



**GOVERNMENT OF INDIA
MINISTRY OF COMMUNICATIONS
DEPARTMENT OF TELECOMMUNICATIONS
TELECOMMUNICATION ENGINEERING CENTRE
Gate No. 5, Khurshid Lal Bhawan, Janpath, New Delhi-110001**

CERTIFICATE OF DESIGNATION

M/S TUV INDIA PVT. LTD., BANGALORE
has been assessed and designated as Conformity Assessment Body (CAB)
for its facilities at

**PLOT NO. 105, PEENYA 3RD PHASE, INDUSTRIAL AREA, SY.NO. 90, 92 and 93
PEENYA VILLAGE, YESHWANTHAPURA HOBLI, BENGALURU- 560 058**

In the field of Testing

Certificate No. TEC/MRA/CAB/IND-D/86

Issue Date: 28/11/2023

Validity: 28/11/2023 to 27/11/2026

This Certificate remains valid for the Scope of Designation as specified in the Annexure subject to the continued validity of NABL Accreditation and satisfied compliance to the Standards/specifications against which lab has been designated and strict compliance to the relevant terms and conditions of TEC CAB Designation Scheme.

(To see the scope of designation of this laboratory, you may also visit TEC website www.tec.gov.in)

Signed for and on behalf of TEC

**Vijay Dixit
Director (CA)
For Designating Authority
TEC**

1/3141143 Certificate No: TEC/MRA/CAB/IND-D/86 dated 28/11/2023 issued to

M/S TUV India Pvt. Ltd., Bangalore

Plot No. 105, Peenya 3rd Phase Industrial area,

Sy.No. 90, 92 and 93 Peenya Village, Yeshwanthapura Hobli,

Bengaluru- 560058



Validity: - 28/11/2023 to 27/11/2026

Terms & Conditions

This certificate is issued as per the terms and conditions stipulated in the TEC SCHEME FOR DESIGNATING DOMESTIC CONFORMITY ASSESEMENT BODIES AND CERTIFICATION BODIES FOR CONFORMITY ASSESEMENT AND CERTIFICATION OF TELECOMMUNICATION EQUIPMENT ISSUE 3 NO. TEC 04019:2023.

Some of the conditions are reiterated as under:

A. Obligations of the Designated CAB.

1. It shall ensure that it maintains its accreditation status from any recognised Indian accreditation body like NABL during validity period of certificate.
2. It shall follow the stipulated procedures, rules and policies laid down by Designating Authority (DA) or Mutual Recognition Agreement (MRA)* partner for testing and evaluation.
3. In respect of tests for which it is seeking designation, it shall have no interest whatsoever in any business to carry on testing in an unfair or biased manner.
4. It shall fully indemnify DA from and against all liabilities, damages, claims, costs, and expenses incurred or sustained by DA as a result of any action taken or omitted by DA relating to the process of designation.
5. It shall comply with DA's or MRA partner's terms and conditions for designation and recognition as modified from time to time.
6. It shall be under obligation to participate in the online process prescribed by TEC for test and certification against TEC's GR/IR/ER and standards.
7. It shall have a record system which shall have a retention period of at least 5 years for documents related to the equipment testing. It shall maintain all the relevant documents including list of products submitted for testing, product-wise testing and evaluation reports. These documents shall be produced before the DA within seven days, as and when required.
8. It shall ensure the Intellectual Property Rights of the customers in the course of testing by maintaining professional ethics, secrecy and keeping all the product related information confidential.

*Applicable only if recognized by MRA (Mutual Recognition Agreement) partner.

9. It shall notify the DA in writing of occurrence of any of the following incident(s) within 2 weeks of its occurrence
 - a) Cessation of its business of conformity assessment for which it is Designated or accredited
 - b) Changes in its legal, commercial, or Organisational status
 - c) Changes, which may affect continuing compliance with any of the criteria or requirement specified by DA or MRA partner.
 - d) Change of premises

B. REFERENCE TO DESIGNATION STATUS

1. Designated CABs may advertise their designation status with regard to standards or parts thereof which are included in the scope of designation.
2. The advertisement should not imply, or otherwise suggest that DA or MRA Partner has endorsed the product or imply that the designated CAB is an agent or representative of DA or MRA Partner.
3. CABs whose designations have been suspended or withdrawn for any reason, shall discontinue advertisement of their designated status and not make any misleading statements regarding their designation status.

C. POST-DESIGNATION SURVEILLANCE

As and when required, DA shall conduct surveillance assessments and other non-routine assessments on the Designated CABs to ensure that standards of practices are maintained as well as to investigate complaints made against them.

D. SUSPENSION OR WITHDRAWAL OF DESIGNATION

1. DA shall suspend or withdraw the designation of a CAB if
 - a. Its accreditation is withdrawn.
 - b. It is found that the CAB is not complying with the stipulated criteria or requirements.
 - c. It is guilty of any offence involving fraud or dishonesty.
 - d. DA concludes that there is a just cause for withdrawing the designation.
2. A CAB whose designation, and recognition in case of MRA, has been suspended or withdrawn shall be removed from the list of designated CABs, in case it fails to take corrective measures.
3. DA shall keep the designation of a Designated CAB under suspension, until the completion of formal review process.

E. AMENDMENT TO THE SCHEME

DA reserves the rights to amend the scheme, as and when required, for the purpose of streamlining designation process.

SCOPE OF DESIGNATION (ANNEXURE)

Laboratory Name: M/s TUV India Pvt. Ltd., Bangalore,
Plot No. 105, Peenya 3rd Phase, Industrial Area,
Sy. No. 90, 92 and 93 Peenya Village, Yeshwanthapura Hobli,
Bengaluru- 560 058

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Validity: 28/11/2023 to 27/11/2026

Last Amended on: ----

Sl. No.	Telecom Equipment/Product	Test Parameter or Type of Testing	Standard/ Specification
1.	Secondary cell sand batteries (Lithium-ion system)-Safety Requirements	Insulation and wiring Clause- 5.2	IEC 62133-2
		Charging procedures for test purposes (First procedure) Clause- 7.1.1	IEC 62133-2
		Charging procedures for test purposes (Second procedure) Clause- 7.1.2	IEC 62133-2
		Continuous charging at constant voltage (cells) Clause- 7.2.1	IEC 62133-2
		Case stress at high ambient temperature (battery) Clause- 7.2.2	IEC 62133-2
		External short-circuit (cell) Clause 7.3.1	IEC 62133-2
		External short-circuit (Battery) Clause- 7.3.2	IEC 62133-2
		Free fall Clause- 7.3.3	IEC 62133-2
		Thermal abuse (cells) Clause- 7.3.4	IEC 62133-2
		Crush (Cells) Clause- 7.3.5	IEC 62133-2
		Over-charging of battery Clause- 7.3.6	IEC 62133-2

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Last Amended on: ----

Sl. No.	Telecom Equipment/Product	Test Parameter or Type of Testing	Standard/Specification
	Secondary cell and batteries (Lithium-ion system)-Safety Requirements	Vibration Test Clause- 7.3.8.1	IEC 62133-2
2.	Uninterruptible Power System (UPS)-General and Safety Requirements	Protective Earthing and bonding Clause- 5.3	IEC 62040-1
		Clearance, Creepage Distance and Distance through Insulation Clause- 5.7	IEC 62040-1
		Connection to Telecommunication Networks Clause- 9	IEC 62040-1
		Electric Strength Clause- 8.2	IEC 62040-1
		General Provisions for Earth Leakage Clause- 8.1	IEC 62040-1
		Mechanical Strength Clause- 7.3	IEC 62040-1
		Over Current and Earth Fault Protection Clause- 5.5.1, 5.5.2	IEC 62040-1
		Power Interfaces Clause- 4.6	IEC 62040-1
		Protection for UPS intended to be used in Operator access areas Clause- 5.1.1	IEC 62040-1

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Sl. No.	Telecom Equipment/Product	Test Parameter or Type of Testing	Standard/Specification
	Uninterruptible Power System (UPS)-General and Safety requirements	Protection for UPS intended to be used in Service access area Clause- 5.1.2	IEC 62040-1
		Protection for UPS intended to be used in restricted access area Clause- 5.1.3	IEC 62040-1
		Backfeed Protection Clause-5.1.4	IEC 62040-1
		Resistance to Fire Clause- 7.5	IEC 62040-1
		Stability Clause- 7.2	IEC 62040-1
		Temperature Rise Clause- 7.7	IEC 62040-1
		Durability of marking Clause- 4.7.16	IEC 62040-1
		Abnormal Operating and Fault Conditions Clause- 8.3	IEC 62040-1
		Construction Details Clause- 7.4	IEC 62040-1
		General provisions for Connection to Power (Cord anchorage and Strain relief) Clause- 6.2.1	IEC 62040-1
		Wiring connections and Supply Clause 6.0	IEC 62040-1

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Sl. No.	Telecom Equipment/Product	Test Parameter or Type of Testing	Standard/Specification
	Uninterruptible Power System (UPS)-General and Safety requirements	Guidance on Protection against ingress of water and foreign objects Annex- H	IEC 62040-1
		Limited Power Source Clause- 5.2.5	IEC 62040-1
		Limited Current Circuits Clause- 5.2.3	IEC 62040-1
		Motor tests under abnormal conditions Annex- B	IEC 62040-1
		Safety extra low voltage-SELV circuit Clause- 5.2.1	IEC 62040-1
		Telephone network voltage circuits-TNV circuit Clause- 5.2.2	IEC 62040-1
		Transformer Annex- C	IEC 62040-1
		Ventilation Clause- 7.6.7	IEC 62040-1
		Wiring terminals for external Power Conductors Clause- 6.3	IEC 62040-1
3.	Information Technology Equipment	Abnormal Operating and Fault conditions Clause-5.3	IEC 60950-1:2005 +A1:2009+A2:2013
		Abrasion Test Clause-2.10.8.4	IEC 60950-1:2005 +A1:2009 +A2:2013

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Sl. No.	Telecom Equipment/Product	Test Parameter or Type of Testing	Standard/Specification
	Safety Requirement Information Technology Equipment Safety Requirement	Clearance, Creepage distances and distances through insulation Clause-2.10	IEC 60950-1:2005 +A1:2009 +A2:2013
		Design and Construction Clause-4.3	IEC 60950-1:2005 +A1:2009 +A2:2013
		Discharge of Capacitor in Equipment's Clause-2.1.1.7	IEC 60950-1:2005 +A1:2009 +A2:2013
		Drop Test Clause-4.2.6	IEC 60950-1:2005 +A1:2009 +A2:2013
		Electric Strength Clause-5.2	IEC 60950-1:2005 +A1:2009 +A2:2013
		Electrical requirements and simulated abnormal conditions Clause-5.1	IEC 60950-1:2005 +A1:2009 +A2:2013
		Materials Clause-4.7.3	IEC 60950-1:2005 +A1:2009 +A2:2013
		Humidity Conditioning Clause-2.9.2	IEC 60950-1:2005 +A1:2009 +A2:2013
		Impulse Test Clause-7.4.3	IEC 60950-1:2005 +A1:2009 +A2:2013
		Limited Current Circuits Clause- 2.4	IEC 60950-1:2005 +A1:2009 +A2:2013
		Limited Power Sources Clause -2.5	IEC 60950-1:2005 +A1:2009 +A2:2013
		Non- separable thin sheet material (Mandrel Test) Clause-2.10.5.8	IEC 60950-1:2005 +A1:2009 +A2:2013

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Sl. No.	Telecom Equipment/Product	Test Parameter or Type of Testing	Standard/ Specification
	Information Technology Equipment Safety Requirement	Marking & Instruction Clause-1.7	IEC 60950-1:2005 +A1:2009 +A2:2013
		Measurement of transient voltage Clause-2.10.3.9	IEC 60950-1:2005 +A1:2009 +A2:2013
		Mechanical Strength Clause-4.2.2	IEC 60950-1:2005 +A1:2009 +A2:2013
		Mechanical Strength Clause-4.2.3	IEC 60950-1:2005 +A1:2009 +A2:2013
		Mechanical strength Clause-4.2.4	IEC 60950-1:2005 +A1:2009 +A2:2013
		Over-Current and Earth fault Protection in Primary Circuits Clause-2.7	IEC 60950-1:2005 +A1:2009 +A2:2013
		Physical Requirements Stability Clause- 4.1	IEC 60950-1:2005 +A1:2009 +A2:2013
		Protection against Hazardous Moving Parts Clause-4.4	IEC 60950-1:2005 +A1:2009 +A2:2013
		Protection of equipment users from Over Voltages on Telecommunication networks Clause-6.2	IEC 60950-1:2005 +A1:2009 +A2:2013
		Protection of the Telecommunication Wiring System from overheating Clause-6.3	IEC 60950-1:2005 +A1:2009 +A2:2013
		Provision for Earthing and Bonding Clause-2.6	IEC 60950-1:2005 +A1:2009 +A2:2013

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Sl. No.	Telecom Equipment/Product	Test Parameter or Type of Testing	Standard/ Specification
	Information Technology Equipment Safety Requirement	Resistance to Abnormal Heat Clause-4.5.5	IEC 60950-1:2005 +A1:2009 +A2:2013
		Resistance to Fire Clause-4.7	IEC 60950-1:2005 +A1:2009 +A2:2013
		Power Interface Clause-1.6.2	IEC 60950-1:2005 +A1:2009 +A2:2013
		SELV Circuits Clause-2.2	IEC 60950-1:2005 +A1:2009 +A2:2013
		Stress Relief Test Clause-4.2.7	IEC 60950-1:2005 +A1:2009 +A2:2013
		Termination of Conductors Clause-3.1.9	IEC 60950-1:2005 +A1:2009 +A2:2013
		Thermal Requirements Clause-4.5	IEC 60950-1:2005 +A1:2009 +A2:2013
		TNV Circuits Clause-2.3	IEC 60950-1:2005 +A1:2009 +A2:2013
		Voltage Surge Test Clause-7.4.2	IEC 60950-1:2005 +A1:2009 +A2:2013
		Protection From Hazards Clause- 2.1	IEC 60950-1:2005 +A1:2009 +A2:2013
		Wiring terminals for Connection of External Conductors Clause-3.3	IEC 60950-1:2005 +A1:2009 +A2:2013
		Interconnection of Equipment Clause-3.5	IEC 60950-1:2005 +A1:2009 +A2:2013
		Electrical requirements and simulated abnormal conditions Clause-5	IEC 60950-1:2005 +A1:2009 +A2:2013

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Sl. No.	Telecom Equipment/Product	Test Parameter or Type of Testing	Standard/Specification
	Information Technology Equipment Safety Requirement	Physical Requirements Stability Clause-4.0	IEC 60950-1:2005 +A1:2009 +A2:2013
		Protection of telecommunication network service persons, and users of other equipment connected to the network, from hazards in the equipment Clause-6.1	IEC 60950-1:2005 +A1:2009 +A2:2013
		Wiring Connection and Supply Clause-3.0	IEC 60950-1:2005 +A1:2009 +A2:2013
		Opening in Enclosure Clause-4.6	IEC 60950-1:2005 +A1:2009 +A2:2013
		Connection to an a. c. mains Supply Clause-3.2.1.1	IEC 60950-1:2005 +A1:2009 +A2:2013
		Connection to a d. c. mains Supply Clause-3.2.1.2	IEC 60950-1:2005 +A1:2009 +A2:2013
		Appliance Inlets Clause-3.2.4	IEC 60950-1:2005 +A1:2009 +A2:2013
		Safety Interlocks Clause-2.8	IEC 60950-1:2005 +A1:2009 +A2:2013
		Disconnection from the Mains Supply Clause-3.4	IEC 60950-1:2005 +A1:2009 +A2:2013
		Grade of Insulation Clause- 2.9.3	IEC 60950-1:2005 +A1:2009 +A2:2013
		Impact Test Clause-4.2.5	IEC 60950-1:2005 +A1:2009 +A2:2013
		Interconnected Equipment Clause-3.4.10	IEC 60950-1:2005 +A1:2009 +A2:2013

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Sl. No.	Telecom Equipment/ Product	Test Parameter or Type of Testing	Standard/ Specification
	Information Technology Equipment Safety Requirement	Multiple Power Sources Clause-3.4.11	IEC 60950-1:2005 +A1:2009 +A2:2013
		Number of Poles - Single-Phase and d. c. Equipment Clause-3.4.6	IEC 60950-1:2005 +A1:2009 +A2:2013
		Number of Poles Three-Phase Equipment Clause-3.4.7	IEC 60950-1:2005 +A1:2009 +A2:2013
		Parts which remain energized Clause-3.4.4	IEC 60950-1:2005 +A1:2009 +A2:2013
		Permanently Connected Equipment Clause-3.4.3	IEC 60950-1:2005 +A1:2009 +A2:2013
		Plugs as Disconnect Devices Clause-3.4.9	IEC 60950-1:2005 +A1:2009 +A2:2013
		Properties of Insulating Materials Clause-2.9.1	IEC 60950-1:2005 +A1:2009 +A2:2013
		Connection to Cable Distribution Systems Clause-7	IEC 60950-1:2005 +A1:2009 +A2:2013
		Wall or Ceiling mounted Equipment Clause-4.2.10	IEC 60950-1:2005 +A1:2009 +A2:2013
		Connection to Telecommunication Networks Clause- 6	IEC 60950-1:2005 +A1:2009 +A2:2013
		Electrical Insulation Clause-2.9	IEC 60950-1:2005 +A1:2009 +A2:2013
		Mechanical Strength Clause-4.2	IEC 60950-1:2005 +A1:2009 +A2:2013
		Cord anchorages and Strain Relief Clause-3.2.6	IEC 60950-1:2005 +A1:2009 +A2:2013

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Sl. No.	Telecom Equipment/ Product	Test Parameter or Type of Testing	Standard/ Specification
	Information Technology Equipment Safety Requirement	Protection against Mechanical Damage Clause-3.2.7	IEC 60950-1:2005 +A1:2009 +A2:2013
		Cord Guards Clause-3.2.8	IEC 60950-1:2005 +A1:2009 +A2:2013
		AC Power Supply Cords Clause-3.2.5.1	IEC 60950-1:2005 +A1:2009 +A2:2013
		DC power Supply Cords Clause-3.2.5.2	IEC 60950-1:2005 +A1:2009 +A2:2013
		Doors or Covers in Fire Enclosures Clause-4.6.3	IEC 60950-1:2005 +A1:2009 +A2:2013
		Evaluation measures for larger Openings Clause-4.6.4.2	IEC 60950-1:2005 +A1:2009 +A2:2013
		Grade of Insulation Clause- 2.9.3	IEC 60950-1:2005 +A1:2009 +A2:2013
		Inadvertent Reactivation Clause-2.8.3	IEC 60950-1:2005 +A1:2009 +A2:2013
		Openings in Transportable Equipment Clause-4.6.4	IEC 60950-1:2005 +A1:2009 +A2:2013
		Permanently Connected Equipment Clause-3.2.3	IEC 60950-1:2005 +A1:2009 +A2:2013
		Switches and Relays Clause-2.8.7	IEC 60950-1:2005 +A1:2009 +A2:2013
		Separation from Hazardous Voltages Clause-2.9.4	IEC 60950-1:2005 +A1:2009 +A2:2013
		Supply Wiring Space Clause-3.2.9	IEC 60950-1:2005 +A1:2009 +A2:2013

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Sl. No.	Telecom Equipment/Product	Test Parameter or Type of Testing	Standard/Specification
	Information Technology Equipment Safety Requirement	Switches in Flexible Cords Clause-3.4.5	IEC 60950-1:2005 +A1:2009 +A2:2013
		Use of Metallized Parts Clause-4.6.4.3	IEC 60950-1:2005 +A1:2009 +A2:2013
		Top and Side Openings Clause-4.6.1	IEC 60950-1:2005 +A1:2009 +A2:2013
		Switches as Disconnect Devices Clause-3.4.8	IEC 60950-1:2005 +A1:2009 +A2:2013
		Multiple Supply Connections Clause-3.2.2	IEC 60950-1:2005 +A1:2009 +A2:2013
		Mechanical Actuators Clause-2.8.8	IEC 60950-1:2005 +A1:2009 +A2:2013
		Power Supply Cords Clause-3.2.5	IEC 60950-1:2005 +A1:2009 +A2:2013
4.	Standard for Environmental Testing of Telecommunication Equipment	Low Temperature (Cold) Test (Test No. 1)	QM-333 Issue March 2010
		High Temperature (Dry Heat) (Test No. 2)	QM-333 Issue March 2010
		Tropical Exposure (Damp Heat Cyclic) Test (Test No. 3)	QM-333 Issue March 2010
		Rapid Temperature Cycling Test (Test No. 4)	QM-333 Issue March 2010
		Damp Heat (Steady State) Test (Test No. 5)	QM-333 Issue March 2010

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Sl. No.	Telecom Equipment/Product	Test Parameter or Type of Testing	Standard/ Specification
		Vibration Test (Test No. 6)	QM-333 Issue March 2010
5.	Audio/Video, Information and Communication Technology Equipment-Safety Requirements	Accessibility to Electrical Energy Sources and Safeguards (Measurement of air gap) Clause-5.3.2	IEC 62368-1
		Antenna Terminal insulation (High voltage test / Insulation Resistance Test) Clause-5.4.5.3	IEC 62368-1
		Antenna Terminal insulation (Antenna Surge Test) Clause-5.4.5	IEC 62368-1
		Ball Pressure Test Clause-5.4.1.10.3	IEC 62368-1
		Battery replacement Test (Torque Test) Clause-4.8.4.3	IEC 62368-1
		Capacitance Limits (Verification Test) Clause-5.2.2.3	IEC 62368-1
		Capacitor discharge after disconnection of a Connector Clause-5.5.2.2	IEC 62368-1
		Cart, Stand or Carrier Impact Test (Impact test) Clause-8.10.4	IEC 62368-1
		Carts, Stands and Similar Carriers (Force Test) Clause-8.10.3	IEC 62368-1
		Classification of Potential ignition Sources Clause-6.2.3	IEC 62368-1

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SCOPE OF DESIGNATION (ANNEXURE)

Laboratory Name: M/s TUV India Pvt. Ltd., Bangalore,
Plot No. 105, Peenya 3rd Phase, Industrial Area,
Sy. No. 90, 92 and 93 Peenya Village, Yeshwanthapura Hobli,
Bengaluru- 560 058

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Sl. No.	Telecom Equipment/Product	Test Parameter or Type of Testing	Standard/Specification
	Audio/Video, Information and Communication Technology Equipment-Safety Requirements	Cord Anchorage & Strain relief for non - detachable Power Supply cord Clause-Annex G.7.3	IEC 62368-1
		Clearance, Creepage distances and distances through insulation Clause-5.4.3	IEC 62368-1
		Criteria for telephone ringing signals (TNV Circuit Test) Clause-Annex-H	IEC 62368-1
		Crush Test (Force Test) Clause-4.8.4.6	IEC 62368-1
		Determination of transient voltage level by measurements (Impulse test) Clause-5.4.2.3.2.5	IEC 62368-1
		Drop Test Clause-4.4.3.3	IEC 62368-1
		Drop Test Clause-4.8.4.4	IEC 62368-1
		Electric Strength Test Clause-5.4.9	IEC 62368-1
		Equipment containing Coin/button cell batteries Clause-4.8	IEC 62368-1
		Equipment for direct insertion into mains socket-outlets (Plug & socket test) Clause-4.7	IEC 62368-1
		Fixing of conductors (Steady Force Test) Clause-4.6	IEC 62368-1

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Sl. No.	Telecom Equipment/Product	Test Parameter or Type of Testing	Standard/ Specification
	Audio/Video, Information and Communication Technology Equipment-Safety Requirements	Glass fragmentation Test Clause-Annex T.10	IEC 62368-1
		Glass Impact Test Clause-4.4.3.6	IEC 62368-1
		Glass Slide Test (Stability Test) Clause-8.6.4	IEC 62368-1
		Handle Strength Clause-8.8	IEC 62368-1
		Horizontal Force test and Compliance Criteria (Stability Test) Clause-8.6.5	IEC 62368-1
		Humidity Conditioning Clause-5.4.8	IEC 62368-1
		IC that includes a capacitor discharge function (ICX) (Humidity Test, Impulse Test) Clause-Annex G.16	IEC 62368-1
		Impact test Clause-4.4.3.4	IEC 62368-1
		Impact Test Clause-4.8.4.5	IEC 62368-1
		Impact Test Clause-Annex T.6	IEC 62368-1
		Impulse Test Clause-Annex G.10.5	IEC 62368-1
		Impulse Test Clause-5.4.10.2.2	IEC 62368-1

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Sl. No.	Telecom Equipment/Product	Test Parameter or Type of Testing	Standard/Specification
	Audio/Video, Information and Communication Technology Equipment-Safety Requirements	Impulse Test generator Clause-Annex D.1	IEC 62368-1
		Input Test Clause-Annex B.2.5	IEC 62368-1
		Insulation in circuits generating starting pulses (Clearance & Creepage test) Clause-5.4.1.7	IEC 62368-1
		Insulation of internal wire as a part of a supplementary safeguard (Compliance by High voltage Test) Clause-5.4.6	IEC 62368-1
		Internal accessible safeguard test (Steady Force Test of 30 N) Clause-4.4.3.5	IEC 62368-1
		Internal accessible safeguard test (Steady Force Test of 30 N) Clause-Annex T.3	IEC 62368-1
		Limits of repetitive Pulse (Touch Current) Clause-5.2.2.5	IEC 62368-1
		Maximum operating temperatures for Materials, Components and Systems (Heating Test) Clause-5.4.1.4	IEC 62368-1
		Mounting means for Slide-rail mounting equipment (SMRE) (Mounting withstand Test) Clause-8.11	IEC 62368-1

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Sl. No.	Telecom Equipment/Product	Test Parameter or Type of Testing	Standard/Specification
	Audio/Video, Information and Communication Technology Equipment-Safety Requirements	Procedure 1 for Determine clearance (Clearance Test) Clause-5.4.2.2	IEC 62368-1
		Procedure 2 for Determine clearance (Clearance Test) Clause-5.4.2.3	IEC 62368-1
		Protective Source Circuit Classification (Limited Power Source Test) Clause-6.2.2	IEC 62368-1
		Resistance of the Protective bonding System (Protective bonding Test) Clause-5.6.6	IEC 62368-1
		Resistive PIS (Determination) Clause-6.2.3.2	IEC 62368-1
		Resistors conditioning (Damp Heat Test) Clause-Annex G.10.2	IEC 62368-1
		Safety Interlock Clause-4.4.5	IEC 62368-1
		Single Pulse Limits (Verification only) Clause-5.2.2.4	IEC 62368-1
		Solid Insulation Clause-5.4.4	IEC 62368-1
		Steady Force Test Clause-Annex T.5	IEC 62368-1
		Steady State Voltage and Current Limits (Verification only) Clause-5.2.2.2	IEC 62368-1

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Sl. No.	Telecom Equipment/Product	Test Parameter or Type of Testing	Standard/Specification
	Audio/Video, Information and Communication Technology Equipment-Safety Requirements	Stress Relief Test Clause-Annex T.8	IEC 62368-1
		Telescoping or rod antennas Clause-8.12, Annex.-T.11	IEC 62368-1
		Terminals for Connecting Stripped Wire (Verification) Clause-5.3.2.4	IEC 62368-1
		Test for Semiconductor Components and for Cementing Joints (Thermal Cycling Test) Clause-5.4.7	IEC 62368-1
		Test for Semiconductor Components and for Cementing Joints (Thermal Cycling Test) Clause-5.4.1.5.3	IEC 62368-1
		Tests on Coated Printed Boards (Test method & Compliance Criteria) Clause-Annex G.13.6	IEC 62368-1
		Thermal burn injury Clause-9	IEC 62368-1
		Thermoplastic Material Tests (Stress Relief Test) Clause-4.4.3.8	IEC 62368-1
		Thermoplastic Material Tests (Stress Relief Test) Clause-4.8.4.2	IEC 62368-1
		Thin Sheet Material (Mandrel Test) Clause-5.4.4.6	IEC 62368-1

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Sl. No.	Telecom Equipment/Product	Test Parameter or Type of Testing	Standard/Specification
	Audio/Video, Information and Communication Technology Equipment-Safety Requirements	Mandrel Test Clause-5.4.4.6.5	IEC 62368-1
		Transformers (Thermal Cycling test & Compliance) Clause-5.5.3	IEC 62368-1
		Transformers with basic, Double & reinforced insulation Clause-5.5.3	IEC 62368-1
		Transformers Overload Test Clause-5.5.3	IEC 62368-1
		Transformers (Thermal Cycling Test & Compliance) Clause-Annex G.5.3.4.5	IEC 62368-1
		Transformers Overload Test Clause-Annex G.5.3.3	IEC 62368-1
		Transformers with basic, Double & reinforced insulation Clause-Annex G.5.3.4.2	IEC 62368-1
		Transformers with basic, Double & reinforced insulation Clause-Annex G.5.3.4.3	IEC 62368-1
		Vicat Test Clause-5.4.1.10.2	IEC 62368-1
		Voltage Surge Test Clause-Annex G.10.4	IEC 62368-1
		Limited Power Source Clause-Annex Q.1	IEC 62368-1

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Sl. No.	Telecom Equipment/Product	Test Parameter or Type of Testing	Standard/Specification
	Audio/Video, Information and Communication Technology Equipment-Safety Requirements	Clearance, Creepage distances and distances through insulation Clause-5.4.2	IEC 62368-1
		Accessibility to Electrical Energy Sources and Safeguards (Measurement of air gap) Clause- 5.3.2	IEC 62368-1
		Clearance, Creepage distances and distances through insulation Clause- 5.4.3	IEC 62368-1
		Clearance, Creepage distances and distances through insulation Clause- 5.4.4	IEC 62368-1
		Safeguard against Fire under Single Fault Conditions (Verification) Clause- 6.4	IEC 62368-1
		Protection From Hazards Annex-V	IEC 62368-1
		Drop Test Clause-Annex T.7	IEC 62368-1
		Electrically Caused Injury (Verification) Clause-5	IEC 62368-1
		Glass Impact Test Clause-Annex T.9	IEC 62368-1
		Marking & Instruction Clause-8.10.2	IEC 62368-1
		Comparative Tracking Index Clause-5.4.3.3	IEC 62368-1

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Sl. No.	Telecom Equipment/Product	Test Parameter or Type of Testing	Standard/ Specification
	Audio/Video, Information and Communication Technology Equipment-Safety Requirements	Insulation materials and requirements (High Voltage Compliance Criteria) Clause-5.4.1.3	IEC 62368-1
		Internal & External Wiring (Verification of mains supply cords) Clause- 6.5	IEC 62368-1
		Wiring Connection and Supply Clause-Annex G.7	IEC 62368-1
		Mechanically- caused injury (Verification) Clause-8	IEC 62368-1
		Prospective Touch Voltage, Touch Current and Protective Conductor Current (Touch Current Test) Clause-5.7	IEC 62368-1
		Accessibility to electrical Energy Sources and Safeguards (Measurement of air gap) Clause-5.3.2	IEC 62368-1
		Determination of working Voltages Clause-5.4.1.8	IEC 62368-1
		Separation between External Circuits and Earth Clause-5.4.11	IEC 62368-1
		Safeguard against Fire under normal Operating Conditions and abnormal Operating Conditions (Glow Wire Test) Clause-6.3.1	IEC 62368-1

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Sl. No.	Telecom Equipment/Product	Test Parameter or Type of Testing	Standard/Specification
	Audio/Video, Information and Communication Technology Equipment-Safety Requirements	Safeguard against Fire under Single Fault Conditions (Verification) Clause-6.4	IEC 62368-1
		Protection against Hazardous Moving Parts Clause-8.5	IEC 62368-1
		Impulse Test Clause-5.4.10.2.2	IEC 62368-1
		Steady State Test Clause-5.4.10.2.3	IEC 62368-1
		Safety Interlock Clause-Annex K	IEC 62368-1
		Fire Enclosure and Fire barriers Test Clause-6.4.8	IEC 62368-1
		Safeguard against Fire under Single Fault Conditions (Verification) (Clause- 6.4)	IEC 62368-1
		Abnormal Operating and Fault conditions Clause- Annex B.3	IEC 62368-1
		Solid Insulation (Clause-5.4.4)	IEC 62368-1
		Fixing of Conductors (Steady Force Test) (Clause-Annex T.2)	IEC 62368-1
		Steady Force Test (Clause-Annex T.4)	IEC 62368-1
		Cord Anchorage & Strain relief for non - detachable Power Supply Cord Clause- G.7.3	IEC 62368-1

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GOVERNMENT OF INDIA
MINISTRY OF COMMUNICATIONS
DEPARTMENT OF TELECOMMUNICATIONS
TELECOMMUNICATION ENGINEERING CENTRE
Gate No. 5, Khurshid Lal Bhawan, Janpath, New Delhi - 110 001



SCOPE OF DESIGNATION
(ANNEXURE)

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Sl. No.	Telecom Equipment/Product	Test Parameter or Type of Testing	Standard/Specification
	Audio/Video, Information and Communication Technology Equipment-Safety Requirements	Wiring terminals for connection of External Conductors Clause-Annex G.7.6	IEC 62368-1
		Abnormal Operating and Fault Conditions Clause- B.4	IEC 62368-1
		Impulse Test Generator Annex- D.1	IEC 62368-1
		Wheel or Casters attachment requirements Clause-8.9	IEC 62368-1
		Handle Strength Clause-8.8	IEC 62368-1
		Relocation Stability (Stability Test) Clause-8.6.3	IEC 62368-1
		Equipment mounting to a Wall, Ceiling or Other Structure (Wall Mounting Test) Clause-8.7	IEC 62368-1
		Static Stability (Stability Test) Clause-8.6.2	IEC 62368-1
		Electric Strength Test Clause- 5.4.9	IEC 62368-1
		Thermal Requirements Clause-9.3	IEC 62368-1
		Special category of Equipment's containing Moving Parts (Verification only) Clause-8.5.4	IEC 62368-1

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Sl. No.	Telecom Equipment/Product	Test Parameter or Type of Testing	Standard/Specification
6.	Electromagnetic Compatibility Standard for telecommunication Equipment	Conducted Emission Test CISPR 11	TEC/SD/DD/EMC-221/05/OCT-16
		Conducted Emission Test CISPR 32	TEC/SD/DD/EMC-221/05/OCT-16
		Conducted Emission Test- Electrical Appliances CISPR 14-1	TEC/SD/DD/EMC-221/05/OCT-16
		Immunity to AC Voltage Dips and Short Interruptions IEC:61000-4-11	TEC/SD/DD/EMC-221/05/OCT-16
		Immunity to DC Voltage Dips and Short Interruptions IEC:61000-4-29	TEC/SD/DD/EMC-221/05/OCT-16
		Immunity to Electrostatic Discharge IEC:61000-4-2	TEC/SD/DD/EMC-221/05/OCT-16
		Immunity to Fast Transients (Burst) IEC:61000-4-4	TEC/SD/DD/EMC-221/05/OCT-16
		Immunity to RF Field Induced Conducted Disturbance IEC:61000-4-6	TEC/SD/DD/EMC-221/05/OCT-16
		Immunity to Surges IEC:61000-4-5	TEC/SD/DD/EMC-221/05/OCT-16

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