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Report No.: CTC20202040S01

Page 1 of 53

TEST REPORT

Product name:	IP Phone
Trademark:	XONTEL
Model No:	XT-19G
Applicant:	XonTel Technology Trd. Co. W.L.L
Address of applicant::	Kuwait City, Qibla, Aladel Tower, F21, state of Kuwait
Test date:	Dec. 25, 2020 to Jan. 08, 2021
Date of issue:	Jan. 08, 2021

Test result:	Pass *
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* In the configuration tested, the EUT complied with the standard EN 62368-1:2014+A11:2017.



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TEST REPORT

IEC 62368-1

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

Report Number	CTC20202040S01	
Tested by (+ signature)	Alison Wang	Alison Woung
Compiled by (+ signature):	Hardy Huang	Alison Woung Hardy Huang
Approved by (+ signature):	Totti Zhao	
Date of issue	Dec. 25, 2020	
Total number of pages:	53 pages	
Testing laboratory	CTC Laboratories, Inc.	
Address:	•	., Building 2, Jiaquan Building, , Longhua District, Shenzhen,
Testing location:	As above	
Applicant's name	XonTel Technology Trd.	Co. W.L.L
Address:	Kuwait City, Qibla, Alade	Tower, F21, state of Kuwait
Test specification:		
Standard	IEC 62368-1:2014 (Secor	nd Edition)
Test procedure:	CE Attestation	
Non-standard test method	N/A	
Test Report Form No:	IEC62368_1B	
Test Report Form(s) Originator :	UL(US)	
Master TRF:	2014-03	
This test report is specially limited to not be duplicated without prior writte	•	y and product model only. It may
Test Item description	IP Phone	
Trade Mark	XONTEL	
Manufacturer	Same as applicant.	
Model/Type reference	XT-19G	
Ratings:	5V === 600mA(Supply by Ethernet (POE) complied	y external power adapter) /48VDC switch

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

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ummary o	i testing:	
ests perfo	rmed (name of test and test clause):	Testing location:
II applicable	e tests as described in Test Case and	CTC Laboratories, Inc.
leasuremer	nt Sections were performed.	1-2/F., Building 1 and 2, Jiaquan
ollowing tes	sts performed during evaluation	Building, Guanlan High-Tech Park, Shenzhen 518110, Guangdong, China
5.2	Electrical energy source classifications	
5.4.1.4,	Maximum operating temperatures for	
6.3.2, 9.0, B.2.6	materials, components and systems	
B.2.5	Input tests	
B.3	Simulated Abnormal operating condition tests	
B.4	Simulated single fault conditions	
F.3.9	Durability, legibility and permanence of	1
	markings	
Η	CRITERIA FOR TELEPHONE RINGING	
	SIGNALS	
T.2	Steady force test, 10 N	
T.5	Steady force test, 250 N	
T.6	Enclosure impact test	
T.7	Drop tests	
T.8	Stress relief test	
	ed sample was found to comply with the s of above tests.	

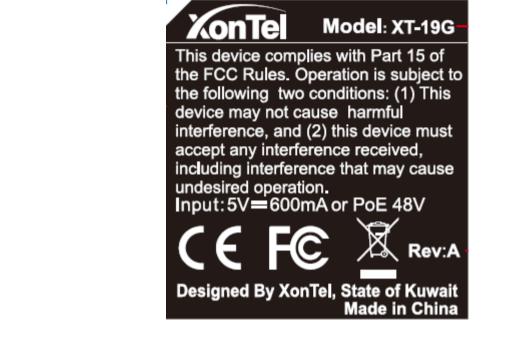


Summary of compliance with National Differences:

- EU Group Differences, EU Special National Conditions
- The product fulfils the requirements of EN 62368-1:2014+A11:2017.

Copy 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.



Notes:

- 1. Since similar label used, only label for model above listed to represent other similar ones.
- 2. The height dimension of CE mark should not less than 5mm, height dimension of WEEE mark should not less than 7mm.



Test item particulars:	
Classification of use by:	⊠ Ordinary person
	Instructed person
	Skilled person
	Children likely to be present
Supply Connection	AC Mains DC Mains
	External Circuit - not Mains connected
	- 🔀 ES1 🔲 ES2 🔲 ES3
Supply % Tolerance	+10%/-10%
	+20%/-15%
	□ +%/%
	None
Supply Connection – Type:	pluggable equipment type A -
	non-detachable supply cord
	appliance coupler
	direct plug-in
	mating connector
	D pluggable equipment type B -
	non-detachable supply cord
	permanent connection mating connector other: building-in equipment
	shall be evaluated in end system (see also general
	product information).
	I not directly connected to the mains
Considered current rating of protective device as part	(Not directly connected to mains)
of building or equipment installation	Installation location: Duilding; dequipment
Equipment mobility:	movable hand-held transportable stationary for building-in direct plug-in rack-mounting wall-mounted
Over voltage category (OVC)	
	□ OVC IV
Class of equipment:	Class I Class II Class III
Access location:	□ restricted access location
Pollution degree (PD):	□ PD 1
Manufacturer's specified maximum operating ambient:	40°C
IP protection class	
Power Systems	⊠ TN □ TT □ IT - <u>230</u> V _{L-L}
Altitude during operation (m)	⊠ 2000 m or less <u>5000</u> m
Altitude of test laboratory (m)	⊠ 2000 m or less □ m

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Mass of equipment (kg)	🖾 0.76kg
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:	Dec. 25, 2020
Date (s) of performance of tests:	Dec. 25, 2020 to Jan. 08, 2021
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 \Box comma / \boxtimes point is used as the decimal separator.

Manufacturer's Declaration per sub-clause 4.2.5 of IECEE 02:

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 th	e General product information section.
Name and address of factory (ies):	XonTel Technology Trd. Co. W.L.L 4F, Block A, Building 1#, GaoXinQi Hi-Tech Park (Phase-

II), 67th District, Bao[,]An, Shenzhen, China

GENERAL PRODUCT INFORMATION:

1. The product in this report is an IP Phone, class III equipment used for information technology equipment.

- 2. The maximum ambient temperature specified by manufacturer is +40°C.
- 3. The product shall be charged by a suitable rated and certified DC power supply accordingly to IEC/EN 60950-1 with Limited Power Sources, or accordingly to IEC/EN 62368-1 with output within PS 2.
- 4. This report is based on the original report CTC20192368S01, except for changing the applicant, the manufacturer, the factory, the trade Mark and the model name. About the changes, no additional tests should be considered, all the test data were derived from the original test report CTC20192368S01.



Abbreviations used in the report:

- normal conditions	N.C.	- single fault conditions	S.F.C
- functional insulation	FI	- basic insulation	BI
- double insulation	DI	- supplementary insulation	SI
- between parts of opposite	9		
polarity	BOP	- reinforced insulation	RI
Indicate used obbroviation	o (if only)		
Indicate used abbreviation	s (ii any)		

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ENERGY SOURCE IDENTIFICATION AND CLASSIFICAT	ION TABLE:
(Note 1: Identify the following six (6) energy source forms b (Note 2: The identified classification e.g., ES2, TS1, should on the body or its ability to ignite a combustible material. An worse case classification e.g. PS3, ES3.	be with respect to its ability to cause pain or injury
Electrically-caused injury (Clause 5): (Note: Identify type of source, list sub-assembly or circuit d classification) Example: +5 V dc input	esignation and corresponding energy source
Source of electrical energy	Corresponding classification (ES)
All internal circuits	ES1
DC input circuits	ES1
Ringing signals	ES2
Electrically-caused fire (Clause 6): (Note: List sub-assembly or circuit designation and corresp Example: Battery pack (maximum 85 watts):	onding energy source classification) PS2
Source of power or PIS	Corresponding classification (PS)
DC input circuits	PS1
Injury caused by hazardous substances (Clause 7) (Note: Specify hazardous chemicals, whether produces oze as part of the component evaluation.) Example: Liquid in filled component	
	Glycol
Source of hazardous substances	Corresponding chemical
	-
Source of hazardous substances	Corresponding chemical N/A
Source of hazardous substances N/A Mechanically-caused injury (Clause 8) (Note: List moving part(s), fan, special installations, etc. & d	Corresponding chemical N/A corresponding MS classification based on Table 35.)
Source of hazardous substances N/A Mechanically-caused injury (Clause 8) (Note: List moving part(s), fan, special installations, etc. & o Example: Wall mount unit	Corresponding chemical N/A corresponding MS classification based on Table 35.) MS2
Source of hazardous substances N/A Mechanically-caused injury (Clause 8) (Note: List moving part(s), fan, special installations, etc. & o Example: Wall mount unit Source of kinetic/mechanical energy	Corresponding chemical N/A corresponding MS classification based on Table 35.) MS2 Corresponding classification (MS)
Source of hazardous substances N/A Mechanically-caused injury (Clause 8) (Note: List moving part(s), fan, special installations, etc. & o Example: Wall mount unit Source of kinetic/mechanical energy Edges and corners of enclosure	Corresponding chemical N/A corresponding MS classification based on Table 35.) MS2 Corresponding classification (MS) MS1 MS1 ergy source classification based on type of part,
Source of hazardous substances N/A Mechanically-caused injury (Clause 8) (Note: List moving part(s), fan, special installations, etc. & of Example: Wall mount unit Source of kinetic/mechanical energy Edges and corners of enclosure Mass of the unit Thermal burn injury (Clause 9) (Note: Identify the surface or support, and corresponding en location, operating temperature and contact time in Table 38	Corresponding chemical N/A corresponding MS classification based on Table 35.) MS2 Corresponding classification (MS) MS1 MS1 ergy source classification based on type of part, 3.)
Source of hazardous substances N/A Mechanically-caused injury (Clause 8) (Note: List moving part(s), fan, special installations, etc. & of Example: Wall mount unit Source of kinetic/mechanical energy Edges and corners of enclosure Mass of the unit Thermal burn injury (Clause 9) (Note: Identify the surface or support, and corresponding en location, operating temperature and contact time in Table 38 Example: Hand-held scanner – thermoplastic enclosure	Corresponding chemical N/A corresponding MS classification based on Table 35.) MS2 Corresponding classification (MS) MS1 MS1 ergy source classification based on type of part, 8.) TS1
Source of hazardous substances N/A Mechanically-caused injury (Clause 8) (Note: List moving part(s), fan, special installations, etc. & of Example: Wall mount unit Source of kinetic/mechanical energy Edges and corners of enclosure Mass of the unit Thermal burn injury (Clause 9) (Note: Identify the surface or support, and corresponding en location, operating temperature and contact time in Table 38 Example: Hand-held scanner – thermoplastic enclosure Source of thermal energy	Corresponding chemical N/A Corresponding MS classification based on Table 35.) MS2 Corresponding classification (MS) MS1 MS1 ergy source classification based on type of part, 3.) TS1 Corresponding classification (TS) TS1
Source of hazardous substances N/A Mechanically-caused injury (Clause 8) (Note: List moving part(s), fan, special installations, etc. & of Example: Wall mount unit Source of kinetic/mechanical energy Edges and corners of enclosure Mass of the unit Thermal burn injury (Clause 9) (Note: Identify the surface or support, and corresponding en location, operating temperature and contact time in Table 38 Example: Hand-held scanner – thermoplastic enclosure Source of thermal energy External surface Radiation (Clause 10) (Note: List the types of radiation present in the product and the	Corresponding chemical N/A Corresponding MS classification based on Table 35.) MS2 Corresponding classification (MS) MS1 MS1 ergy source classification based on type of part, 3.) TS1 Corresponding classification (TS) TS1 he corresponding energy source classification.)

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ENERGY SOURCE DIAGRAM

Indicate which energy sources are included in the energy source diagram. Insert diagram below

(Refer to above table)

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OVERVIEW OF EMPLOYED	SAFEGUARDS			
Clause	Possible Hazard			
5.1	Electrically-caused injury			
Body Part	Energy Source	Safeguards		
(e.g. Ordinary)	(ES3: Primary Filter circuit)	Basic	Supplementary	Reinforced (Enclosure)
Ordinary person	ES1: All internal circuits ES1: DC input circuits	N/A	N/A	N/A
Ordinary person	ES2: Ringing signal	Equipment	N/A	N/A
6.1	Electrically-caused fire			
Material part	Energy Source		Safeguards	
(e.g. mouse enclosure)		Basic	Supplementary	Reinforced
Combustible materials within equipment	PS1: <15 Watt circuit	N/A	N/A	N/A
Outside enclosure	PS1: <15 Watt circuit	N/A	N/A	N/A
7.1	Injury caused by hazardous substances			
Body Part	Energy Source	Safeguards		
(e.g., skilled)	(hazardous material)	Basic	Supplementary	Reinforced
N/A (no such sources)	N/A	N/A	N/A	N/A
8.1	Mechanically-caused injury			
Body Part	Energy Source		Safeguards	
(e.g. Ordinary)	(MS3:High Pressure Lamp)	Basic	Supplementary	Reinforced (Enclosure)
Ordinary	MS1: Edges and corners	N/A	N/A	N/A
Mass of the unit	MS1	N/A	N/A	N/A
9.1	Thermal Burn –		·	
Body Part	Energy Source	Safeguards		
(e.g., Ordinary)	(TS2)	Basic	Supplementary	Reinforced
Ordinary	TS1: Accessible parts	N/A	N/A	N/A
10.1	Radiation		•	
Body Part Energy Source Safeguard		Safeguards		
(e.g., Ordinary)	(Output from audio port)	Basic	Supplementary	Reinforced
Ordinary	No radiation	N/A	N/A	N/A
Supplementary Information: (Condition; "A" – Abnormal Condition	1) See attached energy source ndition; "S" Single Fault	diagram for add	ditional details. (2)	"N" – Normal

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Clause	Requirement + Test	Result - Remark	Verdict

4	GENERAL REQUIREMENTS		Р
4.1.1	Acceptance of materials, components and subassemblies	See appended table 4.1.2	Ρ
4.1.2	Use of components	Components which are certified to IEC and/or national standards are used correctly within their ratings. Components not covered by IEC standards are tested under the conditions present in the equipment. See also Annex G	Ρ
4.1.3	Equipment design and construction	Evaluation of safeguards regarding limiting the outputs to fulfill ES1 and protection in regard to risk of spread of fire, mechanical and thermal burn injury considered.	Ρ
4.1.15	Markings and instructions:	(See Annex F)	Р
4.4.4	Safeguard robustness	See below.	Р
4.4.4.2	Steady force tests:	(See Annex T.2 and T.5)	Р
4.4.4.3	Drop tests:	See Annex T.7	Р
4.4.4.4	Impact tests:	See Annex T.6	Р
4.4.4.5	Internal accessible safeguard enclosure and barrier tests:	The external enclosure cannot be opened without damaging the product.	N/A
4.4.4.6	Glass Impact tests:	No such glass used.	N/A
4.4.4.7	Thermoplastic material tests:	Not thermoplastic material	N/A
4.4.4.8	Air comprising a safeguard:	Class 1 energy source	N/A
4.4.4.9	Accessibility and safeguard effectiveness	Class 1 energy source	N/A
4.5	Explosion	No explosion occurs during normal/abnormal operation and single fault conditions	Ρ
4.6	Fixing of conductors	No conductors to fix.	N/A
4.6.1	Fix conductors not to defeat a safeguard		N/A
4.6.2	10 N force test applied to:		N/A
4.7	Equipment for direct insertion into mains socket - outlets	Not equipment 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	Products containing coin/button cell batteries		N/A
4.8.2	Instructional safeguard		N/A

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IEC 62368-1

Clause	Requirement + Test	Result - Remark	Verdict
4.8.3	Battery Compartment Construction		N/A
	Means to reduce the possibility of children removing the battery		—
4.8.4	Battery Compartment Mechanical Tests:		N/A
4.8.5	Battery Accessibility		N/A
4.9	Likelihood of fire or shock due to entry of conductive object:	PS1	N/A

5	ELECTRICALLY-CAUSED INJURY		Р
5.2.1	Electrical energy source classifications:	(See appended table 5.2)	Р
5.2.2	ES1, ES2 and ES3 limits		Р
5.2.2.2	Steady-state voltage and current	(See appended table 5.2)	Р
5.2.2.3	Capacitance limits	No such capacitance within the EUT	N/A
5.2.2.4	Single pulse limits	No such single pulses generated in the EUT or applied to it.	N/A
5.2.2.5	Limits for repetitive pulses	No such repetitive pulses within the EUT	N/A
5.2.2.6	Ringing signals	ES2	Р
5.2.2.7	Audio signals:	No such audio signals	N/A
5.3	Protection against electrical energy sources	Only ES1 circuit for this product.	N/A
5.3.1	General Requirements for accessible parts to ordinary, instructed and skilled persons		N/A
5.3.2.1	Accessibility to electrical energy sources and safeguards		N/A
5.3.2.2	Contact requirements		N/A
	a) Test with test probe from Annex V		N/A
	b) Electric strength test potential (V)		N/A
	c) Air gap (mm):		N/A
5.3.2.4	Terminals for connecting stripped wire	No such terminals.	N/A
5.4	Insulation materials and requirements		Р
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 and natural rubber, hygroscopic materials or asbestos are not used as insulation.	N/A
5.4.1.3	Humidity conditioning:	No hygroscopic material used.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
5.4.1.4	Maximum operating temperature for insulating materials:		N/A
5.4.1.5	Pollution degree:	2	
5.4.1.5.2	Test for pollution degree 1 environment and for an insulating compound	Pollution degree 2 is applied. No insulating compound applied.	N/A
5.4.1.5.3	Thermal cycling	See above	N/A
5.4.1.6	Insulation in transformers with varying dimensions	No such transformer within the EUT	N/A
5.4.1.7	Insulation in circuits generating starting pulses	No such starting pulses within the EUT	N/A
5.4.1.8	Determination of working voltage		N/A
5.4.1.9	Insulating surfaces		N/A
5.4.1.10	Thermoplastic parts on which conductive metallic parts are directly mounted	No such thermoplastic parts.	N/A
5.4.1.10.2	Vicat softening temperature:		N/A
5.4.1.10.3	Ball pressure:		N/A
5.4.2	Clearances	Class 1 energy source	N/A
5.4.2.2	Determining clearance using peak working voltage		N/A
5.4.2.3	Determining clearance using required withstand voltage:		N/A
	a) a.c. mains transient voltage:		
	b) d.c. mains transient voltage:		
	c) external circuit transient voltage:		
	d) transient voltage determined by measurement :		
5.4.2.4	Determining the adequacy of a clearance using an electric strength test		N/A
5.4.2.5	Multiplication factors for clearances and test voltages:		N/A
5.4.3	Creepage distances:	Class 1 energy source	N/A
5.4.3.1	General		N/A
5.4.3.3	Material Group:		
5.4.4	Solid insulation		N/A
5.4.4.2	Minimum distance through insulation:		N/A
5.4.4.3	Insulation compound forming solid insulation		N/A
5.4.4.4	Solid insulation in semiconductor devices		N/A
5.4.4.5	Cemented joints		N/A
5.4.4.6	Thin sheet material		N/A
5.4.4.6.1	General requirements		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
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
5.4.4.6.4	Standard test procedure for non-separable thin sheet material:		N/A
5.4.4.6.5	Mandrel test		N/A
5.4.4.7	Solid insulation in wound components		N/A
5.4.4.9	Solid insulation at frequencies >30 kHz:		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
	Insulation resistance (MΩ):		N/A
5.4.6	Insulation of internal wire as part of supplementary safeguard:	No such 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	No test requirement .	N/A
	Relative humidity (%):		
	Temperature (°C):		
	Duration (h):		
5.4.9	Electric strength test:		N/A
5.4.9.1	Test procedure for a solid insulation type test		N/A
5.4.9.2	Test procedure for routine tests		N/A
5.4.10	Protection against transient voltages between external circuit	No such external circuits	N/A
5.4.10.1	Parts and circuits separated from external circuits		N/A
5.4.10.2	Test methods		N/A
5.4.10.2.1	General		N/A
5.4.10.2.2	Impulse test:		N/A
5.4.10.2.3	Steady-state test:		N/A
5.4.11	Insulation between external circuits and earthed circuitry:	No such connections for external circuit applied within the EUT	N/A
5.4.11.1	Exceptions to separation between external circuits and earth	No such connections to external circuit as above.	N/A
5.4.11.2	Requirements		N/A
	Rated operating voltage $U_{op}(V)$:		

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IEC 62368-1			
Clause	Requirement + Test Result - Remark	Verdict	
	Nominal voltage U _{peak} (V):	—	
	Max increase due to variation U _{sp} :		
	Max increase due to ageing Usa:		
	U _{op} = U _{peak} + U _{sp} + U _{sa} :		
5.5	Components as safeguards		
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	N/A	
5.5.3	Transformers	N/A	
5.5.4	Optocouplers	N/A	
5.5.5	Relays	N/A	
5.5.6	Resistors	N/A	
5.5.7	SPD's	N/A	
5.5.7.1	Use of an SPD connected to reliable earthing	N/A	
5.5.7.2	Use of an SPD between mains and protective earth	N/A	
5.5.8	Insulation between the mains and external circuit consisting of a coaxial cable:	N/A	
5.6	Protective conductor class III equipment with no means of earthing	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	NA	
	Protective earthing conductor size (mm ²):		
5.6.4	Requirement for protective bonding conductors	N/A	
5.6.4.1	Protective bonding conductors	N/A	
	Protective bonding conductor size (mm ²):		
	Protective current rating (A) :		
5.6.4.3	Current limiting and overcurrent protective devices	N/A	
5.6.5	Terminals for protective conductors	N/A	
5.6.5.1	Requirement	N/A	
	Conductor size (mm ²), nominal thread diameter (mm)	N/A	

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Clause	Requirement + Test	Result - Remark	Verdict
5.6.5.2	Corrosion		N/A
5.6.6	Resistance of the protective system		N/A
5.6.6.1	Requirements		N/A
5.6.6.2	Test Method Resistance (Ω):		N/A
5.6.7	Reliable earthing		N/A
5.7	Prospective touch voltage, touch current and prote	ective conductor current	N/A
5.7.2	Measuring devices and networks	class III equipment	N/A
5.7.2.1	Measurement of touch current:		N/A
5.7.2.2	Measurement of prospective touch voltage		N/A
5.7.3	Equipment set-up, supply connections and earth connections		N/A
	System of interconnected equipment (separate connections/single connection):		
	Multiple connections to mains (one connection at a time/simultaneous connections)		
5.7.4	Earthed conductive accessible parts:		N/A
5.7.5	Protective conductor current		N/A
	Supply Voltage (V):		
	Measured current (mA):		
	Instructional Safeguard		N/A
5.7.6	Prospective touch voltage and touch current due to external circuits		N/A
5.7.6.1	Touch current from coaxial cables		N/A
5.7.6.2	Prospective touch voltage and touch current from external circuits		N/A
5.7.7	Summation of touch currents from external circuits		N/A
	a) Equipment with earthed external circuits Measured current (mA):		N/A
	b) Equipment whose external circuits are not referenced to earth. Measured current (mA):		N/A

6	ELECTRICALLY- CAUSED FIRE		Р
6.2	Classification of power sources (PS) and potential ignition sources (PIS)		Р
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.	Ρ

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Clause	Requirement + Test	Result - Remark	Verdict
6.2.2.1	General	See the following details.	Р
6.2.2.2	Power measurement for worst-case load fault :		N/A
6.2.2.3	Power measurement for worst-case power source fault:		N/A
6.2.2.4	PS1:		N/A
6.2.2.5	PS2:		N/A
6.2.2.6	PS3:		N/A
6.2.3	Classification of potential ignition sources		N/A
6.2.3.1	Arcing PIS:		N/A
6.2.3.2	Resistive PIS:		N/A
6.3	Safeguards against fire under normal operating and	abnormal operating conditions	Р
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:	No ignition and no such temperature attained within the equipment. (See appended table 5.4.1.4, 6.3.2, 9.0, B.2.6)	Р
6.3.1 (b)	Combustible materials outside fire enclosure		N/A
6.4	Safeguards against fire under single fault conditions	5	Р
6.4.1	Safeguard Method		N/A
6.4.2	Reduction of the likelihood of ignition under single fault conditions in PS1 circuits	PS1	Р
6.4.3	Reduction of the likelihood of ignition under single fault conditions in PS2 and PS3 circuits		N/A
6.4.3.1	General		Р
6.4.3.2	Supplementary Safeguards		Р
	Special conditions if conductors on printed boards are opened or peeled		N/A
6.4.3.3	Single Fault Conditions :	(See appended table B.4)	Р
	Special conditions for temperature limited by fuse	No such consideration.	N/A
6.4.4	Control of fire spread in PS1 circuits		Р
6.4.5	Control of fire spread in PS2 circuits	PS1	N/A
6.4.5.2	Supplementary safeguards:	No supplementary safeguards.	N/A
6.4.6	Control of fire spread in PS3 circuit	Not PS3 circuit.	N/A
6.4.7	Separation of combustible materials from a PIS		Р
6.4.7.1	General:		Р
6.4.7.2	Separation by distance		Р
6.4.7.3	Separation by a fire barrier		N/A
6.4.8	Fire enclosures and fire barriers	See below.	Р

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Clause	Requirement + Test	Result - Remark	Verdict
6.4.8.1	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	See below	Р
6.4.8.3.1	Fire enclosure and fire barrier openings		N/A
6.4.8.3.2	Fire barrier dimensions	No fire barrier.	N/A
6.4.8.3.3	Top Openings in Fire Enclosure: dimensions (mm)	Metal enclosure	N/A
	Needle Flame test		N/A
6.4.8.3.4	Bottom Openings in Fire Enclosure, condition met a), b) and/or c) dimensions (mm)		N/A
	Flammability tests for the bottom of a fire enclosure:		N/A
6.4.8.3.5	Integrity of the fire enclosure, condition met: a), b) or c):		N/A
6.4.8.4	Separation of PIS from fire enclosure and fire barrier distance (mm) or flammability rating		Р
6.5	Internal and external wiring		N/A
6.5.1	Requirements		N/A
6.5.2	Cross-sectional area (mm ²):		
6.5.3	Requirements for interconnection to building wiring:		N/A
6.6	Safeguards against fire due to connection to additional equipment		N/A
	External port limited to PS2 or complies with Clause Q.1		N/A

7	INJURY CAUSED BY HAZARDOUS SUBSTANCES		N/A
7.2	Reduction of exposure to hazardous substances	Not exposure to hazardous substances.	N/A
7.3	Ozone exposure		N/A
7.4	Use of personal safeguards (PPE)		N/A
	Personal safeguards and instructions:		_
7.5	Use of instructional safeguards and instructions		N/A
	Instructional safeguard (ISO 7010)		_
7.6	Batteries:	No battery used.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
8	MECHANICALLY-CAUSED INJURY		Р
8.1	General	No moving parts in the equipment – see below regarding edges and corners.	Р
8.2	Mechanical energy source classifications	MS1	Р
8.3	Safeguards against mechanical energy sources		N/A
8.4	Safeguards against parts with sharp edges and corners	Edges and corners of the enclosure are rounded.	Р
8.4.1	Safeguards		N/A
8.5	Safeguards against moving parts	No moving parts.	N/A
8.5.1	MS2 or MS3 part required to be accessible for the function of the equipment		N/A
8.5.2	Instructional Safeguard:		—
8.5.4	Special categories of equipment comprising moving parts		N/A
8.5.4.1	Large data storage equipment		N/A
8.5.4.2	Equipment having electromechanical device for destruction of media		N/A
8.5.4.2.1	Safeguards and Safety Interlocks		N/A
8.5.4.2.2	Instructional safeguards against moving parts		N/A
	Instructional Safeguard		—
8.5.4.2.3	Disconnection from the supply		N/A
8.5.4.2.4	Probe type and force (N)		N/A
8.5.5	High Pressure Lamps		N/A
8.5.5.1	Energy Source Classification		N/A
8.5.5.2	High Pressure Lamp Explosion Test		N/A
8.6	Stability	Classification MS1 according to table 35, line 5 and no stability requirements.	N/A
8.6.1	Product classification		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
	Unit configuration during 10° tilt:		

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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 or ceiling	Not such equipment.	N/A	
8.7.1	Mounting Means (Length of screws (mm) and mounting surface):		N/A	
8.7.2	Direction and applied force:		N/A	
8.8	Handles strength	No handles provided.	N/A	
8.8.1	Classification		N/A	
8.8.2	Applied Force:		N/A	
8.9	Wheels or casters attachment requirements	No wheels or casters.	N/A	
8.9.1	Classification		N/A	
8.9.2	Applied force:			
8.10	Carts, stands and similar carriers	No carts, stands or 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	
	Applied force		_	
8.10.4	Cart, stand or carrier impact test		N/A	
8.10.5	Mechanical stability		N/A	
	Applied horizontal force (N):			
8.10.6	Thermoplastic temperature stability (°C):		N/A	
8.11	Mounting means for rack mounted equipment	Not such equipment.	N/A	
8.11.1	General		N/A	
8.11.2	Product Classification		N/A	
8.11.3	Mechanical strength test, variable N		N/A	
8.11.4	Mechanical strength test 250N, including end stops		N/A	
8.12	Telescoping or rod antennas	No such parts.	N/A	
	Button/Ball diameter (mm)			

9	THERMAL BURN INJURY		Р
9.2		TS1: accessible parts, based on a max. Tma of 25°C	Р
9.3	Safeguard against thermal energy sources	TS1.	N/A

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Requirement + Test	Result - Remark	Verdict
		N/A
F		Requirement + Test Result - Remark

9.4	Requirements for safeguards		N/A
9.4.1	Equipment safeguard		N/A
9.4.2	Instructional safeguard		N/A

10	RADIATION		Р
10.2	Radiation energy source classification	RS1: The LED only used for indicating, which is considered as low power & inherently exempt group according to IEC 62471	Р
10.2.1	General classification		Р
10.3	Protection against laser radiation	No laser radiation	N/A
	Laser radiation that exists equipment:		_
	Normal, abnormal, single-fault:		
	Instructional safeguard:		_
	Tool:		_
10.4	Protection against visible, infrared, and UV radiation	No protection needed for RS1 indicating LED.	N/A
10.4.1	General		N/A
10.4.1.a)	RS3 for Ordinary and instructed persons:		N/A
10.4.1.b)	RS3 accessible to a skilled person:		N/A
	Personal safeguard (PPE) instructional safeguard:		_
10.4.1.c)	Equipment visible, IR, UV does not exceed RS1		N/A
10.4.1.d)	Normal, abnormal, single-fault conditions:		N/A
10.4.1.e)	Enclosure material employed as safeguard is opaque:		N/A
10.4.1.f)	UV attenuation:		N/A
10.4.1.g)	Materials resistant to degradation UV		N/A
10.4.1.h)	Enclosure containment of optical radiation:		N/A
10.4.1.i)	Exempt Group under normal operating conditions:		N/A
10.4.2	Instructional safeguard:		N/A
10.5	Protection against x-radiation	No such x-radiation generated from the equipment	N/A
10.5.1	X- radiation energy source that exists equipment :		N/A
	Normal, abnormal, single fault conditions		N/A



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Clause	Requirement + Test	Result - Remark	Verdict
	Equipment safeguards:		N/A
	Instructional safeguard for skilled person:		N/A
10.5.3	Most unfavourable supply voltage to give maximum radiation		—
	Abnormal and single-fault condition:		N/A
	Maximum radiation (pA/kg):		N/A
10.6	Protection against acoustic energy sources	Not such equipment.	N/A
10.6.1	General		N/A
10.6.2	Classification		N/A
	Acoustic output, dB(A):		N/A
	Output voltage, unweighted r.m.s:		N/A
10.6.4	Protection of persons		N/A
	Instructional safeguards:		N/A
	Equipment safeguard prevent ordinary person to RS2:		—
	Means to actively inform user of increase sound pressure:		_
	Equipment safeguard prevent ordinary person to RS2		_
10.6.5	Requirements for listening devices (headphones, earphones, etc.)		N/A
10.6.5.1	Corded passive listening devices with analog input		N/A
	Input voltage with 94 dB(A) <i>L_{Aeq}</i> acoustic pressure output:		—
10.6.5.2	Corded listening devices with digital input		N/A
	Maximum dB(A):		
10.6.5.3	Cordless listening device		N/A
	Maximum dB(A)		

в	NORMAL OPERATING CONDITION TESTS, ABNORMAL OPERATING CONDITION TESTS AND SINGLE FAULT CONDITION TESTS		Р
B.2	Normal Operating Conditions	See the following details.	Р
B.2.1	General requirements:	(See summary of testing & appended test tables)	Р
	Audio Amplifiers and equipment with audio amplifiers	Not such equipment.	N/A
B.2.3	Supply voltage and tolerances	(See appended table B.2.5)	Р

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Clause	Requirement + Test	Result - Remark	Verdic
B.2.5	Input test:	(See appended table B.2.5)	Р
B.3	Simulated abnormal operating conditions		Р
B.3.1	General requirements	(See appended table B.3)	Р
B.3.2	Covering of ventilation openings	(See appended table B.3)	Р
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	No output terminals	N/A
B.3.6	Reverse battery polarity	No battery.	N/A
B.3.7	Abnormal operating conditions as specified in Clause E.2.	(See appended table B.3)	Ρ
B.3.8	Safeguards functional during and after abnormal operating conditions		Ρ
B.4	Simulated single fault conditions		Р
B.4.2	Temperature controlling device open or short- circuited	No such device used.	N/A
B.4.3	Motor tests	No motors used.	N/A
B.4.3.1	Motor blocked or rotor locked increasing the internal ambient temperature		N/A
B.4.4	Short circuit of functional insulation	See the following details.	Р
B.4.4.1	Short circuit of clearances for functional insulation	(See appended table B.3&B.4)	Р
B.4.4.2	Short circuit of creepage distances for functional insulation	(See appended table B.3&B.4)	Ρ
B.4.4.3	Short circuit of functional insulation on coated printed boards	No coated printed boards within the EUT.	N/A
B.4.5	Short circuit and interruption of electrodes in tubes and semiconductors		N/A
B.4.6	Short circuit or disconnect of passive components	(See appended table B.3&B.4)	Р
B.4.7	Continuous operation of components	The EUT is continuous operating type and no such components intended for short time operation or intermittent operation.	N/A
B.4.8	Class 1 and Class 2 energy sources within limits during and after single fault conditions	No change to circuits classified in 5.3.	Ρ
B.4.9	Battery charging under single fault conditions :	No battery.	N/A

С	UV RADIATION		N/A
C.1		No such UV generated from the equipment.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
C.1.2	Requirements	See above.	N/A
C.1.3	Test method	See above.	N/A
C.2	UV light conditioning test	See above.	N/A
C.2.1	Test apparatus	See above.	N/A
C.2.2	Mounting of test samples	See above.	N/A
C.2.3	Carbon-arc light-exposure apparatus	See above.	N/A
C.2.4	Xenon-arc light exposure apparatus	See above.	N/A

D	TEST GENERATORS		N/A
D.1	Impulse test generators	No such consideration.	N/A
D.2	Antenna interface test generator	See above.	N/A
D.3	Electronic pulse generator	See above.	N/A

E	TEST CONDITIONS FOR EQUIPMENT CONTAINING AUDIO AMPLIFIERS		Р
E.1	Audio amplifier normal operating conditions		Р
	Audio signal voltage (V):		_
	Rated load impedance (Ω):	4Ω	_
E.2	Audio amplifier abnormal operating conditions		Р

F	EQUIPMENT MARKINGS, INSTRUCTIONS, AND	DINSTRUCTIONAL SAFEGUARDS	Р
F.1	General requirements	See the following details.	Р
	Instructions – Language	English.	_
F.2	Letter symbols and graphical symbols	See the following details.	Р
F.2.1	Letter symbols according to IEC60027-1	Letter symbols for quantities and units are complied with IEC 60027- 1.	Р
F.2.2	Graphic symbols IEC, ISO or manufacturer specific	Graphical symbols are complied with IEC 60417, ISO 3864-2, ISO 7000 or ISO 7010.	Р
F.3	Equipment markings		Р
F.3.1	Equipment marking locations	Equipment marking is located on the enclosure surface and is easily visible.	Ρ
F.3.2	Equipment identification markings	See the following details.	Р
F.3.2.1	Manufacturer identification	See copy of marking on page 4.	
F.3.2.2	Model identification:	See page 2 for details.	
F.3.3	Equipment rating markings	See the following details.	Р

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Clause	Requirement + Test	Result - Remark	Verdict
F.3.3.1	Equipment with direct connection to mains		N/A
F.3.3.2	Equipment without direct connection to mains		Р
F.3.3.3	Nature of supply voltage		
F.3.3.4	Rated voltage		
F.3.3.4	Rated frequency		
F.3.3.6	Rated current or rated power:		
F.3.3.7	Equipment with multiple supply connections	Equipment does not have multiple supply connections.	N/A
F.3.4	Voltage setting device	No voltage selector provide within the equipment.	N/A
F.3.5	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
F.3.5.4	Replacement battery identification marking :		N/A
F.3.5.5	Terminal marking location		N/A
F.3.6	Equipment markings related to equipment classification	Class III equipment.	N/A
F.3.6.1	Class I Equipment		N/A
F.3.6.1.1	Protective earthing conductor terminal		N/A
F.3.6.1.2	Neutral conductor terminal		N/A
F.3.6.1.3	Protective bonding conductor terminals		N/A
F.3.6.2	Class II equipment (IEC60417-5172)		N/A
F.3.6.2.1	Class II equipment with or without functional earth		N/A
F.3.6.2.2	Class II equipment with functional earth terminal marking		N/A
F.3.7	Equipment IP rating marking:	IPX0.	
F.3.8	External power supply output marking		N/A
F.3.9	Durability, legibility and permanence of marking	Marking is considered to be legible and easily discernible. See also the following details.	Р



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F.3.10	Test for permanence of markings	The label was subjected to the permanence of marking test. The label was rubbed with cloth soaked with water for 15 sec. And then again for 15 sec. With the cloth soaked with petroleum spirit. After this test there was no damage to the label. The marking on the label did not fade. After each test, the marking remained legible.	Ρ		
F.4	Instructions		Р		
	a) Equipment for use in locations where children not likely to be present - marking		N/A		
	b) Instructions given for installation or initial use		Р		
	c) Equipment intended to be fastened in place		Р		
	d) Equipment intended for use only in restricted access area		N/A		
	e) Audio equipment terminals classified as ES3 and other equipment with terminals marked in accordance F.3.6.1	No such terminals provided.	N/A		
	f) Protective earthing employed as safeguard		N/A		
	g) Protective earthing conductor current exceeding ES2 limits		N/A		
	h) Symbols used on equipment	No such symbols used as a safeguard considered.	N/A		
	i) Permanently connected equipment not provided with all-pole mains switch	Not permanently connected equipment.	N/A		
	j) Replaceable components or modules providing safeguard function	No such markings.	N/A		
F.5	Instructional safeguards	No instructional safeguard is considered as necessary.	N/A		
	Where "instructional safeguard" is referenced in the test report it specifies the required elements, location of marking and/or instruction	No instructional safeguard required in the equipment.	N/A		

G	COMPONENTS	COMPONENTS	
G.1	Switches		N/A
G.1.1	General requirements	No switch used.	N/A
G.1.2	Ratings, endurance, spacing, maximum load		N/A
G.2	Relays		N/A
G.2.1	General requirements	No such relay provided within the equipment.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
G.2.2	Overload test	See above.	N/A
G.2.3	Relay controlling connectors supply power	See above.	N/A
G.2.4	Mains relay, modified as stated in G.2	See above.	N/A
G.3	Protection Devices		N/A
G.3.1	Thermal cut-offs	No thermal cut-off provided within the equipment.	N/A
G.3.1.1a) &b)	Thermal cut-outs separately approved according to IEC 60730 with conditions indicated in a) & b)	See above.	N/A
G.3.1.1c)	Thermal cut-outs tested as part of the equipment as indicated in c)	See above.	N/A
G.3.1.2	Thermal cut-off connections maintained and secure	See above.	N/A
G.3.2	Thermal links		N/A
G.3.2.1a)	Thermal links separately tested with IEC 60691	No thermal link provided within the equipment.	N/A
G.3.2.1b)	Thermal links tested as part of the equipment	See above.	N/A
	Aging hours (H)	See above.	
	Single Fault Condition	See above.	
	Test Voltage (V) and Insulation Resistance (Ω). :	See above.	
G.3.3	PTC Thermistors	No PTC thermistor provided within the equipment.	N/A
G.3.4	Overcurrent protection devices	No overcurrent protection devices	N/A
G.3.5	Safeguards components not mentioned in G.3.1 to	G.3.5	N/A
G.3.5.1	Non-resettable devices suitably rated and marking provided	No such safeguards components	N/A
G.3.5.2	Single faults conditions:		N/A
G.4	Connectors		N/A
G.4.1	Spacings	No such connector .	N/A
G.4.2	Mains connector configuration:		N/A
G.4.3	Plug is shaped that insertion into mains socket- outlets or appliance coupler is unlikely		N/A
G.5	Wound Components		N/A
G.5.1	Wire insulation in wound components	No wound components	N/A
G.5.1.2 a)	Two wires in contact inside wound component, angle between 45° and 90°		N/A
G.5.1.2 b)	Construction subject to routine testing		N/A
G.5.2	Endurance test on wound components		N/A
G.5.2.1	General test requirements		N/A

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Clause	Requirement + Test	Result - Remark	Verdict	
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		N/A	
G.5.3.1	Requirements applied (IEC61204-7, IEC61558- 1/-2, and/or IEC62368-1):	No transformers	N/A	
	Position:			
	Method of protection:			
G.5.3.2	Insulation		N/A	
	Protection from displacement of windings			
G.5.3.3	Overload test		N/A	
G.5.3.3.1	Test conditions		N/A	
G.5.3.3.2	Winding Temperatures testing in the unit		N/A	
G.5.3.3.3	Winding Temperatures - Alternative test method		N/A	
G.5.4	Motors	·	N/A	
G.5.4.1	General requirements	No motors used.	N/A	
	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	
	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		N/A	
G.5.4.6.2	Tested in the unit		N/A	
	Maximum Temperature		N/A	
	Electric strength test (V):		N/A	
G.5.4.6.3	Tested on the bench - Alternative test method; test time (h):		N/A	

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Clause	Requirement + Test	Result - Remark	Verdict
	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	No power supply cord used	N/A
G.6.2	Solvent-based enamel wiring insulation		N/A
G.7	Mains supply cords		N/A
G.7.1	General requirements	Not directly connected to mains	N/A
	Туре		
	Rated current (A):		
	Cross-sectional area (mm ²), (AWG):		
G.7.2	Compliance and test method		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):		
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.7.6.2	Stranded wire		N/A
G.7.6.2.1	Test with 8 mm strand		N/A
G.8	Varistors		N/A
G.8.1	General requirements	No varistors used.	N/A
G.8.2	Safeguard against shock		N/A
G.8.3	Safeguard against fire		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
G.8.3.2	Varistor overload test:		N/A
G.8.3.3	Temporary overvoltage		N/A
G.9	Integrated Circuit (IC) Current Limiters		N/A
G.9.1 a)	Manufacturer defines limit at max. 5A.	No IC current limiter provided within the equipment.	N/A
G.9.1 b)	Limiters do not have manual operator or reset		N/A
G.9.1 c)	Supply source does not exceed 250 VA:		_
G.9.1 d)	IC limiter output current (max. 5A):		
G.9.1 e)	Manufacturers' defined drift:		
G.9.2	Test Program 1		N/A
G.9.3	Test Program 2		N/A
G.9.4	Test Program 3		N/A
G.10	Resistors		N/A
G.10.1	General requirements		N/A
G.10.2	Resistor test		N/A
G.10.3	Test for resistors serving as safeguards between the mains and an external circuit consisting of a coaxial cable	No such resistors	N/A
G.10.3.1	General requirements		N/A
G.10.3.2	Voltage surge test		N/A
G.10.3.3	Impulse test		N/A
G.11	Capacitor and RC units		N/A
G.11.1	General requirements	No capacitor and RC units	N/A
G.11.2	Conditioning of capacitors and RC units		N/A
G.11.3	Rules for selecting capacitors		N/A
G.12	Optocouplers		N/A
	Optocouplers comply with IEC 60747-5-5:2007 Spacing or Electric Strength Test (specify option and test results)	No optocouplers	N/A
	Type test voltage Vini, a		_
	Routine test voltage, Vini,b:		
G.13	Printed boards	•	Р
G.13.1	General requirements	See the following details.	Р
G.13.2	Uncoated printed boards		Р
G.13.3	Coated printed boards	No coated printed board or multilayer board applied for within the equipment.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
G.13.4	Insulation between conductors on the same inner surface	See above.	N/A
	Compliance with cemented joint requirements (Specify construction):		_
G.13.5	Insulation between conductors on different surfaces	See above.	N/A
	Distance through insulation		N/A
	Number of insulation layers (pcs):		—
G.13.6	Tests on coated printed boards	See above.	N/A
G.13.6.1	Sample preparation and preliminary inspection		N/A
G.13.6.2a)	Thermal conditioning		N/A
G.13.6.2b)	Electric strength test		N/A
G.13.6.2c)	Abrasion resistance test		N/A
G.14	Coating on components terminals		N/A
G.14.1	Requirements	No coating on component terminals considered to affect creepage or clearances.	N/A
G.15	Liquid filled components		N/A
G.15.1	General requirements	No such device provided within the equipment.	N/A
G.15.2	Requirements		N/A
G.15.3	Compliance and test methods		N/A
G.15.3.1	Hydrostatic pressure test		N/A
G.15.3.2	Creep resistance test		N/A
G.15.3.3	Tubing and fittings compatibility test		N/A
G.15.3.4	Vibration test		N/A
G.15.3.5	Thermal cycling test		N/A
G.15.3.6	Force test		N/A
G.15.4	Compliance		N/A
G.16	IC including capacitor discharge function (ICX)		N/A
a)	Humidity treatment in accordance with sc5.4.8 – 120 hours	No such ICX provided within the equipment.	N/A
b)	Impulse test using circuit 2 with Uc = to transient voltage:		N/A
C1)	Application of ac voltage at 110% of rated voltage for 2.5 minutes		N/A
C2)	Test voltage:		

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Clause	Requirement + Test	Result - Remark	Verdict	
D1)	10,000 cycles on and off using capacitor with smallest capacitance resistor with largest resistance specified by manufacturer		N/A	
D2)	Capacitance:			
D3)	Resistance:			

н	CRITERIA FOR TELEPHONE RINGING SIGNALS	Р
H.1	General	Р
H.2	Method A a) I _{TS1} <16mA	Р
	c) <i>I</i> _{TS1} <20mA	
H.3	Method B	N/A
H.3.1	Ringing 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)	
J	INSULATED WINDING WIRES FOR USE WITHOUT INTERLEAVED INSULATION	N/A
	General requirements	N/A

К	SAFETY INTERLOCKS		N/A
K.1	General requirements	No safety interlock provided within the equipment.	N/A
K.2	Components of safety interlock safeguard mechanism		N/A
K.3	Inadvertent change of operating mode		N/A
K.4	Interlock safeguard override		N/A
K.5	Fail-safe		N/A
	Compliance		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

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IEC 62368-1 **Result - Remark** Clause Requirement + Test Verdict K.7.1 Separation distance for contact gaps & interlock N/A circuit elements (type and circuit location): Overload test, Current (A): K.7.2 N/A K.7.3 N/A Endurance test K.7.4 N/A Electric strength test:

L	DISCONNECT DEVICES	N/A
L.1	General requirements	N/A
L.2	Permanently connected equipment	N/A
L.3	Parts that remain energized	N/A
L.4	Single phase equipment	N/A
L.5	Three-phase equipment	N/A
L.6	Switches as disconnect devices	N/A
L.7	Plugs as disconnect devices	N/A
L.8	Multiple power sources	N/A

М	EQUIPMENT CONTAINING BATTERIES AND THEIR PROTECTION CIRCUITS		N/A
M.1	General requirements	No 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 secondary lithium battery		N/A
M.4.1	General		N/A
M.4.2	Charging safeguards		N/A
M.4.2.1	Charging operating limits		N/A
M.4.2.2a)	Charging voltage, current and temperature:		

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Clause	Requirement + Test	Result - Remark	Verdict
M.4.2.2 b)	Single faults in charging circuitry		_
M.4.3	Fire Enclosure		N/A
M.4.4	Endurance of equipment containing a secondary lithium battery		N/A
M.4.4.2	Preparation		N/A
M.4.4.3	Drop and charge/discharge function tests		N/A
	Drop		N/A
	Charge		N/A
	Discharge		N/A
M.4.4.4	Charge-discharge cycle test		N/A
M.4.4.5	Result of charge-discharge cycle test		N/A
M.5	Risk of burn due to short circuit during carrying		N/A
M.5.1	Requirement		N/A
M.5.2	Compliance and Test Method (Test of P.2.3)		N/A
M.6	Prevention of short circuits and protection from other effects of electric current		N/A
M.6.1	Short circuits		N/A
M.6.1.1	General requirements		N/A
M.6.1.2	Test method to simulate an internal fault		N/A
M.6.1.3	Compliance (Specify M.6.1.2 or alternative method)		N/A
M.6.2	Leakage current (mA):		N/A
M.7	Risk of explosion from lead acid and NiCd batteries		N/A
M.7.1	Ventilation preventing explosive gas concentration		N/A
M.7.2	Compliance and test method		N/A
M.8	Protection against internal ignition from external spark sources of lead acid batteries		N/A
M.8.1	General requirements		N/A
M.8.2	Test method		N/A
M.8.2.1	General requirements		N/A
M.8.2.2	Estimation of hypothetical volume Vz (m ³ /s):		
M.8.2.3	Correction factors:		
M.8.2.4	Calculation of distance d (mm):		
M.9	Preventing electrolyte spillage		N/A
M.9.1	Protection from electrolyte spillage		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
M.9.2	Tray for preventing electrolyte spillage		N/A
M.10	Instructions to prevent reasonably foreseeable misuse (Determination of compliance: inspection, data review; or abnormal testing):		N/A

N	ELECTROCHEMICAL POTENTIALS		N/A
	Metal(s) used:	Class III equipment.	
0	MEASUREMENT OF CREEPAGE DISTANCES A	AND CLEARANCES	N/A
	Figures O.1 to O.20 of this Annex applied:	Class III equipment.	
Р	SAFEGUARDS AGAINST ENTRY OF FOREIGN OBJECTS AND SPILLAGE OF INTERNAL LIQUIDS		N/A
P.1	General requirements		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
P.2.3.1	Safeguards against the entry of a foreign object		N/A
	Openings in transportable equipment		N/A
	Transportable equipment with metalized plastic parts		N/A
P.2.3.2	Openings in transportable equipment in relation to metallized parts of a barrier or enclosure (identification of supplementary safeguard):		N/A
P.3	Safeguards against spillage of internal liquids	No such liquids.	N/A
P.3.1	General requirements		N/A
P.3.2	Determination of spillage consequences		N/A
P.3.3	Spillage safeguards		N/A
P.3.4	Safeguards effectiveness		N/A
P.4	Metallized coatings and adhesive securing parts	No such construction.	N/A
P.4.2 a)	Conditioning testing		N/A
	Tc (°C):		
	Tr (°C):		
	Ta (°C):		
P.4.2 b)	Abrasion testing:		N/A
P.4.2 c)	Mechanical strength testing:		N/A



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Clause	Requirement + Test	Result - Remark	Verdict
Q	CIRCUITS INTENDED FOR INTERCONNECTION	I WITH BUILDING WIRING	N/A
Q.1	Limited power sources	Equipment not intended for interconnection with building wiring.	N/A
Q.1.1 a)	Inherently limited output		N/A
Q.1.1 b)	Impedance limited output		N/A
	- Regulating network limited output under normal operating and simulated single fault condition		N/A
Q.1.1 c)	Overcurrent protective device limited output		N/A
Q.1.1 d)	IC current limiter complying with G.9		N/A
Q.1.2	Compliance and test method		N/A
Q.2	Test for external circuits – paired conductor cable		N/A
	Maximum output current (A):		
	Current limiting method:		
R	LIMITED SHORT CIRCUIT TEST		N/A
R.1	General requirements	No such consideration.	N/A
R.2	Determination of the overcurrent protective device and circuit	See above.	N/A
R.3	Test method Supply voltage (V) and short-circuit current (A)).	See above.	N/A

S	TESTS FOR RESISTANCE TO HEAT AND FIRE	N/A
S.1	Flammability test for fire enclosures and fire barrier materials of equipment where the steady state power does not exceed 4 000 W	N/A
	Samples, material	—
	Wall thickness (mm):	_
	Conditioning (°C):	
	Test flame according to IEC 60695-11-5 with conditions as set out	N/A
	- Material not consumed completely	N/A
	- Material extinguishes within 30s	N/A
	- No burning of layer or wrapping tissue	N/A
S.2	Flammability test for fire enclosure and fire barrier integrity	N/A
	Samples, material	
	Wall thickness (mm):	
	Conditioning (°C)	

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Clause	Requirement + Test	Result - Remark	Verdict
	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
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 (test condition), (°C):		
	Test flame according to IEC 60695-11-20 with conditions as set out		N/A
	After every test specimen was not consumed completely		N/A
	After fifth flame application, flame extinguished within 1 min		N/A

т	MECHANICAL STRENGTH TESTS	MECHANICAL STRENGTH TESTS		
T.1	General requirements		Р	
T.2	Steady force test, 10 N	(See appended table T2)	Р	
Т.3	Steady force test, 30 N		N/A	
T.4	Steady force test, 100 N		N/A	
T.5	Steady force test, 250 N	(See appended table T5)	Р	
T.6	Enclosure impact test	(See appended table T6)	Р	
	Fall test		Р	
	Swing test		N/A	
T.7	Drop test	(See appended table T7)	Р	
T.8	Stress relief test	(See appended table T8)		
T.9	Impact Test (glass)	No glass used.	N/A	
T.9.1	General requirements		N/A	
T.9.2	Impact test and compliance		N/A	
	Impact energy (J):		—	

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Clause	Requirement + Test	Result - Remark	Verdict
	Height (m):		_
T.10	Glass fragmentation test		N/A
T.11	Test for telescoping or rod antennas	No such antennas provided within the equipment.	N/A
	Torque value (Nm)	See above.	

U	MECHANICAL STRENGTH OF CATHODE RAY TUBES (CRT) AND PROTECTION AGAINST THE EFECTS OF IMPLOSION			
U.1	General requirements No CRT provided within the equipment.			
U.2	Compliance and test method for non-intrinsically protected CRTs See above.			
U.3	Protective Screen	See above.	N/A	

v	DETERMINATION OF ACCESSIBLE PARTS (FINGERS, PROBES AND WEDGES)				
V.1	Accessible parts of equipment No access with test probes (test probe V.1 used) to any hazardous parts				
V.2	Accessible part criterion	See above.	Р		



Clause

Result - Remark

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Requirement + Test

Vero	dict.
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4.1.2	TABLE: List of critical	components			Р
Object / partManufacturer/ trademarkType / modelTechnical data		Technical data	Standard	Mark(s) of conformity ¹	
Adapter	Chenzhou Frecom Electronics Co., Ltd.	F05L5- 050060SPAB F05L5- 050060SPAV	Input: 100-240V~ 50/60Hz 0.2A Output:5VDC 0.6A	EN 60950- 1:2006+A11:200 9+A1:2010+A12: 2011+A2:2013	CB certified By TUV SUD (Certif. No. SG PSB-OF- 03951)
					Report No: 211-700166- 000)
Adapter	Shenzhen Frecom Electronics Co., Ltd.	F05L5- 050060SPAV F05L5- 050060SPAB	Input: 100-240V~ 50/60Hz 0.2A Output:5VDC 0.6A	EN 60950- 1:2006+A11:200 9+A1:2010+A12: 2011+A2:2013	CB certified By TUV SUD (Certif. No. SG-OF- 12218M1) Report No: 211-400845-
РСВ	Interchangeable	Interchangeable	V-0,130°C	UL796 (6 ed.): 2013	100) UL
Plastic enclosure material	CHI MEI CORPORATION	PA-757(+)	HB, 80°C	UL 94	UL E56070
Alternative	Interchangeable	Interchangeable	HB, 80°C	UL 94(6 ed.): 2013	UL

Supplementay information:

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

4.8.4, 4.8.5	TABLE: Lithium coin/button cell batteries mechanical tests				
(The followi	ng mechanical	tests are conducted in the seque	nce noted.)		
4.8.4.2	2 TABLE: Stress Relief test				
Part Material Oven Temperature (°C)			Comments		
4.8.4.3 TABLE: Battery replacement test					
Battery part no		······		—	
Battery Installation/withdrawal Battery Installation/Removal Cycle				Comments	

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4.8.4, 4.8.5	TABLE: Lit	thium coin/button cell batteries	mech	anical tests	N/A	
(The followi	ng mechanica	I tests are conducted in the sequer	nce not	ted.)		
4.8.4.4	TABLE: Drop test				—	
Impact Are	a	Drop Distance		Drop No.	Observations	
4.8.4.5	TABLE: Imp	pact			—	
Impacts p	per surface	Surface tested		Impact energy (Nm)	Comments	
4.8.4.6	TABLE: Cru	ush test				
Test p	osition	Surface tested		Crushing Force (N)	Duration force applied (s)	
Supplement	tary informatio	n:				

4.8.5	TABLE: Lithium coin/button cell batteries mechanical test result						
Test position		Surface tested	Force (N)		ation force oplied (s)		
-	-						
-	-						
Supplementa	Supplementary information:						

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Clau	se	Requirem	nent + Test		Resu	ult - Remark		Verdict		
5.2	Table: (Classification of	electrical energy	sources		Р				
5.2.2.2	- Steady Stat	e Voltage and Cu	rrent conditions							
	Supply	Location (e.g.			Para	meters				
No.	Supply Voltage	circuit designation)	Test conditions	U (Vrms or Vp	ok) (A	l pk or Arms)	Hz	ES Class		
1	5V d.c. or 48V d.c.	Supplied by dc power. or	Normal	5 Vdc max or 48 Vdc ma			DC	ES1		
		POE	Abnormal							
L			Single fault							
5.2.2.3	- Capacitance	e Limits								
No.	Supply Voltage	Location (e.g. circuit	Test conditions	Capacitanc	Parameters apacitance, nF Upk (V)		ES Class			
		designation)	Nermel		, m	Орк	(•)			
			Normal							
			Abnormal							
			Single fault – SC/OC							
Overall	capacity: Lim	nit: ES1=60V; ES	2=120V.							
5.2.2.4	- Single Pulse	es								
	Supply	Location (e.g.			Paran	neters				
No.	Voltage	circuit designation)	Test conditions	Duration (ms)	Upk	. (V) Ip	k (mA)	ES Class		
			Normal		-	-				
			Abnormal		-	-				
			Single fault – SC/OC							
5.2.2.5	- Repetitive P	ulses			•					
		Location (e.g.		Parameters				Parameters		
No.	Voltago	circuit designation)	Test conditions	Off time (ms)	Upk	(V) Ipł	k (mA)	ES Class		
			Normal							
			Abnormal							
		-	Single fault – SC/OC							

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Clause Requirem	ent + Test	Result - Remark	Verdict
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Test Conditions:

Normal – Full load and no load.

Abnormal – Overload output

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

5.4.1.4, 6.3.2, 9.0, B.2.6	TABLE: Temperature measurements							Р
	Supply voltage (V)	:	48 VDC					
	Ambient T _{min} (°C) :		24.6					
	Ambient T _{max} (°C) :		25.0					
	Tma (°C) :		25.0					_
Maximum n of part/at:	neasured temperature T			T (°C))		Allo	wed T _{max} (°C)
EC2			43.2					105
PCB(near in	nput port)		46.3					130
PCB(button	i board)		42.0					130
Spearker			42.2					Ref.
Enclosure i	nside(above)		40.6					80
Enclosure i	nside(below)		43.0					80
Ambient			40.0					
Accessible	part						·	
Enclosure of	of adapter		29.6					60*
Input port			29.5					60*
Button			25.9					60*
Screen			26.2					56*
Enclosure c	outside(above)		25.5					48*
Enclosure c	outside(below)		27.6					48*
Ambient			25.0					
Supplemen	tary information: * Temp	erature limit	for TS1 of	accessible	enclosure	according	to Table 38	3.
	e apparatus was submitt ma) of 40°C.	ed and evalu	uated for m	naximum m	anufacture	r's recomn	nended aml	bient
Note 2: The	e temperatures were me	asured unde	r the wors	e case nor	mal mode o	defined in a	clause B.2.	1.
Tomporatur	ro T of winding:	t1 (°C)	R1 (Ω)	t ₂ (°C)	R ₂ (Ω)	T (°C)	Allowed	Insulation

Temperature T of winding:	t1 (°C)	R1 (Ω)	t ₂ (°C)	R ₂ (Ω)	T (°C)	Allowed T _{max} (°C)	Insulation class

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5.4.1.10.2	2 TABLE: Vicat softening temperature of thermoplastics					
Penetration	(mm)					
:						
Object/ Part No./Material		Manufacturer/trademark	T softening (°C)			
supplementary information:						

5.4.1.10.3 TABLE: Ball pressure test of thermoplastics					
Allowed impression diameter (mm) : < 2 mm					
Object/Part No./Material Manufacturer/trademark		Test temperature (°C)	Test temperature (°C) Impression dia		
Supplement	ary information:				

5.4.2.2, 5.4.2.4 TABLE: Minimum Clearances/Creepage distance and 5.4.3						N/A		
Clearance (cl) and distance (cr) at/of/		Up (V)	U r.m.s. (V)	Frequenc y (Hz)	Required cl (mm)	cl (mm) ²	Required ³ cr (mm)	cr (mm)

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5.4.2.3	TABLE: Minimum Clearances	voltage	N/A			
	Overvoltage Category (OV):					
	Pollution Degree:					
Clearance distanced between:		Required withstand voltage	Required cl (mm)	Measured cl (mm)		
See table 5.4.2.2, 5.4.2.4 and 5.4.3 above.						
Supplemer	ntary information:					

5.4.2.4	TABLE: Clearances based on electric strength test						
Test voltage	e applied between:	Required cl (mm)	Test voltage (kV) peak/ r.m.s. / d.c.	Breakdown Yes / No			
Supplementary information: Using procedure 2 to determine the clearance.							

5.4.4.2, 5.4.4.5 c) 5.4.4.9	TABLE: Distance through insulation measurements						
Distance through insulation di at/of:		Peak voltage (V)	Frequency (Hz)	Material	Required DTI (mm)	DTI (mm)	
Supplement	Supplementary information:						

5.4.9	TABLE: Electric strength	tests		N/A
Test volt	age applied between:	Voltage shape (AC, DC)	Test voltage (Vpeak)	Breakdown Yes / No
Supplem	entary information:	·		•

5.5.2.2	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 Clas	ssification
-	-						
-	-						
Supplemen	Supplementary information:						

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Clause	Requirement + Test	Result - Remark	Verdict

5.6.6.2	TABLE: Resistance	TABLE: Resistance of protective conductors and terminations				
	Accessible part	Test current (A)	Duration (min)	Voltage drop (V)	Res	sistance (Ω)
Suppleme	ntary Information:					

5.7.2.2, 5.7.4	TABLE: Earthed accessible conductive part		
Supply volt	age:	264Vac	—
Location		Test conditions specified in 6.1 of IEC 60990 or Fault Condition No in IEC 60990 clause 6.2.2.1 through 6.2.2.8, except for 6.2.2.7	Touch current (mA)
		1 (e closed, normal and reverse polarity p)	
		2* (netural open (switch n), earth intact and normal polarity, again in reverse polarity (switch p)	
		3 (for IT system, each phase conductor faulted to earth, one at a time (switch g)	
		4 (for three-phase, each phase conductor open, one at a time switches I)	

Notes:

[1] Supply voltage is the anticipated maximum Touch Voltage

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

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

[4] IEC60990, sub-clause 6.2.2.7, Fault 7 not applicable.

[5] (*) IEC60990, sub-clause 6.2.2.2 is not applicable if switch or disconnect device (e.g., appliance coupler) provided.

a) Not considered IT power system.

b) Not three phase equipment.

c) Not IT power system or three phase delta system.

d) Not three-phase for use on centre-earthed dalta supply system.

e) Not such parts.

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6.2.2	Table: Electrical power sources (PS) measurements for classification					N/A
Source	Description	Measurement	Max Power after 3 s	Max Power after 5 s	PS Class	ification
Supplementary Information: *Unit shut-down immediately.						

	Table: Determination of Potential Ignition Sources (Arcing PIS)					
	Location	Open circuit voltage After 3 s (Vp)	Measured r.m.s current (Irms)	Calculated value (V _p x I _{rms})	Arcing PIS? Yes / No	
See below						

6.2.3.2	Table: Determination of Potential Ignition Sources (Resistive PIS)					N/A
Circuit Loc	cation (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
See b	below					

Supplementary Information:

All power dissipating components in primary and secondary circuit which are supplied by a source exceeding 15W (since the output rating is higher than 15VA) are considerd as resistive PIS.

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, <u>or</u> (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.

* A Resistive PIS is considered to exist in primary circuits and secondary circuits.

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Clause	Requirement + Test	Result - Remark	Verdict		

8.5.5	TABLE: High Pressure Lamp			N/A
Description	1	Values	Energy Source Cl	assification
Lamp type.			_	
Manufactu	rer:		_	
Cat no			_	
Pressure (cold) (MPa)		MS_	
Pressure (operating) (MPa)		MS_	
Operating t	time (minutes)		—	
Explosion r	method:		_	
Max particl	e length escaping enclosure (mm) .:		MS_	
Max particl	e length beyond 1 m (mm)		MS_	
Overall res	ult:			
Supplemen	ntary information:			

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Clause	Requirement + Test	Result - Remark	Verdict

B.2.5	TABLE: Inp	ut test						Р
U (V)	I (A)	I rated (A)	P (W)	P rated (W)	Fuse No	I fuse (A)	Conditi	on/status
5 Vdc	0.16	0.6	0.80				Maximum load. Supply by power ada	external
48 Vdc	0.02		0.96				Maximum load. Supply by (POE) cor switch.	Ethernet

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Clause	Requirement + Test	Result - Remark	Verdict

B.3 & B.4 TABLE: Abnormal operating and fault condition tests									
Ambient temperature (°C) 25.3°C, if not specified									
Power source for EUT: Manufacturer, model/type, output rating:									
Component No.	Abnormal Condition	Supply voltage , (V)	Test time (ms)	Fuse no.	Fuse current, (A)	T- couple	Temp. (°C)	Observa	tion
Q1 Pin G-S	S-C	48 Vdc	10 min			Туре К		Unit shut down, damaged, No ha	
Q1 Pin D-S	S-C	48 Vdc	10 min			Туре К		Unit working normally, No damage, no hazard.	
Q1 Pin G-D	S-C	48 Vdc	10 min			Туре К		Unit working normally, No damage, no hazard.	
U1 Pin1-3	S-C	48 Vdc	10 min			Туре К		Unit shut down, No damaged, No hazard.	
U1 Pin2-3	S-C	48 Vdc	10 min			Туре К		Unit working norr No damage, no h	



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Clause		Req	uirement -	+ Test			Result	- Remark	Verdict
Speaker	S-C	48Vdc	1h32 min			Type K		Max input current The equipment in normally,no dann no hazards. 1. PCB(near inpu- 64.9°C 2. Ambient: 40°C 3. Enclosure of a 40.6°C 4. Input port:43. 5. Button: 26.8 6. Screen:27.4° 7. Enclosure ou (above):26.1°C 8. Enclosure ou (below): 40.5°C 9. Ambient: 25°C	working haged, ut port): C adapter: 4°C °C C utside utside

Supplementary information:

Test table is provided to record abnormal and fault conditions for all applicable energy sources including Thermal burn injury. Column "Abnormal/Fault." Specify if test condition by indicating "Abnormal" then the condition for a Clause B.3 test or "Single Fault" then the condition for Clause B.4.

1) SC: Short-circuited; OC: Open-circuit; OL: Overloaded.

2) The test result shown all safeguards remained effective and didn't lead to a single fault condition during abnormal operating condition; In addition all safeguards complied with applicable requirements in this standard after restoration of normal operating conditions.

3) The test result showed no Class 1 or 2 energy source become Class 3 level during and after single fault condition.

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Clause	Requirement + Test	Result - Remark	Verdict

Annex M	ТА	BLE: Batte	eries							N/A
The tests of	f Anr	nex M are a	applicable o	only when app	propriate ba	attery data	is not ava	ilable		
Is it possible	e to i	install the b	pattery in a	reverse polar	ity position	?	:			
		Non-re	chargeable	e batteries		R	lechargeal	ole batterie	es	
		Discha	arging	Un-	Chai	rging	Disch	arging	Reverse	d charging
		Meas. current	Manuf. Specs.	intentional charging	Meas. current	Manuf. Specs.	Meas. current	Manuf. Specs.	Meas. current	Manuf. Specs.
Max. curren during norm condition										
Max. curren during fault condition	nt									
						1	I			
Test results	:									Verdict
- Chemical	leak	S								
- Explosion	of th	e battery								
- Emission of	of fla	me or exp	ulsion of m	olten metal						
- Electric str	reng	th tests of	equipment	after completi	on of tests					
Supplement	tary	informatior	ו:							

Annex M.4 Table batte		itional safeguards for equipment containing secondary lithium						N/A		
Battery/Cell		Test conditions		Measurements				O	Observation	
No.				U	I	(A)	Temp (C)			
		Normal								
		Abnormal								
	Single fau		t –SC/OC							
Normal		Normal								
		Abnormal								
		Single fau	t – SC/OC							
Supplementary In	formatio	on:			•					
Battery identification	Battery Timest		Observa	ation	Charg T _{hig} (°(hest	Obs	servat	ion	
Supplementary In	formatio	on:								

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TABLE: Circuits intended for interconnection with building wiring (LPS)								
UOC (V) with all lo	ad circuits disco	nnected:			·			
Components	U _{oc} (V)	Isc	(A)	S (\	VA)			
		Meas.	Limit	Meas.	Limit			
	UOC (V) with all lo Components 	UOC (V) with all load circuits disco Components Uoc (V)	UOC (V) with all load circuits disconnected: Components Uoc (V) Isc Meas.	UOC (V) with all load circuits disconnected: Components U _{oc} (V) I _{sc} (A)	UOC (V) with all load circuits disconnected: Components U_{oc} (V) I_{sc} (A) S (* </td			

T.2, T.3, T.4, T.5	TABI	E: Steady force te	est				Р
Part/Loca	tion	Material	Thickness (mm)	Force (N)	Test Duration (sec)	Observ	vation
Internal components	5			10	5	No dam haza	-
Top enclosu	Ure		No dam haza	•			
Side enclos	ure			250	5	No damage, no hazards.	
Bottom enclosure				250	5	No dam haza	-
Supplement	ary inf	ormation:					

T.6, T.9	TAB	LE: Impact tests				Р
Part/Locati	on	Material	Thickness (mm)	Vertical distance (mm)	Observation	
Horizonta surface		Plastic		1300	No damage, no hazai	ds.
The vertic surface		Plastic		1300	No damage, no haza	rds.
Supplementa	ary info	ormation:				

T.7	TAB	LE: Drop tests				Р
Part/Locati	on	Material	Thickness (mm)	Drop Height (mm)	Observation	
Top enclos	ure	Plastic		750	No damage, no hazar	ds.
Side enclos	ure	Plastic		750	No damage, no hazar	ds.

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Bottom enclosure	Plastic	 750	No damage, no hazards.
Supplementary in	formation:		

T.8 T.	ABLE: Stress relief t	est				Р
Part/Location	Material	Thickness (mm)	Oven Temperature (°C)	Duration (h)	Observ	ration
Enclosure	Plastic		70	7	No damage,	no hazard
Supplementary information:						



Result - Remark

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Requirement + Test

Clause

Verdict

		ΑΤΤΑ	CHMENT T	O TEST REPOR	RT		
(Audio/vide			IFFERENC	2368-1 ES AND NATION chnology equip		ENCES 1: Safety require	ements)
Differences a	ccording to	EN	I 62368-1:2	014+A11:2017			
Attachment F	Form No	: EL	J_GD_IEC6	2368_1B_II			
Attachment (Originator	: Ne	emko AS				
Master Attac	hment	: Da	ate 2017-09	-22			
		em for Confo and. All rights		ng and Certifica	ation of Elec	trical Equipmer	nt
	CENELEC C			NS (EN)			
		oclauses, notes 62368-1:2014		ires and annexes I "Z".	which are a	dditional to	
CONTENTS	Add the follo Annex ZA (n	wing annexes:					Р
	Annex ZB (normative)with their corresponding European publicationsAnnex ZC (informative)A-deviational conditionsAnnex ZD (informative)IEC and CENELEC code designations for flexible cordsDelete all the "country" notes in the reference document (IEC 62368-1:2014)						
		the following lis				1.2014)	Р
	0.2.1	Note	1	Note 3	4.1.15	Note	
	4.7.3	Note 1 and 2	5.2.2.2	Note	5.4.2.3.2.2 Table 13	Note c	
	5.4.2.3.2.4	Note 1 and 3	5.4.2.5	Note 2	5.4.5.1	Note	
	5.5.2.1	Note	5.5.6	Note	5.6.4.2.1	Note 2 and 3	
	5.7.5	Note	5.7.6.1	Note 1 and 2	10.2.1 Table 39	Note 2, 3 and 4	
	10.5.3	Note 2	10.6.2.1	Note 3	F.3.3.6	Note 3	
	For special r	national condition	ons, see An	inex ZB.			Р
1		wing note: use of certain subst ment is restricted w					Р

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Clause	Requirement + Test	Result - Remark	Verdic
4.Z1	 Add the following new subclause after 4.9: To protect against excessive current, short-circul and earth faults in circuits connected to an a.c. mains, protective devices shall be included either as integral parts of the equipment or as parts of building installation, subject to the following, a), I and c): a) except as detailed in b) and c), protective devices necessary to comply with the requirement of B.3.1 and B.4 shall be included as parts of the equipment; b) for components in series with the mains input the equipment such as the supply cord, appliance coupler, r.f.i. filter and switch, short-circuit and ear fault protection may be provided by protective devices in the building installation; c) it is permitted for pluggable equipment, to rely dedicated overcurrent and short-circuit protection the building installation, provided that the means protection, e.g. fuses or circuit breakers, is fully specified in the installation instructions. If reliance is placed on protection in the building installation, the installation shall be regarded as providing protection in accordance with the ratio 	er the b) ents e to ce arth B on n in s of e A	N/A
5.4.2.3.2.4	the wall socket outlet. Add the following to the end of this subclause:	-1	N/A
	The requirement for interconnection with extern circuit is in addition given in EN 50491-3:2009.		
10.2.1	Add the following to ^{c)} and ^{d)} in table 39: For additional requirements, see 10.5.1.		N/A



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Clause	Requirement + Test	Result - Remark	Verdict
10.5.1	 Add the following after the first paragraph: For RS 1 compliance is checked by measurement under the following conditions: In addition to the normal operating conditions, a controls adjustable from the outside by hand, by any object such as a tool or a coin, and those internal adjustments or presets which are not locked in a reliable manner, are adjusted so as give maximum radiation whilst maintaining an intelligible picture for 1 h, at the end of which the measurement is made. NOTE Z1 Soldered joints and paint lockings are examples or adequate locking. The dose-rate is determined by means of a radiation monitor with an effective area of 10 cm any point 10 cm from the outer surface of the apparatus. Moreover, the measurement shall be made und fault conditions causing an increase of the high-voltage, provided an intelligible picture is maintained for 1 h, at the end of which the measurement is made. For RS1, the dose-rate shall not exceed 1 μSv/h 	ent II / to e of n², at ler	N/A
10.6.1	taking account of the background level. NOTE Z2 These values appear in Directive 96/29/Euratom May 1996. Add the following paragraph to the end of the subclause:	of 13	N/A
10.Z1	EN 71-1:2011, 4.20 and the related tests metho and measurement distances apply.Add the following new subclause after 10.6.5.	ds	
	 10.Z1 Non-ionizing radiation from radio frequencies in the range 0 to 300 GHz The amount of non-ionizing radiation is regulate European Council Recommendation 1999/519/f of 12 July 1999 on the limitation of exposure of t general public to electromagnetic fields (0 Hz to GHz). For intentional radiators, ICNIRP guidelines sho be taken into account for Limiting Exposure to Time-Varying Electric, Magnetic, and Electromagnetic Fields (up to 300 GHz). For hall held and body-mounted devices, attention is dra to EN 50360 and EN 50566 	EC the 300 uld nd-	
G.7.1	Add the following note: NOTE Z1 The harmonized code designations correspondin the IEC cord types are given in Annex ZD.	g to	N/A

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Clause Requirement + Test Result - Remark Verdic	ŀ				
		Clause	Requirement + Test	Result - Remark	Verdict

Bibliography	Add the following	standards:	N/A
	Add the following	notes for the standards indicated:	
	IEC 60130-9	NOTE Harmonized as EN 60130-9.	
	IEC 60269-2	NOTE Harmonized as HD 60269-2.	
	IEC 60309-1	NOTE Harmonized as EN 60309-1.	
	IEC 60364	NOTE some parts harmonized in HD 384/HD 60364 series.	
	IEC 60601-2-4	NOTE Harmonized as EN 60601-2-4.	
	IEC 60664-5	NOTE Harmonized as EN 60664-5.	
	IEC 61032:1997	NOTE Harmonized as EN 61032:1998 (not modified).	
	IEC 61508-1	NOTE Harmonized as EN 61508-1.	
	IEC 61558-2-1	NOTE Harmonized as EN 61558-2-1.	
	IEC 61558-2-4	NOTE Harmonized as EN 61558-2-4.	
	IEC 61558-2-6	NOTE Harmonized as EN 61558-2-6.	
	IEC 61643-1	NOTE Harmonized as EN 61643-1.	
	IEC 61643-21	NOTE Harmonized as EN 61643-21.	
	IEC 61643-311	NOTE Harmonized as EN 61643-311.	
	IEC 61643-321	NOTE Harmonized as EN 61643-321.	
	IEC 61643-331	NOTE Harmonized as EN 61643-331.	
ZB	ANNEX ZB, SPE	CIAL NATIONAL CONDITIONS (EN)	N/A
4.1.15	Denmark, Finlan	d, Norway and Sweden	N/A
	To the end of the	subclause the following is added:	
	connection to othe safety relies on co surge suppressor network terminals marking stating th	e equipment type A intended for er equipment or a network shall, if onnection to reliable earthing or if s are connected between the and accessible parts, have a at the equipment shall be earthed mains socket-outlet.	
	The marking text as follows:	in the applicable countries shall be	
		paratets stikprop skal tilsluttes en ord som giver forbindelse til "	
	In Finland : "Laite varustettuun pisto	on liitettävä suojakoskettimilla rasiaan"	
	In Norway : "Appa stikkontakt"	ratet må tilkoples jordet	
	In Sweden : "Appa uttag"	araten skall anslutas till jordat	



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Clause	Requirement + Test	Result - Remark	Verdict

4.7.3	United Kingdom	N/A
	To the end of the subclause the following is added:	
	The torque test is performed using a socket-outlet complying with BS 1363, and the plug part shall be assessed to the relevant clauses of BS 1363. Also see Annex G.4.2 of this annex	
5.2.2.2	Denmark	N/A
	After the 2nd paragraph add the following:	
	A warning (marking safeguard) for high touch current is required if the touch current exceeds the limits of 3,5 mA a.c. or 10 mA d.c.	



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Clause	Requirement + Test	Result - Remark	Verdict
E 4 4 4 4 5 5 1	Eister Louis Louis		
5.4.11.1 and Annex G		adu	N/A
	To the end of the subclause the following is add		
	For separation of the telecommunication networ from earth the following is applicable:		
	If this insulation is solid, including insulation form part of a component, it shall at least consist of e		
	 two layers of thin sheet material, each of which shall pass the electric strength test below, or 	1	
	• one layer having a distance through insulation at least 0,4 mm, which shall pass the electric strength test below.	of	
	If this insulation forms part of a semiconductor component (e.g. an optocoupler), there is no distance through insulation requirement for the insulation consisting of an insulating compound completely filling the casing, so that clearances a creepage distances do not exist, if the compone passes the electric strength test in accordance w the compliance clause below and in addition	ent	
	• passes the tests and inspection criteria of 5.4.8 with an electric strength test of 1,5 kV multiplied 1,6 (the electric strength test of 5.4.9 shall be performed using 1,5 kV), and		
	• is subject to routine testing for electric strength during manufacturing, using a test voltage of 1,5		
	It is permitted to bridge this insulation with a capacitor complying with EN 60384-14:2005, subclass Y2.		
	A capacitor classified Y3 according to EN 60384 14:2005, may bridge this insulation under the following conditions:	ŀ-	
	• the insulation requirements are satisfied by have a capacitor classified Y3 as defined by EN 6038 14, which in addition to the Y3 testing, is tested an impulse test of 2,5 kV defined in 5.4.11;	4-	
	• the additional testing shall be performed on all test specimens as described in EN 60384-14;	the	
	the impulse test of 2,5 kV is to be performed bef the endurance test in EN 60384-14, in the sequence of tests as described in EN 60384-14.		
5.5.2.1	Norway		N/A
	After the 3rd paragraph the following is added:		
	Due to the IT power system used, capacitors are required to be rated for the applicable line-to-line voltage (230 V).		

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Clause	Requirement + Test	Result - Remark	Verdict	

5.5.6	Finland, Norway and Sweden	N/A
	To the end of the subclause the following is added:	
	Resistors used as basic safeguard or bridging basic insulation in class I pluggable equipment type A shall comply with G.10.1 and the test of G.10.2.	
5.6.1	Denmark	N/A
	Add to the end of the subclause	
	Due to many existing installations where the socket- outlets can be protected with fuses with higher rating than the rating of the socket-outlets the protection for pluggable equipment type A shall be an integral part of the equipment.	
	<i>Justification:</i> In Denmark an existing 13 A socket outlet can be protected by a 20 A fuse.	
5.6.4.2.1	Ireland and United Kingdom	N/A
	After the indent for pluggable equipment type A , the following is added:	
	 the protective current rating is taken to be 13 A, this being the largest rating of fuse used in the mains plug. 	
5.6.5.1	To the second paragraph the following is added:	N/A
	The range of conductor sizes of flexible cords to be accepted by terminals for equipment with a rated current over 10 A and up to and including 13 A is:	
	1,25 mm ² to 1,5 mm ² in cross-sectional area.	
5.7.5	Denmark	N/A
	To the end of the subclause the following is added:	
	The installation instruction shall be affixed to the equipment if the protective conductor current exceeds the limits of 3,5 mA a.c. or 10 mA d.c.	



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Clause	Requirement + Test	Result - Remark	Verdict
5.7.6.1	Norway and Sweden		N/A
0.7.0.1	To the end of the subclause the following is added		1.0// (
	The screen of the television distribution system is normally not earthed at the entrance of the building and there is normally no equipotential bonding system within the building. Therefore the protective earthing of the building installation needs to be isolated from the screen of a cable distribution system.	g	
	It is however accepted to provide the insulation external to the equipment by an adapter or an interconnection cable with galvanic isolator, which may be provided by a retailer, for example.		
	The user manual shall then have the following or similar information in Norwegian and Swedish language respectively, depending on in what country the equipment is intended to be used in:		
	"Apparatus connected to the protective earthing of the building installation through the mains connection or through other apparatus with a connection to protective earthing – and to a television distribution system using coaxial cable, may in some circumstances create a fire hazard. Connection to a television distribution system therefore has to be provided through a device providing electrical isolation below a certain frequency range (galvanic isolator, see EN 60728- 11)"		
	NOTE In Norway, due to regulation for CATV-installations, and Sweden, a galvanic isolator shall provide electrical insulation below 5 MHz. The insulation shall withstand a dielectric strength of 1,5 kV r.m.s., 50 Hz or 60 Hz, for 1 min.		
	Translation to Norwegian (the Swedish text will als be accepted in Norway):	O	
	"Apparater som er koplet til beskyttelsesjord via nettplugg og/eller via annet jordtilkoplet utstyr – og er tilkoplet et koaksialbasert kabel-TV nett, kan forårsake brannfare. For å unngå dette skal det ved tilkopling av apparater til kabel-TV nett installeres en galvanisk isolator mellom apparatet og kabel-TV nettet."		
	Translation to Swedish:		
	"Apparater som är kopplad till skyddsjord via jorda vägguttag och/eller via annan utrustning och samtidigt är kopplad till kabel-TV nät kan i vissa fa medfőra risk főr brand. Főr att undvika detta skall vid anslutning av apparaten till kabel-TV nät galvanisk isolator finnas mellan apparaten och kabel-TV nätet.".		

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Clause	Requirement + Test	Result - Remark	Verdict	

5.7.6.2	Denmark	N/A
	To the end of the subclause the following is added:	
	The warning (marking safeguard) for high touch current is required if the touch current or the protective current exceed the limits of 3,5 mA .	
B.3.1 and B.4	Ireland and United Kingdom	N/A
	The following is applicable:	
	To protect against excessive currents and short- circuits in the primary circuit of direct plug-in equipment , tests according to Annexes B.3.1 and B.4 shall be conducted using an external miniature circuit breaker complying with EN 60898-1, Type B, rated 32A. If the equipment does not pass these tests, suitable protective devices shall be included as an integral part of the direct plug-in equipment , until the requirements of Annexes B.3.1 and B.4 are met	
G.4.2	Denmark	N/A
	To the end of the subclause the following is added:	
	Supply cords of single phase appliances having a rated current not exceeding 13 A shall be provided with a plug according to DS 60884-2-D1:2011. CLASS I EQUIPMENT provided with socket-outlets with earth contacts or which are intended to be used in locations where protection against indirect contact is required according to the wiring rules shall be provided with a plug in accordance with standard sheet DK 2-1a or DK 2-5a.	
	If a single-phase equipment having a RATED CURRENT exceeding 13 A or if a poly-phase equipment is provided with a supply cord with a plug, this plug shall be in accordance with the standard sheets DK 6-1a in DS 60884-2-D1 or EN 60309-2.	
	Mains socket outlets intended for providing power to Class II apparatus with a rated current of 2,5 A shall be in accordance DS 60884-2-D1:2011 standard sheet DKA 1-4a.	
	Other current rating socket outlets shall be in compliance with Standard Sheet DKA 1-3a or DKA 1-1c.	
	Mains socket-outlets with earth shall be in compliance with DS 60884-2-D1:2011 Standard Sheet DK 1-3a, DK 1-1c, DK1-1d, DK 1-5a or DK 1- 7a	
	Justification: Heavy Current Regulations, Section 6c	



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Clause	Requirement + Test	Result - Remark	Verdict
G.4.2	United Kingdom To the end of the subclause the following is adde The plug part of direct plug-in equipment shall be assessed to BS 1363: Part 1, 12.1, 12.2, 12.3, 1 12.11, 12.12, 12.13, 12.16, and 12.17, except th the test of 12.17 is performed at not less than 125 °C. Where the metal earth pin is replaced by Insulated Shutter Opening Device (ISOD), the requirements of clauses 22.2 and 23 also apply.	e 2.9, iat y an	N/A
G.7.1	 United Kingdom To the first paragraph the following is added: Equipment which is fitted with a flexible cable or cord and is designed to be connected to a mains socket conforming to BS 1363 by means of that flexible cable or cord shall be fitted with a 'standa plug' in accordance with the Plugs and Sockets (Safety) Regulations 1994, Statutory Instrument 1994 No. 1768, unless exempted by those regulations. NOTE "Standard plug" is defined in SI 1768:1994 and essen means an approved plug conforming to BS 1363 or an approced plug. 	s ard etc	N/A
G.7.1	Ireland To the first paragraph the following is added: Apparatus which is fitted with a flexible cable or cord shall be provided with a plug in accordance with Statutory Instrument 525: 1997, "13 A Plugs and Conversion Adapters for Domestic Use Regulations: 1997. S.I. 525 provides for the recognition of a standard of another Member Sta which is equivalent to the relevant Irish Standard	ate	N/A



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	IEC62368_1B - ATTACI	HMENT	
Clause	Requirement + Test	Result - Remark	Verdict
G.7.2	Ireland and United Kingdom		N/A
	To the first paragraph the following is added:		
	A power supply cord with a conductor of 1,25 mr is allowed for equipment which is rated over 10 / and up to and including 13 A.		
ZC	ANNEX ZC, NATIONAL DEVIATIONS (EN)	·	N/A
10.5.2	Germany		N/A
	The following requirement applies:		
	For the operation of any cathode ray tube intend for the display of visual images operating at an acceleration voltage exceeding 40 kV, authorizat is required, or application of type approval (Bauartzulassung) and marking.		
	Justification: German ministerial decree against ionizing radia (Röntgenverordnung), in force since 2002-07-01 implementing the European Directive 96/29/EURATOM.		
	NOTE Contact address: Physikalisch-Technische Bundesanstalt, Bundesallee 100, D-38116 Braunschweig, Tel.: Int +49-531-592-6320, Internet: http://www.ptb.de		



Product: IP Phone

Type Designation: XT-19G



Figure 1 Overall view



Figure 2. Overall view

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Figure 3. Internal view



Figure 4. Internal view

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Product: IP Phone

Type Designation: XT-19G



Figure 5. Front view of mainboard

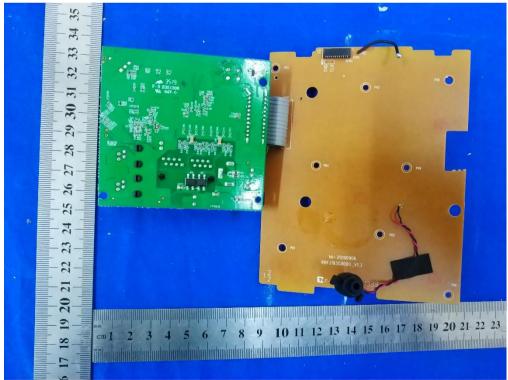


Figure 6. Rear view of mainboard

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Product: IP Phone

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Type Designation: XT-19G
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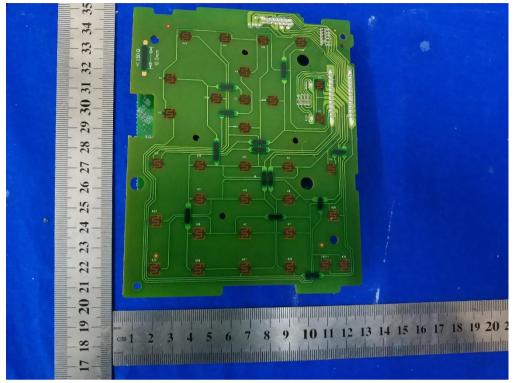


Figure 7. Front view of button board



Figure 8. View of speaker

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Attachment 2: Photo Documentation

Product: IP Phone

Type Designation: XT-19G



Figure 10. View of adapter

CHENZHOU FRECOM ELECTRONICS CO

MADE IN CHINA 011303409008.

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Model: F05L5-050060SPA8 L.P.S Input:100-240V~50/60Hz 0.2A Output:5V==0.6A 🗇 👁 🏵 I.T.E. Power Supply

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Attachment 2: Photo Documentation

Product: IP Phone

Type Designation: XT-19G



Figure 11. View of adapter



Figure 12. View of adapter

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