



<b>TEST REPORT</b> <b>IEC 62368-1</b> <b>Audio/video, information and communication technology equipment</b> <b>Part 1: Safety requirements</b>	
<b>Report number.....:</b>	<b>BKC22072091GS</b>
<b>Date of issue.....:</b>	<b>Jul. 08, 2022</b>
<b>Testing Laboratory.....:</b>	<b>Shenzhen BKC Testing Co., Ltd.</b>
<b>Address.....:</b>	103, 1/F, Huaya Science Park, Longhua Community, Longhua District, Shenzhen, Guangdong, China
<b>Applicant's name.....:</b>	<b>Shenzhen MP LED Technology Co.,Ltd</b>
<b>Address.....:</b>	5-6 <sup>th</sup> Floor of Building 10, Huafeng Industrial Zone, Fuhai Street, Bao'an District, Shenzhen, Guangdong Province. 518103
<b>Test specification.....:</b>	
<b>Standard.....:</b>	IEC 62368-1: 2018 J62368-1(H30)
<b>Test procedure.....:</b>	Type test
<b>Non-standard test method.....:</b>	N/A
<b>Test Report Form No.:</b>	IEC62368_1E
<b>Test Report Form(s) Originator..</b>	UL(US)
<b>Master TRF.....:</b>	Dated 2021
<b>Test item description.....:</b>	LED Display
<b>Trademark.....:</b>	MPLED
<b>Manufacturer.....:</b>	Same as applicant
<b>Model/Type reference.....:</b>	P10, P0.9, P1.25, P1.53 ,P1.56, P1.86, P1.875, P1.95, P2, P2.5, P2.6, P2.976, P3, P3.076, P3.3, P3.91, P4, P4.81, P5, P5.33, P6, P6.25, P6.66, P7.81, P8, P10.42, P16.
<b>Ratings.....:</b>	See the page 3
<b>General disclaimer:</b>	The test results presented in this report relate only to the object tested.



<b>Responsible Testing Laboratory (as applicable), testing procedure and testing location(s):</b>	
<input checked="" type="checkbox"/> <b>Testing Laboratory:</b>	Shenzhen BKC Testing Co.,Ltd
<b>Testing location/ address.....:</b>	103, 1/F, Huaya Science Park, Longhua Community, Longhua District, Shenzhen, Guangdong, China
<b>Tested by.....:</b> James Guo / Test Engineer	
<b>Checked by.....:</b> Corbin Wang / Project Engineer	
<b>Approved by.....:</b> Jerry Liao / Project Manager	

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

- Attachment 1: GROUP DIFFERENCES (CENELEC common modifications JAPAN) (5 pages)
- Attachment 2: Photo documentation. (2 pages)

**Summary of testing:**

Tests performed:

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

Electrical safety  
IEC 62368-1:2018  
J62368-1(H30)

**Summary of compliance with National Differences:**

**List of countries addressed:** National Differences and Group Differences, Refer Attachment No. 1 for details

The product fulfils the requirements of J62368-1(H30).

**Artwork of marking plate(s):**

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.

**LED Display****Model: P10****Rating(s): 100-240V~ 50/60Hz 10A****Shenzhen MP LED Technology Co.,Ltd**

5-6<sup>th</sup> Floor of Building 10, Huafeng Industrial Zone, Fuhai Street, Bao'an District,  
Shenzhen, Guangdong Province. 518103

Importer:XXXXXX

Address:XXXXXX

**Made in China**

Note:

The height of WEEE symbol  $\geq$  7.0mm.



**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;  
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<sub>ma</sub>.....: 35 °C     Outdoor: minimum            °C

IP protection class .....:  IPX0             IP\_\_

Power systems .....:  TN     TT     IT -            V<sub>L-L</sub>     not AC mains

Altitude during operation (m) .....:  2000 m or less                m

Altitude of test laboratory (m) .....:  2000 m or less                m

Mass of equipment (kg) .....: 27 kg



**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..... :** Jun. 30, 2022

**Date (s) of performance of tests..... :** Jun. 30, 2022 to Jul. 08, 2022

**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 IEC 60950-1:**

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.**

**General product information:**

1. The products are **LED Display** for used with information technology equipment or audio/video equipment.
2. All models are identical except for the name, all tests were conducted on model: **P10**.

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: Primary circuit	Ordinary	Equipment safeguard (for parts connected to Earth)	Equipment safeguard (Earthing)	Enclosure
ES3: Appliance inlet	Ordinary	N/A	N/A	Evaluated in certified component power supply
6	Electrically-caused fire			
Class and Energy Source (e.g. PS2: 100 Watt circuit)	Material part (e.g. Printed board)	Safeguards		
		B	1 <sup>st</sup> S	2 <sup>nd</sup> S
Enclosure	PS3	See 6.3	Metal enclosure	N/A
PCB	PS3	See 6.3	Min. V-0	N/A
Internal/external wiring	PS3	N/A	N/A	See 6.5
Other combustible components / materials	PS3	See 6.3	See 6.4.5, 6.4.6	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 (None)	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	Ordinary	N/A	N/A	N/A

MS3: Equipment mass	Ordinary	N/A	N/A	N/A
MS3: Wall mount	Ordinary	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: All accessible parts	Ordinary	N/A	N/A	N/A
10	Radiation			
Class and Energy Source (e.g. RS1: PMP sound output)	Body Part (e.g., Ordinary)	Safeguards		
		B	S	R
RS1: LED for indicating	Ordinary	N/A	N/A	N/A
Supplementary Information: "B" – Basic Safeguard; "S" – Supplementary Safeguard; "R" – Reinforced Safeguard				

<b>ENERGY SOURCE DIAGRAM</b>				
<p><b>Optional.</b> 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.</p> <p>Insert diagram below. Example diagram designs are; Block diagrams; image(s) with layered data; mechanical drawings</p>				
<div style="display: flex; justify-content: space-around; align-items: center;"> <span>☒ ES</span> <span>☒ PS</span> <span>☒ MS</span> <span>☒ TS</span> <span>☒ RS</span> </div>				



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Clause	Requirement + Test	Result - Remark	Verdict
<b>4</b>	<b>GENERAL REQUIREMENTS</b>		P
4.1.1	Acceptance of materials, components and subassemblies	Components which are certified to IEC and/or national standards are used correctly within their ratings. Components not covered by IEC standards are tested under the conditions present in the equipment.	P
4.1.2	Use of components	See table 4.1.2	P
4.1.3	Equipment design and construction	No accessible part which could cause injury	P
4.1.4	Specified ambient temperature for outdoor use (°C).....		N/A
4.1.5	Constructions and components not specifically covered		P
4.1.8	Liquids and liquid filled components (LFC)	(See G.15)	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.3, T.4, T.5)	P
4.4.3.3	Drop tests		N/A
4.4.3.4	Impact tests		P
4.4.3.5	Internal accessible safeguard tests		N/A
4.4.3.6	Glass impact tests	(See Clause T.9, Annex U)	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 Annex T.8)	N/A
4.4.3.9	Air comprising a safeguard	(See Annex T)	P





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Clause	Requirement + Test	Result - Remark	Verdict
4.4.3.10	Accessibility, glass, safeguard effectiveness		N/A
4.4.4	Displacement of a safeguard by an insulating liquid		N/A
4.4.5	Safety interlocks	(See Annex K)	N/A
4.5	Explosion	No explosion	N/A
4.5.1	General	(See Annex M for batteries)	N/A
4.5.2	No explosion during normal/abnormal operating condition	(See Clause B.2, B.3)	N/A
	No harm by explosion during single fault conditions	(See Clause B.4)	N/A
4.6	Fixing of conductors		P
	Fix conductors not to defeat a safeguard		P
	Compliance is checked by test:	(See Clause T.2)	P
4.7	Equipment for direct insertion into mains socket - outlets	The EUT is not for direct insertion into mains socket-outlets	N/A
4.7.2	Mains plug part complies with the relevant standard..... :		N/A
4.7.3	Torque (Nm)..... :		N/A
4.8	Equipment containing coin/button cell batteries	No lithium coin/button cell battery used.	N/A
4.8.1	General		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



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Clause	Requirement + Test	Result - Remark	Verdict
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..... :	(See Annex P)	N/A
4.10	Component requirements		P
4.10.1	Disconnect Device	(See Annex L)	P
4.10.2	Switches and relays	(See Annex G)	N/A

<b>5</b>	<b>ELECTRICALLY-CAUSED INJURY</b>		<b>P</b>
5.2	Classification and limits of electrical energy sources	(See appended table 5.2)	P
5.2.2	ES1, ES2 and ES3 limits	See below.	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 such single pulses with the EUT	N/A
5.2.2.5	Limits for repetitive pulses..... :	No such repetitive pulses with the EUT	N/A
5.2.2.6	Ringing signals ..... :	(See Annex H)	N/A
5.2.2.7	Audio signals ..... :	(See Clause E.1)	N/A
5.3	Protection against electrical energy sources		P
5.3.1	General Requirements for accessible parts to ordinary, instructed and skilled persons	See below.	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		N/A
5.3.2.1	Accessibility to electrical energy sources and safeguards	Only ES1 could be accessible to ordinary person.	P



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Clause	Requirement + Test	Result - Remark	Verdict
	Accessibility to outdoor equipment bare parts		N/A
5.3.2.2	Contact requirements		P
	Test with test probe from Annex V..... :	The probe could not insert into the equipment as there is no ventilation on the product.	P
5.3.2.2 a)	Air gap – electric strength test potential (V):	(See appended table 5.4.9)	P
5.3.2.2 b)	c) Air gap (mm) .....		P
5.3.2.3	Compliance		P
5.3.2.4	Terminals for connecting stripped wire	No such terminals intended to be used by ordinary person.	N/A
5.4	Insulation materials and requirements		P
5.4.1.2	Properties of insulating material	The choice and application have taken into account as specified in this Clause 5 and Annex T except natural rubber, hygroscopic materials or asbestos are not used as insulation.	P
5.4.1.3	Material is non-hygroscopic		P
5.4.1.4	Maximum operating temperature for insulating materials .....	(See appended table 5.4.1.4)	P
5.4.1.5	Pollution degree..... :	Pollution degree 2	—
5.4.1.5.2	Test for pollution degree 1 environment and for an insulating compound	Pollution degree 2	N/A
5.4.1.5.3	Thermal cycling	Pollution degree 2	N/A
5.4.1.6	Insulation in transformers with varying dimensions		N/A
5.4.1.7	Insulation in circuits generating starting pulses	No such starting pulses within the EUT	N/A
5.4.1.8	Determination of working voltage		P
5.4.1.9	Insulating surfaces	Considered.	P



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Clause	Requirement + Test	Result - Remark	Verdict
5.4.1.10	Thermoplastic parts on which conductive metallic parts are directly mounted	See below	P
5.4.1.10.2	Vicat test..... :	(See appended table 5.4.1.10.2)	N/A
5.4.1.10.3	Ball pressure ..... :	(See appended table 5.4.1.10.3)	P
5.4.2	Clearances		P
5.4.2.1	General requirements		P
	Clearances in circuits connected to AC Mains, Alternative method	(See Annex X)	P
5.4.2.2	Procedure 1 for determining clearance		P
	Temporary overvoltage :		—
5.4.2.3	Procedure 2 for determining clearance		P
5.4.2.3.2.2	a.c. mains transient voltage:	2500Vac	—
5.4.2.3.2.3	d.c. mains transient voltage :		—
5.4.2.3.2.4	External circuit transient voltage:		—
5.4.2.3.2.5	Transient voltage determined by measurement :		—
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 5.4.3)	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)	N/A
5.4.4.3	Insulation compound forming solid insulation		P
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		P



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Clause	Requirement + Test	Result - Remark	Verdict
5.4.4.6.1	General requirements		P
5.4.4.6.2	Separable thin sheet material		P
	Number of layers (pcs) .....	Three layers of insulation tape used as reinforced insulation, any combination of two layers pass the electric strength test.	P
5.4.4.6.3	Non-separable thin sheet material	No such thin sheet material within the EUT	N/A
	Number of layers (pcs) .....		
5.4.4.6.4	Standard test procedure for non-separable thin sheet material.....	See above	N/A
5.4.4.6.5	Mandrel test		N/A
5.4.4.7	Solid insulation in wound components		P
5.4.4.9	Solid insulation at frequencies >30 kHz, EP, KR, d, VPW (V) :	(See appended Table 5.4.4.9)	P
	Alternative by electric strength test, tested voltage (V), KR :	(See appended Tables 5.4.4.9 and 5.4.9)	N/A
5.4.5	Antenna terminal insulation	See below	N/A
5.4.5.1	General		N/A
5.4.5.2	Voltage surge test		N/A
5.4.5.3	Insulation resistance (MΩ).....		—
	Electric strength test.....		—
5.4.6	Insulation of internal wire as part of supplementary safeguard.....	No such insulation of internal wire used alone as 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 (%).....	93%	—
	Temperature (°C) .....	25°C	—



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Clause	Requirement + Test	Result - Remark	Verdict
	Duration (h) .....	48h	—
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		P
5.4.9.2	Test procedure for routine tests		N/A
5.4.10	Safeguards against transient voltages from external circuits		N/A
5.4.10.1	Parts and circuits separated from external circuits	(See appended table 5.4.9)	N/A
5.4.10.2	Test methods		N/A
5.4.10.2.1	General		N/A
5.4.10.2.2	Impulse test.....	(See appended table 5.4.9)	N/A
5.4.10.2.3	Steady-state test.....	(See appended table 5.4.9)	N/A
5.4.10.3	Verification for insulation breakdown for impulse test :		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
	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 $\Delta U_{sp}$ :		—
	Max increase due to ageing $\Delta U_{sa}$ :		—
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



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Clause	Requirement + Test	Result - Remark	Verdict
5.5	Components as safeguards		P
5.5.1	General		P
5.5.2	Capacitors and RC units	Evaluated in the test report of approved power supply	P
5.5.2.1	General requirement		P
5.5.2.2	Safeguards against capacitor discharge after disconnection of a connector..... :	(See appended table 5.5.2.2)	N/A
5.5.3	Transformers	Evaluated in the test report of approved power supply	P
5.5.4	Optocouplers	Evaluated in the test report of approved power supply	P
5.5.5	Relays		N/A
5.5.6	Resistors	No such component	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..... :		N/A
5.5.9	Safeguards for socket-outlets in outdoor equipment		N/A
	RCD rated residual operating current (mA):		—
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		P
	Protective earthing conductor size (mm <sup>2</sup> ) ..... :		—
5.6.4	Requirement for protective bonding conductors		P



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Clause	Requirement + Test	Result - Remark	Verdict
5.6.4.1	Protective bonding conductors		P
	Protective bonding conductor size (mm <sup>2</sup> )..... :		—
5.6.4.2	Protective current rating (A) ..... :		—
5.6.5	Terminals for protective conductors		P
5.6.5.1	Terminal size for connecting protective earthing conductors (mm):		P
	Terminal size for connecting protective bonding conductors (mm):		N/A
5.6.5.2	Corrosion		P
5.6.6	Resistance of the protective system		P
5.6.6.1	Requirements		P
5.6.6.2	Test Method:	(See appended table 5.6.6)	P
5.6.6.3	Resistance ( $\Omega$ ) or voltage drop..... :	(See appended table 5.6.6)	P
5.6.7	Reliable earthing		P
5.6.8	Functional earthing		N/A
	Conductor size (mm <sup>2</sup> ):		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	Figure 4 of IEC 60990 was used in determining of the limit of ES1.	P
5.7.2.1	Measurement of touch current.....:	(See appended table 5.7.4)	P
5.7.2.2	Measurement of prospective touch voltage		P
5.7.3	Equipment set-up, supply connections and earth connections	Clause 4, 5.3 and 5.4 of IEC 60990:1999 applied.	P
	System of interconnected equipment (separate connections/single connection)..... :		—
	Multiple connections to mains (one connection at a time/simultaneous connections).....:		—
5.7.4	Unearthed accessible parts:	(See appended Table 5.7.4)	P





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Clause	Requirement + Test	Result - Remark	Verdict
5.7.5	Earthed conductive accessible parts:	(See appended Table 5.7.5)	P
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 due to external circuits	No 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 from external circuits		N/A
5.7.8	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
5.8	Backfeed safeguard in battery backed up supplies		N/A
	Mains terminal ES:	(See appended table 5.8)	N/A
	Air gap (mm):		N/A

<b>6</b>	<b>ELECTRICALLY- CAUSED FIRE</b>		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
6.2.3	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



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Clause	Requirement + Test	Result - Remark	Verdict
6.3.1 (a)	No ignition and attainable temperature value less than 90 % defined by ISO 871 or less than 300 °C for unknown materials..... :	(See appended table 5.4.1.5, 6.3.2, 9.0, B.2.6)	P
6.3.1 (b)	Combustible materials outside fire enclosure	No such materials used.	N/A
6.4	Safeguards against fire under single fault conditions		P
6.4.1	Safeguard Method	Control of fire spread.	P
6.4.2	Reduction of the likelihood of ignition under single fault conditions in PS1 circuits	See above.	N/A
6.4.3	Reduction of the likelihood of ignition under single fault conditions in PS2 and PS3 circuits	See above.	N/A
6.4.3.1	Supplementary Safeguards		N/A
6.4.3.2	Single Fault Conditions..... :	(See appended table B.4)	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		N/A
6.4.5.2	Supplementary safeguards .....		N/A
6.4.6	Control of fire spread in PS3 circuit		P
6.4.7	Separation of combustible materials from a PIS	See the following details.	N/A
6.4.7.1	General..... :		N/A
6.4.7.2	Separation by distance	No separation	N/A
6.4.7.3	Separation by a fire barrier	No separation	N/A
6.4.8	Fire enclosures and fire barriers		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		P
6.4.8.3	Constructional requirements for a fire enclosure and a fire barrier		P
6.4.8.3.1	Fire enclosure and fire barrier openings		N/A



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Clause	Requirement + Test	Result - Remark	Verdict
6.4.8.3.2	Fire barrier dimensions		N/A
6.4.8.3.3	Top openings and properties		N/A
	Openings dimensions (mm) :		N/A
6.4.8.3.4	Bottom openings and properties		N/A
	Openings dimensions (mm) :		N/A
	Flammability tests for the bottom of a fire enclosure	(See Clause S.3)	N/A
	Instructional Safeguard :		N/A
6.4.8.3.5	Side openings and properties		N/A
	Openings dimensions (mm) :		N/A
6.4.8.3.6	Integrity of the fire enclosure, condition met: a), b) or c)..... :	No removable door or cover on the equipment	N/A
6.4.8.4	Separation of PIS from fire enclosure and fire barrier distance (mm) or flammability rating :	Electrical components enclosed in metal enclosure.	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..... :	(See Annex Q.)	N/A
6.5.3	Internal wiring size (mm <sup>2</sup> ) for socket-outlets:		N/A
6.6	Safeguards against fire due to connection to additional equipment		P

<b>7</b>	<b>INJURY CAUSED BY HAZARDOUS SUBSTANCES</b>		N/A
7.2	Reduction of exposure to hazardous substances	No hazardous chemicals within the equipment.	N/A
7.3	Ozone exposure		N/A
7.4	Use of personal safeguards (PPE)		N/A
	Personal safeguards and instructions..... :		—



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Clause	Requirement + Test	Result - Remark	Verdict
7.5	Use of instructional safeguards and instructions		N/A
	Instructional safeguard (ISO 7010).....:		—
7.6	Batteries..... :	(See Annex M)	N/A

<b>8</b>	<b>MECHANICALLY-CAUSED INJURY</b>		P
8.1	General	See the following details.	P
8.2	Mechanical energy source classifications	MS1 for accessible surface of equipment, MS3 for mass of equipment and wall mount	P
8.3	Safeguards against mechanical energy sources	Adequate mechanical strength for the equipment	P
8.4	Safeguards against parts with sharp edges and corners	Accessible edges and corners of the equipment are rounded and are classified as MS1.	P
8.4.1	Safeguards		—
	Instructional Safeguard :		—
8.4.2	Sharp edges or corners		P
8.5	Safeguards against moving parts	No moving parts within the equipment.	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 :		—
8.5.4	Special categories of equipment comprising 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



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Clause	Requirement + Test	Result - Remark	Verdict
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:		N/A
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
	Explosion test:		
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 :		—
8.6.2	Static stability		N/A
8.6.2.2	Static stability test		N/A
	Applied Force :		—
8.6.2.3	Downward Force Test		N/A
8.6.3	Relocation stability test		N/A
	Wheels diameter (mm):		—
	Tilt test		N/A



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Clause	Requirement + Test	Result - Remark	Verdict
8.6.4	Glass slide test		N/A
8.6.5	Horizontal force test (Applied Force) :		N/A
	Position of feet or movable parts :		—
8.7	Equipment mounted to wall, ceiling or other structure		P
8.7.1	Mount means type :		P
8.7.2	Test methods		P
	Test 1, additional downwards force (N):		P
	Test 2, number of attachment points and test force (N):		P
	Test 3 Nominal diameter (mm) and applied torque (Nm):		N/A
8.8	Handles strength	No such handles.	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
8.9.1	Classification		N/A
8.9.2	Pull test		—
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 :		—
8.10.3	Cart, stand or carrier loading test and compliance		N/A
	Loading force applied (N):		—
8.10.4	Cart, stand or carrier impact test		N/A
8.10.5	Mechanical stability		N/A
	Applied horizontal force (N) :		—



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Clause	Requirement + Test	Result - Remark	Verdict
8.10.6	Thermoplastic temperature stability (°C) :		N/A
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	(See Annex T)	N/A
	Button/Ball diameter (mm)..... :		—

<b>9</b>	<b>THERMAL BURN INJURY</b>		P
9.2	Thermal energy source classifications	All accessible surfaces are classified as TS1, see appended table 5.4.1.4, 6.3.2, 9.0, B.2.6.	P
9.3	Touch temperature limits		P
9.3.1	Touch temperatures of accessible parts :	(See appended table)	P
9.3.2	Test method and compliance		P
9.4	Safeguards against thermal energy sources		N/A
9.5	Requirements for safeguards		N/A
9.5.1	Equipment safeguard		N/A
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 :	(See appended table 9.6)	N/A

<b>10</b>	<b>RADIATION</b>		P
10.2	Radiation energy source classification		P



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Clause	Requirement + Test	Result - Remark	Verdict
10.2.1	General classification	LED used within this equipment is considered as RS1	P
	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) comply:		N/A
10.4	Safeguards against optical radiation from lamps and lamp systems (including LED types)		P
10.4.1	General requirements		P
	Instructional safeguard provided for accessible radiation level needs to exceed		P
	Risk group marking and location :		P
	Information for safe operation and installation		N/A
10.4.2	Requirements for enclosures		N/A
	UV radiation exposure :	(See Annex C)	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) :	(See appended tables B.3 & B.4)	—
10.6	Safeguards against acoustic energy sources		N/A
10.6.1	General		N/A
10.6.2	Classification		N/A
	Acoustic output LAeq,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





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Clause	Requirement + Test	Result - Remark	Verdict
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 LAeq,T, dB(A):		N/A
10.6.6.3	Cordless listening devices		N/A
	Max. acoustic output LAeq,T, dB(A):		N/A





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Clause	Requirement + Test	Result - Remark	Verdict
<b>B</b>	<b>NORMAL OPERATING CONDITION TESTS, ABNORMAL OPERATING CONDITION TESTS AND SINGLE FAULT CONDITION TESTS</b>		P
B.1	General		P
B.1.5	Temperature measurement conditions	(See appended table B.1.5)	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%	P
B.2.5	Input test.....:	(See appended table B.2.5)	P
B.3	Simulated abnormal operating conditions		N/A
B.3.1	General requirements.....:	(See appended table B.3)	N/A
B.3.2	Covering of ventilation openings		N/A
B.3.3	D.C. mains polarity test	The EUT is not connected to a D.C. mains	N/A
B.3.4	Setting of voltage selector.....:	No setting of voltage selector within the EUT	N/A
B.3.5	Maximum load at output terminals.....:	(See appended table B.3&B.4)	N/A
B.3.6	Reverse battery polarity	No battery within the EUT	N/A
B.3.7	Abnormal operating conditions as specified in Clause E.2.		N/A
B.3.8	Safeguards functional during and after abnormal operating conditions		N/A
B.4	Simulated single fault conditions		P
B.4.1	General	No such device	P
B.4.2	Temperature controlling device		N/A
B.4.3	Blocked motor test	(See Clause G.5)	P
B.4.4	Functional insulation		N/A



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



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Clause	Requirement + Test	Result - Remark	Verdict
D.3	Electronic pulse generator		N/A
<b>E</b>	<b>TEST CONDITIONS FOR EQUIPMENT CONTAINING AUDIO AMPLIFIERS</b>		N/A
E.1	Electrical energy source classification for audio signals		N/A
	Maximum non-clipped output power (W):		N/A
	Rated load impedance ( $\Omega$ ):		N/A
	Open-circuit output voltage (V):		N/A
	Instructional safeguard:		N/A
E.2	Audio amplifier normal operating conditions		N/A
	Audio signal source type:		N/A
	Audio output power (W):		N/A
	Audio output voltage (V):		N/A
	Rated load impedance ( $\Omega$ ):		N/A
	Requirements for temperature measurement	(See Table B.1.5)	N/A
E.3	Audio amplifier abnormal operating conditions	(See Table B.3, B.4)	N/A
<b>F</b>	<b>EQUIPMENT MARKINGS, INSTRUCTIONS, AND INSTRUCTIONAL SAFEGUARDS</b>		P
F.1	General requirements		P
	Instructions – Language .....	<p>Evaluated the user manual in English version.</p> <p>The manufacturer commits to provide them in the language of the countries where the product will be distributed.</p>	—
F.2	Letter symbols and graphical symbols	Complied	P
F.2.1	Letter symbols according to IEC60027-1	Complied	P
F.2.2	Graphic symbols IEC, ISO or manufacturer specific	Complied	P
F.3	Equipment markings		P
F.3.1	Equipment marking locations	On the product	P



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Clause	Requirement + Test	Result - Remark	Verdict
F.3.2	Equipment identification markings		P
F.3.2.1	Manufacturer identification .....		—
F.3.2.2	Model identification .....		—
F.3.3	Equipment rating markings		P
F.3.3.1	Equipment with direct connection to mains	Considered	P
F.3.3.2	Equipment without direct connection to mains		N/A
F.3.3.3	Nature of supply voltage.....	~ used for input voltage	—
F.3.3.4	Rated voltage.....	100-240V~	—
F.3.3.4	Rated frequency.....	50/60 Hz	—
F.3.3.6	Rated current or rated power.....	10A	—
F.3.3.7	Equipment with multiple supply connections	No such device	N/A
F.3.4	Voltage setting device	No such device	N/A
F.3.5	Terminals and operating devices		P
F.3.5.1	Mains appliance outlet and socket-outlet markings	No such device	N/A
F.3.5.2	Switch position identification marking.....		P
F.3.5.3	Replacement fuse identification and rating markings.....	Evaluated in the test report of approved power supply	P
	Instructional safeguards for neutral fuse:		N/A
F.3.5.4	Replacement battery identification marking.....	No such device	N/A
F.3.5.5	Neutral conductor terminal		N/A
F.3.5.6	Terminal marking location		P
F.3.6	Equipment markings related to equipment classification		P
F.3.6.1	Class I Equipment		P
F.3.6.1.1	Protective earthing conductor terminal		P
F.3.6.1.2	Protective bonding conductor terminals :		N/A
F.3.6.2	Equipment class marking		P



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Clause	Requirement + Test	Result - Remark	Verdict
F.3.6.3	Functional earthing terminal marking:		N/A
F.3.7	Equipment IP rating marking .....	IPX0 product without marking	—
F.3.8	External power supply output marking		N/A
F.3.9	Durability, legibility and permanence of marking	Marking plate was provided on the enclosure and it was legible, permanent and easily discernible.	P
F.3.10	Test for permanence of markings	Complied	P
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		P
	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		N/A
	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		P
F.5	Instructional safeguards	Considered	P



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Clause	Requirement + Test	Result - Remark	Verdict
	Where "instructional safeguard" is referenced in the test report it specifies the required elements, location of marking and/or instruction	Considered	P
<b>G</b>	<b>COMPONENTS</b>		P
G.1	Switches		N/A
G.1.1	General		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	General requirements		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	Protection Devices		P
G.3.1	Thermal cut-offs	No thermal cut-off provided within the equipment.	N/A
G.3.1.1a) &b)	Thermal cut-outs separately approved according to IEC 60730 with conditions indicated in a) & b)		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	Test method and compliance		N/A
G.3.2	Thermal links		N/A
G.3.2.1a)	Thermal links separately tested with IEC 60691	No thermal link provided within the equipment.	N/A
G.3.2.1b)	Thermal links tested as part of the equipment		N/A
	Aging hours (H)..... :		—
	Single Fault Condition..... :		—
	Test Voltage (V) and Insulation Resistance ( $\Omega$ )..:		—



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Clause	Requirement + Test	Result - Remark	Verdict
G.3.2.2	Test method and compliance		—
G.3.3	PTC Thermistors	No PTC thermistor provided within the equipment.	N/A
G.3.4	Overcurrent protection devices	All sources of fuse (F1) complied with IEC 60127-1, IEC 60127-3.	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	No such component.	N/A
G.3.5.2	Single faults conditions.....:	(See appended Table B.4)	N/A
G.4	Connectors		P
G.4.1	Spacings		P
G.4.2	Mains connector configuration .....		P
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.....	Evaluated in the test report of approved power supply.	P
G.5.1.2 a)	Two wires in contact inside wound component, angle between 45° and 90°	Evaluated in the test report of approved power supply.	P
G.5.1.2 b)	Construction subject to routine testing	See G.5.1.2 a)	N/A
G.5.2	Endurance test	See G.5.1.2 a)	N/A
G.5.2.1	General test requirements		N/A
G.5.2.2	Heat run test		N/A
	Time (s).....:		—
	Temperature (°C).....:		—
G.5.2.3	Wound Components supplied by mains		N/A
G.5.3	Transformers		P
G.5.3.1	Requirements applied (IEC61204-7, IEC61558-1/-2, and/or IEC62368-1).....:	Evaluated in the test report of approved power supply.	P





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Clause	Requirement + Test	Result - Remark	Verdict
	Position.....:	T1	—
	Method of protection .....	Reinforced insulation	—
G.5.3.2	Insulation	See above and appended table B.3 & B.4.	P
	Protection from displacement of windings.....:	Insulation tape used	—
G.5.3.3	Overload test.....:	(See appended table B.3)	P
G.5.3.3.1	Test conditions	The test loads are applied to the output of the power supply unit	P
G.5.3.3.2	Winding Temperatures testing in the unit	(See appended table B.3&B.4)	P
G.5.3.3.3	Winding Temperatures - Alternative test method	Alternative test method was not considered.	N/A
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		P
G.5.4.1	General requirements		P
	Position .....		—
G.5.4.2	Test conditions		N/A
G.5.4.3	Running overload test		N/A
G.5.4.4	Locked-rotor overload test		N/A



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Clause	Requirement + Test	Result - Remark	Verdict
	Test duration (days) .....		—
G.5.4.5	Running overload test for d.c. motors in secondary circuits		N/A
G.5.4.5.2	Tested in the unit		N/A
	Electric strength test (V).....		—
G.5.4.5.3	Tested on the Bench - Alternative test method; test time (h) .....		N/A
	Electric strength test (V).....		—
G.5.4.6	Locked-rotor overload test for d.c. motors in secondary circuits		P
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).....	See appended table B.4	P
	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 .....		—
G.6	Wire Insulation		N/A
G.6.1	General		N/A
G.6.2	Enamelled winding wire insulation		N/A
G.7	Mains supply cords		N/A
G.7.1	General requirements		N/A
	Type.....		—
G.7.2	Cross-sectional area (mm <sup>2</sup> ), (AWG) :		N/A



IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
G.7.3	Cord anchorages and strain relief for non-detachable power supply cords		N/A
G.7.3.2	Cord strain relief		N/A
G.7.3.2.1	Requirements		N/A
	Strain relief test force (N).....:		—
G.7.3.2.2	Strain relief mechanism failure		N/A
G.7.3.2.3	Cord sheath or jacket position, distance (mm).....:		—
G.7.3.2.4	Strain relief comprised of polymeric material		N/A
G.7.4	Cord Entry.....:		N/A
G.7.5	Non-detachable cord bend protection		N/A
G.7.5.1	Requirements		N/A
G.7.5.2	Mass (g) .....		—
	Diameter (m).....:		—
	Temperature (°C).....:		—
G.7.6	Supply wiring space		N/A
G.7.6.1	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	(See appended table B.3)	N/A
G.8.2.3	Temporary overvoltage test	(See appended table B.3)	N/A
G.9	Integrated Circuit (IC) Current Limiters		N/A



IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
G.9.1	Requirements	No IC current limiter provided within the equipment.	N/A
	IC limiter output current (max. 5A):		N/A
	Manufacturers' defined drift :		—
G.9.2	Test Program		N/A
G.9.3	Compliance		N/A
G.9.4	Test Program 3		N/A
G.10	Resistors		N/A
G.10.1	General	No resistor used for safety guard	N/A
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	No resistor used for safety guard	N/A
G.10.6	Overload test		N/A
G.11	Capacitor and RC units		N/A
G.11.1	General requirements	Evaluated in the test report of approved power supply.	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 with specifics	Evaluated in the test report of approved power supply.	P
	Type test voltage Vini .....		—
	Routine test voltage, Vini,b .....		—
G.13	Printed boards		P
G.13.1	General requirements	See the following details.	P



IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
G.13.2	Uncoated printed boards	The insulation between conductors on the outer surfaces of an uncoated printed board complied with the minimum clearance and creepage requirements	P
G.13.3	Coated printed boards	No coated printed board provided within the equipment.	N/A
G.13.4	Insulation between conductors on the same inner surface		N/A
	Compliance with cemented joint requirements (Specify construction).....:		—
G.13.5	Insulation between conductors on different surfaces		N/A
	Distance through insulation.....:	(See appended table 5.4.4.5)	N/A
	Number of insulation layers (pcs) .....		—
G.13.6	Tests on coated printed boards		N/A
G.13.6.1	Sample preparation and preliminary inspection		N/A
G.13.6.2	Test method and compliance		N/A
G.14	Coating on components terminals		N/A
G.14.1	Requirements .....	(See G.13)	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
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



IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
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	No such component used	N/A
	ICX with associated circuitry tested in equipment		N/A
	ICX tested separately		N/A
G.16.2	Tests		—
	Smallest capacitance and smallest resistance specified by ICX manufacturer for impulse test:		N/A
	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
<b>H</b>	<b>CRITERIA FOR TELEPHONE RINGING SIGNALS</b>		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 complied with		N/A
H.3.2.2	Tripping device		N/A
H.3.2.3	Monitoring voltage (V).....		—



IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
<b>J</b>	<b>INSULATED WINDING WIRES FOR USE WITHOUT INTERLEAVED INSULATION</b>		P
	General requirements		P
<b>K</b>	<b>SAFETY INTERLOCKS</b>		N/A
K.1	General requirements	No safety interlock provided within the equipment.	N/A
K.2	Components of safety interlock safeguard mechanism .....	(See 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		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 .....	(See appended table 5.4.11)	N/A
<b>L</b>	<b>DISCONNECT DEVICES</b>		P
L.1	General requirements		P



IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
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	Only one a.c. mains connection.	N/A
<b>M</b>	<b>EQUIPMENT CONTAINING BATTERIES AND THEIR PROTECTION CIRCUITS</b>		N/A
M.1	General requirements	No such battery used.	N/A
M.2	Safety of batteries and their cells		N/A
M.2.1	Requirements		N/A
M.2.2	Compliance and test method (identify method)... :		N/A
M.3	Protection circuits		N/A
M.3.1	Requirements		N/A
M.3.2	Tests		N/A
	- Overcharging of a rechargeable battery		N/A
	- Unintentional charging of a non-rechargeable battery		N/A
	- Reverse charging of a rechargeable battery		N/A
	- Excessive discharging rate for any battery		N/A
M.3.3	Compliance .....		N/A
M.4	Additional safeguards for equipment containing 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





IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
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
M.7.2	Test method and compliance		N/A
	Minimum air flow rate, Q (m <sup>3</sup> /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



IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
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 <sup>3</sup> /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		N/A
	Instructional safeguard.....:		N/A
<b>N</b>	<b>ELECTROCHEMICAL POTENTIALS</b>		N/A
	Metal(s) used.....:	Pollution degree considered	—
<b>O</b>	<b>MEASUREMENT OF CREEPAGE DISTANCES AND CLEARANCES</b>		P
	Value of $X$ (mm):.....:		—
<b>P</b>	<b>SAFEGUARDS AGAINST CONDUCTIVE OBJECTS</b>		N/A
P.1	General requirements	See the following details.	N/A
P.2.2	Safeguards against entry of foreign object		N/A
	Location and Dimensions (mm) .....:		—
P.2.3	Safeguard against the consequences of entry of foreign object		N/A



IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
P.2.3.1	Safeguard requirements		N/A
	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	No 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	Metalized coatings and adhesive securing parts		N/A
P.4.1	General		N/A
P.4.2	Tests		N/A
	Conditioning, T <sub>c</sub> (°C)..... :		N/A
	Duration (weeks)..... :		N/A
<b>Q</b>	<b>CIRCUITS INTENDED FOR INTERCONNECTION WITH BUILDING WIRING</b>		N/A
Q.1	Limited power sources		N/A
Q.1.1	Requirements		N/A
	a) Inherently limited output		N/A
	b) Impedance limited output		N/A
	c) Regulating network limited output		N/A
	d) Overcurrent protective device limited output		N/A
	e) 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) ..... :		—



IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
	Current limiting method.....:		—
<b>R</b>	<b>LIMITED SHORT CIRCUIT TEST</b>		N/A
R.1	General		N/A
R.2	Test setup		N/A
	Overcurrent protective device for test.....:		N/A
R.3	Test method	•	N/A
	Cord/cable used for test.....:		N/A
R.4	Compliance		N/A
<b>S</b>	<b>TESTS FOR RESISTANCE TO HEAT AND FIRE</b>		N/A
S.1	Flammability test for fire enclosures and fire barrier materials of equipment where the steady state power does not exceed 4 000 W		N/A
	Samples, material.....:		—
	Wall thickness (mm).....:		—
	Conditioning (°C).....:		—
	Test flame according to IEC 60695-11-5 with conditions as set out		N/A
	- Material not consumed completely		N/A
	- Material extinguishes within 30s		N/A
	- No burning of layer or wrapping tissue		N/A
S.2	Flammability test for fire enclosure and fire barrier integrity		N/A
	Samples, material.....:		—
	Wall thickness (mm).....:		—
	Conditioning (°C).....:		—
	Test flame according to IEC 60695-11-5 with conditions as set out		N/A
	Test specimen does not show any additional hole		N/A



IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
S.3	Flammability test for the bottom of a fire enclosure		N/A
	Samples, material.....:		—
	Wall thickness (mm).....:		—
	Cheesecloth did not ignite		N/A
S.4	Flammability classification of materials		N/A
S.5	Flammability test for fire enclosures and fire barrier materials of equipment where the steady state power does not exceed 4 000 W		N/A
	Samples, material.....:		—
	Wall thickness (mm).....:		—
	Conditioning (°C).....:		—
<b>T</b>	<b>MECHANICAL STRENGTH TESTS</b>		<b>P</b>
T.1	General requirements		P
T.2	Steady force test, 10 N .....	(See appended table T.2)	P
T.3	Steady force test, 30 N .....	(See appended table T.3)	N/A
T.4	Steady force test, 100 N .....	(See appended table T.4)	N/A
T.5	Steady force test, 250 N .....	(See appended table T.5)	P
T.6	Enclosure impact test	(See appended table T.6)	P
	Fall test		P
	Swing test		P
T.7	Drop test .....	(See appended table T.7)	N/A
T.8	Stress relief test.....:	(See appended table T.8)	N/A
T.9	Glass Impact Test.....:	(See appended table T.9)	N/A
T.9.1	General requirements		N/A
T.9.2	Impact test and compliance		N/A
	Impact energy (J).....:		—
	Height (m).....:		—



IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
T.10	Glass fragmentation test..... :	(See sub-clause 4.4.4.9)	N/A
T.11	Test for telescoping or rod antennas		N/A
	Torque value (Nm) ..... :		—
<b>U</b>	<b>MECHANICAL STRENGTH OF CATHODE RAY TUBES (CRT) AND PROTECTION AGAINST THEEFFECTS OF IMPLOSION</b>		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
<b>V</b>	<b>DETERMINATION OF ACCESSIBLE PARTS</b>		P
V.1	Accessible parts of equipment	No access with test probes to any hazardous parts	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		P
V.1.4	Plugs, jacks, connectors tested with blunt probe		P
V.1.5	Slot openings tested with wedge probe		N/A
V.1.6	Terminals tested with rigid test wire		P
V.2	Accessible part criterion	See above.	P
<b>X</b>	<b>ALTERNATIVE METHOD FOR DETERMINING CLEARANCES FOR INSULATION IN CIRCUITS CONNECTED TO AN AC MAINS NOT EXCEEDING 420 V PEAK (300 V RMS)</b>		N/A
	Clearance:	(See appended table X)	N/A
<b>Y</b>	<b>CONSTRUCTION REQUIREMENTS FOR OUTDOOR ENCLOSURES</b>		N/A
Y.1	General		N/A
Y.2	Resistance to UV radiation		N/A
Y.3	Resistance to corrosion		N/A
Y.3	Resistance to corrosion		N/A



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

4.1.2		TABLE: List of critical components				P
Object / part No.	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity <sup>1</sup>	
PCB	Interchangable	Interchangable	V-0, 130°C	UL 796	UL	
Heat shrinkable tube	DONGGUAN LIAOBU SANLIAN PLASTIC CO.,LTD.	SALIPT S-901-600	125°C, 600V, VW-1	UL 224	UL	
Internal wire	GUANGZHOU TANG YAO WIRES CO LTD	1332	24-22AWG;300V 200°C	UL758	UL	
Terminal block	Yuyao Ming Cheng Lightings Co.,Ltd	PA10	450V, 1,0-4,0 mm <sup>2</sup> , T100	EN60998-2-1	VDE	
DC fan	Protechnic Electric Co Ltd	MGA8012XS-A 20	12VDC, 0.34A, 36.64CFM	EN 60950, UL 507	VDE, UL	
Power supply	SHENZHEN MEGMEET ELECTRICAL CO.,LTD	MCP400WD- 4.2/3.2-4	Input:100-240VAC~ 50/60Hz 4.8AMax. Output1: DC4.2V 45A Output1: DC3.2V 35A	EN 62368-1	CE	
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.	264Vac	Primary circuits supplied by a.c. mains supply	Normal	264Vrms	--	--	ES3
			Abnormal	--	--	--	
			Single fault –SC/OC	--	--	--	

Note: All condition are considered, the maximum values are shown in the above table.  
Steady state is considered established when the voltage or current values persist for 2 s or longer.





<b>5.4.1.10.2</b>	<b>TABLE: Vicat softening temperature of thermoplastics</b>		N/A
Method.....	ISO 306 / B50		—
Object/ Part No./Material	Manufacturer/t rademark	T softening (°C)	
--	--	--	
supplementary information:			

<b>5.4.1.10.3</b>	<b>TABLE: Ball pressure test of thermoplastics</b>			P
Allowed impression diameter (mm) .....	≤ 2 mm			—
Object/Part No./Material	Manufacturer/trademark	Test temperature (°C)	Impression diameter (mm)	
PCB	See table 4.1.2	125	0.9	
Terminal block	See table 4.1.2	125	1.0	
Supplementary information:				

<b>5.4.2 and 5.4.3</b>	<b>TABLE: Minimum Clearances/Creepage distance</b>						P
Clearance (cl) and creepage distance (cr) at/of/between:	Up (V)	U r.m.s. (V)	Frequenc y (kHz) <sup>1</sup>	Required cl (mm)	cl (mm) <sup>2</sup>	Required <sup>3</sup> cr (mm)	cr (mm)
Primary trace to metal enclosure	420	240	50	1.5	>4.6	3.0	>4.6
Supplementary information:							
1) Only for frequency above 30 kHz							
2) Complete Electric Strength voltage (E.S. (V) when 5.4.2.4 applied)							

<b>5.4.4.2</b>	<b>TABLE: Distance through insulation measurements</b>			N/A
Distance through insulation (DTI) at/of	Peak voltage (V)	Required DTI (mm)	Measured 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	
L to N (fuse opened)	DC	2500 V	No	
L/N to metal enclosure	DC	2500 V	No	
L/N to screen (wrap with metal foil)	DC	4000 V	No	
Supplementary information:				

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

5.6.6	TABLE: Resistance of protective conductors and terminations				P
Accessible part	Test current (A)	Duration (min)	Voltage drop (V)	Resistance (Ω)	
Earthed metal enclosure	32	2	1.344	0.042	
Supplementary information:					



5.7.4		TABLE: Unearthed accessible parts				P
Location	Operating and fault conditions	Supply Voltage (V)	Parameters			ES class
			Voltage (V <sub>rms</sub> or V <sub>pk</sub> )	Current (A <sub>rms</sub> or A <sub>pk</sub> )	Freq. (Hz)	
L/N to screen (wrap with metal foil)	Normal	264	374	0.001mApk	60	ES1
Supplementary information:						

5.7.5		TABLE: Earthed accessible conductive part		P
Supply voltage (V).....:	264Vac		—	
Phase(s) .....	[x] Single Phase; [ ] Three Phase: [ ] Delta [ ] Wye			
Power Distribution System .....	<input checked="" type="checkbox"/> TN <input type="checkbox"/> TT <input type="checkbox"/> IT			
Location	Fault Condition No in IEC 60990 clause 6.2.2	Touch current (mA)	Comment	
Measured to metal enclosure	(e open, normal and reverse polarity p)	Normal: 0.02 Reverse: 0.02		
Supplementary Information:				

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: Electrical power sources (PS) measurements for classification				P
Source	Description	Measurement	Max Power after 3 s	Max Power after 5 s <sup>*</sup> )	PS Classification	
All internal circuit/components	Normal	Power (W) :	--	--	PS3 (declared)	
		V <sub>A</sub> (V) :	--	--		
		I <sub>A</sub> (A) :	--	--		
Supplementary Information: (* ) Measurement taken only when limits at 3 seconds exceed PS1 limits. Measurement taken only when limits at 5 seconds exceed PS2 limits						

6.2.3.1		Table: Determination of Potential Ignition Sources (Arcing PIS)			P
Location	Open circuit voltage After 3 s (V <sub>p</sub> )	Measured r.m.s current (I <sub>rms</sub> )	Calculated value (V <sub>p</sub> × I <sub>rms</sub> )	Arcing PIS? Yes / No	
All primary circuits/components	--	--	--	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 <sub>p</sub> ) and normal operating condition rms current (I <sub>rms</sub> ) is greater than 15. The output circuit is not arcing PIS as the open voltage of which is less than 50V <sub>peak</sub> .					

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
All internal circuits/components	--	--	--	--	Yes (declaration)



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:									



<b>5.4.1.4, 9.3, B.1.5, B.2.6</b>	<b>TABLE: Temperature measurements</b>							<b>P</b>
	Supply voltage (V) .....	AC90V/ 60Hz	AC264 V/50Hz	--	--	--	--	
	Test condition	Normal		--	--	--	--	
	Ambient T(°C) .....	25.0	25.2	--	--	--	--	
Maximum measured temperature T of part/at:		T (°C)						Allowed T <sub>max</sub> (°C)
Accessible parts:		Shift to 25°C	Shift to 25°C	--	--	--	--	--
Enclosure		49.7	44.6	--	--	--	--	60
Screen		55.6	47.8	--	--	--	--	71
Other parts:		Shift to 35°C	Shift to 35°C	--	--	--	--	--
PCB near BD1		68.7	62.1	--	--	--	--	130
PCB near T1		76.1	68.6	--	--	--	--	130
T1 core		74.6	66.8	--	--	--	--	110
T1 coil		82.9	74.5	--	--	--	--	110
PCB near U1		71.4	63.9	--	--	--	--	130
C1 body		67.9	62.7	--	--	--	--	105
DC fan		66.2	61.8	--	--	--	--	Ref.
Internal wire		65.6	60.5	--	--	--	--	80
Terminal block		63.6	58.2	--	--	--	--	210
Supplementary information:								
Temperature T of winding:		t <sub>1</sub> (°C)	R <sub>1</sub> (Ω)	t <sub>2</sub> (°C)	R <sub>2</sub> (Ω)	T (°C)	Allowed T <sub>max</sub> (°C)	Insulation class
--		--	--	--	--	--	--	--
Supplementary information:								



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	
90V/50Hz	7.142	--	635.9	--	F1	7.142	Normal condition	
90V/60Hz	7.075	--	632.1	--	F1	7.075		
100V/50Hz	6.362	10	630.5	--	F1	6.362		
100V/60Hz	6.353	10	628.2	--	F1	6.353		
240V/50Hz	2.589	10	609.4	--	F1	2.589		
240V/60Hz	2.615	10	612.8	--	F1	2.615		
264V/50Hz	2.386	--	608.3	--	F1	2.386		
264V/60Hz	2.395	--	610.0	--	F1	2.395		
Supplementary information:								

B.3,B.4		TABLE: Abnormal operating and fault condition tests					P
Ambient temperature (°C) .....					35		—
Power source for EUT: Manufacturer, model/type, output rating ..					Refer to below		—
Component No.	Abnormal Condition	Supply voltage, (V)	Test time (ms)	Fuse no.	Fuse current, (A)	Observation	
C3	SC	264	30mins	F1	0.002	Unit shutdown immediately, no hazards, no damaged.	
DC fan	Locked	264	3hrs25 mins	F1	2.388	Unit work as normal. Unit run for thermal equilibrium, no hazard. PCB near BD1: 63.5°C; PCB near T1: 70.1°C; T1 core: 68.2°C; T1 coil: 75.6°C; PCB near U1: 65.2°C; C1 body: 63.8°C; DC fan: 55.2°C; Internal wire: 61.7°C; Terminal block: 59.1°C; Enclosure: 55.7°C; Screen: 59.1°C; Ambient temperature: 35.2°C	
Supplementary information:SC= short circuit; OC= open circuit							



<b>M.3</b>	<b>TABLE: Protection circuits for batteries provided within the equipment</b>						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: 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.							

<b>M.4.2</b>	<b>TABLE: Charging safeguards for equipment containing a secondary lithium battery</b>					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

<b>Q.1</b>	<b>TABLE: Circuits intended for interconnection with building wiring (LPS)</b>	N/A
------------	--	-----

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

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

Supplementary Information:

S-C=Short circuit, O-C=Open circuit

<b>T.2, T.3, T.4, T.5</b>	<b>TABLE: Steady force test</b>	P
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Part/Location	Material	Thickness (mm)	Force (N)	Test Duration (sec)	Observation
Internal component	--	--	10	5	No damaged
All side of enclosure	Metal	Min. 2.5	250	5	No damaged

Supplementary information:

<b>T.6, T.9</b>	<b>TABLE: Impact tests</b>	P
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Part/Location	Material	Thickness (mm)	Vertical distance (mm)	Observation
All side of enclosure	Metal	Min. 2.5	1300	No damaged

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:						

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:				



<b>IEC62368-1- ATTACHMENT 1</b>
<b>ATTACHMENT TO TEST REPORT</b> <b>IEC 62368-1</b> <b>(JAPAN) NATIONAL DIFFERENCES</b> (Audio/video, information and communication technology equipment – Part 1: Safety requirements)
<b>Differences according to</b> .....: J62368-1 (H30)
<b>Attachment Form No</b> .....: JP_ND_IEC62368_1B
<b>Attachment Originator</b> .....: UL (JP)
<b>Master Attachment</b> .....: Date 2018-11-22
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Clause	Requirement + Test	Result - Remark	Verdict
4.1.2	Where the component, or a characteristic of a component, is a safeguard or a part of a safeguard, components shall comply with the requirements of this standard or, where specified in a requirements clause, with the safety aspects of the relevant JIS component standards or IEC component standards, or components shall have properties equivalent to or better than these.		P
5.6.1	Mains socket-outlet and appliance outlet shall comply with Clause G.4.2A if they are incorporated as part of the equipment.		N/A
5.6.2.1	Mains connection of class 0I equipment: Instructional safeguard in accordance with Clause F.3.6.1A; Mains plug having a lead wire for protective earthing connection of class 0I equipment; Independent main protective earthing terminal installed by ordinary person.		N/A
5.6.2.2	This requirement does not apply to internal conductor of the cord set that is covered by the sheath of mains cord and is formed together with mains plug and appliance connector.		N/A

IEC62368-1- ATTACHMENT 1			
IEC 62368-1, GROUP DIFFERENCES (CENELEC common modifications JAPAN)			
Clause	Requirement + Test	Result - Remark	Verdict
5.6.3	In case of class 0I equipment using power supply cord having two conductors (no earthing conductor), the conductor of protective earthing lead wire shall comply with either of the following: – use of annealed copper wire with 1.6 mm diameter or corrosion-inhibiting metal wire having size and strength that are equivalent to or more than the above copper wire – single core cord or single core cab tire cable with 1.25 mm <sup>2</sup> or more cross-sectional area		N/A
5.7.3	For class 0I equipment that is provided with mains socket-outlet in the configuration as specified in JIS C 8282 series or JIS C 8303, or otherwise being considered to comply with relevant regulations, or that is provided with mains appliance outlet as specified in JIS C 8283-2-2 for the purpose of interconnection, the measurement is conducted on the system of the interconnected equipment having a single connection to the mains.		N/A
5.7.4	In case of class 0I equipment, touch current shall not exceed 1.41 mA peak or for sinusoidal wave, 1.0 mA r.m.s. when measured using the network specified in Figure 4 of IEC 60990.		N/A
6.4.3.3	A fuse complying with JIS C 6575 series or a fuse having equivalent characteristics shall open within 1 s. For Class A fuse of JIS C 6575, replace “2.1 times” by “1.35 times” and in case of Class B fuse of JIS C 6575, replace “2.1 times” by “1.6 times”. A fuse not complying with JIS C 6575 series shall be tested with the breaking capacity taken into account.		N/A
8.5.4.2.1	Only three-phase stationary equipment rated more than 200 V ac can be considered as being for use in locations where children are not likely to		N/A

IEC62368-1- ATTACHMENT 1			
IEC 62368-1, GROUP DIFFERENCES (CENELEC common modifications JAPAN)			
Clause	Requirement + Test	Result - Remark	Verdict
	be present, when complying with Clause F.4.		
8.5.4.2.2	For equipment installed where children may be present, an instructional safeguard shall be provided by easily understandable wording in accordance with Clause F.5, except that element 3 is optional.		N/A
8.5.4.2.4	The media destruction device is tested according to Clause V.1.2 with applicable jointed test probes to the opening. And then the wedge probe per Figure V.4 shall not contact any moving part.		N/A
8.5.4.2.5	The wedge probe of Figure V.4 and applicable jointed test probes specified in Clause V.1.2 shall not contact any moving part. Instructional safeguard shall not be used instead of equipment safeguard for preventing access to hazardous moving parts.		N/A
9.2.6, Table 38	Handles, Knobs, grips, etc. and external surfaces either held, touched or worn against the body in normal use (> 1 min) <sup>b,c</sup>		P
F.3.5.1	Instructional safeguard of class 0I equipment in accordance with Clause F.5 when a mains socketoutlet as specified in JIS C 8282 series, JIS C 8303 or relevant regulation to which class I equipment can be connected is provided in accordance with Clause G.4.2A except for the cases where the socket-outlet is accessible only to skilled persons.		N/A
F.3.5.3	If the fuse is necessary for the safeguard function, the symbols indicating pre-arcing time-current characteristic.		N/A
F.3.6.1A	Marking for class 0I equipment The requirements of Clauses F.3.6.1.1 and F.3.6.1.3 shall be applied to class 0I equipment. For class 0I equipment, a marking of instructions and instructional safeguard shall be provided regarding the earthing connection.		N/A

<b>IEC62368-1- ATTACHMENT 1</b>			
<b>IEC 62368-1, GROUP DIFFERENCES (CENELEC common modifications JAPAN)</b>			
Clause	Requirement + Test	Result - Remark	Verdict
F.3.6.2.1	Symbols, IEC 60417-5172 (2003-02) or IEC 60417-6092 (2011-10), shall not be used for class I equipment or class 0I equipment.		N/A
F.4	Instruction for audio equipment with terminals classified as ES3 in accordance with Table E.1, and for other equipment with terminals marked in accordance with F.3.6.1 and F.3.6.1A. Installation instruction for the protective earthing connection for class 0I equipment provided with independent main protective earthing terminal, where the cord for the protective earthing connection is not provided within the package for the equipment.		N/A
G.3.2.1	The thermal link when tested as a separate component, shall comply with the requirements of JIS C 6691 or have properties equivalent to or better than that.		N/A
G.3.4	Except for devices covered by Clause G.3.5, overcurrent protective devices used as a safeguard shall comply with the relevant part of JIS C 6575 (corresponding to IEC60127) or shall have equivalent characteristics. If there are no applicable IEC standards, overcurrent protective devices used as a safeguard shall comply with their applicable IEC standards.		N/A
G.4.1	This requirement is not applicable to Clauses G.4.2 and G.4.2A.		N/A
G.4.2	Mains connector shall comply with JIS C 8282 series, JIS C 8283 series, JIS C 8285, JIS C 8303 or IEC 60309 series. Mains plugs and socket-outlets shall comply with JIS C 8282 series, JIS C 8303, IEC 60309 series, or have equivalent or better performance. A power supply cord set provided with appliance connector that can fit appliance inlet complying		N/A

<b>IEC62368-1- ATTACHMENT 1</b>			
<b>IEC 62368-1, GROUP DIFFERENCES (CENELEC common modifications JAPAN)</b>			
Clause	Requirement + Test	Result - Remark	Verdict
	with JIS C 8283-1 shall comply with JIS C 8286. Construction preventing mechanical stress not to transmit to the soldering part of inlet terminal. Consideration for an equipment rated not more than 125 V provided with Type C14 and C18 appliance coupler complying with JIS C 8283 series.		
G.4.2A	Mains socket-outlet and interconnection coupler provided with the class II, class I and class 0I equipment respectively.		N/A
G.7.1	A mains supply cord need not include the protective earthing conductor for class 0I equipment provided with independent protective earthing conductor.		N/A
G.8.3.3	Withstand $1,71 \times 1.1 \times U_0$ for 5 s.		N/A



**Attachment 2:**

**Photo-documentation**



Photo 1



Photo 2



Photo 3

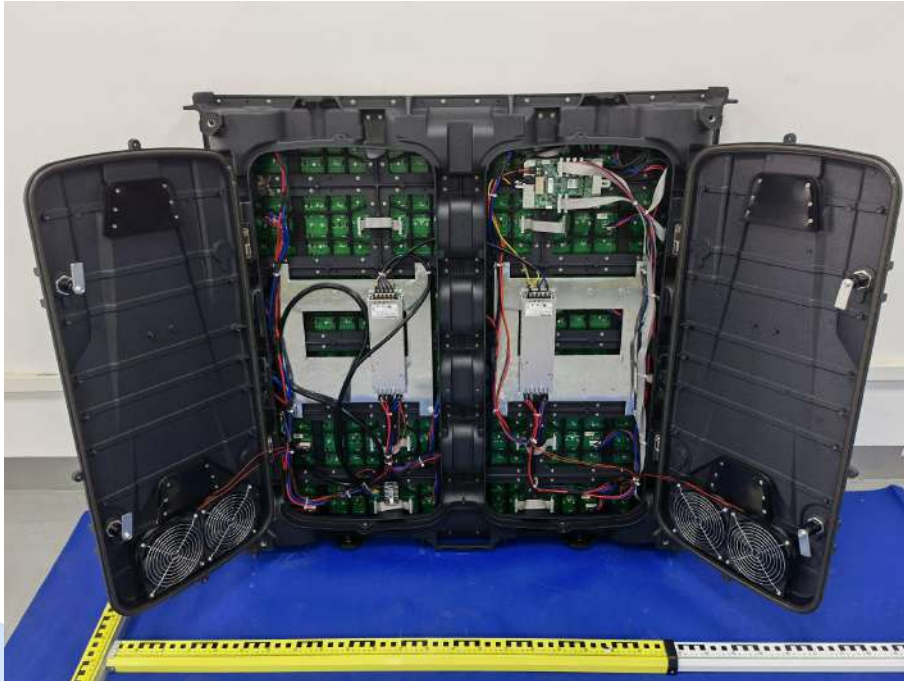


Photo 4



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