RGBlink Science & Technology Co.,Ltd

LVD REPORT

Applicant	RGBlink Science & Technology Co.,Ltd
Address	Room 601A, No. 37-3 Banshang community, Building 3, Xinke Plaza, Torch Hi-Tech Industrial Development Zone, Xiamen, China
Product Name	Video Mixer
Trademark	RGBlink®
Model Number	mini-pro
Additional Models	mini-mx, mini-max, mini-pro 2022, mini 2022, mini-ultra, mini-mx delta, mini-mx titan, mini-mx atlas, mini-mx apollo, mini-mx orion
Test Laboratory	Shenzhen Circle Testing Certification Co., Ltd.
Address	101,302, Building 1, Donglongxing Technology Park, Huaning Road, Longhua District, Shenzhen, Guangdong, China
Test Date	Aug. 26, 20233 - Aug. 31, 2023
Date of Report	Aug. 31, 2023
Report Number	CTC025G08122SR

TEST REPORT
EN IEC 62368-1:2020+A11:2020
Audio/video, information and communication technology equipment — Part 1: Safety requirements

Report reference No.....	:	CTC025G08121SR
Date of issue.....	:	Aug. 31, 2023

Testing laboratory

Name.....	:	Shenzhen Circle Testing Certification Co., Ltd.
Address.....	:	101, 302, Building 1, Donglongxing Technology Park, Huaning Road, Longhua District, Shenzhen, Guangdong,China
Test location.....	:	(Same as above)

Client

Name.....	:	RGBlink Science & Technology Co.,Ltd
Address.....	:	Room 601A, No. 37-3 Banshang community, Building 3, Xinke Plaza, Torch Hi-Tech Industrial Development Zone, Xiamen, China

Test specification

Standard.....	:	EN IEC 62368-1:2020+A11:2020
Test procedure.....	:	Safety report
Procedure deviation.....	:	N.A.
Non-standard test method..	:	N.A.

Test item

Description.....	:	Video Mixer
Model No.	:	mini-pro
Brand name.....	:	RGBlink®
Manufacturer.....	:	RGBlink Science & Technology Co.,Ltd
Address.....	:	Room 601A, No. 37-3 Banshang community, Building 3, Xinke Plaza, Torch Hi-Tech Industrial Development Zone, Xiamen, China
Rating(s).....	:	Input: 100-240 VAC, 50/60Hz, 18W Output: 12VDC

Test item particulars:

Classification of use by	☒ Ordinary person ☒ Instructed person ☒ Skilled person ☐ Children likely to be present
Supply Connection	☒ AC Mains ☐ DC Mains ☐ External Circuit - 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 ☐ mating connector ☐ pluggable equipment type B - ☐ non-detachable supply cord ☐ appliance coupler ☐ permanent connection ☒ mating connector ☒ other: Not directly connected to the mains
Considered current rating of protective device as part of building or equipment installation	16 A; Installation location: ☒ building; ☒ equipment
Equipment mobility	☐ movable ☐ hand-held ☐ transportable ☐ stationary ☐ for building-i n ☒ direct plug- ☐ rack-mounting ☐ wall-mounted
Over voltage category (OVC)	☐ OVC I ☒ OVC II ☐ OVC III ☐ OVC IV ☐ other: Not directly connected to the mains
Class of equipment	☐ Class I ☒ Class II ☐ Class III
Access location	☐ restricted access location ☒ N/A
Pollution degree (PD)	☐ PD 1 ☒ PD 2 ☐ PD 3
Manufacturer's specified maxium operating ambient	40°C
IP protection class	☒ IPX0 ☐ IP20
Power Systems	☒ TN ☐ TT ☐ IT - ____ V_{L-L}
Altitude during operation (m)	☒ 2000 m or less ☐ 5000 m
Altitude of test laboratory (m)	☒ 2000 m or less ☐ _____ m
Mass of equipment (kg)	☒ _kg

Possible test case verdicts:	
- test case does not apply to the test object.....	: N/A (N)
- test object does meet the requirement.....	: Pass (P)
- test object does not meet the requirement.....	: Fail (F)
Testing:	
Sample appearance and function are in normal condition, yes or no.....	: Yes
Ambient temperature.....	: 25.0 ºC
Ambient humidity.....	: 60.0%

General remarks:

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 Issuing testing laboratory.

Laboratory CTC. The authenticity of this Test Report and its contents can be verified by contacting CTC, responsible for this Test Report.

"(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.

General product information:

1, The equipment is a **Video Mixer**.

2, The appliance is intended for indoor or similar condition used only.

3, Instructions and equipment marking related to safety is applied in the language that is acceptable in the country in which the equipment is to be sold.

4, Max. operated temperature is considered as 40ºC.

ENERGY SOURCE IDENTIFICATION AND CLASSIFICATION TABLE:	
(Note 1: Identify the following six (6) energy source forms based on the origin of the energy.) (Note 2: The identified classification e.g., ES2, TS1, should be with respect to its ability to cause pain or injury on the body or its ability to ignite a combustible material. Any energy source can be declared Class 3 as a worse case classification e.g. PS3, ES3.)	
Electrically-caused injury (Clause 5): (Note: Identify type of source, list sub-assembly or circuit designation and corresponding energy source classification) Example: 100-240V ac input ES1	
Source of electrical energy	**Corresponding classification (ES)**
AC input and internal primary circuit	ES3
Secondary circuit after power module output	ES1
Electrically-caused fire (Clause 6): (Note: List sub-assembly or circuit designation and corresponding energy source classification) Example: Battery pack (maximum 85 watts): PS2	
Source of power or PIS	**Corresponding classification (PS)**
Supplied by external power supply which is complied with LPS.	PS2
Injury caused by hazardous substances (Clause 7) (Note: Specify hazardous chemicals, whether produces ozone or other chemical construction not addressed as part of the component evaluation.) Example: Liquid in filled component Glycol	
Source of hazardous substances	**Corresponding chemical**
N/A	N/A
Mechanically-caused injury (Clause 8) (Note: List moving part(s), fan, special installations, etc. & corresponding MS classification based on Table 35.) Example: Wall mount unit MS2	
Source of kinetic/mechanical energy	**Corresponding classification (MS)**
Equipment mass	MS1
Edges and corners	MS1
Thermal burn injury (Clause 9) (Note: Identify the surface or support, and corresponding energy source classification based on type of part, location, operating temperature and contact time in Table 38.) Example: Hand-held scanner – thermoplastic enclosure TS1	
Source of thermal energy	**Corresponding classification (TS)**
Enclosure of the equipment	TS1
control panel	TS1

ENERGY SOURCE IDENTIFICATION AND CLASSIFICATION TABLE:	
Radiation (Clause 10) (Note: List the types of radiation present in the product and the corresponding energy source classification.) Example: DVD – Class 1 Laser Product RS1	
Type of radiation	**Corresponding classification (RS)**
N/A	N/A

ENERGY SOURCE DIAGRAM
Indicate which energy sources are included in the energy source diagram. Insert diagram below
☐ ES ☐ PS ☐ MS ☐ TS ☐ RS

Copy of marking plate:

Product Name: Video Mixer
Model No: mini-pro
Input: 100-240 VAC, 50/60Hz, 18W
Output: 12VDC

RGBlink Science & Technology Co.,Ltd
Made in China

Summary of testing:
The submitted sample were tested and found to compliance with requirements of the standards EN IEC 62368-1:2020+A11:2020

Testing procedure and testing location

Laboratory name	:	Shenzhen Circle Testing Certification Co., Ltd.
Testing location/address	:	101,302,Building 1,Donglongxing Technology Park,Huaning Road, Longhua District,Shenzhen,Guangdong,China
Testing procedure	:	TL ☒ RMT ☐ SMT ☐ WMT ☐ TMP ☐
Tested By (Test Engineer)	:	Kara Li Aug. 31, 2023
Approved By (Chief Engineer)	:	Davis Wei Aug. 31, 2023

OVERVIEW OF EMPLOYED SAFEGUARDS				
Clause	**Possible Hazard**			
5.1	Electrically-caused injury			
Body Part (e.g. Ordinary)	Energy Source (ES3: Primary Filter circuit)	Safeguards		
		Basic	Supplementary	Reinforced (Enclosure)
Ordinary Person	ES1: All circuits except for Secondary circuit after power module output	N/A	N/A	Enclosure
Ordinary Person	ES1: Secondary circuit after power module output	N/A	N/A	Enclosure
6.1	Electrically-caused fire			
Material part (e.g. mouse enclosure)	Energy Source (PS2: 100 Watt circuit)	Safeguards		
		Basic	Supplementary	Reinforced
PCB, Plastic parts inside the enclosure and other combustible components in the equipment.	PS2: 15<100 Watt circuit (All primary circuits and secondary circuits)	See 6.3	N/A	Enclosure
Enclosure	PS2: 15<100 Watt circuit	See 6.3	N/A	Enclosure
7.1	Injury caused by hazardous substances			
Body Part (e.g., skilled)	Energy Source (hazardous material)	Safeguards		
		Basic	Supplementary	Reinforced
N/A	N/A	N/A	N/A	N/A
8.1	Mechanically-caused injury			
Body Part (e.g. Ordinary)	Energy Source (MS3:High Pressure Lamp)	Safeguards		
		Basic	Supplementary	Reinforced (Enclosure)
Ordinary person	MS1: Edges and corners	N/A	N/A	Enclosure
9.1	Thermal Burn			
Body Part (e.g., Ordinary)	Energy Source (TS2)	Safeguards		
		Basic	Supplementary	Reinforced
Ordinary person	Power board	N/A	N/A	Enclosure
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10.1	Radiation			
Body Part	Energy Source	Safeguards		

(e.g., Ordinary)	(Output from audio port)	Basic	Supplementary	Reinforced
N/A	N/A	N/A	N/A	N/A
Supplementary Information: (1) See attached energy source diagram for additional details. (2) “N” – Normal Condition; “A” – Abnormal Condition; “S” Single Fault				

EN 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 preventing access to ES3 parts, limiting the source supplying outputs to fulfill ES1,and protection in regard to risk of ignition, mechanical-caused injury and thermal burn considered.	P
4.1.15	Markings and instructions.....:	(See Annex F)	P
4.4.4	Safeguard robustness		P
4.4.4.2	Steady force tests.....:		N/A
4.4.4.3	Drop tests.....:	Wall mounted	P
4.4.4.4	Impact tests.....:		P
4.4.4.5	Internal accessible safeguard enclosure and barrier tests.....:		N/A
4.4.4.6	Glass Impact tests.....:	No parts made of glass.	N/A
4.4.4.7	Thermoplastic material tests.....:	70℃	P
4.4.4.8	Air comprising a safeguard.....:	(See Annex T)	P
4.4.4.9	Accessibility and safeguard effectiveness		P
4.5	Explosion	No explosion occurs during normal/abnormal operation and single fault conditions	N/A
4.6	Fixing of conductors		P
4.6.1	Fix conductors not to defeat a safeguard		P
4.6.2	10 N force test applied to .....:	10 N was applied to internal components.	P

EN IEC 62368-1			
Clause	Requirement-Test	Result-Remark	Verdict
4.7	Equipment for direct insertion into mains socket - outlets	Not direct plug-in equipment.	N/A
4.7.2	Mains plug part complies with the relevant standard..... :		P
4.7.3	Torque (Nm)..... :	See above	P
4.8	Products containing coin/button cell batteries		N/A
4.8.2	Instructional safeguard		N/A
4.8.3	Battery Compartment Construction	Only skilled person used, professional equipment	N/A
	Means to reduce the possibility of children removing the battery.....:		N/A
4.8.4	Battery Compartment Mechanical Tests.....:		N/A
4.8.5	Battery Accessibility		N/A
4.9	Likelihood of fire or shock due to entry of conductive object..... :	.	P
5	**ELECTRICALLY-CAUSED INJURY**		P
5.2.1	Electrical energy source classifications..... :	(See appended table 5.2)	P
5.2.2	ES1, ES2 and ES3 limits		P
5.2.2.2	Steady-state voltage and current..... :	(See appended table 5.2)	P
5.2.2.3	Capacitance limits..... :	(See appended table 5.2)	P
5.2.2.4	Single pulse limits.....:	No pulse occurred during test.	N/A
5.2.2.5	Limits for repetitive pulses.....:	No such repetitive pulses within the EUT.	N/A
5.2.2.6	Ringing signals ..... :	(See Annex H) No ringing signals	N/A
5.2.2.7	Audio signals .....:	(See Clause E.1) No audio signals.	N/A
5.3	Protection against electrical energy sources	See below	P
5.3.1	General Requirements for accessible parts to ordinary, instructed and skilled persons	.	P
5.3.2.1	Accessibility to electrical energy sources and safeguards		P

EN IEC 62368-1			
Clause	Requirement-Test	Result-Remark	Verdict
5.3.2.2	Contact requirements		P
	a) Test with test probe from Annex V.....:		P
	b) Electric strength test potential (V).....:		P
	c) Air gap (mm) .....:		P
5.3.2.4	Terminals for connecting stripped wire	No such constructions	N/A
5.4	Insulation materials and requirements		P
5.4.1.2	Properties of insulating material		P
5.4.1.3	Humidity conditioning.....:	(See sub-clause 5.4.8), then subjected to electric strength test of 5.4.9.1	P
5.4.1.4	Maximum operating temperature for insulating materials .....:	Class B EIS,(See appended table 5.4.1.4)	P
5.4.1.5	Pollution degree.....:	PD2	P
5.4.1.5.2	Test for pollution degree 1 environment and for an insulating compound	Insulation compound, test as 5.4.1.5.3	P
5.4.1.5.3	Thermal cycling	Only PD2 available	N/A
5.4.1.6	Insulation in transformers with varying dimensions		P
5.4.1.7	Insulation in circuits generating starting pulses		N/A
5.4.1.8	Determination of working voltage	(See appended table 5.4.2.2 and 5.4.2.3)	P
5.4.1.9	Insulating surfaces	Considered.	P
5.4.1.10	Thermoplastic parts on which conductive metallic parts are directly mounted	(See appended table 5.4.1.10.3)	P
5.4.1.10.2	Vicat softening temperature.....:	Ball pressure test done.	N/A
5.4.1.10.3	Ball pressure .....:	(See appended table 5.4.1.10.3)	P
5.4.2	Clearances		P
5.4.2.2	Determining clearance using peak working voltage	(See appended table 5.4.2.2)	P
5.4.2.3	Determining clearance using required withstand voltage .....:		P
	a) a.c. mains transient voltage.....:	2500V	P
	b) d.c. mains transient voltage .....:		N/A

EN IEC 62368-1			
Clause	Requirement-Test	Result-Remark	Verdict
	c) external circuit transient voltage.....:		N/A
	d) transient voltage determined by measurement.... :		P
5.4.2.4	Determining the adequacy of a clearance using an electric strength test	Procedure 1 and procedure 2 used.	P
5.4.2.5	Multiplication factors for clearances and test voltages .....:	1.0 considered.	N/A
5.4.3	Creepage distances.....:	(See appended table 5.4.3)	P
5.4.3.1	General		P
5.4.3.3	Material Group.....:	IIIa&IIIb	P
5.4.4	Solid insulation		P
5.4.4.2	Minimum distance through insulation .....:		P
5.4.4.3	Insulation compound forming solid insulation		P
5.4.4.4	Solid insulation in semiconductor devices		P
5.4.4.5	Cemented joints	See 5.4.1.5.2	N/A
5.4.4.6	Thin sheet material	See power module report.	P
5.4.4.6.1	General requirements		P
5.4.4.6.2	Separable thin sheet material	See above	P
	Number of layers (pcs).....:	3Layers of insulation tape	P
5.4.4.6.3	Non-separable thin sheet material		N/A
5.4.4.6.4	Standard test procedure for non-separable thin sheet material.....:	(See appended Table 5.4.9)	N/A
5.4.4.6.5	Mandrel test		N/A
5.4.4.7	Solid insulation in wound components		P
5.4.4.9	Solid insulation at frequencies >30 kHz.....:		N/A
5.4.5	Antenna terminal insulation	No antenna used.	N/A
5.4.5.1	General		N/A
5.4.5.2	Voltage surge test		N/A
	Insulation resistance (MΩ).....:		N/A
5.4.6	Insulation of internal wire as part of supplementary safeguard.....:	No such wires.	N/A

EN IEC 62368-1			
Clause	Requirement-Test	Result-Remark	Verdict
5.4.7	Tests for semiconductor components and for cemented joints	No semiconductor components and cemented joints used.	N/A
5.4.8	Humidity conditioning		P
	Relative humidity (%)..... :	93	P
	Temperature (°C) ..... :	25	P
	Duration (h)..... :	48	P
5.4.9	Electric strength test..... :	(See appended table 5.4.9)	P
5.4.9.1	Test procedure for a solid insulation type test		N/A
5.4.9.2	Test procedure for routine tests		N/A
5.4.10	Protection against transient voltages between external circuit		N/A
5.4.10.1	Parts and circuits separated from external circuits	(See appended table 5.4.9)	N/A
5.4.10.2	Test methods		N/A
5.4.10.2.1	General		N/A
5.4.10.2.2	Impulse test..... :	(See appended table 5.4.9)	N/A
5.4.10.2.3	Steady-state test..... :	(See appended table 5.4.9)	N/A
5.4.11	Insulation between external circuits and earthed circuitry..... :	(See appended table 5.4.9)	N/A
5.4.11.1	Exceptions to separation between external circuits and earth		N/A
5.4.11.2	Requirements		N/A
	Rated operating voltage U_{op}(V)..... :		N/A
	Nominal voltage U_{peak}(V)..... :		N/A
	Max increase due to variation U_{sp}..... :		N/A
	Max increase due to ageing ΔU_{sa}..... :		N/A
	$U_{op}= U_{peak}+ \Delta U_{sp}+\Delta U_{sa}$..... :		N/A
5.5	Components as safeguards		
5.5.1	General		P
5.5.2	Capacitors and RC units		P
5.5.2.1	General requirement		P

EN IEC 62368-1			
Clause	Requirement-Test	Result-Remark	Verdict
5.5.2.2	Safeguards against capacitor discharge after disconnection of a connector..... :	Intended for skilled person	P
5.5.3	Transformers		P
5.5.4	Optocouplers		P
5.5.4	Optocouplers		P
5.5.5	Relays		N/A
5.5.6	Resistors	No such resistors.	N/A
5.5.7	SPD's		N/A
5.5.7.1	Use of an SPD connected to reliable earthing		N/A
5.5.7.2	Use of an SPD between mains and protective earth		N/A
5.5.8	Insulation between the mains and external circuit consisting of a coaxial cable..... :	No coaxial cable used.	N/A
5.6	Protective conductor		P
5.6.2	Requirement for protective conductors		P
5.6.2.1	General requirements		P
5.6.2.2	Colour of insulation		P
5.6.3	Requirement for protective earthing conductors		N/A
	Protective earthing conductor size (mm^2) ..... :		N/A
5.6.4	Requirement for protective bonding conductors		N/A
5.6.4.1	Protective bonding conductors		N/A
	Protective bonding conductor size (mm^2)..... :	See below	N/A
	Protective current rating (A)..... :		N/A
5.6.4.3	Current limiting and overcurrent protective devices	No such protective device.	N/A
5.6.5	Terminals for protective conductors		N/A
5.6.5.1	Requirement		N/A
	Conductor size (mm^2), nominal thread diameter (mm)..... :		N/A
5.6.5.2	Corrosion		N/A
5.6.6	Resistance of the protective system		N/A
5.6.6.1	Requirements		N/A

EN IEC 62368-1			
Clause	Requirement-Test	Result-Remark	Verdict
5.6.6.2	Test Method Resistance (Ω).....:		N/A
5.6.7	Reliable earthing		N/A
5.7	Prospective touch voltage, touch current and protective conductor current		P
5.7.2	Measuring devices and networks		P
5.7.2.1	Measurement of touch current.....:	(See appended table 5.7.4)	P
5.7.2.2	Measurement of prospective touch voltage	Considered	P
5.7.3	Equipment set-up, supply connections and earth connections		P
	System of interconnected equipment (separate connections/single connection).....:	Single connection, with earth disconnected.	P
	Multiple connections to mains (one connection at a time/simultaneous connections).....:		N/A
5.7.4	Earthed conductive accessible parts.....:	(See appended Table 5.7.4)	N/A
5.7.5	Protective conductor current		p
	Supply Voltage (V).....:	240V	p
	Measured current (mA).....:	(See appended Table 5.7.4)	p
	Instructional Safeguard.....:	(See F.4 and F.5)	p
5.7.6	Prospective touch voltage and touch current due to external circuits		p
5.7.6.1	Touch current from coaxial cables		N/A
5.7.6.2	Prospective touch voltage and touch current from external circuits		N/A
5.7.7	Summation of touch currents from external circuits		N/A
	a) Equipment with earthed external circuits Measured current (mA).....:		N/A
	b) Equipment whose external circuits are not referenced to earth. Measured current (mA).....:		N/A

EN IEC 62368-1			
Clause	Requirement-Test	Result-Remark	Verdict
6	**ELECTRICALLY- CAUSED FIRE**		P
6.2	Classification of power sources (PS) and potential ignition sources (PIS)		P
6.2.2	Power source circuit classifications	PS (power source) classification determined by measuring the maximum power in Figures 34 and 35 for load and power source circuits.	P
6.2.2.1	General		P
6.2.2.2	Power measurement for worst-case load fault.... :	(See appended table 6.2.2)	P
6.2.2.3	Power measurement for worst-case power source fault.....:	(See appended table 6.2.2)	P
6.2.2.4	PS1 .....:	(See appended table 6.2.2)	P
6.2.2.5	PS2 .....:		N/A
6.2.2.6	PS3 .....:	(See appended table 6.2.2)	N/A
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 (a)	No ignition and attainable temperature value less than 90 % defined by ISO 871 or less than 300 °C for unknown materials.....:	(See appended table 6.3.2, 9.0, B.2.6)	P
6.3.1 (b)	Combustible materials outside fire enclosure	It shall be evaluated in end use system	N/A
6.4	Safeguards against fire under single fault conditions		P
6.4.1	Safeguard Method	Enclosure.	P
6.4.2	Reduction of the likelihood of ignition under single fault conditions in PS1 circuits		P
6.4.3	Reduction of the likelihood of ignition under single fault conditions in PS2 and PS3 circuits	No PS2 circuits.	N/A
6.4.3.1	General		N/A
6.4.3.2	Supplementary Safeguards		N/A
	Special conditions if conductors on printed boards are opened or peeled		N/A

EN IEC 62368-1			
Clause	Requirement-Test	Result-Remark	Verdict
6.4.3.3	Single Fault Conditions..... :		P
	Special conditions for temperature limited by fuse		P
6.4.4	Control of fire spread in PS1 circuits		P
6.4.5	Control of fire spread in PS2 circuits		N/A
6.4.5.2	Supplementary safeguards ..... :	(See appended tables 4.1.2 and Annex G)	N/A
6.4.6	Control of fire spread in PS3 circuit	All components mounted on PCB, related components comply with IEC standards; Fire enclosure shall be considered in end use system.	P
6.4.7	Separation of combustible materials from a PIS	Metal enclosure cover all parts except for input, output terminal and control module.	N/A
6.4.7.1	General.....:	(See tables 6.2.3.1 and 6.2.3.2)	N/A
6.4.7.2	Separation by distance		N/A
6.4.7.3	Separation by a fire barrier		N/A
6.4.8	Fire enclosures and fire barriers	Fire enclosure shall be considered in end use system.	P
6.4.8.1	Fire enclosure and fire barrier material properties		P
6.4.8.2.1	Requirements for a fire barrier		N/A
6.4.8.2.2	Requirements for a fire enclosure	Fire enclosure Shall be considered in end use system.	P
6.4.8.3	Constructional requirements for a fire enclosure and a fire barrier	Fire enclosure Shall be considered in end use system.	P
6.4.8.3.1	Fire enclosure and fire barrier openings	Metal enclosure cover all parts except for input, output terminal and control module. Fire enclosure Shall be considered in end use system.	N/A
6.4.8.3.2	Fire barrier dimensions		N/A
6.4.8.3.3	Top Openings in Fire Enclosure: dimensions(mm) .....:		N/A
	Needle Flame test		N/A

EN IEC 62368-1			
Clause	Requirement-Test	Result-Remark	Verdict
6.4.8.3.4	Bottom Openings in Fire Enclosure, condition met a), b) and/or c) dimensions (mm)..... :		N/A
	Flammability tests for the bottom of a fire enclosure ..... :		N/A
6.4.8.3.5	Integrity of the fire enclosure, condition met: a), b) or c)..... :	No doors or covers.	N/A
6.4.8.4	Separation of PIS from fire enclosure and fire barrier distance (mm) or flammability rating..... :	Metal enclosure provided.	N/A
6.5	Internal and external wiring		P
6.5.1	Requirements		P
6.5.2	Cross-sectional area (mm^2) ..... :		P
6.5.3	Requirements for interconnection to building wiring ..... :	(See Annex Q.)	N/A
6.6	Safeguards against fire due to connection to additional equipment		N/A
	External port limited to PS2 or complies with Clause Q.1		N/A
7	**INJURY CAUSED BY HAZARDOUS SUBSTANCES**		N/A
7.2	Reduction of exposure to hazardous substances	No hazardous chemicals within the equipment.	N/A
7.3	Ozone exposure	Does not produce Ozone.	N/A
7.4	Use of personal safeguards (PPE)		N/A
	Personal safeguards and instructions..... :		N/A
7.5	Use of instructional safeguards and instructions		N/A
	Instructional safeguard (ISO 7010)..... :		N/A
7.6	Batteries..... :	No batteries used.	N/A

EN IEC 62368-1			
Clause	Requirement-Test	Result-Remark	Verdict
8	**MECHANICALLY-CAUSED INJURY**		P
8.1	General	No moving parts in the equipment. See below regarding edges and corners.	P
8.2	Mechanical energy source classifications	MS1	P
8.3	Safeguards against mechanical energy sources		N/A
8.4	Safeguards against parts with sharp edges and corners	Edges, corners and fan are classed as MS1.	P
8.4.1	Safeguards		P
8.5	Safeguards against moving parts		N/A
8.5.1	MS2 or MS3 part required to be accessible for the function of the equipment		N/A
8.5.2	Instructional Safeguard..... :		N/A
8.5.4	Special categories of equipment comprising moving parts		P
8.5.4.1	Large data storage equipment		N/A
8.5.4.2	Equipment having electromechanical device for destruction of media		N/A
8.5.4.2.1	Safeguards and Safety Interlocks.....:	(See Annex F.4 and Annex K)	N/A
8.5.4.2.2	Instructional safeguards against moving parts		N/A
	Instructional Safeguard..... :		N/A
8.5.4.2.3	Disconnection from the supply		N/A
8.5.4.2.4	Probe type and force (N).....:		N/A
8.5.5	High Pressure Lamps		N/A
8.5.5.1	Energy Source Classification		N/A
8.5.5.2	High Pressure Lamp Explosion Test.....:	(See appended table 8.5.5.2)	N/A
8.6	Stability		N/A
8.6.1	Product classification		N/A
	Instructional Safeguard..... :		N/A
8.6.2	Static stability		N/A
8.6.2.2	Static stability test		N/A

EN IEC 62368-1			
Clause	Requirement-Test	Result-Remark	Verdict
	Applied Force.....:		N/A
8.6.2.3	Downward Force Test		N/A
8.6.3	Relocation stability test		N/A
	Unit configuration during 10° tilt.....:		N/A
8.6.4	Glass slide test		N/A
8.6.5	Horizontal force test (Applied Force)..... :		N/A
	Position of feet or movable parts.....:		N/A
8.7	Equipment mounted to wall or ceiling		N/A
8.7.1	Mounting Means (Length of screws (mm) and mounting surface) ..... :		N/A
8.7.2	Direction and applied force..... :		N/A
8.8	Handles strength		N/A
8.8.1	Classification0		N/A
8.8.2	Applied Force .....:		N/A
8.9	Wheels or casters attachment requirements		N/A
8.9.1	Classification		N/A
8.9.2	Applied force.....:		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
	Instructional Safeguard.....:		N/A
8.10.3	Cart, stand or carrier loading test and compliance		N/A
	Applied force..... :		N/A
8.10.4	Cart, stand or carrier impact test		N/A
8.10.5	Mechanical stability		N/A
	Applied horizontal force (N).....:		N/A
8.10.6	Thermoplastic temperature stability (°C).....:		N/A
8.11	Mounting means for rack mounted equipment		N/A
8.11.1	General		N/A

EN IEC 62368-1			
Clause	Requirement-Test	Result-Remark	Verdict
8.11.2	Product Classification		N/A
8.11.3	Mechanical strength test, variable *N*..... :		N/A
8.11.4	Mechanical strength test 250N, including end stops		N/A
8.12	Telescoping or rod antennas.....	(See Annex T)	N/A
	Button/Ball diameter (mm)..... :		N/A
9	**THERMAL BURN INJURY**		P
9.2	Thermal energy source classifications		P
9.3	Safeguard against thermal energy sources		P
9.4	Requirements for safeguards		P
9.4.1	Equipment safeguard		P
9.4.2	Instructional safeguard ..... :		P
10	**RADIATION**		N/A
10.2	Radiation energy source classification	No such radiation generated from the equipment.	N/A
10.2.1	General classification		N/A
10.3	Protection against laser radiation		N/A
	Laser radiation that exists equipment:		N/A
	Normal, abnormal, single-fault..... :	(See attached laser test report)	N/A
	Instructional safeguard..... :		N/A
	Tool..... :		N/A
10.4	Protection against visible, infrared, and UV radiation		N/A
10.4.1	General		N/A
10.4.1.a)	RS3 for Ordinary and instructed persons.....:		N/A
10.4.1.b)	RS3 accessible to a skilled person..... :		N/A
	Personal safeguard (PPE) instructional safeguard:		N/A
10.4.1.c)	Equipment visible, IR, UV does not exceed RS1..:		N/A

EN IEC 62368-1			
Clause	Requirement-Test	Result-Remark	Verdict
10.4.1.d)	Normal, abnormal, single-fault conditions .....:	(See appended table B.3 & B.4)	N/A
10.4.1.e)	Enclosure material employed as safeguard is opaque.....:		N/A
10.4.1.f)	UV attenuation.....:		N/A
10.4.1.g)	Materials resistant to degradation UV..... :		N/A
10.4.1.h)	Enclosure containment of optical radiation.....:		N/A
10.4.1.i)	Exempt Group under normal operating conditions .....:		N/A
10.4.2	Instructional safeguard.....:		N/A
10.5	Protection against x-radiation		N/A
10.5.1	X- radiation energy source that exists equipment .....:	(See appended table B.3 & B.4)	N/A
	Normal, abnormal, single fault conditions		N/A
	Equipment safeguards.....:		N/A
	Instructional safeguard for skilled person..... :		N/A
10.5.3	Most unfavourable supply voltage to give maximum radiation.....:		N/A
	Abnormal and single-fault condition.....:	(See appended table B.3 & B.4)	N/A
	Maximum radiation (pA/kg).....:		N/A
10.6	Protection against acoustic energy sources		N/A
10.6.1	General		N/A
10.6.2	Classification		N/A
	Acoustic output, dB(A).....:		N/A
	Output voltage, unweighted r.m.s.....:		N/A
10.6.4	Protection of persons		N/A
	Instructional safeguards.....:		N/A
	Equipment safeguard prevent ordinary person to RS2.....:		N/A
	Means to actively inform user of increase sound pressure.....:		N/A

EN IEC 62368-1			
Clause	Requirement-Test	Result-Remark	Verdict
	Equipment safeguard prevent ordinary person to RS2.....:		N/A
	Equipment safeguard prevent ordinary person to RS2.....:		N/A
10.6.5	Requirements for listening devices (headphones, earphones, etc.)		N/A
10.6.5.1	Corded passive listening devices with analog input		N/A
	Input voltage with 94 dB(A) L_{Aeq}acoustic pressure output..... :		N/A
10.6.5.2	Corded listening devices with digital input		N/A
	Maximum dB(A).....:		N/A
10.6.5.3	Cordless listening device		N/A
	Maximum dB(A).....:		N/A
B	**NORMAL OPERATING CONDITION TESTS, ABNORMAL OPERATING CONDITION TESTS AND SINGLE FAULT CONDITION TESTS**		P
B.2	Normal Operating Conditions	See the following details.	P
B.2.1	General requirements.....:	(See Test Item Particulars and appended test tables)	P
	Audio Amplifiers and equipment with audio amplifiers..... :	No audio amplifiers	N/A
B.2.3	Supply voltage and tolerances	The minimum tolerance shall be taken as +10 % and −10 %	P
B.2.5	Input test.....:	(See appended table B.2.5)	P
B.3	Simulated abnormal operating conditions		P
B.3.1	General requirements.....:	(See appended table B.3)	P
B.3.2	Covering of ventilation openings		P
B.3.3	D.C. mains polarity test	AC mains	N/A
B.3.4	Setting of voltage selector..... :	No 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	Battery can not be reversed polarity	N/A

EN IEC 62368-1			
Clause	Requirement-Test	Result-Remark	Verdict
B.3.7	Abnormal operating conditions as specified in Clause E.2.	Not such equipment.	N/A
B.3.8	Safeguards functional during and after abnormal operating conditions	All safeguards remained effective.	N/A
B.4	Simulated single fault conditions		P
B.4.2	Temperature controlling device open or short-circuited.....:	(See appended table B.4)	N/A
B.4.3	Motor tests	UL approved fans. See power module report	N/A
B.4.3.1	Motor blocked or rotor locked increasing the internal ambient temperature ..... :	(See Clause G.5)	N/A
B.4.4	Short circuit of functional insulation		P
B.4.4.1	Short circuit of clearances for functional insulation		P
B.4.4.2	Short circuit of creepage distances for functional insulation		P
B.4.4.3	Short circuit of functional insulation on coated printed boards	No coated printed boards used.	N/A
B.4.5	Short circuit and interruption of electrodes in tubes and semiconductors	(See appended table B.4 for faults on electronic components)	P
B.4.6	Short circuit or disconnect of passive components	(See appended table B.4)	P
B.4.7	Continuous operation of components	The EUT is continuous operating type and no such components intended for short time operation or intermittent operation	N/A
B.4.8	Class 1 and Class 2 energy sources within limits during and after single fault conditions	No change to circuits classified in 5.3.	P
B.4.9	Battery charging under single fault conditions.....:	(See Annex M)	N/A
C	**UV RADIATION**		N/A
C.1	Protection of materials in equipment from UV radiation	No UV generated from the equipment.	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

EN IEC 62368-1			
Clause	Requirement-Test	Result-Remark	Verdict
C.2.2	Mounting of test samples		N/A
C.2.3	Carbon-arc light-exposure apparatus		N/A
C.2.4	Xenon-arc light exposure apparatus		N/A
D	**TEST GENERATORS**		N/A
D.1	Impulse test generators		N/A
D.2	Antenna interface test generator		N/A
D.3	Electronic pulse generator		N/A
E	**TEST CONDITIONS FOR EQUIPMENT CONTAINING AUDIO AMPLIFIERS**		N/A
E.1	Audio amplifier normal operating conditions		N/A
	Audio signal voltage (V)..... :		N/A
	Rated load impedance (Ω) ..... :		N/A
E.2	Audio amplifier abnormal operating conditions		N/A
F	**EQUIPMENT MARKINGS, INSTRUCTIONS, AND INSTRUCTIONAL SAFEGUARDS**		P
F.1	General requirements	See below.	P
	Instructions – Language ..... :	English	P
F.2	Letter symbols and graphical symbols		P
F.2.1	Letter symbols according to IEC60027-1	Letter symbols for quantities and units are complied with IEC 60027-1.	P
F.2.2	Graphic symbols IEC, ISO or manufacturer specific	Graphical symbols are complied with IEC 60417, ISO 3864-2, ISO 7000 or ISO 7010.	N/A
F.3	Equipment markings		P
F.3.1	Equipment marking locations	Exterior of equipment.	P
F.3.2	Equipment identification markings		P
F.3.2.1	Manufacturer identification ..... :	RGBlink Science & Technology Co.,Ltd	P
F.3.2.2	Model identification ..... :	Refer to marking label	P
F.3.3	Equipment rating markings	See marking.	P
F.3.3.1	Equipment with direct connection to mains		P
F.3.3.2	Equipment without direct connection to mains		N/A

EN IEC 62368-1			
Clause	Requirement-Test	Result-Remark	Verdict
F.3.3.3	Nature of supply voltage.....:	~	P
F.3.3.4	Rated voltage.....:	100-240Va.c.	P
F.3.3.4	Rated frequency.....:	50Hz	P
F.3.3.6	Rated current or rated power.....:	Refer to marking label	P
F.3.3.7	Equipment with multiple supply connections	Only one supply	N/A
F.3.4	Voltage setting device	No voltage setting device.	N/A
F.3.5	Terminals and operating devices		P
F.3.5.1	Mains appliance outlet and socket-outlet markings .....:		P
F.3.5.2	Switch position identification marking.....:		P
F.3.5.3	Replacement fuse identification and rating markings.....:		N/A
F.3.5.4	Replacement battery identification marking.....:		P
F.3.5.5	Terminal marking location	Neutral conductor identified by capital letter “N”	P
F.3.6	Equipment markings related to equipment classification	Class II equipment	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	Neutral conductor terminal		N/A
F.3.6.1.3	Protective bonding conductor terminals		N/A
F.3.6.2	Class II equipment (IEC 60417-5172)	Class II equipment	P
F.3.6.2.1	Class II equipment with or without functional earth		P
F.3.6.2.2	Class II equipment with functional earth terminal marking		P
F.3.7	Equipment IP rating marking .....:		N/A
F.3.8	External power supply output marking		P
F.3.9	Durability, legibility and permanence of marking		P
F.3.10	Test for permanence of markings	After test, the marking remain legible, it was not possible to remove marking plate and no curling observed.	P
F.4	Instructions		P

EN IEC 62368-1			
Clause	Requirement-Test	Result-Remark	Verdict
	a) Equipment for use in locations where children not likely to be present - marking		P
	b) Instructions given for installation or initial use		P
	c) Equipment intended to be fastened in place		P
	d) Equipment intended for use only in restricted access area		P
	e) Audio equipment terminals classified as ES3 and other equipment with terminals marked in accordance F.3.6.1		N/A
	f) Protective earthing employed as safeguard		P
	g) Protective earthing conductor current exceeding ES 2 limits		N/A
	h) Symbols used on equipment		P
	i) Permanently connected equipment not provided with all-pole mains switch	.	N/A
	j) Replaceable components or modules providing safeguard function		P
F.5	Instructional safeguards	No such components.	N/A
	Where “instructional safeguard” is referenced in the test report it specifies the required elements, location of marking and/or instruction		N/A
G	**COMPONENTS**		N/A
G.1	**Switches**		N/A
G.1.1	General requirements	Approved switch located only in output circuit not used as safeguard.	N/A
G.1.2	Ratings, endurance, spacing, maximum load		N/A
G.2	**Relays**		N/A
G.2.1	General requirements	Approved by UL	N/A
G.2.2	Overload test		N/A
G.2.3	Relay controlling connectors supply power		N/A
G.2.4	Mains relay, modified as stated in G.2		N/A
G.3	**Protection Devices**		P
G.3.1	Thermal cut-offs		N/A

EN IEC 62368-1			
Clause	Requirement-Test	Result-Remark	Verdict
G.3.1.1a) &b)	Thermal cut-outs separately approved according to IEC 60730 with conditions indicated in a) & b)		N/A
G.3.1.1c)	Thermal cut-outs tested as part of the equipment as indicated in c)		N/A
G.3.1.2	Thermal cut-off connections maintained and secure		N/A
G.3.2	Thermal links		N/A
G.3.2.1a)	Thermal links separately tested with IEC 60691		N/A
G.3.2.1b)	Thermal links tested as part of the equipment		N/A
	Aging hours (H)..... :		N/A
	Single Fault Condition..... :		N/A
	Test Voltage (V) and Insulation Resistance (Ω)..:		N/A
G.3.3	PTC Thermistors		N/A
G.3.4	Overcurrent protection devices		N/A
G.3.5	Safeguards components not mentioned in G.3.1 to G.3.5		N/A
G.3.5.1	Non-resettable devices suitably rated and marking provided		N/A
G.3.5.2	Single faults conditions.....:	(See appended Table B.4)	N/A
G.4	**Connectors**		N/A
G.4.1	Spacings	Approved by UL	N/A
G.4.2	Mains connector configuration .....:		N/A
G.4.3	Plug is shaped that insertion into mains socket-outlets or appliance coupler is unlikely		N/A
G.5	**Wound Components**		P
G.5.1	Wire insulation in wound components.....	Approved triple wire used. (See Annex J)	P
G.5.1.2 a)	Two wires in contact inside wound component, angle between 45° and 90°	Tape used for the protection.	P
G.5.1.2 b)	Construction subject to routine testing		N/A
G.5.2	Endurance test on wound components		N/A
G.5.2.1	General test requirements		N/A
G.5.2.2	Heat run test		N/A

EN IEC 62368-1			
Clause	Requirement-Test	Result-Remark	Verdict
	Time (s)..... :		N/A
	Temperature (°C)..... :		N/A
G.5.2.3	Wound Components supplied by mains		N/A
G.5.3	**Transformers**		P
G.5.3.1	Requirements applied (IEC61204-7, IEC61558-1/-2, and/or IEC62368-1)..... :		N/A
	Position..... :		N/A
	Method of protection ..... :		N/A
G.5.3.2	Insulation		P
	Protection from displacement of windings..... :		P
G.5.3.3	Overload test..... :		P
G.5.3.3.1	Test conditions		P
G.5.3.3.2	Winding Temperatures testing in the unit		P
G.5.3.3.3	Winding Temperatures - Alternative test method		N/A
G.5.4	**Motors**		N/A
G.5.4.1	General requirements		N/A
	Position ..... :		N/A
G.5.4.2	Test conditions		N/A
G.5.4.3	Running overload test		N/A
G.5.4.4	Locked-rotor overload test		N/A
	Test duration (days) ..... :		N/A
G.5.4.5	Running overload test for d.c. motors in secondary circuits		N/A
G.5.4.5.2	Tested in the unit		N/A
	Electric strength test (V)..... :		N/A
G.5.4.5.3	Tested on the Bench - Alternative test method; test time (h) ..... :		N/A
	Electric strength test (V)..... :		N/A
G.5.4.6	Locked-rotor overload test for d.c. motors in secondary circuits		N/A
G.5.4.6.2	Tested in the unit		N/A

	Maximum Temperature .....:		N/A
	Electric strength test (V) ..... :		N/A
G.5.4.6.3	Tested on the bench - Alternative test method; test time (h)..... :		N/A
	Electric strength test (V)..... :		N/A
G.5.4.7	Motors with capacitors		N/A
G.5.4.8	Three-phase motors		N/A
G.5.4.9	Series motors		N/A
	Operating voltage ..... :		N/A
G.6	**Wire Insulation**		N/A
G.6.1	General		N/A
G.6.2	Solvent-based enamel wiring insulation		N/A
G.7	**Mains supply cords**		N/A
G.7.1	General requirements	VDE Approved	P
	Type.....:		P
	Rated current (A).....:		P
	Cross-sectional area (mm^2), (AWG)..... :		P
G.7.2	Compliance and test method		P
G.7.3	Cord anchorages and strain relief for non-detachable power supply cords		P
G.7.3.2	Cord strain relief		P
G.7.3.2.1	Requirements		P
	Strain relief test force (N).....:	30N	P
G.7.3.2.2	Strain relief mechanism failure		P
G.7.3.2.3	Cord sheath or jacket position, distance (mm).....:	0.8mm	P
G.7.3.2.4	Strain relief comprised of polymeric material		P
G.7.4	Cord Entry..... :		P
G.7.5	Non-detachable cord bend protection		P
G.7.5.1	Requirements		P
G.7.5.2	Mass (g) .....:		P
	Diameter (m).....:		N/A
	Temperature (°C).....:		N/A

G.7.6	Supply wiring space		P
G.7.6.2	Stranded wire		N/A
G.7.6.2.1	Test with 8 mm strand		N/A
G.8	**Varistors**		P
G.8.1	General requirements		P
G.8.2	Safeguard against shock		P
G.8.3	Safeguard against fire		N/A
G.8.3.2	Varistor overload test.....:		N/A
G.8.3.3	Temporary overvoltage.....:		N/A
G.9	**Integrated Circuit (IC) Current Limiters**		N/A
G.9.1 a)	Manufacturer defines limit at max. 5A.		N/A
G.9.1 b)	Limiters do not have manual operator or reset		N/A
G.9.1 c)	Supply source does not exceed 250 VA .....:		N/A
G.9.1 d)	IC limiter output current (max. 5A).....:		N/A
G.9.1 e)	Manufacturers' defined drift .....:		N/A
G.9.2	Test Program 1		N/A
G.9.3	Test Program 2		N/A
G.9.4	Test Program 3		N/A
G.10	**Resistors**		N/A
G.10.1	General requirements		N/A
G.10.2	Resistor test		N/A
G.10.3	Test for resistors serving as safeguards between the mains and an external circuit consisting of a coaxial cable		N/A
G.10.3.1	General requirements		N/A
G.10.3.2	Voltage surge test		N/A
G.10.3.3	Impulse test		N/A
G.11	**Capacitor and RC units**		P
G.11.1	General requirements		P
G.11.2	Conditioning of capacitors and RC units		P
G.11.3	Rules for selecting capacitors		P

G.12	**Optocouplers**		P
	Optocouplers comply with IEC 60747-5-5:2007 Spacing or Electric Strength Test (specify option and test results)..... :		P
	Type test voltage Vini.....:		P
	Routine test voltage, Vini,b..... :		P
G.13	**Printed boards**		P
G.13.1	General requirements	Approved Printed board used.	P
G.13.2	Uncoated printed boards		P
G.13.3	Coated printed boards		N/A
G.13.3	Coated printed boards		N/A
G.13.4	Insulation between conductors on the same inner surface		N/A
	Compliance with cemented joint requirements (Specify construction).....:		N/A
G.13.5	Insulation between conductors on different surfaces		N/A
	Distance through insulation.....:		N/A
	Number of insulation layers (pcs).....:		N/A
G.13.6	Tests on coated printed boards		N/A
G.13.6.1	Sample preparation and preliminary inspection		N/A
G.13.6.2a)	Thermal conditioning		N/A
G.13.6.2b)	Electric strength test		N/A
G.13.6.2c)	Abrasion resistance test		N/A
G.14	**Coating on components terminals**		N/A
G.14.1	Requirements .....:	(See G.13)	N/A
G.15	**Liquid filled components**		N/A
G.15.1	General requirements		
G.15.2	Requirements		N/A
G.15.3	Compliance and test methods		N/A
G.15.3.1	Hydrostatic pressure test		N/A
G.15.3.2	Creep resistance test		N/A
G.15.3.3	Tubing and fittings compatibility test		N/A

G.15.3.4	Vibration test		N/A
G.15.3.5	Thermal cycling test		N/A
G.15.3.6	Force test		N/A
G.15.4	Compliance		N/A
G.16	**IC including capacitor discharge function (ICX)**		N/A
a)	Humidity treatment in accordance with sc5.4.8 – 120 hours		N/A
b)	Impulse test using circuit 2 with Uc = to transient voltage .....:		N/A
C1)	Application of ac voltage at 110% of rated voltage for 2.5 minutes		N/A
C2)	Test voltage .....:		N/A
D1)	10,000 cycles on and off using capacitor with smallest capacitance resistor with largest resistance specified by manufacturer		N/A
D2)	Capacitance .....:		N/A
D3)	Resistance .....:		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	Ringing signal		N/A
H.3.1.1	Frequency (Hz) .....:		N/A
H.3.1.2	Voltage (V) .....:		N/A
H.3.1.3	Cadence; time (s) and voltage (V) .....:		N/A
H.3.1.4	Single fault current (mA):.....:		N/A
H.3.2	Tripping device and monitoring voltage.....:		N/A
H.3.2.1	Conditions for use of a tripping device or a monitoring voltage complied with		N/A
H.3.2.2	Tripping device		N/A
H.3.2.3	Monitoring voltage (V).....:		N/A
J	**INSULATED WINDING WIRES FOR USE WITHOUT INTERLEAVED INSULATION**		P
	General requirements	Approved triple insulated wire used.	P

K	**SAFETY INTERLOCKS**		N/A
K.1	General requirements		N/A
K.2	Components of safety interlock safeguard mechanism	(See Annex G)	N/A
K.3	Inadvertent change of operating mode		N/A
K.4	Interlock safeguard override		N/A
K.5	Fail-safe		N/A
	Compliance..... :	(See appended table B.4)	N/A
K.6	Mechanically operated safety interlocks		N/A
K.6.1	Endurance requirement		N/A
K.6.2	Compliance and Test method..... :		N/A
K.7	Interlock circuit isolation		N/A
K.7.1	Separation distance for contact gaps & interlock circuit elements (type and circuit location) ..... :		N/A
K.7.2	Overload test, Current (A)..... :		N/A
K.7.3	Endurance test		N/A
K.7.4	Electric strength test ..... :	(See appended table 5.4.11)	N/A
L	**DISCONNECT DEVICES**		N/A
L.1	General requirements	B	N/A
L.2	Permanently connected equipment	Shall be stated in user manual.	N/A
L.3	Parts that remain energized		N/A
L.3	Parts that remain energized		N/A
L.4	Single phase equipment		N/A
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
M	**EQUIPMENT CONTAINING BATTERIES AND THEIR PROTECTION CIRCUITS**		N/A
M.1	General requirements	Device without battery structure	N/A
M.2	Safety of batteries and their cells		N/A
M.2.1	Requirements		N/A

M.2.2	Compliance and test method (identify method)... :		N/A
M.3	Protection circuits		N/A
M.3.1	Requirements		N/A
M.3.2	Tests	Device without battery structure	N/A
	- Overcharging of a rechargeable battery		N/A
	- Unintentional charging of a non-rechargeable battery		N/A
	- Reverse charging of a rechargeable battery		N/A
	- Excessive discharging rate for any battery		N/A
M.3.3	Compliance .....:	(See appended Tables and Annex M and M.4)	N/A
M.4	Additional safeguards for equipment containing secondary lithium battery	No rechargeable battery in secondary circuit.	P
M.4.1	General		P
M.4.2	Charging safeguards		N/A
M.4.2.1	Charging operating limits		N/A
M.4.2.2a)	Charging voltage, current and temperature..... :		N/A
M.4.2.2 b)	Single faults in charging circuitry..... :		N/A
M.4.3	Fire Enclosure		N/A
M.4.4	Endurance of equipment containing a secondary lithium battery		N/A
M.4.4.2	Preparation		N/A
M.4.4.3	Drop and charge/discharge function tests		N/A
	Drop		N/A
	Charge		N/A
	Discharge		N/A
M.4.4.4	Charge-discharge cycle test		N/A
M.4.4.5	Result of charge-discharge cycle test		N/A
M.5	Risk of burn due to short circuit during carrying	Device without battery structure	N/A
M.5.1	Requirement		N/A
M.5.2	Compliance and Test Method (Test of P.2.3)		N/A

M.6	Prevention of short circuits and protection from other effects of electric current		N/A
M.6.1	Short circuits		N/A
M.6.1.1	General requirements		N/A
M.6.1.2	Test method to simulate an internal fault		N/A
M.6.1.3	Compliance (Specify M.6.1.2 or alternative method) ..... :		N/A
M.6.2	Leakage current (mA) ..... :		N/A
M.7	Risk of explosion from lead acid and NiCd batteries		N/A
M.7.1	Ventilation preventing explosive gas concentration		N/A
M.7.2	Compliance and test method		N/A
M.8	Protection against internal ignition from external spark sources of lead acid batteries		N/A
M.8.1	General requirements		N/A
M.8.2	Test method		N/A
M.8.2.1	General requirements		N/A
M.8.2.2	Estimation of hypothetical volume *Vz* (m^3/s)..... :		N/A
M.8.2.3	Correction factors..... :		N/A
M.8.2.4	Calculation of distance *d* (mm) ..... :		N/A
M.9	Preventing electrolyte spillage		N/A
M.9.1	Protection from electrolyte spillage		N/A
M.9.2	Tray for preventing electrolyte spillage		N/A
M.10	Instructions to prevent reasonably foreseeable misuse (Determination of compliance: inspection, data review; or abnormal testing) .....:		N/A
N	**ELECTROCHEMICAL POTENTIALS**		N/A
	Metal(s) used.....:	No risk of corrosion.	N/A
O	**MEASUREMENT OF CREEPAGE DISTANCES AND CLEARANCES**		P
	Figures O.1 to O.20 of this Annex applied.....:		P
P	**SAFEGUARDS AGAINST ENTRY OF FOREIGN OBJECTS AND SPILLAGE OF INTERNAL LIQUIDS**		P
P.1	General requirements	Enclosure	P
P.2.2	Safeguards against entry of foreign object		P

	Location and Dimensions (mm) ..... :		N/A
P.2.3	Safeguard against the consequences of entry of foreign object		P
P.2.3.1	Safeguards against the entry of a foreign object		P
	Openings in transportable equipment		N/A
	Transportable equipment with metalized plastic parts..... :		N/A
P.2.3.2	Openings in transportable equipment in relation to metallized parts of a barrier or enclosure (identification of supplementary safeguard) ..... :		N/A
P.3	Safeguards against spillage of internal liquids		N/A
P.3.1	General requirements		N/A
P.3.2	Determination of spillage consequences		N/A
P.3.3	Spillage safeguards		N/A
P.3.4	Safeguards effectiveness		N/A
P.4	Metallized coatings and adhesive securing parts		N/A
P.4.2 a)	Conditioning testing		N/A
	Tc (°C)..... :		N/A
	Tr (°C)..... :		N/A
	Ta (°C)..... :		N/A
P.4.2 b)	Abrasion testing ..... :	(See G.13.6.2)	N/A
P.4.2 c)	Mechanical strength testing..... :	(See Annex T)	N/A
Q	**CIRCUITS INTENDED FOR INTERCONNECTION WITH BUILDING WIRING**		N/A
Q.1	Limited power sources		N/A
Q.1.1 a)	Inherently limited output		N/A
Q.1.1 b)	Impedance limited output		N/A
	- Regulating network limited output under normal operating and simulated single fault condition	See appended table Q.1	N/A
Q.1.1 c)	Overcurrent protective device limited output		N/A
Q.1.1 d)	IC current limiter complying with G.9		N/A
Q.1.1 d)	IC current limiter complying with G.9		N/A
Q.1.2	Compliance and test method		N/A
Q.2	Test for external circuits – paired conductor cable		N/A

	Maximum output current (A) ..... :		N/A
	Current limiting method..... :		N/A
R	**LIMITED SHORT CIRCUIT TEST**		P
R.1	General requirements		P
R.2	Determination of the overcurrent protective device and circuit		P
R.3	Test method Supply voltage (V) and short-circuit current (A)). ..... :		P
S	**TESTS FOR RESISTANCE TO HEAT AND FIRE**		P
S.1	Flammability test for fire enclosures and fire barrier materials of equipment where the steady state power does not exceed 4 000 W		P
	Samples, material..... :	Enclosure	P
	Wall thickness (mm)..... :	2.5mm	P
	Conditioning (°C)..... :	25	P
	Test flame according to IEC 60695-11-5 with conditions as set out		p
	- Material not consumed completely		p
	- Material extinguishes within 30s		p
	- No burning of layer or wrapping tissue		p
S.2	Flammability test for fire enclosure and fire barrier integrity		p
	Samples, material..... :		p
	Wall thickness (mm)..... :		p
	Conditioning (°C)..... :		p
	Test flame according to IEC 60695-11-5 with conditions as set out		p
	Test specimen does not show any additional hole		p
S.3	Flammability test for the bottom of a fire enclosure	See S.2	p
	Samples, material..... :		p
	Wall thickness (mm)..... :		p
	Cheesecloth did not ignite		p
S.4	Flammability classification of materials		p

S.5	Flammability test for fire enclosures and fire barrier materials of equipment where the steady state power exceed 4 000 W		p
	Samples, material.....:		p
	Wall thickness (mm).....:		p
	Conditioning (test condition), (°C).....:		p
	Test flame according to IEC 60695-11-20 with conditions as set out		p
	After every test specimen was not consumed completely		p
	After fifth flame application, flame extinguished within 1 min		p
T	**MECHANICAL STRENGTH TESTS**		P
T.1	General requirements		P
T.2	Steady force test, 10 N .....:	(See appended table T.2, T.3, T.4,T.5)	P
T.3	Steady force test, 30 N .....:		P
T.4	Steady force test, 100 N ..... :		P
T.5	Steady force test, 250 N ..... :		P
T.6	Enclosure impact test		P
	Fall test		N/A
	Swing test		N/A
T.7	Drop test .....:	(See appended table T7)	P
T.8	Stress relief test.....:	(See appended table T8)	N/A
T.9	Impact Test (glass)		N/A
T.9.1	General requirements		N/A
T.9.2	Impact test and compliance		p
	Impact energy (J).....:		p
	Height (m)..... :		p
T.10	Glass fragmentation test.....:	(See sub-clause 4.4.4.9)	N/A
T.11	Test for telescoping or rod antennas		N/A
	Torque value (Nm).....:		N/A

U	**MECHANICAL STRENGTH OF CATHODE RAY TUBES (CRT) AND PROTECTION AGAINST THE EFECTS OF IMPLOSION**		N/A
U.1	General requirements		N/A
U.2	Compliance and test method for non-intrinsically protected CRTs		N/A
U.3	Protective Screen.....:	(See Annex T)	N/A
V	**DETERMINATION OF ACCESSIBLE PARTS (FINGERS, PROBES AND WEDGES)**		p
V.1	Accessible parts of equipment		p
V.2	Accessible part criterion		p

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_1C
Attachment Originator.....:	IntertekSemko AB
Master Attachment..... :	Date (2015-08)
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	CENELEC COMMON MODIFICATIONS (EN)		P
1	NOTE Z1		P
4.Z1	Protective devices included as integral parts of the equipment or as parts of the building installation:		P
	a) Included as parts of the equipment		N/A
	b) For components in series with the mains; by devices in the building installation		N/A
	c) For pluggable type B or permanently connected; by devices in the building installation		P
5.4.2.3.2.4	Interconnection with external circuit		N/A
10.2.1	Additional requirements in 10.5.1		P
10.5.1	RS1 compliance measurement conditions		P
10.6.2.1	EN 71-1:2011, 4.20 and methods and distances		N/A
10.Z1	Non-ionizing radiation from radio frequencies in the range 0 to 300 GHz		N/A
G.7.1	NOTE Z1		N/A

ZB	**ANNEX ZB, SPECIAL NATIONAL CONDITIONS (EN)**		**N/A**
4.1.15	**Denmark, Finland, Norway and Sweden:** Class I pluggable equipment type A marking		N/A
4.7.3	**United Kingdom:** Torque test socket-outlet BS 1363, and the plug part BS 1363.		N/A

5.2.2.2	**Denmark:** Warning for high touch current		N/A
5.4.11.1 and Annex G	**Finland and Sweden:** Separation of the telecommunication network from earth		N/A

5.5.2.1	**Norway:** Capacitors rated for the applicable line-to-line voltage (230 V).		P
5.5.6	**Finland, Norway and Sweden:** Resistors used as basic safeguard or bridging basic insulation comply with G.10.1 and G.10.2.		N/A
5.6.1	**Denmark:** Protection for pluggable equipment type A; integral part of the equipment		N/A
5.6.4.2.1	**Ireland and United Kingdom:** The protective current rating is taken to be 13 A		P
5.6.5.1	**Ireland and United Kingdom:** Conductor sizes of flexible cords to be accepted by terminals for equipment rated 10 A to 13 A		P
5.7.5	**Denmark:** The installation instruction affixed to the equipment if high protective conductor current		P
5.7.6.1	**Norway and Sweden:** Video Mixer distribution system isolation text in user manual		P
5.7.6.2	**Denmark:** Warning for high touch current		N/A
B.3.1 and B.4	**Ireland and United Kingdom:** Tests conducted using an external miniature circuit breaker or protective devices included as an integral part of the direct plug-in equipment		N/A
G.4.2	**Denmark:** Appliances rated ≤13 A provided with a plug according to DS 60884-2-D1:2011.		N/A
	Class I equipment provided with socket-outlets provided with a plug in accordance with standard sheet DK 2-1a or DK 2-5a.		N/A

	If a single-phase equipment having rated >13 A or poly-phase equipment provided with a supply cord with a plug, plug in accordance with the standard sheets DK 6-1a in DS 60884-2-D1 or EN 60309-2.		N/A
	Mains socket outlets intended for providing power to Class II apparatus rated 2,5 A in accordance with DS 60884-2-D1:2011 standard sheet DKA 1-4a.		P

	Other current rating socket outlets in compliance with Standard Sheet DKA 1-3a or DKA 1-1c.		N/A
	Mains socket-outlets with earth in compliance with DS 60884-2-D1:2011 Standard Sheet DK 1-3a, DK 1-1c, DK1-1d, DK 1-5a or DK 1-7a		N/A
G.4.2	**United Kingdom:** The plug part of direct plug-in equipment assessed to BS 1363		N/A
G.7.1	**United Kingdom:** Equipment fitted with a 'standard plug' in accordance with the Plugs and Sockets etc (Safety) Regulations 1994, Statutory Instrument 1994 No. 1768		N/A
G.7.1	**Ireland:** Apparatus provided with a plug in accordance with Statutory Instrument 525: 1997, "13 A Plugs and Conversion Adapters for Domestic Use		N/A
G.7.2	**Ireland and United Kingdom:** A power supply cord for equipment which is rated over 10 A and up to and including 13 A.		N/A

ZC	**ANNEX ZC, NATIONAL DEVIATIONS (EN)**		**P**
10.5.2	**Germany:** Cathode ray tube intended for the display of visual images, authorization or application of type approval and marking.		N/A
F.1	**Italy:** The power consumption in Watts (W) indicated on TV receiver and in instruction for use		N/A
	TV receivers provided with an instruction for use, schematic diagrams and adjustments procedure in Italian language.		N/A

	Marking for controls and terminals in Italian language.		N/A
	Conformity declaration according to the above requirements in the instruction manual		N/A
	First importers of TV receivers manufactured outside EEC previous conformity certification to the Italian Post Ministry and Certification number on the backcover.		N/A

4.1.2	TABLE: List of critical components	P

Kind of component	Manufacturer	Mechanical, electrical and chemical specification			Test report and/or mark from
Object / part No.	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity
Plastic enclosure	SABIC JAPAN L C C	945（GG）	V-0, 120 °C	UL 94	UL E207780
Fusible resistor (F1)	Dongguan Chevron Electronic Technology Co.,Ltd.	SST	T2AL, 250 Vac	IEC/EN 60127-1 IEC/EN 60127-3	VDE 40052042
(alternative)	ZHONG SHAN LANBAO ELECTRICAL APPLIANCES CO LTD	TB/TR	T2AL, 250 Vac	UL 248	UL E213695
PCB	KINGBOARD LAMINATES HOLDINGS LTD	KB-6165F	V-0, 130 °C	UL796	UL E123995
(alternative)	SHENZHEN SHARED PCB ELECTRONICS CO LTD	SD-M	V-0, 130 °C	UL796	UL E501193
Y-Capacitor (CY1)	GCE (Dongguan) Electronics Co.,Ltd	G Y1	Max. 2200pF , min. 440Vac, 125 °C, Y1 type	IEC 60384-14:2013	VDE 40040844
Optocoupler (U2)	Shenzhen Orient Components Co. Ltd.	OR-1009	Double protection optical isolators, Dti=≥0.4mm, Ext. Dcr.≥7.0mm, 100 C	IEC 60747-5-5:2007	VDE 40029733
Inductor L1	AMPLY ELECTRONIC CO.,LTD	DR5*11	160uH min.	EN 62368-1:2014	Tested with appliance
T1	Shenzhen Ruiyuan Industrial co.,LTD	RY-U33	Class B	EN 62368-1:2014	Tested with appliance
-Bobbin	CHANG CHUN PLASTICS CO LTD	T357	V-0, 150 °C	UL 94	UL E59481
-Triple insulated wire	Jinma New Material Technology CO.,Ltd	TEX-E	130 °C, class B	IEC/EN 60950-1	UL E485952
- Insulating tape	JINGJIANG YAHUA PRESSURE SENSITIVE GLUE CO LTD	CT	130 °C	UL 510	UL E165111
- Insulating tube	Fluotech Industrial (Huizhou) Co Ltd	TFT	300V rms, 200 °C	UL 224	UL E175982
Insulated sleeve	SHIN-ETSU CHEMICAL CO LTD	KE-5612G@	V-0,150°C	UL 746	E48923
Insulation sheet	FORMEX, DIV OF ILLINOIS TOOL WORKS INC,FORMERLY	FORMEX GK-(a)(b)@	V-0, 200°C. min. thickness 0.2mm	UL 746	E121855

Supplementary information:
1) Provided evidence ensures the agreed level of compliance. See OD-CB2039.

4.8.4, 4.8.5	TABLE: Lithium coin/button cell batteries mechanical tests	N/A
(The following mechanical tests are conducted in the sequence noted.)		

4.8.4.2	TABLE: Stress Relief test	—

Part	Material	Oven Temperature (°C)	Comments
--	--	--	--

4.8.4.3	TABLE: Battery replacement test	—
Battery part no.....:		—

Battery Installation/withdrawal	Battery Installation/Removal Cycle	Comments
--	1	--
	2	--
	3	--
	4	--
	5	--
	6	--
	8	--
	9	--
	10	--

4.8.4.4	TABLE: Drop test	—

Impact Area	Drop Distance	Drop No.	Observations
--	--	1	--
--	--	2	--
--	--	3	--

4.8.4.5	TABLE: Impact	—

Impacts per surface	Surface tested	Impact energy (Nm)	Comments
--	--	--	--
--	--	--	--
--	--	--	--

4.8.4.6	TABLE: Crush test	—

Test position	Surface tested	Crushing Force (N)	Duration force applied (s)
--	--	--	--
--	--	--	--

4.8.4, 4.8.5	TABLE: Lithium coin/button cell batteries mechanical tests	N/A
(The following mechanical tests are conducted in the sequence noted.)		
Supplementary information:		

4.8.5	TABLE: Lithium coin/button cell batteries mechanical test result		N/A
Test position	**Surface tested**	**Force (N)**	**Duration force applied (s)**
--	--	--	--
--	--	--	--
Supplementary information:			

5.2	Table: Classification of electrical energy sources					P
5.2.2.2 – Steady State Voltage and Current conditions						
No.	Supply Voltage	Location (e.g. circuit designation)	Test conditions	Parameters		ES Class
				U (Vrms or ~~Vpk~~)	I (~~Apk~~ or Arms) / Hz	
1	240V	AC input and internal primary circuit	Normal	240	--- / 50	ES3
			Abnormal	240	--- / 50	
			Single fault – SC/OC	240	--- / 50	
2	240V	Output（+to-）	Normal	48.025	1 / ---	ES1
			Abnormal	47.938	1.74 / ---	
			Single fault – SC/OC	See table B.3	--- / ---	

5.2.2.3 - Capacitance Limits							
No.	Supply Voltage	Location (e.g. circuit designation)	Test conditions	Parameters			ES Class
				Capacitance, nF	Upk (V)	Hz	
--	--	--	--	--	--	-	--
			--	--	--	-	
			--	--	--	-	
--	--	--	--	--	--	-	--
			--	--	--	-	

			--	--	--	-	

5.2.2.4 - Single Pulses

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

5.2.2.5 - Repetitive Pulses

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

Test Conditions:

Normal -

Abnormal -

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

5.4.1.4, 6.3.2, 9.0, B.2.6	TABLE: Temperature measurements					P
	Supply voltage (V) ..... :	264V 50Hz[1)]	264V 50Hz[2)]	90V 50Hz[3)]	90V 50Hz[4)]	—
	Ambient T_{min} (°C) ..... :	18.0				—
	Ambient T_{max} (°C) ..... :	19.2				—
	Tma (°C)..... :	40	40	40	40	—

Maximum measured temperature T of part/at:	T (°C)				Allowed T_{max} (°C)
Electric Capacitor(C1)	81.2	80.3	81.0	72.3	105
Fuse(F1)3-1	66	68	70.6	73.2	Ref
Enclosure(Outside)	69.4	62.3	88.1	68.2	77
PCB under Varistor	87.2	84.1	106.6	93.9	130
AC inlet	60.5	53.2	61.8	64.9	85
Line Choke(L1)	81.6	87.6	119.1	107.6	135
Electric Capacitor(C1)	87.7	87.2	82.7	72.8	105
Y Capacitor(CY1)	73.5	76.4	74.7	74.2	125
Transistor(IC1)	84.5	85.6	108.2	98.4	Ref
Transformer Core (T1)	98.2	96.4	93.6	104.1	Ref
Transformer Winding(T1)	92	93.8	96.1	90.8	110
Optical Coupler	86	81	80.8	75.9	100
Output wire	66.4	68.4	63.0	59.8	80
Ambient	40	40	40	40	--

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:

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

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

5.4.1.10.2	TABLE: Vicat softening temperature of thermoplastics		N/A
Penetration (mm)..... :	---		—
Object/ Part No./Material	Manufacturer/trademark	T softening (°C)	
---	---	---	
supplementary information: all plastic material approved by UL ,see table 5.4.1.10.3			

5.4.1.10.3	TABLE: Ball pressure test of thermoplastics		P
Allowed impression diameter (mm) ..... :	≤ 2 mm		—
Object/Part No./Material	Manufacturer/trademark	Test temperature (°C)	Impression diameter (mm)
Enclosure	See appended table 4.1.2	84.6	1.09
Supplementary information:			

5.4.2.2, 5.4.2.4 and 5.4.3	TABLE: Minimum Clearances/Creepage distance						P
Clearance (cl) and creepage distance (cr) at/of/between:	Up (V)	U r.m.s. (V)	Frequency (kHz)[1]	Required cl (mm)	cl (mm)[2]	Required[3] cr (mm)	cr (mm)
Basic/Supplementary insulation:							
Input L/N trace on PCB before Fuse F1	420	250	≤30	2.22	3.0	2.5	3.0
Different two pole of fuse F1	420	250	≤30	2.22	3.7	2.5	3.0
Reinforced insulation:							
Primary trace to enclosure	420	250	≤30	4.44	5.5	5.0	>10.0
Output to L	420	250	≤30	4.44	6.3	5.0	6.3
Primary trace to secondary trace	420	250	≤30	4.44	8.5	5.0	8.5
Power module N to secondary trace	420	250	≤30	4.44	5.0	5.0	5.4
Supplementary information: -only Max Vp and Vr.m.s between primary pin and secondary pin of TR106 is record on the report Max U r.m.s 300V, Max Up 640 V.							

-2500V temporary overvoltage is taken for mains system voltage between 250V and 600V

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

5.4.2.3	TABLE: Minimum Clearances distances using required withstand voltage	P
	Overvoltage Category (OV):	II
	Pollution Degree:	2

Clearance distanced between:	Required withstand voltage	Required cl (mm)	Measured cl (mm)
The same as Mini creepage and clerance distance	2500V for Basic Insulation ; 4000V for reinforced insulation	2.22mm for basic insulation, 4.44 mm for reinforced insulation	The same as Mini creepage and clerance distance
Supplementary information:			

5.4.2.4	TABLE: Clearances based on electric strength test	N/A

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

5.4.4.2, 5.4.4.5 c) 5.4.4.9	TABLE: Distance through insulation measurements	N/A

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

5.4.9	TABLE: Electric strength tests	P

Test voltage applied between:	Voltage shape (AC, DC)	Test voltage (V)	Breakdown Yes / No
Primary circuit to enclosure	DC	2500	No
Primary circuit to secondary circuit	DC	4000	No

5.4.9	TABLE: Electric strength tests		P
Test voltage applied between:	Voltage shape (AC, DC)	Test voltage (V)	Breakdown Yes / No
Supplementary information: core as primary part.			

5.5.2.2	TABLE: Stored discharge on capacitors				P
Supply Voltage (V), Hz	Test Location	Operating Condition (N, S)	Switch position On or off	Measured Voltage (after 2 seconds)	ES Classification
240	Input terminal	Normal	N/A	0	ES1
Supplementary information: X-capacitors installed for testing are: ☐ bleeding resistor rating: ☐ ICX: Notes: A. Test Location: Phase to Neutral; Phase to Phase; Phase to Earth; and/or Neutral to Earth B. Operating condition abbreviations: N – Normal operating condition (e.g., normal operation, or open fuse); S –Single fault condition					

5.6.6.2	TABLE: Resistance of protective conductors and terminations			N/A
Accessible part	Test current (A)	Duration (min)	Voltage drop (V)	Resistance (Ω)
Earthing terminal	--	--	--	--
Supplementary information:				

5.7.2.2, 5.7.4	TABLE: Earthed accessible conductive part	P
Supply voltage.....:		—
Location	Test conditions specified in 6.1 of IEC 60990 or Fault Condition Noin IEC 60990 clause 6.2.2.1 through 6.2.2.8, except for 6.2.2.7	Touch current (mA)
L & N to enclosure	Fig 4 and Fig 5	0.01
Input to Output terminal	Fig 4 and Fig 5	0.15
	3	N/A

	4	N/A
	5	N/A
	6	N/A
	8	N/A

Supplementary Information:

Notes:

[1] Supply voltage is the anticipated maximum Touch Voltage

[2] Earthed neutral conductor [Voltage differences less than 1% or more]

[3] Specify method used for measurement as described in IEC 60990 sub-clause 4.3

[4] IEC 60990, sub-clause 6.2.2.7, Fault 7 not applicable.

[5] (*) IEC 60990, sub-clause 6.2.2.2 is not applicable if switch or disconnect device (e.g., appliance coupler) provided.

6.2.2	**Table: Electrical power sources (PS) measurements for classification**				P
Source	Description	Measurement	Max Power after 3 s	Max Power after 5 s*	PS Classification
---	Output	Power (W) :	--	18	PS1
		V_A (V) :	--	220	
		I_A (A) :	--	1.9	

Supplementary Information:

(*) Measurement taken only when limits at 3 seconds exceed PS1 limits

6.2.3.1	**Table: Determination of Potential Ignition Sources (Arcing PIS)**			**P**
Location	Open circuit voltage After 3 s (Vp)	Measured r.m.s current (Irms)	Calculated value (V_p x I_{rms})	Arcing PIS? Yes / No
Output terminal	>50	>0.3A	>15	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 (V_p) and normal operating condition rms current (I_{rms}) is greater than 15.

6.2.3.2	**Table: Determination of Potential Ignition Sources (Resistive PIS)**	**p**

Circuit Location (x-y)	Operating Condition (Normal / Describe Single Fault)	Measured wattage or VA During first 30 s (W / VA)	Measured wattage or VA After 30 s (W / VA)	Protective Circuit, Regulator, or PTC Operated? Yes / No (Comment)	Resistive PIS? Yes/No
-	-	-	-	-	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

Description	Values	Energy Source Classification
Lamp type.....:	---	—
Manufacturer.....:	---	—
Cat no.....:	---	—
Pressure (cold) (MPa).....:	---	MS_
Pressure (operating) (MPa).....:	---	MS_
Operating time (minutes).....:	---	—
Explosion method.....:	---	—
Max particle length escaping enclosure (mm). :	---	MS_
Max particle length beyond 1 m (mm).....:	---	MS_
Overall result .....:	---	
Supplementary information:		

B.2.5	TABLE: Input test	P

U (V)	I (A)	I rated (A)	P (W)	P rated (W)	Fuse No	I fuse (A)	Condition/status
240/50Hz	0.810	1	---	---	F1/F2	0.810	
100/50Hz	1.421	1	---	---	F1/F2	1.421	

Supplementary information:

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

B.3	TABLE: Abnormal operating condition tests							P
Ambient temperature (°C) .....:				25.4				—
Power source for EUT: Manufacturer, model/type, output rating ..:				--				—
Component No.	Abnormal Condition	Supply voltage, (V)	Test time (ms)	Fuse no.	Fuse current, (A)	T-couple	Temp. (°C)	Observation
Output ternimal	OL	264Va.c.	1s	F1	0.399	Type K	85.3	
Supplementary information: Test table is provided to record abnormal and fault conditions for all applicable energy sources including Thermal burn injury. Column “Abnormal/Fault.” Specify if test condition by indicating “Abnormal” then the condition for a Clause B.3 test or “Single Fault” then the condition for Clause B.4.								

B.4	TABLE: Fault condition tests							P
Ambient temperature (°C) .....:				25.0				—
Power source for EUT: Manufacturer, model/type, output rating ..:				--				—
Component No.	Fault Condition	Supply voltage, (V)	Test time (ms)	Fuse no.	Fuse current, (A)	T-couple	Temp. (°C)	Observation
Varistor	Short circuit	220Va.c.	1s	F1	0	Type K	64.5	Electronics Circuit protected ,no output
Electronic Capacitor(C1)	Open circuit	220V	1s	F1	0	Type K	64.5	Electronics Circuit protected ,no output
Opto Coupler(U1)	Open Circuit	220V	1s	F1	0	Type K	64.5	Electronics Circuit protected ,no output
Transformer (Pin 2-Pin4)	Short circuit	220Va.c.	1s	F1	0	Type K	64.5	Electronics Circuit protected ,no output

Supplementary information:

1. SC – Short Circuit; OC – Open Circuit; OL- Overload;
2. After each of above test, unit can pass the dielectric strength test specified in table 5.4.9.
3. #: For fault where fuse opened, tested with each source of fuse in table 4.1.2.
4. No ignition during and after all tests;
5. Output voltage comply with ES1 during and after all tests.

Annex M	**TABLE: Batteries**	N/A
The tests of Annex M are applicable only when appropriate battery data is not available		--
Is it possible to install the battery in a reverse polarity position?.....:	--	--

	Non-rechargeable batteries			Rechargeable batteries					
	Discharging		Un-intentional charging	Charging		Discharging		Reversed charging	
	Meas. current	Manuf. Specs.		Meas. current	Manuf. Specs.	Meas. current	Manuf. Specs.	Meas. current	Manuf. Specs.
Max. current during normal condition	--	--	--	--	--	--	--	--	--
Max. current during fault condition	--	--	--	--	--	--	--	--	--

Test results:	--	Verdict
- Chemical leaks	--	--
- Explosion of the battery	--	--
- Emission of flame or expulsion of molten metal	--	--
- Electric strength tests of equipment after completion of tests	--	--

Supplementary information:

Annex M.4	Table: Additional safeguards for equipment containing secondary lithium batteries	N/A

Battery/Cell No.	Test conditions	Measurements			Observation
		U	I (A)	Temp (C)	
--	Normal	--	--	--	--
--	Abnormal	--	--	--	--
--	Single fault –SC/OC	--	--	--	--
--	Normal	--	--	--	--
--	Abnormal	--	--	--	--
--	Single fault – SC/OC	--	--	--	--
Supplementary Information:					

Battery identification	Charging at T_{lowest} (°C)	Observation	Charging at $T_{highest}$ (°C)	Observation
--	--	--	--	--
--	--	--	--	--
Supplementary Information:				

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

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

Output Circuit	Components	U_{oc} (V)	I_{sc}(A)		S (VA)	
			Meas.	Limit	Meas.	Limit
--	--	--	--	--	--	--
Supplementary Information:						

T.2, T.3, T.4, T.5	TABLE: Steady force test	N/A

Part/Location	Material	Thickness (mm)	Force(N)	Test Duration(sec)	Observation
--	--	--	--	--	--
Supplementary information:					

T.6, T.9	TABLE: Impact tests	N/A

Part/Location	Material	Thickness (mm)	Vertical distance (mm)	Observation
--	--	--	--	--
Supplementary information:				

T.7	TABLE: Drop tests			N/A
Part/Location	Material	Thickness (mm)	Drop Height (mm)	Observation
--	--	--	--	--
Supplementary information:				

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

Appendix
Photo documentation

Photo 1 [√] front [ ] rear [ ] right side [ ] left side [ ] top [ ] bottom [ ] internal	

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