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# SAFETY TEST REPORT

## MEASUREMENT AND TEST REPORT

For

Shenzhen Karsun Access Technology Co.,Ltd	
F1- F3 , Building A2,Silicon Valley Power Digital Industrial Park, Guanlan Street, Longhua,Shenzhen,Guang Dong, China.518000	
<b>Models:</b>	JS-AI08
<b>Additional model:</b>	JS-AI05, JS-AI03, JS-AI03F, JS-AI01,JS-AI06, JS-AI06F,JS-WA07F, JS-AI07F, JS-AI18E, JS- AI18EF, JS-AI08FW, JS-AIX1, JS-AIFace11, JS-AIFace11F, JS-AI27F, JS-AI26, JS-AI26F, JS-AI20, JS-AI21,JS-AI03QR, JS-WC07QR, JS-AI06QR, JS-TFS50, JS-TFS70, JS-TM51, JS-TM51-P, JS-TM51-IC, JS-TM51-IC-B, JS-TM51-QR, JS-TM51-IC-QR, JS-TM51-IC-F, JS-TM71-IC, JS-TM51-XP,JS-TM51-PZ, JS-TM81, JS-TM81-IC, JS-TM81-QR-IC, JS-TM81-F-IC, JS-TM101-IC
<b>Equipment Type:</b>	Face recognition device
<b>Test Standard:</b>	EN IEC 62368-1:2018
<b>Report Number:</b>	GBT50306731012
<b>Test Date:</b>	Mar.11,2026 to Mar.17,2026
<b>Prepared By:</b>	<b>Guangdong Baotong Quality Inspection Co.,Ltd.</b> Room 802,Building 22,CIMC Intelligent Manufacturing Center,No.15.Shunye West Road,Xingtan,Shunde District.Foshan,Guangdong.China
<b>Date of issue</b>	Mar.17,2026

Tested by: *Uved*Reviewer: *shudw*Approved: *barw*

## TEST REPORT

**Applicant**

name.....: Shenzhen Karsun Access Technology Co.,Ltd  
Address.....: F1- F3 , Building A2,Silicon Valley Power Digital Industrial Park,  
Guanlan Street, Longhua,Shenzhen,Guang Dong, China.518000

**Test specification:**

Standard.....: EN IEC 62368-1:2018

Test procedure.....: Type Test

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

**Test item**

Description.....: Face recognition device

Model and/or type reference.....: See page 1

Additional model.....: See page 1

Trade mark .....: Karsun

Rated voltage .....: /

Manufacturer .....: Shenzhen Karsun Access Technology Co.,Ltd

Address .....: F1- F3 , Building A2,Silicon Valley Power Digital Industrial Park,  
Guanlan Street, Longhua,Shenzhen,Guang Dong, China.518000

**Test item particulars**

Classification of installation and use: N/A

Supply Connection.....: N/A

**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)

**Summary of testing:**

The product has been tested according to standard  
EN IEC 62368-1:2018

- Maximum ambient temperature: +25°C
- Tested for moderate conditions

**Copy of marking plate**

Face recognition device  
Model:JS-AI08  
Rating(s): /



Shenzhen Karsun Access Technology Co.,Ltd  
Made In China

Test item particulars:	
Product group :	<input checked="" type="checkbox"/> end product <input type="checkbox"/> built-in component
Classification of use by :	<input checked="" type="checkbox"/> Ordinary person <input type="checkbox"/> Children likely present <input type="checkbox"/> Instructed person <input type="checkbox"/> Skilled person
Supply connection :	<input checked="" type="checkbox"/> AC mains <input type="checkbox"/> DC mains <input type="checkbox"/> not mains connected: <input type="checkbox"/> ES1 <input type="checkbox"/> ES2 <input type="checkbox"/> ES3
Supply tolerance :	<input type="checkbox"/> +10%/-10% <input type="checkbox"/> +20%/-15% <input type="checkbox"/> + %/ - % <input checked="" type="checkbox"/> None
Supply connection – type :	<input checked="" type="checkbox"/> pluggable equipment type A - <input type="checkbox"/> non-detachable supply cord <input type="checkbox"/> appliance coupler <input checked="" type="checkbox"/> direct plug-in <input type="checkbox"/> pluggable equipment type B - <input type="checkbox"/> non-detachable supply cord <input type="checkbox"/> appliance coupler <input type="checkbox"/> permanent connection <input type="checkbox"/> mating connector <input type="checkbox"/> other:
Considered current rating of protective device :	<input checked="" type="checkbox"/> 0.3 A; Location: <input checked="" type="checkbox"/> building <input type="checkbox"/> equipment <input type="checkbox"/> N/A
Equipment mobility :	<input checked="" type="checkbox"/> movable <input type="checkbox"/> hand-held <input type="checkbox"/> transportable <input type="checkbox"/> direct plug-in <input type="checkbox"/> stationary <input type="checkbox"/> for building-in <input type="checkbox"/> wall/ceiling-mounted <input type="checkbox"/> SRME/rack-mounted <input type="checkbox"/> other:
Overvoltage category (OVC) :	<input type="checkbox"/> OVC I <input checked="" type="checkbox"/> OVC II <input type="checkbox"/> OVC III <input type="checkbox"/> OVC IV <input type="checkbox"/> other:
Class of equipment :	<input type="checkbox"/> Class I <input checked="" type="checkbox"/> Class II <input type="checkbox"/> Class III <input type="checkbox"/> Not classified <input type="checkbox"/>
Special installation location :	<input checked="" type="checkbox"/> N/A <input type="checkbox"/> restricted access area <input type="checkbox"/> outdoor location <input type="checkbox"/>
Pollution degree (PD) :	<input type="checkbox"/> PD 1 <input checked="" type="checkbox"/> PD 2 <input type="checkbox"/> PD 3
Manufacturer's specified Tma :	40 °C <input type="checkbox"/> Outdoor: minimum °C
IP protection class :	<input checked="" type="checkbox"/> IPX0 <input type="checkbox"/> IP
Power systems :	<input checked="" type="checkbox"/> TN <input type="checkbox"/> TT <input type="checkbox"/> IT - $\sqrt{L-L}$ <input type="checkbox"/> not AC mains
Altitude during operation (m) :	<input checked="" type="checkbox"/> 2000 m or less <input type="checkbox"/> m
Altitude of test laboratory (m) :	<input checked="" type="checkbox"/> 2000 m or less <input type="checkbox"/> m
Mass of equipment (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)
:	
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 <input type="checkbox"/> comma / <input checked="" type="checkbox"/> 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 :	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> Not applicable
When differences exist; they shall be identified in the General product information section.	
Name and address of factory (ies) :	Same as applicant
General product information and other remarks:	
The equipment is for indoor use only and for the use in video, information and communication technology equipment, It belongs to class III equipment. The equipment is used as movable equipment. enclosure was considered as fire enclosure. The maximum operation temperature is 40°C. All tests were performed on model NeutrinoE224 . The user manual specified the relevant information for installation instruction.	

EN 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
<b>4</b>	<b>GENERAL REQUIREMENTS</b>		P
4.1.1	Acceptance of materials, components and subassemblies	(See appended Table 4.1.2.)	P
4.1.2	Use of components	Safeguard components are certified to IEC and/or national standards and are used correctly within their ratings.	P
4.1.3	Equipment design and construction		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	See below	P
4.4.3.1	General		P
4.4.3.2	Steady force tests	(See Annex T.4)	P
4.4.3.3	Drop tests	(See Annex T.7)	P
4.4.3.4	Impact tests	(See Annex T.6)	P
4.4.3.5	Internal accessible safeguard tests		N/A
4.4.3.6	Glass impact tests		N/A
4.4.3.7	Glass fixation tests		N/A
	Glass impact test (1J)		N/A
	Push/pull test (10 N)		N/A
4.4.3.8	Thermoplastic material tests	(See Annex T.8)	N/A
4.4.3.9	Air comprising a safeguard		N/A
4.4.3.10	Accessibility, glass, safeguard effectiveness	All safeguards remain effective.	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
<b>4.5</b>	<b>Explosion</b>		P
4.5.1	General	No explosion observed during normal / abnormal / single fault conditions.	P
4.5.2	No explosion during normal/abnormal operating condition	(See Clause B.2, B.3)	P
	No harm by explosion during single fault conditions	(See Clause B.4)	P
<b>4.6</b>	<b>Fixing of conductors</b>		N/A
	Fix conductors not to defeat a safeguard		N/A
	Compliance is checked by test ..... :		N/A

<b>4.7</b>	<b>Equipment for direct insertion into mains socket-outlets</b>		N/A
4.7.2	Mains plug part complies with relevant standard .... :		N/A
4.7.3	Torque (Nm) ..... :		N/A
<b>4.8</b>	<b>Equipment containing coin/button cell batteries</b>		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
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
<b>4.9</b>	<b>Likelihood of fire or shock due to entry of conductive object</b>		N/A
<b>4.10</b>	<b>Component requirements</b>		N/A
4.10.1	Disconnect Device	(See Annex L)	N/A
4.10.2	Switches and relays	(See Annex G)	N/A

<b>5</b>	<b>ELECTRICALLY-CAUSED INJURY</b>		P
<b>5.2</b>	<b>Classification and limits of electrical energy sources</b>		P
5.2.2	ES1, ES2 and ES3 limits	ES1	P
5.2.2.2	Steady-state voltage and current limits ..... :	(See appended table 5.2)	P
5.2.2.3	Capacitance limits ..... :		N/A
5.2.2.4	Single pulse limits..... :		N/A
5.2.2.5	Limits for repetitive pulses ..... :		N/A
5.2.2.6	Ringling signals		N/A
5.2.2.7	Audio signals		N/A
<b>5.3</b>	<b>Protection against electrical energy sources</b>		N/A
5.3.1	General Requirements for accessible parts to ordinary, instructed and skilled persons	See below.	N/A
5.3.1 a)	Accessible ES1/ES2 derived from ES2/ES3 circuits		N/A
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		N/A
	Accessibility to outdoor equipment bare parts		N/A
5.3.2.2	Contact requirements		N/A
	Test with test probe from Annex V	Figure V.1, V.2 can't contact any bare internal conductive part	—
5.3.2.2 a)	Air gap – electric strength test potential (V) ..... :	(See appended table 5.4.9)	N/A
5.3.2.2 b)	Air gap – distance (mm) ..... :	>0.2	N/A

5.3.2.3	Compliance		N/A
5.3.2.4	Terminals for connecting stripped wire		N/A
<b>5.4</b>	<b>Insulation materials and requirements</b>		N/A
5.4.1.2	Properties of insulating material		N/A
5.4.1.3	Material is non-hygroscopic		N/A
5.4.1.4	Maximum operating temperature for insulating materials..... :	(See appended table 5.4.1.4, 9.3, B.1.5, B.2.6)	N/A
5.4.1.5	Pollution degrees..... :	PD2.	N/A
5.4.1.5.2	Test for pollution degree 1 environment and for an insulating compound	Pollution degree 2 is applied	N/A
5.4.1.5.3	Thermal cycling test		N/A
5.4.1.6	Insulation in transformers with varying dimensions		N/A
5.4.1.7	Insulation in circuits generating starting pulses		N/A
5.4.1.8	Determination of working voltage ..... :	(See appended table 5.4.1.8)	N/A
5.4.1.9	Insulating surfaces		N/A
5.4.1.10	Thermoplastic parts on which conductive metallic parts are directly mounted		N/A
5.4.1.10.2	Vicat test ..... :		N/A
5.4.1.10.3	Ball pressure test..... :	(See appended table 5.4.1.10.3)	N/A
5.4.2	Clearances		N/A
5.4.2.1	General requirements		N/A
	Clearances in circuits connected to AC Mains, Alternative method	(See Annex X)	N/A
5.4.2.2	Procedure 1 for determining clearance		N/A
	Temporary overvoltage ..... :		—
5.4.2.3	Procedure 2 for determining clearance		N/A

5.4.2.3.2.2	a.c. mains transient voltage ..... :		—
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)	N/A
5.4.3	Creepage distances	See appended table 5.4.2.2, 5.4.2.4 and 5.4.3	N/A
5.4.3.1	General		N/A
5.4.3.3	Material group..... :	IIIb	—
5.4.3.4	Creepage distances measurement ..... :	(See appended table 5.4.3)	N/A
5.4.4	Solid insulation		N/A
5.4.4.1	General requirements		N/A
5.4.4.2	Minimum distance through insulation ..... :	(See appended table 5.4.4.2)	N/A
5.4.4.3	Insulating compound forming solid insulation		N/A
5.4.4.4	Solid insulation in semiconductor devices		N/A
5.4.4.5	Insulating compound forming cemented joints		N/A

5.4.4.6	Thin sheet material		N/A
5.4.4.6.1	General requirements		N/A
5.4.4.6.2	Separable thin sheet material		N/A
	Number of layers (pcs) .....		N/A
5.4.4.6.3	Non-separable thin sheet material		N/A
	Number of layers (pcs) .....		N/A
5.4.4.6.4	Standard test procedure for non-separable thin sheet material .....	(See appended table 5.4.9)	N/A
5.4.4.6.5	Mandrel test		N/A
5.4.4.7	Solid insulation in wound components	(See Annex G5 and G6)	N/A
5.4.4.9	Solid insulation at frequencies >30 kHz, $E_p$ , $K_R$ , $d$ , $V_{PW}$ (V) .....	(See appended Table 5.4.4.9)	N/A
	Alternative by electric strength test, tested voltage (V), $K_R$ .....	(See appended Tables 5.4.4.9 and 5.4.9)	N/A
5.4.5	Antenna terminal insulation		N/A
5.4.5.1	General		N/A
5.4.5.2	Voltage surge test		N/A
5.4.5.3	Insulation resistance (M $\Omega$ ) .....		N/A
	Electric strength test.....	(See appended table 5.4.9)	N/A

5.4.6	Insulation of internal wire as part of supplementary safeguard		N/A
5.4.7	Tests for semiconductor components and for cemented joints		N/A
5.4.8	Humidity conditioning		N/A
	Relative humidity (%), temperature ( $^{\circ}$ C), duration (h) .....		—
5.4.9	Electric strength test	(See appended table 5.4.9)	N/A
5.4.9.1	Test procedure for type test of solid insulation .....	Method 1 used.	N/A
5.4.9.2	Test procedure for routine test		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		N/A
5.4.10.2	Test methods		N/A
5.4.10.2.1	General		N/A
5.4.10.2.2	Impulse test .....	(See appended table 5.4.9)	N/A
5.4.10.2.3	Steady-state test.....	(See appended table 5.4.9)	N/A
5.4.10.3	Verification for insulation breakdown for impulse test.....		N/A
5.4.11	Separation between external circuits and earth		N/A
5.4.11.1	Exceptions to separation between external circuits and earth		N/A
5.4.11.2	Requirements		N/A
	SPDs bridge separation between external circuit and earth		N/A
	Rated operating voltage $U_{op}$ (V) .....		—
	Nominal voltage $U_{peak}$ (V) .....		—
	Max increase due to variation $\Delta U_{sp}$ .....		—
	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
<b>5.5</b>	<b>Components as safeguards</b>		N/A
5.5.1	General		N/A
5.5.2	Capacitors and RC units		N/A
5.5.2.1	General requirement		N/A



5.5.2.2	Safeguards against capacitor discharge after disconnection of a connector .....	(See appended table 5.5.2.2)	N/A
5.5.3	Transformers	(See Annex G.5.3)	N/A
5.5.4	Optocouplers	(See appended table 4.1.2)	N/A
5.5.5	Relays	(See sub-clause 5.4)	N/A
5.5.6	Resistors	(See Clause G.10)	N/A
5.5.7	SPDs	(See Clause G.8)	N/A
5.5.8	Insulation between the mains and an external circuit consisting of a coaxial cable.....		N/A
5.5.9	Safeguards for socket-outlets in outdoor equipment		N/A
	RCD rated residual operating current (mA) .....		—
<b>5.6</b>	<b>Protective conductor</b>		N/A
5.6.2	Requirement for protective conductors		N/A
5.6.2.1	General requirements		N/A
5.6.2.2	Colour of insulation		N/A
5.6.3	Requirement for protective earthing conductors		N/A
	Protective earthing conductor size (mm <sup>2</sup> ) .....		—
	Protective earthing conductor serving as a reinforced safeguard		N/A
	Protective earthing conductor serving as a double safeguard		N/A
5.6.4	Requirements for protective bonding conductors		N/A
5.6.4.1	Protective bonding conductors		N/A
	Protective bonding conductor size (mm <sup>2</sup> ).....	(see table 4.1.2)	—
5.6.4.2	Protective current rating (A) .....		N/A
5.6.5	Terminals for protective conductors		N/A
5.6.5.1	Terminal size for connecting protective earthing conductors (mm) .....		N/A
	Terminal size for connecting protective bonding conductors (mm).....		N/A
5.6.5.2	Corrosion		N/A
5.6.6	Resistance of the protective bonding system		N/A
5.6.6.1	Requirements		N/A
5.6.6.2	Test Method.....	(See appended table 5.6.6)	N/A
5.6.6.3	Resistance (Ω) or voltage drop .....	(See appended table 5.6.6)	N/A
5.6.7	Reliable connection of a protective earthing conductor		N/A
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
<b>5.7</b>	<b>Prospective touch voltage, touch current and protective conductor current</b>		N/A
5.7.2	Measuring devices and networks		N/A
5.7.2.1	Measurement of touch current	(See appended table 5.7.4)	N/A
5.7.2.2	Measurement of voltage	(See appended table 5.7.4)	N/A
5.7.3	Equipment set-up, supply connections and earth connections		N/A
5.7.4	Unearthed accessible parts .....	(See appended table 5.7.4)	N/A
5.7.5	Earthed accessible conductive parts .....	(See appended table 5.7.5)	N/A

5.7.6	Requirements when touch current exceeds ES2 limits		N/A
	Protective conductor current (mA) .....		N/A
	Instructional Safeguard.....		N/A
5.7.7	Prospective touch voltage and touch current associated with external circuits		N/A
5.7.7.1	Touch current from coaxial cables		N/A
5.7.7.2	Prospective touch voltage and touch current associated with paired conductor cables		N/A
5.7.8	Summation of touch currents from external circuits		N/A
	a) Equipment connected to earthed external circuits, current (mA) .....		N/A
	b) Equipment connected to unearthed external circuits, current (mA) .....		N/A
<b>5.8</b>	<b>Backfeed safeguard in battery backed up supplies</b>		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
<b>6.2</b>	<b>Classification of PS and PIS</b>		P
6.2.2	Power source circuit classifications.....	(See appended table 6.2.2)	P
6.2.3	Classification of potential ignition sources	See below.	P
6.2.3.1	Arcing PIS .....	Primary circuits are considered as arcing PIS.	N/A
6.2.3.2	Resistive PIS .....	All components located within the EUT are considered as resistive PIS.	N/A
<b>6.3</b>	<b>Safeguards against fire under normal operating and abnormal operating conditions</b>		P
6.3.1	No ignition and attainable temperature value less than 90 % defined by ISO 871 or less than 300 °C for unknown materials.....	(See appended table 5.4.1.4, 9.3, B.1.5, B.2.6)	P
	Combustible materials outside fire enclosure .....		N/A
<b>6.4</b>	<b>Safeguards against fire under single fault conditions</b>		P
6.4.1	Safeguard method	Method of Control fire spread used.	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		N/A
6.4.3.1	Supplementary safeguards		P
6.4.3.2	Single Fault Conditions.....	(See appended table B.4)	P
	Special conditions for temperature limited by fuse		N/A
6.4.4	Control of fire spread in PS1 circuits		P
6.4.5	Control of fire spread in PS2 circuits	See below.	N/A
6.4.5.2	Supplementary safeguards	Compliance detailed as follows: - Printed board: rated V-1	P

		or VTM-1 min. class material; Other components other than PCB and wires are: - mounted on PCB rated V-1 or VTM-1 min., or - made of V-2, VTM-2 or HF2 min.  Detail see table 4.1.2	
6.4.6	Control of fire spread in PS3 circuits		N/A
6.4.7	Separation of combustible materials from a PIS		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		N/A
6.4.8.2	Fire enclosure and fire barrier material properties		N/A
6.4.8.2.1	Requirements for a fire barrier		N/A
6.4.8.2.2	Requirements for a fire enclosure		N/A
6.4.8.3	Constructional requirements for a fire enclosure and a fire barrier		N/A
6.4.8.3.1	Fire enclosure and fire barrier openings		N/A
6.4.8.3.2	Fire barrier dimensions		N/A
6.4.8.3.3	Top openings and properties		N/A
	Openings dimensions (mm) .....		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 a fire enclosure, condition met: a), b) or c) .....		N/A
6.4.8.4	Separation of a PIS from a fire enclosure and a fire barrier distance (mm) or flammability rating.....	(See appended table 4.1.2.)	N/A
6.4.9	Flammability of insulating liquid.....		N/A
<b>6.5</b>	<b>Internal and external wiring</b>		P
6.5.1	General requirements	The material of VW-1 on internal wiring were considered compliance equal to equivalent to IEC/TS 60695-11-21 relevant standards	P
6.5.2	Requirements for interconnection to building wiring .....	No such interconnection to building wiring.	N/A
6.5.3	Internal wiring size (mm <sup>2</sup> ) for socket-outlets .....	See appended table 4.1.2	N/A
<b>6.6</b>	<b>Safeguards against fire due to the connection to additional equipment</b>		P
<b>7</b>	<b>INJURY CAUSED BY HAZARDOUS SUBSTANCES</b>		N/A
<b>7.2</b>	<b>Reduction of exposure to hazardous substances</b>		N/A
<b>7.3</b>	<b>Ozone exposure</b>		N/A
<b>7.4</b>	<b>Use of personal safeguards or personal protective equipment (PPE)</b>		N/A

	Personal safeguards and instructions..... :		—
<b>7.5</b>	<b>Use of instructional safeguards and instructions</b>		N/A
	Instructional safeguard (ISO 7010) .....		—
<b>7.6</b>	<b>Batteries and their protection circuits</b>		N/A

<b>8</b>	<b>MECHANICALLY-CAUSED INJURY</b>		P
<b>8.2</b>	<b>Mechanical energy source classifications</b>		P
<b>8.3</b>	<b>Safeguards against mechanical energy sources</b>		P
<b>8.4</b>	<b>Safeguards against parts with sharp edges and corners</b>		P
8.4.1	Safeguards	Accessible edges and corners of the equipment are rounded and are classified as MS1.	P
	Instructional Safeguard .....		N/A
8.4.2	Sharp edges or corners		N/A
<b>8.5</b>	<b>Safeguards against moving parts</b>		N/A
8.5.1	Fingers, jewellery, clothing, hair, etc., contact with MS2 or MS3 parts		N/A
	MS2 or MS3 part required to be accessible for the function of the equipment		N/A
	Moving MS3 parts only accessible to skilled person		N/A
8.5.2	Instructional safeguard..... :		N/A

8.5.4	Special categories of equipment containing moving parts		N/A
8.5.4.1	General		N/A
8.5.4.2	Equipment containing work cells with MS3 parts		N/A
8.5.4.2.1	Protection of persons in the work cell		N/A
8.5.4.2.2	Access protection override		N/A
8.5.4.2.2.1	Override system		N/A
8.5.4.2.2.2	Visual indicator		N/A
8.5.4.2.3	Emergency stop system		N/A
	Maximum stopping distance from the point of activation (m) .....		N/A
	Space between end point and nearest fixed mechanical part (mm) .....		N/A
8.5.4.2.4	Endurance requirements		N/A
	Mechanical system subjected to 100 000 cycles of operation		N/A
	- Mechanical function check and visual inspection		N/A
	- Cable assembly..... :		N/A
8.5.4.3	Equipment having electromechanical device for destruction of media		N/A
8.5.4.3.1	Equipment safeguards		N/A
8.5.4.3.2	Instructional safeguards against moving parts .....		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 .....		N/A

8.5.5.3	Glass particles dimensions (mm) .....		N/A
<b>8.6</b>	<b>Stability of equipment</b>		N/A
8.6.1	General	MS1	N/A
	Instructional safeguard.....		N/A
8.6.2	Static stability		N/A
8.6.2.2	Static stability test.....		N/A
8.6.2.3	Downward force test		N/A
8.6.3	Relocation stability		N/A
	Wheels diameter (mm) .....	--	—
	Tilt test		N/A
8.6.4	Glass slide test		N/A



8.6.5	Horizontal force test .....		N/A
<b>8.7</b>	<b>Equipment mounted to wall, ceiling or other structure</b>		N/A
8.7.1	Mount means type.....		N/A
8.7.2	Test methods		N/A
	Test 1, additional downwards force (N) .....		N/A
	Test 2, number of attachment points and test force (N).....		N/A
	Test 3 Nominal diameter (mm) and applied torque (Nm) .....		N/A
<b>8.8</b>	<b>Handles strength</b>		N/A
8.8.1	General	No handle	N/A
8.8.2	Handle strength test		N/A
	Number of handles .....		—
	Force applied (N) .....		N/A
<b>8.9</b>	<b>Wheels or casters attachment requirements</b>		N/A
8.9.2	Pull test		N/A
<b>8.10</b>	<b>Carts, stands and similar carriers</b>		N/A
8.10.1	General		N/A
8.10.2	Marking and instructions .....		N/A
8.10.3	Cart, stand or carrier loading test		N/A
	Loading force applied (N).....		N/A
8.10.4	Cart, stand or carrier impact test		N/A
8.10.5	Mechanical stability		N/A
	Force applied (N) .....		N/A
8.10.6	Thermoplastic temperature stability		N/A
<b>8.11</b>	<b>Mounting means for slide-rail mounted equipment (SRME)</b>		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
<b>8.12</b>	<b>Telescoping or rod antennas</b>		N/A
	Button/ball diameter (mm) .....		—

<b>9</b>	<b>THERMAL BURN INJURY</b>		P
<b>9.2</b>	<b>Thermal energy source classifications</b>		P
<b>9.3</b>	<b>Touch temperature limits</b>		P
9.3.1	Touch temperatures of accessible parts .....	(See appended table 9.3)	P
9.3.2	Test method and compliance		P
<b>9.4</b>	<b>Safeguards against thermal energy sources</b>		N/A

<b>9.5</b>	<b>Requirements for safeguards</b>		N/A
9.5.1	Equipment safeguard		N/A
9.5.2	Instructional safeguard..... :		N/A
<b>9.6</b>	<b>Requirements for wireless power transmitters</b>		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
<b>10.2</b>	<b>Radiation energy source classification</b>		P
10.2.1	General classification		N/A
	Lasers..... :		—
	Lamps and lamp systems ..... :		—
	Image projectors ..... :		—
	X-Ray..... :		—
	Personal music player ..... :		—
<b>10.3</b>	<b>Safeguards against laser radiation</b>		N/A
	The standard(s) equipment containing laser(s) comply ..... :	No laser radiation	N/A
<b>10.4</b>	<b>Safeguards against optical radiation from lamps and lamp systems (including LED types)</b>		N/A
10.4.1	General requirements		N/A
	Instructional safeguard provided for accessible radiation level needs to exceed		N/A
	Risk group marking and location ..... :		N/A
	Information for safe operation and installation		N/A
10.4.2	Requirements for enclosures		N/A
	UV radiation exposure..... :	(See Annex C)	N/A
10.4.3	Instructional safeguard ..... :		N/A
<b>10.5</b>	<b>Safeguards against X-radiation</b>		N/A
10.5.1	Requirements	No X-radiation	N/A
	Instructional safeguard for skilled persons..... :		—
10.5.3	Maximum radiation (pA/kg) ..... :	(See appended tables B.3 &	—

		B.4)	
<b>10.6</b>	<b>Safeguards against acoustic energy sources</b>		N/A
10.6.1	General	No acoustic energy source	N/A
10.6.2	Classification		N/A
	Acoustic output $L_{Aeq,T}$ , dB(A) .....		N/A
	Unweighted RMS output voltage (mV) .....		N/A
	Digital output signal (dBFS) .....		N/A
10.6.3	Requirements for dose-based systems		N/A
10.6.3.1	General requirements		N/A
10.6.3.2	Dose-based warning and automatic decrease		N/A
10.6.3.3	Exposure-based warning and requirements		N/A
	30 s integrated exposure level (MEL30) .....		N/A
	Warning for MEL $\geq$ 100 dB(A) .....		N/A
10.6.4	Measurement methods		N/A
10.6.5	Protection of persons		N/A
	Instructional safeguards.....		N/A
10.6.6	Requirements for listening devices (headphones, earphones, etc.)		N/A
10.6.6.1	Corded listening devices with analogue input		N/A
	Listening device input voltage (mV) .....		N/A
10.6.6.2	Corded listening devices with digital input		N/A
	Max. acoustic output $L_{Aeq,T}$ , dB(A) .....		N/A
10.6.6.3	Cordless listening devices		N/A
	Max. acoustic output $L_{Aeq,T}$ , dB(A) .....		N/A
			N/A

<b>B</b>	<b>NORMAL OPERATING CONDITION TESTS, ABNORMAL OPERATING CONDITION TESTS AND SINGLE FAULT CONDITION TESTS</b>		P
<b>B.1</b>	<b>General</b>		P
B.1.5	Temperature measurement conditions	(See appended table B.1.5)	P
<b>B.2</b>	<b>Normal operating conditions</b>		P
B.2.1	General requirements .....	(See Test Item Particulars and appended test tables)	P
	Audio Amplifiers and equipment with audio amplifiers .....		N/A
B.2.3	Supply voltage and tolerances	+10% and -10% for a.c. mains.	P
B.2.5	Input test.....	(See appended table B.2.5)	N/A
<b>B.3</b>	<b>Simulated abnormal operating conditions</b>		P
B.3.1	General	(See appended table B.3, B.4)	P

B.3.2	Covering of ventilation openings		N/A
	Instructional safeguard .....		P
B.3.3	DC mains polarity test		N/A
B.3.4	Setting of voltage selector	No voltage selector	N/A
B.3.5	Maximum load at output terminals	(See appended table B.3, B.4)	P
B.3.6	Reverse battery polarity		N/A
B.3.7	Audio amplifier abnormal operating conditions		N/A
B.3.8	Safeguards functional during and after abnormal operating conditions..... :	(See appended table B.3, B.4)	P
<b>B.4</b>	<b>Simulated single fault conditions</b>		P
B.4.1	General		P
B.4.2	Temperature controlling device		N/A
B.4.3	Blocked motor test		N/A
B.4.4	Functional insulation	(See appended table B.3, B.4)	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		N/A
B.4.5	Short-circuit and interruption of electrodes in tubes and semiconductors	(See appended table B.3, B.4)	P
B.4.6	Short circuit or disconnection of passive components	(See appended table B.3, B.4)	P
B.4.7	Continuous operation of components		N/A
B.4.8	Compliance during and after single fault conditions .....	(See appended table B.3, B.4)	P
B.4.9	Battery charging and discharging under single fault conditions	(See Annex M)	N/A
<b>C</b>	<b>UV RADIATION</b>		N/A
<b>C.1</b>	<b>Protection of materials in equipment from UV radiation</b>		N/A
C.1.2	Requirements		N/A
C.1.3	Test method		N/A
<b>C.2</b>	<b>UV light conditioning test</b>		N/A
C.2.1	Test apparatus..... :		N/A
C.2.2	Mounting of test samples		N/A
C.2.3	Carbon-arc light-exposure test		N/A
C.2.4	Xenon-arc light-exposure test		N/A
<b>D</b>	<b>TEST GENERATORS</b>		N/A
<b>D.1</b>	<b>Impulse test generators</b>		N/A
<b>D.2</b>	<b>Antenna interface test generator</b>		N/A

<b>D.3</b>	<b>Electronic pulse generator</b>		N/A
<b>E</b>	<b>TEST CONDITIONS FOR EQUIPMENT CONTAINING AUDIO AMPLIFIERS</b>		N/A
<b>E.1</b>	<b>Electrical energy source classification for audio signals</b>		N/A
	Maximum non-clipped output power (W) .....		—
	Rated load impedance (Ω) .....		—
	Open-circuit output voltage (V) .....		—
	Instructional safeguard .....		—
<b>E.2</b>	<b>Audio amplifier normal operating conditions</b>		N/A
	Audio signal source type.....		—
	Audio output power (W) .....		—
	Audio output voltage (V) .....		—
	Rated load impedance (Ω) .....		—
	Requirements for temperature measurement	(See appended table B.1.5)	N/A
E.3	Audio amplifier abnormal operating conditions	(See appended table B.3, B.4)	N/A
<b>F</b>	<b>EQUIPMENT MARKINGS, INSTRUCTIONS, AND INSTRUCTIONAL SAFEGUARDS</b>		P
<b>F.1</b>	<b>General</b>		P
	Language .....	English. Versions in other languages will be provided when national certificate approval.	—
<b>F.2</b>	<b>Letter symbols and graphical symbols</b>		P
F.2.1	Letter symbols according to IEC60027-1		N/A
F.2.2	Graphic symbols according to IEC, ISO or manufacturer specific		P
<b>F.3</b>	<b>Equipment markings</b>		P
F.3.1	Equipment marking locations	The equipment marking is located on the surface and is easily visible.	P
F.3.2	Equipment identification markings	See below.	P
F.3.2.1	Manufacturer identification .....	Baicells Technologies Co., Ltd.	P
F.3.2.2	Model identification .....	NeutrinoE224	P
F.3.3	Equipment rating markings	Refer to 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
F.3.3.3	Nature of the supply voltage .....	Refer to marking	P
F.3.3.4	Rated voltage .....	Refer to marking	P
F.3.3.5	Rated frequency .....	Refer to marking	P
F.3.3.6	Rated current or rated power.....	Refer to marking	P
F.3.3.7	Equipment with multiple supply connections	Only one connection.	N/A

F.3.4	Voltage setting device	No voltage setting device.	N/A
F.3.5	Terminals and operating devices	No terminals and operating devices	N/A
F.3.5.1	Mains appliance outlet and socket-outlet markings ..... :		N/A
F.3.5.2	Switch position identification marking ..... :		N/A
F.3.5.3	Replacement fuse identification and rating markings ..... :		N/A
	Instructional safeguards for neutral fuse..... :		N/A
F.3.5.4	Replacement battery identification marking ..... :		N/A
F.3.5.5	Neutral conductor terminal		N/A
F.3.5.6	Terminal marking location		N/A
F.3.6	Equipment markings related to equipment classification		P
F.3.6.1	Class I equipment		N/A
F.3.6.1.1	Protective earthing conductor terminal ..... :		N/A
F.3.6.1.2	Protective bonding conductor terminals ..... :		N/A
F.3.6.2	Equipment class marking..... :		N/A
F.3.6.3	Functional earthing terminal marking..... :		N/A
F.3.7	Equipment IP rating marking ..... :	IPX0	N/A
F.3.8	External power supply output marking..... :		P
F.3.9	Durability, legibility and permanence of marking	All markings required are easily discernible under normal lighting conditions.	P
F.3.10	Test for permanence of markings	After rubbing test by water and petroleum spirit, the marking still legible; it is not easily possible to remove the marking plate and show no curling.	P
<b>F.4</b>	<b>Instructions</b>		P
	a)..... Information prior to installation and initial use		P
	b)..... Equipment for use in locations where children not likely to be present		P
	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		P

	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		P
	j)..... Permanently connected equipment not provided with all-pole mains switch		N/A
	k)..... Replaceable components or modules providing safeguard function		N/A
	l)..... Equipment containing insulating liquid		N/A
	m)..... Installation instructions for outdoor equipment		N/A

<b>F.5</b>	Instructional safeguards		N/A
<b>G</b>	<b>COMPONENTS</b>		P
<b>G.1</b>	<b>Switches</b>		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
<b>G.2</b>	<b>Relays</b>		N/A
G.2.1	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
<b>G.3</b>	<b>Protective devices</b>		P
G.3.1	Thermal cut-offs		N/A
	Thermal cut-outs separately approved according to IEC 60730 with conditions indicated in a) & b)		N/A
	Thermal cut-outs tested as part of the equipment as indicated in c)		N/A
G.3.1.2	Test method and compliance		N/A
G.3.2	Thermal links		N/A
G.3.2.1	a) Thermal links tested separately according to IEC 60691 with specifics		N/A
	b) Thermal links tested as part of the equipment		N/A

G.3.2.2	Test method and compliance		N/A
G.3.3	PTC thermistors		N/A
G.3.4	Overcurrent protection devices	Certified Fuse used.	P
G.3.5	Safeguards components not mentioned in G.3.1 to G.3.4		N/A
G.3.5.1	Non-resettable devices suitably rated and marking provided		N/A
G.3.5.2	Single faults conditions..... :		N/A
<b>G.4</b>	<b>Connectors</b>		P
G.4.1	Spacings		P
G.4.2	Mains connector configuration..... :	Approved appliance inlet used	P
G.4.3	Plug is shaped that insertion into mains socket-outlets or appliance coupler is unlikely		N/A
<b>G.5</b>	<b>Wound components</b>		P
G.5.1	Wire insulation in wound components	Approved triple insulated wire used as Reinforced insulation for primary winding of transformer.	P
G.5.1.2	Protection against mechanical stress	Physical separation provided by insulation tape and tube.	P
G.5.2	Endurance test		N/A
G.5.2.1	General test requirements		N/A
G.5.2.2	Heat run test		N/A
	Test time (days per cycle)..... :		—
	Test temperature (°C)..... :		—
G.5.2.3	Wound components supplied from the mains		N/A
G.5.2.4	No insulation breakdown		N/A
G.5.3	Transformers		P
G.5.3.1	Compliance method..... :	Meet the requirement in G.5.3.2 and G.5.3.3	P
	Position..... :	T101	P
	Method of protection..... :	Non-inherently short-circuit proof transformers protected by electronic circuit	P
G.5.3.2	Insulation		P
	Protection from displacement of windings..... :	The end turns are reliably fixed by tape, the whole transformer varnished	—

G.5.3.3	Transformer overload tests	(See appended tables B.3 & B.4)	P
G.5.3.3.1	Test conditions		P
G.5.3.3.2	Winding temperatures	(See appended tables B.3 & B.4)	P
G.5.3.3.3	Winding temperatures - alternative test method		N/A
G.5.3.4	Transformers using FIW		N/A
G.5.3.4.1	General		N/A
	FIW wire nominal diameter..... :		—
G.5.3.4.2	Transformers with basic insulation only		N/A
G.5.3.4.3	Transformers with double insulation or reinforced insulation..... :		N/A
G.5.3.4.4	Transformers with FIW wound on metal or ferrite core		N/A
G.5.3.4.5	Thermal cycling test and compliance		N/A
G.5.3.4.6	Partial discharge test		N/A
G.5.3.4.7	Routine test		N/A
G.5.4	Motors		N/A
G.5.4.1	General requirements		N/A
G.5.4.2	Motor overload test conditions		N/A
G.5.4.3	Running overload test		N/A
G.5.4.4.2	Locked-rotor overload test		N/A
	Test duration (days) ..... :		—
G.5.4.5	Running overload test for DC motors		N/A
G.5.4.5.2	Tested in the unit		N/A
G.5.4.5.3	Alternative method		N/A
G.5.4.6	Locked-rotor overload test for DC motors		N/A
G.5.4.6.2	Tested in the unit		N/A
	Maximum Temperature ..... :		N/A
G.5.4.6.3	Alternative method		N/A
G.5.4.7	Motors with capacitors		N/A
G.5.4.8	Three-phase motors		N/A
G.5.4.9	Series motors		N/A
	Operating voltage ..... :		—
<b>G.6</b>	<b>Wire Insulation</b>		N/A
G.6.1	General		N/A

G.6.2	Enamelled winding wire insulation		N/A
<b>G.7</b>	<b>Mains supply cords</b>		N/A
G.7.1	General requirements		N/A
	Type..... :		—
G.7.2	Cross sectional area (mm <sup>2</sup> or AWG)..... :		N/A
G.7.3	Cord anchorages and strain relief for non-detachable power supply cords		N/A
G.7.3.2	Cord strain relief		N/A
G.7.3.2.1	Requirements		N/A
	Strain relief test force (N)..... :		N/A
G.7.3.2.2	Strain relief mechanism failure		N/A
G.7.3.2.3	Cord sheath or jacket position, distance (mm)..... :		N/A
G.7.3.2.4	Strain relief and cord anchorage material		N/A
G.7.4	Cord Entry		N/A
G.7.5	Non-detachable cord bend protection		N/A
G.7.5.1	Requirements		N/A
G.7.5.2	Test method and compliance		N/A
	Overall diameter or minor overall dimension, <i>D</i> (mm)..... :		—
	Radius of curvature after test (mm)..... :		—
G.7.6	Supply wiring space		N/A
G.7.6.1	General requirements		N/A
G.7.6.2	Stranded wire		N/A
G.7.6.2.1	Requirements		N/A
G.7.6.2.2	Test with 8 mm strand		N/A
<b>G.8</b>	<b>Varistors</b>		N/A
G.8.1	General requirements		N/A
G.8.2	Safeguards against fire		N/A
G.8.2.1	General		N/A
G.8.2.2	Varistor overload test		N/A
G.8.2.3	Temporary overvoltage test		N/A
<b>G.9</b>	<b>Integrated circuit (IC) current limiters</b>		N/A
G.9.1	Requirements	No such component	N/A
	IC limiter output current (max. 5A)..... :		—
	Manufacturers' defined drift ..... :		—

G.9.2	Test Program		N/A
G.9.3	Compliance		N/A
<b>G.10</b>	<b>Resistors</b>		N/A
G.10.1	General	No such resistor used	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		N/A
G.10.6	Overload test		N/A
<b>G.11</b>	<b>Capacitors and RC units</b>		P
G.11.1	General requirements	(see appended table 4.1.2) X2 Capacitor as Basic safeguard and Y1-capacitor used as Reinforced safeguard both complied with IEC/EN 60384-14.	P
G.11.2	Conditioning of capacitors and RC units	All capacitors complied to IEC 60384-14.	P
G.11.3	Rules for selecting capacitors		P
<b>G.12</b>	<b>Optocouplers</b>		N/A
	Optocouplers comply with IEC 60747-5-5 with specifics		N/A
	Type test voltage $V_{ini,a}$ ..... :	>4000pk	—
	Routine test voltage, $V_{ini, b}$ ..... :	>4000pk	—
<b>G.13</b>	<b>Printed boards</b>		P
G.13.1	General requirements		P
G.13.2	Uncoated printed boards		P
G.13.3	Coated printed boards		N/A
G.13.4	Insulation between conductors on the same inner surface		N/A
G.13.5	Insulation between conductors on different surfaces		N/A
	Distance through insulation..... :		N/A
	Number of insulation layers (pcs) ..... :		—
G.13.6	Tests on coated printed boards		N/A
G.13.6.1	Sample preparation and preliminary inspection		N/A
G.13.6.2	Test method and compliance		N/A
<b>G.14</b>	<b>Coating on components terminals</b>		N/A

G.14.1	Requirements .....		N/A
<b>G.15</b>	<b>Pressurized liquid filled components</b>		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
G.15.3	Compliance		N/A
<b>G.16</b>	<b>IC including capacitor discharge function (ICX)</b>		N/A
G.16.1	Condition for fault tested is not required		N/A
	ICX with associated circuitry tested in equipment		N/A
	ICX tested separately		N/A
G.16.2	Tests		N/A
	Smallest capacitance and smallest resistance specified by ICX manufacturer for impulse test .....		—
	Mains voltage that impulses to be superimposed on.....		—
	Largest capacitance and smallest resistance for ICX tested by itself for 10000 cycles test....		—
G.16.3	Capacitor discharge test.....		N/A
<b>H</b>	<b>CRITERIA FOR TELEPHONE RINGING SIGNALS</b>		N/A
<b>H.1</b>	<b>General</b>		N/A
<b>H.2</b>	<b>Method A</b>		N/A
<b>H.3</b>	<b>Method B</b>		N/A
H.3.1	Ringling signal		N/A
H.3.1.1	Frequency (Hz) .....		—
H.3.1.2	Voltage (V) .....		—
H.3.1.3	Cadence; time (s) and voltage (V) .....		—
H.3.1.4	Single fault current (mA):.....		—
H.3.2	Tripping device and monitoring voltage		N/A
H.3.2.1	Conditions for use of a tripping device or a monitoring voltage		N/A

H.3.2.2	Tripping device		N/A
H.3.2.3	Monitoring voltage (V)..... :		N/A
<b>J</b>	<b>INSULATED WINDING WIRES FOR USE WITHOUT INTERLEAVED INSULATION</b>		P
<b>J.1</b>	<b>General</b>		P
	Winding wire insulation..... :	Approved TIW used	—
	Solid round winding wire, diameter (mm)..... :		N/A
	Solid square and rectangular (flatwise bending) winding wire, cross-sectional area (mm <sup>2</sup> )..... :		N/A
<b>J.2/J.3</b>	Tests and Manufacturing		—
<b>K</b>	<b>SAFETY INTERLOCKS</b>		N/A
<b>K.1</b>	<b>General requirements</b>		N/A
	Instructional safeguard..... :		N/A
<b>K.2</b>	<b>Components of safety interlock safeguard mechanism</b>		N/A
<b>K.3</b>	<b>Inadvertent change of operating mode</b>		N/A
<b>K.4</b>	<b>Interlock safeguard override</b>		N/A
<b>K.5</b>	<b>Fail-safe</b>		N/A
K.5.1	Under single fault condition		N/A
<b>K.6</b>	<b>Mechanically operated safety interlocks</b>		N/A
K.6.1	Endurance requirement		N/A
K.6.2	Test method and compliance..... :		N/A
<b>K.7</b>	<b>Interlock circuit isolation</b>		N/A
K.7.1	Separation distance for contact gaps & interlock circuit elements		N/A
	In circuit connected to mains, separation distance for contact gaps (mm)..... :		N/A
	In circuit isolated from mains, separation distance for contact gaps (mm)..... :		N/A
	Electric strength test before and after the test of K.7.2..... :		N/A
K.7.2	Overload test, Current (A)..... :		N/A
K.7.3	Endurance test		N/A
K.7.4	Electric strength test		N/A
<b>L</b>	<b>DISCONNECT DEVICES</b>		P
<b>L.1</b>	<b>General requirements</b>		P
<b>L.2</b>	<b>Permanently connected equipment</b>		N/A

<b>L.3</b>	<b>Parts that remain energized</b>		N/A
<b>L.4</b>	<b>Single-phase equipment</b>		N/A
<b>L.5</b>	<b>Three-phase equipment</b>		N/A
<b>L.6</b>	<b>Switches as disconnect devices</b>		N/A
<b>L.7</b>	<b>Plugs as disconnect devices</b>		N/A
<b>L.8</b>	<b>Multiple power sources</b>		N/A
	Instructional safeguard..... :		N/A
<b>M</b>	<b>EQUIPMENT CONTAINING BATTERIES AND THEIR PROTECTION CIRCUITS</b>		N/A
<b>M.1</b>	<b>General requirements</b>		N/A
<b>M.2</b>	<b>Safety of batteries and their cells</b>		N/A
M.2.1	Batteries and their cells comply with relevant IEC standards..... :		N/A
<b>M.3</b>	<b>Protection circuits for batteries provided within the equipment</b>		N/A
M.3.1	Requirements		N/A
M.3.2	Test method		N/A
	Overcharging of a rechargeable battery		N/A
	Excessive discharging		N/A
	Unintentional charging of a non-rechargeable battery		N/A
	Reverse charging of a rechargeable battery		N/A
M.3.3	Compliance		N/A
<b>M.4</b>	<b>Additional safeguards for equipment containing a portable secondary lithium battery</b>		N/A
M.4.1	General		N/A
M.4.2	Charging safeguards		N/A
M.4.2.1	Requirements		N/A
M.4.2.2	Compliance..... :		N/A
M.4.3	Fire enclosure..... :		N/A
M.4.4	Drop test of equipment containing a secondary lithium battery		N/A
M.4.4.2	Preparation and procedure for the drop test		N/A
M.4.4.3	Drop, Voltage on reference and dropped batteries (V); voltage difference during 24 h period (%): .....		N/A
M.4.4.4	Check of the charge/discharge function		N/A
M.4.4.5	Charge / discharge cycle test		N/A

M.4.4.6	Compliance		N/A
<b>M.5</b>	<b>Risk of burn due to short-circuit during carrying</b>		N/A
M.5.1	Requirement		N/A
M.5.2	Test method and compliance		N/A
<b>M.6</b>	<b>Safeguards against short-circuits</b>		N/A
M.6.1	External and internal faults		N/A
M.6.2	Compliance		N/A
<b>M.7</b>	<b>Risk of explosion from lead acid and NiCd batteries</b>		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
M.7.3.4	Ventilation test – alternative 3		N/A
	Hydrogen gas concentration (%)..... :		N/A
M.7.4	Marking..... :		N/A
<b>M.8</b>	<b>Protection against internal ignition from external spark sources of batteries with aqueous electrolyte</b>		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).... :		—
M.8.2.3	Correction factors..... :		—
M.8.2.4	Calculation of distance $d$ (mm) ..... :		—
<b>M.9</b>	<b>Preventing electrolyte spillage</b>		N/A
M.9.1	Protection from electrolyte spillage		N/A
M.9.2	Tray for preventing electrolyte spillage		N/A
<b>M.10</b>	<b>Instructions to prevent reasonably foreseeable misuse</b>		N/A
	Instructional safeguard..... :		N/A

<b>N</b>	<b>ELECTROCHEMICAL POTENTIALS</b>		P
	Material(s) used..... :	Copper	—
<b>O</b>	<b>MEASUREMENT OF CREEPAGE DISTANCES AND CLEARANCES</b>		P
	Value of X (mm)..... :	All applicable figures	—
<b>P</b>	<b>SAFEGUARDS AGAINST CONDUCTIVE OBJECTS</b>		P
<b>P.1</b>	<b>General</b>		P
<b>P.2</b>	<b>Safeguards against entry or consequences of entry of a foreign object</b>		P
P.2.1	General		P
P.2.2	Safeguards against entry of a foreign object		P
	Location and Dimensions (mm) .....	Side openings do not exceed 1mm in width regardless of length	—
P.2.3	Safeguards against the consequences of entry of a foreign object		N/A
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
<b>P.3</b>	<b>Safeguards against spillage of internal liquids</b>		N/A
P.3.1	General		N/A
P.3.2	Determination of spillage consequences		N/A
P.3.3	Spillage safeguards		N/A
P.3.4	Compliance		N/A
<b>P.4</b>	<b>Metallized coatings and adhesives securing parts</b>		N/A
P.4.1	General		N/A
P.4.2	Tests		N/A
	Conditioning, T <sub>c</sub> (°C)..... :		—
	Duration (weeks)..... :		—
<b>Q</b>	<b>CIRCUITS INTENDED FOR INTERCONNECTION WITH BUILDING WIRING</b>		N/A
<b>Q.1</b>	<b>Limited power sources</b>		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	Test method and compliance.....:	(See appended table Q.1)	N/A
	Current rating of overcurrent protective device (A) .....		N/A
<b>Q.2</b>	<b>Test for external circuits – paired conductor cable</b>		N/A
	Maximum output current (A) .....		N/A
	Current limiting method.....:		—
<b>R</b>	<b>LIMITED SHORT CIRCUIT TEST</b>		N/A
<b>R.1</b>	<b>General</b>		N/A
<b>R.2</b>	<b>Test setup</b>		N/A
	Overcurrent protective device for test.....:		—
<b>R.3</b>	<b>Test method</b>		N/A
	Cord/cable used for test.....:		—
<b>R.4</b>	<b>Compliance</b>		N/A
<b>S</b>	<b>TESTS FOR RESISTANCE TO HEAT AND FIRE</b>		N/A
<b>S.1</b>	<b>Flammability test for fire enclosures and fire barrier materials of equipment where the steady state power does not exceed 4 000 W</b>		N/A
	Samples, material.....:	Metal enclosure used	—
	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
<b>S.2</b>	<b>Flammability test for fire enclosure and fire barrier integrity</b>		N/A
	Samples, material.....:		—
	Wall thickness (mm).....:		—
	Conditioning (°C).....:		—
<b>S.3</b>	<b>Flammability test for the bottom of a fire enclosure</b>		N/A
S.3.1	Mounting of samples		N/A
S.3.2	Test method and compliance		N/A
	Mounting of samples .....		—
	Wall thickness (mm).....:		—
<b>S.4</b>	<b>Flammability classification of materials</b>		N/A

<b>S.5</b>	<b>Flammability test for fire enclosures and fire barrier materials of equipment where the steady state power exceeding 4 000 W</b>		N/A
	Samples, material..... :		—
	Wall thickness (mm)..... :		—
	Conditioning (°C)..... :		—
<b>T</b>	<b>MECHANICAL STRENGTH TESTS</b>		P
<b>T.1</b>	<b>General</b>		P
<b>T.2</b>	<b>Steady force test, 10 N .....</b> :	(See appended table T.2)	P
<b>T.3</b>	<b>Steady force test, 30 N .....</b> :		N/A
<b>T.4</b>	<b>Steady force test, 100 N .....</b> :		N/A
<b>T.5</b>	<b>Steady force test, 250 N .....</b> :	(See appended table T.5)	P
<b>T.6</b>	<b>Enclosure impact test</b>	(See appended table T.6)	P
	Fall test		P
	Swing test		P
<b>T.7</b>	<b>Drop test .....</b> :		N/A
<b>T.8</b>	<b>Stress relief test.....</b> :	(See appended table T.8)	P
<b>T.9</b>	<b>Glass Impact Test.....</b> :		N/A
<b>T.10</b>	<b>Glass fragmentation test</b>		N/A
	Number of particles counted..... :		N/A
<b>T.11</b>	<b>Test for telescoping or rod antennas</b>		N/A
	Torque value (Nm) .....		N/A
<b>U</b>	<b>MECHANICAL STRENGTH OF CATHODE RAY TUBES (CRT) AND PROTECTION AGAINST THE EFFECTS OF IMPLOSION</b>		N/A
<b>U.1</b>	<b>General</b>		N/A
	Instructional safeguard :		N/A
<b>U.2</b>	<b>Test method and compliance for non-intrinsically protected CRTs</b>		N/A
<b>U.3</b>	<b>Protective screen</b>		N/A
<b>V</b>	<b>DETERMINATION OF ACCESSIBLE PARTS</b>		P
<b>V.1</b>	<b>Accessible parts of equipment</b>		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

<b>V.2</b>	<b>Accessible part criterion</b>	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..... :	N/A
<b>Y</b>	<b>CONSTRUCTION REQUIREMENTS FOR OUTDOOR ENCLOSURES</b>	N/A
<b>Y.1</b>	<b>General</b>	N/A
<b>Y.2</b>	<b>Resistance to UV radiation</b>	N/A
<b>Y.3</b>	<b>Resistance to corrosion</b>	N/A
<b>Y.3</b>	<b>Resistance to corrosion</b>	N/A
Y.3.1	Metallic parts of outdoor enclosures are resistant to effects of water-borne contaminants by..... :	N/A
Y.3.2	Test apparatus	N/A
Y.3.3	Water – saturated sulphur dioxide atmosphere	N/A
Y.3.4	Test procedure..... :	N/A
Y.3.5	Compliance	N/A
<b>Y.4</b>	<b>Gaskets</b>	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
<b>Y.5</b>	<b>Protection of equipment within an outdoor enclosure</b>	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
<b>Y.6</b>	<b>Mechanical strength of enclosures</b>	N/A
Y.6.1	General	N/A

Y.6.2	Impact test..... :		N/A
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5.2		TABLE: Classification of electrical energy sources					P
Supply Voltage	Location (e.g. circuit designation)	Test conditions	Parameters				ES Class
			U (V)	I (mA)	Type <sup>1)</sup>	Additional Info <sup>2)</sup>	
264	Primary circuits supplied by a.c. mains supply	Normal	-	-	-	-	ES3
		Abnormal	-	-	-	-	
		Single fault-SC/OC	-	-	-	-	
264	T101 pin 10 to pin 11	Normal	30.1	-	SS	-	ES1
		Abnormal (overload)	30.1	-	SS	-	ES1
		Single fault – T101 pin 10 to pin 11	0		SS		ES1
264	T101 pin 5 to pin 6,7	Normal	20.4	-	SS	-	ES1
		Abnormal (overload)	20.4	-	SS	-	ES1
		Single fault – T101 pin 5 to pin 6,7	0		SS		ES1
264	T101 pin8 to pin 6,7	Normal	18.6	-	SS	-	ES1
		Abnormal (overload)	18.6	-	SS	-	ES1
		Single fault – T101 pin8 to pin 6,7	0		SS		ES1

Supplementary information:  
 1) Type: Steady state (SS), Capacitance (CP), Single pulse (SP), Repetitive pulses (RP), etc.  
 2) Additional Info: Frequency, Pulse duration, Pulse off time, Capacitance value, etc.

5.4.1.8 TABLE: Working voltage measurement				P
Location	RMS voltage (V)	Peak voltage (V)	Frequency (Hz)	Comments
T101 pin1 – pin5	148	388	60	
T101 pin1 – pin6,7	150	405	60	
T101 pin1 – pin8	<b>248</b>	<b>532</b>	58kHz	Max. RMS and peak
T101 pin1 – pin10	242	516	58kHz	
T101 pin1 – pin11	155	392	60	
T101 pin4 – pin5	149	390	60	
T101 pin4 – pin6,7	164	402	60	
T101 pin4 – pin8	158	398	60	
T101 pin4 – pin10	176	399	60	
T101 pin4 – pin11	172	381	60	
T101 pin2– pin5	231	514	53 kHz	
T101 pin2 – pin6,7	215	502	53 kHz	
T101 pin2 – pin8	156	398	60	
T101 pin2 – pin10	177	402	60	
T101 pin2– pin11	221	498	60	
T101 pin3– pin5	167	384	60	
T101 pin3 – pin6,7	159	396	60	
T101 pin3 – pin8	186	403	60	
T101 pin3 – pin10	223	506	55 kHz	
T101 pin3– pin11	211	498	55 kHz	
CY4	146	393	60	
U1 0 pin1-3	172	354	60	
U1 0 pin1-4	172	354	60	
U1 0 pin2-3	172	354	60	
U1 0 pin2-4	172	354	60	
U205 pin1-3	161	317	60	
U205 pin1-4	161	317	60	
U205 pin2-3	161	317	60	
U205 pin2-4	161	317	60	
Supplementary information:				

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

<b>5.4.1.10.3 TABLE: Ball pressure test of thermoplastics</b>					P
Allowed impression diameter (mm)..... :				≤ 2 mm	—
Object/Part No./Material	Manufacturer/trademark	Thickness (mm)	Test temperature (°C)	Impression diameter (mm)	
Appliance inlet (for power supply board)	See table 4.1.2	2.0	125	1.0	
Supplementary information:					

5.4.2, 5.4.3 TABLE: Minimum Clearances/Creepage distance								P
Clearance (cl) and creepage distance (cr) at/of/between:	U <sub>p</sub> (V)	U <sub>rms</sub> (V)	Freq <sup>1)</sup> (Hz)	Required cl (mm)	cl (mm)	E.S. <sup>2)</sup> (V)	Required cr (mm)	cr (mm)
Line to neutral before fuse (BI)	<420	240	60	1.5	3.3	--	2.4	3.3
Different pole of fuse (BI)	<420	240	60	1.5	3.1	--	2.4	3.1
CY1 to functional earthing terminal	<420	240	60	1.5	>3.1	--	2.4	>3.1
CY2 to functional earthing terminal	<420	240	60	1.5	>3.1	--	2.4	>3.1
Live trace to metal chassis	<420	240	60	1.5	>3.0	--	2.4	>3.0
Primary component to top metal internal enclosure	<420	240	60	1.5	>3.0	--	2.4	>3.0
Primary and secondary of CY4 capacitor (RI)	<420	240	60	3.0	7.5	--	4.8	7.5
Primary and secondary of optocoupler (RI)	<420	240	60	3.0	6.9	--	4.8	6.9
Transformer primary and secondary on PCB (RI)	532	248	53k	3.0	7.5	--	5.0	7.5
Transformer core to primary winding (BI)	532	248	53k	1.5	4.5	--	2.5	5.8
Transformer primary winding and secondary winding (RI)	532	248	53k	3.0	6.0	--	5.0	6.0
Supplementary information: 1) Only for frequency above 30 kHz 2) Complete Electric Strength voltage (E.S. (V) when 5.4.2.4 applied)								

5.4.4.2	TABLE: Minimum distance through insulation	P
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Distance through insulation (DTI) at/of	Peak voltage (V)	Insulation	Required DTI (mm)	Measured DTI (mm)
Opto-coupler	< 420	Reinforced	0.4	*)
Bobbin of transformer of T101	532	Reinforced	0.4	*)
Insulation tape of transformer of T101	532	Basic	≥two layers	two layers
Insulating sheet under power board	532	Basic	0.4	>0.4

Supplementary information:

\*) see table 4.1.2

5.4.4.9 TABLE: Solid insulation at frequencies >30 kHz						P
Insulation material	$E_P$	Frequency (kHz)	$K_R$	Thickness $d$ (mm)	Insulation	$V_{PW}$ (Vpk)
Insulation tape used in transformer T101	52	58	0.59	0.05	Reinforced	532V

Supplementary information:

5.4.9 TABLE: Electric strength tests				P
Test voltage applied between:	Voltage shape (Surge, Impulse, AC, DC, etc.)	Test voltage (V)	Breakdown Yes / No	
Basic insulation				
L and N (fuse opened)	DC	1000	No	
L/N to metal enclosure	DC	1000	No	
Insulation mylar sheet	DC	1000	No	
Reinforced insulation				
Between input and output terminal	DC	1000	No	
Between Transformer T101 primary to secondary	DC	1000	No	
1 layer insulation tape of transformer	DC	1000	No	
Between input and LCD screen	DC	1000	No	

Supplementary information:

5.5.2.2 TABLE: Stored discharge on capacitors					P
Location	Supply voltage (V)	Operating and fault condition <sup>1)</sup>	Switch position	Measured voltage (Vpk)	ES Class
Line and Neutral	12V, 60Hz	Normal condition	-	15	ES1
		RX1 OC	-	18	ES1

Supplementary information:  
 X-capacitors installed for testing: CX2=0.47μF  
 bleeding resistor rating: RX1=RX2=RX3=RX4=2M ohm  
 ICX:  
 1) Normal operating condition (e.g., normal operation, or open fuse), SC= short circuit, OC= open circuit

5.6.6		TABLE: Resistance of protective conductors and terminations			P
Location	Test current (A)	Duration (min)	Voltage drop (V)	Resistance (Ω)	
Earthing terminal to fareset metal	32	2	--	0.04	

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 LCD screen (with metal foil)	Normal	12	--	0.092mA <sub>pk</sub>	--	ES1
	Single fault RS106	12	--	0.092mA <sub>pk</sub>	--	ES1

Supplementary information:  
 Abbreviation: SC= short circuit; OC= open circuit

5.7.5		TABLE: Earthed accessible conductive part			P
Supply voltage (V).....:	12V/60Hz			—	
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		
L/N to metal enclosure	1	0.078			
	2*	0.11			
	3	N/A			
	4	N/A			
	5	N/A			
	6	N/A			
	8	N/A			

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: Power source circuit classifications						P
Location	Operating and fault condition	Voltage (V)	Current (A)	Max. Power <sup>1)</sup> (W)	Time (S)	PS class
Primary circuit	Normal operation	12	--	--	5	PS3 (declared)
Speaker port	Overload	9.0	1.12	10.08	3	PS1

Supplementary information:  
Abbreviation: SC= short circuit; OC= open circuit  
1) Measured after 3 s for PS1 and measured after 5 s for PS2 and PS3.

6.2.3.1 TABLE: Determination of Arcing PIS					P
Location	Open circuit voltage after 3 s (Vpk)	Measured r.m.s current (A)	Calculated value	Arcing PIS? Yes / No	
Primary circuit	12	-	>100	Yes	

Supplementary information:

6.2.3.2 TABLE: Determination of resistive PIS				P
Location	Operating and fault condition	Dissipate power (W)		Arcing PIS? Yes / No
All circuits	Normal	>100		Yes

Supplementary information:  
Abbreviation: SC= short circuit; OC= open circuit

8.5.5 TABLE: High pressure lamp			N/A
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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:									

5.4.1.4, 9.3, B.1.5, B.2.6	TABLE: Temperature measurements					P
Supply voltage (V).....:	12	-	12	-	—	
Ambient temperature during test $T_{amb}$ (°C) .....:	25.3	Cal. to Tma: 40°C	24.7	Cal. to Tma: 40°C	—	
Maximum measured temperature $T$ of part/at:	$T$ (°C)				Allowed $T_{max}$ (°C)	
Power cord	29.4	44.1	27.8	43.1	70	
AC connector	35.8	50.5	31.8	47.1	105	
Varistor (RV1)	77	91.7	63.6	78.9	125	
CX1 body	37.5	52.2	33.8	49.1	100	
CX2 body	36.7	51.4	32.6	47.9	100	
T101 Coil	71.8	86.5	69.8	85.1	110	
T101 core	68.4	83.1	67.8	83.1	110	
L101winding	77.4	92.1	74.3	89.6	110	
L101 bobbin	75.3	90	72.4	87.7	110	
LY2 Winding	60.7	75.4	38.9	54.2	130	
CY1 body	56	70.7	54.8	70.1	125	
CY4 body	56.5	71.2	55.6	70.9	125	
U104 body	55.6	70.3	54.5	69.8	110	
U205 body	56.4	71.1	55.1	70.4	110	
LY3 winding	72.2	86.9	59.7	75	130	
EC215 body	54.5	69.2	52	67.3	105	

EC205 body	56	70.7	53.8	69.1	105		
PCB	75.8	90.5	71.6	86.9	130		
<b>Touch temperature</b>	--	Cal. to 25°C	--	Cal. to 25°C	--		
Switch	28.1	--	27.2	27.5	77		
Metal enclosure on the center of back	36	--	34.8	35.1	70		
LCD Panel	33.4	--	32.3	32.6	80		
Botton	28.4	--	28	28.3	77		
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: The EUT was be tested at type C model							

B.3, B.4 TABLE: Abnormal operating and fault condition tests							P
Ambient temperature T <sub>amb</sub> (°C).....						25°C unless otherwise specified	—
Power source for EUT: Manufacturer, model/type, outputrating.....							—
Component No.	Condition	Supply voltage (V)	Test time	Fuse no.	Fuse current (A)	Observation	
CX2	SC	12V	1s	F01	0	Fuse open immediately, no damage, no hazard.	
T101 pin 2-3	SC	12V	10mins	F01	0.06	Unit shutdown immediately, recoverable,no damaged, no hazard.	
T101 pin 1-4	SC	12V	10mins	F01	0.06	Unit shutdown immediately, recoverable,no damaged, no hazard.	
T101 pin 10-11	SC	12V	10mins	F01	0.06	Unit shutdown immediately, recoverable,no damaged, no hazard.	
T101 secondary (after PD201)	OL	12V	2h46mins	F01	0.411→ 0.423→ 0.435→ 0.06	<b>Observation:</b> The maximum T101 load is 2.6A, Unit shutdown when T101 output at load A, No damage, no hazard. T101 coil:82.3°C T101 core: 80.0°C Switch:30.9°C Metal enclosure :38.3°C LCD Panel: 35.9°C Ambient: 24.8°C	
D101	SC	12V	10mins	F01	0.06	Unit shutdown	



						immediately, recoverable, no damaged, no hazard.
U200 pin2-3	SC	12V	10mins	F01	0.06	Unit shutdown immediately, recoverable, no damaged, no hazard..
U101 pin4-6	SC	12V	10mins	F01	0.06	Unit shutdown immediately, recoverable, no damaged, no hazard.
U104 pin 1-2	SC	12V	10mins	F01	0.06	Unit shutdown immediately, recoverable, no damaged, no hazard.
U104 pin 3-4	SC	12V	10mins	F01	0.06	Unit shutdown immediately, recoverable, no damaged, no hazard.
U205 pin 1-2	SC	12V	10mins	F01	0.06	Unit shutdown immediately, recoverable, no damaged, no hazard.
U205 pin 3-4	SC	12V	10mins	F01	0.06	Unit shutdown immediately, recoverable, no damaged, no hazard.
PQ103 pin G-D SC	SC	12V	10mins	F01	0.06	Unit shutdown immediately, recoverable, no damaged, no hazard.
PQ103 pin D-S SC	SC	12V	1s	F01	0	Fuse open immediately, no damage, no hazard.
PQ103 pin G-S SC	SC	12V	1s	F01	0	Fuse open immediately, no damage, no hazard.
EC202	SC	12V	10mins	F01	0.06	Unit shutdown immediately, recoverable, no damaged, no hazard.
EC209	SC	12V	10mins	F01	0.06	Unit shutdown immediately, recoverable, no damaged, no hazard.

<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)	

<p>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</p>			

<b>Q.1</b>	<b>TABLE: Circuits intended for interconnection with building wiring (LPS)</b>						N/A
Output Circuit	Condition	U <sub>oc</sub> (V)	Time (s)	I <sub>sc</sub> (A)		S (VA)	
				Meas.	Limit	Meas.	Limit
Supplementary Information:							



T.2, T.3, T.4, T.5		TABLE: Steady force test					P
Part/Location	Material	Thickness (mm)	Probe	Force (N)	Test Duration (s)	Observation	
Component	-	-	-	10	5	No crack, no hazard.	
Enclosure, Top	plastic	See table 4.1.2	-	250	5	No crack, no hazard.	
Enclosure, Side	plastic	See table 4.1.2	-	250	5	No crack, no hazard.	
Enclosure, Rear	plastic	See table 4.1.2	-	250	5	No crack, no hazard.	
Supplementary information:							

T.6, T.9		TABLE: Impact test			P
Location/part	Material	Thickness (mm)	Height (mm)	Observation	
Enclosure	plastic	1.0	1300	Enclosure remained intact, no crack/opening developed. Internal ES3 were not accessible after test. No insulation breakdown.	
Supplementary information:					

T.7		TABLE: Drop test			N/A
Location/part	Material	Thickness (mm)	Height (mm)	Observation	
Supplementary information:					

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

X		TABLE: Alternative method for determining minimum clearances distances			N/A
Clearance distanced	Peak of working	Required cl	Measured cl		

between:	voltage (V)	(mm)	(mm)
Supplementary information:			





## Sample pictures



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