***भारतीय मानक***

***ऑडियो / वीडियो, सूचना एवं***

***संचार प्रौद्योगिकी उपकरण***

***भाग 1 सुरक्षा अपेक्षायें***

 *(दूसरा पुनरीक्षण)*

 ***Indian Standard***

***Audio/Video, Information and***

***Communication Technology Equipment –***

***Part 1: Safety Requirements***

 ***(Second Revision)***

***ICS 33.160.01; 35.020***

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**भारतीय मानक ब्‍यूरो**

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**October 2024                                                                       Price Group**

**NATIONAL FOREWORD**

This Indian Standard (Part 1) (Second Revision) which is identical with IEC 62368-1:2023 ‘Audio/Video, Information and Communication Technology Equipment - Part 1: Safety Requirements’ issued by the International Electrotechnical Commission (IEC) was adopted by the Bureau of Indian Standards on recommendation of the Audio, Video and Multimedia Systems and Equipment Sectional Committee and approval of the Electronics and Information Technology Division Council.

This standard was originally published in 2018 and was identical with IEC 62368-1: 2014.The first revision of this standard published in 2020 was identical with IEC 62368-1: 2018. The second revision of this standard aligns this Indian Standard with the latest version of IEC 62368-1:2023.

This edition includes the following significant technical changes with respect to the previous edition:

a) new table with requirements for external circuits;

b) revision of requirements for openings in fire enclosures;

c) revision of requirements for liquid filled components;

d) revision of battery charging requirements.

The text of IEC Standard has been approved as suitable for publication as an Indian Standard without deviations. Certain conventions are however not identical to those used in Indian Standards. Attention is particularly drawn to the following:

1. Wherever the words ‘International Standard’ appears referring to this standard, they should be read as ‘Indian Standard’.
2. Comma (,) has been used as a decimal marker while in Indian Standards, the current

Practice is to use a point (.) as the decimal marker.

In this adopted standard, reference appears to certain International Standards for which Indian Standard also exist. The corresponding Indian Standard which is to be substituted in its respective place is listed below along with its degree of equivalence for the edition indicated. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies:

|  |  |  |
| --- | --- | --- |
| **International Standard** | **Corresponding Indian Standard** | **Degree of Equivalence** |
| IEC 60027-1, Letter symbols to be used in electrical technology – Part 1: General | IS 3722 (Parts 1):2023 IEC 60027-1: 1992 Letter Symbols and Signs used in Electrical Technology - Part 1: General (Second Revision) | Identical |
| IEC 60038, IEC standard voltages | IS 12360 : 1988 Voltage bands for electrical installations including preferred voltages and frequency | Technically Equivalent  |
| IEC 60068-2-6, Environmental testing – Part 2-6: Tests – Test Fc: Vibration (sinusoidal) | IS/IEC 60068-2-6: 2007 Environmental Testing Part 2 Tests Section 6 Test Fc: Vibration (sinusoidal) | Identical  |
| IEC 60068-2-78, Environmental testing – Part 2-78: Tests – Test Cab: Damp heat, steady state | IS 9000 (Part 4) : 2020 IEC 60068-2-78 : 2012 Environmental Testing Part 4 Tests - Test Cab: Damp Heat, Steady State (Second Revision) | Identical  |
| IEC 60073, Basic and safety principles for man-machine interface, marking and identification – Coding principles for indicators and actuators | IS/IEC 60073 : 2002 Basic and safety principles for man-machine interface marking and identification - Coding principles for indicators and actuators | Identical  |
| IEC 60085, Electrical insulation – Thermal evaluation and designation | IS 1271: 2012IEC 60085 : 2007 Electrical insulation - Thermal evaluation and designation (Second Revision) | Identical  |
| IEC 60086-4, Primary batteries – Part 4: Safety of lithium batteries | IS 6303 (Part 4): 2023 IEC 60086-4:2019Primary batteries – Part 4: Safety of lithium batteries | Identical  |
| IEC 60086-5, Primary batteries – Part 5: Safety of batteries with aqueous electrolyte | IS 6303 (Part 5): 2023 IEC 60086-5:2021Primary batteries – Part 5: Safety of batteries with aqueous electrolyte | Identical  |
| IEC 60107-1:1997, Methods of measurement on receivers for television broadcasttransmissions – Part 1: General considerations – Measurements at radio and video frequencies | IS 4545 (Part 13) : 2023 IEC 60107-1:1997 Methods of Measurement on Receivers for Television Broadcast Transmissions Part 13 General Considerations ― Measurements at Radio and Video Frequencies | Identical  |
| IEC 60227-1, Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V – Part 1: General requirements | IS 694 : 2010 Polyvinyl chloride insulated unsheathed and sheathed cables/cords with rigid and flexible conductor for rated voltages up to and including 450/750 V | Technically Equivalent |
| IEC 60227-2:1997, Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V – Part 2: Test methods IEC 60227-2:1997/AMD1:2003 | IS 694 : 2010 Polyvinyl chloride insulated unsheathed and sheathed cables/cords with rigid and flexible conductor for rated voltages up to and including 450/750 V | Technically Equivalent |
| IEC 60245-1, Rubber insulated cables – Rated voltages up to and including 450/750 V – Part 1:General requirements | IS 9968 (Part 1) : 1988 Specification for elastomer insulated cables: Part 1 for working voltages up to and including 1100 volts (First Revision) | Technically Equivalent |
| IEC 60268-1:1985, Sound system equipment – Part 1: General IEC 60268-1:1985/AMD1:1988IEC 602681:1985/ AMD2 :1988 | IS 15596 (Part 1): 2005 IEC 60268-1:1985 Sound system equipment: Part 1 General | Identical |
| IEC 60309-1 Plugs fixed or portable socket-outlets and appliance inlets for industrial purposes Part 1: General requirements | IS/IEC 60309-1 :2021 Plugs fixed or portable socket-outlets and appliance inlets for industrial purposes Part 1: General requirements (Second Revision) | Identical |
| IEC 60309-2 Plugs fixed or portable socket-outlets and appliance inlets for industrial purposes Part 2: Dimensional compatibility requirements for pin and contact-tube accessories  | IS/IEC 60309-2 :2021 Plugs fixed or portable socket-outlets and appliance inlets for industrial purposes Part 2: Dimensional compatibility requirements for pin and contact-tube accessories (Second Revision) | Identical |
| IEC 60317 (all parts), Specifications for particular types of winding wires | IS 13730 Specification for particular types of winding wires (various Parts) | Identical |
| IEC 60317-43, Specifications for particular types of winding wires – Part 43: Aromatic polyimide tape wrapped round copper wire, class 240 | IS 13730 (Part 43) : 2013 IEC 60317-43 : 2010 Specification for particular types of winding wires: Part 43 aromatic polyimide tape wrapped round copper wire, class 240 (First Revision) | Identical  |
| IEC 60320-1, Appliance couplers for household and similar general purposes: Part 1 general requirements | IS/IEC 60320-1 : 2021 Appliance couplers for household and similar general purposes: Part 1 general requirements (First Revision) | Identical  |
| IEC 60529:1989 Degrees of protection provided by enclosures (IP Code)IEC 60529:1989/AMD1:1999,IEC 60529:1989/ AMD2:2013 | IS/IEC 60529: 2001 Degrees of protection provided by enclosures (IP Code) | Identical  |
| IEC 60664-1:2020, Insulation coordination for equipment within low-voltage systems – Part 1: Principles, requirements and tests | IS 15382 (Part 1) : 2022 IEC 60664-1:2020 Insulation coordination for equipment within low - Voltage systems: Part 1 principles, requirements and tests (Second Revision) | Identical  |
| IEC 60664-3, Insulation coordination for equipment within low-voltage systems – Part 3: Use of coating, potting or moulding for protection against pollution | IS 15382 (Part 3) : 2019 IEC 60664-3 : 2016 Insulation coordination for equipment within low-voltage systems : Part 3 use of coating potting or moulding for protection against pollution (First Revision) | Identical  |
| IEC 60691:2015 Thermal-links – Requirements and application guide | IS/IEC 60691:2015 Thermal-links – Requirements and application guide (First Revision) | Identical  |
| IEC 60695-2-11, Fire hazard testing – Part 2-11: Glowing/hot-wire based test methods – Glowwire flammability test method for end-products (GWEPT) | IS/IEC 60695-2-11 : 2021 Fire Hazard Testing Part 2-11 Glowing / Hot-Wire Based Test Methods Glow-Wire Flammability Test Method for End-Products (GWEPT) (First Revision) | Identical  |
| IEC 60695-10-2, Fire hazard testing – Part 10-2: Abnormal heat – Ball pressure test method | IS/IEC 60695-10-2 : 2014 Fire hazard testing Part 10 Abnormal heat - Sec 2 ball pressure test method | Identical  |
| IEC 60695-11-5:2016, Fire hazard testing – Part 11-5: Test flames – Needle-flame test method – Apparatus, confirmatory test arrangement and guidance | IS/IEC 60695-11-5: 2016 Fire Hazard Testing Part 11 Test Flames Section 5 Needle - Flame test method - Apparatus, confirmatory test arrangement and guidance (First Revision) | Identical |
| IEC 60695-11-10, Fire hazard testing – Part 11-10: Test flames – 50 W horizontal and vertical flame test methods | IS/IEC 60695-11-10 : 2013 Fire hazard testing: Part 11 test flames :: Sec 10 50 w horizontal and vertical flame test methods | Identical  |
| IEC 60884-1 Plugs and socket-outlets for household and similar purposes – Part 1: General requirements | IS 1293:2019 Plugs and socket- outlets of rated Voltage up to and including 250 Volts and rated current up to and including 16 amperes-Specification(Fourth Revision) | Technically Equivalent |
| IEC 60906-1 IEC system of plugs and socket-outlets for household and similar purposes – Part 1: Plugs and socket-outlets 16 A 250 V a.c. | IS 1293:2019 Plugs and socket- outlets of rated Voltage up to and including 250 Volts and rated current up to and including 16 amperes-Specification(Fourth Revision) | Technically Equivalent |
| IEC 60906-2 IEC system of plugs and socket-outlets for household and similar purposes – Part 2: Plugs and socket-outlets 15 A 125 V a.c. and 20 A 125 V a.c. | IS 1293:2019 Plugs and socket- outlets of rated Voltage up to and including 250 Volts and rated current up to and including 16 amperes-Specification(Fourth Revision) | Technically Equivalent |
| IEC 60947-1, Low-voltage switchgear and controlgear – Part 1: General rules | IS/IEC 60947-1 : 2020 Low - Voltage switchgear and controlgear: Part 1 general rules (Second Revision) | Identical  |
| IEC 60947-5-5, Low-voltage switchgear and controlgear – Part 5-5: Control circuit devices and switching elements – Electrical emergency stop device with mechanical latching function | IS/IEC 60947-5-5 : 2016 Low - Voltage switchgear and controlgear: Part 5 control circuit devices and switching elements: Sec 5 electrical emergency stop devices with mechanical latching function | Identical  |
| IEC 60990:2016, Methods of measurement of touch current and protective conductor current | IS/IEC 60990 : 2016 Methods of measurement of touch current and protective conductor current (First Revision) | Identical  |
| IEC 60998-1, Connecting devices for low-voltage circuits for household and similar purposes – Part 1: General requirements | IS/IEC 60998-1 : 2002 Connecting Devices for Low-Voltage Circuits for Household and Similar Purposes Part 1 General Requirements | Identical  |
| IEC 61056-1, General purpose lead-acid batteries (valve-regulated types) – Part 1: General requirements, functional characteristics – Methods of test | IS 16220 (Part 1) : 2015 IEC 61056-1 : 2012 General purpose lead - Acid batteries (Valve - Regulated Types): Part 1 general requirements, functional characteristics - Methods of test | Identical  |
| IEC 61056-2, General purpose lead-acid batteries (valve-regulated types) – Part 2: Dimensions, terminals and marking | IS 16220 (Part 2) : 2017 IEC 61056-2 : 2012 General Purpose Lead-Acid Batteries (Valve-Regulated Types) Part 2 Dimensions, Terminals and Marking | Identical  |
| IEC 61058-1:2016, Switches for appliances – Part 1: General requirements | IS/IEC 61058-1 : 2016 Switches for appliances: Part 1 General requirements | Identical  |
| IEC 61204-7, Low-voltage switch mode power supplies – Part 7: Safety requirements | IS/IEC 61204-7 : 2016 Low-Voltage Power Supplies, d.c. Output Part 7 Safety Requirements | Identical  |
| IEC 61260-1:2014, Electroacoustics – Octave-band and fractional-octave-band filters – Part 1: Specifications | IS 6964 : 2018IEC 61260-1: 2014 Electroacoustics - Octave - Band and fractional octave band filters - Specifications (Second Revision) | Identical |
| IEC 61558-1:2017 Safety of transformers, reactors, power supply units and combinations thereof – Part 1: General requirements and tests | IS/IEC 61558-1:2017 Safety of transformers, reactors, power supply units and combinations thereof – Part 1: General requirements and tests | Identical |
| IEC 61643-11:2011, Low-voltage surge protective devices – Part 11: Surge protective devices connected to low-voltage power systems – Requirements and test methods | IS 16463 (Part 11) : 2016 IEC 61643-11:2011 Low - Voltage surge protective devices Part 11 surge protective devices connected to low - voltage power systems - Requirements and test methods | Identical |
| IEC 61810-1:2015, Electromechanical elementary relays – Part 1: General and safety requirementsIEC 61810-1:2015/AMD1: 2019 | IS 17064 (Part 1) : 2018 IEC 61810-1:2015 Electromechanical elementary relays: Part 1 general and safety requirements | Identical  |
| IEC 61959, Secondary cells and batteries containing alkaline or other non-acid electrolytes – Mechanical tests for sealed portable secondary cells and batteries | IS 16823: 2019IEC 61959 : 2004 Secondary cells and batteries containing alkaline or other non - acid electrolytes - Mechanical tests for sealed portable secondary cells and batteries | Identical  |
| IEC 61965:2003, Mechanical safety of cathode ray tubes | IS/IEC 61965 : 2003 Mechanical safety of cathode ray tubes | Identical  |
| IEC 62061, Safety of machinery – Functional safety of safety-related control systems | IS 16501 : 2023IEC 62061 : 2021 Safety of Machinery — Functional Safety of Safety-Related Control Systems (First Revision) | Identical  |
| IEC 62133-1, Secondary cells and batteries containing alkaline or other non-acid electrolytes – Safety requirements for portable sealed secondary cells, and for batteries made from them, foruse in portable applications – Part 1: Nickel systems | IS 16046 (Part 1) : 2018 IEC 62133-1 : 2017 Secondary Cells and Batteries Containing Alkaline or Other Non-Acid Electrolytes Safety Requirements for Portable Sealed Secondary Cells and for Batteries Made from Them for Use in Portable Applications Part 1 Nickel Systems (Second Revision ) | Identical  |
| IEC 62133-2:2017, Secondary cells and batteries containing alkaline or other non-acid electrolytes – Safety requirements for portable sealed secondary cells, and for batteries made from them, for use in portable applications – Part 2: Lithium systemsIEC 62133-2:2017/AMD1: 2021 | IS 16046 (Part 2) : 2018 IEC 62133-2:2017 Secondary Cells and Batteries Containing Alkaline or Other Non-Acid Electrolytes Safety Requirements for Portable Sealed Secondary Cells and for Batteries Made from Them for Use in Portable Applications Part 2 Lithium Systems (Second Revision) | Identical  |
| IEC 62471:2006 Photobiological safety of lamps and lamp systems | IS 16108: 2012IEC 62471:2006Photobiological safety of lamps and lamp systems | Identical  |
| IEC 62485-2, Safety requirements for secondary batteries and battery installations – Part 2: Stationary batteries | IS 16894 (Part 2) : 2018 IEC 62485-2:2010 Safety requirements for secondary batteries and battery installations: Part 2 stationary batteries | Identical  |
| ISO 37, Rubber, vulcanized or thermoplastic – Determination of tensile stress-strain properties | IS 3400: 2021ISO 37 : 2017 Methods of Test for Vulcanized Rubber Part 1 Tensile Stress-Strain Properties  | Identical  |
| ISO 178, Plastics – Determination of flexural properties | IS 13360 (Part 5/Sec 7) : 2022 ISO 178 : 2019 Plastics - Methods of testing: Part 5 mechanical properties section 7 determination of flexural properties (Second Revision) | Identical  |
| ISO 179-1, Plastics – Determination of Charpy impact properties – Part 1: Non-instrumented impact test | IS 13360 (Part 5/Sec 5) : 2017ISO 179-1:2010Plastics — Methods of testing: Part 5 Mechanical properties, Section 5Determination of Charpy impactproperties — Non-instrumented impact test (first revision) | Identical  |
| ISO 180, Plastics – Determination of Izod impact strength | IS 13360 (Part 5/Sec 4) : 2021ISO 180:2019Plastics - Methods of Testing Part 5 : Mechanical Properties Sec 4 Determination of Izod Impact Strength | Identical  |
| ISO 527-1, Plastics – Determination of tensile properties — Part 1: General principles | [IS 13360 (Part 5/Sec 1) : 2021](https://www.services.bis.gov.in/php/BIS_2.0/bisconnect/standard_review/Standard_review/Isdetails?ID=MjY2MTg%3D)[ISO 527-1: 2019](https://www.services.bis.gov.in/php/BIS_2.0/bisconnect/standard_review/Standard_review/Isdetails?ID=MjY2MTg%3D) Plastics - Methods of testing: Part 5 Mechanical properties Section 1 Determination of tensile properties - General requirements Second Revision | Identical  |
| ISO 527-2 Plastics — Determination of tensile properties — Part 2: Test conditions for moulding and extrusion plastics | [IS 13360 (Part 5/Sec 2) : 2017](https://www.services.bis.gov.in/php/BIS_2.0/bisconnect/standard_review/Standard_review/Isdetails?ID=NDkzNg%3D%3D)[ISO 527-2 : 2012](https://www.services.bis.gov.in/php/BIS_2.0/bisconnect/standard_review/Standard_review/Isdetails?ID=NDkzNg%3D%3D) Plastics - Methods of testing: Part 5 mechanical properties section 2 determination of tensile properties - Test conditions for moulding and extrusion plastics (First Revision) | Identical  |
| ISO 527-5Plastics — Determination of tensile properties — Part 5: Test conditions for unidirectional fibre-reinforced plastic composites | IS 13360 (Part 5/Sec 26) : 2023ISO 527-5 : 2021Plastics - Methods of testing: Part 5 mechanical properties section 26 Test conditions for unidirectional fibre-reinforced plastic composites | Identical  |
| ISO 871, Plastics – Determination of ignition temperature using a hot-air furnace | IS 13360 (Part 6/Sec 21) : 2023 ISO 871 : 2022 Plastics — Methods of Test Part 6 Thermal Properties Section 21 Determination of Ignition Temperature Using a Hot-Air Furnace (First Revision) | Identical  |
| ISO 2719, Determination of flash point – Pensky-Martens closed cup method | IS 1448 (Part 21) : 2019ISO 2719 : 2016 Methods of test for petroleum and its products [ p : 21 ] determination of flash point - Pensky - Martens closed cup method (Fourth Revision) | Identical  |
| ISO 3864-1, Graphical symbols – Safety colours and safety signs — Part 1: General principles for safety signs and safety markings | IS 16449 (Part 1) : 2018 ISO 3864:2011 Graphical symbols - Safety colours and safety signs: Part 1 design principles for safety signs and safety markings | Identical  |
| ISO 3864-2, Graphical symbols – Safety colours and safety signs – Part 2: Design principles for product safety labels | IS 16449 (Part 2) : 2021ISO 3864-2 : 2016 Graphical Symbols - Safety Colours and Safety Signs Part 2 Design Principles for Product Safety Labels | Identical  |
| ISO 3864-3, Graphical symbols – Safety colours and safety signs Part 3: Design principles for graphical symbols for use in safety signs | IS 16449 (Part 3) : 2018ISO 3864-3 : 2012 Graphical Symbols- Safety Colours and Safety Signs Part 3 Design Principles for Graphical Symbols for Use in Safety Signs | Identical |
| ISO 3864-4 Graphical symbols – Safety colours and safety signs Part 4: Colorimetric and photometric properties of safety sign materials | IS 16449 (Part 4) : 2017 ISO 3684-4:2011 Graphical symbols - Safety colours and safety signs: Part 4 colorimetric and photometric properties of safety sign materials | Identical |
| ISO 4892-1, Plastics – Methods of exposure to laboratory light sources – Part 1: General guidance | [IS 17863 (Part 1) : 2022](https://www.services.bis.gov.in/php/BIS_2.0/bisconnect/standard_review/Standard_review/Isdetails?ID=MjczODk%3D)[ISO 4892-1: 2016](https://www.services.bis.gov.in/php/BIS_2.0/bisconnect/standard_review/Standard_review/Isdetails?ID=MjczODk%3D) Plastics Methods of Exposure to Laboratory Light Sources: Part 1 General Guidance | Identical |
| ISO 4892-2:2013, Plastics – Methods of exposure to laboratory light sources – Part 2: Xenonarc lamps | [IS 17863 (Part 2) : 2022](https://www.services.bis.gov.in/php/BIS_2.0/bisconnect/standard_review/Standard_review/Isdetails?ID=MjczOTA%3D)[ISO 4892-2:2013](https://www.services.bis.gov.in/php/BIS_2.0/bisconnect/standard_review/Standard_review/Isdetails?ID=MjczOTA%3D) Plastics Methods of Exposure to Laboratory Light Sources: Part 2 Xenon-Arc Lamps | Identical |
| ISO 4892-4, Plastics – Methods of exposure to laboratory light sources – Part 4: Open-flame carbon-arc lamps | [IS 17863 (Part 4) : 2022](https://www.services.bis.gov.in/php/BIS_2.0/bisconnect/standard_review/Standard_review/Isdetails?ID=MjczOTI%3D)[ISO 4892-4:2013](https://www.services.bis.gov.in/php/BIS_2.0/bisconnect/standard_review/Standard_review/Isdetails?ID=MjczOTI%3D) Plastics Methods of Exposure to Laboratory Light Sources: Part 4 Open-Flame Carbon-Arc Lamps | Identical |
| ISO 7000, Graphical symbols for use on equipment – Registered symbols | IS 16450 : 2023ISO 7000 : 2019 Graphical Symbols for Use on Equipment Registered Symbols (First Revision) | Identical  |
| ISO 7010 Graphical symbols – Safety colours and safety signs –Registered safety signs | IS 16451 : 2023ISO 7010 : 2019 Graphical Symbols Safety Colours and Safety Signs Registered Safety Signs (First Revision) | Identical |
| ISO 8256 Plastics – Determination of tensile-impact strength | IS 13360 (Part 5/Sec 27) : 2022ISO 8256: 2004 Plastics — Methods of Testing Part 5 Mechanical Properties Section 27 Determination of tensile-impact strength | Identical |
| ISO 9772 Cellular plastics — Determination of horizontal burning characteristics of small specimens subjected to a small flame | IS 13360 (Part 6/Sec 24) : 2024ISO 9772 : 2020 Cellular plastics – Determination of horizontal burning characteristics of small specimens subjected to a small flame | Identical |
| ISO 9773 Plastics – Determination of burning behaviour of thin flexible vertical specimens in contact with a small-flame ignition source | IS 13360 (Part 6/Sec 23) : 2006 ISO 9773:1998 Plastics - Methods of testing: Part 6 thermal properties section 23 determination of burning behaviour of thin fiexibie vertical specimens in contact with smaii - Fiame ignition source | Identical  |

The technical committee has reviewed the provisions of the following International Standards referred in this adopted standard and has decided that they are acceptable for use in conjunction with this standard. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies:

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| **International Standard** | **Title** |
| IEC 60068-2-11 | Basic environmental testing procedures – Part 2-11: Tests – Test Ka: Salt mist |
| IEC TR 60083 | Plugs and socket-outlets for domestic and similar general use standardized in member countries of IEC |
| IEC 60112 |  Method for the determination of the proof and the comparative tracking indices of solid insulating materials |
| IEC 60127 (all parts),  | Miniature fuses |
| IEC 60127-8 | Miniature fuses - Part 8: Fuse resistors with particular overcurrent protection |
| IEC 60243-1 | Electric strength of insulating materials – Test methods – Part 1: Tests at power frequencies |
| IEC 60309 (all parts) | Plugs, socket-outlets and couplers for industrial purposes |
| IEC 60317 (all parts),  | Specifications for particular types of winding wires |
| IEC 60317-0-7:2017 | Specifications for particular types of winding wires – Part 0-7: General requirements – Fully insulated (FIW) zero-defect enamelled round copper wire |
| IEC 60317-56 | Specifications for particular types of winding wires - Part 56: Solderable fully insulated (FIW) zero-defect polyurethane enamelled round copper wire, class 180 |
| IEC 60320 (all parts),  | Appliance couplers for household and similar general purposes |
| IEC 60332-1-2 | Tests on electric and optical fibre cables under fire conditions – Part 1-2: Test for vertical flame propagation for a single insulated wire or cable – Procedure for 1 kW premixed flame |
| IEC 60332-1-3 | Tests on electric and optical fibre cables under fire conditions – Part 1-3: Test for vertical flame propagation for a single insulated wire or cable – Procedure for determination of flaming droplets/particles |
| IEC 60332-2-2 | Tests on electric and optical fibre cables under fire conditions – Part 2-2: Test for vertical flame propagation for a single small insulated wire or cable – Procedure for diffusion flame |
| IEC 60384-14:2013IEC 603841-4:2013/AMD1 :2016 | Fixed capacitors for use in electronic equipment – Part 14: Sectional specification – Fixed capacitors for electromagnetic interference suppression and connection to the supply mains  |
| IEC 60417 | Graphical symbols for use on equipment |
| IEC 60695-10-3 | Fire hazard testing – Part 10-3: Abnormal heat – Mould stress relief distortion test |
| IEC 60695-11-20:2015 | Fire hazard testing – Part 11-20: Test flames – 500 W flame test methods |
| IEC TS 60695-11-21 | Fire hazard testing – Part 11-21: Test flames – 500 W vertical flame test method for tubular polymeric materials |
| IEC 60728-11:2016 | Cable networks for television signals, sound signals and interactive services – Part 11: Safety |
| IEC 60730 (all parts) | Automatic electrical controls for household and similar use  |
| IEC 60730-1:2022 | Automatic electrical controls – Part 1: General requirements |
| IEC 60738-1:2022 | Thermistors – Directly heated positive temperature coefficient – Part 1: Generic specification |
| IEC 60747-5-5:2020 | Semiconductor devices – Part 5-5: Optoelectronic devices – Photocouplers |
| IEC 60825-1:2014 | Safety of laser products – Part 1: Equipment classification and requirements |
| IEC 60825-2 | Safety of laser products – Part 2: Safety of optical fibre communication systems (OFCSs) |
| IEC 60825-12 | Safety of laser products – Part 12: Safety of free space optical communication systems used for transmission of information |
| IEC 60851-3:2009, IEC 60851- 3:2009/ AMD1 : 2013IEC 60851-3:2009/ AMD2: 2019 | Winding wires – Test methods – Part 3: Mechanical properties |
| IEC 60851-5:2008, IEC 60851-5:2008/AMD1: 2011IEC 60851-5:2008/AMD2: 2019 | Winding wires – Test methods – Part 5: Electrical properties |
| IEC 60896-11 | 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 | Stationary lead-acid batteries – Part 22: Valve regulated types – Requirements |
| IEC 60999-1 | Connecting devices – Electrical copper conductors – Safety requirements for screw-type and screwless-type clamping units – Part 1: General requirements and particular requirements for clamping units for conductors from 0,2 mm2 up to 35 mm2 (included) |
| IEC 60999-2 | Connecting devices – Electrical copper conductors – Safety requirements for screw-type and screwless-type clamping units – Part 2: Particular requirements for clamping units for conductors above 35 mm2 up to 300 mm2 (included) |
| IEC 61051-1 | Varistors for use in electronic equipment – Part 1: Generic specification |
| IEC 61051-2:2021 | Varistors for use in electronic equipment – Part 2: Sectional specification for surge suppression varistors |
| IEC 61293 | Marking of electrical equipment with ratings related to electrical supply – Safety requirements |
| IEC 61427 (all parts) | Secondary cells and batteries for renewable energy storage – General requirements and methods of test |
| IEC TS 61430 | Secondary cells and batteries – Test methods for checking the performance of devices designed for reducing explosion hazards – Lead-acid starter batteries |
| IEC 61434 | Secondary cells and batteries containing alkaline or other non-acid electrolytes – Guide to designation of current in alkaline secondary cell and battery standards |
| IEC 61558-2-16 | 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 |
| IEC 61587-1:2022 | Mechanical structures for electrical and electronic equipment – Tests for IEC 60917 and IEC 60297 series – Part 1: Environmental requirements, test setups and safety aspects |
| IEC 61643-331:2020 | Components for low-voltage surge protection – Part 331: Performance requirements and test methods for metal oxide varistors (MOV) |
| IEC 61984 | Connectors – Safety requirements and tests |
| IEC 62230 | Electric cables – Spark-test method |
| IEC 62281 | Safety of primary and secondary lithium cells and batteries during transport |
| IEC 62440:2008 | Electric cables with a rated voltage not exceeding 450/750 V – Guide to use |
| IEC 62471-5:2015 | Photobiological safety of lamps and lamp systems – Part 5: Image projectors |
| IEC 62619:2022 | Secondary cells and batteries containing alkaline or other non-acid electrolytes – Safety requirements for secondary lithium cells and batteries, for use in industrial applications |
| IEC 62821-1 | Electric cables - Halogen-free, low smoke, thermoplastic insulated and sheathed cables of rated voltages up to and including 450/750 V – Part 1: General requirements |
| IEC 62821-2 | Electric cables - Halogen-free, low smoke, thermoplastic insulated and sheathed cables of rated voltages up to and including 450/750 V – Part 2: Test methods |
| IEC 62821-3 | Electric cables - Halogen-free, low smoke, thermoplastic insulated and sheathed cables of rated voltages up to and including 450/750 V – Part 3: Flexible cables (cords) |
| IEC 63010-1 | Halogen-free thermoplastic insulated and sheathed flexible cables of rated voltages up to and including 300/300 V – Part 1: General requirements and cables |
| IEC 63010-2 | Halogen-free thermoplastic insulated and sheathed flexible cables of rated voltages up to and including 300/300 V – Part 2: Test methods |
| IEC 63294:2021 | Test methods for electric cables with rated voltages up to and including 450/750 V |
| ISO 306 | Plastics – Thermoplastic materials – Determination of Vicat softening temperature (VST) |
| ISO 527 (all parts) | Plastics – Determination of tensile properties |
| ISO 1798 | Flexible cellular polymeric materials – Determination of tensile strength and elongation at break |
| ISO 1817:2022 | Rubber, vulcanized or thermoplastic – Determination of the effect of liquids |
| ISO 3679 | Determination of flash point – Method for flash no-flash and flash point by small scale closed cup tester |
| ISO 13849-1  | Safety of machinery – Safety-related parts of control systems – Part 1: General principles for design |
| ISO 14993 | Corrosion of metals and alloys – Accelerated testing involving cyclic exposure to salt mist, "dry" and "wet" conditions |
| ISO 21207 | Corrosion tests in artificial atmospheres – Accelerated corrosion tests involving alternate exposure to corrosion-promoting gases, neutral salt-spray and drying |
| ISO 22479 | Corrosion of metals and alloys – Sulfur dioxide test in a humid atmosphere (fixed gas method) |
| ASTM D412 | Standard Test Methods for Vulcanized Rubber and Thermoplastic Elastomers –Tension |
| ASTM D471-98 | Standard Test Method for Rubber Property – Effect of Liquids |
| ASTM D3574 | Standard Test Methods for Flexible Cellular Materials – Slab, Bonded, and Molded Urethane Foams |
| 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 50332-2 | 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 standardized connectors between the two allowing to combine components of different manufacturers or different design |
| 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 |

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS 2:2022 ‘Rules for rounding off numerical values *(Second Revision)*’. The number of significant places retained in the rounded off value should be same as that of the specified value in this standard.