercial and light-industrial environments

EN 50491-12-1:2018

General requirements for Home and Building Electronic Systems (HBES) and Building Automation and Control Systems (BACS) - Smart grid - Application specification - Interface and framework for customer - Part 12-1: Interface between the CEM and Home/Building Resource manager - General Requirements and Architecture

EN 50491-2:2010

General requirements for Home and Building Electronic Systems (HBES) and Building Automation and Control Systems (BACS) - Part 2: Environmental conditions

EN 50090-5-3:2016

Home and Building Electronic Systems (HBES) - Part 5-3: Media and media dependent layers - Radio Frequency for HBES Class 1

CLC/TR 50552:2010

Home and Building Electronic Systems (HBES) - Open communication system - Interfaces - Medium interface, twisted pair, class 1

EN 50491-6-1:2014

General requirements for Home and Building Electronic Systems (HBES) and Building Automation and Control Systems (BACS) - Part 6-1: HBES installations - Installation and planning

Standards under development:

prEN 50065-2-3(65171)

Signalling on low-voltage electrical installations in the frequency range 3 kHz to 148,5 kHz. Part 2-3: Immunity requirements for mains communicating equipment operating in the range of frequencies 3 kHz to 95 kHz and intended for use by electricity suppliers and distributors

prEN 50090-6-2(66523)

Home and Building Electronic Systems (HBES)- Part 6-2 IoT Semantic Ontology_Model_Description

prEN 50491-12-2(69013)

General requirements for Home and Building Electronic Systems (HBES) and Building Automation and Control Systems (BACS) - Part 12-2: Smart grid – Application specification - Interface and framework for customer - Interface between the Home / Building CEM

prEN 50698:2019(67131)

Home and Building Electronic Systems (HBES) and BACS - Electrical safety and EMC requirements for radio equipment

EN 63044-1:2017/prA1(71021)

Home and Building Electronic Systems (HBES) and Building Automation and Control Systems (BACS) - Part 1: General requirements

EN IEC 63044-3:2018/prA1(70794)

Home and Building Electronic Systems (HBES) and Building Automation and Control Systems (BACS) - Part 3: Electrical safety requirements

prEN IEC 63044-4(70427)

General requirements for Home and Building Electronic Systems (HBES) and Building Automation and Control Systems (BACS) - Part 4: General functional safety requirements for products intended to be integrated in Building Electronic Systems (HBES) and Building Automation and Control Systems (BACS)

EN IEC 63044-5-1:2019/prA1(70795)

Home and Building Electronic Systems (HBES) and Building Automation and Control Systems (BACS) - Part 5-1: EMC requirements, conditions and test set-up

EN IEC 63044-5-2:2019/prA1(70796)

Home and Building Electronic Systems (HBES) and Building Automation and Control Systems (BACS) - Part 5-2: EMC requirements for HBES/BACS used in residential, commercial and light-industrial environments

EN IEC 63044-5-3:2019/prA1(70797)

Home and Building Electronic Systems (HBES) and Building Automation and Control Systems (BACS) - Part 5-3: EMC requirements for HBES/BACS used in industrial environments

prEN IEC 63044-6-1(68183)

General requirements for Home and Building Electronic Systems (HBES) and Building Automation and Control Systems (BACS) - Part 6: Requirements for planning and installation

3.2.78 PC 118 - Smart grid user interface

Keywords:

Smart Grids,

Scope:

The Project Committee PC118 was disbanded 31/12/2018.

All publications are currently under the responsibility of the Chinese National Committee.

For further information please contact IEC Central office.

Standards:

IEC 62746-10-1:2018

Systems interface between customer energy management system and the power management system - Part 10-1: Open automated demand response

IEC 62746-10-3:2018

Systems interface between customer energy management system and the power management system - Part 10-3: Open automated demand response - Adapting smart grid user interfaces to the IEC common information model

IEC TR 62939-1:2014

Smart grid user interface - Part 1: Interface overview and country perspectives

IEC TS 62939-2:2018

Smart grid user interface - Part 2: Architecture and requirements

Standards under development:

There are not any standards under development.

3.2.79 SC 8A - Grid Integration of Renewable Energy Generation

Keywords:

Smart Grids, Clean Energy for transportation, Renewable energy power prediction, Operational behaviour and coordinated control between renewable energy and HVDC systems, Grid code compliance assessment for grid connection of wind and PV power plants, System issues regarding integration of wind and PV generation into bulk electrical grid, Grid integration of renewable energy generation

Scope:

To prepare and coordinate, in co-operation with other TC/SCs, the development of international standards and other deliverables for grid integration of variable power generation from renewables such as PV and wind energy with emphasis on overall system aspects of electricity supply systems (grids) as defined in TC 8 scope, but not covering issues usually covered by regulation such as renewable policies.

SC 8A focuses on the impact of a high percentage of renewables connected to the grid, considering that their variability and predictability impact the functioning of the whole electricity grid. It covers grid integration standards for renewable energy, aggregating contributions of all grid users and prescribing interaction modes between the grid and power plants. This includes requirements for interconnection and related grid compliance tests, as well as standards or best practice documents for planning, modeling, forecasting, assessment, control and protection, scheduling and dispatching of renewables with a grid level perspective.

Note 1: SC 8A deals with the grid level requirements enabling secure, non-discriminatory and cost effective operation of electricity supply systems with a significant share of renewable generation and cooperates with TC 82, TC 88, TC 95, TC 114, TC 115, TC 117, TC 120 and other product committees to ensure technical feasibility and verification of the implementation of the grid level requirements.

Note 2: SC 8A coordinates with TC 8 which covers standards related to Distributed Energy Resources (e.g. interconnection with the grid, design and operation of micro grids).

Standards:

There are not any published standards.

Standards under development:

PWI TR 8A-16 ED1

IEC TR 6XXXX-1 ED1: Interconnecting Inverter-Based Resources to Weak AC Networks

PWI TR 8A-17 ED1

IEC TR 6XXXX-2 ED1: Sub- and Super-synchronous Control Interactions

PWI TR 8A-18 ED1

IEC TR 6XXXX-3 ED1: Fast Frequency Response and Frequency Ride-Through from Inverter-Based Resources during Severe Frequency Disturbances

PWI TR 8A-19 ED1

IEC TR 6XXXX-4 ED1: Behaviour of Inverter-Based Resources in Response to Bulk Grid Faults

PWI TR 8A-20

IEC TR 6XXXXX ED1: Integrating distributed PV into LVDC/MVDC systems and use cases

PWI TR 8A-21

IEC TR 6XXXX ED1 : Operational behaviour and coordinated control between renewable energy and HVDC systems

IEC 62934 ED1

Grid integration of renewable energy generation - Terms, definitions and symbols

IEC TR 63043 ED1

Renewable Energy Power Forecasting Technology

IEC TS 63102 ED1

Grid code compliance assessment methods for grid connection of wind and PV power plants

3.2.80 SyC Smart Cities - Electrotechnical aspects of Smart Cities

Keywords:

Smart Cities,

Scope:

To foster the development of standards in the field of electrotechnology to help with the integration, interoperability and effectiveness of city systems.

Note 1: This will be done:

- by promoting the collaboration and systems thinking between IEC/TCs, the SyC and other SDOs in relation to City systems standards,
- by undertaking systems analysis to understand the needs for standards and assess new work item proposals (NWIPs) related to city systems,
- by developing systems standards where needed and by providing recommendations to existing SyCs, TCs/SCs and other SDOs.

Note 2: Overall common city goals include, for example, sustainable development, efficiency, resilience, safety and support for citizens' engagement and participation. However, an individual city will follow its own approach.

Note 3: "Cities" refers to any geographically located population.

Standards:

IEC 63152:2020 PRV

Smart cities - City service continuity against disasters - The role of the electrical supply

Standards under development:

IEC 63152 ED1

Smart Cities - City service continuity against disasters - The role of the electrical supply

IEC TS 63188 ED1

Systems Reference Deliverable - Smart Cities - Smart Cities Reference Architecture Methodology (SCRAM)

IEC 63205 ED1

Smart Cities Reference Architecture (SCRA)

IEC TS 63233 ED1

Systems Reference Deliverable (SRD) - Smart City Standards Inventory and Mapping- Part 1: Methodology

IEC TS 63235 ED1

Systems Reference Deliverable (SRD) - Smart City System - Methodology for concepts building

IEC TS 63273 ED1

Systems Reference Deliverable (SRD) - Use Case Collection and Analysis: City Information Modeling for Smart Cities

IEC TS 63301 ED1

Systems Reference Deliverable (SRD) - Use Case Collection and Analysis: Water Systems in Smart Cities

IEC TS 63302 ED1

Systems Reference Deliverable (SRD) - Use cases collection and Analysis: intelligent operations center for smart cities

IEC 60050-831 ED1

International Electrotechnical Vocabulary (IEV) – Part 831: Smart city systems

PWI SyCSmartCities-1 ED1

City Service Continuity(CSC): collection of actual city service cases and design guideline for implementation

PNW TS SYCSMARTCITIES-127

Systems Reference Deliverable (SRD) - Use Case Collection and Analysis: Smart Urban Planning for Smart Cities

PNW TS SyCSmartCities-128 ED1

Systems Reference Deliverable (SRD) - City Needs Analysis Framework

PNW TS SYCSMARTCITIES-133

Systems Reference Deliverable (SRD) - Smart City Standards Inventory and Mapping - Part 2: Standards Inventory

PNW TS SYCSMARTCITIES-140

Systems Reference Deliverable (SRD) Smart City Standards Inventory and Mapping-Part 4: Guidance on standards for public health emergencies

3.2.81 SyC Smart Energy- Smart Energy

Keywords:

Smart Cities, Electrical energy supply, Clean Energy for transportation

Scope:

Standarisation in the field of Smart Energy in order to provide systems level standarisation, coordination and guidance in the areas of Smart Grid and Smart Energy, including interaction in the areas of Heat and Gas.

To widely consult within the IEC community and the broader stakeholder community to provide overall systems level value, support and guidance to the TCs and other standard development groups, both inside and outside the IEC.

To liaise and cooperate with the SEG Smart Cities and future SEGs, as well as the future Systems Resource Group.

Standards:

IEC TR 62559-1:2019

Use case methodology - Part 1: Concept and processes in standarisation

IEC 62559-3:2017

Use case methodology - Part 3: Definition of use case template artefacts into an XML serialized format

IEC SRD 62559-4:2020

Use case methodology - Part 4: Best practices in use case development for IEC standarisation processes and some examples for application outside standarisation

IEC SRD 62913-1:2019

Generic smart grid requirements - Part 1: Specific application of the Use Case methodology for defining generic smart grid requirements according to the IEC systems approach

IEC SRD 62913-2-1:2019

Generic smart grid requirements - Part 2-1: Grid related domains

IEC SRD 62913-2-2:2019

Generic smart grid requirements - Part 2-2: Market related domain

IEC SRD 62913-2-3:2019

Generic smart grid requirements - Part 2-3: Resources connected to the grid domains

IEC SRD 62913-2-4:2019

Generic smart grid requirements - Part 2-4: Electric transportation related domain

IEC TR 63097:2017

Smart grid standarisation roadmap

IEC Technology Report Cyber security:2019

Cyber security and resilience guidelines for the smart energy operational environment

Standards under development:

IEC TS 63199 ED1

Top priority Standards development status in the domain of Smart Energy

IEC TS 63200 ED1

System Reference Deliverable SRD: Definition of Extended SGAM Smart Energy Grid Reference Architecture

IEC TS 63268 ED1

SRD: Energy and data interfaces of users connected to the smart grid with other smart grid stakeholders - Standardisation landscape

PWI TR SYCSMARTENERGY-1

Cyber Security and Resilience Guidelines for Cyber-Physical Power Systems

3.2.82 TC 8 - System aspects of electrical energy supply

Keywords:

Electrical energy supply, Grid Integration of Renewable Energy Generation, Decentralized Electrical Energy Systems, Network Management, Power Quality

Scope:

To prepare and coordinate, in co-operation with other TC/SCs, the development of international standards and other deliverables with emphasis on overall system aspects of electricity supply systems and acceptable balance between cost and quality for the users of electrical energy. Electricity supply system encompasses transmission and distribution networks, generators and loads with their network interfaces . This scope includes, but is not limited to, standarisation in the field of:

- Terminology for the electricity supply sector,
- Characteristics of electricity supplied by public networks,
- Network management from a system perspective,
- Connection of network users (generators and loads) and grid integration,
- Design and management of de-centralized electricity supply systems e.g. microgrids, systems for rural electrification.

While relying on efficient and secure data communication and exchange, TC 8's scope does not include standards for communication with appliances and equipment connected to the electric grid or for communication infrastructure serving the electric grid. TC 8 is responsible for the maintenance of basic publications (horizontal standards) on standard voltages, currents and frequencies ensuring the consistency of the IEC publications in these fields. TC 8 cooperates also with several organizations active in the field of electricity supply such as CIGRE, CIRED, IEEE, AFSEC, IEA.

Standards:

IEC 60038:2009

IEC standard voltages

IEC 60059:1999+AMD1:2009 CSV

IEC standard current ratings

IEC 60059:1999

IEC standard current ratings

IEC 60059:1999/AMD1:2009

Amendment 1 - IEC standard current ratings

IEC 60196:2009

IEC standard frequencies

IEC TR 62511:2014

Guidelines for the design of interconnected power systems

IEC 62559-2:2015

Use case methodology - Part 2: Definition of the templates for use cases, actor list and requirements list

IEC TS 62749:2020

Assessment of power quality - Characteristics of electricity supplied by public networks

IEC TS 62749:2020 RLV

Assessment of power quality - Characteristics of electricity supplied by public networks

IEC TS 62786:2017

Distributed energy resources connection with the grid

IEC TS 63060:2019

Electric energy supply networks - General aspects and methods for the maintenance of installations and equipment

Standards under development:

PWI 8-6

IEC TS 62786-xx Distributed Energy Resources connection with the Grid - Regional profiles

PWI 8-7 ED1

Criteria for capacity allocation in interconnection links of electric power systems

PWI 8-8 ED1

PWI TS 62786-4: Distributed Energy Resources Connection with the Grid – Part 4: Additional Requirements for Synchronous Generators

PWI 8-9 ED1

PWI TS 62786-42: Distributed Energy Resources Connection with the Grid – Part 42: Technical Requirements for Voltage Measurement Used for Reactive Power Control of DERs

PWI TR 8-10 ED1

Impact of poor power quality on electric equipment and power system

IEC 60038/AMD1/FRAG1 ED7

Amendment 1 (f1) - Standard voltages for LVDC supply and LVDC equipment (Proposed horizontal standard)

IEC 60038/AMD1/FRAG2 ED7

Amendment 1 (f2) - Standard voltages for AC supply and AC equipment (Proposed horizontal standard)

IEC 60038/AMD1/FRAG3 ED7

Amendment 1 (f3) - Standard voltages for DC and AC traction systems (Proposed horizontal standard)

IEC 60050-601 ED2

International Electrotechnical Vocabulary (IEV) - Part 601: Generation, transmission and distribution of electricity - General

IEC 60050-691 ED2

International Electrotechnical Vocabulary (IEV) - Part 691: Tariffs for electricity

IEC TS 62786-1 ED1

Distributed Energy resources connection with the grid - General requirements

IEC TS 62786-2 ED1

IEC/TS 62786-2 - Distributed energy resources connection with the grid – Part 2 Additional requirements for PV generation

IEC TS 62786-3 ED1

IEC/TS 62786-3 - Distributed energy resources connection with the grid – Part 3 Additional requirements for Stationary Battery Energy Storage System

IEC TS 62786-41 ED1

IEC/TS 62786-41 – Distributed energy resources connection with the grid – Part 41 Requirements for frequency measurement used to control DER and loads

IEC TS 63222 ED1

Guidelines for network management - Power quality management

IEC TR 63282 ED1

Assessment of standard voltages and power quality requirements for LVDC distribution

3.2.83 TC 13 - Electrical energy measurement and control

Keywords:

Electrical energy supply, Clean Energy for transportation, Electricity metering equipment, Data exchange for meter reading, tariff and load control, Smart Metering Functions and Processes, Test equipment, techniques and procedures for electrical energy meters

Scope:

Standarisation in the field of AC and DC electrical energy measurement and control, for smart metering equipment and systems forming part of smart grids, used in power stations, along the network, and at energy users and producers, as well as to prepare international standards for meter test equipment and methods. Excluded: Standarisation for the interface of metering equipment for interconnection lines and industrial consumers and producers (covered by TC 57)..

Standards:

IEC TR 62051:1999

Electricity metering - Glossary of terms

IEC TR 62051-1:2004

Electricity metering - Data exchange for meter reading, tariff and load control - Glossary of terms - Part 1: Terms related to data exchange with metering equipment using DLMS/COSEM

IEC TR 62051-1:2004/COR1:2005

Corrigendum 1 - Electricity metering - Data exchange for meter reading, tariff and load control - Glossary of terms - Part 1: Terms related to data exchange with metering equipment using DLMS/COSEM

IEC 62052-11:2020 PRV

Electricity metering equipment - General requirements, tests and test conditions - Part 11: Metering equipment

IEC 62052-11:2003+AMD1:2016 CSV

Electricity metering equipment (AC) - General requirements, tests and test conditions - Part 11: Metering equipment

IEC 62052-11:2003

Electricity metering equipment (AC) - General requirements, tests and test conditions - Part 11: Metering equipment

IEC 62052-11:2003/AMD1:2016

Amendment 1 - Electricity metering equipment (AC) - General requirements, tests and test conditions - Part 11: Metering equipment

IEC 62052-11:2003/AMD1:2016/COR1:2018

Corrigendum 1 - Amendment 1 - Electricity metering equipment (AC) - General requirements, tests and test conditions - Part 11: Metering equipment

IEC 62052-21:2004+AMD1:2016 CSV

Electricity metering equipment (AC) - General requirements, tests and test conditions - Part 21: Tariff and load control equipment

IEC 62052-21:2004

Electricity metering equipment (AC) - General requirements, tests and test conditions - Part 21: Tariff and load control equipment

IEC 62052-21:2004/AMD1:2016

Amendment 1 - Electricity metering equipment (AC) - General requirements, tests and test conditions - Part 21: Tariff and load control equipment

IEC 62052-21:2004/AMD1:2016/COR1:2018

Corrigendum 1 - Amendment 1 - Electricity metering equipment (AC) - General requirements, tests and test conditions - Part 21: Tariff and load control equipment

IEC 62052-31:2015

Electricity metering equipment (AC) - General requirements, tests and test conditions - Part 31: Product safety requirements and tests

IEC 62052-31:2015/ISH1:2019

Interpretation Sheet 1 - Electricity metering equipment (AC) - General requirements, tests and test conditions - Part 31: Product safety requirements and tests

IEC 62053-11:2003+AMD1:2016 CSV

Electricity metering equipment (AC) - Particular requirements - Part 11: Electromechanical meters for active energy (classes 0,5, 1and 2)

IEC 62053-11:2003

Electricity metering equipment (AC) - Particular requirements - Part 11: Electromechanical meters for active energy (classes 0,5, 1 and 2)

IEC 62053-11:2003/AMD1:2016

Amendment 1 - Electricity metering equipment (AC) - Particular requirements - Part 11: Electromechanical meters for active energy (classes 0,5, 1 and 2)

IEC 62053-11:2003/AMD1:2016/COR1:2018

Corrigendum 1 - Amendment 1 - Electricity metering equipment (AC) - Particular requirements - Part 11: Electromechanical meters for active energy (classes 0,5, 1 and 2)

IEC 62053-21:2003+AMD1:2016 CSV

Electricity metering equipment (AC) - Particular requirements - Part 21: Static meters for active energy (classes 1 and 2)

IEC 62053-21:2003

Electricity metering equipment (AC) - Particular requirements - Part 21: Static meters for active energy (classes 1 and 2)

IEC 62053-21:2003/AMD1:2016

Amendment 1 - Electricity metering equipment (AC) - Particular requirements - Part 21: Static meters for active energy (classes 1 and 2)

IEC 62053-21:2003/AMD1:2016/COR1:2018

Corrigendum 1 - Amendment 1 - Electricity metering equipment (AC) - Particular requirements - Part 21: Static meters for active energy (classes 1 and 2)

IEC 62053-22:2003+AMD1:2016 CSV

Electricity metering equipment (AC) - Particular Requirements - Part 22: Static meters for active energy (classes 0,2 S and 0,5 S)

IEC 62053-22:2003

Electricity metering equipment (AC) - Particular Requirements - Part 22: Static meters for active energy (classes 0,2 S and 0,5 S)

IEC 62053-22:2003/AMD1:2016

Amendment 1 - Electricity metering equipment (AC) - Particular requirements - Part 22: Static meters for active energy (classes 0,2 S and 0,5 S)

IEC 62053-22:2003/AMD1:2016/COR1:2018

Corrigendum 1 - Amendment 1 - Electricity metering equipment (AC) - Particular requirements - Part 22: Static meters for active energy (classes 0,2 S and 0,5 S)

IEC 62053-23:2003+AMD1:2016 CSV

Electricity metering equipment (AC) - Particular requirements -Part 23: Static meters for reactive energy (classes 2 and 3)

IEC 62053-23:2003

Electricity metering equipment (AC) - Particular requirements - Part 23: Static meters for reactive energy (classes 2 and 3)

IEC 62053-23:2003/AMD1:2016

Amendment 1 - Electricity metering equipment (AC) - Particular requirements - Part 23: Static meters for reactive energy (classes 2 and 3)

IEC 62053-23:2003/AMD1:2016/COR1:2018

Corrigendum 1 - Amendment 1 - Electricity metering equipment (AC) - Particular requirements - Part 23: Static meters for reactive energy (classes 2 and 3)

IEC 62053-24:2014+AMD1:2016 CSV

Electricity metering equipment (AC) - Particular requirements - Part 24: Static meters for reactive energy at fundamental frequency(classes 0,5 S, 1 S and 1)

IEC 62053-24:2014

Electricity metering equipment (AC) - Particular requirements - Part 24: Static meters for reactive energy at fundamental frequency (classes 0,5 S, 1S and 1)

IEC 62053-24:2014/AMD1:2016

Amendment 1 - Electricity metering equipment (AC) - Particular requirments - Part 24: Static meters for reactive energy at fundamental frequency (classes 0,5 S, 1 S and 1)

IEC 62053-24:2014/AMD1:2016/COR1:2018

Corrigendum 1 - Amendment 1 - Electricity metering equipment (AC) - Particular requirments - Part 24: Static meters for reactive energy at fundamental frequency (classes 0,5 S, 1 S and 1)

IEC 62053-31:1998

Electricity metering equipment (AC) - Particular requirements - Part 31: Pulse output devices for electromechanical and electronic meters (two wires only)

IEC 62053-52:2005

Electricity metering equipment (AC) - Particular requirements - Part 52: Symbols

IEC 62053-61:1998

Electricity metering equipment (AC) - Particular requirements - Part 61: Power consumption and voltage requirements

IEC 62054-11:2004+AMD1:2016 CSV

Electricity metering (AC) - Tariff and load control - Part 11:Particular requirements for electronic ripple control receivers

IEC 62054-11:2004

Electricity metering (AC) - Tariff and load control - Part 11: Particular requirements for electronic ripple control receivers

IEC 62054-11:2004/AMD1:2016

Amendment 1 - Electricity metering (AC) - Tariff and load control - Part 11: Particular requirements for electronic ripple control receivers

IEC 62054-11:2004/AMD1:2016/COR1:2018

Corrigendum 1 - Amendment 1 - Electricity metering (AC) - Tariff and load control - Part 11: Particular requirements for electronic ripple control receivers

IEC 62054-21:2004+AMD1:2017 CSV

Electricity metering (AC) - Tariff and load control - Part 21: Particular requirements for time switches

IEC 62054-21:2004

Electricity metering (AC) - Tariff and load control - Part 21: Particular requirements for time switches

IEC 62054-21:2004/AMD1:2017

Amendment 1 - Electricity metering (AC) - Tariff and load control - Part 21: Particular requirements for time switches

IEC 62054-21:2004/AMD1:2017/COR1:2018

Corrigendum 1 - Amendment 1 - Electricity metering (AC) - Tariff and load control - Part 21: Particular requirements for time switches

IEC TR 62055-21:2005

Electricity metering - Payment systems - Part 21: Framework for standarisation

IEC 62055-31:2005

Electricity metering - Payment systems - Part 31: Particular requirements - Static payment meters for active energy (classes 1 and 2)

IEC 62055-31:2005/COR1:2007

Corrigendum 1 - Electricity metering - Payment systems - Part 31: Particular requirements - Static payment meters for active energy (classes 1 and 2)

IEC 62055-41:2018

Electricity metering - Payment systems - Part 41: Standard transfer specification (STS) - Application layer protocol for one-way token carrier systems

IEC 62055-41:2018 RLV

Electricity metering - Payment systems - Part 41: Standard transfer specification (STS) - Application layer protocol for one-way token carrier systems

IEC 62055-51:2007

Electricity metering - Payment systems - Part 51: Standard transfer specification (STS) - Physical layer protocol for one-way numeric and magnetic card token carriers

IEC 62055-52:2008

Electricity metering - Payment systems - Part 52: Standard transfer specification (STS) - Physical layer protocol for a two-way virtual token carrier for direct local connection

IEC 62056-1-0:2014

Electricity metering data exchange - The DLMS/COSEM suite - Part 1-0: Smart metering standardisation framework

IEC TS 62056-1-1:2016

Electricity metering data exchange - The DLMS/COSEM suite - Part 1-1: Template for DLMS/COSEM communication profile standards

IEC 62056-3-1:2013

Electricity metering data exchange - The DLMS/COSEM suite - Part 3-1: Use of local area networks on twisted pair with carrier signalling

IEC 62056-4-7:2015

Electricity metering data exchange - The DLMS/COSEM suite - Part 4-7: DLMS/COSEM transport layer for IP networks

IEC 62056-5-3:2017

Electrcity metering data exchange - The DLMS/COSEM suite - Part 5-3: DLMS/COSEM application layer

IEC 62056-6-1:2017

Electricity metering data exchange - The DLMS/COSEM suite - Part 6-1: Object Identification System (OBIS)

IEC 62056-6-2:2017

Electricity metering data exchange - The DLMS/COSEM suite - Part 6-2: COSEM interface classes

IEC TS 62056-6-9:2016

Electricity metering data exchange - The DLMS/COSEM suite - Part 6-9: Mapping between the Common Information Model message profiles (IEC 61968-9) and DLMS/COSEM (IEC 62056) data models and protocols

IEC 62056-7-3:2017

Electricity metering data exchange - The DLMS/COSEM suite - Part 7-3: Wired and wireless M-Bus communication profiles for local and neighbourhood networks

IEC 62056-7-5:2016

Electricity metering data exchange - The DLMS/COSEM suite - Part 7-5: Local data transmission profiles for Local Networks (LN)

IEC 62056-7-6:2013

Electricity metering data exchange - The DLMS/COSEM suite - Part 7-6: The 3-layer, connection-oriented HDLC based communication profile

IEC 62056-8-3:2013

Electricity metering data exchange - The DLMS/COSEM suite - Part 8-3: Communication profile for PLC S-FSK neighbourhood networks

IEC 62056-8-4:2018

Electricity metering data exchange - The DLMS/COSEM suite - Part 8-4: Communication profiles for narrow-band OFDM PLC PRIME neighbourhood networks

IEC 62056-8-5:2017

Electricity metering data exchange - The DLMS/COSEM suite - Part 8-5: Narrow-band OFDM G3-PLC communication profile for neighbourhood networks

IEC 62056-8-5:2017/COR1:2017

Corrigendum 1 - Electricity metering data exchange - The DLMS/COSEM suite - Part 8-5: Narrow-band OFDM G3-PLC communication profile for neighbourhood networks

IEC 62056-8-6:2017

Electricity metering data exchange - The DLMS/COSEM suite - Part 8-6: High speed PLC ISO/IEC 12139-1 profile for neighbourhood networks

IEC 62056-8-8:2020

Electricity metering data exchange - The DLMS/COSEM suite - Part 8-8: Communication profile for ISO/IEC 14908 series networks

IEC TS 62056-8-20:2016

Electricity metering data exchange - The DLMS/COSEM suite - Part 8-20: Mesh communication profile for neighbourhood networks

IEC TS 62056-9-1:2016

Electricity metering data exchange - The DLMS/COSEM suite - Part 9-1: Communication profile using web-services to access a DLMS/COSEM server via a COSEM Access Service (CAS)

IEC 62056-9-7:2013

Electricity metering data exchange - The DLMS/COSEM suite - Part 9-7: Communication profile for TCP-UDP/IP networks

IEC 62056-21:2002

Electricity metering - Data exchange for meter reading, tariff and load control - Part 21: Direct local data exchange

IEC TS 62056-41:1998

Electricity metering - Data exchange for meter reading, tariff and load control - Part 41: Data exchange using wide area networks: Public switched telephone network (PSTN) with LINK+ protocol

IEC 62056-42:2002

Electricity metering - Data exchange for meter reading, tariff and load control - Part 42: Physical layer services and procedures for connection-oriented asynchronous data exchange

IEC 62056-46:2002+AMD1:2006 CSV

Electricity metering - Data exchange for meter reading, tariff and load control - Part 46: Data link layer using HDLC protocol

IEC 62056-46:2002

Electricity metering - Data exchange for meter reading, tariff and load control - Part 46: Data link layer using HDLC protocol

IEC 62056-46:2002/AMD1:2006

Amendment 1 - Electricity metering - Data exchange for meter reading, tariff and load control - Part 46: Data link layer using HDLC protocol

IEC TS 62056-51:1998

Electricity metering - Data exchange for meter reading, tariff and load control - Part 51: Application layer protocols

IEC TS 62056-52:1998

Electricity metering - Data exchange for meter reading, tariff and load control - Part 52: Communication protocols management distribution line message specification (DLMS) server

IEC 62058-11:2008

Electricity metering equipment (AC) - Acceptance inspection - Part 11: General acceptance inspection methods

IEC 62058-21:2008

Electricity metering equipment (AC) - Acceptance inspection - Part 21: Particular requirements for electromechanical meters for active energy (classes 0,5, 1 and 2)

IEC 62058-31:2008

Electricity metering equipment (AC) - Acceptance inspection - Part 31: Particular requirements for static meters for active energy (classes 0,2 S, 0,5 S, 1 and 2)

IEC TR 62059-11:2002

Electricity metering equipment - Dependability - Part 11: General concepts

IEC TR 62059-21:2002

Electricity metering equipment - Dependability - Part 21: Collection of meter dependability data from the field

IEC 62059-31-1:2008

Electricity metering equipment - Dependability - Part 31-1: Accelerated reliability testing - Elevated temperature and humidity

IEC 62059-31-1:2008/COR1:2008

Corrigendum 1 - Electricity metering equipment - Dependability - Part 31-1: Accelerated reliability testing - Elevated temperature and humidity

IEC 62059-32-1:2011

Electricity metering equipment - Dependability - Part 32-1: Durability - Testing of the stability of metrological characteristics by applying elevated temperature

IEC 62059-41:2006

Electricity metering equipment - Dependability - Part 41: Reliability prediction

<u>Standards under development:</u>

PNW 13-1801

Electricity metering - Payment systems - Part 42: Transaction Reference Numbers (TRN)

PNW 13-1802

Electricity metering equipment – General requirements, tests and test conditions – Part 41: Energy registration methods and requirements for multi-energy and multi-rate meters

PNW 13-1810 ED1

IEC 62057-3 ED1 Test equipment, techniques and procedures for electrical energy meters - Part 3: Automatic Meter Testing System (AMTS)

IEC 62052-11 ED2

Electricity metering equipment - General requirements, tests and test conditions - Part 11: Metering equipment

IEC 62052-31 ED2

Electricity metering equipment (AC) - General requirements, tests and test conditions - Part 31: Product safety requirements and tests

IEC 62053-21 ED2

Electricity metering equipment - Particular requirements - Part 21: Static meters for AC active energy (classes 0,5, 1 and 2)

IEC 62053-22 ED2

Electricity metering equipment - Particular requirements - Part 22: Static meters for AC active energy (classes 0,1S, 0,2S and 0,5S)

IEC 62053-23 ED2

Electricity metering equipment - Particular requirements - Part 23: Static meters for reactive energy (classes 2 and 3)

IEC 62053-24 ED2

Electricity metering equipment - Particular requirements - Part 24: Static meters for fundamental component reactive energy (classes 0,5S, 1S, 1, 2 and 3)

IEC 62053-41 ED1

Electricity metering equipment (DC direct current) - Particular requirements - Part 41 - Static meter for active energy (class 0.5 and 1)

IEC 62055-31 ED2

Electricity metering - Payment systems - Part 31: Particular requirements - Static payment meters for active energy (classes 1 and 2)

IEC 62056-3-1 ED2

Electricity metering data exchange - The DLMS/COSEM suite - Part 3-1: Use of local area networks on twisted pair with carrier signalling

IEC 62057-1 ED1

Test equipment, techniques and procedures for electrical energy meters - Part 1: Stationary Meter Test Units (MTU)

3.2.84 TC 69 - Electrical power/energy transfer systems for electrically propelled road vehicles and industrial trucks

Keywords:

Electrical energy supply, Road vehicles, Clean Energy for transportation, Calibration of chargers, Smart Charging, Dynamic charge management, Vehicle-to-Grid (V2G), Charging speed, Electric Vehicle Supply Equipment (EVSE), Electric vehicle wireless power transfer (WPT) systems, **Electric vehicle charging roaming service,**   Light electric vehicles conductive power supply systems, Electric Vehicles conductive power/energy transfer system, Electric vehicle battery exchange infrastructure safety requirements, Electric vehicle conductive charging system - DC Charging with an automatic connection system, Electric vehicle conductive charging system - DC EV supply equipment where protection relies on electrical separation, Electrical characteristics test methods of EDLC Module for Electric road vehicles, Dynamic electric vehicle wireless power transfer systems, EMC requirements for off board electric vehicle charging systems, Electrically propelled vehicles, energy storage, electric double-layer capacitors and hybrid capacitors, Management of Electric Vehicles charging and discharging infrastructures

Scope:

To prepare publications on electrical power/energy transfer systems for electrically propelled road vehicles and industrial trucks (hereafter EV) drawing current from a rechargeable energy storage system (RESS). Possibilities to transfer power/energy include conductive power/energy transfer, wireless power/energy transfer and battery swap.

The different publications can cover, but are not limited to:

- general requirements (e.g. safety, EMC, construction, testing);
- functional requirements (e.g. charging modes);
- communication between the EV and the EV supply equipment;
- electrical power/energy transfer between EV and supply network (G2V and V2G);
- management of the corresponding infrastructures in view of offering the associated value added services.

 EV include but are not limited to passenger cars and buses, two and three-wheel and light four-wheel vehicles, trucks and goods vehicles, trailers and special and industrial trucks.

Trains, trams and trolleybuses are out of scope of TC69.

Standards:

IEC 61851-1:2017

Electric vehicle conductive charging system - Part 1: General requirements

IEC 61851-21-1:2017

Electric vehicle conductive charging system - Part 21-1 Electric vehicle on-board charger EMC requirements for conductive connection to AC/DC supply

IEC 61851-21-2:2018

Electric vehicle conductive charging system - Part 21-2: Electric vehicle requirements for conductive connection to an AC/DC supply - EMC requirements for off board electric vehicle charging systems

IEC 61851-23:2014

Electric vehicle conductive charging system - Part 23: DC electric vehicle charging station

IEC 61851-23:2014/COR1:2016

Corrigendum 1 - Electric vehicle conductive charging systems - Part 23: DC electric vehicle charging station

IEC 61851-24:2014

Electric vehicle conductive charging system - Part 24: Digital communication between a DC EV charging station and an electric vehicle for control of DC charging

IEC 61851-24:2014/COR1:2015

Corrigendum 1 - Electric vehicle conductive charging system - Part 24: Digital communication between a DC EV charging station and an electric vehicle for control of DC charging

IEC 61980-1:2015

Electric vehicle wireless power transfer (WPT) systems - Part 1: General requirements

IEC 61980-1:2015/COR1:2017

Corrigendum 1 - Electric vehicle wireless power transfer (WPT) systems - Part 1: General requirements

IEC TS 61980-2:2019

Electric vehicle wireless power transfer (WPT) systems - Part 2: Specific requirements for communication between electric road vehicle (EV) and infrastructure

IEC TS 61980-3:2019

Electric vehicle wireless power transfer (WPT) systems - Part 3: Specific requirements for the magnetic field wireless power transfer systems

IEC 62576:2018

Electric double-layer capacitors for use in hybrid electric vehicles - Test methods for electrical characteristics

IEC 62576:2018 RLV

Electric double-layer capacitors for use in hybrid electric vehicles - Test methods for electrical characteristics

IEC TS 62840-1:2016

Electric vehicle battery swap system - Part 1: General and guidance

IEC 62840-2:2016

Electric vehicle battery swap system - Part 2: Safety requirements

IEC 63119-1:2019

Information exchange for electric vehicle charging roaming service - Part 1: General

ISO 15118-1:2019

Road vehicles - Vehicle to grid communication interface - Part 1: General information and use case definition

ISO 15118-2:2014

Road vehicles -- Vehicle-to-Grid Communication Interface -- Part 2: Network and application protocol requirements

ISO 15118-3:2015

Road vehicles -- Vehicle to grid communication interface -- Part 3: Physical and data link layer requirements

ISO 15118-4:2018

Road vehicles - Vehicle to grid communication interface - Part 4: Network and application protocol conformance test

ISO 15118-5:2018

Road vehicles - Vehicles to grid communication interface - Part 5: Physical and data link layer conformance tests

ISO 15118-8:2018

Road vehicles - Vehicle to grid communication interface - Part 8: Physical layer and data link layer requirements for wireless communication

ISO 17409:2015

Electrically propelled road vehicles -- Connection to an external electric power supply -- Safety requirements

Standards under development:

IEC 61851-0 ED1

Electrical systems for electric road vehicles and electric industrial trucks - Common items of TC 69 publications

IEC TS 61851-3-1 ED1

Electric Vehicles conductive power supply system - Part 3-1: General Requirements for EV supply equipment where protection relies on double or reinforced insulation - AC and DC conductive power supply systems

IEC TS 61851-3-2 ED1

Electric Vehicles conductive power supply system - Part 3-2: Particular requirements EV supply equipment where protection relies on double or reinforced insulation - Voltage converter unit

IEC TS 61851-3-4 ED1

Electric Vehicles conductive power supply system - Part 3-4: Particular requirements EV supply equipment where protection relies on double or reinforced insulation - General definitions and requirements for CANopen communications

IEC TS 61851-3-5 ED1

Electric Vehicles conductive power supply system - Part 3-5: Particular requirements EV supply equipment where protection relies on double or reinforced insulation - Pre-defined communication parameters and general application objects

IEC TS 61851-3-6 ED1

Electric Vehicles conductive power supply system - Part 3-6: Particular requirements for EV supply equipment where protection relies on double or reinforced insulation - Voltage converter and communication

IEC TS 61851-3-7 ED1

Electric vehicles conductive power supply system - Part 3-7: Particular requirements for EV supply equipment where protection relies on double or reinforced insulation – Battery system communication

IEC 61851-23 ED2

Electric vehicle conductive charging system - Part 23: DC electric vehicle supply equipment

IEC 61851-23-1 ED1

Electric vehicle conductive charging system - Part 23-1: DC electric vehicle charging station with an automated connection device

IEC 61851-24 ED2

Electric vehicle conductive charging system - Part 24: Digital communication between a DC EV charging station and an electric vehicle for control of DC charging

IEC 61851-25 ED1

Electric vehicle conductive charging system - Part 25: DC EV supply equipment where protection relies on electrical separation

IEC 61980-1 ED2

Electric vehicle wireless power transfer (WPT) systems - Part 1: General requirements

IEC 61980-2 ED1

Electric vehicle wireless power transfer (WPT) systems - Part 2: Specific requirements for communication between electric road vehicle (EV) and infrastructure

IEC 61980-3 ED1

Electric vehicle wireless power transfer (WPT) systems - Part 3: Specific requirements for the magnetic field wireless power transfer systems

IEC 62576-2 ED1

Electrical characteristics test methods of EDLC Module for Electric road vehicles

IEC 62840-1 ED1

Electric vehicle battery swap system - Part 1: General and guidance

IEC 62840-2 ED2

Electric vehicle battery swap system - Part 2: Safety requirements

IEC TS 62840-3 ED1

Electric vehicle battery swap system - Part 3: Requirements for Light Electric Vehicles (LEV)

IEC 63110-1 ED1

Protocol for Management of Electric Vehicles charging and discharging infrastructures - Part 1: Basic Definitions, Use Cases and architectures

IEC 63110-2 ED1

Protocol for Management of Electric Vehicles charging and discharging infrastructures - Part 2: Technical protocol specifications and requirements

IEC 63110-3 ED1

Protocol for Management of Electric Vehicles charging and discharging infrastructures - Part 3: Requirements for conformance tests

IEC 63119-2 ED1

Information exchange for Electric Vehicle charging roaming service - Part 2: Use cases

IEC 63119-3 ED1

Information exchange for Electric Vehicle charging roaming service - Part 3: Message structure

IEC 63119-4 ED1

Information exchange for Electric Vehicle charging roaming service - Part 4: Cybersecurity and information privacy

IEC 63243 ED1

Interoperability and safety of dynamic wireless power transfer (WPT) for electric vehicles

ISO 15118-4 ED2

Road vehicles - Vehicle to grid communication interface - Part 4: Network and application protocol conformance test

ISO 15118-8 ED2

Road vehicles - Vehicle to grid communication interface - Part 8: Physical layer and data link layer requirements for wireless communication

ISO 15118-9 ED1

Road vehicles - Vehicle to grid communication interface - Part 9: Physical and data link layer conformance test for wireless communication

ISO 15118-20 ED1

Road vehicles - Vehicle to grid communication interface - Part 20: Network and application protocol requirements

3.2.85 TC 120 - Electrical Energy Storage (EES) Systems

Keywords:

Electrical energy supply, Clean Energy for transportation

Scope:

1. Standarisation in the field of grid integrated EES Systems.

- TC 120 focuses on system aspects on EES Systems rather than energy storage devices.
- TC 120 investigates system aspects and the need for new standards for EES Systems.
- TC 120 also focuses on the interaction between EES Systems and Electric Power Systems (EPS).

2. For the purpose of TC120, "grid" includes and is not limited to applications in:

a) transmission grids
b) distribution grids
c) commercial grids
d) industrial grids
e) residential grids
f) islanded grids
g) MUSH(Municipal/Military, Utilities/Universities, Schools, Hospitals) grids
h) ICI (Institutional, Commercial and Industrial) grids

It is also confirmed that TC120 can include "smart grid." Storage in railway systems is considered if it contributes as an EES System to the grid as referenced in2 a-f.

Note: grid: electricity supply network (ISO/IEC 15067-3) smart grid: electric power system that utilizes information exchange and control technologies, distributed computing and associated sensors and actuators, for purposes such as:

- to integrate the behaviour and actions of the network users and other stakeholders
- to efficiently deliver sustainable, economic and secure electricity supplies (IEV 617-04-13)

3. EES Systems include any type of grid-connected EES Systems which can both store electrical energy from a grid or any other source and provide electrical energy to a grid. By that feature it maintains the balance between electrical energy demand and supply over a period of time.

TC 120 considers all storage technologies as long as they are capable to store and to discharge electrical energy. (Energy storage itself is not in the scope of the work.)

Note) Thermal storage systems are included in the scope, only from the electricity exchange point of view. Unidirectional energy storage systems such as UPS are not included in the scope of TC 120.

4. The scope of TC 120 is to prepare normative documents dealing with the system aspects of EES Systems.

Standards:

IEC 62933-1:2018

Electrical energy storage (EES) systems - Part 1: Vocabulary

IEC 62933-2-1:2017

Electrical energy storage (EES) systems - Part 2-1: Unit parameters and testing methods - General specification

IEC 62933-2-1:2017/COR1:2019

Corrigendum 1 - Electrical energy storage (EES) systems - Part 2-1: Unit parameters and testing methods - General specification

IEC TS 62933-3-1:2018

Electrical energy storage (EES) systems - Part 3-1: Planning and performance assessment of electrical energy storage systems - General specification

IEC TS 62933-4-1:2017

Electrical energy storage (EES) systems - Part 4-1: Guidance on environmental issues - General specification

IEC TS 62933-5-1:2017

Electrical energy storage (EES) systems - Part 5-1: Safety considerations for grid-integrated EES systems - General specification

IEC 62933-5-2:2020

Electrical energy storage (EES) systems - Part 5-2: Safety requirements for grid-integrated EES systems - Electrochemical-based systems

Standards under development:

PNW 120-181

Electrical energy storage (EES) systems Part 5-3: Safety requirements for electrochemical based EES systems considering initially non-anticipated modifications - partial replacement, changing application, relocation and loading reused battery -

IEC 62933-1 ED2

Electrical energy storage (EES) systems - Part 1: Vocabulary

IEC TS 62933-2-2 ED1

Electric Energy Storage Systems; Part 2-2: Unit parameters and testing methods – Applications and Performance testing

IEC TS 62933-3-2 ED1

Electric Energy Storage Systems: Part 3-2: Planning and performance assessment of electrical energy storage systems - Additional requirements for power intensive and for renewable energy sources integration related applications

IEC TS 62933-3-3 ED1

Electrical Energy Storage (EES) systems - Part 3-3: Planning and performance assessment of electrical energy storage systems - Additional requirements for energy intensive and backup power applications

IEC TR 62933-4-200 ED1

ELECTRICAL ENERGY STORAGE (EES) SYSTEMS Part 4-200: Guidance on environmental issues - Greenhouse gas (GHG) emission reduction by electrical energy storage (EES) systems

IEC 62933-4-2 ED1

Electric Energy Storage System part4-2- environment impact assessment requirement for electrochemical based systems failure

IEC 62933-4-3 ED1

Electrical energy storage(EES) systems; part4-3: –The protection requirements of BESS according to the environmental conditions and location types

IEC 62933-4-4 ED1

Electrical energy storage (EES) systems- Part 4-4: Environmental requirements for BESS using reused batteries in various installations and aspects of life cycles

3.2.86 TC 96 - Transformers, reactors, power supply units, and combinations thereof

Keywords:

Electrical energy supply

Scope:

Standarisation in the field of safety, EMC, EMF, energy efficiency and environmental aspects of transformers, reactors, power supply units, and combinations thereof. The standarisation does not cover transformers, reactors and power supply units intended to be a part of distribution networks (covered by TC 14).

TC 96 has group safety function in accordance with IEC Guide 104 for transformers other than those intended to supply distribution networks, in particular transformers and power supply units intended to allow the application of protective measures against electric shock as defined by TC 64, with no limitation of rated output power, but in certain cases including limitation of voltage.

The general limitations for voltages are:

- rated supply voltage not exceeding 1 000 V AC;
- rated output voltage not exceeding 1 000 V AC or 1 500 V ripple free DC; however, internal voltages may exceed 1 000 V AC or 1 500 V ripple free DC For high-voltage applications, other than distribution networks (covered by TC 14), the rated output voltage can exceed 1 000 V AC or 1 500 V ripple free DC but the no load output voltage shall not exceed 15 000 V AC or 15 000 V DC

The general limitations for the rated output are:

- The maximum rated output depends on the type of transformer or linear power supply unit does in most cases not exceed 25 kVA for single-phase products and 40 kVA for three phase products;
- the maximum rated output does not exceed 1 kVA for both single-phase and three phase Switch Mode Power Supplies;
- the general limitations for the rated core power are 25 kVA for single-phase auto transformers and 40 kVA for three phase auto transformers;
- the general limitations for the rated power are 50 kvar for single-phase reactors and 80 kvar for three phase reactors. For special transformers, reactors and power supply units and combinations thereof there are no limitation of rated output, rated core power and rated power.

Standards:

IEC 61558-1:2017

Safety of transformers, reactors, power supply units and combinations thereof - Part 1: General requirements and tests

IEC 61558-1:2017 RLV

Safety of transformers, reactors, power supply units and combinations thereof - Part 1: General requirements and tests

IEC 61558-2-1:2007

Safety of power transformers, power supplies, reactors and similar products - Part 2-1: Particular requirements and tests for separating transformers and power supplies incorporating separating transformers for general applications

IEC 61558-2-2:2007

Safety of power transformers, power supplies, reactors and similar products - Part 2-2: Particular requirements and tests for control transformers and power supplies incorporating control transformers

IEC 61558-2-3:2010

Safety of transformers, reactors, power supply units and combinations thereof - Part 2-3: Particular requirements and tests for ignition transformers for gas and oil burners

IEC 61558-2-4:2009

Safety of transformers, reactors, power supply units and similar products for supply voltages up to 1 100 V - Part 2-4: Particular requirements and tests for isolating transformers and power supply units incorporating isolating transformers

IEC 61558-2-5:2010

Safety of transformers, reactors, power supply units and combinations thereof - Part 2-5: Particular requirements and test for transformer for shavers, power supply units for shavers and shaver supply units

IEC 61558-2-6:2009

Safety of transformers, reactors, power supply units and similar products for supply voltages up to 1 100 V - Part 2-6: Particular requirements and tests for safety isolating transformers and power supply units incorporating safety isolating transformers

IEC 61558-2-7:2007

Safety of power transformers, power supplies, reactors and similar products - Part 2-7: Particular requirements and tests for transformers and power supplies for toys

IEC 61558-2-8:2010

Safety of transformers, reactors, power supply units and combinations thereof - Part 2-8: Particular requirements and tests for transformers and power supply units for bells and chimes

IEC 61558-2-9:2010

Safety of transformers, reactors, power supply units and combinations thereof - Part 2-9: Particular requirements and tests for transformers and power supply units for class III handlamps for tungsten filament lamps

IEC 61558-2-10:2014

Safety of transformers, reactors, power supply units and combinations thereof - Part 2-10: Particular requirements and tests for separating transformers with high insulation level and separating transformers with output voltages exceeding 1 000 V

IEC 61558-2-12:2011

Safety of transformers, reactors, power supply units and combination thereof - Part 2-12: Particular requirements and tests for constant voltage transformers and power supply units for constant voltage

IEC 61558-2-13:2009

Safety of transformers, reactors, power supply units and similar products for supply voltages up to 1 100 V - Part 2-13: Particular requirements and tests for auto transformers and power supply units incorporating auto transformers

IEC 61558-2-14:2012

Safety of transformers, reactors, power supply units and combinations thereof - Part 2-14: Particular requirements and tests for variable transformers and power supply units incorporating variable transformers

IEC 61558-2-15:2011

Safety of transformers, reactors, power supply units and combinations thereof - Part 2-15: Particular requirements and tests for isolating transformers for the supply of medical locations

IEC 61558-2-16:2009+AMD1:2013 CSV

Safety of transformers, reactors, power supply units and similar products for supply voltages up to 1 100 V - Part 2-16: Particularrequirements and tests for switch mode power supply units andtransformers for switch mode power supply units

IEC 61558-2-16:2009

Safety of transformers, reactors, power supply units and similar products for supply voltages up to 1 100 V - Part 2-16: Particular requirements and tests for switch mode power supply units and transformers for switch mode power supply units

IEC 61558-2-16:2009/AMD1:2013

Amendment 1 - Safety of transformers, reactors, power supply units and similar products for supply voltages up to 1 100 V - Part 2-16: Particular requirements and tests for switch mode power supply units and transformers for switch mode power supply units

IEC 61558-2-20:2010

Safety of transformers, reactors, power supply units and combinations thereof - Part 2-20: Particular requirements and tests for small reactors

IEC 61558-2-23:2010

Safety of transformers, reactors, power supply units and combinations thereof - Part 2-23: Particular requirements and tests for transformers and power supply units for construction sites

IEC 61558-2-26:2013

Safety of transformers, reactors, power supply units and combinations thereof - Part 2-26: Particular requirements and tests for transformers and power supply units all for saving energy and other purposes

IEC 62041:2017

Transformers, power supplies, reactors and similar products - EMC requirements

Standards under development:

IEC 61558-2-1 ED3

Safety of transformers, reactors, power supply units and combinations thereof - Part 2-1: Particular requirements and tests for separating transformers and power supplies incorporating separating transformers for general applications

IEC 61558-2-4 ED3

Safety of transformers, reactors, power supply units and combinations thereof - Part 2-4: Particular requirements and tests for isolating transformers and power supply units incorporating isolating transformers for general applications

IEC 61558-2-6 ED3

Safety of transformers, reactors, power supply units and combinations thereof - Part 2-6: Particular requirements and tests for safety isolating transformers and power supply units incorporating safety isolating transformers for general applications

IEC 61558-2-16 ED2

Safety of transformers, reactors, power supply units and combinations thereof - Part 2-16: Particular requirements and tests for switch mode power supply units and transformers for switch mode power supply units for general applications

3.2.87 TA 17 - Multimedia systems and equipment for vehicles

Keywords:

Road vehicles, Event video data recorder for road vehicle accidents, Car Multimedia systems and equipment Drive Monitor System, Configurable Car Infotainment Service (CCIS)

Scope:

To develop international publications addressing all aspects of audio, video and multimedia systems and equipment used by vehicle drivers and/or passengers. Specific aspects to be addressed include:

- Requirements for systems and equipment for infotainment of driving and event monitoring and recording, driving assistance and other multimedia applications in the vehicles,
- Standarisation to address the identified requirements,
- User Interfaces, interfaces and networks, protocols, data formats, criteria, evaluation methods and control mechanisms for the above systems and equipment".

Standards:

IEC 63005-1:2017

Event video data recorder for road vehicle accidents - Part 1: Basic requirements

IEC 63005-2:2019

Event video data recorder for road vehicle accidents - Part 2: Test methods for evaluating the performance of basic functions

IEC TS 63033-1:2017

Car multimedia systems and equipment - Drive monitoring system - Part 1: General

IEC TR 63038:2016

Conceptual model of standarisation for multimedia car systems and equipment

Standards under development:

PNW 100-3389

Multimedia Systems and equipment for vehicle - Surround-view system
 Part 4: Application for Camera Monitor Systems

IEC 63246-1 ED1

Configurable Car Infotainment Service(CCIS) : Part 1 - General (TA 17)

IEC 63246-2 ED1

Multimedia systems and equipment for cars - Configurable Car Infotainment Services (CCIS) – Part 2: Requirements (TA 17)

IEC 63246-3 ED1

Multimedia systems and equipment for cars - Configurable Car Infotainment Services (CCIS) – Part 3: Framework (TA 17)

3.2.88 CIS/D - Electromagnetic disturbances related to electric/electronic equipment on vehicles and internal combustion engine powered devices

Keywords:

Road vehicles

Scope:

Standarisation of limits and methods of measurement for control of radio frequency disturbances (including interference to on-board radio reception arising from devices within the product itself) from:

- Self propelled equipment powered by internal combustion engines, electrical motors or a combination thereof including but not limited to Road Vehicles and boats (under 15 m in length)
- All equipment/machines equipped with an internal combustion engine. Aircraft, traction systems (railway, tramway, electric trolley bus (unless it is also equipped with an internal combustion engine)), boats over 15 m in length, and robotic vacuum cleaners are excluded from the scope of CISPR/D.

Standards:

CISPR 12:2007+AMD1:2009 CSV

Vehicles, boats and internal combustion engines - Radio disturbance characteristics - Limits and methods of measurement for the protection of off-board receivers

CISPR 12:2007

Vehicles, boats and internal combustion engines - Radio disturbance characteristics - Limits and methods of measurement for the protection of off-board receivers

CISPR 12:2007/AMD1:2009

Amendment 1 - Vehicles, boats and internal combustion engines - Radio disturbance characteristics - Limits and methods of measurement for the protection of off-board receivers

CISPR 25:2016

Vehicles, boats and internal combustion engines - Radio disturbance characteristics - Limits and methods of measurement for the protection of on-board receivers

CISPR 25:2016/COR1:2017

Corrigendum 1 - Vehicles, boats and internal combustion engines - Radio disturbance characteristics - Limits and methods of measurement for the protection of on-board receivers

Standards under development:

CISPR 12 ED7

Vehicles, boats and devices with internal combustion engines or traction batteries – Radio disturbance characteristics – Limits and methods of measurement for the protection of off-board receivers

CISPR 25 ED5

Vehicles, boats and internal combustion engines - Radio disturbance characteristics - Limits and methods of measurement for the protection of on-board receivers

CISPR 36 ED1

Electric and hybrid electric road vehicles - Radio disturbance characteristics - Limits and methods of measurement for the protection of off-board receivers below 30 MHz

3.2.89 TC 125 - Personal e-Transporters (PeTs)

Keywords:

Road vehicles

Scope:

Standarisation of electrically powered transport devices where the speed control and/or steering is electrical/electronic ('personal e-transporters') for use on the road or in public spaces. This means, standarisation in the field of personal e-Transporters, including but not limited to:

- Electrical and mechanical Safety
- Reliability
- Functional safety
- EMC
- Maintenance
- Docking stations for public use
- Recycling

Exclusions:

Standarisation of electrically powered bicycles, mopeds, motorcycles and passenger cars are excluded from the scope because they are handled by other TCs:

- - IEC TC 69
- - ISO TC 149
- - ISO TC 22

Standards:

There are not any published standards.

Standards under development:

IEC 63281 ED1

Personal e-Transporters - Safety requirements and test methods

3.2.90 TA 6 - Storage media, storage data structures, storage systems and equipment

Keywords:

Data Model, Availability and information

Scope:

To develop international publications on storage media, data structures, systems and equipment related to multimedia applications for professional and consumer electronics. These include standards or guidelines on file format, metadata, and applications related to storage systems and equipment.

Standards:

IEC 60094-1:1981

Magnetic tape sound recording and reproducing systems. Part 1: General conditions and requirements

IEC 60094-1:1981/AMD1:1994

Amendment 1 - Magnetic tape sound recording and reproducing systems. Part 1: General conditions and requirements

IEC 60094-2:1994

Magnetic tape sound recording and reproducing systems - Part 2: Calibration tapes

IEC 60094-2:1994/COR1:1995

Corrigendum 1 - Magnetic tape sound recording and reproducing systems - Part 2: Calibration tapes

IEC 60094-3:1979+AMD2:1988

CSV

IEC 60094-3:1979

Magnetic tape sound recording and reproducing systems - Part 3: Methods of measuring the characteristics of recording and reproducing equipment for sound on magnetic tape

IEC 60094-3:1979/AMD2:1988

Amendment 2 - Magnetic tape sound recording and reproducing systems. Part 3: Methods of measuring the characteristics of recording and reproducing equipment for sound on magnetic tape

IEC 60094-3:1979/AMD3:1996

Amendment 3 - Magnetic tape sound recording and reproducing systems. Part 3: Methods of measuring the characteristics of recording and reproducing equipment for sound on magnetic tape

IEC 60094-4:1986

Magnetic tape sound recording and reproducing systems. Part 4: Mechanical magnetic tape properties

IEC 60094-4:1986/AMD1:1994

Amendment 1 - Magnetic tape sound recording and reproducing systems. Part 4: Mechanical magnetic tape properties

IEC 60094-5:1988

Magnetic tape sound recording and reproducing systems. Part 5: Electrical magnetic tape properties

IEC 60094-5:1988/AMD1:1996

Amendment 1 - Magnetic tape sound recording and reproducing systems. Part 5: Electrical magnetic tape properties

IEC 60094-6:1985

Magnetic tape sound recording and reproducing systems. Part 6: Reel to reel systems

IEC 60094-7:1986

Magnetic tape sound recording and reproducing systems. Part 7: Cassette for commercial tape records and domestic use

IEC 60094-7:1986/AMD1:1996

Amendment 1 - Magnetic tape sound recording and reproducing systems. Part 7: Cassette for commercial tape records and domestic use

IEC 60094-10:1988

Magnetic tape sound recording and reproducing systems. Part 10: Time and address codes

IEC 60094-11:1988

Magnetic tape sound recording and reproducing systems. Part 11: Address code for compact cassettes

IEC 60347:1982

Transverse track recorders

IEC 60386:1972

Method of measurement of speed fluctuations in sound recording and reproducing equipment

IEC 60386:1972/AMD1:1988

Amendment 1 - Method of measurement of speed fluctuations in sound recording and reproducing equipment

IEC 60461:2010

Time and control code

IEC 60503:1998

Spools for broadcast videotape recorders (VTRS)

IEC 60558:1982

Type C helical video tape recorders

IEC 60558:1982/AMD1:1987

Amendment 1 - Type C helical video tape recorders

IEC 60558:1982/AMD2:1993

Amendment 2 - Type C helical video tape recorders

IEC 60602:1980

Type B helical video recorders

IEC 60602:1980/AMD1:1987

Amendment 1 - Type B helical video recorders

IEC 60712:1993

Helical-scan video-tape cassette system using 19 mm (3/4 in) magnetic tape, known as U-format

IEC 60712:1993/AMD1:1993

Amendment 1 - Helical-scan video-tape cassette system using 19 mm (3/4 in) magnetic tape, known as U-format

IEC 60735:1991

Measuring methods for video tape properties

IEC 60756:1991

Non-broadcast video tape recorders - Time base stability

IEC 60767:1983

Helical-scan video-tape cassette system using 12.65 mm (0.5 in) magnetic tape on type beta-format

IEC 60774-1:1994

Helical-scan video tape cassette system using 12,65 mm (0,5 in) magnetic tape on type VHS - Part 1: VHS and compact VHS video cassette system

IEC 60774-2:1999

Helical-scan video tape cassette system using 12,65 mm (0,5 in) magnetic tape on type VHS - Part 2: FM audio recording

IEC 60774-3:1993

Helical-scan video tape cassette system using 12,65 mm (0,5 in) magnetic tape on type VHS - Part 3: S-VHS

IEC 60774-4:2002

Helical-scan video tape cassette system using 12,65 mm (0,5 in) magnetic tape on type VHS - Part 4: S-VHS video cassette system - ET mode

IEC 60774-5:2004

Helical-scan video tape cassette system using 12,65 mm (0,5 in) magnetic tape on type VHS - Part 5: D-VHS

IEC 60841:1988

Audio recording - PCM encoder/decoder system

IEC 60843-1:1994

Helical-scan video tape cassette system using 8 mm magnetic tape - 8 mm video - Part 1: General specifications

IEC 60843-2:1992

Helical-scan video tape cassette system using 8 mm magnetic tape - 8 mm Video - Part 2: PCM multi-track audio system

IEC 60843-3:1993

Helical-scan video tape cassette system using 8 mm magnetic tape - 8 mm Video - Part 3: High-band specifications for Hi 8

IEC 60843-4:2000

Helical-scan video tape cassette system using 8 mm magnetic tape (8 mm video) - Part 4: Video subcode (VSC)

IEC 60856:1986

Pre-recorded optical reflective videodisk system 'Laser vision' 50Hz/625 lines - PAL

IEC 60856:1986/AMD1:1991

Amendment 1 - Pre-recorded optical reflective videodisk system 'Laser vision' 50Hz/625 lines - PAL

IEC 60856:1986/AMD2:1997

Amendment 2 - Pre-recorded optical reflective videodisk system 'Laser vision' 50Hz/625 lines - PAL

IEC 60857:1986

Pre-recorded optical reflective videodisk system 'Laser vision' 60Hz/525 lines - M/NTSC

IEC 60857:1986/AMD1:1991

Amendment 1 - Pre-recorded optical reflective videodisk system 'Laser vision' 60Hz/525 lines - M/NTSC

IEC 60857:1986/AMD2:1997

Amendment 2 - Pre-recorded optical reflective videodisk system 'Laser vision' 60Hz/525 lines - M/NTSC

IEC 60883:1987

Measuring method for chrominance signal-to-random noise ratio for video tape recorders

IEC TS 60899:1987

Sampling rate and source encoding for professional digital audio recording

IEC 60961:1994

Helical-scan video tape cassette system using 12,65 mm (0,5 in) magnetic tape on type L

IEC 61016:1989

Helical-scan digital component video cassette recording system using 19 mm magnetic tape (format D-1)

IEC 61016:1989/AMD1:1999

Amendment 1 - Helical-scan digital component video cassette recording system using 19 mm magnetic tape (format D-1)

IEC 61041-1:1990

Non-broadcast video tape recorders. Methods of measurement - Part1: General, video (NTSC/PAL) and audio (longitudinal)characteristics

IEC 61041-2:1994

Non-broadcast video tape recorders - Methods of measurements - Part2: Video characteristics chrominance SECAM

IEC 61041-3:1993

Non-broadcast video tape recorders - Methods of measurement - Part 3: Audio characteristics for FM recording

IEC 61041-4:1997

Non-broadcast video tape recorders - Methods of measurement - Part 4: Calibration tape (NTSC/PAL/SECAM)

IEC 61041-5:1997   Non-broadcast video tape recorders - Methods of measurement - Part 5: High-band video tape recorders, including those equipped with Y/C video connectors (NTSC/PAL)

IEC 61053-1:1991

Helical-scan video tape cassette system using 12,65 mm (0,5 in)magnetic tape on type Beta format - FM audio recording - Part 1:625 line-50 field systems

IEC 61053-2:1991

Helical-scan video tape cassette system using 12,65 mm (0,5 in)magnetic tape on type Beta format - FM audio recording - Part 2:525 line-60 field systems

IEC 61077:1991

Helical-scan video tape cassette system using 12.65 mm (0.5 in) magnetic tape on type VHS - Compact VHS video cassette

IEC 61096:1992

Methods of measuring the characteristics of reproducing equipment for digital audio compact discs

IEC 61096:1992/AMD1:1996

Amendment 1 - Methods of measuring the characteristics of reproducing equipment for digital audio compact discs

IEC 61104:1992

Compact disc video system - 12 cm CD-V

IEC 61105:1991

Reference tapes for video tape recorder systems

IEC 61106:1993

Videodisks - Methods of measurement for parameters

IEC 61118:1993

Helical-scan video tape cassette system using 12,65 mm (0,5 in) magnetic tape - Type M2

IEC 61119-1:1992

Digital audio tape cassette system (DAT) - Part 1: Dimensions and characteristics

IEC 61119-2:1991

Digital audio tape cassette system - Part 2: DAT calibration tape

IEC 61119-3:1992

Digital audio tape cassette system (DAT) - Part 3: DAT tape properties

IEC TR 61119-4:1997

Digital audio tape (DAT) cassette system - Part 4: Character packformat

IEC 61119-5:1993

Digital audio tape cassette system (DAT) - Part 5: DAT forprofessional use

IEC 61119-6:1992

Digital audio tape cassette system (DAT) - Part 6: Serial copymanagement system

IEC TR 61119-7:1995

Digital audio tape cassette system (DAT) - Part 7: DAT logoapplication rule

IEC 61120-1:1991

Digital audio tape recorder reel to reel system, using 6,3 mmmagnetic tape, for professional use - Part 1: General requirements

IEC 61120-2:1991

Digital audio tape recorder reel to reel system, using 6.3 mm magnetic tape, for professional use - Part 2: Format A

IEC 61120-3:1991

Digital audio tape recorder reel to reel system, using 6.3 mm magnetic tape, for professional use - Part 3: Format B

IEC 61120-4:1992

Digital audio tape recorder reel-to-reel system, using 6,3 mm magnetic tape, for professional use - Part 4: Magnetic tape properties: definitions and methods of measurement

IEC 61120-5:1995

Digital audio tape recorder reel-to-reel system, using 6,3 mm magnetic tape, for professional use - Part 5: Reels

IEC 61179:1993

Helical-scan digital composite video cassette recording system using 19 mm magnetic tape, format D2 (NTSC, PAL, PAL-M)

IEC 61213:1993

Analogue audio recording on video tape - Polarity of magnetization

IEC 61237-1:1994

Broadcast video tape recorders - Methods of measurement - Part 1: Mechanical measurements

IEC 61237-2:1995

Broadcast video tape recorders - Methods of measurement - Part 2: Electrical measurements for analogue composite video signals

IEC 61237-3:1995

Broadcast video tape recorders - Methods of measurement - Part 3: Electrical measurements for analogue component video signals

IEC 61237-3:1995/COR1:1995

Corrigendum 1 - Broadcast video tape recorders - Methods of measurement - Part 3: Electrical measurements for analogue component video signals

IEC 61237-4:1997

Broadcast video tape recorders - Methods of measurement - Part 4: Analogue audio performance measurements

IEC TR 61295:1994

Calibration tapes for broadcast VTRs

IEC 61319-1:1995

Interconnections of satellite receiving equipment - Part 1: Europe

IEC 61319-2:1997

Interconnections of satellite receiving equipment - Part 2: Japan

IEC 61327:1995

Helical-scan digital composite video cassette recording system using 12,65 mm (0,5 in) magnetic tape - Format D-3

IEC 61595-1:1997

Multichannel digital audio tape recorder (DATR), reel-to-reel system, for professional use - Part 1: Format A

IEC 61595-2:1997

Multichannel digital audio tape recorder (DATR), reel-to-reel system, for professional use - Part 2: Format B

IEC 61595-3:1999

Multichannel digital audio tape recorder (DATR), reel-to-reel system, for professional use - Part 3: 24-bit operation for 16-bit media

IEC 61599:1999

Videodisk players - Methods of measurement

IEC 61834-1:1998+AMD1:2001 CSV

Recording - Helical-scan digital video cassette recording system using 6,35 mm magnetic tape for consumer use (525-60, 625-50, 1125-60 and 1250-50 systems) - Part 1: General specifications

IEC 61834-1:1998

Recording - Helical-scan digital video cassette recording system using 6,35 mm magnetic tape for consumer use (525-60, 625-50, 1125-60 and 1250-50 systems) - Part 1: General specifications

IEC 61834-1:1998/AMD1:2001

Amendment 1 - Recording - Helical-scan digital video cassette recording system using 6,35 mm magnetic tape for consumer use (525-60, 625-50, 1125-60 and 1250-50 systems) - Part 1: General specifications

IEC 61834-2:1998

Recording - Helical-scan digital video cassette recording system using 6,35 mm magnetic tape for consumer use (525-60, 625-50, 1125-60 and 1250-50 systems) - Part 2: SD format for 525-60 and 625-50 systems

IEC 61834-3:1999

Recording - Helical-scan digital video cassette recording system using 6,35 mm magnetic tape for consumer use (525-60, 625-50, 1125-60 and 1250-50 systems) - Part 3: HD format for 1125-60 and 1250-50 systems

IEC 61834-4:1998

Recording - Helical-scan digital video cassette recording system using 6,35 mm magnetic tape for consumer use (525-60, 625-50, 1125-60 and 1250-50 systems) - Part 4: Pack header table and contents

IEC 61834-4:1998/AMD1:2010

Amendment 1 - Recording - Helical-scan digital video cassette recording system using 6,35 mm magnetic tape for consumer use (525-60, 625-50, 1125-60 and 1125-50 systems) - Part 4: Pack header table and contents

IEC 61834-5:1998

Recording - Helical-scan digital video cassette recording system using 6,35 mm magnetic tape for consumer use (525-60, 625-50,   1125-60 and 1250-50 systems) - Part 5: The character information system

IEC 61834-6:2000

Recording - Helical-scan digital video cassette recording system using 6,35 mm magnetic tape for consumer use (525-60, 625-50, 1125-60 and 1250-50 systems) - Part 6: SDL format

IEC 61834-7:2001

Recording - Helical-scan digital video cassette recording system using 6,35 mm magnetic tape for consumer use (525-60, 625-50, 1125-60 and 1250-50 systems) - Part 7: EDTV2 format

IEC 61834-8:2001

Recording - Helical-scan digital video cassette recording system using 6,35 mm magnetic tape for consumer use (525-60, 625-50, 1125-60 and 1250-50 systems) - Part 8: PALplus format for the 625-50 system

IEC 61834-9:2001

Recording - Helical-scan digital video cassette recording system using 6,35 mm magnetic tape for consumer use (525-60, 625-50, 1125-60 and 1250-50 systems) - Part 9: DVB format

IEC 61834-10:2001

Recording - Helical-scan digital video cassette recording system using 6,35 mm magnetic tape for consumer use (525-60, 625-50, 1125-60 and 1250-50 systems) - Part 10: DTV format

IEC 61834-10:2001/COR1:2001

Corrigendum 1 - Recording - Helical-scan digital video cassette recording system using 6,35 mm magnetic tape for consumer use (525-60, 625-50, 1125-60 and 1250-50 systems) - Part 10: DTV format

IEC 61834-11:2008

Recording - Helical-scan digital video cassette recording system using 6,35 mm magnetic tape for consumer use (525-60, 625-50, 1125-60 and 1250-50 systems) - Part 11: HDV format for 1080i and 720p systems

IEC 61835:1998

Helical-scan digital component video cassette recording system using 12,65 mm (0,5 in) magnetic tape - Format D-5

IEC 61904:2000

Video recording - Helical-scan digital component video cassette recording format using 12,65 mm magnetic tape and incorporating data compression (Format digital-L)

IEC 61909:2000

Audio recording - Minidisc system

IEC 62070:2001

Broadcast digital video tape recorders - lentification method for recording and/or reproduction error status

IEC 62071-1:2005

Helical-scan compressed digital video cassette system using 6,35 mm magnetic tape - Format D-7 - Part 1: VTR specifications

IEC 62107:2000

Super video compact disc - Disc-interchange system-specification

IEC 62121:2001

Methods of measurement for minidisc recorders/players

IEC 62122:2002

Methods of measurement for consumer-use digital VTRs - Electronic and mechanical performances

IEC 62141:2005

Helican-scan digital video cassette recording format using 12,65 mm magnetic tape and incorporating MPEG-4 compression - Type D-16 format

IEC 62156:2001

Digital video recording with video compression 12,65 mm type D-9 component format 525/60 and 625/50 (Digital S)

IEC 62289:2002

Video recording - Helical-scan digital video casette recording format using 12,65 mm magnetic tape and incorporating MPEG-2 Compression - Format D-10

IEC 62330-1:2003

Helical-scan digital video cassette recording system using 12,65 mm (0,5 in) magnetic tape - Format HD-D5 - Part 1: VTR specifications

IEC 62330-2:2003

Helical-scan digital video cassette recording system using 12,65 mm (0,5 in) magnetic tape - Format HD-D5 - Part 2: Compression format

IEC 62330-3:2003

Helical-scan digital video cassette recording system using 12,65 mm (0,5 in) magnetic tape - Format HD-D5 - Part 3: Data stream format

IEC 62345:2005

ID format for 50 mm magneto-optical disc system

IEC 62356-1:2003

Video recording - 12,65 mm Type D-11 format - Part 1: Tape recording

IEC 62356-2:2003

Video recording - 12,65 mm Type D-11 format - Part 2: Picture compression and data stream

IEC 62356-3:2003

Video recording - 12,65 mm type D-11 format - Part 3: Data mapping over SDTI

IEC 62375:2004

Video systems (625/50 progressive) - Video and accompanied data using the vertical blanking interval - Analogue interface

IEC 62389:2005

Methods of measurement for DVD players

IEC 62403:2005

High density recording format on CD-R/RW disc systems - HD-BURN format

IEC 62447-1:2007

Helical-scan compressed digital video cassette system using 6,35 mm magnetic tape - Format D-12 - Part 1: VTR specifications

IEC 62447-2:2007

Helical-scan compressed digital video cassette system using 6,35 mm magnetic tape - Format D-12 - Part 2: Compression format

IEC 62447-3:2007

Helical-scan compressed digital video cassette system using 6,35 mm magnetic tape - Format D-12 - Part 3: Data stream format

IEC TS 62592:2012

Encoding guidelines for portable multimedia CE products using MP4 file format with AVC video codec and AAC audio codec

IEC TS 62644:2012

Professional video storage equipment - Guideline of time code transmission

IEC 62702-1-1:2016

Audio archive system - Part 1-1: DVD disk and data migration for long term audio data storage

IEC 62702-1-1:2016/COR1:2018

Corrigendum 1 - Audio archive system - Part 1-1: DVD disk and data migration for long term audio data storage

IEC TS 62702-2:2016

Audio archive system - Part 2: Audio data preservation

IEC TR 62712:2011

Professional tape-less camera recorder

IEC TS 62871-1:2015

Professional video strage products - Tape-less camera recorder using MXF file format - Encoding guidelines - Part 1: MXF Operational Pattern

Standards under development:

PWI TR 100-28 ED1

Universal Archival Disk Format (UADF)

3.2.91 TC 103 - Transmitting equipment for radiocommunication

Keywords:

Mobile Telecommunications,   RFID cards, Methods of measurement and TV transamitters, Radio on fibre Transmitter, Safety requirements for radio transmitting equipment

Scope:

Standarisation of transmitting equipment for radiocom- munications purposes and electronic devices employing similar techniques. The standarisation work deals with methods of measurement, safety requirements and transmitter control and interconnection.

Standards:

IEC 60215:2016

Safety requirements for radio transmitting equipment - General requirements and terminology

IEC 60244-1:1999

Methods of measurement for radio transmitters - Part 1: General characteristics for broadcast transmitters

IEC 60244-2:1969

Methods of measurement for radio transmitters. Part 2: Bandwidth, out-of-band power and power of non-essential oscillations

IEC 60244-2:1969/AMD1:1974

Amendment 1 - Methods of measurement for radio transmitters. Part 2: Bandwidth, out-of-band power and power of non-essential oscillations

IEC 60244-3:1972

Methods of measurement for radio transmitters - Part 3: Wanted and unwanted modulation

IEC 60244-4:1973

Methods of measurement for radio transmitters. Part 4: Amplitude/frequency characteristics and non-linearity distortion in transmitters for radiotelephony and sound broadcasting

IEC 60244-5:1992

Methods of measurement for radio transmitters - Part 5: Performance characteristics of television transmitters

IEC 60244-6:1976

Methods of measurement for radio transmitters. Part 6: Cabinet radiation at frequencies between 130 kHz and 1 GHz

IEC 60244-7:1979

Methods of measurement for radio transmitters. Part 7: Cabinet radiation at frequencies above 1 GHz

IEC 60244-8:1993

Methods of measurement for radio transmitters - Part 8: Performance characteristics of vestigial-sideband demodulators used for testing television transmitters and transposers

IEC 60244-9:1993

Methods of measurement for radio transmitters - Part 9: Performance characteristics for television transposers

IEC 60244-10:1986

Methods of measurement for radio transmitters. Part 10: Methods of measurement for television transmitters and transposers employing insertion test signals

IEC 60244-11:1989

Methods of measurement for radio transmitters. Part 11: Transposers for FM sound broadcasting

IEC 60244-13:1991

Methods of measurement for radio transmitters - Part 13: Performance characteristics for FM sound broadcasting

IEC 60244-14:1997

Methods of measurement for radio transmitters - Part 14: External intermodulation products caused by two or more transmitters using the same or adjacent antennas

IEC 60244-15:1999

Methods of measurement for radio transmitters - Part 15: Amplitude-modulated transmitters for sound broadcasting

IEC 60244-2A:1969

Methods of measurement for radio transmitters - Part 2: Bandwidth, out-of-band power and power of non-essential oscillations

IEC 60244-2A:1969/AMD1:1973

Amendment 1 - Methods of measurement for radio transmitters - Part 2: Bandwidth, out-of-band power and power of non-essential oscillations - First supplement: Appendices

IEC 60244-2B:1969

Supplement B - Methods of measurement for radio transmitters - Part 2: Bandwidth, out-of-band power and power of non-essential oscillations - Modulating signals for the measurement of bandwidth and out-of-band power of transmitters for telephony and sound broadcasting

IEC 60244-3A:1971

Methods of measurement for radio transmitters - Part 3: Wanted and unwanted modulation - First supplement: Appendices

IEC 60244-3B:1972

Supplement B - Methods of measurement for radio transmitters - Part 3: Wanted and unwanted modulation - Unwanted modulation, including hum and noise modulation

IEC 60244-4A:1976

Supplement A - Methods of measurement for radio transmitters - Part 4: Amplitude/frequency characteristics and non-linearity distortion in transmitters for radiotelephony and sound broadcasting - Section Three

IEC 60244-7A:1980

Supplement A - Methods of measurement for radio transmitters - Part 7: Cabinet radiation at frequencies above 1 GHz - Medium-sized transmitters - Large transmitters

IEC 60657:1979

Non-ionizing radiation hazards in the frequency range from 10 MHz to 300 000 MHz

IEC 60864-1:1986

Standarisation of interconnections between broadcasting transmitters or transmitter systems and supervisory equipment. Part 1: Interface standards for systems using dedicated interconnections

IEC 60864-1:1986/AMD1:1987

Amendment 1 - Standarisation of interconnections between broadcasting transmitters or transmitter systems and supervisory equipment. Part 1: Interface standards for systems using dedicated interconnections

IEC 60864-2:1997

Standarisation of interconnections between broadcasting transmitters or transmitter systems and supervisory equipment - Part 2: Interface standards for systems using data bus type interconnections

IEC 61566:1997

Measurement of exposure to radio-frequency electromagnetic fields - Field strength in the frequency range 100 kHz to 1 GHz

IEC 62272-2:2007

Digital radio mondiale (DRM) - Part 2: Digital radio in the bands below 30 MHz - Methods of measurement for DRM transmitters

IEC 62273-1:2007

Methods of measurement for radio transmitters - Part 1: Performance characteristics of terrestrial digital television transmitters

IEC 62553:2012

Methods of measurement for digital network - Performance characteristics of terrestrial digital multimedia transmission network

IEC PAS 62593:2008

Measurement method of a half-wavelength voltage for Mach-Zehnder optical modulators in wireless communication and broadcasting systems

IEC 62802:2017

Measurement method of a half-wavelength voltage and a chirp parameter for Mach-Zehnder optical modulator in high-frequency radio on fibre (RoF) systems

IEC 62803:2016

Transmitting equipment for radiocommunication - Frquency response of optical-to-electric conversion device in high-frequency radio over fibre systems - Measurement method

IEC TR 63098-1:2017

Transmitting equipment for radiocommunication - Radio-over-fibre technologies and their performance standard - Part 1: System applications of radio over fibre technology

IEC TR 63099-1:2017

Transmitting equipment for radiocommunication - Radio-over fibre technologies for electromagnetic-field measurement - Part 1: Radio-over-fibre technologies for antenna measurement

IEC TR 63100:2017

Transmitting equipment for radiocommunication - Radio-over-fibre technologies for spectrum measurement - 100-GHz spectrum measurement equipment

Standards under development:

IEC 62801 ED1

Measurement Method of a Half-Wavelength Voltage for Mach-Zehnder Optical Modulator in Wireless Communication and Broadcasting Systems

IEC 63098-2 ED1

Transmitting equipment for radiocommunication – radio-over-fibre technologies and their performance standard - Part 2: Radio over fibre based fronthaul network for railway communication system

IEC 63098-3 ED1

Transmitting equipment for radiocommunication - radio-over-fibre technologies and their performance standard - Part 3: Radio over fibre based remote radar for foreign object and debris (FOD) detection system

IEC TR 63099-2 ED1

Transmitting equipment for radiocommunication - Radio-over-fibre technologies for electromagnetic-field measurement - Part 2: Radio-over-fibre technologies for electric-field sensing

3.2.92 TC 108 - Safety of electronic equipment within the field of audio/video, information technology and communication technology

Keywords:

Mobile Telecommunications,

Scope:

Standarisation in the field of safety for audio/video and similar technology, information technology and communication technology equipment.

Horizontal safety function: Methods of measuring touch current and protective conductor current (IEC 60990) This includes, for various types of equipment, methods of measurement of touch current with regard to physiological effects and of protective conductor current for installation purposes. The methods of measurement consider both normal conditions and certain fault conditions. Safety of equipment electrically connected to a telecommunication network (IEC 62151) Group safety function: Audio, video and similar electronic apparatus - Safety requirements (IEC 60065) Audio/video, information and communication technology equipment - Safety - Part 3: Remote power feeding (IEC 62368-3).

Standards:

IEC 60065:2014

Audio, video and similar electronic apparatus - Safety requirements

IEC 60065:2014/COR1:2015

Corrigendum 1 - Audio, video and similar electronic apparatus - Safety requirements

IEC 60065:2014/COR2:2016

Corrigendum 2 - Audio, video and similar electronic apparatus - Safety requirements

IEC 60065:2014/COR3:2018

Corrigendum 3 - Audio, video and similar electronic apparatus - Safety requirements

IEC 60950-1:2005+AMD1:2009+AMD2:2013 CSV

Information technology equipment - Safety - Part 1: General requirements

IEC 60950-1:2005+AMD1:2009 CSV

Information technology equipment - Safety - Part 1: General requirements

IEC 60950-1:2005

Information technology equipment - Safety - Part 1: General requirements

IEC 60950-1:2005/COR1:2006

Corrigendum 1 - Information technology equipment - Safety - Part 1: General requirements

IEC 60950-1:2005/COR2:2013

Corrigendum 2 - Information technology equipment - Safety - Part 1: General requirements

IEC 60950-1:2005/AMD1:2009

Amendment 1 - Information technology equipment - Safety - Part 1: General requirements

IEC 60950-1:2005/AMD1:2009/COR1:2012

Corrigendum 1 - Amendment 1 - Information technology equipment - Safety - Part 1: General requirements

IEC 60950-1:2005/AMD2:2013

Amendment 2 - Information technology equipment - Safety - Part 1: General requirements

IEC 60950-21:2002

Information technology equipment - Safety - Part 21: Remote power feeding

IEC 60950-21:2002/COR1:2003

Corrigendum 1 - Information technology equipment - Safety - Part 21: Remote power feeding

IEC 60950-22:2016 RLV

Information technology equipment - Safety - Part 22: Equipment to be installed outdoors

IEC 60950-22:2016

Information technology equipment - Safety - Part 22: Equipment to be installed outdoors

IEC 60950-23:2005

Information technology equipment - Safety - Part 23: Large data storage equipment

IEC 60990:2016 RLV

Methods of measurement of touch current and protective conductor current

IEC 60990:2016

Methods of measurement of touch current and protective conductor current

IEC TR 62102:2005

Electrical safety - Classification of interfaces for equipment to be connected to information and communications technology networks

IEC 62151:2000

Safety of equipment electrically connected to a telecommunication network

IEC 62151:2000/COR1:2001

Corrigendum 1 - Safety of equipment electrically connected to a telecommunication network

IEC 62151:2000/COR2:2001

Corrigendum 2 - Safety of equipment electrically connected to a telecommunication network

IEC TS 62367:2004

Safety aspects for xDSL signals on circuits connected to telecommunication networks (DSL: Digital Subscriber Line)

IEC 62368-1:2018

Audio/video, information and communication technology equipment - Part 1: Safety requirements

IEC 62368-1:2018 RLV

Audio/video, information and communication technology equipment - Part 1: Safety requirements

IEC 62368-1:2018/COR1:2020

Corrigendum 1 - Audio/video, information and communication technology equipment - Part 1: Safety requirements

IEC TR 62368-2:2019

Audio/video, information and communication technology equipment - Part 2: Explanatory information related to IEC 62368-1:2018

IEC TR 62368-2:2019 RLV

Audio/video, information and communication technology equipment - Part 2: Explanatory information related to IEC 62368-1:2018

IEC 62368-3:2017

Audio/video, information and communication technology equipment - Part 3: Safety aspects for DC power transfer through communication cables and ports

IEC TS 62441:2011

Safeguards againts accidentally caused candle flame ignition for audio/video, communication and information technology equipment

IEC 62911:2016

Audio, video and information technology equipment - Routine electrical safety testing in production

IEC 62949:2017

Particular safety requirements for equipment to be connected to information and communication technology networks

Standards under development:

PNW 108-729

AUDIO/VIDEO, INFORMATION AND COMMUNICATION TECHNOLOGY EQUIPMENT – SAFETY – DC power transfer between ICT equipment ports using ICT cabling at ≤ 60 VDC

PNW 108-730

AUDIO/VIDEO, INFORMATION AND COMMUNICATION TECHNOLOGY EQUIPMENT – SAFETY – Power transfer between Communications equipment ports using Communications cabling at ≥ 60 VDC and AC

3.2.93 TC 57 - Power systems management and associated information exchange

Keywords:

Mobile Telecommunications, Telecontrol protocols, Distribution automation using distribution line carrier systems, Power system IED communication and associated data models, Software interfaces for operation and planning of the electric grid, Enterprise business function interfaces for utility operations, Data and communication security, Deregulated energy market communications, Power system intelligent electronic device communication and associated data models for microgrids, distributed energy resources and distribution automation Hydroelectric power plants, Communication for monitoring and control**, Interoperability**, Interfaces and protocol profiles relevant to systems connected to the electrical grid

Scope:

To prepare international standards for power systems control equipment and systems including EMS (Energy Management Systems), SCADA (Supervisory Control And Data Acquisition), distribution automation, teleprotection, and associated information exchange for real-time and non-real-time information, used in the planning, operation and maintenance of power systems. Power systems management comprises control within control centres, substations and individual pieces of primary equipment including telecontrol and interfaces to equipment, systems and databases, which may be outside the scope of TC 57. The special conditions in a high voltage environment have to be taken into consideration.

Note 1: Standards prepared by other technical committees of the IEC and organizations such as ITU and ISO shall be used where applicable.

Note 2: Although the work of TC 57 is chiefly concerned with standards for electric power systems, these standards may also be useful for application by the relevant bodies to other geographical widespread processes.

Note 3: Whereas standards related to measuring and protection relays and to the control and monitoring equipment used with these systems are treated by TC 95, TC 57 deals with the interface to the control systems and the transmission aspects for teleprotection systems. Whereas standards related to equipment for electrical measurement and load control are treated by TC 13, TC 57 deals with the interface of equipment for interconnection lines and industrial consumers and producers requiring energy management type interfaces to the control system.

Standards:

IEC 60353:1989

Line traps for AC power systems

IEC 60353:1989/AMD1:2002

Amendment 1 - Line traps for AC power systems

IEC 60481:1974

Coupling devices for power line carrier systems

IEC 60495:1993

Single sideband power-line carrier terminals

IEC TR 60663:1980

Planning of (single-sideband) power line carrier systems

IEC 60834-1:1999

Teleprotection equipment of power systems - Performance and testing - Part 1: Command systems

IEC 60834-2:1993

Performance and testing of teleprotection equipment of power systems - Part 2: Analogue comparison systems

IEC 60870-5:2020 SER

Telecontrol equipment and systems - Part 5: Transmission protocols - ALL PARTS

IEC TR 60870-1-1:1988

Telecontrol equipment and systems. Part 1: General considerations. Section One: General principles

IEC 60870-1-2:1989

Telecontrol equipment and systems. Part 1: General considerations. Section Two: Guide for specifications

IEC TR 60870-1-3:1997

Telecontrol equipment and systems - Part 1: General considerations - Section 3: Glossary

IEC TR 60870-1-4:1994

Telecontrol equipment and systems - Part 1: General considerations - Section 4: Basic aspects of telecontrol data transmission and organization of standards IEC 870-5 and IEC 870-6

IEC TR 60870-1-5:2000

Telecontrol equipment and systems - Part 1-5: General considerations - Influence of modem transmission procedures with scramblers on the data integrity of transmission systems using the protocol IEC 60870-5

IEC 60870-2-1:1995

Telecontrol equipment and systems - Part 2: Operating conditions - Section 1: Power supply and electromagnetic compatibility

IEC 60870-2-2:1996

Telecontrol equipment and systems - Part 2: Operating conditions -Section 2: Environmental conditions (climatic, mechanical and othernon electrical influences)

IEC 60870-3:1989

Telecontrol equipment and systems. Part 3: Interfaces (electrical characteristics)

IEC 60870-4:1990

Telecontrol equipment and systems. Part 4: Performance requirements

IEC 60870-5-1:1990

Telecontrol equipment and systems. Part 5: Transmission protocols - Section One: Transmission frame formats

IEC 60870-5-2:1992

Telecontrol equipment and systems - Part 5: Transmission protocols - Section 2: Link transmission procedures

IEC 60870-5-3:1992

Telecontrol equipment and systems - Part 5: Transmission protocols - Section 3: General structure of application data

IEC 60870-5-4:1993

Telecontrol equipment and systems - Part 5: Transmission protocols - Section 4: Definition and coding of application information elements

IEC 60870-5-5:1995

Telecontrol equipment and systems - Part 5: Transmission protocols - Section 5: Basic application functions

IEC 60870-5-6:2006

Telecontrol equipment and systems - Part 5-6: Guidelines for conformance testing for the IEC 60870-5 companion standards

IEC TS 60870-5-7:2013

Telecontrol equipment and systems - Part 5-7: Transmission protocols - Security extensions to IEC 60870-5-101 and IEC 60870-5-104 protocols (applying IEC 62351)

IEC 60870-5-101:2003+AMD1:2015 CSV

Telecontrol equipment and systems - Part 5-101: Transmissionprotocols - Companion standard for basic telecontrol tasks

IEC 60870-5-101:2003

Telecontrol equipment and systems - Part 5-101: Transmission protocols - Companion standard for basic telecontrol tasks

IEC 60870-5-101:2003/AMD1:2015

Amendment 1 - Telecontrol equipment and systems - Part 5-101: Transmission protocols - Companion standard for basic telecontrol tasks

IEC 60870-5-102:1996

Telecontrol equipment and systems - Part 5: Transmission protocols - Section 102: Companion standard for the transmission of integrated totals in electric power systems

IEC 60870-5-103:1997

Telecontrol equipment and systems - Part 5-103: Transmission protocols - Companion standard for the informative interface of protection equipment

IEC 60870-5-104:2006+AMD1:2016 CSV

Telecontrol equipment and systems - Part 5-104: Transmission protocols - Network access for IEC 60870-5-101 using standardtransport profiles

IEC 60870-5-104:2006

Telecontrol equipment and systems - Part 5-104: Transmission protocols - Network access for IEC 60870-5-101 using standard transport profiles

IEC 60870-5-104:2006/AMD1:2016

Amendment 1 - Telecontrol equipment and systems - Part 5-104: Transmission protocols - Network access for IEC 60870-5-101 using standard transport profiles

IEC TS 60870-5-601:2015

Telecontrol equipment and systems - Part 5-601: Transmission protocols - Conformance test cases for the IEC 60870-5-101 companion standard

IEC TS 60870-5-604:2016 RLV

Telecontrol equipment and systems - Part 5-604: Conformance test cases for the IEC 60870-5-104 companion standard

IEC TS 60870-5-604:2016

Telecontrol equipment and systems - Part 5-604: Conformance test cases for the IEC 60870-5-104 companion standard

IEC TR 60870-6-1:1995

Telecontrol equipment and systems - Part 6: Telecontrol protocols compatible with ISO standards and ITU-T recommendations - Section 1: Application context and organization of standards

IEC 60870-6-2:1995

Telecontrol equipment and systems - Part 6: Telecontrol protocols compatible with ISO standards and ITU-T recommendations - Section 2: Use of basic standards (OSI layers 1-4)

IEC 60870-6-501:1995

Telecontrol equipment and systems - Part 6: Telecontrol protocols compatible with ISO standards and ITU-T recommendations - Section 501: TASE.1 Service definitions

IEC 60870-6-502:1995

Telecontrol equipment and systems - Part 6: Telecontrol protocols compatible with ISO standards and ITU-T recommendations - Section 502: TASE.1 Protocol definitions

IEC 60870-6-503:2014

Telecontrol equipment and systems - Part 6-503: Telecontrol protocols compatible with ISO standards and ITU-T recommendations - TASE.2 Services and protocol

IEC TS 60870-6-504:1998

Telecontrol equipment and systems - Part 6-504: Telecontrol protocols compatible with ISO standards and ITU-T recommendations - TASE.1 User conventions

IEC TR 60870-6-505:2002+AMD1:2005 CSV

Telecontrol equipment and systems - Part 6-505: Telecontrol protocols compatible with ISO standards and ITU-T recommendations - TASE.2 User guide

IEC TR 60870-6-505:2002

Telecontrol equipment and systems - Part 6-505: Telecontrol   protocols compatible with ISO standards and ITU-T recommendations - TASE.2 User guide

IEC TR 60870-6-505:2002/AMD1:2005

Amendment 1 - Telecontrol equipment and systems - Part 6-505: Telecontrol protocols compatible with ISO standards and ITU-T recommendations - Tase.2 User guide

IEC 60870-6-601:1994

Telecontrol equipment and systems - Part 6: Telecontrol protocol s compatible with ISO standards and ITU-T recommendations - Sect ion 601: Functional profile for providing the connection-oriente d transport service in an end system connected via permanent acc ess to a packet switched data network

IEC TS 60870-6-602:2001

Telecontrol equipment and systems - Part 6-602: Telecontrol protocols compatible with ISO standards and ITU-T recommendations - TASE transport profiles

IEC 60870-6-701:1998

Telecontrol equipment and systems - Part 6-701: Telecontrol protocols compatible with ISO standards and ITU-T recommendations - Functional profile for providing the TASE.1 application service in end systems

IEC 60870-6-702:2014

Telecontrol equipment and systems - Part 6-702: Telecontrol protocols compatible with ISO standards and ITU-T recommendations - Functional profile for providing the TASE.2 application service in end systems

IEC 60870-6-802:2014

Telecontrol equipment and systems - Part 6-802: Telecontrol protocols compatible with ISO standards and ITU-T recommendations - TASE.2 Object models

IEC TS 61085:1992

General considerations for telecommunication services for electric power systems

IEC TR 61334-1-1:1995

Distribution automation using distribution line carrier systems - Part 1: General considerations - Section 1: Distribution automation system architecture

IEC TR 61334-1-2:1997

Distribution automation using distribution line carrier systems - Part 1-2: General considerations - Guide for specification

IEC TR 61334-1-4:1995

Distribution automation using distribution line carrier systems - Part 1: General considerations - Section 4: Identification of data transmission parameters concerning medium and low-voltage distribution mains

IEC 61334-3-1:1998

Distribution automation using distribution line carrier systems - Part 3-1: Mains signalling requirements - Frequency bands and output levels

IEC 61334-3-21:1996

Distribution automation using distribution line carrier systems - Part 3: Mains signalling requirements - Section 21: MV phase-to-phase isolated capacitive coupling device

IEC 61334-3-22:2001

Distribution automation using distribution line carrier systems - Part 3-22: Mains signalling requirements - MV phase-to-earth and screen-to-earth intrusive coupling devices

IEC 61334-4-1:1996

Distribution automation using distribution line carrier systems - Part 4: Data communication protocols - Section 1: Reference model of the communication system

IEC 61334-4-32:1996

Distribution automation using distribution line carrier systems - Part 4: Data communication protocols - Section 32: Data link layer - Logical link control (LLC)

IEC 61334-4-33:1998

Distribution automation using distribution line carrier systems - Part 4-33: Data communication protocols - Data link layer - Connection oriented protocol

IEC 61334-4-41:1996

Distribution automation using distribution line carrier systems - Part 4: Data communication protocols - Section 41: Application protocol - Distribution line message specification

IEC 61334-4-42:1996

Distribution automation using distribution line carrier systems -Part 4: Data communication protocols - Section 42: Applicationprotocols - Application layer

IEC 61334-4-61:1998

Distribution automation using distribution line carrier systems - Part 4-61: Data communication protocols - Network layer - Connectionless protocol

IEC 61334-4-511:2000

Distribution automation using distribution line carrier systems - Part 4-511: Data communication protocols - Systems management - CIASE protocol

IEC 61334-4-512:2001

Distribution automation using distribution line carrier systems - Part 4-512: Data communication protocols - System management using profile 61334-5-1 - Management Information Base (MIB)

IEC 61334-5-1:2001

Distribution automation using distribution line carrier systems - Part 5-1: Lower layer profiles - The spread frequency shift keying (S-FSK) profile

IEC TS 61334-5-2:1998

Distribution automation using distribution line carrier systems - Part 5-2: Lower layer profiles - Frequency shift keying (FSK) profile

IEC TS 61334-5-3:2001

Distribution automation using distribution line carrier systems - Part 5-3: Lower-layer profiles - Spread spectrum adaptive wideband (SS-AW) profile

IEC TS 61334-5-4:2001

Distribution automation using distribution line carrier systems - Part 5-4: Lower layer profiles - Multi-carrier modulation (MCM) profile

IEC TS 61334-5-5:2001

Distribution automation using distribution line carrier systems - Part 5-5: Lower layer profiles - Spread spectrum - fast frequency hopping (SS-FFH) profile

IEC 61334-6:2000

Distribution automation using distribution line carrier systems - Part 6: A-XDR encoding rule

IEC 61850:2020 SER

Communication networks and systems for power utility automation - ALL PARTS

IEC TR 61850-1:2013

Communication networks and systems for power utility automation - Part 1: Introduction and overview

IEC TS 61850-2:2019

Communication networks and systems for power utility automation - Part 2: Glossary

IEC 61850-3:2013

Communication networks and systems for power utility automation - Part 3: General requirements

IEC 61850-4:2011

Communication networks and systems for power utility automation - Part 4: System and project management

IEC 61850-5:2013

Communication networks and systems for power utility automation - Part 5: Communication requirements for functions and device models

IEC 61850-6:2009+AMD1:2018 CSV

Communication networks and systems for power utility automation - Part 6: Configuration description language for communication in power utility automation systems related to IEDs

IEC 61850-6:2009

Communication networks and systems for power utility automation - Part 6: Configuration description language for communication in electrical substations related to IEDs

IEC 61850-6:2009/AMD1:2018

Amendment 1 - Communication networks and systems for power utility automation - Part 6: Configuration description language for communication in power utility automation systems related to IEDs

IEC 61850-7-1:2011

Communication networks and systems for power utility automation - Part 7-1: Basic communication structure - Principles and models

IEC 61850-7-1/AMD1:2020 PRV

Amendment 1 - Communication networks and systems for power utility automation - Part 7-1: Basic communication structure - Principles and models

IEC 61850-7-2:2010+AMD1:2020 CSV

Communication networks and systems for power utility automation - Part 7-2: Basic information and communication structure - Abstract communication service interface (ACSI)

IEC 61850-7-2:2010

Communication networks and systems for power utility automation - Part 7-2: Basic information and communication structure - Abstract communication service interface (ACSI)

IEC 61850-7-2:2010/AMD1:2020

Amendment 1 - Communication networks and systems for power utility automation - Part 7-2: Basic information and communication structure - Abstract communication service interface (ACSI)

IEC 61850-7-3:2010+AMD1:2020 CSV

Communication networks and systems for power utility automation - Part 7-3: Basic communication structure - Common data classes

IEC 61850-7-3:2010

Communication networks and systems for power utility automation - Part 7-3: Basic communication structure - Common data classes

IEC 61850-7-3:2010/AMD1:2020

Amendment 1 - Communication networks and systems for power utility automation - Part 7-3: Basic communication structure - Common data classes

IEC 61850-7-4:2010+AMD1:2020 CSV

Communication networks and systems for power utility automation - Part 7-4: Basic communication structure - Compatible logical node classes and data object classes

IEC 61850-7-4:2010

Communication networks and systems for power utility automation - Part 7-4: Basic communication structure - Compatible logical node classes and data object classes

IEC 61850-7-4:2010/AMD1:2020

Amendment 1 - Communication networks and systems for power utility automation - Part 7-4: Basic communication structure - Compatible logical node classes and data object classes

IEC TR 61850-7-6:2019

Communication networks and systems for power utility automation - Part 7-6: Guideline for definition of Basic Application Profiles (BAPs) using IEC 61850

IEC TS 61850-7-7:2018

Communication networks and systems for power utility automation - Part 7-7: Machine-processable format of IEC 61850-related data models for tools

IEC 61850-7-410:2012+AMD1:2015 CSV

Communication networks and systems for power utility automation - Part 7-410: Basic communication structure - Hydroelectric power plants - Communication for monitoring and control

IEC 61850-7-410:2012

Communication networks and systems for power utility automation - Part 7-410: Basic communication structure - Hydroelectric power plants - Communication for monitoring and control

IEC 61850-7-410:2012/AMD1:2015

Amendment 1 - Communication networks and systems for power utility automation - Part 7-410: Basic communication structure - Hydroelectric power plants - Communication for monitoring and control

IEC 61850-7-420:2009

Communication networks and systems for power utility automation - Part 7-420: Basic communication structure - Distributed energy resources logical nodes

IEC TR 61850-7-500:2017

Communication networks and systems for power utility automation - Part 7-500: Basic information and communication structure - Use of logical nodes for modeling application functions and related concepts and guidelines for substations

IEC TR 61850-7-510:2012

Communication networks and systems for power utility automation - Part 7-510: Basic communication structure - Hydroelectric power plants - Modelling concepts and guidelines

IEC 61850-8-1:2011+AMD1:2020 CSV

Communication networks and systems for power utility automation - Part 8-1: Specific communication service mapping (SCSM) - Mappings to MMS (ISO 9506-1 and ISO 9506-2) and to ISO/IEC 8802-3

IEC 61850-8-1:2011

Communication networks and systems for power utility automation - Part 8-1: Specific communication service mapping (SCSM) - Mappings to MMS (ISO 9506-1 and ISO 9506-2) and to ISO/IEC 8802-3

IEC 61850-8-1:2011/AMD1:2020

Amendment 1 - Communication networks and systems for power utility automation - Part 8-1: Specific communication service mapping (SCSM) - Mappings to MMS (ISO 9506-1 and ISO 9506-2) and to ISO/IEC 8802-3

IEC 61850-8-2:2018

Communication networks and systems for power utility automation - Part 8-2: Specific communication service mapping (SCSM) - Mapping to Extensible Messaging Presence Protocol (XMPP)

IEC 61850-9-2:2011+AMD1:2020 CSV

Communication networks and systems for power utility automation - Part 9-2: Specific communication service mapping (SCSM) - Sampled values over ISO/IEC 8802-3

IEC 61850-9-2:2011

Communication networks and systems for power utility automation - Part 9-2: Specific communication service mapping (SCSM) - Sampled values over ISO/IEC 8802-3

IEC 61850-9-2:2011/AMD1:2020

Amendment 1 - Communication networks and systems for power utility automation - Part 9-2: Specific communication service mapping (SCSM) - Sampled values over ISO/IEC 8802-3

IEC/IEEE 61850-9-3:2016

Communication networks and systems for power utility automation - Part 9-3: Precision time protocol profile for power utility automation

IEC 61850-10:2012

Communication networks and systems for power utility automation - Part 10: Conformance testing

IEC TS 61850-80-1:2016

Communication networks and systems for power utility automation - Part 80-1: Guideline to exchanging information from a CDC-based data model using IEC 60870-5-101 or IEC 60870-5-104

IEC TR 61850-80-3:2015

Communication networks and systems for power utility automation - Part 80-3: Mapping to web protocols - Requirements and technical choices

IEC TS 61850-80-4:2016

Communication networks and systems for power utility automation - Part 80-4: Translation from the COSEM object model (IEC 62056) to the IEC 61850 data model

IEC TR 61850-90-1:2010

Communication networks and systems for power utility automation - Part 90-1: Use of IEC 61850 for the communication between substations

IEC TR 61850-90-2:2016

Communication networks and systems for power utility automation - Part 90-2: Using IEC 61850 for communication between substations and control centres

IEC TR 61850-90-3:2016

Communication networks and systems for power utility automation - Part 90-3: Using IEC 61850 for condition monitoring diagnosis and analysis

IEC TR 61850-90-4:2013

Communication networks and systems for power utility automation - Part 90-4: Network engineering guidelines

IEC TR 61850-90-5:2012

Communication networks and systems for power utility automation - Part 90-5: Use of IEC 61850 to transmit synchrophasor information according to IEEE C37.118

IEC TR 61850-90-6:2018

Communication networks and systems for power utility automation - Part 90-6: Use of IEC 61850 for Distribution Automation Systems

IEC TR 61850-90-6:2018/COR1:2020

Corrigendum 1 - Communication networks and systems for power utility automation - Part 90-6: Use of IEC 61850 for Distribution Automation Systems

IEC TR 61850-90-7:2013

Communication networks and systems for power utility automation - Part 90-7: Object models for power converters in distributed energy resources (DER) systems

IEC TR 61850-90-8:2016

Communication networks and systems for power utility automation - Part 90-8: Object model for E-mobility

IEC TR 61850-90-10:2017

Communication networks and systems for power utility automation - Part 90-10: Models for scheduling

IEC TR 61850-90-12:2015

Communication networks and systems for power utility automation - Part 90-12: Wide area network engineering guidelines

IEC TR 61850-90-17:2017

Communication networks and systems for power utility automation - Part 90-17: Using IEC 61850 to transmit power quality data

IEC 61968-1:2020

Application integration at electric utilities - System interfaces for distribution management - Part 1: Interface architecture and general recommendations

IEC TS 61968-2:2011

Application integration at electric utilities - System interfaces for distribution management - Part 2: Glossary

IEC 61968-3:2017

Application integration at electric utilities - System interfaces for distribution management - Part 3: Interface for network operations

IEC 61968-4:2019

Application integration at electric utilities - System interfaces for distribution management - Part 4: Interfaces for records and asset management

IEC 61968-6:2015

Application integration at electric utilities - System interfaces for distribution management - Part 6: Interfaces for maintenance and construction

IEC 61968-8:2015

Application integration at electric utilities - System interfaces for distribution management - Part 8: Interfaces for customer operations

IEC 61968-9:2013

Application integration at electric utilities - System interfaces for distribution management - Part 9: Interfaces for meter reading and control

IEC 61968-11:2013

Application integration at electric utilities - System interfaces for distribution management - Part 11: Common information model (CIM) extensions for distribution

IEC 61968-13:2008

Application integration at electric utilities - System interfaces for distribution management - Part 13: CIM RDF Model exchange format for distribution

IEC TS 61968-14:2015

Application integration at electric utilities - System interfaces for distribution management - Part 14: MultiSpeak - CIM harmonization

IEC 61968-100:2013

Application integration at electric utilities - System interfaces for distribution management - Part 100: Implementation profiles

IEC TR 61968-900:2015

Application integration at electric utilities - System interfaces for distribution management - Part 900: Guidance for implementation of IEC 61968-9

IEC 61970:2020 SER

Energy management system application program interface (EMS-API) - ALL PARTS

IEC 61970-1:2005

Energy management system application program interface (EMS-API) - Part 1: Guidelines and general requirements

IEC TS 61970-2:2004

Energy management system application program interface (EMS-API) - Part 2: Glossary

IEC 61970-301:2020 PRV

Energy management system application program interface (EMS-API) - Part 301: Common information model (CIM) base

IEC 61970-301:2016 RLV

Energy management system application program interface (EMS-API) - Part 301: Common information model (CIM) base

IEC 61970-301:2016

Energy management system application program interface (EMS-API) - Part 301: Common information model (CIM) base

IEC 61970-302:2018

Energy management system application program interface (EMS-API) - Part 302: Common information model (CIM) dynamics

IEC TS 61970-401:2005

Energy management system application program interface (EMS-API) - Part 401: Component interface specification (CIS) framework

IEC 61970-452:2017

Energy management system application program interface (EMS-API) - Part 452: CIM static transmission network model profiles

IEC 61970-453:2014+AMD1:2018 CSV

Energy management system application program interface (EMS-API) - Part 453: Diagram layout profile

IEC 61970-453:2014

Energy management system application program interface (EMS-API) - Part 453: Diagram layout profile

IEC 61970-453:2014/AMD1:2018

Amendment 1 - Energy management system application program interface (EMS-API) - Part 453: Diagram layout profile

IEC 61970-456:2018

Energy management system application program interface (EMS-API) - Part 456: Solved power system state profiles

IEC 61970-501:2006

Energy management system application program interface (EMS-API) - Part 501: Common Information Model Resource Description Framework (CIM RDF) schema

IEC 61970-552:2016

Energy management system application program interface (EMS-API) - Part 552: CIMXML Model exchange format

IEC TS 61970-555:2016

Energy management system application program interface (EMS-API) - Part 555: CIM based efficient model exchange format (CIM/E)

IEC TS 61970-556:2016

Energy management system application program interface (EMS-API) - Part 556: CIM based graphic exchange format (CIM/G)

IEC TS 61970-600-1:2017

Energy management system application program interface (EMS-API) - Part 600-1: Common Grid Model Exchange Specification (CGMES) - Structure and rules

IEC TS 61970-600-2:2017

Energy management system application program interface (EMS-API) - Part 600-2: Common Grid Model Exchange Specification (CGMES) - Exchange profiles specification

IEC 61970-CGMES:2020

Energy management system application program interface (EMS-API) - Common Grid Model Exchange Specification (CGMES)

IEC TR 62325-103:2017

Framework for energy market communications - Part 103: Review of information exchanges within the deregulated European style retail energy market from a CIM perspective

IEC 62325-301:2018

Framework for energy market communications - Part 301: Common information model (CIM) extensions for markets

IEC 62325-351:2016

Framework for energy market communications - Part 351: CIM European market model exchange profile

IEC 62325-450:2013

Framework for energy market communications - Part 450: Profile and context modelling rules

IEC 62325-451-1:2017

Framework for energy market communications - Part 451-1: Acknowledgement business process and contextual model for CIM European market

IEC 62325-451-2:2014

Framework for energy market communications - Part 451-2: Scheduling business process and contextual model for CIM European market

IEC 62325-451-2:2014/COR1:2016

Corrigendum 1 - Framework for energy market communications - Part 451-2: Scheduling business process and contextual model for CIM European market

IEC 62325-451-3:2014+AMD1:2017 CSV

Framework for energy market communications - Part 451-3: Transmission capacity allocation business process (explicit or implicit auction) and contextual models for European market

IEC 62325-451-3:2014

Framework for energy market communications - Part 451-3: Transmission capacity allocation business process (explicit or implicit auction) and contextual models for European market

IEC 62325-451-3:2014/AMD1:2017

Amendment 1 - Framework for energy market communications - Part 451-3: Transmission capacity allocation business process (explicit or implicit auction) and contextual models for European market

IEC 62325-451-4:2017

Framework for energy market communications - Part 451-4: Settlement and reconciliation business process, contextual and assembly models for European market

IEC 62325-451-5:2015

Framework for energy market communications - Part 451-5: Problem statement and status request business processes, contextual and assembly models for European market

IEC 62325-451-6:2018

Framework for energy market communications - Part 451-6: Publication of information on market, contextual and assembly models for European-style markets

IEC TS 62325-502:2005

Framework for energy market communications - Part 502: Profile of ebXML

IEC 62325-503:2018

Framework for energy market communications - Part 503: Market data exchanges guidelines for the IEC 62325-351 profile

IEC TS 62325-504:2015

Framework for energy market communications - Part 504: Utilization of web services for electronic data interchanges on the European energy market for electricity

IEC 62351:2020 SER

Power systems management and associated information exchange - Data and communications security - ALL PARTS

IEC TS 62351-1:2007

Power systems management and associated information exchange - Data and communications security - Part 1: Communication network and system security - Introduction to security issues

IEC TS 62351-2:2008

Power systems management and associated information exchange - Data and communications security - Part 2: Glossary of terms

IEC 62351-3:2014+AMD1:2018+AMD2:2020 CSV

Power systems management and associated information exchange - Data and communications security - Part 3: Communication network and system security - Profiles including TCP/IP

IEC 62351-3:2014+AMD1:2018 CSV

Power systems management and associated information exchange - Data and communications security - Part 3: Communication network and system security - Profiles including TCP/IP

IEC 62351-3:2014

Power systems management and associated information exchange - Data and communications security - Part 3: Communication network and system security - Profiles including TCP/IP

IEC 62351-3:2014/AMD1:2018

Amendment 1 - Power systems management and associated information exchange - Data and communications security - Part 3: Communication network and system security - Profiles including TCP/IP

IEC 62351-3:2014/AMD2:2020

Amendment 2 - Power systems management and associated information exchange - Data and communications security - Part 3: Communication network and system security - Profiles including TCP/IP

IEC 62351-4:2018

Power systems management and associated information exchange - Data and communications security - Part 4: Profiles including MMS and derivatives

IEC 62351-4/AMD1:2020 PRV

Amendment 1 - Power systems management and associated information exchange - Data and communications security - Part 4: Profiles including MMS and derivatives

IEC TS 62351-5:2013

Power systems management and associated information exchange - Data and communications security - Part 5: Security for IEC 60870-5 and derivatives

IEC TS 62351-6:2007

Power systems management and associated information exchange - Data and communications security - Part 6: Security for IEC 61850

IEC 62351-7:2017

Power systems management and associated information exchange - Data and communications security - Part 7: Network and System Management (NSM) data object models

IEC 62351-8:2020

Power systems management and associated information exchange - Data and communications security - Part 8: Role-based access control for power system management

IEC 62351-9:2017

Power systems management and associated information exchange - Data and communications security - Part 9: Cyber security key management for power system equipment

IEC TR 62351-10:2012

Power systems management and associated information exchange - Data and communications security - Part 10: Security architecture guidelines

IEC 62351-11:2016

Power systems management and associated information exchange - Data and communications security - Part 11: Security for XML documents

IEC TR 62351-12:2016

Power systems management and associated information exchange - Data and communications security - Part 12: Resilience and security recommendations for power systems with distributed energy resources (DER) cyber-physical systems

IEC TR 62351-13:2016

Power systems management and associated information exchange - Data and communications security - Part 13: Guidelines on security topics to be covered in standards and specifications

IEC TR 62351-90-1:2018

Power systems management and associated information exchange - Data and communications security - Part 90-1: Guidelines for handling role-based access control in power systems

IEC TR 62351-90-2:2018

Power systems management and associated information exchange - Data and communications security - Part 90-2: Deep packet inspection of encrypted communications

IEC TS 62351-100-1:2018

Power systems management and associated information exchange - Data and communications security - Part 100-1: Conformance test cases for IEC TS 62351-5 and IEC TS 60870-5-7

IEC TS 62351-100-3:2020

Power systems management and associated information exchange - Data and communications security - Part 100-3: Conformance test cases for the IEC 62351-3, the secure communication extension for profiles including TCP/IP

IEC TR 62357-1:2016

Power systems management and associated information exchange - Part 1: Reference architecture

IEC TR 62357-2:2019

Power systems management and associated information exchange - Part 2: Use Cases and role model

IEC TR 62357-200:2015

Power systems management and associated information exchange - Part 200: Guidelines for migration from Internet Protocol version 4 (IPv4) to Internet Protocol version 6 (IPv6)

IEC 62361-2:2013

Power systems management and associated information exchange - Interoperability in the long term - Part 2: End to end quality codes for supervisory control and data acquisition (SCADA)

IEC 62361-100:2016

Power systems management and associated information exchange - Interoperability in the long term - Part 100: CIM profiles to XML schema mapping

IEC TS 62361-102:2018

Power systems management and associated information exchange - Interoperability in the long term - Part 102: CIM - IEC 61850 harmonization

IEC TR 62361-103:2018

Power systems management and associated information exchange - Interoperability in the long term - Part 103: Standard profiling

IEC 62488-1:2012

Power line communication systems for power utility applications - Part 1: Planning of analogue and digital power line carrier systems operating over EHV/HV/MV electricity grids

IEC 62488-2:2017

Power line communication systems for power utility applications - Part 2: Analogue power line carrier terminals or APLC

IEC 62488-2:2017/COR1:2020

Corrigendum 1 - Power line communication systems for power utility applications - Part 2: Analogue power line carrier terminals or APLC

IEC TR 62746-2:2015

Systems interface between customer energy management system and the power management system - Part 2: Use cases and requirements

IEC TS 62746-3:2015

Systems interface between customer energy management system and the power management system - Part 3: Architecture

IEC 62843:2013

Standard for N times 64 kilobit per second optical fiber interfaces between teleprotection and multiplexer equipment

Standards under development:

PWI TR 57-1000 ED

IEC TR 61850-90-13, Deterministic networking technologies

PWI TR 57-1001

Development of IEC TR 61850-6-100, SCL Function Modelling for Substation Automation

PWI TR 57-1003

IEC TR 61850-90-22, SCD based substation network auto-routing with visualization and supervision support

PNW 57-2094 ED1

Energy Management System Application Program Interface (EMS-API) – Part 457: Dynamics profile

IEC TS 61850-1-2 ED1

Communication networks and systems for power utility automation - Part 1-2: Guideline on extending IEC 61850

IEC 61850-4/AMD1 ED2

Amendment 1 - Communication networks and systems for power utility automation - Part 4: System and project management

IEC 61850-5/AMD1 ED2

Amendment 1 - Communication networks and systems for power utility automation - Part 5: Communication requirements for functions and device models

IEC 61850-6-2 ED1

Communication networks and systems for power utility automation - Part 6-2: Configuration description language for extensions for human machine interfaces

IEC 61850-7-1/AMD1 ED2

Amendment 1 - Communication networks and systems for power utility automation - Part 7-1: Basic communication structure - Principles and models

PWI 61850-7-5 ED1

IEC 61850 modeling concepts

IEC 61850-7-420 ED2

Communication networks and systems for power utility automation - Part 7-420: Basic communication structure - Distributed energy resources and distribution automation logical nodes

IEC TR 61850-10-3 ED1

Communication networks and systems for power utility automation - Part 10-3: Functional testing of IEC 61850 systems

IEC TS 61850-80-5 ED1

Communication networks and systems for power utility automation - Part 80-5: Guideline for mapping information between IEC 61850 and IEC 61158-6 (Modbus)

IEC TR 61850-90-4 ED2

Communication networks and systems for power utility automation - Part 90-4: Network engineering guidelines

IEC TR 61850-90-9 ED1

Communication networks and systems for power utility automation – Part 90-9: Use of IEC 61850 for Electrical Energy Storage Systems

IEC TR 61850-90-11 ED1

Communication networks and systems for power utility automation – Part 90-11: Methodologies for modelling of logics for IEC 61850 based applications

IEC TR 61850-90-12 ED2

Communication networks and systems for power utility automation - Part 90-12: Wide area network engineering guidelines

PWI 61850-90-14 ED1

Using IEC 61850 for FACTS data modeling

IEC TS 61850-90-16 ED1

Communication networks and systems for power utility automation - Part 90-16: System management for IEC 61850

IEC TR 61850-90-19 ED1

Communication networks and systems for power utility automation - Part 90-19: Using Role Based Access Control (RBAC) and IEC 61850

PWI 61850-90-20 ED1

Communication networks and systems for power utility automation - Part 90-20: Guideline to redundancy systems

IEC 61968-5 ED1

Application integration at electric utilities - System interfaces for distribution management – Part 5: Distributed energy optimization

IEC 61968-9 ED3

Application integration at electric utilities - System interfaces for distribution management - Part 9: Interfaces for meter reading and control

IEC 61968-13 ED2

Application integration at electric utilities - System interfaces for distribution management - Part 13: Common distribution power system model profiles

IEC 61970-301 ED7

Energy management system application program interface (EMS-API) - Part 301: Common information model (CIM) base

IEC 61970-303 ED1

Energy Management System Application Program Interface (EMS-API) - Part 303: Common information model (CIM), Network Model Management

IEC 61970-401 ED1

Energy management system application program interface (EMS-API) - Part 401: Profile framework

IEC 61970-452 ED4

Energy management system application program interface (EMS-API) - Part 452: CIM static transmission network model profiles

IEC 61970-459 ED1

Energy Management System Application Program Interface (EMS-API) - Part 459: Framework for managing shared network model information

IEC 61970-460 ED1

Energy Management System Application Program Interface (EMS-API) – Part 460: Profiles for projects that describe changes to IEC 61970 network models

IEC 61970-501 ED2

Energy management system application program interface (EMS-API) - Part 501: Common Information Model Resource Description Framework (CIM RDF) schema

IEC 61970-600-1 ED1

Energy management system application program interface (EMS-API) - Part 600-1: Common Grid Model Exchange Specification (CGMES) - Structure and rules

IEC 61970-600-2 ED1

Energy management system application program interface (EMS-API) - Part 600-2: Common Grid Model Exchange Specification (CGMES) - Exchange profiles specification

IEC 62325-451-7 ED1

Framework for energy market communications - Part 451-7: Balancing processes, contextual and assembly models for European style market

IEC 62325-451-8 ED1

Framework for energy market communications - Part 451-8: HVDC processes, contextual and assembly models for European style market

IEC 62325-451-10 ED1

Framework for energy market communications - Part 451-10: Profiles for energy consumption data ("My Energy Data")

PWI 62325-452-1 ED1

Day Ahead Market

PWI 62325-452-4 ED1

Weather data to support market operations

PWI 62325-452-5 ED1

Communications with Demand Response Systems

PWI 62325-550-2 ED1

Common Dynamic Data Structures for DAM, RT, FTR

PWI 62325-552-1 ED1

Dynamic Data Structures for DAM

IEC 62351-4/AMD1 ED1

Amendment 1 - Power systems management and associated information exchange - Data and communications security - Part 4: Profiles including MMS and derivatives

IEC 62351-5 ED1

Power systems management and associated information exchange - Data and communications security - Part 5: Security for IEC 60870-5 and derivatives

IEC 62351-6 ED1

Power systems management and associated information exchange - Data and communications security - Part 6: Security for IEC 61850

IEC 62351-9 ED2

Power systems management and associated information exchange - Data and communications security - Part 9: Cyber security key management for power system equipment

IEC 62351-14 ED1

Power systems management and associated information exchange - Data and communications security - Part 14: Cyber security event logging

IEC TS 62351-100-4 ED1

Power systems management and associated information exchange – Data and communication security – Part 100-4: Conformance testing for IEC 62351-4

IEC TS 62351-100-6 ED1

Power systems management and associated information exchange – Data and communications security – Part 100-6: Conformance testing for IEC 62351-6

IEC 62488-3 ED1

Power line communication systems for power utility applications - Part 3: Digital Power Line Carrier (DPLC) terminals and hybrid ADPLC terminals

PWI 62488-4 ED1

Broadband systems operating over EHV/HV/MV/LV electricity grids

3.2.94 CIS/I - Electromagnetic compatibility of information technology equipment, multimedia equipment and receivers

Keywords:

Mobile Telecommunications

Scope:

Standarisation in the field of EMC to establish limits and particular methods of measurement for the control of radio frequency disturbances from immunity of Multimedia Equipment including Information Technology Equipment , Radio and TV Broadcast Receivers and Associated Equipment.

The radio transmission aspects of MME transceivers and transmitters are excluded from the work of CISPR/I and are activities handled by other international standards organizations such as ITU-R.

Standards:

CISPR 20:2006+AMD1:2013 CSV

Sound and television broadcast receivers and associated equipment -Immunity characteristics - Limits and methods of measurement

CISPR 20:2006

Sound and television broadcast receivers and associated equipment - Immunity characteristics - Limits and methods of measurement

CISPR 20:2006/AMD1:2013

Amemdment 1 - Sound and television broadcast receivers and associated equipment - Immunity characteristics - Limits and methods of measurement

CISPR 24:2010+AMD1:2015 CSV

Information technology equipment - Immunity characteristics - Limitsand methods of measurement

CISPR 24:2010

Information technology equipment - Immunity characteristics - Limits and methods of measurement

CISPR 24:2010/COR1:2011

Corrigendum 1 - Information technology equipment - Immunity characteristics - Limits and methods of measurement

CISPR 24:2010/AMD1:2015

Amendment 1 - Information technology equipment - Immunity characteristics - Limits and methods of measurement

CISPR TR 29:2004

Television broadcast receivers and associated equipment - Immunity characteristics - Methods of objective picture assessment

CISPR 32:2015+AMD1:2019 CSV

Electromagnetic compatibility of multimedia equipment - Emission requirements

CISPR 32:2015 RLV

Electromagnetic compatibility of multimedia equipment - Emission requirements

CISPR 32:2015

Electromagnetic compatibility of multimedia equipment - Emission requirements

CISPR 32:2015/COR1:2016

Corrigendum 1 - Electromagnetic compatibility of multimedia equipment - Emission requirements

CISPR 32:2015/AMD1:2019

Amendment 1 - Electromagnetic compatibility of multimedia equipment - Emission requirements

CISPR 35:2016

Electromagnetic compatibility of multimedia equipment - Immunity requirements

Standards under development:

CISPR TR 29 ED2

Television broadcast receivers and associated equipment - Immunity characteristics - Methods of objective picture assessment

CISPR 32/AMD1/FRAG5 ED2

Amendment 1/Fragment 5: Electromagnetic compatibility of multimedia equipment - Emission requirements

CISPR 35 ED2

Electromagnetic compatibility of multimedia equipment - Immunity requirements

3.2.95 SC 8B - Decentralized Electrical Energy Systems

Keywords:

Clean Energy for transportation, Energy Management System, Virtual Power Plants, Low Voltage Installation, Decentralized Electrical Energy Systems

Scope:

Standards enabling the development of secure, reliable and cost-effective systems with decentralized management for electrical energy supply, alternative/complement/precursor to traditional large interconnected and highly centralized systems. The most popular concept is currently the "microgrid" defined as a group of interconnected loads and distributed energy resources with defined electrical boundaries that acts as a single controllable entity and is able to operate in both grid-connected and island mode. Decentralized energy systems have applications for developing countries (focussing on access to electricity) as well as for developed countries (focussing on high reliability, black-out recovery and/or services). Interactions within Decentralized (Multi) Energy Systems should also be considered.

Standarisation activities in this proposed SC will proceed with cooperation with concerned TC/SCs and SyCs, including but not limited to IEC SyC Smart Energy, TC 22, TC57, TC64, TC82, TC88, TC 95, TC120.

Standards:

IEC TS 62898-1:2017

Microgrids - Part 1: Guidelines for microgrid projects planning and specification

IEC TS 62898-2:2018

Microgrids - Part 2: Guidelines for operation

Standards under development:

PWI TR 8B-1

Decentralized electrical energy systems roadmap

PWI TR 8B-2

Guideline for the planning and design of the decentralized direct current distribution systems

IEC TS 62898-3-1 ED1

Microgrids - Part 3-1: Technical requirements - Protection and dynamic control

IEC TS 62898-3-2 ED1

Microgrids – Part 3-2: Technical requirements - Energy management systems

IEC TS 62898-3-3 ED1

Microgrids - Part 3-3: Technical requirements – Self-regulation of dispatchable loads

IEC 63189-1 ED1

Virtual Power Plants- Part 1: Architecture and Functional Requirements

IEC TS 63189-2 ED1

Virtual Power Plants- Part 2: Use Cases

IEC TS 63276 ED1

Guideline for the hosting capacity evaluation of distribution networks for distributed generations

3.2.96 TC 82 - Solar photovoltaic energy systems

Keywords:

Clean Energy for transportation, Photovoltaic (PV) cells, Environmental Health and Safety (EH&S), Sustainability of PV module, Building Integrated Photovoltaics (BIPV), Photovoltaic off grid systems, including decentralized rural electrification and hybrid systems, Distributed energy ressources connection, Grid code compliance assessment for grid connection of wind and PV power plants, System issues regarding integration of wind and PV generation into bulk electrical grid, Secondary cells and batteries for Renewable Energy Storage, Electrical safety of PV system installations Managed by TC 64

Scope:

To prepare international standards for systems of photovoltaic conversion of solar energy into electrical energy and for all the elements in the entire photovoltaic energy system. In this context, the concept "photovoltaic energy system" includes the entire field from light input to a photovoltaic cell to and including the interface with the electrical system(s) to which energy is supplied.

NOTE: It is recognized that there is some common interest between TC 47 and TC 82, therefore these two Committees shall maintain liaison.

Standards:

IEC 60891:2009

Photovoltaic devices - Procedures for temperature and irradiance corrections to measured I-V characteristics

IEC 60904:2020 SER

Photovoltaic devices - ALL PARTS

IEC 60904-1:2006

Photovoltaic devices - Part 1: Measurement of photovoltaic current-voltage characteristics

IEC 60904-1-1:2017

Photovoltaic devices - Part 1-1: Measurement of current-voltage characteristics of multi-junction photovoltaic (PV) devices

IEC TS 60904-1-2:2019

Photovoltaic devices - Part 1-2: Measurement of current-voltage characteristics of bifacial photovoltaic (PV) devices

IEC 60904-2:2015

Photovoltaic devices - Part 2: Requirements for photovoltaic reference devices

IEC 60904-2:2015 RLV

Photovoltaic devices - Part 2: Requirements for photovoltaic reference devices

IEC 60904-3:2019 RLV

Photovoltaic devices - Part 3: Measurement principles for terrestrial photovoltaic (PV) solar devices with reference spectral irradiance data

IEC 60904-3:2019

Photovoltaic devices - Part 3: Measurement principles for terrestrial photovoltaic (PV) solar devices with reference spectral irradiance data

IEC 60904-4:2019

Photovoltaic devices - Part 4: Reference solar devices - Procedures for establishing calibration traceability

IEC 60904-4:2019 RLV

Photovoltaic devices - Part 4: Reference solar devices - Procedures for establishing calibration traceability

IEC 60904-5:2011

Photovoltaic devices - Part 5: Determination of the equivalent cell temperature (ECT) of photovoltaic (PV) devices by the open-circuit voltage method

IEC 60904-7:2019

Photovoltaic devices - Part 7: Computation of the spectral mismatch correction for measurements of photovoltaic devices

IEC 60904-7:2019 RLV

Photovoltaic devices - Part 7: Computation of the spectral mismatch correction for measurements of photovoltaic devices

IEC 60904-8:2014

Photovoltaic devices - Part 8: Measurement of spectral responsivity of a photovoltaic (PV) device

IEC 60904-8-1:2017

Photovoltaic devices - Part 8-1: Measurement of spectral responsivity of multi-junction photovoltaic (PV) devices

IEC 60904-9:2007

Photovoltaic devices - Part 9: Solar simulator performance requirements

IEC 60904-10:2009

Photovoltaic devices - Part 10: Methods of linearity measurement

IEC TS 60904-13:2018

Photovoltaic devices - Part 13: Electroluminescence of photovoltaic modules

IEC 61215-1:2016

Terrestrial photovoltaic (PV) modules - Design qualification and type approval - Part 1: Test requirements

IEC 61215-1-1:2016

Terrestrial photovoltaic (PV) modules - Design qualification and type approval - Part 1-1: Special requirements for testing of crystalline silicon photovoltaic (PV) modules

IEC 61215-1-2:2016

Terrestrial photovoltaic (PV) modules - Design qualification and type approval - Part 1-2: Special requirements for testing of thin-film Cadmium Telluride (CdTe) based photovoltaic (PV) modules

IEC 61215-1-3:2016

Terrestrial photovoltaic (PV) modules - Design qualification and type approval - Part 1-3: Special requirements for testing of thin-film amorphous silicon based photovoltaic (PV) modules

IEC 61215-1-4:2016

Terrestrial photovoltaic (PV) modules - Design qualification and type approval - Part 1-4: Special requirements for testing of thin-film $Cu(In,GA)(S,Se)_2$ based photovoltaic (PV) modules

IEC 61215-2:2016

Terrestrial photovoltaic (PV) modules - Design qualification and type approval - Part 2: Test procedures

IEC 61215-2:2016/COR1:2018

Corrigendum 1 - Terrestrial photovoltaic (PV) modules - Design qualification and type approval - Part 2: Test procedures

IEC 61683:1999

Photovoltaic systems - Power conditioners - Procedure for measuring efficiency

IEC 61701:2011

Salt mist corrosion testing of photovoltaic (PV) modules

IEC 61724-1:2017

Photovoltaic system performance - Part 1: Monitoring

IEC TS 61724-2:2016

Photovoltaic system performance - Part 2: Capacity evaluation method

IEC TS 61724-3:2016

Photovoltaic system performance - Part 3: Energy evaluation method

IEC TS 61724-3:2016/COR1:2018

Corrigendum 1 - Photovoltaic system performance - Part 3: Energy evaluation method

IEC 61727:2004

Photovoltaic (PV) systems - Characteristics of the utility interface

IEC 61730-1:2016

Photovoltaic (PV) module safety qualification - Part 1: Requirements for construction

IEC 61730-2:2016 RLV

Photovoltaic (PV) module safety qualification - Part 2: Requirements for testing

IEC 61730-2:2016

Photovoltaic (PV) module safety qualification - Part 2: Requirements for testing

IEC 61829:2015

Photovoltaic (PV) array - On-site measurement of current-voltage characteristics

IEC TS 61836:2016

Solar photovoltaic energy systems - Terms, definitions and symbols

IEC TS 61836:2016 RLV

Solar photovoltaic energy systems - Terms, definitions and symbols

IEC 61853-1:2011

Photovoltaic (PV) module performance testing and energy rating - Part 1: Irradiance and temperature performance measurements and power rating

IEC 61853-2:2016

Photovoltaic (PV) module performance testing and energy rating - Part 2: Spectral responsivity, incidence angle and module operating temperature measurements

IEC 61853-3:2018

Photovoltaic (PV) module performance testing and energy rating - Part 3: Energy rating of PV modules

IEC 61853-4:2018

Photovoltaic (PV) module performance testing and energy rating - Part 4: Standard reference climatic profiles

IEC 62093:2005

Balance-of-system components for photovoltaic systems - Design qualification natural environments

IEC 62108:2016

Concentrator photovoltaic (CPV) modules and assemblies - Design qualification and type approval

IEC 62108:2016 RLV

Concentrator photovoltaic (CPV) modules and assemblies - Design qualification and type approval

IEC 62109-1:2010

Safety of power converters for use in photovoltaic power systems - Part 1: General requirements

IEC 62109-2:2011

Safety of power converters for use in photovoltaic power systems - Part 2: Particular requirements for inverters

IEC 62109-3:2020 PRV

Safety of power converters for use in photovoltaic power systems - Part 3: Particular requirements for electronic devices in combination with photovoltaic elements

IEC 62116:2014

Utility-interconnected photovoltaic inverters - Test procedure of islanding prevention measures

IEC 62124:2004

Photovoltaic (PV) stand alone systems - Design verification

IEC 62253:2011

Photovoltaic pumping systems - Design qualification and performance measurements

IEC TS 62257-1:2015

Recommendations for renewable energy and hybrid systems for rural electrification - Part 1: General introduction to IEC 62257 series and rural electrification

IEC TS 62257-2:2015

Recommendations for renewable energy and hybrid systems for rural electrification - Part 2: From requirements to a range of electrification systems

IEC TS 62257-3:2015

Recommendations for renewable energy and hybrid systems for rural electrification - Part 3: Project development and management

IEC TS 62257-4:2015

Recommendations for renewable energy and hybrid systems for rural electrification - Part 4: System selection and design

IEC TS 62257-5:2015

Recommendations for renewable energy and hybrid systems for rural electrification - Part 5: Protection against electrical hazards

IEC TS 62257-6:2015

Recommendations for renewable energy and hybrid systems for rural electrification - Part 6: Acceptance, operation, maintenance and replacement

IEC TS 62257-7:2017

Recommendations for renewable energy and hybrid systems for rural electrification - Part 7: Generators

IEC TS 62257-7:2017 RLV

Recommendations for renewable energy and hybrid systems for rural electrification - Part 7: Generators

IEC TS 62257-7-1:2010

Recommendations for small renewable energy and hybrid systems for rural electrification - Part 7-1: Generators - Photovoltaic generators

IEC TS 62257-7-3:2018

Recommendations for renewable energy and hybrid systems for rural electrification - Part 7-3: Generator set - Selection of generator sets for rural electrification systems

IEC TS 62257-7-4:2019

Recommendations for renewable energy and hybrid systems for rural electrification - Part 7-4: Generators - Integration of solar with other forms of power generation within hybrid power systems

IEC TS 62257-8-1:2018

Recommendations for renewable energy and hybrid systems for rural electrification - Part 8-1: Selection of batteries and battery management systems for stand-alone electrification systems - Specific case of automotive flooded lead-acid batteries available in developing countries

IEC TS 62257-9-1:2016

Recommendations for renewable energy and hybrid systems for rural electrification - Part 9-1: Integrated systems - Micropower systems

IEC TS 62257-9-2:2016

Recommendations for renewable energy and hybrid systems for rural electrification - Part 9-2: Integrated systems - Microgrids

IEC TS 62257-9-3:2016

Recommendations for renewable energy and hybrid systems for rural electrification - Part 9-3: Integrated systems - User interface

IEC TS 62257-9-4:2016

Recommendations for renewable energy and hybrid systems for rural electrification - Part 9-4: Integrated systems - User installation

IEC TS 62257-9-5:2018

Recommendations for renewable energy and hybrid systems for rural electrification - Part 9-5: Integrated systems - Laboratory evaluation of stand-alone renewable energy products for rural electrification

IEC TS 62257-9-5:2018 RLV

Recommendations for renewable energy and hybrid systems for rural electrification - Part 9-5: Integrated systems - Laboratory evaluation of stand-alone renewable energy products for rural electrification

IEC TS 62257-9-6:2019

Renewable energy and hybrid systems for rural electrification - Part 9-6: Integrated systems - Recommendations for selection of Photovoltaic Individual Electrification Systems (PV-IES)

IEC TS 62257-9-6:2019 RLV

Renewable energy and hybrid systems for rural electrification - Part 9-6: Integrated systems - Recommendations for selection of Photovoltaic Individual Electrification Systems (PV-IES)

IEC TS 62257-9-7:2019

Renewable energy and hybrid systems for rural electrification - Part 9-7: Recommendations for selection of inverters

IEC PAS 62257-10:2017

Recommendations for renewable energy and hybrid systems for rural electrification - Part 10: Silicon solar module visual inspection guide

IEC TS 62257-12-1:2015

Recommendations for renewable energy and hybrid systems for rural electrification - Part 12-1: Selection of lamps and lighting appliances for off-grid electricity systems

IEC 62446-1:2016+AMD1:2018 CSV

Photovoltaic (PV) systems - Requirements for testing, documentation and maintenance - Part 1: Grid connected systems - Documentation, commissioning tests and inspection

IEC 62446-1:2016

Photovoltaic (PV) systems - Requirements for testing, documentation and maintenance - Part 1: Grid connected systems - Documentation, commissioning tests and inspection

IEC 62446-1:2016/AMD1:2018

Amendment 1 - Photovoltaic (PV) systems - Requirements for testing, documentation and maintenance - Part 1: Grid connected systems - Documentation, commissioning tests and inspection

IEC 62446-2:2020

Photovoltaic (PV) systems - Requirements for testing, documentation and maintenance - Part 2: Grid connected systems - Maintenance of PV systems

IEC TS 62446-3:2017

Photovoltaic (PV) systems - Requirements for testing, documentation and maintenance - Part 3: Photovoltaic modules and plants - Outdoor infrared thermography

IEC 62509:2010

Battery charge controllers for photovoltaic systems - Performance and functioning

IEC 62548:2016

Photovoltaic (PV) arrays - Design requirements

IEC 62670-1:2013

Photovoltaic concentrators (CPV) - Performance testing - Part 1: Standard conditions

IEC 62670-2:2015

Photovoltaic concentrators (CPV) - Performance testing - Part 2: Energy measurement

IEC 62670-3:2017

Photovoltaic concentrators (CPV) - Performance testing - Part 3: Performance measurements and power rating

IEC 62688:2017

Concentrator photovoltaic (CPV) modules and assemblies - Safety qualification

IEC 62716:2013

Photovoltaic (PV) modules - Ammonia corrosion testing

IEC 62716:2013/COR1:2014

Corrigendum 1 - Photovoltaic (PV) modules - Ammonia corrosion testing

IEC TS 62727:2012

Photovoltaic systems - Specification for solar trackers

IEC TS 62738:2018

Ground-mounted photovoltaic power plants - Design guidelines and recommendations

IEC 62759-1:2015

Photovoltaic (PV) modules - Transportation testing - Part 1: Transportation and shipping of module package units

IEC TS 62782:2016

Photovoltaic (PV) modules - Cyclic (dynamic) mechanical load testing

IEC 62788-1-2:2016

Measurement procedures for materials used in photovoltaic modules - Part 1-2: Encapsulants - Measurement of volume resistivity of photovoltaic encapsulants and other polymeric materials

IEC 62788-1-4:2016

Measurement procedures for materials used in photovoltaic modules - Part 1-4: Encapsulants - Measurement of optical transmittance and calculation of the solar-weighted photon transmittance, yellowness index, and UV cut-off wavelength

IEC 62788-1-5:2016

Measurement procedures for materials used in photovoltaic modules - Part 1-5: Encapsulants - Measurement of change in linear dimensions of sheet encapsulation material resulting from applied thermal conditions

IEC 62788-1-5:2016/COR1:2017

Corrigendum 1 - Measurement procedures for materials used in photovoltaic modules - Part 1-5: Encapsulants - Measurement of change in linear dimensions of sheet encapsulation material resulting from applied thermal conditions

IEC 62788-1-6:2017

Measurement procedures for materials used in photovoltaic modules - Part 1-6: Encapsulants - Test methods for determining the degree of cure in Ethylene-Vinyl Acetate

IEC 62788-1-7:2020

Measurement procedures for materials used in photovoltaic modules - Part 1-7: Encapsulants - Test procedure of optical durability

IEC TS 62788-2:2017

Measurement procedures for materials used in photovoltaic modules - Part 2: Polymeric materials - Frontsheets and backsheets

IEC 62788-5-1:2020

Measurement procedures for materials used in photovoltaic modules - Part 5-1: Edge seals - Suggested test methods for use with edge seal materials

IEC 62788-6-2:2020

Measurement procedures for materials used in photovoltaic modules - Part 6-2: General tests - Moisture permeation testing of polymeric materials

IEC TS 62788-7-2:2017

Measurement procedures for materials used in photovoltaic modules - Part 7-2: Environmental exposures - Accelerated weathering tests of polymeric materials

IEC TS 62789:2014

Photovoltaic concentrator cell documentation

IEC 62790:2020 PRV

Junction boxes for photovoltaic modules - Safety requirements and tests

IEC 62790:2014

Junction boxes for photovoltaic modules - Safety requirements and tests

IEC TS 62804-1:2015

Photovoltaic (PV) modules - Test methods for the detection of potential-induced degradation - Part 1: Crystalline silicon

IEC TS 62804-1-1:2020

Photovoltaic (PV) modules - Test methods for the detection of potential-induced degradation - Part 1-1: Crystalline silicon - Delamination

IEC 62805-1:2017

Method for measuring photovoltaic (PV) glass - Part 1: Measurement of total haze and spectral distribution of haze

IEC 62805-2:2017

Method for measuring photovoltaic (PV) glass - Part 2: Measurement of transmittance and reflectance

IEC 62817:2014+AMD1:2017 CSV

Photovoltaic systems - Design qualification of solar trackers

IEC 62817:2014

Photovoltaic systems - Design qualification of solar trackers

IEC 62817:2014/AMD1:2017

Amendment 1 - Photovoltaic systems - Design qualification of solar trackers

IEC 62852:2014+AMD1:2020 CSV

Connectors for DC-application in photovoltaic systems - Safety requirements and tests

IEC 62852:2014

Connectors for DC-application in photovoltaic systems - Safety requirements and tests

IEC 62852:2014/AMD1:2020

Amendment 1 - Connectors for DC-application in photovoltaic systems - Safety requirements and tests

IEC 62891:2020 PRV

Maximum power point tracking efficiency of grid connected photovoltaic inverters

IEC 62892:2019

Extended thermal cycling of PV modules - Test procedure

IEC 62894:2014+AMD1:2016 CSV

Photovoltaic inverters - Data sheet and name plate

IEC 62894:2014

Photovoltaic inverters - Data sheet and name plate

IEC 62894:2014/AMD1:2016

Amendment 1 - Photovoltaic inverters - Data sheet and name plate

IEC TS 62910:2015

Utility-interconnected photovoltaic inverters - Test procedure for low voltage ride-through measurements

IEC TS 62915:2018

Photovoltaic (PV) modules - Type approval, design and safety qualification - Retesting

IEC TS 62916:2017

Photovoltaic modules - Bypass diode electrostatic discharge susceptibility testing

IEC 62920:2017

Photovoltaic power generating systems - EMC requirements and test methods for power conversion equipment

IEC 62925:2016

Concentrator photovoltaic (CPV) modules - Thermal cycling test to differentiate increased thermal fatigue durability

IEC 62941:2019

Terrestrial photovoltaic (PV) modules - Quality system for PV module manufacturing

IEC 62979:2017

Photovoltaic modules - Bypass diode - Thermal runaway test

IEC TS 62989:2018

Primary optics for concentrator photovoltaic systems

IEC TS 62994:2019

Photovoltaic (PV) modules through the life cycle - Environmental health and safety (EH&S) risk assessment - General principles and nomenclature

IEC TS 63019:2019

Photovoltaic power systems (PVPS) - Information model for availability

IEC TS 63049:2017

Terrestrial photovoltaic (PV) systems - Guidelines for effective quality assurance in PV systems installation, operation and maintenance

IEC TR 63149:2018

Land usage of photovoltaic (PV) farms - Mathematical models and calculation examples

IEC TS 63157:2019

Photovoltaic systems - Guidelines for effective quality assurance of power conversion equipment

IEC 63202-1:2019

Photovoltaic cells - Part 1: Measurement of light-induced degradation of crystalline silicon photovoltaic cells

IEC TR 63225:2019

Incompatibility of connectors for DC-application in photovoltaic systems

IEC TR 63228:2019

Measurement protocols for photovoltaic devices based on organic, dye-sensitized or perovskite materials

Standards under development:

PNW 82-1715

Measurement and specification for silver pastes of crystalline silicon solar cells

PNW 82-1722

Solar photovoltaic tracking systems - Part 1: Design qualification for horizontal one-axis solar tracking system

IEC 60891 ED3

Photovoltaic devices - Procedures for temperature and irradiance corrections to measured I-V characteristics

IEC 60904-1 ED3

Photovoltaic devices - Part 1: Measurement of photovoltaic current-voltage characteristics

IEC 60904-5/AMD1 ED2

Amendment 1 - Photovoltaic devices - Part 5: Determination of the equivalent cell temperature (ECT) of photovoltaic (PV) devices by the open-circuit voltage method

IEC 60904-8/AMD1 ED3

Amendment 1 - Photovoltaic devices - Part 8: Measurement of spectral responsivity of a photovoltaic (PV) device

IEC 60904-9 ED3

Photovoltaic devices - Part 9: Classification of solar simulator characteristics

IEC 60904-9-1 ED1

Photovoltaic devices - Part 9-1: Collimated beam solar simulator performance requirements

IEC 60904-10 ED3

Photovoltaic devices – Part 10: Methods of linear dependence and linearity measurements

IEC 61215-1 ED2

Terrestrial photovoltaic (PV) modules - Design qualification and type approval - Part 1: Test requirements

IEC 61215-1-1 ED2

Terrestrial photovoltaic (PV) modules - Design qualification and type approval - Part 1-1: Special requirements for testing of crystalline silicon photovoltaic (PV) modules

IEC 61215-1-2 ED2

Terrestrial photovoltaic (PV) modules - Design qualification and type approval - Part 1-2: Special requirements for testing of thin-film Cadmium Telluride (CdTe) based photovoltaic (PV) modules

IEC 61215-1-3 ED2

Terrestrial photovoltaic (PV) modules - Design qualification and type approval - Part 1-3: Special requirements for testing of thin-film amorphous silicon based photovoltaic (PV) modules

IEC 61215-1-4 ED2

Terrestrial photovoltaic (PV) modules - Design qualification and type approval - Part 1-4: Special requirements for testing of thin-film Cu(In,GA)(S,Se)2 based photovoltaic (PV) modules

IEC 61215-2 ED2

Terrestrial photovoltaic (PV) modules - Design qualification and type approval - Part 2: Test procedures

IEC 61701 ED3

Photovoltaic (PV) modules - Salt mist corrosion testing

IEC 61724-1 ED2

Photovoltaic system performance - Part 1: Monitoring

IEC TS 61724-2 ED2

Photovoltaic system performance - Part 2: Capacity evaluation method

IEC TS 61724-3 ED2

Photovoltaic system performance - Part 3: Energy evaluation method

IEC 61730-1/AMD1 ED2

Amendment 1 - Photovoltaic (PV) module safety qualification - Part 1: Requirements for construction

IEC 61730-2/AMD1 ED2

Amendment 1 - Photovoltaic (PV) module safety qualification - Part 2: Requirements for testing

IEC TS 61836 ED4

Solar photovoltaic energy systems - Terms, definitions and symbols

IEC 61853-2/AMD1 ED1

Amendment 1 - Photovoltaic (PV) module performance testing and energy rating - Part 2: Spectral responsivity, incidence angle and module operating temperature measurements

IEC 62093 ED2

Power conversion equipment for photovoltaic systems - Design qualification testing

IEC 62108 ED3

Concentrator photovoltaic (CPV) modules and assemblies - Design qualification and type approval

IEC 62109-1 ED2

Safety of power converters for use in photovoltaic power systems - Part 1: General requirements

IEC 62109-2 ED2

Safety of power converters for use in photovoltaic power systems - Part 2: Particular requirements for inverters

IEC 62109-3 ED1

Safety of power converters for use in photovoltaic power systems - Part 3: Particular requirements for electronic devices in combination with photovoltaic elements

IEC TS 62257-1 ED4

Renewable energy and hybrid systems for rural electrification - Part 1: General introduction to IEC 62257 series and rural electrification

IEC TS 62257-2 ED3

Renewable energy and hybrid systems for rural electrification - Part 2: From requirements to a range of electrification systems

IEC TS 62257-3 ED3

Renewable energy and hybrid systems for rural electrification - Part 3: Project development and management

IEC TS 62257-4 ED3

Renewable energy and hybrid systems for rural electrification - Part 4: System selection and design

IEC TS 62257-5 ED3

Renewable energy and hybrid systems for rural electrification - Part 5: Protection against electrical hazards

IEC TS 62257-6 ED3

Renewable energy and hybrid systems for rural electrification - Part 6: Acceptance, operation, maintenance and replacement

IEC TS 62257-7-2 ED1

Renewable energy and hybrid systems for rural electrification – Part 7-2: Generator set – Off-grid wind turbines

IEC TS 62257-9-1 ED3

Renewable energy and hybrid systems for rural electrification - Part 9-1: Integrated systems - Micropower systems

IEC TS 62257-9-4 ED3

Renewable energy and hybrid systems for rural electrification - Part 9-4: Integrated systems - User installation

IEC TS 62257-9-5 ED5

Renewable energy and hybrid systems for rural electrification - Part 9-5: Integrated systems - Laboratory evaluation of stand-alone renewable energy products for rural electrification

IEC TS 62257-9-8 ED1

Renewable energy and hybrid systems for rural electrification – Part 9-8: Integrated systems – Quality standards for stand-alone renewable energy products with power ratings less than or equal to 350 W

IEC TS 62257-12-1 ED3

Recommendations for renewable energy and hybrid systems for rural electrification - Part 12-1: Laboratory evaluation of lamps and lighting appliances for off-grid electricity systems

IEC 62446-1 ED2

Photovoltaic (PV) systems - Requirements for testing, documentation and maintenance - Part 1: Grid connected systems - Documentation, commissioning tests and inspection

IEC 62548 ED2

Photovoltaic (PV) arrays - Design requirements

IEC 62759-1 ED2

Photovoltaic (PV) modules - Transportation testing - Part 1: Transportation and shipping of module package units

IEC 62787 ED1

Concentrator photovoltaic (CPV) solar cells and cell-on-carrier (COC) assemblies - Reliability qualification

IEC 62788-1-1 ED1

Measurement procedures for materials used in photovoltaic modules – Part 1-1: Encapsulants – Polymeric materials used for encapsulants

IEC 62788-1-4/AMD1 ED1

Amendment 1 - Measurement procedures for materials used in photovoltaic modules - Part 1-4: Encapsulants - Measurement of optical transmittance and calculation of the solar-weighted photon transmittance, yellowness index, and UV cut-off wavelength

IEC 62788-1-6/AMD1 ED1

Amendment 1 - Measurement procedures for materials used in photovoltaic modules - Part 1-6: Encapsulants - Test methods for determining the degree of cure in Ethylene-Vinyl Acetate

IEC TS 62788-2/AMD1 ED1

Amendment 1 - Measurement procedures for materials used in photovoltaic modules - Part 2: Polymeric materials - Frontsheets and backsheets

IEC 62788-2-1 ED1

Measurement procedures for materials used in photovoltaic modules - Part 2-1: Polymeric materials - Frontsheet and backsheet - Safety requirements

IEC TS 62788-5-2 ED1

Measurement procedures for materials used in photovoltaic modules - Part 5-2: Edge seals - Durability evaluation guideline

IEC TS 62788-6-3 ED1

Measurement procedures for materials used in photovoltaic modules - Part 6-3: Adhesion testing of interfaces within PV modules

IEC 62788-7-3 ED1

Measurement procedures for materials used in photovoltaic modules - Part 7-3: Environmental exposures - Accelerated abrasion tests of PV module external surfaces

IEC 62790 ED2

Junction boxes for photovoltaic modules - Safety requirements and tests

IEC TS 62804-2 ED1

Photovoltaic (PV) modules - Test methods for the detection of potential-induced degradation - Part 2: Thin-film

IEC 62891 ED1

Maximum power point tracking efficiency of grid connected photovoltaic inverters

IEC TS 62910 ED2

Utility-interconnected photovoltaic inverters - Test procedure for under voltage ride-through measurements

IEC TS 62915 ED2

Photovoltaic (PV) modules - Type approval, design and safety qualification - Retesting

IEC 62920/AMD1 ED1

Amendment 1 - Photovoltaic power generating systems - EMC requirements and test methods for power conversion equipment

IEC 62938 ED1

Photovoltaic (PV) modules - Non-uniform snow load testing

IEC 63027 ED1

DC arc detection and interruption in photovoltaic power systems

IEC 63092-1 ED1

Photovoltaics in buildings – Part 1: Building integrated photovoltaic modules

IEC 63092-2 ED1

Photovoltaics in buildings – Part 2: Building integrated photovoltaic systems

IEC 63104 ED1

Solar trackers - Safety requirements

IEC TS 63106-1 ED1

Basic requirements for simulator used for testing of photovoltaic power conversion equipment - Part 1: AC power simulator

IEC TS 63106-2 ED1

Basic requirements for simulator used for testing of photovoltaic power conversion equipment - Part 2: DC power simulator

IEC TS 63109 ED1

Measurement of diode ideality factor by quantitative analysis of electroluminescence images

IEC 63112 ED1

Safety, functionality and classification of Photovoltaic Earth Fault Protection (PV EFP) equipment

IEC TS 63126 ED1

Guidelines for qualifying PV modules, components and materials for operation at high temperatures

IEC TS 63140 ED1

Photovoltaic (PV) modules – Partial shade endurance testing for monolithically integrated products

IEC TS 63156 ED1

Photovoltaic systems – Power conditioners - Energy evaluation method

IEC 63163 ED1

Terrestrial photovoltaic (PV) modules for consumer products - Design qualification and type approval

IEC TS 63202-2 ED1

Photovoltaic cells - Part 2: Electroluminescence image for crystalline silicon solar cells

IEC TS 63209 ED1

Extended-stress testing of photovoltaic modules for risk analysis

IEC TS 63209-2 ED1

Extended-stress testing of photovoltaic modules for risk analysis – Part 2: Durability characterization of polymeric component materials and packaging sets

IEC TR 63217 ED1

Utility-interconnected photovoltaic (PV) inverters – Test procedure of high-voltage ride-through measurements

IEC TR 63226 ED1

Managing risk related to photovoltaic (PV) systems on buildings

IEC TR 63227 ED1

Lightning and surge voltage protection for photovoltaic (PV) power supply systems

IEC 63257 ED1

Power line communication for DC shutdown equipment

IEC TS 63265 ED1

Reliability practices for the operation of photovoltaic power systems

IEC TR 63279 ED1

Sequential and combined accelerated stress testing for de-risking photovoltaic modules

IEC TR 63292 ED1

Roadmap for robust reliability of a Photovoltaic Power System (PVPS)

3.2.97 TC 88 - Wind energy generation systems

Keywords:

Clean Energy for transportation, Wind energy generation systems ,Design requirements for offshore wind turbines, Assessment of wind resource, energy yield and site suitability input conditions for wind power plants, Measurement and assessment of power quality characteristics of grid connected wind turbines, Availability and reliability for wind turbines and wind turbine plants, Wind turbines - Electrical simulation models for wind power generation

Scope:

Standarisation in the field of wind energy generation systems including wind turbines, wind power plants onshore and offshore and interaction with the electrical system(s) to which energy is supplied.

These standards address site suitability and resource assessment, design requirements, engineering integrity, modeling requirements, measurement techniques, test procedures, operation and maintenance.

Their purpose is to provide a basis for design, quality assurance and technical aspects for certification. The standards address site-specific conditions, all systems and subsystems of wind turbines and wind power plants, such as mechanical, and electrical systems, support structures, control and protection as well as communication systems for monitoring, centralized and distributed control and evaluation, implementation of grid connection requirements for wind power plants, and environmental aspects of wind power development.

The TC 88 standards will be developed based on and in agreement with appropriate IEC/ISO standards.

Standards:

IEC 61400:2015 OC

IEC 61400 - ONLINE COLLECTION - Wind turbines

IEC 61400-1:2019

Wind energy generation systems - Part 1: Design requirements

IEC 61400-1:2019 RLV

Wind energy generation systems - Part 1: Design requirements

IEC 61400-1:2019/COR1:2019

Corrigendum 1 - Wind energy generation systems - Part 1: Design requirements

IEC 61400-2:2013

Wind turbines - Part 2: Small wind turbines

IEC 61400-2:2013/COR1:2019

Corrigendum 1 - Wind turbines - Part 2: Small wind turbines

IEC 61400-3-1:2019

Wind energy generation systems - Part 3-1: Design requirements for fixed offshore wind turbines

IEC TS 61400-3-2:2019

Wind energy generation systems - Part 3-2: Design requirements for floating offshore wind turbines

IEC 61400-4:2012

Wind turbines - Part 4: Design requirements for wind turbine gearboxes

IEC 61400-6:2020

Wind energy generation systems - Part 6: Tower and foundation design requirements

IEC 61400-11:2012+AMD1:2018 CSV

Wind turbines - Part 11: Acoustic noise measurement techniques

IEC 61400-11:2012

Wind turbines - Part 11: Acoustic noise measurement techniques

IEC 61400-11:2012/AMD1:2018

Amendment 1 - Wind turbines - Part 11: Acoustic noise measurement techniques

IEC 61400-11:2012/AMD1:2018/COR1:2019

Corrigendum 1 - Amendment 1 - Wind turbines - Part 11: Acoustic noise measurement techniques

IEC 61400-12-1:2017

Wind energy generation systems - Part 12-1: Power performance measurements of electricity producing wind turbines

IEC 61400-12-1:2017 RLV

Wind energy generation systems - Part 12-1: Power performance measurements of electricity producing wind turbines

IEC 61400-12-1:2017/COR1:2019

Corrigendum 1 - Wind energy generation systems - Part 12-1: Power performance measurements of electricity producing wind turbines

IEC 61400-12-1:2017/COR2:2020

Corrigendum 2 - Wind energy generation systems - Part 12-1: Power performance measurements of electricity producing wind turbines

IEC 61400-12-2:2013

Wind turbines - Part 12-2: Power performance of electricity-producing wind turbines based on nacelle anemometry

IEC 61400-12-2:2013/COR1:2016

Corrigendum 1 - Wind turbines - Part 12-2: Power performance of electricity-producing wind turbines based on nacelle anemometry

IEC 61400-13:2015

Wind turbines - Part 13: Measurement of mechanical loads

IEC TS 61400-14:2005

Wind turbines - Part 14: Declaration of apparent sound power level and tonality values

IEC 61400-21-1:2019

Wind energy generation systems - Part 21-1: Measurement and assessment of electrical characteristics - Wind turbines

IEC TR 61400-21-3:2019

Wind energy generation systems - Part 21-3: Measurement and assessment of electrical characteristics - Wind turbine harmonic model and its application

IEC 61400-23:2014

Wind turbines - Part 23: Full-scale structural testing of rotor blades

IEC 61400-24:2019

Wind energy generation systems - Part 24: Lightning protection

IEC 61400-25-1:2017

Wind energy generation systems - Part 25-1: Communications for monitoring and control of wind power plants - Overall description of principles and models

IEC 61400-25-1:2017 RLV

Wind energy generation systems - Part 25-1: Communications for monitoring and control of wind power plants - Overall description of principles and models

IEC 61400-25-2:2015

Wind turbines - Part 25-2: Communications for monitoring and control of wind power plants - Information models

IEC 61400-25-3:2015 RLV

Wind turbines - Part 25-3: Communications for monitoring and control of wind power plants - Information exchange models

IEC 61400-25-3:2015

Wind turbines - Part 25-3: Communications for monitoring and control of wind power plants - Information exchange models

IEC 61400-25-4:2016 RLV

Wind energy generation systems - Part 25-4: Communications for monitoring and control of wind power plants - Mapping to communication profile

IEC 61400-25-4:2016

Wind energy generation systems - Part 25-4: Communications for monitoring and control of wind power plants - Mapping to communication profile

IEC 61400-25-5:2017

Wind energy generation systems - Part 25-5: Communications for monitoring and control of wind power plants - Compliance testing

IEC 61400-25-6:2016

Wind energy generation systems - Part 25-6: Communications for monitoring and control of wind power plants - Logical node classes and data classes for condition monitoring

IEC TS 61400-25-71:2019

Wind energy generation systems - Part 25-71: Communications for monitoring and control of wind power plants - Configuration description language

IEC 61400-26-1:2019

Wind energy generation systems - Part 26-1: Availability for wind energy generation systems

IEC 61400-27-1:2020 PRV

Wind energy generation systems - Part 27-1: Electrical simulation models - Generic models

IEC 61400-27-1:2015

Wind turbines - Part 27-1: Electrical simulation models - Wind turbines

IEC 61400-27-2:2020 PRV

Wind energy generation systems - Part 27-2: Electrical simulation models - Model validation

Standards under development:

PNW TS 88-761

Wind energy generation systems – Part 9: Probabilistic design measures for wind turbines

IEC 61400-4 ED2

Wind energy generation systems - Part 4: Design requirements for wind turbine gearboxes

IEC 61400-5 ED1

Wind energy generation systems - Part 5: Wind turbine blades

IEC 61400-7 ED1

Wind energy generation systems - Part 7: Safety of wind turbines power converters

IEC 61400-8 ED1

Wind energy generation systems - Part 8: Design of wind turbine structural components

IEC TS 61400-11-2 ED1

Wind energy generation systems - Part 11-2: Measurement of wind turbine noise characteristics in receptor position

IEC TR 61400-12-4 ED1

Wind energy generation systems – Part 12-4: Numerical site calibration for power performance testing of wind turbines

IEC 61400-15 ED1

Wind energy generation systems - Part 15: Assessment of site specific wind conditions for wind power stations

IEC 61400-21-2 ED1

Wind energy generation systems - Part 21-2: Measurement and assessment of electrical characteristics - Wind power plants

IEC TS 61400-21-4 ED1

Wind energy generation systems – Part 21-4: Measurement and assessment of electrical characteristics - Wind turbine components and subsystems

IEC 61400-23 ED2

Wind energy generation systems - Part 23: Full-scale structural testing of rotor blades

IEC TS 61400-25-41 ED1

Wind turbines - Part 25-41: Communications for monitoring and control of wind power plants - Mapping to communication profile based on IEC 62541 (OPC UA)

IEC TS 61400-26-4 ED1

Wind energy generation systems - Part 26-4: Reliability for wind energy generating systems

IEC 61400-27-1 ED2

Wind energy generation systems - Part 27-1: Electrical simulation models - Generic models

IEC 61400-27-2 ED1

Wind energy generation systems - Part 27-2: Electrical simulation models - Model validation

IEC TS 61400-28 ED1

Wind energy generation systems - Part 28: Through life management and life extension of wind power assets

IEC 61400-29 ED1

Wind energy generation systems – Marking and lighting of wind turbines

IEC TS 61400-30 ED1

Wind turbines - Part 30: Safety of Wind Turbine Generator Systems (WTGs) - General principles for design

IEC 61400-40 ED1

Wind energy generation systems - Part 40: Electromagnetic Compatibility (EMC) - Requirements and test methods

IEC 61400-50-3 ED1

Wind energy generation systems - Part 50-3: Use of nacelle mounted lidars for wind measurements

IEC TS 61400-50-4 ED1

Wind energy generation systems - Part 50-4: Use of floating lidars for wind measurements

IEC 61400-101 ED1

Wind energy generation systems - Part 101: General requirements for wind turbine plants

3.2.98 TC 3 - Documentation, graphical symbols and representations of technical information

Keywords:

Availability and information, Graphical symbols for use on equipment, Classes, Properties and Identification of products

Scope:

Standarisation in the field of documentation, graphical symbols and representations of technical information, covering

1) Rules, principles and methods focusing on machine sensible representation of information. This includes but is not limited to:

- Definition and identification of classes and properties (e.g. sematic data),
- ontologies and data dictionaries (e.g. CDD),
- Information models for structuring of technical data and document management,
- information exchange based on existing communication means.

It includes definition, co-ordination and management of the information required during the whole life cycle of a device, system, or plant, also covering aspects of documentation.

2) Rules, principles and methods focusing on human sensible representation of the information. This includes but is not limited to:

- presentation of information in documentation,
- graphical symbols for use in documentation,
- graphical symbols for the human interaction with equipment.

The standards deal with the presentations and graphical symbols as shown in documents or on equipment, independently of their forms of representation, analogue or digital, but may also include requirements for the development of documentation.

3) Rules, principles and methods for general and safety related marking, identification and arrangement of information in electrical installations, equipment and man-machine interfaces. This includes but is not limited to:

- the meanings of colours and alternative means, when used for marking and identification,
- the arrangement of indicating devices and actuators,
- coding principles for indicating and actuating devices,
- terminal designation of electrical and electronic components, apparatus and equipment,
- designation of certain designated conductors,
- marking of electrical and electronic equipment with ratings related to supply and to its properties,
- marking of bare and insulated conductors.

Standards:

IEC 60073:2002

Basic and safety principles for man-machine interface, marking and identification - Coding principles for indicators and actuators

IEC 60152:1963

Identification by hour numbers of the phase conductors of 3-phase electric systems

IEC 60445:2017

Basic and safety principles for man-machine interface, marking and identification - Identification of equipment terminals, conductor terminations and conductors

IEC 60445:2017 RLV

Basic and safety principles for man-machine interface, marking and identification - Identification of equipment terminals, conductor terminations and conductors

IEC 60445:2017/COR1:2017

Corrigendum 1 - Basic and safety principles for man-machine interface, marking and identification - Identification of equipment terminals, conductor terminations and conductors

IEC 60447:2004

Basic and safety principles for man-machine interface, marking and identification - Actuating principles

IEC 60617:2012 DB

Graphical symbols for diagrams - 12-month subscription to regularly updated online database comprising parts 2 to 13 of IEC 60617

IEC 60757:1983

Code for designation of colours

IEC 60848:2013

GRAFCET specification language for sequential function charts

IEC 61082-1:2014

Preparation of documents used in electrotechnology - Part 1: Rules

IEC 61082-1:2014 RLV

Preparation of documents used in electrotechnology - Part 1: Rules

IEC 61175-1:2015

Industrial systems, installations and equipment and industrial products - Designation of signals - Part 1: Basic rules

IEC 61293:2019

Marking of electrical equipment with ratings related to electrical supply - Safety requirements

IEC TR 61352:2006

Mnemonics and symbols for integrated circuits

IEC 61355-1:2008

Classification and designation of documents for plants, systems and equipment - Part 1: Rules and classification tables

IEC 61666:2010

Industrial systems, installations and equipment and industrial products - Identification of terminals within a system

IEC TR 61734:2006

Application of symbols for binary logic and analogue elements

IEC 62023:2011

Structuring of technical information and documentation

IEC 62023:2011/COR1:2012

Corrigendum 1 - Structuring of technical information and documentation

IEC 62027:2011

Preparation of object lists, including parts lists

IEC 62491:2008

Industrial systems, installations and equipment and industrial products - Labelling of cables and cores

IEC 62507-1:2010

Identification systems enabling unambiguous information interchange - Requirements - Part 1: Principles and methods

IEC 62569-1:2017

Generic specification of information on products by properties - Part 1: Principles and methods

IEC TS 62666:2016

Guidelines for the inclusion of documentation aspects in product standards

IEC TR 62711:2011

Mnemonics and designations of symbols for measuring relays, instruments and related device

IEC 62744:2014

Representation of states of objects by graphical symbols

IEC TS 62768:2012

Preparation and processing of source definitions for data element types - Guidelines for product committees

IEC TS 62771:2012

Information model covering the contents of IEC 81346-1 and IEC 81346-2, IEC 61175, IEC 61666 and IEC 81714-3

IEC TS 63064:2018

Graphical symbols for diagrams - Guidance on design for standarisation in IEC 60617

IEC 81346-1:2009

Industrial systems, installations and equipment and industrial products - Structuring principles and reference designations - Part 1: Basic rules

IEC 81346-2:2019

Industrial systems, installations and equipment and industrial products - Structuring principles and reference designations - Part 2: Classification of objects and codes for classes

IEC 81714-2:2006

Design of graphical symbols for use in the technical documentation of products - Part 2: Specification for graphical symbols in a computer sensible form, including graphical symbols for a reference library, and requirements for their interchange

IEC 81714-3:2004

Design of graphical symbols for use in the technical documentation of products - Part 3: Classification of connect nodes, networks and their encoding

IEC 82045-1:2001

Document management - Part 1: Principles and methods

IEC 82045-2:2004

Document management - Part 2: Metadata elements and information reference model

IEC 82045-2:2004/COR1:2014

Corrigendum 1 - Document management - Part 2: Metadata elements and information reference model

IEC/IEEE 82079-1:2019

Preparation of information for use (instructions for use) of products - Part 1: Principles and general requirements

ISO TS 81346-10:2015

Industrial systems, installations and equipment and industrial products - Structuring principles and reference designation - Part 10: Power plants

ISO 81346-12:2018

Industrial systems, installations and equipment and industrial products - Structuring principles and reference designations - Part 12: Construction works and building services

ISO 81714-1:2010

Design of graphical symbols for use in the technical documentation of products - Part 1: Basic rules

Standards under development:

IEC 60152 ED2

Identification by hour numbers of the phase conductors of 3-phase electric systems

IEC 60445 ED7

Basic and safety principles for man-machine interface, marking and identification - Identification of equipment terminals, conductor terminations and conductors

IEC 60617 ED0

Maintenance of IEC 60617 through the corresponding database. See report on recently processed change requests and symbols.

IEC 60757 ED2

Code for designation of colours

IEC 61666/AMD1 ED2

Amendment 1 - Industrial systems, installations and equipment and industrial products - Identification of terminals within a system

IEC TR 63266 ED1

Documentation of communication in power utility automation

IEC 81346-1 ED2

Industrial systems, installations and equipment and industrial products - Structuring principles and reference designations - Part 1: Basic rules

IEC 82045-2 ED2

Document management - Part 2: Metadata elements and information reference model

3.2.99 TA 15 - Wireless Power Transfer

Keywords:

Smart Charging, Dynamic charge management, Management and Interfaces for WPT, Energy efficiency and relevant applications for WPT

Scope:

To develop international publications related to wireless power transfer (WPT) for multimedia systems and equipment, and interoperability between the WPT transmitting and the WPT receiving functions. The scope also includes as follows:

- a Framework of Standards whereby WPT common elements and WPT technology-specific elements are coordinated;
- WPT system specifications, requirements, functional architectures, interfaces and the corresponding services, management and power control protocols for device-level and system-level operations;
- methods of measurement of power consumption and energy efficiency for WPT devices, equipment and systems.

Standards:

IEC 62827-1:2016

Wireless power transfer - Management - Part 1: Common components

IEC 62827-2:2017

Wireless power transfer - Management - Part 2: Multiple device control management

IEC 62827-3:2016

Wireless power transfer - Management - Part 3: Multiple source control management

IEC TR 62869:2013

Activities and considerations related to wireless power transfer (WPT) for audio, video and multimedia systems and equipment

IEC 63028:2017

Wireless power transfer - Airfuel alliance resonant baseline system specification (BSS)

IEC TR 63231:2019

Consideration of energy efficiency in wireless power transfer technology

IEC TR 63239:2020

Radio frequency beam wireless power transfer (WPT) for mobile devices

Standards under development:

PNW 100-3436 ED1

Time-division duplex(TDD) communication-based controlling technology for RF beamforming wireless power transfer

IEC 62980 ED1

Parasitic communication protocol for radio-frequency wireless power transmission (TA 15)

IEC 63245-1 ED1

Management and Interfaces for WPT - Spatial wireless power transfer based on multiple magnetic resonances (SWPT-MMR) - Part 1: Requirements (TA 15)

IEC 63245-2 ED1

Spatial wireless power transfer based on multiple magnetic resonances (SWPT-MMR) - Part 2: Reference model (TA 15)

IEC 63254 ED1

Management and Interfaces for WPT - Device to device wireless charging (D2DWC) for mobile devices with wireless power TX/RX module (TA 15)

IEC 63288 ED1

Wireless Power Transfer - Measuring method for wireless power transfer efficiency and standby power - mobile phone (TA 15)

3.2.100   TC 21 - Secondary cells and batteries

<u>Keywords:</u>

Road vehicles, Starter and Auxiliary batteries, Traction and stationary batteries, Safe operations and marking of batteries, Marking symbols for identification of secondary battery chemistry, Secondary high temperature cells and batteries

<u>Scope:</u>

To provide standards for all secondary cells and batteries related to product (dimension and performance), safety (including marking and labelling), testing, and safe application (installation, maintenance, operation) irrespective of type or application or configuration (hybrid, stand alone, module). Main applications are:

- automotive (car, motorcycle, truck) for starting, lighting, ignition, start/stop
- industrial (telecom, UPS, reliable power supply and traction)
- electrical vehicles (full electrical vehicle, hybrid car, bicycle)
- portable (computer, tool, lamp)
- onboard batteries (aircraft, railway, ship, motor-home)
- energy storage (renewable, on- grid and off-grid).

All electrochemical systems are considered such as Lead acid, Nickel based (NiMH, NiCd) and Lithium based. New battery technologies and chemistries such as flow batteries and High temperature batteries (e.g. sodium sulfur, sodium nickel chloride) are included. The work is shared between TC 21 and SC 21A according to technologies and applications. For standarisation of applications and system integration, TC 21 is cooperating with the responsible Committees, TC 9, TC 34, TC 69, TC 82, TC 105, TC 116, TC 120 and ISO TC22/SC21.

<u>Standards:</u>

IEC 60095-1:2018

Lead-acid starter batteries - Part 1: General requirements and methods of test

IEC 60095-1:2018 RLV

Lead-acid starter batteries - Part 1: General requirements and methods of test

IEC 60095-2:2009

Lead-acid starter batteries - Part 2: Dimensions of batteries and dimensions and marking of terminals

IEC 60095-4:2008

Lead-acid starter batteries - Part 4: Dimensions of batteries for heavy vehicles

IEC 60095-6:2019

Lead-acid starter batteries - Part 6: Batteries for micro-cycle applications

IEC 60095-7:2019

Lead-acid starter batteries - Part 7: General requirements and methods of test for motorcycle batteries

IEC 60254-1:2005

Lead-acid traction batteries - Part 1: General requirements and methods of tests

IEC 60254-2:2008

Lead-acid traction batteries - Part 2: Dimensions of cells and terminals and marking of polarity on cells

IEC 60896-11:2002

Stationary lead-acid batteries - Part 11: Vented types - General requirements and methods of tests

IEC 60896-21:2004

Stationary lead-acid batteries - Part 21: Valve regulated types - Methods of test

IEC 60896-22:2004

Stationary lead-acid batteries - Part 22: Valve regulated types - Requirements

IEC TR 61044:2002

Opportunity-charging of lead-acid traction batteries

IEC 61056-1:2012

General purpose lead-acid batteries (valve-regulated types) - Part 1: General requirements, functional characteristics - Methods of test

IEC 61056-2:2012

General purpose lead-acid batteries (valve-regulated types) - Part 2: Dimensions, terminals and marking

IEC 61056-2:2012/COR1:2012

Corrigendum 1 - General purpose lead-acid batteries (valve-regulated types) - Part 2: Dimensions, terminals and marking

IEC 61427-1:2013

Secondary cells and batteries for renewable energy storage - General requirements and methods of test - Part 1: Photovoltaic off-grid application

IEC 61427-2:2015

Secondary cells and batteries for renewable energy storage - General requirements and methods of test - Part 2: On-grid applications

IEC 61429:1995

Marking of secondary cells and batteries with the international recycling symbol ISO 7000-1135

IEC TS 61430:1997

Secondary cells and batteries - Test methods for checking the performance of devices designed for reducing explosion hazards - Lead-acid starter batteries

IEC TR 61431:1995

Guide for the use of monitor systems for lead-acid traction batteries

IEC 61982:2012

Secondary batteries (except lithium) for the propulsion of electric road vehicles - Performance and endurance tests

IEC 61982-4:2015

Secondary batteries (except lithium) for the propulsion of electric road vehicles - Part 4: Safety requirements of nickel-metal hydride cells and modules

IEC TR 62060:2001

Secondary cells and batteries - Monitoring of lead acid stationary batteries - User guide

IEC 62485-1:2015

Safety requirements for secondary batteries and battery installations - Part 1: General safety information

IEC 62485-2:2010

Safety requirements for secondary batteries and battery installations - Part 2: Stationary batteries

IEC 62485-3:2014

Safety requirements for secondary batteries and battery installations - Part 3: Traction batteries

IEC 62485-4:2015

Safety requirements for secondary batteries and battery installations - Part 4: Valve-regulated lead-acid batteries for use in portable appliances

IEC TR 62540:2009

Radio frequency identification (RFID) for stationary lead acid cells and monoblocs - Tentative requirements

IEC 62660-1:2018

Secondary lithium-ion cells for the propulsion of electric road vehicles - Part 1: Performance testing

IEC 62660-1:2018 RLV

Secondary lithium-ion cells for the propulsion of electric road vehicles - Part 1: Performance testing

IEC 62660-2:2018 RLV

Secondary lithium-ion cells for the propulsion of electric road vehicles - Part 2: Reliability and abuse testing

IEC 62660-2:2018

Secondary lithium-ion cells for the propulsion of electric road vehicles - Part 2: Reliability and abuse testing

IEC 62660-3:2016

Secondary lithium-ion cells for the propulsion of electric road vehicles - Part 3: Safety requirements

IEC TR 62660-4:2017

Secondary lithium-ion cells for the propulsion of electric road vehicles - Part 4: Candidate alternative test methods for the internal short circuit test of IEC 62660-3

IEC 62877-1:2016

Electrolyte and water for vented lead acid accumulators - Part 1: requirements for electrolyte

IEC 62877-1:2016/COR1:2017

Corrigendum 1 - Electrolyte and water for vented lead acid accumulators - Part 1: Requirements for electrolyte

IEC 62877-2:2016

Electrolyte and water for vented lead acid accumulators - Part 2: Requirements for water

IEC 62902:2019

Secondary cells and batteries - Marking symbols for identification of their chemistry

IEC 62932-1:2020

Flow battery energy systems for stationary applications - Part 1: Terminology and general aspects

IEC 62932-2-1:2020

Flow battery energy systems for stationary applications - Part 2-1: Performance general requirements and test methods

IEC 62932-2-2:2020

Flow battery energy systems for stationary applications - Part 2-2 Safety requirements

IEC 62984-1:2020

High-temperature secondary batteries - Part 1: General requirements

IEC 62984-2:2020

High-temperature secondary batteries – Part 2: Safety requirements and tests

IEC 62984-3:2020

High-temperature secondary batteries - Part 3: Sodium-based batteries - Performance requirements and tests

ISO/IEC PAS 16898:2012

Electrically propelled road vehicles -- Dimensions and designation of secondary lithium-ion cells

<u>Standards under development:</u>

PNW 21-1045

Requirements for reuse of secondary batteries

IEC 60095-2 ED5

Lead-acid starter batteries - Part 2: Dimensions of batteries and dimensions and marking of terminals

IEC 60095-4 ED3

Lead-acid starter batteries - Part 4: Dimensions of batteries for heavy vehicles

IEC TR 61044 ED3

Opportunity-charging of lead-acid traction batteries

IEC TR 61431 ED2

Guide for the use of monitor systems for lead-acid traction batteries

IEC 62485-5 ED1

Safety requirements for secondary batteries and battery installations - Part 5: Safe operation of stationary lithium-ion batteries

IEC 62485-6 ED1

Safety requirements for secondary batteries and battery installations - Part 6: Safe operation of lithium-ion batteries in traction applications

IEC 62660-3 ED2

Secondary lithium-ion cells for the propulsion of electric road vehicles - Part 3: Safety requirements

IEC 62902 ED2

Secondary cells and batteries - Marking symbols for identification of their chemistry

IEC 63118 ED1

Secondary cells and batteries containing alkaline or other non-acid electrolytes - Secondary lithium batteries for use in road vehicles not for the propulsion

IEC 63193 ED1

Lead-acid batteries for propulsion power of lightweight vehicles – General requirements and methods of test

3.2.101   TC ITS - TECHNICAL COMMITTEE (TC) INTELLIGENT TRANSPORT SYSTEMS (ITS)

Keywords:

Electro-Mobility, Smart Cities, Road vehicles

Scope:

We are responsible for standarisation to support the development and implementation of Intelligent Transport Systems (ITS) service provision across the network, for transport networks, vehicles and transport users, including interface aspects, multiple modes of transport and interoperability between systems.

We are helping to accelerate the introduction of ITS services and applications and to maximize their benefits by developing common European standards and technical specifications to enable interoperability. TC ITS is leading the drive to achieve international standards.

Standards:

ETSI TS 102 636-4-2 V1.2.1 (2020-04)

Intelligent Transport Systems (ITS); Vehicular Communications; GeoNetworking; Part 4: Geographical addressing and forwarding for point-to-point and point-to-multipoint communications; Sub-part 2: Media-dependent functionalities for ITS-G5

ETSI TS 102 868-1 V1.5.1 (2020-04)

Intelligent Transport Systems (ITS); Testing; Conformance test specifications for Cooperative Awareness Basic Service (CA); Part 1: Test requirements and Protocol Implementation Conformance Statement (PICS) pro forma

ETSI TS 102 868-2 V1.5.1 (2020-04)

Intelligent Transport Systems (ITS); Testing; Conformance test specifications for Cooperative Awareness Basic Service (CA); Part 2: Test Suite Structure and Test Purposes (TSS & TP)

ETSI TS 102 868-3 V1.5.1 (2020-04)

Intelligent Transport Systems (ITS); Testing; Conformance test specifications for Cooperative Awareness Basic Service (CA); Part 3: Abstract Test Suite (ATS) and Protocol Implementation eXtra Information for Testing (PIXIT)

ETSI TS 102 869-1 V1.6.1 (2020-04)

Intelligent Transport Systems (ITS); Testing; Conformance test specifications for Decentralized Environmental Notification Basic Service (DEN); Part 1: Test requirements and Protocol Implementation Conformance Statement (PICS) pro forma

ETSI TS 102 869-2 V1.6.1 (2020-04)

Intelligent Transport Systems (ITS); Testing; Conformance test specifications for Decentralized Environmental Notification Basic Service (DEN); Part 2: Test Suite Structure and Test Purposes (TSS & TP)

ETSI TS 102 869-3 V1.6.1 (2020-04)

Intelligent Transport Systems (ITS); Testing; Conformance test specifications for Decentralized Environmental Notification Basic Service (DEN); Part 3: Abstract Test Suite (ATS) and Protocol Implementation eXtra Information for Testing (PIXIT)

ETSI EN 302 890-2 V2.1.1 (2020-03)

Intelligent Transport Systems (ITS); Facilities Layer function; Part 2: Position and Time management (PoTi); Release 2

ETSI TR 101 607 V1.2.1 (2020-02)

Intelligent Transport Systems (ITS); Cooperative ITS (C-ITS); Release 1

ETSI TS 103 301 V1.3.1 (2020-02)

Intelligent Transport Systems (ITS); Vehicular Communications; Basic Set of Applications; Facilities layer protocols and communication requirements for infrastructure services

ETSI TR 103 576-2 V1.1.1 (2020-02)

Intelligent Transport Systems (ITS); Pre-standarisation study on ITS architecture; Part 2: Interoperability among heterogeneous ITS systems and backward compatibility

ETSI TS 102 965 V1.5.1 (2020-01)

Intelligent Transport Systems (ITS); Application Object Identifier (ITS-AID); Registration

ETSI EN 302 636-4-1 V1.4.1 (2020-01)

Intelligent Transport Systems (ITS); Vehicular Communications; GeoNetworking; Part 4: Geographical addressing and forwarding for point-to-point and point-to-multipoint communications; Sub-part 1: Media-Independent Functionality

ETSI EN 303 613 V1.1.1 (2020-01)

Intelligent Transport Systems (ITS); LTE-V2X Access layer specification for Intelligent Transport Systems operating in the 5 GHz frequency band

ETSI EN 302 663 V1.3.1 (2020-01)

Intelligent Transport Systems (ITS); ITS-G5 Access layer specification for Intelligent Transport Systems operating in the 5 GHz frequency band

ETSI TR 103 562 V2.1.1 (2019-12)

Intelligent Transport Systems (ITS); Vehicular Communications; Basic Set of Applications; Analysis of the Collective Perception Service (CPS); Release 2

ETSI TS 103 152 V2.1.1 (2019-11)

Intelligent Transport Systems (ITS); V2X Communications; Multimedia Content Dissemination (MCD) Basic Service specification; Release 2

ETSI TR 103 573 V1.1.1 (2019-11)

Intelligent Transport Systems (ITS); Pre-standarisation study of ITS test mode for operational devices in the field

ETSI TS 103 544-1 V1.3.1 (2019-10)

Publicly Available Specification (PAS); Intelligent Transport Systems (ITS); MirrorLinkÂ®; Part 1: Connectivity

ETSI TS 103 544-2 V1.3.1 (2019-10)

Publicly Available Specification (PAS); Intelligent Transport Systems (ITS); MirrorLinkÂ®; Part 2: Virtual Network Computing (VNC) based Display and Control

ETSI TS 103 544-3 V1.3.1 (2019-10)

Publicly Available Specification (PAS); Intelligent Transport Systems (ITS); MirrorLinkÂ®; Part 3: Audio

ETSI TS 103 544-4 V1.3.1 (2019-10)

Publicly Available Specification (PAS); Intelligent Transport Systems (ITS); MirrorLinkÂ®; Part 4: Device Attestation Protocol (DAP)

ETSI TS 103 544-5 V1.3.1 (2019-10)

Publicly Available Specification (PAS); Intelligent Transport Systems (ITS); MirrorLinkÂ®; Part 5: Common Data Bus (CDB)

ETSI TS 103 544-6 V1.3.1 (2019-10)

Publicly Available Specification (PAS); Intelligent Transport Systems (ITS); MirrorLinkÂ®; Part 6: Service Binary Protocol (SBP)

ETSI TS 103 544-7 V1.3.1 (2019-10)

Publicly Available Specification (PAS); Intelligent Transport Systems (ITS); MirrorLinkÂ®; Part 7: GPS Data Service

ETSI TS 103 544-8 V1.3.1 (2019-10)

Publicly Available Specification (PAS); Intelligent Transport Systems (ITS); MirrorLinkÂ®; Part 8: Location Data Service

ETSI TS 103 544-9 V1.3.1 (2019-10)

Publicly Available Specification (PAS); Intelligent Transport Systems (ITS); MirrorLinkÂ®; Part 9: UPnP Application Server Service

ETSI TS 103 544-10 V1.3.1 (2019-10)

Publicly Available Specification (PAS); Intelligent Transport Systems (ITS); MirrorLinkÂ®; Part 10: UPnP Client Profile Service

ETSI TS 103 544-11 V1.3.1 (2019-10)

Publicly Available Specification (PAS); Intelligent Transport Systems (ITS); MirrorLinkÂ®; Part 11: UPnP Notification Server Service

ETSI TS 103 544-12 V1.3.1 (2019-10)

Publicly Available Specification (PAS); Intelligent Transport Systems (ITS); MirrorLinkÂ®; Part 12: UPnP Server Device

ETSI TS 103 544-13 V1.3.1 (2019-10)

Publicly Available Specification (PAS); Intelligent Transport Systems (ITS); MirrorLinkÂ®; Part 13: Core Architecture

ETSI TS 103 544-14 V1.3.1 (2019-10)

Publicly Available Specification (PAS); Intelligent Transport Systems (ITS); MirrorLinkÂ®; Part 14: Application Certificates

ETSI TS 103 544-15 V1.3.1 (2019-10)

Publicly Available Specification (PAS); Intelligent Transport Systems (ITS); MirrorLinkÂ®; Part 15: Application Programming Interface (API) Level 1 & 2

ETSI TS 103 544-16 V1.3.1 (2019-10)

Publicly Available Specification (PAS); Intelligent Transport Systems (ITS); MirrorLinkÂ®; Part 16: Application Developer Certificates

ETSI TS 103 544-17 V1.3.1 (2019-10)

Publicly Available Specification (PAS); Intelligent Transport Systems (ITS); MirrorLinkÂ®; Part 17: MirrorLinkÂ® over Wi-Fi Display (WFD)

ETSI TS 103 544-18 V1.3.1 (2019-10)

Publicly Available Specification (PAS); Intelligent Transport Systems (ITS); MirrorLinkÂ®; Part 18: IEEE 802.11TM Car Connectivity Consortium (CCC) Information Element

ETSI TS 103 544-19 V1.3.1 (2019-10)

Publicly Available Specification (PAS); Intelligent Transport Systems (ITS); MirrorLinkÂ®; Part 19: Network Information Data Service

ETSI TS 103 544-20 V1.3.1 (2019-10)

Publicly Available Specification (PAS); Intelligent Transport Systems (ITS); MirrorLinkÂ®; Part 20: Internet Accessibility

ETSI TS 103 544-21 V1.3.1 (2019-10)

Publicly Available Specification (PAS); Intelligent Transport Systems (ITS); MirrorLinkÂ®; Part 21: High Speed Media Link (HSML)

ETSI TS 103 544-22 V1.3.1 (2019-10)

Publicly Available Specification (PAS); Intelligent Transport Systems (ITS); MirrorLinkÂ®; Part 22: Android Specific Specifications enabling AIDL-based MirrorLinkÂ® Applications

ETSI TS 103 544-23 V1.3.1 (2019-10)

Publicly Available Specification (PAS); Intelligent Transport Systems (ITS); MirrorLinkÂ®; Part 23: BluetoothÂ® Out-of-Band Pairing Data Service

ETSI TS 103 544-24 V1.3.1 (2019-10)

Publicly Available Specification (PAS); Intelligent Transport Systems (ITS); MirrorLinkÂ®; Part 24: Media Meta Data Service

ETSI TS 103 544-25 V1.3.1 (2019-10)

Publicly Available Specification (PAS); Intelligent Transport Systems (ITS); MirrorLinkÂ®; Part 25: Navigation Meta Data Service

ETSI TS 103 544-26 V1.3.1 (2019-10)

Publicly Available Specification (PAS); Intelligent Transport Systems (ITS); MirrorLinkÂ®; Part 26: Consumer Experience Principles and Basic Features

ETSI TS 103 544-27 V1.3.1 (2019-10)

Publicly Available Specification (PAS); Intelligent Transport Systems (ITS); MirrorLinkÂ®; Part 27: Basic Meta Data Service

ETSI TS 103 544-28 V1.3.1 (2019-10)

Publicly Available Specification (PAS); Intelligent Transport Systems (ITS); MirrorLinkÂ®; Part 28: Weather Data Service

ETSI TS 103 544-29 V1.3.1 (2019-10)

Publicly Available Specification (PAS); Intelligent Transport Systems (ITS); MirrorLinkÂ®; Part 29: Schedule Data Service

ETSI TR 103 300-1 V2.1.1 (2019-09)

Intelligent Transport System (ITS); Vulnerable Road Users (VRU) awareness; Part 1: Use Cases definition; Release 2

ETSI EN 302 890-1 V1.2.1 (2019-07)

Intelligent Transport Systems (ITS); Facilities layer function; Part 1: Services Announcement (SA) specification

ETSI TR 103 299 V2.1.1 (2019-06)

Intelligent Transport System (ITS); Cooperative Adaptive Cruise Control (CACC); Pre-standarisation study

ETSI TR 103 257-1 V1.1.1 (2019-05)

Intelligent Transport Systems (ITS); Access Layer; Part 1: Channel Models for the 5,9 GHz frequency band

ETSI TS 103 600 V1.1.1 (2019-05)

Intelligent Transport Systems (ITS); Testing; Interoperability test specifications for security

ETSI EN 302 636-5-1 V2.2.1 (2019-05)

Intelligent Transport Systems (ITS); Vehicular Communications; GeoNetworking; Part 5: Transport Protocols; Sub-part 1: Basic Transport Protocol

ETSI TS 103 248 V1.3.1 (2019-04)

Intelligent Transport Systems (ITS); GeoNetworking; Port Numbers for the Basic Transport Protocol (BTP)

ETSI EN 302 637-2 V1.4.1 (2019-04)

Intelligent Transport Systems (ITS); Vehicular Communications; Basic Set of Applications; Part 2: Specification of Cooperative Awareness Basic Service

ETSI EN 302 637-3 V1.3.1 (2019-04)

Intelligent Transport Systems (ITS); Vehicular Communications; Basic Set of Applications; Part 3: Specifications of Decentralized Environmental Notification Basic Service

ETSI TS 103 525-1 V1.1.1 (2019-03)

Intelligent Transport Systems (ITS); Testing; Conformance test specifications for ITS PKI management; Part 1: Protocol Implementation Conformance Statement (PICS)

ETSI TS 103 525-2 V1.1.1 (2019-03)

Intelligent Transport Systems (ITS); Testing; Conformance test specifications for ITS PKI management; Part 2: Test Suite Structure and Test Purposes (TSS & TP)

ETSI TS 103 525-3 V1.1.1 (2019-03)

Intelligent Transport Systems (ITS); Testing; Conformance test specifications for ITS PKI management; Part 3: Abstract Test Suite (ATS) and Protocol Implementation eXtra Information for Testing (PIXIT)

ETSI TS 102 941 V1.3.1 (2019-02)

Intelligent Transport Systems (ITS); Security; Trust and Privacy Management

ETSI TS 102 636-7-2 V1.1.1 (2019-01)

Intelligent Transport Systems (ITS); Vehicular Communications; GeoNetworking; Part 7: Amendments for LTE-V2X; Sub-part 2: Amendments to ETSI EN 302 636-5-1 (Basic Transport Protocol)

ETSI TS 102 636-7-1 V1.1.1 (2019-01)

Intelligent Transport Systems (ITS); Vehicular Communications; GeoNetworking; Part 7: Amendments for LTE-V2X; Sub-part 1: Amendments to ETSI EN 302 636-4-1 (Media-Independent Functionality)

ETSI TS 102 965 V1.4.1 (2018-11)

Intelligent Transport Systems (ITS); Application Object Identifier (ITS-AID); Registration

ETSI TS 103 574 V1.1.1 (2018-11)

Intelligent Transport Systems (ITS); Congestion Control Mechanisms for C-V2X PC5 interface; Access layer part

ETSI TS 103 613 V1.1.1 (2018-11)

Intelligent Transport Systems (ITS); Access layer specification for Intelligent Transport Systems using LTE Vehicle to everything communication in the 5,9 GHz frequency band

ETSI TS 103 192-1 V1.1.1 (2018-09)

Intelligent Transport Systems (ITS); Testing; Interoperability test specifications for ITS V2X use cases; Part 1: Test requirements and Interoperability Feature Statement (IFS) pro forma

ETSI TS 103 192-2 V1.1.1 (2018-09)

Intelligent Transport Systems (ITS); Testing; Interoperability test specifications for ITS V2X use cases; Part 2: Test Suite Structure and Test Purposes (TSS & TP)

ETSI TS 103 192-3 V1.1.1 (2018-09)

Intelligent Transport Systems (ITS); Testing; Interoperability test specifications for ITS V2X use cases; Part 3: Abstract Test Suite (ATS) and Protocol Implementation eXtra Information for Testing (PIXIT)

ETSI TR 103 193 V1.1.1 (2018-09)

Intelligent Transport Systems (ITS); Testing; Interoperability test specifications for ITS V2X use cases; Architecture of ITS Interoperability Validation Framework

ETSI TS 102 708-2-2 V1.5.1 (2018-08)

Intelligent Transport Systems (ITS); RTTT; Test specifications for High Data Rate (HDR) data transmission equipment operating in the 5,8 GHz ISM band; Part 2: Application Layer; Sub-Part 2: Test Suite Structure and Test Purposes (TSS & TP)

ETSI TS 102 708-2-3 V1.5.1 (2018-08)

Intelligent Transport Systems (ITS); RTTT; Test specifications for High Data Rate (HDR) data transmission equipment operating in the 5,8 GHz ISM band; Part 2: Application Layer; Sub-part 3: Abstract Test Suite (ATS) and partial PIXIT pro forma

ETSI TS 103 096-1 V1.4.1 (2018-08)

Intelligent Transport Systems (ITS); Testing; Conformance test specifications for ITS Security; Part 1: Protocol Implementation Conformance Statement (PICS)

ETSI TS 103 096-2 V1.4.1 (2018-08)

Intelligent Transport Systems (ITS); Testing; Conformance test specifications for ITS Security; Part 2: Test Suite Structure and Test Purposes (TSS & TP)

ETSI TS 103 096-3 V1.4.1 (2018-08)

Intelligent Transport Systems (ITS); Testing; Conformance test specifications for ITS Security; Part 3: Abstract Test Suite (ATS) and Protocol Implementation eXtra Information for Testing (PIXIT)

ETSI TS 103 248 V1.2.1 (2018-08)

Intelligent Transport Systems (ITS); GeoNetworking; Port Numbers for the Basic Transport Protocol (BTP)

ETSI TS 102 894-2 V1.3.1 (2018-08)

Intelligent Transport Systems (ITS); Users and applications requirements; Part 2: Applications and facilities layer common data dictionary

ETSI TS 103 301 V1.2.1 (2018-08)

Intelligent Transport Systems (ITS); Vehicular Communications; Basic Set of Applications; Facilities layer protocols and communication requirements for infrastructure services

ETSI TS 101 539-2 V1.1.1 (2018-06)

Intelligent Transport Systems (ITS); V2X Applications; Part 2: Intersection Collision Risk Warning (ICRW) application requirements specification

ETSI TS 102 941 V1.2.1 (2018-05)

Intelligent Transport Systems (ITS); Security; Trust and Privacy Management

ETSI TR 103 415 V1.1.1 (2018-04)

Intelligent Transport Systems (ITS); Security; Pre-standarisation study on pseudonym change management

ETSI TS 102 687 V1.2.1 (2018-04)

Intelligent Transport Systems (ITS); Decentralized Congestion Control Mechanisms for Intelligent Transport Systems operating in the 5 GHz range; Access layer part

ETSI TS 102 940 V1.3.1 (2018-04)

Intelligent Transport Systems (ITS); Security; ITS communications security architecture and security management

ETSI TS 103 097 V1.3.1 (2017-10)

Intelligent Transport Systems (ITS); Security; Security header and certificate formats

ETSI TS 103 544-1 V1.3.0 (2017-10)

Publicly Available Specification (PAS); Intelligent Transport Systems (ITS); MirrorLinkÂ®; Part 1: Connectivity

ETSI TS 103 544-2 V1.3.0 (2017-10)

Publicly Available Specification (PAS); Intelligent Transport Systems (ITS); MirrorLinkÂ®; Part 2: Virtual Network Computing (VNC) based Display and Control

ETSI TS 103 544-3 V1.3.0 (2017-10)

Publicly Available Specification (PAS); Intelligent Transport Systems (ITS); MirrorLinkÂ®; Part 3: Audio

ETSI TS 103 544-4 V1.3.0 (2017-10)

Publicly Available Specification (PAS); Intelligent Transport Systems (ITS); MirrorLinkÂ®; Part 4: Device Attestation Protocol (DAP)

ETSI TS 103 544-5 V1.3.0 (2017-10)

Publicly Available Specification (PAS); Intelligent Transport Systems (ITS); MirrorLinkÂ®; Part 5: Common Data Bus (CDB)

ETSI TS 103 544-6 V1.3.0 (2017-10)

Publicly Available Specification (PAS); Intelligent Transport Systems (ITS); MirrorLinkÂ®; Part 6: Service Binary Protocol (SBP)

ETSI TS 103 544-7 V1.3.0 (2017-10)

Publicly Available Specification (PAS); Intelligent Transport Systems (ITS); MirrorLinkÂ®; Part 7: GPS Data Service

ETSI TS 103 544-8 V1.3.0 (2017-10)

Publicly Available Specification (PAS); Intelligent Transport Systems (ITS); MirrorLinkÂ®; Part 8: Location Data Service

ETSI TS 103 544-9 V1.3.0 (2017-10)

Publicly Available Specification (PAS); Intelligent Transport Systems (ITS); MirrorLinkÂ®; Part 9: UPnP Application Server Service

ETSI TS 103 544-10 V1.3.0 (2017-10)

Publicly Available Specification (PAS); Intelligent Transport Systems (ITS); MirrorLinkÂ®; Part 10: UPnP Client Profile Service

ETSI TS 103 544-11 V1.3.0 (2017-10)

Publicly Available Specification (PAS); Intelligent Transport Systems (ITS); MirrorLinkÂ®; Part 11: UPnP Notification Server Service

ETSI TS 103 544-12 V1.3.0 (2017-10)

Publicly Available Specification (PAS); Intelligent Transport Systems (ITS); MirrorLinkÂ®; Part 12: UPnP Server Device

ETSI TS 103 544-13 V1.3.0 (2017-10)

Publicly Available Specification (PAS); Intelligent Transport Systems (ITS); MirrorLinkÂ®; Part 13: Core Architecture

ETSI TS 103 544-14 V1.3.0 (2017-10)

Publicly Available Specification (PAS); Intelligent Transport Systems (ITS); MirrorLinkÂ®; Part 14: Application Certificates

ETSI TS 103 544-15 V1.3.0 (2017-10)

Publicly Available Specification (PAS); Intelligent Transport Systems (ITS); MirrorLinkÂ®; Part 15: Application Programming Interface (API) Level 1 & 2

ETSI TS 103 544-16 V1.3.0 (2017-10)

Publicly Available Specification (PAS); Intelligent Transport Systems (ITS); MirrorLinkÂ®; Part 16: Application Developer Certificates

ETSI TS 103 544-17 V1.3.0 (2017-10)

Publicly Available Specification (PAS); Intelligent Transport Systems (ITS); MirrorLinkÂ®; Part 17: MirrorLinkÂ® over Wi-Fi Display (WFD)

ETSI TS 103 544-18 V1.3.0 (2017-10)

Publicly Available Specification (PAS); Intelligent Transport Systems (ITS); MirrorLinkÂ®; Part 18: IEEE 802.11TM Car Connectivity Consortium (CCC) Information Element

ETSI TS 103 544-19 V1.3.0 (2017-10)

Publicly Available Specification (PAS); Intelligent Transport Systems (ITS); MirrorLinkÂ®; Part 19: Network Information Data Service

ETSI TS 103 544-20 V1.3.0 (2017-10)

Publicly Available Specification (PAS); Intelligent Transport Systems (ITS); MirrorLinkÂ®; Part 20: Internet Accessibility

ETSI TS 103 544-21 V1.3.0 (2017-10)

Publicly Available Specification (PAS); Intelligent Transport Systems (ITS); MirrorLinkÂ®; Part 21: High Speed Media Link (HSML)

ETSI TS 103 544-22 V1.3.0 (2017-10)

Publicly Available Specification (PAS); Intelligent Transport Systems (ITS); MirrorLinkÂ®; Part 22: Android Specific Specifications enabling AIDL-based MirrorLinkÂ® Applications

ETSI TS 103 544-23 V1.3.0 (2017-10)

Publicly Available Specification (PAS); Intelligent Transport Systems (ITS); MirrorLinkÂ®; Part 23: BluetoothÂ® Out-of-Band Pairing Data Service

ETSI TS 103 544-24 V1.3.0 (2017-10)

Publicly Available Specification (PAS); Intelligent Transport Systems (ITS); MirrorLinkÂ®; Part 24: Media Meta Data Service

ETSI TS 103 544-25 V1.3.0 (2017-10)

Publicly Available Specification (PAS); Intelligent Transport Systems (ITS); MirrorLinkÂ®; Part 25: Navigation Meta Data Service

ETSI TS 103 544-26 V1.3.0 (2017-10) Publicly Available Specification (PAS); Intelligent Transport Systems (ITS); MirrorLinkÂ®; Part 26: Consumer Experience Principles and Basic Features

ETSI TS 103 544-27 V1.3.0 (2017-10)

Publicly Available Specification (PAS); Intelligent Transport Systems (ITS); MirrorLinkÂ®; Part 27: Basic Meta Data Service

ETSI TS 103 544-28 V1.3.0 (2017-10)

Publicly Available Specification (PAS); Intelligent Transport Systems (ITS); MirrorLinkÂ®; Part 28: Weather Data Service

ETSI TS 103 544-29 V1.3.0 (2017-10)

Publicly Available Specification (PAS); Intelligent Transport Systems (ITS); MirrorLinkÂ®; Part 29: Schedule Data Service

ETSI EN 302 636-4-1 V1.3.1 (2017-08)

Intelligent Transport Systems (ITS); Vehicular Communications; GeoNetworking; Part 4: Geographical addressing and forwarding for point-to-point and point-to-multipoint communications; Sub-part 1: Media-Independent Functionality

ETSI EN 302 636-5-1 V2.1.1 (2017-08)

Intelligent Transport Systems (ITS); Vehicular Communications; GeoNetworking; Part 5: Transport Protocols; Sub-part 1: Basic Transport Protocol

ETSI TR 103 403 V1.1.1 (2017-06)

Intelligent Transport Systems (ITS); Mitigation techniques to avoid harmful interference between equipment compliant with ES 200 674-1 and ITS operating in the 5 GHz frequency range; Evaluation of mitigation methods and techniques

ETSI TS 102 871-1 V1.4.1 (2017-05)

Intelligent Transport Systems (ITS); Testing; Conformance test specifications for GeoNetworking ITS-G5; Part 1: Test requirements and Protocol Implementation Conformance Statement (PICS) pro forma

ETSI TS 102 871-2 V1.4.1 (2017-05)

Intelligent Transport Systems (ITS); Testing; Conformance test specifications for GeoNetworking ITS-G5; Part 2: Test Suite Structure and Test Purposes (TSS & TP)

ETSI TS 102 871-3 V1.4.1 (2017-05)

Intelligent Transport Systems (ITS); Testing; Conformance test specifications for GeoNetworking ITS-G5; Part 3: Abstract Test Suite (ATS) and Protocol Implementation eXtra Information for Testing (PIXIT)

ETSI TS 102 890-1 V1.1.1 (2017-05)

Intelligent Transport Systems (ITS); Facilities layer function; Part 1: Services Announcement (SA) specification

ETSI TR 102 893 V1.2.1 (2017-03)

Intelligent Transport Systems (ITS); Security; Threat, Vulnerability and Risk Analysis (TVRA)

ETSI TS 103 096-1 V1.3.1 (2017-03)

Intelligent Transport Systems (ITS); Testing; Conformance test specifications for ITS Security; Part 1: Protocol Implementation Conformance Statement (PICS)

ETSI TS 103 096-2 V1.3.1 (2017-03)

Intelligent Transport Systems (ITS); Testing; Conformance test specifications for ITS Security; Part 2: Test Suite Structure and Test Purposes (TSS & TP)

ETSI TS 103 096-3 V1.3.1 (2017-03)

Intelligent Transport Systems (ITS); Testing; Conformance test specifications for ITS Security; Part 3: Abstract Test Suite (ATS) and Protocol Implementation eXtra Information for Testing (PIXIT)

ETSI TR 103 099 V1.4.1 (2017-03)

Intelligent Transport Systems (ITS); Architecture of conformance validation framework

ETSI TS 102 869-1 V1.5.1 (2017-03)

Intelligent Transport Systems (ITS); Testing; Conformance test specifications for Decentralized Environmental Notification Basic Service (DEN); Part 1: Test requirements and Protocol Implementation Conformance Statement (PICS) pro forma

ETSI TS 102 869-2 V1.5.1 (2017-03)

Intelligent Transport Systems (ITS); Testing; Conformance test specifications for Decentralized Environmental Notification Basic Service (DEN); Part 2: Test Suite Structure and Test Purposes (TSS & TP)

ETSI TS 102 869-3 V1.5.1 (2017-03)

Intelligent Transport Systems (ITS); Testing; Conformance test specifications for Decentralized Environmental Notification Basic Service (DEN); Part 3: Abstract Test Suite (ATS) and Protocol Implementation eXtra Information for Testing (PIXIT)

ETSI TS 103 191-1 V1.2.1 (2017-03)

Intelligent Transport Systems (ITS); Testing; Conformance test specifications for Facilities layer protocols and communication requirements for infrastructure services; Part 1: Test requirements and Protocol Implementation Conformance Statement (PICS) pro forma

ETSI TS 103 191-2 V1.2.1 (2017-03)

Intelligent Transport Systems (ITS); Testing; Conformance test specifications for Facilities layer protocols and communication requirements for infrastructure services; Part 2: Test Suite Structure and Test Purposes (TSS & TP)

ETSI TS 103 191-3 V1.2.1 (2017-03)

Intelligent Transport Systems (ITS); Testing; Conformance test specifications for Facilities layer protocols and communication requirements for infrastructure services; Part 3: Abstract Test Suite (ATS) and Protocol Implementation eXtra Information for Testing (PIXIT)

ETSI TS 102 868-1 V1.4.1 (2017-03)

Intelligent Transport Systems (ITS); Testing; Conformance test specifications for Cooperative Awareness Basic Service (CA); Part 1: Test requirements and Protocol Implementation Conformance Statement (PICS) pro forma

ETSI TS 102 868-2 V1.4.1 (2017-03)

Intelligent Transport Systems (ITS); Testing; Conformance test specifications for Cooperative Awareness Basic Service (CA); Part 2: Test Suite Structure and Test Purposes (TSS & TP)

ETSI TS 102 868-3 V1.4.1 (2017-03)

Intelligent Transport Systems (ITS); Testing; Conformance test specifications for Cooperative Awareness Basic Service (CA); Part 3: Abstract Test Suite (ATS) and Protocol Implementation eXtra Information for Testing (PIXIT)

ETSI TS 103 248 V1.1.1 (2016-11)

Intelligent Transport Systems (ITS); GeoNetworking; Port Numbers for the Basic Transport Protocol (BTP)

ETSI TS 102 965 V1.3.1 (2016-11)

Intelligent Transport Systems (ITS); Application Object Identifier (ITS-AID); Registration

ETSI TS 103 301 V1.1.1 (2016-11)

Intelligent Transport Systems (ITS); Vehicular Communications; Basic Set of Applications; Facilities layer protocols and communication requirements for infrastructure services

ETSI TS 102 940 V1.2.1 (2016-11)

Intelligent Transport Systems (ITS); Security; ITS communications security architecture and security management

ETSI TS 102 723-8 V1.1.1 (2016-04)

Intelligent Transport Systems (ITS); OSI cross-layer topics; Part 8: Interface between security entity and network and transport layer

ETSI TS 101 556-2 V1.1.1 (2016-02)

Intelligent Transport Systems (ITS); Infrastructure to Vehicle Communication; Part 2: Communication system specification to support application requirements for Tyre Information System (TIS) and Tyre Pressure Gauge (TPG) interoperability

ETSI TS 103 191-1 V1.1.1 (2015-09)

Intelligent Transport Systems (ITS); Testing; Conformance test specifications for Signal Phase And Timing (SPAT) and Map (MAP); Part 1: Test requirements and Protocol Implementation Conformance Statement (PICS) pro forma

ETSI TS 103 191-2 V1.1.1 (2015-09)

Intelligent Transport Systems (ITS); Testing; Conformance test specifications for Signal Phase And Timing (SPAT) and Map (MAP); Part 2: Test Suite Structure and Test Purposes (TSS & TP)

ETSI TS 103 191-3 V1.1.1 (2015-09)

Intelligent Transport Systems (ITS); Testing; Conformance test specifications for Signal Phase And Timing (SPAT) and Map (MAP); Part 3: Abstract Test Suite (ATS) and Protocol Implementation eXtra Information for Testing (PIXIT)

ETSI TR 101 613 V1.1.1 (2015-09)

Intelligent Transport Systems (ITS); Cross Layer DCC Management Entity for operation in the ITS G5A and ITS G5B medium; Validation set-up and results

ETSI TS 103 096-1 V1.2.1 (2015-09)

Intelligent Transport Systems (ITS); Testing; Conformance test specifications for ITS Security; Part 1: Protocol Implementation Conformance Statement (PICS)

ETSI TS 103 096-2 V1.2.1 (2015-09)

Intelligent Transport Systems (ITS); Testing; Conformance test specifications for ITS Security; Part 2: Test Suite Structure and Test Purposes (TSS & TP)

ETSI TS 103 096-3 V1.2.1 (2015-09)

Intelligent Transport Systems (ITS); Testing; Conformance test specifications for ITS Security; Part 3: Abstract Test Suite (ATS) and Protocol Implementation eXtra Information for Testing (PIXIT)

ETSI TR 103 061-6 V1.1.1 (2015-09)

Intelligent Transport Systems (ITS); Testing; Conformance test specifications for ITS Security; Part 6: Validation report

ETSI TS 102 868-1 V1.3.1 (2015-07)

Intelligent Transport Systems (ITS); Testing; Conformance test specifications for Cooperative Awareness Basic Service (CA); Part 1: Test requirements and Protocol Implementation Conformance Statement (PICS) pro forma

ETSI TS 102 868-2 V1.3.1 (2015-07)

Intelligent Transport Systems (ITS); Testing; Conformance test specifications for Cooperative Awareness Basic Service (CA); Part 2: Test Suite Structure and Test Purposes (TSS & TP)

ETSI TS 102 868-3 V1.3.1 (2015-07)

Intelligent Transport Systems (ITS); Testing; Conformance test specifications for Cooperative Awareness Basic Service (CA); Part 3: Abstract Test Suite (ATS) and Protocol Implementation eXtra Information for Testing (PIXIT)

ETSI TS 102 869-1 V1.4.1 (2015-07)

Intelligent Transport Systems (ITS); Testing; Conformance test specifications for Decentralized Environmental Notification Basic Service (DEN); Part 1: Test requirements and Protocol Implementation Conformance Statement (PICS) pro forma

ETSI TS 102 869-2 V1.4.1 (2015-07)

Intelligent Transport Systems (ITS); Testing; Conformance test specifications for Decentralized Environmental Notification Basic Service (DEN); Part 2: Test Suite Structure and Test Purposes (TSS & TP)

ETSI TS 102 869-3 V1.4.1 (2015-07)

Intelligent Transport Systems (ITS); Testing; Conformance test specifications for Decentralized Environmental Notification Basic Service (DEN); Part 3: Abstract Test Suite (ATS) and Protocol Implementation eXtra Information for Testing (PIXIT)

ETSI TR 103 099 V1.3.1 (2015-07)

Intelligent Transport Systems (ITS); Architecture of conformance validation framework

ETSI TS 102 871-1 V1.3.1 (2015-06)

Intelligent Transport Systems (ITS); Testing; Conformance test specifications for GeoNetworking ITS-G5; Part 1: Test requirements and Protocol Implementation Conformance Statement (PICS) pro forma

ETSI TS 102 871-2 V1.3.1 (2015-06)

Intelligent Transport Systems (ITS); Testing; Conformance test specifications for GeoNetworking ITS-G5; Part 2: Test Suite Structure and Test Purposes (TSS & TP)

ETSI TS 102 871-3 V1.3.1 (2015-06)

Intelligent Transport Systems (ITS); Testing; Conformance test specifications for GeoNetworking ITS-G5; Part 3: Abstract Test Suite (ATS) and Protocol Implementation eXtra Information for Testing (PIXIT)

ETSI TS 102 792 V1.2.1 (2015-06)

Intelligent Transport Systems (ITS); Mitigation techniques to avoid interference between European CEN Dedicated Short Range Communication (CEN DSRC) equipment and Intelligent Transport Systems (ITS) operating in the 5 GHz frequency range

ETSI TS 103 175 V1.1.1 (2015-06)

Intelligent Transport Systems (ITS); Cross Layer DCC Management Entity for operation in the ITS G5A and ITS G5B medium

ETSI TS 103 097 V1.2.1 (2015-06)

Intelligent Transport Systems (ITS); Security; Security header and certificate formats

ETSI TS 102 965 V1.2.1 (2015-06)

Intelligent Transport Systems (ITS); Application Object Identifier (ITS-AID); Registration

ETSI EN 302 636-3 V1.2.1 (2014-12)

Intelligent Transport Systems (ITS); Vehicular Communications; GeoNetworking; Part 3: Network Architecture

ETSI EN 302 637-2 V1.3.2 (2014-11)

Intelligent Transport Systems (ITS); Vehicular Communications; Basic Set of Applications; Part 2: Specification of Cooperative Awareness Basic Service

ETSI EN 302 637-3 V1.2.2 (2014-11)

Intelligent Transport Systems (ITS); Vehicular Communications; Basic Set of Applications; Part 3: Specifications of Decentralized Environmental Notification Basic Service

ETSI TS 101 556-3 V1.1.1 (2014-10)

Intelligent Transport Systems (ITS); Infrastructure to Vehicle Communications; Part 3: Communications system for the planning and reservation of EV energy supply using wireless networks

ETSI EN 302 895 V1.1.1 (2014-09)

Intelligent Transport Systems (ITS); Vehicular Communications; Basic Set of Applications; Local Dynamic Map (LDM)

ETSI TR 101 612 V1.1.1 (2014-09)

Intelligent Transport Systems (ITS); Cross Layer DCC Management Entity for operation in the ITS G5A and ITS G5B medium; Report on Cross layer DCC algorithms and performance evaluation

ETSI TS 102 894-2 V1.2.1 (2014-09)

Intelligent Transport Systems (ITS); Users and applications requirements; Part 2: Applications and facilities layer common data dictionary

ETSI EN 302 636-5-1 V1.2.1 (2014-08)

Intelligent Transport Systems (ITS); Vehicular Communications; GeoNetworking; Part 5: Transport Protocols; Sub-part 1: Basic Transport Protocol

ETSI EN 302 636-4-1 V1.2.1 (2014-07)

Intelligent Transport Systems (ITS); Vehicular Communications; GeoNetworking; Part 4: Geographical addressing and forwarding for point-to-point and point-to-multipoint communications; Sub-part 1: Media-Independent Functionality

ETSI TS 102 760-1 V1.2.1 (2014-06)

Intelligent Transport Systems (ITS); Communications Access for Land Mobiles (CALM); Test specifications for Access Technology Support (ISO 21218); Part 1: Implementation Conformance Statement (ICS) proforma

ETSI TS 102 760-2 V1.2.1 (2014-06)

Intelligent Transport Systems (ITS); Communications Access for Land Mobiles (CALM); Test specifications for Access Technology Support (ISO 21218); Part 2: Test Suite Structure and Test Purposes (TSS & TP)

ETSI TS 102 760-3 V1.1.1 (2014-06)

Intelligent Transport Systems (ITS); Communications Access for Land Mobiles (CALM); Test specifications for Access Technology Support (ISO 21218); Part 3: Abstract Test Suite (ATS) and partial PIXIT proforma

ETSI TR 101 611 V1.1.1 (2014-06)

Intelligent Transport Systems (ITS); Testing; Conformance test specification for CALM Fast Services; FNTP/FSAP/IICP validation report

ETSI TR 103 101 V1.1.1 (2014-06)

Intelligent Transport Systems (ITS); Test suite validation; Access technology support ISO 21218

ETSI TS 102 797-1 V1.2.1 (2014-06)

Intelligent Transport Systems (ITS); Communications Access for Land Mobiles (CALM); Test specifications for ITS station management (ISO 24102); Part 1: Protocol Implementation Conformance Statement (PICS) specification

ETSI TS 102 797-2 V1.2.1 (2014-06)

Intelligent Transport Systems (ITS); Communications Access for Land Mobiles (CALM); Test specifications for ITS station management (ISO 24102); Part 2: Test Suite Structure and Test Purposes (TSS & TP)

ETSI TS 102 797-3 V1.2.1 (2014-06)

Intelligent Transport Systems (ITS); Communications Access for Land Mobiles (CALM); Test specifications for ITS station management (ISO 24102); Part 3: Abstract Test Suite (ATS) and partial PIXIT proforma

ETSI TS 102 985-1 V1.2.1 (2014-06)

Intelligent Transport Systems (ITS); Communications Access for Land Mobiles (CALM); Test specifications for non-IP networking (ISO 29281); Part 1: Protocol Implementation Conformance Statement (PICS) proforma

ETSI TS 102 985-2 V1.2.1 (2014-06)

Intelligent Transport Systems (ITS); Communications Access for Land Mobiles (CALM); Test specifications for non-IP networking (ISO 29281); Part 2: Test Suite Structure and Test Purposes (TSS & TP)

ETSI TS 102 985-3 V1.2.1 (2014-06)

Intelligent Transport Systems (ITS); Communications Access for Land Mobiles (CALM); Test specifications for non-IP networking (ISO 29281); Part 3: Abstract Test Suite (ATS) and partial PIXIT proforma

ETSI EN 302 636-6-1 V1.2.1 (2014-05)

Intelligent Transport Systems (ITS); Vehicular Communications; GeoNetworking; Part 6: Internet Integration; Sub-part 1: Transmission of IPv6 Packets over GeoNetworking Protocols

ETSI TR 103 099 V1.2.1 (2014-05)

Intelligent Transport Systems (ITS); Architecture of conformance validation framework

ETSI TS 102 869-1 V1.3.1 (2014-05)

Intelligent Transport Systems (ITS); Testing; Conformance test specifications for Decentralized Environmental Notification Messages (DENM); Part 1: Test requirements and Protocol Implementation Conformance Statement (PICS) proforma

ETSI TS 102 869-2 V1.3.1 (2014-05)

Intelligent Transport Systems (ITS); Testing; Conformance test specifications for Decentralized Environmental Notification Messages (DENM); Part 2: Test Suite Structure and Test Purposes (TSS & TP)

ETSI TS 102 869-3 V1.3.1 (2014-05)

Intelligent Transport Systems (ITS); Testing; Conformance test specifications for Decentralized Environmental Notification Messages (DENM); Part 3: Abstract Test Suite (ATS) and Protocol Implementation eXtra Information for Testing (PIXIT)

ETSI EN 302 636-1 V1.2.1 (2014-04)

Intelligent Transport Systems (ITS); Vehicular Communications; GeoNetworking; Part 1: Requirements

ETSI TR 103 061-3 V1.2.1 (2014-04)

Intelligent Transport Systems (ITS); Testing; Part 3: Conformance test specifications for Geographical addressing and forwarding for point-to-point and point-to-multipoint communications; GeoNetworking validation report

ETSI TS 102 859-2 V1.2.1 (2014-04)

Intelligent Transport Systems (ITS); Testing; Conformance test specifications for Transmission of IP packets over GeoNetworking; Part 2: Test Suite Structure and Test Purposes (TSS & TP)

ETSI TS 102 859-3 V1.2.1 (2014-04)

Intelligent Transport Systems (ITS); Testing; Conformance test specifications for Transmission of IP packets over GeoNetworking; Part 3: Abstract Test Suite (ATS) and Protocol Implementation eXtra Information for Testing (PIXIT)

ETSI TS 102 859-1 V1.2.1 (2014-04)

Intelligent Transport Systems (ITS); Testing; Conformance test specifications for Transmission of IP packets over GeoNetworking; Part 1: Test requirements and Protocol Implementation Conformance Statement (PICS) proforma

ETSI TR 103 061-1 V1.2.1 (2014-04)

Intelligent Transport Systems (ITS); Testing; Part 1: Conformance test specifications for Co-operative Awareness Messages (CAM); CAM validation report

ETSI TR 103 061-2 V1.2.1 (2014-04)

Intelligent Transport Systems (ITS); Testing; Part 2: Conformance test specifications for Decentralized Environmental Notification basic service Messages (DENM); DENM validation report

ETSI TS 102 868-1 V1.2.1 (2014-04)

Intelligent Transport Systems (ITS); Testing; Conformance test specifications for Co-operative Awareness Messages (CAM); Part 1: Test requirements and Protocol Implementation Conformance Statement (PICS) proforma

ETSI TS 102 871-3 V1.2.1 (2014-04)

Intelligent Transport Systems (ITS); Testing; Conformance test specifications for GeoNetworking ITS-G5; Part 3: Abstract Test Suite (ATS) and Protocol Implementation eXtra Information for Testing (PIXIT)

ETSI TS 102 871-1 V1.2.1 (2014-04)

Intelligent Transport Systems (ITS); Testing; Conformance test specifications for GeoNetworking ITS-G5; Part 1: Test requirements and Protocol Implementation Conformance Statement (PICS) proforma

ETSI TS 102 871-2 V1.2.1 (2014-04)

Intelligent Transport Systems (ITS); Testing; Conformance test specifications for GeoNetworking ITS-G5; Part 2: Test Suite Structure and Test Purposes (TSS & TP)

ETSI TS 102 868-2 V1.2.1 (2014-04)

Intelligent Transport Systems (ITS); Testing; Conformance test specifications for Co-operative Awareness Messages (CAM); Part 2: Test Suite Structure and Test Purposes (TSS & TP)

ETSI TS 102 868-3 V1.2.1 (2014-04)

Intelligent Transport Systems (ITS); Testing; Conformance test specifications for Co-operative Awareness Messages (CAM); Part 3: Abstract Test Suite (ATS) and Protocol Implementation eXtra Information for Testing (PIXIT)

ETSI TS 102 723-11 V1.1.1 (2013-12)

Intelligent Transport Systems (ITS); OSI cross-layer topics; Part 11: Interface between networking and transport layer and facilities layer

ETSI EN 302 636-2 V1.2.1 (2013-11)

Intelligent Transport Systems (ITS); Vehicular Communications; GeoNetworking; Part 2: Scenarios

ETSI TS 101 539-3 V1.1.1 (2013-11)

Intelligent Transport Systems (ITS); V2X Applications; Part 3: Longitudinal Collision Risk Warning (LCRW) application requirements specification

ETSI TS 102 636-4-2 V1.1.1 (2013-10)

Intelligent Transport Systems (ITS); Vehicular Communications; GeoNetworking; Part 4: Geographical addressing and forwarding for point-to-point and point-to-multipoint communications; Sub-part 2: Media-dependent functionalities for ITS-G5

ETSI TS 102 894-1 V1.1.1 (2013-08)

Intelligent Transport Systems (ITS); Users and applications requirements; Part 1: Facility layer structure, functional requirements and specifications

ETSI TS 101 539-1 V1.1.1 (2013-08)

Intelligent Transport Systems (ITS); V2X Applications; Part 1: Road Hazard Signalling (RHS) application requirements specification

ETSI TS 102 869-2 V1.2.1 (2013-08)

Intelligent Transport Systems (ITS); Testing; Conformance test specification for Decentralized Environmental Notification Messages (DENM); Part 2: Test Suite Structure and Test Purposes (TSS&TP)

ETSI TS 102 869-3 V1.2.1 (2013-08)

Intelligent Transport Systems (ITS); Testing; Conformance test specification for Decentralized Environmental Notification Messages (DENM); Part 3: Abstract Test Suite (ATS) and Protocol Implementation eXtra Information for Testing (PIXIT)

ETSI TS 102 894-2 V1.1.1 (2013-08)

Intelligent Transport Systems (ITS); Users and applications requirements; Part 2: Applications and facilities layer common data dictionary

ETSI TS 102 869-1 V1.2.1 (2013-08)

Intelligent Transport Systems (ITS); Testing; Conformance test specification for Decentralized Environmental Notification Messages (DENM); Part 1: Test requirements and Protocol Implementation Conformance Statement (PICS) proforma

ETSI TS 103 096-1 V1.1.1 (2013-07)

Intelligent Transport Systems (ITS); Testing; Conformance test specification for TS 102 867 and TS 102 941; Part 1: Protocol Implementation Conformance Statement (PICS)

ETSI TS 103 096-2 V1.1.1 (2013-07)

Intelligent Transport Systems (ITS); Testing; Conformance test specification for TS 102 867 and TS 102 941; Part 2: Test Suite Structure and Test Purposes (TSS&TP)

ETSI TS 103 096-3 V1.1.1 (2013-07)

Intelligent Transport Systems (ITS); Testing; Conformance test specification for TS 102 867 and TS 102 941; Part 3: Abstract Test Suite (ATS) and Protocol Implementation eXtra Information for Testing (PIXIT)

ETSI EN 302 663 V1.2.1 (2013-07)

Intelligent Transport Systems (ITS); Access layer specification for Intelligent Transport Systems operating in the 5 GHz frequency band

ETSI ES 200 674-1 V2.4.1 (2013-05)

Intelligent Transport Systems (ITS); Road Transport and Traffic Telematics (RTTT); Dedicated Short Range Communications (DSRC); Part 1: Technical characteristics and test methods for High Data Rate (HDR) data transmission equipment operating in the 5,8 GHz Industrial, Scientific and Medical (ISM) band

ETSI TR 101 607 V1.1.1 (2013-05)

Intelligent Transport Systems (ITS); Cooperative ITS (C-ITS); Release 1

ETSI TS 103 097 V1.1.1 (2013-04)   Intelligent Transport Systems (ITS); Security; Security header and certificate formats

ETSI TS 102 708-2-1 V1.3.1 (2013-03)

Intelligent Transport Systems (ITS); RTTT; Test specifications for High Data Rate (HDR) data transmission equipment operating in the 5,8 GHz ISM band; Part 2: Application Layer; Sub-part 1: Protocol Implementation Conformance Statement (PICS) proforma specification

ETSI TS 102 708-2-2 V1.4.1 (2013-03)

Intelligent Transport Systems (ITS); RTTT; Test specifications for High Data Rate (HDR) data transmission equipment operating in the 5,8 GHz ISM band; Part 2: Application Layer; Sub-Part 2: Test Suite Structure and Test Purposes (TSS&TP)

ETSI TS 102 708-2-3 V1.4.1 (2013-03)

Intelligent Transport Systems (ITS); RTTT; Test specifications for High Data Rate (HDR) data transmission equipment operating in the 5,8 GHz ISM band; Part 2: Application Layer; Sub-part 3: Abstract Test Suite (ATS) and partial PIXIT proforma

ETSI TR 102 965 V1.1.1 (2013-03)

Intelligent Transport Systems (ITS); Application Object Identifier (ITS-AID); Registration list

ETSI TS 102 917-1 V1.1.1 (2013-01)

Intelligent Transport Systems (ITS); Test specifications for the channel congestion control algorithms operating in the 5,9 GHz range; Part 1: Protocol Implementation Conformance Statement (PICS)

ETSI TS 102 917-2 V1.1.1 (2013-01)

Intelligent Transport Systems (ITS); Test specifications for the channel congestion control algorithms operating in the 5,9 GHz range; Part 2: Test Suite Structure and Test Purposes (TSS & TP)

ETSI TS 102 917-3 V1.1.1 (2013-01)

Intelligent Transport Systems (ITS); Test specifications for the channel congestion control algorithms operating in the 5,9 GHz range; Part 3: Abstract Test Suite (ATS) and partial Protocol Implementation eXtra Information for Testing (PIXIT)

ETSI TR 102 960 V1.1.1 (2012-11)

Intelligent Transport Systems (ITS); Mitigation techniques to avoid interference between European CEN Dedicated Short Range Communication (RTTT DSRC) equipment and Intelligent Transport Systems (ITS) operating in the 5 GHz frequency range; Evaluation of mitigation methods and techniques

ETSI TS 102 723-10 V1.1.1 (2012-11)

Intelligent Transport Systems (ITS); OSI cross-layer topics; Part 10: Interface between access layer and networking & transport layer

ETSI TS 102 723-1 V1.1.1 (2012-11)

Intelligent Transport Systems (ITS); OSI cross-layer topics; Part 1: Architecture and addressing schemes

ETSI TS 102 723-2 V1.1.1 (2012-11)

Intelligent Transport Systems (ITS); OSI cross-layer topics; Part 2: Management information base

ETSI TS 102 723-3 V1.1.1 (2012-11)

Intelligent Transport Systems (ITS); OSI cross-layer topics; Part 3: Interface between management entity and access layer

ETSI TS 102 723-4 V1.1.1 (2012-11)

Intelligent Transport Systems (ITS); OSI cross-layer topics; Part 4: Interface between management entity and networking & transport layer

ETSI TS 102 723-5 V1.1.1 (2012-11)

Intelligent Transport Systems (ITS); OSI cross-layer topics; Part 5: Interface between management entity and facilities layer

ETSI TR 103 061-5 V1.1.1 (2012-11)

Intelligent Transport Systems (ITS); Testing; Part 5: IPv6 over GeoNetworking validation report

ETSI TR 103 061-4 V1.1.1 (2012-11)

Intelligent Transport Systems (ITS); Testing; Part 4: Conformance test specification for GeoNetworking Basic Transport Protocol (BTP); GeoNetworking BTP validation report

ETSI TR 103 061-3 V1.1.1 (2012-11)

Intelligent Transport Systems (ITS); Testing; Part 3: Conformance test specification for Geographical addressing and forwarding for point-to-point and point-to-multipoint communications; GeoNetworking validation report

ETSI TR 103 061-1 V1.1.1 (2012-11)

Intelligent Transport Systems (ITS); Testing; Part 1: Conformance test specification for Co-operative Awareness Messages (CAM); CAM validation report

ETSI TR 103 061-2 V1.1.1 (2012-11)

Intelligent Transport Systems (ITS); Testing; Part 2: Conformance test specification for Decentralized Environmental Notification basic Service Message (DENM); DENM validation report

ETSI TR 103 099 V1.1.1 (2012-11)

Intelligent Transport Systems (ITS); Architecture of conformance validation framework

ETSI TS 102 724 V1.1.1 (2012-10)

Intelligent Transport Systems (ITS); Harmonized Channel Specifications for Intelligent Transport Systems operating in the 5 GHz frequency band

ETSI TS 102 792 V1.1.1 (2012-10)

Intelligent Transport Systems (ITS); Mitigation techniques to avoid interference between European CEN Dedicated Short Range Communication (CEN DSRC) equipment and Intelligent Transport Systems (ITS) operating in the 5 GHz frequency range

ETSI ES 200 674-1 V2.3.1 (2012-08)

Intelligent Transport Systems (ITS); Road Transport and Traffic Telematics (RTTT); Dedicated Short Range Communications (DSRC); Part 1: Technical characteristics and test methods for High Data Rate (HDR) data transmission equipment operating in the 5,8 GHz Industrial, Scientific and Medical (ISM) band

ETSI TS 102 797-2 V1.1.1 (2012-08)

Intelligent Transport Systems (ITS); Communications Access for Land Mobiles (CALM); Test specifications for ITS station management (ISO 24102); Part 2: Test Suite Structure and Test Purposes (TSS&TP)

ETSI TS 102 797-1 V1.1.1 (2012-08)

Intelligent Transport Systems (ITS); Communications Access for Land Mobiles (CALM); Test specifications for ITS station management (ISO 24102); Part 1: Protocol Implementation Conformance Statement (PICS) specification

ETSI TS 102 797-3 V1.1.1 (2012-08)

Intelligent Transport Systems (ITS); Communications Access for Land Mobiles (CALM); Test specifications for ITS station management (ISO 24102); Part 3: Abstract Test Suite (ATS) and partial PIXIT proforma

ETSI TS 102 985-1 V1.1.1 (2012-07)

Intelligent Transport Systems (ITS); Communications Access for Land Mobiles (CALM); Test specifications for non-IP networking (ISO 29281); Part 1: Protocol Implementation Conformance Statement (PICS) proforma

ETSI TS 102 985-2 V1.1.1 (2012-07)

Intelligent Transport Systems (ITS); Communications Access for Land Mobiles (CALM); Test specifications for non-IP networking (ISO 29281); Part 2: Test Suite Structure and Test Purposes (TSS&TP)

ETSI TS 102 985-3 V1.1.1 (2012-07)

Intelligent Transport Systems (ITS); Communications Access for Land Mobiles (CALM); Test specifications for non-IP networking (ISO 29281); Part 3: Abstract Test Suite (ATS) and partial PIXIT proforma

ETSI TS 101 556-1 V1.1.1 (2012-07)

Intelligent Transport Systems (ITS); Infrastructure to Vehicle Communication; Electric Vehicle Charging Spot Notification Specification

ETSI TS 102 940 V1.1.1 (2012-06)

Intelligent Transport Systems (ITS); Security; ITS communications security architecture and security management

ETSI TS 102 941 V1.1.1 (2012-06)

Intelligent Transport Systems (ITS); Security; Trust and Privacy Management

ETSI TS 102 942 V1.1.1 (2012-06)

Intelligent Transport Systems (ITS); Security; Access Control

ETSI TS 102 943 V1.1.1 (2012-06)

Intelligent Transport Systems (ITS); Security; Confidentiality services

ETSI TS 102 708-2-2 V1.3.1 (2012-06)

Intelligent Transport Systems (ITS); RTTT; Test specifications for High Data Rate (HDR) data transmission equipment operating in the 5,8 GHz ISM band; Part 2: Application Layer; Sub-Part 2: Test Suite Structure and Test Purposes (TSS&TP)

ETSI TS 102 708-2-3 V1.3.1 (2012-06)

Intelligent Transport Systems (ITS); RTTT; Test specifications for High Data Rate (HDR) data transmission equipment operating in the 5,8 GHz ISM band; Part 2: Application Layer; Sub-Part 3: Abstract Test Suite (ATS) and partial PIXIT proforma

ETSI TS 102 916-1 V1.1.1 (2012-05)

Intelligent Transport Systems (ITS); Test specifications for the methods to ensure coexistence of Cooperative ITS G5 with RTTT DSRC; Part 1: Protocol Implementation Conformance Statement (PICS)

ETSI TS 102 916-2 V1.1.1 (2012-05)

Intelligent Transport Systems (ITS); Test specifications for the methods to ensure coexistence of Cooperative ITS G5 with RTTT DSRC; Part 2: Test Suite Structure and Test Purposes (TSS&TP)

ETSI TS 102 916-3 V1.1.1 (2012-05)

Intelligent Transport Systems (ITS); Test specifications for the methods to ensure coexistence of Cooperative ITS G5 with RTTT DSRC; Part 3: Abstract Test Suite (ATS) and partial Protocol Implementation eXtra Information for Testing (PIXIT)

ETSI TS 102 708-2-3 V1.2.1 (2012-03)

Intelligent Transport Systems (ITS); RTTT; Test specifications for High Data Rate (HDR) data transmission equipment operating in the 5,8 GHz ISM band; Part 2: Application Layer; Sub-Part 3: Abstract Test Suite (ATS) and partial PIXIT proforma

ETSI TS 102 708-2-2 V1.2.1 (2012-02)

Intelligent Transport Systems (ITS); RTTT; Test specifications for High Data Rate (HDR) data transmission equipment operating in the 5,8 GHz ISM band; Part 2: Application Layer; Sub-Part 2: Test Suite Structure and Test Purposes (TSS&TP)

ETSI TS 102 708-2-1 V1.2.1 (2012-02)

Intelligent Transport Systems (ITS); RTTT; Test specifications for High Data Rate (HDR) data transmission equipment operating in the 5,8 GHz ISM band; Part 2: Application Layer; Sub-Part 1: Protocol Implementation Conformance Statement (PICS) proforma specification

ETSI TR 102 962 V1.1.1 (2012-02)

Intelligent Transport Systems (ITS); Framework for Public Mobile Networks in Cooperative ITS (C-ITS)

ETSI TR 102 861 V1.1.1 (2012-01)

Intelligent Transport Systems (ITS); STDMA recommended parameters and settings for cooperative ITS; Access Layer Part

ETSI TR 102 862 V1.1.1 (2011-12)

Intelligent Transport Systems (ITS); Performance Evaluation of Self-Organizing TDMA as Medium Access Control Method Applied to ITS; Access Layer Part

ETSI EN 302 931 V1.1.1 (2011-07)

Intelligent Transport Systems (ITS); Vehicular Communications; Geographical Area Definition

ETSI TS 102 687 V1.1.1 (2011-07)

Intelligent Transport Systems (ITS); Decentralized Congestion Control Mechanisms for Intelligent Transport Systems operating in the 5 GHz range; Access layer part

ETSI TS 102 636-4-1 V1.1.1 (2011-06)

Intelligent Transport System (ITS); Vehicular communications; GeoNetworking; Part 4: Geographical addressing and forwarding for point-to-point and point-to-multipoint communications; Sub-part 1: Media-Independent Functionality

ETSI TS 102 871-3 V1.1.1 (2011-06)

Intelligent Transport Systems (ITS); Testing; Conformance test specifications for GeoNetworking ITS-G5; Part 3: Abstract Test Suite (ATS) and Protocol Implementation eXtra Information for Testing (PIXIT)

ETSI TS 102 871-1 V1.1.1 (2011-06)

Intelligent Transport Systems (ITS); Testing; Conformance test specifications for GeoNetworking ITS-G5; Part 1: Test requirements and Protocol Implementation Conformance Statement (PICS) proforma

ETSI TS 102 871-2 V1.1.1 (2011-06)

Intelligent Transport Systems (ITS); Testing; Conformance test specifications for GeoNetworking ITS-G5; Part 2: Test Suite Structure and Test Purposes (TSS&TP)

ETSI TR 102 863 V1.1.1 (2011-06)

Intelligent Transport Systems (ITS); Vehicular Communications; Basic Set of Applications; Local Dynamic Map (LDM); Rationale for and guidance on standarisation

ETSI TS 102 860 V1.1.1 (2011-05)   Intelligent Transport Systems (ITS); Classification and management of ITS application objects

ETSI TS 102 869-3 V1.1.1 (2011-03)

Intelligent Transport Systems (ITS); Testing; Conformance test specification for Decentralized Environmental Notification Messages (DENM); Part 3: Abstract Test Suite (ATS) and Protocol Implementation eXtra Information for Testing (PIXIT)

ETSI TS 102 869-1 V1.1.1 (2011-03)

Intelligent Transport Systems (ITS); Testing; Conformance test specification for Decentralized Environmental Notification Messages (DENM); Part 1: Test requirements and Protocol Implementation Conformance Statement (PICS) proforma

ETSI TS 102 869-2 V1.1.1 (2011-03)

Intelligent Transport Systems (ITS); Testing; Conformance test specification for Decentralized Environmental Notification Messages (DENM); Part 2: Test Suite Structure and Test Purposes (TSS&TP)

ETSI TS 102 868-3 V1.1.1 (2011-03)

Intelligent Transport Systems (ITS); Testing; Conformance test specification for Co-operative Awareness Messages (CAM); Part 3: Abstract Test Suite (ATS) and Protocol Implementation eXtra Information for Testing (PIXIT)

ETSI TS 102 868-1 V1.1.1 (2011-03)

Intelligent Transport Systems (ITS); Testing; Conformance test specification for Co-operative Awareness Messages (CAM); Part 1: Test requirements and Protocol Implementation Conformance Statement (PICS) proforma

ETSI TS 102 868-2 V1.1.1 (2011-03)

Intelligent Transport Systems (ITS); Testing; Conformance test specification for Co-operative Awareness Messages (CAM); Part 2: Test Suite Structure and Test Purposes (TSS&TP)

ETSI TS 102 859-3 V1.1.1 (2011-03)

Intelligent Transport Systems (ITS); Testing; Conformance test specifications for Transmission of IP packets over GeoNetworking; Part 3: Abstract Test Suite (ATS) and Protocol Implementation eXtra Information for Testing (PIXIT)

ETSI TS 102 859-1 V1.1.1 (2011-03)

Intelligent Transport Systems (ITS); Testing; Conformance test specifications for Transmission of IP packets over GeoNetworking; Part 1: Test requirements and Protocol Implementation Conformance Statement (PICS) proforma

ETSI TS 102 859-2 V1.1.1 (2011-03)

Intelligent Transport Systems (ITS); Testing; Conformance test specifications for Transmission of IP packets over GeoNetworking; Part 2: Test Suite Structure and Test Purposes (TSS&TP)

ETSI TS 102 636-6-1 V1.1.1 (2011-03)

Intelligent Transport Systems (ITS); Vehicular Communications; GeoNetworking; Part 6: Internet Integration; Sub-part 1: Transmission of IPv6 Packets over GeoNetworking Protocols

ETSI TS 102 637-2 V1.2.1 (2011-03)

Intelligent Transport Systems (ITS); Vehicular Communications; Basic Set of Applications; Part 2: Specification of Cooperative Awareness Basic Service

ETSI TS 102 870-3 V1.1.1 (2011-03)

Intelligent Transport Systems (ITS); Testing; Conformance test specifications for Geonetworking Basic Transport Protocol (BTP); Part 3: Abstract Test Suite (ATS) and Protocol Implementation eXtra Information for Testing (PIXIT)

ETSI TS 102 870-1 V1.1.1 (2011-03)

Intelligent Transport Systems (ITS); Testing; Conformance test specifications for GeoNetworking Basic Transport Protocol (BTP); Part 1: Test requirements and Protocol Implementation Conformance Statement (PICS) proforma

ETSI TS 102 870-2 V1.1.1 (2011-03)

Intelligent Transport Systems (ITS); Testing; Conformance test specifications for GeoNetworking Basic Transport Protocol (BTP); Part 2: Test Suite Structure and Test Purposes (TSS&TP)

ETSI ES 200 674-1 V2.2.1 (2011-02)

Intelligent Transport Systems (ITS); Road Transport and Traffic Telematics (RTTT); Dedicated Short Range Communications (DSRC); Part 1: Technical characteristics and test methods for High Data Rate (HDR) data transmission equipment operating in the 5,8 GHz Industrial, Scientific and Medical (ISM) band

ETSI TS 102 636-5-1 V1.1.1 (2011-02)

Intelligent Transport Systems (ITS); Vehicular Communications; GeoNetworking; Part 5: Transport Protocols; Sub-part 1: Basic Transport Protocol

ETSI EG 202 798 V1.1.1 (2011-01)

Intelligent Transport Systems (ITS); Testing; Framework for conformance and interoperability testing

ETSI EN 302 665 V1.1.1 (2010-09)

Intelligent Transport Systems (ITS); Communications Architecture

ETSI TS 102 731 V1.1.1 (2010-09)

Intelligent Transport Systems (ITS); Security; Security Services and Architecture

ETSI TS 102 637-3 V1.1.1 (2010-09)

Intelligent Transport Systems (ITS); Vehicular Communications; Basic Set of Applications; Part 3: Specifications of Decentralized Environmental Notification Basic Service

ETSI TS 102 637-1 V1.1.1 (2010-09)

Intelligent Transport Systems (ITS); Vehicular Communications; Basic Set of Applications; Part 1: Functional Requirements

ETSI TR 102 698 V1.1.2 (2010-07)

Intelligent Transport Systems (ITS); Vehicular Communications; C2C-CC Demonstrator 2008; Use Cases and Technical Specifications

ETSI TS 102 637-2 V1.1.1 (2010-04)

Intelligent Transport Systems (ITS); Vehicular Communications; Basic Set of Applications; Part 2: Specification of Cooperative Awareness Basic Service

ETSI TS 102 708-2-1 V1.1.1 (2010-03)

Intelligent Transport Systems (ITS); RTTT; Test specifications for High Data Rate (HDR) data transmission equipment operating in the 5,8 GHz ISM band; Part 2: Application Layer Common Application Service Elements; Sub-Part 1: Protocol Implementation Conformance Statement (PICS) proforma specification

ETSI TS 102 708-2-2 V1.1.1 (2010-03)

Intelligent Transport Systems (ITS); RTTT; Test specifications for High Data Rate (HDR) data transmission equipment operating in the 5,8 GHz ISM band; Part 2: Application Layer Common Application Service Elements; Sub-Part 2: Test Suite Structure and Test Purposes (TSS&TP)

ETSI TS 102 708-2-3 V1.1.1 (2010-03)

Intelligent Transport Systems (ITS); RTTT; Test specifications for High Data Rate (HDR) data transmission equipment operating in the 5,8 GHz ISM band; Part 2: Application Layer Common Application Service Elements; Sub-Part 3: Abstract Test Suite (ATS) and partial PIXIT proforma

ETSI TS 102 708-1-1 V1.1.1 (2010-03)

Intelligent Transport Systems (ITS); RTTT; Test specifications for High Data Rate (HDR) data transmission equipment operating in the 5,8 GHz ISM band; Part 1: Data Link Layer; Sub-Part 1: Protocol Implementation Conformance Statement (PICS) proforma specification

ETSI TS 102 708-1-2 V1.1.1 (2010-03)

Intelligent Transport Systems (ITS); RTTT; Test specifications for High Data Rate (HDR) data transmission equipment operating in the 5,8 GHz ISM band; Part 1: Data Link Layer; Sub-Part 2: Test Suite Structure and Test Purposes (TSS&TP)

ETSI TS 102 708-1-3 V1.1.1 (2010-03)

Intelligent Transport Systems (ITS); RTTT; Test specifications for High Data Rate (HDR) data transmission equipment operating in the 5,8 GHz ISM band; Part 1: Data Link Layer; Sub-Part 3: Abstract Test Suite (ATS) and partial PIXIT proforma

ETSI TS 102 636-1 V1.1.1 (2010-03)

Intelligent Transport Systems (ITS); Vehicular Communications; GeoNetworking; Part 1: Requirements

ETSI TS 102 636-2 V1.1.1 (2010-03)

Intelligent Transport Systems (ITS); Vehicular Communications; GeoNetworking; Part 2: Scenarios

ETSI TS 102 636-3 V1.1.1 (2010-03)

Intelligent Transport Systems (ITS); Vehicular Communications; GeoNetworking; Part 3: Network architecture

ETSI TR 102 893 V1.1.1 (2010-03)

Intelligent Transport Systems (ITS); Security; Threat, Vulnerability and Risk Analysis (TVRA)

ETSI ES 202 663 V1.1.0 (2010-01)

Intelligent Transport Systems (ITS); European profile standard for the physical and medium access control layer of Intelligent Transport Systems operating in the 5 GHz frequency band

ETSI TS 102 760-1 V1.1.1 (2009-11)

Intelligent Transport Systems (ITS); Test specifications for Intelligent Transport Systems; Communications Access for Land Mobiles (CALM); Medium Service Access Points (ISO 21218); Part 1: Implementation Conformance Statement (ICS) proforma

ETSI TS 102 760-2 V1.1.1 (2009-11)

Intelligent Transport Systems (ITS); Test specifications for Intelligent Transport Systems; Communications Access for Land Mobiles (CALM); Medium Service Access Points (ISO 21218); Part 2: Test Suite Structure and Test Purposes (TSS&TP)

ETSI TR 102 638 V1.1.1 (2009-06)

Intelligent Transport Systems (ITS); Vehicular Communications; Basic Set of Applications; Definitions

ETSI TR 102 698 V1.1.1 (2009-06)

Intelligent Transport Systems (ITS); Vehicular Communications; C2C-CC Demonstrator 2008; Use Cases and Technical Specifications

ETSI TS 102 486-1-3 V1.2.2 (2009-05)

Intelligent Transport Systems (ITS); Road Transport and Traffic Telematics (RTTT); Test specifications for Dedicated Short Range Communication (DSRC) transmission equipment; Part 1: DSRC data link layer: medium access and logical link control; Sub-Part 3: Abstract Test Suite (ATS) and partial PIXIT proforma

ETSI TR 102 707 V1.1.1 (2009-05)

Intelligent Transport Systems (ITS); ETSI object identifier tree; ITS domain

ETSI TS 102 486-1-2 V1.2.1 (2008-10)

Intelligent Transport Systems (ITS); Road Transport and Traffic Telematics (RTTT); Test specifications for Dedicated Short Range Communication (DSRC) transmission equipment; Part 1: DSRC data link layer: medium access and logical link control; Sub-Part 2: Test Suite Structure and Test Purposes (TSS&TP)

ETSI TS 102 486-1-3 V1.2.1 (2008-10)

Intelligent Transport Systems (ITS); Road Transport and Traffic Telematics (RTTT); Test specifications for Dedicated Short Range Communication (DSRC) transmission equipment; Part 1: DSRC data link layer: medium access and logical link control; Sub-Part 3: Abstract Test Suite (ATS) and partial PIXIT proforma

ETSI TS 102 486-2-1 V1.2.1 (2008-10)

Intelligent Transport Systems (ITS); Road Transport and Traffic Telematics (RTTT); Test specifications for Dedicated Short Range Communication (DSRC) transmission equipment; Part 2: DSRC application layer; Sub-Part 1: Protocol Implementation Conformance Statement (PICS) proforma specification

ETSI TS 102 486-2-2 V1.2.1 (2008-10)

Intelligent Transport Systems (ITS) Road Transport and Traffic Telematics (RTTT); Test specifications for Dedicated Short Range Communication (DSRC) transmission equipment; Part 2: DSRC application layer; Sub-Part 2: Test Suite Structure and Test Purposes (TSS&TP)

ETSI TS 102 486-2-3 V1.2.1 (2008-10)

Intelligent Transport Systems (ITS); Road Transport and Traffic Telematics (RTTT); Test specifications for Dedicated Short Range Communication (DSRC) transmission equipment; Part 2: DSRC application layer; Sub-Part 3: Abstract Test Suite (ATS) and partial PIXIT proforma

Standards under development:

There are not any standards under development.

3.2.102   TC SMARTM2M - TECHNICAL COMMITTEE (TC) SMART MACHINE-TO-MACHINE COMMUNICATIONS (SMARTM2M)

Keywords:

Smart Grids, Internet of Things (IoT), Smart appliances, **Smart cities**, Smart Metering

Scope:

We are developing standards to enable M2M services and applications and certain aspects of the Internet of Things (IoT).

We are a partner in oneM2M and help to produce the specifications to enable users to build platforms by which devices and services can be connected, regardless of the underlying technology used.

Our work enables connected devices to exchange information through SAREF, our smart applications reference ontology that runs with oneM2M-compliant communication platforms. With SAREF, SmartM2M is promoting oneM2M Base Ontology with extensions in many IoT domains.

We are the first group in ETSI to develop Smart Cities requirements. SmartM2M is the home of the first Smart Agriculture oneM2M/ITS Pilot. We are investigating virtualized IoT architectures, identifying new elements that are required to support a virtualized IoT service layer. We are also supporting the ETSI role in AIOTI (www.aioti.eu) WG03 (IoT Standarisation) in collaboration with the H2020 IoT Large Scape Pilot and IoT Platforms. We collaborate with TC CYBER to achieve the move towards better IoT Cybersecurity, Safety and Privacy protection.

Standards:

ETSI TR 103 546 V1.1.1 (2020-04)

SmartM2M; Requirements & Feasibility study for Smart Lifts in IoT

ETSI SR 003 680 V1.1.1 (2020-03)

SmartM2M; Guidelines for Security, Privacy and Interoperability in IoT System Definition; A Concrete Approach

ETSI TS 103 264 V3.1.1 (2020-02)

SmartM2M; Smart Applications; Reference Ontology and oneM2M Mapping

ETSI TS 103 267 V2.1.1 (2020-02)

SmartM2M; Smart Applications; Communication Framework

ETSI TR 103 536 V1.1.2 (2019-12)

SmartM2M; Strategic/technical approach on how to achieve interoperability/interworking of existing standardised IoT Platforms

ETSI TR 103 536 V1.1.1 (2019-12)

SmartM2M; Strategic/technical approach on how to achieve interoperability/interworking of existing standardised IoT Platforms

ETSI TR 103 510 V1.1.1 (2019-10)

SmartM2M; SAREF extension investigation; Requirements for Wearables

ETSI TR 103 547 V1.1.1 (2019-10)

SmartM2M; SAREF extension investigation; Requirements for the Water domain

ETSI TR 103 508 V1.1.1 (2019-10)

SmartM2M; SAREF extension investigation; Requirements for Automotive

ETSI TR 103 509 V1.1.1 (2019-10)

SmartM2M; SAREF extension investigation; Requirements for eHealth/Ageing-well

ETSI TR 103 535 V1.1.1 (2019-10)

SmartM2M; Guidelines for using semantic interoperability in the industry

ETSI TR 103 534-2 V1.1.1 (2019-10)

SmartM2M; Teaching material; Part 2: Privacy

ETSI TR 103 591 V1.1.1 (2019-10)

SmartM2M; Privacy study report; Standards Landscape and best practices

ETSI TR 103 537 V1.1.1 (2019-09)

SmartM2M; PlugtestsTM preparation on Semantic Interoperability

ETSI TR 103 533 V1.1.1 (2019-08)

SmartM2M; Security; Standards Landscape and best practices

ETSI TR 103 534-1 V1.1.1 (2019-08)

SmartM2M; Teaching material; Part 1: Security

ETSI TR 103 608 V1.1.1 (2019-07)

SmartM2M; SAREF publication framework reinforcing the engagement of its community of users

ETSI TR 103 549 V1.1.1 (2019-07)

SmartM2M; Guidelines for consolidating SAREF with new reference ontology patterns, based on the experience from the ITEA SEAS project

ETSI TS 103 548 V1.1.1 (2019-07)

SmartM2M; SAREF consolidation with new reference ontology patterns, based on the experience from the SEAS project

ETSI TS 103 410-5 V1.1.1 (2019-05)

SmartM2M; Extension to SAREF Part 5: Industry and Manufacturing Domains

ETSI TS 103 410-6 V1.1.1 (2019-05)

SmartM2M; Extension to SAREF; Part 6: Smart Agriculture and Food Chain Domain

ETSI TS 103 410-4 V1.1.1 (2019-05)

SmartM2M Extension to SAREF Part 4: Smart Cities Domain

ETSI TR 103 507 V1.1.1 (2018-10)

SmartM2M; SAREF extension investigation; Requirements for industry and manufacturing domains

ETSI TR 103 511 V1.1.1 (2018-10)

SmartM2M; SAREF extension investigation; Requirements for AgriFood domain

ETSI TR 103 506 V1.1.1 (2018-09)

SmartM2M; SAREF extension investigation; Requirements for Smart Cities

ETSI TR 103 528 V1.1.1 (2018-08)

SmartM2M; Landscape for open source and standards for cloud native software applicable for a Virtualized IoT service layer

ETSI TR 103 545 V1.1.1 (2018-08)

SmartM2M; Pilot test definition and guidelines for testing cooperation between oneM2M and Ag equipment standards

ETSI TR 103 529 V1.1.1 (2018-08)

SmartM2M; IoT over Cloud back-ends: A Proof of Concept

ETSI TR 103 527 V1.1.1 (2018-07)

SmartM2M; Virtualized IoT Architectures with Cloud Back-ends

ETSI TS 103 268-1 V1.1.1 (2017-04)

SmartM2M; Smart Appliances Ontology and Communication Framework Testing; Part 1: Testing methodology

ETSI TS 103 268-2 V1.1.1 (2017-04)

SmartM2M; Smart Appliances Ontology and Communication Framework Testing; Part 2: Protocol Implementation Conformance Statement (PICS) pro forma

ETSI TS 103 268-4 V1.1.1 (2017-04)

SmartM2M; Smart Appliances Ontology and Communication Framework Testing; Part 4: Abstract Test Suite (ATS) and Protocol Implementation eXtra Information for Testing (PIXIT)

ETSI TS 103 268-3 V1.1.1 (2017-04)

SmartM2M; Smart Appliances Ontology and Communication Framework Testing; Part 3: Test Suite Structure and Test Purposes (TSS & TP)

ETSI TS 103 264 V2.1.1 (2017-03)

SmartM2M; Smart Appliances; Reference Ontology and oneM2M Mapping

ETSI TR 103 411 V1.1.1 (2017-02)

SmartM2M; Smart Appliances; SAREF extension investigation

ETSI TS 103 410-1 V1.1.1 (2017-01)

SmartM2M; Smart Appliances Extension to SAREF; Part 1: Energy Domain

ETSI TS 103 410-2 V1.1.1 (2017-01)

SmartM2M; Smart Appliances Extension to SAREF; Part 2: Environment Domain

ETSI TS 103 410-3 V1.1.1 (2017-01)

SmartM2M; Smart Appliances Extension to SAREF; Part 3: Building Domain

ETSI TS 103 424 V1.1.1 (2016-11)

Publicly Available Specification (PAS); Smart Machine-to-Machine communications (SmartM2M) Home Gateway Initiative RD036-Smart Home architecture and system requirements

ETSI TS 103 425 V1.1.1 (2016-11)

Publicly Available Specification (PAS); Smart Machine-to-Machine communications (SmartM2M) Home Gateway Initiative RD039-Requirements for Wireless Home Area Networks (WHANs) Supporting Smart Home Services

ETSI TS 103 426 V1.1.1 (2016-11)

Publicly Available Specification (PAS); Smart Machine-to-Machine communications (SmartM2M) Home Gateway Initiative RD048-HG Requirements For HGI Open Platform 2.1

ETSI TR 103 376 V1.1.1 (2016-10)

SmartM2M; IoT LSP use cases and standards gaps

ETSI TR 103 375 V1.1.1 (2016-10)

SmartM2M; IoT Standards landscape and future evolutions

ETSI TS 103 267 V1.1.1 (2015-12)

SmartM2M; Smart Appliances; Communication Framework

ETSI TS 103 264 V1.1.1 (2015-11)

SmartM2M; Smart Appliances; Reference Ontology and oneM2M Mapping

ETSI TR 103 118 V1.1.1 (2015-08)

Machine-to-Machine communications (M2M); Smart Energy Infrastructures security; Review of existing security measures and convergence investigations

ETSI TR 103 290 V1.1.1 (2015-04)

Machine-to-Machine communications (M2M); Impact of Smart City Activity on IoT Environment

ETSI TS 103 315 V1.1.1 (2015-01)

SmartM2M; Machine-to-Machine communications (M2M); Interoperability Test Specification for ETSI M2M Primitives

ETSI TS 102 921 V1.3.1 (2014-09)   Machine-to-Machine communications (M2M); mIa, dIa and mId interfaces

ETSI TR 102 966 V1.1.1 (2014-02)

Machine-to-Machine communications (M2M); Interworking between the M2M Architecture and M2M Area Network technologies

ETSI TS 102 921 V2.1.1 (2013-12)

Machine-to-Machine communications (M2M); mIa, dIa and mId interfaces

ETSI TR 101 584 V2.1.1 (2013-12)

Machine-to-Machine communications (M2M); Study on Semantic support for M2M Data

ETSI TS 102 690 V2.1.1 (2013-10)

Machine-to-Machine communications (M2M); Functional architecture

ETSI TR 102 732 V1.1.1 (2013-09)

Machine-to-Machine Communications (M2M); Use Cases of M2M applications for eHealth

ETSI TR 102 857 V1.1.1 (2013-08)

Machine-to-Machine communications (M2M); Use Cases of M2M applications for Connected Consumer

ETSI TS 102 689 V2.1.1 (2013-07)

Machine-to-Machine communications (M2M); M2M service requirements

ETSI TS 102 690 V1.2.1 (2013-06)

Machine-to-Machine communications (M2M); Functional architecture

ETSI TS 102 689 V1.2.1 (2013-06)

Machine-to-Machine communications (M2M); M2M service requirements

ETSI TS 102 921 V1.2.1 (2013-06)

Machine-to-Machine communications (M2M); mIa, dIa and mId interfaces

ETSI TR 102 725 V1.1.1 (2013-06)

Machine-to-Machine communications (M2M); Definitions

ETSI TS 103 104 V1.1.1 (2013-04)

Machine-to-Machine communications (M2M); Interoperability Test Specification for CoAP Binding of ETSI M2M Primitives

ETSI TR 102 898 V1.1.1 (2013-04)

Machine to Machine communications (M2M); Use cases of Automotive Applications in M2M capable networks

ETSI TS 103 093 V1.2.1 (2013-03)

Machine-to-Machine communications (M2M); BBF TR-069 compatible Management Objects for ETSI M2M

ETSI TS 103 093 V2.1.1 (2013-03)

Machine-to-Machine communications (M2M); BBF TR-069 compatible Management Objects for ETSI M2M

ETSI TS 103 092 V1.2.1 (2013-01)

Machine-to-Machine communications (M2M); OMA DM compatible Management Objects for ETSI M2M

ETSI TS 103 092 V2.1.1 (2013-01)

Machine-to-Machine communications (M2M); OMA DM compatible Management Objects for ETSI M2M

ETSI TR 102 935 V2.1.1 (2012-09)

Machine-to-Machine communications (M2M); Applicability of M2M architecture to Smart Grid Networks; Impact of Smart Grids on M2M platform

ETSI TS 103 092 V1.1.1 (2012-05)

Machine-to-Machine communications (M2M); OMA DM compatible Management Objects for ETSI M2M

ETSI TS 103 093 V1.1.1 (2012-05)

Machine-to-Machine communications (M2M); BBF TR-069 compatible Management Objects for ETSI M2M

ETSI TS 102 921 V1.1.1 (2012-02)

Machine-to-Machine communications (M2M); mIa, dIa and mId interfaces

ETSI TS 102 690 V1.1.1 (2011-10)

Machine-to-Machine communications (M2M); Functional architecture

ETSI TR 103 167 V1.1.1 (2011-08)

Machine to Machine (M2M); Threat analysis and counter measures to M2M service layer

ETSI TS 102 689 V1.1.1 (2010-08)

Machine-to-Machine communications (M2M); M2M service requirements

ETSI TR 102 691 V1.1.1 (2010-05)

Machine-to-Machine communications (M2M); Smart Metering Use Cases

<u>Standards under development:</u>

There are not any standards under development.

3.2.103   TC EE- TECHNICAL COMMITTEE (TC) ENVIRONMENTAL ENGINEERING (EE)

Keywords:

Electrical energy supply, Energy efficiency (EE), Environmental Aspects**, Smart cities**

Scope:

We are responsible for defining the equipment engineering, the bonding and grounding, the power supply interface and environmental aspects for telecommunication infrastructures and equipment.

We manage various engineering aspects of telecommunication equipment in different types of installations. These include:

- environmental conditions (climatic, thermal, active substances, acoustic, etc.);
- equipment practice (the physical requirements of racks, sub-racks and cabinets including thermal matters);
- power supply and grounding (power interface specifications, power and grounding distributions);
- eco-environmental matters (energy efficiency, environmental impact analysis, alternative energy sources);
- environmental matters associated with mobile Information and Communications Technologies (ICT) devices.

Much of our work on energy efficiency supports European Commission (EC) policies, regulation or legislation.

We also comprise representatives from the Telecommunication network operators and equipment suppliers of Europe, China, Japan and the US.

Standards:

ETSI EN 303 423 V1.2.9 (2020-03)

Environmental Engineering (EE); Electrical and electronic household and office equipment; Measurement of networked standby power consumption of Interconnecting equipment

ETSI EN 300 019-2-8 V2.2.1 (2020-03)

Environmental Engineering (EE); Environmental conditions and environmental tests for telecommunications equipment; Part 2-8: Specification of environmental tests; Stationary use at underground locations

ETSI ES 203 682 V1.1.1 (2020-02)

Environmental Engineering (EE); Green Abstraction Layer (GAL); Power management capabilities of the future energy telecommunication fixed network nodes; Enhanced Interface for power management in Network Function Virtualisation (NFV) environments

ETSI TS 103 553-3 V1.1.1 (2020-01)

Environmental Engineering (EE); Innovative energy storage technology for stationary use; Part 3: Supercapacitor

ETSI TS 103 553-1 V1.1.1 (2019-08)

Environmental Engineering (EE); Innovative energy storage technology for stationary use; Part 1: Overview

ETSI ES 203 539 V1.1.1 (2019-06)

Environmental Engineering (EE); Measurement method for energy efficiency of Network Functions Virtualisation (NFV) in laboratory environment

ETSI TR 103 679 V1.1.1 (2019-05)

Environmental Engineering (EE); Explore the challenges of developing product group-specific Product Environmental Footprint Category Rules (PEFCRs) for smartphones

ETSI EN 300 132-2 V2.6.1 (2019-04)

Environmental Engineering (EE); Power supply interface at the input of Information and Communication Technology (ICT) equipment; Part 2: -48 V Direct Current (DC)

ETSI TS 103 586 V1.1.1 (2019-04)

Environmental Engineering (EE); Liquid cooling solutions for Information and Communication Technology (ICT) infrastructure equipment

ETSI EN 303 470 V1.1.1 (2019-03)

Environmental Engineering (EE); Energy Efficiency measurement methodology and metrics for servers

ETSI EN 300 132-1 V2.1.1 (2019-03)

Environmental Engineering (EE); Power supply interface at the input to Information and Communication Technology (ICT) equipment; Part 1: Alternating Current (AC)

ETSI TR 103 538 V1.1.1 (2019-03)

Environmental Engineering (EE); Analysis of test method and test severity for mechanical test of equipment installed on poles/towers

ETSI ES 202 336-12 V1.2.1 (2019-02)

Environmental Engineering (EE); Monitoring and control interface for infrastructure equipment (power, cooling and building environment systems used in telecommunication networks); Part 12: ICT equipment power, energy and environmental parameters monitoring information model

ETSI EN 303 471 V1.1.1 (2019-01)

Environmental Engineering (EE); Energy Efficiency measurement methodology and metrics for Network Function Virtualisation (NFV)

ETSI TS 102 706-2 V1.5.1 (2018-11)

Environmental Engineering (EE); Metrics and Measurement Method for Energy Efficiency of Wireless Access Network Equipment; Part 2: Energy Efficiency - dynamic measurement method

ETSI EN 303 472 V1.1.1 (2018-10)

Environmental Engineering (EE); Energy Efficiency measurement methodology and metrics for RAN equipment

ETSI TS 103 531 V1.1.1 (2018-09)

Environmental Engineering (EE); Impact on ICT equipment architecture of multiple AC, -48 VDC or up to 400 VDC power inputs

ETSI EN 303 423 V1.2.1 (2018-08)

Environmental Engineering (EE); Electrical and electronic household and office equipment; Measurement of networked standby power consumption of Interconnecting equipment; Harmonised Standard covering the measurement method for EC Regulation 1275/2008 amended by EU Regulation 801/2013

ETSI EN 300 019-2-4 V2.5.1 (2018-07)

Environmental Engineering (EE); Environmental conditions and environmental tests for telecommunications equipment; Part 2-4: Specification of environmental tests; Stationary use at non-weatherprotected locations

ETSI TR 103 542 V1.1.1 (2018-06)

Environmental Engineering (EE); Study on methods and metrics to evaluate energy efficiency for future 5G systems

ETSI TR 103 541 V1.1.1 (2018-05)

Environmental Engineering (EE); Best practice to assess energy performance of future Radio Access Network (RAN) deployment

ETSI TR 103 540 V1.1.1 (2018-04)

Environmental Engineering (EE); Mobile Network (MN) Energy Consumption (EC) estimation method; Energy estimation method based on statistical approach

ETSI ES 203 474 V1.1.1 (2018-03)

Environmental Engineering (EE); Interfacing of renewable energy or distributed power sources to 400 VDC distribution systems powering Information and Communication Technology (ICT) equipment

ETSI TR 103 476 V1.1.2 (2018-02)

Environmental Engineering (EE); Circular Economy (CE) in Information and Communication Technology (ICT); Definition of approaches, concepts and metrics

ETSI EN 300 019-2-2 V2.4.1 (2017-11)

Environmental Engineering (EE); Environmental conditions and environmental tests for telecommunications equipment; Part 2-2: Specification of environmental tests; Transportation

ETSI EN 300 019-2-1 V2.3.1 (2017-11)

Environmental Engineering (EE); Environmental conditions and environmental tests for telecommunications equipment; Part 2-1: Specification of environmental tests; Storage

ETSI ES 203 475 V1.1.1 (2017-11)

Environmental Engineering (EE); Standarisation terms and trends in energy efficiency

ETSI ES 203 136 V1.2.1 (2017-10)

Environmental Engineering (EE); Measurement methods for energy efficiency of router and switch equipment

ETSI EN 303 423 V1.1.1 (2017-04)

Environmental Engineering (EE); Electrical and electronic household and office equipment; Measurement of networked standby power consumption of Interconnecting equipment; Harmonised Standard covering the measurement method for EC Regulation 1275/2008 amended by EU Regulation 801/2013

ETSI ES 203 228 V1.2.1 (2017-04)

Environmental Engineering (EE); Assessment of mobile network energy efficiency

ETSI TR 103 476 V1.1.1 (2017-01)

Environmental Engineering (EE); Circular Economy (CE) in Information and Communication Technology (ICT); Definition of approaches, concepts and metrics

ETSI ES 202 706-1 V1.5.1 (2017-01)

Environmental Engineering (EE); Metrics and measurement method for energy efficiency of wireless access network equipment; Part 1: Power Consumption - Static Measurement Method

ETSI ES 203 408 V1.1.1 (2016-12)

Environmental Engineering (EE); Colour and marking of DC cable and connecting devices

ETSI EN 300 132-2 V2.5.1 (2016-10)

Environmental Engineering (EE); Power supply interface at the input to telecommunications and datacom (ICT) equipment; Part 2: Operated by -48 V direct current (dc)

ETSI TR 103 419 V1.1.1 (2016-02)

Environmental Engineering (EE); Testing methodology for equipment able of dynamic performances adaptation

ETSI ES 203 228 V1.1.2 (2016-01)

Environmental Engineering (EE); Assessment of mobile network energy efficiency

ETSI EN 300 019-2-4 V2.4.1 (2015-12)

Environmental Engineering (EE); Environmental conditions and environmental tests for telecommunications equipment; Part 2-4: Specification of environmental tests; Stationary use at non-weatherprotected locations

ETSI EN 300 019-2-3 V2.4.1 (2015-12)

Environmental Engineering (EE); Environmental conditions and environmental tests for telecommunications equipment; Part 2-3: Specification of environmental tests; Stationary use at weatherprotected locations

ETSI TR 102 489 V1.4.1 (2015-10)

Environmental Engineering (EE); European telecommunications standard for equipment practice; Thermal management guidance for equipment and its deployment

ETSI ES 202 336-12 V1.1.1 (2015-06)

Environmental Engineering (EE); Monitoring and control interface for infrastructure equipment (power, cooling and building environment systems used in telecommunication networks); Part 12: ICT equipment power, energy and environmental parameters monitoring information model

ETSI EN 300 253 V2.2.1 (2015-06)

Environmental Engineering (EE); Earthing and bonding of ICT equipment powered by -48 VDC in telecom and data centres

ETSI EN 303 215 V1.3.1 (2015-04)

Environmental Engineering (EE); Measurement methods and limits for power consumption in broadband telecommunication networks equipment

ETSI ES 203 228 V1.1.1 (2015-04)

Environmental Engineering (EE); Assessment of mobile network energy efficiency

ETSI EN 300 119-7 V1.1.1 (2015-02)

Environmental Engineering (EE); European telecommunication standard for equipment practice; Part 7: Engineering requirements for Subracks in harmonized racks and cabinets with extended features

ETSI EN 300 119-6 V1.1.1 (2015-02)

Environmental Engineering (EE); European telecommunication standard for equipment practice; Part 6: Engineering requirements for harmonized racks and cabinets with extended features

ETSI ES 203 199 V1.3.1 (2015-02)

Environmental Engineering (EE); Methodology for environmental Life Cycle Assessment (LCA) of Information and Communication Technology (ICT) goods, networks and services

ETSI ES 202 706 V1.4.1 (2014-12)

Environmental Engineering (EE); Measurement method for power consumption and energy efficiency of wireless access network equipment

ETSI EN 300 019-2-1 V2.2.1 (2014-10)

Environmental Engineering (EE); Environmental conditions and environmental tests for telecommunications equipment; Part 2-1: Specification of environmental tests; Storage

ETSI ES 203 199 V1.2.1 (2014-10)

Environmental Engineering (EE); Methodology for environmental Life Cycle Assessment (LCA) of Information and Communication Technology (ICT) goods, networks and services

ETSI ES 202 336-11 V1.1.1 (2014-09)

Environmental Engineering (EE); Monitoring and control interface for infrastructure equipment (Power, Cooling and environment systems used in telecommunication networks); Part 11: Battery system with integrated control and monitoring information model

ETSI ES 203 156 V1.2.1 (2014-08)

Environmental Engineering (EE); Thermal Management requirements for outdoor enclosures

ETSI EN 302 099 V2.1.1 (2014-08)

Environmental Engineering (EE); Powering of equipment in access network

ETSI ES 201 554 V1.2.1 (2014-07)

Environmental Engineering (EE); Measurement method for Energy efficiency of Mobile Core network and Radio Access Control equipment

ETSI TR 103 229 V1.1.1 (2014-07)

Environmental Engineering (EE); Safety Extra Low Voltage (SELV) DC power supply network for ICT devices with energy storage and grid or renewable energy sources options

ETSI TS 102 121 V1.3.1 (2014-07)

Environmental Engineering (EE); Power distribution to telecommunications and datacom (ICT) equipment

ETSI EN 300 019-1-1 V2.2.1 (2014-04)

Environmental Engineering (EE); Environmental conditions and environmental tests for telecommunications equipment; Part 1-1: Classification of environmental conditions; Storage

ETSI EN 300 019-1-2 V2.2.1 (2014-04)

Environmental Engineering (EE); Environmental conditions and environmental tests for telecommunications equipment; Part 1-2: Classification of environmental conditions; Transportation

ETSI EN 300 019-1-3 V2.4.1 (2014-04)

Environmental Engineering (EE); Environmental conditions and environmental tests for telecommunications equipment; Part 1-3: Classification of environmental conditions; Stationary use at weatherprotected locations

ETSI EN 300 019-1-4 V2.2.1 (2014-04)

Environmental Engineering (EE); Environmental conditions and environmental tests for telecommunications equipment; Part 1-4: Classification of environmental conditions; Stationary use at non-weatherprotected locations

ETSI ES 203 237 V1.1.1 (2014-03)

Environmental Engineering (EE); Green Abstraction Layer (GAL); Power management capabilities of the future energy telecommunication fixed network nodes

ETSI EN 301 605 V1.1.1 (2013-10)

Environmental Engineering (EE); Earthing and bonding of 400 VDC data and telecom (ICT) equipment

ETSI ES 203 156 V1.1.1 (2013-09)

Environmental Engineering (EE); Thermal Management requirements for outdoor enclosures

ETSI EN 300 019-2-4 V2.3.1 (2013-08)

Environmental Engineering (EE); Environmental conditions and environmental tests for telecommunications equipment; Part 2-4: Specification of environmental tests; Stationary use at non-weatherprotected locations

ETSI TS 102 706 V1.3.1 (2013-07)

Environmental Engineering (EE); Measurement method for energy efficiency of wireless access network equipment

ETSI TR 102 489 V1.3.1 (2013-06)

Environmental Engineering (EE); European telecommunications standard for equipment practice; Thermal management guidance for equipment and its deployment

ETSI ES 203 136 V1.1.1 (2013-05)

Environmental Engineering (EE); Measurement methods for energy efficiency of router and switch equipment

ETSI EN 300 019-2-3 V2.3.1 (2013-04)

Environmental Engineering (EE); Environmental conditions and environmental tests for telecommunications equipment; Part 2-3: Specification of environmental tests; Stationary use at weatherprotected locations

ETSI EN 300 019-2-2 V2.3.1 (2013-04)

Environmental Engineering (EE); Environmental conditions and environmental tests for telecommunications equipment; Part 2-2: Specification of environmental tests; Transportation

ETSI ES 202 336-4 V1.1.1 (2013-03)

Environmental Engineering (EE); Monitoring and Control Interface for Infrastructure Equipment (Power, Cooling and Building Environment Systems used in Telecommunication Networks); Part 4: AC distribution power system control and monitoring information model

ETSI ES 203 184 V1.1.1 (2013-03)

Environmental Engineering (EE); Measurement Methods for Power Consumption in Transport Telecommunication Networks Equipment

ETSI TR 102 532 V1.2.1 (2012-11)

Environmental Engineering (EE); The use of alternative energy solutions in telecommunication installations

ETSI TR 103 117 V1.1.1 (2012-11)

Environmental Engineering (EE); Principles for Mobile Network level energy efficiency

ETSI TR 103 116 V1.1.1 (2012-10)

Environmental Engineering (EE); Practical verification of ETSI TS 102 706 V1.2.1

ETSI ES 202 336-9 V1.1.1 (2012-09)

Environmental Engineering (EE); Monitoring and Control Interface for Infrastructure Equipment (Power, Cooling and Building Environment Systems used in Telecommunication Networks); Part 9: Alternative Power Systems

ETSI ES 202 336-6 V1.1.1 (2012-09)

Environmental Engineering (EE); Monitoring and Control Interface for Infrastructure Equipment (Power, Cooling and Building Environment Systems used in Telecommunication Networks); Part 6: Air Conditioning System control and monitoring information model

ETSI EN 301 575 V1.1.1 (2012-05)

Environmental Engineering (EE); Measurement method for energy consumption of Customer Premises Equipment (CPE)

ETSI ES 201 554 V1.1.1 (2012-04)

Environmental Engineering (EE); Measurement method for Energy efficiency of Core network equipment

ETSI EN 300 132-3-1 V2.1.1 (2012-02)

Environmental Engineering (EE); Power supply interface at the input to telecommunications and datacom (ICT) equipment; Part 3: Operated by rectified current source, alternating current source or direct current source up to 400 V; Sub-part 1: Direct current source up to 400 V

ETSI EN 300 132-3-0 V2.1.1 (2012-02)

Environmental Engineering (EE); Power supply interface at the input to telecommunications and datacom (ICT) equipment; Part 3: Operated by rectified current source, alternating current source or direct current source up to 400 V; Sub-part 0: Overview

ETSI EN 300 753 V1.3.1 (2012-01)

Environmental Engineering (EE); Acoustic noise emitted by telecommunications equipment

ETSI EN 300 019-2-2 V2.2.1 (2012-01)

Environmental Engineering (EE); Environmental conditions and environmental tests for telecommunications equipment; Part 2-2: Specification of environmental tests; Transportation

ETSI EN 300 132-2 V2.4.6 (2011-12)

Environmental Engineering (EE); Power supply interface at the input to telecommunications and datacom (ICT) equipment; Part 2: Operated by -48 V direct current (dc)

ETSI TR 101 576 V1.1.1 (2011-12)

Environmental Engineering (EE); Recommendation for the applicability of environmental classes in outdoor cabinet environment

ETSI TS 103 199 V1.1.1 (2011-11)

Environmental Engineering [EE]; Life Cycle Assessment (LCA) of ICT equipment, networks and services; General methodology and common requirements

ETSI TS 102 706 V1.2.1 (2011-10)

Environmental Engineering (EE) Measurement Method for Energy Efficiency of Wireless Access Network Equipment

ETSI ES 203 215 V1.2.1 (2011-10)

Environmental Engineering (EE); Measurement Methods and Limits for Power Consumption in Broadband Telecommunication Networks Equipment

ETSI ES 202 336-10 V1.1.1 (2011-09)

Environmental Engineering (EE); Monitoring and Control Interface for Infrastructure Equipment (Power, Cooling and Building Environment Systems used in Telecommunication Networks); Part 10: AC inverter power system control and monitoring information model

ETSI ES 202 336-1 V1.2.1 (2011-07)

Environmental Engineering (EE); Monitoring and Control Interface for Infrastructure Equipment (Power, Cooling and Building Environment Systems used in Telecommunication Networks) Part 1: Generic Interface

ETSI TR 102 530 V1.2.1 (2011-07)

Environmental Engineering (EE); The reduction of energy consumption in telecommunications equipment and related infrastructure

ETSI TR 102 614 V1.1.1 (2010-06)

Environmental Engineering (EE); Reverse powering of access network unit by end-user equipment: A4 interface

ETSI ES 202 336-5 V1.1.1 (2010-04)

Environmental Engineering (EE); Monitoring and Control Interface for Infrastructure Equipment (Power, Cooling and Building Environment Systems used in Telecommunication Networks); Part 5: AC diesel back-up generator system control and monitoring information model

ETSI TR 102 489 V1.2.1 (2010-02)

Environmental Engineering (EE); European telecommunications standard for equipment practice; Thermal Management Guidance for equipment and its deployment

ETSI EN 300 119-3 V2.2.2 (2010-01)

Environmental Engineering (EE); European telecommunication standard for equipment practice; Part 3: Engineering requirements for miscellaneous racks and cabinets

ETSI ES 202 336-7 V1.1.1 (2009-12)

Environmental Engineering (EE); Monitoring and Control Interface for Infrastructure Equipment (Power, Cooling and Building Environment Systems used in Telecommunication Networks); Part 7: Other utilities system control and monitoring information model

ETSI EN 300 119-2 V2.2.2 (2009-12)

Environmental Engineering (EE); European telecommunication standard for equipment practice; Part 2: Engineering requirements for racks and cabinets

ETSI EN 300 019-1-3 V2.3.2 (2009-11)

Environmental Engineering (EE); Environmental conditions and environmental tests for telecommunications equipment; Part 1-3: Classification of environmental conditions; Stationary use at weatherprotected locations

ETSI ES 202 336-3 V1.1.1 (2009-10)

Environmental Engineering (EE); Monitoring and Control Interface for Infrastructure Equipment (Power, Cooling and Building Environment Systems used in Telecommunication Networks); Part 3: AC UPS power system control and monitoring information model

ETSI ES 202 336-8 V1.1.1 (2009-09)

Environmental Engineering (EE); Monitoring and Control Interface for Infrastructure Equipment (Power, Cooling and Building Environment Systems used in Telecommunication Networks); Part 8: Remote Power Feeding System control and monitoring information model

ETSI TS 102 706 V1.1.1 (2009-08)

Environmental Engineering (EE) Energy Efficiency of Wireless Access Network Equipment

ETSI EN 300 753 V1.2.1 (2009-07)

Equipment Engineering (EE); Acoustic noise emitted by telecommunications equipment

ETSI TR 102 532 V1.1.1 (2009-06)

Environmental Engineering (EE) The use of alternative energy sources in telecommunication installations

ETSI ES 202 336-2 V1.1.1 (2009-03)

Environmental Engineering (EE); Monitoring and control interface for infrastructure equipment (Power, Cooling and environment systems used in telecommunication networks); Part 2: DC power system control and monitoring information model

ETSI ES 202 336-1 V1.1.2 (2008-09)

Environmental Engineering (EE); Monitoring and Control Interface for Infrastructure Equipment (Power, Cooling and Building Environment Systems used in Telecommunication Networks) Part 1: Generic Interface

ETSI TR 102 530 V1.1.1 (2008-06)

Environmental Engineering (EE); The reduction of energy consumption in telecommunications equipment and related infrastructure

ETSI TS 102 533 V1.1.1 (2008-06)

Environmental Engineering (EE) Measurement Methods and limits for Energy Consumption in Broadband Telecommunication Networks Equipment

ETSI ES 202 336-1 V1.1.1 (2007-11)

Environmental Engineering (EE); Monitoring and Control Interface for Infrastructure Equipment (Power, Cooling and Building Environment Systems used in Telecommunication Networks) Part 1: Generic Interface

ETSI EN 300 132-2 V2.2.2 (2007-10)

Environmental Engineering (EE); Power supply interface at the input to telecommunications equipment; Part 2: Operated by direct current (dc)

ETSI TR 100 283 V2.2.1 (2007-08)

Environmental Engineering (EE); Transient voltages at Interface "A" on telecommunications direct current (dc) power distributions

ETSI EN 300 132-2 V2.2.1 (2007-05)

Environmental Engineering (EE); Power supply interface at the input to telecommunications equipment; Part 2: Operated by direct current (DC)

ETSI TR 102 531 V1.1.1 (2007-04)

Environmental Engineering (EE); Better determination of equipment energy consumption for improved sizing of power plant

ETSI TR 102 121 V1.2.1 (2005-11)

Environmental Engineering (EE); Guidance for power distribution to telecommunication and datacom equipment

ETSI TR 102 446 V1.1.1 (2005-11)

Environmental Engineering (EE); General Requirements for UPS for use in Telecommunication Environment

ETSI EN 300 119-5 V1.2.2 (2004-12)

Environmental Engineering (EE); European telecommunication standard for equipment practice; Part 5: Thermal management

ETSI TR 102 336 V1.1.1 (2004-09)

Environmental Engineering (EE); Power and cooling system control and monitoring guidance

ETSI EN 300 119-1 V2.1.1 (2004-09)

Environmental Engineering (EE); European telecommunication standard for equipment practice; Part 1: Introduction and terminology

ETSI EN 300 119-2 V2.1.1 (2004-09)

Environmental Engineering (EE); European telecommunication standard for equipment practice; Part 2: Engineering requirements for racks and cabinets

ETSI EN 300 119-3 V2.1.1 (2004-09)

Environmental Engineering (EE); European telecommunication standard for equipment practice; Part 3: Engineering requirements for miscellaneous racks and cabinets

ETSI EN 300 119-4 V2.1.1 (2004-09)

Environmental Engineering (EE); European telecommunication standard for equipment practice; Part 4: Engineering requirements for subracks in miscellaneous racks and cabinets

ETSI EN 300 019-1-3 V2.2.2 (2004-07)

Environmental Engineering (EE); Environmental conditions and environmental tests for telecommunications equipment; Part 1-3: Classification of environmental conditions; Stationary use at weatherprotected locations

ETSI TR 102 489 V1.1.1 (2004-06)

Environmental Engineering (EE); European telecommunications standard for equipment practice; Thermal Management Guidance for equipment and its deployment

ETSI TR 100 035 V2.1.2 (2004-02)

Environmental Engineering (EE); Environmental engineering; Guidance and terminology

ETSI TR 102 121 V1.1.1 (2004-01)

Environmental Engineering (EE); Guidance for power distribution to telecommunication and datacom equipment

ETSI EN 300 019-2-0 V2.1.2 (2003-09)

Environmental Engineering (EE); Environmental conditions and environmental tests for telecommunications equipment; Part 2-0: Specification of environmental tests; Introduction

ETSI EN 300 019-1-0 V2.1.2 (2003-09)

Environmental Engineering (EE); Environmental conditions and environmental tests for telecommunications equipment; Part 1-0: Classification of environmental conditions; Introduction

ETSI EN 300 132-2 V2.1.2 (2003-09)

Environmental Engineering (EE); Power supply interface at the input to telecommunications equipment; Part 2: Operated by direct current (dc)

ETSI EN 300 132-3 V1.2.1 (2003-08)

Environmental Engineering (EE); Power supply interface at the input to telecommunications equipment; Part 3: Operated by rectified current source, alternating current source or direct current source up to 400 V

ETSI TR 100 035 V2.1.1 (2003-05)

Environmental Engineering (EE); Environmental engineering; Guidance and terminology

ETSI EN 300 019-1-1 V2.1.4 (2003-04) Environmental Engineering (EE); Environmental conditions and environmental tests for telecommunications equipment; Part 1-1: Classification of environmental conditions; Storage

ETSI EN 300 019-1-2 V2.1.4 (2003-04) Environmental Engineering (EE); Environmental conditions and environmental tests for telecommunications equipment; Part 1-2: Classification of environmental conditions; Transportation

ETSI EN 300 019-1-5 V2.1.4 (2003-04) Environmental Engineering (EE); Environmental conditions and environmental tests for telecommunications equipment; Part 1-5: Classification of environmental conditions; Ground vehicle installations

ETSI EN 300 019-1-6 V2.1.4 (2003-04)

Environmental Engineering (EE); Environmental conditions and environmental tests for telecommunications equipment; Part 1-6: Classification of environmental conditions; Ship environments

ETSI EN 300 019-1-7 V2.1.4 (2003-04)

Environmental Engineering (EE); Environmental conditions and environmental tests for telecommunications equipment; Part 1-7: Classification of environmental conditions; Portable and non-stationary use

ETSI EN 300 019-1-8 V2.1.4 (2003-04)

Environmental Engineering (EE); Environmental conditions and environmental tests for telecommunications equipment; Part 1-8: Classification of environmental conditions; Stationary use at underground locations

ETSI EN 300 019-1-3 V2.1.2 (2003-04)

Environmental Engineering (EE); Environmental conditions and environmental tests for telecommunications equipment; Part 1-3: Classification of environmental conditions; Stationary use at weatherprotected locations

ETSI EN 300 019-1-4 V2.1.2 (2003-04)

Environmental Engineering (EE); Environmental conditions and environmental tests for telecommunications equipment; Part 1-4: Classification of environmental conditions; Stationary use at non-weatherprotected locations

ETSI EN 300 019-2-3 V2.2.2 (2003-04)

Environmental Engineering (EE); Environmental conditions and environmental tests for telecommunications equipment; Part 2-3: Specification of environmental tests; Stationary use at weatherprotected locations

ETSI EN 300 019-2-4 V2.2.2 (2003-04)

Environmental Engineering (EE); Environmental conditions and environmental tests for telecommunications equipment; Part 2-4: Specification of environmental tests; Stationary use at non-weatherprotected locations

ETSI EN 300 019-2-7 V3.0.1 (2003-04)

Environmental Engineering (EE); Environmental conditions and environmental tests for telecommunications equipment; Part 2-7: Specification of environmental tests; Portable and non-stationary use

ETSI EN 300 019-2-3 V2.2.1 (2003-03)

Environmental Engineering (EE); Environmental conditions and environmental tests for telecommunications equipment; Part 2-3: Specification of environmental tests; Stationary use at weatherprotected locations

ETSI EN 300 019-2-4 V2.2.1 (2003-03)

Environmental Engineering (EE); Environmental conditions and environmental tests for telecommunications equipment; Part 2-4: Specification of environmental tests; Stationary use at non-weatherprotected locations

ETSI EN 300 019-1-3 V2.1.1 (2003-03)

Environmental Engineering (EE); Environmental conditions and environmental tests for telecommunications equipment; Part 1-3: Classification of environmental conditions; Stationary use at weatherprotected locations

ETSI EN 300 019-1-4 V2.1.1 (2003-03)

Environmental Engineering (EE); Environmental conditions and environmental tests for telecommunications equipment; Part 1-4: Classification of environmental conditions; Stationary use at non-weatherprotected locations

ETSI EN 300 019-2-5 V3.0.0 (2002-12)

Environmental Engineering (EE); Environmental conditions and environmental tests for telecommunications equipment; Part 2-5: Specification of environmental tests; Ground vehicle installations

ETSI EN 300 019-2-6 V3.0.0 (2002-12)

Environmental Engineering (EE); Environmental conditions and environmental tests for telecommunications equipment; Part 2-6: Specification of environmental tests; Ship environments

ETSI EN 300 019-2-7 V3.0.0 (2002-12)

Environmental Engineering (EE); Environmental conditions and environmental tests for telecommunications equipment; Part 2-7: Specification of environmental tests; Portable and non-stationary use

ETSI TR 100 283 V2.1.1 (2002-07)

Environmental Engineering (EE); Transient voltages at Interface "A" on telecommunications direct current (dc) power distributions

ETSI EN 300 253 V2.1.1 (2002-04)

Environmental Engineering (EE); Earthing and bonding of telecommunication equipment in telecommunication centres

ETSI EN 300 019-1-5 V2.1.2 (2002-04)

Environmental Engineering (EE); Environmental conditions and environmental tests for telecommunications equipment; Part 1-5: Classification of environmental conditions; Ground vehicle installations

ETSI EN 300 019-1-6 V2.1.2 (2002-04)

Environmental Engineering (EE); Environmental conditions and environmental tests for telecommunications equipment; Part 1-6: Classification of environmental conditions; Ship environments

ETSI EN 300 019-1-7 V2.1.2 (2002-04)

Environmental Engineering (EE); Environmental conditions and environmental tests for telecommunications equipment; Part 1-7: Classification of environmental conditions; Portable and non-stationary use

ETSI EN 300 019-1-8 V2.1.2 (2002-04)

Environmental Engineering (EE); Environmental conditions and environmental tests for telecommunications equipment; Part 1-8: Classification of environmental conditions; Stationary use at underground locations

ETSI EN 300 019-1-1 V2.1.2 (2002-04)

Environmental Engineering (EE); Environmental conditions and environmental tests for telecommunications equipment; Part 1-1: Classification of environmental conditions; Storage

ETSI EN 300 019-1-2 V2.1.2 (2002-04)

Environmental Engineering (EE); Environmental conditions and environmental tests for telecommunications equipment; Part 1-2: Classification of environmental conditions; Transportation

ETSI EN 302 099 V1.1.1 (2002-01)

Environmental Engineering (EE); Powering of equipment in access network

ETSI EN 300 019-2-5 V2.1.2 (2001-09)

Environmental Engineering (EE); Environmental conditions and environmental tests for telecommunications equipment; Part 2-5: Specification of environmental tests; Ground vehicle installations

ETSI EN 300 019-2-6 V2.1.2 (2001-09)

Environmental Engineering (EE); Environmental conditions and environmental tests for telecommunications equipment; Part 2-6: Specification of environmental tests; Ship environments

ETSI EN 300 019-2-7 V2.1.2 (2001-09)

Environmental Engineering (EE); Environmental conditions and environmental tests for telecommunications equipment; Part 2-7: Specification of environmental tests; Portable and non-stationary use

ETSI EN 300 019-2-1 V2.1.2 (2000-09)

Environmental Engineering (EE); Environmental conditions and environmental tests for telecommunications equipment; Part 2-1: Specification of environmental tests; Storage

ETSI EN 300 019-2-8 V2.1.2 (1999-09)

Equipment Engineering (EE); Environmental conditions and environmental tests for telecommunications equipment; Part 2-8: Specification of environmental tests; Stationary use at underground locations

ETSI EN 300 019-2-2 V2.1.2 (1999-09)

Equipment Engineering (EE); Environmental conditions and environmental tests for telecommunications equipment; Part 2-2: Specification of environmental tests; Transportation

ETSI EN 300 019-2-3 V2.1.2 (1999-09)

Equipment Engineering (EE); Environmental conditions and environmental tests for telecommunications equipment; Part 2-3: Specification of environmental tests; Stationary use at weatherprotected locations

ETSI EN 300 019-2-4 V2.1.2 (1999-09)

Equipment Engineering (EE); Environmental conditions and environmental tests for telecommunications equipment; Part 2-4: Specification of environmental tests; Stationary use at non-weatherprotected locations

ETSI EN 301 169-2 V1.5.3 (1999-02)

Equipment practice; Engineering requirements for outdoor enclosures; Part 2: Unequipped enclosures

ETSI EN 301 169-1 V1.6.3 (1999-02)

Equipment practice; Engineering requirements for outdoor enclosures; Part 1: Equipped enclosures

ETSI ETS 300 019-2-3/A2 ed.1 (1998-05)

Equipment Engineering (EE); Environmental conditions and environmental tests for telecommunications equipment; Part 2-3: Specification of environmental tests T 3.1 to T 3.5; Stationary use at weatherprotected locations

ETSI EG 201 147 V1.1.2 (1998-02)

Equipment Engineering (EE); Interworking between Direct Current/Isolated (DC/I) and Direct Current/Common (DC/C) electrical power systems

ETSI ETS 300 753 ed.1 (1997-10)

Equipment Engineering (EE); Acoustic noise emitted by telecommunications equipment

ETSI ETS 300 019-2-8 ed.1 (1997-09)

Equipment Engineering (EE); Environmental conditions and environmental tests for telecommunications equipment; Part 2-8: Specification of environmental tests; Stationary use at underground locations

ETSI ETS 300 019-1-8 ed.1 (1997-09)

Equipment Engineering (EE); Environmental conditions and environmental tests for telecommunications equipment; Part 1-8: Classification of environmental conditions; Stationary use at underground locations

ETSI ETS 300 019-1-4/A1 ed.1 (1997-06)

Equipment Engineering (EE); Environmental conditions and environmental tests for telecommunications equipment; Part 1-4: Classification of environmental conditions; Stationary use at non-weatherprotected locations

ETSI ETS 300 019-2-3/A1 ed.1 (1997-06)

Equipment Engineering (EE); Environmental conditions and environmental tests for telecommunications equipment; Part 2-3: Specification of environmental tests; Stationary use at weatherprotected locations

ETSI ETS 300 019-1-3/A1 ed.1 (1997-06)

Equipment Engineering (EE); Environmental conditions and environmental tests for telecommunications equipment; Part 1-3: Classification of environmental conditions; Stationary use at weatherprotected locations

ETSI ETS 300 019-2-4/A1 ed.1 (1997-06)

Equipment Engineering (EE); Environmental conditions and environmental tests for telecommunications equipment; Part 2-4: Specification of environmental tests; Stationary use at non-weatherprotected locations

ETSI ETS 300 386-1/C1 ed.1 (1997-04)

Equipment Engineering (EE); Telecommunication network equipment; Electro-Magnetic Compatibility (EMC) requirements; Part 1: Product family overview, compliance criteria and test levels

ETSI ETS 300 132-2/C1 ed.1 (1996-12)

Equipment Engineering (EE); Power supply interface at the input to telecommunications equipment; Part 2: Operated by direct current (dc)

ETSI ETR 194 ed.1 (1996-10)

Equipment Engineering (EE); Connector for ITU-T defined G.series digital hierarchy interfaces

ETSI ETS 300 132-2 ed.1 (1996-09)

Equipment Engineering (EE); Power supply interface at the input to telecommunications equipment; Part 2: Operated by direct current (dc)

ETSI ETS 300 132-1 ed.1 (1996-09)

Equipment Engineering (EE); Power supply interface at the input to telecommunications equipment; Part 1: Operated by alternating current (ac) derived from direct current (dc) sources

ETSI ETR 151 ed.1 (1995-02)

Equipment Engineering (EE); ElectroMagnetic Compatibility (EMC) testing of telecommunication equipment above 1 GHz

ETSI ETS 300 253 ed.1 (1995-01)

Equipment Engineering (EE); Earthing and bonding of telecommunication equipment in telecommunication centres

ETSI ETS 300 386-1 ed.1 (1994-12)

Equipment Engineering (EE); Telecommunication network equipment; Electro-Magnetic Compatibility (EMC) requirements; Part 1: Product family overview, compliance criteria and test levels

ETSI ETR 143 ed.1 (1994-10)

Equipment Engineering (EE); Connectors for test and disconnection points Display of alarms

ETSI ETS 300 019-2-3 ed.1 (1994-05)

Equipment Engineering (EE); Environmental conditions and environmental tests for telecommunications equipment; Part 2-3: Specification of environmental tests; Stationary use at weatherprotected locations

ETSI ETS 300 019-2-2 ed.1 (1994-05)

Equipment Engineering (EE); Environmental conditions and environmental tests for telecommunications equipment; Part 2-2: Specification of environmental tests; Transportation

ETSI ETS 300 019-2-0 ed.1 (1994-05)

Equipment Engineering (EE); Environmental conditions and environmental tests for telecommunications equipment; Part 2-0: Specification of environmental tests; Introduction

ETSI ETS 300 019-2-1 ed.1 (1994-05)

Equipment Engineering (EE); Environmental conditions and environmental tests for telecommunications equipment; Part 2-1: Specification of environmental tests; Storage

ETSI ETS 300 019-1-0 ed.1 (1994-05)

Equipment Engineering (EE); Environmental conditions and environmental tests for telecommunications equipment; Part 1-0: Classification of environmental conditions; Introduction

ETSI ETS 300 019-2-4 ed.1 (1994-05)

Equipment Engineering (EE); Environmental conditions and environmental tests for telecommunications equipment; Part 2-4: Specification of environmental tests; Stationary use at non-weatherprotected locations

ETSI ETS 300 019-2-5 ed.1 (1994-05)

Equipment Engineering (EE); Environmental conditions and environmental tests for telecommunications equipment; Part 2-5: Specification of environmental tests; Ground vehicle installations

ETSI ETS 300 019-2-6 ed.1 (1994-05)

Equipment Engineering (EE); Environmental conditions and environmental tests for telecommunications equipment; Part 2-6: Specification of environmental tests; Ship environments

ETSI ETS 300 019-2-7 ed.1 (1994-05)

Equipment Engineering (EE); Environmental conditions and environmental tests for telecommunications equipment; Part 2-7: Specification of environmental tests; Portable and non-stationary use

ETSI ETR 127 ed.1 (1994-03)

Equipment Engineering (EE); Electrostatic environment and mitigation measures for Public Telecommunications Network (PTN)

ETSI ETS 300 127 ed.1 (1994-01)

Equipment Engineering (EE); Radiated emission testing of physically large telecommunication systems

ETSI ETS 300 119-2 ed.1 (1994-01)

Equipment Engineering (EE); European telecommunication standard for equipment practice; Part 2: Engineering requirements for racks and cabinets

ETSI ETS 300 119-1 ed.1 (1994-01)

Equipment Engineering (EE); European telecommunication standard for equipment practice; Part 1: Introduction and terminology

ETSI ETS 300 119-4 ed.1 (1994-01)

Equipment Engineering (EE); European telecommunication standard for equipment practice; Part 4: Engineering requirements for subracks in miscellaneous racks and cabinets

ETSI ETS 300 119-3 ed.1 (1994-01)

Equipment Engineering (EE); European telecommunication standard for equipment practice; Part 3: Engineering requirements for miscellaneous racks and cabinets

ETSI ETR 035 ed.1 (1992-07)

Equipment Engineering (EE); Environmental engineering; Guidance and terminology

ETSI ETS 300 019-1-3 ed.1 (1992-02)

Equipment Engineering (EE); Environmental conditions and environmental tests for telecommunications equipment; Part 1-3: Classification of environmental conditions; Stationary use at weatherprotected locations

ETSI ETS 300 019-1-1 ed.1 (1992-02)

Equipment Engineering (EE); Environmental conditions and environmental tests for telecommunications equipment; Part 1-1: Classification of environmental conditions; Storage

ETSI ETS 300 019-1-2 ed.1 (1992-02)

Equipment Engineering (EE); Environmental conditions and environmental tests for telecommunications equipment; Part 1-2: Classification of environmental conditions; Transportation

ETSI ETS 300 019-1-4 ed.1 (1992-02)

Equipment Engineering (EE); Environmental conditions and environmental tests for telecommunications equipment; Part 1-4: Classification of environmental conditions; Stationary use at non-weatherprotected locations

ETSI ETS 300 019-1-5 ed.1 (1992-02)

Equipment Engineering (EE); Environmental conditions and environmental tests for telecommunications equipment; Part 1-5: Classification of environmental conditions; Ground vehicle installations

ETSI ETS 300 019-1-6 ed.1 (1992-02)

Equipment Engineering (EE); Environmental conditions and environmental tests for telecommunications equipment; Part 1-6: Classification of environmental conditions; Ship environments

ETSI ETS 300 019-1-7 ed.1 (1992-02)

Equipment Engineering (EE); Environmental conditions and environmental tests for telecommunications equipment; Part 1-7: Classification of environmental conditions; Portable and non-stationary use

Standards under development:

There are not any standards under development.

3.2.104   TC CYBERSECURITY - TECHNICAL COMMITTEE (TC) CYBER (CYBERSECURITY)

Keywords:

Cybersecurity, Lawful Interception (LI), Quantum Key Distribution (QKD), Quantum-Safe Cryptography (QSC), Securing Artificial Intelligence (SAI), Security algorithms

Scope:

The rapid evolution and growth in the complexity of new systems and networks, coupled with the sophistication of changing threats, present demanding challenges for maintaining the security of Information and Communications Technologies (ICT) systems and networks. Security solutions must include a reliable and secure network infrastructure, but they must also protect the privacy of individuals and organizations. Security standarisation, sometimes in support of legislative actions, has a key role to play in protecting the Internet and the communications and business it carries. We offer market-driven cybersecurity standarisation solutions, along with advice and guidance to users, manufacturers, network, infrastructure and service operators and regulators. See also the TC CYBER Roadmap.

Standards:

ETSI EN 303 645 V2.1.0 (2020-04)

CYBER; Cyber Security for Consumer Internet of Things: Baseline Requirements

ETSI TR 103 306 V1.4.1 (2020-03)

CYBER; Global Cyber Security Ecosystem

ETSI TS 103 643 V1.1.1 (2020-01)

Techniques for assurance of digital material used in legal proceedings

ETSI TR 103 644 V1.1.1 (2019-12)

CYBER; Increasing smart meter security

ETSI TR 103 618 V1.1.1 (2019-12)

CYBER; Quantum-Safe Identity-Based Encryption

ETSI TR 103 331 V1.2.1 (2019-09)

CYBER; Structured threat information sharing

ETSI TS 103 523-3 V1.3.1 (2019-08)

CYBER; Middlebox Security Protocol; Part 3: Enterprise Transport Security

ETSI TS 103 523-3 V1.2.1 (2019-03)

CYBER; Middlebox Security Protocol; Part 3: Enterprise Transport Security

ETSI TS 103 645 V1.1.1 (2019-02)

CYBER; Cyber Security for Consumer Internet of Things

ETSI TR 103 370 V1.1.1 (2019-01)

Practical introductory guide to Technical Standards for Privacy

ETSI TS 103 457 V1.1.1 (2018-10)

CYBER; Trusted Cross-Domain Interface: Interface to offload sensitive functions to a trusted domain

ETSI TR 103 642 V1.1.1 (2018-10)

CYBER; Security techniques for protecting software in a white box model

ETSI TS 103 523-3 V1.1.1 (2018-10)

CYBER; Middlebox Security Protocol; Part 3: Profile for enterprise network and data centre access control

ETSI TR 103 617 V1.1.1 (2018-09)

Quantum-Safe Virtual Private Networks

ETSI TR 103 305-1 V3.1.1 (2018-09)

CYBER; Critical Security Controls for Effective Cyber Defence; Part 1: The Critical Security Controls

ETSI TR 103 305-2 V2.1.1 (2018-09)

CYBER; Critical Security Controls for Effective Cyber Defence; Part 2: Measurement and auditing

ETSI TR 103 305-3 V2.1.1 (2018-09)

CYBER; Critical Security Controls for Effective Cyber Defence; Part 3: Service Sector Implementations

ETSI TR 103 305-5 V1.1.1 (2018-09)

CYBER; Critical Security Controls for Effective Cyber Defence; Part 5: Privacy enhancement

ETSI TR 103 305-4 V2.1.1 (2018-09)

CYBER; Critical Security Controls for Effective Cyber Defence; Part 4: Facilitation Mechanisms

ETSI TR 103 306 V1.3.1 (2018-08)

CYBER; Global Cyber Security Ecosystem

ETSI TS 103 458 V1.1.1 (2018-06)

CYBER; Application of Attribute Based Encryption (ABE) for PII and personal data protection on IoT devices, WLAN, cloud and mobile services - High level requirements

ETSI TS 103 307 V1.3.1 (2018-04)

CYBER; Security Aspects for LI and RD Interfaces

ETSI TS 103 532 V1.1.1 (2018-03)

CYBER; Attribute Based Encryption for Attribute Based Access Control

ETSI TR 103 456 V1.1.1 (2017-10)

CYBER; Implementation of the Network and Information Security (NIS) Directive

ETSI TS 102 165-1 V5.2.3 (2017-10)

CYBER; Methods and protocols; Part 1: Method and pro forma for Threat, Vulnerability, Risk Analysis (TVRA)

ETSI TR 103 570 V1.1.1 (2017-10)

CYBER; Quantum-Safe Key Exchanges

ETSI TR 103 421 V1.1.1 (2017-04)

CYBER; Network Gateway Cyber Defence

ETSI TR 103 306 V1.2.1 (2017-03)

CYBER; Global Cyber Security Ecosystem

ETSI TS 103 307 V1.2.1 (2016-10)

CYBER; Security Aspects for LI and RD Interfaces

ETSI TR 103 305-1 V2.1.1 (2016-08)

CYBER; Critical Security Controls for Effective Cyber Defence; Part 1: The Critical Security Controls

ETSI TR 103 305-2 V1.1.1 (2016-08)

CYBER; Critical Security Controls for Effective Cyber Defence; Part 2: Measurement and auditing

ETSI TR 103 305-3 V1.1.1 (2016-08)

CYBER; Critical Security Controls for Effective Cyber Defence; Part 3: Service Sector Implementations

ETSI TR 103 305-4 V1.1.1 (2016-08)

CYBER; Critical Security Controls for Effective Cyber Defence; Part 4: Facilitation Mechanisms

ETSI TR 103 331 V1.1.1 (2016-08)

CYBER; Structured threat information sharing

ETSI TR 103 304 V1.1.1 (2016-07)

CYBER; Personally Identifiable Information (PII) Protection in mobile and cloud services

ETSI TR 103 369 V1.1.1 (2016-07)

CYBER; Design requirements ecosystem

ETSI EG 203 310 V1.1.1 (2016-06)

CYBER; Quantum Computing Impact on security of ICT Systems; Recommendations on Business Continuity and Algorithm Selection

ETSI TS 103 307 V1.1.1 (2016-04)

CYBER; Security Aspects for LI and RD Interfaces

ETSI TR 103 303 V1.1.1 (2016-04)

CYBER; Protection measures for ICT in the context of Critical Infrastructure

ETSI TS 103 487 V1.1.1 (2016-04)

CYBER; Baseline security requirements regarding sensitive functions for NFV and related platforms

ETSI TR 103 308 V1.1.1 (2016-01)

CYBER; Security baseline regarding LI and RD for NFV and related platforms

ETSI TR 103 306 V1.1.1 (2015-11)

CYBER; Global Cyber Security Ecosystem

ETSI TR 103 309 V1.1.1 (2015-08)

CYBER; Secure by Default - platform security technology

ETSI TR 103 305 V1.1.1 (2015-05)

CYBER; Critical Security Controls for Effective Cyber Defence

<u>Standards under development:</u>

There are not any standards under development.

3.2.105   TC- CABLE - TECHNICAL COMMITTEE (TC) INTEGRATED BROADBAND CABLE TELECOMMUNICATION NETWORKS (CABLE)

Keywords:

Mobile Telecommunications, Broadband Cable Access, Fixed-line Access

Scope:

We are responsible for the creation, development and maintenance of standards and other ETSI deliverables related to integrated broadband cable telecommunication network technologies including:

-    network terminals e.g. cable CPE devices and network terminating devices,
-    network infrastructure, including network topologies, HFC (hybrid fibre-coax) network distribution, data over cable systems, and frequency management,
-    services delivered across integrated broadband cable telecommunication networks,
-    energy efficiency and sustainability for integrated broadband cable telecommunication networks,
-    security of integrated broadband cable telecommunication networks and services.

Standards:

ETSI ES 203 311-1 V1.1.1 (2019-05)

Integrated broadband cable telecommunication networks (CABLE); Fourth generation transmission systems for interactive cable television services - IP cable modems; Part 1: General; DOCSISÂ® 3.1

ETSI ES 203 311-2 V1.1.1 (2019-05)

Integrated broadband cable telecommunication networks (CABLE); Fourth generation transmission systems for interactive cable television services - IP cable modems; Part 2: Physical layer; DOCSISÂ® 3.1 [ANSI/SCTE 220-1 2016]

ETSI ES 203 311-3 V1.1.1 (2019-05)

Integrated broadband cable telecommunication networks (CABLE); Fourth generation transmission systems for interactive cable television services - IP cable modems; Part 3: MAC and upper layer protocols interface; DOCSISÂ® 3.1 [ANSI/SCTE 220-2 2016]

ETSI ES 203 311-4 V1.1.1 (2019-05)

Integrated broadband cable telecommunication networks (CABLE); Fourth generation transmission systems for interactive cable television services - IP cable modems; Part 4: Cable modem operations support system interface; DOCSISÂ® 3.1 [ANSI/SCTE 220-3 2016]

ETSI ES 203 311-5 V1.1.1 (2019-05)

Integrated broadband cable telecommunication networks (CABLE); Fourth generation transmission systems for interactive cable television services - IP cable modems; Part 5: Converged cable access platform operations support system interface; DOCSISÂ® 3.1 [ANSI/SCTE 220-4 2016]

ETSI ES 203 311-6 V1.1.1 (2019-05)

Integrated broadband cable telecommunication networks (CABLE); Fourth generation transmission systems for interactive cable television services - IP cable modems; Part 6: Security; DOCSISÂ® 3.1 [ANSI/SCTE 220-5 2016]

ETSI EN 305 200-4-4 V1.1.1 (2018-04)

Integrated broadband cable telecommunication networks (CABLE); Energy management; Operational infrastructures; Global KPIs; Part 4: Design assessments; Sub-part 4: Cable Access Networks

ETSI ES 203 386 V1.1.1 (2017-08)

Integrated broadband cable telecommunication networks (CABLE); Embedded Router

ETSI TS 103 311-1 V1.1.1 (2017-02)

Integrated broadband cable telecommunication networks (CABLE); Fourth Generation Transmission Systems for Interactive Cable Television Services - IP Cable Modems; Part 1: General; DOCSISÂ® 3.1

ETSI TS 103 311-2 V1.1.1 (2017-02)

Integrated broadband cable telecommunication networks (CABLE); Fourth Generation Transmission Systems for Interactive Cable Television Services - IP Cable Modems; Part 2: Physical Layer; DOCSISÂ® 3.1

ETSI TS 103 311-3 V1.1.1 (2017-02)

Integrated broadband cable telecommunication networks (CABLE); Fourth Generation Transmission Systems for Interactive Cable Television Services - IP Cable Modems; Part 3: MAC and Upper Layer Protocols Interface; DOCSISÂ® 3.1

ETSI TR 103 182 V1.1.1 (2016-09)

Integrated broadband cable telecommunication networks (CABLE); Characteristics of Evolving Electromagnetic Environment with ECN800 parameters and Cable Network Equipment

ETSI TS 103 443-1 V1.1.1 (2016-08)

Integrated broadband cable telecommunication networks (CABLE); IPv6 Transition Technology Engineering and Operational Aspects; Part 1: General

ETSI TS 103 443-2 V1.1.1 (2016-08)

Integrated broadband cable telecommunication networks (CABLE); IPv6 Transition Technology Engineering and Operational Aspects; Part 2: NAT64

ETSI TS 103 443-3 V1.1.1 (2016-08)

Integrated broadband cable telecommunication networks (CABLE); IPv6 Transition Technology Engineering and Operational Aspects; Part 3: DS-Lite

ETSI TS 103 443-4 V1.1.1 (2016-08)

Integrated broadband cable telecommunication networks (CABLE); IPv6 Transition Technology Engineering and Operational Aspects; Part 4: MAP-E

ETSI TS 103 443-5 V1.1.1 (2016-08)

Integrated broadband cable telecommunication networks (CABLE); IPv6 Transition Technology Engineering and Operational Aspects; Part 5: 464XLAT

ETSI TS 103 443-6 V1.1.1 (2016-08)

Integrated broadband cable telecommunication networks (CABLE); IPv6 Transition Technology Engineering and Operational Aspects; Part 6: 6RD

ETSI TS 103 429 V1.1.1 (2016-07)

Integrated broadband cable telecommunication networks (CABLE); Cable Customer Premises Equipment (CPE) with Integrated Radio and Non-Radio Interfaces; Technical Specification covering the cable equipment technical requirements in support of Harmonised Standards for the essential requirements of article 3.1b of the Directive 2014/53/EU

ETSI ES 205 200-2-4 V1.1.1 (2015-06)

Integrated broadband cable telecommunication networks (CABLE); Energy management; Global KPIs; Operational infrastructures; Part 2: Specific requirements; Sub-part 4: Cable Access Networks

ETSI ES 203 312 V1.1.1 (2015-03)

Integrated broadband cable telecommunication networks (CABLE); Cabinet DOCSIS (C-DOCSIS) System Specification

ETSI TR 105 174-6 V1.1.1 (2015-03)

Integrated broadband cable telecommunication networks (CABLE); Broadband Deployment and Energy Management; Part 6: Cable Access Networks

ETSI ES 203 259 V1.1.1 (2015-01)

Integrated broadband cable telecommunication networks (CABLE); Converged Cable Access Platform; Operational Support System Interface

ETSI TS 103 238-1 V1.1.1 (2015-01)

Integrated broadband cable telecommunication networks (CABLE); Testing; Conformance test specifications for NAT64 technology; Part 1: Protocol Implementation Conformance Statement (PICS) proforma

ETSI TS 103 238-2 V1.1.1 (2015-01)

Integrated broadband cable telecommunication networks (CABLE); Testing; Conformance test specifications for NAT64 technology; Part 2: Test Suite Structure and Test Purposes (TSS&TP)

ETSI TS 103 238-3 V1.1.1 (2015-01)

Integrated broadband cable telecommunication networks (CABLE); Testing; Conformance test specifications for NAT64 technology; Part 3: Abstract Test Suite (ATS) and Protocol Implementation eXtra Information for Testing (PIXIT)

ETSI TS 103 239-1 V1.1.1 (2015-01)

Integrated broadband cable telecommunication networks (CABLE); Testing; Conformance test specifications for MAP-E technology; Part 1: Protocol Implementation Conformance Statement (PICS) proforma

ETSI TS 103 241-1 V1.1.1 (2015-01)

Integrated broadband cable telecommunication networks (CABLE); Testing; Conformance test specifications for DS-Lite technology; Part 1: Protocol Implementation Conformance Statement (PICS) proforma

ETSI TS 103 242-1 V1.1.1 (2015-01)

Integrated broadband cable telecommunication networks (CABLE); Testing; Conformance test specifications for 464XLAT technology; Part 1: Protocol Implementation Conformance Statement (PICS) proforma

ETSI TS 103 243-1 V1.1.1 (2015-01)

Integrated broadband cable telecommunication networks (CABLE); Testing; Conformance test specifications for 6rd technology; Part 1: Protocol Implementation Conformance Statement (PICS) proforma

ETSI TS 103 243-2 V1.1.1 (2014-12)

Integrated broadband cable telecommunication networks (CABLE); Testing; Conformance test specifications for 6rd technology; Part 2: Test Suite Structure and Test Purposes (TSS&TP)

ETSI TS 103 243-3 V1.1.1 (2014-12)

Integrated broadband cable telecommunication networks (CABLE); Testing; Conformance test specifications for 6rd technology; Part 3: Abstract Test Suite (ATS) and Protocol Implementation eXtra Information for Testing (PIXIT)

ETSI TS 103 242-2 V1.1.1 (2014-12)

Integrated broadband cable telecommunication networks (CABLE) Testing; Conformance test specifications for 464XLAT technology; Part 2: Test Suite Structure and Test Purposes (TSS&TP)

ETSI TS 103 242-3 V1.1.1 (2014-12)

Integrated broadband cable telecommunication networks (CABLE); Testing; Conformance test specifications for 464XLAT technology; Part 3: Abstract Test Suite (ATS) and Protocol Implementation eXtra Information for Testing (PIXIT)

ETSI TS 103 241-2 V1.1.1 (2014-12)

Integrated broadband cable telecommunication networks (CABLE); Testing; Conformance test specifications for DS-Lite technology; Part 2: Test Suite Structure and Test Purposes (TSS&TP)

ETSI TS 103 241-3 V1.1.1 (2014-12)

Integrated broadband cable telecommunication networks (CABLE); Testing; Conformance test specifications for DS-Lite technology; Part 3: Abstract Test Suite (ATS) and Protocol Implementation eXtra Information for Testing (PIXIT)

ETSI TS 103 239-2 V1.1.1 (2014-12)

Integrated broadband cable telecommunication networks (CABLE); Testing; Conformance test specifications for MAP-E technology; Part 2: Test Suite Structure and Test Purposes (TSS&TP)

ETSI TS 103 239-3 V1.1.1 (2014-12)

Integrated broadband cable telecommunication networks (CABLE); Testing; Conformance test specifications for MAP-E technology; Part 3: Abstract Test Suite (ATS) and Protocol Implementation eXtra Information for Testing (PIXIT)

ETSI ES 203 385 V1.1.1 (2014-11)   CABLE; DOCSISÂ® Layer 2 Virtual Private Networking

ETSI TS 102 866 V1.1.1 (2014-07)

Integrated Broadband Cable Telecommunication Networks (CABLE); Cable Equipment Operations within its Frequency Band

ETSI TS 101 569-1 V1.1.1 (2013-10)

Integrated Broadband Cable Telecommunication Networks (CABLE); Cable Network Transition to IPv6 Part 1: IPv6 Transition Requirements

Standards under development:

There are not any standards under development.

3.2.106   TC DECT - TECHNICAL COMMITTEE (TC) DIGITAL ENHANCED CORDLESS TELECOMMUNICATIONS (DECT)

<u>Keywords:</u>

Mobile Telecommunications, Broadband Wireless Access, Digital Enhanced Cordless Telecommunications (DECT), Security algorithms

<u>Scope:</u>

We are responsible for the development and maintenance of DECTTM standards.

ETSI's DECT specification is the leading standard around the world for digital cordless telecommunications. Over 1 billion devices have been installed worldwide: the system has been adopted in over 110 countries and more than 100 million new devices are sold every year. As the number one cordless system in Europe and the USA, DECT products now account for more than 90% of the world's cordless market. They are also sold in Japan, where a legislative change has provided more spectrum for license-exempt operation.

At the same time, the specification is being enhanced to include Ultra Low Energy (ULE) products. ULE is the name given to the new networking technology for residential and building applications that is primarily driven by a low power requirement for battery-operated devices. DECT ULE enjoys all the advantages of the DECT spectrum and technology as well as adhering to the technical parameters for the Internet of Things.

<u>Standards:</u>

ETSI TR 103 637 V1.1.1 (2020-02)

Digital Enhanced Cordless Telecommunications (DECT); DECT-2020 New Radio (NR) interface; Study on Security Architecture

ETSI EN 300 176-2 V2.3.1 (2019-12)

Digital Enhanced Cordless Telecommunications (DECT); Test specification; Part 2: Audio and speech

ETSI EN 300 175-1 V2.8.1 (2019-12)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 1: Overview

ETSI EN 300 175-2 V2.8.1 (2019-12)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 2: Physical Layer (PHL)

ETSI EN 300 175-3 V2.8.1 (2019-12)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 3: Medium Access Control (MAC) layer

ETSI EN 300 175-4 V2.8.1 (2019-12)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 4: Data Link Control (DLC) layer

ETSI EN 300 175-5 V2.8.1 (2019-12)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 5: Network (NWK) layer

ETSI EN 300 175-6 V2.8.1 (2019-12)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 6: Identities and addressing

ETSI EN 300 175-7 V2.8.1 (2019-12)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 7: Security features

ETSI EN 300 175-8 V2.8.1 (2019-12)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 8: Speech and audio coding and transmission

ETSI TR 103 635 V1.1.1 (2019-11)

Digital Enhanced Cordless Telecommunications (DECT); DECT-2020 New Radio (NR) interface; Study on MAC and higher layers

ETSI TR 103 513 V1.1.1 (2019-11)

Digital Enhanced Cordless Telecommunications (DECT); DECT Technology Roadmap

ETSI TS 103 634 V1.1.1 (2019-08)

Digital Enhanced Cordless Telecommunications (DECT); Low Complexity Communication Codec plus (LC3plus)

ETSI TS 102 527-1 V1.5.1 (2019-08)

Digital Enhanced Cordless Telecommunications (DECT); New Generation DECT; Part 1: Wideband speech

ETSI TS 102 527-3 V1.7.1 (2019-08)

Digital Enhanced Cordless Telecommunications (DECT); New Generation DECT; Part 3: Extended wideband speech services

ETSI TS 102 527-5 V1.3.1 (2019-08)

Digital Enhanced Cordless Telecommunications (DECT); New Generation DECT; Part 5: Additional feature set nr. 1 for extended wideband speech services

ETSI TS 102 939-2 V1.3.1 (2019-01)

Digital Enhanced Cordless Telecommunications (DECT); Ultra Low Energy (ULE); Machine to Machine Communications; Part 2: Home Automation Network (phase 2)

ETSI TS 102 497 V1.2.1 (2018-12)

Digital Enhanced Cordless Telecommunications (DECT); DECT in the 1 920 MHz to 1 930 MHz Unlicensed Personal Communications Services (UPCS) frequency band; Specific requirements

ETSI EN 300 700 V2.2.1 (2018-12)

Digital Enhanced Cordless Telecommunications (DECT); Wireless Relay Station (WRS)

ETSI TR 103 590 V1.1.1 (2018-09)

Digital Enhanced Cordless Telecommunications (DECT); Study of Super Wideband Codec in DECT for narrowband, wideband and super-wideband audio communication including options of low delay audio connections (<= 10 ms framing)

ETSI TR 103 514 V1.1.1 (2018-07)

Digital Enhanced Cordless Telecommunications (DECT); DECT-2020 New Radio (NR) interface; Study on Physical (PHY) layer

ETSI TR 103 515 V1.1.1 (2018-03)

Digital Enhanced Cordless Telecommunications (DECT); Study on URLLC use cases of vertical industries for DECT evolution and DECT-2020

ETSI EN 300 176-1 V2.3.1 (2018-01)

Digital Enhanced Cordless Telecommunications (DECT); Test specification; Part 1: Radio

ETSI EN 300 175-1 V2.7.1 (2017-11)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 1: Overview

ETSI EN 300 175-3 V2.7.1 (2017-11)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 3: Medium Access Control (MAC) layer

ETSI EN 300 175-2 V2.7.1 (2017-11)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 2: Physical Layer (PHL)

ETSI EN 300 175-4 V2.7.1 (2017-11)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 4: Data Link Control (DLC) layer

ETSI EN 300 175-5 V2.7.1 (2017-11)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 5: Network (NWK) layer

ETSI EN 300 175-6 V2.7.1 (2017-11)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 6: Identities and addressing

ETSI EN 300 175-7 V2.7.1 (2017-11)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 7: Security features

ETSI EN 300 175-8 V2.7.1 (2017-11)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 8: Speech and audio coding and transmission

ETSI EN 300 444 V2.5.1 (2017-10)

Digital Enhanced Cordless Telecommunications (DECT); Generic Access Profile (GAP)

ETSI TS 102 939-1 V1.3.1 (2017-10)

Digital Enhanced Cordless Telecommunications (DECT); Ultra Low Energy (ULE); Machine to Machine Communications; Part 1: Home Automation Network (phase 1)

ETSI TS 102 939-2 V1.2.1 (2017-10)

Digital Enhanced Cordless Telecommunications (DECT); Ultra Low Energy (ULE); Machine to Machine Communications; Part 2: Home Automation Network (phase 2)

ETSI TR 103 445 V1.1.1 (2017-07)

Digital Enhanced Cordless Telecommunications (DECT); DECT security technical review; Security review and assessment 2017

ETSI TR 103 422 V1.1.1 (2017-06)

Digital Enhanced Cordless Telecommunications (DECT); DECT evolution technical study; Requirements and technical analysis for the further evolution of DECT and DECT ULE

ETSI EN 300 700 V2.1.1 (2016-11)

Digital Enhanced Cordless Telecommunications (DECT); Wireless Relay Station (WRS)

ETSI EN 301 908-10 V4.2.2 (2016-11)

Electromagnetic compatibility and Radio spectrum Matters (ERM); Base Stations (BS), Repeaters and User Equipment (UE) for IMT-2000 Third-Generation cellular networks; Part 10: Harmonised Standard for IMT-2000, FDMA/TDMA (DECT) covering the essential requirements of article 3.2 of the Directive 2014/53/EU

ETSI EN 301 406 V2.2.2 (2016-09)

Digital Enhanced Cordless Telecommunications (DECT); Harmonised Standard covering the essential requirements of article 3.2 of the Directive 2014/53/EU

ETSI TS 102 527-4 V1.3.1 (2015-11)

Digital Enhanced Cordless Telecommunications (DECT); New Generation DECT; Part 4: Light Data Services; Software Update Over The Air (SUOTA), content downloading and HTTP based applications

ETSI EN 300 176-1 V2.2.1 (2015-10)

Digital Enhanced Cordless Telecommunications (DECT); Test specification; Part 1: Radio

ETSI EN 300 175-1 V2.6.1 (2015-07)   Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 1: Overview

ETSI EN 300 175-2 V2.6.1 (2015-07)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 2: Physical Layer (PHL)

ETSI EN 300 175-3 V2.6.1 (2015-07)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 3: Medium Access Control (MAC) layer

ETSI EN 300 175-4 V2.6.1 (2015-07)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 4: Data Link Control (DLC) layer

ETSI EN 300 175-5 V2.6.1 (2015-07)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 5: Network (NWK) layer

ETSI EN 300 175-6 V2.6.1 (2015-07)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 6: Identities and addressing

ETSI EN 300 175-7 V2.6.1 (2015-07)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 7: Security features

ETSI EN 300 175-8 V2.6.1 (2015-07)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 8: Speech and audio coding and transmission

ETSI EN 301 649 V2.3.1 (2015-03)

Digital Enhanced Cordless Telecommunications (DECT); DECT Packet Radio Service (DPRS)

ETSI TS 102 939-1 V1.2.1 (2015-03)

Digital Enhanced Cordless Telecommunications (DECT); Ultra Low Energy (ULE); Machine to Machine Communications; Part 1: Home Automation Network (phase 1)

ETSI TS 102 939-2 V1.1.1 (2015-03)

Digital Enhanced Cordless Telecommunications (DECT); Ultra Low Energy (ULE); Machine to Machine Communications; Part 2: Home Automation Network (phase 2)

ETSI TS 102 527-4 V1.2.1 (2014-12)

Digital Enhanced Cordless Telecommunications (DECT); New Generation DECT; Part 4: Light Data Services; Software Update Over The Air (SUOTA), content downloading and HTTP based applications

ETSI TS 103 158 V1.1.1 (2014-11)

Digital Enhanced Cordless Telecommunications (DECT); New Generation DECT; Light Data Services; Software Update Over The Air (SUOTA); Profile Test Specification (PTS) and Test Case Library (TCL)

ETSI TS 103 159-1 V1.1.1 (2014-04)

Digital Enhanced Cordless Telecommunications (DECT); Ultra Low Energy (ULE); Machine to Machine Communications; Part 1: Test Framework and Profile Test Specification (PTS) for Home Automation Network (phase 1)

ETSI TS 102 527-1 V1.4.1 (2014-04)

Digital Enhanced Cordless Telecommunications (DECT); New Generation DECT; Part 1: Wideband speech

ETSI TS 102 527-5 V1.2.1 (2014-01)

Digital Enhanced Cordless Telecommunications (DECT); New Generation DECT; Part 5: Additional feature set nr. 1 for extended wideband speech services

ETSI TS 102 527-3 V1.6.1 (2014-01)

Digital Enhanced Cordless Telecommunications (DECT); New Generation DECT; Part 3: Extended wideband speech services

ETSI TS 102 841 V1.5.1 (2014-01)

Digital Enhanced Cordless Telecommunications (DECT); New Generation DECT; Extended wideband speech services; Profile Test Specification (PTS) and Test Case Library (TCL)

ETSI TS 102 843 V1.1.1 (2014-01)

Digital Enhanced Cordless Telecommunications (DECT); New Generation DECT; Additional feature set nr.1 for extended wideband speech services; Profile Test Specification (PTS) and Test Case Library (TCL)

ETSI EN 300 175-1 V2.5.1 (2013-08)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 1: Overview

ETSI EN 300 175-2 V2.5.1 (2013-08)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 2: Physical Layer (PHL)

ETSI EN 300 175-3 V2.5.1 (2013-08)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 3: Medium Access Control (MAC) layer

ETSI EN 300 175-4 V2.5.1 (2013-08)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 4: Data Link Control (DLC) layer

ETSI EN 300 175-5 V2.5.1 (2013-08)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 5: Network (NWK) layer

ETSI EN 300 175-6 V2.5.1 (2013-08)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 6: Identities and addressing

ETSI EN 300 175-7 V2.5.1 (2013-08)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 7: Security features

ETSI EN 300 175-8 V2.5.1 (2013-08)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 8: Speech and audio coding and transmission

ETSI EN 300 444 V2.4.1 (2013-07)

Digital Enhanced Cordless Telecommunications (DECT); Generic Access Profile (GAP)

ETSI TS 102 527-5 V1.1.1 (2013-04)

Digital Enhanced Cordless Telecommunications (DECT); New Generation DECT; Part 5: Additional feature set nr. 1 for extended wideband speech services

ETSI TS 102 939-1 V1.1.1 (2013-04)

Digital Enhanced Cordless Telecommunications (DECT); Ultra Low Energy (ULE); Machine to Machine Communications; Part 1: Home Automation Network (phase 1)

ETSI TS 102 527-3 V1.5.1 (2013-03)

Digital Enhanced Cordless Telecommunications (DECT); New Generation DECT; Part 3: Extended wideband speech services

ETSI TS 102 841 V1.4.1 (2013-03)

Digital Enhanced Cordless Telecommunications (DECT); New Generation DECT; Extended wideband speech services; Profile Test Specification (PTS) and Test Case Library (TCL)

ETSI TR 103 089 V1.1.1 (2013-01)

Digital Enhanced Cordless Telecommunications (DECT); DECT properties and radio parameters relevant for studies on compatibility with cellular technologies operating on frequency blocks adjacent to the DECT frequency band

ETSI EN 300 176-2 V2.2.1 (2012-07)

Digital Enhanced Cordless Telecommunications (DECT); Test specification; Part 2: Audio and speech

ETSI TS 102 841 V1.3.1 (2012-05)

Digital Enhanced Cordless Telecommunications (DECT); New Generation DECT; Extended wideband speech services; Profile Test Specification (PTS) and Test Case Library (TCL)

ETSI EN 300 444 V2.3.1 (2012-04)

Digital Enhanced Cordless Telecommunications (DECT); Generic Access Profile (GAP)

ETSI EN 300 175-1 V2.4.1 (2012-04)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 1: Overview

ETSI EN 300 175-2 V2.4.1 (2012-04)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 2: Physical Layer (PHL)

ETSI EN 300 175-3 V2.4.1 (2012-04)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 3: Medium Access Control (MAC) layer

ETSI EN 300 175-4 V2.4.1 (2012-04)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 4: Data Link Control (DLC) layer

ETSI EN 300 175-5 V2.4.1 (2012-04)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 5: Network (NWK) layer

ETSI EN 300 175-6 V2.4.1 (2012-04)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 6: Identities and addressing

ETSI EN 300 175-7 V2.4.1 (2012-04)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 7: Security features

ETSI EN 300 175-8 V2.4.1 (2012-04)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 8: Speech and audio coding and transmission

ETSI EN 301 649 V2.2.1 (2012-02)

Digital Enhanced Cordless Telecommunications (DECT); DECT Packet Radio Service (DPRS)

ETSI TS 102 527-3 V1.4.1 (2012-01)

Digital Enhanced Cordless Telecommunications (DECT); New Generation DECT; Part 3: Extended wideband speech services

ETSI TS 102 527-1 V1.3.1 (2012-01)

Digital Enhanced Cordless Telecommunications (DECT); New Generation DECT; Part 1: Wideband speech

ETSI TS 102 527-3 V1.3.1 (2011-02)

Digital Enhanced Cordless Telecommunications (DECT); New Generation DECT; Part 3: Extended wideband speech services

ETSI TS 102 841 V1.2.1 (2011-02)

Digital Enhanced Cordless Telecommunications (DECT); New Generation DECT; Extended wideband speech services; Profile Test Specification (PTS) and Test Case Library (TCL)

ETSI EN 300 444 V2.2.1 (2010-06)

Digital Enhanced Cordless Telecommunications (DECT); Generic Access Profile (GAP)

ETSI EN 300 175-1 V2.3.1 (2010-06)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 1: Overview

ETSI EN 300 175-2 V2.3.1 (2010-06)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 2: Physical Layer (PHL)

ETSI EN 300 175-3 V2.3.1 (2010-06)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 3: Medium Access Control (MAC) layer

ETSI EN 300 175-4 V2.3.1 (2010-06)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 4: Data Link Control (DLC) layer

ETSI EN 300 175-5 V2.3.1 (2010-06)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 5: Network (NWK) layer

ETSI EN 300 175-6 V2.3.1 (2010-06)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 6: Identities and addressing

ETSI EN 300 175-7 V2.3.1 (2010-06)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 7: Security features

ETSI EN 300 175-8 V2.3.1 (2010-06)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 8: Speech and audio coding and transmission

ETSI TS 102 841 V1.1.1 (2010-04)

Digital Enhanced Cordless Telecommunications (DECT); New Generation DECT; Extended wideband speech services; Profile Test Specification (PTS) and Test Case Library (TCL)

ETSI TS 102 527-3 V1.2.1 (2010-04)

Digital Enhanced Cordless Telecommunications (DECT); New Generation DECT; Part 3: Extended wideband speech services

ETSI EN 301 649 V2.1.1 (2010-02)

Digital Enhanced Cordless Telecommunications (DECT); DECT Packet Radio Service (DPRS)

ETSI TS 102 527-4 V1.1.1 (2009-10)

Digital Enhanced Cordless Telecommunications (DECT); New Generation DECT; Part 4: Light Data Services; Software Update Over The Air (SUOTA), content downloading and HTTP based applications

ETSI EN 301 908-10 V4.1.1 (2009-07)

Electromagnetic compatibility and Radio spectrum Matters (ERM); Base Stations (BS), Repeaters and User Equipment (UE) for IMT-2000 Third-Generation cellular networks; Part 10: Harmonized EN for IMT-2000, FDMA/TDMA (DECT) covering essential requirements of article 3.2 of the R&TTE Directive

ETSI EN 300 176-1 V2.1.1 (2009-07)

Digital Enhanced Cordless Telecommunications (DECT); Test specification; Part 1: Radio

ETSI EN 301 406 V2.1.1 (2009-07)

Digital Enhanced Cordless Telecommunications (DECT); Harmonized EN for Digital Enhanced Cordless Telecommunications (DECT) covering the essential requirements under article 3.2 of the R&TTE Directive; Generic radio

ETSI EN 300 176-2 V2.1.1 (2009-05)

Digital Enhanced Cordless Telecommunications (DECT); Test specification; Part 2: Audio and speech

ETSI EN 300 175-4 V2.2.2 (2009-02)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 4: Data Link Control (DLC) layer

ETSI EN 300 175-8 V2.2.1 (2009-02)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 8: Speech and audio coding and transmission

ETSI EN 300 175-1 V2.2.1 (2008-11)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 1: Overview

ETSI EN 300 175-2 V2.2.1 (2008-11)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 2: Physical Layer (PHL)

ETSI EN 300 175-3 V2.2.1 (2008-11)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 3: Medium Access Control (MAC) layer

ETSI EN 300 175-4 V2.2.1 (2008-11)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 4: Data Link Control (DLC) layer

ETSI EN 300 175-5 V2.2.1 (2008-11)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 5: Network (NWK) layer

ETSI EN 300 175-6 V2.2.1 (2008-11)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 6: Identities and addressing

ETSI EN 300 175-7 V2.2.1 (2008-11)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 7: Security features

ETSI EN 300 444 V2.1.1 (2008-10)

Digital Enhanced Cordless Telecommunications (DECT); Generic Access Profile (GAP)

ETSI TS 102 527-3 V1.1.1 (2008-06)

Digital Enhanced Cordless Telecommunications (DECT); New Generation DECT; Part 3: Extended wideband speech services

ETSI TS 102 527-1 V1.2.1 (2008-06)

Digital Enhanced Cordless Telecommunications (DECT); New Generation DECT; Part 1: Wideband speech

ETSI EN 300 175-1 V2.1.1 (2007-08)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 1: Overview

ETSI EN 300 175-2 V2.1.1 (2007-08)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 2: Physical Layer (PHL)

ETSI EN 300 175-3 V2.1.1 (2007-08)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 3: Medium Access Control (MAC) layer

ETSI EN 300 175-4 V2.1.1 (2007-08)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 4: Data Link Control (DLC) layer

ETSI EN 300 175-5 V2.1.1 (2007-08)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 5: Network (NWK) layer

ETSI EN 300 175-6 V2.1.1 (2007-08)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 6: Identities and addressing

ETSI EN 300 175-7 V2.1.1 (2007-08)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 7: Security features

ETSI EN 300 175-8 V2.1.1 (2007-08)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 8: Speech coding and transmission

ETSI TS 102 527-2 V1.1.1 (2007-06)

Digital Enhanced Cordless Telecommunications (DECT); New Generation DECT; Part 2: Support of transparent IP packet data

ETSI TS 102 527-1 V1.1.1 (2007-04)

Digital Enhanced Cordless Telecommunications (DECT); New Generation DECT; Part 1: Wideband speech

ETSI TR 102 570 V1.1.1 (2007-03)

Digital Enhanced Cordless Telecommunications (DECT); New Generation DECT; Overview and Requirements

ETSI TS 102 497 V1.1.1 (2005-10)

Digital Enhanced Cordless Telecommunications (DECT); DECT in the 1 920 MHz to 1 930 MHz Unlicensed Personal Communications Services (UPCS) frequency band; Specific requirements

ETSI TS 102 342 V1.2.1 (2005-09)

Digital Enhanced Cordless Telecommunications (DECT); Cordless multimedia communication system; Open Data Access Profile (ODAP)

ETSI EN 300 175-1 V1.9.1 (2005-09)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 1: Overview

ETSI EN 300 175-2 V1.9.1 (2005-09)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 2: Physical Layer (PHL)

ETSI EN 300 175-3 V1.9.1 (2005-09)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 3: Medium Access Control (MAC) layer

ETSI EN 300 175-4 V1.9.1 (2005-09)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 4: Data Link Control (DLC) layer

ETSI EN 300 175-5 V1.9.1 (2005-09)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 5: Network (NWK) layer

ETSI EN 300 175-6 V1.9.1 (2005-09)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 6: Identities and addressing

ETSI EN 300 175-7 V1.9.1 (2005-09)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 7: Security features

ETSI EN 300 175-8 V1.9.1 (2005-09)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 8: Speech coding and transmission

ETSI TR 101 178 V1.5.1 (2005-02)

Digital Enhanced Cordless Telecommunications (DECT); A High Level Guide to the DECT Standarisation

ETSI TS 102 379 V1.1.1 (2005-02)

Digital Enhanced Cordless Telecommunications (DECT); Fixed network Multimedia Message Service (F-MMS) Interworking Profile

ETSI EN 301 649 V1.4.1 (2004-12)

Digital Enhanced Cordless Telecommunications (DECT); DECT Packet Radio Service (DPRS)

ETSI EN 300 175-1 V1.8.1 (2004-11)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 1: Overview

ETSI EN 300 175-2 V1.8.1 (2004-11)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 2: Physical Layer (PHL)

ETSI EN 300 175-3 V1.8.1 (2004-11)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 3: Medium Access Control (MAC) layer

ETSI EN 300 175-4 V1.8.1 (2004-11)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 4: Data Link Control (DLC) layer

ETSI EN 300 175-5 V1.8.1 (2004-11)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 5: Network (NWK) layer

ETSI EN 300 175-6 V1.8.1 (2004-11)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 6: Identities and addressing

ETSI EN 300 175-7 V1.8.1 (2004-11)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 7: Security features

ETSI EN 300 175-8 V1.8.1 (2004-11)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 8: Speech coding and transmission

ETSI TS 102 265 V1.2.1 (2004-10)

Digital Enhanced Cordless Telecommunications (DECT); DECT access to IP networks

ETSI EN 300 757 V1.5.1 (2004-09)

Digital Enhanced Cordless Telecommunications (DECT); Low Rate Messaging Service (LRMS) including Short Messaging Service (SMS)

ETSI TS 102 342 V1.1.1 (2004-07)

Digital Enhanced Cordless Telecommunications (DECT); Cordless multimedia communication system; Open Data Access Profile (ODAP)

ETSI TR 101 310 V1.2.1 (2004-04)

Digital Enhanced Cordless Telecommunications (DECT); Traffic capacity and spectrum requirements for multi-system and multi-service DECT applications co-existing in a common frequency band

ETSI EN 300 176-2 V1.5.1 (2004-01)

Digital Enhanced Cordless Telecommunications (DECT); Test specification; Part 2: Speech

ETSI EN 301 908-10 V2.1.1 (2003-12)

Electromagnetic compatibility and Radio spectrum Matters (ERM); Base Stations (BS), Repeaters and User Equipment (UE) for IMT-2000 Third-Generation cellular networks; Part 10: Harmonized EN for IMT-2000, FDMA/TDMA (DECT) covering essential requirements of article 3.2 of the R&TTE Directive

ETSI TS 102 265 V1.1.1 (2003-10)

Digital Enhanced Cordless Telecommunications (DECT); DECT access to IP networks

ETSI EN 300 176-1 V1.5.1 (2003-10)

Digital Enhanced Cordless Telecommunications (DECT); Test specification; Part 1: Radio

ETSI EN 300 474-1 V1.2.1 (2003-09)

Digital Enhanced Cordless Telecommunications (DECT); Generic Access Profile (GAP); Profile requirement list and profile specific Implementation Conformance Statement (ICS) proforma; Part 1: Portable radio Termination (PT)

ETSI EN 300 474-2 V1.2.1 (2003-09)

Digital Enhanced Cordless Telecommunications (DECT); Generic Access Profile (GAP); Profile requirement list and profile specific Implementation Conformance Statement (ICS) proforma; Part 2: Fixed radio Termination (FT)

ETSI EN 300 175-3 V1.7.1 (2003-07)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 3: Medium Access Control (MAC) layer

ETSI EN 301 406 V1.5.1 (2003-07)

Digital Enhanced Cordless Telecommunications (DECT); Harmonized EN for Digital Enhanced Cordless Telecommunications (DECT) covering essential requirements under article 3.2 of the R&TTE Directive; Generic radio

ETSI EN 300 175-4 V1.7.1 (2003-07)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 4: Data Link Control (DLC) layer

ETSI EN 300 175-5 V1.7.1 (2003-07)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 5: Network (NWK) layer

ETSI EN 300 175-6 V1.7.1 (2003-07)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 6: Identities and addressing

ETSI EN 300 175-7 V1.7.1 (2003-07)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 7: Security features

ETSI EN 300 175-8 V1.7.1 (2003-07)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 8: Speech coding and transmission

ETSI EN 300 175-1 V1.7.1 (2003-07)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 1: Overview

ETSI EN 300 175-2 V1.7.1 (2003-07)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 2: Physical Layer (PHL)

ETSI TS 101 871-1 V1.2.1 (2003-04)

Digital Enhanced Cordless Telecommunications (DECT); Application Specific Access Profile (ASAP); DECT Multimedia Access Profile (DMAP); Profile requirement list and profile specific Implementation Conformance Statement (ICS) proforma; Part 1: Portable radio Termination (PT)

ETSI TS 101 871-2 V1.2.1 (2003-04)

Digital Enhanced Cordless Telecommunications (DECT); Application Specific Access Profile (ASAP); DECT Multimedia Access Profile (DMAP); Profile requirement list and profile specific Implementation Conformance Statement (ICS) proforma; Part 2: Fixed radio Termination (FT)

ETSI TS 101 948 V1.1.2 (2003-04)

Digital Enhanced Cordless Telecommunications (DECT); DECT derivative for implementation in the 2,45 GHz ISM Band (DECT-ISM)

ETSI TR 101 178 V1.4.1 (2003-03)

Digital Enhanced Cordless Telecommunications (DECT); A High Level Guide to the DECT Standarisation

ETSI TR 102 179 V1.1.1 (2003-03)

Digital Enhanced Cordless Telecommunications (DECT); AT command interface; High-level description

ETSI EN 301 649 V1.3.1 (2003-03)

Digital Enhanced Cordless Telecommunications (DECT); DECT Packet Radio Service (DPRS)

ETSI EN 300 444 V1.4.2 (2003-02)

Digital Enhanced Cordless Telecommunications (DECT); Generic Access Profile (GAP)

ETSI TR 102 183 V1.2.1 (2002-12)

Digital Enhanced Cordless Telecommunications (DECT); Conformance testing on DECT equipment

ETSI EN 300 494-3 V1.4.1 (2002-04)

Digital Enhanced Cordless Telecommunications (DECT); Generic Access Profile (GAP); Profile Test Specification (PTS); Part 3: Profile Specific Test Specification (PSTS) - Fixed radio Termination (FT)

ETSI EN 300 757 V1.4.1 (2002-04)

Digital Enhanced Cordless Telecommunications (DECT); Low Rate Messaging Service (LRMS) including Short Messaging Service (SMS)

ETSI EN 300 494-1 V1.4.1 (2002-04)

Digital Enhanced Cordless Telecommunications (DECT); Generic Access Profile (GAP); Profile Test Specification (PTS); Part 1: Summary

ETSI EN 300 494-2 V1.4.1 (2002-04)

Digital Enhanced Cordless Telecommunications (DECT); Generic Access Profile (GAP); Profile Test Specification (PTS); Part 2: Profile Specific Test Specification (PSTS) - Portable radio Termination (PT)

ETSI EN 301 650 V1.2.1 (2002-04)

Digital Enhanced Cordless Telecommunications (DECT); DECT Multimedia Access Profile (DMAP); Application Specific Access Profile (ASAP)

ETSI EN 300 175-4 V1.6.1 (2002-02)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 4: Data Link Control (DLC) layer

ETSI EN 300 175-5 V1.6.1 (2002-02)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 5: Network (NWK) layer

ETSI EN 300 175-7 V1.6.1 (2002-02)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 7: Security features

ETSI EN 301 908-10 V1.1.1 (2002-01)

Electromagnetic compatibility and Radio spectrum Matters (ERM); Base Stations (BS) and User Equipment (UE) for IMT-2000 Third-Generation cellular networks; Part 10: Harmonized EN for IMT-2000 FDMA/TDMA (DECT) covering essential requirements of article 3.2 of the R&TTE Directive

ETSI EN 300 175-8 V1.6.1 (2002-01)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 8: Speech coding and transmission

ETSI EN 300 175-6 V1.6.1 (2002-01)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 6: Identities and addressing

ETSI EN 300 175-3 V1.6.1 (2002-01)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 3: Medium Access Control (MAC) layer

ETSI EN 300 175-1 V1.6.1 (2002-01)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 1: Overview

ETSI EN 300 757 V1.3.1 (2002-01)   Digital Enhanced Cordless Telecommunications (DECT); Low Rate Messaging Service (LRMS) including Short Messaging Service (SMS)

ETSI TS 101 863-1 V1.1.2 (2001-11)

Digital Enhanced Cordless Telecommunications (DECT); DECT/UMTS Interworking Profile (IWP); Part 1: General description and overview

ETSI TS 101 863-2 V1.1.2 (2001-11)

Digital Enhanced Cordless Telecommunications (DECT); DECT/UMTS Interworking Profile (IWP); Part 2: CN-FP interworking

ETSI TS 101 863-3 V1.1.2 (2001-11)

Digital Enhanced Cordless Telecommunications (DECT); DECT/UMTS Interworking Profile (IWP); Part 3: 3,1 kHz speech service

ETSI TS 102 011-1 V1.1.1 (2001-11)

Digital Enhanced Cordless Telecommunications (DECT); DECT Packet Radio Service (DPRS); Application Specific Access Profile (ASAP): V.24 Interworking; Profile Implementation Conformance Statement (ICS); Part 1: Portable radio Termination (PT)

ETSI TS 102 011-2 V1.1.1 (2001-11)

Digital Enhanced Cordless Telecommunications (DECT); DECT Packet Radio Service (DPRS); Application Specific Access Profile (ASAP): V.24 Interworking; Profile Implementation Conformance Statement (ICS); Part 2: Fixed radio Termination (FT)

ETSI TS 102 013-2 V1.1.1 (2001-11)

Digital Enhanced Cordless Telecommunications (DECT); DECT Packet Radio Service (DPRS); Application Specific Access Profile (ASAP): Ethernet Interworking; Profile Implementation Conformance Statement (ICS); Part 2: Fixed radio Termination (FT)

ETSI TS 102 013-1 V1.1.1 (2001-11)

Digital Enhanced Cordless Telecommunications (DECT); DECT Packet Radio Service (DPRS); Application Specific Access Profile (ASAP): Ethernet Interworking; Profile Implementation Conformance Statement (ICS); Part 1: Portable radio Termination (PT)

ETSI TS 102 014 V1.1.1 (2001-11)

Digital Enhanced Cordless Telecommunications (DECT); DECT Packet Radio Service (DPRS); Application Specific Access Profile (ASAP): Ethernet Interworking; Profile Test Specification (PTS)

ETSI TR 102 010 V1.1.1 (2001-11)

Digital Enhanced Cordless Telecommunications (DECT); DECT access to IP networks;

ETSI TS 101 950 V1.2.1 (2001-11)

Digital Enhanced Cordless Telecommunications (DECT); DECT Packet Radio Service (DPRS); Interoperability Test Specification

ETSI TS 102 012 V1.1.1 (2001-11)

Digital Enhanced Cordless Telecommunications (DECT); DECT Packet Radio Service (DPRS); Application Specific Access Profile (ASAP): V.24 Interworking; Profile Test Specification (PTS)

ETSI TS 101 863-6 V1.1.1 (2001-11)

Digital Enhanced Cordless Telecommunications (DECT); DECT/UMTS Interworking Profile (IWP); Part 6: Packet switched data

ETSI TR 101 178 V1.3.2 (2001-11)

Digital Enhanced Cordless Telecommunications (DECT); A High Level Guide to the DECT Standarisation

ETSI EN 301 238 V1.3.1 (2001-10)

Digital Enhanced Cordless Telecommunications (DECT); Data Services Profile (DSP); Isochronous data bearer services with roaming mobility (service type D, mobility class 2)

ETSI EN 300 434-1 V1.2.1 (2001-10)

Digital Enhanced Cordless Telecommunications (DECT); Integrated Services Digital Network (ISDN); DECT/ISDN interworking for end system configuration; Part 1: Interworking specification

ETSI EN 300 444 V1.4.1 (2001-09)

Digital Enhanced Cordless Telecommunications (DECT); Generic Access Profile (GAP)

ETSI EN 300 175-2 V1.6.1 (2001-08)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 2: Physical Layer (PHL)

ETSI EN 300 822 V1.2.1 (2001-08)

Digital Enhanced Cordless Telecommunications (DECT); Integrated Services Digital Network (ISDN); DECT/ISDN interworking for intermediate system configuration; Interworking and profile specification

ETSI EN 300 824 V1.3.1 (2001-08)

Digital Enhanced Cordless Telecommunications (DECT); Cordless Terminal Mobility (CTM); CTM Access Profile (CAP)

ETSI EN 300 434-2 V1.2.1 (2001-08)

Digital Enhanced Cordless Telecommunications (DECT); Integrated Services Digital Network (ISDN); DECT/ISDN interworking for end system configuration; Part 2: Access profile

ETSI TS 101 863-4 V1.1.1 (2001-08)

Digital Enhanced Cordless Telecommunications (DECT); DECT/UMTS Interworking Profile (IWP); Part 4: Supplementary services

ETSI TS 101 863-5 V1.1.1 (2001-08)

Digital Enhanced Cordless Telecommunications (DECT); DECT/UMTS Interworking Profile (IWP); Part 5: SMS point-to-point and cell broadcast

ETSI EN 301 649 V1.2.1 (2001-06)

Digital Enhanced Cordless Telecommunications (DECT); DECT Packet Radio Service (DPRS)

ETSI TS 101 946-1 V1.1.1 (2001-06)

Digital Enhanced Cordless Telecommunications (DECT); Low Rate Messaging Service (LRMS) including Short Message Service (SMS); Profile requirement list and profile specific Implementation Conformance Statement (ICS) proforma; Part 1: Portable radio Termination (PT)

ETSI TS 101 946-2 V1.1.1 (2001-06)

Digital Enhanced Cordless Telecommunications (DECT); Low Rate Messaging Service (LMRS) including Short Message Service (SMS); Profile requirement list and profile specific Implementation Conformance Statement (ICS) proforma; Part 2: Fixed radio Termination (FT)

ETSI TR 102 185 V1.2.1 (2001-05)

Digital Enhanced Cordless Telecommunications (DECT); Data Services Profile (DSP); Profile overview

ETSI TS 101 950 V1.1.1 (2001-05)

Digital Enhanced Cordless Telecommunications (DECT); DECT Packet Radio Service (DPRS); Interoperability Test Specification

ETSI TS 101 863-1 V1.1.1 (2001-04)

Digital Enhanced Cordless Telecommunications (DECT); DECT/UMTS Interworking Profile (IWP); Part 1: General description and overview

ETSI TS 101 863-2 V1.1.1 (2001-04)

Digital Enhanced Cordless Telecommunications (DECT); DECT/UMTS Interworking Profile (IWP); Part 2: CN-FP interworking

ETSI TS 101 863-3 V1.1.1 (2001-04)

Digital Enhanced Cordless Telecommunications (DECT); DECT/UMTS Interworking Profile (IWP); Part 3: 3,1 kHz speech service

ETSI EN 300 494-2 V1.3.1 (2001-04)

Digital Enhanced Cordless Telecommunications (DECT); Generic Access Profile (GAP); Profile Test Specification (PTS); Part 2: Profile Specific Test Specification (PSTS) - Portable radio Termination (PT)

ETSI EN 300 494-3 V1.3.1 (2001-04)

Digital Enhanced Cordless Telecommunications (DECT); Generic Access Profile (GAP); Profile Test Specification (PTS); Part 3: Profile Specific Test Specification (PSTS) - Fixed radio Termination (FT)

ETSI TS 101 948 V1.1.1 (2001-04)

Digital Enhanced Cordless Telecommunications (DECT); DECT derivative for implementation in the 2,45 GHz ISM Band (DECT-ISM)

ETSI EN 300 765-1 V1.3.1 (2001-04)

Digital Enhanced Cordless Telecommunications (DECT); Radio in the Local Loop (RLL) Access Profile (RAP); Part 1: Basic telephony services

ETSI EN 300 494-1 V1.3.1 (2001-04)

Digital Enhanced Cordless Telecommunications (DECT); Generic Access Profile (GAP); Profile Test Specification (PTS); Part 1: Summary

ETSI TS 101 945-1 V1.1.1 (2001-04)

Digital Enhanced Cordless Telecommunications (DECT); Data Services Profile (DSP); Isochronous data bearer services with roaming capability (Service Type D, mobility class 2); Profile requirement list and profile specific Implementation Conformance Statement (ICS) proforma; Part 1: Portable radio Termination (PT)

ETSI TS 101 945-2 V1.1.1 (2001-04)

Digital Enhanced Cordless Telecommunications (DECT); Data Services Profile (DSP); Isochronous data bearer services with roaming capability (Service Type D, mobility class 2); Profile requirement list and profile specific Implementation Conformance Statement (ICS) proforma; Part 2: Fixed radio Termination (FT)

ETSI TS 101 942 V1.1.1 (2001-04)

Digital Enhanced Cordless Telecommunications (DECT); DECT Packet Radio Service (DPRS); Application Specific Access Profile (ASAP): Ethernet (Eth) Interworking

ETSI TS 101 947 V1.1.1 (2001-04)

Digital Enhanced Cordless Telecommunications (DECT); DECT Packet Radio Service (DPRS); Application Specific Access Profile (ASAP): V.24 Interworking

ETSI EN 301 406 V1.4.1 (2001-03)

Digital Enhanced Cordless Telecommunications (DECT); Harmonized EN for Digital Enhanced Cordless Telecommunications (DECT) covering essential requirements under article 3.2 of the R&TTE Directive; Generic radio

ETSI EN 300 175-1 V1.5.1 (2001-02)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 1: Overview

ETSI EN 300 175-2 V1.5.1 (2001-02)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 2: Physical Layer (PHL)

ETSI EN 300 175-3 V1.5.1 (2001-02)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 3: Medium Access Control (MAC) layer

ETSI EN 300 175-4 V1.5.1 (2001-02)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 4: Data Link Control (DLC) layer

ETSI EN 300 175-5 V1.5.1 (2001-02)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 5: Network (NWK) layer

ETSI EN 300 175-6 V1.5.1 (2001-02)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 6: Identities and addressing

ETSI EN 300 175-7 V1.5.1 (2001-02)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 7: Security features

ETSI EN 300 175-8 V1.5.1 (2001-02)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 8: Speech coding and transmission

ETSI EN 300 765-2 V1.2.1 (2001-02)

Digital Enhanced Cordless Telecommunications (DECT); Radio in the Local Loop (RLL) Access Profile (RAP); Part 2: Advanced telephony services

ETSI EN 300 176-1 V1.4.1 (2001-02)

Digital Enhanced Cordless Telecommunications (DECT); Approval test specification; Part 1: Radio

ETSI EN 300 176-2 V1.4.1 (2001-02)

Digital Enhanced Cordless Telecommunications (DECT); Approval test specification; Part 2: Speech

ETSI EN 300 370 V1.3.1 (2001-01)

Digital Enhanced Cordless Telecommunications (DECT); Global System for Mobile communications (GSM); DECT/GSM Interworking Profile (IWP); Access and mapping (protocol/procedure description for 3,1 kHz speech service)

ETSI EN 300 757 V1.2.1 (2001-01)

Digital Enhanced Cordless Telecommunications (DECT); Low Rate Messaging Service (LRMS) including Short Messaging Service (SMS)

ETSI EN 300 466 V1.2.1 (2001-01)

Digital Enhanced Cordless Telecommunications (DECT); Global System for Mobile communications (GSM); DECT/GSM Interworking Profile (IWP); General description of service requirements; Functional capabilities and information flows

ETSI EN 300 476-1 V1.2.1 (2000-11)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Protocol Implementation Conformance Statement (PICS) proforma; Part 1: Network (NWK) layer - Portable radio Termination (PT)

ETSI EN 300 476-2 V1.2.1 (2000-11)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Protocol Implementation Conformance Statement (PICS) proforma; Part 2: Data Link Control (DLC) layer - Portable radio Termination (PT)

ETSI EN 300 476-3 V1.2.1 (2000-11)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Protocol Implementation Conformance Statement (PICS) proforma; Part 3: Medium Access Control (MAC) layer - Portable radio Termination (PT)

ETSI EN 300 476-4 V1.2.1 (2000-11)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Protocol Implementation Conformance Statement (PICS) proforma; Part 4: Network (NWK) layer - Fixed radio Termination (FT)

ETSI EN 300 476-5 V1.2.1 (2000-11)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Protocol Implementation Conformance Statement (PICS) proforma; Part 5: Data Link Control (DLC) layer - Fixed radio Termination (FT)

ETSI EN 300 476-6 V1.2.1 (2000-11)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Protocol Implementation Conformance Statement (PICS) proforma; Part 6: Medium Access Control (MAC) layer - Fixed radio Termination (FT)

ETSI EN 300 476-7 V1.2.1 (2000-11)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Protocol Implementation Conformance Statement (PICS) proforma; Part 7: Physical layer

ETSI TS 101 859-1 V1.1.1 (2000-11)

Digital Enhanced Cordless Telecommunications (DECT); DECT Multimedia Access Profile (DMAP); Application Specific Access Profile (ASAP); Profile Test Specification (PTS); Part 1: Summary

ETSI TS 101 859-2 V1.1.1 (2000-11)

Digital Enhanced Cordless Telecommunications (DECT); DECT Multimedia Access Profile (DMAP); Application Specific Access Profile (ASAP); Profile Test Specification (PTS); Part 2: Profile Specific Test Specification (PSTS) Portable radio Termination (PT)

ETSI TS 101 859-3 V1.1.1 (2000-11)

Digital Enhanced Cordless Telecommunications (DECT); DECT Multimedia Access Profile (DMAP); Application Specific Access Profile (ASAP); Profile Test Specification (PTS); Part 3: Profile Specific Test Specification (PSTS) - Fixed radio Termination (FT)

ETSI TS 101 871-1 V1.1.1 (2000-11)

Digital Enhanced Cordless Telecommunications (DECT); Application Specific Access Profile (ASAP); DECT Multimedia Access Profile (DMAP); Profile requirement list and profile specific Implementation Conformance Statement (ICS) proforma; Part 1: Portable radio Termination (PT)

ETSI TS 101 871-2 V1.1.1 (2000-11)

Digital Enhanced Cordless Telecommunications (DECT); Application Specific Access Profile (ASAP); DECT Multimedia Access Profile (DMAP); Profile requirement list and profile specific Implementation Conformance Statement (ICS) proforma; Part 2: Fixed radio Termination (FT)

ETSI TS 101 869-1 V1.1.1 (2000-11)

Digital Enhanced Cordless Telecommunications (DECT); DECT Packet Radio Services (DPRS); Profile requirement list and profile specific Implementation Conformance Statement (ICS) proforma; Part 1: Portable radio Termination (PT)

ETSI TS 101 869-2 V1.1.1 (2000-11)

Digital Enhanced Cordless Telecommunications (DECT); DECT Packet Radio Services (DPRS); Profile requirement list and profile specific Implementation Conformance Statement (ICS) proforma; Part 2: Fixed radio Termination (FT)

ETSI EN 301 469-1 V1.1.1 (2000-10)

Digital Enhanced Cordless Telecommunications (DECT); DECT Packet Radio Service (DPRS) Test Case Library (TCL); Part 1: Test Suite Structure (TSS) and Test Purposes (TP) - Medium Access Control (MAC) layer

ETSI EN 301 469-2 V1.1.1 (2000-10)

Digital Enhanced Cordless Telecommunications (DECT); DECT Packet Radio Service (DPRS) Test Case Library (TCL); Part 2: Abstract Test Suite (ATS) - Medium Access Control (MAC) layer - Portable radio Termination (PT)

ETSI EN 301 469-3 V1.1.1 (2000-10)

Digital Enhanced Cordless Telecommunications (DECT); DECT Packet Radio Service (DPRS) Test Case Library (TCL); Part 3: Abstract Test Suite (ATS) - Medium Access Control (MAC) layer - Fixed radio Termination (FT)

ETSI EN 301 469-4 V1.1.1 (2000-10)

Digital Enhanced Cordless Telecommunications (DECT); DECT Packet Radio Service (DPRS) Test Case Library (TCL); Part 4: Test Suite Structure (TSS) and Test Purposes (TP) - Data Link Control (DLC) layer

ETSI EN 301 469-5 V1.1.1 (2000-10)

Digital Enhanced Cordless Telecommunications (DECT); DECT Packet Radio Service (DPRS) Test Case Library (TCL); Part 5: Abstract Test Suite (ATS) - Data Link Control (DLC) layer - Portable radio Termination (PT)

ETSI EN 301 469-6 V1.1.1 (2000-10)

Digital Enhanced Cordless Telecommunications (DECT); DECT Packet Radio Service (DPRS) Test Case Library (TCL); Part 6: Abstract Test Suite (ATS) - Data Link Control (DLC) layer - Fixed radio Termination (FT)

ETSI EN 301 469-7 V1.1.1 (2000-10)

Digital Enhanced Cordless Telecommunications (DECT); DECT Packet Radio Service (DPRS) Test Case Library (TCL); Part 7: Test Suite Structure (TSS) and Test Purposes (TP) - Network (NWK) layer

ETSI EN 301 469-8 V1.1.1 (2000-10)

Digital Enhanced Cordless Telecommunications (DECT); DECT Packet Radio Service (DPRS) Test Case Library (TCL); Part 8: Abstract Test Suite (ATS) - Network (NWK) layer - Portable radio Termination (PT)

ETSI EN 301 469-9 V1.1.1 (2000-10)

Digital Enhanced Cordless Telecommunications (DECT); DECT Packet Radio Service (DPRS) Test Case Library (TCL); Part 9: Abstract Test Suite (ATS) - Network (NWK) layer - Fixed radio Termination (FT)

ETSI EN 300 700 V1.2.1 (2000-09)

Digital Enhanced Cordless Telecommunications (DECT); Wireless Relay Station (WRS)

ETSI TS 101 808-1 V1.1.1 (2000-09)

Digital Enhanced Cordless Telecommunications (DECT); Wireless Relay Station (WRS); Test Case Library (TCL); Part 1: Test Suite Structure (TSS) and Test Purposes (TP) for Medium Access Control (MAC) layer

ETSI TS 101 808-2 V1.1.1 (2000-09)

Digital Enhanced Cordless Telecommunications (DECT); Wireless Relay Station (WRS); Test Case Library (TCL); Part 2: Abstract Test Suite (ATS) for Medium Access Control (MAC) layer - Cordless Radio Fixed Part Portable radio Termination (CRFP_PT)

ETSI TS 101 808-3 V1.1.1 (2000-09)

Digital Enhanced Cordless Telecommunications (DECT); Wireless Relay Station (WRS); Test Case Library (TCL); Part 3: Abstract Test Suite (ATS) for Medium Access Control (MAC) layer - Cordless Radio Fixed Part Fixed radio Termination (CRFP_FT)

ETSI TS 101 808-4 V1.1.1 (2000-09)

Digital Enhanced Cordless Telecommunications (DECT); Wireless Relay Station (WRS); Test Case Library (TCL); Part 4: Test Suite Structure (TSS) and Test Purposes (TP) - Data Link Control (DLC) layer

ETSI TS 101 808-5 V1.1.1 (2000-09)

Digital Enhanced Cordless Telecommunications (DECT); Wireless Relay Station (WRS); Test Case Library (TCL); Part 5: Abstract Test Suite (ATS) - Data Link Control (DLC) layer; Cordless Radio Fixed Part Portable radio Termination (CRFP_PT)

ETSI TS 101 808-6 V1.1.1 (2000-09)

Digital Enhanced Cordless Telecommunications (DECT); Wireless Relay Station (WRS); Test Case Library (TCL); Part 6: Abstract Test Suite (ATS) - Data Link Control (DLC) layer; Cordless Radio Fixed Part Fixed radio Termination (CRFP_FT)

ETSI TS 101 808-7 V1.1.1 (2000-09)

Digital Enhanced Cordless Telecommunications (DECT); Wireless Relay Station (WRS); Test Case Library (TCL); Part 7: Test Suite Structure (TSS) and Test Purposes (TP) - Network (NWK) layer

ETSI TS 101 808-8 V1.1.1 (2000-09)

Digital Enhanced Cordless Telecommunications (DECT); Wireless Relay Station (WRS); Test Case Library (TCL); Part 8: Abstract Test Suite (ATS) for Network (NWK) layer - Cordless Radio Fixed Part Portable radio Termination (CRFP_PT)

ETSI TS 101 808-9 V1.1.1 (2000-09)

Digital Enhanced Cordless Telecommunications (DECT); Wireless Relay Station (WRS); Test Case Library (TCL); Part 9: Abstract Test Suite (ATS) for Network (NWK) layer - Cordless Radio Fixed Part Fixed radio Termination (CRFP_FT)

ETSI EN 300 765-1 V1.2.1 (2000-09)

Digital Enhanced Cordless Telecommunications (DECT); Radio in the Local Loop (RLL) Access Profile (RAP); Part 1: Basic telephony services

ETSI EN 301 238 V1.2.3 (2000-04)

Digital Enhanced Cordless Telecommunications (DECT); Data Services Profile (DSP); Isochronous data bearer services with roaming mobility (service type D, mobility class 2)

ETSI TR 101 178 V1.3.1 (2000-03)

Digital Enhanced Cordless Telecommunications (DECT); A High Level Guide to the DECT Standarisation

ETSI EN 301 649 V1.1.1 (2000-03)

Digital Enhanced Cordless Telecommunications (DECT); DECT Packet Radio Service (DPRS)

ETSI EN 301 650 V1.1.1 (2000-02)

Digital Enhanced Cordless Telecommunications (DECT); DECT Multimedia Access Profile (DMAP); Application Specific Access Profile (ASAP)

ETSI EN 301 361-2 V1.1.1 (2000-02)

Digital Enhanced Cordless Telecommunications (DECT); Integrated Services Digital Network (ISDN); ISDN Mobility protocol Interworking specification Profile (IMIP); Part 2: DECT/ISDN interworking for Global System for Mobile communications (GSM) support

ETSI EN 302 096 V0.2.3 (1999-11)

Digital Enhanced Cordless Telecommunications (DECT); Cordless Terminal Mobility (CTM); Feature Package 1 (FP1); CTM circuit-switched data profile, 32 kbit/s and 64 kbit/s Unrestricted Digital Information (UDI)

ETSI EN 301 361-1 V1.1.1 (1999-10)

Digital Enhanced Cordless Telecommunications (DECT); Integrated Services Digital Network (ISDN); ISDN Mobility protocol Interworking specification Profile (IMIP); Part 1: DECT/ISDN interworking for Cordless Terminal Mobility (CTM) support

ETSI EN 300 497-7 V0.3.0 (1999-10)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Test Case Library (TCL); Part 7: Abstract Test Suite (ATS) for Network (NWK) layer - Portable radio Termination (PT)

ETSI EN 300 497-2 V0.3.1 (1999-10)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Test Case Library (TCL); Part 2: Abstract Test Suite (ATS) for Medium Access Control (MAC) layer - Portable radio Termination (PT)

ETSI EN 300 497-4 V0.3.0 (1999-10)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Test Case Library (TCL); Part 4: Test Suite Structure (TSS) and Test Purposes (TP) - Data Link Control (DLC) layer

ETSI EN 300 497-5 V0.3.0 (1999-10)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Test Case Library (TCL); Part 5: Abstract Test Suite (ATS) - Data Link Control (DLC) layer

ETSI EN 301 371-1 V0.0.1 (1999-09)

Digital Enhanced Cordless Telecommunications (DECT); Cordless Terminal Mobility (CTM); CTM Access Profile (CAP); Profile Test Specification (PTS); Part 1: Summary

ETSI EN 301 371-2 V0.0.1 (1999-09)

Digital Enhanced Cordless Telecommunications (DECT); Cordless Terminal Mobility (CTM); CTM Access Profile (CAP); Profile Test Specification (PTS); Part 2: Profile Specific Test Specification (PSTS) - Portable radio Termination (PT)

ETSI EN 301 371-3 V0.0.3 (1999-09)

Digital Enhanced Cordless Telecommunications (DECT); Cordless Terminal Mobility (CTM); CTM Access Profile (CAP); Profile Test Specification (PTS); Part 3: Profile Specific Test Specification (PSTS) - Fixed radio Termination (FT)

ETSI EN 300 824 V1.2.2 (1999-09)

Digital Enhanced Cordless Telecommunications (DECT); Cordless Terminal Mobility (CTM); CTM Access Profile (CAP)

ETSI EN 301 242 V1.2.2 (1999-09)

Digital Enhanced Cordless Telecommunications (DECT); Global System for Mobile communications (GSM); DECT/GSM integration based on dual-mode terminals

ETSI EN 300 497-1 V0.3.2 (1999-09)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Test Case Library (TCL); Part 1: Test Suite Structure (TSS) and Test Purposes (TP) for Medium Access Control (MAC) layer

ETSI EN 300 497-6 V0.3.2 (1999-09)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Test Case Library (TCL); Part 6: Test Suite Structure (TSS) and Test Purposes (TP) - Network (NWK) layer - Portable radio Termination (PT)

ETSI EN 300 497-8 V0.3.2 (1999-09)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Test Case Library (TCL); Part 8: Test Suite Structure (TSS) and Test Purposes (TP) - Network (NWK) layer - Fixed radio Termination (FT)

ETSI EN 300 497-9 V0.3.2 (1999-09)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Test Case Library (TCL); Part 9: Abstract Test Suite (ATS) for Network (NWK) layer - Fixed radio Termination (FT)

ETSI EN 300 497-3 V0.3.2 (1999-09)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Test Case Library (TCL); Part 3: Abstract Test Suite (ATS) for Medium Access Control (MAC) layer - Fixed radio Termination (FT)

ETSI EN 300 494-1 V1.2.1 (1999-08)

Digital Enhanced Cordless Telecommunications (DECT); Generic Access Profile (GAP); Profile Test Specification (PTS); Part 1: Summary

ETSI EN 300 494-2 V1.2.1 (1999-08)

Digital Enhanced Cordless Telecommunications (DECT); Generic Access Profile (GAP); Profile Test Specification (PTS); Part 2: Profile Specific Test Specification (PSTS) - Portable radio Termination (PT)

ETSI EN 300 494-3 V1.2.1 (1999-08)   Digital Enhanced Cordless Telecommunications (DECT); Generic Access Profile (GAP); Profile Test Specification (PTS); Part 3: Profile Specific Test Specification (PSTS) - Fixed radio Termination (FT)

ETSI TS 101 679 V1.1.1 (1999-07)   Digital Enhanced Cordless Telecommunications (DECT); Broadband Integrated Services Digital Network (B-ISDN); DECT/B-ISDN interworking

ETSI TBR 010 ed.3 (1999-07)

Digital Enhanced Cordless Telecommunications (DECT); General Terminal Attachment Requirements; Telephony Applications

ETSI EN 300 175-1 V1.4.2 (1999-06)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 1: Overview

ETSI EN 300 175-2 V1.4.2 (1999-06)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 2: Physical Layer (PHL)

ETSI EN 300 175-3 V1.4.2 (1999-06)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 3: Medium Access Control (MAC) Layer

ETSI EN 300 175-4 V1.4.2 (1999-06)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 4: Data Link Control (DLC) Layer

ETSI EN 300 175-5 V1.4.2 (1999-06)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 5: Network (NWK) Layer

ETSI EN 300 175-6 V1.4.2 (1999-06)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 6: Identities and Addressing

ETSI EN 300 175-7 V1.4.2 (1999-06)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 7: Security Features

ETSI EN 300 175-8 V1.4.2 (1999-06)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 8: Speech Coding and Transmission

ETSI EN 300 176-2 V1.3.2 (1999-06)

Digital Enhanced Cordless Telecommunications (DECT); Approval test specification; Part 2: Speech

ETSI EN 300 176-1 V1.3.2 (1999-06)

Digital Enhanced Cordless Telecommunications (DECT); Approval test specification; Part 1: Radio

ETSI TBR 006 ed.3 (1999-06)

Digital Enhanced Cordless Telecommunications (DECT); General terminal attachment requirements

ETSI EN 300 444 V1.3.3 (1999-05)

Digital Enhanced Cordless Telecommunications (DECT); Generic Access Profile (GAP)

ETSI EN 301 439 V1.1.1 (1999-03)

Digital Enhanced Cordless Telecommunications (DECT); Global System for Mobile communications (GSM); Attachment requirements for DECT/GSM dual-mode terminal equipment

ETSI EN 301 614-1 V1.1.2 (1999-02)

Digital Enhanced Cordless Telecommunications (DECT); Integrated Services Digital Network (ISDN); DECT/ISDN interworking for intermediate system configuration; Part 1: Profile Test Specification (PTS) summary

ETSI EN 301 614-2 V1.1.2 (1999-02)

Digital Enhanced Cordless Telecommunications (DECT); Integrated Services Digital Network (ISDN); DECT/ISDN interworking for intermediate system configuration; Part 2: Profile Specific Test Specification (PSTS) for Portable radio Termination (PT)

ETSI EN 301 614-3 V1.1.2 (1999-02)

Digital Enhanced Cordless Telecommunications (DECT); Integrated Services Digital Network (ISDN); DECT/ISDN interworking for intermediate system configuration; Part 3: Profile Specific Test Specification (PSTS) for Fixed radio Termination (FT)

ETSI EN 301 440 V1.2.2 (1999-01)

Digital Enhanced Cordless Telecommunications (DECT); Integrated Services Digital Network (ISDN); Attachment requirements for terminal equipment for DECT/ISDN interworking profile applications

ETSI EN 301 241-1 V1.1.1 (1998-12)

Digital Enhanced Cordless Telecommunications (DECT); Integrated Services Digital Network (ISDN); DECT/ISDN interworking for intermediate system configuration; Profile Implementation Conformance Statement (ICS); Part 1: Portable radio Termination (PT)

ETSI EN 301 241-2 V1.1.1 (1998-12)

Digital Enhanced Cordless Telecommunications (DECT); Integrated Services Digital Network (ISDN); DECT/ISDN interworking for intermediate system configuration; Profile Implementation Conformance Statement (ICS); Part 2: Fixed radio Termination (FT)

ETSI TR 101 370 V1.1.1 (1998-09)

Digital Enhanced Cordless Telecommunications (DECT); Implementing DECT Fixed Wireless Access (FWA) in an arbitrary spectrum allocation

ETSI ETS 300 494-1/A1 ed.1 (1998-08)

Digital Enhanced Cordless Telecommunications (DECT); Generic Access Profile (GAP); Profile Test Specification (PTS); Part 1: Summary

ETSI EN 301 240 V1.1.3 (1998-06)

Digital Enhanced Cordless Telecommunications (DECT); Data Services Profile (DSP); Point-to-Point Protocol (PPP) interworking for internet access and general multi-protocol datagram transport

ETSI TBR 040 ed.1 (1998-06)

Digital Enhanced Cordless Telecommunications (DECT); Integrated Services Digital Network (ISDN); Attachment requirements for terminal equipment for DECT/ISDN interworking profile applications

ETSI EN 301 238 V1.1.3 (1998-06)

Digital Enhanced Cordless Telecommunications (DECT); Data Services Profile (DSP); Isochronous data bearer services with roaming mobility (service type D, mobility class 2)

ETSI EN 301 239 V1.1.3 (1998-06)

Digital Enhanced Cordless Telecommunications (DECT); Data Services Profile (DSP); Isochronous data bearer services for closed user groups (service type D, mobility class 1)

ETSI TR 101 159 V1.2.1 (1998-06)

Digital Enhanced Cordless Telecommunications (DECT); Implementing DECT in an arbitrary spectrum allocation

ETSI EN 301 242 V1.1.3 (1998-06)

Digital Enhanced Cordless Telecommunications (DECT); Global System for Mobile communications (GSM); DECT/GSM integration based on dual-mode terminals

ETSI TBR 036 ed.1 (1998-05)

Digital Enhanced Cordless Telecommunications (DECT); Global System for Mobile communications (GSM); DECT access to GSM Public Land Mobile Networks (PLMNs) for 3,1 kHz speech applications

ETSI TR 101 176 V1.1.1 (1998-04)

Digital Enhanced Cordless Telecommunications (DECT); Global System for Mobile communications (GSM); DECT/GSM advanced integration of DECT/GSM dual-mode terminal equipment

ETSI ETS 300 822 ed.1 (1998-04)

Digital Enhanced Cordless Telecommunications (DECT); Integrated Services Digital Network (ISDN); DECT/ISDN interworking for intermediate system configuration; Interworking and profile specification

ETSI ETS 300 765-2 ed.1 (1998-04)

Digital Enhanced Cordless Telecommunications (DECT); Radio in the Local Loop (RLL) Access Profile (RAP); Part 2: Advanced telephony services

ETSI TBR 022/A1 ed.1 (1998-03)

Radio Equipment and Systems (RES); Attachment requirements for terminal equipment for Digital Enhanced Cordless Telecommunications (DECT) Generic Access Profile (GAP) applications

ETSI ETS 300 494-3/A1 ed.1 (1998-02)

Digital Enhanced Cordless Telecommunications (DECT); Generic Access Profile (GAP); Profile Test Specification (PTS); Part 3: Profile Specific Test Specification (PSTS) - Fixed radio Termination (FT)

ETSI ETS 300 494-2/A1 ed.1 (1998-02)

Digital Enhanced Cordless Telecommunications (DECT); Generic Access Profile (GAP); Profile Test Specification (PTS); Part 2: Profile Specific Test Specification (PSTS) - Portable radio Termination (PT)

ETSI TR 101 159 V1.1.1 (1998-02)

Digital Enhanced Cordless Telecommunications (DECT); Implementing DECT in an arbitrary spectrum allocation

ETSI ETS 300 497-1 ed.2 (1998-02)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Test Case Library (TCL); Part 1: Test Suite Structure (TSS) and Test Purposes (TP) for Medium Access Control (MAC) layer

ETSI ETS 300 497-2 ed.2 (1998-02)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Test Case Library (TCL); Part 2: Abstract Test Suite (ATS) for Medium Access Control (MAC) layer - Portable radio Termination (PT)

ETSI ETS 300 497-3 ed.2 (1998-02)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Test Case Library (TCL); Part 3: Abstract Test Suite (ATS) for Medium Access Control (MAC) layer - Fixed radio Termination (FT)

ETSI ETS 300 497-4 ed.2 (1998-02)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Test Case Library (TCL); Part 4: Test Suite Structure (TSS) and Test Purposes (TP) - Data Link Control (DLC) layer

ETSI ETS 300 497-5 ed.2 (1998-02)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Test Case Library (TCL); Part 5: Abstract Test Suite (ATS) - Data Link Control (DLC) layer

ETSI ETS 300 497-6 ed.2 (1998-02)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Test Case Library (TCL); Part 6: Test Suite Structure (TSS) and Test Purposes (TP) - Network (NWK) layer - Portable radio Termination (PT)

ETSI ETS 300 497-7 ed.2 (1998-02)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Test Case Library (TCL); Part 7: Abstract Test Suite (ATS) for Network (NWK) layer - Portable radio Termination (PT)

ETSI ETS 300 497-8 ed.2 (1998-02)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Test Case Library (TCL); Part 8: Test Suite Structure (TSS) and Test Purposes (TP) - Network (NWK) layer - Fixed radio Termination (FT)

ETSI ETS 300 497-9 ed.2 (1998-02)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Test Case Library (TCL); Part 9: Abstract Test Suite (ATS) for Network (NWK) layer - Fixed radio Termination (FT)

ETSI ETS 300 370 ed.2 (1998-02)

Digital Enhanced Cordless Telecommunications (DECT); Global System for Mobile communications (GSM); DECT/GSM Interworking Profile (IWP); Access and mapping (protocol/procedure description for 3,1 kHz speech service)

ETSI EN 300 703 V1.2.2 (1998-02)

Digital Enhanced Cordless Telecommunications (DECT); Global System for Mobile communications (GSM); DECT/GSM Interworking Profile (IWP); GSM Phase 2 supplementary services implementation

ETSI ETS 300 175-5 ed.3 (1997-12)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 5: Network (NWK) layer

ETSI ETS 300 759 ed.1 (1997-10)

Digital Enhanced Cordless Telecommunications (DECT); DECT Authentication Module (DAM); Test specification for DAM

ETSI ETS 300 824 ed.1 (1997-10)

Digital Enhanced Cordless Telecommunications (DECT); Cordless Terminal Mobility (CTM); CTM Access Profile (CAP)

ETSI ETS 300 825 ed.1 (1997-10)

Digital Enhanced Cordless Telecommunications (DECT); 3 Volt DECT Authentication Module (DAM)

ETSI ETS 300 175-7 ed.3 (1997-09)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 7: Security features

ETSI EN 300 444 V1.2.2 (1997-08)

Digital Enhanced Cordless Telecommunications (DECT); Generic Access Profile (GAP)

ETSI ETS 300 175-6/A1 ed.2 (1997-08)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 6: Identities and Addressing

ETSI ETS 300 765-1 ed.1 (1997-08)

Digital Enhanced Cordless Telecommunications (DECT); Radio in the Local Loop (RLL) Access Profile (RAP); Part 1: Basic telephony services

ETSI ETS 300 787 ed.1 (1997-07)

Digital Enhanced Cordless Telecommunications (DECT); Global System for Mobile communications (GSM); Integrated Services Digital Network (ISDN); DECT access to GSM via ISDN; General description of service requirements

ETSI ETS 300 788 ed.1 (1997-07)

Digital Enhanced Cordless Telecommunications (DECT); Global System for Mobile communications (GSM); Integrated Services Digital Network (ISDN); DECT access to GSM via ISDN; Functional capabilities and information flows

ETSI ETS 300 792 ed.1 (1997-06)

Digital Enhanced Cordless Telecommunications (DECT); Global System for Mobile communications (GSM); DECT/GSM Interworking Profile (IWP); Implementation of facsimile group 3

ETSI ETS 300 705-2 ed.1 (1997-06)

Digital Enhanced Cordless Telecommunications (DECT); Integrated Services Digital Network (ISDN); DECT/ISDN interworking for end system configuration; Profile Implementation Conformance Statement (ICS); Part 2: Fixed radio Termination (FT)

ETSI TR 101 072 V1.1.1 (1997-06)

Digital Enhanced Cordless Telecommunications (DECT); Global System for Mobile communications (GSM); DECT/GSM integration based on dual-mode terminals

ETSI ETS 300 705-1 ed.1 (1997-06)

Digital Enhanced Cordless Telecommunications (DECT); Integrated Services Digital Network (ISDN); DECT/ISDN interworking for end system configuration; Profile Implementation Conformance Statement (ICS); Part 1: Portable radio Termination (PT)

ETSI ETS 300 760 ed.1 (1997-06)

Digital Enhanced Cordless Telecommunications (DECT); DECT Authentication Module (DAM); Implementation Conformance Statement (ICS) proforma specification

ETSI ETS 300 755 ed.1 (1997-05)

Digital Enhanced Cordless Telecommunications (DECT); Data Services Profile (DSP); Multimedia Messaging Service (MMS) with specific provision for facsimile services (service type F, class 2)

ETSI ETS 300 764 ed.1 (1997-05)

Digital Enhanced Cordless Telecommunications (DECT); Global System for Mobile communications (GSM); DECT/GSM Interworking Profile (IWP); Implementation of short message service, point-to-point and cell broadcast

ETSI ETS 300 758-2 ed.1 (1997-04)

Digital Enhanced Cordless Telecommunications (DECT); Integrated Services Digital Network (ISDN); DECT/ISDN interworking for end system configuration; Profile Test Specification (PTS); Part 2: Profile Specific Test Specification (PSTS) for Portable radio Termination (PT)

ETSI ETS 300 758-3 ed.1 (1997-04)

Digital Enhanced Cordless Telecommunications (DECT); Integrated Services Digital Network (ISDN); DECT/ISDN interworking for end system configuration; Profile Test Specification (PTS); Part 3: Profile Specific Test Specification (PSTS) for Fixed radio Termination (FT)

ETSI ETS 300 758-1 ed.1 (1997-04)

Digital Enhanced Cordless Telecommunications (DECT); Integrated Services Digital Network (ISDN); DECT/ISDN interworking for end system configuration; Profile Test Specification (PTS); Part 1: Summary

ETSI ETS 300 757 ed.1 (1997-04)

Digital Enhanced Cordless Telecommunications (DECT); Data Services Profile (DSP); Low rate messaging service (service type E, class 2)

ETSI ETS 300 702-2 ed.1 (1997-03)

Digital Enhanced Cordless Telecommunications (DECT); Global System for Mobile communications (GSM); DECT/GSM Interworking Profile (IWP); Profile Test Specification (PTS); Profile Specific Test Specification (PSTS); Part 2: Portable radio Termination (PT)

ETSI ETS 300 702-3 ed.1 (1997-03)

Digital Enhanced Cordless Telecommunications (DECT); Global System for Mobile communications (GSM); DECT/GSM Interworking Profile (IWP); Profile Test Specification (PTS); Profile Specific Test Specification (PSTS); Part 3: Fixed radio Termination (FT)

ETSI ETS 300 704-2 ed.1 (1997-03)

Digital Enhanced Cordless Telecommunications (DECT); Global System for Mobile communications (GSM); DECT/GSM Interworking Profile (IWP); Profile Implementation Conformance Statement (ICS); Part 2: Fixed radio Termination (FT)

ETSI ETS 300 704-1 ed.1 (1997-03)

Digital Enhanced Cordless Telecommunications (DECT); Global System for Mobile communications (GSM); DECT/GSM Interworking Profile (IWP); Profile Implementation Conformance Statement (ICS); Part 1: Portable radio Termination (PT)

ETSI ETS 300 756 ed.1 (1997-03)

Digital Enhanced Cordless Telecommunications (DECT); Global System for Mobile communications (GSM); DECT/GSM Interworking Profile (IWP); Implementation of bearer services

ETSI ETS 300 700 ed.1 (1997-03)

Digital Enhanced Cordless Telecommunications (DECT); Wireless Relay Station (WRS)

ETSI ETR 178 ed.2 (1997-01)

Digital Enhanced Cordless Telecommunications (DECT); A high level guide to the DECT standarisation

Standards under development:

There are not any standards under development.

3.2.107   SC EMTEL - SPECIAL COMMITTEE (SC) EMERGENCY TELECOMMUNICATIONS (EMTEL)

Keywords:

Mobile Telecommunications, Public safety & emergency communications

Scope:

The EMTEL Special Committee is responsible for the capture of European requirements concerning emergency communication services, covering typically the four scenarios in case of an emergency e.g. communication of citizens with authorities, from authorities to citizens, between authorities and amongst citizens. In addition, EMTEL deals with topics like location (e.g. Advanced Mobile Location), NG112 opening emergency services communications to data, video and text, communications involving IoT devices in emergency situations and alerting.

Beyond the delivery of specifications EMTEL is involved with Conformance testing and Plugtests, e.g. NG112 Communications.

Standards:

ETSI TS 103 478 V1.2.1 (2020-03)

Emergency Communications (EMTEL); Pan-European Mobile Emergency Application

ETSI TS 103 650-1 V1.1.1 (2020-01)

EMTEL; Testing - Conformance test specifications for core elements for network independent access to emergency services (NG112); Part 1: Protocol Implementation Conformance Statement (PICS), Test Suite Structure and Test Purposes (TSS & TP)

ETSI TS 103 650-2 V1.1.1 (2020-01)

EMTEL; Testing - Conformance test specifications for core elements for network independent access to emergency services (NG112); Part 2: Abstract Test Suite (ATS) and Protocol Implementation eXtra Information for Testing (PIXIT)

ETSI TS 103 625 V1.1.1 (2019-12)

Emergency Communications (EMTEL); Transporting Handset Location to PSAPs for Emergency Calls - Advanced Mobile Location

ETSI TS 103 479 V1.1.1 (2019-12)

Emergency Communications (EMTEL); Core elements for network independent access to emergency services

ETSI TR 102 299 V1.4.1 (2019-11)

Emergency Communications (EMTEL); Collection of European Regulatory Texts and orientations

ETSI TR 103 582 V1.1.1 (2019-07)

EMTEL; Study of use cases and communications involving IoT devices in provision of emergency situations

ETSI TS 102 900 V1.3.1 (2019-02)

Emergency Communications (EMTEL); European Public Warning System (EU-ALERT) using the Cell Broadcast Service

ETSI TS 103 478 V1.1.1 (2018-03)

Emergency Communications (EMTEL); Pan-European Mobile Emergency Application

ETSI TR 103 335 V1.1.1 (2017-04)

Emergency Communications (EMTEL); Guidelines for alert message content accessibility

ETSI TR 103 273 V1.1.1 (2016-12)

Emergency Communications (EMTEL); Recommendations for public warning making use of pre-defined libraries

ETSI TR 103 393 V1.1.1 (2016-03)

Emergency Communications (EMTEL); Advanced Mobile Location for emergency calls

ETSI TR 103 201 V1.1.1 (2016-03)

Emergency Communications (EMTEL); Total Conversation for emergency communications; implementation guidelines

ETSI TR 102 180 V1.5.1 (2015-07)

Emergency Communications (EMTEL); Basis of requirements for communication of individuals with authorities/organizations in case of distress (Emergency call handling)

ETSI TR 102 180 V1.4.1 (2014-03)

Emergency Communications (EMTEL); Basis of requirements for communication of individuals with authorities/organizations in case of distress (Emergency call handling)

ETSI TS 101 470 V1.1.1 (2013-11)

Emergency Communications (EMTEL); Total Conversation Access to Emergency Services

ETSI TR 102 299 V1.3.1 (2013-07)

Emergency Communications (EMTEL); Collection of European Regulatory Texts and orientations

ETSI TS 102 900 V1.2.1 (2012-01)

Emergency Communications (EMTEL); European Public Warning System (EU-ALERT) using the Cell Broadcast Service

ETSI TR 102 180 V1.3.1 (2011-09)

Emergency Communications (EMTEL); Basis of requirements for communication of individuals with authorities/organizations in case of distress (Emergency call handling)

ETSI TR 102 299 V1.2.1 (2011-08)

Emergency Communications (EMTEL); Collection of European Regulatory Texts and orientations

ETSI TS 102 900 V1.1.1 (2010-10)

Emergency Communications (EMTEL); European Public Warning System (EU-ALERT) using the Cell Broadcast Service

ETSI TR 102 850 V1.1.1 (2010-08)

Emergency Communications (EMTEL); Analysis of Mobile Device Functionality for PWS

ETSI TS 102 182 V1.4.1 (2010-07)

Emergency Communications (EMTEL); Requirements for communications from authorities/organizations to individuals, groups or the general public during emergencies

ETSI TR 102 180 V1.2.1 (2010-07)

Emergency Communications (EMTEL); Basis of requirements for communication of individuals with authorities/organizations in case of distress (Emergency call handling)

ETSI SR 002 777 V1.1.1 (2010-07)

Emergency Communications (EMTEL); Test/verification procedure for emergency calls

ETSI TR 102 476 V1.1.1 (2008-07)

Emergency Communications (EMTEL); Emergency calls and VoIP: possible short and long term solutions and standarisation activities

ETSI TR 102 299 V1.1.1 (2008-04)

Emergency Communications; Collection of European Regulatory Texts and orientations

ETSI TS 102 182 V1.3.1 (2008-02)

Emergency Communications (EMTEL); Requirements for communications from authorities/organizations to individuals, groups or the general public during emergencies

ETSI TS 102 181 V1.2.1 (2008-02)

Emergency Communications (EMTEL); Requirements for communication between authorities/organizations during emergencies

ETSI TR 102 410 V1.1.1 (2007-08)

Emergency Communications (EMTEL); Basis of requirements for communications between individuals and between individuals and authorities whilst emergencies are in progress

ETSI TR 102 180 V1.1.1 (2007-02)

Basis of requirements for communication of individuals with authorities/organizations in case of distress (Emergency call handling)

ETSI TS 102 182 V1.2.1 (2006-12)

Emergency Communications (EMTEL); Requirements for communications from authorities/organizations to individuals, groups or the general public during emergencies

ETSI TR 102 445 V1.1.1 (2006-09)

Emergency Communications (EMTEL); Overview of Emergency Communications Network Resilience and Preparedness

ETSI TR 102 444 V1.1.1 (2006-02)

Emergency Communications (EMTEL); Analysis of the Short Message Service (SMS) and Cell Broadcast Service (CBS) for Emergency Messaging applications; Emergency Messaging; SMS and CBS

ETSI TS 102 181 V1.1.1 (2005-12)

Emergency Communications (EMTEL); Requirements for communication between authorities/organizations during emergencies

Standards under development:

There are not any standards under development.

3.2.108   TC TCCE - TECHNICAL COMMITTEE (TC) TERRESTRIAL TRUNKED RADIO AND CRITICAL COMMUNICATIONS EVOLUTION (TCCE)

Keywords:

Mobile Telecommunications, Public safety & emergency communications, Security algorithms, TETRA

Scope:

We are responsible for the design and standarisation of TErrestrial Trunked RAdio (TETRA) and its evolution to critical communications mobile broadband solutions.

TETRA (Terrestrial Trunked Radio) is the leading technology choice for critical communications users. With a projected 5 million terminals in use by 2020, the use of TETRA in security as well as other business-critical markets such as the transportation, military, commercial and utilities sectors continue to increase.

TETRA is designed to address a specific set of communication requirements. These include high reliability, single and group calling capabilities, PTT (Push-To-Talk), and the possibility for direct peer-to-peer communications in situations such as natural disasters and emergencies when the supporting network is unavailable. Accordingly, much of our work of is driven by the requirements of Public Protection and Disaster Relief and other mission-critical services.

Standards:

ETSI EN 300 392-3-8 V1.4.1 (2020-04)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 3: Interworking at the Inter-System Interface (ISI); Sub-part 8: Generic Speech Format Implementation

ETSI EN 300 392-3-9 V1.2.1 (2020-04)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 3: Interworking at the Inter-System Interface (ISI); Sub-part 9: Transport layer independent, General design

ETSI EN 300 392-3-10 V1.2.1 (2020-04)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 3: Interworking at the Inter-System Interface (ISI); Sub-part 10: General design, PSS1 over E.1

ETSI EN 300 392-3-11 V1.2.1 (2020-04)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 3: Interworking at the Inter-System Interface (ISI); Sub-part 11: General design, SIP/IP

ETSI EN 300 392-3-12 V1.2.1 (2020-04)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 3: Interworking at the Inter-System Interface (ISI); Sub-part 12: Transport layer independent Additional Network Feature Individual Call (ANF-ISIIC)

ETSI EN 300 392-3-13 V1.2.1 (2020-04)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 3: Interworking at the Inter-System Interface (ISI); Sub-part 13: Transport layer independent Additional Network Feature Group Call (ANF-ISIGC)

ETSI EN 300 392-3-14 V1.2.1 (2020-04)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 3: Interworking at the Inter-System Interface (ISI); Sub-part 14: Transport layer independent Additional Network Feature Short Data Service (ANF-ISISDS)

ETSI EN 300 392-3-15 V1.2.1 (2020-04)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 3: Interworking at the Inter-System Interface (ISI); Sub-part 15: Transport layer independent Additional Network Feature, Mobility Management (ANF-ISIMM)

ETSI EN 300 392-1 V1.6.1 (2020-04)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 1: General network design

ETSI EN 300 392-9 V1.7.1 (2020-04)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 9: General requirements for supplementary services

ETSI EN 300 392-5 V2.7.1 (2020-04)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D) and Direct Mode Operation (DMO); Part 5: Peripheral Equipment Interface (PEI)

ETSI TS 103 564 V1.3.1 (2020-03)

PlugtestsTM scenarios for Mission Critical Services

ETSI EN 300 392-7 V3.5.1 (2019-07)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 7: Security

ETSI TS 103 564 V1.2.1 (2019-03)

PlugtestsTM scenarios for Mission Critical Services

ETSI TS 100 392-19-2 V1.1.1 (2019-03)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 19: Interworking between TETRA and Broadband systems; Sub-part 2: Format for the transport of TETRA speech over mission critical broadband systems

ETSI TS 100 392-2 V3.9.1 (2019-01)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 2: Air Interface (AI)

ETSI TR 100 392-17-6 V1.1.1 (2018-12)

TETRA and Critical Communications Evolution (TCCE); Part 17: TETRA V+D, DMO and associated specifications; Sub-part 6: Release 2.2

ETSI TS 101 053-2 V2.5.1 (2018-12)

Rules for the management of the TETRA standard encryption algorithms; Part 2: TEA2

ETSI TR 103 565-1 V1.2.1 (2018-12)

TETRA and Critical Communications Evolution (TCCE); Interworking between TETRA and 3GPP mission critical services Part 1: General considerations for interworking

ETSI TS 100 392-5 V2.6.1 (2018-06)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D) and Direct Mode Operation (DMO); Part 5: Peripheral Equipment Interface (PEI)

ETSI TS 100 392-9 V1.6.1 (2018-05)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 9: General requirements for supplementary services

ETSI TS 100 392-3-10 V1.1.1 (2018-05)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 3: Interworking at the Inter-System Interface (ISI); Sub-part 10: General design, PSS1 over E.1

ETSI TS 100 392-3-11 V1.1.1 (2018-05)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 3: Interworking at the Inter-System Interface (ISI); Sub-part 11: General design, SIP/IP

ETSI TS 100 392-3-13 V1.1.1 (2018-05)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 3: Interworking at the Inter-System Interface (ISI); Sub-part 13: Transport layer independent Additional Network Feature Group Call (ANF-ISIGC)

ETSI TS 100 392-3-15 V1.1.1 (2018-05)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 3: Interworking at the Inter-System Interface (ISI); Sub-part 15: Transport layer independent Additional Network Feature, Mobility Management (ANF-ISIMM)

ETSI TS 100 392-3-9 V1.1.1 (2018-05)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 3: Interworking at the Inter-System Interface (ISI); Sub-part 9: Transport layer independent, General design

ETSI TS 100 392-3-12 V1.1.1 (2018-05)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 3: Interworking at the Inter-System Interface (ISI); Sub-part 12: Transport layer independent Additional Network Feature Individual Call (ANF-ISIIC)

ETSI TS 100 392-3-14 V1.1.1 (2018-05)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 3: Interworking at the Inter-System Interface (ISI); Sub-part 14: Transport layer independent Additional Network Feature Short Data Service (ANF-ISISDS)

ETSI TS 100 392-3-8 V1.3.1 (2018-05)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 3: Interworking at the Inter-System Interface (ISI); Sub-part 8: Generic Speech Format Implementation

ETSI TR 103 565-2 V1.1.1 (2018-05)

TETRA and Critical Communications Evolution (TCCE); Interworking between TETRA and 3GPP mission critical services Part 2: Security of interworking between TETRA and Broadband applications

ETSI TS 100 392-1 V1.5.1 (2018-04)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 1: General network design

ETSI TS 100 392-18-1 V1.7.2 (2018-01)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D) and Direct Mode Operation (DMO); Part 18: Air interface optimized applications; Sub-part 1: Location Information Protocol (LIP)

ETSI TR 102 022-2 V1.2.1 (2018-01)

User Requirements Specification; Mission Critical Broadband Communications; Part 2: Critical Communications Application

ETSI TS 101 053-2 V2.4.1 (2018-01)

Rules for the management of the TETRA standard encryption algorithms; Part 2: TEA2

ETSI EN 300 392-3-3 V1.4.1 (2017-12)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 3: Interworking at the Inter-System Interface (ISI); Sub-part 3: Additional Network Feature Group Call (ANF-ISIGC)

ETSI TS 103 564 V1.1.1 (2017-10)

TETRA and Critical Communications Evolution (TCCE); Testing; PlugtestTM scenarios for Mission Critical Push To Talk (MCPTT)

ETSI TR 103 565 V1.1.1 (2017-10)

TETRA and Critical Communications Evolution (TCCE); Terrestrial Trunked Radio (TETRA); Study into interworking between TETRA and 3GPP mission critical services

ETSI TS 103 269-2 V1.2.1 (2017-06)

TETRA and Critical Communications Evolution (TCCE); Critical Communications Architecture; Part 2: Critical Communications application mobile to network interface architecture

ETSI EN 300 392-7 V3.4.1 (2017-01)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 7: Security

ETSI EN 300 396-6 V1.6.1 (2016-11)

Terrestrial Trunked Radio (TETRA); Direct Mode Operation (DMO); Part 6: Security

ETSI TR 102 300-7 V1.2.1 (2016-11)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D): Designers' guide; Part 7: TETRA High-Speed Data (HSD); TETRA Enhanced Data Service (TEDS)

ETSI EN 300 392-5 V2.5.1 (2016-10)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D) and Direct Mode Operation (DMO); Part 5: Peripheral Equipment Interface (PEI)

ETSI TR 103 414 V1.1.1 (2016-09)

TETRA and Critical Communications Evolution (TCCE); Study into the provision of speech services over QAM channels

ETSI EN 300 392-2 V3.8.1 (2016-08)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 2: Air Interface (AI)

ETSI EN 300 392-12-4 V1.4.1 (2016-07)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 12: Supplementary services stage 3; Sub-part 4: Call Forwarding (CF)

ETSI EN 300 392-3-5 V1.5.1 (2016-06)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 3: Interworking at the Inter-System Interface (ISI); Sub-part 5: Additional Network Feature for Mobility Management (ANF-ISIMM)

ETSI TR 102 300-6 V1.1.2 (2016-05)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D): Designers' guide; Part 6: Air-Ground-Air

ETSI TS 100 392-5 V2.4.1 (2016-03)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D) and Direct Mode Operation (DMO); Part 5: Peripheral Equipment Interface (PEI)

ETSI TS 101 052 V2.1.1 (2016-02)

Rules for the management of the TETRA standard authentication and key management algorithm set TAA1

ETSI TS 101 053-1 V2.1.1 (2016-02)

Rules for the management of the TETRA standard encryption algorithms; Part 1: TEA1

ETSI TS 101 053-3 V2.1.1 (2016-02)

Rules for the management of the TETRA standard encryption algorithms; Part 3: TEA3

ETSI TS 101 053-4 V2.1.1 (2016-02)

Rules for the management of the TETRA standard encryption algorithms; Part 4: TEA4

ETSI TS 100 392-2 V3.7.1 (2016-01)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 2: Air Interface (AI)

ETSI EN 300 392-3-1 V1.4.1 (2015-12)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 3: Interworking at the Inter-System Interface (ISI); Sub-part 1: General design

ETSI TS 100 392-18-4 V1.2.1 (2015-07)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D) and Direct Mode Operation (DMO); Part 18: Air interface optimized applications; Sub-part 4: Net Assist Protocol 2 (NAP2)

ETSI TR 102 300-5 V1.4.1 (2015-06)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Designers' guide; Part 5: Guidance on numbering and addressing

ETSI EN 300 394-1 V3.3.1 (2015-04)

Terrestrial Trunked Radio (TETRA); Conformance testing specification; Part 1: Radio

ETSI TS 100 392-18-1 V1.7.1 (2015-03)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D) and Direct Mode Operation (DMO); Part 18: Air interface optimized applications; Sub-part 1: Location Information Protocol (LIP)

ETSI EN 300 392-12-22 V1.4.1 (2015-02)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 12: Supplementary services stage 3; Sub-part 22: Dynamic Group Number Assignment (DGNA)

ETSI TS 103 269-2 V1.1.1 (2015-01)

TETRA and Critical Communications Evolution (TCCE); Critical Communications Architecture; Part 2: Critical Communications application mobile to network interface architecture

ETSI TR 102 022-2 V1.1.1 (2015-01)

User Requirements SpecificationMission Critical Broadband Communications Part 2: Critical Communications Application

ETSI TR 103 269-1 V1.1.1 (2014-07)

TETRA and Critical Communications Evolution (TCCE); Critical Communications Architecture; Part 1: Critical Communications Architecture Reference Model

ETSI TS 101 053-2 V2.3.1 (2014-04)

Security Algorithms Group of Experts (SAGE); Rules for the management of the TETRA standard encryption algorithms; Part 2: TEA2

ETSI TR 102 300-2 V1.2.1 (2013-09)

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ETSI TS 100 392-2 V3.6.1 (2013-05)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 2: Air Interface (AI)

ETSI EN 300 394-1 V3.2.1 (2012-10)

Terrestrial Trunked Radio (TETRA); Conformance testing specification; Part 1: Radio

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Terrestrial Trunked Radio (TETRA); Direct Mode Operation (DMO); Part 6: Security

ETSI TS 100 392-5 V2.3.1 (2012-08)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D) and Direct Mode Operation (DMO); Part 5: Peripheral Equipment Interface (PEI)

ETSI TS 100 392-18-1 V1.6.1 (2012-08)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D) and Direct Mode Operation (DMO); Part 18: Air interface optimized applications; Sub-part 1: Location Information Protocol (LIP)

ETSI TR 102 022-1 V1.1.1 (2012-08)

User Requirement Specification; Mission Critical Broadband Communication Requirements

ETSI TR 102 021-12 V1.1.1 (2012-08)

Terrestrial Trunked Radio (TETRA); User Requirement Specification TETRA Release 2.1; Part 12: Direct Mode Operation (DMO)

ETSI EN 300 392-7 V3.3.1 (2012-07)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 7: Security

ETSI TS 100 392-18-4 V1.1.1 (2012-06)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D) and Direct Mode Operation (DMO); Part 18: Air interface optimized applications; Sub-part 4: Net Assist Protocol 2 (NAP2)

ETSI EN 300 392-12-23 V1.2.1 (2012-04)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 12: Supplementary services stage 3; Sub-part 23: Call Completion on No Reply (CCNR)

ETSI EN 300 392-12-4 V1.3.1 (2012-04)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 12: Supplementary services stage 3; Sub-part 4: Call Forwarding (CF)

ETSI EN 300 392-12-20 V1.2.1 (2012-04)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 12: Supplementary services stage 3; Sub-part 20: Discreet Listening (DL)

ETSI EN 300 392-9 V1.5.1 (2012-04)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 9: General requirements for supplementary services

ETSI EN 300 392-12-21 V1.5.1 (2012-04)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 12: Supplementary services stage 3; Sub-part 21: Ambience Listening (AL)

ETSI EN 300 392-12-13 V1.2.1 (2012-03)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 12: Supplementary services stage 3; Sub-part 13: Call Completion to Busy Subscriber (CCBS)

ETSI EN 300 392-12-14 V1.2.1 (2012-03)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 12: Supplementary services stage 3; Sub-part 14: Late Entry (LE)

ETSI EN 300 396-1 V1.2.1 (2011-12)

Terrestrial Trunked Radio (TETRA); Technical requirements for Direct Mode Operation (DMO); Part 1: General network design

ETSI EN 300 396-2 V1.4.1 (2011-12)

Terrestrial Trunked Radio (TETRA); Technical requirements for Direct Mode Operation (DMO); Part 2: Radio aspects

ETSI EN 300 396-3 V1.4.1 (2011-12)

Terrestrial Trunked Radio (TETRA); Technical requirements for Direct Mode Operation (DMO); Part 3: Mobile Station to Mobile Station (MS-MS) Air Interface (AI) protocol

ETSI EN 300 396-4 V1.4.1 (2011-12)

Terrestrial Trunked Radio (TETRA); Technical requirements for Direct Mode Operation (DMO); Part 4: Type 1 repeater air interface

ETSI EN 300 396-5 V1.3.1 (2011-12)

Terrestrial Trunked Radio (TETRA); Technical requirements for Direct Mode Operation (DMO); Part 5: Gateway air interface

ETSI TR 102 300-6 V1.1.1 (2011-12)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D): Designers' guide; Part 6: Air-Ground-Air

ETSI TR 100 392-17-5 V1.1.1 (2011-11)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 17: TETRA V+D and DMO specifications; Sub-part 5: Release 2.1

ETSI EN 300 392-3-3 V1.3.1 (2011-11)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 3: Interworking at the Inter-System Interface (ISI); Sub-part 3: Additional Network Feature Group Call (ANF-ISIGC)

ETSI TS 100 392-2 V3.5.1 (2011-10)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 2: Air Interface (AI)

ETSI TR 102 021-4 V1.4.1 (2011-08)

Terrestrial Trunked Radio (TETRA); User Requirement Specification TETRA Release 2.1; Part 4: Air Interface Enhancements

ETSI TR 102 021-6 V1.2.1 (2011-08)

Terrestrial Trunked Radio (TETRA); User Requirement Specification TETRA Release 2.1; Part 6: Smart Card (SC) and Subscriber Identity Module (SIM)

ETSI TR 102 021-1 V1.3.1 (2011-07)

Terrestrial Trunked Radio (TETRA); User Requirement Specification TETRA Release 2.1; Part 1: General overview

ETSI TR 102 021-11 V1.1.1 (2011-07)

Terrestrial Trunked Radio (TETRA); User Requirement Specification TETRA Release 2.1; Part 11: Over-The-Air Management

ETSI EN 300 392-12-21 V1.4.1 (2011-04)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 12: Supplementary services stage 3; Sub-part 21: Ambience Listening (AL)

ETSI TS 100 392-15 V1.5.1 (2011-02)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 15: TETRA frequency bands, duplex spacings and channel numbering

ETSI TS 100 392-18-3 V1.2.1 (2010-12)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D) and Direct Mode Operation (DMO); Part 18: Air interface optimized applications; Sub-part 3: Direct mode Over The Air Management protocol (DOTAM)

ETSI TR 102 021-9 V1.2.1 (2010-12)

Terrestrial Trunked Radio (TETRA); User Requirement Specification TETRA Release 2.1; Part 9: Peripheral Equipment Interface

ETSI TR 102 021-2 V1.3.1 (2010-12)

Terrestrial Trunked Radio (TETRA); User Requirement Specification TETRA Release 2.1; Part 2: High Speed Data

ETSI TR 102 021-7 V1.3.1 (2010-12)

Terrestrial Trunked Radio (TETRA); User Requirement Specification TETRA Release 2.1; Part 7: Security

ETSI TR 102 021-10 V1.1.1 (2010-12)

Terrestrial Trunked Radio (TETRA); User Requirement Specification TETRA Release 2.1; Part 10: Local Mode Broadband

ETSI TR 102 021-5 V1.2.1 (2010-12)

Terrestrial Trunked Radio (TETRA); User Requirement Specification TETRA Release 2.1; Part 5: Interworking and Roaming

ETSI EN 300 392-2 V3.4.1 (2010-08)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 2: Air Interface (AI)

ETSI EN 300 392-3-1 V1.3.1 (2010-08)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 3: Interworking at the Inter-System Interface (ISI); Sub-part 1: General design

ETSI EN 300 392-3-2 V1.4.1 (2010-08)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 3: Interworking at the Inter-System Interface (ISI); Sub-part 2: Additional Network Feature Individual Call (ANF-ISIIC)

ETSI EN 300 392-3-4 V1.3.1 (2010-08)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 3: Interworking at the Inter-System Interface (ISI); Sub-part 4: Additional Network Feature Short Data Service (ANF-ISISDS)

ETSI EN 300 392-9 V1.4.1 (2010-08)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 9: General requirements for supplementary services

ETSI EN 300 392-12-4 V1.2.1 (2010-07)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 12: Supplementary services stage 3; Sub-part 4: Call Forwarding (CF)

ETSI EN 300 392-12-8 V1.2.1 (2010-07)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 12: Supplementary services stage 3; Sub-part 8: Area Selection (AS)

ETSI EN 300 392-5 V2.2.1 (2010-07)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D) and Direct Mode Operation (DMO); Part 5: Peripheral Equipment Interface (PEI)

ETSI EN 300 396-6 V1.4.1 (2010-07)

Terrestrial Trunked Radio (TETRA); Direct Mode Operation (DMO); Part 6: Security

ETSI EN 300 392-7 V3.2.1 (2010-06)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 7: Security

ETSI EN 300 392-3-5 V1.4.1 (2010-06)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 3: Interworking at the Inter-System Interface (ISI); Sub-part 5: Additional Network Feature for Mobility Management (ANF-ISIMM)

ETSI TS 100 392-18-1 V1.5.1 (2010-03)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D) and Direct Mode Operation (DMO); Part 18: Air interface optimized applications; Sub-part 1: Location Information Protocol (LIP)

ETSI TR 102 300-5 V1.3.1 (2010-03)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Designers' guide; Part 5: Guidance on numbering and addressing

ETSI TS 100 392-3-8 V1.2.1 (2010-03)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 3: Interworking at the Inter-System Interface (ISI); Sub-part 8: Generic Speech Format Implementation

ETSI TS 100 392-15 V1.4.1 (2010-03)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 15: TETRA frequency bands, duplex spacings and channel numbering

ETSI TS 100 392-18-3 V1.1.1 (2009-11)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D) and Direct Mode Operation (DMO); Part 18: Air interface optimized applications; Sub-part 3: Direct mode Over The Air Management protocol (DOTAM)

ETSI TR 102 300-3 V1.3.3 (2009-06)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Designers' guide; Part 3: Direct Mode Operation (DMO)

ETSI TR 102 021-9 V1.1.1 (2009-04)

Terrestrial Trunked Radio (TETRA); User Requirement Specification TETRA Release 2; Part 9: Peripheral Equipment Interface

ETSI EN 300 392-1 V1.4.1 (2009-01)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 1: General network design

ETSI TS 100 392-18-2 V1.1.1 (2008-11)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D) and Direct Mode Operation (DMO); Part 18: Air interface optimized applications; Sub-part 2: Net Assist Protocol (NAP)

ETSI TS 100 392-2 V3.3.1 (2008-10)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 2: Air Interface (AI)

ETSI EN 300 392-9 V1.3.2 (2008-08)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 9: General requirements for supplementary services

ETSI TS 100 392-5 V2.1.1 (2008-07)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D) and Direct Mode Operation (DMO); Part 5: Peripheral Equipment Interface (PEI)

ETSI TS 100 392-18-1 V1.4.1 (2008-07)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D) and Direct Mode Operation (DMO); Part 18: Air interface optimized applications; Sub-part 1: Location Information Protocol (LIP)

ETSI EN 300 392-7 V3.1.1 (2008-06)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 7: Security

ETSI TR 100 392-17-4 V1.1.1 (2008-05)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 17: TETRA V+D and DMO specifications; Sub-part 4: Release 2.0

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Terrestrial Trunked Radio (TETRA); TETRA mobiles moving at high velocity

ETSI TR 102 621 V1.1.1 (2008-04)

Terrestrial Trunked Radio (TETRA); TWC2007 Future of TETRA workshop report

ETSI TS 100 392-3-8 V1.1.1 (2008-04)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 3: Interworking at the Inter-System Interface (ISI); Sub-part 8: Generic Speech Format Implementation

ETSI EN 300 394-1 V3.1.1 (2007-11)

Terrestrial Trunked Radio (TETRA); Conformance testing specification; Part 1: Radio

ETSI TR 102 580 V1.1.1 (2007-10)

Terrestrial Trunked Radio (TETRA); Release 2; Designer's Guide; TETRA High-Speed Data (HSD); TETRA Enhanced Data Service (TEDS)

ETSI EN 300 392-3-5 V1.3.1 (2007-10)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 3: Interworking at the Inter-System Interface (ISI); Sub-part 5: Additional Network Feature for Mobility Management (ANF-ISIMM)

ETSI EN 300 392-2 V3.2.1 (2007-09)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 2: Air Interface (AI)

ETSI EN 300 392-12-1 V1.2.2 (2007-08)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 12: Supplementary services stage 3; Sub-part 1: Call Identification (CI)

ETSI EN 300 392-5 V1.3.1 (2007-08)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 5: Peripheral Equipment Interface (PEI)

ETSI EN 300 392-3-2 V1.3.1 (2007-07)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 3: Interworking at the Inter-System Interface (ISI); Sub-part 2: Additional Network Feature Individual Call (ANF-ISIIC)

ETSI EN 300 392-12-21 V1.3.1 (2007-07)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 12: Supplementary services stage 3; Sub-part 21: Ambience Listening (AL)

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Terrestrial Trunked Radio (TETRA); RF Sensitive Area Mode

ETSI TR 102 582 V1.1.1 (2007-07)

Terrestrial Trunked Radio (TETRA); Evaluation of low rate (2,4 kbit/s) speech codec

ETSI TS 100 392-18-1 V1.3.1 (2007-04)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D) and Direct Mode Operation (DMO); Part 18: Air interface optimized applications; Sub-part 1: Location Information Protocol (LIP)

ETSI TS 101 789-1 V1.1.2 (2007-04)

Terrestrial Trunked Radio (TETRA); TMO Repeaters Part 1: Requirements, test methods and limits

ETSI TS 100 392-5 V1.3.1 (2007-03)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 5: Peripheral Equipment Interface (PEI)

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Terrestrial Trunked Radio (TETRA); Feasibility Study into the Implications of Operating Public Safety Sector (PSS) TEDS using the proposed "Tuning Range" concept in the 410 MHz to 430 MHz and 450 MHz to 470 MHz frequency bands

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Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 7: Security

ETSI TS 100 392-16 V1.2.1 (2006-09)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 16: Network Performance Metrics

ETSI TS 100 392-2 V3.1.1 (2006-09)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 2: Air Interface (AI)

ETSI EN 300 396-2 V1.3.1 (2006-09)

Terrestrial Trunked Radio (TETRA); Technical requirements for Direct Mode Operation (DMO); Part 2: Radio aspects

ETSI EN 300 392-10-16 V1.3.1 (2006-08)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 10: Supplementary services stage 1; Sub-part 16: Pre-emptive Priority Call (PPC)

ETSI EN 300 396-3 V1.3.1 (2006-08)

Terrestrial Trunked Radio (TETRA); Technical requirements for Direct Mode Operation (DMO); Part 3: Mobile Station to Mobile Station (MS-MS) Air Interface (AI) protocol

ETSI EN 300 392-10-6 V1.4.1 (2006-08)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 10: Supplementary services stage 1; Sub-part 6: Call Authorized by Dispatcher (CAD)

ETSI TR 102 512 V1.1.1 (2006-08)

Terrestrial Trunked Radio (TETRA); Security; Security requirements analysis for modulation enhancements to TETRA

ETSI TR 100 392-17-3 V1.2.1 (2006-06)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 17: TETRA V+D and DMO specifications; Sub-part 3: Release 1.3

ETSI EN 300 396-6 V1.3.1 (2006-06)

Terrestrial Trunked Radio (TETRA); Direct Mode Operation (DMO); Part 6: Security

ETSI TR 102 021-4 V1.3.1 (2006-05)

Terrestrial Trunked Radio (TETRA); User Requirement Specification TETRA Release 2; Part 4: Air Interface Enhancements

ETSI TS 100 392-2 V2.6.1 (2006-05)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 2: Air Interface (AI)

ETSI EN 300 396-4 V1.3.1 (2006-05)

Terrestrial Trunked Radio (TETRA); Technical requirements for Direct Mode Operation (DMO); Part 4: Type 1 repeater air interface

ETSI EN 300 396-5 V1.2.1 (2006-05)

Terrestrial Trunked Radio (TETRA); Technical requirements for Direct Mode Operation (DMO); Part 5: Gateway air interface

ETSI EN 300 392-12-3 V1.3.1 (2006-04)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 12: Supplementary services stage 3; Sub-part 3: Talking Party Identification (TPI)

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Terrestrial Trunked Radio (TETRA); Security; Lawful Interception (LI) interface

ETSI EN 300 392-12-6 V1.3.1 (2006-02)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 12: Supplementary services stage 3; Sub-part 6: Call Authorized by Dispatcher (CAD)

ETSI EN 300 394-1 V2.4.1 (2006-02)

Terrestrial Trunked Radio (TETRA); Conformance testing specification; Part 1: Radio

ETSI TS 100 392-18-1 V1.2.1 (2005-12)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D) and Direct Mode Operation (DMO); Part 18: Air interface optimized applications; Sub-part 1: Location Information Protocol (LIP)

ETSI EN 300 812-3 V2.3.1 (2005-12)

Terrestrial Trunked Radio (TETRA); Subscriber Identity Module to Mobile Equipment (SIM-ME) interface; Part 3: Integrated Circuit (IC); Physical, logical and TSIM application characteristics

ETSI TR 100 392-17-3 V1.1.1 (2005-12)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 17: TETRA V+D and DMO specifications; Sub-part 3: Release 1.3

ETSI EN 300 392-2 V2.5.2 (2005-11)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 2: Air Interface (AI)

ETSI ES 200 812-2 V2.4.2 (2005-10)

Terrestrial Trunked Radio (TETRA); Subscriber Identity Module to Mobile Equipment (TSIM-ME) interface; Part 2: Universal Integrated Circuit Card (UICC); Characteristics of the TSIM application

ETSI TS 100 812-2 V2.4.1 (2005-08)

Terrestrial Trunked Radio (TETRA); Subscriber Identity Module to Mobile Equipment (TSIM-ME) interface; Part 2: Universal Integrated Circuit Card (UICC); Characteristics of the TSIM application

ETSI TS 100 392-2 V2.5.1 (2005-07)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 2: Air Interface (AI)

ETSI EN 300 395-4 V1.3.1 (2005-06)

Terrestrial Trunked Radio (TETRA); Speech codec for full-rate traffic channel; Part 4: Codec conformance testing

ETSI EN 300 392-1 V1.3.1 (2005-06)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 1: General network design

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Terrestrial Trunked Radio (TETRA); Functional requirements for the TETRA ISI derived from Three-Country Pilot Scenarios

ETSI TR 102 021-1 V1.2.1 (2005-05)

Terrestrial Trunked Radio (TETRA); User Requirement Specification TETRA Release 2; Part 1: General overview

ETSI EN 300 392-12-22 V1.3.1 (2005-04)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 12: Supplementary services stage 3; Sub-part 22: Dynamic Group Number Assignment (DGNA)

ETSI TR 100 392-17-1 V1.1.3 (2005-02)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 17: TETRA V+D and DMO specifications; Sub-part 1: Release 1.1

ETSI TS 100 392-18-1 V1.1.1 (2005-02)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D) and Direct Mode Operation (DMO; Part 18: Air interface optimized applications; Sub-part 1: Location Information Protocol (LIP)

ETSI EN 300 395-1 V1.2.1 (2005-01)

Terrestrial Trunked Radio (TETRA); Speech codec for full-rate traffic channel; Part 1: General description of speech functions

ETSI EN 300 395-3 V1.2.1 (2005-01)

Terrestrial Trunked Radio (TETRA); Speech codec for full-rate traffic channel; Part 3: Specific operating features

ETSI EN 300 395-2 V1.3.1 (2005-01)

Terrestrial Trunked Radio (TETRA); Speech codec for full-rate traffic channel; Part 2: TETRA codec

ETSI EN 300 396-3 V1.2.1 (2004-12)

Terrestrial Trunked Radio (TETRA); Technical requirements for Direct Mode Operation (DMO); Part 3: Mobile Station to Mobile Station (MS-MS) Air Interface (AI) protocol

ETSI EN 300 392-9 V1.3.1 (2004-11)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 9: General requirements for supplementary services

ETSI EN 300 392-12-21 V1.2.1 (2004-11)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 12: Supplementary services stage 3; Sub-part 21: Ambience Listening (AL)

ETSI TR 100 392-17-1 V1.1.2 (2004-10)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 17: TETRA V+D and DMO specifications; Sub-part 1: Release 1.1

ETSI EN 300 392-11-16 V1.2.1 (2004-09)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 11: Supplementary services stage 2; Sub-part 16: Pre-emptive Priority Call (PPC)

ETSI EN 300 392-10-16 V1.2.1 (2004-09)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 10: Supplementary services stage 1; Sub-part 16: Pre-emptive Priority Call (PPC)

ETSI EN 300 392-12-16 V1.2.1 (2004-09)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 12: Supplementary services stage 3; Sub-part 16: Pre-emptive Priority Call (PPC)

ETSI EN 300 392-7 V2.2.1 (2004-09)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 7: Security

ETSI TR 100 392-17-2 V1.1.1 (2004-06)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 17: TETRA V+D and DMO specifications; Sub-part 2: Release 1.2

ETSI TS 100 392-15 V1.3.1 (2004-06)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 15: TETRA frequency bands, duplex spacings and channel numbering

ETSI EN 300 396-6 V1.2.1 (2004-05)

Terrestrial Trunked Radio (TETRA); Direct Mode Operation (DMO); Part 6: Security

ETSI TR 102 021-4 V1.2.1 (2004-05)

Terrestrial Trunked Radio (TETRA); User Requirement Specification TETRA Release 2; Part 4: Air Interface Enhancements

ETSI EN 300 392-2 V2.4.2 (2004-02)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 2: Air Interface (AI)

ETSI EN 300 812-3 V2.2.1 (2004-02)

Terrestrial Trunked Radio (TETRA); Subscriber Identity Module to Mobile Equipment (SIM-ME) interface; Part 3: Integrated Circuit (IC); Physical, logical and TSIM application characteristics

ETSI EN 300 392-12-22 V1.2.1 (2004-02)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 12: Supplementary services stage 3; Sub-part 22: Dynamic Group Number Assignment (DGNA)

ETSI EN 300 392-12-3 V1.2.1 (2004-02)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 12: Supplementary services stage 3; Sub-part 3: Talking Party Identification (TPI)

ETSI EN 300 392-10-12 V1.3.1 (2004-02)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 10: Supplementary services stage 1; Sub-part 12: Call Hold (HOLD)

ETSI EN 300 392-12-10 V1.2.1 (2004-02)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 12: Supplementary services stage 3; Sub-part 10: Priority Call (PC)

ETSI EN 300 392-10-8 V1.2.1 (2004-02)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 10: Supplementary services stage 1; Sub-part 8: Area Selection (AS)

ETSI EN 300 392-10-6 V1.3.1 (2004-02)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 10: Supplementary services stage 1; Sub-part 6: Call Authorized by Dispatcher (CAD)

ETSI EN 300 392-3-3 V1.2.1 (2004-01)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 3: Interworking at the Inter-System Interface (ISI); Sub-part 3: Additional Network Feature Group Call (ANF-ISIGC)

ETSI EN 300 392-3-5 V1.2.1 (2004-01)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 3: Interworking at the Inter-System Interface (ISI); Sub-part 5: Additional Network Feature for Mobility Management (ANF-ISIMM)

ETSI EN 300 392-3-4 V1.2.1 (2004-01)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 3: Interworking at the Inter-System Interface (ISI); Sub-part 4: Additional Network Feature Short Data Service (ANF-ISISDS)

ETSI EN 300 392-3-2 V1.2.1 (2004-01)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 3: Interworking at the Inter-System Interface (ISI); Sub-part 2: Additional Network Feature Individual Call (ANF-ISIIC)

ETSI EN 300 392-9 V1.2.1 (2004-01)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 9: General requirements for supplementary services

ETSI EN 300 392-10-1 V1.3.1 (2004-01)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 10: Supplementary services stage 1; Sub-part 1: Call Identification (CI)

ETSI EN 300 392-10-11 V1.3.1 (2004-01)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 10: Supplementary services stage 1; Sub-part 11: Call Waiting (CW)

ETSI EN 300 392-11-6 V1.2.1 (2004-01)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 11: Supplementary services stage 2; Sub-part 6: Call Authorized by Dispatcher (CAD)

ETSI EN 300 392-12-6 V1.2.1 (2004-01)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 12: Supplementary services stage 3; Sub-part 6: Call Authorized by Dispatcher (CAD)

ETSI EN 300 392-12-1 V1.2.1 (2004-01)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 12: Supplementary services stage 3; Sub-part 1: Call Identification (CI)

ETSI EN 300 392-11-1 V1.2.1 (2004-01)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 11: Supplementary services stage 2; Sub-part 1: Call Identification (CI)

ETSI TS 100 392-3-6 V1.1.1 (2003-12)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 3: Interworking at the Inter-System Interface (ISI); Sub-part 6: Speech format implementation for circuit mode transmission

ETSI ES 200 812-2 V2.3.2 (2003-12)

Terrestrial Trunked Radio (TETRA); Subscriber Identity Module to Mobile Equipment (TSIM-ME) interface; Part 2: Universal Integrated Circuit Card (UICC); Characteristics of the TSIM application

ETSI ES 200 812-1 V2.2.5 (2003-12)

Terrestrial Trunked Radio (TETRA); Subscriber Identity Module to Mobile Equipment (TSIM-ME) interface; Part 1: Universal Integrated Circuit Card (UICC); Physical and logical characteristics

ETSI TS 100 392-3-7 V1.1.1 (2003-12)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 3: Interworking at the Inter-System Interface (ISI); Sub-part 7: Speech Format Implementation for Packet Mode Transmission

ETSI EN 300 392-5 V1.2.1 (2003-11)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 5: Peripheral Equipment Interface (PEI)

ETSI TS 100 392-2 V2.4.1 (2003-10)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 2: Air Interface (AI)

ETSI TS 100 812-2 V2.3.1 (2003-10)

Terrestrial Trunked Radio (TETRA); Subscriber Identity Module to Mobile Equipment (SIM-ME) interface; Part 2: Universal Integrated Circuit Card (UICC); Characteristics of the TSIM application

ETSI TS 100 812-1 V2.2.5 (2003-10)

Terrestrial Trunked Radio (TETRA); Subscriber Identity Module to Mobile Equipment (SIM-ME) interface; Part 1: Universal Integrated Circuit Card (UICC); Physical and logical characteristics

ETSI EN 302 109 V1.1.1 (2003-10)

Terrestrial Trunked Radio (TETRA); Security; Synchronization mechanism for end-to-end encryption

ETSI EN 300 392-10-18 V1.3.1 (2003-10)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 10: Supplementary services stage 1; Sub-part 18: Barring of Outgoing Calls (BOC)

ETSI TR 102 021-8 V1.1.1 (2003-09)

Terrestrial Trunked Radio (TETRA); User Requirement Specification TETRA Release 2; Part 8: Air - Ground - Air services

ETSI EN 300 392-10-4 V1.3.1 (2003-09)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 10: Supplementary services stage 1; Sub-part 4: Call Forwarding (CF)

ETSI EN 300 392-10-21 V1.2.1 (2003-09)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 10: Supplementary services stage 1; Sub-part 21: Ambience Listening (AL)

ETSI TS 100 392-5 V1.2.1 (2003-07)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 5: Peripheral Equipment Interface (PEI)

ETSI EN 300 392-11-4 V1.1.1 (2003-07)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 11: Supplementary services stage 2; Sub-part 4: Call Forwarding (CF)

ETSI EN 300 392-12-4 V1.1.1 (2003-07)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 12: Supplementary services stage 3; Sub-part 4: Call Forwarding (CF)

ETSI EN 300 392-11-12 V1.1.2 (2003-05)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 11: Supplementary services stage 2; Sub-part 12: Call Hold (HOLD)

ETSI EN 300 392-12-12 V1.1.2 (2003-05)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 12: Supplementary services stage 3; Sub-part 12: Call Hold (HOLD)

ETSI EN 300 392-12-21 V1.1.1 (2003-05)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 12: Supplementary services stage 3; Sub-part 21: Ambience Listening (AL)

ETSI EN 300 392-11-21 V1.1.1 (2003-04)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 11: Supplementary services stage 2; Sub-part 21: Ambience Listening (AL)

ETSI TS 100 392-16 V1.1.1 (2003-03)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 16: Network Performance Metrics

ETSI EN 303 035-2 V1.2.2 (2003-01)

Terrestrial Trunked Radio (TETRA); Harmonized EN for TETRA equipment covering essential requirements under article 3.2 of the R&TTE Directive; Part 2: Direct Mode Operation (DMO)

ETSI TR 102 300-5 V1.2.1 (2003-01)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Designers' guide; Part 5: Guidance on numbering and addressing

ETSI ES 202 109 V1.1.1 (2003-01)

Terrestrial Trunked Radio (TETRA); Security; Synchronization mechanism for end-to-end encryption

ETSI EN 300 392-1 V1.2.1 (2003-01)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 1: General network design

ETSI TR 102 021-2 V1.2.1 (2002-10)

Terrestrial Trunked Radio (TETRA); User Requirement Specification TETRA Release 2; Part 2: High Speed Data

ETSI TR 102 021-7 V1.2.1 (2002-10)

Terrestrial Trunked Radio (TETRA); User Requirement Specification TETRA Release 2; Part 7: Security

ETSI EN 300 392-3-1 V1.2.1 (2002-09)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 3: Interworking at the Inter-System Interface (ISI); Sub-part 1: General design

ETSI EN 300 392-10-14 V1.2.1 (2002-09)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 10: Supplementary services stage 1; Sub-part 14: Late Entry (LE)

ETSI EN 300 392-10-18 V1.2.1 (2002-09)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 10: Supplementary services stage 1; Sub-part 18: Barring of Outgoing Calls (BOC)

ETSI EN 300 392-10-19 V1.2.1 (2002-09)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 10: Supplementary services stage 1; Sub-part 19: Barring of Incoming Calls (BIC)

ETSI ES 200 812-1 V2.2.2 (2002-09)

Terrestrial Trunked Radio (TETRA); Subscriber Identity Module to Mobile Equipment (SIM-ME) interface; Part 1: Physical and logical characteristics

ETSI ES 200 812-2 V2.2.2 (2002-09)

Terrestrial Trunked Radio (TETRA); Subscriber Identity Module to Mobile Equipment (SIM-ME) interface; Part 2: Characteristics of the TSIM application

ETSI EN 300 396-10 V1.1.2 (2002-08)

Terrestrial Trunked Radio (TETRA); Technical requirements for Direct Mode Operation (DMO); Part 10: Managed Direct Mode Operation (M-DMO)

ETSI TR 102 021-6 V1.1.1 (2002-08)

Terrestrial Trunked Radio (TETRA); User Requirement Specification TETRA Release 2; Part 6: Subscriber Identity Module (SIM)

ETSI EN 300 396-2 V1.2.1 (2002-07)

Terrestrial Trunked Radio (TETRA); Technical requirements for Direct Mode Operation (DMO); Part 2: Radio aspects

ETSI EN 300 392-12-14 V1.1.1 (2002-07)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 12: Supplementary services stage 3; Sub-part 14: Late Entry (LE)

ETSI EN 300 392-11-14 V1.1.1 (2002-07)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 11: Supplementary services stage 2; Sub-part 14: Late Entry (LE)

ETSI TR 102 021-5 V1.1.1 (2002-05)

Terrestrial Trunked Radio (TETRA); User Requirement Specification TETRA Release 2; Part 5: Interworking and Roaming

ETSI EN 300 392-10-17 V1.2.1 (2002-05)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 10: Supplementary services stage 1; Sub-part 17: Include Call (IC)

ETSI EN 300 392-10-10 V1.2.1 (2002-05)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 10: Supplementary services stage 1; Sub-part 10: Priority Call (PC)

ETSI TS 100 392-15 V1.2.1 (2002-04)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 15: TETRA frequency bands, duplex spacings and channel numbering

ETSI TS 100 812-1 V2.2.1 (2002-04)

Terrestrial Trunked Radio (TETRA); Subscriber Identity Module to Mobile Equipment (SIM-ME) interface; Part 1: Physical and logical characteristics

ETSI TS 100 812-2 V2.2.1 (2002-04)

Terrestrial Trunked Radio (TETRA); Subscriber Identity Module to Mobile Equipment (SIM-ME) interface; Part 2: Characteristics of the TSIM application

ETSI TR 102 300-3 V1.2.1 (2002-01)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Designers' guide; Part 3: Direct Mode Operation (DMO)

ETSI EN 300 392-10-22 V1.2.1 (2002-01)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 10: Supplementary services stage 1; Sub-part 22: Dynamic Group Number Assignment (DGNA)

ETSI EN 300 392-11-17 V1.1.2 (2002-01)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 11: Supplementary services stage 2; Sub-part 17: Include Call (IC)

ETSI EN 300 392-12-17 V1.1.2 (2002-01)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 12: Supplementary services stage 3; Sub-part 17: Include Call (IC)

ETSI EN 300 812 V2.1.1 (2001-12)

Terrestrial Trunked Radio (TETRA); Security aspects; Subscriber Identity Module to Mobile Equipment (SIM-ME) interface

ETSI EN 303 035-1 V1.2.1 (2001-12)

Terrestrial Trunked Radio (TETRA); Harmonized EN for TETRA equipment covering essential requirements under article 3.2 of the R&TTE Directive; Part 1: Voice plus Data (V+D)

ETSI EN 303 035-2 V1.2.1 (2001-12)

Terrestrial Trunked Radio (TETRA); Harmonized EN for TETRA equipment covering essential requirements under article 3.2 of the R&TTE Directive; Part 2: Direct Mode Operation (DMO)

ETSI TR 102 021-4 V1.1.1 (2001-12)

Terrestrial Trunked Radio (TETRA); User Requirement Specification TETRA Release 2; Part 4: Air Interface Enhancements

ETSI TR 102 021-1 V1.1.1 (2001-12)

Terrestrial Trunked Radio (TETRA); User Requirement Specification TETRA Release 2; Part 1: General Overview

ETSI TR 102 021-2 V1.1.1 (2001-12)

Terrestrial Trunked Radio (TETRA); User Requirement Specification TETRA Release 2; Part 2: High Speed Data

ETSI TR 102 021-3 V1.1.1 (2001-12)

Terrestrial Trunked Radio (TETRA); User Requirement Specification TETRA Release 2; Part 3: Codec

ETSI TR 102 021-7 V1.1.1 (2001-12)

Terrestrial Trunked Radio (TETRA); User Requirement Specification TETRA Release 2; Part 7: Security

ETSI EN 300 392-5 V1.1.1 (2001-09)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 5: Peripheral Equipment Interface (PEI)

ETSI ES 201 962 V1.1.1 (2001-09)

Terrestrial Trunked Radio (TETRA); TETRA Advanced Packet Service (TAPS)

ETSI TR 101 987 V1.1.1 (2001-08)

Terrestrial Trunked Radio (TETRA); Proposed Air Interface Enhancements for TETRA Release 2; Analysis and Feasibility Assessment

ETSI EN 300 392-11-18 V1.1.1 (2001-08)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 11: Supplementary services stage 2; Sub-part 18: Barring of Outgoing Calls (BOC)

ETSI EN 300 392-11-19 V1.1.1 (2001-08)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 11: Supplementary services stage 2; Sub-part 19: Barring of Incoming Calls (BIC)

ETSI EN 300 392-12-18 V1.1.1 (2001-08)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 12: Supplementary services stage 3; Sub-part 18: Barring of Outgoing Calls (BOC)

ETSI EN 300 392-12-19 V1.1.1 (2001-08)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 12: Supplementary services stage 3; Sub-part 19: Barring of Incoming Calls (BIC)

ETSI TR 101 975 V1.1.1 (2001-07)

Terrestrial Trunked Radio (TETRA); RF Sensitive Area Mode

ETSI TR 101 977 V1.1.1 (2001-07)

Terrestrial Trunked Radio (TETRA); Study of the suitability of the GSM Adaptive Multi-Rate (AMR) speech codec for use in TETRA

ETSI TS 101 747 V1.1.1 (2001-07)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); IP Interworking (IPI)

ETSI EN 300 392-9 V1.1.1 (2001-07)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 9: General requirements for supplementary services

ETSI TS 101 978 V1.1.1 (2001-07)

Terrestrial Trunked Radio (TETRA); TETRA Advanced Packet Service (TAPS) Test Purposes

ETSI TR 101 976 V1.1.1 (2001-07)

Terrestrial Trunked Radio (TETRA); Guide to TETRA Advanced Packet Service (TAPS)

ETSI TS 100 392-5 V1.1.1 (2001-07)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 5: Peripheral Equipment Interface (PEI)

ETSI TS 101 962 V1.1.1 (2001-07)

Terrestrial Trunked Radio (TETRA); TETRA Advanced Packet Service (TAPS)

ETSI EN 303 035-1 V1.1.1 (2001-06)

Terrestrial Trunked Radio (TETRA) Harmonized EN for TETRA equipment covering essential requirements under article 3.2 of the R&TTE Directive; Part 1: Voice plus Data (V+D)

ETSI EN 303 035-2 V1.1.1 (2001-06)

Terrestrial Trunked Radio (TETRA); Harmonized EN for TETRA equipment covering essential requirements under article 3.2 of the R&TTE Directive; Part 2: Direct Mode Operation (DMO)

ETSI EN 300 392-11-10 V1.1.1 (2001-05)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 11: Supplementary services stage 2; Sub-part 10: Priority Call (PC)

ETSI EN 300 392-12-10 V1.1.1 (2001-05)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 12: Supplementary services stage 3; Sub-part 10: Priority Call (PC)

ETSI EN 300 394-1 V2.3.1 (2001-04)

Terrestrial Trunked Radio (TETRA); Conformance testing specification; Part 1: Radio

ETSI EN 300 392-2 V2.3.2 (2001-03)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 2: Air Interface (AI)

ETSI EN 300 392-7 V2.1.1 (2001-02)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 7: Security

ETSI EN 300 392-11-12 V1.1.1 (2001-01)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 11: Supplementary services stage 2; Sub-part 12: Call Hold (CH)

ETSI EN 300 392-12-12 V1.1.1 (2001-01)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 12: Supplementary services stage 3; Sub-part 12: Call Hold (CH)

ETSI EN 300 394-4-5 V1.1.1 (2001-01)

Terrestrial Trunked Radio (TETRA); Conformance testing specification; Part 4: Protocol testing specification for Direct Mode Operation (DMO); Sub-part 5: Abstract Test Suite (ATS) for Mobile Station (MS) Repeater type 1

ETSI EN 300 394-4-6 V1.1.1 (2001-01)

Terrestrial Trunked Radio (TETRA); Conformance testing specification; Part 4: Protocol testing specification for Direct Mode Operation (DMO); Sub-part 6: Abstract Test Suite (ATS) for Direct Mode Repeater (DM-REP) type 1

ETSI EN 300 394-4-13 V1.1.1 (2001-01)

Terrestrial Trunked Radio (TETRA); Conformance testing specification; Part 4: Protocol testing specification for Direct Mode Operation (DMO); Sub-part 13: Abstract Test Suite (ATS) for Mobile station Repeater type 2

ETSI EN 300 394-4-14 V1.1.1 (2001-01)

Terrestrial Trunked Radio (TETRA); Conformance testing specification; Part 4: Protocol testing specification for Direct Mode Operation (DMO); Sub-part 14: Abstract Test Suite (ATS) for Repeater type 2

ETSI EN 300 394-4-3 V1.1.1 (2001-01)

Terrestrial Trunked Radio (TETRA); Conformance testing specification; Part 4: Protocol testing specification for Direct Mode Operation (DMO); Sub-part 3: Test Suite Structure and Test Purposes (TSS&TP) for Mobile Station (MS) Repeater type 1

ETSI EN 300 394-4-12 V1.1.1 (2001-01)

Terrestrial Trunked Radio (TETRA); Conformance testing specification; Part 4: Protocol testing specification for Direct Mode Operation (DMO); Sub-part 12: Test Suite Structure and Test Purposes (TSS&TP) for Repeater type 2

ETSI EN 300 396-8-2 V1.1.1 (2001-01)

Terrestrial Trunked Radio (TETRA); Technical requirements for Direct Mode Operation (DMO); Part 8: Protocol Implementation Conformance Statement (PICS) proforma specification; Sub-part 2: Type 1 repeater Air Interface (AI)

ETSI EN 300 396-8-4 V1.1.1 (2001-01)

Terrestrial Trunked Radio (TETRA); Technical requirements for Direct Mode Operation (DMO); Part 8: Protocol Implementation Conformance Statement (PICS) proforma specification; Sub-part 4: Type 2 repeater Air Interface (AI)

ETSI EN 300 394-4-4 V1.1.1 (2001-01)

Terrestrial Trunked Radio (TETRA); Conformance testing specification; Part 4: Protocol testing specification for Direct Mode Operation (DMO); Sub-part 4: Test Suite Structure and Test Purposes (TSS&TP) for Direct Mode Repeater (DM-REP) type 1

ETSI EN 300 394-4-11 V1.1.1 (2001-01)

Terrestrial Trunked Radio (TETRA); Conformance testing specification; Part 4: Protocol testing specification for Direct Mode Operation (DMO); Sub-part 11: Test Suite Structure and Test Purposes (TSS&TP) for Mobile Station Repeater type 2

ETSI EN 300 392-3-2 V1.1.1 (2000-12)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 3: Interworking at the Inter-System Interface (ISI); Sub-part 2: Additional Network Feature Individual Call (ANF-ISIIC)

ETSI EN 300 394-1 V2.1.2 (2000-12)

Terrestrial Trunked Radio (TETRA); Conformance testing specification; Part 1: Radio

ETSI EN 300 396-7 V1.2.1 (2000-12)

Terrestrial Trunked Radio (TETRA); Technical requirements for Direct Mode Operation (DMO); Part 7: Type 2 repeater air interface

ETSI EN 300 396-4 V1.2.1 (2000-12)

Terrestrial Trunked Radio (TETRA); Technical requirements for Direct Mode Operation (DMO); Part 4: Type 1 repeater air interface

ETSI TS 100 392-7 V2.1.1 (2000-12)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 7: Security

ETSI TS 100 396-10 V1.1.1 (2000-12)

Terrestrial Trunked Radio (TETRA); Technical requirements for Direct Mode Operation (DMO); Part 10: Managed Direct Mode Operation (M-DMO)

ETSI EN 300 392-2 V2.1.1 (2000-12)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 2: Air Interface (AI)

ETSI EN 301 435-1 V1.2.4 (2000-12)

Terrestrial Trunked Radio (TETRA) Attachment requirements for TETRA terminal equipment; Part 1: Civil access

ETSI EN 301 435-2 V1.2.4 (2000-12)

Terrestrial Trunked Radio (TETRA); Attachment requirements for TETRA terminal equipment; Part 2: Emergency access

ETSI TS 100 394-1 V2.3.1 (2000-12)

Terrestrial Trunked Radio (TETRA); Conformance testing specification; Part 1: Radio

ETSI EN 300 392-12-8 V1.1.1 (2000-12)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 12: Supplementary services stage 3; Sub-part 8: Area Selection (AS)

ETSI EN 300 392-11-8 V1.1.1 (2000-12)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 11: Supplementary services stage 2; Sub-part 8: Area Selection (AS)

ETSI EN 300 392-3-4 V1.1.1 (2000-11)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 3: Interworking at the Inter-System Interface (ISI); Sub-part 4: Additional Network Feature Short Data Service (ANF-ISISDS)

ETSI TS 100 392-2 V2.3.1 (2000-11)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 2: Air Interface (AI)

ETSI TS 100 394-4-5 V1.1.1 (2000-10)

Terrestrial Trunked Radio (TETRA); Conformance testing specification; Part 4: Protocol testing specification for Direct Mode Operation (DMO); Sub-part 5: Abstract Test Suite (ATS) for Mobile Station (MS) Repeater type 1

ETSI TS 100 394-4-6 V1.1.1 (2000-10)

Terrestrial Trunked Radio (TETRA); Conformance testing specification; Part 4: Protocol testing specification for Direct Mode Operation (DMO); Sub-part 6: Abstract Test Suite (ATS) for Direct Mode Repeater (DM-REP) type 1

ETSI TS 100 394-4-13 V1.1.1 (2000-10)

Terrestrial Trunked Radio (TETRA); Conformance testing specification; Part 4: Protocol testing specification for Direct Mode Operation (DMO); Sub-part 13: Abstract Test Suite (ATS) for Mobile station Repeater type 2

ETSI TS 100 394-4-14 V1.1.1 (2000-10)

Terrestrial Trunked Radio (TETRA); Conformance testing specification; Part 4: Protocol testing specification for Direct Mode Operation (DMO); Sub-part 14: Abstract Test Suite (ATS) for Repeater type 2

ETSI TS 100 394-4-3 V1.1.1 (2000-10)

Terrestrial Trunked Radio (TETRA); Conformance testing specification; Part 4: Protocol testing specification for Direct Mode Operation (DMO); Sub-part 3: Test Suite Structure and Test Purposes (TSS&TP) for Mobile Station (MS) Repeater type 1

ETSI TS 100 394-4-12 V1.1.1 (2000-10)

Terrestrial Trunked Radio (TETRA); Conformance testing specification; Part 4: Protocol testing specification for Direct Mode Operation (DMO); Sub-part 12: Test Suite Structure and Test Purposes (TSS&TP) for Repeater type 2

ETSI TS 100 394-4-4 V1.1.1 (2000-10)

Terrestrial Trunked Radio (TETRA); Conformance testing specification; Part 4: Protocol testing specification for Direct Mode Operation (DMO); Sub-part 4: Test Suite Structure and Test Purposes (TSS&TP) for Direct Mode Repeater (DM-REP) type 1

ETSI TS 100 396-8-2 V1.1.1 (2000-10)

Terrestrial Trunked Radio (TETRA); Technical requirements for Direct Mode Operation (DMO); Part 8: Protocol Implementation Conformance Statement (PICS) proforma specification; Sub-part 2: Type 1 repeater Air Interface (AI)

ETSI TS 100 396-8-4 V1.1.1 (2000-10)

Terrestrial Trunked Radio (TETRA); Technical requirements for Direct Mode Operation (DMO); Part 8: Protocol Implementation Conformance Statement (PICS) proforma specification; Sub-part 4: Type 2 repeater Air Interface (AI)

ETSI TS 100 394-4-11 V1.1.1 (2000-10)

Terrestrial Trunked Radio (TETRA); Conformance testing specification; Part 4: Protocol testing specification for Direct Mode Operation (DMO); Sub-part 11: Test Suite Structure and Test Purposes (TSS&TP) for Mobile Station Repeater type 2

ETSI TS 100 392-3-2 V1.1.1 (2000-10)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 3: Interworking at the Inter-System Interface (ISI); Sub-part 2: Additional Network Feature Individual Call (ANF-ISIIC)

ETSI TS 100 396-4 V1.2.1 (2000-10)

Terrestrial Trunked Radio (TETRA); Technical requirements for Direct Mode Operation (DMO); Part 4: Type 1 repeater air interface

ETSI TS 100 396-7 V1.2.1 (2000-10)

Terrestrial Trunked Radio (TETRA); Technical requirements for Direct Mode Operation (DMO); Part 7: Type 2 repeater air interface

ETSI TS 100 392-15 V1.1.1 (2000-10)

Terrestrial Trunked Radio (TETRA); Voice plus DATA (V+D) Part 15: TETRA frequency bands, duplex spacings and channel numbering

ETSI TS 100 392-2 V2.1.1 (2000-09)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 2: Air Interface (AI)

ETSI TS 100 392-11-8 V1.1.1 (2000-09)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 11: Supplementary services stage 2; Sub-part 8: Area Selection (AS)

ETSI TS 100 392-12-8 V1.1.1 (2000-09)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 12: Supplementary services stage 3; Sub-part 8: Area Selection (AS)

ETSI ETS 300 392-12-2 ed.1 (2000-09)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 12: Supplementary services stage 3; Sub-part 2: Call Report (CR)

ETSI ETS 300 392-12-5 ed.1 (2000-09)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 12: Supplementary services stage 3; Sub-part 5: List Search Call (LSC)

ETSI ETS 300 392-11-2 ed.1 (2000-09)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 11: Supplementary services stage 2; Sub-part 2: Call Report (CR)

ETSI ETS 300 392-11-5 ed.1 (2000-09)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 11: Supplementary services stage 2; Sub-part 5: List Search Call (LSC)

ETSI TS 100 394-1 V2.1.1 (2000-09)

Terrestrial Trunked Radio (TETRA); Conformance testing specification; Part 1: Radio

ETSI ETS 300 392-11-11 ed.1 (2000-09)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 11: Supplementary services stage 2; Sub-part 11: Call Waiting (CW)

ETSI ETS 300 392-12-24 ed.1 (2000-09)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 12: Supplementary services stage 3; Sub-part 24: Call Retention (CRT)

ETSI ETS 300 392-11-24 ed.1 (2000-09)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 11: Supplementary services stage 2; Sub-part 24: Call Retention (CRT)

ETSI ETS 300 392-12-11 ed.1 (2000-09)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 12: Supplementary services stage 3; Sub-part 11: Call Waiting (CW)

ETSI ETS 300 392-4-2 ed.1 (2000-09)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 4: Gateways basic operation; Sub-part 2: Integrated Services Digital Network (ISDN) gateway

ETSI ETS 300 392-12-16 ed.1 (2000-09)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 12: Supplementary services stage 3; Sub-part 16: Pre-emptive Priority Call (PPC)

ETSI ETS 300 392-11-16 ed.1 (2000-09)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 11: Supplementary services stage 2; Sub-part 16: Pre-emptive Priority Call (PPC)

ETSI ETS 300 395-4 ed.2 (2000-09)

Terrestrial Trunked Radio (TETRA); Speech codec for full-rate traffic channel; Part 4: Codec conformance testing

ETSI ETS 300 392-10-5 ed.2 (2000-08)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 10: Supplementary services stage 1; Sub-part 5: List Search Call (LSC)

ETSI ETS 300 392-10-2 ed.2 (2000-08)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 10: Supplementary services stage 1; Sub-part 2: Call report

ETSI EN 301 435-1 V1.1.1 (2000-05)

Terrestrial Trunked Radio (TETRA); Attachment requirements for TETRA terminal equipment; Part 1: Civil access

ETSI TS 101 789-1 V1.1.1 (2000-05)

Terrestrial Trunked Radio (TETRA); TMO Repeaters Part 1: Requirements, test methods and limits

ETSI ETS 300 392-10-24 ed.2 (2000-04)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 10: Supplementary services stage 1; Sub-part 24: Call Retention (CRT)

ETSI ETS 300 392-12-23 ed.1 (2000-04)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 12: Supplementary services stage 3; Sub-part 23: Call Completion on No Reply (CCNR)

ETSI ETS 300 392-12-7 ed.1 (2000-04)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 12: Supplementary services stage 3; Sub-part 7: Short Number Addressing (SNA)

ETSI ETS 300 392-11-23 ed.1 (2000-04)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 11: Supplementary services stage 2; Sub-part 23: Call Completion on No Reply (CCNR)

ETSI ETS 300 392-11-7 ed.1 (2000-04)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 11: Supplementary services stage 2; Sub-part 7: Short Number Addressing (SNA)

ETSI TS 101 658 V1.2.1 (2000-04)

Terrestrial Trunked Radio (TETRA); Digital Advanced Wireless Service (DAWS); Logical Link Control (LLC) Service Description

ETSI TS 101 659 V1.2.1 (2000-04)

Terrestrial Trunked Radio (TETRA); Digital Advanced Wireless Service (DAWS); Medium Access Control (MAC) Service Description

ETSI TS 101 660 V1.2.1 (2000-04)

Terrestrial Trunked Radio (TETRA); Digital Advanced Wireless Service (DAWS); Physical Layer (PHY) Service Description

ETSI ETS 300 392-12-22 ed.1 (2000-04)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 12: Supplementary services stage 3; Sub-part 22: Dynamic Group Number Assignment (DGNA)

ETSI ETS 300 392-11-22 ed.1 (2000-04)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 11: Supplementary services stage 2; Sub-part 22: Dynamic Group Number Assignment (DGNA)

ETSI ETS 300 392-11-13 ed.1 (2000-03)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 11: Supplementary services stage 2; Sub-part 13: Call Completion to Busy Subscriber (CCBS)

ETSI ETS 300 392-12-13 ed.1 (2000-03)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 12: Supplementary services stage 3; Sub-part 13: Call Completion to Busy Subscriber (CCBS)

ETSI ETS 300 392-3-3 ed.1 (2000-03)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 3: Interworking at the Inter-System Interface (ISI); Sub-part 3: Additional Network Feature Group Call (ANF-ISIGC)

ETSI ETR 300-3 ed.1 (2000-02)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Designers' guide; Part 3: Direct Mode Operation (DMO)

ETSI ETS 300 392-10-12 ed.2 (2000-02)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 10: Supplementary services stage 1; Sub-part 12: Call Hold (CH)

ETSI ETS 300 392-10-4 ed.2 (2000-02)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 10: Supplementary services stage 1; Sub-part 4: Call Forwarding (CF)

ETSI ETS 300 392-10-11 ed.2 (2000-02)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 10: Supplementary services stage 1; Sub-part 11: Call Waiting (CW)

ETSI TR 101 494 V1.1.1 (2000-02)

Terrestrial Trunked Radio (TETRA); SIM; Review

ETSI ETS 300 392-3-5 ed.1 (2000-01)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 3: Interworking at the Inter-System Interface (ISI); Sub-part 5: Additional Network Feature for Mobility Management (ANF-ISIMM)

ETSI ETS 300 396-8-1 ed.1 (2000-01)

Terrestrial Trunked Radio (TETRA); Technical requirements for Direct Mode Operation (DMO); Part 8: Protocol Implementation Conformance Statement (PICS) proforma specification; Sub-part 1: Mobile Station to Mobile Station (MS-MS) Air Interface (AI)

ETSI ETS 300 396-5 ed.1 (2000-01)

Terrestrial Trunked Radio (TETRA); Technical requirements for Direct Mode Operation (DMO); Part 5: Gateway air interface

ETSI ETS 300 392-10-7 ed.2 (1999-09)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 10: Supplementary services stage 1; Sub-part 7: Short number addressing

ETSI ETS 300 392-10-13 ed.2 (1999-09)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 10: Supplementary services stage 1; Sub-part 13: Call completion to busy subscriber

ETSI ETS 300 392-10-23 ed.2 (1999-09)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 10: Supplementary services stage 1; Sub-part 23: Call completion on no reply

ETSI ETS 300 392-12-20 ed.1 (1999-08)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 12: Supplementary services stage 3; Sub-part 20: Discreet Listening (DL)

ETSI ETS 300 392-11-20 ed.1 (1999-08)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 11: Supplementary services stage 2; Sub-part 20: Discreet Listening (DL)

ETSI ETS 300 392-11-1 ed.1 (1999-08)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 11: Supplementary services stage 2; Sub-part 1: Call Identification (CI)

ETSI ETS 300 392-12-1 ed.1 (1999-08)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 12: Supplementary services stage 3; Sub-part 1: Call Identification (CI)

ETSI ETS 300 392-12-3 ed.1 (1999-08)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 12: Supplementary services stage 3; Sub-part 3: Talking Party Identification (TPI)

ETSI ETS 300 393-2 ed.2 (1999-08)

Terrestrial Trunked Radio (TETRA); Packet Data Optimized (PDO); Part 2: Air Interface (AI)

ETSI ETS 300 393-10 ed.1 (1999-07)

Terrestrial Trunked Radio (TETRA); Packet Data Optimized (PDO); Part 10: SDL model of the Air Interface (AI)

ETSI ETS 300 392-11-3 ed.1 (1999-07)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 11: Supplementary services stage 2; Sub-part 3: Talking Party Identification (TPI)

ETSI ETS 300 392-10-3 ed.2 (1999-07)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 10: Supplementary services stage 1; Sub-part 3: Talking Party Identification (TPI)

ETSI ES 201 658 V1.1.1 (1999-07)

Terrestrial Trunked Radio (TETRA); Digital Advanced Wireless Service (DAWS); Logical Link Control (LLC) service description

ETSI ES 201 659 V1.1.1 (1999-07)

Terrestrial Trunked Radio (TETRA); Digital Advanced Wireless Service (DAWS); Medium Access Control (MAC) service description

ETSI ES 201 660 V1.1.1 (1999-07)

Terrestrial Trunked Radio (TETRA); Digital Advanced Wireless Service (DAWS); Physical Layer (PHY) service description

ETSI ETS 300 394-5-3 ed.1 (1999-07)

Terrestrial Trunked Radio (TETRA); Conformance testing specification; Part 5: Security; Sub-part 3: Abstract Test Suite (ATS)

ETSI ETS 300 394-5-2 ed.1 (1999-07)

Terrestrial Trunked Radio (TETRA); Conformance testing specification; Part 5: Security; Sub-part 2: Protocol testing specification for TETRA security

ETSI ETS 300 394-5-1 ed.1 (1999-07)

Terrestrial Trunked Radio (TETRA); Conformance testing specification; Part 5: Security; Sub-part 1: Protocol Implementation Conformance Statement (PICS) proforma specification

ETSI EN 301 040 V2.0.0 (1999-06)

Terrestrial Trunked Radio (TETRA); Security; Lawful Interception (LI) interface

ETSI ETS 300 392-4-3 ed.1 (1999-06)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 4: Gateways basic operation; Sub-part 3: Data networks gateway

ETSI ETS 300 394-4-1 ed.1 (1999-06)

Terrestrial Trunked Radio (TETRA); Conformance testing specification; Part 4: Protocol testing specification for Direct Mode Operation (DMO); Sub-part 1: Test Suite Structure and Test Purposes (TSS&TP) for Mobile Station to Mobile Station (MS-MS) Air Interface (AI)

ETSI ETS 300 394-4-10 ed.1 (1999-06)

Terrestrial Trunked Radio (TETRA); Conformance testing specification; Part 4: Protocol testing specification for Direct Mode Operation (DMO); Sub-part 10: Abstract Test Suite (ATS) for Direct Mode Gateway (DM-GATE)

ETSI ETS 300 394-4-7 ed.1 (1999-06)

Terrestrial Trunked Radio (TETRA); Conformance testing specification; Part 4: Protocol testing specification for Direct Mode Operation (DMO); Sub-part 7: Test Suite Structure and Test Purposes (TSS&TP) for Mobile Station to GateWay (MS-GW) Air Interface (AI)

ETSI ETS 300 394-4-2 ed.1 (1999-06)

Terrestrial Trunked Radio (TETRA); Conformance testing specification; Part 4: Protocol testing specification for Direct Mode Operation (DMO); Sub-part 2: Abstract Test Suite (ATS) for Mobile Station to Mobile Station (MS-MS) Air Interface (AI)

ETSI ETS 300 394-4-8 ed.1 (1999-06)

Terrestrial Trunked Radio (TETRA); Conformance testing specification; Part 4: Protocol testing specification for Direct Mode Operation (DMO); Sub-part 8: Test Suite Structure and Test Purposes (TSS&TP) for Direct Mode Gateway (DM-GATE)

ETSI ETS 300 394-4-9 ed.1 (1999-06)

Terrestrial Trunked Radio (TETRA); Conformance testing specification; Part 4: Protocol testing specification for Direct Mode Operation (DMO); Sub-part 9: Abstract Test Suite (ATS) for Mobile Station (MS) Gateway

ETSI ETS 300 396-8-3 ed.1 (1999-06)

Terrestrial Trunked Radio (TETRA); Technical requirements for Direct Mode Operation (DMO); Part 8: Protocol Implementation Conformance Statement (PICS) proforma specification; Sub-part 3: Gateway Air Interface (AI)

ETSI ETS 300 392-10-20 ed.2 (1999-05)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 10: Supplementary services stage 1; Sub-part 20: Discreet Listening (DL)

ETSI ETS 300 392-10-1 ed.2 (1999-05)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 10: Supplementary services stage 1; Sub-part 1: Call identification

ETSI TR 101 156 V1.1.5 (1999-04)

Terrestrial Trunked Radio (TETRA); Technical requirements specification for Digital Advanced Wireless Service (DAWS)

ETSI TR 101 661 V1.1.1 (1999-04)

Terrestrial Trunked Radio (TETRA); Technical requirements specification; Managed Direct Mode Operation (DMO)

ETSI TS 101 660 V1.1.1 (1999-04)

Terrestrial Trunked Radio (TETRA); Digital Advanced Wireless Service (DAWS); Physical Layer (PHY) service description

ETSI TS 101 659 V1.1.1 (1999-04)

Terrestrial Trunked Radio (TETRA); Digital Advanced Wireless Service (DAWS); Medium Access Control (MAC) service description

ETSI TS 101 658 V1.1.1 (1999-04)

Terrestrial Trunked Radio (TETRA); Digital Advanced Wireless Service (DAWS); Logical Link Control (LLC) service description

ETSI ETS 300 392-10-6 ed.2 (1999-01)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 10: Supplementary services stage 1; Sub-part 6: Call Authorized by Dispatcher (CAD)

ETSI ETS 300 392-4-1 ed.1 (1999-01)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 4: Gateways basic operation; Sub-part 1: Public Switched Telephone Network (PSTN)

ETSI ETS 300 392-3-1 ed.1 (1999-01)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 3: Interworking at the Inter-System Interface (ISI); Sub-part 1: General design

ETSI ETS 300 393-11 ed.1 (1998-12)

Terrestrial Trunked Radio (TETRA); Packet Data Optimized (PDO); Part 11: Protocol Implementation Conformance Statement (PICS) proforma specification

ETSI ETS 300 392-10-9 ed.2 (1998-12)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 10: Supplementary services stage 1; Sub-part 9: Access priority

ETSI ETS 300 812 ed.1 (1998-11)

Terrestrial Trunked Radio (TETRA); Security aspects; Subscriber Identity Module to Mobile Equipment (SIM - ME) interface

ETSI ETS 300 392-11-6 ed.1 (1998-10)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 11: Supplementary services stage 2; Sub-part 6: Call Authorized by Dispatcher (CAD)

ETSI ETS 300 392-11-9 ed.1 (1998-10)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 11: Supplementary services stage 2; Sub-part 9: Access Priority (AP)

ETSI ETS 300 392-12-6 ed.1 (1998-10)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 12: Supplementary services stage 3; Sub-part 6: Call Authorized by Dispatcher (CAD)

ETSI ETS 300 392-12-9 ed.1 (1998-10)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 12: Supplementary services stage 3; Sub-part 9: Access Priority (AP)

ETSI TBR 035 ed.1 (1998-09)

Terrestrial Trunked Radio (TETRA); Emergency access

ETSI ETR 300-5 ed.1 (1998-07)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Designers' guide; Part 5: Guidance on Numbering and addressing

ETSI ETR 293-2 ed.1 (1998-06)

Terrestrial Trunked Radio (TETRA); Air Interface (AI) layer 2 and 3 protocol validation; Part 2: Validation of SDL models for Packet Data Optimized (PDO)

ETSI ETS 300 396-6 ed.1 (1998-04)

Terrestrial Trunked Radio (TETRA); Direct Mode Operation (DMO); Part 6: Security

ETSI EG 201 040 V1.1.1 (1998-04)

Terrestrial Trunked Radio (TETRA); Security; Lawful Interception (LI) interface; Feasibility study report

ETSI ETS 300 396-1 ed.1 (1998-03)

Terrestrial Trunked Radio (TETRA); Technical requirements for Direct Mode Operation (DMO); Part 1: General network design

ETSI ETS 300 396-2 ed.1 (1998-03)

Terrestrial Trunked Radio (TETRA); Technical requirements for Direct Mode Operation (DMO); Part 2: Radio aspects

ETSI ETS 300 396-3 ed.1 (1998-03)

Terrestrial Trunked Radio (TETRA); Technical requirements for Direct Mode Operation (DMO); Part 3: Mobile Station to Mobile Station (MS-MS) Air Interface (AI) protocol

ETSI ETS 300 394-2-1 ed.1 (1998-02)

Terrestrial Trunked Radio (TETRA); Conformance testing specification; Part 2: Protocol testing specification for Voice plus Data (V+D); Sub-part 1: Test suite structure and test purposes

ETSI ETS 300 394-2-2 ed.1 (1998-02)

Terrestrial Trunked Radio (TETRA); Conformance testing specification; Part 2: Protocol testing specification for Voice plus Data (V+D); Sub-part 2: Abstract Test Suite (ATS) for Network (NWK) layer

ETSI ETS 300 394-2-3 ed.1 (1998-02)

Terrestrial Trunked Radio (TETRA); Conformance testing specification; Part 2: Protocol testing specification for Voice plus Data (V+D); Sub-part 3: Abstract Test Suite (ATS) for Logical Link Control (LLC)

ETSI ETS 300 394-2-4 ed.1 (1998-02)

Terrestrial Trunked Radio (TETRA); Conformance testing specification; Part 2: Protocol testing specification for Voice plus Data (V+D); Sub-part 4: Abstract Test Suite (ATS) for Medium Access Control (MAC)

ETSI ETS 300 395-2 ed.2 (1998-02)

Terrestrial Trunked Radio (TETRA); Speech codec for full-rate traffic channel; Part 2: TETRA codec

ETSI TR 101 156 V1.1.1 (1998-01)

Terrestrial Trunked Radio (TETRA); Technical requirements specification for Digital Advanced Wireless Service (DAWS)

ETSI ETS 300 392-14 ed.1 (1997-12)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 14: Protocol Implementation Conformance Statement (PICS) proforma specification

ETSI ETR 300-4 ed.1 (1997-07)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Designers' guide; Part 4: Network management

ETSI ETR 292 ed.1 (1997-07)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Technical requirements specification; Network management

ETSI ETR 300-2 ed.1 (1997-05)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Designers' guide; Part 2: Radio channels, network protocols and service performance

ETSI ETS 300 392-13 ed.1 (1997-05)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 13: SDL model of the Air Interface (AI)

ETSI ETS 300 395-1 ed.1 (1997-05)

Terrestrial Trunked Radio (TETRA); Speech codec for full-rate traffic channel; Part 1: General description of speech functions

ETSI ETS 300 395-4 ed.1 (1997-05)

Terrestrial Trunked Radio (TETRA); Speech codec for full-rate traffic channel; Part 4: Codec conformance testing

ETSI ETS 300 393-7 ed.1 (1997-05)

Terrestrial Trunked Radio (TETRA); Packet Data Optimized (PDO); Part 7: Security

ETSI ETS 300 395-3 ed.1 (1997-05)

Terrestrial Trunked Radio (TETRA); Speech codec for full-rate traffic channel; Part 3: Specific operating features

ETSI ETR 300-1 ed.1 (1997-05)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Designers' guide; Part 1: Overview, technical description and radio aspects

ETSI TS 101 040 V1.1.1 (1997-05)

Terrestrial Trunked Radio (TETRA); Security; Lawful Interception (LI) interface

ETSI ETR 293-1 ed.1 (1997-02)

Terrestrial Trunked Radio (TETRA); Air Interface (AI) layer 2 and 3 protocol validation; Part 1: Validation of SDL models for Voice plus Data (V+D)

ETSI ETR 346 ed.1 (1996-12)

Terrestrial Trunked Radio (TETRA); Air Interface (AI) layer 2 and 3 protocol validation; Part 1: Validation of test suites for Voice plus Data (V+D)

ETSI ETS 300 392-7 ed.1 (1996-12)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 7: Security

ETSI ETS 300 395-2 ed.1 (1996-12)

Terrestrial Trunked Radio (TETRA); Speech codec for full-rate traffic channel; Part 2: TETRA codec

ETSI ETR 295 ed.1 (1996-08)

Terrestrial Trunked Radio (TETRA); User requirements for Subscriber Identity Module (SIM)

ETSI ETR 294 ed.1 (1996-08)

Terrestrial Trunked Radio (TETRA); Voice and Data (V+D) and Direct Mode Operation (DMO); Mobile Station (MS) Man Machine Interface (MMI)

ETSI ETS 300 393-2 ed.1 (1996-05)

Terrestrial Trunked Radio (TETRA); Packet Data Optimized (PDO); Part 2: Air Interface (AI)

ETSI ETS 300 393-1 ed.1 (1996-04)

Terrestrial Trunked Radio (TETRA); Packet Data Optimized (PDO); Part 1: General network design

ETSI ETS 300 392-10-1 ed.1 (1996-04)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 10: Supplementary services stage 1; Sub-part 1: Call identification

ETSI ETS 300 392-10-2 ed.1 (1996-04)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 10: Supplementary services stage 1; Sub-part 2: Call report

ETSI ETS 300 392-10-3 ed.1 (1996-04)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 10: Supplementary services stage 1; Sub-part 3: Talking party identification

ETSI ETS 300 392-10-4 ed.1 (1996-04)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 10: Supplementary services stage 1; Sub-part 4: Call diversion

ETSI ETS 300 392-10-5 ed.1 (1996-04)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 10: Supplementary services stage 1; Sub-part 5: List search call

ETSI ETS 300 392-10-6 ed.1 (1996-04)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 10: Supplementary services stage 1; Sub-part 6: Call authorized by dispatcher

ETSI ETS 300 392-10-7 ed.1 (1996-04)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 10: Supplementary services stage 1; Sub-part 7: Short number addressing

ETSI ETS 300 392-10-8 ed.1 (1996-04)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 10: Supplementary services stage 1; Sub-part 8: Area selection

ETSI ETS 300 392-10-9 ed.1 (1996-04)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 10: Supplementary services stage 1; Sub-part 9: Access priority

ETSI ETS 300 392-10-10 ed.1 (1996-04)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 10: Supplementary services stage 1; Sub-part 10: Priority Call (PC)

ETSI ETS 300 392-10-11 ed.1 (1996-04)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 10: Supplementary services stage 1; Sub-part 11: Call waiting

ETSI ETS 300 392-10-12 ed.1 (1996-04)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 10: Supplementary services stage 1; Sub-part 12: Call hold

ETSI ETS 300 392-10-13 ed.1 (1996-04)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 10: Supplementary services stage 1; Sub-part 13: Call completion to busy subscriber

ETSI ETS 300 392-10-14 ed.1 (1996-04)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 10: Supplementary services stage 1; Sub-part 14: Late entry

ETSI ETS 300 392-10-15 ed.1 (1996-04)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 10: Supplementary services stage 1; Sub-part 15: Transfer of control

ETSI ETS 300 392-10-16 ed.1 (1996-04)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 10: Supplementary services stage 1; Sub-part 16: Pre-emptive priority call

ETSI ETS 300 392-10-17 ed.1 (1996-04)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 10: Supplementary services stage 1; Sub-part 17: Include call

ETSI ETS 300 392-10-18 ed.1 (1996-04)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 10: Supplementary services stage 1; Sub-part 18: Barring of outgoing calls

ETSI ETS 300 392-10-19 ed.1 (1996-04)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 10: Supplementary services stage 1; Sub-part 19: Barring of incoming calls

ETSI ETS 300 392-10-20 ed.1 (1996-04)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 10: Supplementary services stage 1; Sub-part 20: Discreet listening

ETSI ETS 300 392-10-21 ed.1 (1996-04)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 10: Supplementary services stage 1; Sub-part 21: Ambience listening

ETSI ETS 300 392-10-22 ed.1 (1996-04)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 10: Supplementary services stage 1; Sub-part 22: Dynamic group number assignment

ETSI ETS 300 392-10-23 ed.1 (1996-04)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 10: Supplementary services stage 1; Sub-part 23: Call completion on no reply

ETSI ETS 300 392-10-24 ed.1 (1996-04)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 10: Supplementary services stage 1; Sub-part 24: Call retention

ETSI ETS 300 392-2 ed.1 (1996-03)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 2: Air Interface (AI)

ETSI ETS 300 394-1 ed.1 (1996-03)

Terrestrial Trunked Radio (TETRA); Conformance testing specification; Part 1: Radio

ETSI ETR 265 ed.1 (1996-02)

Terrestrial Trunked Radio (TETRA); Technical requirements specification for Direct Mode (DM)

ETSI ETS 300 392-1 ed.1 (1996-02)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 1: General network design

ETSI ETR 120 ed.1 (1994-11)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Open channel

ETSI ETR 086-3 ed.1 (1994-01)

Trans European Trunked Radio (TETRA) systems; Technical requirements specification; Part 3: Security aspects

ETSI ETR 086-1 ed.1 (1994-01)

Trans European Trunked Radio (TETRA) systems; Technical requirements specification; Part 1: Voice plus Data (V+D) systems

ETSI ETR 086-2 ed.1 (1994-01)

Trans European Trunked Radio (TETRA) systems; Technical requirements specification; Part 2: Packet Data Optimised (PDO) systems

Standards under development:

There are not any standards under development.

3.2.109   TC MSG - TECHNICAL COMMITTEE (TC) MOBILE STANDARDS GROUP (MSG)

Keywords:

Mobile Telecommunications, 5G, Mobile Communicationsm Smart Metering

Scope:

We are responsible for the identification of European regulatory requirements for cellular systems developed by the Third Generation Partnership Project (3GPP™), and for developing Harmonised Standards and related ETSI standards for GSM™, International Mobile Telecommunications (IMT) systems for cellular and technologies evolving from them (including IMT Advanced but excluding Digital Enhanced Cordless Telecommunications (DECTTM)).

We provide the regulatory standards needed to support the deployment of GSM, Universal Mobile Telecommunications System (UMTS™) and LTE™ networks in Europe.

Standards:

ETSI EN 301 908-2 V13.0.1 (2020-03)

IMT cellular networks; Harmonised Standard for access to radio spectrum; Part 2: CDMA Direct Spread (UTRA FDD) User Equipment (UE)

ETSI TS 103 412 V1.3.1 (2020-03)

Mobile Standards Group (MSG); Pan-European eCall end to end and in-band modem conformance testing; Prose test specification

ETSI TS 103 683 V1.1.1 (2020-02)

      Mobile Standards Group (MSG); Testing; Next Generation eCall High Level Application Protocol (HLAP) Interoperability Testing

ETSI EN 301 908-15 V15.1.1 (2020-01)

IMT cellular networks; Harmonised Standard for access to radio spectrum; Part 15: Evolved Universal Terrestrial Radio Access (E-UTRA FDD) Repeaters

ETSI TR 103 612 V1.1.1 (2019-12)

IMT cellular networks; Mobile/Fixed Communication Network (MFCN) in the frequency range 6 425 - 7 125 MHz

ETSI EN 301 908-13 V13.1.1 (2019-11)

IMT cellular networks; Harmonised Standard for access to radio spectrum; Part 13: Evolved Universal Terrestrial Radio Access (E-UTRA) User Equipment (UE)

ETSI EN 301 908-1 V13.1.1 (2019-11)

IMT cellular networks; Harmonised Standard for access to radio spectrum; Part 1: Introduction and common requirements

ETSI EN 301 908-3 V13.1.1 (2019-09)

IMT cellular networks; Harmonised Standard for access to radio spectrum; Part 3: CDMA Direct Spread (UTRA FDD) Base Stations (BS)

ETSI EN 301 908-14 V13.1.1 (2019-09)

IMT cellular networks; Harmonised Standard for access to radio spectrum; Part 14: Evolved Universal Terrestrial Radio Access (E-UTRA) Base Stations (BS)

ETSI EN 301 908-18 V13.1.1 (2019-09)

IMT cellular networks; Harmonised Standard for access to radio spectrum; Part 18: E-UTRA, UTRA and GSM/EDGE Multi-Standard Radio (MSR) Base Station (BS)

ETSI TS 103 412 V1.2.1 (2018-04)

Mobile Standards Group (MSG); Pan-European eCall end to end and in-band modem conformance testing; Prose test specification

ETSI TS 103 543 V1.1.1 (2018-02)

Mobile Standards Group (MSG); Pan-European eCall In-Vehicle Systems; Guidelines for IVS conformity assessment

ETSI TS 102 576 V2.2.1 (2017-10)

Radio access network equipment specification; Mobile Communication On Board Aircraft (MCOBA) systems; Operational requirements and methodology for showing conformance

ETSI EN 301 908-2 V11.1.2 (2017-08)

IMT cellular networks; Harmonised Standard covering the essential requirements of article 3.2 of Directive 2014/53/EU; Part 2: CDMA Direct Spread (UTRA FDD) User Equipment (UE)

ETSI EN 301 908-13 V11.1.2 (2017-07)

IMT cellular networks; Harmonised Standard covering the essential requirements of article 3.2 of Directive 2014/53/EU; Part 13: Evolved Universal Terrestrial Radio Access (E-UTRA) User Equipment (UE)

ETSI EN 301 908-18 V11.1.2 (2017-04)

IMT cellular networks; Harmonised Standard covering the essential requirements of article 3.2 of Directive 2014/53/EU; Part 18: E-UTRA, UTRA and GSM/EDGE Multi-Standard Radio (MSR) Base Station (BS)

ETSI EN 301 908-3 V11.1.3 (2017-04)

IMT cellular networks; Harmonised Standard covering the essential requirements of article 3.2 of Directive 2014/53/EU; Part 3: CDMA Direct Spread (UTRA FDD) Base Stations (BS)

ETSI EN 301 908-14 V11.1.2 (2017-04)

IMT cellular networks; Harmonised Standard covering the essential requirements of article 3.2 of Directive 2014/53/EU; Part 14: Evolved Universal Terrestrial Radio Access (E-UTRA) Base Stations (BS)

ETSI EN 301 511 V12.5.1 (2017-03)

Global System for Mobile communications (GSM); Mobile Stations (MS) equipment; Harmonised Standard covering the essential requirements of article 3.2 of Directive 2014/53/EU

ETSI EN 301 502 V12.5.2 (2017-03)

Global System for Mobile communications (GSM); Base Station (BS) equipment; Harmonised Standard covering the essential requirements of article 3.2 of Directive 2014/53/EU

ETSI EN 302 480 V2.1.2 (2017-02)

Mobile Communication On Board Aircraft (MCOBA) systems; Harmonised Standard covering the essential requirements of article 3.2 of Directive 2014/53/EU

ETSI EN 301 908-11 V11.1.2 (2017-01)

Harmonised Standard covering the essential requirements of article 3.2 of the Directive 2014/53/EU; Harmonised Standard covering the essential requirements of article 3.2 of the Directive 2014/53/EU; Part 11: CDMA Direct Spread (UTRA FDD) Repeaters

ETSI EN 301 908-15 V11.1.2 (2017-01)

IMT cellular networks; Harmonised Standard covering the essential requirements of article 3.2 of Directive 2014/53/EU; Part 15: Evolved Universal Terrestrial Radio Access (E-UTRA FDD) Repeaters

ETSI EN 301 908-22 V6.1.1 (2016-07)

IMT cellular networks; Harmonised Standard covering the essential requirements of article 3.2 of the Directive 2014/53/EU; Part 22: OFDMA TDD WMAN (Mobile WiMAXTM) FDD Base Stations (BS)

ETSI EN 301 502 V12.5.1 (2016-07)

Global System for Mobile communications (GSM); Base Station (BS) equipment; Harmonised Standard covering the essential requirements of article 3.2 of the Directive 2014/53/EU

ETSI EN 301 908-13 V11.1.1 (2016-07)

IMT cellular networks; Harmonised Standard covering the essential requirements of article 3.2 of the Directive 2014/53/EU; Part 13: Evolved Universal Terrestrial Radio Access (E-UTRA) User Equipment (UE)

ETSI EN 301 908-3 V11.1.2 (2016-07)

IMT cellular networks; Harmonised Standard covering the essential requirements of article 3.2 of the Directive 2014/53/EU; Part 3: CDMA Direct Spread (UTRA FDD) Base Stations (BS)

ETSI EN 301 908-18 V11.1.1 (2016-07)

IMT cellular networks; Harmonised Standard covering the essential requirements of article 3.2 of the Directive 2014/53/EU; Part 18: E-UTRA, UTRA and GSM/EDGE Multi-Standard Radio (MSR) Base Station (BS)

ETSI EN 301 908-1 V11.1.1 (2016-07)

IMT cellular networks; Harmonised Standard covering the essential requirements of article 3.2 of the Directive 2014/53/EU; Part 1: Introduction and common requirements

ETSI EN 301 908-2 V11.1.1 (2016-07)

IMT cellular networks; Harmonised Standard covering the essential requirements of article 3.2 of the Directive 2014/53/EU; Part 2: CDMA Direct Spread (UTRA FDD) User Equipment (UE)

ETSI TS 103 428 V1.1.1 (2016-06)

Mobile Standards Group (MSG); eCall HLAP Interoperability Testing

ETSI EN 301 908-3 V11.1.1 (2016-05)

IMT cellular networks; Harmonised Standard covering the essential requirements of article 3.2 of the Directive 2014/53/EU; Part 3: CDMA Direct Spread (UTRA FDD) Base Stations (BS)

ETSI EN 301 908-12 V7.1.1 (2016-05)

IMT cellular networks; Harmonised Standard covering the essential requirements of article 3.2 of the Directive 2014/53/EU; Part 12: CDMA Multi-Carrier (cdma2000) Repeaters

ETSI EN 301 908-19 V6.3.1 (2016-05)

IMT cellular networks; Harmonised Standard covering the essential requirements of article 3.2 of the Directive 2014/53/EU; Part 19: OFDMA TDD WMAN (Mobile WiMAXTM) TDD User Equipment (UE)

ETSI EN 301 908-20 V6.3.1 (2016-05)

IMT cellular networks; Harmonised Standard covering the essential requirements of article 3.2 of the Directive 2014/53/EU; Part 20: OFDMA TDD WMAN (Mobile WiMAXTM) TDD Base Stations (BS)

ETSI EN 301 908-14 V11.1.1 (2016-05)

IMT cellular networks; Harmonised Standard covering the essential requirements of article 3.2 of the Directive 2014/53/EU; Part 14: Evolved Universal Terrestrial Radio Access (E-UTRA) Base Stations (BS)

ETSI EN 301 908-21 V6.1.1 (2016-05)

IMT cellular networks; Harmonised Standard covering the essential requirements of article 3.2 of the Directive 2014/53/EU; Part 21: OFDMA TDD WMAN (Mobile WiMAXTM) FDD User Equipment (UE)

ETSI EN 303 609 V12.5.1 (2016-04)

Global System for Mobile communications (GSM); GSM Repeaters; Harmonised Standard covering the essential requirements of article 3.2 of the Directive 2014/53/EU

ETSI TS 103 412 V1.1.1 (2016-04)

Mobile Standards Group (MSG); Pan-European eCall end to end and in-band modem conformance testing; Prose test specification

ETSI TS 102 576 V2.1.1 (2016-02)

Radio access network equipment specification; Mobile Communication On Board Aircraft (MCOBA) systems; Operational requirements and methodology for showing conformance

ETSI EN 301 908-2 V7.1.1 (2015-12)

IMT cellular networks; Harmonised EN covering the essential requirements of article 3.2 of the R&TTE Directive; Part 2: CDMA Direct Spread (UTRA FDD) User Equipment (UE)

ETSI EN 301 908-13 V7.1.1 (2015-12)

IMT cellular networks; Harmonised EN covering the essential requirements of article 3.2 of the R&TTE Directive; Part 13: Evolved Universal Terrestrial Radio Access (E-UTRA) User Equipment (UE)

ETSI EN 301 908-14 V7.1.1 (2015-07)

IMT cellular networks; Harmonised EN covering the essential requirements of article 3.2 of the R&TTE Directive; Part 14: Evolved Universal Terrestrial Radio Access (E-UTRA) Base Stations (BS)

ETSI EN 301 908-3 V7.1.1 (2015-07)

IMT cellular networks; Harmonized EN covering the essential requirements of article 3.2 of the R&TTE Directive; Part 3: CDMA Direct Spread (UTRA FDD) Base Stations (BS)

ETSI EN 301 511 V12.1.1 (2015-06)

Global System for Mobile communications (GSM); Harmonised EN for mobile stations in the GSM 900 and GSM 1800 bands covering essential requirements under article 3.2 of the R&TTE directive (1999/5/EC)

ETSI TS 103 321 V1.1.1 (2015-04)

Mobile Standards Group (MSG); eCall HLAP Conformance Testing Abstract Test Suite (ATS) and Protocol Implementation eXtra Information for Testing (PIXIT)

ETSI EN 301 908-1 V7.1.1 (2015-03)

IMT cellular networks; Harmonized EN covering the essential requirements of article 3.2 of the R&TTE Directive; Part 1: Introduction and common requirements

ETSI EN 301 502 V12.1.1 (2015-03)

Global System for Mobile communications (GSM); Harmonized EN for Base Station Equipment covering the essential requirements of article 3.2 of the R&TTE Directive

ETSI EN 301 502 V11.1.1 (2014-07)

Global System for Mobile communications (GSM); Harmonized EN for Base Station Equipment covering the essential requirements of article 3.2 of the R&TTE Directive

ETSI EN 301 908-18 V7.1.2 (2014-07)

IMT cellular networks; Harmonized EN covering the essential requirements of article 3.2 of the R&TTE Directive; Part 18: E-UTRA, UTRA and GSM/EDGE Multi-Standard Radio (MSR) Base Station (BS)

ETSI EN 301 908-18 V7.1.1 (2014-07)

IMT cellular networks; Harmonized EN covering the essential requirements of article 3.2 of the R&TTE Directive; Part 18: E-UTRA, UTRA and GSM/EDGE Multi-Standard Radio (MSR) Base Station (BS)

ETSI TR 103 140 V1.1.1 (2014-04)

Mobile Standards Group (MSG); eCall for VoIP

ETSI TR 103 227 V1.1.1 (2014-01)

Mobile Standards Group (MSG); Overview of the technical framework for the separate sale of roaming services in the European Union

ETSI EN 301 908-3 V6.2.1 (2013-10)

IMT cellular networks; Harmonized EN covering the essential requirements of article 3.2 of the R&TTE Directive; Part 3: CDMA Direct Spread (UTRA FDD) Base Stations (BS)

ETSI EN 301 908-14 V6.2.1 (2013-10)

IMT cellular networks; Harmonized EN covering the essential requirements of article 3.2 of the R&TTE Directive; Part 14: Evolved Universal Terrestrial Radio Access (E-UTRA) Base Stations (BS)

ETSI EN 301 908-2 V6.2.1 (2013-10)

IMT cellular networks; Harmonized EN covering the essential requirements of article 3.2 of the R&TTE Directive; Part 2: CDMA Direct Spread (UTRA FDD) User Equipment (UE)

ETSI EN 301 908-13 V6.2.1 (2013-10)

IMT cellular networks; Harmonized EN covering the essential requirements of article 3.2 of the R&TTE Directive; Part 13: Evolved Universal Terrestrial Radio Access (E-UTRA) User Equipment (UE)

ETSI EN 301 908-19 V6.2.1 (2013-06)

IMT cellular networks; Harmonized EN covering the essential requirements of article 3.2 of the R&TTE Directive; Part 19: OFDMA TDD WMAN (Mobile WiMAX) TDD User Equipment (UE)

ETSI EN 301 908-20 V6.2.1 (2013-06)

IMT cellular networks; Harmonized EN covering the essential requirements of article 3.2 of the R&TTE Directive; Part 20: OFDMA TDD WMAN (Mobile WiMAX) TDD Base Stations (BS)

ETSI EN 301 908-4 V6.2.1 (2013-06)

IMT cellular networks; Harmonized EN covering the essential requirements of article 3.2 of the R&TTE Directive; Part 4: CDMA Multi-Carrier (cdma2000) User Equipment (UE)

ETSI TR 103 139 V1.1.1 (2013-04)

Mobile Specification Group (MSG) Assessment of IMT Base Station (BS) emissions in relation to Block Edge Masks (BEM)

ETSI EN 301 908-1 V6.2.1 (2013-04)

IMT cellular networks; Harmonized EN covering the essential requirements of article 3.2 of the R&TTE Directive; Part 1: Introduction and common requirements

ETSI EN 301 908-2 V5.4.1 (2012-12)

IMT cellular networks; Harmonized EN covering the essential requirements of article 3.2 of the R&TTE Directive; Part 2: CDMA Direct Spread (UTRA FDD) User Equipment (UE)

ETSI EN 301 908-18 V6.2.1 (2012-11)

IMT cellular networks; Harmonized EN covering the essential requirements of article 3.2 of the R&TTE Directive; Part 18: E-UTRA, UTRA and GSM/EDGE Multi-Standard Radio (MSR) Base Station (BS)

ETSI EN 301 502 V10.2.1 (2012-11)

Global System for Mobile communications (GSM); Harmonized EN for Base Station Equipment covering the essential requirements of article 3.2 of the R&TTE Directive

ETSI EN 300 609-4 V10.2.1 (2012-11)

Global System for Mobile communications (GSM); Part 4: Harmonized EN for GSM Repeaters covering the essential requirements of article 3.2 of the R&TTE Directive

ETSI EN 301 908-19 V5.2.1 (2011-09)

IMT cellular networks; Harmonized EN covering the essential requirements of article 3.2 of the R&TTE Directive; Part 19: OFDMA TDD WMAN (Mobile WiMAX) TDD User Equipment (UE)

ETSI EN 301 908-20 V5.2.1 (2011-09)

IMT cellular networks; Harmonized EN covering the essential requirements of article 3.2 of the R&TTE Directive; Part 20: OFDMA TDD WMAN (Mobile WiMAX) TDD Base Stations (BS)

ETSI EN 301 908-21 V5.2.1 (2011-09)

IMT cellular networks; Harmonized EN covering the essential requirements of article 3.2 of the R&TTE Directive; Part 21: OFDMA TDD WMAN (Mobile WiMAX) FDD User Equipment (UE)

ETSI EN 301 908-22 V5.2.1 (2011-09)

IMT cellular networks; Harmonized EN covering the essential requirements of article 3.2 of the R&TTE Directive; Part 22: OFDMA TDD WMAN (Mobile WiMAX) FDD Base Stations (BS)

ETSI EN 301 908-4 V5.2.1 (2011-09)

IMT cellular networks; Harmonized EN covering the essential requirements of article 3.2 of the R&TTE Directive; Part 4: CDMA Multi-Carrier (cdma2000) User Equipment (UE)

ETSI EN 301 908-5 V5.2.1 (2011-09)

IMT cellular networks; Harmonized EN covering the essential requirements of article 3.2 of the R&TTE Directive; Part 5: CDMA Multi-Carrier (cdma2000) Base Stations (BS)

ETSI EN 301 908-2 V5.2.1 (2011-07)

IMT cellular networks; Harmonized EN covering the essential requirements of article 3.2 of the R&TTE Directive; Part 2: CDMA Direct Spread (UTRA FDD) User Equipment (UE)

ETSI EN 301 908-3 V5.2.1 (2011-07)

IMT cellular networks; Harmonized EN covering the essential requirements of article 3.2 of the R&TTE Directive; Part 3: CDMA Direct Spread (UTRA FDD) Base Stations (BS)

ETSI EN 301 908-11 V5.2.1 (2011-07)

IMT cellular networks; Harmonized EN covering the essential requirements of article 3.2 of the R&TTE Directive; Part 11: CDMA Direct Spread (UTRA FDD) (Repeaters)

ETSI EN 301 908-7 V5.2.1 (2011-07)

IMT cellular networks; Harmonized EN covering the essential requirements of article 3.2 of the R&TTE Directive; Part 7: CDMA TDD (UTRA TDD) Base Stations (BS)

ETSI EN 301 908-6 V5.2.1 (2011-07)

IMT cellular networks; Harmonized EN covering the essential requirements of article 3.2 of the R&TTE Directive; Part 6: CDMA TDD (UTRA TDD) User Equipment (UE)

ETSI EN 301 908-15 V5.2.1 (2011-07)

IMT cellular networks; Harmonized EN covering the essential requirements of article 3.2 of the R&TTE Directive; Part 15: Evolved Universal Terrestrial Radio Access (E-UTRA FDD) (Repeaters)

ETSI EN 301 908-18 V5.2.1 (2011-07)

IMT cellular networks; Harmonized EN covering the essential requirements of article 3.2 of the R&TTE Directive; Part 18: E-UTRA, UTRA and GSM/EDGE Multi-Standard Radio (MSR) Base Station (BS)

ETSI EN 301 908-1 V5.2.1 (2011-05)

IMT cellular networks; Harmonized EN covering the essential requirements of article 3.2 of the R&TTE Directive; Part 1: Introduction and common requirements

ETSI EN 301 908-13 V5.2.1 (2011-05)

IMT cellular networks; Harmonized EN covering the essential requirements of article 3.2 of the R&TTE Directive; Part 13: Evolved Universal Terrestrial Radio Access (E-UTRA) User Equipment (UE)

ETSI EN 301 908-14 V5.2.1 (2011-05)

IMT cellular networks; Harmonized EN covering the essential requirements of article 3.2 of the R&TTE Directive; Part 14: Evolved Universal Terrestrial Radio Access (E-UTRA) Base Stations (BS)

ETSI TS 102 936-1 V1.1.1 (2011-04)

eCall Network Access Device (NAD) conformance specification; Part 1: Protocol test specification

ETSI TS 102 936-2 V1.1.1 (2011-04)

eCall Network Access Device (NAD) conformance specification; Part 2: Test suites

ETSI TR 102 937 V1.1.1 (2011-03)

eCall communications equipment; Conformance to EU vehicle regulations, R&TTE, EMC & LV Directives, and EU regulations for eCall implementation

ETSI EN 300 609-4 V9.2.1 (2010-10)

Global System for Mobile communications (GSM); Part 4: Harmonized EN for GSM Repeaters covering the essential requirements of article 3.2 of the R&TTE Directive

ETSI EN 301 502 V9.2.1 (2010-10)

Global System for Mobile communications (GSM); Harmonized EN for Base Station Equipment covering the essential requirements of article 3.2 of the R&TTE Directive

ETSI TS 102 735 V7.1.0 (2010-01)

Universal Mobile Telecommunications System (UMTS); Band-specific requirements for UMTS Frequency Division Duplex (FDD) operation in the bands 1 900 MHz to 1 920 MHz paired with 2 600 MHz to 2 620 MHz and 2 010 MHz to 2 025 MHz paired with 2 585 MHz to 2 600 MHz

ETSI TR 102 736 V7.0.0 (2007-09)

Universal Mobile Telecommunications System (UMTS); 2,6 GHz Frequency Division Duplex (FDD) downlink external

ETSI TS 102 735 V7.0.1 (2007-08)

Universal Mobile Telecommunications System (UMTS); Band-specific requirements for UMTS Frequency Division Duplex (FDD) operation in the bands 1 900 MHz to 1 920 MHz paired with 2 600 MHz to 2 620 MHz and 2 010 MHz to 2 025 MHz paired with 2 585 MHz to 2 600 MHz

ETSI TS 102 338 V1.0.0 (2004-08)

Digital Celullar Telecommunications System (Phase 2 & Phase 2+) Global System for Mobile communication (GSM); System Definition

ETSI EN 301 511 V9.0.2 (2003-03)

Global System for Mobile communications (GSM); Harmonized EN for mobile stations in the GSM 900 and GSM 1800 bands covering essential requirements under article 3.2 of the R&TTE directive (1999/5/EC)

ETSI EN 301 515 V1.0.1 (2001-10)

Global System for Mobile communication (GSM); Requirements for GSM operation on railways

ETSI EN 301 502 V8.1.2 (2001-07)

Harmonized EN for Global System for Mobile communications (GSM); Base Station and Repeater equipment covering essential requirements under article 3.2 of the R&TTE directive (GSM 13.21 version 8.1.2 Release 1999)

Standards under development:

There are not any standards under development.

3.2.110   TC INT - TECHNICAL COMMITTEE (TC) CORE NETWORK AND INTEROPERABILITY TESTING (INT)

Keywords:

Interoperability

Scope:

We develop test specifications to test interoperability, conformance, performance and security. The methodology used is end-to-end (e2e) and includes verification of both the control and user plane. The test specifications are based on 3GPP specifications which enable network operators to test their network for services for both fixed and mobile customers.

We produce test purposes, test descriptions, and TTCN-3 test cases to enable interoperability testing of the core network elements and covering the single-network, interconnect and roaming scenarios. Use Cases and requirements specified by ETSI for Automated and Autonomic Management and Control (self- management) of Networks and Services are tested via "industry standards-anchored" Proof of Concepts (PoC) events.

Specifically, within 5G Network Slice Service Assurance space along with SDN, NFV, E2E Orchestration. As all those paradigms are targeting a common objective they can be considered as key Enablers for 5G.

Standards:

ETSI TS 183 036 V3.6.2 (2020-04)

Core Network and Interoperability Testing (INT); ISDN/SIP interworking; Protocol specification

ETSI TS 103 397 V1.1.2 (2020-03)

Core Network and Interoperability Testing (INT); VoLTE and ViLTE interconnect, interworking and roaming test specification with QoS/QoE (3GPPTM Release 12)

ETSI TR 103 626 V1.1.1 (2020-02)

Autonomic network engineering for the self-managing Future Internet (AFI); An Instantiation and Implementation of the Generic Autonomic Network Architecture (GANA) Model onto Heterogeneous Wireless Access Technologies using Cognitive Algorithms

ETSI TS 103 427 V1.1.1 (2019-11)

Core Network and Interoperability Testing (INT); Framework of Internet related performance measurements [Recommendation ITU-T Q.3960 (2016)]

ETSI TS 103 571-3 V1.1.1 (2019-06)

Core Network and Interoperability Testing (INT); Diameter Conformance testing for the Sh/Dh interfaces; (3GPPTM Release 13); Part 3: Abstract Test Suite (ATS) and partial Protocol Implementation eXtra Information for Testing (PIXIT) pro

forma specification

ETSI TS 183 036 V3.6.1 (2019-06)   Core Network and Interoperability Testing (INT); ISDN/SIP interworking; Protocol specification

ETSI TS 101 572-2 V2.1.1 (2019-05)

Core Network and Interoperability Testing (INT); Conformance tests; (3GPPTM Release 10); Interworking between SIP-I based circuit-switched core network and other networks; Part 2: SIP-I/SIP NNI Test Suite Structure and Test Purposes (TSS&TP)

ETSI TS 103 571-1 V1.1.1 (2019-04)

Core Network and Interoperability Testing (INT); Diameter Conformance testing for the Sh/Dh interfaces; (3GPPTM Release 13); Part 1: Protocol Implementation Conformance Statement (PICS)

ETSI TS 103 571-2 V1.1.1 (2019-04)

Core Network and Interoperability Testing (INT); Diameter Conformance testing for Sh/Dh interfaces; (3GPPâ„¢ Release 13); Part 2: Test Suite Structure (TSS) and Test Purposes (TP)

ETSI TS 103 397 V1.1.1 (2019-03)

Core Network and Interoperability Testing (INT); VoLTE and ViLTE interconnect, interworking and roaming test specification with QoS/QoE (3GPPTM Release 12)

ETSI TS 101 597-2 V2.1.1 (2019-01)

Core Network and Interoperability Testing (INT); Closed User Group (CUG) using IP Multimedia (IM) Core Network (CN) subsystem; Conformance Test Specification (3GPPâ„¢ Release 12); Part 2: Test Suite Structure and Test Purposes (TSS&TP)

ETSI TS 101 595-2 V6.1.1 (2019-01)

Core Network and Interoperability Testing (INT); Malicious Communication Identification (MCID) using IP Multimedia (IM) Core Network (CN) subsystem; Conformance Test Specification (3GPPâ„¢ Release 12); Part 2: Test Suite Structure and Test Purposes (TSS&TP)

ETSI TR 103 473 V1.1.2 (2018-12)

Evolution of management towards Autonomic Future Internet (AFI); Autonomicity and Self-Management in the Broadband Forum (BBF) Architectures

ETSI TS 101 588-2 V6.1.1 (2018-07)

Core Network and Interoperability Testing (INT); Completion of Communications to Busy Subscriber (CCBS) and Completion of Communications by No Reply (CCNR) using IP Multimedia (IM) Core Network (CN) subsystem; Conformance Test Specification (3GPPâ„¢ Release 12); Part 2: Test Suite Structure and Test Purposes (TSS&TP)

ETSI TS 101 597-1 V6.1.1 (2018-07)

Core Network and Interoperability Testing (INT); Closed User Group (CUG) using IP Multimedia (IM) Core Network (CN) subsystem; Conformance Test Specification (3GPPTM Release 12); Part 1: Protocol Implementation Conformance Statement (PICS)

ETSI TS 186 017-1 V6.1.1 (2018-07)

Core Network and Interoperability Testing (INT); Anonymous Communication Rejection (ACR) and Communication Barring (CB) using IP Multimedia (IM) Core Network (CN) subsystem; Conformance Test Specification (3GPPTM Release 12); Part 1: Protocol Implementation Conformance Statement (PICS)

ETSI TS 186 017-2 V6.1.1 (2018-07)

Core Network and Interoperability Testing (INT); Anonymous Communication Rejection (ACR) and Communication Barring (CB) using IP Multimedia (IM) Core Network (CN) subsystem; Conformance Test Specification (3GPPTM Release 12); Part 2: Test Suite Structure and Test Purposes (TSS&TP)

ETSI TS 101 588-1 V6.1.1 (2018-07)

Core Network and Interoperability Testing (INT); Completion of Communications to Busy Subscriber (CCBS) and Completion of Communications by No Reply (CCNR) using IP Multimedia (IM) Core Network (CN) subsystem; Conformance Test Specification (3GPPâ„¢ Release 12); Part 1: Protocol Implementation Conformance Statement (PICS)

ETSI TS 186 022-1 V6.1.1 (2018-07)

Core Network and Interoperability Testing (INT); Communication Waiting (CW) using IP Multimedia (IM) Core Network (CN) subsystem; Conformance test specification (3GPPTM Release 12); Part 1: Protocol Implementation Conformance Statement (PICS)

ETSI TS 186 022-2 V6.1.1 (2018-07)

Core Network and Interoperability Testing (INT); Communication Waiting (CW) using IP Multimedia (IM) Core Network (CN) subsystem; Conformance test specification (3GPPTM Release 12); Part 2: Test Suite Structure and Test Purposes (TSS&TP)

ETSI TS 101 595-1 V6.1.1 (2018-07)

Core Network and Interoperability Testing (INT); Malicious Communication Identification (MCID) using IP Multimedia (IM) Core Network (CN) subsystem; Conformance Test Specification (3GPPâ„¢ Release 12); Part 1: Protocol Implementation Conformance Statement (PICS)

ETSI TS 101 594-1 V6.1.1 (2018-06)

Core Network and Interoperability Testing (INT); Explicit Communication Transfer (ECT) using IP Multimedia (IM) Core Network (CN) subsystem; Conformance Test Specification (3GPPâ„¢ Release 12); Part 1: Protocol Implementation Conformance Statement (PICS)

ETSI TS 101 594-2 V6.1.1 (2018-06)

Core Network and Interoperability Testing (INT); Explicit Communication Transfer (ECT) using IP Multimedia (IM) Core Network (CN) subsystem; Conformance Test Specification (3GPPâ„¢ Release 12); Part 2: Test Suite Structure and Test Purposes (TSS&TP)

ETSI TS 102 891-1 V4.1.1 (2018-06)

Core Network and Interoperability Testing (INT); Message Waiting Indication (MWI) using IP Multimedia (IM) Core Network (CN) subsystem; Conformance Test Specification (3GPPâ„¢ Release 12); Part 1: Protocol Implementation Conformance Statement (PICS)

ETSI TS 102 891-2 V4.1.1 (2018-06)

Core Network and Interoperability Testing (INT); Message Waiting Indication (MWI) using IP Multimedia (IM) Core Network (CN) subsystem; Conformance Test Specification (3GPPâ„¢ Release 12); Part 2: Test Suite Structure and Test Purposes (TSS&TP)

ETSI TS 101 585 V2.1.1 (2018-02)

Core Network and Interoperability Testing (INT); IMS interconnection tests at the Ic Interface; (3GPPTM Release 13); Test Suite Structure and Test Purposes (TSS&TP)

ETSI TS 186 006-2 V5.1.1 (2018-02)

Core Network and Interoperability Testing (INT); Originating Identification Presentation (OIP) and Originating Identification Restriction (OIR) using IP Multimedia (IM) Core Network (CN) subsystem; Conformance Test specification; (3GPPTM Release 12); Part 2: Test Suite Structure and Test Purposes (TSS&TP)

ETSI TS 103 530-3 V1.1.1 (2018-02)

Core Network and Interoperability Testing (INT); NAS Conformance Testing for the S1-MME interface; (3GPPTM Release 13); Part 3: Abstract Test Suite (ATS) and partial Protocol Implementation eXtra Information for Testing (PIXIT) pro forma specification

ETSI TS 103 530-2 V1.1.1 (2018-02)

Core Network and Interoperability Testing (INT); NAS Conformance Testing for the S1-MME interface; (3GPPTM Release 13); Part 2: Test Suite Structure (TSS) and Test Purposes (TP)

ETSI TS 103 530-1 V1.1.1 (2018-01)

Core Network and Interoperability Testing (INT); NAS Conformance Testing for the S1-MME interface; (3GPPTM Release 13); Part 1: Protocol Implementation Conformance Statement (PICS)

ETSI TS 101 596-1 V6.1.1 (2018-01)

Core Network and Interoperability Testing (INT); Terminating Identification Presentation (TIP) and Terminating Identification Restriction (TIR) using IP Multimedia (IM) Core Network (CN) subsystem; Conformance Test Specification; (3GPPTM Release 12); Part 1: Protocol Implementation Conformance Statement (PICS)

ETSI TS 101 596-2 V6.1.1 (2018-01)

Core Network and Interoperability Testing (INT); Terminating Identification Presentation (TIP) and Terminating Identification Restriction (TIR) using IP Multimedia (IM) Core Network (CN)

subsystem; Conformance Test Specification; (3GPPTM Release 12); Part 2: Test Suite Structure and Test Purposes (TSS&TP)

ETSI TS 186 014-1 V3.1.1 (2017-12)

Core Network and Interoperability Testing (INT); Communication Diversion (CDIV) using IP Multimedia (IM) Core Network (CN) subsystem; (3GPPTM Release 12); Part 1: Protocol Implementation Conformance Statement (PICS)

ETSI TS 186 014-2 V4.1.1 (2017-12)

Core Network and Interoperability Testing (INT); Communication Diversion (CDIV) using IP Multimedia (IM) Core Network (CN) subsystem; (3GPPTM Release 12); Part 2: Test Suite Structure and Test Purposes (TSS&TP)

ETSI TS 186 010-1 V4.1.1 (2017-12)

Core Network and Interoperability Testing (INT); Conference (CONF) using IP Multimedia (IM) Core Network (CN) subsystem; Conformance test specification; (3GPPTM Release 12); Part 1: Protocol Implementation Conformance Statement (PICS)

ETSI TS 186 010-2 V4.1.1 (2017-12)

Core Network and Interoperability Testing (INT); Conference (CONF) using IP Multimedia (IM) Core Network (CN) subsystem; Conformance test specification; (3GPPTM Release 12); Part 2: Test Suite Structure and Test Purposes (TSS&TP)

ETSI TS 186 007-1 V3.1.1 (2017-12)

Core Network and Interoperability Testing (INT); Communication HOLD (HOLD) using IP Multimedia (IM) Core Network (CN) subsystem; Conformance test specification; (3GPPTM Release 12); Part 1: Protocol Implementation Conformance Statement (PICS)

ETSI TS 186 007-2 V5.1.1 (2017-12)

Core Network and Interoperability Testing (INT); Communication HOLD (HOLD) using IP Multimedia (IM) Core Network (CN) subsystem; Conformance test specification; (3GPPTM Release 12); Part 2: Test Suite Structure and Test Purposes (TSS&TP)

ETSI TS 186 006-1 V3.1.1 (2017-12)

Core Network and Interoperability Testing (INT); Originating Identification Presentation (OIP) and Originating Identification Restriction (OIR) using IP Multimedia (IM) Core Network (CN) subsystem; Conformance Test Specification; (3GPPTM Release 12); Part 1: Protocol Implementation Conformance Statement (PICS)

ETSI TS 103 497-3 V1.1.1 (2017-07)

Core Network and Interoperability Testing (INT); S1AP Conformance Testing for the S1-MME interface; (3GPPTM Release 13); Part 3: Abstract Test Suite (ATS) and partial Protocol Implementation eXtra Information for Testing (PIXIT) pro forma specification

ETSI TS 103 497-1 V1.1.1 (2017-07)

Core Network and Interoperability Testing (INT); S1AP Conformance Testing for the S1-MME interface; (3GPPTM Release 13); Part 1: Protocol Implementation Conformance Statement (PICS)

ETSI TS 103 497-2 V1.1.1 (2017-07)

Core Network and Interoperability Testing (INT); S1AP Conformance Testing for the S1-MME interface; (3GPPTM Release 13); Part 2: Test Suite Structure (TSS) and Test Purposes (TP)

ETSI TS 103 374-1 V1.2.1 (2017-01)

Core Network and Interoperability Testing (INT); Diameter Conformance testing for Rf/Ro interface; (3GPPTM Release 10); Part 1: Protocol Implementation Conformance Statement (PICS)

ETSI TS 103 374-2 V1.2.1 (2017-01)

Core Network and Interoperability Testing (INT); Diameter Conformance testing for Rf/Ro interface; (3GPPTM Release 10); Part 2: Test Suite Structure (TSS) and Test Purposes (TP)

ETSI TS 103 374-3 V1.2.1 (2017-01)

Core Network and Interoperability Testing (INT); Diameter Conformance testing for Rf/Ro interface; (3GPPTM Release 10); Part 3: Abstract Test Suite (ATS) and partial Protocol Implementation eXtra Information for Testing (PIXIT) pro forma specification

ETSI EG 203 341 V1.1.1 (2016-10)

Core Network and Interoperability Testing (INT); Approaches for Testing Adaptive Networks

ETSI TS 101 553-1 V2.1.1 (2016-09)

Core Network and Interoperability Testing (INT); Testing of the IBCF requirements; (3GPP Release 12); Part 1: Protocol Implementation Conformance Statement (PICS)

ETSI TS 101 553-2 V4.1.1 (2016-09)

Core Network and Interoperability Testing (INT); Testing of the IBCF requirements; (3GPP Release 12); Part 2: Test Suite Structure and Test Purposes (TSS&TP)

ETSI TS 103 289-1 V2.1.1 (2016-07)

Core Network and Interoperability Testing (INT); Diameter Conformance testing for Cx and Dx interfaces; (3GPPTM Release 10); Part 1: Protocol Implementation Conformance Statement (PICS)

ETSI TS 103 289-2 V2.1.1 (2016-07)

Core Network and Interoperability Testing (INT); Diameter Conformance testing for Cx and Dx interfaces; (3GPPTM Release 10); Part 2: Test Suite Structure (TSS) and Test Purposes (TP)

ETSI TS 103 289-3 V2.1.1 (2016-07)

Core Network and Interoperability Testing (INT); Diameter Conformance testing for Cx and Dx interfaces; (3GPPTM Release 10); Part 3: Abstract Test Suite (ATS) and partial Protocol Implementation eXtra Information for Testing (PIXIT) pro forma specification

ETSI TS 103 374-3 V1.1.1 (2016-05)

Core Network and Interoperability Testing (INT); Diameter Conformance testing for Rf/Ro interface; (3GPPTM Release 10); Part 3: Abstract Test Suite (ATS) and partial Protocol Implementation eXtra Information for Testing (PIXIT) pro forma specification

ETSI TS 102 710-1 V5.2.1 (2016-02)

Core Network and Interoperability Testing (INT); Interworking between the IP Multimedia (IM) Core Network (CN) subsystem and Circuit Switched (CS) networks; Conformance Test Specification; (3GPPTM Release 10); Part 1: Protocol Implementation Conformance Statement (PICS)

ETSI TS 102 710-2 V5.2.1 (2016-02)

Core Network and Interoperability Testing (INT); Interworking between the IP Multimedia (IM) Core Network (CN) subsystem and Circuit Switched (CS) networks; Conformance Test Specification; (3GPPTM Release 10); Part 2: Test Suite Structure and Test Purposes (TSS&TP)

ETSI TS 103 374-2 V1.1.1 (2016-01)

Core Network and Interoperability Testing (INT); Diameter Conformance testing for Rf/Ro interface; (3GPPTM Release 10); Part 2: Test Suite Structure (TSS) and Test Purposes (TP)

ETSI TS 103 202-3 V1.1.1 (2015-12)

Core Network and Interoperability Testing (INT); GTPv2-C Conformance Testing for S11 Interface; (3GPPTM Release 10); Part 3: Abstract Test Suite (ATS) and partial Protocol Implementation eXtra Information for Testing (PIXIT) pro forma specification

ETSI TS 103 202-1 V1.1.1 (2015-12)

Core Network and Interoperability Testing (INT); GTPv2-C Conformance Testing for S11 Interface; (3GPPTM Release 10); Part 1: Protocol Implementation Conformance Statement (PICS)

ETSI TS 103 202-2 V1.1.1 (2015-12)

Core Network and Interoperability Testing (INT); GTPv2-C Conformance Testing for S11 Interface; (3GPPTM Release 10); Part 2: Test Suite Structure and Test Purposes (TSS&TP)

ETSI TS 186 001-5 V2.3.0 (2015-11)

Core Network and Interoperability Testing (INT); Network Integration Testing between SIP and ISDN/PSTN network signalling protocols; Part 5: Test Suite Structure and Test Purposes (TSS&TP) for Network Integration Tests between ISDN-ISDN and ISDN-PSTN over SIP II NNI / SIP-I NNI

ETSI TS 186 001-1 V3.1.1 (2015-11)

Core Network and Interoperability Testing (INT); Network Integration Testing between SIP and ISDN/PSTN network signalling protocols; Part 1: Test Suite Structure and Test Purposes (TSS&TP) for SIP-ISDN

ETSI TS 103 374-1 V1.1.2 (2015-10)

Core Network and Interoperability Testing (INT); Diameter Conformance testing for Rf/Ro interface; (3GPPTM Release 10); Part 1: Protocol Implementation Conformance Statement (PICS)

ETSI TS 186 022-1 V3.1.1 (2015-10)

Core Network and Interoperability Testing (INT); Communication Waiting (CW) using IP Multimedia (IM) Core Network (CN) subsystem; Conformance test specification (3GPPTM Release 10); Part 1: Protocol Implementation Conformance Statement (PICS)

ETSI TS 186 022-2 V4.1.1 (2015-10)

Core Network and Interoperability Testing (INT); Communication Waiting (CW) using IP Multimedia (IM) Core Network (CN) subsystem; Conformance test specification (3GPPTM Release 10); Part 2: Test Suite Structure and Test Purposes (TSS&TP)

ETSI TS 186 007-1 V2.1.1 (2015-10)

Core Network and Interoperability Testing (INT); Communication HOLD (HOLD) using IP Multimedia (IM) Core Network (CN) subsystem; Conformance test specification (3GPPTM Release 10); ; Part 1: Protocol Implementation Conformance Statement (PICS)

ETSI TS 186 007-2 V4.1.1 (2015-10)

Core Network and Interoperability Testing (INT); Communication HOLD (HOLD) using IP Multimedia (IM) Core Network (CN) subsystem; Conformance test specification (3GPPTM Release 10); Part 2: Test Suite Structure and Test Purposes (TSS&TP)

ETSI TS 186 010-1 V3.1.1 (2015-10)

Core Network and Interoperability Testing (INT); Conference (CONF) using IP Multimedia (IM) Core Network (CN) subsystem; Conformance test specification (3GPPTM Release 10); Part 1: Protocol Implementation Conformance Statement (PICS)

ETSI TS 186 010-2 V3.2.1 (2015-10)

Core Network and Interoperability Testing (INT); Conference (CONF) using IP Multimedia (IM) Core Network (CN) subsystem; Conformance test specification (3GPP Release 10); Part 2: Test Suite Structure and Test Purposes (TSS&TP)

ETSI TS 186 006-1 V2.1.1 (2015-10)

Core Network and Interoperability Testing (INT); Originating Identification Presentation (OIP) and Originating Identification Restriction (OIR) using IP Multimedia (IM) Core Network (CN) subsystem; Conformance test specification (3GPP Release 10); Part 1: Protocol Implementation Conformance Statement (PICS)

ETSI TS 186 006-2 V4.1.1 (2015-10)

Core Network and Interoperability Testing (INT); Originating Identification Presentation (OIP) and Originating Identification Restriction (OIR) using IP Multimedia (IM) Core Network (CN) subsystem; Conformance test specification (3GPP Release 10); Part 2: Test Suite Structure and Test Purposes (TSS&TP)

ETSI TS 103 262-1 V1.2.1 (2015-07)

Core Network and Interoperability Testing (INT); Diameter Conformance testing for S9 interface; (3GPPTM Release 10); Part 1: Protocol Implementation Conformance Statement (PICS)

ETSI TS 103 262-2 V1.2.1 (2015-07)

Core Network and Interoperability Testing (INT); Diameter Conformance testing for S9 interface; (3GPPTM Release 10); Part 2: Test Suite Structure (TSS) and Test Purposes (TP)

ETSI TS 103 262-3 V1.2.1 (2015-07)

Core Network and Interoperability Testing (INT); Diameter Conformance testing for S9 interface; (3GPPTM Release 10); Part 3: Abstract Test Suite (ATS) and partial Protocol Implementation eXtra Information for Testing (PIXIT) proforma specification

ETSI TS 103 261-1 V1.2.1 (2015-06)

Core Network and Interoperability Testing (INT); Diameter Conformance testing for S6a interface; (3GPP Release 10); Part 1: Protocol Implementation Conformance Statement (PICS)

ETSI TS 103 261-2 V1.2.1 (2015-06)

Core Network and Interoperability Testing (INT); Diameter Conformance testing for S6a interface; (3GPP Release 10); Part 2: Test Suite Structure (TSS) and Test Purposes (TP)

ETSI TS 103 261-3 V1.2.1 (2015-06)

Core Network and Interoperability Testing (INT); Diameter Conformance testing for S6a interface; (3GPP Release 10); Part 3: Abstract Test Suite (ATS) and partial Protocol Implementation eXtra Information for Testing (PIXIT) proforma specification

ETSI TS 186 014-2 V3.2.1 (2015-06)

Core Network and Interoperability Testing (INT); Communication Diversion (CDIV) using IP Multimedia (IM) Core Network (CN) subsystem; 3GPPTM Release 10; Part 2: Test Suite Structure and Test Purposes (TSS&TP)

ETSI TS 186 014-1 V2.2.1 (2015-06)

Core Network and Interoperability Testing (INT); Communication Diversion (CDIV) using IP Multimedia (IM) Core Network (CN) subsystem; 3GPPTM Release 10; Part 1: Protocol Implementation Conformance Statement (PICS)

ETSI TS 103 289-3 V1.1.1 (2015-06)

Core Network and Interoperability Testing (INT); Diameter Conformance testing for Cx and Dx interfaces; (3GPP Release 10); Part 3: Abstract Test Suite (ATS) and partial Protocol Implementation eXtra Information for Testing (PIXIT) proforma specification

ETSI TS 103 289-2 V1.1.1 (2015-06)

Core Network and Interoperability Testing (INT); Diameter Conformance testing for Cx and Dx interfaces; (3GPP Release 10); Part 2: Test Suite Structure (TSS) and Test Purposes (TP)

ETSI TS 186 008-3 V2.1.1 (2015-06)

Core Network and Interoperability Testing (INT); IMS/NGN Performance and Robustness Benchmarking; Part 3: Traffic Sets and Traffic Profiles

ETSI TS 186 008-4 V2.1.1 (2015-05)

Core Network and Interoperability Testing (INT); IMS/NGN Performance Benchmark; Part 4: Reference Load network quality parameters

ETSI TR 103 277 V1.1.1 (2014-11)

Core Network and Interoperability Testing (INT); Coding Guidelines for TTCN-3 Libraries Based on the Example of the SIP and IMS TTCN-3 Libraries

ETSI TS 186 002-1 V1.1.5 (2014-10)

Core Network and Interoperability Testing (INT); Interworking between Session Initiation Protocol (SIP) and Bearer Independent Call Control Protocol (BICC) or ISDN User Part (ISUP); Part 1: Protocol Implementation Conformance Statement (PICS)

ETSI TS 102 709-1 V3.2.1 (2014-10)

Core Network and Interoperability Testing (INT); Interworking between the 3GPP Cs domain with BICC or ISUP as signalling protocol and external SIP-I networks; (3GPP Release 8); Part 1: Protocol Implementation Conformance Statement (PICS)

ETSI TS 102 709-2 V3.3.1 (2014-10)

Core Network and Interoperability Testing (INT); Interworking between the 3GPP Cs domain with BICC or ISUP as signalling protocol and external SIP-I networks; (3GPP Release 8); Part 2: Test Suite Structure and Test Purposes (TSS&TP)

ETSI TS 103 289-1 V1.1.1 (2014-10)

Core Network and Interoperability Testing (INT); Diameter Conformance testing for Cx and Dx interfaces; (3GPP Release 10); Part 1: Protocol Implementation Conformance Statement (PICS)

ETSI TS 186 002-3 V1.3.2 (2014-10)

Core Network and Interoperability Testing (INT); Interworking between Session Initiation Protocol (SIP) and Bearer Independent Call Control Protocol (BICC) or ISDN User Part (ISUP); Part 3: Test Suite Structure and Test Purposes (TSS&TP) for Profile C

ETSI TR 103 278 V1.1.1 (2014-07)

Core Network and Interoperability Testing (INT); IMS specific use of Session Initiation Protocol (SIP) and Session Description Protocol (SDP); Conformance Testing; (3GPP Release 10); Validation report

ETSI TS 103 261-1 V1.1.1 (2014-07)

Core Network and Interoperability Testing (INT); Diameter Conformance testing for S6a interface; (3GPP Release 10); Part 1: Protocol Implementation Conformance Statement (PICS)

ETSI TS 103 261-2 V1.1.1 (2014-07)

Core Network and Interoperability Testing (INT); Diameter Conformance testing for S6a interface; (3GPP Release 10); Part 2: Test Suite Structure (TSS) and Test Purposes (TP)

ETSI TS 103 261-3 V1.1.1 (2014-07)

Core Network and Interoperability Testing (INT); Diameter Conformance testing for S6a interface; (3GPP Release 10); Part 3: Abstract Test Suite (ATS) and partial Protocol Implementation eXtra Information for Testing (PIXIT) proforma specification

ETSI TS 103 262-1 V1.1.1 (2014-07)

Core Network and Interoperability Testing (INT); Diameter Conformance testing for S9 interface; (3GPP Release 10); Part 1: Protocol Implementation Conformance Statement (PICS)

ETSI TS 103 262-2 V1.1.1 (2014-07)

Core Network and Interoperability Testing (INT); Diameter Conformance testing for S9 interface; (3GPP Release 10); Part 2: Test Suite Structure (TSS) and Test Purposes (TP)

ETSI TS 103 262-3 V1.1.1 (2014-07)

Core Network and Interoperability Testing (INT); Diameter Conformance testing for S9 interface; (3GPP Release 10); Part 3: Abstract Test Suite (ATS) and partial Protocol Implementation eXtra Information for Testing (PIXIT) proforma specification

ETSI TS 101 572-2 V1.2.1 (2014-07)

Core Network and Interoperability Testing (INT); Conformance tests; (3GPP Release 10); Interworking between SIP-I based circuit-switched core network and other networks; Part 2: SIP-I/SIP NNI Test Suite Structure and Test Purposes (TSS&TP)

ETSI TS 101 572-1 V1.2.1 (2014-07)

Core Network and Interoperability Testing (INT); Conformance tests; (3GPP Release 10); Interworking between SIP-I based circuit-switched core network and other networks; Part 1: Protocol Implementation Conformance Statement (PICS)

ETSI TS 101 553-1 V1.2.1 (2014-07)

Core Network and Interoperability Testing (INT); Testing of the IBCF requirements; (3GPP Release 9); Part 1: Protocol Implementation Conformance Statement (PICS)

ETSI TS 101 553-2 V3.2.1 (2014-07)

Core Network and Interoperability Testing (INT); Testing of the IBCF requirements; (3GPP Release 9); Part 2: Test Suite Structure and Test Purposes (TSS&TP)

ETSI TS 102 790-1 V3.1.1 (2014-07)

Core Network and Interoperability Testing (INT); IMS specific use of Session Initiation Protocol (SIP) and Session Description Protocol (SDP); Conformance Testing; (3GPP Release 10); Part 1: Protocol Implementation Conformance Statement (PICS)

ETSI TS 102 790-2 V3.1.1 (2014-07)

Core Network and Interoperability Testing (INT); IMS specific use of Session Initiation Protocol (SIP) and Session Description Protocol (SDP); Conformance Testing; (3GPP Release 10); Part 2: Test Suite Structure (TSS) and Test Purposes (TP)

ETSI TS 102 790-3 V3.1.1 (2014-07)

Core Network and Interoperability Testing (INT); IMS specific use of Session Initiation Protocol (SIP) and Session Description Protocol (SDP); Conformance Testing; (3GPP Release 10); Part 3: Abstract Test Suite (ATS) and partial Protocol Implementation eXtra Information for Testing (PIXIT) proforma specification

ETSI TS 103 189 V1.2.1 (2014-04)

Core Network and Interoperability Testing (INT); Assessment of end-to-end Quality for VoLTE and RCS

ETSI TS 101 585 V1.2.1 (2014-04)

Core Network and Interoperability Testing (INT); IMS interconnection tests at the Ic Interface; Test Suite Structure and Test Purposes (TSS&TP)

ETSI TS 101 606-1 V2.1.1 (2013-12)

Core Network and Interoperability Testing (INT); Diameter Conformance testing for Gx interface (3GPP Release 10); Part 1: Protocol Implementation Conformance Statement (PICS)

ETSI TS 101 606-2 V2.1.1 (2013-12)

Core Network and Interoperability Testing (INT); Diameter Conformance testing for Gx interface (3GPP Release 10); Part 2: Test Suite Structure (TSS) and Test Purposes (TP)

ETSI TS 101 606-3 V2.1.1 (2013-12)

Core Network and Interoperability Testing (INT); Diameter Conformance testing for Gx interface (3GPP Relase 10); Part 3: Abstract Test Suite (ATS) and partial Protocol Implementation eXtra Information for Testing (PIXIT) proforma specification

ETSI TS 101 580-1 V2.1.1 (2013-12)

Core Network and Interoperability Testing (INT); Diameter Conformance testing for Rx interface (3GPP Release 10); Part 1: Protocol Implementation Conformance Statement (PICS)

ETSI TS 101 580-2 V2.1.1 (2013-12)

Core Network and Interoperability Testing (INT); Diameter Conformance testing for Rx interface (3GPP Release 10); Part 2: Test Suite Structure (TSS) and Test Purposes (TP)

ETSI TS 101 580-3 V2.1.1 (2013-12)

Core Network and Interoperability Testing (INT); Diameter Conformance testing for Rx interface (3GPP Release 10); Part 3: Abstract Test Suite (ATS) and partial Protocol Implementation eXtra Information for Testing (PIXIT) proforma specification

ETSI TS 101 572-2 V1.1.1 (2013-10)

Core Network and Interoperability Testing (INT); Conformance tests according to 3GPPTM 29.235 Release 10; Interworking between SIP-I based circuit-switched core network and other networks; Part 2: SIP-I / SIP NNI Test Suite Structure and Test Purposes (TSS&TP)

ETSI TS 101 572-1 V1.1.1 (2013-10)

Core Network and Interoperability Testing (INT); Conformance tests according to 3GPPTM 29.235 Release 10; Interworking between SIP-I based circuit-switched core network and other networks; Part 1: Protocol Implementation Conformance Statement (PICS)

ETSI TS 102 901 V5.1.1 (2013-10)

Core Network and Interoperability Testing (INT); IMS NNI Interoperability Test Specifications; IMS NNI interoperability test descriptions for RCS (3GPP Release 10)

ETSI TS 186 011-2 V5.1.1 (2013-10)

Core Network and Interoperability Testing (INT); IMS NNI Interoperability Test Specifications (3GPP Release 10); Part 2: Test descriptions for IMS NNI Interoperability

ETSI TS 186 011-1 V5.1.1 (2013-10)

Core Network and Interoperability Testing (INT); IMS NNI Interoperability Test Specifications (3GPP Release 10); Part 1: Test purposes for IMS NNI Interoperability

ETSI TS 103 029 V5.1.1 (2013-10)

IMS Network Testing (INT); IMS & EPC Interoperability test descriptions (3GPP Release 10)

ETSI TS 103 189 V1.1.2 (2013-10)

IMS Network Testing (INT); Specification of end-to-end QoS assessment for VoLTE and RCS Interop Events or Plugtests

ETSI TS 103 189 V1.1.1 (2013-10)

IMS Network Testing (INT); Specification of end-to-end QoS assessment for LTE and RCS Interop Events or Plugtests

ETSI TS 102 710-2 V3.3.1 (2013-08)

IMS Network Testing (INT); Interworking between the IP Multimedia (IM) Core Network (CN) subsystem and Circuit Switched (CS) networks (Release 8); Part 2: Test Suite Structure and Test Purposes (TSS&TP)

ETSI TS 186 008-2 V2.1.1 (2013-08)

IMS Network Testing (INT); IMS/NGN Performance Benchmark; Part 2: Subsystem Configurations and Benchmarks

ETSI TS 101 597-1 V1.1.1 (2013-07)

IMS Network Testing (INT); Closed User Group (CUG) using IP Multimedia (IM) Core Network (CN) subsystem; Conformance Test Specification; Part 1: Protocol Implementation Conformance Statement (PICS)

ETSI TS 101 597-2 V1.1.1 (2013-07)

IMS Network Testing (INT); Closed User Group (CUG) using IP Multimedia (IM) Core Network (CN) subsystem; Conformance Test Specification; Part 2: Test Suite Structure and Test Purposes (TSS&TP)

ETSI TS 186 025-4 V2.2.1 (2013-06)

IMS Network Testing (INT); IMS/PES Performance Benchmark; Part 4: Reference Load network quality parameters

ETSI TS 186 008-1 V1.2.2 (2013-06)

IMS Network Testing (INT); IMS/NGN Performance Benchmark; Part 1: Core Concepts

ETSI TR 101 590 V1.1.1 (2013-03)

IMS Network Testing (INT); IMS/NGN Security Testing and Robustness Benchmark

ETSI TS 102 790-2 V2.1.1 (2013-02)

IMS Network Testing (INT); IMS specific use of Session Initiation Protocol (SIP) and Session Description Protocol (SDP); Conformance Testing; Part 2: Test Suite Structure (TSS) and Test Purposes (TP)

ETSI TS 102 790-3 V2.1.1 (2013-02)

IMS Network Testing (INT); IMS specific use of Session Initiation Protocol (SIP) and Session Description Protocol (SDP); Conformance Testing; Part 3: Abstract Test Suite (ATS) and partial Protocol Implementation eXtra Information for Testing (PIXIT) proforma specification

ETSI TS 102 710-2 V5.1.1 (2013-02)

IMS Network Testing (INT); Interworking between the IP Multimedia (IM) Core Network (CN) subsystem and Circuit Switched (CS) networks; Conformance Test Specification; Part 2: Test Suite Structure and Test Purposes (TSS&TP)

ETSI TS 102 710-1 V5.1.1 (2013-02)

IMS Network Testing (INT); Interworking between the IP Multimedia (IM) Core Network (CN) subsystem and Circuit Switched (CS) networks; Conformance Test Specification; Part 1: Protocol Implementation Conformance Statement (PICS)

ETSI TR 101 655 V1.1.1 (2013-02)

IMS Network Testing (INT); Report on the automatic conformance review during the IMS plugtest 2012; TTCN-3 based trace analysis of SIP and Diameter messages

ETSI TS 102 790-1 V2.1.1 (2012-11)

IMS Network Testing (INT); IMS specific use of Session Initiation Protocol (SIP) and Session Description Protocol (SDP); Conformance Testing; Part 1: Protocol Implementation Conformance Statement (PICS)

ETSI TS 186 008-1 V1.2.1 (2012-11)

IMS Network Testing (INT); IMS/NGN Performance Benchmark; Part 1: Core Concepts

ETSI TS 101 592 V1.1.1 (2012-10)

IMS Network Testing (INT); Signalling Connection Control Part User Adaptation Layer (SUA); (IETF RFC 3868); Test Suite Structure and Test Purposes (TSS&TP) Conformance testing

ETSI TS 101 594-1 V5.1.1 (2012-10)

IMS Network Testing (INT); Explicit Communication Transfer (ECT) using IP Multimedia (IM) Core Network (CN) subsystem; Conformance Test Specification; Part 1: Protocol Implementation Conformance Statement (PICS)

ETSI TS 101 594-2 V5.1.1 (2012-10)

IMS Network Testing (INT); Explicit Communication Transfer (ECT) using IP Multimedia (IM) Core Network (CN) subsystem; Conformance Test Specification; Part 2: Test Suite Structure and Test Purposes (TSS&TP)

ETSI TS 101 595-1 V5.1.1 (2012-10)

IMS Network Testing (INT); Malicious Communication Identification (MCID) using IP Multimedia (IM) Core Network (CN) subsystem; Conformance Test Specification; Part 1: Protocol Implementation Conformance Statement (PICS)

ETSI TS 101 595-2 V5.1.1 (2012-10)

IMS Network Testing (INT); Malicious Communication Identification (MCID) using IP Multimedia (IM) Core Network (CN) subsystem; Conformance Test Specification; Part 2: Test Suite Structure and Test Purposes (TSS&TP)

ETSI TS 101 596-1 V5.1.1 (2012-10)

IMS Network Testing (INT); Terminating Identification Presentation (TIP) and Terminating Identification Restriction (TIR) using IP Multimedia (IM) Core Network (CN) subsystem; Conformance Test Specification; Part 1: Protocol Implementation Conformance Statement (PICS)

ETSI TS 101 596-2 V5.1.1 (2012-10)

IMS Network Testing (INT); Terminating Identification Presentation (TIP) and Terminating Identification Restriction (TIR) using IP Multimedia (IM) Core Network (CN) subsystem; Conformance Test Specification; Part 2: Test Suite Structure and Test Purposes (TSS&TP)

ETSI TS 101 588-2 V5.1.1 (2012-10)

IMS Network Testing (INT); Completion of Communications to Busy Subscriber (CCBS) and Completion of Communications by No Reply (CCNR) using IP Multimedia (IM) Core Network (CN) subsystem; Conformance Test Specification; Part 2: Test Suite Structure and Test Purposes (TSS&TP)

ETSI TS 101 588-1 V5.1.1 (2012-10)

IMS Network Testing (INT); Completion of Communications to Busy Subscriber (CCBS) and Completion of Communications by No Reply (CCNR) using IP Multimedia (IM) Core Network (CN) subsystem; Conformance Test Specification; Part 1: Protocol Implementation Conformance Statement (PICS)

ETSI TS 186 025-3 V1.1.1 (2012-10)

IMS Network Testing (INT); IMS/PES Performance Benchmark; Part 3: Traffic Sets and Traffic Profiles

ETSI TS 101 591 V1.1.1 (2012-10)

IMS Network Testing (INT); SS7 Message Transfer Part 2 - User Peer-to-Peer Adaptation Layer (M2PA); (IETF RFC 4165); Test Suite Structure and Test Purposes (TSS&TP) Conformance Testing

ETSI TS 186 017-1 V5.1.1 (2012-09)

IMS Network Testing (INT); Anonymous Communication Rejection (ACR) and Communication Barring (CB) using IP Multimedia (IM) Core Network (CN) subsystem 3GPP Release 10; Conformance Testing Specification Part 1: Protocol Implementation Conformance Statement (PICS)

ETSI TS 186 017-2 V5.1.1 (2012-09)

IMS Network Testing (INT); Anonymous Communication Rejection (ACR) and Communication Barring (CB) using IP Multimedia (IM) Core Network (CN) subsystem; Conformance Test Specification; Part 2: Test Suite Structure and Test Purposes (TSS&TP)

ETSI TS 101 585 V1.1.2 (2012-09)

IMS Network Testing (INT); NGN/IMS interconnection tests at the Ic Interface; Test Suite Structure and Test Purposes (TSS&TP)

ETSI TS 101 606-2 V1.1.1 (2012-09)

IMS Network Testing (INT); Diameter Conformance testing for Gx interface; Part 2: Test Suite Structure (TSS) and Test Purposes (TP)

ETSI TS 101 606-3 V1.1.1 (2012-09)

IMS Network Testing (INT); Diameter Conformance testing for Gx interface; Part 3: Abstract Test Suite (ATS) and partial Protocol Implementation eXtra Information for Testing (PIXIT) proforma specification

ETSI TS 101 585 V1.1.1 (2012-08)

IMS Network Testing (INT); NGN/IMS interconnection tests at the Ic Interface; Part 1: Protocol Implementation Conformance Statement (PICS)

ETSI TS 102 710-2 V3.2.1 (2012-07)

IMS Network Testing (INT); Interworking between the IP Multimedia (IM) Core Network (CN) subsystem and Circuit Switched (CS) networks (Release 8); Part 2: Test Suite Structure and Test Purposes (TSS&TP)

ETSI TS 101 606-1 V1.1.1 (2012-07)

IMS Network Testing (INT); Diameter Conformance testing for Gx interface; Part 1: Protocol Implementation Conformance Statement (PICS)

ETSI TS 102 901 V4.1.1 (2012-05)

IMS Network Testing (INT); IMS NNI Interoperability Test Specifications IMS NNI interoperability test descriptions for RCS

ETSI TS 186 011-3 V4.1.3 (2012-05)

IMS Network Testing (INT); IMS NNI Interoperability Test Specifications; Part 3: Abstract Test Suite (ATS) and partial Protocol Implementation eXtra Information for Testing (PIXIT)

ETSI TS 186 011-2 V4.1.3 (2012-05)

IMS Network Testing (INT); IMS NNI Interoperability Test Specifications; Part 2: Test description for IMS NNI Interoperability

ETSI TS 186 011-1 V4.1.3 (2012-05)

IMS Network Testing (INT); IMS NNI Interoperability Test Specifications; Part 1: Test purposes for IMS NNI Interoperability

ETSI TS 101 586 V1.1.1 (2012-04)

IMS Network Testing (INT); User Documentation and IMS Codec and Adapter layer software for IPv6 and 3GPP Release 9

ETSI TS 101 587 V1.1.1 (2012-04)

IMS Network Testing (INT); Abstract Test Suite for IMS & EPC Interoperability

ETSI TS 101 580-3 V1.1.1 (2012-04)

IMS Network Testing (INT); Diameter Conformance testing for Rx interface; Part 3: Abstract Test Suite (ATS) and partial Protocol Implementation eXtra Information for Testing (PIXIT) proforma specification

ETSI TS 101 580-2 V1.1.1 (2012-04)

IMS Network Testing (INT); Diameter Conformance testing for Rx interface; Part 2: Test Suite Structure (TSS) and Test Purposes (TP)

ETSI TS 101 580-1 V1.1.1 (2012-04)

IMS Network Testing (INT); Diameter Conformance testing for Rx interface; Part 1: Protocol Implementation Conformance Statement (PICS)

ETSI TS 102 709-3 V3.1.1 (2012-02)

IMS Network Testing (INT); Interworking between the 3GPP Cs domain with BICC or ISUP as signalling protocol and external SIP-I networks; Part 3: Abstract Test Suite (ATS) and partial Protocol Implementation eXtra Information for Testing (PIXIT)

ETSI TS 186 006-3 V3.1.1 (2012-01)

IMS Network Testing (INT); Originating Identification Presentation (OIP) and Originating Identification Restriction (OIR); using IP Multimedia (IM) Core Network (CN) subsystem; Conformance Testing; Part 3: Abstract Test Suite (ATS) and partial Protocol Implementation eXtra Information for Testing (PIXIT) proforma specification

ETSI TS 186 010-3 V3.1.1 (2012-01)

IMS Network Testing (INT); Conference (CONF) using IP Multimedia (IM) Core Network (CN) subsystem; Conformance Testing; Part 3: Abstract Test Suite (ATS) and partial Protocol Implementation eXtra Information for Testing (PIXIT) proforma specification

ETSI TS 186 007-3 V3.1.1 (2012-01)

IMS Network Testing (INT); Communication HOLD (HOLD) using IP Multimedia (IM) Core Network (CN) subsystem; Conformance Testing; Part 3: Abstract Test Suite (ATS) and partial Protocol Implementation eXtra Information for Testing (PIXIT) proforma specification

ETSI TS 186 014-3 V3.1.1 (2012-01)

IMS Network Testing (INT); Communication Diversion (CDIV) using IP Multimedia (IM) Core Network (CN) subsystem; Conformance Testing; Part 3: Abstract Test Suite (ATS) and partial Protocol Implementation eXtra Information for Testing (PIXIT) proforma specification

ETSI TS 186 022-3 V3.1.1 (2012-01)

IMS Network Testing (INT); Communication Waiting (CW) using IP Multimedia (IM) Core Network (CN) subsystem; Conformance Testing; Part 3: Abstract Test Suite (ATS) and partial Protocol Implementation eXtra Information for Testing (PIXIT) proforma specification

ETSI TS 102 891-3 V3.1.1 (2012-01)

IMS Network Testing (INT); Message Waiting Indication (MWI) using IP Multimedia (IM) Core Network (CN) subsystem; Conformance Testing; Part 3: Abstract Test Suite (ATS) and partial Protocol Implementation eXtra Information for Testing (PIXIT) proforma specification

ETSI TS 102 901 V2.1.1 (2011-11)

IMS Network Testing (INT); IMS NNI Interoperability Test Specifications; IMS NNI interoperability test descriptions for RCS

ETSI TS 103 029 V3.1.1 (2011-11)

IMS Network Testing (INT); IMS & EPC Interoperability test descriptions

ETSI TS 186 011-1 V4.1.1 (2011-10)

IMS Network Testing (INT); IMS NNI Interoperability Test Specifications; Part 1: Test Purposes for IMS NNI Interoperability

ETSI TS 186 011-2 V4.1.1 (2011-10)

IMS Network Testing (INT); IMS NNI Interoperability Test Specifications; Part 2: Test Descriptions for IMS NNI Interoperability

ETSI TS 101 553-1 V1.1.1 (2011-10)

Technical Committee for IMS Network Testing (INT); Testing of the IBCF requirements; Part 1: Protocol Implementation Conformance Statement (PICS)

ETSI TS 101 553-2 V3.1.1 (2011-08)

Technical Committee for IMS Network Testing (INT); Testing of the IBCF requirements; Part 2: Test Suite Structure and Test Purposes (TSS&TP)

ETSI TS 102 891-2 V3.2.1 (2011-08)

Technical Committee for IMS Network Testing (INT); Message Waiting Indication (MWI) using IP Multimedia (IM) Core Network (CN) subsystem; Part 2: Test Suite Structure and Test Purposes (TSS&TP)

ETSI TS 186 022-2 V3.1.1 (2011-08)

Technical Committee for IMS Network Testing (INT); Communication Waiting (CW) using IP Multimedia (IM) Core Network (CN) subsystem; Conformance Testing; Part 2: Test Suite Structure and Test Purposes (TSS&TP)

ETSI TS 186 007-2 V3.1.1 (2011-08)

Technical Committee for IMS Network Testing (INT); Communication HOLD (HOLD) using IP Multimedia (IM) Core Network (CN) subsystem; Conformance Testing; Part 2: Test Suite Structure and Test Purposes (TSS&TP)

ETSI TS 186 010-2 V3.1.1 (2011-07)

Technical Committee for IMS Network Testing (INT); Conference (CONF) using IP Multimedia (IM) Core Network (CN) subsystem; Conformance Testing; Part 2: Test Suite Structure and Test Purposes (TSS&TP)

ETSI TS 186 014-2 V3.1.1 (2011-07)

Technical Committee for IMS Network Testing (INT); PSTN/ISDN simulation services; Communication Diversion (CDIV); Part 2: Test Suite Structure and Test Purposes (TSS&TP)

ETSI TS 186 006-2 V3.1.1 (2011-07)

Technical Committee for IMS Network Testing (INT); Originating Identification Presentation (OIP) and Originating Identification Restriction (OIR) using IP Multimedia (IM) Core Network (CN) subsystem; Conformance Testing; Part 2: Test Suite Structure and Test Purposes (TSS&TP)

ETSI TR 101 560 V1.1.1 (2011-06)

IMS Network Testing (INT); IMS NNI Interworking Test Scripts for RCS Release 2.0

ETSI TS 186 011-3 V3.1.1 (2011-06)

IMS Network Testing (INT); IMS NNI Interoperability Test Specifications; Part 3: Abstract Test Suite (ATS) and partial Protocol Implementation eXtra Information for Testing (PIXIT)

ETSI TS 186 011-1 V3.1.1 (2011-06)

IMS Network Testing (INT); IMS NNI InteroperabilityTest Specifications; Part 1: Test Purposes for IMS NNI Interoperability

ETSI TS 186 011-2 V3.1.1 (2011-06)

IMS Network Testing (INT); IMS NNI Interoperability Test Specifications; Part 2: Test Description for IMS NNI Interoperability

ETSI TS 102 901 V1.1.1 (2011-06)

IMS Network Testing (INT); IMS NNI Interoperability Test Specifications; IMS NNI interoperability test descriptions for RCS

ETSI TR 101 561 V1.1.1 (2011-06)

IMS Network Testing (INT); Enhancement of Automated Interoperability Testing Framework in IMS core networks: Test adapter And codec design suited for TTCN-3 interoperability testing

ETSI TS 102 710-1 V3.1.1 (2011-05)

IMS Network Testing (INT); Interworking between the IP Multimedia (IM) Core Network (CN) subsystem and Circuit Switched (CS) networks (Release 8); Part 1: Protocol Implementation Conformance Statement (PICS)

ETSI TS 102 710-2 V3.1.1 (2011-05)

IMS Network Testing (INT); Interworking between the IP Multimedia (IM) Core Network (CN) subsystem and Circuit Switched (CS) networks (Release 8); Part 2: Test Suite Structure and Test Purposes (TSS&TP)

ETSI TS 186 009-2 V2.2.1 (2011-03)

Technical Committee for IMS Network Testing (INT); SIP-ISUP Interworking between the IP Multimedia (IM) Core Network (CN) subsystem and Circuit Switched (CS) networks; Part 2: Test Suite Structure and Test Purposes (TSS&TP)

ETSI TS 102 709-2 V3.2.1 (2011-03)

Technical Committee for IMS Network Testing (INT); Interworking between the 3GPP Cs domain with BICC or ISUP as signalling protocol and external SIP-I networks; Part 2: Test Suite Structure and Test Purposes (TSS&TP)

ETSI TS 186 001-3 V2.2.1 (2010-11)

IMS Network Testing (INT); Network Integration Testing; Part 3: Test Suite Structure and Test Purposes (TSS&TP) for SIP-SIP

ETSI TS 186 018-3 V2.2.1 (2010-11)

IMS Network Testing (INT); Malicious Communication Identification (MCID) Conformance Testing; Part 3: Abstract Test Suite (ATS) and partial Protocol Implementation eXtra Information for Testing (PIXIT) proforma specification

ETSI TS 186 017-3 V2.2.1 (2010-10)

Technical Committee for IMS Network Testing (INT); Anonymous Communication Rejection (ACR) and Communication Barring (CB) conformance testing; Part 3: Abstract Test Suite (ATS) and partial Protocol Implementation eXtra Information for Testing (PIXIT) proforma specification

ETSI TS 186 016-3 V2.2.1 (2010-10)

Technical Committee for IMS Network Testing (INT); Closed User Group (CUG); Conformance Testing; Part 3: Abstract Test Suite (ATS) and partial Protocol Implementation eXtra Information for Testing (PIXIT) proforma specification

ETSI TS 186 005-3 V2.2.1 (2010-10)

IMS Network Testing (INT); Terminating Identification Presentation (TIP) and Terminating Identification Restriction (TIR) Conformance Testing; Part 3: Abstract Test Suite (ATS) and partial Protocol Implementation eXtra Information for Testing (PIXIT) proforma specification

ETSI TS 186 001-4 V2.2.1 (2010-09)

IMS Network Testing (INT); Network Integration Testing; Part 4: Abstract Test Suite (ATS) and partial Protocol Implementation eXtra Information for Testing (PIXIT) proforma specification

ETSI TS 102 891-1 V3.1.1 (2010-07)

Technical Committee for IMS Network Testing (INT); Message Waiting Indication (MWI) using IP Multimedia (IM) Core Network (CN) subsystem; Part 1: Protocol Implementation Conformance Statement (PICS)

ETSI TS 102 891-2 V3.1.1 (2010-07)

Technical Committee for IMS Network Testing (INT); Message Waiting Indication (MWI) using IP Multimedia (IM) Core Network (CN) subsystem; Part 2: Test Suite Structure and Test Purposes (TSS&TP)

ETSI TS 102 709-1 V3.1.1 (2010-06)

Technical Committee for IMS Network Testing (INT); Interworking between the 3GPP Cs domain with BICC or ISUP as signalling protocol and external SIP-I networks; Part 1: Protocol Implementation Conformance Statement (PICS)

ETSI TS 102 709-2 V3.1.1 (2010-06)

Technical Committee for IMS Network Testing (INT); Interworking between the 3GPP Cs domain with BICC or ISUP as signalling protocol and external SIP-I networks; Part 2: Test Suite Structure and Test Purposes (TSS&TP)

ETSI TS 186 011-1 V2.3.1 (2010-04)

Technical Committee for IMS Network Testing (INT); IMS NNI Interoperability Test Specifications; Part 1: Test purposes for IMS NNI Interoperability

ETSI TS 186 011-2 V2.3.1 (2010-04)

Technical Committee for IMS Network Testing (INT); IMS NNI Interoperability Test Specifications; Part 2: Test descriptions for IMS NNI Interoperability

ETSI TS 102 790-3 V1.1.1 (2010-03)

Technical Committee for IMS Network Testing (INT); Network Integration Testing; IMS specific use of Session Initiation Protocol (SIP) and Session Description Protocol (SDP); Conformance Testing; Part 3: Abstract Test Suite (ATS) and partial Protocol Implementation eXtra Information for Testing (PIXIT) proforma specification

ETSI TS 102 790-1 V1.1.1 (2010-03)

Technical Committee for IMS Network Testing (INT); Network Integration Testing; IMS specific use of Session Initiation Protocol (SIP) and Session Description Protocol (SDP); Conformance Testing; Part 1: Protocol Implementation Conformance Statement (PICS)

ETSI TS 102 790-2 V1.1.1 (2010-03)

Technical Committee for IMS Network Testing (INT); Network Integration Testing; IMS specific use of Session Initiation Protocol (SIP) and Session Description Protocol (SDP); Conformance Testing; Part 2: Test Suite Structure (TSS) and Test Purposes (TP)

ETSI TS 186 001-3 V2.1.1 (2009-10)

Technical Committee for IMS Network Testing (INT); Network Integration Testing; Part 3: Test Suite Structure and Test Purposes (TSS&TP) for SIP-SIP

ETSI TS 186 011-3 V2.2.1 (2009-09)

Technical Committee for IMS Network Testing (INT); IMS NNI Interworking Test Specifications; Part 3: Abstract Test Suite (ATS) and partial Protocol Implementation eXtra Information for Testing (PIXIT)

ETSI TS 186 016-3 V2.1.1 (2009-09)

Technical Committee for IMS Network Testing (INT); Closed User Group (CUG); Conformance Testing; Part 3: Abstract Test Suite (ATS) and partial Protocol Implementation eXtra Information for Testing (PIXIT) proforma specification

ETSI TS 186 005-3 V2.1.1 (2009-09)

Technical Committee for IMS Network Testing (INT); Terminating Identification Presentation (TIP) and Terminating Identification Restriction (TIR) Conformance Testing; Part 3: Abstract Test Suite (ATS) and partial Protocol Implementation eXtra Information for Testing (PIXIT) proforma specification

ETSI TS 186 017-3 V2.1.1 (2009-07)

Technical Committee for IMS Network Testing (INT); Anonymous Communication Rejection (ACR) and Communication Barring (CB) conformance testing; Part 3: Abstract Test Suite (ATS) and partial Protocol Implementation eXtra Information for Testing (PIXIT) proforma specification

ETSI TS 186 018-3 V2.1.1 (2009-07)

Technical Committee for IMS Network Testing (INT); Malicious Communication Identification (MCID) Conformance Testing; Part 3: Abstract Test Suite (ATS) and partial Protocol Implementation eXtra Information for Testing (PIXIT) proforma specification

ETSI TS 186 011-1 V2.2.1 (2009-03)

Technical Committee for IMS Network Testing (INT); IMS NNI Interworking Test Specifications; Part 1: Test Purposes for IMS NNI Interworking

ETSI TS 186 011-2 V2.2.1 (2009-03)

Technical Committee for IMS Network Testing (INT); IMS NNI Interworking Test Specifications; Part 2: Test description for IMS NNI Interworking.

ETSI TS 186 011-1 V1.1.1 (2009-03)

Technical Committee for IMS Network Testing (INT); IMS NNI Interworking Test Specifications; Part 1: Test Purposes for IMS NNI Interworking

ETSI TS 186 011-2 V1.1.1 (2009-03)

Technical Committee for IMS Network Testing (INT); IMS NNI Interworking Test Specifications; Part 2: Test description for IMS NNI Interworking.

Standards under development:

There are not any standards under development.

ANNEX B. Scopes for relevant standards

This Annex specifies the scopes of the standards on Chapter 3.

EN 61851-1:2011 Electric vehicle conductive charging system - Part 1: General requirements

IEC 61851-1:2010 applies to on-board and off-board equipment for charging electric road vehicles at standard AC supply voltages (as per IEC 60038) up to 1 000 V and at DC voltages up to 1 500 V, and for providing electrical power for any additional services on the vehicle if required when connected to the supply network. It includes characteristics and operating conditions of the supply device and the connection to the vehicle; operators and third party electrical safety, and the characteristics to be complied with by the vehicle with respect to the AC/DC EVSE, only when the EV is earthed. This second edition cancels and replaces the first edition published in 2001. It constitutes a technical revision. The main changes with respect to the first edition of this standard are: - revision of connector definitions and current levels (Clause 8); - modification definition of pilot wire to pilot function; - division of Clause 9 to create Clauses 9 and 11; - Clause 9: specific requirements for inlet, plug and socket-outlet; - Clause 11: EVSE requirements: the basic generic requirements for charging stations; - renumbering of annexes; - deletion of previous Annex A and integration of charging cable requirements into new Clause 10; - Annex B becomes Annex A and is normative for all systems using a PWM pilot function with a pilot wire; Annex C becomes Annex B; - replacement of previous Annex D (coding tables for power indicator) with B.4 in Annex B using new values; - new informative Annex C describing an alternative pilot function system.

https://www.cenelec.eu/dyn/www/f?p=104:110:492132631119301::::FSP_ORG_ID,FSP_PROJECT,FSP_LANG_ID:1258145,54309,25

EN 61851-22:2002 Electric vehicle conductive charging system - Part 22: AC electric vehicle charging station

This part of EN 61851, together with part 1, gives the requirements for AC electric vehicle charging stations for conductive connection to an electric vehicle, with AC supply voltages according to EN 60038 up to 690 V.

https://www.cenelec.eu/dyn/www/f?p=104:110:492132631119301::::FSP_ORG_ID,FSP_PROJECT,FSP_LANG_ID:1258145,54903,25

EN 61851-23:2014/ AC:2016-06 Conductive charging systems for electric vehicles - Part 23: DC charging stations for electric vehicles

IEC 61851-23:2014, together with IEC 61851-1:2010, gives the requirements for DC electric vehicle (EV) charging stations, herein also referred to as 'DC charger', for conductive connection to the vehicle, with an AC or DC input voltage up to 1 000 V AC and up to 1 500 V DC according to IEC 60038. It provides the general requirements for the control communication between a DC EV charging station and an EV. The requirements for digital communication between DC EV charging station and electric vehicle for control of DC charging are defined in IEC 61851-24.

https://www.cenelec.eu/dyn/www/f?p=104:110:492132631119301::::FSP_ORG_ID,FSP_PROJ ECT,FSP_LANG_ID:1258145,62786,25

EN 60038:2011 CENELEC standard voltages

IEC 60038:2009 specifies standard voltage values which are intended to serve as preferential values for the nominal voltage of electrical supply systems, and as reference values for equipment and system design. This seventh edition supersedes the sixth edition (1993), its Amendment 1 (1994) and its Amendment 2 (1997). It constitutes a technical revision. The significant technical changes are: - the addition of the values of 230 V (50 Hz) and 230/400 V (60 Hz) to Table 1; - the replacement of the utilization voltage range at LV by a reference to the relevant standard and an informative annex; - the addition of the value of 30 kV to Table 3; - the replacement of the value of 1 050 kV by 1 100 kV in Table 5. It has the status of a horizontal standard in accordance with IEC Guide 108.

https://www.cenelec.eu/dyn/www/f?p=104:110:492132631119301::::FSP_ORG_ID,FSP_PROJ ECT,FSP_LANG_ID:1258595,55078,25

EN 60529:1991/A2:2013/AC:2019-02 Degrees of protection provided by cases (IP code)

Applies to the classification of degrees of protection provided by enclosures for electrical equipment with a rated voltage not exceeding 72,5 kV. Has the status of a basic safety publication in accordance with IEC Guide 104.

https://www.cenelec.eu/dyn/www/f?p=104:110:492132631119301::::FSP_ORG_ID,FSP_PROJ ECT,FSP_LANG_ID:1258025,68973,25

EN 61439-1:2011 Low-voltage switchgear and control gear assemblies - Part 1: General requirements

IEC 61439-1:2011 lays down the definitions and states the service conditions, construction requirements, technical characteristics and verification requirements for low-voltage switchgear and controlgear assemblies. This standard cannot be used alone to specify an ASSEMBLY or used for a purpose of determining conformity. ASSEMBLIES shall comply with the relevant part of the IEC 61439 series; Parts 2 onwards. This standard applies to low-voltage switchgear and controlgear assemblies (ASSEMBLIES) only when required by the relevant ASSEMBLY standard

as follows: - ASSEMBLIES for which the rated voltage does not exceed 1 000 V in case of AC or 1 500 V in case of DC; - stationary or movable ASSEMBLIES with or without enclosure; - ASSEMBLIES intended for use in connection with the generation, transmission, distribution and conversion of electric energy, and for the control of electric energy consuming equipment; - ASSEMBLIES designed for use under special service conditions, for example in ships and in rail vehicles provided that the other relevant specific requirements are complied with; - ASSEMBLIES designed for electrical equipment of machines provided that the other relevant specific requirements are complied with. This second edition cancels and replaces the first edition published in 2009. It constitutes a technical revision. This second edition includes the following significant technical changes with respect to the last edition of IEC 61439-1: - revision of service conditions in Clause 7; - numerous changes regarding verification methods in Clause 10; - modification of routine verification in respect of clearances and creepage distances (see 11.3); - adaption of the tables in Annex C and Annex D to the revised requirements and verification methods; - revision of the EMC requirements in Annex J; - shifting of tables from Annex H to new Annex N; - new Annex O with guidance on temperature rise verification; - new Annex P with a verification method for short-circuit withstand strength (integration of the content of IEC/TR 61117); - update of normative references; - general editorial review.

https://www.cenelec.eu/dyn/www/f?p=104:110:492132631119301::::FSP_ORG_ID,FSP_PROJECT,FSP_LANG_ID:1929960,51358,25

EN 61439-2:2011 Low-voltage switchgear and control gear assemblies Part 2: Energy switchgear assemblies

IEC 61439-2:2011 defines the specific requirements of power switchgear and controlgear assemblies (PSC-ASSEMBLIES) as follows: - ASSEMBLIES for which the rated voltage does not exceed 1 000 V in case of AC or 1 500 V in case of DC; - stationary or movable ASSEMBLIES with or without enclosure; - ASSEMBLIES intended for use in connection with the generation, transmission, distribution and conversion of electric energy, and for the control of electric energy consuming equipment; - ASSEMBLIES designed for use under special service conditions, for example in ships and in rail vehicles provided that the other relevant specific requirements are complied with; - ASSEMBLIES designed for electrical equipment of machines. Supplementary requirements for ASSEMBLIES forming part of a machine are covered by the IEC 60204 series. This second edition cancels and replaces the first edition published in 2009. It constitutes a technical revision. This second edition includes the following significant technical changes with respect to the last edition of IEC 61439-2: - clarification of the scope; - revision of requirements for withdrawable and removable parts; - revision of mechanical impact test (10.2.6); - extension of Table 101; - review of Table BB.1 to reflect modified requirements and verifications; - general editorial review. This publication is to be read in conjunction with IEC 61439-1:2009.

https://www.cenelec.eu/dyn/www/f?p=104:110:492132631119301::::FSP_ORG_ID,FSP_PROJECT,FSP_LANG_ID:1929960,47992,25

EN 60664-1:2007 Insulation coordination for electrical equipment in low voltage systems - Part 1: Principles, requirements, and tests

Deals with insulation coordination for equipment within low-voltage systems. It applies to equipment for use up to 2 000 m above sea level having a rated voltage up to AC 1 000 V with rated frequencies up to 30 kHz, or a rated voltage up to DC 1 500 V. It specifies the requirements for clearances, creepage distances and solid insulation for equipment based upon their performance criteria. It includes methods of electric testing with respect to insulation coordination. The minimum clearances specified in this standard do not apply where ionized gases occur. Special requirements for such situations may be specified at the discretion of the relevant technical committee. This standard does not deal with distances - through liquid insulation, - through gases other than air, - through compressed air. Main changes have been made with respect to the previous edition: - Amendment of Japanese mains conditions with regard to the rated impulse voltages, the rationalized voltages and the nominal voltages of supply systems for different modes of overvoltage control - Amendment of dimensioning of clearances smaller than 0,01 mm - Alignment of the table and the corresponding formula regarding test voltages for verifying clearances at different altitudes - Amendment of interpolation of the creepage distance values for functional insulation - Amendment of creepage distance dimensioning taking into account ribs - Revision of the former Clause 4 'Tests and measurements' (now Clause 6) to achieve a more detailed description of the tests and their purpose, the test equipment and possible alternatives - Change of Annex C 'Partial discharge test methods' from a former technical report, Type 2 (now called TS), to a normative Annex C. Has the status of a basic safety publication in accordance with IEC Guide 104.

https://www.cenelec.eu/dyn/www/f?p=104:110:492132631119301::::FSP_ORG_ID,FSP_PROJECT,FSP_LANG_ID:1258497,50513,25

EN 61140:2016 Protection against electric shock – Common requirements for installations and equipment

IEC 61140:2016 applies to the protection of persons and livestock against electric shock. The intent is to give fundamental principles and requirements which are common to electrical installations, systems and equipment or necessary for their coordination, without limitations with regard to the magnitude of the voltage or current, or the type of current, and for frequencies up to 1 000 Hz. It has the status of a basic safety publication in accordance with IEC Guide 104. This fourth edition cancels and replaces the third edition published in 2001 and Amendment 1:2004. This edition constitutes a technical revision.

https://www.cenelec.eu/dyn/www/f?p=104:110:492132631119301::::FSP_ORG_ID,FSP_PROJECT,FSP_LANG_ID:1257163,43881,25

EN 50178:1997 Electronic equipment for use in power installations

This European Standard applies to the use of electronic equipment (EE) in power installations where a uniform technical level with respect to safety and reliability is necessary. This standard also applies to EE which are not covered by a specific product standard. This European Standard

defines the minimum requirements for the design and manufacture of EE, for protection against electric shock, for testing and its integration into systems for power installations. This European Standard does not cover the following applications: Electrical accessories and electrical appliances for household and similar purposes, medical equipment, electric railway equipment, data processing without control on systems and processes, public and private non-industrial telecommunication and radio communication equipment and networks, protection relays, residual-current-operated protective devices, uninterruptible power supplies, lighting equipment and public charging equipment for electrical vehicles

https://www.cenelec.eu/dyn/www/f?p=104:110:492132631119301::::FSP_ORG_ID,FSP_PROJECT,FSP_LANG_ID:1258337,45892,25

EN 60947-1:2007/A2:2014 Low-voltage switchgear and controlgear - Part 1: General rules

The purpose of this standard is to harmonize as far as practicable all rules and requirements of a general nature applicable to low-voltage switchgear and controlgear in order to obtain uniformity of requirements and tests throughout the corresponding range of equipment and to avoid the need for testing to different standards.

https://www.cenelec.eu/dyn/www/f?p=104:110:492132631119301::::FSP_ORG_ID,FSP_PROJECT,FSP_LANG_ID:1929958,48554,25

EN 60947-3:2009/A2:2015 Low-voltage switchgear and controlgear - Part 3: Switches, disconnectors, switch-disconnectors and fuse-combination units

IEC 60947-3:2008 applies to switches, disconnectors, switch-disconnectors and fuse-combination units to be used in distribution circuits and motor circuits of which the rated voltage does not exceed 1 000 V AC or 1 500 V DC This part does not apply to equipment coming within the scope of IEC 60947-2, IEC 60947-4-1 and IEC 60947-5-1; however, when switches and fuse-combination units coming into the scope of this part are normally used to start, accelerate and/or stop an individual motor they shall also comply with the additional requirements given in Annex A. The requirements for single pole operated three pole switches are included in Annex C. Auxiliary switches fitted to equipment within the scope of this part shall comply with the requirements of IEC 60947-5-1. This part does not include the additional requirements necessary for electrical apparatus for explosive gas atmospheres. This edition includes the following significant technical changes with respect to the previous edition: - alignment with the fifth edition of IEC 60947-1; - a switching operation without current allowed between making and breaking operation (Table 3); - increased number of operations for AC-23 allowed with agreement of the manufacturer (Table 3); - simplified test procedure amended, f) added to 8.3.2.1.3; - temperature rise test shall be made at the rated operational current /e instead of the conventional enclosed thermal current /the (8.3.3.1).

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EN 60947-6-1:2005/A1:2014 Low-voltage switchgear and controlgear - Part 6-1: Multiple function equipment - Transfer switching equipment

This part of EN 60947 applies to transfer switching equipment (TSE) to be used in power systems with interruption of the supply to the load during transfer, the rated voltage of which does not exceed 1 000 V AC or 1 500 V DC

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EN 60947-6-2:2003/A1:2007 Low-voltage switchgear and controlgear - Part 6-2: Multiple function equipment - Control and protective switching devices (or equipment) (CPS)

Applies to control and protective switching devices (or equipment) (CPS), the main contacts of which are intended to be connected to circuits of rated voltage not exceeding 1 000 V AC or 1 500 V DC CPSs are intended to provide both protective and control functions for circuits and are operated otherwise than by hand. They may also fulfil additional functions, such as isolation.

https://www.cenelec.eu/dyn/www/f?p=104:110:492132631119301::::FSP_ORG_ID,FSP_PROJECT,FSP_LANG_ID:1929958,43655,25

EN 60950-1:2006/A2:2013 Information technology equipment - Safety - Part 1: General requirements

Applicable to mains-powered or battery-powered information technology equipment, including electrical business equipment and associated equipment, with a RATED VOLTAGE not exceeding 600 V. Also applicable are components and subassemblies intended for incorporation in information technology equipment. It is not expected that such components and subassemblies comply with every aspect of the standard, provided that the complete information technology equipment, incorporating such components and subassemblies, does comply. The contents of the corrigenda of August 2006 and August 2013 have been included in this copy.

https://www.cenelec.eu/dyn/www/f?p=104:110:492132631119301::::FSP_ORG_ID,FSP_PROJECT,FSP_LANG_ID:1257189,53711,25

EN IEC 61000-6-1:2007 Electromagnetic compatibility (EMC) - Part 6-1: Generic standards - Immunity standard for residential, commercial and light-industrial environments

Applies to electrical and electronic apparatus intended for use in residential, commercial and light-industrial environments. Immunity requirements in the frequency range 0 Hz to 400 GHz are covered. No tests need to be performed at frequencies where no requirements are specified. This generic EMC immunity standard is applicable if no relevant dedicated product or product-family EMC immunity standard exists. This standard applies to apparatus intended to be directly connected to a low-voltage public mains network or connected to a dedicated DC source which is intended to interface between the apparatus and the low-voltage public mains network. This standard applies also to apparatus which is battery operated or is powered by a non-public, but

non-industrial, low-voltage power distribution system if this apparatus is intended to be used in the locations described below. The environments encompassed by this standard are residential, commercial and light-industrial locations, both indoor and outdoor. The following list, although not comprehensive, gives an indication of locations which are included: - residential properties, for example houses, apartments; - retail outlets, for example shops, supermarkets; - business premises, for example offices, banks; - areas of public entertainment, for example cinemas, public bars, dance halls; - outdoor locations, for example petrol stations, car parks, amusement and sports centres; - light-industrial locations, for example workshops, laboratories, service centres. Locations which are characterised by being supplied directly at low voltage from the public mains network are considered to be residential, commercial or light-industrial. The immunity requirements have been selected to ensure an adequate level of immunity for apparatus at residential, commercial and light-industrial locations. The levels do not, however, cover extreme cases, which may occur at any location, but with an extremely low probability of occurrenc

https://www.cenelec.eu/dyn/www/f?p=104:110:492132631119301::::FSP_ORG_ID,FSP_PROJECT,FSP_LANG_ID:1258289,43372,25

EN 61000-6-3:2007/A1:2011/AC:2012 Electromagnetic compatibility (EMC) - Part 6-3: Generic standards - Emission standard for residential, commercial and light-industrial environments

This part of IEC 61000 for EMC emission requirements applies to electrical and electronic apparatus intended for use in residential, commercial and light-industrial environments. Emission requirements in the frequency range 0 Hz to 400 GHz are covered. No measurement needs to be performed at frequencies where no requirement is specified. This generic EMC emission standard is applicable if no relevant dedicated product or product-family EMC emission standard exists. This standard applies to apparatus intended to be directly connected to a low-voltage public mains network or connected to a dedicated DC source, which is intended to interface between the apparatus and the low-voltage public mains network. This standard applies also to apparatus which is battery operated or is powered by a non-public, but non-industrial, low-voltage power distribution system if this apparatus is intended to be used in the locations described below. The environments encompassed by this standard are residential, commercial and light-industrial locations, both indoor and outdoor. The following list, although not comprehensive, gives an indication of locations that are included: - residential properties, for example houses, apartments; - retail outlets, for example shops, supermarkets; - business premises, for example offices, banks; - areas of public entertainment, for example cinemas, public bars, dance halls; - outdoor locations, for example petrol stations, car parks, amusement and sports centres; - light-industrial locations, for example workshops, laboratories, service centres. Locations that are characterised by being supplied directly at low voltage from the public mains network are considered to be residential, commercial or light-industrial. The object of this standard is to define the emission test requirements for apparatus defined in the scope in relation to continuous and transient, conducted and radiated disturbances. The emission requirements have been selected so as to ensure that disturbances generated by apparatus operating normally in residential, commercial and light-industrial locations do not exceed a level which could prevent other apparatus from operating as intended. Fault conditions of apparatus are not taken into account. Not all

disturbance phenomena have been included for testing purposes in this standard but only those considered as relevant for the equipment covered by this standard. These requirements represent essential electromagnetic compatibility emission requirements. Requirements are specified for each port considered.

https://www.cenelec.eu/dyn/www/f?p=104:110:492132631119301::::FSP_ORG_ID,FSP_PROJECT,FSP_LANG_ID:1258289,52095,25

HD 60364-4-41:2017/A12:2019 Low-voltage electrical installations - Part 4-41: Protection for safety - Protection against electric shock

ISO/TR 22411:2008 presents ergonomics data and guidelines for applying ISO/IEC Guide 71 in addressing the needs of older persons and persons with disabilities in standards development. It provides ergonomics data and knowledge about human abilities - sensory, physical and cognitive - and allergies, as well as guidance on the accessible design of products, services and environments.

https://www.cenelec.eu/dyn/www/f?p=104:110:492132631119301::::FSP_ORG_ID,FSP_PROJECT,FSP_LANG_ID:1257163,69969,25

HD 60364-6:2007 Low-voltage electrical installations - Part 6: Verification

Provides requirements for initial verification, by inspection and testing, of an electrical installation to determine, as far as reasonably practicable, whether the requirements of the other parts of IEC 60364 have been met and requirements for the reporting of the results of the initial verification. The initial verification takes place upon completion of a new installation or completion of additions or of alterations to existing installations. Provides requirements for periodic verification of an electrical installation to determine, as far as reasonably practicable, whether the installation and all its constituent equipment are in a satisfactory condition for use and requirements for the reporting of the results of the periodic verification.

https://www.cenelec.eu/dyn/www/f?p=104:110:492132631119301::::FSP_ORG_ID,FSP_PROJECT,FSP_LANG_ID:1257163,48407,25

ISO 17800:2017 Facility smart grid information model

ISO 17800:2017 provides the basis for common information exchange between control systems and end use devices found in single - and multi-family homes, commercial and institutional buildings, and industrial facilities that is independent of the communication protocol in use. It provides a common basis for electrical energy consumers to describe, manage, and communicate about electrical energy consumption and forecasts.

ISO 17800:2017 defines a comprehensive set of data objects and actions that support a wide range of energy management applications and electrical service provider interactions including:

a) on-site generation,

b) demand response,

c) electrical storage,

d) peak demand management,

e) forward power usage estimation,

f) load shedding capability estimation,

g) end load monitoring (sub metering),

h) power quality of service monitoring,

i) utilization of historical energy consumption data, and

j) direct load control.

https://www.iso.org/standard/71547.html

ISO/IEC 30101:2014 Information technology -- Sensor networks: Sensor network and its interfaces for smart grid system

ISO/IEC 30101:2014 is for sensor networks in order to support smart grid technologies for power generation, distribution, networks, energy storage, load efficiency, control and communications, and associated environmental challenges. This International Standard characterizes the requirements for sensor networks to support the aforementioned applications and challenges. Data from sensors in smart grid systems is collected, transmitted, published, and acted upon to ensure efficient coordination of the various systems and subsystems. The intelligence derived through the sensor networks supports synchronization, monitoring and responding, command and control, data/information processing, security, information routing, and human-grid display/graphical interfaces.

This International standard specifies

? interfaces between the sensor networks and other networks for smart grid system applications,

? sensor network architecture to support smart grid systems,

? interface between sensor networks with smart grid systems, and

? sensor network based emerging applications and services to support smart grid systems.

https://www.iso.org/standard/53221.html

IEC 62746-10-3:2018 Systems interface between customer energy management system and the power management system - Part 10-3: Open automated demand response - Adapting smart grid user interfaces to the IEC common information model

IEC 62746-10-3:2018 defines and describes methods and example XML artefacts that can be used to build a conformant adapter to enable interoperation between a utility distributed automation or demand response (DR) system based on the IEC common information model (CIM) and a utility smart grid user interface (SGUI) bridge standard (e.g., IEC 62746-10-1) to a customer

facility. The scope is restricted to a method to define payload mappings between any specific CIM profile that contains DR/DER information models and the SGUI bridge standards including IEC 62746-10-1.

https://webstore.iec.ch/publication/59771

EN ISO 15118-1:2019 Road vehicles - Vehicle to grid communication interface - Part 1: General information and use-case definition (ISO 15118-1:2019)

This document, as a basis for the other parts of the ISO 15118 series, specifies terms and definitions, general requirements and use cases for conductive and wireless HLC between the EVCC and the SECC. This document is applicable to HLC involved in conductive and wireless power transfer technologies in the context of manual or automatic connection devices. This document is also applicable to energy transfer either from EV supply equipment to charge the EV battery or from EV battery to EV supply equipment in order to supply energy to home, to loads or to the grid. This document provides a general overview and a common understanding of aspects influencing identification, association, charge or discharge control and optimisation, payment, load levelling, cybersecurity and privacy. It offers an interoperable EV-EV supply equipment interface to all e-mobility actors beyond SECC. The ISO 15118 series does not specify the vehicle internal communication between battery and other internal equipment (beside some dedicated message elements related to the energy transfer). NOTE 1 Electric road vehicles specifically are vehicles in categories M (used for carriage of passengers) and N (used for carriage of goods) (compare ECE/TR ANS/WP.29/78 ev.2). This does not prevent vehicles in other categories from adopting the ISO 15118 series as well. NOTE 2 This document is destined to orientate the message set of ISO 15118-2 and ISO 15118-20[1]. The absence of any particular use case in this document does not imply that it will not be put into practice, with the required messages. NOTE 3 This document, ISO 15118-2 and ISO 15118-20 are designed to work independent of data transfer medium used. However, the ISO 15118 series is made for fitting the specified data link layers in the corresponding documents in this series. [1] Under preparation. Stage at the time on publication: ISO/DIS 15118-20:2019.

https://standards.cen.eu/dyn/www/f?p=204:110:0::::FSP_PROJECT,FSP_ORG_ID:61047,6282&cs=1A0139A11DBC146380D400BA2A7389113

EN ISO 15118-2:2016 Road vehicles - Vehicle-to-grid communication Interface - Part 2: Network and application protocol requirements (ISO 15118-2:2014)

ISO 15118-2:2014 specifies the communication between battery electric vehicles (BEV) or plug-in hybrid electric vehicles (PHEV) and the Electric Vehicle Supply Equipment. The application layer message set defined in ISO 15118-2:2014 is designed to support the energy transfer from an EVSE to an EV. ISO 15118-1 contains additional use case elements describing the bidirectional energy transfer. The implementation of these use cases requires enhancements of the application layer message set defined herein. The purpose of ISO 15118-2:2014 is to detail the communication between an EV (BEV or a PHEV) and an EVSE. Aspects are specified to detect a vehicle in a communication network and enable an Internet Protocol (IP) based communication

between EVCC and SECC. ISO 15118-2:2014 defines messages, data model, XML/EXI based data representation format, usage of V2GTP, TLS, TCP and IPv6. In addition, it describes how data link layer services can be accessed from a layer 3 perspective. The Data Link Layer and Physical Layer functionality is described in ISO 15118-3.

https://standards.cen.eu/dyn/www/f?p=204:110:0::::FSP_PROJECT,FSP_ORG_ID:40100,6282&cs=1B44CBCD55F9032E7A34706E686EDA6FA

EN ISO 15118-3:2016 Road vehicles - Vehicle to grid Communication interface - Part 3: Physical and data link layer requirements (ISO 15118-3:2015)

ISO 15118-3:2015 specifies the requirements of the physical and data link layer for a high-level communication, directly between battery electric vehicles (BEV) or plug-in hybrid electric vehicles (PHEV), termed as EV (electric vehicle) [ISO-1], based on a wired communication technology and the fixed electrical charging installation [Electric Vehicle Supply Equipment (EVSE)] used in addition to the basic signalling, as defined in [IEC-1]. It covers the overall information exchange between all actors involved in the electrical energy exchange. ISO 15118 (all parts) is applicable for manually connected conductive charging. Only "[IEC-1] modes 3 and 4" EVSEs, with a high-level communication module, are covered by this part of ISO 15118.

https://standards.cen.eu/dyn/www/f?p=204:110:0::::FSP_PROJECT,FSP_ORG_ID:40096,6282&cs=17BD488F9C788D4E1A0E2F4DE6372D24D

EN ISO 15118-4:2019 Road vehicles - Vehicle to grid communication interface - Part 4: Network and application protocol conformance test (ISO 15118-4:2018)

ISO 15118-4:2018 specifies conformance tests in the form of an Abstract Test Suite (ATS) for a System Under Test (SUT) implementing an EVCC or SECC according to ISO 15118-2. These conformance tests specify the testing of capabilities and behaviors of an SUT as well as checking what is observed against the conformance requirements specified in ISO 15118-2 and against what the supplier states the SUT implementation's capabilities are. The capability tests within the ATS check that the observable capabilities of the SUT are in accordance with the static conformance requirements defined in ISO 15118-2. The behavior tests of the ATS examine an implementation as thoroughly as is practical over the full range of dynamic conformance requirements defined in ISO 15118-2 and within the capabilities of the SUT (see NOTE). A test architecture is described in correspondence to the ATS. The conformance test cases in this document are described leveraging this test architecture and are specified in TTCN-3 Core Language for ISO/OSI Network Layer (Layer 3) and above. The conformance test cases for the Data Link Layer (Layer 2) and Physical Layer (Layer 1) are described in ISO 15118-5. Test cases with overlapping scopes are explicitly detailed. This document does not include specific tests of other standards referenced within ISO 15118-2, e.g. IETF RFCs. Furthermore, the conformance tests specified in this document do not include the assessment of performance nor robustness or reliability of an implementation. They cannot provide judgments on the physical realization of abstract service primitives, how a system is implemented, how it provides any requested service, nor the environment of the protocol implementation. Furthermore, the test cases defined in this

document only consider the communication protocol defined ISO 15118-2. Power flow between the EVSE and the EV is not considered. NOTE 1 Practical limitations make it impossible to define an exhaustive test suite, and economic considerations can restrict testing even further. Hence, the purpose of this document is to increase the probability that different implementations are able to interwork. This is achieved by verifying them by means of a protocol test suite, thereby increasing the confidence that each implementation conforms to the protocol specification. However, the specified protocol test suite cannot guarantee conformance to the specification since it detects errors rather than their absence. Thus conformance to a test suite alone cannot guarantee interworking. What it does do is give confidence that an implementation has the required capabilities and that its behavior conforms consistently in representative instances of communication. NOTE 2 This document has some interdependencies to the conformance tests defined in ISO 15118-5 which result from ISO/OSI cross layer dependencies in the underlying protocol specification (e.g. for sleep mode)

https://standards.cen.eu/dyn/www/f?p=204:110:0::::FSP_PROJECT,FSP_ORG_ID:66345,6282&cs=104B7B3E593991F486468573BFEA53100

EN ISO 15118-5:2019 Road vehicles - Vehicle to grid communication interface - Part 5: Physical layer and data link layer conformance test (ISO 15118-5:2018)

ISO 15118-5:2018 specifies conformance tests in the form of an Abstract Test Suite (ATS) for a System Under Test (SUT) implementing an Electric Vehicle or Supply Equipment Communication Controller (EVCC or SECC) with support for PLC-based High Level Communication (HLC) and Basic Signaling according to ISO 15118-3. These conformance tests specify the testing of capabilities and behaviors of an SUT, as well as checking what is observed against the conformance requirements specified in ISO 15118-3 and against what the implementer states the SUT implementation's capabilities are. The capability tests within the ATS check that the observable capabilities of the SUT are in accordance with the static conformance requirements defined in ISO 15118-3. The behavior tests of the ATS examine an implementation as thoroughly as is practical over the full range of dynamic conformance requirements defined in ISO 15118-3 and within the capabilities of the SUT (see NOTE 1). A test architecture is described in correspondence to the ATS. The conformance test cases in this part of the standard are described leveraging this test architecture and are specified in TTCN-3 Core Language for the ISO/OSI Physical and Data Link Layers (Layers 1 and 2). The conformance test cases for the ISO/OSI Network Layer (Layer 3) and above are described in ISO 15118-4. In terms of coverage, this document only covers normative sections and requirements in ISO 15118-3. This document can additionally include specific tests for requirements of referenced standards (e.g. IEEE, or industry consortia standards) as long as they are relevant in terms of conformance for implementations according to ISO 15118-3. However, it is explicitly not intended to widen the scope of this conformance specification to such external standards, if it is not technically necessary for the purpose of conformance testing for ISO 15118-3. Furthermore, the conformance tests specified in this document do not include the assessment of performance nor robustness or reliability of an implementation. They cannot provide judgments on the physical realization of abstract service primitives, how a system is implemented, how it provides any requested service, nor the environment of the protocol implementation. Furthermore, the test cases defined in this

document only consider the communication protocol and the system's behavior defined ISO 15118-3. Power flow between the EVSE and the EV is not considered. NOTE 1 Practical limitations make it impossible to define an exhaustive test suite, and economic considerations can restrict testing even further. Hence, the purpose of this document is to increase the probability that different implementations are able to interwork. This is achieved by verifying them by means of a protocol test suite, thereby increasing the confidence that each implementation conforms to the protocol specification. However, the specified protocol test suite cannot guarantee conformance to the specification since it detects errors rather than their absence. Thus conformance to a test suite alone cannot guarantee interworking. What it does do is give confidence that an implementation has the required capabilities and that its behavior conforms consistently in representative instances of communication. NOTE 2 This document has some interdependencies to the conformance tests defined in ISO 15118-4 which result from ISO/OSI cross layer dependencies in the underlying protocol specification

https://standards.cen.eu/dyn/www/f?p=204:110:0::::FSP_PROJECT,FSP_ORG_ID:66346,6282&cs=1F1DECC4FC721FDE82971444046C70547

EN ISO 15118-8:2019 Road vehicles - Vehicle to grid communication interface - Part 8: Physical layer and data link layer requirements for wireless communication (ISO 15118-8:2018)

ISO 15118-8:2018 specifies the requirements of the physical and data link layer of a wireless High Level Communication (HLC) between Electric Vehicles (EV) and the Electric Vehicle Supply Equipment (EVSE). The wireless communication technology is used as an alternative to the wired communication technology as defined in ISO 15118-3. It covers the overall information exchange between all actors involved in the electrical energy exchange. ISO 15118 (all parts) are applicable for conductive charging as well as Wireless Power Transfer (WPT). For conductive charging, only EVSEs compliant with "IEC 61851-1 modes 3 and 4" and supporting HLC are covered by this document. For WPT, charging sites according to IEC 61980 (all parts) and vehicles according to ISO/PAS 19363 are covered by this document.

https://standards.cen.eu/dyn/www/f?p=204:110:0::::FSP_PROJECT,FSP_ORG_ID:66347,6282&cs=11C59488BE120AE0E01486F11952D2C5F

ISO 37106:2018 Sustainable cities and communities — Guidance on establishing smart city operating models for sustainable communities

This document gives guidance for leaders in smart cities and communities (from the public, private and voluntary sectors) on how to develop an open, collaborative, citizen-centric and digitally-enabled operating model for their city that puts its vision for a sustainable future into operation.

This document does not describe a one-size-fits-all model for the future of cities. Rather, the focus is on the enabling processes by which innovative use of technology and data, coupled with organizational change, can help each city deliver its own specific vision for a sustainable future in more efficient, effective and agile ways.

This document provides proven tools that cities can deploy when operationalizing the vision, strategy and policy agenda they have developed following the adoption of ISO 37101, the management system for sustainable development of communities. It can also be used, either in whole or in part, by cities that have not committed to deployment of the ISO 37101 management system.

https://www.iso.org/standard/62065.html

ISO/CD 37166 Smart community infrastructures —Urban data integration framework for smart city planning (SCP)

Standard under development

https://www.iso.org/standard/69252.html

ISO/IEC 21972:2020 Information technology — Upper level ontology for smart city indicators

This document establishes general principles and gives guidelines for an indicator upper level ontology (IULO) for smart cities that enables the representation of indicator definitions and the data used to derive them. It includes:

— concepts (e.g., indicator, population, cardinality); and

— properties that relate concepts (e.g., cardinality_of, parameter_of_var).

https://www.iso.org/standard/72325.html

ISO/IEC 30146:2019 Information technology — Smart city ICT indicators

This document defines a comprehensive set of evaluation indicators specially related to information and communication technologies (ICT) adoption and usage in smart cities. Firstly, it establishes an overall framework for all the indicators. Then, it specifies the name, description, classification and measurement method for each indicator.

https://www.iso.org/standard/70302.html

ISO/IEC AWI 24039 Information Technology - Smart city digital platform

Standard under development

https://www.iso.org/standard/77621.html

ISO/IEC DIS 30145-1 Information technology — Smart City ICT reference framework — Part 1: Smart city business process framework

Standard under development

https://www.iso.org/standard/76371.html

ISO/IEC DIS 30145-2 Information technology — Smart City ICT reference framework — Part 2: Smart city knowledge management framework

Standard under development

https://www.iso.org/standard/76372.html

ISO/IEC DIS 30145-3 Information technology — Smart City ICT reference framework — Part 3: Smart city engineering framework

Standard under development

ISO 1185:2003 Road vehicles — Connectors for the electrical connection of towing and towed vehicles — 7-pole connector type 24 N (normal) for vehicles with 24 V nominal supply voltage

ISO 1185:2003 specifies the dimensions of, and gives particular requirements for, 7-pole connectors of type 24 N and their contact allocation for the electrical connection between towing and towed vehicles with 24 V nominal supply voltage, thus ensuring interchangeability.

https://www.iso.org/standard/30213.html

ISO 1724:2003 Road vehicles — Connectors for the electrical connection of towing and towed vehicles — 7-pole connector type 12 N (normal) for vehicles with 12 V nominal supply voltage

ISO 1724:2003 specifies the dimensions of, and contact allocation tests and requirements for, 7-pole connectors of type 12 N for the electrical connection between towing and towed vehicles with 12 V nominal supply voltage, thus ensuring interchangeability.

https://www.iso.org/search.html?q=ISO%201724:2003

ISO 3731:2003 Road vehicles — Connectors for the electrical connection of towing and towed vehicles — 7-pole connector type 24 S (supplementary) for vehicles with 24 V nominal supply voltage

ISO 3731:2003 specifies the dimensional characteristics of, and specific requirements for, 7-pole connectors of type 24 S and their contact allocation for the electrical connection of towing and towed vehicles with 24 V nominal supply voltage, thus ensuring interchangeability. A 24 S connector is intended to be used in addition to a 24 N connector according to ISO 1185 where more than 7 poles are required.

https://www.iso.org/standard/30211.html

ISO 3732:2003 Road vehicles — Connectors for the electrical connection of towing and towed vehicles — 7-pole connector type 12 S (supplementary) for vehicles with 12 V nominal supply voltage

ISO 3732:2003 specifies the dimensions of, and requirements for, 7-pole connectors of type 12 S and their contact allocation for the electrical connection of towing (passenger cars or light commercial vehicles) and towed vehicles with 12 V nominal supply voltage, thus ensuring interchangeability. A 12 S connector is intended to be used in addition to a 12 N connector according to ISO 1724 where more than 7 poles are required.

https://www.iso.org/standard/30210.html

ISO 21848:2005 Road vehicles — Electrical and electronic equipment for a supply voltage of 42 V — Electrical loads

ISO 21848:2005 describes the electrical loads that can affect electric and electronic systems and components of road vehicles for a supply voltage of 42 V which may be used in a multiple voltage electrical system.

In addition it specifies the tests and resulting requirements, test equipment accuracy being agreed upon between the vehicle manufacturer and the supplier.

This International Standard also provides design guidance for the interaction of 42 V with other system voltages.

https://www.iso.org/standard/34742.html

ISO/FDIS 21780 Road vehicles — Supply voltage of 48 V — Electrical requirements and tests

Standard under development

ISO 18246:2015 Electrically propelled mopeds and motorcycles — Safety requirements for conductive connection to an external electric power supply

ISO 18246:2015 specifies safety requirements for conductive connection to an external electric power supply of electrically propelled mopeds and motorcycles.

It is not applicable to vehicles not in normal conditions, such as damaged vehicles and vehicles which have mechanical and/or electrical failure.

It applies only to on-board charging systems between the plug or vehicle couplers and RESS circuits.

The safety requirements for vehicles not connected to external power supply are specified in ISO 13063.

NOTE This International Standard does not contain requirements for bidirectional power flow.

It does not provide comprehensive safety information for manufacturing, maintenance and repair personnel.

https://www.iso.org/standard/61859.html

HD 472 S1:1989/AC:2013 Nominal voltages for low-voltage public electricity supply systems

Applies to: AC transmission, distribution and utilization systems and equipment with standard frequencies 50 Hz and 60 Hz and a nominal voltage above 100 V; AC and DC traction systems; AC and DC equipment with nominal voltages below 120 V AC or below 750 V DC

https://www.cenelec.eu/dyn/www/f?p=104:110:492132631119301::::FSP_ORG_ID,FSP_PROJECT,FSP_LANG_ID:1258595,51855,25

EN 61851-21:2002 Electric vehicle conductive charging system - Part 21: Electric vehicle requirements for conductive connection to an AC/DC supply

This part of EN 61851 together with part 1 gives the electric vehicle requirements for conductive connection to an AC or DC supply, for AC voltages according to EN 60038 up to 690 V and for DC voltages up to 1 000 V, when the electric vehicle is connected to the supply network.

https://www.cenelec.eu/dyn/www/f?p=104:110:492132631119301::::FSP_ORG_ID,FSP_PROJECT,FSP_LANG_ID:1258145,42014,25

EN 61851-21-1:2017/AC:2017-11 Electric vehicle conductive charging system - Part 21-1: Electric vehicle on-board charger EMC requirements for conductive connection to an AC/DC supply

IEC 61851-21-1:2017(E), together with IEC 61851-1:2010, gives requirements for conductive connection of an electric vehicle (EV) to an AC or DC supply. It applies only to on-board charging units either tested on the complete vehicle or tested on the charging system component level (ESA - electronic sub assembly). This document covers the electromagnetic compatibility (EMC) requirements for electrically propelled vehicles in any charging mode while connected to the mains supply. This first edition, together with IEC 61851-21-2, cancels and replaces IEC 61851-21:2001. It constitutes a technical revision. This edition includes the following significant technical changes with respect to IEC 61851-21:2001: a)   this document addresses now only EMC tests instead of other electrical tests; b)   test setups are defined more precisely; c)   Annex A "Artificial networks, asymmetric artificial networks and integration of charging stations into the test setup" was added.

https://www.cenelec.eu/dyn/www/f?p=104:110:492132631119301::::FSP_ORG_ID,FSP_PROJECT,FSP_LANG_ID:1258145,66195,25

ISO 17409:2015 Electrically propelled road vehicles -- Connection to an external electric power supply -- Safety requirements

ISO 17409:2015 specifies electric safety requirements for conductive connections of electrically propelled road vehicles to an external electric power supply using a plug or vehicle inlet.

It applies to electrically propelled road vehicles with voltage class B electric circuits. In general, it may apply to motorcycles and mopeds if no dedicated standards for these vehicles exist.

It applies only to vehicle power supply circuits. It applies also to dedicated power supply control functions used for the connection of the vehicle to an external electric power supply.

It does not provide requirements regarding the connection to a non-isolated DC charging station.

It does not provide comprehensive safety information for manufacturing, maintenance, and repair personnel.

The requirements when the vehicle is not connected to the external electric power supply are specified in ISO 6469-3.

NOTE 1 This International Standard does not contain requirements for vehicle power supply circuits using protection by class II or double/reinforced insulation but it is not the intention to exclude such vehicle applications.

NOTE 2 Requirements for EV supply equipment are specified in IEC 61851.

https://www.iso.org/standard/68491.html

ISO/IEC 27007:2020 Information security, cybersecurity and privacy protection — Guidelines for information security management systems auditing

This document provides guidance on managing an information security management system (ISMS) audit programme, on conducting audits, and on the competence of ISMS auditors, in addition to the guidance contained in ISO 19011.

This document is applicable to those needing to understand or conduct internal or external audits of an ISMS or to manage an ISMS audit programme.

https://www.iso.org/standard/77802.html

ISO/IEC 27009:2020 Information security, cybersecurity and privacy protection — Sector-specific application of ISO/IEC 27001 — Requirements

This document specifies the requirements for creating sector-specific standards that extend ISO/IEC 27001, and complement or amend ISO/IEC 27002 to support a specific sector (domain, application area or market).

This document explains how to:

— include requirements in addition to those in ISO/IEC 27001,

— refine or interpret any of the ISO/IEC 27001 requirements,

— include controls in addition to those of ISO/IEC 27001:2013, Annex A and ISO/IEC 27002,

— modify any of the controls of ISO/IEC 27001:2013, Annex A and ISO/IEC 27002,

— add guidance to or modify the guidance of ISO/IEC 27002.

This document specifies that additional or refined requirements do not invalidate the requirements in ISO/IEC 27001.

This document is applicable to those involved in producing sector-specific standards.

https://www.iso.org/standard/73907.html

ISO/IEC 27032:2012 Information technology — Security techniques — Guidelines for cybersecurity

ISO/IEC 27032:2012 provides guidance for improving the state of Cybersecurity, drawing out the unique aspects of that activity and its dependencies on other security domains, in particular:

- information security,
- network security,
- internet security, and
- critical information infrastructure protection (CIIP).

It covers the baseline security practices for stakeholders in the Cyberspace. This International Standard provides:

- an overview of Cybersecurity,
- an explanation of the relationship between Cybersecurity and other types of security,
- a definition of stakeholders and a description of their roles in Cybersecurity,
- guidance for addressing common Cybersecurity issues, and
- a framework to enable stakeholders to collaborate on resolving Cybersecurity issues.

https://www.iso.org/standard/44375.html

ISO/IEC DIS 15408-1 Information security, cybersecurity and privacy protection — Evaluation criteria for IT security — Part 1: Introduction and general model

Standard under development

https://www.iso.org/standard/72891.html

ISO/IEC DIS 15408-2 Information security, cybersecurity and privacy protection — Evaluation criteria for IT security — Part 2: Security functional components

Standard under development

https://www.iso.org/standard/72892.html

ISO/IEC DIS 15408-3 Information security, cybersecurity and privacy protection — Evaluation criteria for IT security — Part 3: Security assurance components

Standard under development

https://www.iso.org/standard/72906.html

ISO/IEC DIS 15408-4 Information security, cybersecurity and privacy protection — Evaluation criteria for IT security — Part 4: Framework for the specification of evaluation methods and activities

Standard under development

https://www.iso.org/standard/72913.html

ISO/IEC DIS 15408-5 Information security, cybersecurity and privacy protection — Evaluation criteria for IT security — Part 5: Pre-defined packages of security requirements

Standard under development

https://www.iso.org/standard/72917.html

ISO/IEC WD 27032 IT Security Techniques — Cybersecurity — Guidelines for Internet Security

Standard under development

https://www.iso.org/standard/76070.html

ISO/SAE DIS 21434 Road vehicles — Cybersecurity engineering

Standard under development

https://www.iso.org/standard/70918.html

IEC 63119-4 ED1 Information exchange for Electric Vehicle charging roaming service - Part 4: Cybersecurity and information privacy

Standard under development

https://www.iec.ch/dyn/www/f?p=103:38:15017557233877::::FSP_ORG_ID,FSP_APEX_PAGE,FSP_PROJECT_ID:1255,23,102128

ISO 24100:2010 Intelligent transport systems — Basic principles for personal data protection in probe vehicle information services

ISO 24100:2010 states the basic rules to be observed by service providers who handle personal data in probe vehicle information services. This International Standard is aimed at protecting the personal data as well as the intrinsic rights and interests of probe data senders, i.e., owners and drivers of vehicles fitted with in-vehicle probe systems.

https://www.iso.org/standard/42017.html

ISO/IEC TS 20748-4:2019 Information technology for learning, education and training — Learning analytics interoperability — Part 4: Privacy and data protection policies

This document specifies privacy and data protection requirements and attributes to inform design of learning analytics systems and learning analytics practices in schools, universities, workplace learning and blended learning settings.

https://www.iso.org/standard/74379.html

IEC 62660-1:2018 Secondary lithium-ion cells for the propulsion of electric road vehicles - Part 1: Performance testing

IEC 62660-1:2018 is available as IEC 62660-1:2018 RLV which contains the International Standard and its Redline version, showing all changes of the technical content compared to the previous edition.

IEC 62660-1:2018 specifies performance and life testing of secondary lithium-ion cells used for propulsion of electric vehicles including battery electric vehicles (BEV) and hybrid electric vehicles (HEV). This document specifies the test procedures to obtain the essential characteristics of lithium-ion cells for vehicle propulsion applications regarding capacity, power density, energy density, storage life and cycle life. This document provides the standard test procedures and conditions for testing basic performance characteristics of lithium-ion cells for vehicle propulsion applications, which are indispensable for securing a basic level of performance and obtaining essential data on cells for various designs of battery systems and battery packs. IEC 62660-1:2018 cancels and replaces the first edition published in 2010. This edition constitutes a technical revision. This edition includes the following significant technical changes with respect to the previous edition:

a) The purpose of each test has been added.

b) The power test has been revised for clarification, and an informative part of the current-voltage characteristic test has been moved to the new Annex C.

https://webstore.iec.ch/publication/28965

IEC 62660-2:2018 Secondary lithium-ion cells for the propulsion of electric road vehicles - Part 2: Reliability and abuse testing

IEC 62660-2:2018 is available as IEC 62660-2:2018 RLV which contains the International Standard and its Redline version, showing all changes of the technical content compared to the previous edition.

IEC 62660-2:2018 specifies test procedures to observe the reliability and abuse behaviour of secondary lithium-ion cells and cell blocks used for propulsion of electric vehicles including battery electric vehicles (BEV) and hybrid electric vehicles (HEV). This document specifies the standard test procedures and conditions for basic characteristics of lithium-ion cells for use in propulsion of battery and hybrid electric vehicles. The tests are indispensable for obtaining essential data on reliability and abuse behaviour of lithium-ion cells for use in various designs of battery systems and battery packs. This document provides standard classification of description of test results to be used for the design of battery systems or battery packs. IEC 62660-2:2018 cancels and replaces the first edition published in 2010. This edition constitutes a technical revision. This edition includes the following significant technical changes with respect to the previous edition:

a) The procedure of forced discharge test has been clarified (6.4.3.2).

b) "Cell block" has been added to the scope (Clause 1).

c) Option of temperature cycling test with electrical operation has been deleted (6.3.2).

d) The test conditions for overcharge test have been revised (6.4.2.2)

https://webstore.iec.ch/publication/27387

IEC 62660-3:2016 Secondary lithium-ion cells for the propulsion of electric road vehicles - Part 3: Safety requirements

IEC 62660-3:2016 specifies test procedures and the acceptance criteria for safety performance of secondary lithium-ion cells and cell blocks used for the propulsion of electric vehicles (EV) including battery electric vehicles (BEV) and hybrid electric vehicles (HEV). This International Standard intends to determine the basic safety performance of cells used in a battery pack and system under intended use, and reasonably foreseeable misuse or incident, during the normal operation of the EV. The safety requirements of the cell in this standard are based on the premise that the cells are properly used in a battery pack and system within the limits for voltage, current and temperature as specified by the cell manufacturer (cell operating region). The evaluation of the safety of cells during transport and storage is not covered by this standard.

https://webstore.iec.ch/publication/25737

IEC TR 62660-4:2017 Secondary lithium-ion cells for the propulsion of electric road vehicles - Part 4: Candidate alternative test methods for the internal short circuit test of IEC 62660-3

IEC TR 62660-4:2017(E) provides the test data on the candidate alternative test methods for the internal short circuit test according to 6.4.4.2.2 of IEC 62660-3:2016. The internal short circuit

test in this document is intended to simulate an internal short circuit of a cell caused by the contamination of conductive particle, and to verify the safety performance of the cell under such conditions.

This document is applicable to the secondary lithium-ion cells and cell blocks used for propulsion of electric vehicles (EV) including battery electric vehicles (BEV) and hybrid electric vehicles (HEV).

This document does not cover cylindrical cells.

https://webstore.iec.ch/publication/30991

ISO 8715:2001 Electric road vehicles — Road operating characteristics

This International Standard specifies the procedures for measuring the road performance of purely electrically propelled passenger cars and commercial vehicles of a maximum authorized total mass of 3 500 kg.

The road performance comprises road operating characteristics such as speed, acceleration and hill climbing ability.

https://www.iso.org/standard/16118.html

ISO/PAS 16898:2012 Electrically propelled road vehicles — Dimensions and designation of secondary lithium-ion cells

ISO/IEC PAS 16898:2012 specifies a designation system as well as the shapes and dimensions for secondary lithium-ion cells for integration into battery packs and systems used in electrically propelled road vehicles including the position of the terminals and any over-pressure safety device (OPSD). It is related to cylindrical, prismatic and pouch cells.

The cell designation according to ISO/IEC PAS 16898:2012 is intended to be applied to the cells used for electrically propelled road vehicles. ISO/IEC PAS 16898:2012 does not apply to cells specifically used for mopeds, motorcycles and vehicles not primarily defined as road vehicles, i.e. material handling trucks or forklifts.

The cell dimensions listed in ISO/IEC PAS 16898:2012 are recommended but not restricted for use in passenger cars up to 3,5 t.

The inner design, the cell chemistry, the electrical characteristics and any further properties of the cells are not defined in ISO/IEC PAS 16898:2012.

https://www.iso.org/standard/57871.html

ISO 20762:2018 Electrically propelled road vehicles — Determination of power for propulsion of hybrid electric vehicle

This document specifies measurement methods for the maximum system propulsion power of hybrid-electric vehicles (HEV).

The results can be compared with the data of internal combustion engine vehicles (ICEV) power measured with the relevant current method.

NOTE ISO 1585 and UN Regulation No. 85, for example.

This document applies only to the vehicles with the following characteristics:

— HEVs with an internal combustion engine (ICE) and one or more electric motors powered by one or more rechargeable energy storage systems (RESS) for propulsion;

— vehicles classified as passenger cars or light duty trucks.

https://www.iso.org/standard/68993.html

EN 12896-1:2016 Public transport - Reference data model - Part 1: Common concepts

1.1 General scope of the Standard The main objective of this European Standard is to present the Public Transport Reference Data Model based on: - the Public Transport Reference Data Model published 2006 as EN12896 and known as Transmodel V5.1, - the model for the Identification of Fixed Objects for Public transport, published 2009 as EN 28701and known as IFOPT, incorporating the requirements of - EN15531-1 to 3 and TS15531-4 and 5: Service interface for real-time information relating to public transport operations (SIRI), - TS16614-1 and 2: Network and Timetable Exchange (NeTEx), in particular the specific needs for long distance train operation. Particular attention is drawn to the data model structure and methodology: - the data model is described in a modular form in order to facilitate understanding and use of the model, - the data model is entirely described in UML. In particular, a Reference Data Model kernel is described, referring to the data domain: - Network Description: routes, lines, journey patterns, timing patterns, service patterns, scheduled stop points and stop places. This part corresponds to the network description as in Transmodel V5.1 extended by the relevant parts of IFOPT. Furthermore, the following functional domains are considered: - Timing Information and Vehicle Scheduling (runtimes, vehicle journeys, day type-related vehicle schedules) - Passenger Information (planned and real-time) - Operations Monitoring and Control: operating day-related data, vehicle follow-up , control actions - Fare Management (fare structure and access rights definition, sales, validation, control) - Management Information and Statistics (including data dedicated to service performance indicators). - Driver Management: - Driver Scheduling (day-type related driver schedules), - Rostering (ordering of driver duties into sequences according to some chosen methods), - Driving Personnel Disposition (assignment of logical drivers to physical drivers and recording of driver performance). The data modules dedicated to cover most functions of the above domains will be specified. Several concepts are shared by the different functional domains. This data domain is called "Common Concepts". 1.2 Functional domain description 1.2.1 Public transport network and stop description The reference data model includes entity definitions for different types of points and links as the building elements of the topological network. Stop points, timing points and route points, for instance, reflect the different roles one point may have in the network definition: whether it is used for the definition of (topological or geographical) routes, as a point served by vehicles when operating on a line, or as a location against which timing information like departure, passing, or wait times are stored in order to construct the timetables. The line network is the fundamental infrastructure for the service offer,

to be provided in the form of vehicle journeys which passengers may use for their trips. The main entities describing the line network in the reference data model are the line, the route and the journey pattern, which refer to the concepts of an identified service offer to the public, the possible variants of itineraries vehicles would follow when serving the line, and the (possibly different) successions of stop points served by the vehicles when operating on the route. The functional views of the network are described as layers. A projection is a mechanism enabling the description of the correspondence between the different layers. This mapping between the layers is particularly useful when spatial data from different environments (sources, functional domains) have to be combined. An example of such a situation is the mapping of the public transport network on the road network. (...)

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EN 12896-2:2016 Public transport - Reference data model - Part 2: Public transport network

1.1 General scope of the Standard The main objective of the present Standard is to present the public transport reference data model based on: - the public transport reference data model published 2006 as EN 12896 and known as Transmodel V5.1; - the model for the Identification of Fixed Objects for Public transport, published 2009 as EN 28701and known as IFOPT; incorporating the requirements of - EN 15531-1 to 3 and CEN/TS 15531-4 and CEN/TS 15531-5, Service interface for real-time information relating to public transport operations (SIRI); - CEN/TS 16614-1 and CEN/TS 16614-2, Network and Timetable Exchange (NeTEx); in particular the specific needs for long distance train operation. Particular attention is drawn to the data model structure and methodology: - the data model is described in a modular form in order to facilitate understanding and use of the model; - the data model is entirely described in UML. In particular, a reference data model kernel is described, referring to the data domain: - network description: routes, lines, journey patterns, timing patterns, service patterns, scheduled stop points and stop places. - This part corresponds to the network description as in Transmodel V5.1 extended by the relevant parts of IFOPT. - Furthermore, the following functional domains are considered: - timing information and vehicle scheduling (runtimes, vehicle journeys, day type-related vehicle schedules); - passenger information (planned and real-time); - operations monitoring and control: operating day-related data, vehicle follow-up, control actions; - fare management (fare structure and access rights definition, sales, validation, control); - management information and statistics (including data dedicated to service performance indicators); - driver management: - driver scheduling (day-type related driver schedules); - rostering (ordering of driver duties into sequences according to some chosen methods); - driving personnel disposition (assignment of logical drivers to physical drivers and recording of driver performance). The data modules dedicated to cover most functions of the above domains will be specified. Several concepts are shared by the different functional domains. This data domain is called "common concepts". 1.2 Functional domain description The different functional domains taken into account in the present Standard and of which the data have been represented as the reference data model are described in "Public transport reference data model - Part 1: Common concepts". They are: - public transport network and stop description; - timing information and vehicle scheduling; - passenger information; - fare management; - operations monitoring and control; - management

information; - personnel management: driver scheduling, rostering, personnel disposition. The aspects of multi-modal operation and multiple operators' environment are also taken into account. (...)

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EN 12896-3:2016 Public transport - Reference data model - Part 3: Timing information and vehicle scheduling

1.1 General Scope of the Standard The main objective of the present standard is to present the Reference Data Model for Public Transport, based on: - the Reference Data Model, EN12896, known as Transmodel V5.1, - CEN EN 28701, known as IFOPT, incorporating the requirements of - EN 15531-1 to -3 and TS 15531-4 and -5: Service interface for real-time information relating to public transport operations (SIRI), - TS 16614-1 and 2: Network and Timetable Exchange (NeTEx), in particular, the specific needs for long distance train operation. A particular attention is drawn to the data model structure and methodology: - the data model is described in a modular form in order to facilitate the understanding and the use of the model, - the data model is entirely described in UML. In particular, a Reference Data Model kernel is described, referring to the data domain: - Network Description: routes, lines, journey patterns, timing patterns, service patterns, scheduled stop points and stop places. This part corresponds to the Transmodel V5.1 Network Description extended by the IFOPT relevant parts. Furthermore, the following functional domains are considered: - Timing Information and Vehicle Scheduling (runtimes, vehicle journeys, day type-related vehicle schedules) - Passenger Information (planned and real-time) - Fare Management (fare structure, sales, validation, control) - Operations Monitoring and Control: operating day-related data, vehicle follow-up , control actions - Management Information and Statistics (including data dedicated to service performance indicators). - Driver Management: - Driver Scheduling (day-type related driver schedules), - Rostering (ordering of driver duties into sequences according to some chosen methods), - Driving Personnel Disposition (assignment of logical drivers to physical drivers and recording of driver performance). The data modules dedicated to cover most functions of the above domains will be specified. Several concepts are shared by the different functional domains. This data domain is called "Common Concepts". 1.2 Functional Domain Description The different functional domains taken into account in the present standard and of which the data have been represented as the reference data model are described in "Public Transport Reference Data Model - Part 1: Common Concepts". They are: - Public Transport Network and Stop Description - Timing Information and Vehicle scheduling - Passenger information - Fare Management - Operations monitoring and control - Management information - Personnel Management: Driver Scheduling, Rostering, Personnel Disposition. The aspects of multi-modal operation and multiple operators' environment are also taken into account. 1.3 Particular Scope of this Document The present European Standard entitled "Reference Data Model for Public Transport – Part 3: Timing Information and Vehicle Scheduling". incorporates - Journey and Journey Times Model: describes the time-related information at the level of vehicle journeys, i.e. planned timing for the vehicles at day-type level. - Dated Journey Model: describes the link of the timing information for a single operating day and the day type related timing, - Passing Times Model: describes all the different types of passing times for the

day type related information, - Vehicle Service Model: describes the information related the work of vehicles as planned for days types. It constitutes the main part of the Vehicle Scheduling Data Domain. - Vehicle Journey Assignment Model: describes operational assignments (advertised vehicle labels, stopping positions) related to particular vehicle journeys. This document itself is composed of the following parts: - Main document (normative) representing the data model, (...)

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EN 12896-4:2019 Public transport - Reference data model - Part 4: Operations monitoring and control

1.1 General Scope of the Standard The main objective of the present standard is to present the Reference Data Model for Public Transport, based on: - the Reference Data Model, EN 12896, known as Transmodel V5.1; - EN 28701:2012, Intelligent transport systems - Public transport - Identification of Fixed Objects in Public Transport (IFOPT), although note that this particular standard has been withdrawn as it is now included within Parts 1 and 2 of this standard (EN 12896-1:2016 and EN 12896-2:2016) following their successful publication; incorporating the requirements of: - EN 15531-1 to -3 and CEN/TS 15531-4 and -5: Public transport - Service interface for real-time information relating to public transport operations (SIRI); - CEN/TS 16614-1 and -2: Public transport - Network and Timetable Exchange (NeTEx), in particular the specific needs for long distance train operation. Particular attention is drawn to the data model structure and methodology: - the data model is described in a modular form in order to facilitate the understanding and the use of the model; - the data model is entirely described in UML. The following functional domains are considered: - Network Description: routes, lines, journey patterns, timing patterns, service patterns, scheduled stop points and stop places; - Timing Information and Vehicle Scheduling (runtimes, vehicle journeys, day type-related vehicle schedules); - Passenger Information (planned and real-time); - Fare Management (fare structure, sales, validation, control); - Operations Monitoring and Control: operating day-related data, vehicle follow-up, control actions; - Driver Management: - Driver Scheduling (day-type related driver schedules), - Rostering (ordering of driver duties into sequences according to some chosen methods), - Driving Personnel Disposition (assignment of logical drivers to physical drivers and recording of driver performance); - Management Information and Statistics (including data dedicated to service performance indicators). The data modules dedicated to cover most functions of the above domains will be specified. Several concepts are shared by the different functional domains. This data domain is called "Common Concepts". 1.2 Functional Domain Description The different functional domains (enumerated above) taken into account in the present document, and of which the data have been represented as the reference model, are described in EN 12896-1:2016, Public transport - Reference data model - Part 1: Common concepts. 1.3 Particular Scope of this Document The present document entitled Public transport - Reference data model - Part 4: Operations monitoring and control incorporates the following data packages: - Dated Production Components MODEL; - Call MODEL; - Production Plan MODEL; - Detecting and Monitoring MODEL; - Control Action MODEL; - Event and Incident MODEL; - Messaging MODEL; - Situation MODEL; and - Facility Monitoring and Availability MODEL. The data structures represented in this part form descriptions of data that are specific

to operations for an operational day (as opposed to those planned for day types). They reference to structures as described in EN 12896-1:2016, such as version frames or generic grouping mechanisms, but also to EN 12896-2:2016 and EN 12896-3:2016. This document itself is composed of the following parts: - Main document (normative) presenting the data model for the domain Operations Monitoring and Control; - Annex A (normative), containing the data dictionary, i.e. the list of all the concepts and attribute tables present in the main document together with the definitions; - Annex B (normative), providing a complement to EN 12896-1:2016, particularly useful for parts 4 to 8 of the Public Transport Reference Data Model; - Annex C (informative), indicating the data model evolutions; and (...)

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EN 12896-5:2019 Public transport - Reference data model - Part 5: Fare management

1.1 General Scope of the Standard The main objective of the present standard is to present the Reference Data Model for Public Transport, based on: - the Reference Data Model, EN 12896, known as Transmodel V5.1; - EN 28701:2012, Intelligent transport systems - Public transport - Identification of Fixed Objects in Public Transport (IFOPT), although note that this particular standard has been withdrawn as it is now included within Parts 1 and 2 of this standard (EN 12896-1:2016 and EN 12896-2:2016) following their successful publication. incorporating the requirements of: - EN 15531-1 to -3 and CEN/TS 15531-4 and -5: Public transport - Service interface for real-time information relating to public transport operations (SIRI); - CEN/TS 16614-1 and -2: Public transport - Network and Timetable Exchange (NeTEx), in particular the specific needs for long distance train operation. Particular attention is drawn to the data model structure and methodology: - the data model is described in a modular form in order to facilitate the understanding and the use of the model; - the data model is entirely described in UML. The following functional domains are considered: - Network Description: routes, lines, journey patterns, timing patterns, service patterns, scheduled stop points and stop places; - Timing Information and Vehicle Scheduling (runtimes, vehicle journeys, day type-related vehicle schedules); - Passenger Information (planned and real-time); - Fare Management (fare structure, sales, validation, control); - Operations Monitoring and Control: operating day-related data, vehicle follow-up, control actions; - Driver Management: - Driver Scheduling (day-type related driver schedules), - Rostering (ordering of driver duties into sequences according to some chosen methods), - Driving Personnel Disposition (assignment of logical drivers to physical drivers and recording of driver performance); - Management Information and Statistics (including data dedicated to service performance indicators). The data modules dedicated to cover most functions of the above domains will be specified. Several concepts are shared by the different functional domains. This data domain is called "Common Concepts". 1.2 Functional Domain Description The different functional domains (enumerated above) taken into account in the present standard, and of which the data have been represented as the reference model, are described in EN 12896-1:2016, Public transport - Reference data model - Part 1: Common concepts. 1.3 Particular Scope of this Document The present document entitled Public transport - Reference data model - Part 5: Fare Management addresses Fare Information for Public Transport and incorporates the following data packages: - Fare Structure; - Access Right

Assignment; - Fare Pricing; - Sales Description; - Sales Transaction; - Fare Roles; - Validation and Control; - Explicit Frames for Fares. This document itself is composed of the following parts: - Main document (normative) representing the data model for the concepts shared by the different fare domains covered by Transmodel, - Annex A (normative), containing the data dictionary, i.e. the list of all the concepts and attribute tables present in the main document together with the definitions, - Annex B (normative), providing a complement to the "Common Concepts" domain, particularly useful for parts 4 to 8 of the Public Transport Reference Data Model, Annex C (informative), indicating the data model evolutions from previous versions of Transmodel (EN 12896:2006).

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EN 12896-6:2019 Public transport - Reference data model - Part 6: Passenger information

1.1 General Scope of the Standard The main objective of the present standard is to present the Reference Data Model for Public Transport, based on: - the Reference Data Model, EN 12896, known as Transmodel V5.1; - EN 28701:2012, Intelligent transport systems -) Public transport - Identification of Fixed Objects in Public Transport (IFOPT), although note that this particular standard has been withdrawn as it is now included within Parts 1 and 2 of this standard (EN 12896-1:2016 and EN 12896-2:2016) following their successful publication, incorporating the requirements of: - EN 15531-1 to -3 and CEN/TS 15531-4 and -5: Public transport – Service interface for real-time information relating to public transport operations (SIRI); - CEN/TS 16614-1 and -2: Public transport - Network and Timetable Exchange (NeTEx), in particular the specific needs for long distance train operation. Particular attention is drawn to the data model structure and methodology: - the data model is described in a modular form in order to facilitate the understanding and the use of the model; - the data model is entirely described in UML. The following functional domains are considered: - Network Description: routes, lines, journey patterns, timing patterns, service patterns, scheduled stop points and stop places; - Timing Information and Vehicle Scheduling (runtimes, vehicle journeys, day type-related vehicle schedules); - Passenger Information (planned and real-time); - Fare Management (fare structure, sales, validation, control); Operations Monitoring and Control: operating day-related data, vehicle follow-up, control actions; - Driver Management: - Driver Scheduling (day-type related driver schedules), - Rostering (ordering of driver duties into sequences according to some chosen methods), - Driving Personnel Disposition (assignment of logical drivers to physical drivers and recording of driver performance); - Management Information and Statistics (including data dedicated to service performance indicators). The data modules dedicated to cover most functions of the above domains will be specified. Several concepts are shared by the different functional domains. This data domain is called "Common Concepts". 1.2 Functional Domain Description The different functional domains (enumerated above) taken into account in the present standard, and of which the data have been represented as the reference model, are described in EN 12896-1:2016, Public transport - Reference data model - Part 1: Common concepts. 1.3 Particular Scope of this Document The present document entitled Public transport - Reference data model - Part 6: Passenger information, incorporates the following main data packages: - Trip Description; - Passenger Queries. This document itself is composed of the

following parts: - Main document (normative) representing the data model for the concepts shared by the different fare domains covered by Transmodel; - Annex A (normative), containing the data dictionary, i.e. the list of all the concepts and attribute tables present in the main document together with the definitions; - Annex B (normative), providing a complement to EN 12896-1:2016, particularly useful for parts 4 to 8 of the Public Transport Reference Data Model; - Annex C (informative), indicating the data model evolutions; - Annex D (informative), indicating the high-level equivalences of the example passenger information functional requests to the capabilities of other standards; - Annex E (informative), providing an example set of commonly found passenger information functional requests and data dictionary for the elements used in the examples.

https://standards.cen.eu/dyn/www/f?p=204:110:0::::FSP_PROJECT,FSP_ORG_ID:67687,6259&cs=17D470CFBFF71B9C991E14FF02B95DAEB

EN 12896-7:2019 Public transport - Reference data model - Part 7: Driver management

1.1 General Scope of the Standard The main objective of the present standard is to present the Reference Data Model for Public Transport, based on: - the Reference Data Model, EN 12896, known as Transmodel V5.1; - EN 28701:2012, Intelligent transport systems - Public transport - Identification of Fixed Objects in Public Transport (IFOPT), although note that this particular standard has been withdrawn as it is now included within Parts 1 and 2 of this European Standard (EN 12896-1:2016 and EN 12896-2:2016) following their successful publication; incorporating the requirements of: - EN 15531-1 to -3 and CEN/TS 15531-4 and -5: Public transport - Service interface for real-time information relating to public transport operations (SIRI); - CEN/TS 16614-1 and -2: Public transport - Network and Timetable Exchange (NeTEx), in particular the specific needs for long distance train operation. Particular attention is drawn to the data model structure and methodology: - the data model is described in a modular form in order to facilitate the understanding and the use of the model; - the data model is entirely described in UML. The following functional domains are considered: - Network Description: routes, lines, journey patterns, timing patterns, service patterns, scheduled stop points and stop places; - Timing Information and Vehicle Scheduling (runtimes, vehicle journeys, day type-related vehicle schedules); - Passenger Information (planned and real-time); - Fare Management (fare structure, sales, validation, control); - Operations Monitoring and Control: operating day-related data, vehicle follow-up, control actions; - Driver Management: - Driver Scheduling (day-type related driver schedules), - Rostering (ordering of driver duties into sequences according to some chosen methods), - Driving Personnel Disposition (assignment of logical drivers to physical drivers and recording of driver performance); - Management Information and Statistics (including data dedicated to service performance indicators). The data modules dedicated to cover most functions of the above domains will be specified. Several concepts are shared by the different functional domains. This data domain is called "Common Concepts". 1.2 Functional Domain Description The different functional domains (enumerated above) taken into account in the present document, and of which the data have been represented as the reference model, are described in EN 12896-1, Public transport - Reference data model - Part 1: Common concepts. 1.3 Particular Scope of this Document The present document entitled Public transport - Reference data model - Part 7: Driver management incorporates the following data packages: -

Driver Scheduling; Rostering; - Personnel Disposition; - Driver Control Actions. This document itself is composed of the following parts: - Main document (normative) presenting the data model for the concepts shared by the different domains covered by Transmodel, - Annex A (normative), containing the data dictionary, i.e. the list of all the concepts and attribute tables present in the main document together with the definitions, - Annex B (normative), providing a complement to EN 12896-1:2016, particularly useful for Parts 4 to 8 of the Public Transport Reference Data Model; and - Annex C (informative), indicating the data model evolutions.

https://standards.cen.eu/dyn/www/f?p=204:110:0::::FSP_PROJECT,FSP_ORG_ID:67688,6259&cs=15FE20736ECF60707980F0D63EE90254A

EN 12896-8:2019 Public transport - Reference data model - Part 8: Management information & statistics

1.1 General Scope of the Standard The main objective of the present standard is to present the Reference Data Model for Public Transport, based on: - the Reference Data Model, EN 12896, known as Transmodel V5.1; - EN 28701:2012, Intelligent transport systems - Public transport - Identification of Fixed Objects in Public Transport (IFOPT), although note that this particular standard has been withdrawn as it is now included within Parts 1 and 2 of this standard (EN 12896 1:2016 and EN 12896 2:2016) following their successful publication; incorporating the requirements of: - EN 15531-1 to −3 and CEN/TS 15531-4 and −5: Public transport - Service interface for real-time information relating to public transport operations (SIRI); - CEN/TS 16614-1 and -2: Network and Timetable Exchange (NeTEx), in particular the specific needs for long distance train operation. Particular attention is drawn to the data model structure and methodology: - the data model is described in a modular form in order to facilitate the understanding and the use of the model; - the data model is entirely described in UML. The following functional domains are considered: - Network Description: routes, lines, journey patterns, timing patterns, service patterns, scheduled stop points and stop places; - Timing Information and Vehicle Scheduling (runtimes, vehicle journeys, day type-related vehicle schedules); - Passenger Information (planned and real-time); - Fare Management (fare structure, sales, validation, control); - Operations Monitoring and Control: operating day-related data, vehicle follow-up, control actions; - Driver Management: - Driver Scheduling (day-type related driver schedules), - Rostering (ordering of driver duties into sequences according to some chosen methods), - Driving Personnel Disposition (assignment of logical drivers to physical drivers and recording of driver performance); - Management Information and Statistics (including data dedicated to service performance indicators). The data modules dedicated to cover most functions of the above domains will be specified. Several concepts are shared by the different functional domains. This data domain is called "Common Concepts". 1.2 Functional Domain Description The different functional domains (enumerated above) taken into account in the present document, and of which the data have been represented as the reference model, are described in EN 12896-1:2016, Public transport - Reference data model - Part 1: Common Concepts. 1.3 Particular Scope of this Document The present document entitled Public transport - Reference data model - Part 8: Management information & statistics describes how to structure data which refers to the planning stages (e.g. timetables, run times, driver rosters, etc.) and/or to the daily actual production, and which is registered for different purposes, in particular to build

service performance indicators. The data model is based on a generic design pattern, Generic Loggable Objects Model (provided in the Additional Common Concepts part - Annex B), and incorporates the following data packages: - Logging Time and Place, providing additions to the Generic Loggable Objects Model, - Recorded Objects, - Recorded Use of Services, - Service Journey Performance. The last three packages show how the recorded data contributes to the implementation of indicators. This document itself is composed of the following parts: - Main document (normative), - Annex A (normative), containing the data dictionary, i.e. the list of all the concepts and attribute tables present in the main document together with the definitions, - Annex B (normative), providing a complement to EN 12896-1:2016, particularly useful for Parts 4 to 8 of the Public Transport Reference Data Model; - Annex C (informative), indicating the data model evolution from the previous version.

https://standards.cen.eu/dyn/www/f?p=204:110:0::::FSP_PROJECT,FSP_ORG_ID:67689,6259&cs=114B2C1248F90CC97A09572DC4F37D1C7

ISO/TS 20452:2007 Requirements and Logical Data Model for a Physical Storage Format (PSF) and an Application Program Interface (API) and Logical Data Organization for PSF used in Intelligent Transport Systems (ITS) Database Technology

ISO/TS 20452:2007 describes the functional requirements and Logical Data Model for PSF and API and the Logical Data Organization for PSF that were completed under ISO/NP 14826. It does not specify a Physical Data Organization.

https://www.iso.org/standard/39447.html

ISO/TR 25104:2008 Intelligent transport systems — System architecture, taxonomy, terminology and data modelling — Training requirements for ITS architecture

ISO/TR 25104:2008 discusses the development for generic education and training requirements for the teaching of ITS architecture, and the acquisition of skills to interpret and develop ITS architectures.

ISO/TR 25104:2008 provides suggestions to those planning education and/or training courses associated with ITS system architecture as to the subjects that should be studied.

https://www.iso.org/standard/42745.html

ETSI TS 102 735 V7.1.0 (2010-01) Universal Mobile Telecommunications System (UMTS); Band-specific requirements for UMTS Frequency Division Duplex (FDD) operation in the bands 1 900 MHz to 1 920 MHz paired with 2 600 MHz to 2 620 MHz and 2 010 MHz to 2 025 MHz paired with 2 585 MHz to 2 600 MHz

The present document defines the Band Specific Requirements for UMTS FDD operation in the bands 2 570 MHz to 2 620 MHz paired with 1 900 MHz to 1 920 MHz and 2 010 MHz to 2 025 MHz. These requirements apply in addition to what is specified by the ETSI deliverables of the 3GPP specifications.

https://www.etsi.org/deliver/etsi_ts/102700_102799/102735/07.01.00_60/ts_102735v070100p.pdf

ETSI TR 102 736 V7.0.0 (2007-09) Universal Mobile Telecommunications System (UMTS); 2,6 GHz Frequency Division Duplex (FDD) downlink external

The present document is a technical report of the UMTS 2,6 GHz FDD Downlink External work item, which was approved to establish in ETSI MSG#12. The purpose of the work item is to provide UMTS specification support for the following band allocation options: • 2 010 - 2 025 MHz and 1 900 - 1 920 MHz: Up-link options (UE transmit, Node B receive). • 2 570 - 2 620 MHz: Down-link (Node B transmit, UE receive). In addition to the schedule and status of the work item, the report includes a description of the motivation of requirements and specification recommendations. This work item is intended only for ITU region 1 and is inline with ECC Decision (ECC/DEC/(05)05) [1] of 18 March 2005 on harmonized utilization of spectrum for IMT-2000/UMTS systems operating within the band 2 500 - 2 690 MHz, and ECC Decision (ECC/DEC/(06)01) [2] of 24 March 2006 on the harmonized utilization of spectrum for terrestrial IMT-2000/UMTS systems operating within the bands 1 900 - 1 980 MHz, 2 010 - 2 025 MHz and 2 110 - 2 170 MHz.

https://www.etsi.org/deliver/etsi_tr/102700_102799/102736/07.00.00_60/tr_102736v070000p.pdf

prEN ISO 1936 Electrically propelled vehicles - Magnetic field wireless power transfer - Safety and interoperability requirements

ISO/PAS 19363:2017 defines the requirements and operation of the on-board vehicle equipment that enables magnetic field wireless power transfer (MF-WPT) for traction battery charging of electric vehicles. It is intended to be used for passenger cars and light duty vehicles. ISO/PAS 19363:2017 addresses the following aspects for an EV device: - transferred power; - ground clearance; - interoperability requirements among differently classified EV devices and associated off-vehicle systems; - performance requirements under various conditions, including among different manufacturers and classifications; - safety requirements; - test procedures. EV devices according to ISO/PAS 19363:2017 are intended to operate with off-board systems currently under development in the IEC 61980 series. NOTE 1 This edition covers stationary applications. NOTE 2 Bidirectional power transfer is not considered in this edition.

https://standards.cen.eu/dyn/www/f?p=204:110:0::::FSP_PROJECT,FSP_ORG_ID:62584,6282&cs=17705911E8087E8277507C689909EFB24

ISO/IEC 19500-2:2012 Information technology — Object Management Group — Common Object Request Broker Architecture (CORBA) — Part 2: Interoperability

ISO/IEC 19500-2:2012 specifies a comprehensive, flexible approach to supporting networks of objects that are distributed across and managed by multiple, heterogeneous CORBA-compliant

Object Request Brokers (ORBs). The approach to inter-ORB operation is universal, because elements can be combined in many ways to satisfy a very broad range of needs.

ISO/IEC 19500-2:2012 specifies

- ORB interoperability architecture

- Inter-ORB bridge support

- General Inter-ORB Protocol (GIOP) for object request broker (ORB) interoperability. GIOP can be mapped onto any connection-oriented transport protocol that meets a minimal set of assumptions defined by this International Standard

- Internet Inter-ORB Protocol (IIOP), a specific mapping of the GIOP which runs directly over connections that use the Internet Protocol and the Transmission Control Protocol (TCP/IP connections)

- CORBA Security Attribute Service (SAS) protocol and its use within the CSIv2 architecture to address the requirements of CORBA security for interoperable authentication, delegation, and privileges

ISO/IEC 19500-2:2012 provides a widely implemented and used particularization of ITU-T Rec. X.931 | ISO/IEC 14752. It supports interoperability and location transparency in ODP systems.

https://www.iso.org/standard/53348.html

ISO/IEC 24727-6:2010 Identification cards — Integrated circuit card programming interfaces — Part 6: Registration authority procedures for the authentication protocols for interoperability

ISO/IEC 24727-6:2010 defines the procedures for

- registration of authentication protocols (APs), including related cryptographic algorithms, test methods and conformance assessment criteria, and

- registration of the adoption of ISO/IEC 24727 APs by parties desiring to advertise AP interoperability.

https://www.iso.org/standard/51572.html

ISO/IEC 21823-1:2019 Internet of Things (IoT) - Interoperability for IoT systems - Part 1: Framework

ISO/IEC 21823-1:2019(E) provides an overview of interoperability as it applies to IoT systems and a framework for interoperability for IoT systems. This document enables IoT systems to be built in such a way that the entities of the IoT system are able to exchange information and mutually use the information in an efficient way. This document enables peer-to-peer interoperability between separate IoT systems. This document provides a common understanding of interoperability as it applies to IoT systems and the various entities within them.

https://www.iso.org/standard/71885.html

ISO/IEC 21823-2:2020 Internet of Things (IoT) - Interoperability for IoT systems - Part 2: Transport interoperability

ISO/IEC 21823-2:2020(E) specifies a framework and requirements for transport interoperability, in order to enable the construction of IoT systems with information exchange, peer-to-peer connectivity and seamless communication both between different IoT systems and also among entities within an IoT system. This document specifies: ● transport interoperability interfaces and requirements between IoT systems; ● transport interoperability interfaces and requirements within an IoT system

https://www.iso.org/standard/80986.html

IEC 63243 ED1 Interoperability and safety of dynamic wireless power transfer (WPT) for electric vehicles

https://www.iec.ch/dyn/www/f?p=103:38:11628269509406::::FSP_ORG_ID,FSP_APEX_PAGE ,FSP_PROJECT_ID:1255,20,102794

EN ISO 19133:2007 Geographic information - Location-based services - Tracking and navigation

ISO 19133:2005 describes the data types, and operations associated with those types, for the implementation of tracking and navigation services. It is designed to specify web services that can be made available to wireless devices through web-resident proxy applications, but is not restricted to that environment.

https://standards.cen.eu/dyn/www/f?p=204:110:0::::FSP_PROJECT,FSP_ORG_ID:26737,6268& cs=1BE3ECCE64900F9885A833A7E3F991673

EN ISO 19128:2008 Geographic information - Web map server interface (ISO 19128:2005)

ISO 19128:2005 specifies the behaviour of a service that produces spatially referenced maps dynamically from geographic information. It specifies operations to retrieve a description of the maps offered by a server, to retrieve a map, and to query a server about features displayed on a map. ISO 19128:2005 is applicable to pictorial renderings of maps in a graphical format; it is not applicable to retrieval of actual feature data or coverage data values.

https://standards.cen.eu/dyn/www/f?p=204:110:0::::FSP_PROJECT,FSP_ORG_ID:27470,6268& cs=1622BFD2E0AE37E797E86C9028F3AA07D

EN ISO 19134:2008 Geographic information - Location-based services - Multimodal routing and navigation (ISO 19134:2007

ISO 19134:2006 specifies the data types and their associated operations for the implementation of multimodal location-based services for routing and navigation. It is designed to specify web

services that may be made available to wireless devices through web-resident proxy applications, but is not limited to that environment.

https://standards.cen.eu/dyn/www/f?p=204:110:0::::FSP_PROJECT,FSP_ORG_ID:28463,6268&cs=15DDBBCA658B6E6B72D44E6D771FDADA2

EN IEC 63119-1:2019 Information exchange for electric vehicle charging roaming service - Part 1: General

IEC 63119-1:2019 establishes a basis for the other parts of IEC 63119, specifying the terms and definitions, general description of the system model, classification, information exchange and security mechanisms for roaming between EV charge service providers (CSP), charging station operators (CSOs) and clearing house platforms through roaming endpoints. It provides an overview and describes the general requirements of the EV roaming service system. IEC 63119 (all parts) is applicable to high-level communication involved in information exchange/interaction between different CSPs, as well as between a CSP and a CSO with or without a clearing house platform through the roaming endpoint. IEC 63119 (all parts) does not specify the information exchange, either between the charging station (CS) and the charging station operator (CSO), or between the EV and the CS.

https://www.cenelec.eu/dyn/www/f?p=104:110:492132631119301::::FSP_ORG_ID,FSP_PROJECT,FSP_LANG_ID:1258145,66405,25

IEC 63119-2 ED1 Information exchange for Electric Vehicle charging roaming service - Part 2: Use cases

https://www.iec.ch/dyn/www/f?p=103:38:0::::FSP_ORG_ID,FSP_APEX_PAGE,FSP_PROJECT_ID:1255,23,102126

IEC 63119-3 ED1 Information exchange for Electric Vehicle charging roaming service - Part 3: Message structure

https://www.iec.ch/dyn/www/f?p=103:38:11628269509406::::FSP_ORG_ID,FSP_APEX_PAGE,FSP_PROJECT_ID:1255,20,102127

IEC 63119-4 ED1 Information exchange for Electric Vehicle charging roaming service - Part 4: Cybersecurity and information privacy

https://www.iec.ch/dyn/www/f?p=103:38:11628269509406::::FSP_ORG_ID,FSP_APEX_PAGE,FSP_PROJECT_ID:1255,20,102128

IEC 61851-21-2:2018 Electric vehicle conductive charging system - Part 21-2: Electric vehicle requirements for conductive connection to an AC/DC supply - EMC requirements for off board electric vehicle charging systems

IEC 61851-21-2:2018 defines the EMC requirements for any off-board components or equipment of such systems used to supply or charge electric vehicles with electric power by conductive power transfer (CPT), with a rated input voltage, according to IEC 60038:2009, up to 1 000 V AC or 1 500 V DC and an output voltage up to 1 000 V AC or 1 500 V DC. This document covers off-board charging equipment for mode 1, mode 2, mode 3 and mode 4 charging as defined in IEC 61851-1:2017.

This first edition, together with IEC 61851-21-1, cancels and replaces IEC 61851-21:2001. It constitutes a technical revision.

This edition includes the following significant technical changes with respect to IEC 61851-21:2001:
a) this document addresses now only EMC related tests instead of other electrical tests;

b) Clauses 2 and 3 have been updated;

c) the port definition, the test-setups and their corresponding limits as well as the operation modes are defined more precisely;

d) Annexes A to F have been added.

https://webstore.iec.ch/publication/31282

IEC 61000-6-2:2016 Electromagnetic compatibility (EMC) - Part 6-2: Generic standards - Immunity standard for industrial environments

IEC 61000-6-2:2016 RLV contains both the official IEC International Standard and its Redline version. The Redline version is not an official document, it is available in English only and provides you with a quick and easy way to compare all the changes between the official IEC Standard and its previous edition.

IEC 61000-6-2:2016 for EMC immunity requirements applies to electrical and electronic equipment intended for use in industrial locations, as described below. Immunity requirements in the frequency range 0 Hz to 400 GHz are covered. No tests need to be performed at frequencies where no requirements are specified. This generic EMC immunity standard is applicable if no relevant dedicated product or product-family EMC immunity standard exists. This third edition cancels and replaces the second edition published in 2005. This edition constitutes a technical revision.

https://webstore.iec.ch/publication/25629

EN 62311:2008 Assessment of electronic and electrical equipment related to human exposure restrictions for electromagnetic fields (0 Hz - 300 GHz)

Applies to electronic and electrical equipment for which no dedicated product- or product family standard regarding human exposure to electromagnetic fields applies. The frequency range covered is 0 Hz to 300 GHz. The object of this generic standard is to provide assessment methods and criteria to evaluate such equipment against basic restrictions or reference levels on exposure of the general public related to electric, magnetic and electromagnetic fields and induced and contact current.

https://www.cenelec.eu/dyn/www/f?p=104:110:492132631119301::::FSP_ORG_ID,FSP_PROJECT,FSP_LANG_ID:1258483,50031,25

IEC 61439-7:2018 Low-voltage switchgear and controlgear assemblies - Part 7: Assemblies for specific applications such as marinas, camping sites, market squares, electric vehicle charging stations

IEC 61439-7:2018 defines the specific requirements of assemblies as follows:

- assemblies for which the rated voltage does not exceed 1 000 V in the case of AC or 1 500 V in the case of DC;

- assemblies intended for use in connection with the generation, transmission, distribution and conversion of electric energy, and for the control of electric energy consuming equipment;

- assemblies operated by ordinary persons (e.g. plug and unplug of electrical equipment);

- assemblies intended to be installed and used in market squares, marinas, campsites and other similar outdoor public sites;

- assemblies intended for charging stations for electric vehicles (AEVCS) for Mode 3 and Mode 4. They are designed to integrate the functionality and additional requirements for electric vehicle conductive charging systems according to IEC 61851-1:2017.

This first edition cancels and replaces the relevant technical specification published in 2014. It constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous technical specification:

- a new classification of the stationary ASSEMBLIES in accordance with their mechanical resistance (5.702);

- a new Table 702 with the list of tests and relevant severities to which the ASSEMBLIES have to be subjected according to the classification mentioned at point a);

- a new Annex (CC) with a new endurance test for the individual switching devices intended to be used in AEVSC, if they have not already been tested against this requirement;

- a general editorial review and a technical revision.

The contents of the corrigendum of August 2019 have been included in this copy.

https://webstore.iec.ch/publication/29556

IEC 61439-1:2020 Low-voltage switchgear and controlgear assemblies - Part 1: General rules

IEC 61439-1:2020 RLV contains both the official IEC International Standard and its Redline version. The Redline version is not an official document, it is available in English only and provides you with a quick and easy way to compare all the changes between the official IEC Standard and its previous edition.

IEC 61439-1:2020 lays down the general definitions and service conditions, construction requirements, technical characteristics and verification requirements for low-voltage switchgear and controlgear assemblies. NOTE Throughout this document, the term assembly(s) (see 3.1.1) is used for a low-voltage switchgear and controlgear assembly(s). For the purpose of determining assembly conformity, the requirements of the relevant part of the IEC 61439 series, Part 2 onwards, apply together with the cited requirements of this document. For assemblies not covered by Part 3 onward, Part 2 applies. This third edition cancels and replaces the second edition published in 2011. It constitutes a technical revision. This edition includes the following significant technical changes with respect to the previous edition: a) clarification that power electric converter systems, switch mode power supplies, uninterruptable power supplies and adjustable speed power drive systems are tested to their particular products standard, but when they are incorporated in assemblies the incorporation is in accordance with the IEC 61439 series of standards;

b) introduction of a group rated current for circuits within a loaded assembly and the refocusing of temperature-rise verification on this new characteristic;

c) addition of requirements in respect of DC;

d) introduction of the concept of class I and class II assemblies regarding protection against electric shock.

https://webstore.iec.ch/publication/67026

IEC 61851-1:2017 Electric vehicle conductive charging system - Part 1: General requirements

IEC 61851-1:2017 applies to EV supply equipment for charging electric road vehicles, with a rated supply voltage up to 1 000 V AC or up to 1 500 V DC and a rated output voltage up to 1 000 V AC or up to 1 500 V DC. Electric road vehicles (EV) cover all road vehicles, including plug-in hybrid road vehicles (PHEV), that derive all or part of their energy from on-board rechargeable energy storage systems (RESS). The aspects covered in this standard include:

- the characteristics and operating conditions of the EV supply equipment;

- the specification of the connection between the EV supply equipment and the EV;

- the requirements for electrical safety for the EV supply equipment.

This third edition cancels and replaces the second edition published in 2010. It constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

a) The contents of IEC 61851-1:2010 have been re-ordered. Numbering of clauses has changed as new clauses were introduced and some contents moved for easy reading. The following lines give an insight to the new ordering in addition to the main technical changes.

b) All requirements from IEC 61851-22 have been moved to this standard, as work on IEC 61851-22 has ceased.

c) Any requirements that concern EMC have been removed from the text and are expected to be part of the future version of 61851-21-2.

d) Clause 4 contains the original text from IEC 61851-1:2010 and all general requirements from Clause 6 of IEC 61851-1:2010.

e) Clause 5 has been introduced to provide classifications for EV supply equipment.

f) Previous general requirements of Clause 6 have been integrated into Clause 4. Clause 6 contains all Mode descriptions and control requirements. Specific requirements for the combined use of AC and DC on the same contacts are included.

g) Clause 9 is derived from previous Clause 8. Adaptation of the description of DC accessories to allow for the DC charging modes that have only recently been proposed by industry and based on the standards IEC 61851-23, IEC 61851-24 as well as IEC 62196-1, IEC 62196-2 and IEC 62196-3. Information and tables contained in the IEC 62196 series standards have been removed from this standard.

h) Clause 10 specifically concerns the requirements for adaptors, initially in Clause 6.

i) Clause 11 includes new requirements for the protection of the cable.

j) Specific requirements for equipment that is not covered in the IEC 62752 remain in the present document.

k) Previous Clause 11 is now treated in Clauses 12 to 13. The requirements in 61851-1 cover the EV supply equipment of both mode 2 and mode 3 types, with the exception in-cable control and protection devices for mode 2 charging of electric road vehicles (IC-CPD) which are covered by IEC 62752.

l) Clause 14 gives requirements on automatic reclosing of protection equipment.

m) Clause 16 gives requirements for the marking of equipment and the contents of the installation and user manual. This makes specific mention of the need to maintain coherence with the

standards for the fixed installation. It also contains an important text on the markings for temperature ratings.

n) Annex A has been reviewed to introduce complete sequences and tests and to make the exact cycles explicit. Annex A in this edition supersedes IEC TS 62763 (Edition 1).

o) Annex B is normative and has requirements for proximity circuits with and without current coding.

p) Previous Annex C has been removed and informative descriptions of pilot function and proximity function implementations initially in Annex B are moved to Annex C.

q) New informative Annex D describing an alternative pilot function system has been introduced.

r) Dimensional requirements for free space to be left around socket-outlets used for EV energy supply are given in the informative Annex E.

s) The inclusion of protection devices within the EV supply equipment could, in some cases, contribute to the protection against electric shock as required by the installation. This is covered by the information required for the installation of EV supply equipment in Clause 16 (Marking).

https://webstore.iec.ch/publication/33644

IEC 60529:1989+AMD1:1999+AMD2:2013 Degrees of protection provided by enclosures (IP Code)

IEC 60529:1989+A1:1999+A2:2013 Applies to the classification of degrees of protection provided by enclosures for electrical equipment with a rated voltage not exceeding 72,5 kV. The contents of the corrigenda of January 2003, September 2007, October 2009, October 2013, May 2015 and January 2019 have been included in this copy.

This consolidated version consists of the second edition (1989), its amendment 1 (1999) and its amendment 2 (2013). Therefore, no need to order amendments in addition to this publication.

https://webstore.iec.ch/publication/2452

IEC 62196-2:2016 Plugs, socket-outlets, vehicle connectors and vehicle inlets - Conductive charging of electric vehicles - Part 2: Dimensional compatibility requirements for AC pin and contact-tube accessories

IEC 62196-2:2016 applies to plugs, socket-outlets, vehicle connectors and vehicle inlets with pins and contact-tubes of standardised configurations, herein referred to as accessories. They have a nominal rated operating voltage not exceeding 480 V AC, 50 Hz to 60 Hz, and a rated current not exceeding 63 A three-phase or 70 A single phase, for use in conductive charging of electric vehicles. This second edition cancels and replaces the first edition published in 2011 and constitutes a technical revision. This second edition includes the following significant technical changes with respect to the previous edition.

a) Standard sheets for configurations type 2 and type 3 have been updated.

b) Configuration type 2 is now available with optional shutter.

This publication is to be read in conjunction with IEC 62196-1:2014..

https://webstore.iec.ch/publication/24204

EN 50620:2017 Electric cables - Charging cables for electric vehicles

This standard specifies design, dimensions and test requirements for halogen-free cables with extruded insulation and sheath having a voltage rating of up to and including 450/750 V for flexible applications under severe condition for the power supply between the electricity supply point or the charging station and the vehicle. The EV charging cable is intended to supply power and if needed communication (details see IEC 61851 series and IEC 62196 series) to an electric vehicle. The charging cables are applicable for charging modes 1-3 of IEC 61851-1. Cables with rated voltage 300/500 V are only permitted for charging mode 1 of IEC 61851-1. The maximum conductor operating temperatures for the cables in this standard is 90°C. The cables may be a) an integral part of the vehicle (case A of IEC 61851-1), or b) a detachable cable assembly with a vehicle connector and AC supply connection to a socket outlet (case B of IEC 61851-1), or c) permanently attached to a fixed charging point (case C of IEC 61851-1). This standard describes cables whose safety and reliability is ensured when they are installed and/or used in accordance to the guide to use EN 50565-1 and ANNEX B.

https://www.cenelec.eu/dyn/www/f?p=104:110:492132631119301::::FSP_ORG_ID,FSP_PROJECT,FSP_LANG_ID:1257155,44416,25

ETSI EN 301 489-1 V2.2.3 (2019-11) ElectroMagnetic Compatibility (EMC) standard for radio equipment and services - Part 1: Common technical requirements-Harmonised Standard for ElectroMagnetic Compatibility

The present document specifies methods of measurements and technical characteristics for radio equipment and associated ancillary equipment, excluding broadcast receivers, in respect of ElectroMagnetic Compatibility (EMC). Technical specifications related to the antenna port of radio equipment and radiated emissions from the enclosure port of radio equipment and combinations of radio and ancillary equipment are not included in the present document. Such technical specifications are normally found in the relevant product standards for the effective use of the radio spectrum. NOTE 1: The relationship between the present document and essential requirements of article 3.1(b) of Directive 2014/53/EU [i.1] is given in annex A. NOTE 2: Other standards may apply in place of the present document, e.g. product specific standards in the ETSI EN 301 489 [i.13] series.

https://www.etsi.org/deliver/etsi_en/301400_301499/30148901/02.02.03_60/en_30148901v020203p.pdf

ETSI EN 301 489-3 V2.1.1 (2019-03) ElectroMagnetic Compatibility (EMC) standard for radio equipment and services - Part 3: Specific conditions for Short-Range Devices (SRD) operating on frequencies between 9 kHz and 246 GHz - Harmonised Standard covering the essential requirements of article 3.1(b) of Directive 2014/53/EU

The product family of Short Range Devices covers a wide range of equipment types, which may have different sets of performance criteria set out in the relevant radio standards and/or product standards. The present document is intended for all SRD types and applies a standard set of performance criteria. This includes the requirement that the equipment continues to operate as intended under certain standardised conditions of EMC stress. The term "Short Range Device" (SRD) is intended to cover the radio equipment which provides either uni-directional or bi-directional communication and which have low capability of causing interference to other radio equipment. SRDs use either integral, dedicated or external antennas and all modes of modulation can be permitted subject to relevant standards. For Short Range Devices individual licenses are normally not required.

https://www.etsi.org/deliver/etsi_en/301400_301499/30148903/02.01.01_60/en_30148903v020101p.pdf

ETSI EN 301 489-17 V3.2.2 (2019-12) ElectroMagnetic Compatibility (EMC) standard for radio equipment and services - Part 17: Specific conditions for Broadband Data Transmission Systems - Harmonised Standard for ElectroMagnetic Compatibility

The present document, together with ETSI EN 301 489-1 [1], specifies technical characteristics and methods of measurements for Broadband Data Transmission System equipment, as detailed in annex B. Technical specifications related to the antenna port and emissions from the enclosure port of the radio equipment are not included in the present document. Such technical specifications are found in the relevant product standards for the effective use of the radio spectrum. The present document specifies the applicable test conditions, performance assessment and performance criteria for wideband data communication systems. The environmental classification and the emission and immunity requirements used in the present document are as stated in ETSI EN 301 489-1 [1], except for any special conditions included in the present document. The present document covers the essential requirements of article 3.1(b) of Directive 2014/53/EU [i.1] under the conditions identified in annex A.

https://www.etsi.org/deliver/etsi_en/301400_301499/30148917/03.02.02_20/en_30148917v030202a.pdf

ETSI EN 301 489-52 V1.1.0 (2016-11) Electromagnetic Compatibility (EMC) standard for radio equipment and services - Part 52: Specific conditions for Cellular Communication Mobile and portable (UE) radio and ancillary equipment - Harmonised Standard for ElectroMagnetic Compatibility

The present document specifies technical characteristics and methods of measurements for equipment the following equipment types: 1) digital cellular User Equipment (UE); 2) associated ancillary equipment. Including individually and combinations of:

- UTRA, WCDMA (IMT-2000 Direct Spread, W-CDMA, UMTS)

- E-UTRA, LTE (IMT-2000 and IMT advanced) (see annex D)

- GSM (IMT-2000 SC, Technology GSM/EDGE) (see annex D)

In case of differences (for instance concerning special conditions, definitions, abbreviations) between the present document and ETSI EN 301 489-1 [1], the provisions of the present document take precedence.

Technical specifications related to the antenna port and emissions from the enclosure port of radio equipment are not included in the present document. Such technical specifications are found in the relevant product standards for the effective use of the radio spectrum.

The environmental classification and the emission and immunity requirements used in the present document are as stated in ETSI EN 301 489-1 [1], except for any special conditions included in the present document.

Base station (BS) equipment operating within network infrastructure is outside the scope of the present document. However, the present document does cover mobile and portable equipment that is intended to be operated in a fixed location while connected to the AC mains (see clause 5.5).

The present document covers the essential requirements of article 3.1(b) of Directive 2014/53/EU under the conditions identified in annex A.

https://www.etsi.org/deliver/etsi_en/301400_301499/30148952/01.01.00_20/en_30148952v010100a.pdf

IEC 61980-1:2015 Electric vehicle wireless power transfer (WPT) systems - Part 1: General requirement

IEC 61980-1:2015 applies to the equipment for the wireless transfer of electric power from the supply network to electric road vehicles for purposes of supplying electric energy to the RESS (Rechargeable energy storage system) and/or other on-board electrical systems in an operational state when connected to the supply network, at standard supply voltages ratings per IEC 60038 up to 1 000 V AC and up to 1 500 V DC This standard also applies to Wireless Power Transfer (WPT) equipment supplied from on-site storage systems (e.g. buffer batteries, etc.). This publication is to be read in conjunction with the IEC 61980 series. The contents of the corrigendum of January 2017 have been included in this copy.

https://webstore.iec.ch/publication/22951

IEC 61851-23:2014 Electric vehicle conductive charging systems - Part 23: DC electric vehicle charging station

IEC 61851-23:2014, gives the requirements for DC electric vehicle (EV) charging stations, herein also referred to as "DC charger", for conductive connection to the vehicle, with an AC or DC input voltage up to 1 000 V AC and up to 1 500 V DC according to IEC 60038. It provides the general

requirements for the control communication between a DC EV charging station and an EV. The requirements for digital communication between DC EV charging station and electric vehicle for control of DC charging are defined in IEC 61851-24.

Due to further technical developments in the field of electric vehicles charging, the requirements in IEC 61851-23:2014 to fulfill the safety objective "protection against electric shock" under single fault condition by limiting the capacitance energy, may not cover all possible combinations of charging stations and vehicles. Since the charging process links the charging infrastructure with the electric vehicle, the requirements laid down in ISO 17409:2015 are also relevant for the electrical safety of the charging process. The approach of limiting the capacitance energy will not be sufficient for the safety objective "protection against electric shock" under single fault condition in all relevant cases. Therefore, this warning is issued for both standards. It is as always strongly recommended that users of standards additionally perform a risk assessment. Specifically in this case, standards users shall select proper means to fulfill safety requirements in the system of charging station and electric vehicle.

This publication is to be read in conjunction with IEC 61851-1:2010. The contents of the corrigendum of May 2016 have been included in this copy.

https://webstore.iec.ch/publication/6032

EN ISO/IEC 19762-3:2012 Information technology - Automatic identification and data capture (AIDC) techniques - Harmonized vocabulary - Part 3: Radio frequency identification (RFID) (ISO/IEC 19762-3:2008)

ISO/IEC 19762-3:2008 provides terms and definitions unique to radio frequency identification (RFID) in the area of automatic identification and data capture techniques. This glossary of terms enables the communication between non-specialist users and specialists in RFID through a common understanding of basic and advanced concepts.

https://standards.cen.eu/dyn/www/f?p=204:110:0::::FSP_PROJECT,FSP_ORG_ID:36453,6206&cs=17C35313AE072802BD316BECB931F5A99

ISO/IEC 24791-1:2010 Information technology — Radio frequency identification (RFID) for item management — Software system infrastructure — Part 1: Architecture

ISO/IEC 24791 defines a Software System Infrastructure that enables radio frequency identification (RFID) system operations between business applications and RFID interrogators. RFID software systems are composed of RFID interrogators, intermediate software systems, and applications that provide control and coordination of air interface operation, tag and sensor information exchange, and health and performance management of system components.

ISO/IEC 24791-1:2010 provides the following:

- an overview of the Software System Infrastructure;

- the relationship of the Software System Infrastructure to existing ISO components, e.g. ISO/IEC 15962;

- a basic description of each Software System Infrastructure component and the services that it provides (The detailed description of a particular component can be found in other parts of ISO/IEC 24791.);

- illustrative (informative) deployment models of the components of the Software System Infrastructure.

https://www.iso.org/standard/46137.html

ISO/IEC 24791-2:2011 Information technology — Radio frequency identification (RFID) for item management — Software system infrastructure — Part 2: Data management

ISO/IEC 24791-2:2011 defines the interface(s) that provide operations on radio frequency identification (RFID) tag data including, but not limited to, reading, writing, collection, filtering, grouping, and event subscription and notification within the Software System Infrastructure (SSI).

Specifically, the interface(s) defined by ISO/IEC 24791-2:2011 provide the following features:

- full support for the commands and responses for air protocols supported by ISO/IEC 24791-2:2011 at an abstraction level appropriate for Data Management's position in the SSI architecture defined in ISO/IEC 24791-1;

- an abstract definition of commands and operations that can be applied to different network bindings and encoding mechanisms;

- support for the encoding mechanisms defined in ISO/IEC 15962;

- volume reduction, format or structure modification, data analysis, and data access appropriate for Data Management's position in the SSI architecture defined in ISO/IEC 24791-1;

- reporting of data to support application or data managing in formats controlled by the client, either inside or outside of SSI.

ISO/IEC 24791-2:2011 is composed of the EPCglobal Application Level Events Standard, in its entirety, with extensions to further support operation with ISO/IEC 15962 and the air protocols defined by ISO/IEC 18000.

https://www.iso.org/standard/46138.html

ISO/IEC 24791-3:2014 Information technology — Radio frequency identification (RFID) for item management — Software system infrastructure — Part 3: Device management

ISO/IEC 24791-3:2014 defines interfaces for device management of radio frequency identification (RFID) systems. Interfaces are defined that provide for discovery, configuration, initialization and monitoring of RFID systems within the Software System Infrastructure (SSI).

It only deals with devices that provide RFID related services. It does not distinguish the form factor of such RFID devices.

ISO/IEC 24791-3:2014 provides two distinct interface sets, one based on the EPCglobal Discovery, Configuration, and Initialization (DCI) standard and the IETF SNMP RFCs and the other based on the Organization for the Advancement of Structured Information Standards (OASIS) Device Profile for Web Services (DPWS) standard. The definition of the Device Profile for RFID is referred to in ISO/IEC 24791-3:2014 as the RFID Device Management Profile, or RDMP.

Each interface option set provides interface definitions that provide ISO/IEC 24791-3 Client Endpoints and Services Endpoints with the mechanisms for:

- discovery of the RFID devices and services on a local or remote subnet;

- a firmware upgrade service;

- a management service that implements configuration related functions;

- a monitoring service for reporting alerts, diagnostics, and performance information.

The two interface set definitions provided by ISO/IEC 24791-3:2014 allow for clients and services endpoints to implement and provide the services based on the specific characteristics of the RFID system to be implemented.

https://www.iso.org/standard/46139.html

ISO/IEC 24791-5:2012 Information technology — Radio frequency identification (RFID) for item management — Software system infrastructure — Part 5: Device interface

ISO/IEC 24791-5:2012 defines an interface within the Software System Infrastructure (SSI) that provides RFID system control components with low-level access to RFID interrogators for the purpose of optimizing RFID data access and control operations. This interface is designed to be modular with the ability to support multiple RFID air protocols. However, in ISO/IEC 24791-5:2012, the only RFID air protocol supported is Type C of ISO/IEC 18000-6.

https://www.iso.org/standard/60833.html

ISO/IEC 15961-1:2013 Information technology — Radio frequency identification (RFID) for item management: Data protocol — Part 1: Application interface

ISO/IEC 15961-1:2013 focuses on the abstract interface between an application and the data processor, and includes the specification and definition of application commands and responses. It allows data and commands to be specified in a standardised way, independent of the particular air interface of ISO/IEC 18000.

ISO/IEC 15961-1:2013

- provides guidelines on how data shall be presented as objects;

- defines the structure of Object Identifiers, based on ISO/IEC 9834-1;

- specifies the commands that are supported for transferring data between an application and the radio frequency identification (RFID) tag;

- specifies the responses that are supported for transferring data between the RFID tag and the application;

- does not specify any required transfer syntax with ISO/IEC 15962, but provides the non-normative information to provide backward compatibility with ISO/IEC 15961:2004.

https://www.iso.org/standard/43458.html

ISO/IEC 15961-2:2019 Information technology — Data protocol for radio frequency identification (RFID) for item management — Part 2: Registration of RFID data constructs

This document specifies the procedural requirements to maintain specific RFID data constructs. The data constructs are associated with managing open and closed applications that utilise RFID systems which conform to the data protocol defined in other parts of ISO/IEC 15961 and ISO/IEC 15962, and the air interface protocols of ISO/IEC 18000.

It also outlines the obligations of the Registration Authority and the application administrators, with respect to:

— the allocation of AFIs to particular applications defined by the application administrator;

— the allocation of data formats to particular applications defined by the application administrator;

— the registration of Root-OIDs, compliant with ISO/IEC 9834-1, to any Unique Item Identifiers used in applications defined by the application administrator;

— the registration of Root-OIDs, compliant with ISO/IEC 9834-1, to any other data used in applications defined by the application administrator;

— the registration of various table-driven encoding schemes, compliant with ISO/IEC 15962.

https://www.iso.org/standard/43631.html

ISO/IEC 15961-3:2019 Information technology — Data protocol for radio frequency identification (RFID) for item management — Part 3: RFID data constructs

This document specifies rules and code structures associated with the data constructs for RFID for item management. In particular, it:

— defines the application family identifier (AFI), including the range of code values that are available to use for RFID for item management;

— defines the data format, including the range of code values that are available to use for RFID for item management;

— describes the Object Identifier structure used for RFID for item management;

— specifies the function of the Object Identifier for the Unique Item Identifier (UII);

— specifies the function of the Object Identifier for other item attendant data.

NOTE Conventionally in International Standards, long numbers are separated by a space character as a "thousands separator". This convention has not been followed in this document because the arcs of an Object Identifier are defined by a space separator (according to ISO/IEC 8824 and ISO/IEC 8825). As the correct representation of these arcs is vital to this document, all numeric values have no space separators except to denote a node between two arcs of an Object Identifier. For additional clarity, Object Identifiers are presented in bold text.

https://www.iso.org/standard/43632.html

ISO/IEC 15961-4:2016 Information technology — Radio frequency identification (RFID) for item management: Data protocol — Part 4: Application interface commands for battery assist and sensor functionality

ISO/IEC 15961-4:2016 provides a set of application commands and their associated responses for the following functions:

- to start and stop battery assistance;

- to select and de-select a particular sensory function supported by the RFID tag;

- to set sensor parameters both initially and ongoing;

- to start and stop the sensor monitoring the environment;

- to access sensor data;

- to establish the battery status.

ISO/IEC 24753 defines the encoding rules for identifying sensors, their functions, their delivered measurements, and the processing rules for sensor data. As such, it receives commands as defined in ISO/IEC 15961-4:2016 and provides the information that is required for the appropriate responses.

https://www.iso.org/standard/51145.html

ISO/IEC 15962:2013 Information technology — Radio frequency identification (RFID) for item management — Data protocol: data encoding rules and logical memory functions

The data protocol used to exchange information in a radio frequency identification (RFID) system for item management is specified in ISO/IEC 15961 and in ISO/IEC 15962:2013. Both International Standards are required for a complete understanding of the data protocol in its entirety; but each focuses on one particular interface:

•   ISO/IEC 15961 addresses the interface with the application system.

•   ISO/IEC 15962:2013 deals with the processing of data and its presentation to the RF tag, and the initial processing of data captured from the RF tag.

ISO/IEC 15962:2013 focuses on encoding the transfer syntax, as defined in ISO/IEC 15961 according to the application commands defined in ISO/IEC 15961. The encodation is in a Logical

Memory as a software analogue of the physical memory of the RFID tag being addressed by the interrogator.

ISO/IEC 15962:2013

- defines the encoded structure of object identifiers;

- specifies the data compaction rules that apply to the encoded data;

- specifies a Precursor for encoding syntax features efficiently;

- specifies formatting rules for the data, e.g. depending on whether a directory is used or not;

- defines how application commands, e.g. to lock data, are transferred to the Tag Driver;

- specifies processes associated with sensory information and the transfers to the Tag Driver;

- defines other communication to the application.

https://www.iso.org/standard/43459.html

ISO/IEC 15963-1:2020 Information technology — Radio frequency identification for item management — Part 1: Unique identification for RF tags numbering systems

This document describes numbering systems that are available for the identification of RF tags and assigns various allocation classes to various agencies that issue manufacturer codes.

The unique ID can be used:

— for the traceability of the integrated circuit itself for quality control in its manufacturing process;

— for the traceability of the RF tag during its manufacturing process and along its lifetime;

— for the completion of the reading in a multi-antenna configuration;

— by the anti-collision mechanism to inventory multiple tags in the reader's field of view; and

— for the traceability of the item to which the RF tag is attached.

https://www.iso.org/standard/73195.html

ISO/IEC 15963-2:2020 Information technology — Radio frequency identification for item management — Part 2: Unique identification for RF tags registration procedures

This document specifies the procedural requirements to maintain identities and outlines the obligations of the Registration Authority.

https://www.iso.org/standard/73196.html

ETSI EN 300 330 V2.1.1 (2017-02) Short Range Devices (SRD)-Radio equipment in the frequency range 9 kHz to 25 MHz and inductive loop systems in the frequency range 9 kHz to 30 MHz -Harmonised Standard covering the essential requirements of article 3.2 of Directive 2014/53/EU

The present document specifies technical characteristics and methods of measurements for the following Short Range Device major equipment types:

1) Generic Short range Devices including transmitters and receivers operating in the range from 9 kHz to 25 MHz; and

2) inductive loop transmitters and receivers operating from 9 kHz to 30 MHz including Radio Frequency Identification (RFID), Near Field Communication (NFC) and Electronic Article Surveillance (EAS) operating in LF and HF ranges.

Also the present document covers fixed, mobile and portable stations.

NOTE: If a system includes transponders, these are measured together with the transmitter.

These radio equipment types are capable of operating in the permitted frequency bands within the 9 kHz to 30 MHz range as specified in table 1.

Table 1: Short Range Devices within the 9 kHz to 30 MHz permitted frequency bands

	Frequency Bands/frequencies	Applications
Transmit and Receive	9 kHz to 90 kHz	Inductive devices, Generic use
Transmit and Receive	90 kHz to 119 kHz	Inductive devices, Generic use
Transmit and Receive	119 kHz to 140 kHz	Inductive devices, Generic use
Transmit and Receive	140 kHz to 148,5 kHz	Inductive devices, Generic use
Transmit and Receive	148,5 kHz to 5 MHz	Inductive devices, Generic use
Transmit and Receive	400 kHz to 600 kHz	RFID only
Transmit and Receive	5 MHz to 30 MHz	Inductive devices, Generic use
Transmit and Receive	3 155 kHz to 3 400 kHz	Inductive devices, Generic use
Transmit and Receive	984 kHz to 7 484 kHz (Note 3, Centre frequency is 4 234 kHz)	Inductive devices, Railway applications
Transmit and Receive	4 516 kHz	Inductive devices, Railway applications
Transmit and Receive	6 765 kHz to 6 795 kHz	Inductive devices, Generic use
Transmit and Receive	7 400 kHz to 8 800 kHz	Inductive devices, Generic use
Transmit and Receive	10 200 kHz to 11,000 MHz	Inductive devices, Generic use

Transmit and Receive	11,810 MHz to 15,310 MHz (Centre frequency is 13,56 MHz)	RFID only
Transmit and Receive	12,5 MHz to 20 MHz	Inductive devices, Wireless healthcare
Transmit and Receive	13,553 MHz to 13,567 MHz	Inductive devices, Generic use
Transmit and Receive	26,957 MHz to 27,283 MHz	Inductive devices, Generic use
Transmit and Receive	27,090 MHz to 27,100 MHz	Inductive devices, Railway applications

NOTE 1: In addition, it should be noted that other frequency bands may be available in a country within the frequency range 9 kHz to 30 MHz.

NOTE 2: On non-harmonised parameters, national administrations may impose certain conditions such as the type of modulation, frequency, channel/frequency separations, maximum transmitter radiated power, duty cycle, and the inclusion of an automatic transmitter shut-off facility, as a condition for the issue of an Individual Rights for use of spectrum or General Authorization, or as a condition for use under "licence exemption" as it is in most cases for Short Range Devices.

NOTE 3: Transmitting only on receipt of a Balise/Eurobalise tele-powering signal from a train.

The frequency ranges and limits of the present document are based on the European Commission Decision for SRDs [i.10], CEPT/ERC/REC 70-03 [i.1].

When selecting parameters for new SRDs, which may have inherent safety of human life implications, manufacturers and users should pay particular attention to the potential for interference from other systems operating in the same or adjacent bands.

The radio equipment, covered by the present document is divided into several classes which are dependent on the antenna used (see annex B). Three types of measuring methods are defined in the present document due to the varied nature of the antenna types for equipment used in this band. One method measures the RF carrier current, another measures the radiated H-field and the third conducted power.

The present document covers the essential requirements of article 3.2 of Directive 2014/53/EU [i.4] under the conditions identified in annex A.

https://www.etsi.org/deliver/etsi_en/300300_300399/300330/02.01.01_60/en_300330v020101p.pdf

EN 62196-1:2014 Plugs, socket-outlets, vehicle connectors and vehicle inlets - Conductive charging of electric vehicles - Part 1: General requirements

IEC 62196-1:2014 is applicable to plugs, socket-outlets, vehicle connectors, vehicle inlets and cable assemblies for electric vehicles, herein referred to as "accessories", intended for use in conductive charging systems which incorporate control means, with a rated operating voltage not exceeding: - 690 V AC 50 Hz to 60 Hz, at a rated current not exceeding 250 A; - 1 500 V DC at a rated current not exceeding 400 A. This third edition cancels and replaces the second edition published in 2011 and constitutes a technical revision. This edition includes the following significant technical changes with respect to the previous edition: a) addition of a preferred operating voltage of 1 000 V DC; b) addition of a preferred rated current of 80 A DC; c) addition of a provision for a combined interface AC/DC; d) description of DC configurations (previously under consideration); e) addition of requirements pertaining to the locking mechanism, the interlock and the latching device; f) addition of a test for accessories not suitable for making and breaking an electrical circuit under load; g) addition of requirements and tests for insulated end caps.

https://www.cenelec.eu/dyn/www/f?p=104:110:492132631119301::::FSP_ORG_ID,FSP_PROJECT,FSP_LANG_ID:2054077,45640,25

EN 62196-2:2017 Plugs, socket-outlets, vehicle connectors and vehicle inlets - Conductive charging of electric vehicles - Part 2: Dimensional compatibility and interchangeability requirements for AC pin and contact-tube accessories

IEC 62196-2:2016 applies to plugs, socket-outlets, vehicle connectors and vehicle inlets with pins and contact-tubes of standardised configurations, herein referred to as accessories. They have a nominal rated operating voltage not exceeding 480 V AC, 50 Hz to 60 Hz, and a rated current not exceeding 63 A three-phase or 70 A single phase, for use in conductive charging of electric vehicles. This second edition cancels and replaces the first edition published in 2011 and constitutes a technical revision. This second edition includes the following significant technical changes with respect to the previous edition. a) Standard sheets for configurations type 2 and type 3 have been updated. b) Configuration type 2 is now available with optional shutter. This publication is to be read in conjunction with IEC 62196-1:2014.

https://www.cenelec.eu/dyn/www/f?p=104:110:492132631119301::::FSP_ORG_ID,FSP_PROJECT,FSP_LANG_ID:2054077,60387,25

EN 62196-3:2014 Plugs, socket-outlets, vehicle connectors and vehicle inlets - Conductive charging of electric vehicles - Part 3: Dimensional compatibility and interchangeability requirements for DC and AC/DC pin and contact-tube vehicle couplers

IEC 62196-3:2014 is applicable to vehicle couplers with pins and contact-tubes of standardised configuration, herein also referred to as "accessories", intended for use in electric vehicle conductive charging systems which incorporate control means, with rated operating voltage up to 1 500 V DC and rated current up to 250 A, and 1 000 V AC and rated current up to 250 A. This part of IEC 62196 applies to high power DC interfaces and combined AC/DC interfaces of

vehicle couplers specified in IEC 62196-1:2014, and intended for use in conductive charging systems for circuits specified in IEC 61851-1:2010, and IEC 61851-23:2014. This publication is to be read in conjunction with IEC 62196-1:2011.

https://www.cenelec.eu/dyn/www/f?p=104:110:492132631119301::::FSP_ORG_ID,FSP_PROJECT,FSP_LANG_ID:2054077,42664,25

ANNEX C. New technical committees detected

This Annex contents information about the technical committees detected by the that they were not included in the previous list.

TC 64 Electrical installations and protection against electric shock

Scope:

To prepare International standards:

- concerning protection against electric shock arising from equipment, from installations and from systems without limit of voltage,

- for the design, erection foreseeable correct use and verification of all kind of electrical installations at supply voltage up to 1 kV AC or 1,5 kV DC, except those installations covered by the following IEC committees: TC 9, TC 18, TC 44, TC 97, TC99

- in co-ordination with TC 99, concerning requirements additional to those of TC 99 for the design, erection and verification of electrical installations of buildings above 1kV up to 35kV.

The object of the standards shall be:

- to lay down requirements for installation and co-ordination of electrical equipment

- to lay down basic safety requirements for protection against electric shock for use by technical committees

- to lay down safety requirements for protection against other hazards arising from the use of electricity

- to give general guidance to IEC member countries that may have need of such requirements

- and to facilitate international exchanges that may be hampered by differences in national regulations.

The standards will not cover individual items of electrical equipment other than their selection for use. Safety Pilot Function: Protection against electric shock.

CLC/TC 64 Electrical installations and protection against electric shock

Scope:

To prepare International standards - concerning protection against electric shock arising from equipment, from installations and from systems without limit of voltage, - for the design, erection

foreseeable correct use and verification of all kind of electrical installations at supply voltage up to 1 kV AC or 1,5 kV DC, except those installations covered by the following IEC committees: TC 9X, TC 18X, TC 44X, TC 97, TC 99X, - in co-ordination with TC 99X, concerning requirements additional to those of TC 99X for the design, erection and verification of electrical installations of buildings above 1 kV up to 35 kV. The object of the standards shall be: - to lay down requirements for installation and co-ordination of electrical equipment, - to lay down basic safety requirements for protection against electric shock for use by technical committees, - to lay down safety requirements for protection against other hazards arising from the use of electricity, - to give general guidance to IEC member countries that may have need of such requirements, and - to facilitate international exchanges that may be hampered by differences in national regulations. The standards will not cover individual items of electrical equipment other than their selection for use.

CLC/TC 21X Secondary cells and batteries

Scope:

To execute the following standarisation activities for secondary cells and batteries: - to implement IEC/TC 21/SC 21A documents into CENELEC standards; - to prepare Product Standards, general requirements and methods of testing included; - to prepare Safety Standards and associated Codes of Practice; - to consider Environmental Requirements (EC Rules) for the products.