



## TEST REPORT

EN IEC 62368-1

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

<b>Report Number</b> ..... :	JAT24041102618SR-2
<b>Date of issue</b> .....	2024-04-10
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<b>Tested by (name + signature)</b> .....:	Tanac Project Engineer
<b>Approved by (name + signature)</b> .....:	Tim You Reviewer
<b>Testing Laboratory</b> .....	Dongguan Jun'an Testing and Certification Co., Ltd.
<b>Address</b> ..... :	Room 303, Building 1, No.316, Renzhou Road, Shatian Town, Dongguan City, Guangdong Province
<b>Applicant's name</b> .....	SDAPO Communication Co., Ltd.
<b>Address</b> ..... :	5F, W2, Chengxin Building , Tian An Shen Chuang Valley Industrial Center, Fenggang Town, Dongguan City, Guangdong Province,China
<b>Test specification:</b>	
<b>Standard</b> .....	EN IEC 62368-1:2020+A11:2020
Test procedure .....	CE-LVD
<b>Non-standard test method</b> .....:	N/A
<b>Test item description</b> ..... :	POE injector
<b>Trade Mark</b> ..... :	SDAPO
<b>Manufacturer</b> .....	SDAPO Communication Co., Ltd.
<b>Address</b> ..... :	5F, W2, Chengxin Building , Tian An Shen Chuang Valley Industrial Center, Fenggang Town, Dongguan City, Guangdong Province,China
<b>Model/Type reference</b> ..... :	PSE30,PSE801,PSE30G,PSE801G,PSE30TG,PSE802G,PSE60 G,PSE156G,PSE90G,POE4805
<b>Ratings</b> ..... :	See Copy of marking plate





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**List of Attachments (including a total number of pages in each attachment):**

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**Summary of testing:**

The tested samples comply with the requirements of EN IEC 62368-1:2020+A11:2020.

Full test conducted on the product at the normally working.

**Summary of compliance with National Differences**

European group differences were taken into account.

Copy of marking plate



Note:

- The Markings are attached on external enclosure and visible during normal use.
- As declared by the applicant, the importer (and manufacturer, if it is different)'s name, registered trade name or registered trade mark and the postal address will be marked on the products before being placed on the market. The contact details shall be in a language easily understood by end-users and market surveillance authorities.



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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 type="checkbox"/> AC Mains <input checked="" 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"/> +15 %/ -15 % <input type="checkbox"/> None
Supply Connection – Type .....	<input type="checkbox"/> pluggable equipment type A - <input checked="" type="checkbox"/> non-detachable supply cord <input 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 A or 20A (US and Canada) Installation location: <input type="checkbox"/> building; <input checked="" type="checkbox"/> equipment
Equipment mobility .....	<input type="checkbox"/> movable <input type="checkbox"/> hand-held <input checked="" type="checkbox"/> transportable <input checked="" type="checkbox"/> stationary <input checked="" 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 type="checkbox"/> Class I <input type="checkbox"/> Class II <input checked="" 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 maximum operating ambient.....	25 °C
IP protection class .....	<input type="checkbox"/> IPX0 <input type="checkbox"/> IP20____
Power Systems .....	<input checked="" type="checkbox"/> TN <input checked="" type="checkbox"/> TT <input checked="" type="checkbox"/> IT - 230 V <sub>L-L</sub>
Altitude during operation (m) .....	<input checked="" type="checkbox"/> 2000 m or less <input type="checkbox"/> 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.....	2024-04-01
Date (s) of performance of tests.....	2024-04-01 to 2024-04-10
<b>GENERAL PRODUCT INFORMATION:</b>	
The unit has following features:	
1. The equipment described in this report is a cash detector.	
2. The EUT Tma is 25°C declared by client..	

<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 circuit	ES3
Accessible terminals/ enclosure	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>
Primary circuit	PS3
POE injector	PS1
<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>



ENERGY SOURCE IDENTIFICATION AND CLASSIFICATION TABLE:	
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	MS2
<b>Source of kinetic/mechanical energy</b>	<b>Corresponding classification (MS)</b>
Sharp edges and corners	MS1
Equipment mass	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	TS1
<b>Source of thermal energy</b>	<b>Corresponding classification (TS)</b>
Enclosure	TS1
Accessible controls/knobs	TS1
Wooden enclosure	N/A
<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	RS1
<b>Type of radiation</b>	<b>Corresponding classification (RS)</b>
Signal indication LED	RS1

ENERGY SOURCE DIAGRAM		
Indicate which energy sources are included in the energy source diagram. Insert diagram below		
<input type="checkbox"/> ES <input type="checkbox"/> PS <input type="checkbox"/> MS <input type="checkbox"/> TS <input type="checkbox"/> RS		
OVERVIEW OF EMPLOYED SAFEGUARDS		
Clause	Possible Hazard	
5.1	Electrically-caused injury	
Body Part (e.g. Ordinary)	Energy Source (ES3: Primary Filter circuit)	Safeguards



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		Basic	Supplementary	Reinforced (Enclosure)
Ordinary	ES3: primary circuit	N/A	N/A	Enclosure, transformer
Ordinary	ES1: Output connector	N/A	N/A	N/A
Ordinary	ES3: Pattern trace of between primary circuits and secondary circuits or the like	N/A	N/A	Clearance and creepage distance
6.1	Electrically-caused fire			
Material part (e.g. mouse enclosure)	Energy Source (PS2: 100 Watt circuit)	Safeguards		
		Basic	Supplementary	Reinforced
Ordinary	PS1 Output terminal	N/A	N/A	N/A
Ordinary	PS3 primary circuit	N/A	N/A	Enclosure used as reinforced safeguard
Combustible materials within equipment fire enclosure	PS3: >100 Watt circuit (Primary circuits)	No parts exceeding 90% of its spontaneous Ignition temperature	1. V-0 grade PCB used 2. Mounted on V-1 material 3. Components complied with IEC standard 4. Separation from PIS 5. Provided with fire barrier and fire enclosure	N/A
External wiring material	PS3: >100 Watt circuit (Primary circuits)	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	Energy Source	Safeguards		



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(e.g. Ordinary)	(MS3:High Pressure Lamp)	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 enclosure	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
<b>4</b>	<b>GENERAL REQUIREMENTS</b>		P
4.1.1	Acceptance of materials, components and subassemblies	See appended table 4.1.2	P
4.1.2	Use of components	Components which are certified to IEC and/or national standards are used correctly within their ratings. Components not covered by IEC standards are tested under the conditions present in the equipment.	P
4.1.3	Equipment design and construction	No accessible part which could cause injury	P
4.1.15	Markings and instructions.....:	(See Annex F)	P
4.4.4	Safeguard robustness	See below	P
4.4.4.2	Steady force tests.....:	(See Annex T.2, T.3, T.4, T.5)	P
4.4.4.3	Drop tests.....:	Not such type of equipment	N/A
4.4.4.4	Impact tests.....:	(See Annex T.6)	P
4.4.4.5	Internal accessible safeguard enclosure and barrier tests.....:	No internal enclosure.	N/A
4.4.4.6	Glass Impact tests.....:	No such glass used.	N/A
4.4.4.7	Thermoplastic material tests.....:	(See Annex T.8)	P
4.4.4.8	Air comprising a safeguard.....:	(See Annex T)	P
4.4.4.9	Accessibility and safeguard effectiveness	Class 3 energy sources except for PS3 cannot become accessible to an ordinary person and all other safeguards remain effective	P
4.5	Explosion		N/A
4.6	Fixing of conductors		P
4.6.1	Fix conductors not to defeat a safeguard		P
4.6.2	10 N force test applied to.....:	See appended table 5.4.2.2, 5.4.2.4 and 5.4.3	P
4.7	Equipment for direct insertion into mains socket - outlets	The EUT is not for direct insertion into mains socket-outlets	N/A
4.7.2	Mains plug part complies with the relevant standard.....:	See above	N/A
4.7.3	Torque (Nm).....:	--	N/A
4.8	Products containing coin/button cell batteries	No coin/button batteries used.	N/A
4.8.2	Instructional safeguard		N/A
4.8.3	Battery Compartment Construction		N/A



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Clause	Requirement + Test	Result - Remark	Verdict
	Means to reduce the possibility of children removing the battery .....		—
4.8.4	Battery Compartment Mechanical Tests .....		N/A
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

5	ELECTRICALLY-CAUSED INJURY		
5.2.1	Electrical energy source classifications.....	(See appended table 5.2)	P
5.2.2	ES1, ES2 and ES3 limits		P
5.2.2.2	Steady-state voltage and current.....	(See appended table 5.2)	P
5.2.2.3	Capacitance limits .....	(See sub-clause 5.5.2.2)	P
5.2.2.4	Single pulse limits .....	No such single pulses with the EUT	N/A
5.2.2.5	Limits for repetitive pulses .....	No such repetitive pulses with the EUT	N/A
5.2.2.6	Ringling signals .....	No such ringling signals with the EUT	N/A
5.2.2.7	Audio signals .....	No such audio signals with the EUT	N/A
5.3	Protection against electrical energy sources		P
5.3.1	General Requirements for accessible parts to ordinary, instructed and skilled persons	See above.	P
5.3.2.1	Accessibility to electrical energy sources and safeguards	ES3 source cannot access by ordinary persons and ES3 source cannot accessed by instructed persons. Double or reinforced safeguard is provided between ES3 and ordinary persons or instructed persons.	P
5.3.2.2	Contact requirements		P
	a) Test with test probe from Annex V .....	The test probe cannot accessed the hazardous live part	P
	b) Electric strength test potential (V) .....		N/A
	c) Air gap (mm) .....	No openings.	P
5.3.2.4	Terminals for connecting stripped wire	No such terminals intended to be used by ordinary person.	N/A
5.4	Insulation materials and requirements		P



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Clause	Requirement + Test	Result - Remark	Verdict
5.4.1.2	Properties of insulating material	The choice and application have taken into account as specified in this Clause 5 and Annex T except natural rubber, hygroscopic materials or asbestos are not used as insulation.	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 .....	2	—
5.4.1.5.2	Test for pollution degree 1 environment and for an insulating compound	Pollution degree 2 is applied	N/A
5.4.1.5.3	Thermal cycling	See above	N/A
5.4.1.6	Insulation in transformers with varying dimensions	No such transformer within the EUT	N/A
5.4.1.7	Insulation in circuits generating starting pulses	No such transformer within the EUT	N/A
5.4.1.8	Determination of working voltage	See appended table 5.4.2.2, 5.4.2.4 and 5.4.3.	P
5.4.1.9	Insulating surfaces	Without openings.	N/A
5.4.1.10	Thermoplastic parts on which conductive metallic parts are directly mounted	See below	P
5.4.1.10.2	Vicat softening temperature .....	Ball pressure test considered	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 )	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 .....	2500V	—
	b) d.c. mains transient voltage .....		—
	c) external circuit transient voltage .....		—
	d) transient voltage determined by measurement :		—
5.4.2.4	Determining the adequacy of a clearance using an electric strength test		N/A
5.4.2.5	Multiplication factors for clearances and test voltages .....	(See appended tables 5.4.2.2, 5.4.2.4 and 5.4.3) Specified the equipment to be operated up to 5000m above sea level, the required clearance is multiplied by the altitude correction factor 1.48 according to Table 17.	P



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Clause	Requirement + Test	Result - Remark	Verdict
5.4.3	Creepage distances .....	(See appended table 5.4.3)	P
5.4.3.1	General		P
5.4.3.3	Material Group .....	IIIa&IIIb	—
5.4.4	Solid insulation	See below	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	Approved optocoupler used	P
5.4.4.5	Cemented joints	No such device within the EUT	N/A
5.4.4.6	Thin sheet material	See below	P
5.4.4.6.1	General requirements	Two layers of insulation sheets around T1 body are used for double insulation and not subjected to handling or abrasion during ordinary or instructed person servicing.	P
5.4.4.6.2	Separable thin sheet material	Two layers insulating tapes provides as double insulation and one layer passed the electric strength test for reinforced insulation	P
	Number of layers (pcs).....	2	P
5.4.4.6.3	Non-separable thin sheet material	No such device within the EUT	N/A
5.4.4.6.4	Standard test procedure for non-separable thin sheet material .....	See above	N/A
5.4.4.6.5	Mandrel test		N/A
5.4.4.7	Solid insulation in wound components		N/A
5.4.4.9	Solid insulation at frequencies >30 kHz .....	No such insulation at frequencies ≥ 30 kHz was considered.	N/A
5.4.5	Antenna terminal insulation	No antenna used.	N/A
5.4.5.1	General		N/A
5.4.5.2	Voltage surge test		N/A
	Insulation resistance (MΩ).....		—
5.4.6	Insulation of internal wire as part of supplementary safeguard .....	No such insulation of internal wire as part of supplementary insulation	N/A
5.4.7	Tests for semiconductor components and for cemented joints	Approved optocoupler used	P
5.4.8	Humidity conditioning		P
	Relative humidity (%).....	95%	—



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Clause	Requirement + Test	Result - Remark	Verdict
	Temperature (°C) .....	40°C	—
	Duration (h).....	120h	—
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	Compliance was checked immediately following temperature test in 5.4.1.4.	P
5.4.9.2	Test procedure for routine tests	No routine test under consideration this time	N/A
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		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 .....		N/A
5.4.10.2.3	Steady-state test.....		N/A
5.4.11	Insulation between external circuits and earthed circuitry .....	No such external circuit within the EUT	N/A
5.4.11.1	Exceptions to separation between external circuits and earth	No such external circuit within the EUT	N/A
5.4.11.2	Requirements		N/A
	Rated operating voltage $U_{op}$ (V).....		—
	Nominal voltage $U_{peak}$ (V).....		—
	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	See the following details.	P
5.5.2	Capacitors and RC units	Approved X capacitors provided.	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)	N/A
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	No such component provided	N/A



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Clause	Requirement + Test	Result - Remark	Verdict
5.5.6	Resistors	Bleeder resistors are serve as safeguard but not across basic, supplementary or reinforce insulations, no energy hazards between inlet access terminal and ordinary person, see clause 5.2.2.3.	N/A
5.5.7	SPD's	No such component provided	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.....:	No such external circuits.	N/A
5.6	Protective conductor		P
5.6.2	Requirement for protective conductors	Parts connected to protective earthing reliably	N/A
5.6.2.1	General requirements	The earth pin of the approved appliance inlet	N/A
5.6.2.2	Colour of insulation		N/A
5.6.3	Requirement for protective earthing conductors		N/A
	Protective earthing conductor size (mm <sup>2</sup> ) .....	Min.0.75mm <sup>2</sup>	—
5.6.4	Requirement for protective bonding conductors		N/A
5.6.4.1	Protective bonding conductors		N/A
	Protective bonding conductor size (mm <sup>2</sup> ).....:		—
	Protective current rating (A)..... :		—
5.6.4.3	Current limiting and overcurrent protective devices	No current limiting and overcurrent protective devices in parallel with any other components.	N/A
5.6.5	Terminals for protective conductors		N/A
5.6.5.1	Requirement		N/A
	Conductor size (mm <sup>2</sup> ), nominal thread diameter (mm). .....	Min.0.75mm <sup>2</sup>	N/A
5.6.5.2	Corrosion		N/A
5.6.6	Resistance of the protective system		N/A
5.6.6.1	Requirements		N/A
5.6.6.2	Test Method Resistance (Ω).....:		N/A
5.6.7	Reliable earthing		N/A
5.7	Prospective touch voltage, touch current and protective conductor current		P



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Clause	Requirement + Test	Result - Remark	Verdict
5.7.2	Measuring devices and networks	Figure 4 of IEC 60990 was used in determining of the limit of ES1.	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		P
	System of interconnected equipment (separate connections/single connection) .....	Single equipment.	—
	Multiple connections to mains (one connection at a time/simultaneous connections) .....	Single connection.	—
5.7.4	Earthed conductive accessible parts .....		N/A
5.7.5	Protective conductor current		N/A
	Supply Voltage (V).....		—
	Measured current (mA).....		—
	Instructional Safeguard.....		N/A
5.7.6	Prospective touch voltage and touch current due to external circuits	No 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		N/A
5.7.7	Summation of touch currents from external circuits	No 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

6	ELECTRICALLY- CAUSED FIRE		
6.2	Classification of power sources (PS) and potential ignition sources (PIS)		P
6.2.2	Power source circuit classifications	PS (power source) classification determined by measuring the maximum power in Figures 34 and 35 for load and power source circuits.	P
6.2.2.1	General	See the following details.	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



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Clause	Requirement + Test	Result - Remark	Verdict
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	See the following details.	P
6.2.3.1	Arcing PIS .....	(See appended table 6.2.3.1)	P
6.2.3.2	Resistive PIS .....	(See appended table 6.2.3.2)	P
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 5.4.1.4, 6.3.2, 9.0, B.2.6)	P
6.3.1 (b)	Combustible materials outside fire enclosure	No such materials used.	N/A
6.4	Safeguards against fire under single fault conditions		P
6.4.1	Safeguard Method	Method by control fire spread.	P
6.4.2	Reduction of the likelihood of ignition under single fault conditions in PS1 circuits	See above.	P
6.4.3	Reduction of the likelihood of ignition under single fault conditions in PS2 and PS3 circuits	See above.	N/A
6.4.3.1	General	See above.	P
6.4.3.2	Supplementary Safeguards	By equipment plastic fire enclosure.	P
	Special conditions if conductors on printed boards are opened or peeled	No such case happened.	N/A
6.4.3.3	Single Fault Conditions .....	(See appended table B.3 & B.4)	P
	Special conditions for temperature limited by fuse	No such consideration.	N/A
6.4.4	Control of fire spread in PS1 circuits	PS2 and PS3 circuits inside.	P
6.4.5	Control of fire spread in PS2 circuits	Compliance detailed as follows: <ul style="list-style-type: none"> <li>- <u>Printed board</u>: rated min. V-1</li> <li>- <u>Wire insulation and tubing</u>: complying with Clause 6.</li> <li>- <u>All other components</u>: at least V-2 except for mounted on min. V-1 material or small parts of combustible material.</li> <li>- <u>Isolating transformer</u>: complying with G.5.3.</li> </ul>	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	In additional of the compliance of clause 6.4.5, a fire enclosure of clause 6.4.8 provided with the equipment.	P
6.4.7	Separation of combustible materials from a PIS	See the following details.	N/A



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Clause	Requirement + Test	Result - Remark	Verdict
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	All components and combustible materials other than small parts are mounted on material with rated min. V-1.	N/A
6.4.7.3	Separation by a fire barrier	See above.	N/A
6.4.8	Fire enclosures and fire barriers	Equipment enclosure was evaluated as a fire enclosure.	P
6.4.8.1	Fire enclosure and fire barrier material properties	See the following details.	P
6.4.8.2.1	Requirements for a fire barrier	No such construction.	N/A
6.4.8.2.2	Requirements for a fire enclosure	Equipment fire enclosure was made of min. V-0 material.	N/A
6.4.8.3	Constructional requirements for a fire enclosure and a fire barrier	See the following details.	N/A
6.4.8.3.1	Fire enclosure and fire barrier openings	No openings.	N/A
6.4.8.3.2	Fire barrier dimensions	No barrier used.	N/A
6.4.8.3.3	Top Openings in Fire Enclosure: dimensions(mm) .....	No openings.	N/A
	Needle Flame test	Equipment fire enclosure was made of min. V-0 material.	N/A
6.4.8.3.4	Bottom Openings in Fire Enclosure, condition met a), b) and/or c) dimensions (mm) .....	No bottom opening provided	N/A
	Flammability tests for the bottom of a fire enclosure .....	No such consideration.	N/A
6.4.8.3.5	Integrity of the fire enclosure, condition met: a), b) or c) .....	No such door or cover can be opened by ordinary.	N/A
6.4.8.4	Separation of PIS from fire enclosure and fire barrier distance (mm) or flammability rating .....	The plastic enclosure rated min. min. V-0 is considered as fire enclosure.	P
6.5	Internal and external wiring		P
6.5.1	Requirements	The material of VW-1 on internal or external wiring were considered compliance equivalent to IEC 60332 or IEC/TS 60695-11-21 relevant standards.	N/A
6.5.2	Cross-sectional area (mm <sup>2</sup> ) .....	See above.	—
6.5.3	Requirements for interconnection to building wiring .....	No such interconnection to building wiring.	N/A
6.6	Safeguards against fire due to connection to additional equipment	No such connection to additional equipment.	N/A



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Clause	Requirement + Test	Result - Remark	Verdict
	External port limited to PS2 or complies with Clause Q.1	See above.	N/A

7	INJURY CAUSED BY HAZARDOUS SUBSTANCES		N/A
7.2	Reduction of exposure to hazardous substances	No hazardous chemicals within the equipment.	N/A
7.3	Ozone exposure	No ozone production within the equipment.	N/A
7.4	Use of personal safeguards (PPE)	No such consideration.	N/A
	Personal safeguards and instructions .....	See above.	—
7.5	Use of instructional safeguards and instructions	No chemical-caused injuries, the instruction safeguard was not required.	N/A
	Instructional safeguard (ISO 7010) .....	(See Annex F)	—
7.6	Batteries.....	No battery used.	N/A

8	MECHANICALLY-CAUSED INJURY		P
8.1	General	See the following details.	P
8.2	Mechanical energy source classifications	Sharp edges and corners, classified as MS1 Equipment mass 1.035 kg < 7 kg, classified as MS1	P
8.3	Safeguards against mechanical energy sources	See above.	N/A
8.4	Safeguards against parts with sharp edges and corners	Accessible edges and corners of the equipment are rounded and are classified as MS1.	P
8.4.1	Safeguards	See above.	N/A
8.5	Safeguards against moving parts	No moving parts within the equipment.	N/A
8.5.1	MS2 or MS3 part required to be accessible for the function of the equipment	See above.	N/A
8.5.2	Instructional Safeguard .....	See above.	—
8.5.4	Special categories of equipment comprising moving parts	See above.	N/A
8.5.4.1	Large data storage equipment	See above.	N/A
8.5.4.2	Equipment having electromechanical device for destruction of media	See above.	N/A
8.5.4.2.1	Safeguards and Safety Interlocks .....	See above.	N/A



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Clause	Requirement + Test	Result - Remark	Verdict
8.5.4.2.2	Instructional safeguards against moving parts	See above.	N/A
	Instructional Safeguard.....:	See above.	—
8.5.4.2.3	Disconnection from the supply	See above.	N/A
8.5.4.2.4	Probe type and force (N) .....	See above.	N/A
8.5.5	High Pressure Lamps	See above.	N/A
8.5.5.1	Energy Source Classification	See above.	N/A
8.5.5.2	High Pressure Lamp Explosion Test.....:	See above.	N/A
8.6	Stability	See the following details.	N/A
8.6.1	Product classification		P
	Instructional Safeguard.....:	See instruction for details.	—
8.6.2	Static stability	See above.	N/A
8.6.2.2	Static stability test	See above.	N/A
	Applied Force .....		—
8.6.2.3	Downward Force Test	See above.	N/A
8.6.3	Relocation stability test	See above.	N/A
	Unit configuration during 10° tilt.....:	See above.	—
8.6.4	Glass slide test	See above.	N/A
8.6.5	Horizontal force test (Applied Force).....:	See above.	N/A
	Position of feet or movable parts.....:	See above.	—
8.7	Equipment mounted to wall or ceiling		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 such handles.	N/A
8.8.1	Classification	See above.	N/A
8.8.2	Applied Force .....	See above.	N/A
8.9	Wheels or casters attachment requirements	No such wheels or casters within the EUT	N/A
8.9.1	Classification	See above.	N/A
8.9.2	Applied force .....	See above.	—
8.10	Carts, stands and similar carriers	No such device provided within the EUT.	N/A
8.10.1	General	See above.	N/A
8.10.2	Marking and instructions	See above.	N/A



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Clause	Requirement + Test	Result - Remark	Verdict
	Instructional Safeguard.....: See above.	See above.	—
8.10.3	Cart, stand or carrier loading test and compliance	See above.	N/A
	Applied force .....: See above.	See above.	—
8.10.4	Cart, stand or carrier impact test	See above.	N/A
8.10.5	Mechanical stability	See above.	N/A
	Applied horizontal force (N) .....: See above.	See above.	—
8.10.6	Thermoplastic temperature stability (°C).....: See above.	See above.	N/A
8.11	Mounting means for rack mounted equipment	The equipment is not intended to be rack-mounted.	N/A
8.11.1	General	See above.	N/A
8.11.2	Product Classification	See above.	N/A
8.11.3	Mechanical strength test, variable N .....: See above.	See above.	N/A
8.11.4	Mechanical strength test 250N, including end stops	See above.	N/A
8.12	Telescoping or rod antennas .....: No such device provided within the EUT.	No such device provided within the EUT.	N/A
	Button/Ball diameter (mm).....: See above.	See above.	—

9 THERMAL BURN INJURY			P
9.2	Thermal energy source classifications	All accessible surfaces are classified as TS1, see appended table 5.4.1.4, 6.3.2, 9.0, B.2.6.	P
9.3	Safeguard against thermal energy sources	See above.	P
9.4	Requirements for safeguards		P
9.4.1	Equipment safeguard	See above.	N/A
9.4.2	Instructional safeguard .....: See above.	See above.	N/A

10 RADIATION			P
10.2	Radiation energy source classification		P
10.2.1	General classification	RS1 exist only	P
10.3	Protection against laser radiation	No laser radiation	N/A
	Laser radiation that exists equipment:	See above.	—
	Normal, abnormal, single-fault.....: See above.	See above.	
	Instructional safeguard .....: See above.	See above.	—
	Tool.....: See above.	See above.	—
10.4	Protection against visible, infrared, and UV	No such radiation generated from	N/A



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Clause	Requirement + Test	Result - Remark	Verdict
	radiation	the equipment.	
10.4.1	General	See above.	N/A
10.4.1.a)	RS3 for Ordinary and instructed persons .....	See above.	N/A
10.4.1.b)	RS3 accessible to a skilled person.....	See above.	N/A
	Personal safeguard (PPE) instructional safeguard.....	See above.	—
10.4.1.c)	Equipment visible, IR, UV does not exceed RS1. :	See above.	N/A
10.4.1.d)	Normal, abnormal, single-fault conditions .....	See above.	N/A
10.4.1.e)	Enclosure material employed as safeguard is opaque.....	See above.	N/A
10.4.1.f)	UV attenuation.....	See above.	N/A
10.4.1.g)	Materials resistant to degradation UV .....	See above.	N/A
10.4.1.h)	Enclosure containment of optical radiation.....	See above.	N/A
10.4.1.i)	Exempt Group under normal operating conditions.....	See above.	N/A
10.4.2	Instructional safeguard .....	See above.	N/A
10.5	Protection against x-radiation	No such x-radiation generated from the equipment	N/A
10.5.1	X- radiation energy source that exists equipment .....	See above.	N/A
	Normal, abnormal, single fault conditions	See above.	N/A
	Equipment safeguards.....	See above.	N/A
	Instructional safeguard for skilled person.....	See above.	N/A
10.5.3	Most unfavourable supply voltage to give maximum radiation .....	See above.	—
	Abnormal and single-fault condition .....	See above.	N/A
	Maximum radiation (pA/kg).....	See above.	N/A
10.6	Protection against acoustic energy sources	No such consideration for the purpose of personal music players.	N/A
10.6.1	General	See above.	N/A
10.6.2	Classification	See above.	N/A
	Acoustic output, dB(A).....	See above.	N/A
	Output voltage, unweighted r.m.s.....	See above.	N/A
10.6.4	Protection of persons	See above.	N/A
	Instructional safeguards .....	See above.	N/A
	Equipment safeguard prevent ordinary person to	See above.	—



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Clause	Requirement + Test	Result - Remark	Verdict
	RS2..... :		
	Means to actively inform user of increase sound pressure..... :	See above.	—
	Equipment safeguard prevent ordinary person to RS2..... :	See above.	—
10.6.5	Requirements for listening devices (headphones, earphones, etc.)	See above.	N/A
10.6.5.1	Corded passive listening devices with analog input	See above.	N/A
	Input voltage with 94 dB(A) $L_{Aeq}$ acoustic pressure output..... :	See above.	—
10.6.5.2	Corded listening devices with digital input	See above.	N/A
	Maximum dB(A)..... :	See above.	—
10.6.5.3	Cordless listening device	See above.	N/A
	Maximum dB(A)..... :	See above.	—

<b>B</b>	<b>NORMAL OPERATING CONDITION TESTS, ABNORMAL OPERATING CONDITION TESTS AND SINGLE FAULT CONDITION TESTS</b>		P
B.2	Normal Operating Conditions	See the following details.	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	+10% and -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&B.4)	P
B.3.2	Covering of ventilation openings	No ventilation openings provided.	N/A
B.3.3	D.C. mains polarity test	The EUT is not connected to a D.C. mains	N/A
B.3.4	Setting of voltage selector..... :	No setting of voltage selector within the EUT	N/A
B.3.5	Maximum load at output terminals..... :	(See appended table B.3&B.4)	P
B.3.6	Reverse battery polarity	No battery within the EUT	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	All safeguards remained effectively.	P



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Clause	Requirement + Test	Result - Remark	Verdict
B.4	Simulated single fault conditions		P
B.4.2	Temperature controlling device open or short-circuited .....	(See appended table B.3&B.4)	P
B.4.3	Motor tests	No motor within the EUT	N/A
B.4.3.1	Motor blocked or rotor locked increasing the internal ambient temperature .....	See above.	N/A
B.4.4	Short circuit of functional insulation	See the following details.	P
B.4.4.1	Short circuit of clearances for functional insulation	(See appended table B.3 &B.4)	P
B.4.4.2	Short circuit of creepage distances for functional insulation	(See appended table B.3 &B.4)	P
B.4.4.3	Short circuit of functional insulation on coated printed boards	No coated printed boards within the EUT	N/A
B.4.5	Short circuit and interruption of electrodes in tubes and semiconductors	(See appended table B.3 &B.4)	P
B.4.6	Short circuit or disconnect of passive components	(See appended table B.3 &B.4)	P
B.4.7	Continuous operation of components	The EUT is continuous operating type and no such components intended for short time operation or intermittent operation	N/A
B.4.8	Class 1 and Class 2 energy sources within limits during and after single fault conditions	(See appended table B.3&B.4)	P
B.4.9	Battery charging under single fault conditions ... :	No battery involved in the EUT	N/A
<b>C</b>	<b>UV RADIATION</b>		N/A
C.1	Protection of materials in equipment from UV radiation	No such UV generated from the equipment.	N/A
C.1.2	Requirements	See above.	N/A
C.1.3	Test method	See above.	N/A
C.2	UV light conditioning test	See above.	N/A
C.2.1	Test apparatus	See above.	N/A
C.2.2	Mounting of test samples	See above.	N/A
C.2.3	Carbon-arc light-exposure apparatus	See above.	N/A
C.2.4	Xenon-arc light exposure apparatus	See above.	N/A
<b>D</b>	<b>TEST GENERATORS</b>		N/A
D.1	Impulse test generators	No such consideration.	N/A
D.2	Antenna interface test generator	See above.	N/A
D.3	Electronic pulse generator	See above.	N/A



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Clause	Requirement + Test	Result - Remark	Verdict
<b>E</b>	<b>TEST CONDITIONS FOR EQUIPMENT CONTAINING AUDIO AMPLIFIERS</b>		N/A
E.1	Audio amplifier normal operating conditions	Not such equipment.	N/A
	Audio signal voltage (V) .....	See above.	—
	Rated load impedance (Ω) .....	See above.	—
E.2	Audio amplifier abnormal operating conditions	See above.	N/A
<b>F</b>	<b>EQUIPMENT MARKINGS, INSTRUCTIONS, AND INSTRUCTIONAL SAFEGUARDS</b>		P
F.1	General requirements	See the following details.	P
	Instructions – Language .....	English	—
F.2	Letter symbols and graphical symbols	See the following details.	P
F.2.1	Letter symbols according to IEC60027-1	Letter symbols for quantities and units are complied with IEC 60027-1.	N/A
F.2.2	Graphic symbols IEC, ISO or manufacturer specific		P
F.3	Equipment markings		P
F.3.1	Equipment marking locations	Equipment marking is located on the exterior surface and is easily visible.	P
F.3.2	Equipment identification markings	See the following details.	P
F.3.2.1	Manufacturer identification .....	See copy of marking plate.	—
F.3.2.2	Model identification .....	See copy of marking plate.	—
F.3.3	Equipment rating markings	See the following details.	P
F.3.3.1	Equipment with direct connection to mains	The equipment is connected to AC mains supply.	P
F.3.3.2	Equipment without direct connection to mains	See above.	N/A
F.3.3.3	Nature of supply voltage.....	~	—
F.3.3.4	Rated voltage .....	See copy of marking plate.	—
F.3.3.4	Rated frequency .....	See copy of marking plate	—
F.3.3.6	Rated current or rated power .....	See copy of marking plate.	—
F.3.3.7	Equipment with multiple supply connections	Only one supply connection.	N/A
F.3.4	Voltage setting device	No such device on the equipment.	N/A
F.3.5	Terminals and operating devices	See below	P
F.3.5.1	Mains appliance outlet and socket-outlet markings.....	No such devices on the equipment.	N/A
F.3.5.2	POE injector position identification marking.....	No such POE injector on the equipment.	N/A



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Clause	Requirement + Test	Result - Remark	Verdict
F.3.5.3	Replacement fuse identification and rating markings..... :		N/A
F.3.5.4	Replacement battery identification marking ..... :	No such battery on the equipment.	N/A
F.3.5.5	Terminal marking location	See markings specified in F.3.6.1 and F.3.6.2.2 is not placed on removable parts such as screws.	P
F.3.6	Equipment markings related to equipment classification	See the following details.	P
F.3.6.1	Class I Equipment		N/A
F.3.6.1.1	Protective earthing conductor terminal	See above.	N/A
F.3.6.1.2	Neutral conductor terminal	The equipment is not permanently connected equipment.	P
F.3.6.1.3	Protective bonding conductor terminals	See above.	P
F.3.6.2	Class II equipment (IEC60417-5172)	See label	N/A
F.3.6.2.1	Class II equipment with or without functional earth	without functional earth	N/A
F.3.6.2.2	Class II equipment with functional earth terminal marking		N/A
F.3.7	Equipment IP rating marking ..... :	This equipment is classified as IP20	—
F.3.8	External POE injector output marking	See copy of marking plate.	P
F.3.9	Durability, legibility and permanence of marking	See the following details.	P
F.3.10	Test for permanence of markings	The label was subjected to the permanence of marking test, 15 sec. for water and 15 sec. for petroleum spirit. After each test, the marking remained legible.	P
F.4	Instructions		P
	a) Equipment for use in locations where children not likely to be present - marking	The accessibility of equipment was evaluated by using test probe of Figure V.1.	P
	b) Instructions given for installation or initial use	Relevant safety caution texts and installation instruction are available.	P
	c) Equipment intended to be fastened in place	See above.	P
	d) Equipment intended for use only in restricted access area	The EUT is not such type equipment	N/A
	e) Audio equipment terminals classified as ES3 and other equipment with terminals marked in accordance F.3.6.1	No such terminals provided.	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 ES2 limits	See above.	N/A
	h) Symbols used on equipment	No such consideration.	N/A
	i) Permanently connected equipment not provided with all-pole mains POE injector	The EUT is not a permanently connected equipment	N/A
j)	j) Replaceable components or modules providing safeguard function	The required information for fuse are marked adjacent to the fuse (see F.3.5.3 for details)	P
F.5	Instructional safeguards	No instructional safeguard is considered as necessary.	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 required in the equipment.	N/A
<b>G</b>	<b>COMPONENTS</b>		P
<b>G.1</b>	<b>Switches</b>		N/A
G.1.1	General requirements	No such POE injector as disconnect devices provided within the equipment.	N/A
G.1.2	Ratings, endurance, spacing, maximum load	See above.	N/A
<b>G.2</b>	<b>Relays</b>		N/A
G.2.1	General requirements	No such relay provided within the equipment.	N/A
G.2.2	Overload test	See above.	N/A
G.2.3	Relay controlling connectors supply power	See above.	N/A
G.2.4	Mains relay, modified as stated in G.2	See above.	N/A
<b>G.3</b>	<b>Protection Devices</b>		P
G.3.1	Thermal cut-offs	No thermal cut-off provided within the equipment.	N/A
G.3.1.1a) &b)	Thermal cut-outs separately approved according to IEC 60730 with conditions indicated in a) & b)	See above.	N/A
G.3.1.1c)	Thermal cut-outs tested as part of the equipment as indicated in c)	See above.	N/A
G.3.1.2	Thermal cut-off connections maintained and secure	See above.	N/A
G.3.2	Thermal links		N/A
G.3.2.1a)	Thermal links separately tested with IEC 60691	No thermal link provided within the equipment.	N/A
G.3.2.1b)	Thermal links tested as part of the equipment	See above.	N/A
	Aging hours (H) ..... :	See above.	—



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Clause	Requirement + Test	Result - Remark	Verdict
	Single Fault Condition .....	See above.	—
	Test Voltage (V) and Insulation Resistance ( $\Omega$ ). :	See above.	—
G.3.3	PTC Thermistors	No PTC thermistor provided within the equipment.	N/A
G.3.4	Overcurrent protection devices	All sources of fuse (F1) complied with 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	No such component.	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	No such connector within the EUT	N/A
G.4.2	Mains connector configuration .....	See above.	N/A
G.4.3	Plug is shaped that insertion into mains socket-outlets or appliance coupler is unlikely	See above.	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°	Insulation tape or tubing provided.	P
G.5.1.2 b)	Construction subject to routine testing	Approved TIW used	N/A
G.5.2	Endurance test on wound components	Approved TIW used	N/A
G.5.2.1	General test requirements	See above.	N/A
G.5.2.2	Heat run test	See above.	N/A
	Time (s) .....	See above.	—
	Temperature (°C) .....	See above.	—
G.5.2.3	Wound Components supplied by mains	See above.	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 transformer meets the requirements given in G.5.3.2 and G.5.3.3.	P
	Position.....	T1	—
	Method of protection .....	See above and appended table B.3 & B.4.	—
G.5.3.2	Insulation	Primary windings and secondary windings are isolated by double insulation	P



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Clause	Requirement + Test	Result - Remark	Verdict
	Protection from displacement of windings..... :	The end-turn of each winding is fixed by insulating tape	—
G.5.3.3	Overload test .....	(See appended table B.3 & B.4)	P
G.5.3.3.1	Test conditions	Tested in the complete equipment	P
G.5.3.3.2	Winding Temperatures testing in the unit	(See appended table B.3&B.4)	P
G.5.3.3.3	Winding Temperatures - Alternative test method	Alternative test method was not considered.	N/A
<b>G.5.4</b>	<b>Motors</b>		N/A
G.5.4.1	General requirements	No such devices within the EUT	N/A
	Position .....	See above.	—
G.5.4.2	Test conditions	See above.	N/A
G.5.4.3	Running overload test	See above.	N/A
G.5.4.4	Locked-rotor overload test	See above.	N/A
	Test duration (days) .....	See above.	—
G.5.4.5	Running overload test for d.c. motors in secondary circuits	See above.	N/A
G.5.4.5.2	Tested in the unit	See above.	N/A
	Electric strength test (V) .....	See above.	—
G.5.4.5.3	Tested on the Bench - Alternative test method; test time (h) .....	See above.	N/A
	Electric strength test (V) .....	See above.	—
G.5.4.6	Locked-rotor overload test for d.c. motors in secondary circuits	See above.	N/A
G.5.4.6.2	Tested in the unit	See above.	N/A
	Maximum Temperature .....	See above.	N/A
	Electric strength test (V) .....	See above.	N/A
G.5.4.6.3	Tested on the bench - Alternative test method; test time (h) .....	See above.	N/A
	Electric strength test (V) .....	See above.	N/A
G.5.4.7	Motors with capacitors	See above.	N/A
G.5.4.8	Three-phase motors	See above.	N/A
G.5.4.9	Series motors	See above.	N/A
	Operating voltage .....	See above.	—
<b>G.6</b>	<b>Wire Insulation</b>		N/A
G.6.1	General		N/A
G.6.2	Solvent-based enamel wiring insulation		N/A



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Clause	Requirement + Test	Result - Remark	Verdict
<b>G.7</b>	<b>Mains supply cords</b>		N/A
G.7.1	General requirements	Approved AC inlet used.	N/A
	Type.....:	See above.	—
	Rated current (A).....:	See above.	—
	Cross-sectional area (mm <sup>2</sup> ), (AWG).....:	See above.	—
G.7.2	Compliance and test method	See above.	N/A
G.7.3	Cord anchorages and strain relief for non-detachable POE injector cords	See above.	N/A
G.7.3.2	Cord strain relief	See above.	N/A
G.7.3.2.1	Requirements	See above.	N/A
	Strain relief test force (N) .....	See above.	—
G.7.3.2.2	Strain relief mechanism failure	See above.	N/A
G.7.3.2.3	Cord sheath or jacket position, distance (mm).....:	See above.	—
G.7.3.2.4	Strain relief comprised of polymeric material	See above.	N/A
G.7.4	Cord Entry .....	See above.	N/A
G.7.5	Non-detachable cord bend protection	See above.	N/A
G.7.5.1	Requirements	See above.	N/A
G.7.5.2	Mass (g) .....	See above.	—
	Diameter (m) .....	See above.	—
	Temperature (°C) .....	See above.	—
G.7.6	Supply wiring space	See above.	N/A
G.7.6.2	Stranded wire	See above.	N/A
G.7.6.2.1	Test with 8 mm strand	See above.	N/A
<b>G.8</b>	<b>Varistors</b>		N/A
G.8.1	General requirements	No VDR.	N/A
G.8.2	Safeguard against shock	See above.	N/A
G.8.3	Safeguard against fire		N/A
G.8.3.2	Varistor overload test .....	See above.	N/A
G.8.3.3	Temporary overvoltage .....	See above.	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.	No IC current limiter provided within the equipment.	N/A
G.9.1 b)	Limiters do not have manual operator or reset	See above.	N/A
G.9.1 c)	Supply source does not exceed 250 VA .....	See above.	—



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Clause	Requirement + Test	Result - Remark	Verdict
G.9.1 d)	IC limiter output current (max. 5A) .....	See above.	—
G.9.1 e)	Manufacturers' defined drift .....	See above.	—
G.9.2	Test Program 1	See above.	N/A
G.9.3	Test Program 2	See above.	N/A
G.9.4	Test Program 3	See above.	N/A
<b>G.10</b>	<b>Resistors</b>		N/A
G.10.1	General requirements	See the following details.	N/A
G.10.2	Resistor test	The bleeder resistors (R11, R12) used as a safeguard without the following evaluation were conducted under single fault condition in turn.	N/A
G.10.3	Test for resistors serving as safeguards between the mains and an external circuit consisting of a coaxial cable	See above.	N/A
G.10.3.1	General requirements	See above.	N/A
G.10.3.2	Voltage surge test	See above.	N/A
G.10.3.3	Impulse test	See above.	N/A
<b>G.11</b>	<b>Capacitor and RC units</b>		P
G.11.1	General requirements	(see appended table 4.1.2) X and Y-capacitor used as safeguard and complied with IEC/EN 60384-14.	P
G.11.2	Conditioning of capacitors and RC units	At least 21 days at $40 \pm 2^\circ\text{C}$ and $93 \pm 3\% \text{ RH}$ .	P
G.11.3	Rules for selecting capacitors	The selection followed with tables G.9 and G.12.	P
<b>G.12</b>	<b>Optocouplers</b>		N/A
	Optocouplers comply with IEC 60747-5-5:2007 Spacing or Electric Strength Test (specify option and test results) .....	(see appended table 4.1.2)	N/A
	Type test voltage $V_{ini}$ .....	See above	—
	Routine test voltage, $V_{ini,b}$ .....	See above	—
<b>G.13</b>	<b>Printed boards</b>		P
G.13.1	General requirements	See the following details.	P
G.13.2	Uncoated printed boards	The insulation between conductors on the outer surfaces of an uncoated printed board complied with the minimum clearance and creepage requirements	P



<b>EN IEC 62368-1</b>			
Clause	Requirement + Test	Result - Remark	Verdict
G.13.3	Coated printed boards	No coated printed board provided within the equipment.	N/A
G.13.4	Insulation between conductors on the same inner surface	See above.	N/A
	Compliance with cemented joint requirements (Specify construction) .....	See above.	—
G.13.5	Insulation between conductors on different surfaces	See above.	N/A
	Distance through insulation .....	See above.	N/A
	Number of insulation layers (pcs) .....	See above.	—
G.13.6	Tests on coated printed boards	See above.	N/A
G.13.6.1	Sample preparation and preliminary inspection	See above.	N/A
G.13.6.2a)	Thermal conditioning	See above.	N/A
G.13.6.2b)	Electric strength test	See above.	N/A
G.13.6.2c)	Abrasion resistance test	See above.	N/A
<b>G.14</b>	<b>Coating on components terminals</b>		N/A
G.14.1	Requirements .....	No coating on component terminals.	N/A
<b>G.15</b>	<b>Liquid filled components</b>		N/A
G.15.1	General requirements	No such device provided within the equipment.	N/A
G.15.2	Requirements	See above.	N/A
G.15.3	Compliance and test methods	See above.	N/A
G.15.3.1	Hydrostatic pressure test	See above.	N/A
G.15.3.2	Creep resistance test	See above.	N/A
G.15.3.3	Tubing and fittings compatibility test	See above.	N/A
G.15.3.4	Vibration test	See above.	N/A
G.15.3.5	Thermal cycling test	See above.	N/A
G.15.3.6	Force test	See above.	N/A
G.15.4	Compliance	See above.	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



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Clause	Requirement + Test	Result - Remark	Verdict
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 .....	See above.	—
<b>H</b>	<b>CRITERIA FOR TELEPHONE RINGING SIGNALS</b>		N/A
H.1	General	No telephone ringing signal generated within the equipment.	N/A
H.2	Method A	See above.	N/A
H.3	Method B	See above.	N/A
H.3.1	Ringling signal	See above.	N/A
H.3.1.1	Frequency (Hz) .....	See above.	—
H.3.1.2	Voltage (V) .....	See above.	—
H.3.1.3	Cadence; time (s) and voltage (V) .....	See above.	—
H.3.1.4	Single fault current (mA):.....	See above.	—
H.3.2	Tripping device and monitoring voltage .....	See above.	N/A
H.3.2.1	Conditions for use of a tripping device or a monitoring voltage complied with	See above.	N/A
H.3.2.2	Tripping device	See above.	N/A
H.3.2.3	Monitoring voltage (V) .....	See above.	—
<b>J</b>	<b>INSULATED WINDING WIRES FOR USE WITHOUT INTERLEAVED INSULATION</b>		P
	General requirements	Triple-insulated winding wiring used as reinforced safeguard in the isolating transformer that had been evaluated with Annex J.	P
<b>K</b>	<b>SAFETY INTERLOCKS</b>		N/A
K.1	General requirements	No safety interlock provided within the equipment.	N/A
K.2	Components of safety interlock safeguard mechanism .....	See above.	N/A
K.3	Inadvertent change of operating mode	See above.	N/A
K.4	Interlock safeguard override	See above.	N/A
K.5	Fail-safe	See above.	N/A
	Compliance .....	See above.	N/A
K.6	Mechanically operated safety interlocks	See above.	N/A
K.6.1	Endurance requirement	See above.	N/A



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Clause	Requirement + Test	Result - Remark	Verdict
K.6.2	Compliance and Test method .....	See above.	N/A
K.7	Interlock circuit isolation	See above.	N/A
K.7.1	Separation distance for contact gaps & interlock circuit elements (type and circuit location) .....	See above.	N/A
K.7.2	Overload test, Current (A) .....	See above.	N/A
K.7.3	Endurance test	See above.	N/A
K.7.4	Electric strength test .....	See above.	N/A
<b>L</b>	<b>DISCONNECT DEVICES</b>		<b>P</b>
L.1	General requirements	The appliance coupler is considered as disconnect device.	P
L.2	Permanently connected equipment	The EUT is not permanently connected equipment	N/A
L.3	Parts that remain energized	No parts remain energized	N/A
L.4	Single phase equipment	The disconnect device disconnects both poles simultaneously.	N/A
L.5	Three-phase equipment	The EUT is a Single phase equipment	N/A
L.6	Switches as disconnect devices	No such POE injector provided on the equipment.	N/A
L.7	Plugs as disconnect devices	Appliance coupler as disconnect device.	N/A
L.8	Multiple power sources	Only one a.c. mains connection.	N/A
<b>M</b>	<b>EQUIPMENT CONTAINING BATTERIES AND THEIR PROTECTION CIRCUITS</b>		<b>N/A</b>
M.1	General requirements	No such battery used.	N/A
M.2	Safety of batteries and their cells	See above.	N/A
M.2.1	Requirements	See above.	N/A
M.2.2	Compliance and test method (identify method) .. :	See above.	N/A
M.3	Protection circuits	See above.	N/A
M.3.1	Requirements	See above.	N/A
M.3.2	Tests	See above.	N/A
	- Overcharging of a rechargeable battery	See above.	N/A
	- Unintentional charging of a non-rechargeable battery	See above.	N/A
	- Reverse charging of a rechargeable battery	See above.	N/A
	- Excessive discharging rate for any battery	See above.	N/A
M.3.3	Compliance .....	See above.	N/A



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Clause	Requirement + Test	Result - Remark	Verdict
M.4	Additional safeguards for equipment containing secondary lithium battery	See above.	N/A
M.4.1	General	See above.	N/A
M.4.2	Charging safeguards	See above.	N/A
M.4.2.1	Charging operating limits	See above.	N/A
M.4.2.2a)	Charging voltage, current and temperature .....	See above.	—
M.4.2.2 b)	Single faults in charging circuitry .....	See above.	—
M.4.3	Fire Enclosure	See above.	N/A
M.4.4	Endurance of equipment containing a secondary lithium battery	See above.	N/A
M.4.4.2	Preparation	See above.	N/A
M.4.4.3	Drop and charge/discharge function tests	See above.	N/A
	Drop	See above.	N/A
	Charge	See above.	N/A
	Discharge	See above.	N/A
M.4.4.4	Charge-discharge cycle test	See above.	N/A
M.4.4.5	Result of charge-discharge cycle test	See above.	N/A
M.5	Risk of burn due to short circuit during carrying	See above.	N/A
M.5.1	Requirement	See above.	N/A
M.5.2	Compliance and Test Method (Test of P.2.3)	See above.	N/A
M.6	Prevention of short circuits and protection from other effects of electric current	See above.	N/A
M.6.1	Short circuits	See above.	N/A
M.6.1.1	General requirements	See above.	N/A
M.6.1.2	Test method to simulate an internal fault	See above.	N/A
M.6.1.3	Compliance (Specify M.6.1.2 or alternative method) .....	See above.	N/A
M.6.2	Leakage current (mA) .....	See above.	N/A
M.7	Risk of explosion from lead acid and NiCd batteries	See above.	N/A
M.7.1	Ventilation preventing explosive gas concentration	See above.	N/A
M.7.2	Compliance and test method	See above.	N/A
M.8	Protection against internal ignition from external spark sources of lead acid batteries	See above.	N/A
M.8.1	General requirements	See above.	N/A



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Clause	Requirement + Test	Result - Remark	Verdict
M.8.2	Test method	See above.	N/A
M.8.2.1	General requirements	See above.	N/A
M.8.2.2	Estimation of hypothetical volume Vz (m <sup>3</sup> /s)..... :	See above.	—
M.8.2.3	Correction factors..... :	See above.	—
M.8.2.4	Calculation of distance d (mm) ..... :	See above.	—
M.9	Preventing electrolyte spillage	See above.	N/A
M.9.1	Protection from electrolyte spillage	See above.	N/A
M.9.2	Tray for preventing electrolyte spillage	See above.	N/A
M.10	Instructions to prevent reasonably foreseeable misuse (Determination of compliance: inspection, data review; or abnormal testing) ..... :	See above.	N/A
<b>N</b>	<b>ELECTROCHEMICAL POTENTIALS</b>		N/A
	Metal(s) used ..... :		—
<b>O</b>	<b>MEASUREMENT OF CREEPAGE DISTANCES AND CLEARANCES</b>		P
	Figures O.1 to O.20 of this Annex applied ..... :	Considered.	—
<b>P</b>	<b>SAFEGUARDS AGAINST ENTRY OF FOREIGN OBJECTS AND SPILLAGE OF INTERNAL LIQUIDS</b>		N/A
P.1	General requirements	See the following details.	N/A
P.2.2	Safeguards against entry of foreign object	See below.	N/A
	Location and Dimensions (mm) ..... :	No openings.	—
P.2.3	Safeguard against the consequences of entry of foreign object	See above.	N/A
P.2.3.1	Safeguards against the entry of a foreign object	See above.	N/A
	Openings in transportable equipment	No openings.	P
	Transportable equipment with metalized plastic parts ..... :	See above.	N/A
P.2.3.2	Openings in transportable equipment in relation to metallized parts of a barrier or enclosure (identification of supplementary safeguard) ..... :	See above.	N/A
P.3	Safeguards against spillage of internal liquids	No such consideration.	N/A
P.3.1	General requirements	See above.	N/A
P.3.2	Determination of spillage consequences	See above.	N/A
P.3.3	Spillage safeguards	See above.	N/A
P.3.4	Safeguards effectiveness	See above.	N/A
P.4	Metallized coatings and adhesive securing parts	No such construction.	N/A
P.4.2 a)	Conditioning testing	See above.	N/A



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Clause	Requirement + Test	Result - Remark	Verdict
	Tc (°C)..... :	See above.	—
	Tr (°C) ..... :	See above.	—
	Ta (°C)..... :	See above.	—
P.4.2 b)	Abrasion testing ..... :	See above.	N/A
P.4.2 c)	Mechanical strength testing ..... :	See above.	N/A
<b>Q</b>	<b>CIRCUITS INTENDED FOR INTERCONNECTION WITH BUILDING WIRING</b>		N/A
Q.1	Limited power sources	The output connector complied with the relevant requirement in this annex.	P
Q.1.1 a)	Inherently limited output	See below.	N/A
Q.1.1 b)	Impedance limited output	See below.	P
	- Regulating network limited output under normal operating and simulated single fault condition	Complied	P
Q.1.1 c)	Overcurrent protective device limited output	See above.	N/A
Q.1.1 d)	IC current limiter complying with G.9	See above.	N/A
Q.1.2	Compliance and test method	See above.	N/A
Q.2	Test for external circuits – paired conductor cable	No such circuit within the EUT	N/A
	Maximum output current (A) ..... :	See above.	—
	Current limiting method..... :	See above.	—
<b>R</b>	<b>LIMITED SHORT CIRCUIT TEST</b>		N/A
R.1	General requirements	No such consideration.	N/A
R.2	Determination of the overcurrent protective device and circuit	See above.	N/A
R.3	Test method Supply voltage (V) and short-circuit current (A)). ..... :	See above.	N/A
<b>S</b>	<b>TESTS FOR RESISTANCE TO HEAT AND FIRE</b>		N/A
S.1	Flammability test for fire enclosures and fire barrier materials of equipment where the steady state power does not exceed 4 000 W	The fire enclosure was made of rated min. V-0 material.	N/A
	Samples, material ..... :	See above.	—
	Wall thickness (mm)..... :	See above.	—
	Conditioning (°C)..... :	See above.	—
	Test flame according to IEC 60695-11-5 with conditions as set out	See above.	N/A
	- Material not consumed completely	See above.	N/A
	- Material extinguishes within 30s	See above.	N/A



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Clause	Requirement + Test	Result - Remark	Verdict
	- No burning of layer or wrapping tissue	See above.	N/A
S.2	Flammability test for fire enclosure and fire barrier integrity	See above.	N/A
	Samples, material .....	See above.	—
	Wall thickness (mm).....	See above.	—
	Conditioning (°C).....	See above.	—
	Test flame according to IEC 60695-11-5 with conditions as set out	See above.	N/A
	Test specimen does not show any additional hole	See above.	N/A
S.3	Flammability test for the bottom of a fire enclosure	See above.	N/A
	Samples, material .....	See above.	—
	Wall thickness (mm).....	See above.	—
	Cheesecloth did not ignite	See above.	N/A
S.4	Flammability classification of materials	See above.	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	See above.	N/A
	Samples, material .....	See above.	—
	Wall thickness (mm).....	See above.	—
	Conditioning (test condition), (°C) .....	See above.	—
	Test flame according to IEC 60695-11-20 with conditions as set out	See above.	N/A
	After every test specimen was not consumed completely	See above.	N/A
	After fifth flame application, flame extinguished within 1 min	See above.	N/A
<b>T</b>	<b>MECHANICAL STRENGTH TESTS</b>		<b>P</b>
T.1	General requirements	See the following details.	P
T.2	Steady force test, 10 N .....	(See appended table T.2)	P
T.3	Steady force test, 30 N .....	(See appended table T.3)	P
T.4	Steady force test, 100 N .....	(See appended table T.4)	P
T.5	Steady force test, 250 N .....	(See appended table T.5)	P
T.6	Enclosure impact test	(See appended table T.6)	P



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Clause	Requirement + Test	Result - Remark	Verdict
	Fall test	A 500 g steel sphere ball fell freely from rest through a vertical distance of 1300 mm onto the sample.	P
	Swing test	By fall test above.	N/A
T.7	Drop test .....	Complete equipment was dropped onto a horizontal surface from the height of 1000 mm for three times.	N/A
T.8	Stress relief test .....	(See appended table T.8)	N/A
T.9	Impact Test (glass)	No such glass provided within the equipment.	N/A
T.9.1	General requirements	See above.	N/A
T.9.2	Impact test and compliance	See above.	N/A
	Impact energy (J).....	See above.	—
	Height (m) .....	See above.	—
T.10	Glass fragmentation test .....	(See sub-clause 4.4.4.9)	N/A
T.11	Test for telescoping or rod antennas		P
	Torque value (Nm).....	See above.	—
<b>U</b>	<b>MECHANICAL STRENGTH OF CATHODE RAY TUBES (CRT) AND PROTECTION AGAINST THE EFFECTS OF IMPLOSION</b>		N/A
U.1	General requirements	No CRT provided within the equipment.	N/A
U.2	Compliance and test method for non-intrinsically protected CRTs	See above.	N/A
U.3	Protective Screen.....	See above.	N/A
<b>V</b>	<b>DETERMINATION OF ACCESSIBLE PARTS (FINGERS, PROBES AND WEDGES)</b>		P
V.1	Accessible parts of equipment	Following the probes test specified in this annex except Figure V.3., V.4 and V.5 is not suitable.	P
V.2	Accessible part criterion	No live parts can be accessible.	P


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Clause	Requirement + Test	Result - Remark	Verdict
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TABLE: List of critical components

Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity <sup>1)</sup>
Appliance Inlet	Yueqing Hongrui Electronic Co Ltd	AS-012	10A 250V	EN60320	40040898
(Alternative)	Zhejiang Bei'erjia Electronic Co., Ltd.	ST-A01-002L	10A 250V	EN60320	40013388
DC Fan	Shenzhen BaoDiKai Technology Co., Ltd.	BDM8015S	DC12V 0.15A	EN 62368-1	B 081258 0003
Fuse	Xucheng Electronics (Shenzhen) Co.,Ltd.	3F 6.3A	T6.3A 250V	EN60127-1	40019636
	Suzhou Walter Electronic Co. Ltd.	T3 6.3A	T6.3A 250V	EN60127-1	40018781
Transformer T1	Dongguan Hangqi Electronic Components Co.,Ltd	E33	Class B (Applies only to the altitude of 5000 meters and below)	UL1446	E510904
Transformer T2	Dongguan Hangqi Electronic Components Co.,Ltd	E19	Class B (Applies only to the altitude of 5000 meters and below)	UL1446	E510904
Capacitor CX(for EMI)	Macrofar Electronics Technology (HK) Limited	MPX	X2,275VAC,1uF	EN 60384-14	VDE:40052686
(Alternative)	Shenzhen TenTa Electronic APPLIANCE Co., Ltd.	MEX	X2,275VAC,1uF	EN 60384-14	E186475


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Clause	Requirement + Test			Result - Remark	Verdict
Capacitor CX1	Macrofar Electronics Technology (HK) Limited	MPX	X2,275VAC,0.68uF	EN 60384-14	VDE:40052686
(Alternative)	Shenzhen TenTa Electronic APPLIANCE Co., Ltd.	MEX	X2,275VAC,0.68uF	EN 60384-14	E186475
Capacitor CY1'&CY2' (for EMI)	JYH HSU ELECTRONICS LTD	JY	Y2,300VAC,4700pF	IEC 60384-14:2005	E187963
Capacitor CY1'&CY2' (for EMI)	Electronics Technology (HK) Limited	JY	Y2,300VAC,4700pF	IEC 60384-14:2005	TUV:R 50326364
Capacitor CY1&CY2	JYH HSU ELECTRONICS LTD	JY	Y2,300VAC,4700pF	IEC 60384-14:2005	E187963
Capacitor CY1&CY2	Electronics Technology (HK) Limited	JY	Y2,300VAC,4700pF	IEC 60384-14:2005	TUV:R 50326364
Capacitor CY3	JYH HSU ELECTRONICS LTD	JD	Y1,400VAC,2200pF	IEC 60384-14:2005	E187963
Capacitor CY3	Electronics Technology (HK) Limited	JD	Y1,400VAC,2200pF	IEC 60384-14:2005	TUV:R 50326364
Isolated resistor 1R2&1R3	Yageo Electronics (China) Co., Ltd.	1206	680K,1/4W	GB4943.1-2011	Test by Appliance
Varistor VD1	Shantou Hongzhi Electronics Ltd	10D	Breakdown voltage 470V,Maximum continuous AC voltage 300V	IEC 61051-2:1991+Amd1:2009	E197799
(Alternative)	Macrofar Electronics Technology (HK) Limited	10D	Breakdown voltage 470V,Maximum continuous AC voltage 300V	IEC 61051-2:1991+Amd1:2009	TUV:B 117480 0001



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Clause	Requirement + Test			Result - Remark	Verdict
Optocoupler UA1 UA2 UA3	Bright LED Electronics Co.,Ltd	BPC-817*, BPC-817S*	Reinforced insulation,Distance through insulation >0.7mm,E xternal creepage distance >8.1mm,Pa ss the thermal cycling tests, Altitude during operation: below 5000m	IEC 60384- 14:2005	E236324
(Alternative)	Shenzhen orient components Co., Ltd.	ORPC817	Reinforced insulation,Distance through insulation ≥0.4mm,External creepage distance ≥8.0mm, Pass the thermal cycling tests, Altitude during operation: below 5000m	IEC 60384- 14:2005	E323844
PCB	TIANJIAN ELECTRONIC CIRCUITS CO LTD	TJ-2	Thickness 1.2mm, V-0	IEC 60384- 14:2005	E320794
<p>1) An asterisk indicates a mark which assures the agreed level of surveillance</p> <p>2) Complied with IEC60950-1:2005</p>					
Supplementary information:					

5.2.2.3 - Capacitance Limits						
No.	Supply Voltage	Location (e.g. circuit designation)	Test conditions	Parameters		ES Class
				Capacitance, nF	Upk (V)	
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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) .....	See below				—
	Ambient T <sub>min</sub> (°C) .....	--	--	--	--	—
	Ambient T <sub>max</sub> (°C) .....	--	--	--	--	—
	T <sub>ma</sub> (°C) .....	--	--	--	--	—
Maximum measured temperature T of part/at:		T (°C)				Allowed T <sub>max</sub> (°C)
<b>Test condition</b>	198V60HZ Horizontal	Shift 40°C	5V60HZ Vertical	Shift 40°C	--	
Input wire	28.4	43.9	28.7	44.1	85	
Transformer T1 winding	65.5	81.0	64.7	80.1	130	
Transformer T1 core	60.3	75.8	60.5	75.9	130	
PCB near Q1(maid board)	55.4	70.9	57.4	72.8	130	
E-Capacitor C21 body(maid board)	49.2	64.7	49.5	64.9	105	
PCB near Q7(maid board)	48.7	64.2	50.6	66.0	130	
PCB near Q6(maid board)	48.6	64.1	49.7	65.1	130	
PCB near U5(maid board)	46.5	62.0	50.3	65.7	130	
PCB near U8(maid board)	67.2	82.7	68.0	83.4	130	
PCB near U2(display board)	60.1	75.6	60.7	76.1	130	
PCB near U1(display board)	48.1	63.6	48.6	64.0	130	
Motor(60KTYZ)	35.0	50.5	35.6	51.0	Ref.	
Motor()	30.0	45.5	30.5	45.9	Ref.	
Enclosure inside near U2(display board)	28.1	43.6	28.6	44.0	Ref.	
Enclosure outside near U2(display board)	26.0	41.5	26.4	41.8	77	
Enclosure outside near Motor()	25.5	41.0	25.8	41.2	77	
POE injector body	25.3	40.8	25.4	40.8	85	
Ambient	24.5	40.0	24.6	40.0	--	



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Clause	Requirement + Test	Result - Remark	Verdict

Supplementary information:

Note 1: The apparatus was submitted and evaluated for maximum manufacturer's recommended ambient (T<sub>ma</sub>) of 40°C.

Note 2: The temperatures were measured under the worst case normal mode defined in table B.2.5.

Note 3: Temperature limits are calculated as follows:

Winding components providing safety isolation:

Class B → T<sub>max</sub> = 120 - 10 = 110 °C

Note 4: Test conditions E; values for T (°C) are re-calculated from ambient during test respectively.

Temperature T of winding:	t <sub>1</sub> (°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
--	--	--	--	--	--	--	--

Supplementary information:

Note 1: T<sub>ma</sub> should be considered as directed by applicable requirement

Note 2: T<sub>ma</sub> is not included in assessment of Touch Temperatures (Clause 9)

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:	U <sub>p</sub> (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)
L to N before F1	420	250	>30	1.9	3.4	2.5	3.4
Across F1	420	250	>30	1.9	>3.0	2.5	>3.0

Supplementary information:

- \* Both frequencies lower than 30 kHz and higher than 30 kHz are present. Limit from Table 11 based on the temporary overvoltage (2000V<sub>peak</sub>) which is higher than Table 12.
- Max. altitude up to 5000m, the multiplication factor for Cl. Is 1.48.
- Power Transformer T1: TIW used as secondary winding, core considered as primary part.
- Input lead wire considered as BI.

5.4.2.3	TABLE: Minimum Clearances distances using required withstand voltage			P
	Overvoltage Category (OV):		II	
	Pollution Degree:		2	
Clearance distanced between:	Required withstand voltage	Required cl (mm)	Measured cl (mm)	
Same as the "TABLE: Minimum Clearances/Creepage distance"	2500V <sub>peak</sub>	1.5 (for BI) 3.0 (for RI)	Same as the "TABLE: Minimum Clearances/Creepage distance"	



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<b>5.4.2.3</b>	<b>TABLE: Minimum Clearances distances using required withstand voltage</b>			P
	<b>Overvoltage Category (OV):</b>			II
	<b>Pollution Degree:</b>			2
Clearance distanced between:	Required withstand voltage	Required cl (mm)	Measured cl (mm)	
Supplementary information:				

<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>					P
Distance through insulation di at/of:	Peak voltage (V)	Frequency (kHz)	Material	Required DTI (mm)	DTI (mm)	
Plastic enclosure	340	>1	-	0.4	≥0.4	
Supplementary information:						

<b>5.4.9</b>	<b>TABLE: Electric strength tests</b>				P
Test voltage applied between:	Voltage shape (AC, DC)		Test voltage (V)	Breakdown Yes / No	
T1: Primary/ core to secondary pin	DC		4000	No	
One layer of insulation tape used in transformer T1	DC		4000	No	
Supplementary information:					

<b>5.5.2.2</b>	<b>TABLE: Stored discharge on capacitors</b>					P
Supply Voltage (V/Hz)	Test Location	Operating Condition (N, S)	POE injector position On or off	Measured Voltage (V) (after 2 seconds)	ES Classification	
5	Inlet pins (L-	Normal	--	0	--	



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	N)	Open R1	--	2	--
<p>Supplementary information:</p> <p>X-capacitors installed for testing are:</p> <ul style="list-style-type: none"> <li>- bleeding resistor rating:</li> <li>- CX1: C1=0.22uF.</li> </ul> <p>Notes:</p> <p>A. Test Location: Phase to Neutral; Phase to Phase; Phase to Earth; and/or Neutral to Earth</p> <p>B. Operating condition abbreviations:</p> <p>N – Normal operating condition (e.g., normal operation, or open fuse); S –Single fault condition</p> <p>C. The resistor passed G.10.1 and G.10.2 of IEC62368-1 test, so no need to perform discharge test under single fault condition</p>					

<b>5.6.6.2</b>	<b>TABLE: Resistance of protective conductors and terminations</b>				N/A
Accessible part	Test current (A)	Duration (min)	Voltage drop (V)	Resistance (mΩ)	
--	--	--	--	--	
Supplementary information:					

<b>6.2.2</b>	<b>Table: Electrical power sources (PS) measurements for classification</b>				N
Source	Description	Measurement	Max Power after 3 s	Max Power after 5 s <sup>*</sup>	PS Classification
Output terminal	Normal operation	Power (W) :	--	--	PS1
		V <sub>A</sub> (V) :	--	--	
		I <sub>A</sub> (A) :	--	--	
Supplementary Information:					
(*) Measurement taken only when limits at 3 seconds exceed PS1 limits					

<b>6.2.3.1</b>	<b>Table: Determination of Potential Ignition Sources (Arcing PIS)</b>				P
Location	Open circuit voltage After 3 s (V <sub>p</sub> )	Measured r.m.s current (I <sub>rms</sub> )	Calculated value (V <sub>p</sub> x I <sub>rms</sub> )	Arcing PIS? Yes / No	
All circuits (exclude the output terminal)	--	--	--	Yes	



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Clause	Requirement + Test	Result - Remark	Verdict
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Supplementary information:

- 1) 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.
- 2) Assumption: All circuits inside the equipment enclosure are declared as arcing PIS.

B.3 & B.4		TABLE: Abnormal operating and fault condition tests						P
Ambient temperature (°C) .....		25°C, if not specified						—
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
T1 pin A-B	SC	5	10mins	F1	0.012	Type J	--	Unit shutdown immediately, recoverable, no hazard.
T1 pin 1-2	SC	5	10mins	F1	0.010	Type J	--	Unit shutdown immediately, recoverable, no hazard.
T1 pin 4-3	SC	5	10mins	F1	0.013	Type J	--	Unit shutdown immediately, recoverable, no hazard.

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.

- 1) SC: Short-circuited; OC: Open-circuited; OL: Overloaded.
- 2) The test result shown all safeguards remained effective and didn't lead to a single fault condition during abnormal operating condition; besides, all safeguards complied with applicable requirements in this standard after restoration of normal operating conditions.
- 3) The test result shown no Class 1 or 2 energy source become Class 3 level during and after single fault condition.
- 4) The overloaded condition is according to annex G.5.3.3.  
Winding Limit for T1 winding:  $175-(45-25)=155K$



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Clause	Requirement + Test	Result - Remark	Verdict
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<b>Annex Q.1</b>	<b>TABLE: Circuits intended for interconnection with building wiring (LPS)</b>	N/A
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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
--	Normal	--	--	8	--	100

Supplementary Information:

SC=Short circuit, OC=Open circuit

I/P=5V, 60Hz.

<b>T.2, T.3, T.4, T.5</b>	<b>TABLE: Steady force test</b>	P
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Part/Location	Material	Thickness (mm)	Force (N)	Test Duration (sec)	Observation
Top enclosure	Plastic enclosure	--	250	5	No damaged
Side enclosure	Plastic enclosure	--	250	5	No damaged
Bottom enclosure	Plastic enclosure	--	250	5	No damaged

Supplementary information:

<b>T.6, T.9</b>	<b>TABLE: Impact tests</b>	<b>P</b>
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Part/Location	Material	Thickness (mm)	Vertical distance (mm)	Observation
Top enclosure	Top enclosure	--	1300	No damaged
Side enclosure	Side enclosure	--	1300	No damaged
Bottom enclosure	Bottom enclosure	--	1300	No damaged

Supplementary information:

<b>T.7</b>	<b>TABLE: Drop tests</b>	<b>P</b>
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Part/Location	Material	Thickness (mm)	Drop Height (mm)	Observation
Top enclosure	Plastic enclosure	--	1000	No damaged
Side enclosure	Plastic enclosure	--	1000	No damaged



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Clause	Requirement + Test	Result - Remark	Verdict
Bottom enclosure	Plastic enclosure --	1000	No damaged
Supplementary information:			

T.8	TABLE: Stress relief test					P
Part/Location	Material	Thickness (mm)	Oven Temperature (°C)	Duration (h)	Observation	
--	Plastic enclosure	2.0	70	7	No damaged	
Supplementary information: For details refer to appended table 4.1.2.						



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<b>ATTACHMENT TO TEST REPORT IEC 62368-1</b> <b>EUROPEANGROUPDIFFERENCESANDNATIONALDIFFERENCES</b> (Audio/video, information and communication technology equipment Part 1: Safety requirements)	
<b>Differencesaccordingto</b> .....	EN IEC 62368-1:2020
<b>Attachment FormNo</b> .....	EU_GD_IEC62368_1B
<b>AttachmentOriginator</b> .....	Intertek SemkoAB
<b>MasterAttachment</b> .....	Date(2015-08)
<b>Copyright © 2015 IEC System of Conformity Assessment Schemes for Electrotechnical Equipment and Components (IECEE)</b>	

<b>CENELEC COMMON MODIFICATIONS (EN)</b>			
1	NOTE Z1		P
4.Z1	Protective devices included as integral parts of the equipment or as parts of the building installation:		N/A
	a) Included as parts of the equipment		N/A
	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

<b>ZB ANNEX ZB, SPECIAL NATIONAL CONDITIONS (EN)</b>			
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.	The EUT is not directly plug-in equipment	N/A
5.2.2.2	<b>Denmark:</b> Warning for high touch current		N/A
5.4.11.1 and Annex G	<b>Finland and Sweden:</b> Separation of the telecommunication network from earth		N/A



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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.	No such device used as safeguard	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



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	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
G.4.2	<b>United Kingdom:</b> The plug part of direct plug-in equipment assessed to BS 1363	The EUT is not directly plug-in equipment	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 POE injector cord for equipment which is rated over 10 A and up to and including 13 A.		N/A
<b>ZC</b>	<b>ANNEX ZC, NATIONAL DEVIATIONS (EN)</b>		
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 Documents



**===End of the report===**