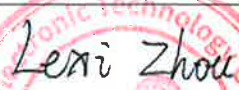


TEST REPORT

Report Number :	S01A22120724S00101		
Date of issue :	2022-12-28		
Total number of pages :	90		
Testing Laboratory :	Dongguan Anci Electronic Technology Co., Ltd.		
Laboratory address :	1-2 Floor, Building A, No.11, Headquarters 2 Road, Songshan Lake Hi-tech Industrial Development Zone, Dongguan City, Guangdong Pr. China		
Applicant's name :	SHENZHEN SORGHUM RED ELECTRONICS TECHNOLOGY CO LTD		
Address :	XINHE RD 29 SHANGMUGU COMMUNITY PINGHU TOWN LONGGANG DISTRICT SHENZHEN, GUANGDONG 518111 CHINA		
Test specification:			
Standard	EN IEC 62368-1:2020+A11:2020		
Test procedure	Safety test		
Non-standard test method	N/A		
Test Report Form No.	01-S002-1B		
Test Report Form(s) Originator :	GTG		
Master TRF	Dated 2022-07-01		
General disclaimer:			
The test results presented in this report relate only to the object tested.			
This report shall not be reproduced, except in full, without the written approval of the Testing Laboratory.			
The authenticity of this Test Report and its contents can be verified by contacting the GTG, responsible for this Test Report.			
TESTING LABORATORY INFORMATION			
☒	Testing Laboratory:	Dongguan Anci Electronic Technology Co., Ltd.	
	Testing location/ address	1-2 Floor, Building A, No.11, Headquarters 2 Road, Songshan Lake Hi-tech Industrial Development Zone, Dongguan City, Guangdong Pr. China	
	Tested by (name, function, signature) :	Lexi Zhou Project handler	
	Reviewed by (name, signature)	Karo Wu Reviewer	
	Approved by (name, signature)	Bruce Yu Approver	

Test item description :	SWITCHING ADAPTER
Trade Mark(s)	N/A
Manufacturer	Same as applicant
Model/Type reference :	GLHXXXYYYYZ, G006AXXXYYYYZ(for “XXX”, “YYYY” and “Z” are variables, refer to model list for details.)
Ratings :	Input: 100-240Vac, 50/60Hz, 0.3A Output:5.0-12.0Vdc, 0.01-1.0A

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

- Attachment 1: National difference (20 pages)
- Attachment 2: Photograph (8 pages)

Summary of testing:

Unless otherwise indicated, all tests were conducted at Dongguan Anci Electronic Technology Co., Ltd.
1-2 Floor, Building A, No.11, Headquarters 2 Road, Songshan Lake Hi-tech Industrial Development Zone,
Dongguan City, Guangdong Pr. China

If not otherwise specified, tests were performed on model GLH0501000C, GLH1200500C,
G006A0501000C, G006A12005000C.

This report is basic on the SA1812177S 002 issued on 2019-01-28, in this report only updated the
standard version.

Tests performed (name of test and test clause):

The submitted samples were tested and found to
comply with the requirements of:

Electrical safety

- EN IEC 62368-1:2020+A11:2020

Testing location:

Dongguan Anci Electronic Technology Co., Ltd.
1-2 Floor, Building A, No.11, Headquarters 2 Road,
Songshan Lake Hi-tech Industrial Development
Zone, Dongguan City, Guangdong Pr. China

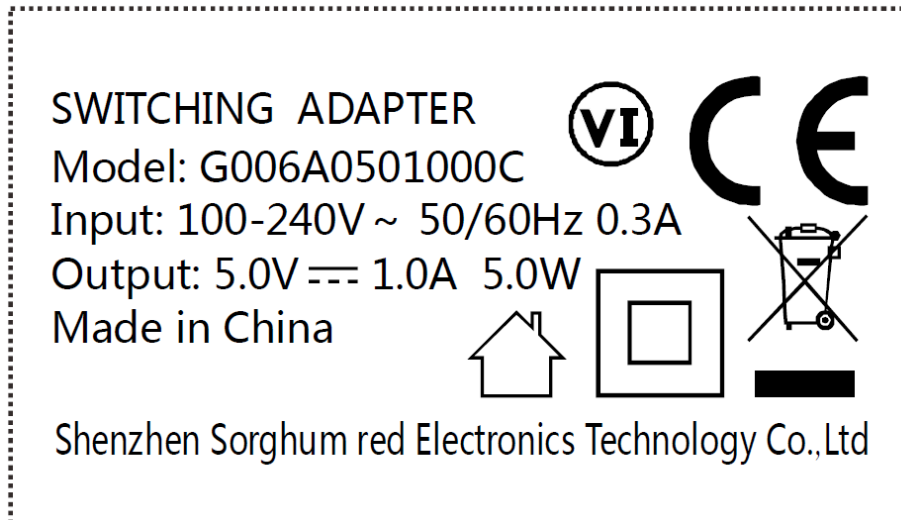
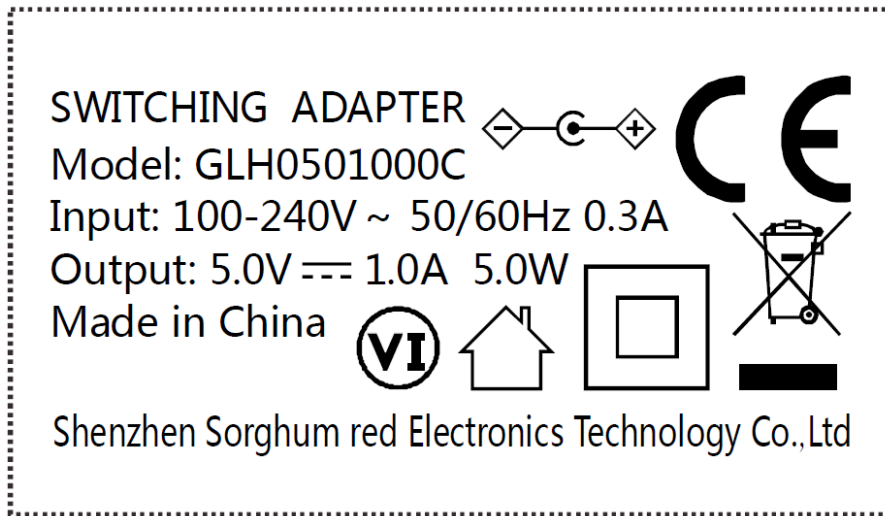
Summary of compliance with National Differences (List of countries addressed):

EU

EU=EU Group Differences

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.

**Notes:**

- The above markings are the min. requirements required by the safety standard. For the final production samples, the additional markings which do not give rise to misunderstanding may be added.
- The height dimension of CE symbol should not less than 5mm, and the height dimension of WEEE symbol should not less than 7mm.

Test item particulars:			
Product group	☒ end product	☐ built-in component	
Classification of use by	☒ Ordinary person	☒ Children likely present	
	☐ Instructed person		
	☐ Skilled person		
Supply connection	☒ AC mains	☐ DC mains	
	☐ not mains connected:		
	☐ ES1	☐ ES2	☐ ES3
Supply tolerance	☒ +10%/-10%		
	☐ +20%/-15%		
	☐ + %/ - %		
	☐ None		
Supply connection – type	☒ pluggable equipment type A -		
	☐ non-detachable supply cord		
	☐ appliance coupler		
	☒ direct plug-in		
	☐ pluggable equipment type B -		
	☐ non-detachable supply cord		
	☐ appliance coupler		
	☐ permanent connection		
	☐ mating connector	☐ other:	
Considered current rating of protective device	☒ 16 A(13A for UK);		
	Location: ☒ building	☐ equipment	
	☐ N/A		
Equipment mobility	☐ movable	☐ hand-held	☒ transportable
	☒ direct plug-in	☐ stationary	☐ for building-in
	☐ wall/ceiling-mounted	☐ SRME/rack-mounted	
	☐ other:		
Overvoltage category (OVC)	☐ OVC I	☒ OVC II	☐ OVC III
	☐ OVC IV	☐ other:	
Class of equipment	☐ Class I	☒ Class II	☐ Class III
	☐ Not classified		
Special installation location	☒ N/A	☐ restricted access area	
	☐ outdoor location		
Pollution degree (PD)	☐ PD 1	☒ PD 2	☐ PD 3
Manufacturer's specified T _{ma}	40°C	☐ Outdoor: minimum	°C
IP protection class	☐ IPX0	☒ IP_20_	
Power systems	☒ TN	☐ TT	☐ IT - V _{L-L}
	☐ not AC mains		
Altitude during operation (m)	☐ 2000 m or less	☒ 5000 m	
Altitude of test laboratory (m)	☒ 2000 m or less	☐	m
Mass of equipment (kg)	Approximate 0.04kg		

Possible test case verdicts:

- 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)

Testing:

Date of receipt of test item..... : 2022-12-22

Date (s) of performance of tests : N/A

General remarks:

"(See Enclosure #)" refers to additional information appended to the report.

"(See appended table)" refers to a table appended to the report.

Throughout this report a ☐ comma / ☒ point is used as the decimal separator.

Manufacturer's Declaration per sub-clause 4.2.5 of IEC60335-1:

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..... :

☐ Yes

☒ Not applicable

When differences exist; they shall be identified in the General product information section.

Name and address of factory (ies) : Same as applicant

General product information and other remarks:

- The product is SWITCHING ADAPTER (direct plug-in type) for use with audio/video, information technology equipment.
- The bottom enclosure is secured to top enclosure by ultrasonic.
- The specified Max. ambient temperature is +40°C.
- All models are identical except for model name, enclosure case, output rating and some secondary electrical components.

Model Differences –

- All models are identical to each other except the model name, enclosure, output rating, plug portion , transformer secondary winding and some non-critical secondary component;
- Model list

Table A : Definition of Variables		
XXX	050-120	3 digits code indicates output voltage range from 5.0-12.0V, minimum step by 0.1V. eg: 050=5.0Vdc, 120=12.0Vdc.
YYYY	0001-1000	4 digits code indicate output current from 0.001A to 1.0A, the rising step is 0.001A. eg: 0001 = 0.001A, 1000=1.0A
Z	C, V, B	Represent the plug type. C or V means EU plug; B means BS plug;

Table B: model list					
Model	Output Voltage(Vdc)	Output Current(A)	Max. Output Power(W)	Transformer (T1)	Output type
GLHXXYYZZ	5.0-7.9	0.001-1.0	5.0	GLH0510	USB or DC wire

	8.0-12.0	0.001-0.75	6.0	GLH1205	USB or DC wire	
G006AXXXYYYYZ	5.0-7.9	0.001-1.0	5.0	GLH0510	USB	
	8.0-12.0	0.001-0.75	6.0	GLH1205	USB	
Remark: model GLHXXYYYYYZ used enclosure case1 and model G006AXXXYYYYZ used enclosure case 2, all used the same schematics and PCB layout.						

OVERVIEW OF ENERGY SOURCES AND SAFEGUARDS				
Clause	Possible Hazard			
5	Electrically-caused injury			
Class and Energy Source (e.g. ES3: Primary circuit)	Body Part (e.g. Ordinary)	Safeguards		
		B	S	R
ES3: All Internal circuits (Primary circuits)	Ordinary person	N/A	N/A	Enclosure, See 5.4.2, 5.4.3, 5.4.4, 5.4.5, 5.4.9, 5.5.3 and 5.5.4
ES1: Output terminal	Ordinary person	N/A	N/A	N/A
6	Electrically-caused fire			
Class and Energy Source (e.g. PS2: 100 Watt circuit)	Material part (e.g. Printed board)	Safeguards		
		B	1 st S	2 nd S
PS3: All internal circuits	Enclosure	See 6.3	V-0	N/A
PS3: All internal circuits	PCB	See 6.3	V-0	N/A
PS3: All internal circuits	Plastic materials not part of PS3 circuits	See 6.3	V-2 or better	N/A
PS3: All internal circuits	The other components/materials	See 6.3	See 6.4.5, 6.4.6	N/A
PS1: Output circuits	Output circuits	N/A	N/A	N/A
7	Injury caused by hazardous substances			
Class and Energy Source (e.g. Ozone)	Body Part (e.g., Skilled)	Safeguards		
		B	S	R
N/A	N/A	N/A	N/A	N/A
8	Mechanically-caused injury			
Class and Energy Source (e.g. MS3: Plastic fan blades)	Body Part (e.g. Ordinary)	Safeguards		
		B	S	R
MS1: Sharp edges and corners	Ordinary person, Instructed person, skilled person	N/A	N/A	N/A
MS1: Equipment mass (<7kg)	Ordinary person, Instructed person, skilled person	N/A	N/A	N/A
9	Thermal burn			
Class and Energy Source (e.g. TS1: Keyboard caps)	Body Part (e.g., Ordinary)	Safeguards		
		B	S	R
TS1: External surfaces	Ordinary person, Instructed person, skilled person	N/A	N/A	N/A
TS3: The component surfaces inside the equipment	Ordinary	N/A	N/A	Enclosure
10	Radiation			
Class and Energy Source	Body Part	Safeguards		

(e.g. RS1: PMP sound output)	(e.g., Ordinary)	B	S	R
N/A	N/A	N/A	N/A	N/A
Supplementary Information: “B” – Basic Safeguard; “S” – Supplementary Safeguard; “R” – Reinforced Safeguard				

ENERGY SOURCE DIAGRAM
Optional. Manufacturers are to provide the energy sources diagram identify declared energy sources and identifying the demarcations are between power sources. Recommend diagram be provided included in power supply and multipart systems. Insert diagram below. Example diagram designs are; Block diagrams; image(s) with layered data; mechanical drawings
☐ ES ☐ PS ☐ MS ☐ TS ☐ RS (Refer to ENERGY SOURCES AND SAFEGUARDS TABLE for DETAIL)

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict

4	GENERAL REQUIREMENTS		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. See also Annex G	P
4.1.3	Equipment design and construction	Evaluation of safeguards regarding limiting the outputs to fulfill ES1 and protection in regard to risk of spread of fire, mechanical and thermal burn injury considered.	P
4.1.4	Specified ambient temperature for outdoor use (°C):		N/A
4.1.5	Constructions and components not specifically covered		N/A
4.1.8	Liquids and liquid filled components (LFC)		N/A
4.1.15	Markings and instructions	(See Annex F)	P
4.4.3	Safeguard robustness		P
4.4.3.1	General		P
4.4.3.2	Steady force tests	(See Clause T.4)	P
4.4.3.3	Drop tests	(See Clause T.7)	P
4.4.3.4	Impact tests		N/A
4.4.3.5	Internal accessible safeguard tests		N/A
4.4.3.6	Glass impact tests		N/A
4.4.3.7	Glass fixation tests		N/A
	Glass impact test (1J)		N/A
	Push/pull test (10 N)		N/A
4.4.3.8	Thermoplastic material tests	(See Clause T.8)	P
4.4.3.9	Air comprising a safeguard		P
4.4.3.10	Accessibility, glass, safeguard effectiveness		P
4.4.4	Displacement of a safeguard by an insulating liquid		N/A
4.4.5	Safety interlocks		N/A
4.5	Explosion		P
4.5.1	General		P
4.5.2	No explosion during normal/abnormal operating	(See Clause B.2, B.3)	P

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
	condition		
	No harm by explosion during single fault conditions	(See Clause B.4)	P
4.6	Fixing of conductors		P
	Fix conductors not to defeat a safeguard	Output wire, input wire and bonding conductor were secured by soldering and glue fixed additionally, so that a loosening of the terminal connection is unlikely	P
	Compliance is checked by test	(See Clause T.2)	P
4.7	Equipment for direct insertion into mains socket-outlets		P
4.7.2	Mains plug part complies with relevant standard ...:	See plug test report attachment.	P
4.7.3	Torque (Nm).....:	0.008Nm Max.	P
4.8	Equipment containing coin/button cell batteries		N/A
4.8.1	General	No coin/button battery used	N/A
4.8.2	Instructional safeguard.....:		N/A
4.8.3	Battery compartment door/cover construction		N/A
	Open torque test		N/A
4.8.4.2	Stress relief test		N/A
4.8.4.3	Battery replacement test		N/A
4.8.4.4	Drop test		N/A
4.8.4.5	Impact test		N/A
4.8.4.6	Crush test		N/A
4.8.5	Compliance		N/A
	30N force test with test probe		N/A
	20N force test with test hook		N/A
4.9	Likelihood of fire or shock due to entry of conductive object		P
4.10	Component requirements		P
4.10.1	Disconnect Device	(See Annex L)	P
4.10.2	Switches and relays		N/A

5	ELECTRICALLY-CAUSED INJURY		P
5.2	Classification and limits of electrical energy sources		P
5.2.2	ES1, ES2 and ES3 limits		P
5.2.2.2	Steady-state voltage and current limits	(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.....:	No such single pulses generated in the EUT or applied to it.	N/A

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
5.2.2.5	Limits for repetitive pulses..... :	No such repetitive pulses within the EUT	N/A
5.2.2.6	Ringing signals		N/A
5.2.2.7	Audio signals		N/A
5.3	Protection against electrical energy sources		P
5.3.1	General Requirements for accessible parts to ordinary, instructed and skilled persons		P
5.3.1 a)	Accessible ES1/ES2 derived from ES2/ES3 circuits		P
5.3.1 b)	Skilled persons not unintentional contact ES3 bare conductors		P
5.3.2.1	Accessibility to electrical energy sources and safeguards	Only ES1 circuit can be accessed for this product.	P
	Accessibility to outdoor equipment bare parts		N/A
5.3.2.2	Contact requirements		P
	Test with test probe from Annex V	No openings	—
5.3.2.2 a)	Air gap – electric strength test potential (V)..... :	(See appended table 5.4.9)	N/A
5.3.2.2 b)	Air gap – distance (mm) :	Max. 524V _{peak} , Air gap > 0.2mm	P
5.3.2.3	Compliance		P
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	Material is non-hygroscopic	(See sub-clause 5.4.8)	P
5.4.1.4	Maximum operating temperature for insulating materials :	(See appended table 5.4.1.4, 9.3, B.1.5, B.2.6)	P
5.4.1.5	Pollution degrees..... :	Pollution degree 2 considered	P
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 test		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 :	(See appended table 5.4.1.8)	P
5.4.1.9	Insulating surfaces		P
5.4.1.10	Thermoplastic parts on which conductive metallic parts are directly mounted		P
5.4.1.10.2	Vicat test :		N/A
5.4.1.10.3	Ball pressure test..... :	(See appended table 5.4.1.10.3)	P
5.4.2	Clearances		P
5.4.2.1	General requirements		P

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
	Clearances in circuits connected to AC Mains, Alternative method		N/A
5.4.2.2	Procedure 1 for determining clearance		P
	Temporary overvoltage	2000Vpk	—
5.4.2.3	Procedure 2 for determining clearance		P
5.4.2.3.2.2	a.c. mains transient voltage	Overvoltage category II, 2500V peak	—
5.4.2.3.2.3	d.c. mains transient voltage	No such transient voltage	—
5.4.2.3.2.4	External circuit transient voltage	No such transient voltage	—
5.4.2.3.2.5	Transient voltage determined by measurement.....	No need to conduct this test	—
5.4.2.4	Determining the adequacy of a clearance using an electric strength test	(See appended table 5.4.2)	N/A
5.4.2.5	Multiplication factors for clearances and test voltages		N/A
5.4.2.6	Clearance measurement.....	(See appended table 5.4.2)	P
5.4.3	Creepage distances	(See appended table 5.4.2)	P
5.4.3.1	General		P
5.4.3.3	Material group.....	IIIb	—
5.4.3.4	Creepage distances measurement.....	(See appended table 5.4.3)	P
5.4.4	Solid insulation		P
5.4.4.1	General requirements		P
5.4.4.2	Minimum distance through insulation	(See appended table 5.4.4.2)	P
5.4.4.3	Insulating compound forming solid insulation		N/A
5.4.4.4	Solid insulation in semiconductor devices		P
5.4.4.5	Insulating compound forming cemented joints		N/A
5.4.4.6	Thin sheet material	Two layers of insulation tape between winding and core of transformer is used for reinforced insulation and are not expected to be subject to handling or abrasion during ordinary or instructed person servicing.	P
5.4.4.6.1	General requirements		P
5.4.4.6.2	Separable thin sheet material		P
	Number of layers (pcs)	Min. 2 layers	P
5.4.4.6.3	Non-separable thin sheet material	No such material used	N/A
	Number of layers (pcs)		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

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
5.4.4.7	Solid insulation in wound components	(See clause G.5)	P
5.4.4.9	Solid insulation at frequencies >30 kHz, E_P , K_R , d , V_{PW} (V).....:	Alternative method used	N/A
	Alternative by electric strength test, tested voltage (V), K_R	(See appended table 5.4.4.9)	P
5.4.5	Antenna terminal insulation	Test applied between input terminal and output terminal as the client's request	P
5.4.5.1	General		P
5.4.5.2	Voltage surge test	10KV, 50 times	P
5.4.5.3	Insulation resistance (M Ω)	>500	P
	Electric strength test.....:	(See appended table 5.4.9)	P
5.4.6	Insulation of internal wire as part of supplementary safeguard		N/A
5.4.7	Tests for semiconductor components and for cemented joints		N/A
5.4.8	Humidity conditioning		P
	Relative humidity (%), temperature (°C), duration (h).....:	95% RH, 40°C, 120h	—
5.4.9	Electric strength test		P
5.4.9.1	Test procedure for type test of solid insulation	(See appended table 5.4.9)	P
5.4.9.2	Test procedure for routine test		N/A
5.4.10	Safeguards against transient voltages from external circuits	No transient voltage from external circuit	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.....:	(See appended table 5.4.9)	N/A
5.4.10.2.3	Steady-state test	(See appended table 5.4.9)	N/A
5.4.10.3	Verification for insulation breakdown for impulse test.....:		N/A
5.4.11	Separation between external circuits and earth		N/A
5.4.11.1	Exceptions to separation between external circuits and earth		N/A
5.4.11.2	Requirements		N/A
	SPDs bridge separation between external circuit and earth		N/A
	Rated operating voltage U_{op} (V)		—
	Nominal voltage U_{peak} (V)		—
	Max increase due to variation ΔU_{sp}		—
	Max increase due to ageing ΔU_{sa}		—

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
5.4.11.3	Test method and compliance	(See appended table 5.4.9)	N/A
5.4.12	Insulating liquid		N/A
5.4.12.1	General requirements		N/A
5.4.12.2	Electric strength of an insulating liquid.....	(See appended table 5.4.9)	N/A
5.4.12.3	Compatibility of an insulating liquid	(See appended table 5.4.9)	N/A
5.4.12.4	Container for insulating liquid.....		N/A
5.5	Components as safeguards		P
5.5.1	General		P
5.5.2	Capacitors and RC units	Approved Y1 type capacitors provided.	P
5.5.2.1	General requirement		N/A
5.5.2.2	Safeguards against capacitor discharge after disconnection of a connector		N/A
5.5.3	Transformers		P
5.5.4	Optocouplers	No such component provided	N/A
5.5.5	Relays	No such component provided	N/A
5.5.6	Resistors		N/A
5.5.7	SPDs		N/A
5.5.8	Insulation between the mains and an external circuit consisting of a coaxial cable		N/A
5.5.9	Safeguards for socket-outlets in outdoor equipment		N/A
	RCD rated residual operating current (mA)		—
5.6	Protective conductor		N/A
5.6.2	Requirement for protective conductors		N/A
5.6	Protective conductor		N/A
5.6.2	Requirement for protective conductors		N/A
5.6.2.1	General requirements		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 ²)		—
	Protective earthing conductor serving as a reinforced safeguard		N/A
	Protective earthing conductor serving as a double safeguard		N/A
5.6.4	Requirements for protective bonding conductors		N/A
5.6.4.1	Protective bonding conductors		N/A
	Protective bonding conductor size (mm ²).....		N/A
5.6.4.2	Protective current rating (A)		N/A
5.6.5	Terminals for protective conductors		N/A

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
5.6.5.1	Terminal size for connecting protective earthing conductors (mm)		N/A
	Terminal size for connecting protective bonding conductors (mm).....		N/A
5.6.5.2	Corrosion		N/A
5.6.6	Resistance of the protective bonding system		N/A
5.6.6.1	Requirements		N/A
5.6.6.2	Test Method	(See appended table 5.6.6.2)	N/A
5.6.6.3	Resistance (Ω) or voltage drop	(See appended table 5.6.6.2)	N/A
5.6.7	Reliable connection of a protective earthing conductor		N/A
5.6.8	Functional earthing		N/A
	Conductor size (mm^2)		N/A
	Class II with functional earthing marking		N/A
	Appliance inlet cl & cr (mm)		N/A
5.7	Prospective touch voltage, touch current and protective conductor current		P
5.7.2	Measuring devices and networks		P
5.7.2.1	Measurement of touch current		P
5.7.2.2	Measurement of voltage		P
5.7.3	Equipment set-up, supply connections and earth connections		P
5.7.4	Unearthed accessible parts		N/A
5.7.5	Earthed accessible conductive parts		N/A
5.7.6	Requirements when touch current exceeds ES2 limits		N/A
	Protective conductor current (mA)		N/A
	Instructional Safeguard		N/A
5.7.7	Prospective touch voltage and touch current associated with external circuits		N/A
5.7.7.1	Touch current from coaxial cables		N/A
5.7.7.2	Prospective touch voltage and touch current associated with paired conductor cables		N/A
5.7.8	Summation of touch currents from external circuits		N/A
	a) Equipment connected to earthed external circuits, current (mA)		N/A
	b) Equipment connected to unearthed external circuits, current (mA)		N/A
5.8	Backfeed safeguard in battery backed up supplies		N/A
	Mains terminal ES		N/A
	Air gap (mm)		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
6	ELECTRICALLY- CAUSED FIRE		P
6.2	Classification of PS and PIS		P
6.2.2	Power source circuit classifications	(See appended table 6.2.2)	P
6.2.3	Classification of potential ignition sources		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	No ignition and attainable temperature value less than 90 % defined by ISO 871 or less than 300 °C for unknown materials	(See appended table B.1.5 and B.3)	P
	Combustible materials outside fire enclosure.....		N/A
6.4	Safeguards against fire under single fault conditions		P
6.4.1	Safeguard method		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	Supplementary safeguards		N/A
6.4.3.2	Single Fault Conditions		N/A
	Special conditions for temperature limited by fuse		N/A
6.4.4	Control of fire spread in PS1 circuits		N/A
6.4.5	Control of fire spread in PS2 circuits		P
6.4.5.2	Supplementary safeguards		P
6.4.6	Control of fire spread in PS3 circuits	Compliance detailed as follows: - Printed board: rated V-0 - Wire insulation: complying with Clause 6. - All other components: at least V-2 except for parts mounted on min. V-1 material or small parts of combustible material) with mass less than 4g) or components complying to relevant IEC standard. - Isolating transformer: complying with G.5.3. - Fire enclosure rated V-0 used.	P
6.4.7	Separation of combustible materials from a PIS	See 6.4.8.4	N/A
6.4.7.2	Separation by distance		N/A
6.4.7.3	Separation by a fire barrier		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
6.4.8	Fire enclosures and fire barriers	Fire enclosure used	P
6.4.8.2	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	Enclosure material: V-0	P
6.4.8.3	Constructional requirements for a fire enclosure and a fire barrier		N/A
6.4.8.3.1	Fire enclosure and fire barrier openings		N/A
6.4.8.3.2	Fire barrier dimensions		N/A
6.4.8.3.3	Top openings and properties		N/A
	Openings dimensions (mm):	No openings	N/A
6.4.8.3.4	Bottom openings and properties		N/A
	Openings dimensions (mm):	No openings	N/A
	Flammability tests for the bottom of a fire enclosure		N/A
	Instructional Safeguard :		N/A
6.4.8.3.5	Side openings and properties		N/A
	Openings dimensions (mm):	No openings	N/A
6.4.8.3.6	Integrity of a fire enclosure, condition met: a), b) or c):		N/A
6.4.8.4	Separation of a PIS from a fire enclosure and a fire barrier distance (mm) or flammability rating.....:	Plastic enclosure is made of V-0 class material	P
6.4.9	Flammability of insulating liquid :		N/A
6.5	Internal and external wiring		P
6.5.1	General requirements		P
6.5.2	Requirements for interconnection to building wiring:		N/A
6.5.3	Internal wiring size (mm ²) for socket-outlets:		N/A
6.6	Safeguards against fire due to the connection to additional equipment		P

7	INJURY CAUSED BY HAZARDOUS SUBSTANCES	N/A
7.2	Reduction of exposure to hazardous substances	N/A
7.3	Ozone exposure	N/A
7.4	Use of personal safeguards or personal protective equipment (PPE)	N/A
	Personal safeguards and instructions.....:	—
7.5	Use of instructional safeguards and instructions	N/A
	Instructional safeguard (ISO 7010):	—
7.6	Batteries and their protection circuits	N/A

8	MECHANICALLY-CAUSED INJURY	P
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Clause	Requirement + Test	Result - Remark	Verdict
8.2	Mechanical energy source classifications		P
8.3	Safeguards against mechanical energy sources		N/A
8.4	Safeguards against parts with sharp edges and corners		N/A
8.4.1	Safeguards		N/A
	Instructional Safeguard :		N/A
8.4.2	Sharp edges or corners		N/A
8.5	Safeguards against moving parts		N/A
8.5.1	Fingers, jewellery, clothing, hair, etc., contact with MS2 or MS3 parts		N/A
	MS2 or MS3 part required to be accessible for the function of the equipment		N/A
	Moving MS3 parts only accessible to skilled person		N/A
8.5.2	Instructional safeguard :		N/A
8.5.4	Special categories of equipment containing moving parts		N/A
8.5.4.1	General		N/A
8.5.4.2	Equipment containing work cells with MS3 parts		N/A
8.5.4.2.1	Protection of persons in the work cell		N/A
8.5.4.2.2	Access protection override		N/A
8.5.4.2.2.1	Override system		N/A
8.5.4.2.2.2	Visual indicator		N/A
8.5.4.2.3	Emergency stop system		N/A
	Maximum stopping distance from the point of activation (m) :		N/A
	Space between end point and nearest fixed mechanical part (mm)..... :		N/A
8.5.4.2.4	Endurance requirements		N/A
	Mechanical system subjected to 100 000 cycles of operation		N/A
	- Mechanical function check and visual inspection		N/A
	- Cable assembly :		N/A
8.5.4.3	Equipment having electromechanical device for destruction of media		N/A
8.5.4.3.1	Equipment safeguards		N/A
8.5.4.3.2	Instructional safeguards against moving parts :		
8.5.4.3.3	Disconnection from the supply		N/A
8.5.4.3.4	Cut type and test force (N) :		N/A
8.5.4.3.5	Compliance		N/A
8.5.5	High pressure lamps		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Explosion test		N/A
8.5.5.3	Glass particles dimensions (mm).....		N/A
8.6	Stability of equipment		N/A
8.6.1	General		N/A
	Instructional safeguard		N/A
8.6.2	Static stability		N/A
8.6.2.2	Static stability test		N/A
8.6.2.3	Downward force test		N/A
8.6.3	Relocation stability		N/A
	Wheels diameter (mm)		—
	Tilt test		N/A
8.6.4	Glass slide test		N/A
8.6.5	Horizontal force test		N/A
8.7	Equipment mounted to wall, ceiling or other structure		N/A
8.7.1	Mount means type		N/A
8.7.2	Test methods		N/A
	Test 1, additional downwards force (N)		N/A
	Test 2, number of attachment points and test force (N)		N/A
	Test 3 Nominal diameter (mm) and applied torque (Nm)		N/A
8.8	Handles strength		N/A
8.8.1	General		N/A
8.8.2	Handle strength test		N/A
	Number of handles		—
	Force applied (N)		—
8.9	Wheels or casters attachment requirements		N/A
8.9.2	Pull test		N/A
8.10	Carts, stands and similar carriers		N/A
8.10.1	General		N/A
8.10.2	Marking and instructions		N/A
8.10.3	Cart, stand or carrier loading test		N/A
	Loading force applied (N)		N/A
8.10.4	Cart, stand or carrier impact test		N/A
8.10.5	Mechanical stability		N/A
	Force applied (N)		—
8.10.6	Thermoplastic temperature stability		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
8.11	Mounting means for slide-rail mounted equipment (SRME)		N/A
8.11.1	General		N/A
8.11.2	Requirements for slide rails		N/A
	Instructional Safeguard :		N/A
8.11.3	Mechanical strength test		N/A
8.11.3.1	Downward force test, force (N) applied :		N/A
8.11.3.2	Lateral push force test		N/A
8.11.3.3	Integrity of slide rail end stops		N/A
8.11.4	Compliance		N/A
8.12	Telescoping or rod antennas		N/A
	Button/ball diameter (mm)..... :		—

9	THERMAL BURN INJURY		P
9.2	Thermal energy source classifications		P
9.3	Touch temperature limits		P
9.3.1	Touch temperatures of accessible parts..... :	(See appended table 5.4.1.4, 9.3, B.1.5, B.2.6)	P
9.3.2	Test method and compliance		P
9.4	Safeguards against thermal energy sources		P
9.5	Requirements for safeguards		P
9.5.1	Equipment safeguard		P
9.5.2	Instructional safeguard :		N/A
9.6	Requirements for wireless power transmitters		N/A
9.6.1	General		N/A
9.6.2	Specification of the foreign objects		N/A
9.6.3	Test method and compliance..... :		N/A

10	RADIATION		N/A
10.2	Radiation energy source classification		N/A
10.2.1	General classification		N/A
	Lasers..... :		—
	Lamps and lamp systems :		—
	Image projectors :		—
	X-Ray :		—
	Personal music player..... :		—
10.3	Safeguards against laser radiation		N/A
	The standard(s) equipment containing laser(s)		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	comply..... :		
10.4	Safeguards against optical radiation from lamps and lamp systems (including LED types)		N/A
10.4.1	General requirements		N/A
	Instructional safeguard provided for accessible radiation level needs to exceed		N/A
	Risk group marking and location :		N/A
	Information for safe operation and installation		N/A
10.4.2	Requirements for enclosures		N/A
	UV radiation exposure..... :		N/A
10.4.3	Instructional safeguard..... :		N/A
10.5	Safeguards against X-radiation		N/A
10.5.1	Requirements		N/A
	Instructional safeguard for skilled persons..... :		—
10.5.3	Maximum radiation (pA/kg) :		—
10.6	Safeguards against acoustic energy sources		N/A
10.6.1	General		N/A
10.6.2	Classification		N/A
	Acoustic output $L_{Aeq,T}$, dB(A) :		N/A
	Unweighted RMS output voltage (mV) :		N/A
	Digital output signal (dBFS) :		N/A
10.6.3	Requirements for dose-based systems		N/A
10.6.3.1	General requirements		N/A
10.6.3.2	Dose-based warning and automatic decrease		N/A
10.6.3.3	Exposure-based warning and requirements		N/A
	30 s integrated exposure level (MEL30)..... :		N/A
	Warning for $MEL \geq 100$ dB(A)..... :		N/A
10.6.4	Measurement methods		N/A
10.6.5	Protection of persons		N/A
	Instructional safeguards :		N/A
10.6.6	Requirements for listening devices (headphones, earphones, etc.)		N/A
10.6.6.1	Corded listening devices with analogue input		N/A
	Listening device input voltage (mV) :		N/A
10.6.6.2	Corded listening devices with digital input		N/A
	Max. acoustic output $L_{Aeq,T}$, dB(A) :		N/A
10.6.6.3	Cordless listening devices		N/A
	Max. acoustic output $L_{Aeq,T}$, dB(A) :		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

B	NORMAL OPERATING CONDITION TESTS, ABNORMAL OPERATING CONDITION TESTS AND SINGLE FAULT CONDITION TESTS		P
B.1	General		P
B.1.5	Temperature measurement conditions		P
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		N/A
B.2.3	Supply voltage and tolerances	+10% and -10% for AC mains	P
B.2.5	Input test.....	(See appended table B.2.5)	P
B.3	Simulated abnormal operating conditions		P
B.3.1	General		P
B.3.2	Covering of ventilation openings	No ventilation openings	N/A
	Instructional safeguard.....		N/A
B.3.3	DC mains polarity test	A.C. mains supply only	N/A
B.3.4	Setting of voltage selector	No such voltage selector	N/A
B.3.5	Maximum load at output terminals	(See appended table B.3, B.4)	P
B.3.6	Reverse battery polarity		N/A
B.3.7	Audio amplifier abnormal operating conditions		N/A
B.3.8	Safeguards functional during and after abnormal operating conditions	(See appended table B.3, B.4)	P
B.4	Simulated single fault conditions		P
B.4.1	General		P
B.4.2	Temperature controlling device		N/A
B.4.3	Blocked motor test		N/A
B.4.4	Functional insulation		P
B.4.4.1	Short circuit of clearances for functional insulation		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		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 disconnection of passive components	(See appended table B.3, B.4)	P
B.4.7	Continuous operation of components		N/A
B.4.8	Compliance during and after single fault conditions	(See appended table B.3, B.4)	P

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Clause	Requirement + Test	Result - Remark	Verdict
B.4.9	Battery charging and discharging under single fault conditions		N/A
C	UV RADIATION		N/A
C.1	Protection of materials in equipment from 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 test		N/A
C.2.4	Xenon-arc light-exposure test		N/A
D	TEST GENERATORS		P
D.1	Impulse test generators		N/A
D.2	Antenna interface test generator		P
D.3	Electronic pulse generator		N/A
E	TEST CONDITIONS FOR EQUIPMENT CONTAINING AUDIO AMPLIFIERS		N/A
E.1	Electrical energy source classification for audio signals		N/A
	Maximum non-clipped output power (W)		—
	Rated load impedance (Ω)		—
	Open-circuit output voltage (V)		—
	Instructional safeguard.....		—
E.2	Audio amplifier normal operating conditions		N/A
	Audio signal source type		—
	Audio output power (W)		—
	Audio output voltage (V).....		—
	Rated load impedance (Ω)		—
	Requirements for temperature measurement		N/A
E.3	Audio amplifier abnormal operating conditions		N/A
F	EQUIPMENT MARKINGS, INSTRUCTIONS, AND INSTRUCTIONAL SAFEGUARDS		P
F.1	General		P
	Language	English	—
F.2	Letter symbols and graphical symbols		P
F.2.1	Letter symbols according to IEC60027-1		P
F.2.2	Graphic symbols according to IEC, ISO or manufacturer specific		P
F.3	Equipment markings		P
F.3.1	Equipment marking locations		P

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Clause	Requirement + Test	Result - Remark	Verdict
F.3.2	Equipment identification markings		P
F.3.2.1	Manufacturer identification	See copy of marking plate for details	P
F.3.2.2	Model identification	See copy of marking plate for details	P
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 the supply voltage	~ or AC	P
F.3.3.4	Rated voltage	100-240V	P
F.3.3.5	Rated frequency	50/60Hz	P
F.3.3.6	Rated current or rated power	0.3A	P
F.3.3.7	Equipment with multiple supply connections		N/A
F.3.4	Voltage setting device		N/A
F.3.5	Terminals and operating devices		P
F.3.5.1	Mains appliance outlet and socket-outlet markings	No appliance-outlet or socket-outlet used	N/A
F.3.5.2	Switch position identification marking		N/A
F.3.5.3	Replacement fuse identification and rating markings.....	The fuses are located within the equipment and not replaceable by an ordinary person or an instructed person. The fuse rating marked on PCB with FR1 15R/1W, 10R/1W	P
	Instructional safeguards for neutral fuse		N/A
F.3.5.4	Replacement battery identification marking		N/A
F.3.5.5	Neutral conductor terminal		N/A
F.3.5.6	Terminal marking location		N/A
F.3.6	Equipment markings related to equipment classification		P
F.3.6.1	Class I equipment		N/A
F.3.6.1.1	Protective earthing conductor terminal		N/A
F.3.6.1.2	Protective bonding conductor terminals		N/A
F.3.6.2	Equipment class marking	 used	P
F.3.6.3	Functional earthing terminal marking		N/A
F.3.7	Equipment IP rating marking.....	IPX0	N/A
F.3.8	External power supply output marking.....	See copy of marking plate	P
F.3.9	Durability, legibility and permanence of marking		P
F.3.10	Test for permanence of markings		P

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Clause	Requirement + Test	Result - Remark	Verdict
F.4	Instructions		P
	a) Information prior to installation and initial use		P
	b) Equipment for use in locations where children not likely to be present		N/A
	c) Instructions for installation and interconnection		N/A
	d) Equipment intended for use only in restricted access area		N/A
	e) Equipment intended to be fastened in place		N/A
	f) Instructions for audio equipment terminals		N/A
	g) Protective earthing used as a safeguard		N/A
	h) Protective conductor current exceeding ES2 limits		N/A
	i) Graphic symbols used on equipment	Class II symbols	P
	j) Permanently connected equipment not provided with all-pole mains switch		N/A
	k) Replaceable components or modules providing safeguard function		N/A
	l) Equipment containing insulating liquid		N/A
	m) Installation instructions for outdoor equipment		N/A
F.5	Instructional safeguards		P
G	COMPONENTS		P
G.1	Switches		N/A
G.1.1	General	No switches used	N/A
G.1.2	Ratings, endurance, spacing, maximum load		N/A
G.1.3	Test method and compliance		N/A
G.2	Relays		N/A
G.2.1	Requirements	No Relays used	N/A
G.2.2	Overload test		N/A
G.2.3	Relay controlling connectors supplying power to other equipment		N/A
G.2.4	Test method and compliance		N/A
G.3	Protective devices		P
G.3.1	Thermal cut-offs		N/A
	Thermal cut-outs separately approved according to IEC 60730 with conditions indicated in a) & b)		N/A
	Thermal cut-outs tested as part of the equipment as indicated in c)		N/A
G.3.1.2	Test method and compliance		N/A
G.3.2	Thermal links		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
G.3.2.1	a) Thermal links tested separately according to IEC 60691 with specifics		N/A
	b) Thermal links tested as part of the equipment		N/A
G.3.2.2	Test method and compliance		N/A
G.3.3	PTC thermistors		N/A
G.3.4	Overcurrent protection devices	(See appended table 4.1.2 and B.4)	P
G.3.5	Safeguards components not mentioned in G.3.1 to G.3.4		N/A
G.3.5.1	Non-resettable devices suitably rated and marking provided		N/A
G.3.5.2	Single faults conditions		N/A
G.4	Connectors		P
G.4.1	Spacings		P
G.4.2	Mains connector configuration	Attachment Plug used.	P
G.4.3	Plug is shaped that insertion into mains socket-outlets or appliance coupler is unlikely	Mismating of output connectors to mains plugs or sockets are impossible	P
G.5	Wound components		P
G.5.1	Wire insulation in wound components	Certified triple insulation wire used.	P
G.5.1.2	Protection against mechanical stress	Separated by insulation tube	P
G.5.2	Endurance test		N/A
G.5.2.1	General test requirements		N/A
G.5.2.2	Heat run test		N/A
	Test time (days per cycle)		—
	Test temperature (°C)		—
G.5.2.3	Wound components supplied from the mains		N/A
G.5.2.4	No insulation breakdown		N/A
G.5.3	Transformers		P
G.5.3.1	Compliance method	Comply with the requirements as below	P
	Position.....	T1	P
	Method of protection	Electronic protection	P
G.5.3.2	Insulation	Primary windings and secondary windings are separated by Reinforced insulation (The core is considered as primary part as it is not isolated from Primary)	P

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Clause	Requirement + Test	Result - Remark	Verdict
	Protection from displacement of windings	Fixed by bobbin and insulation tape	—
G.5.3.3	Transformer overload tests	(See appended table B.3, B.4)	P
G.5.3.3.1	Test conditions		P
G.5.3.3.2	Winding temperatures		P
G.5.3.3.3	Winding temperatures - alternative test method		N/A
G.5.3.4	Transformers using FIW		N/A
G.5.3.4.1	General		N/A
	FIW wire nominal diameter		—
G.5.3.4.2	Transformers with basic insulation only		N/A
G.5.3.4.3	Transformers with double insulation or reinforced insulation		N/A
G.5.3.4.4	Transformers with FIW wound on metal or ferrite core		N/A
G.5.3.4.5	Thermal cycling test and compliance		N/A
G.5.3.4.6	Partial discharge test		N/A
G.5.3.4.7	Routine test		N/A
G.5.4	Motors		N/A
G.5.4.1	General requirements		N/A
G.5.4.2	Motor overload test conditions		N/A
G.5.4.3	Running overload test		N/A
G.5.4.4.2	Locked-rotor overload test		N/A
	Test duration (days)		—
G.5.4.5	Running overload test for DC motors		N/A
G.5.4.5.2	Tested in the unit		N/A
G.5.4.5.3	Alternative method		N/A
G.5.4.6	Locked-rotor overload test for DC motors		N/A
G.5.4.6.2	Tested in the unit		N/A
	Maximum Temperature		N/A
G.5.4.6.3	Alternative method		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		—
G.6	Wire Insulation		P
G.6.1	General	Approved TIW used in transformer as secondary winding	P
G.6.2	Enamelled winding wire insulation		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
G.7	Mains supply cords		N/A
G.7.1	General requirements		N/A
	Type		—
G.7.2	Cross sectional area (mm ² or AWG).....		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)		N/A
G.7.3.2.2	Strain relief mechanism failure		N/A
G.7.3.2.3	Cord sheath or jacket position, distance (mm).....		N/A
G.7.3.2.4	Strain relief and cord anchorage material		N/A
G.7.4	Cord Entry		N/A
G.7.5	Non-detachable cord bend protection		N/A
G.7.5.1	Requirements		N/A
G.7.5.2	Test method and compliance		N/A
	Overall diameter or minor overall dimension, <i>D</i> (mm)		—
	Radius of curvature after test (mm)		—
G.7.6	Supply wiring space		N/A
G.7.6.1	General requirements		N/A
G.7.6.2	Stranded wire		N/A
G.7.6.2.1	Requirements		N/A
G.7.6.2.2	Test with 8 mm strand		N/A
G.8	Varistors		N/A
G.8.1	General requirements		N/A
G.8.2	Safeguards against fire		N/A
G.8.2.1	General		N/A
G.8.2.2	Varistor overload test		N/A
G.8.2.3	Temporary overvoltage test		N/A
G.9	Integrated circuit (IC) current limiters		N/A
G.9.1	Requirements		N/A
	IC limiter output current (max. 5A)		—
	Manufacturers' defined drift		—
G.9.2	Test Program		N/A
G.9.3	Compliance		N/A
G.10	Resistors		N/A
G.10.1	General		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
G.10.2	Conditioning		N/A
G.10.3	Resistor test		N/A
G.10.4	Voltage surge test		N/A
G.10.5	Impulse test		N/A
G.10.6	Overload test		N/A
G.11	Capacitors and RC units		P
G.11.1	General requirements	Approval Y1 type capacitor provide, see table 4.1.2 for details	P
G.11.2	Conditioning of capacitors and RC units		P
G.11.3	Rules for selecting capacitors		P
G.12	Optocouplers		N/A
	Optocouplers comply with IEC 60747-5-5 with specifics		N/A
	Type test voltage $V_{ini,a}$	Min. 4000Vdc	—
	Routine test voltage, $V_{ini,b}$	Min. 4000Vdc	—
G.13	Printed boards		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 or over the outer surface of coated printed boards complied with the minimum clearance and creepage requirements of 5.4.2 and 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
G.13.5	Insulation between conductors on different surfaces		N/A
	Distance through insulation.....:		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.13.6.2	Test method and compliance		N/A
G.14	Coating on components terminals		N/A
G.14.1	Requirements		N/A
G.15	Pressurized liquid filled components		N/A
G.15.1	Requirements		N/A
G.15.2	Test methods and compliance		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
G.15.2.1	Hydrostatic pressure test		N/A
G.15.2.2	Creep resistance test		N/A
G.15.2.3	Tubing and fittings compatibility test		N/A
G.15.2.4	Vibration test		N/A
G.15.2.5	Thermal cycling test		N/A
G.15.2.6	Force test		N/A
G.15.3	Compliance		N/A
G.16	IC including capacitor discharge function (ICX)		N/A
G.16.1	Condition for fault tested is not required		N/A
	ICX with associated circuitry tested in equipment		N/A
	ICX tested separately		N/A
G.16.2	Tests		N/A
	Smallest capacitance and smallest resistance specified by ICX manufacturer for impulse test		—
	Mains voltage that impulses to be superimposed on		—
	Largest capacitance and smallest resistance for ICX tested by itself for 10000 cycles test		—
G.16.3	Capacitor discharge test		N/A
H	CRITERIA FOR TELEPHONE RINGING SIGNALS		N/A
H.1	General		N/A
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		N/A
H.3.2.2	Tripping device		N/A
H.3.2.3	Monitoring voltage (V)		N/A
J	INSULATED WINDING WIRES FOR USE WITHOUT INTERLEAVED INSULATION		P
J.1	General		P
	Winding wire insulation	Approved triple insulated wires complied with Annex J of IEC 62368-1	—

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Clause	Requirement + Test	Result - Remark	Verdict
	Solid round winding wire, diameter (mm).....:		N/A
	Solid square and rectangular (flatwise bending) winding wire, cross-sectional area (mm ²)		N/A
J.2/J.3	Tests and Manufacturing	(See separate test report)	—
K	SAFETY INTERLOCKS		N/A
K.1	General requirements		N/A
	Instructional safeguard.....:	No safety interlocks inside the EUT	N/A
K.2	Components of safety interlock safeguard mechanism		N/A
K.3	Inadvertent change of operating mode		N/A
K.4	Interlock safeguard override		N/A
K.5	Fail-safe		N/A
K.5.1	Under single fault condition		N/A
K.6	Mechanically operated safety interlocks		N/A
K.6.1	Endurance requirement		N/A
K.6.2	Test method and compliance		N/A
K.7	Interlock circuit isolation		N/A
K.7.1	Separation distance for contact gaps & interlock circuit elements		N/A
	In circuit connected to mains, separation distance for contact gaps (mm)		N/A
	In circuit isolated from mains, separation distance for contact gaps (mm)		N/A
	Electric strength test before and after the test of K.7.2		N/A
K.7.2	Overload test, Current (A)		N/A
K.7.3	Endurance test		N/A
K.7.4	Electric strength test		N/A
L	DISCONNECT DEVICES		P
L.1	General requirements	The mains plug used as disconnect device	P
L.2	Permanently connected equipment		N/A
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
	Instructional safeguard.....:		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
M	EQUIPMENT CONTAINING BATTERIES AND THEIR PROTECTION CIRCUITS		N/A
M.1	General requirements		N/A
M.2	Safety of batteries and their cells		N/A
M.2.1	Batteries and their cells comply with relevant IEC standards.....:		N/A
M.3	Protection circuits for batteries provided within the equipment		N/A
M.3.1	Requirements		N/A
M.3.2	Test method		N/A
	Overcharging of a rechargeable battery		N/A
	Excessive discharging		N/A
	Unintentional charging of a non-rechargeable battery		N/A
	Reverse charging of a rechargeable battery		N/A
M.3.3	Compliance		N/A
M.4	Additional safeguards for equipment containing a portable secondary lithium battery		N/A
M.4.1	General		N/A
M.4.2	Charging safeguards		N/A
M.4.2.1	Requirements		N/A
M.4.2.2	Compliance		N/A
M.4.3	Fire enclosure		N/A
M.4.4	Drop test of equipment containing a secondary lithium battery		N/A
M.4.4.2	Preparation and procedure for the drop test		N/A
M.4.4.3	Drop, Voltage on reference and dropped batteries (V); voltage difference during 24 h period (%):		N/A
M.4.4.4	Check of the charge/discharge function		N/A
M.4.4.5	Charge / discharge cycle test		N/A
M.4.4.6	Compliance		N/A
M.5	Risk of burn due to short-circuit during carrying		N/A
M.5.1	Requirement		N/A
M.5.2	Test method and compliance		N/A
M.6	Safeguards against short-circuits		N/A
M.6.1	External and internal faults		N/A
M.6.2	Compliance		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
	Calculated hydrogen generation rate		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
M.7.2	Test method and compliance		N/A
	Minimum air flow rate, Q (m ³ /h)		N/A
M.7.3	Ventilation tests		N/A
M.7.3.1	General		N/A
M.7.3.2	Ventilation test – alternative 1		N/A
	Hydrogen gas concentration (%)		N/A
M.7.3.3	Ventilation test – alternative 2		N/A
	Obtained hydrogen generation rate		N/A
M.7.3.4	Ventilation test – alternative 3		N/A
	Hydrogen gas concentration (%)		N/A
M.7.4	Marking.....		N/A
M.8	Protection against internal ignition from external spark sources of batteries with aqueous electrolyte		N/A
M.8.1	General		N/A
M.8.2	Test method		N/A
M.8.2.1	General		N/A
M.8.2.2	Estimation of hypothetical volume V_z (m ³ /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		N/A
	Instructional safeguard.....		N/A
N	ELECTROCHEMICAL POTENTIALS		N/A
	Material(s) used		—
O	MEASUREMENT OF CREEPAGE DISTANCES AND CLEARANCES		P
	Value of X (mm)	Considered	—
P	SAFEGUARDS AGAINST CONDUCTIVE OBJECTS		N/A
P.1	General	No opening	N/A
P.2	Safeguards against entry or consequences of entry of a foreign object		N/A
P.2.1	General	No opening	N/A
P.2.2	Safeguards against entry of a foreign object		N/A
	Location and Dimensions (mm)		—
P.2.3	Safeguards against the consequences of entry of a foreign object		N/A
P.2.3.1	Safeguard requirements		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	The ES3 and PS3 keep-out volume in Figure P.3 not applicable to transportable equipment		N/A
	Transportable equipment with metalized plastic parts		N/A
P.2.3.2	Consequence of entry test		N/A
P.3	Safeguards against spillage of internal liquids		N/A
P.3.1	General		N/A
P.3.2	Determination of spillage consequences		N/A
P.3.3	Spillage safeguards		N/A
P.3.4	Compliance		N/A
P.4	Metallized coatings and adhesives securing parts		N/A
P.4.1	General		N/A
P.4.2	Tests		N/A
	Conditioning, T _c (°C)		—
	Duration (weeks)		—
Q	CIRCUITS INTENDED FOR INTERCONNECTION WITH BUILDING WIRING		P
Q.1	Limited power sources		P
Q.1.1	Requirements		P
	a) Inherently limited output		N/A
	b) Impedance limited output		N/A
	c) Regulating network limited output		P
	d) Overcurrent protective device limited output		N/A
	e) IC current limiter complying with G.9		N/A
Q.1.2	Test method and compliance	(See appended table Q.1)	P
	Current rating of overcurrent protective device (A)		N/A
Q.2	Test for external circuits – paired conductor cable		N/A
	Maximum output current (A)		N/A
	Current limiting method		—
R	LIMITED SHORT CIRCUIT TEST		N/A
R.1	General		N/A
R.2	Test setup		N/A
	Overcurrent protective device for test		—
R.3	Test method		N/A
	Cord/cable used for test		—
R.4	Compliance		N/A

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
S	TESTS FOR RESISTANCE TO HEAT AND FIRE		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		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).....		—
S.3	Flammability test for the bottom of a fire enclosure		N/A
S.3.1	Mounting of samples		N/A
S.3.2	Test method and compliance		N/A
	Mounting of samples		—
	Wall thickness (mm).....		—
S.4	Flammability classification of materials		N/A
S.5	Flammability test for fire enclosure materials of equipment with a steady state power exceeding 4 000 W		N/A
	Samples, material		—
	Wall thickness (mm).....		—
	Conditioning (°C).....		—
T	MECHANICAL STRENGTH TESTS		P
T.1	General		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 T.4)	P
T.5	Steady force test, 250 N		N/A
T.6	Enclosure impact test		N/A
	Fall test		N/A
	Swing test		N/A
T.7	Drop test	(See appended table T.7)	P
T.8	Stress relief test	(See appended table T.8)	P

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
T.9	Glass Impact Test..... :		N/A
T.10	Glass fragmentation test		N/A
	Number of particles counted :		N/A
T.11	Test for telescoping or rod antennas		N/A
	Torque value (Nm) :		N/A
U	MECHANICAL STRENGTH OF CATHODE RAY TUBES (CRT) AND PROTECTION AGAINST THE EFFECTS OF IMPLOSION		N/A
U.1	General		N/A
	Instructional safeguard :		N/A
U.2	Test method and compliance for non-intrinsically protected CRTs		N/A
U.3	Protective screen		N/A
V	DETERMINATION OF ACCESSIBLE PARTS		P
V.1	Accessible parts of equipment		P
V.1.1	General		P
V.1.2	Surfaces and openings tested with jointed test probes		P
V.1.3	Openings tested with straight unjointed test probes		N/A
V.1.4	Plugs, jacks, connectors tested with blunt probe		N/A
V.1.5	Slot openings tested with wedge probe		N/A
V.1.6	Terminals tested with rigid test wire		N/A
V.2	Accessible part criterion		P
X	ALTERNATIVE METHOD FOR DETERMINING CLEARANCES FOR INSULATION IN CIRCUITS CONNECTED TO AN AC MAINS NOT EXCEEDING 420 V PEAK (300 V RMS)		N/A
	Clearance..... :		N/A
Y	CONSTRUCTION REQUIREMENTS FOR OUTDOOR ENCLOSURES		N/A
Y.1	General	Not such equipment	N/A
Y.2	Resistance to UV radiation		N/A
Y.3	Resistance to corrosion		N/A
Y.3	Resistance to corrosion		N/A
Y.3.1	Metallic parts of outdoor enclosures are resistant to effects of water-borne contaminants by :		N/A
Y.3.2	Test apparatus		N/A
Y.3.3	Water – saturated sulphur dioxide atmosphere		N/A
Y.3.4	Test procedure..... :		N/A
Y.3.5	Compliance		N/A
Y.4	Gaskets		N/A
Y.4.1	General		N/A
Y.4.2	Gasket tests		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
Y.4.3	Tensile strength and elongation tests		N/A
	Alternative test methods.....:		N/A
Y.4.4	Compression test		N/A
Y.4.5	Oil resistance		N/A
Y.4.6	Securing means	(See Annex P.4)	N/A
Y.5	Protection of equipment within an outdoor enclosure		N/A
Y.5.1	General		N/A
Y.5.2	Protection from moisture		N/A
	Relevant tests of IEC 60529 or Y.5.3.....:		N/A
Y.5.3	Water spray test		N/A
Y.5.4	Protection from plants and vermin		N/A
Y.5.5	Protection from excessive dust		N/A
Y.5.5.1	General		N/A
Y.5.5.2	IP5X equipment		N/A
Y.5.5.3	IP6X equipment		N/A
Y.6	Mechanical strength of enclosures		N/A
Y.6.1	General		N/A
Y.6.2	Impact test.....:		N/A

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict

5.2	TABLE: Classification of electrical energy sources						P
Supply Voltage	Location (e.g. circuit designation)	Test conditions	Parameters				ES Class
			U (V)	I (mA)	Type ¹⁾	Additional Info ²⁾	
Model: GLH0501000C							
264Va.c. 60Hz	Input terminal, All Internal circuits	Normal	--	--	--	--	ES3 (declared)
		Abnormal	--	--	--	--	
		Single fault – SC/OC	--	--	--	--	
264Va.c. 60Hz	Output “+” to “-”	Normal: Rated load	5.17	--	SS	DC	ES1
		Abnormal: output overload	4.99	--	SS	DC	
		Single fault: output SC	0.2	--	SS	DC	
		Single fault: T1 pin 5 to pin 6 SC	0.2	--	SS	DC	
		Single fault: D3 SC	0	--	SS	DC	
		Single fault: BD1 SC	0	--	SS	DC	
		Single fault: C1 SC	0	--	SS	DC	
		Single fault: C2 SC	0	--	SS	DC	
		Single fault: U1 Pin5,6 to 2 SC	0	--	SS	DC	
		Single fault: U1 Pin5,6 to 4 SC	0	--	SS	DC	
		Single fault: R6 SC	0	--	SS	DC	
264Va.c. 60Hz	Output to Earth	Normal: Rated load	210Vpk	0.368mA _{pk}	SS	60	ES1
		Abnormal: output overload	211Vpk	0.368mA _{pk}	SS	60	
		Single fault: output SC	--	0.01mA _{pk}	SS	60	
264Va.c. 60Hz	Enclosure to Earth	Normal: Rated load	10Vpk	0.008mA _{pk}	SS	60	ES1
		Abnormal: output overload	9Vpk	0.008mA _{pk}	SS	60	
		Single fault: output SC	--	--	--	--	

IEC 62368-1							
Clause	Requirement + Test			Result - Remark			Verdict
Model: GLH120100C							
264Va.c. 60Hz	Input terminal, All Internal circuits	Normal	--	--	--	--	ES3 (declared)
		Abnormal	--	--	--	--	
		Single fault – SC/OC	--	--	--	--	
264Va.c. 60Hz	Output “+” to “-”	Normal: Rated load	11.96	--	SS	DC	ES1
		Abnormal: output overload	11.88	--	SS	DC	
		Single fault: output SC	0.2	--	SS	DC	
		Single fault: T1 pin 5 to pin 6 SC	0.2	--	SS	DC	
		Single fault: D3 SC	0	--	SS	DC	
		Single fault: BD1 SC	0	--	SS	DC	
		Single fault: C1 SC	0	--	SS	DC	
		Single fault: C2 SC	0	--	SS	DC	
		Single fault: U1 Pin5,6 to 2 SC	0	--	SS	DC	
		Single fault: U1 Pin5,6 to 4 SC	0	--	SS	DC	
		Single fault: R6 SC	0	--	SS	DC	
264Va.c. 60Hz	Output to Earth	Normal: Rated load	212Vpk	0.367mApk	SS	60	ES1
		Abnormal: output overload	211Vpk	0.368mApk	SS	60	
		Single fault: output SC	--	0.01mApk	SS	60	
264Va.c. 60Hz	Enclosure to Earth	Normal: Rated load	10Vpk	0.008mApk	SS	60	ES1
		Abnormal: output overload	9Vpk	0.008mApk	SS	60	
		Single fault: output SC	--	--	--	--	
Supplementary information:							
1) Type: Steady state (SS), Capacitance (CP), Single pulse (SP), Repetitive pulses (RP), etc.							
2) Additional Info: Frequency, Pulse duration, Pulse off time, Capacitance value, etc.							

5.4.1.8	TABLE: Working voltage measurement	P
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IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict

Location	RMS voltage (V)	Peak voltage (V)	Frequency (Hz)	Comments
T1	265	524	54.1	Max. Vrms and Vpeak
Supplementary information:				
Input: 240V60Hz				

5.4.1.10.2	TABLE: Vicat softening temperature of thermoplastics			N/A
Method :			ISO 306 / B50	—
Object/ Part No./Material	Manufacturer/trademark	Thickness (mm)		T softening (°C)
--	--	--		--
--	--	--		--
Supplementary information:				
--				

5.4.1.10.3	TABLE: Ball pressure test of thermoplastics			P
Allowed impression diameter (mm)		≤ 2 mm		—
Object/Part No./Material	Manufacturer/trademark	Thickness (mm)	Test temperature (°C)	Impression diameter (mm)
Plug holder (Type: 940(f1))	SABIC INNOVATIVE PLASTICS US L L C	125	1.1	1.1
Supplementary information:				
Materials of bobbin are no need to conduct this test, see appended table 4.1.2.				

5.4.2, 5.4.3	TABLE: Minimum Clearances/Creepage distance							P
Clearance (cl) and creepage distance (cr) at/of/between:	U _p (V)	U _{rms} (V)	Freq ¹⁾ (Hz)	Required cl (mm)	cl (mm)	E.S. ²⁾ (V)	Required cr (mm)	cr (mm)
Line and Neutral before FR1(F*)	420	240	0.06	2.3	4.1	--	2.4	4.1
Two terminals of FR1(B*)	420	240	0.06	2.3	3.0	--	2.4	3.1
L trace to C3 trace (B*)	420	240	0.06	2.3	3.9	--	2.4	3.9
L trace to R2 trace (B*)	420	240	0.06	2.3	5.4	--	2.4	5.4
L to C3 body for model GLHXXYYYYYZ(B*)	420	240	0.06	2.3	3.3	--	2.4	3.3
L pin to C3 body for model G006AXXXYYYYYU(B*)	420	240	0.06	2.3	3.3	--	2.4	3.3

IEC 62368-1								
Clause	Requirement + Test				Result - Remark			Verdict

C1 body to outside enclosure for model GLHXXXYYYYZ(R*)	420	240	0.06	4.5	5.6	--	2.4	5.6
Nature trace to outside enclosure for model G006AXXXYYYYZ(R*)	420	240	0.06	4.5	5.2	--	4.8	5.2
CY1 two terminals(R*)	420	240	0.06	4.5	6.7	--	4.8	6.7
T1 primary winding to secondary winding pin (R*)	524	265	54.1	4.5	6.9	--	5.3	6.9
T1 core to secondary winding pin(R*)	524	265	54.1	4.5	7.6	--	5.3	7.6
Primary trace to secondary trace of PCB under T1(R*)	524	265	54.1	4.5	6.8	--	5.3	6.8
T1 core to sec. component USB(R*)	524	265	54.1	4.5	7.3	--	5.3	7.3
T1 core to sec. component output wire GLHXXXYYYYZ(R*)	524	265	54.1	4.5	6.7	--	5.3	6.7
Primary winding to sec. component C7(R*)	524	265	54.1	4.5	7.7	--	5.3	7.7

Supplementary information:

- Complete Electric Strength voltage (E.S. (V) when 5.4.2.4 applied)

*F=Functional insulation, B=Basic insulation, R=Reinforced insulation

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: IIIb

- 1) Core of transformer T1 is considered as primary part.
- 2) The secondary winding wire of T1 is approved reinforced insulation wire
- 3) If no specified, the worst condition was considered.
- 4) Mylar sheet between L pin to T1/C3 primary and secondary circuit as basic insulation
- 5) Mylar sheet between L pin to primary circuit primary and secondary circuit as basic insulation
- 6) Internal wire fixed by glue and solder.
- 7) Min.0.7 thickness bobbin material used between primary circuit and secondary circuit as reinforced insulation

Unit was evaluated for altitude up to 5000m above sea level correction factor for clearance is 1.48.

5.4.4.2	TABLE: Minimum distance through insulation				P
Distance through insulation (DTI) at/of	Peak voltage (V)	Insulation	Required DTI (mm)	Measured DTI (mm)	
Enclosure	524	--	0.4	1.5	
Bobbin of transformer	524	52.2	0.4	0.7	
Supplementary information:					

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Clause	Requirement + Test	Result - Remark	Verdict

*: All alternate materials listed in table 4.1.2 were considered.

5.4.4.9	TABLE: Solid insulation at frequencies >30 kHz					P
Insulation material	E_P	Frequency (kHz)	K_R	Thickness d (mm)	Insulation	V_{PW} (Vpk)
Bobbin of Transformer	--	52.2	0.71	0.7	Reinforced insulation	524
Enclosure	--	52.2	0.35	1.5	Reinforced insulation	524
Supplementary information:						
Alternative method used according to the electrical strength test carried out in 5.4.9.1, no breakdown phenomenon.						
For reinforced insulation: $1.2 \times 2 \times V_{PW} / K_R$, $1.2 \times 2 \times 524 / 0.35 = 3594V$, 4000Vdc applied on Electric strength tests, see details in table of 5.4.9.						

5.4.9	TABLE: Electric strength tests			P
Test voltage applied between:	Voltage shape (Surge, Impulse, AC, DC, etc.)	Test voltage (V)	Breakdown Yes / No	
Functional:				
--	--	--	--	
Basic/supplementary:				
L and N before fuse (FR1 disconnected)	DC	2500	No	
Mylar sheet #	DC	2500	No	
Reinforced:				
L/N to output	DC	4000	No	
L/N to enclosure(with metal foil)	DC	4000	No	
Transformer T1: primary to secondary winding pin	DC	4000	No	
Transformer T1: secondary winding pin to core	DC	4000	No	
1 layer of insulation tape #	DC	4000	No	
Transformer bobbin#	DC	4000	No	
Routine Tests:				
--	--	--	--	
Supplementary information:				
1) # Test repeated for all alternate materials listed in table 4.1.2.				
2) The routine test would be conducted in the factory.				
3) Alternating polarity for electric strength test of dc voltage.				
4) Core of transformer T1 is considered as primary part.				

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Clause	Requirement + Test	Result - Remark	Verdict

5.5.2.2	TABLE: Stored discharge on capacitors					N/A
Location	Supply voltage (V)	Operating and fault condition ¹⁾	Switch position	Measured voltage (Vpk)	ES Class	
264V, 60Hz	Phase to neutral	--	--	--	--	
264V, 60Hz	Phase to neutral	--	--	--	--	
Supplementary information:						
X-capacitors installed for testing: CX1= ±20%						
[] bleeding resistor rating:						
[] ICX:						
1) Normal operating condition (e.g., normal operation, or open fuse), SC= short circuit, OC= open circuit						

5.6.6	TABLE: Resistance of protective conductors and terminations					N/A
Location	Test current (A)	Duration (min)	Voltage drop (V)	Resistance (Ω)		
--	--	--	--	--	--	
Supplementary information:						
--						

5.7.4	TABLE: Unearthed accessible parts					N/A
Location	Operating and fault conditions	Supply Voltage (V)	Parameters			ES class
			Voltage (V _{rms} or V _{pk})	Current (A _{rms} or A _{pk})	Freq. (Hz)	
Plastic enclosure	Normal:	264	--	--	60	--
	Abnormal: Over load	264	--	--	60	--
	Single fault	264	--	--	60	--
Supplementary information:						
Abbreviation: SC= short circuit; OC= open circuit						

5.7.5	TABLE: Earthed accessible conductive part			N/A
Supply voltage (V)		264V/60Hz		—
Phase(s)		[x] Single Phase; [] Three Phase: [] Delta [] Wye		
Power Distribution System		[x] TN [] TT [] IT		
Location		Fault Condition No in IEC 60990 clause 6.2.2	Touch current (mA)	Comment
--		--	--	--
--		--	--	--
Supplementary Information:				

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Clause	Requirement + Test	Result - Remark	Verdict

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5.8	TABLE: Backfeed safeguard in battery backed up supplies					N/A
Location	Supply voltage (V)	Operating and fault condition	Time (s)	Open-circuit voltage (V)	Touch current (A)	ES Class
--	--	--	--	--	--	--
Supplementary information:						
Abbreviation: SC= short circuit, OC= open circuit						

6.2.2	TABLE: Power source circuit classifications					P
Location	Operating and fault condition	Voltage (V)	Current (A)	Max. Power ¹⁾ (W)	Time (S)	PS class
Model: GLH0501000C						
Output	worst case load fault (Normal)	4.75	1.18	5.61	1)	PS1
Output	worst case load fault (short circuit R6) +	0	0	0	1)	PS1
Output	worst case load fault (short circuit R9) &	0	0	0	1)	PS1
Output	worst case load fault (short circuit R10) &	0	0	0	1)	PS1
Model: GLH1200500C						
Output	worst case load fault (Normal)	11.70	0.63	7.37	1)	PS1
Output	worst case load fault (short circuit R6) +	0	0	0	1)	PS1
Output	worst case load fault (short circuit R9) &	0	0	0	1)	PS1
Output	worst case load fault (short circuit R10) &	0	0	0	1)	PS1
Supplementary information:						
Abbreviation: SC= short circuit; OC= open circuit						
1) Measured after 3 s for PS1 and measured after 5 s for PS2 and PS3.						
2) (+) FR1 opened, U1 damaged, no hazard ,(&) Unit shut down, no hazard						

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Clause	Requirement + Test	Result - Remark	Verdict

6.2.3.1	TABLE: Determination of Arcing PIS			P
Location	Open circuit voltage after 3 s (Vpk)	Measured r.m.s current (A)	Calculated value	Arcing PIS? Yes / No
All circuits/components (exclude the output terminal)	--	--	--	Yes
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 (Vp) and normal operating condition rms current (Irms) is greater than 15.				

6.2.3.2	TABLE: Determination of resistive PIS			P
Location		Operating and fault condition	Dissipate power (W)	Arcing PIS? Yes / No
All circuits/components		--	--	Yes
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.				

8.5.5	TABLE: High pressure lamp				N/A
Lamp manufacturer	Lamp type	Explosion method	Longest axis of glass particle (mm)	Particle found beyond 1 m Yes / No	
--	--	--	--	--	
Supplementary information:					
--					

9.6	TABLE: Temperature measurements for wireless power transmitters							N/A
Supply voltage (V)				---				
Max. transmit power of transmitter (W)				---				
Foreign objects	w/o receiver and direct contact		with receiver and direct contact		with receiver and at distance of 2 mm		with receiver and at distance of 5 mm	
	Object (°C)	Ambient (°C)	Object (°C)	Ambient (°C)	Object (°C)	Ambient (°C)	Object (°C)	Ambient (°C)
--	--	--	--	--	--	--	--	--
Supplementary information:								
--								

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Clause	Requirement + Test	Result - Remark	Verdict

5.4.1.4, 9.3, B.1.5, B.2.6	TABLE: Temperature measurements				P
Supply voltage (V)	90V/60Hz	90V/60Hz	264V/50Hz	264V/50Hz	—
Ambient temperature during test T_{amb} (°C)	See below				—
Maximum measured temperature T of part/at:	T (°C)				Allowed T_{max} (°C)
Model: GLH0501000C	Vertical	Horizontal	Vertical	Horizontal	--
Plug holder	38.1	37.7	36.0	35.4	120-(40-24.1)=104.1
Mylar sheet	59.9	57.6	55.5	52.7	110-(40-24.1)=94.1
Input wire	47.0	45.5	42.1	40.8	80-(40-24.1)=64.1
PCB under BD1	67.6	65.0	57.3	54.3	130-(40-24.1)=114.1
PCB under U1	77.2	75.4	73.7	71.3	130-(40-24.1)=114.1
L1	64.1	62.8	54.2	52.3	130-(40-24.1)=114.1
C1	66.0	66.3	59.0	58.4	105-(40-24.1)=89.1
C2	64.4	61.7	54.5	51.3	105-(40-24.1)=89.1
T1 winding	74.4	75.7	71.9	72.2	110-(40-24.1)=94.1
T1 core	70.8	73.0	68.6	69.8	110-(40-24.1)=94.1
CY1	55.9	54.7	54.0	52.3	125-(40-24.1)=109.1
C7	58.8	62.7	58.1	61.7	105-(40-24.1)=89.1
PCB under D3	87.5	89.9	86.7	88.8	130-(40-24.1)=114.1
Output wire	50.4	52.3	49.6	51.3	80-(40-24.1)=64.1
Enclosure inside of T1 top	52.0	54.5	50.8	52.3	120-(40-24.1)=104.1
Enclosure inside of T1 bottom	59.4	61.1	58.4	59.6	120-(40-24.1)=104.1
Enclosure outside of T1 top	42.7	44.0	41.4	42.6	77-(25.0-24.1)=76.1
Enclosure outside of T1 bottom	51.1	52.4	49.6	50.5	77-(25.0-24.1)=76.1
Ambient	24.3	24.2	24.2	24.1	--
Model: GLH1200500C					
Plug holder	40.0	38.2	36.6	33.7	120-(40-24.1)=104.1
Mylar sheet	61.2	61.3	53.5	51.5	110-(40-24.1)=94.1
Input wire	55.0	53.5	43.3	40.8	80-(40-

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Clause	Requirement + Test			Result - Remark	Verdict
					24.1)=64.1
PCB under BD1	69.3	68.8	58.5	56.1	130-(40-24.1)=114.1
PCB under U1	68.7	70.5	65.9	65.9	130-(40-24.1)=114.1
L1	63.5	60.6	52.4	48.3	130-(40-24.1)=114.1
C1	61.6	60.5	54.9	52.4	105-(40-24.1)=89.1
C2	64.1	62.5	53.8	50.1	105-(40-24.1)=89.1
T1 winding	70.2	70.9	67.7	67.5	110-(40-24.1)=94.1
T1 core	68.3	68.8	66.0	65.7	110-(40-24.1)=94.1
CY1	52.0	57.2	50.4	54.4	125-(40-24.1)=109.1
C7	55.3	56.3	55.3	56.4	105-(40-24.1)=89.1
PCB under D3	70.3	71.4	71.1	71.8	130-(40-24.1)=114.1
Output wire	43.0	44.8	42.6	44.7	80-(40-24.1)=64.1
Enclosure inside of T1 top	47.4	48.0	46.1	46.5	120-(40-24.1)=104.1
Enclosure inside of T1 bottom	52.8	54.1	52.7	53.2	120-(40-24.1)=104.1
Enclosure outside of T1 top	39.8	40.7	38.6	39.8	77-(25.0-24.1)=76.1
Enclosure outside of T1 bottom	44.4	45.2	43.9	43.5	77-(25.0-24.1)=76.1
Ambient	24.1	24.2	24.2	24.1	--
Model: G006A0501000C					
Plug holder	37.3	35.6	34.8	32.0	120-(40-24.1)=104.1
PCB under BD1	66.0	65.4	56.7	54.3	130-(40-24.1)=114.1
PCB under U1	66.9	68.8	63.2	63.3	130-(40-24.1)=114.1
L1	60.9	58.1	49.4	45.3	130-(40-24.1)=114.1
C1	58.5	57.3	52.7	50.4	105-(40-24.1)=89.1
C2	62.1	60.4	50.9	47.0	105-(40-24.1)=89.1
T1 winding	67.3	67.8	64.0	63.9	110-(40-24.1)=94.1
T1 core	64.7	65.0	63.1	62.7	110-(40-24.1)=94.1
CY1	49.1	54.1	48.6	52.7	125-(40-24.1)=109.1
C7	53.6	54.6	52.4	53.7	105-(40-24.1)=89.1
PCB under D3	67.5	68.7	67.4	68.2	130-(40-24.1)=114.1
Enclosure inside of T1 top	43.7	44.2	43.1	43.6	120-(40-24.1)=104.1

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Clause		Requirement + Test			Result - Remark			Verdict
Enclosure inside of T1 bottom		49.8	51.0	50.0	50.5	120-(40-24.1)=104.1		
Enclosure outside of T1 top		37.1	38.1	35.2	36.5	77-(25.0-24.1)=76.1		
Enclosure outside of T1 bottom		41.1	42.0	41.0	40.6	77-(25.0-24.1)=76.1		
Input wire		53.2	51.6	40.0	37.6	80-(40-24.1)=64.1		
Ambient		24.2	24.1	24.1	24.1	--		
Model: G006A1200500C								
Plug holder		37.3	35.6	34.8	32.0	120-(40-24.1)=104.1		
PCB under BD1		66.0	65.4	56.7	54.3	130-(40-24.1)=114.1		
PCB under U1		66.9	68.8	63.2	63.3	130-(40-24.1)=114.1		
L1		60.9	58.1	49.4	45.3	130-(40-24.1)=114.1		
C1		58.5	57.3	52.7	50.4	105-(40-24.1)=89.1		
C2		62.1	60.4	50.9	47.0	105-(40-24.1)=89.1		
T1 winding		67.3	67.8	64.0	63.9	110-(40-24.1)=94.1		
T1 core		64.7	65.0	63.1	62.7	110-(40-24.1)=94.1		
CY1		49.1	54.1	48.6	52.7	125-(40-24.1)=109.1		
C7		53.6	54.6	52.4	53.7	105-(40-24.1)=89.1		
PCB under D3		67.5	68.7	67.4	68.2	130-(40-24.1)=114.1		
Enclosure inside of T1 top		43.7	44.2	43.1	43.6	120-(40-24.1)=104.1		
Enclosure inside of T1 bottom		49.8	51.0	50.0	50.5	120-(40-24.1)=104.1		
Enclosure outside of T1 top		37.1	38.1	35.2	36.5	77-(25.0-24.1)=76.1		
Enclosure outside of T1 bottom		41.1	42.0	41.0	40.6	77-(25.0-24.1)=76.1		
Input wire		52.4	49.8	37.9	35.3	80-(40-24.1)=64.1		
Ambient		24.2	24.1	24.1	24.1	--		
Temperature T of winding:		t ₁ (°C)	R ₁ (Ω)	t ₂ (°C)	R ₂ (Ω)	T (°C)	Allowed T _{max} (°C)	Insulation class
--		--	--	--	--	--	--	--
Supplementary information:								
- Thermal coupler method used for above temperature tests.								
- The maximum operating temperature is 40°C.								
- Label up means the adaptor is placed on desk with rating label up position; Label down means the adaptor is placed on desk with rating label down position.								
- External surfaces touched occasionally for very short periodes: 1s<t<10s.								

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Clause	Requirement + Test	Result - Remark	Verdict

B.2.5		TABLE: Input test							P
U (V)	Hz	I (A)	I rated (A)	P (W)	P rated (W)	Fuse No	I fuse (A)	Condition/status	
Model: GLH0501000C									
90Vac	50Hz	0.128	--	7.54	-	FR1	0.128	Load with 5Vdc,1A	
90Vac	60Hz	0.129	--	7.55	-	FR1	0.129	Load with 5Vdc,1A	
100Vac	50Hz	0.116	0.4	7.43	-	FR1	0.116	Load with 5Vdc,1A	
100Vac	60Hz	0.116	0.4	7.44	-	FR1	0.116	Load with 5Vdc,1A	
240Vac	50Hz	0.063	0.4	7.66	-	FR1	0.063	Load with 5Vdc,1A	
240Vac	60Hz	0.063	0.4	7.62	-	FR1	0.063	Load with 5Vdc,1A	
264Vac	50Hz	0.060	--	7.79	-	FR1	0.060	Load with 5Vdc,1A	
264Vac	60Hz	0.060	--	7.75	-	FR1	0.060	Load with 5Vdc,1A	
Model: GLH1200500C									
90Vac	50Hz	0.136	--	8.18	-	FR1	0.136	Load with 12Vdc,0.5A	
90Vac	60Hz	0.139	--	8.19	-	FR1	0.139	Load with 12Vdc,0.5A	
100Vac	50Hz	0.127	0.4	8.12	-	FR1	0.127	Load with 12Vdc,0.5A	
100Vac	60Hz	0.128	0.4	8.14	-	FR1	0.128	Load with 12Vdc,0.5A	
240Vac	50Hz	0.070	0.4	8.48	-	FR1	0.070	Load with 12Vdc,0.5A	
240Vac	60Hz	0.070	0.4	8.42	-	FR1	0.070	Load with 12Vdc,0.5A	
264Vac	50Hz	0.066	--	8.63	-	FR1	0.066	Load with 12Vdc,0.5A	
264Vac	60Hz	0.066	--	8.59	-	FR1	0.066	Load with 12Vdc,0.5A	
Supplementary information:									
Equipment may be have rated current or rated power or both. Both should be measured									

B.3, B.4		TABLE: Abnormal operating and fault condition tests					P
Ambient temperature T _{amb} (°C)					See below		—
Power source for EUT: Manufacturer, model/type, outputrating...					See below		—
Component No.	Condition	Supply voltage (V)	Test time	Fuse no.	Fuse current (A)	Observation	
For model GLH0501000C							

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Clause	Requirement + Test			Result - Remark		Verdict
Output terminal	OL	264	5hrs52 min	FR1	0.060A to 0.064A to 0.067A to 0.002A	Output current >1.15A, circuit protect operated. The Max temperature obtained at 1.17A. NB, NC. Output: 0.2V Output to earth:0.365mA 1.T1 winding, 86.8°C 2. T1 core, 83.9°C 3. Enclosure outside near T1 top 55.0°C 4. Enclosure outside near T1 bottom 62.1°C 5.Ambient 24.2°C
Output terminal	OL	90	3hrs18 min	FR1	0.129A to 0.135A to 0.002A	Output current >1.1A, circuit protect operated. The Max temperature obtained at 1.15A. NB, NC. Output: 0.2V Output to earth:0.364mA 1.T1 winding, 88.8°C 2. T1 core, 83.3°C 3. Enclosure outside near T1 top 57.1°C 4. Enclosure outside near T1 bottom 62.7°C 5.Ambient 24.2°C
Output terminal	SC	264Vac	10min	FR1	0.060A to 0.006A	EUT shutdown immediately, recoverable. Input power and output power was less than normal operation, no temperature was recorded. NB, NC Output: 0.2V Output to earth:0.365mA
BD1 (Condition1)	SC	264Vac	1S	FR1	0.060A to 0A	FR1 opened immediately, NB/NC, no hazards. Output: 0V Output to earth:0.372mA
C1 (Condition1)	SC	264Vac	1S	FR1	0.060A to 0A	FR1 opened immediately, NB/NC, no hazards. Output: 0V Output to earth:0.372mA

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Clause	Requirement + Test			Result - Remark		Verdict
C2 (Condition1)	SC	264Vac	1S	FR1	0.060A to 0A	FR1 opened immediately, NB/NC, no hazards. Output: 0V Output to earth:0.372mA
U1 Pin 5,6-2 (Condition1)	SC	264Vac	1S	FR1	0.060A to 0A	FR1 open, U1 damaged, no hazard. NB, NC Output: 0V Output to earth:0.372mA
U1 Pin 5,6-4 (Condition1)	SC	264Vac	1S	FR1	0.060A to 0A	FR1 open, U1 damaged, no hazard. NB, NC Output: 0V Output to earth:0.372mA
R6 (Condition1)	SC	264Vac	1S	FR1	0.060A to 0A	FR1 open, U1 damaged, no hazard. NB, NC Output: 0V Output to earth:0.372mA
R9	SC	264Vac	10min	FR1	0.060A to 0.006A	EUT shutdown immediately, recoverable. Input power and output power was less than normal operation, no temperature was recorded. NB, NC Output: 0.2V Output to earth:0.365mA
R10	SC	264Vac	10min	FR1	0.060A to 0.006A	EUT shutdown immediately, recoverable. Input power and output power was less than normal operation, no temperature was recorded. NB, NC Output: 0.2V Output to earth:0.365mA
T1 Pin 1 to Pin 2	SC	264Vac	10min	FR1	0.060A to 0.006A	EUT shutdown immediately, recoverable. Input power and output power was less than normal operation, no temperature was recorded. NB, NC Output: 0.2V Output to earth:0.365mA
T1 Pin 3 to Pin 4	SC	264Vac	10min	FR1	0.060A to 0.006A	EUT shutdown immediately, recoverable. Input power and output power was less than normal operation, no temperature was recorded. NB, NC Output: 0.2V Output to earth:0.365mA

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Clause	Requirement + Test				Result - Remark	Verdict
T1 Pin 5 to Pin 6	SC	264Vac	10min	FR1	0.060A to 0.006A	EUT shutdown immediately, recoverable. Input power and output power was less than normal operation, no temperature was recorded. NB, NC Output: 0.2V Output to earth:0.365mA
D3	SC	264Vac	10min	FR1	0.060A to 0.006A	EUT shutdown immediately, recoverable. Input power and output power was less than normal operation, no temperature was recorded. NB, NC Output: 0.2V Output to earth:0.365mA
For model GLH1200500C						
Output terminal	OL	264	6hrs40 min	FR1	0.066A to 0.072A to 0.075A to 0.003A	Output current >0.61A, circuit protect operated. The Max temperature obtained at 0.62A. NB, NC. Output: 0.2V Output to earth:0.365mA 1.T1 winding, 95.8°C 2. T1 core, 94.1°C 3. Enclosure outside near T1 top 57.5°C 4. Enclosure outside near T1 bottom 61.6°C 5.Ambient 24.1°C
Output terminal	OL	90	4hrs00 min	FR1	0.139A to 0.146A to 0.002A	Output current >0.60A, circuit protect operated. The Max temperature obtained at 0.61A. NB, NC. Output: 0.2V Output to earth:0.365mA 1.T1 winding, 90.1°C 2. T1 core, 88.3°C 3. Enclosure outside near T1 top 56.2°C 4. Enclosure outside near T1 bottom 59.3°C 5.Ambient 24.1°C

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Clause	Requirement + Test				Result - Remark	Verdict
Output terminal	SC	264Vac	10min	FR1	0.066A to 0.006A	EUT shutdown immediately, recoverable. Input power and output power was less than normal operation, no temperature was recorded. NB, NC Output: 0.2V Output to earth:0.367mA
BD1 (Condition1)	SC	264Vac	1S	FR1	0.066A to 0A	FR1 opened immediately, NB/NC, no hazards. Output: 0V Output to earth:0.371mA
C1 (Condition1)	SC	264Vac	1S	FR1	0.066A to 0A	FR1 opened immediately, NB/NC, no hazards. Output: 0V Output to earth:0.371mA
C2 (Condition1)	SC	264Vac	1S	FR1	0.066A to 0A	FR1 opened immediately, NB/NC, no hazards. Output: 0V Output to earth:0.372mA
U1 Pin 5,6-2 (Condition1)	SC	264Vac	1S	FR1	0.066A to 0A	FR1 open, U1 damaged, no hazard. NB, NC Output: 0V Output to earth:0.372mA
U1 Pin 5,6-4 (Condition1)	SC	264Vac	1S	FR1	0.066A to 0A	FR1 open, U1 damaged, no hazard. NB, NC Output: 0V Output to earth:0.371mA
R6 (Condition1)	SC	264Vac	1S	FR1	0.066A to 0A	FR1 open, U1 damaged, no hazard. NB, NC Output: 0V Output to earth:0.371mA
R9	SC	264Vac	10min	FR1	0.066A to 0.006A	EUT shutdown immediately, recoverable. Input power and output power was less than normal operation, no temperature was recorded. NB, NC Output: 0.2V Output to earth:0.364mA

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Clause	Requirement + Test				Result - Remark	Verdict
R10	SC	264Vac	10min	FR1	0.066A to 0.006A	EUT shutdown immediately, recoverable. Input power and output power was less than normal operation, no temperature was recorded. NB, NC Output: 0.2V Output to earth:0.365mA
T1 Pin 1 to Pin 2	SC	264Vac	10min	FR1	0.066A to 0.006A	EUT shutdown immediately, recoverable. Input power and output power was less than normal operation, no temperature was recorded. NB, NC Output: 0.2V Output to earth:0.365mA
T1 Pin 3 to Pin 4	SC	264Vac	10min	FR1	0.066A to 0.006A	EUT shutdown immediately, recoverable. Input power and output power was less than normal operation, no temperature was recorded. NB, NC Output: 0.2V Output to earth:0.364mA
T1 Pin 5 to Pin 6	SC	264Vac	10min	FR1	0.066A to 0.006A	EUT shutdown immediately, recoverable. Input power and output power was less than normal operation, no temperature was recorded. NB, NC Output: 0.2V Output to earth:0.365mA
D3	SC	264Vac	10min	FR1	0.066A to 0.006A	EUT shutdown immediately, recoverable. Input power and output power was less than normal operation, no temperature was recorded. NB, NC Output: 0.2V Output to earth:0.365mA
For model G006A050100C						

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Clause	Requirement + Test			Result - Remark		Verdict
Output terminal	OL	264	6hrs46 min	FR1	0.066A to 0.072A to 0.076A to 0.003A	Output current >1.15A, circuit protect operated. The Max temperature obtained at 1.17A. NB, NC. Output: 0.2V Output to earth:0.365mA 1.T1 winding, 92.4°C 2. T1 core, 90.3°C 3. Enclosure outside near T1 top 54.3°C 4. Enclosure outside near T1 bottom 58.3°C 5.Ambient 24.1°C
Output terminal	OL	90	4hrs06 min	FR1	0.139A to 0.147A to 0.002A	Output current >1.1A, circuit protect operated. The Max temperature obtained at 1.15A. NB, NC. Output: 0.2V Output to earth:0.364mA 1.T1 winding, 86.5°C 2. T1 core, 85.2°C 3. Enclosure outside near T1 top 52.3°C 4. Enclosure outside near T1 bottom 56.0°C 5.Ambient 23.8°C
For model G006A12005000C						
Output terminal	OL	264	5hrs26 min	FR1	0.066A to 0.073A to 0.075A to 0.002A	Output current >0.61A, circuit protect operated. The Max temperature obtained at 0.62A. NB, NC. Output: 0.2V Output to earth:0.364mA 1.T1 winding, 90.3°C 2. T1 core, 89.6°C 3. Enclosure outside near T1 top 52.6°C 4. Enclosure outside near T1 bottom 50.8°C 5.Ambient 24.1°C

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Clause	Requirement + Test				Result - Remark	
Output terminal	OL	90	4hrs26 min	FR1	0.139A to 0.148A to 0.002A	Output current >0.60A, circuit protect operated. The Max temperature obtained at 0.61A. NB, NC. Output: 0.2V Output to earth:0.365mA 1.T1 winding, 84.9°C 2. T1 core, 83.8°C 3. Enclosure outside near T1 top 50.7°C 4. Enclosure outside near T1 bottom 55.9°C 5.Ambient 23.9°C
supplementary information:						
1) SC: short circuit, OL: overload, OC: open circuit; CD: components damaged; NB - No indication of dielectric breakdown;NC – Cheesecloth remained intact 2) The Hi-pot test conducted successfully after the completion of fault condition test; 3) FR1, All tests which fuse opened were tested with each source of fuse and same result observed. 4) During and after abnormal operating conditions, the output voltage did not increase by more than 10% of its rated output voltage under normal operating condition. 5) During and after single fault conditions, the output voltage did not increase by more than 10% of its rated output voltage under normal operating condition. 6) Transformer winding and core temperature limit is $148.9^{\circ}\text{C}=(175-10-(40-23.9))^{\circ}\text{C}$. 7) Enclosure outside surface temperature limit is $85.9^{\circ}\text{C}=(87-(25-23.9))^{\circ}\text{C}$.						

M.3	TABLE: Protection circuits for batteries provided within the equipment						N/A
Is it possible to install the battery in a reverse polarity position?						—	
Equipment Specification		Charging					
		Voltage (V)			Current (A)		
		--			--		
Manufacturer/type		Battery specification					
		Non-rechargeable batteries		Rechargeable batteries			
		Discharging current (A)	Unintentional charging current (A)	Charging		Discharging current (A)	Reverse charging current (A)
				Voltage (V)	Current (A)		
--		--	--	--	--	--	
Note: The tests of M.3.2 are applicable only when above appropriate data is not available.							
Specified battery temperature (°C).....				--			
Component No.	Fault condition	Charge/ discharge mode	Test time	Temp. (°C)	Current (A)	Voltage (V)	Observation
--	--	--	--	--	--	--	--
Supplementary information:							

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Clause	Requirement + Test	Result - Remark	Verdict

Abbreviation: SC= short circuit; OC= open circuit NL= no chemical leakage; NS= no spillage of liquid; NE= no explosion; NF= no emission of flame or expulsion of molten metal.

M.4.2	TABLE: Charging safeguards for equipment containing a secondary lithium battery					N/A
Maximum specified charging voltage (V)			--			—
Maximum specified charging current (A)			--			—
Highest specified charging temperature (°C)			--			
Lowest specified charging temperature (°C)			--			
Battery manufacturer/type	Operating and fault condition	Measurement			Observation	
		Charging voltage (V)	Charging current (A)	Temp. (°C)		
--	--	--	--	--	--	
Supplementary information:						
Abbreviation: SC= short circuit; OC= open circuit; MSCV= maximum specified charging voltage; MSCC= maximum specified charging current; HSCT= highest specified charging temperature; LSCT= lowest specified charging temperature						

Q.1	TABLE: Circuits intended for interconnection with building wiring (LPS)						P
Output Circuit	Condition	U _{oc} (V)	Time (s)	I _{sc} (A)		S (VA)	
				Meas.	Limit	Meas.	Limit
Output (GLH0501 000C)	Normal condition	5.17	After 5s	1.18	8	5.61	100
Output (GLH1200 500C)	Normal condition	11.96	After 5s	0.63	8	7.37	100
Output terminal	Single fault: R9 SC *	0	After 5s	0	8	0	100
Output terminal	Single fault: R10 SC #	0	After 5s	0	8	0	100
Output terminal	Single fault: R6 SC #	0	After 5s	0	8	0	100
Supplementary Information:							
SC – Short Circuit, OC – Open Circuit							
Note: * FR1 opened, U1 damaged, no hazard # Unit shut down, no hazard							

T.2, T.3, T.4, T.5	TABLE: Steady force test						P
Location/Part	Material	Thickness (mm)	Probe	Force (N)	Test Duration (s)	Observation	

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Clause	Requirement + Test			Result - Remark		Verdict
Top enclosure	*	1.5	--	100	5S	No damaged, no hazard
Side enclosure	*	1.5	--	100	5S	No damaged, no hazard
Bottom enclosure	*	1.5	--	100	5S	No damaged, no hazard
Internal Components	--	--	--	10	5S	No damaged, no hazard
Supplementary information:						
*The Enclosure material has been tested in table 4.1.2						

T.6, T.9	TABLE: Impact test				N/A
Location/Part	Material	Thickness (mm)	Height (mm)	Observation	
--	--	--	--	--	
Supplementary information:					
--					
T.7	TABLE: Drop test				P
Location/Part	Material	Thickness (mm)	Height (mm)	Observation	
Top	*	1.5	1000	No damaged, no hazard	
Side	*	1.5	1000	No damaged, no hazard	
Bottom	*	1.5	1000	No damaged, no hazard	
Supplementary information:					
*The Enclosure material has been tested in table 4.1.2 and all enclosure of different plug are considered.					

T.8	TABLE: Stress relief test				P
Location/Part	Material	Thickness (mm)	Oven Temperature (°C)	Duration (h)	Observation
Enclosure	*	1.5	87	7	No damaged, no hazard
Supplementary information:					
*The Enclosure material has been tested in table 4.1.2					

X	TABLE: Alternative method for determining minimum clearances distances			N/A
Clearance distanced between:	Peak of working voltage (V)	Required cl (mm)	Measured cl (mm)	
--	--	--	--	
Supplementary information:				
--				

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Clause	Requirement + Test	Result - Remark	Verdict

4.1.2	TABLE: Critical components information					P
Object / part No.	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹⁾	
Enclosure	SABIC INNOVATIVE PLASTICS US L L C	940(f1)	Rated V-0, min. thickness 1.5 mm, 120 °C	UL94 IEC/EN 62368-1	UL E121562 Tested in appliance	
Plug holder or sleeving	SABIC INNOVATIVE PLASTICS US L L C	940(f1)	Rated V-0, mm, 120 °C	UL94 IEC/EN 62368-1	UL E121562 Tested in appliance	
PCB	Interchangeable	Interchangeable	V-1 or better, 130 °C	UL 796 IEC/EN 62368-1	UL, CUL Tested in appliance	
Fusing Resistors (FR1)	SHENZHEN LANBAO ANKE ELECTRONICS CO LTD	RXF21	Rated 10R 1W or 15R 1W	UL 1412, IEC/EN 60065	UL, CUL E482793 VDE 40046884	
(Alternative)	JIEYANG MADEFORCE ELECTRONIC CO LTD	RX21-1W	Rated 10R 1W or 15R 1W	UL 1412, IEC/EN 62368-1	UL, CUL E358222 Tested in appliance	
(Alternative)	DONGGUAN SUYA ELECTRONIC CO LTD	RXF21	Rated 10R 1W or 15R 1W	UL 1412 IEC/EN 62368-1	UL, CUL E500121 VDE 40048272	
(Alternative)	ANHUI CHANGSHENG ELECTRONICS CO LTD	RXF-1W	Rated 10R 1W or 15R 1W	UL 1412 IEC/EN 62368-1	UL, CUL E306095 VDE 40024768	
Heat Shrinkable tube on FR1	Interchangeable	Interchangeable	VW-1, 125 °C, 600Vac	UL 224 IEC/EN 62368-1	UL, CUL Tested in appliance	
Diode bridge (BD1)	Interchangeable	Interchangeable	Min. 600V, Min. 0.5A	IEC/EN 62368-1	Tested in appliance	
Line filter (L1) (Optional)	Interchangeable	AL0510-222K	130 °C	IEC/EN 62368-1	Tested in appliance	
Capacitor (C1, C2)	Interchangeable	Interchangeable	Rated 1.0-15uF, Min. 400V, 105 °C	IEC/EN 62368-1	Tested in appliance	
Current sense resistor (R6, R7)	Interchangeable	Interchangeable	Min. 1.0 ohm, 1/4W.	IEC/EN 62368-1	Tested in appliance	
IC(U1)	Interchangeable	Interchangeable	Min.500V, Min.0.5A	IEC/EN 62368-1	Tested in appliance	
Y-Capacitor (CY1) (Optional)	JYH CHUNG ELECTRONICS CO LTD	JD	Max.2200pF, Min. 400Vac, 125°C, Y1 type	UL/IEC/EN 60384-14	VDE 137027 UL E187963	
(Alternative)	DONG GUAN CITY JIANKUN ELECTRONICS TECHNOLOGY CO LTD	JT for UL; JT series for VDE	Max. 2200pF, min. 250V, 125 °C. Y1 type	UL/IEC/EN 60384-14	UL E340699 VDE 40041534	

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Clause	Requirement + Test		Result - Remark		Verdict
(Alternative)	DONGGUAN QINHONG (QNR) ELECTRONIC TECHNOLOGY CO LTD	CT7 for UL; CT7 series for VDE	Max.2200pF, Min. 250Vac, 125°C, Y1 type	UL/IEC/EN 60384-14	VDE 40046285 UL E488626
(Alternative)	ZONKAS ELECTRONIC CO LTD	ZD	Max. 2200pF, Min. 400Vac, 125°C, Y1 type	UL/IEC/EN 60384-14	VDE 40017350 UL E258931
(Alternative)	SHANTOU HIGH-NEW TECHNOLOGY DEVELOPMNT ZONE SONGTIAN ENTERPRISE CO LTD	CD for UL; CD-Series for VDE	Max.2200pF, min. 250V, 125 °C. Y1 type	UL/IEC/EN 60384-14	UL E208107 VDE 40025754
(Alternative)	DONGGUAN CITY DAFU ELECTRONICS CO LTD	CT7 Y1 for UL; CT7 Y1 Series for VDE	Max. 2200pF, min. 250V, 125 °C. Y1 type	UL/IEC/EN 60384-14	UL E465278 VDE 40041523
(Alternative)	HONGZHI ENTERPRISES LTD	Y for UL; X1Y1 Series for VDE)	Max. 2200pF, 400V, 125 °C. Y1 type	UL/IEC/EN 60384-14	UL E192572 VDE 40038760
(Alternative)	South China Electronic Co Ltd	CY	Max. 2200pF, 400V, 125 °C. Y1 type	UL/IEC/EN 60384-14	UL, E492769 VDE 40045823
(Alternative)	MACROFAR ELECTRONICS TECHNOLOGY	HY	Max. 2200pF, 400V, 125 °C. Y1 type	UL /EN 60384-14	UL E481054 TUV RH R 50326364
(Alternative)	SHAN TOU DONG LING ELECTRONIC CO LTD	CT7 for UL; CT7 series for VDE	Max. 2200pF, 400V, 125 °C. Y1 type	UL/IEC/EN 60384-14	UL E494131 VDE 40046765
Transformer (T1)	SHENZHENSHI XINDAHUI ELECTRONICS CO LTD	GLH1205 GLH0510	130 °C	IEC/EN 62368-1	Tested in appliance
Insulation system	SHENZHENSHI XINDAHUI ELECTRONICS CO LTD	CCP-130-1	Class B	UL1446 IEC/EN 62368-1	UL E348674 Tested in appliance
Magnet wire of T1	Interchangeable	MW28, MW75, MW79, MW80, MW82, MW83, MW85	Min. 130 °C	UL 1446 IEC/EN 62368-1	UL Tested in appliance
Bobbin of T1	Chang Chun Plastics Co Ltd	T375J	V-0, 150 °C, min. thickness 0.7mm	UL 94, UL 746C IEC/EN 62368-1	ULE59481 Tested in appliance
(Alternative)	SUMITOMO BAKELITE CO LTD	PM-9820	V-0, 150 °C, min. thickness 0.7mm	UL 94, UL 746C IEC/EN 62368-1	UL E41429 Tested in appliance

IEC 62368-1					
Clause	Requirement + Test		Result - Remark		Verdict
Triple insulation wire of T1	DAH JIN TECHNOLOGY CO LTD	TLW-B, TLW-BB for VDE; TLW-BB(xx)(y)@ for UL	130°C	UL 2353 IEC/EN 62368-1	VDE 40008834 UL E236542
(Alternative)	FURUKAWA ELECTRIC CO LTD	TEX-E	130°C	UL 2353 IEC/EN 62368-1	VDE 006735 UL E206440
(Alternative)	TOTOKU ELECTRIC CO LTD	TIW-2LZX\$+ for UL; TIW-2LZ for VDE;	130°C	UL 2353 IEC/EN 60950-1	VDE 40005152 UL E166483
Insulation tape of T1	3M COMPANY ELECTRICAL MARKETS DIV (EMD)	1350T-1 (b), 1350T-2 (b)	130 °C	UL 510 IEC/EN 62368-1	UL E17385 Tested in appliance
(Alternative)	JINGJIANG YAHUA PRESSURE SENSITIVE GLUE CO LTD	PZ* (b)	130 °C	UL 510 IEC/EN 62368-1	UL E165111 Tested in appliance
Tube of T1	Great Holding Industrial Co Ltd	TFS, TFT	Min. 300V, 200 °C, VW-1	UL 224 IEC/EN 62368-1	UL E156256 Tested in appliance
Varnish of T1	John C Dolph Co	BC-346A, BC-346-A	155°C	UL 1446 IEC/EN 62368-1	UL E317427 Tested in appliance
(Alternative)	ELANTAS ZHUHAI CO LTD	468-2 (d), V1380	155°C	UL 1446 IEC/EN 62368-1	UL E314793 Tested in appliance
Mylar sheet (Between L pin to primary circuit) (only for model GLHXXXXYY YZ)	CHENGDU KANGLONGXI N PLASTICS CO LTD	KLX PP WT-10	V-0, 110 °C, min. thickness 0.18mm	UL94 IEC/EN 62368-1	UL, CUL E315185 Tested in appliance
Mylar sheet (between L pin to T1/C3)	CHENGDU KANGLONGXI N PLASTICS CO LTD	KLX PP WT-10	V-0, 110 °C, min. thickness 0.18mm	UL94 IEC/EN 62368-1	UL, CUL E315185 Tested in appliance
Input wire	Interchangeable	Interchangeable	Min. 300V, VW-1, Min. 80°C, Min. 28AWG.	UL 758 IEC/EN 62368-1	UL, Tested in appliance
Output wire (only for model GLHXXXXYY YZ)	Interchangeable	Interchangeable	Min. 300V, VW-1, Min. 80°C, Min. 28AWG.	UL 758 IEC/EN 62368-1	UL, Tested in appliance
Glue (Fix component)	Interchangeable	Interchangeable	Min. V-2. Min. 105 °C	UL 94 IEC/EN 62368-1	UL, Tested in appliance
Supplementary information:					
1) Provided evidence ensures the agreed level of compliance. See OD-CB2039.					
License available upon request.					

IEC62368_1E - ATTACHMENT			
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)			
Differences according to: EN IEC 62368-1:2020+A11:2020			
Attachment Form No.: EU_GD_IEC62368_1E			
Attachment Originator: UL(Demko)			
Master Attachment: 2021-02-04			
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	CENELEC COMMON MODIFICATIONS (EN)		P
	Clause numbers in the cells that are shaded light grey are clause references in EN IEC 62368-1:2020+A11:2020. All other clause numbers in that column, except for those in the paragraph below, refers to IEC 62368-1:2018. Clauses, subclauses, notes, tables, figures and annexes which are additional to those in IEC 62368-1:2018 are prefixed "Z".		P
	Add the following annexes: Annex ZA (normative) Normative references to international publications with their corresponding European publications Annex ZB (normative) Special national conditions Annex ZC (informative) A-deviations Annex ZD (informative) IEC and CENELEC code designations for flexible cords		P
1	Modification to Clause 3 .		
3.3.19	Sound exposure <i>Replace 3.3.19 of IEC 62368-1 with the following definitions:</i>		N/A
3.3.19.1	momentary exposure level, MEL metric for estimating 1 s sound exposure level from the HD 483-1 S2 test signal applied to both channels, based on EN 50332-1:2013, 4.2. Note 1 to entry: MEL is measured as A-weighted levels in dB. Note 2 to entry: See B.3 of EN 50332-3:2017 for additional information.		N/A

IEC62368_1E - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
3.3.19.3	sound exposure, E A-weighted sound pressure (p) squared and integrated over a stated period of time, T Note 1 to entry: The SI unit is $\text{Pa}^2 \text{ s}$. $E = \int_0^T p(t)^2 dt$		N/A
3.3.19.4	sound exposure level, SEL logarithmic measure of sound exposure relative to a reference value, E_0 , typically the 1 kHz threshold of hearing in humans. Note 1 to entry: SEL is measured as A-weighted levels in dB. $SEL = 10 \lg \left(\frac{E}{E_0} \right) \text{ dB}$ Note 2 to entry: See B.4 of EN 50332-3:2017 for additional information.		N/A
3.3.19.5	digital signal level relative to full scale, dBFS levels reported in dBFS are always r.m.s. Full scale level, 0 dBFS, is the level of a dc-free 997-Hz sine wave whose undithered positive peak value is positive digital full scale, leaving the code corresponding to negative digital full scale unused Note 1 to entry: It is invalid to use dBFS for non-r.m.s. levels. Because the definition of full scale is based on a sine wave, the level of signals with a crest factor lower than that of a sine wave may exceed 0 dBFS. In particular, square wave signals may reach +3,01 dBFS.		N/A
2	Modification to Clause 10		
10.6	Safeguards against acoustic energy sources Replace 10.6 of IEC 62368-1 with the following:		N/A
10.6.1.1	Introduction Safeguard requirements for protection against long-term exposure to excessive sound pressure levels from personal music players closely coupled to the ear are specified below. Requirements for earphones and headphones intended for use with personal music players are also covered. A personal music player is a portable equipment intended for use by an ordinary person , that: – is designed to allow the user to listen to audio or audiovisual content / material; and – uses a listening device, such as headphones or earphones that can be worn in or on or around the ears; and – has a player that can be body worn (of a size		N/A

IEC62368_1E - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	suitable to be carried in a clothing pocket) and is intended for the user to walk around with while in continuous use (for example, on a street, in a subway, at an airport, etc.). EXAMPLES Portable CD players, MP3 audio players, mobile phones with MP3 type features, PDAs or similar equipment. Personal music players shall comply with the requirements of either 10.6.2 or 10.6.3. NOTE 1 Protection against acoustic energy sources from telecom applications is referenced to ITU-T P.360. NOTE 2 It is the intention of the Committee to allow the alternative methods for now, but to only use the dose measurement method as given in 10.6.5 in future. Therefore, manufacturers are encouraged to implement 10.6.5 as soon as possible. Listening devices sold separately shall comply with the requirements of 10.6.6. These requirements are valid for music or video mode only. The requirements do not apply to: – professional equipment; NOTE 3 Professional equipment is equipment sold through special sales channels. All products sold through normal electronics stores are considered not to be professional equipment. – hearing aid equipment and other devices for assistive listening; – the following type of analogue personal music players: • long distance radio receiver (for example, a multiband radio receiver or world band radio receiver, an AM radio receiver), and • cassette player/recorder; NOTE 4 This exemption has been allowed because this technology is falling out of use and it is expected that within a few years it will no longer exist. This exemption will not be extended to other technologies. – a player while connected to an external amplifier that does not allow the user to walk around while in use. For equipment that is clearly designed or intended primarily for use by children, the limits of the relevant toy standards may apply. The relevant requirements are given in EN 71-1:2011, 4.20 and the related tests methods and measurement distances apply.		
10.6.1.2	Non-ionizing radiation from radio frequencies in the range 0 to 300 GHz The amount of non-ionizing radiation is regulated by European Council Recommendation 1999/519/EC of 12 July 1999 on the limitation of exposure of the		N/A

IEC62368_1E - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	general public to electromagnetic fields (0 Hz to 300 GHz). For intentional radiators, ICNIRP guidelines should be taken into account for Limiting Exposure to Time-Varying Electric, Magnetic, and Electromagnetic Fields (up to 300 GHz). For hand-held and body mounted devices, attention is drawn to EN 50360 and EN 50566.		
10.6.2	Classification of devices without the capacity to estimate sound dose		N/A
10.6.2.1	General This standard is transitioning from short-term based (30 s) requirements to long-term based (40 hour) requirements. These clauses remain in effect only for devices that do not comply with sound dose estimation as stipulated in EN 50332-3. For classifying the acoustic output $L_{Aeq,T}$, measurements are based on the A-weighted equivalent sound pressure level over a 30 s period. For music where the average sound pressure (long term $L_{Aeq,T}$) measured over the duration of the song is lower than the average produced by the programme simulation noise, measurements may be done over the duration of the complete song. In this case, T becomes the duration of the song. NOTE Classical music, acoustic music and broadcast typically has an average sound pressure (long term $L_{Aeq,T}$) which is much lower than the average programme simulation noise. Therefore, if the player is capable to analyse the content and compare it with the programme simulation noise, the warning does not need to be given as long as the average sound pressure of the song does not exceed the required limit. For example, if the player is set with the programme simulation noise to 85 dB, but the average music level of the song is only 65 dB, there is no need to give a warning or ask an acknowledgement as long as the average sound level of the song is not above the basic limit of 85 dB.		N/A
10.6.2.2	RS1 limits (to be superseded, see 10.6.3.2) RS1 is a class 1 acoustic energy source that does not exceed the following: – for equipment provided as a package (player with its listening device), and with a proprietary connector between the player and its listening device, or where the combination of player and listening device is known by other means such as setting or automatic detection, the $L_{Aeq,T}$ acoustic output shall be ≤ 85 dB when playing the fixed “programme simulation noise” described in EN 50332-1. – for equipment provided with a standardized connector (for example, a 3,5 phone jack) that allows connection to a listening device for general use, the unweighted r.m.s. output voltage shall be ≤ 27 mV (analogue interface) or -25 dBFS (digital interface) when playing the fixed “programme		N/A

IEC62368_1E - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	simulation noise" described in EN 50332-1. – The RS1 limits will be updated for all devices as per 10.6.3.2.		
10.6.2.3	RS2 limits (to be superseded, see 10.6.3.3) RS2 is a class 2 acoustic energy source that does not exceed the following: – for equipment provided as a package (player with its listening device), and with a proprietary connector between the player and its listening device, or when the combination of player and listening device is known by other means such as setting or automatic 130 detection, the $L_{Aeq,T}$ acoustic output shall be ≤ 100 dB(A) when playing the fixed "programme simulation noise" as described in EN 50332-1. – for equipment provided with a standardized connector (for example, a 3,5 phone jack) that allows connection to a listening device for general use, the unweighted r.m.s. output voltage shall be ≤ 150 mV (analogue interface) or -10 dBFS (digital interface) when playing the fixed "programme simulation noise" as described in EN 50332-1.		N/A
10.6.2.4	RS3 limits RS3 is a class 3 acoustic energy source that exceeds RS2 limits.		N/A
10.6.3	Classification of devices (new)		N/A
10.6.3.1	General Previous limits (10.6.2) created abundant false negative and false positive PMP sound level warnings. New limits, compliant with The Commission Decision of 23 June 2009, are given below.		N/A
10.6.3.2	RS1 limits (new) RS1 is a class 1 acoustic energy source that does not exceed the following: – for equipment provided as a package (player with its listening device), and with a proprietary connector between the player and its listening device, or where the combination of player and listening device is known by other means such as setting or automatic detection, the $L_{Aeq,T}$ acoustic output shall be ≤ 80 dB when playing the fixed "programme simulation noise" described in EN 50332-1. – for equipment provided with a standardized connector (for example, a 3,5 phone jack) that allows connection to a listening device for general use, the unweighted r.m.s. output voltage shall be ≤ 15 mV (analogue interface) or -30 dBFS (digital interface) when playing the fixed "programme simulation noise" described in EN 50332-1.		N/A
10.6.3.3	RS2 limits (new)		N/A

IEC62368_1E - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	RS2 is a class 2 acoustic energy source that does not exceed the following: – for equipment provided as a package (player with its listening device), and with a proprietary connector between the player and its listening device, or where the combination of player and listening device is known by other means such as setting or automatic detection, the weekly sound exposure level, as described in EN 50332-3, shall be ≤ 80 dB when playing the fixed "programme simulation noise" described in EN 50332-1. – for equipment provided with a standardized connector (for example, a 3,5 phone jack) that allows connection to a listening device for general use, the unweighted r.m.s. output level, integrated over one week, as described in EN50332-3, shall be ≤ 15 mV (analogue interface) or -30 dBFS (digital interface) when playing the fixed "programme simulation noise" described in EN 50332-1.		
10.6.4	Requirements for maximum sound exposure		N/A
10.6.4.1	Measurement methods All volume controls shall be turned to maximum during tests. Measurements shall be made in accordance with EN 50332-1 or EN 50332-2 as applicable.		N/A
10.6.4.2	Protection of persons Except as given below, protection requirements for parts accessible to ordinary persons, instructed persons and skilled persons are given in 4.3. NOTE 1 Volume control is not considered a safeguard. Between RS2 and an ordinary person, the basic safeguard may be replaced by an instructional safeguard in accordance with Clause F.5, except that the instructional safeguard shall be placed on the equipment, or on the packaging, or in the instruction manual. Alternatively, the instructional safeguard may be given through the equipment display during use. The elements of the instructional safeguard shall be as follows:  – element 1a: the symbol , IEC 60417-6044 (2011-01) – element 2: "High sound pressure" or equivalent wording – element 3: "Hearing damage risk" or equivalent wording – element 4: "Do not listen at high volume levels for long periods." or equivalent wording		

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Clause	Requirement + Test	Result - Remark	Verdict
	An equipment safeguard shall prevent exposure of an ordinary person to an RS2 source without intentional physical action from the ordinary person and shall automatically return to an output level not exceeding what is specified for an RS1 source when the power is switched off. The equipment shall provide a means to actively inform the user of the increased sound level when the equipment is operated with an output exceeding RS1. Any means used shall be acknowledged by the user before activating a mode of operation which allows for an output exceeding RS1. The acknowledgement does not need to be repeated more than once every 20 h of cumulative listening time. NOTE 2 Examples of means include visual or audible signals. Action from the user is always needed. NOTE 3 The 20 h listening time is the accumulative listening time, independent of how often and how long the personal music player has been switched off. A skilled person shall not be unintentionally exposed to RS3.		
10.6.5	Requirements for dose-based systems		N/A
10.6.5.1	General requirements Personal music players shall give the warnings as provided below when tested according to EN 50332-3, using the limits from this clause. The manufacturer may offer optional settings to allow the users to modify when and how they wish to receive the notifications and warnings to promote a better user experience without defeating the safeguards. This allows the users to be informed in a method that best meets their physical capabilities and device usage needs. If such optional settings are offered, an administrator (for example, parental restrictions, business/educational administrators, etc.) shall be able to lock any optional settings into a specific configuration. The personal music player shall be supplied with easy to understand explanation to the user of the dose management system, the risks involved, and how to use the system safely. The user shall be made aware that other sources may significantly contribute to their sound exposure, for example work, transportation, concerts, clubs, cinema, car races, etc.		N/A
10.6.5.2	Dose-based warning and requirements When a dose of 100 % CSD is reached, and at least at every 100 % further increase of CSD, the device shall warn the user and require an		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	acknowledgement. In case the user does not acknowledge, the output level shall automatically decrease to compliance with class RS1. The warning shall at least clearly indicate that listening above 100 % CSD leads to the risk of hearing damage or loss.		
10.6.5.3	Exposure-based requirements With only dose-based requirements, cause and effect could be far separated in time, defying the purpose of educating users about safe listening practice. In addition to dose-based requirements, a PMP shall therefore also put a limit to the short-term sound level a user can listen at. The exposure-based limiter (EL) shall automatically reduce the sound level not to exceed 100 dB(A) or 150 mV integrated over the past 180 s, based on methodology defined in EN 50332-3. The EL settling time (time from starting level reduction to reaching target output) shall be 10 s or faster. Test of EL functionality is conducted according to EN 50332-3, using the limits from this clause. For equipment provided as a package (player with its listening device), the level integrated over 180 s shall be 100 dB or lower. For equipment provided with a standardized connector, the unweighted level integrated over 180 s shall be no more than 150 mV for an analogue interface and no more than -10 dBFS for a digital interface. NOTE In case the source is known not to be music (or test signal), the EL may be disabled.		N/A
10.6.6	Requirements for listening devices (headphones, earphones, etc.)		N/A
10.6.6.1	Corded listening devices with analogue input With 94 dB L_{Aeq} acoustic pressure output of the listening device, and with the volume and sound settings in the listening device (for example, built-in volume level control, additional sound features like equalization, etc.) set to the combination of positions that maximize the measured acoustic output, the input voltage of the listening device when playing the fixed "programme simulation noise" as described in EN 50332-1 shall be ≥ 75 mV. NOTE The values of 94 dB and 75 mV correspond with 85 dB and 27 mV or 100 dB and 150 mV.		N/A
10.6.6.2	Corded listening devices with digital input With any playing device playing the fixed "programme simulation noise" described in EN 50332-1, and with the volume and sound settings		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	in the listening device (for example, built-in volume level control, additional sound features like equalization, etc.) set to the combination of positions that maximize the measured acoustic output, the $L_{Aeq,T}$ acoustic output of the listening device shall be ≤ 100 dB with an input signal of -10 dBFS.		
10.6.6.3	Cordless listening devices In cordless mode, – with any playing and transmitting device playing the fixed programme simulation noise described in EN 50332-1; and – respecting the cordless transmission standards, where an air interface standard exists that specifies the equivalent acoustic level; and – with volume and sound settings in the receiving device (for example, built-in volume level control, additional sound features like equalization, etc.) set to the combination of positions that maximize the measured acoustic output for the above mentioned programme simulation noise, the $L_{Aeq,T}$ acoustic output of the listening device shall be ≤ 100 dB with an input signal of -10 dBFS.		N/A
10.6.6.4	Measurement method <i>Measurements shall be made in accordance with EN 50332-2 as applicable.</i>		N/A
3	Modification to the whole document		

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Clause	Requirement + Test				Result - Remark		Verdict
	Delete all the “country” notes in the reference document according to the following list:						P
	0.2.1	Note 1 and 2	1	Note 4 and 5	3.3.8.1	Note 2	
	3.3.8.3	Note 1	4.1.15	Note	4.7.3	Note 1 and 2	
	5.2.2.2	Note	5.4.2.3.2.2 Table 12	Note c	5.4.2.3.2.4	Note 1 and 3	
	5.4.2.3.2.4 Table 13	Note 2	5.4.2.5	Note 2	5.4.5.1	Note	
	5.4.10.2.1	Note	5.4.10.2.2	Note	5.4.10.2.3	Note	
	5.5.2.1	Note	5.5.6	Note	5.6.4.2.1	Note 2 and 3 and 4	
	5.6.8	Note 2	5.7.6	Note	5.7.7.1	Note 1 and Note 2	
	8.5.4.2.3	Note	10.2.1 Table 39	Note 3 and 4 and 5	10.5.3	Note 2	
	10.6.1	Note 3	F.3.3.6	Note 3	Y.4.1	Note	
Y.4.5	Note						
4	Modification to Clause 1						
1	Add the following note: NOTE Z1 The use of certain substances in electrical and electronic equipment is restricted within the EU: see Directive 2011/65/EU.						P

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Clause	Requirement + Test	Result - Remark	Verdict
5	Modification to 4.Z1		
4.Z1	Add the following new subclause after 4.9: To protect against excessive current, short-circuits and earth faults in circuits connected to an a.c. mains, protective devices shall be included either as integral parts of the equipment or as parts of the building installation, subject to the following, a), b) and c): a) except as detailed in b) and c), protective devices necessary to comply with the requirements of B.3.1 and B.4 shall be included as parts of the equipment; b) for components in series with the mains input to the equipment such as the supply cord, appliance coupler, r.f.i. filter and switch, short-circuit and earth fault protection may be provided by protective devices in the building installation; c) it is permitted for pluggable equipment type B or permanently connected equipment, to rely on dedicated overcurrent and short-circuit protection in the building installation, provided that the means of protection, e.g. fuses or circuit breakers, is fully specified in the installation instructions. If reliance is placed on protection in the building installation, the installation instructions shall so state, except that for pluggable equipment type A the building installation shall be regarded as providing protection in accordance with the rating of the wall socket outlet.		P
6	Modification to 5.4.2.3.2.4		
5.4.2.3.2.4	Add the following to the end of this subclause: The requirement for interconnection with external circuit is in addition given in EN 50491-3:2009.		N/A
7	Modification to 10.2.1		
10.2.1	Add the following to ^{c)} and ^{d)} in table 39: For additional requirements, see 10.5.1.		N/A
8	Modification to 10.5.1		

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Clause	Requirement + Test	Result - Remark	Verdict
10.5.1	Add the following after the first paragraph: For RS 1 compliance is checked by measurement under the following conditions: In addition to the normal operating conditions, all controls adjustable from the outside by hand, by any object such as a tool or a coin, and those internal adjustments or pre-sets which are not locked in a reliable manner, are adjusted so as to give maximum radiation whilst maintaining an intelligible picture for 1 h, at the end of which the measurement is made. NOTE Z1 Soldered joints and paint lockings are examples of adequate locking. The dose-rate is determined by means of a radiation monitor with an effective area of 10 cm², at any point 10 cm from the outer surface of the apparatus. Moreover, the measurement shall be made under fault conditions causing an increase of the high voltage, provided an intelligible picture is maintained for 1 h, at the end of which the measurement is made. For RS1, the dose-rate shall not exceed 1 µSv/h taking account of the background level. NOTE Z2 These values appear in Directive 96/29/Euratom of 13 May 1996.		N/A
9	Modification to G.7.1		
G.7.1	Add the following note: NOTE Z1 The harmonized code designations corresponding to the IEC cord types are given in Annex ZD.		N/A
10	Modification to Bibliography		

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Clause	Requirement + Test	Result - Remark	Verdict
	Add the following notes for the standards indicated: IEC 60130-9 NOTE Harmonized as EN 60130-9. IEC 60269-2 NOTE Harmonized as HD 60269-2. IEC 60309-1 NOTE Harmonized as EN 60309-1. IEC 60364 NOTE some parts harmonized in HD 384/HD 60364 series. IEC 60601-2-4 NOTE Harmonized as EN 60601-2-4. IEC 60664-5 NOTE Harmonized as EN 60664-5. IEC 61032:1997 NOTE Harmonized as EN 61032:1998 (not modified). IEC 61508-1 NOTE Harmonized as EN 61508-1. IEC 61558-2-1 NOTE Harmonized as EN 61558-2-1. IEC 61558-2-4 NOTE Harmonized as EN 61558-2-4. IEC 61558-2-6 NOTE Harmonized as EN 61558-2-6. IEC 61643-1 NOTE Harmonized as EN 61643-1. IEC 61643-21 NOTE Harmonized as EN 61643-21. IEC 61643-311 NOTE Harmonized as EN 61643-311. IEC 61643-321 NOTE Harmonized as EN 61643-321. IEC 61643-331 NOTE Harmonized as EN 61643-331.		N/A
11	ADDITION OF ANNEXES		
ZB	ANNEX ZB, SPECIAL NATIONAL CONDITIONS (EN)		N/A
4.1.15	Denmark, Finland, Norway and Sweden To the end of the subclause the following is added: Class I pluggable equipment type A intended for connection to other equipment or a network shall, if safety relies on connection to reliable earthing or if surge suppressors are connected between the network terminals and accessible parts, have a marking stating that the equipment shall be connected to an earthed mains socket-outlet. The marking text in the applicable countries shall be as follows: In Denmark : "Apparatets stikprop skal tilsluttes en stikkontakt med jord som giver forbindelse til stikproppens jord." In Finland : "Laite on liitettävä suojakoskettimilla varustettuun pistorasiaan" In Norway : "Apparatet må tilkoples jordet stikkontakt" In Sweden : "Apparaten skall anslutas till jordat uttag"		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
4.7.3	United Kingdom To the end of the subclause the following is added: The torque test is performed using a socket-outlet complying with BS 1363, and the plug part shall be assessed to the relevant clauses of BS 1363. Also see Annex G.4.2 of this annex	Should be evaluated in national approval	N/A
5.2.2.2	Denmark After the 2nd paragraph add the following: A warning (marking safeguard) for high touch current is required if the touch current exceeds the limits of 3,5 mA a.c. or 10 mA d.c.		N/A
5.4.11.1 and Annex G	Finland and Sweden To the end of the subclause the following is added: For separation of the telecommunication network from earth the following is applicable: If this insulation is solid, including insulation forming part of a component, it shall at least consist of either • two layers of thin sheet material, each of which shall pass the electric strength test below, or • one layer having a distance through insulation of at least 0,4 mm, which shall pass the electric strength test below. If this insulation forms part of a semiconductor component (e.g. an optocoupler), there is no distance through insulation requirement for the insulation consisting of an insulating compound completely filling the casing, so that clearances and creepage distances do not exist, if the component passes the electric strength test in accordance with the compliance clause below and in addition • passes the tests and inspection criteria of 5.4.8 with an electric strength test of 1,5 kV multiplied by 1,6 (the electric strength test of 5.4.9 shall be performed using 1,5 kV), and • is subject to routine testing for electric strength during manufacturing, using a test voltage of 1,5 kV. It is permitted to bridge this insulation with a capacitor complying with EN 60384-14:2005, subclass Y2. A capacitor classified Y3 according to EN 60384-14:2005, may bridge this insulation under		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	the following conditions: - the insulation requirements are satisfied by having a capacitor classified Y3 as defined by EN 60384-14, which in addition to the Y3 testing, is tested with an impulse test of 2,5 kV defined in 5.4.11; - the additional testing shall be performed on all the test specimens as described in EN 60384-14; the impulse test of 2,5 kV is to be performed before the endurance test in EN 60384-14, in the sequence of tests as described in EN 60384-14.		
5.5.2.1	Norway After the 3rd paragraph the following is added: Due to the IT power system used, capacitors are required to be rated for the applicable line-to-line voltage (230 V).		N/A
5.5.6	Finland, Norway and Sweden To the end of the subclause the following is added: Resistors used as basic safeguard or bridging basic insulation in class I pluggable equipment type A shall comply with G.10.1 and the test of G.10.2.		N/A
5.6.1	Denmark Add to the end of the subclause Due to many existing installations where the socket-outlets can be protected with fuses with higher rating than the rating of the socket-outlets the protection for pluggable equipment type A shall be an integral part of the equipment. <i>Justification:</i> In Denmark an existing 13 A socket outlet can be protected by a 20 A fuse.		N/A
5.6.4.2.1	Ireland and United Kingdom After the indent for pluggable equipment type A, the following is added: – the protective current rating is taken to be 13 A, this being the largest rating of fuse used in the mains plug.		P
5.6.4.2.1	France After the indent for pluggable equipment type A, the following is added: – in certain cases, the protective current rating of the circuit supplied from the mains is taken as 20 A instead of 16 A.		P

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Clause	Requirement + Test	Result - Remark	Verdict
5.6.5.1	To the second paragraph the following is added: The range of conductor sizes of flexible cords to be accepted by terminals for equipment with a rated current over 10 A and up to and including 13 A is: 1,25 mm² to 1,5 mm² in cross-sectional area.		N/A
5.6.8	Norway To the end of the subclause the following is added: Equipment connected with an earthed mains plug is classified as class I equipment. See the Norway marking requirement in 4.1.15. The symbol IEC 60417-6092, as specified in F.3.6.2, is accepted.		N/A
5.7.6	Denmark To the end of the subclause the following is added: The installation instruction shall be affixed to the equipment if the protective conductor current exceeds the limits of 3,5 mA a.c. or 10 mA d.c.		N/A
5.7.6.2	Denmark To the end of the subclause the following is added: The warning (marking safeguard) for high touch current is required if the touch current or the protective current exceed the limits of 3,5 mA .		N/A
5.7.7.1	Norway and Sweden To the end of the subclause the following is added: The screen of the television distribution system is normally not earthed at the entrance of the building and there is normally no equipotential bonding system within the building. Therefore the protective earthing of the building installation needs to be isolated from the screen of a cable distribution system. It is however accepted to provide the insulation external to the equipment by an adapter or an interconnection cable with galvanic isolator, which may be provided by a retailer, for example. The user manual shall then have the following or similar information in Norwegian and Swedish language respectively, depending on in what country the equipment is intended to be used in: “Apparatus connected to the protective earthing of the building installation through the mains connection or through other apparatus with a connection to protective earthing – and to a television distribution system using coaxial cable, may in some circumstances create a fire hazard. Connection to a television distribution system therefore has to be provided through a device providing electrical isolation below a certain frequency range (galvanic isolator, see EN 60728-11)”		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	NOTE In Norway, due to regulation for CATV-installations, and in Sweden, a galvanic isolator shall provide electrical insulation below 5 MHz. The insulation shall withstand a dielectric strength of 1,5 kV r.m.s., 50 Hz or 60 Hz, for 1 min. Translation to Norwegian (the Swedish text will also be accepted in Norway): “Apparater som er koplet til beskyttelsesjord via nettplugg og/eller via annet jordtilkoplet utstyr – og er tilkoplet et koaksialbasert kabel-TV nett, kan forårsake brannfare. For å unngå dette skal det ved tilkopling av apparater til kabel-TV nett installeres en galvanisk isolator mellom apparatet og kabel-TV nettet.” Translation to Swedish: ”Apparater som är kopplad till skyddsjord via jordat vägguttag och/eller via annan utrustning och samtidigt är kopplad till kabel-TV nät kan i vissa fall medföra risk för brand. För att undvika detta skall vid anslutning av apparaten till kabel-TV nät galvanisk isolator finnas mellan apparaten och kabel-TV nätet.”.		
8.5.4.2.3	United Kingdom Add the following after the 2nd dash bullet in 3rd paragraph: An emergency stop system complying with the requirements of IEC 60204-1 and ISO 13850 is required where there is a risk of personal injury.		N/A
B.3.1 and B.4	Ireland and United Kingdom The following is applicable: To protect against excessive currents and short-circuits in the primary circuit of direct plug-in equipment, tests according to Annexes B.3.1 and B.4 shall be conducted using an external miniature circuit breaker complying with EN 60898-1, Type B, rated 32A. If the equipment does not pass these tests, suitable protective devices shall be included as an integral part of the direct plug-in equipment, until the requirements of Annexes B.3.1 and B.4 are met		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
G.4.2	Denmark To the end of the subclause the following is added: Supply cords of single phase appliances having a rated current not exceeding 13 A shall be provided with a plug according to DS 60884-2-D1:2011. CLASS I EQUIPMENT provided with socket-outlets with earth contacts or which are intended to be used in locations where protection against indirect contact is required according to the wiring rules shall be provided with a plug in accordance with standard sheet DK 2-1a or DK 2-5a. If a single-phase equipment having a RATED CURRENT exceeding 13 A or if a polyphase equipment is provided with a supply cord with a plug, this plug shall be in accordance with the standard sheets DK 6-1a in DS 60884-2-D1 or EN 60309-2. Mains socket outlets intended for providing power to Class II apparatus with a rated current of 2,5 A shall be in accordance DS 60884-2-D1:2011 standard sheet DKA 1-4a. Other current rating socket outlets shall be in compliance with Standard Sheet DKA 1-3a or DKA 1-1c. Mains socket-outlets with earth shall be 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 <i>Justification:</i> Heavy Current Regulations, Section 6c		N/A
G.4.2	United Kingdom To the end of the subclause the following is added: The plug part of direct plug-in equipment shall be assessed to BS 1363: Part 1, 12.1, 12.2, 12.3, 12.9, 12.11, 12.12, 12.13, 12.16, and 12.17, except that the test of 12.17 is performed at not less than 125 °C. Where the metal earth pin is replaced by an Insulated Shutter Opening Device (ISOD), the requirements of clauses 22.2 and 23 also apply.		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
G.7.1	United Kingdom To the first paragraph the following is added: Equipment which is fitted with a flexible cable or cord and is designed to be connected to a mains socket conforming to BS 1363 by means of that flexible cable or cord shall be fitted with a 'standard plug' in accordance with the Plugs and Sockets etc. (Safety) Regulations 1994, Statutory Instrument 1994 No. 1768, unless exempted by those regulations. NOTE "Standard plug" is defined in SI 1768:1994 and essentially means an approved plug conforming to BS 1363 or an approved conversion plug.		N/A
G.7.1	Ireland To the first paragraph the following is added: Apparatus which is fitted with a flexible cable or cord shall be provided with a plug in accordance with Statutory Instrument 525: 1997, "13 A Plugs and Conversion Adapters for Domestic Use Regulations: 1997. S.I. 525 provides for the recognition of a standard of another Member State which is equivalent to the relevant Irish Standard		N/A
G.7.2	Ireland and United Kingdom To the first paragraph the following is added: A power supply cord with a conductor of 1,25 mm ² is allowed for equipment which is rated over 10 A and up to and including 13 A.		N/A
ZC	ANNEX ZC, NATIONAL DEVIATIONS (EN)		N/A
10.5.2	Germany The following requirement applies: For the operation of any cathode ray tube intended for the display of visual images operating at an acceleration voltage exceeding 40 kV, authorization is required, or application of type approval (Bauartzulassung) and marking. <i>Justification:</i> German ministerial decree against ionizing radiation (Röntgenverordnung), in force since 2002-07-01, implementing the European Directive 96/29/EURATOM. NOTE Contact address: Physikalisch-Technische Bundesanstalt, Bundesallee 100, D-38116 Braunschweig, Tel.: Int+49-531-592-6320, Internet: http://www.ptb.de		N/A
ZD	IEC and CENELEC CODE DESIGNATIONS FOR FLEXIBLE CORDS (EN)		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
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	Type of flexible cord	Code designations		N/A
		IEC	CENELEC	
	PVC insulated cords			
	Flat twin tinsel cord	60227 IEC 41	H03VH-Y	
	Light polyvinyl chloride sheathed flexible cord	60227 IEC 52	H03VV-F H03VVH2-F	
	Ordinary polyvinyl chloride sheathed flexible cord	60227 IEC 53	H05VV-F H05VVH2-F	
	Rubber insulated cords			
	Braided cord	60245 IEC 51	H03RT-F	
	Ordinary tough rubber sheathed flexible cord	60245 IEC 53	H05RR-F	
	Ordinary polychloroprene sheathed flexible cord	60245 IEC 57	H05RN-F	
	Heavy polychloroprene sheathed flexible cord	60245 IEC 66	H07RN-F	
	Cords having high flexibility			
	Rubber insulated and sheathed cord	60245 IEC 86	H03RR-H	
	Rubber insulated, crosslinked PVC sheathed cord	60245 IEC 87	H03RV4-H	
	Crosslinked PVC insulated and sheathed cord	60245 IEC 88	H03V4V4-H	
	Cords insulated and sheathed with halogen-free thermoplastic compounds			
	Light halogen-free thermoplastic insulated and sheathed flexible cords		H03Z1Z1-F H03Z1Z1H2-F	
	Ordinary halogen-free thermoplastic insulated and sheathed flexible cords		H05Z1Z1-F H05Z1Z1H2-F	

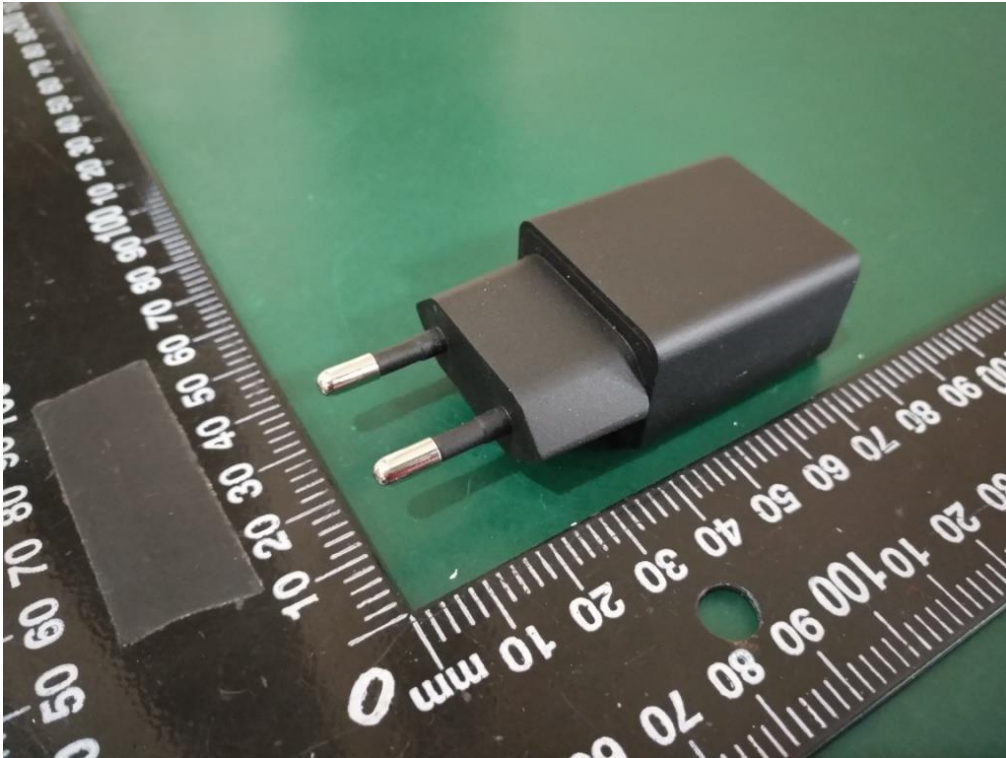


Figure1. Overall view of unit (for model G006AXXXYYYYC and G006AXXXYYYYV)

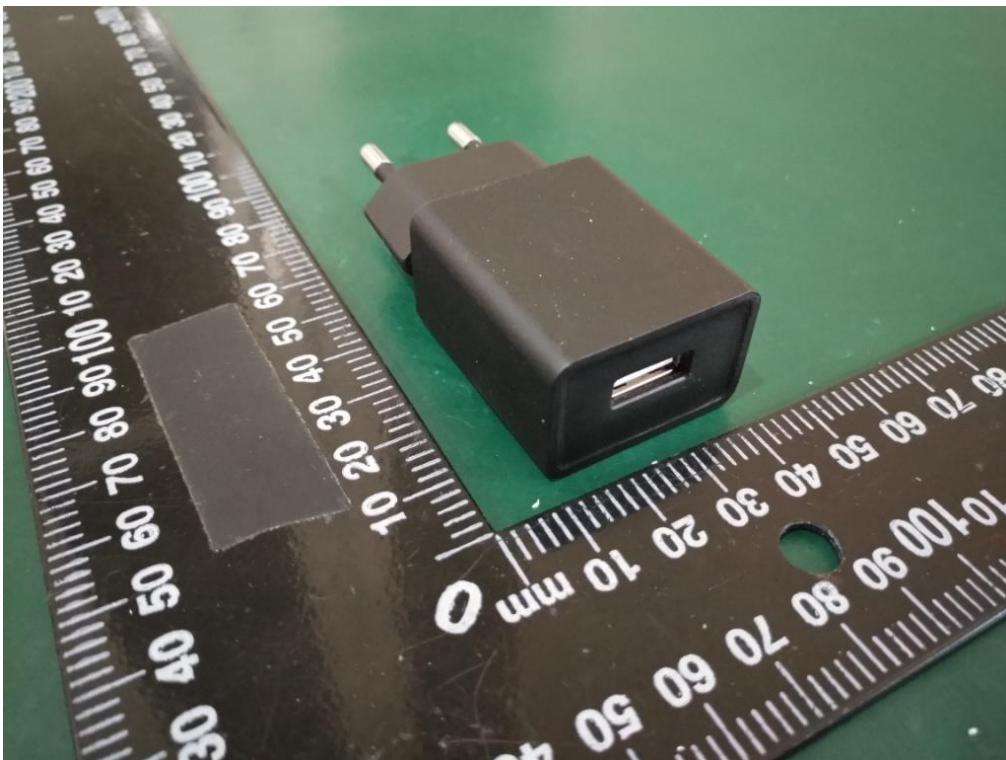


Figure2. Overall view of unit (for model G006AXXXYYYYC and G006AXXXYYYYV)

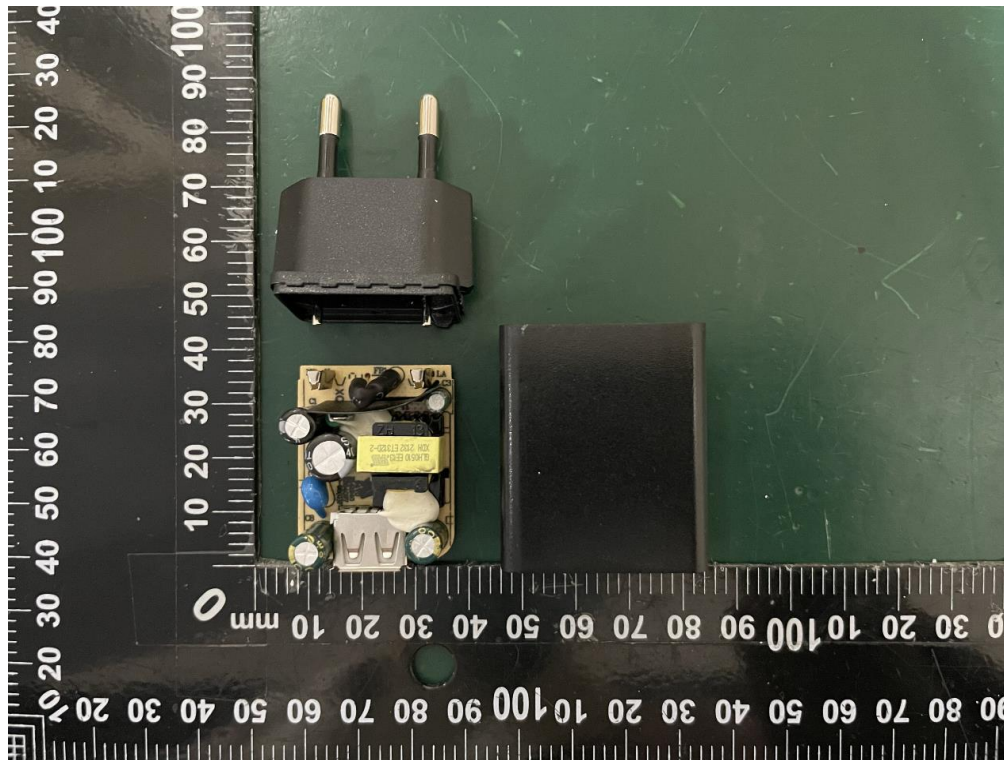


Figure3. Internal view of unit

Figure4. Overall view of unit (for model GLHXXYYYYC and GLHXXYYYYV)
(output with USB connector)



Figure5. Overall view of unit (for model GLHXXXYYYYC and GLHXXXYYYYV)
(output with USB connector)

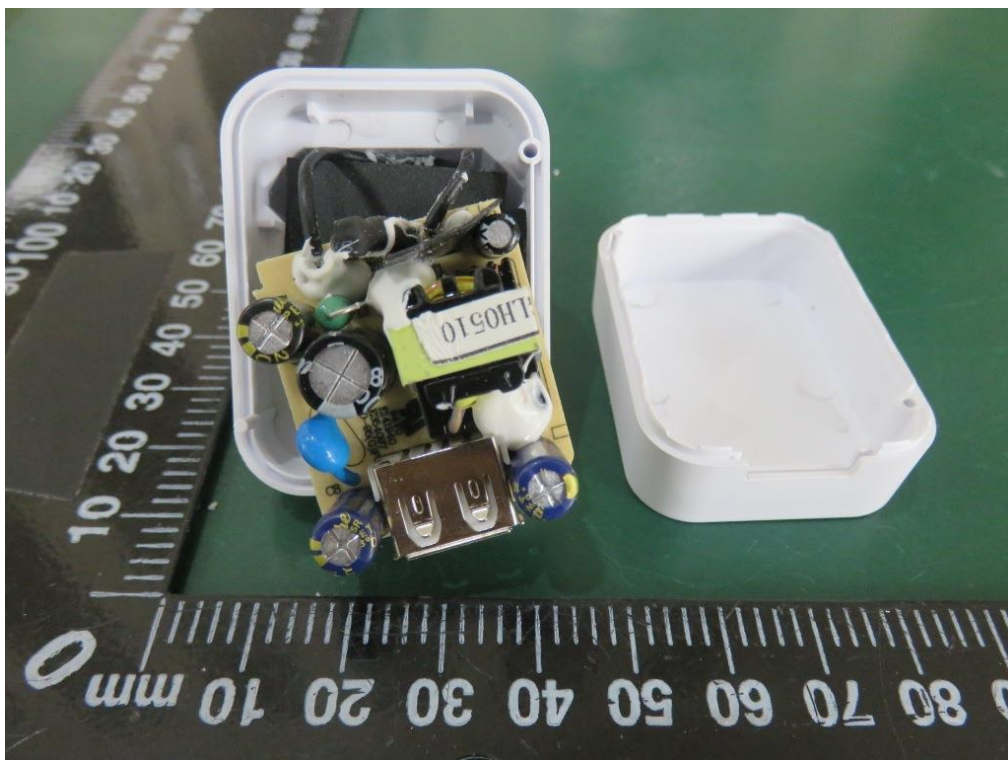


Figure6. Internal view of unit (for model GLHXXXYYYYZ and GLHXXXYYYYZ)
(output with USB connector)

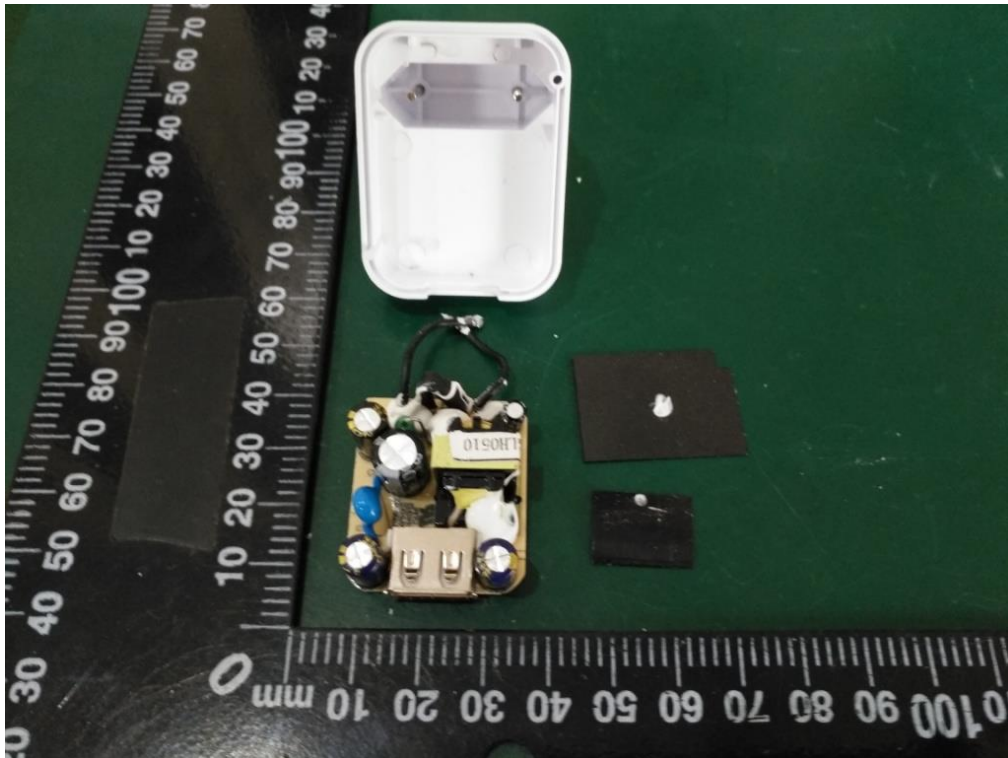


Figure7. Internal view of unit (for model GLHXXXYYYYZ and GLHXXXYYYYZ)
(output with USB connector)

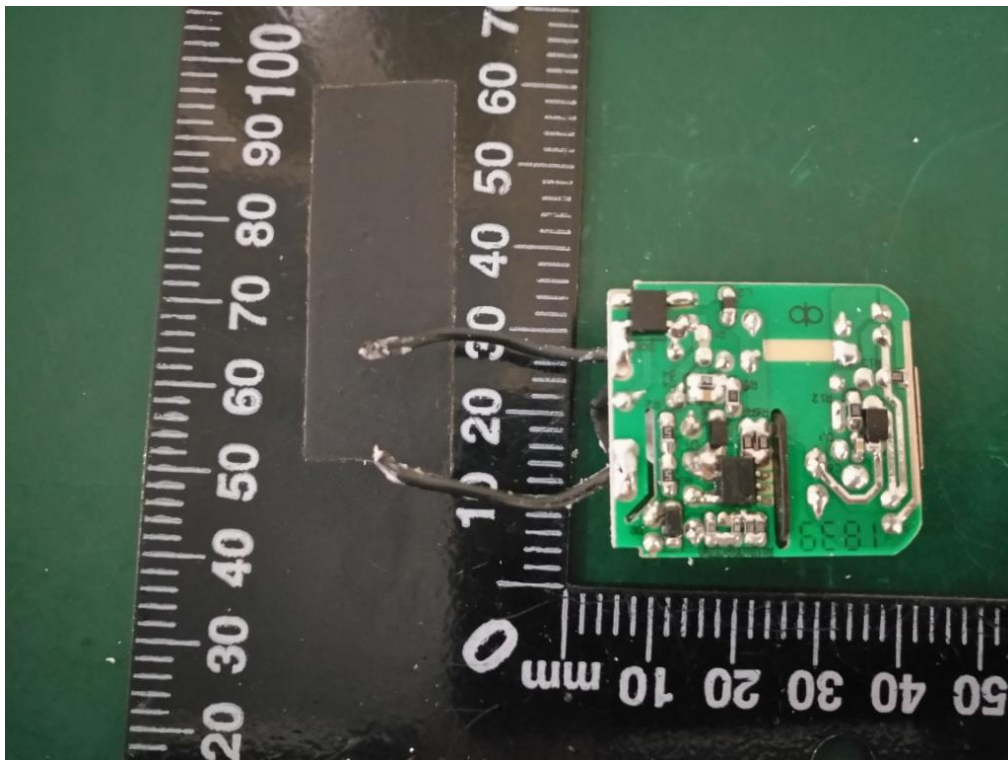


Figure8. Bottom view of PCB (for model GLHXXXYYYYZ and GLHXXXYYYYZ)
(output with USB connector)



Figure9. Overall view of unit (for model GLHXXXYYYU and GLHXXXYYYD)
(output with DC wire)

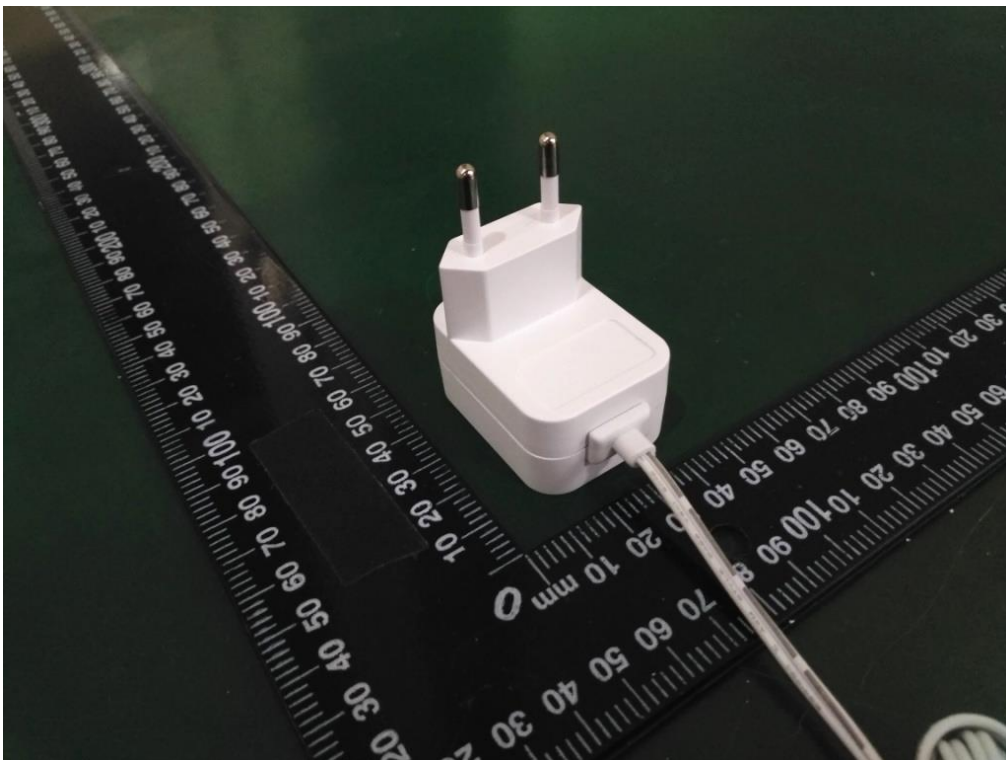


Figure10. Overall view of unit (for model GLHXXXYYYU and GLHXXXYYYD)
(output with DC wire)



Figure11. Internal view of unit (for model GLHXXXXYYYZ and GLHXXXXYYYZ)
(output with DC wire)

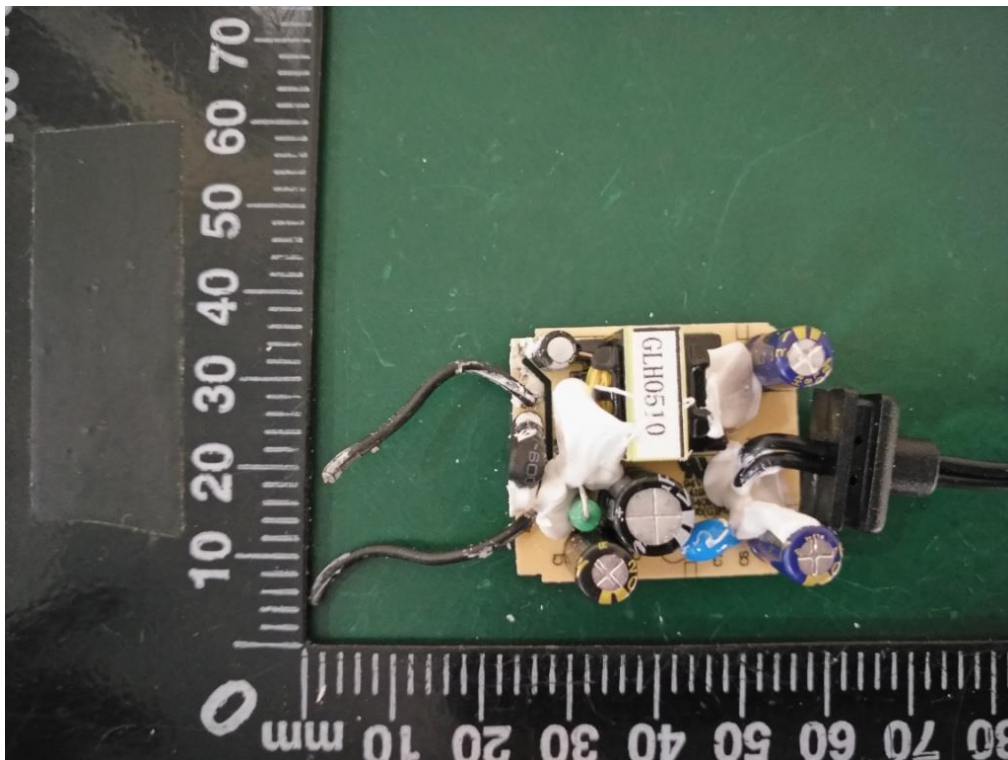


Figure12. Top view of PCB

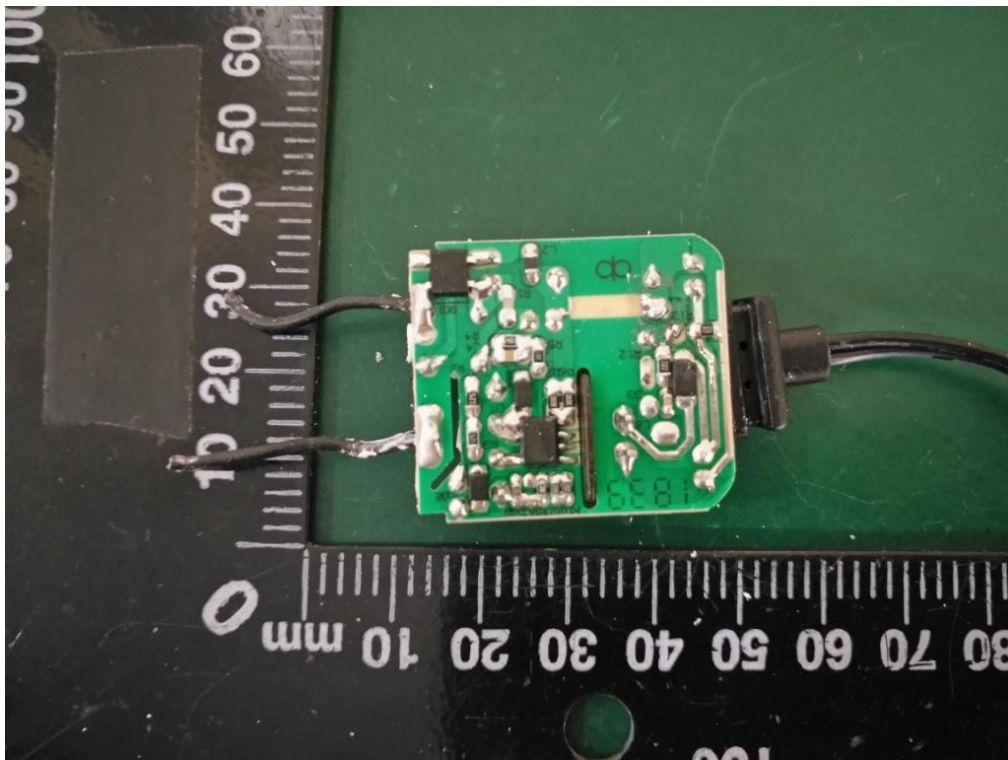


Figure13. Bottom view of PCB

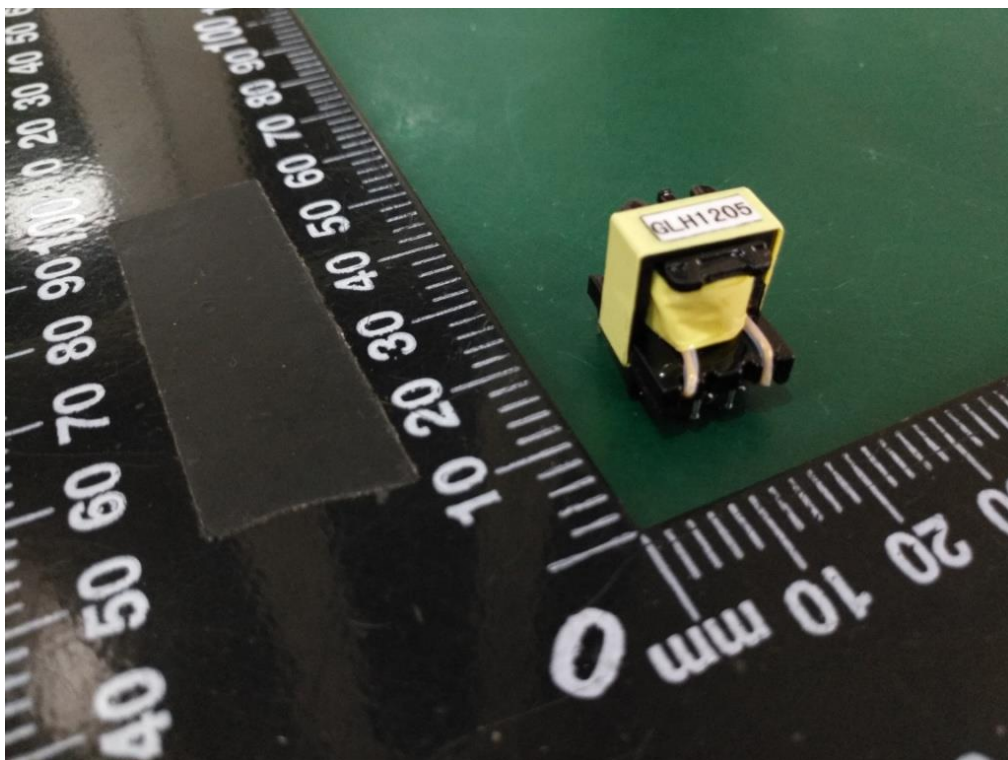


Figure14. Top view of transformer

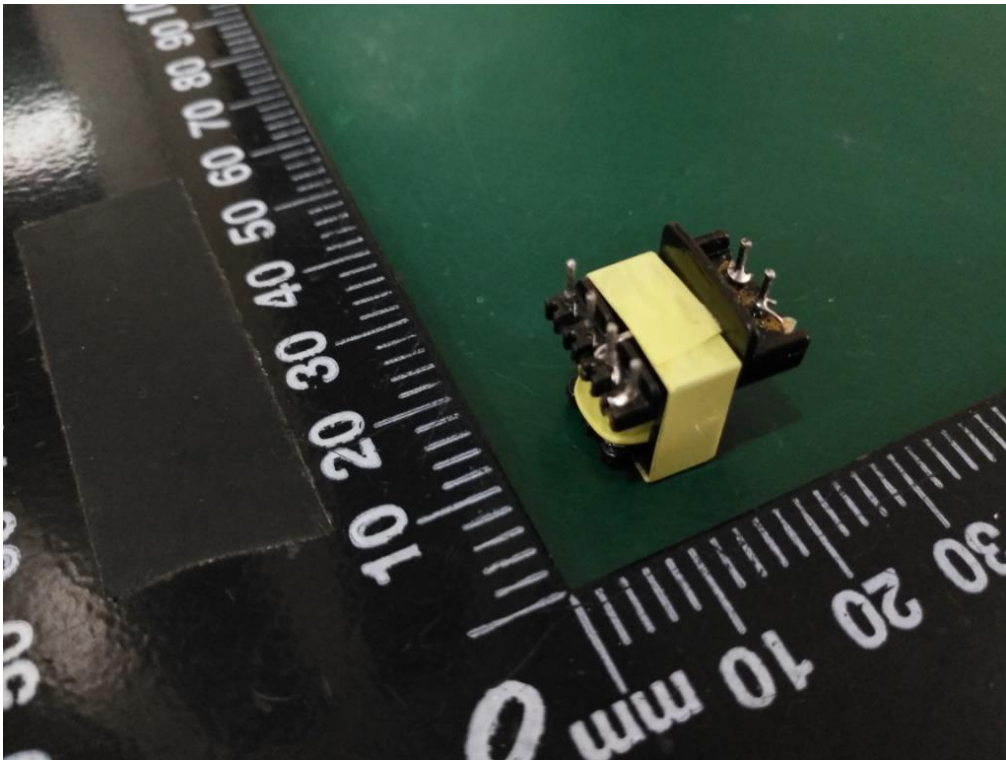


Figure15. Bottom view of transformer

---End of Report---