



**TEST REPORT  
IEC 62368-1**

**Audio/video, information and communication technology equipment  
Part 1: Safety requirements**

Report Number.....: JQL200928699-2S

Tested by (name + signature).....: Alex Chen

Compiled by (name+ signature).....: Jack Xu

Approved by (name + signature).....: Lris Ma

Date of issue.....: October 14, 2020



Testing Laboratory.....: Shenzhen Jialian Testing Consulting Co., Ltd.

Address.....: 5/F, 7 Building, XinYuan Industrial Park, Xili Town, NanShan District, ShenZhen City

Applicant's name.....: XonTel Technology Trd. Co. W.L.L

Address.....: Kuwait City, Qibla, Aladel Tower, F21, state of Kuwait. zip code : 13065

**Test specification:**

Standard.....: IEC 62368-1:2014 (Second Edition)

Test procedure.....: Test report

Non-standard test method.....: N/A

Test Report Form No.....: IEC62368\_1B

Test Report Form(s) Originator.....: UL(US)

Master TRF.....: 2014-03

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**This report is not valid as a CB Test Report unless signed by an approved CB Testing Laboratory and appended to a CB Test Certificate issued by an NCB in accordance with IECEE 02.**

Test Item description .....: Mini Server

Trade Mark .....: XonTel

Manufacturer.....: XonTel Technology Trd. Co. W.L.L  
Kuwait City, Qibla, Aladel Tower, F21, state of Kuwait. zip code : 13065

Model/Type reference .....: XonTel MS PBX

Ratings .....: I/P: 100-240V~, 50/60 Hz, 72W






<b>Summary of testing:</b>	
<b>Tests performed (name of test and test clause):</b> Classification of electrical energy sources (5.2) Accessible ES1 circuits separated from other ES circuits using components (5.2.1.1) Accessibility to electrical energy sources and safeguards (5.3.2) Temperature measurements (5.4.1.4, 6.3.2, 9.0, B.2.6) Determination of working voltage (5.4.1.8) Minimum Clearances/Creepage distance (5.4.2.2, 5.4.2.4 & 5.4.3) Minimum Clearances distances using required withstand voltage (5.4.2.3) Clearances based on electric strength test (5.4.2.4) Distance through insulation measurements (5.4.4.2, 5.4.4.5 c), 5.4.4.9) Humidity conditioning (5.4.8) Electric strength tests (5.4.9) Stored discharge on capacitors (5.5.2.2) Protective conductor (5.6) Prospective touch voltage and touch current measurement (5.7) Electrical power sources (PS) measurements for classification (6.2.2) Input test (B.2.5) Abnormal operating condition tests (B.3) Fault condition tests (B.4) Steady force test (T.2, T.3, T.4, T.5) Impact tests (T.6, T.9) Durability, legibility and permanence of marking (F.3.9)	<b>Testing location:</b> Shenzhen Jialian Testing Consulting Co., Ltd. 5/F, 7 Building, XinYuan Industrial Park, Xili Town, NanShan District, ShenZhen City
<b>Summary of compliance with National Differences:</b> <b>List of countries addressed: European Group Differences</b>	
<input checked="" type="checkbox"/> <b>The product fulfils the requirements of EN 62368-1:2014+A11:2017.</b>	



**Copy of marking plate:**

The artwork below may be only a draft. The use of certification marks on a product must be authorized by the respective NCBs that own these marks.

**XONTEL**  
**MINI SERVER**  
**MODEL: XONTEL MS PBX**  
**RATING: 100-240V~, 50/60 Hz, 72W**  
    
**XONTEL TECHNOLOGY TRD. CO. W.L.L**  
**MADE IN CHINA**



TEST ITEM PARTICULARS:	
Classification of use by..... :	<input checked="" type="checkbox"/> Ordinary person <input type="checkbox"/> Instructed person <input type="checkbox"/> Skilled person <input type="checkbox"/> Children likely to be present
Supply Connection..... :	<input checked="" type="checkbox"/> AC Mains <input type="checkbox"/> DC Mains <input type="checkbox"/> External Circuit - not Mains connected - <input type="checkbox"/> ES1 <input type="checkbox"/> ES2 <input type="checkbox"/> ES3
Supply % Tolerance ..... :	<input checked="" type="checkbox"/> +10%/-10% <input type="checkbox"/> +20%/-15% <input type="checkbox"/> + ___ %/ - ___ % <input type="checkbox"/> None
Supply Connection – Type ..... :	<input checked="" type="checkbox"/> pluggable equipment type A - <input type="checkbox"/> non-detachable supply cord <input checked="" type="checkbox"/> appliance coupler <input type="checkbox"/> direct plug-in <input type="checkbox"/> mating connector <input type="checkbox"/> pluggable equipment type B - <input type="checkbox"/> non-detachable supply cord <input type="checkbox"/> appliance coupler <input type="checkbox"/> permanent connection <input type="checkbox"/> mating connector <input type="checkbox"/> other: _____
Considered current rating of protective device as part of building or equipment installation..... :	16(EU) Installation location: <input checked="" type="checkbox"/> building; <input type="checkbox"/> equipment
Equipment mobility..... :	<input checked="" type="checkbox"/> movable <input type="checkbox"/> hand-held <input type="checkbox"/> transportable <input type="checkbox"/> stationary <input type="checkbox"/> for building-in <input type="checkbox"/> direct plug-in <input type="checkbox"/> rack-mounting <input type="checkbox"/> wall-mounted
Over voltage category (OVC) ..... :	<input type="checkbox"/> OVC I <input checked="" type="checkbox"/> OVC II <input type="checkbox"/> OVC III <input type="checkbox"/> OVC IV <input type="checkbox"/> other: _____
Class of equipment ..... :	<input checked="" type="checkbox"/> Class I <input type="checkbox"/> Class II <input type="checkbox"/> Class III
Access location ..... :	<input type="checkbox"/> restricted access location <input checked="" type="checkbox"/> N/A
Pollution degree (PD) ..... :	<input type="checkbox"/> PD 1 <input checked="" type="checkbox"/> PD 2 <input type="checkbox"/> PD 3
Manufacturer’s specified maxium operating ambient..... :	40°C
IP protection class ..... :	<input checked="" type="checkbox"/> IPX0 <input type="checkbox"/> IP___
Power Systems ..... :	<input checked="" type="checkbox"/> TN <input type="checkbox"/> TT <input type="checkbox"/> IT - ___ V <sub>L-L</sub>
Altitude during operation (m) ..... :	<input checked="" type="checkbox"/> 2000 m or less <input type="checkbox"/> 5000 m
Altitude of test laboratory (m) ..... :	<input checked="" type="checkbox"/> 2000 m or less <input type="checkbox"/> ___ m
<b>POSSIBLE TEST CASE VERDICTS:</b>	
- test case does not apply to the test object..... :	N/A



- test object does meet the requirement.....:	P (Pass)
- test object does not meet the requirement.....:	F (Fail)
<b>TESTING:</b>	
Date of receipt of test item.....:	September 25, 2020
Date (s) of performance of tests.....:	September 25, 2020 to October 15, 2020
<b>GENERAL REMARKS:</b>	
<p>"(See Enclosure #)" refers to additional information appended to the report.          "(See appended table)" refers to a table appended to the report.</p> <p>Throughout this report a <input type="checkbox"/> comma / <input type="checkbox"/> point is used as the decimal separator.</p>	
<b>Manufacturer's Declaration per sub-clause 4.2.5 of IECEE 02:</b>	
The application for obtaining a CB Test Certificate includes more than one factory location and a declaration from the Manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided.....:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> Not applicable
<b>When differences exist; they shall be identified in the General product information section.</b>	
<b>GENERAL PRODUCT INFORMATION:</b>	
<b>Product Description –</b>	
The unit covered in this report is a Mini Server for the use in audio/video, information and communication technology equipment; electrical components are mounted on PWB, housed in metal enclosure sealed by screw.	
<b>Model Differences:</b>	
N/A	
<b>Additional application considerations – (Considerations used to test a component or sub-assembly) –</b>	
N/A	



<b>ENERGY SOURCE IDENTIFICATION AND CLASSIFICATION TABLE:</b>	
(Note 1: Identify the following six (6) energy source forms based on the origin of the energy.) (Note 2: The identified classification e.g., ES2, TS1, should be with respect to its ability to cause pain or injury on the body or its ability to ignite a combustible material. Any energy source can be declared Class 3 as a worse case classification e.g. PS3, ES3.	
<b>Electrically-caused injury (Clause 5):</b> (Note: Identify type of source, list sub-assembly or circuit designation and corresponding energy source classification) Example: +5 V dc input <span style="float: right;">ES1</span>	
<b>Source of electrical energy</b>	<b>Corresponding classification (ES)</b>
Primary circuits supplied by AC mains supply	ES3
Secondary circuits	ES1
<b>Electrically-caused fire (Clause 6):</b> (Note: List sub-assembly or circuit designation and corresponding energy source classification) Example: Battery pack (maximum 85 watts): <span style="float: right;">PS2</span>	
<b>Source of power or PIS</b>	<b>Corresponding classification (PS)</b>
All primary circuits and secondary circuits inside the equipment enclosure	PS3
<b>Injury caused by hazardous substances (Clause 7)</b> (Note: Specify hazardous chemicals, whether produces ozone or other chemical construction not addressed as part of the component evaluation.) Example: Liquid in filled component <span style="float: right;">Glycol</span>	
<b>Source of hazardous substances</b>	<b>Corresponding chemical</b>
N/A	N/A
<b>Mechanically-caused injury (Clause 8)</b> (Note: List moving part(s), fan, special installations, etc. & corresponding MS classification based on Table 35.) Example: Wall mount unit <span style="float: right;">MS2</span>	
<b>Source of kinetic/mechanical energy</b>	<b>Corresponding classification (MS)</b>
Sharp edges and corners	MS1
Equipment mass	MS1
Output cable	MS1
<b>Thermal burn injury (Clause 9)</b> (Note: Identify the surface or support, and corresponding energy source classification based on type of part, location, operating temperature and contact time in Table 38.) Example: Hand-held scanner – thermoplastic enclosure <span style="float: right;">TS1</span>	
<b>Source of thermal energy</b>	<b>Corresponding classification (TS)</b>
Accessible surfaces	TS1



<b>ENERGY SOURCE IDENTIFICATION AND CLASSIFICATION TABLE:</b>	
<b>Radiation (Clause 10)</b> (Note: List the types of radiation present in the product and the corresponding energy source classification.) Example: DVD – Class 1 Laser Product <span style="float: right;">RS1</span>	
<b>Type of radiation</b>	<b>Corresponding classification (RS)</b>
N/A	N/A

<b>ENERGY SOURCE DIAGRAM</b>
Indicate which energy sources are included in the energy source diagram. Insert diagram below
<input checked="" type="checkbox"/> <b>ES</b> <input checked="" type="checkbox"/> <b>PS</b> <input type="checkbox"/> <b>MS</b> <input checked="" type="checkbox"/> <b>TS</b> <input type="checkbox"/> <b>RS</b>



<b>OVERVIEW OF EMPLOYED SAFEGUARDS</b>				
<b>Clause</b>	<b>Possible Hazard</b>			
5.1	Electrically-caused injury			
Body Part (e.g. Ordinary)	Energy Source (ES3: Primary Filter circuit)	Safeguards		
		Basic	Supplementary	Reinforced (Enclosure)
Ordinary	ES3: All primary circuits	N/A	N/A	Equipment enclosure
Ordinary	ES1: Secondary circuits	N/A	N/A	N/A
Ordinary	ES1: Output terminal	N/A	N/A	N/A
6.1	Electrically-caused fire			
Material part (e.g. mouse enclosure)	Energy Source (PS2: 100 Watt circuit)	Safeguards		
		Basic	Supplementary	Reinforced
All combustible materials within equipment fire enclosure	PS3: All primary circuits and secondary circuits inside the equipment enclosure	Equipment safeguard (e.g., no ignition occurs)	N/A	N/A
All combustible materials except for wiring materials	PS3: All primary circuits and secondary circuits inside the equipment enclosure	N/A	Equipment safeguard (e.g., control of fire spread)	N/A
All internal wiring materials	PS3	N/A	Equipment safeguard	N/A
7.1	Injury caused by hazardous substances			
Body Part (e.g., skilled)	Energy Source (hazardous material)	Safeguards		
		Basic	Supplementary	Reinforced
N/A	N/A	N/A	N/A	N/A
8.1	Mechanically-caused injury			
Body Part (e.g. Ordinary)	Energy Source (MS3:High Pressure Lamp)	Safeguards		
		Basic	Supplementary	Reinforced (Enclosure)
Ordinary	MS1: Sharp edges and corners	N/A	N/A	N/A
Ordinary	MS1: Equipment mass	N/A	N/A	N/A
9.1	Thermal Burn			
Body Part (e.g., Ordinary)	Energy Source (TS2)	Safeguards		
		Basic	Supplementary	Reinforced





Ordinary	TS1: Accessible surfaces	N/A	N/A	N/A
10.1	Radiation			
Body Part (e.g., Ordinary)	Energy Source (Output from audio port)	Safeguards		
		Basic	Supplementary	Reinforced
N/A	N/A	N/A	N/A	N/A
Supplementary Information: (1) See attached energy source diagram for additional details. (2) "N" – Normal Condition; "A" – Abnormal Condition; "S" Single Fault				



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Clause	Requirement + Test	Result - Remark	Verdict
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<b>4</b>	<b>GENERAL REQUIREMENTS</b>		<b>P</b>
4.1.1	Acceptance of materials, components and subassemblies	See appended table 4.1.2	P
4.1.2	Use of components	See appended table 4.1.2	P
4.1.3	Equipment design and construction		P
4.1.15	Markings and instructions..... :	(See Annex F)	P
4.4.4	Safeguard robustness		P
4.4.4.2	Steady force tests..... :	(See Annex T.4, T.5)	P
4.4.4.3	Drop tests..... :		N/A
4.4.4.4	Impact tests..... :	(See Annex T.6)	P
4.4.4.5	Internal accessible safeguard enclosure and barrier tests..... :		N/A
4.4.4.6	Glass Impact tests..... :		N/A
4.4.4.74	Thermoplastic material tests..... :		N/A
4.4.4.8	Air comprising a safeguard..... :	(See Annex T)	N/A
4.4.4.9	Accessibility and safeguard effectiveness		P
4.5	Explosion		N/A
4.6	Fixing of conductors	Conductors are connected by soldering and securely hooked in before soldering, and the hole through which the conductors are passed was suitably designed	P
4.6.1	Fix conductors not to defeat a safeguard		P
4.6.2	10 N force test applied to ..... :	Conductors connected by soldering	—
4.7	Equipment for direct insertion into mains socket - outlets	Equipment is connected by AC inlet	N/A
4.7.2	Mains plug part complies with the relevant standard:	Not direct plug-in equipment	N/A
4.7.3	Torque (Nm)..... :		N/A
4.8	Products containing coin/button cell batteries	Product does not containing coin or button cell batteries	N/A
4.8.2	Instructional safeguard		N/A
4.8.3	Battery Compartment Construction		N/A
	Means to reduce the possibility of children removing the battery..... :		—
4.8.4	Battery Compartment Mechanical Tests..... :	(See Table 4.8.4)	N/A



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Clause	Requirement + Test	Result - Remark	Verdict
4.8.5	Battery Accessibility		N/A
4.9	Likelihood of fire or shock due to entry of conductive object..... :	(See Annex P)	N/A

<b>5</b>	<b>ELECTRICALLY-CAUSED INJURY</b>		<b>P</b>
5.2.1	Electrical energy source classifications..... :	(See appended table 5.2)	P
5.2.2	ES1, ES2 and ES3 limits	Accessible parts were with ES1.	P
5.2.2.2	Steady-state voltage and current..... :	See appended table 5.2)	P
5.2.2.3	Capacitance limits..... :	(See appended table 5.2)	P
5.2.2.4	Single pulse limits..... :	(See appended table 5.2)	N/A
5.2.2.5	Limits for repetitive pulses..... :	(See appended table 5.2)	N/A
5.2.2.6	Ringling signals .....	(See Annex H)	N/A
5.2.2.7	Audio signals .....	(See Clause E.1 )	N/A
5.3	Protection against electrical energy sources	See table of "overview of employed safeguards" for details	P
5.3.1	General Requirements for accessible parts to ordinary, instructed and skilled persons		P
5.3.2.1	Accessibility to electrical energy sources and safeguards		P
5.3.2.2	Contact requirements		P
	a) Test with test probe from Annex V..... :	No openings in the product	N/A
	b) Electric strength test potential (V)..... :		N/A
	c) Air gap (mm) .....		N/A
5.3.2.4	Terminals for connecting stripped wire		N/A
5.4	Insulation materials and requirements		P
5.4.1.2	Properties of insulating material		P
5.4.1.3	Humidity conditioning..... :	(See sub-clause 5.4.8)	P
5.4.1.4	Maximum operating temperature for insulating materials .....	(See appended table 5.4.1.4)	P
5.4.1.5	Pollution degree..... :	Pollution degree 2	—
5.4.1.5.2	Test for pollution degree 1 environment and for an insulating compound		N/A
5.4.1.5.3	Thermal cycling		N/A
5.4.1.6	Insulation in transformers with varying dimensions		N/A
5.4.1.7	Insulation in circuits generating starting pulses		N/A
5.4.1.8	Determination of working voltage		P



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Clause	Requirement + Test	Result - Remark	Verdict
5.4.1.9	Insulating surfaces		P
5.4.1.10	Thermoplastic parts on which conductive metallic parts are directly mounted		N/A
5.4.1.10.2	Vicat softening temperature..... :	(See appended table 5.4.1.10.2)	N/A
5.4.1.10.3	Ball pressure .....	(See appended table 5.4.1.10.3)	N/A
5.4.2	Clearances		P
5.4.2.2	Determining clearance using peak working voltage	(See appended table 5.4.2.2)	P
5.4.2.3	Determining clearance using required withstand voltage .....	(See appended table 5.4.2.3)	P
	a) a.c. mains transient voltage..... :	2500 V peak	—
	b) d.c. mains transient voltage .....	N/A	—
	c) external circuit transient voltage..... :	N/A	—
	d) transient voltage determined by measurement..... :	N/A	—
5.4.2.4	Determining the adequacy of a clearance using an electric strength test	(See appended table 5.4.2.4)	P
5.4.2.5	Multiplication factors for clearances and test voltages :	Up to 2000m. According to IEC60664-1, Table A.2.Mltiplication factor of 1.48 is applied.	P
5.4.3	Creepage distances..... :	(See appended table 5.4.3)	P
5.4.3.1	General	The creepage distance requirements for frequencies up to 30 kHz can be used for those over 30 kHz until additional data is available	P
5.4.3.3	Material Group .....	IIIb	—
5.4.4	Solid insulation	Bobbin material of isolation transformer is compliance with 5.4.4.2.	P
5.4.4.2	Minimum distance through insulation .....	(See appended table 5.4.4.2)	P
5.4.4.3	Insulation compound forming solid insulation		N/A
5.4.4.4	Solid insulation in semiconductor devices		N/A
5.4.4.5	Cemented joints		N/A
5.4.4.6	Thin sheet material		N/A
5.4.4.6.1	General requirements	Two layers of thin sheet materials are used in TRANSFORMER and are located within the equipment enclosure	P
5.4.4.6.2	Separable thin sheet material	Each layer of thin sheet materials had passed relevant electric strength test for reinforced insulation	P



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Clause	Requirement + Test	Result - Remark	Verdict
	Number of layers (pcs) .....	2	P
5.4.4.6.3	Non-separable thin sheet material		N/A
5.4.4.6.4	Standard test procedure for non-separable thin sheet material.....	(See appended Table 5.4.9)	N/A
5.4.4.6.5	Mandrel test		N/A
5.4.4.7	Solid insulation in wound components		P
5.4.4.9	Solid insulation at frequencies >30 kHz.....	(See appended Table 5.4.4.9)	P
5.4.5	Antenna terminal insulation		P
5.4.5.1	General		P
5.4.5.2	Voltage surge test		P
	Insulation resistance (MΩ).....	>5000 MΩ	—
5.4.6	Insulation of internal wire as part of supplementary safeguard.....	(See appended table 5.4.4.2)	N/A
5.4.7	Tests for semiconductor components and for cemented joints		N/A
5.4.8	Humidity conditioning		P
	Relative humidity (%).....	95	—
	Temperature (°C) .....	40	—
	Duration (h) .....	120	—
5.4.9	Electric strength test.....	(See appended table 5.4.9)	P
5.4.9.1	Test procedure for a solid insulation type test		N/A
5.4.9.2	Test procedure for routine tests		P
5.4.10	Protection against transient voltages between external circuit	No such external circuits.	N/A
5.4.10.1	Parts and circuits separated from external circuits	(See appended table 5.4.9)	N/A
5.4.10.2	Test methods		N/A
5.4.10.2.1	General		N/A
5.4.10.2.2	Impulse test.....	(See appended table 5.4.9)	N/A
5.4.10.2.3	Steady-state test.....	(See appended table 5.4.9)	N/A
5.4.11	Insulation between external circuits and earthed circuitry.....	(See appended table 5.4.9)	N/A
5.4.11.1	Exceptions to separation between external circuits and earth		N/A
5.4.11.2	Requirements		N/A
	Rated operating voltage U <sub>op</sub> (V).....		—
	Nominal voltage U <sub>peak</sub> (V).....		—



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Clause	Requirement + Test	Result - Remark	Verdict
	Max increase due to variation $U_{sp}$ .....		—
	Max increase due to ageing $\Delta U_{sa}$ .....		—
	$U_{op} = U_{peak} + \Delta U_{sp} + \Delta U_{sa}$ .....		—
5.5	Components as safeguards		
5.5.1	General		P
5.5.2	Capacitors and RC units	Y capacitor complying with IEC 60384-14 is used.	P
5.5.2.1	General requirement		P
5.5.2.2	Safeguards against capacitor discharge after disconnection of a connector.....	(See appended table 5.5.2.2)	P
5.5.3	Transformers	(See Annex G.5.3)	P
5.5.4	Optocouplers	(See sub-clause 5.4 or Annex G.12)	P
5.5.5	Relays	(See Annex G.2)	N/A
5.5.6	Resistors	(See Annex G.10)	N/A
5.5.7	SPD's	(See Annex G.8)	N/A
5.5.7.1	Use of an SPD connected to reliable earthing		N/A
5.5.7.2	Use of an SPD between mains and protective earth		N/A
5.5.8	Insulation between the mains and external circuit consisting of a coaxial cable.....	(See Annex G.10.3)	N/A
5.6	Protective conductor		
5.6.2	Requirement for protective conductors		P
5.6.2.1	General requirements		P
5.6.2.2	Colour of insulation	Green/yellow	P
5.6.3	Requirement for protective earthing conductors		P
	Protective earthing conductor size (mm <sup>2</sup> ) .....		—
5.6.4	Requirement for protective bonding conductors		P
5.6.4.1	Protective bonding conductors		P
	Protective bonding conductor size (mm <sup>2</sup> ).....		—
	Protective current rating (A) .....		—
5.6.4.3	Current limiting and overcurrent protective devices		P
5.6.5	Terminals for protective conductors		P
5.6.5.1	Requirement		P
	Conductor size (mm <sup>2</sup> ), nominal thread diameter (mm). .....		P
5.6.5.2	Corrosion		N/A



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Clause	Requirement + Test	Result - Remark	Verdict
5.6.6	Resistance of the protective system		P
5.6.6.1	Requirements		P
5.6.6.2	Test Method Resistance ( $\Omega$ )..... :	(See appended table 5.6.6.2)	P
5.6.7	Reliable earthing		P
5.7	Prospective touch voltage, touch current and protective conductor current		P
5.7.2	Measuring devices and networks	Figure 4 of IEC 60990 is used in determination of limits of ES1. Figure 5 of IEC 60990 is used in determination of limits of ES2. Peak-responding instrument is use	P
5.7.2.1	Measurement of touch current..... :	(See appended table 5.7.4)	P
5.7.2.2	Measurement of prospective touch voltage		P
5.7.3	Equipment set-up, supply connections and earth connections	Clause 4 and sub-clauses 5.3 and 5.4 of IEC 60990 applied	P
	System of interconnected equipment (separate connections/single connection)..... :	Single connection	—
	Multiple connections to mains (one connection at a time/simultaneous connections)..... :		—
5.7.4	Earthed conductive accessible parts..... :	(See appended Table 5.7.4)	N/A
5.7.5	Protective conductor current		N/A
	Supply Voltage (V)..... :		—
	Measured current (mA)..... :		—
	Instructional Safeguard..... :	(See F.4 and F.5)	N/A
5.7.6	Prospective touch voltage and touch current due to external circuits		N/A
5.7.6.1	Touch current from coaxial cables		N/A
5.7.6.2	Prospective touch voltage and touch current from external circuits	No connections to external circuits	N/A
5.7.7	Summation of touch currents from external circuits	No connections to external circuits	N/A
	a) Equipment with earthed external circuits Measured current (mA)..... :		N/A
	b) Equipment whose external circuits are not referenced to earth. Measured current (mA)..... :		N/A
<b>6</b>	<b>ELECTRICALLY- CAUSED FIRE</b>		P
6.2	Classification of power sources (PS) and potential ignition sources (PIS)		P



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Clause	Requirement + Test	Result - Remark	Verdict
6.2.2	Power source circuit classifications	Basic assumptions: All circuits inside the equipment fire enclosure are declared as of PS3, arcing and resistive PIS. No interconnection to building wiring. Construction details: All components and combustible materials are either rated at least V-0 or mounted on minimum V-0 materials. Equipment fire enclosure does not provide with openings.	P
6.2.2.1	General		P
6.2.2.2	Power measurement for worst-case load fault..... :	(See appended table 6.2.2)	P
6.2.2.3	Power measurement for worst-case power source fault :	(See appended table 6.2.2)	P
6.2.2.4	PS1 .....	(See appended table 6.2.2)	P
6.2.2.5	PS2 .....	(See appended table 6.2.2)	N/A
6.2.2.6	PS3 .....	(See appended table 6.2.2)	N/A
6.2.3	Classification of potential ignition sources		N/A
6.2.3.1	Arcing PIS .....	(See appended table 6.2.3.1)	N/A
6.2.3.2	Resistive PIS .....	(See appended table 6.2.3.2)	N/A
6.3	Safeguards against fire under normal operating and abnormal operating conditions		P
6.3.1 (a)	No ignition and attainable temperature value less than 90 % defined by ISO 871 or less than 300 °C for unknown materials..... :	(See appended table 5.4.1.5, 6.3.2, 9.0, B.2.6)	P
6.3.1 (b)	Combustible materials outside fire enclosure		N/A
6.4	Safeguards against fire under single fault conditions		P
6.4.1	Safeguard Method	Method of control of fire spread was applied.	P
6.4.2	Reduction of the likelihood of ignition under single fault conditions in PS1 circuits		N/A
6.4.3	Reduction of the likelihood of ignition under single fault conditions in PS2 and PS3 circuits		N/A
6.4.3.1	General		N/A
6.4.3.2	Supplementary Safeguards		N/A
	Special conditions if conductors on printed boards are opened or peeled		N/A
6.4.3.3	Single Fault Conditions..... :	(See appended table 6.4.3)	N/A
	Special conditions for temperature limited by fuse		N/A





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Clause	Requirement + Test	Result - Remark	Verdict
6.4.4	Control of fire spread in PS1 circuits		N/A
6.4.5	Control of fire spread in PS2 circuits		N/A
6.4.5.2	Supplementary safeguards .....	(See appended tables 4.1.2 and Annex G)	N/A
6.4.6	Control of fire spread in PS3 circuit		P
6.4.7	Separation of combustible materials from a PIS		N/A
6.4.7.1	General..... :	(See tables 6.2.3.1 and 6.2.3.2)	N/A
6.4.7.2	Separation by distance		N/A
6.4.7.3	Separation by a fire barrier		N/A
6.4.8	Fire enclosures and fire barriers	Equipment enclosure was evaluated for fire enclosure	P
6.4.8.1	Fire enclosure and fire barrier material properties		P
6.4.8.2.1	Requirements for a fire barrier		N/A
6.4.8.2.2	Requirements for a fire enclosure	Metal enclosure	P
6.4.8.3	Constructional requirements for a fire enclosure and a fire barrier		P
6.4.8.3.1	Fire enclosure and fire barrier openings	No opening on fire enclosure	N/A
6.4.8.3.2	Fire barrier dimensions		N/A
6.4.8.3.3	Top Openings in Fire Enclosure: dimensions (mm) ... :	Comply with requirement	P
	Needle Flame test		N/A
6.4.8.3.4	Bottom Openings in Fire Enclosure, condition met a), b) and/or c) dimensions (mm) .....		N/A
	Flammability tests for the bottom of a fire enclosure . :		N/A
6.4.8.3.5	Integrity of the fire enclosure, condition met: a), b) or c)..... :		N/A
6.4.8.4	Separation of PIS from fire enclosure and fire barrier distance (mm) or flammability rating..... :		N/A
6.5	Internal and external wiring		N/A
6.5.1	Requirements		N/A
6.5.2	Cross-sectional area (mm <sup>2</sup> ) .....		—
6.5.3	Requirements for interconnection to building wiring... :	(See Annex Q.)	N/A
6.6	Safeguards against fire due to connection to additional equipment	Additional equipment shall be evaluated for the connection of PS3 circuit.	N/A
	External port limited to PS2 or complies with Clause Q.1	No such port	N/A



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Clause	Requirement + Test	Result - Remark	Verdict
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<b>7</b>	<b>INJURY CAUSED BY HAZARDOUS SUBSTANCES</b>		N/A
7.2	Reduction of exposure to hazardous substances		N/A
7.3	Ozone exposure		N/A
7.4	Use of personal safeguards (PPE)		N/A
	Personal safeguards and instructions..... :		—
7.5	Use of instructional safeguards and instructions		N/A
	Instructional safeguard (ISO 7010)..... :		—
7.6	Batteries..... :	(See Annex M)	N/A

<b>8</b>	<b>MECHANICALLY-CAUSED INJURY</b>		P
8.1	General		P
8.2	Mechanical energy source classifications	Sharp edges and corners, and equipment mass are both classified as MS1	P
8.3	Safeguards against mechanical energy sources	No safeguard is required to be interposed between MS1 and an ordinary person	N/A
8.4	Safeguards against parts with sharp edges and corners	Accessible edges and corners of the equipment were rounded and are classified as MS1	N/A
8.4.1	Safeguards		N/A
8.5	Safeguards against moving parts	No moving parts	N/A
8.5.1	MS2 or MS3 part required to be accessible for the function of the equipment		N/A
8.5.2	Instructional Safeguard..... :		—
8.5.4	Special categories of equipment comprising moving parts		N/A
8.5.4.1	Large data storage equipment		N/A
8.5.4.2	Equipment having electromechanical device for destruction of media		N/A
8.5.4.2.1	Safeguards and Safety Interlocks..... :	(See Annex F.4 and Annex K)	N/A
8.5.4.2.2	Instructional safeguards against moving parts		N/A
	Instructional Safeguard..... :		—
8.5.4.2.3	Disconnection from the supply		N/A



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Clause	Requirement + Test	Result - Remark	Verdict
8.5.4.2.4	Probe type and force (N)..... :		N/A
8.5.5	High Pressure Lamps		N/A
8.5.5.1	Energy Source Classification		N/A
8.5.5.2	High Pressure Lamp Explosion Test..... :	(See appended table 8.5.5.2)	N/A
8.6	Stability		N/A
8.6.1	Product classification	Equipment mass is 0.456kg and is classified as MS1.	N/A
	Instructional Safeguard..... :		—
8.6.2	Static stability		N/A
8.6.2.2	Static stability test		N/A
	Applied Force..... :		—
8.6.2.3	Downward Force Test		N/A
8.6.3	Relocation stability test		N/A
	Unit configuration during 10° tilt..... :		—
8.6.4	Glass slide test		N/A
8.6.5	Horizontal force test (Applied Force)..... :		N/A
	Position of feet or movable parts..... :		—
8.7	Equipment mounted to wall or ceiling	Equipment is not intended for wall or ceiling mounting.	N/A
8.7.1	Mounting Means (Length of screws (mm) and mounting surface) .....		N/A
8.7.2	Direction and applied force..... :		N/A
8.8	Handles strength	No handles	N/A
8.8.1	Classification		N/A
8.8.2	Applied Force .....		N/A
8.9	Wheels or casters attachment requirements	No wheels or casters attachment	N/A
8.9.1	Classification		N/A
8.9.2	Applied force..... :		—
8.10	Carts, stands and similar carriers	No carts, stands or similar carriers	N/A
8.10.1	General		N/A
8.10.2	Marking and instructions		N/A
	Instructional Safeguard..... :		—
8.10.3	Cart, stand or carrier loading test and compliance		N/A
	Applied force..... :		—



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Clause	Requirement + Test	Result - Remark	Verdict
8.10.4	Cart, stand or carrier impact test		N/A
8.10.5	Mechanical stability		N/A
	Applied horizontal force (N)..... :		—
8.10.6	Thermoplastic temperature stability (°C)..... :		N/A
8.11	Mounting means for rack mounted equipment	Equipment is not intended for rack mounting.	N/A
8.11.1	General		N/A
8.11.2	Product Classification		N/A
8.11.3	Mechanical strength test, variable <i>N</i> ..... :		N/A
8.11.4	Mechanical strength test 250N, including end stops		N/A
8.12	Telescoping or rod antennas.....	(See Annex T)	N/A
	Button/Ball diameter (mm)..... :		—

<b>9</b>	<b>THERMAL BURN INJURY</b>		<b>P</b>
9.2	Thermal energy source classifications	All accessible surfaces are classified as TS1.	P
9.3	Safeguard against thermal energy sources	No safeguards are required between TS1 and ordinary person	N/A
9.4	Requirements for safeguards		N/A
9.4.1	Equipment safeguard		N/A
9.4.2	Instructional safeguard ..... :		N/A

<b>10</b>	<b>RADIATION</b>		<b>N/A</b>
10.2	Radiation energy source classification	No radiation energy sources as specified in this standard are present	N/A
10.2.1	General classification		N/A
10.3	Protection against laser radiation	No laser	N/A
	Laser radiation that exists equipment:		—
	Normal, abnormal, single-fault..... :	(See attached laser test report)	N/A
	Instructional safeguard..... :		—
	Tool..... :		—
10.4	Protection against visible, infrared, and UV radiation		N/A
10.4.1	General		N/A
10.4.1.a)	RS3 for Ordinary and instructed persons..... :		N/A



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Clause	Requirement + Test	Result - Remark	Verdict
10.4.1.b)	RS3 accessible to a skilled person..... :		N/A
	Personal safeguard (PPE) instructional safeguard..... :		—
10.4.1.c)	Equipment visible, IR, UV does not exceed RS1..... :		N/A
10.4.1.d)	Normal, abnormal, single-fault conditions ..... :	(See appended table B.3 & B.4)	N/A
10.4.1.e)	Enclosure material employed as safeguard is opaque. :		N/A
10.4.1.f)	UV attenuation..... :		N/A
10.4.1.g)	Materials resistant to degradation UV..... :		N/A
10.4.1.h)	Enclosure containment of optical radiation..... :		N/A
10.4.1.i)	Exempt Group under normal operating conditions..... :		N/A
10.4.2	Instructional safeguard..... :		N/A
10.5	Protection against x-radiation		N/A
10.5.1	X- radiation energy source that exists equipment..... :	(See appended table B.3 & B.4)	N/A
	Normal, abnormal, single fault conditions		N/A
	Equipment safeguards..... :		N/A
	Instructional safeguard for skilled person..... :		N/A
10.5.3	Most unfavourable supply voltage to give maximum radiation..... :		—
	Abnormal and single-fault condition..... :	(See appended table B.3 & B.4)	N/A
	Maximum radiation (pA/kg)..... :		N/A
10.6	Protection against acoustic energy sources		N/A
10.6.1	General		N/A
10.6.2	Classification		N/A
	Acoustic output, dB(A)..... :		N/A
	Output voltage, unweighted r.m.s..... :		N/A
10.6.4	Protection of persons		N/A
	Instructional safeguards..... :		N/A
	Equipment safeguard prevent ordinary person to RS2 ..... :		—
	Means to actively inform user of increase sound pressure..... :		—
	Equipment safeguard prevent ordinary person to RS2 ..... :		—
10.6.5	Requirements for listening devices (headphones, earphones, etc.)		N/A
10.6.5.1	Corded passive listening devices with analog input		N/A
	Input voltage with 94 dB(A) $L_{Aeq}$ acoustic pressure		—



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Clause	Requirement + Test	Result - Remark	Verdict
	output..... :		
10.6.5.2	Corded listening devices with digital input		N/A
	Maximum dB(A)..... :		—
10.6.5.3	Cordless listening device		N/A
	Maximum dB(A)..... :		—

<b>B</b>	<b>NORMAL OPERATING CONDITION TESTS, ABNORMAL OPERATING CONDITION TESTS AND SINGLE FAULT CONDITION TESTS</b>		<b>P</b>
B.2	Normal Operating Conditions		P
B.2.1	General requirements..... :	(See Test Item Particulars and appended test tables)	P
	Audio Amplifiers and equipment with audio amplifiers..... :	(See Annex E)	N/A
B.2.3	Supply voltage and tolerances	100-240Vac, +10%/-10%	P
B.2.5	Input test..... :	(See appended table B.2.5)	P
B.3	Simulated abnormal operating conditions		P
B.3.1	General requirements..... :	(See appended table B.3)	P
B.3.2	Covering of ventilation openings	No openings	N/A
B.3.3	D.C. mains polarity test		N/A
B.3.4	Setting of voltage selector..... :	No voltage selector	N/A
B.3.5	Maximum load at output terminals..... :		P
B.3.6	Reverse battery polarity	No battery	N/A
B.3.7	Abnormal operating conditions as specified in Clause E.2.		N/A
B.3.8	Safeguards functional during and after abnormal operating conditions	During an abnormal operating condition that does not lead to a single fault condition, all safeguards are remained effective. After restoration of normal operating conditions, all safeguards are compliance with applicable requirements.  For abnormal operating condition leads to a consequential fault, the compliance criteria of B.4.8 apply.	N/A
B.4	Simulated single fault conditions		P
B.4.2	Temperature controlling device open or short-circuited..... :	(See appended table B.4)	N/A
B.4.3	Motor tests	No motor	N/A



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Clause	Requirement + Test	Result - Remark	Verdict
B.4.3.1	Motor blocked or rotor locked increasing the internal ambient temperature .....	(See Clause G.5)	N/A
B.4.4	Short circuit of functional insulation		P
B.4.4.1	Short circuit of clearances for functional insulation	Clearances for functional insulation that are not evaluated for basic insulation or relevant electric strength test are short-circuited in turn	P
B.4.4.2	Short circuit of creepage distances for functional insulation	Creepage distances for functional insulation that are not evaluated for basic insulation or relevant electric strength test are short-circuited in turn	P
B.4.4.3	Short circuit of functional insulation on coated printed boards	No coated printed boards.	P
B.4.5	Short circuit and interruption of electrodes in tubes and semiconductors	See appended table B.4.	P
B.4.6	Short circuit or disconnect of passive components	See appended table B.4.	P
B.4.7	Continuous operation of components		N/A
B.4.8	Class 1 and Class 2 energy sources within limits during and after single fault conditions	During and after a single fault condition, a class 1 or class 2 energy sources did not become a class 3 energy source.  For a class 3 energy source, during and after a single fault condition, at least one safeguard continued to comply with the relevant safeguard requirements.	P
B.4.9	Battery charging under single fault conditions.....	(See Annex M)	N/A
<b>C</b>	<b>UV RADIATION</b>		N/A
C.1	Protection of materials in equipment from UV radiation	No UV radiation.	N/A
C.1.2	Requirements		N/A
C.1.3	Test method		N/A
C.2	UV light conditioning test		N/A
C.2.1	Test apparatus		N/A
C.2.2	Mounting of test samples		N/A
C.2.3	Carbon-arc light-exposure apparatus		N/A
C.2.4	Xenon-arc light exposure apparatus		N/A



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Clause	Requirement + Test	Result - Remark	Verdict
<b>D</b>	<b>TEST GENERATORS</b>		<b>P</b>
D.1	Impulse test generators		N/A
D.2	Antenna interface test generator		P
D.3	Electronic pulse generator		N/A
<b>E</b>	<b>TEST CONDITIONS FOR EQUIPMENT CONTAINING AUDIO AMPLIFIERS</b>		<b>N/A</b>
E.1	Audio amplifier normal operating conditions	Equipment does not contain any audio amplifiers	N/A
	Audio signal voltage (V)..... :		—
	Rated load impedance (Ω) .....		
E.2	Audio amplifier abnormal operating conditions		N/A
<b>F</b>	<b>EQUIPMENT MARKINGS, INSTRUCTIONS, AND INSTRUCTIONAL SAFEGUARDS</b>		<b>P</b>
F.1	General requirements		P
	Instructions – Language .....	English	—
F.2	Letter symbols and graphical symbols		P
F.2.1	Letter symbols according to IEC60027-1	Letter symbols for quantities and units are compliance with IEC 60027-1	P
F.2.2	Graphic symbols IEC, ISO or manufacturer specific	Graphic symbols are compliance with IEC 60417 or ISO 3864-2 or ISO 7000	P
F.3	Equipment markings		P
F.3.1	Equipment marking locations	Equipment marking is located on its exterior surface and is readily visible	P
F.3.2	Equipment identification markings		P
F.3.2.1	Manufacturer identification .....	See rated marking	—
F.3.2.2	Model identification .....	See model list	—
F.3.3	Equipment rating markings		P
F.3.3.1	Equipment with direct connection to mains		P
F.3.3.2	Equipment without direct connection to mains		N/A
F.3.3.3	Nature of supply voltage..... :	~	—
F.3.3.4	Rated voltage..... :	100-240V~	—
F.3.3.4	Rated frequency..... :	50/60Hz	—
F.3.3.6	Rated current or rated power..... :	60W	—
F.3.3.7	Equipment with multiple supply connections	No multiple supply connections	N/A
F.3.4	Voltage setting device	No voltage setting device	N/A





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Clause	Requirement + Test	Result - Remark	Verdict
F.3.5	Terminals and operating devices	No terminals and operating devices	N/A
F.3.5.1	Mains appliance outlet and socket-outlet markings.....:	No mains appliance outlet and socket-outlet	N/A
F.3.5.2	Switch position identification marking.....:	Certified switch used	P
F.3.5.3	Replacement fuse identification and rating markings.:	Fuse is not intended to be replaceable	N/A
F.3.5.4	Replacement battery identification marking.....:		N/A
F.3.5.5	Terminal marking location	Marking label	P
F.3.6	Equipment markings related to equipment classification		P
F.3.6.1	Class I Equipment		P
F.3.6.1.1	Protective earthing conductor terminal		N/A
F.3.6.1.2	Neutral conductor terminal		N/A
F.3.6.1.3	Protective bonding conductor terminals		N/A
F.3.6.2	Class II equipment (IEC60417-5172)		P
F.3.6.2.1	Class II equipment with or without functional earth	Without functional earth	P
F.3.6.2.2	Class II equipment with functional earth terminal marking		N/A
F.3.7	Equipment IP rating marking ..... :	Equipment is not intended for other than IPX0.	—
F.3.8	External power supply output marking		P
F.3.9	Durability, legibility and permanence of marking	Marking label is tested in appliance	P
F.3.10	Test for permanence of markings	After the test, the marking remains legible.	P
F.4	Instructions		P
	a) Equipment for use in locations where children not likely to be present - marking	The accessibility of equipment is evaluated using the test probe of Figure V.1	N/A
	b) Instructions given for installation or initial use		P
	c) Equipment intended to be fastened in place		N/A
	d) Equipment intended for use only in restricted access area		N/A
	e) Audio equipment terminals classified as ES3 and other equipment with terminals marked in accordance F.3.6.1		N/A
	f) Protective earthing employed as safeguard		N/A



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Clause	Requirement + Test	Result - Remark	Verdict
	g) Protective earthing conductor current exceeding ES 2 limits		N/A
	h) Symbols used on equipment		N/A
	i) Permanently connected equipment not provided with all-pole mains switch		N/A
j)	j) Replaceable components or modules providing safeguard function		N/A
F.5	Instructional safeguards		N/A
	Where “instructional safeguard” is referenced in the test report it specifies the required elements, location of marking and/or instruction	No instructional safeguard is referenced in this test report.	N/A
<b>G</b>	<b>COMPONENTS</b>		<b>P</b>
<b>G.1</b>	<b>Switches</b>		<b>P</b>
G.1.1	General requirements	Certified switch used	P
G.1.2	Ratings, endurance, spacing, maximum load		P
<b>G.2</b>	<b>Relays</b>		N/A
G.2.1	General requirements	No relays	N/A
G.2.2	Overload test		N/A
G.2.3	Relay controlling connectors supply power		N/A
G.2.4	Mains relay, modified as stated in G.2		N/A
<b>G.3</b>	<b>Protection Devices</b>		N/A
G.3.1	Thermal cut-offs	No thermal cut-offs	N/A
G.3.1.1a) &b)	Thermal cut-outs separately approved according to IEC 60730 with conditions indicated in a) & b)		N/A
G.3.1.1c)	Thermal cut-outs tested as part of the equipment as indicated in c)		N/A
G.3.1.2	Thermal cut-off connections maintained and secure		N/A
G.3.2	Thermal links		N/A
G.3.2.1a)	Thermal links separately tested with IEC 60691	No thermal links	N/A
G.3.2.1b)	Thermal links tested as part of the equipment		N/A
	Aging hours (H)..... :		—
	Single Fault Condition..... :		—
	Test Voltage (V) and Insulation Resistance (Ω)..... :		—
G.3.3	PTC Thermistors	No PTC thermistors	N/A



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Clause	Requirement + Test	Result - Remark	Verdict
G.3.4	Overcurrent protection devices	Fuses employed are compliance with IEC 60127-1 and IEC 60127-3.	P
G.3.5	Safeguards components not mentioned in G.3.1 to G.3.5		N/A
G.3.5.1	Non-resettable devices suitably rated and marking provided		N/A
G.3.5.2	Single faults conditions..... :	(See appended Table B.4)	N/A
<b>G.4</b>	<b>Connectors</b>		N/A
G.4.1	Spacings		N/A
G.4.2	Mains connector configuration ..... :		N/A
G.4.3	Plug is shaped that insertion into mains socket-outlets or appliance coupler is unlikely		N/A
<b>G.5</b>	<b>Wound Components</b>		P
G.5.1	Wire insulation in wound components.....	(See Annex J)	P
G.5.1.2 a)	Two wires in contact inside wound component, angle between 45° and 90°	Tubing used to relieve mechanical stress at crossover points	P
G.5.1.2 b)	Construction subject to routine testing		P
G.5.2	Endurance test on wound components		N/A
G.5.2.1	General test requirements		N/A
G.5.2.2	Heat run test		N/A
	Time (s)..... :		—
	Temperature (°C)..... :		—
G.5.2.3	Wound Components supplied by mains		N/A
<b>G.5.3</b>	<b>Transformers</b>		P
G.5.3.1	Requirements applied (IEC61204-7, IEC61558-1/-2, and/or IEC62368-1)..... :	The isolation transformer meets the requirements given in Annexes G.5.3.2 and G.5.3.3	P
	Position..... :	Isolation transformer	—
	Method of protection ..... :	See appended tables B.3 and B.4	—
G.5.3.2	Insulation		P
	Protection from displacement of windings..... :	The insulation in transformers fulfils requirements of Clause 5 and passes the relevant electric strength tests, according to the application of the insulation in the equipment.	—
G.5.3.3	Overload test..... :	(See appended table B.3)	P
G.5.3.3.1	Test conditions		P



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Clause	Requirement + Test	Result - Remark	Verdict
G.5.3.3.2	Winding Temperatures testing in the unit	Maximum temperatures of windings did not exceed the limits given in Table G.3. During the test, the transformer did not emit flames or molten metal.	P
G.5.3.3.3	Winding Temperatures - Alternative test method		N/A
<b>G.5.4</b>	<b>Motors</b>		N/A
G.5.4.1	General requirements		N/A
	Position .....		—
G.5.4.2	Test conditions		N/A
G.5.4.3	Running overload test		N/A
G.5.4.4	Locked-rotor overload test		N/A
	Test duration (days) .....		—
G.5.4.5	Running overload test for d.c. motors in secondary circuits		N/A
G.5.4.5.2	Tested in the unit		N/A
	Electric strength test (V).....		—
G.5.4.5.3	Tested on the Bench - Alternative test method; test time (h) .....		N/A
	Electric strength test (V).....		—
G.5.4.6	Locked-rotor overload test for d.c. motors in secondary circuits		N/A
G.5.4.6.2	Tested in the unit		N/A
	Maximum Temperature .....		N/A
	Electric strength test (V) .....		N/A
G.5.4.6.3	Tested on the bench - Alternative test method; test time (h).....		N/A
	Electric strength test (V).....		N/A
G.5.4.7	Motors with capacitors		N/A
G.5.4.8	Three-phase motors		N/A
G.5.4.9	Series motors		N/A
	Operating voltage .....		—
<b>G.6</b>	<b>Wire Insulation</b>		P
G.6.1	General	TIW of transformer	P
G.6.2	Solvent-based enamel wiring insulation		P
<b>G.7</b>	<b>Mains supply cords</b>		N/A



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Clause	Requirement + Test	Result - Remark	Verdict
G.7.1	General requirements	Not provided	N/A
	Type..... :		—
	Rated current (A)..... :		—
	Cross-sectional area (mm <sup>2</sup> ), (AWG)..... :		—
G.7.2	Compliance and test method		N/A
G.7.3	Cord anchorages and strain relief for non-detachable power supply cords		N/A
G.7.3.2	Cord strain relief		N/A
G.7.3.2.1	Requirements		N/A
	Strain relief test force (N)..... :		—
G.7.3.2.2	Strain relief mechanism failure		N/A
G.7.3.2.3	Cord sheath or jacket position, distance (mm)..... :		—
G.7.3.2.4	Strain relief comprised of polymeric material		N/A
G.7.4	Cord Entry..... :	(See appended table 5.4.11.1)	N/A
G.7.5	Non-detachable cord bend protection		N/A
G.7.5.1	Requirements		N/A
G.7.5.2	Mass (g) ..... :		—
	Diameter (m)..... :		—
	Temperature (°C)..... :		—
G.7.6	Supply wiring space		N/A
G.7.6.2	Stranded wire		N/A
G.7.6.2.1	Test with 8 mm strand		N/A
<b>G.8</b>	<b>Varistors</b>		N/A
G.8.1	General requirements		N/A
G.8.2	Safeguard against shock		N/A
G.8.3	Safeguard against fire		N/A
G.8.3.2	Varistor overload test..... :	(See appended table B.3)	N/A
G.8.3.3	Temporary overvoltage..... :	(See appended table B.3)	N/A
<b>G.9</b>	<b>Integrated Circuit (IC) Current Limiters</b>		N/A
G.9.1 a)	Manufacturer defines limit at max. 5A.		N/A
G.9.1 b)	Limiters do not have manual operator or reset		N/A
G.9.1 c)	Supply source does not exceed 250 VA ..... :		—
G.9.1 d)	IC limiter output current (max. 5A)..... :		—
G.9.1 e)	Manufacturers' defined drift ..... :		—



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Clause	Requirement + Test	Result - Remark	Verdict
G.9.2	Test Program 1		N/A
G.9.3	Test Program 2		N/A
G.9.4	Test Program 3		N/A
<b>G.10</b>	<b>Resistors</b>		N/A
G.10.1	General requirements		N/A
G.10.2	Resistor test		N/A
G.10.3	Test for resistors serving as safeguards between the mains and an external circuit consisting of a coaxial cable		N/A
G.10.3.1	General requirements		N/A
G.10.3.2	Voltage surge test		N/A
G.10.3.3	Impulse test		N/A
<b>G.11</b>	<b>Capacitor and RC units</b>		P
G.11.1	General requirements		P
G.11.2	Conditioning of capacitors and RC units	Capacitors used are compliant for IEC 60384-14:2005, with the minimum duration of damp heat, steady-state test of 21 days at 40 °C±2 °C and a RH of 93%±3%.	P
G.11.3	Rules for selecting capacitors	One Y1 Capacitor provided	P
<b>G.12</b>	<b>Optocouplers</b>		P
	Optocouplers comply with IEC 60747-5-5:2007 Spacing or Electric Strength Test (specify option and test results)..... :		P
	Type test voltage Vini ..... :	5000Vac	—
	Routine test voltage, Vini,b ..... :	5000Vac	—
<b>G.13</b>	<b>Printed boards</b>		P
G.13.1	General requirements		P
G.13.2	Uncoated printed boards	The insulation between conductors on the outer surfaces of an uncoated printed board is compliant with the minimum requirements of clearances (5.4.2) and creepage distances (5.4.3).	P
G.13.3	Coated printed boards		N/A
G.13.4	Insulation between conductors on the same inner surface		N/A
	Compliance with cemented joint requirements (Specify construction)..... :		—
G.13.5	Insulation between conductors on different surfaces		N/A



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Clause	Requirement + Test	Result - Remark	Verdict
	Distance through insulation.....:	(See appended table 5.4.4.5)	N/A
	Number of insulation layers (pcs) .....		—
G.13.6	Tests on coated printed boards		N/A
G.13.6.1	Sample preparation and preliminary inspection		N/A
G.13.6.2a)	Thermal conditioning		N/A
G.13.6.2b)	Electric strength test		N/A
G.13.6.2c)	Abrasion resistance test		N/A
<b>G.14</b>	<b>Coating on components terminals</b>		N/A
G.14.1	Requirements .....	(See G.13)	N/A
<b>G.15</b>	<b>Liquid filled components</b>		N/A
G.15.1	General requirements		N/A
G.15.2	Requirements		N/A
G.15.3	Compliance and test methods		N/A
G.15.3.1	Hydrostatic pressure test		N/A
G.15.3.2	Creep resistance test		N/A
G.15.3.3	Tubing and fittings compatibility test		N/A
G.15.3.4	Vibration test		N/A
G.15.3.5	Thermal cycling test		N/A
G.15.3.6	Force test		N/A
G.15.4	Compliance		N/A
<b>G.16</b>	<b>IC including capacitor discharge function (ICX)</b>		N/A
a)	Humidity treatment in accordance with sc5.4.8 – 120 hours		N/A
b)	Impulse test using circuit 2 with $U_c =$ to transient voltage .....		N/A
C1)	Application of ac voltage at 110% of rated voltage for 2.5 minutes		N/A
C2)	Test voltage .....		—
D1)	10,000 cycles on and off using capacitor with smallest capacitance resistor with largest resistance specified by manufacturer		N/A
D2)	Capacitance .....		—
D3)	Resistance .....		—
<b>H</b>	<b>CRITERIA FOR TELEPHONE RINGING SIGNALS</b>		N/A
H.1	General		N/A



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Clause	Requirement + Test	Result - Remark	Verdict
H.2	Method A		N/A
H.3	Method B		N/A
H.3.1	Ringling signal		N/A
H.3.1.1	Frequency (Hz) .....		—
H.3.1.2	Voltage (V) .....		—
H.3.1.3	Cadence; time (s) and voltage (V) .....		—
H.3.1.4	Single fault current (mA):.....		—
H.3.2	Tripping device and monitoring voltage.....		N/A
H.3.2.1	Conditions for use of a tripping device or a monitoring voltage complied with		N/A
H.3.2.2	Tripping device		N/A
H.3.2.3	Monitoring voltage (V).....		—
<b>J</b>	<b>INSULATED WINDING WIRES FOR USE WITHOUT INTERLEAVED INSULATION</b>		<b>P</b>
	General requirements	(See separate test report)	<b>P</b>
<b>K</b>	<b>SAFETY INTERLOCKS</b>		<b>N/A</b>
K.1	General requirements		N/A
K.2	Components of safety interlock safeguard mechanism .....	(See Annex G)	N/A
K.3	Inadvertent change of operating mode		N/A
K.4	Interlock safeguard override		N/A
K.5	Fail-safe		N/A
	Compliance.....	(See appended table B.4)	N/A
K.6	Mechanically operated safety interlocks		N/A
K.6.1	Endurance requirement		N/A
K.6.2	Compliance and Test method.....		N/A
K.7	Interlock circuit isolation		N/A
K.7.1	Separation distance for contact gaps & interlock circuit elements (type and circuit location) .....		N/A
K.7.2	Overload test, Current (A).....		N/A
K.7.3	Endurance test		N/A
K.7.4	Electric strength test .....	(See appended table 5.4.11)	N/A
<b>L</b>	<b>DISCONNECT DEVICES</b>		<b>P</b>
L.1	General requirements	Appliance Inlet as disconnect device	<b>P</b>
L.2	Permanently connected equipment		N/A





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Clause	Requirement + Test	Result - Remark	Verdict
L.3	Parts that remain energized		N/A
L.4	Single phase equipment		P
L.5	Three-phase equipment		N/A
L.6	Switches as disconnect devices		N/A
L.7	Plugs as disconnect devices		N/A
L.8	Multiple power sources		N/A
<b>M</b>	<b>EQUIPMENT CONTAINING BATTERIES AND THEIR PROTECTION CIRCUITS</b>		N/A
M.1	General requirements	No batteries	N/A
M.2	Safety of batteries and their cells		N/A
M.2.1	Requirements		N/A
M.2.2	Compliance and test method (identify method)..... :		N/A
M.3	Protection circuits		N/A
M.3.1	Requirements		N/A
M.3.2	Tests		N/A
	- Overcharging of a rechargeable battery		N/A
	- Unintentional charging of a non-rechargeable battery		N/A
	- Reverse charging of a rechargeable battery		N/A
	- Excessive discharging rate for any battery		N/A
M.3.3	Compliance .....		N/A
M.4	Additional safeguards for equipment containing secondary lithium battery		N/A
M.4.1	General		N/A
M.4.2	Charging safeguards		N/A
M.4.2.1	Charging operating limits		N/A
M.4.2.2a)	Charging voltage, current and temperature..... :		—
M.4.2.2 b)	Single faults in charging circuitry..... :		—
M.4.3	Fire Enclosure		N/A
M.4.4	Endurance of equipment containing a secondary lithium battery		N/A
M.4.4.2	Preparation		N/A
M.4.4.3	Drop and charge/discharge function tests		N/A
	Drop		N/A
	Charge		N/A
	Discharge		N/A



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Clause	Requirement + Test	Result - Remark	Verdict
M.4.4.4	Charge-discharge cycle test		N/A
M.4.4.5	Result of charge-discharge cycle test		N/A
M.5	Risk of burn due to short circuit during carrying		N/A
M.5.1	Requirement		N/A
M.5.2	Compliance and Test Method (Test of P.2.3)		N/A
M.6	Prevention of short circuits and protection from other effects of electric current		N/A
M.6.1	Short circuits		N/A
M.6.1.1	General requirements		N/A
M.6.1.2	Test method to simulate an internal fault		N/A
M.6.1.3	Compliance (Specify M.6.1.2 or alternative method) :		N/A
M.6.2	Leakage current (mA) .....		N/A
M.7	Risk of explosion from lead acid and NiCd batteries		N/A
M.7.1	Ventilation preventing explosive gas concentration		N/A
M.7.2	Compliance and test method		N/A
M.8	Protection against internal ignition from external spark sources of lead acid batteries		N/A
M.8.1	General requirements		N/A
M.8.2	Test method		N/A
M.8.2.1	General requirements		N/A
M.8.2.2	Estimation of hypothetical volume $V_z$ (m <sup>3</sup> /s).....		—
M.8.2.3	Correction factors.....		—
M.8.2.4	Calculation of distance $d$ (mm) .....		—
M.9	Preventing electrolyte spillage		N/A
M.9.1	Protection from electrolyte spillage		N/A
M.9.2	Tray for preventing electrolyte spillage		N/A
M.10	Instructions to prevent reasonably foreseeable misuse (Determination of compliance: inspection, data review; or abnormal testing) .....		N/A
<b>N</b>	<b>ELECTROCHEMICAL POTENTIALS</b>		N/A
	Metal(s) used.....	Pollution degree considered	—
<b>O</b>	<b>MEASUREMENT OF CREEPAGE DISTANCES AND CLEARANCES</b>		P
	Figures O.1 to O.20 of this Annex applied.....		—



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Clause	Requirement + Test	Result - Remark	Verdict
<b>P</b>	<b>SAFEGUARDS AGAINST ENTRY OF FOREIGN OBJECTS AND SPILLAGE OF INTERNAL LIQUIDS</b>		<b>P</b>
P.1	General requirements		P
P.2.2	Safeguards against entry of foreign object	Equipment enclosure does not provide with any openings.	P
	Location and Dimensions (mm) .....		—
P.2.3	Safeguard against the consequences of entry of foreign object		N/A
P.2.3.1	Safeguards against the entry of a foreign object		N/A
	Openings in transportable equipment		N/A
	Transportable equipment with metalized plastic parts :		N/A
P.2.3.2	Openings in transportable equipment in relation to metallized parts of a barrier or enclosure (identification of supplementary safeguard) .....		N/A
P.3	Safeguards against spillage of internal liquids		N/A
P.3.1	General requirements		N/A
P.3.2	Determination of spillage consequences		N/A
P.3.3	Spillage safeguards		N/A
P.3.4	Safeguards effectiveness		N/A
P.4	Metallized coatings and adhesive securing parts		N/A
P.4.2 a)	Conditioning testing		N/A
	Tc (°C).....		—
	Tr (°C).....		—
	Ta (°C).....		—
P.4.2 b)	Abrasion testing .....	(See G.13.6.2)	N/A
P.4.2 c)	Mechanical strength testing.....	(See Annex T)	N/A
<b>Q</b>	<b>CIRCUITS INTENDED FOR INTERCONNECTION WITH BUILDING WIRING</b>		<b>N/A</b>
Q.1	Limited power sources		N/A
Q.1.1 a)	Inherently limited output		N/A
Q.1.1 b)	Impedance limited output		N/A
	- Regulating network limited output under normal operating and simulated single fault condition		N/A
Q.1.1 c)	Overcurrent protective device limited output		N/A
Q.1.1 d)	IC current limiter complying with G.9		N/A
Q.1.2	Compliance and test method		N/A
Q.2	Test for external circuits – paired conductor cable		N/A



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Clause	Requirement + Test	Result - Remark	Verdict
	Maximum output current (A) .....		—
	Current limiting method.....		—
<b>R</b>	<b>LIMITED SHORT CIRCUIT TEST</b>		<b>N/A</b>
R.1	General requirements		N/A
R.2	Determination of the overcurrent protective device and circuit		N/A
R.3	Test method Supply voltage (V) and short-circuit current (A). .....		N/A
<b>S</b>	<b>TESTS FOR RESISTANCE TO HEAT AND FIRE</b>		<b>N/A</b>
S.1	Flammability test for fire enclosures and fire barrier materials of equipment where the steady state power does not exceed 4 000 W	Pre-selection of material is used - all combustible materials are separately evaluated for the required resistance to heat and fire.	N/A
	Samples, material.....		—
	Wall thickness (mm).....		—
	Conditioning (°C).....		—
	Test flame according to IEC 60695-11-5 with conditions as set out		N/A
	- Material not consumed completely		N/A
	- Material extinguishes within 30s		N/A
	- No burning of layer or wrapping tissue		N/A
S.2	Flammability test for fire enclosure and fire barrier integrity		N/A
	Samples, material.....		—
	Wall thickness (mm).....		—
	Conditioning (°C).....		—
	Test flame according to IEC 60695-11-5 with conditions as set out		N/A
	Test specimen does not show any additional hole		N/A
S.3	Flammability test for the bottom of a fire enclosure		N/A
	Samples, material.....		—
	Wall thickness (mm).....		—
	Cheesecloth did not ignite		N/A
S.4	Flammability classification of materials		N/A
S.5	Flammability test for fire enclosures and fire barrier materials of equipment where the steady state power does not exceed 4 000 W		N/A



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Clause	Requirement + Test	Result - Remark	Verdict
	Samples, material..... :		—
	Wall thickness (mm)..... :		—
	Conditioning (test condition), (°C)..... :		—
	Test flame according to IEC 60695-11-20 with conditions as set out		N/A
	After every test specimen was not consumed completely		N/A
	After fifth flame application, flame extinguished within 1 min		N/A
<b>T</b>	<b>MECHANICAL STRENGTH TESTS</b>		<b>P</b>
T.1	General requirements		P
T.2	Steady force test, 10 N ..... :	(See appended table T.2)	P
T.3	Steady force test, 30 N ..... :		N/A
T.4	Steady force test, 100 N ..... :	(See appended table T4)	P
T.5	Steady force test, 250 N ..... :	(See appended table T5)	P
T.6	Enclosure impact test	(See appended table T6)	P
	Fall test		P
	Swing test		N/A
T.7	Drop test ..... :		N/A
T.8	Stress relief test..... :		N/A
T.9	Impact Test (glass)		N/A
T.9.1	General requirements		N/A
T.9.2	Impact test and compliance		N/A
	Impact energy (J)..... :		—
	Height (m)..... :		—
T.10	Glass fragmentation test..... :	(See sub-clause 4.4.4.9)	N/A
T.11	Test for telescoping or rod antennas		N/A
	Torque value (Nm) ..... :		—
<b>U</b>	<b>MECHANICAL STRENGTH OF CATHODE RAY TUBES (CRT) AND PROTECTION AGAINST THE EFFECTS OF IMPLOSION</b>		<b>N/A</b>
U.1	General requirements		N/A
U.2	Compliance and test method for non-intrinsically protected CRTs		N/A
U.3	Protective Screen..... :	(See Annex T)	N/A



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Clause	Requirement + Test	Result - Remark	Verdict
<b>V</b>	<b>DETERMINATION OF ACCESSIBLE PARTS (FINGERS, PROBES AND WEDGES)</b>		<b>P</b>
V.1	Accessible parts of equipment		P
V.2	Accessible part criterion		P

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Clause	Requirement + Test	Result - Remark	Verdict

4.1.2	TABLE: List of critical components					P
Object / part No.	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity <sup>1</sup>	
PCB	Interchangeable	Interchangeable	Rated V-0 or better, min.130 degree C.	UL 796	UL	
Heat Shrinkable Tube	Interchangeable	Interchangeable	FEP, PTFE PVC TFE, neoprene, polyamide or marked VW-1, 125 degree C, 600V	UL 224	UL	
Black Mylar sheet	YI-HSIN PLASTECH CO LTD	HSINMEX PC- 175A	Rated minimum 120 degree C, V-0, minimum 0.4mm thickness.	UL746C, UL94	UL E300040	
Transformer	Realan Computer Technology Co., LTD	XonTel MS PBX	130 degree C.	IEC 62368-1	Tested in appliance	
Bobbin	SUMITOMO BAKELITE CO LTD	PM-9630	Phenolic, V-0, 150 degreeC, minimum 0.8mm thick.	UL 94, UL 746C	UL E41429	
Core	Interchangeable	Interchangeable	Ferrite	IEC 62368-1	Tested in appliance	
Coil	Interchangeable	Interchangeable	Magnet copper wire, minimum 130 degree C.	UL 1446	UL	
Triple Insulated Wire	GREAT LEOFロン INDUSTRIAL CO LTD	TRW(B)	Reinforced insulation,1.41KVpea k, rated 130 degree C.	UL 2353 IEC/EN60950-1	UL E211989, VDE	
Insulating Tape	SYMBIO INC	35660Y, 35660	Rated minimum 130 degree C.	UL 510	UL E50292	
Varnish	JOHN C DOLPH CO	BC-346A	Rated minimum 155 degree C.	UL 1446	UL E317427	
Tubing	GREAT HOLDING INDUSTRIAL CO LTD	TFT	Rated minimum 200 degree C.	UL 224	UL E156256	
Glue	Interchangeable	Interchangeable	Minimum V-2, 105 degree C.	UL 746C, UL 94	UL	
Supplementary information:						
1) Provided evidence ensures the agreed level of compliance. See OD-CB2039.						
2) Description line content is optional. Main line description needs to clearly detail the component used for testing						

4.8.4, 4.8.5	TABLE: Lithium coin/button cell batteries mechanical tests	N/A
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Clause	Requirement + Test	Result - Remark	Verdict
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(The following mechanical tests are conducted in the sequence noted.)

<b>4.8.4.2</b>	<b>TABLE: Stress Relief test</b>		---
<b>Part</b>	<b>Material</b>	<b>Oven Temperature (°C)</b>	<b>Comments</b>
--	--	--	--
<b>4.8.4.3</b>	<b>TABLE: Battery replacement test</b>		---
Battery part no.....:	--		---
<b>Battery Installation/withdrawal</b>	<b>Battery Installation/Removal Cycle</b>		<b>Comments</b>
--	1		--
	2		--
	3		--
	4		--
	5		--
	6		--
	8		--
	9		--
	10		--
	<b>4.8.4.4</b>	<b>TABLE: Drop test</b>	
<b>Impact Area</b>	<b>Drop Distance</b>	<b>Drop No.</b>	<b>Observations</b>
--	--	1	--
--	--	2	--
--	--	3	--
<b>4.8.4.5</b>	<b>TABLE: Impact</b>		---
<b>Impacts per surface</b>	<b>Surface tested</b>	<b>Impact energy (Nm)</b>	<b>Comments</b>
--	--	--	--
--	--	--	--
--	--	--	--
<b>4.8.4.6</b>	<b>TABLE: Crush test</b>		---
<b>Test position</b>	<b>Surface tested</b>	<b>Crushing Force (N)</b>	<b>Duration force applied (s)</b>
--	--	--	--
--	--	--	--

Supplementary information:





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Clause	Requirement + Test	Result - Remark	Verdict
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4.8.5	TABLE: Lithium coin/button cell batteries mechanical test result			N/A
Test position	Surface tested	Force (N)	Duration force applied (s)	
--	--	--	--	
--	--	--	--	

Supplementary information:

5.2	Table: Classification of electrical energy sources	P
-----	--	---

5.2.2.2 – Steady State Voltage and Current conditions

No.	Supply Voltage	Location (e.g. circuit designation)	Test conditions	Parameters			ES Class
				U (Vrms or Vpk)	I (A <sub>pk</sub> or A <sub>rms</sub> )	Hz	
1	264V/60Hz	Output connector (+) to (-)	Normal	5.3 Vpk	--	DC	ES1
			Abnormal	--	--	--	
			Single fault – SC/OC	--	--	--	
2	264V/60Hz	Output connector (+) to Earth	Normal	259Vpk	0.0588 mA <sub>pk</sub>	60	
			Abnormal	--	--	--	
			Single fault – SC/OC	--	--	--	
3	264V/60Hz	Output connector (-) to Earth	Normal	256Vpk	0.0588 mA <sub>pk</sub>	60	
			Abnormal	--	--	--	
			Single fault – SC/OC	--	--	--	

5.2.2.3 - Capacitance Limits

No.	Supply Voltage	Location (e.g. circuit designation)	Test conditions	Parameters		ES Class
				Capacitance, nF	Upk (V)	
1	264V/60Hz	X-cap.	Normal	344	28	ES1
			Abnormal	--	--	--
			Single fault – SC/OC(R1 OC)	348	102	ES2

5.2.2.4 - Single Pulses

No.	Supply Voltage	Location (e.g. circuit designation)	Test conditions	Parameters			ES Class
				Duration (ms)	Upk (V)	I <sub>pk</sub> (mA)	
--	--	--	Normal	--	--	--	--



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Clause	Requirement + Test	Result - Remark	Verdict
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		Abnormal	--	--	--	
		Single fault – SC/OC	--	--	--	

5.2.2.5 - Repetitive Pulses

No.	Supply Voltage	Location (e.g. circuit designation)	Test conditions	Parameters			ES Class
				Off time (ms)	Upk (V)	Ipk (mA)	
--	--	--	Normal	--	--	--	--
			Abnormal	--	--	--	
			Single fault – SC/OC	--	--	--	

Test Conditions:

Normal –

Abnormal -

Supplementary information: SC=Short Circuit, OC=Short Circuit



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Clause	Requirement + Test	Result - Remark		Verdict
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5.4.1.4, 6.3.2, 9.0, B.2.6	TABLE: Temperature measurements						P
	Supply voltage (V) .....	90Vac/60Hz	264Vac/60Hz	--	--	---	
	Ambient T <sub>min</sub> (°C) .....	--	--	--	--	---	
	Ambient T <sub>max</sub> (°C) .....	--	--	--	--	---	
	T <sub>ma</sub> (°C) .....	40	40	--	--	---	
Maximum measured temperature T of part/at:		T (°C)				Allowed T <sub>max</sub> (°C)	
AC inlet		64.7	60.7	--	--	70	
X-cap.		83.2	68.5	--	--	100	
PCB		88.7	70.8	--	--	130	
Transformer winding		89.7	87.6	--	--	110	
Transformer core		86.6	85.6	--	--	110	
Output wire		54.8	51.7	--	--	80	
Enclosure inside		68.5	62.7	--	--	120	
Ambient		40.0	40.0	--	--	--	
	Supply voltage (V) .....	90Vac	264Vac	--	--	---	
	Ambient T <sub>min</sub> (°C) .....	--	--	--	--	---	
	Ambient T <sub>max</sub> (°C) .....	--	--	--	--	---	
	T <sub>ma</sub> (°C) .....	25	25	--	--	---	
Maximum measured temperature T of part/at:		T (°C)				Allowed T <sub>max</sub> (°C)	
Enclosure outside		53.9	50.7	--	--	94	
Ambient		25.0	25.0	--	--	--	
Supplementary information:							
Temperature T of winding:	Transformer (°C)	R <sub>1</sub> (Ω)	t <sub>2</sub> (°C)	R <sub>2</sub> (Ω)	T (°C)	Allowed T <sub>max</sub> (°C)	Insulation class
--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--



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Clause	Requirement + Test	Result - Remark	Verdict
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Supplementary information:

Note 1: Tma should be considered as directed by applicable requirement

Note 2: Tma is not included in assessment of Touch Temperatures (Clause 9)

5.4.1.10.2	TABLE: Vicat softening temperature of thermoplastics			N/A
Penetration (mm)..... :				—
Object/ Part No./Material	Manufacturer/trademark	T softening (°C)		
--	--	--		
--	--	--		
supplementary information:				

5.4.1.10.3	TABLE: Ball pressure test of thermoplastics			N/A
Allowed impression diameter (mm) .....	≤ 2 mm			—
Object/Part No./Material	Manufacturer/trademark	Test temperature (°C)	Impression diameter (mm)	
--	--	--	--	
--	--	--	--	
--	--	--	--	
Supplementary information:				

5.4.2.2, 5.4.2.4 and 5.4.3	TABLE: Minimum Clearances/Creepage distance							P
Clearance (cl) and creepage distance (cr) at/of/between:	Up (V)	U r.m.s. (V)	Frequency (kHz) <sup>1</sup>	Required cl (mm)*	cl (mm) <sup>2</sup>	Required <sup>3</sup> cr (mm)	cr (mm)	
Live trace – Neutral trace before FUSE	340	240	#	1.5	3.2	2.4	3.2	
Between two ends of Fuse	340	240	#	1.5	2.9	2.4	2.9	
Supplementary information:								
Note 1: Only for frequency above 30 kHz								
Note 2: See table 5.4.2.4 if this is based on electric strength test								
Note 3: Provide Material Group								
Remark:								
# Highest frequency measured as 27kHz at TRANSFORMER								

5.4.2.3	TABLE: Minimum Clearances distances using required withstand voltage	P
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Clause	Requirement + Test	Result - Remark	Verdict
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	<b>Overvoltage Category (OV):</b>	II
	<b>Pollution Degree:</b>	2

Clearance distanced between:	Required withstand voltage	Required cl (mm) *	Measured cl (mm)
Live trace – Neutral trace	2500	1.5	3.2
Between two ends of Fuse	2500	1.5	2.9
Transformer primary trace – secondary trace	2500	3.0	7.6
Transformer primary winding – secondary winding	2500	3.0	10.0
Transformer Core – secondary winding	2500	3.0	7.7

Supplementary information:

Core is considered as hazardous live part.

Remark: \*The equipment is intended to be operated at altitude 5000m. Clearance requirements between primary and secondary part have been corrected for an altitude of 5000m according to IEC60664-1, Table A.2. Multiplication factor of 1.48 is applied.

<b>5.4.2.4</b>	<b>TABLE: Clearances based on electric strength test</b>	N/A
----------------	--	-----

Test voltage applied between:	Required cl (mm)	Test voltage (kV) peak/ r.m.s. / d.c.	Breakdown Yes / No
--	--	--	--
--	--	--	--

Supplementary information:

<b>5.4.4.2, 5.4.4.5 c) 5.4.4.9</b>	<b>TABLE: Distance through insulation measurements</b>	N/A
------------------------------------	--	-----

Distance through insulation di at/of:	Peak voltage (V)	Frequency (kHz)	Material	Required DTI (mm)	DTI (mm)
--	--	--	--	--	--

Supplementary information:

<b>5.4.9</b>	<b>TABLE: Electric strength tests</b>	
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Test voltage applied between:	Voltage shape (AC, DC)	Test voltage (V)	Breakdown Yes / No
-------------------------------	------------------------	------------------	--------------------

Functional:



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Clause	Requirement + Test	Result - Remark	Verdict
<b>5.4.9</b>	<b>TABLE: Electric strength tests</b>		
Test voltage applied between:	Voltage shape (AC, DC)	Test voltage (V)	Breakdown Yes / No
--	--	--	--
--	--	--	--
Basic/supplementary:			
Primary circuits to AC inlet earth pin	DC	2000	No
Reinforced:			
L/N to output terminal	DC	4000	No
L/N to plastic enclosure with metal foil	DC	4000	No
Transformer: Primary to Secondary	DC	4000	No
Transformer: Core to Secondary	DC	4000	No
Transformer: One layer insulation tape	DC	4000	No
Routine Tests:			
--	--	--	--
--	--	--	--
Supplementary information:			

<b>5.5.2.2</b>	<b>TABLE: Stored discharge on capacitors</b>					<b>P</b>
Supply Voltage (V), Hz	Test Location	Operating Condition (N, S)	Switch position On or off	Measured Voltage (after 2 seconds)	ES Classification	
264Vac, 60Hz	Pin L to N	N	--	32	ES1	
264Vac, 60Hz	Pin L to N	S (R1 open)	--	102	ES2	
Supplementary information:						
X-capacitors installed for testing are:						
<input checked="" type="checkbox"/> bleeding resistor rating: each rated 5.6MΩ, 1/4W.						
<input type="checkbox"/> ICX:						
Notes:						
A. Test Location:						
Phase to Neutral; Phase to Phase; Phase to Earth; and/or Neutral to Earth						
B. Operating condition abbreviations:						
N – Normal operating condition (e.g., normal operation, or open fuse); S –Single fault condition						

<b>5.6.6.2</b>	<b>TABLE: Resistance of protective conductors and terminations</b>					<b>P</b>
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Clause	Requirement + Test		Result - Remark	Verdict	
	Accessible part	Test current (A)	Duration (min)	Voltage drop (V)	Resistance (Ω)
	Appliance inlet PE to metal enclosure	32	2	0.55	0.014
Supplementary information:					

5.7.2.2, 5.7.4	TABLE: Earthed accessible conductive part		N/A
Supply voltage..... :	--		—
Location	Test conditions specified in 6.1 of IEC 60990 or Fault Condition No in IEC 60990 clause 6.2.2.1 through 6.2.2.8, except for 6.2.2.7		Touch current (mA)
--	1		--
	2*		--
	3		--
	4		--
	5		--
	6		--
	8		--
Supplementary Information:			
Notes:			
[1] Supply voltage is the anticipated maximum Touch Voltage			
[2] Earthed neutral conductor [Voltage differences less than 1% or more]			
[3] Specify method used for measurement as described in IEC 60990 sub-clause 4.3			
[4] IEC60990, sub-clause 6.2.2.7, Fault 7 not applicable.			
[5] (*) IEC60990, sub-clause 6.2.2.2 is not applicable if switch or disconnect device (e.g., appliance coupler) provided.			

6.2.3.1	Table: Determination of Potential Ignition Sources (Arcing PIS)			N/A
Location	Open circuit voltage After 3 s (Vp)	Measured r.m.s current (Irms)	Calculated value (Vp x Irms)	Arcing PIS? Yes / No
--	--	--	--	--
--	--	--	--	--
--	--	--	--	--
--	--	--	--	--



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Clause	Requirement + Test	Result - Remark	Verdict

Supplementary information:

An Arcing PIS requires a minimum of 50 V (peak) a.c. or d.c. An Arcing PIS is established when the product of the open circuit voltage ( $V_p$ ) and normal operating condition rms current ( $I_{rms}$ ) is greater than 15.

<b>6.2.3.2</b>	<b>Table: Determination of Potential Ignition Sources (Resistive PIS)</b>				<b>N/A</b>
Circuit Location (x-y)	Operating Condition (Normal / Describe Single Fault)	Measured wattage or VA During first 30 s (W / VA)	Measured wattage or VA After 30 s (W / VA)	Protective Circuit, Regulator, or PTC Operated? Yes / No (Comment)	Resistive PIS? Yes/No
--	--	--	--	--	--
--	--	--	--	--	--
--	--	--	--	--	--
--	--	--	--	--	--

Supplementary Information:

A combination of voltmeter, VA and ammeter IA may be used instead of a wattmeter.

If a separate voltmeter and ammeter are used, the product of (VA x IA) is used to determine Resistive PIS classification.

A Resistive PIS: (a) dissipates more than 15 W, measured after 30 s of normal operation, or (b) under single fault conditions has either a power exceeding 100 W measured immediately after the introduction of the fault if electronic circuits, regulators or PTC devices are used, or has an available power exceeding 15 W measured 30 s after introduction of the fault.

<b>8.5.5</b>	<b>TABLE: High Pressure Lamp</b>		<b>N/A</b>
Description	Values	Energy Source Classification	
Lamp type..... :	--	---	
Manufacturer..... :	--	---	
Cat no..... :	--	---	
Pressure (cold) (MPa)..... :	--	MS_	
Pressure (operating) (MPa)..... :	--	MS_	
Operating time (minutes)..... :	--	---	
Explosion method..... :	--	---	
Max particle length escaping enclosure (mm)..... :	--	MS_	
Max particle length beyond 1 m (mm)..... :	--	MS_	
Overall result .....	--		





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Clause	Requirement + Test	Result - Remark	Verdict
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Supplementary information:

<b>B.2.5</b>	<b>TABLE: Input test</b>							<b>P</b>
U (V)	I (A)	I rated (A)	P (W)	P rated (W)	Fuse No	I fuse (A)	Condition/status	
90/50Hz	0.748	--	56.2	--	Fuse	0.748	Max. Normal load	
90/60Hz	0.745	--	56.2	--	Fuse	0.745	Max. Normal load	
100/50Hz	0.631	--	56.5	72	Fuse	0.631	Max. Normal load	
100/60Hz	0.622	--	56.5	72	Fuse	0.622	Max. Normal load	
240/50Hz	0.217	--	56.5	72	Fuse	0.217	Max. Normal load	
240/60Hz	0.220	--	56.4	72	Fuse	0.220	Max. Normal load	
264/50Hz	0.191	--	56.3	--	Fuse	0.191	Max. Normal load	
264/60Hz	0.192	--	56.2	--	Fuse	0.192	Max. Normal load	

Supplementary information:

Equipment may be have rated current or rated power or both. Both should be measured.

<b>B.3</b>	<b>TABLE: Abnormal operating condition tests</b>							<b>P</b>
Ambient temperature (°C) .....					See below		—	
Power source for EUT: Manufacturer, model/type, output rating .....					--		—	
Component No.	Abnormal Condition	Supply voltage, (V)	Test time (ms)	Fuse no.	Fuse current, (A)	T-couple	Temp. (°C)	Observation
Opening	Blocked	240	2hr11mins	FUSE	--	Enclosure Top near Transformer (outside)	72.4	Normal operation, NB, NC, NT
						Transformer winding	90.9	
						Ambient	23.5	
Fan	Locked	240	2hr15mins	FUSE	--	Enclosure Top near Transformer (outside)	76.4	Normal operation, NB, NC, NT
						Transformer winding	98.2	
						Ambient	23.7	



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Clause	Requirement + Test	Result - Remark	Verdict
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<b>B.3</b>		<b>TABLE: Abnormal operating condition tests</b>						<b>P</b>
Ambient temperature (°C) .....		See below						—
Power source for EUT: Manufacturer, model/type, output rating .....		--						—
Component No.	Abnormal Condition	Supply voltage, (V)	Test time (ms)	Fuse no.	Fuse current, (A)	T-couple	Temp. (°C)	Observation
<p>Supplementary information:            Test table is provided to record abnormal and fault conditions for all applicable energy sources including Thermal burn injury. Column “Abnormal/Fault.” Specify if test condition by indicating “Abnormal” then the condition for a Clause B.3 test or “Single Fault” then the condition for Clause B.4.            The following key and corresponding comments may be used to describe the final results.            NB No indication of dielectric breakdown                      YC Cheesecloth charred or flamed            YB Dielectric breakdown (indicate time and location)    NT Tissue paper remained intact            NC Cheesecloth remained intact                                      YT Tissue paper charred or flamed</p>								

<b>B.4</b>		<b>TABLE: Fault condition tests</b>						
Ambient temperature (°C) .....		See below						—
Power source for EUT: Manufacturer, model/type, output rating .....		--						—
Component No.	Fault Condition	Supply voltage, (V)	Test time (ms)	Fuse no.	Fuse current, (A)	T-couple	Temp. (°C)	Observation
Bridge diode pin 2-3	Short circuit	240V	1s	FUSE	0	Enclosure Top near Transformer (outside)	24.0	FUSE open, no hazards, NB, NC, NT, #.
E-capacitor	Short circuit	240V	1s	FUSE	0	Enclosure Top near Transformer (outside)	24.0	FUSE open, no hazards, NB, NC, NT, #.
TRANSFORMER pin FA–FB	Short circuit	240V	10mins	FUSE	0.054	Enclosure Top near TRANSFORMER (outside)	24.0	Unit shut down, recoverable, no damage, no hazards, NB, NC, NT.
TRANSFORMER pin 4–5	Short circuit	240V	10mins	FUSE	0.043	Enclosure Top near TRANSFORMER (outside)	24.0	Unit shut down, recoverable, no damage, no hazards, NB, NC, NT.



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Clause	Requirement + Test					Result - Remark		Verdict
TRANSFORMER pin 3 – pin 1	Short circuit	240V	10mins	FUSE	0.046	Enclosure Top near TRANSFORMER (outside)	24.0	Unit shut down, recoverable, no hazards, NB, NC, NT.
Supplementary information: The following key and corresponding comments may be used to describe the final results. NB No indication of dielectric breakdown                      YC Cheesecloth charred or flamed YB Dielectric breakdown (indicate time and location)    NT Tissue paper remained intact NC Cheesecloth remained intact                                      YT Tissue paper charred or flamed								

Annex M	TABLE: Batteries								N/A
The tests of Annex M are applicable only when appropriate battery data is not available									--
Is it possible to install the battery in a reverse polarity position?..... :								--	--
	Non-rechargeable batteries			Rechargeable batteries					
	Discharging		Un-intentional charging	Charging		Discharging		Reversed charging	
	Meas. current	Manuf. Specs.		Meas. current	Manuf. Specs.	Meas. current	Manuf. Specs.	Meas. current	Manuf. Specs.
Max. current during normal condition	--	--	--	--	--	--	--	--	--
Max. current during fault condition	--	--	--	--	--	--	--	--	--
Test results:									Verdict
- Chemical leaks							--	--	--
- Explosion of the battery							--	--	--
- Emission of flame or expulsion of molten metal							--	--	--
- Electric strength tests of equipment after completion of tests							--	--	--
Supplementary information:									

Annex M.4	Table: Additional safeguards for equipment containing secondary lithium batteries					N/A
Battery/Cell No.	Test conditions	Measurements			Observation	
		U	I (A)	Temp (C)		
--	Normal	--	--	--	--	



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Clause	Requirement + Test	Result - Remark			Verdict
--	Abnormal	--	--	--	--
--	Single fault –SC/OC	--	--	--	--
--	Normal	--	--	--	--
--	Abnormal	--	--	--	--
--	Single fault – SC/OC	--	--	--	--

Supplementary Information:

Battery identification	Charging at T <sub>lowest</sub> (°C)	Observation	Charging at T <sub>highest</sub> (°C)	Observation
--	--	--	--	--
--	--	--	--	--

Supplementary Information:

**Annex Q.1** TABLE: Circuits intended for interconnection with building wiring (LPS) N/A

Note: Measured UOC (V) with all load circuits disconnected:

Output Circuit	Components	U <sub>oc</sub> (V)	I <sub>sc</sub> (A)		S (VA)	
			Meas.	Limit	Meas.	Limit
--	--	---	--	--	--	--
--	--	---	--	--	--	--
--	--	---	--	--	--	--
--	--	---	--	--	--	--
--	--	---	--	--	--	--

Supplementary Information:

SC=Short circuit, OC=Open circuit

**T.2, T.3, T.4, T.5** TABLE: Steady force test **P**

Part/Location	Material	Thickness (mm)	Force (N)	Test Duration (sec)	Observation
Top enclosure	Metal	2	100	5	No damage
Side enclosure		2	100	5	No damage
Bottom enclosure		2	100	5	No damage

Supplementary information:

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Clause	Requirement + Test	Result - Remark	Verdict
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<b>T.6, T.9</b>	<b>TABLE: Impact tests</b>				<b>P</b>
Part/Location	Material	Thickness (mm)	Vertical distance (mm)	Observation	
Top	Metal	2	1300	No damage & hazard	
Side		2	1300	No damage & hazard	
Bottom		2	1300	No damage & hazard	
Supplementary information:					

<b>T.7</b>	<b>TABLE: Drop tests</b>				<b>P</b>
Part/Location	Material	Thickness (mm)	Drop Height (mm)	Observation	
Top enclosure	Metal	2	750	No damage & hazard	
Side enclosure		2	750	No damage & hazard	
Bottom enclosure		2	750	No damage & hazard	
Supplementary information:					

<b>T.8</b>	<b>TABLE: Stress relief test</b>					<b>N/A</b>
Part/Location	Material	Thickness (mm)	Oven Temperature (°C)	Duration (h)	Observation	
--	--	--	--	--	--	
Supplementary information:						



DIFFERENCES AND NATIONAL DIFFERENCES			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT IEC 62368-1 EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES (Audio/video, information and communication technology equipment Part 1: Safety requirements)			
<b>Differences according to</b> .....	EN 62368-1:2014+A11: 2017		
<b>Attachment Form No.</b> .....	EU_GD_IEC62368_1B		
<b>Attachment Originator</b> .....	Intertek Semko AB		
<b>Master Attachment</b> .....	Date (2015-08)		
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CENELEC COMMON MODIFICATIONS (EN)			
1	NOTE Z1		N/A
4.Z1	Protective devices included as integral parts of the equipment or as parts of the building installation:		P
	a) Included as parts of the equipment		P
	b) For components in series with the mains; by devices in the building installation		N/A
	c) For pluggable type B or permanently connected; by devices in the building installation		N/A
5.4.2.3.2.4	Interconnection with external circuit		N/A
10.2.1	Additional requirements in 10.5.1		N/A
10.5.1	RS1 compliance measurement conditions		N/A
10.6.2.1	EN 71-1:2011, 4.20 and methods and distances		N/A
10.Z1	Non-ionizing radiation from radio frequencies in the range 0 to 300 GHz		N/A
G.7.1	NOTE Z1		N/A

ANNEX ZB, SPECIAL NATIONAL CONDITIONS (EN)			
4.1.15	<b>Denmark, Finland, Norway and Sweden:</b> Class I pluggable equipment type A marking		N/A
4.7.3	<b>United Kingdom:</b> Torque test socket-outlet BS 1363, and the plug part BS 1363.		N/A
5.2.2.2	<b>Denmark:</b> Warning for high touchcurrent		N/A
5.4.11.1 and Annex G	<b>Finland and Sweden:</b> Separation of the telecommunication network from earth		N/A



<b>DIFFERENCES AND NATIONAL DIFFERENCES</b>			
Clause	Requirement + Test	Result - Remark	Verdict
5.5.2.1	<b>Norway:</b> Capacitors rated for the applicable line-to-line voltage (230 V).		N/A
5.5.6	<b>Finland, Norway and Sweden:</b> Resistors used as basic safeguard or bridging basic insulation comply with G.10.1 and G.10.2.		N/A
5.6.1	<b>Denmark:</b> Protection for pluggable equipment type A; integral part of the equipment		N/A
5.6.4.2.1	<b>Ireland and United Kingdom:</b> The protective current rating is taken to be 13 A		N/A
5.6.5.1	<b>Ireland and United Kingdom:</b> Conductor sizes of flexible cords to be accepted by terminals for equipment rated 10 A to 13 A		N/A
5.7.5	<b>Denmark:</b> The installation instruction affixed to the equipment if high protective conductor current		N/A
5.7.6.1	<b>Norway and Sweden:</b> Television distribution system isolation text in user manual		N/A
5.7.6.2	<b>Denmark:</b> Warning for high touch current		N/A
B.3.1 and B.4	<b>Ireland and United Kingdom:</b> Tests conducted using an external miniature circuit breaker or protective devices included as an integral part of the direct plug-in equipment		N/A
G.4.2	<b>Denmark:</b> Appliances rated $\leq 13$ A provided with a plug according to DS 60884-2-D1:2011.		N/A
	Class I equipment provided with socket-outlets provided with a plug in accordance with standard sheet DK 2-1a or DK 2-5a.		N/A
	If a single-phase equipment having rated $>13$ A or poly-phase equipment provided with a supply cord with a plug, plug in accordance with the standard sheets DK 6-1a in DS 60884-2-D1 or EN 60309-2.		N/A
	Mains socket outlets intended for providing power to Class II apparatus rated 2,5 A in accordance with DS 60884-2-D1:2011 standard sheet DKA 1-4a.		N/A
	Other current rating socket outlets in compliance with Standard Sheet DKA 1-3a or DKA 1-1c.		N/A
	Mains socket-outlets with earth in compliance with DS 60884-2-D1:2011 Standard Sheet DK 1-3a, DK 1-1c, DK1-1d, DK 1-5a or DK 1-7a		N/A



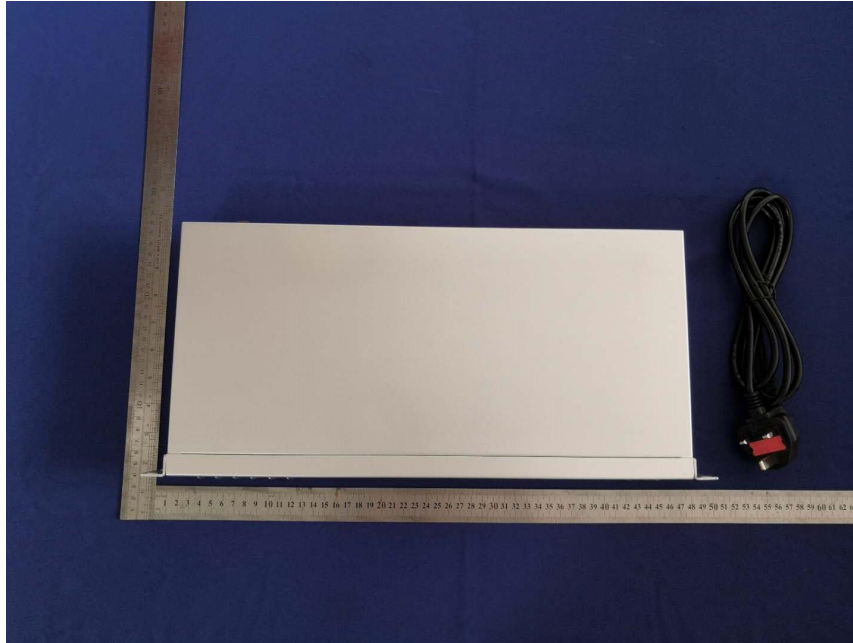
DIFFERENCES AND NATIONAL DIFFERENCES			
Clause	Requirement + Test	Result - Remark	Verdict
G.4.2	<b>United Kingdom:</b> The plug part of direct plug-in equipment assessed to BS 1363		N/A
G.7.1	<b>United Kingdom:</b> Equipment fitted with a 'standard plug' in accordance with the Plugs and Sockets etc (Safety) Regulations 1994, Statutory Instrument 1994 No. 1768		N/A
G.7.1	<b>Ireland:</b> Apparatus provided with a plug in accordance with Statutory Instrument 525: 1997, "13 A Plugs and Conversion Adapters for Domestic Use		N/A
G.7.2	<b>Ireland and United Kingdom:</b> A power supply cord for equipment which is rated over 10 A and up to and including 13 A.		N/A
ZC	ANNEX ZC, NATIONAL DEVIATIONS (EN)		
10.5.2	<b>Germany:</b> Cathode ray tube intended for the display of visual images, authorization or application of type approval and marking.		N/A
F.1	<b>Italy:</b> The power consumption in Watts (W) indicated on TV receiver and in instruction for use		N/A
	TV receivers provided with an instruction for use, schematic diagrams and adjustments procedure in Italian language.		N/A
	Marking for controls and terminals in Italian language.		N/A
	Conformity declaration according to the above requirements in the instruction manual		N/A
	First importers of TV receivers manufactured outside EEC previous conformity certification to the Italian Post Ministry and Certification number on the backcover.		N/A



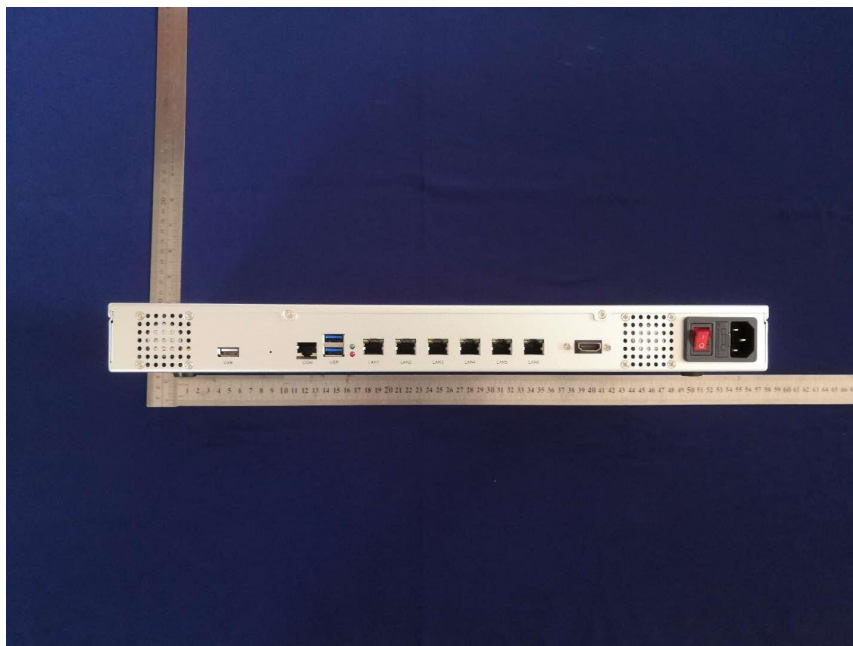


## PHOTOS

**EUT View 1**



**EUT View 2**



### EUT View 3



### EUT View 4

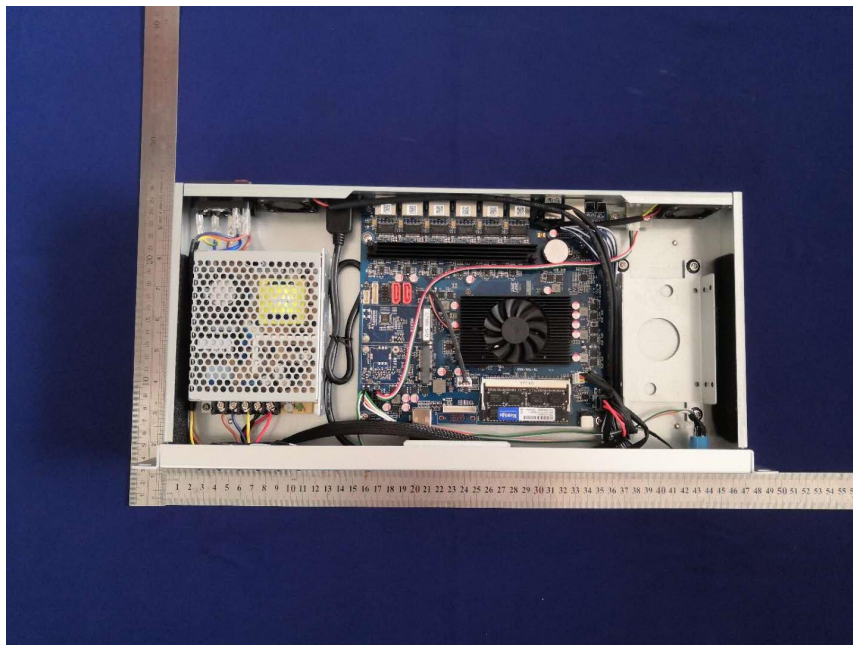




**EUT View 5**



**EUT View 6**



**\*\*\*\*\* END OF REPORT \*\*\*\*\***