

**Infortisa S.L.****CE RED REPORT**

Prepared For:	Infortisa S.L. C/ del Pozo 1 Alfara del Patriarca Valencia ALFARA DEL PATRIARCA , zip code 46115, Spain
Product Name:	Repetidor WiFi 300Mbps
Main Test Model:	RW-N300-AP/R
Prepared By:	BST Testing (Shenzhen) Co.,Ltd. No.7, New Era Industrial Zone, Guantian, Bao'an District, Shenzhen, Guangdong, China
Test Date:	Mar. 22, 2020-Apr. 02, 2020
Date of Report:	Apr. 07, 2020
Report No.:	BSTXD200313733501SR



<b>LVD Report</b> <b>EN 62368-1</b> <b>Information technology equipment - Safety -</b> <b>Part 1: General requirements</b>	
Testing laboratory .....	: BST Testing (Shenzhen) Co.,Ltd.
Address .....	: No.7, New Era Industrial Zone, Guantian, Bao'an District, Shenzhen, Guangdong, China
Testing location .....	: BST Testing (Shenzhen) Co.,Ltd.
Applicant .....	: Infortisa S.L.
Address .....	: C/ del Pozo 1 Alfara del Patriarca Valencia ALFARA DEL PATRIARCA , zip code 46115, Spain
Standard .....	: EN 62368-1:2014+A11:2017
Procedure deviation .....	: N/A.
Non-standard test method .....	: N/A.
Type of test object .....	: Repetidor WiFi 300Mbps
Trademark .....	: iggual
Model/type reference .....	: RW-N300-AP/R
Rating .....	: AC220-240V ,50/60Hz
Manufacturer .....	: Shenzhen Xindaba Electronics Co.,Ltd
Address .....	: No 601, B Building, Jin Yucheng Industrial, Ban Tian Street, Long Gang District, Shenzhen City, China
Test item particulars:	
Equipment mobility .....	: Portable equipment
Operation condition .....	: Continuous
Class of equipment .....	: Class II
Protection against ingress of water .	: IP20

## Possible test case verdicts :





test case does not apply to the test object .....	: N(.A.)
test object does meet the requirement .....	: P(ass)
test object does not meet the requirement .....	: F(ail)



<b>General remarks:</b> "(see remark #)" refers to a remark appended to the report. "(see appended table)" refers to a table appended to the report. Throughout this report a comma is used as the decimal separator. The test results presented in this report relate only to the object tested. This report shall not be reproduced except in full without the written approval of the testing laboratory.	<b>Attached with:</b> A. photo documentation  <b>Remark:</b> The device described above is tested by us with the listed standards and found that L Repetidor WiFi 300Mbps have the same electronic circuit and PCB layout with The EUT of test report BSTXD200313733801SR, except the model name. So, no tests are necessary. The test results are contained in this test report.
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Artwork of Marking Label

Repetidor WiFi 300Mbps  
Model : RW-N300-AP/R  
Rating: AC220-240V ,50/60Hz

Shenzhen Xindaba Electronics Co.,Ltd



Name and address of the testing laboratory : **BST Testing (Shenzhen) Co.,Ltd.**

**No.7, New Era Industrial Zone, Guantian, Bao'an District, Shenzhen, Guangdong, China**

Test by : Apple Li Apr. 07, 2020  
Signature Date

Technician  
Title

Review by : Sabon Apr. 07, 2020  
Signature Date

Project Engineer  
Title



Approved by : \_\_\_\_\_ Apr. 07, 2020  
Signature Date

Andy Yan/ Manager  
Name and Title



EN 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
<b>4</b>	<b>GENERAL REQUIREMENTS</b>		P
4.1.1	Acceptance of materials, components and subassemblies		P
4.1.2	Use of components		P
4.1.15	Markings and instructions	See Annex F	P
4.4.5	Safeguard robustness		N/A
4.5	Explosion		N/A
<b>5</b>	<b>ELECTRICALLY-CAUSED INJURY</b>		P
5.2	Classification of electrical energy sources	ES1	P
5.2.1	Electrical energy source classifications		P
5.2.2	ES1, ES2 and ES3 limits	ES1	P
5.2.2.2	Steady-state voltage and current		P
5.2.2.3	Capacitor		N/A
5.2.2.4	Single pulses		P
5.2.2.5	Repetitive pulses		N/A
5.2.2.6	Ringling signals		N/A
5.2.2.7	Audio signals		N/A
5.3	Protection against electrical energy sources		N/A
5.3.2.2	Safeguards between ES2 and ordinary persons		N/A
5.3.2.3	Safeguards between ES3 and ordinary persons		N/A
5.3.3.2	Safeguards between ES3 and instructed persons		N/A
5.3.4.2	Safeguards between ES3 and skilled persons		N/A
5.3.5.2	Safeguard between ES1, ES2 and ES3		N/A
5.3.5.3	Protection of ES2 against ES3		N/A
5.3.6.1	Accessibility to electrical energy sources and safeguards for ordinary persons		N/A
	Accessibility to electrical energy sources and safeguards for instructed persons are prevented from access to.....:		N/A
5.3.6.2	Contact requirements Air gap (mm) .....		N/A
5.3.6.4	Terminals for connecting stripped wire		N/A



EN 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
5.4	Insulation materials and requirements		P
5.4.1.2	Properties of insulating material		P
5.4.1.3	Humidity conditioning		P
	Relative humidity (%).....: 92%		—
	Temperature (°C), .....: 40°C		—
	Duration (h).....: 48h		—
5.4.1.4	Frequency .....: Alternative electric strength test for solid insulation		P —
5.4.1.5	Maximum operating temperature for insulating materials	See appended table 5.4.1.5	P
5.4.1.6	Pollution degree .....		P
5.4.1.7	Insulation in transformers with varying dimensions		N/A
5.4.1.8	Insulation in circuits generating starting pulses		N/A
5.4.1.9	Determination of working voltage		P
5.4.1.10	Insulating surfaces		P
5.4.1.11	Thermoplastic parts on which conductive metallic parts are directly mounted	T1 bobbin, plug holder.	P
5.4.1.11.2	Vicat softening temperature (°C) .....		N/A
5.4.1.11.3	Ball pressure	See appended table 5.4.1.11.3	P
5.4.2	Clearances		P
5.4.2.3	Determination of Clearances		P
	Transient Voltage.....: Required withstand voltage .....		— —
	Measured peak working voltage.....: 5.4.2.4		— P
5.4.2.4	Determination of transient voltages		P
5.4.2.5	Determination of required withstand voltage		P
5.4.2.6	Measurement of transient voltage levels		P
5.4.2.7	Determination of the minimum clearance	See appended table 5.4.2	P
5.4.2.8	Minimum clearances based on electric strength test	See appended table 5.4.2.8	P
5.4.2.9	Multiplication factors for clearances and test voltage.....: 5.4.3		N/A P
5.4.3	Creepage distances	See appended table 5.4.3	P



EN 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
5.4.3.1	General		P
5.4.3.2.2	Material Group .....	IIIb	—
5.4.4	Solid insulation		P
5.4.4.2	Minimum distance through insulation	See appended table 5.4.4.2	P
5.4.4.3	Insulation compound forming solid insulation		N/A
5.4.4.4	Semiconductor solid insulation		P
5.4.4.5	Cemented joints		N/A
5.4.4.6	Thin sheet material		P
5.4.4.6.1	General requirements		P
5.4.4.6.2	Separable thin sheet material		P
5.4.4.6.3	Non-separable thin sheet material		N/A
5.4.4.6.4	Standard test procedure for non-separable thin sheet material		N/A
5.4.4.6.5	Mandrel test		N/A
5.4.4.7	Solid insulation in wound components		P
5.4.4.9	Solid insulation at frequencies >30 kHz		N/A
	High frequency peak working voltage $V_{PW}$ (V).....:		—
	Total thickness $d$ (mm) .....		—
	Breakdown electric field strength $E_p$ (kV/mm) .....		—
	Reduction Factor $K_R$ (kV/mm) .....		—
	Breakdown electric field strength $E_F$ .....		—
	Actual electric strength $V_W$ (kV) .....		—
5.4.5	Antenna terminal insulation		P
5.4.5.1	General		P
5.4.5.2	Antenna Terminal connections		P
	Insulation resistance (M $\Omega$ ).....:	>100 M $\Omega$	—
5.4.6	Insulation of internal wire as part of supplementary insulation		N/A
5.4.7	Thermal cycling test procedure		N/A
5.4.8	Test for degree 1 environment and for an insulating compound		N/A
5.4.9	Tests for semiconductor components and for cemented joints		N/A



EN 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
5.4.11	Electric strength test	See appended table 5.4.11	P
5.4.11.1	Test procedure for a solid insulation type test		P
5.4.11.2	Test procedure for routine tests		P
5.4.12	Protection against overvoltages between external circuit		N/A
5.4.12.1	Parts and circuits separated from external circuits		N/A
5.4.13	Insulation between external circuits and earthed circuitry		N/A
5.4.13.1	Exceptions to separation between external circuits and earth		N/A
5.4.13.2	Requirements		N/A
	Rated operating voltage $U_{op}$ (V).....:		—
	Nominal voltage $U_{pea}$ (V).....:		—
	Max increase due to variation $U_{sp}$ .....		—
	Max increase due to ageing $\square U_{sa}$ .....		—
	$U_{op} = \square U_{peak} + \Delta \square U_{sp} + \Delta \square U_{sa}$ .....		—
5.5	Components as safeguards		
5.5.1	General		P
5.5.2	Components as basic safeguard and supplementary safeguard		P
5.5.2.2	Capacitors and RC units as basic safeguards and supplementary safeguard		P
5.5.2.3	Safeguards against capacitor discharge		P
	Capacitance (nF) .....		—
	Charged voltage (V) .....		—
	Measured voltage after 2 s (V) .....		—
5.5.2.4	Transformers as basic safeguard or supplementary safeguard		P
5.5.2.5	Optocouplers as basic safeguard or supplementary safeguard		N/A
5.5.2.6	Relay as basic safeguard or supplementary safeguard		N/A
5.5.2.7	Resistors as basic safeguard or supplementary safeguard	See appended table 5.5.2.7	P
5.5.2.8	SPD as basic safeguard		P





EN 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
5.5.2.9	Other components as basic safeguards between ES1 and ES2		N/A
5.5.3	Components as reinforced safeguard		P
5.5.3.1	General requirements		P
5.5.3.2	Capacitors and RC	See Annex G	P
5.5.3.3	Transformer	See Annex G	P
5.5.3.4	Optocouplers		N/A
5.5.3.5	Relays	See Annex G	P
5.5.3.6	Resistors	See Annex G	P
5.5.4	Insulation between the mains and external circuit consisting of a coaxial	See Annex G	P
5.5.5	Components and parts that may bridge insulation	See Annex T	P
5.5.5.1	Access to ES2 or ES3		N/A
5.6	Protective conductor		N/A
5.6.1	General requirements		N/A
5.6.2	Corrosion		N/A
5.6.3	Colour of insulation		N/A
5.6.4	Test for low current-carrying protective conductors resistance ( $\Omega$ ), voltage drop (V), test current (A), duration (min) .....		N/A
5.6.5	Protective conductors used as basic safeguard between ES1 and ES2		N/A
5.6.5.1	General		N/A
5.6.5.2	Fault current-carrying protective conductors		N/A
5.6.5.2.3	Protective earthing conductor size ( $\text{mm}^2$ ) .....		—
	Protective bonding conductor size ( $\text{mm}^2$ ). .....		—
5.6.6	Protective conductors used as supplementary safeguard		N/A
5.6.6.1	General		N/A
5.6.6.2	Size of protective earthing conductors and terminals, Rated current (A) .....		N/A
	Conductor size .....		—
	Terminal size .....		—
5.6.6.3.	Size of protective bonding conductors and terminals, Rated current (A) .....		N/A



EN 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
	Conductor size (mm <sup>2</sup> ).....:		—
	Terminal size (mm).....:		—
5.6.6.4	Resistance of protective conductors and their terminations		N/A
5.6.6.4.1	Protective bonding conductors and terminals rated 80 A or more		N/A
5.6.6.4.2	Protective Bonding Conductor		N/A
	Resistance (Ω).....:		—
	Voltage drop (V) .....		—
	Test current (A) .....		—
	Duration (min).....:		—
5.6.7	Protective earthing conductors serving as double or reinforced safeguard		N/A
5.6.7.1	General		N/A
5.6.7.2	Requirements for protective earthing conductors serving as reinforced safeguard		N/A
5.6.7.3	Terminations		N/A
	Terminal size (mm).....:		—
5.6.8	Reliable earthing		N/A
5.6.8.2	Reliable earthing for protection		N/A
5.6.8.3	Reliable earthing when the basic safeguard between ES1 & ES2 is provided by earthing ES1		N/A
5.7	Prospective touch voltage, touch current and protective conductor current		N/A
5.7.2	Measuring devices and networks		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	Unearthed conductive accessible parts		N/A
5.7.4.1	Unearthed parts accessible to ordinary persons		N/A
5.7.4.2	Unearthed parts accessible to instructed persons		N/A
5.7.5	Earthed accessible conductive parts		N/A



EN 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
5.7.6	Protective conductor current		N/A
	Supply Voltage (V) .....		—
	Measured current (mA) .....		—
	Instructional Safeguard		N/A
5.7.7	Prospective touch voltage and touch current due to external circuits		N/A
5.7.8	Summation of touch currents from external circuits		N/A
	a) Equipment with earthed external circuits Measured current (mA) .....		N/A
	B) Equipment whose external circuits are not referenced to earth. Measured current (mA) .....		N/A
<b>6</b>	<b>ELECTRICALLY- CAUSED FIRE</b>		P
6.2	Classification of power sources (PS) and potential ignition sources (PIS)		P
6.2.2	Power source circuit classifications		P
6.2.2.1	General		P
6.2.2.2	Power measurement for worst-case load fault		P
6.2.2.3	Power measurement for worst-case power source fault		P
6.2.2.4	PS1		P
6.2.2.5	PS2		P
6.2.2.6	PS3		P
6.2.3.1	Arcing PIS		P
	Component, location .....		—
6.2.3.2	Resistive PIS		P
	Component, location .....		—
6.3	Safeguards against fire under normal operating conditions and abnormal operating conditions		
6.3.1	Requirements	See appended table 6.3.2	P
6.4	Safeguards against fire under single fault conditions		P
6.4.1	Protection Method		P
6.4.2	Reduction of the likelihood of ignition under single fault conditions in PS1 circuits		N/A
6.4.3	Reduction of the likelihood of ignition under single fault conditions in PS2 and PS3 circuits		N/A
6.4.3.1	General		N/A



EN 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
6.4.3.2	Supplementary Safeguards		N/A
6.4.3.3	Single Fault Conditions		N/A
6.4.5	Control of fire spread in PS2 circuits		P
6.4.5.2	Supplementary safeguards	See Annex G	P
6.4.6	Control of fire spread in PS3 circuit		P
6.4.7	Separation of combustible materials from a PIS		N/A
6.4.7.1	General		N/A
6.4.7.2	Separation by distance		N/A
6.4.7.3	Separation by a fire barrier		N/A
6.4.8	Fire enclosures and fire barriers		P
6.4.8.1	Fire enclosure and fire barrier material properties		P
6.4.8.1.1	Requirements for a fire barrier		N/A
6.4.8.1.2	Requirements for a fire enclosure		P
6.4.8.2	Constructional requirements for a fire enclosure and a fire barrier		P
6.4.8.2.1	Fire enclosure and fire barrier openings		N/A
6.4.8.2.2	Fire barrier dimensions		N/A
6.4.8.2.3	Fire Enclosure dimensions, top openings (mm) .. :		N/A
	Needle Flame test		N/A
6.4.8.2.4	Bottom Openings in Fire Enclosure, condition met a), b) and/or c): dimensions (mm) .....		N/A
6.4.8.2.5	Integrity of the fire enclosure, condition met: a), b) or c): dimensions (mm) .....		N/A
6.4.8.3	Separation of PIS from fire enclosure and fire barrier distance (mm) or flammability rating .....		N/A
6.5	Internal and external wiring		P
6.5.1	General	See appended table 6.5	P
6.5.2	Cross-sectional area (mm <sup>2</sup> ) .....		--
6.5.3	Flammability		P
6.5.4	Requirements for interconnection to building wiring	See Annex Q	P
6.6	Likelihood of fire due to entry of foreign objects,	See Annex P	P
	Construction and dimensions (mm) .....		—
6.7	Safeguards against fire due to connection to secondary equipment		N/A
	External port limited to PS2		N/A



EN 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
<b>7</b>	<b>CHEMICALLY-CAUSED INJURY</b>		N/A
7.2	Reduction of exposure to hazardous chemicals		N/A
7.3	Ozone exposure		N/A
7.4	Use of PPE		N/A
	Type of PPE .....		—
7.5	Use of instructional safeguards and instructions		N/A
	Instruction Safeguard (ISO 7010)		N/A
7.6	Batteries		N/A
<b>8</b>	<b>MECHANICALLY-CAUSED INJURY</b>		P
8.1	General		P
8.2	Mechanical energy source classifications		P
8.3	Protection against mechanical energy sources		P
8.4	Safeguards against parts with sharp edges and corners		P
8.4.1	Safeguards		N/A
8.4.2	Instructional safeguard		N/A
8.5	Safeguards against moving parts		N/A
8.5.2	MS2 or MS3 part required to be accessible for the function of the equipment		N/A
	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	Protection of persons against loosening, exploding or imploding parts		N/A
8.5.5.1	Protection against MS3 parts		N/A



EN 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
8.5.5.2.1	Mechanical enclosure requirements for rotating solid media		N/A
8.5.5.2.2	High pressure lamps		N/A
8.6	Stability		N/A
8.6.1	Product classification		N/A
	Instructional Safeguard.....:		—
8.6.2	Static stability for floor standing equipment		N/A
8.6.2.1	Requirements		N/A
8.6.2.2	Static stability test		N/A
	Applied Force.....:		—
8.6.2.3	Relocation stability test		N/A
	Unit configuration during 10° tilt.....:		—
8.6.3	Non-floor standing equipment having controls that are accessed during normal use or having displays with moving images		N/A
8.6.3.1	Glass slide test		N/A
8.6.3.2	Horizontal force test (Applied Force).....:		N/A
	Position of feet or movable parts.....:		—
8.7	Equipment mounted to wall or ceiling		N/A
8.7.1	Mounting Means (Length of screws (mm) and mounting surface) .....		N/A
8.7.2	Direction and applied force.....:		N/A
8.8	Handles strength		N/A
8.8.1	Classification		N/A
8.8.2	Applied Force .....		N/A
8.9	Wheels or casters attachment requirements		N/A
8.9.1	Classification		N/A
8.9.2	Applied force.....:		N/A
8.10	Carts, stands and similar carriers		N/A
8.10.1	General		N/A
8.10.2	Marking and instructions		N/A
	Instructional Safeguard.....:		—



EN 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
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		N/A
8.11.2	Mechanical strength test, variable <i>N</i> .....:		N/A
8.11.3	Mechanical strength test 250N, including end stops		N/A
8.12	Telescoping or rod antennas		N/A
	Button/Ball diameter (mm).....:		—
<b>9</b>	<b>THERMAL BURN INJURY</b>		<b>P</b>
9.2	Thermal energy source classifications		P
9.3	Protection against thermal energy sources		N/A
9.3.2	Protection of ordinary person		N/A
9.3.2.1	Protection of ordinary person against TS1		N/A
9.3.2.2	Protection of ordinary person against TS2		N/A
	Instructional Safeguard..... :		N/A
9.3.2.3	Protection of ordinary person against TS3		N/A
9.3.2.4	Identify safeguards..... :		N/A
9.3.3	Protection of instructed person		N/A
9.3.3.1	Protection of instructed person against TS2		N/A
9.3.3.2	Protection of instructed person against TS3 (Identify safeguards)..... :		N/A
9.3.4	Protection of skilled person		N/A
	Instructional Safeguard..... :		N/A
9.4.1	Equipment safeguard		P
9.4.1.2	Temperatures on Accessible Surfaces		P
9.4.2	Instructional safeguard..... :		N/A
<b>10</b>	<b>RADIATON</b>		<b>N/A</b>



EN 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
10.2	Radiation energy source classifications		N/A
10.3	Requirements for electromagnetic radiation		N/A
10.3.1	General		N/A
10.3.1.1	Protection of persons from non-ionizing radiation		N/A
10.3.1.2	Non-ionizing radiation form lasers		N/A
	Laser Class, conditions .....		—
10.3.1.3	Non-ionizing optical radiation from lamps and lamp systems (including LEDs)		N/A
10.3.1.3.1	Identification of lamp or lamp system .....		N/A
10.3.1.3.2a	UV radiation		N/A
	Instructional Safeguard (person and text) .....		—
10.3.1.3.2b	Visible Radiation		N/A
	Instructional Safeguard (person and text) .....		—
10.3.2	Non-ionizing radiation from radio frequencies in the range 0 Hz to 300 GHz		N/A
10.3.3	Protection of persons from ionizing radiation (X-radiation)		N/A
10.3.3.2	Maximum radiation (pA/kg) .....		—
10.3.3.3	Supply voltage (V), distance (mm) .....		—
10.3.3.4	Abnormal and Single fault condition .....		N/A
10.3.4	Protection of materials from lamps that produce UV radiation		N/A
10.4	Protection against acoustic energy sources		N/A
10.4.1	Safeguards		N/A
10.4.3	Protection of ordinary persons from acoustic energy sources (instructional safeguard) .....		N/A

<b>B</b>	<b>NORMAL OPERATING CONDITION TESTS, ABNORMAL OPERATING CONDITION TESTS AND SINGLE FAULT CONDITION TESTS</b>		P
B.2	Normal Operating Conditions		P
B.2.1	General requirements	See Test Item Particulars and appended test tables	P
	Audio Amplifiers and equipment with audio amplifiers		N/A
B.2.5	Input test	See appended table B.2.5	P





EN 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
B.3	Simulated abnormal operating conditions		P
B.3.1	General requirements		P
B.3.2	Covering of ventilation openings		N/A
B.3.3	D.C. mains polarity test		N/A
B.3.4	Setting of voltage selector .....		N/A
B.3.5	Maximum load at output terminals .....		P
B.3.6	Reverse battery polarity		N/A
B.3.7	Abnormal operating conditions as specified in Clause E.2.		N/A
B.3.8	Safeguards functional during and after abnormal operating conditions		P
B.4	Simulated single fault conditions		P
B.4.2	Temperature controlling device open or short-circuited		N/A
B.4.3	Motor tests		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		P
B.4.4.1	Short circuit of clearances for functional insulation		P
B.4.4.2	Short circuit of creepage distances for functional insulation		P
B.4.4.3	Short circuit of functional insulation on coated printed boards		N/A
B.4.5	Short circuit and interruption of electrodes in tubes and semiconductors		P
B.4.6	Short circuit or disconnect of passive components		P
B.4.7	Continuous operation of components		N/A
B.4.8	Class 1 and Class 2 energy sources within limits during and after single fault conditions		P
B.4.9	Battery charging under single fault conditions		N/A
<b>C</b>	<b>UV RADIATION</b>		N/A
C.1	Protection of materials in equipment from UV radiation		N/A
C.1.2	Requirements		N/A
C.1.3	Test method		N/A



EN 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
C.2	UV light conditioning test		N/A
C.2.1	Test apparatus		N/A
C.2.2	Mounting of test samples		N/A
C.2.3	Carbon-arc light-exposure apparatus		N/A
C.2.4	Xenon-arc light exposure apparatus		N/A
<b>D</b>	<b>TEST GENERATORS</b>		P
D.1	Impulse test generators		P
D.2	Antenna interface test generator		P
D.3	Electronic pulse generator		N/A
<b>E</b>	<b>TEST CONDITIONS FOR EQUIPMENT CONTAINING AUDIO AMPLIFIERS</b>		N/A
E.1	Audio amplifier normal operating conditions		N/A
	Audio signal voltage (V).....:		—
E.2	Audio amplifier abnormal operating conditions		N/A
<b>F</b>	<b>ANNEX F, EQUIPMENT MARKINGS, INSTRUCTIONS, AND INSTRUCTIONAL SAFEGUARDS</b>		P
F.1	General requirements		P
	Instructions – Language .....		—
F.2	Letter symbols and graphical symbols		P
	Letter symbols .....		P
	Graphic symbols IEC, ISO or manufacturer specific		P
F.3	Equipment markings		P
F.3.1	Equipment marking locations		P
F.3.2	Equipment identification markings		P
F.3.2.1	Manufacturer identification .....		P
F.3.2.2	Model identification.....:		P
F.3.3	Equipment rating markings		P
F.3.3.1	Equipment without direct connection to mains		P
F.3.3.2	Nature of supply voltage.....:		N/A
F.3.3.3	Rated voltage .....		--
F.3.3.4	Rated frequency .....		--



EN 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
F.3.3.5	Rated current or rated power .....		--
F.3.3.6	Equipment with multiple supply connections		--
F.3.4	Voltage setting device		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.....		P
F.3.5.4	Replacement battery identification marking .....		N/A
	Language .....		—
F.3.6	Equipment markings related to equipment classification		P
F.3.6.1	Class I Equipment		N/A
F.3.6.1.1	Protective earthing conductor terminal		N/A
	-Complete equipment (IEC60417-5017)		N/A
	-Sub-assembly/component (IEC60417-5017 or – 5019)		N/A
F.3.6.1.2	Neutral conductor terminal		N/A
F.3.6.1.3	Protective bonding conductor terminals		N/A
F.3.6.1.4	Terminal marking location		N/A
F.3.6.2	Class II equipment (IEC60417-5172)		P
F.3.7	Equipment IP rating marking.....		--
F.3.8	Durability, legibility and permanence of markings		N/A
F.3.9	Test for permanence of markings		P
F.4	Instructions		P
	Instructions given for installation or initial use		P
	Equipment for use in locations where children not likely to be present marked with the relevant marking		P
	Equipment intended for use only in restricted access area		N/A
	Audio equipment terminals classified as ES3 and other equipment with terminals marked in accordance F.3.6.1		N/A
	Protective earthing employed as safeguard		N/A



EN 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
	Protective earthing conductor current exceeding ES 2 limits		N/A
	Symbols used on equipment		P
	Permanently connected equipment not provided with all-pole mains switch		N/A
	Replaceable components or modules providing safeguard function		N/A
F.5	Instructional safeguards		N/A
	Where "instructional safeguard" is referenced in the test report it specifies the required elements, location of marking and/or instruction		N/A

<b>G</b>	<b>COMPONENTS</b>		P
<b>G.1</b>	<b>Switches</b>		N/A
G.1.1	General requirements		N/A
G.1.2	Ratings, endurance, spacing, maximum load		N/A
<b>G.2</b>	<b>Thermal cut-offs</b>		N/A
G.2.1 a), b)	Thermal cut-outs separately approved according to IEC 60730 with conditions indicated in a) & b)		N/A
G.2.1c)	Thermal cut-outs tested as part of the equipment as indicated in c)		N/A
<b>G.3</b>	<b>Thermal links</b>		P
G.3.1a)	Thermal links separately tested with IEC 60691		N/A
G.3.1b)	Thermal links tested as part of the equipment		N/A
	Aging hours (H) .....		—
	Single Fault Condition .....		—
	Test Voltage (V) and Insulation Resistance ( $\Omega$ )... :		—
<b>G.4</b>	<b>PTC Thermistors</b>		N/A
<b>G.5</b>	<b>Overcurrent protection devices</b>		P
<b>G.6</b>	<b>Protective devices not mentioned in G.2 to G.5</b>		N/A
	Compliance (device and single fault condition) .... :		N/A
<b>G.7</b>	<b>Transformers</b>		P
G.7.1	Requirements applied (IEC61204-7, IEC61558-1/-2, and/or IEC62368-1) .....		P
	Position.....		—



EN 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
	Method of protection.....:		—
G.7.2	Insulation		P
	Protection from displacement of windings.....:		P
G.7.3	Overload test		P
G.7.3.1	Test conditions		P
G.7.3.2	Winding Temperatures testing in the unit		P
G.7.3.3	Winding Temperatures - Alternative test method		N/A
<b>G.8</b>	<b>Motors</b>		N/A
G.8.1	General requirements		N/A
	Position.....:		—
G.8.2	Test conditions		N/A
G.8.3	Running overload test		N/A
G.8.4	Locked-rotor overload test		N/A
	Test duration (days) .....		—
G.8.5	Running overload test for d.c. motors in secondary circuits		N/A
G.8.5.2	Tested in the unit		N/A
G.8.5.3	Tested on the Bench - Alternative test method; test time (h) .....		N/A
G.8.5.4	Electric strength test (V) .....		N/A
G.8.6	Locked-rotor overload test for d.c. motors in secondary circuits		N/A
G.8.6.2	Tested in the unit		N/A
G.8.6.3	Tested on the bench - Alternative test method; test time (h) :		N/A
G.8.7.1	Electric strength test for ES2 or ES3 motors (V) :		N/A
G.8.7.2	Maximum temperatures		N/A
G.8.8	Motors with capacitors		N/A
G.8.9	Three-phase motors		N/A
G.8.10	Series motors		N/A
	Operating voltage .....		—
<b>G.9</b>	<b>Mains supply cords</b>		N/A
G.9.1	General requirements		N/A



EN 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
	Type.....:		—
	Rated current (A) .....		—
	Cross-sectional area (mm <sup>2</sup> ), (AWG) .....		—
G.9.2	Compliance and test method		N/A
G.9.3	Cord anchorages and strain relief for non-detachable power supply cords		N/A
G.9.3.1	General requirements		N/A
G.9.3.2	Cord strain relief		N/A
G.9.3.2.1	Requirements		N/A
	Strain relief test force (N).....:		—
G.9.3.2.2	Strain relief mechanism failure		N/A
G.9.3.2.3	Cord sheath or jacket position, distance (mm) .....		—
G.9.3.2.4	Strain relief comprised of polymeric material		N/A
G.9.4	Cord Entry		N/A
G.9.5	Non-detachable cord bend protection		N/A
G.9.5.1	Requirements		N/A
G.9.5.2	Mass (g) .....		—
	Diameter (m) .....		—
	Temperature (°C) .....		—
G.9.6	Cord Replacement		N/A
G.9.7	Supply wiring space		N/A
G.9.7.2	Stranded wire		N/A
G.9.7.2.1	Test with 8 mm strand		N/A
<b>G.10</b>	<b>Metal oxide varistors</b>		N/A
G.10.1	General requirements		N/A
G.10.2	Basic safeguard		N/A
G.10.3	Supplementary safeguard		N/A
G.10.3.2	Sudden failure		N/A
G.10.3.3	Gradual failure		N/A
<b>G.11</b>	<b>WOUND COMPONENTS</b>		N/A
G.11.1	Wire insulation in wound components		N/A
G.11.1.1	General (thickness (mm), or number of layers		N/A



EN 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
G.11.1.2	Solvent-based enamel winding insulation		N/A
G.11.1.3	Protection against mechanical stress in wound components		N/A
G.11.2	Additional insulation in wound components		N/A
G.11.2.1	General requirements		N/A
G.11.2.2	Dimension (mm) or test		N/A
G.11.3	Endurance test on wound components		N/A
G.11.3.1	General test requirements		N/A
G.11.3.3	Heat run test		N/A
	Time (s) .....		—
	Temperature (°C) .....		—
G.11.3.4	Vibration Test		N/A
G.11.3.5	Wound Components supplied by mains		N/A
<b>G.12</b>	<b>Circuits generating starting pulses</b>		N/A
G.12.1	Insulation in circuits generating starting pulses		N/A
G.12.2	Clearances in circuits generating starting pulses		N/A
	Spacing or Electric Strength Test (specify option and test results) .....		N/A
<b>G.13</b>	<b>IC current limiters</b>		N/A
	IC current limiters in PS1 or PS 2 fulfil all the conditions as set out		N/A
<b>G.14</b>	<b>Test for resistors serving as safeguard</b>		N/A
G.14.1	General requirements		N/A
G.14.2	Resistor test		N/A
G.14.3	Test for resistors serving as safeguards between the mains and an external circuit consisting of a coaxial cable		N/A
G.14.3.1	General requirements		N/A
G.14.3.2	Voltage surge test		N/A
G.14.3.3	Impulse test		N/A
<b>G.15</b>	<b>Capacitor and RC units serving as safeguards bridging insulation</b>		N/A
G.15.1	General requirements		N/A
G.15.2	Conditioning of capacitors and RC units		N/A
G.15.3	Rules for selecting capacitors		N/A



EN 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
<b>G.16</b>	<b>Optocouplers as safeguards</b>		N/A
	Optocouplers comply with IEC 60747-5-5 with testing conditions as indicated		N/A
<b>G.17</b>	<b>Relays</b>		N/A
G.17.1	General requirements		N/A
G.17.2	Requirements for relays		N/A
G.17.3	Overload test		N/A
G.17.4	Electric strength test		N/A
G.17.5	Relay controlling mains socket-outlets		N/A
G.17.6	Test method		N/A
G.17.7	Compliance		N/A
<b>G.18</b>	<b>Printed boards</b>		N/A
G.18.1	General requirements		N/A
G.18.2	Uncoated printed boards		N/A
G.18.3	Coated printed boards		N/A
G.18.4	Insulation between conductors on the same inner surface		N/A
	Compliance with cemented joint requirements (Specify construction) .....		N/A
G.18.5	Insulation between conductors on different surfaces		N/A
	Distance through insulation		N/A
	Number of insulation layers (pcs) .....		—
G.18.6	Tests on coated printed boards		N/A
G.18.6.1	Sample preparation and preliminary inspection		N/A
G.18.6.2	Thermal conditioning		N/A
G.18.6.3	Electric strength test		N/A
G.18.6.4	Abrasion resistance test		N/A
<b>G.19</b>	<b>Coating on components terminals</b>		N/A
G.19.1	Requirements		N/A
G.19.2	Compliance and test method		N/A
<b>G.20</b>	<b>Mains connectors</b>		N/A
	Mains connector configuration .....		—
<b>G.21</b>	<b>Liquid filled components</b>		N/A





EN 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
G.21.1	General requirements		N/A
G.21.2	Requirements		N/A
G.21.3	Compliance and test methods		N/A
G.21.3.1	Hydrostatic pressure test		N/A
G.21.3.2	Creep resistance test		N/A
G.21.3.3	Tubing and fittings compatibility test		N/A
G.21.3.4	Vibration test		N/A
G.21.3.5	Thermal cycling test		N/A
G.21.3.6	Force test		N/A
G.21.4	Compliance		N/A
<b>G.22</b>	<b>Connectors other than mains connectors</b>		N/A
	Plug is shaped that insertion into mains socket-outlets or appliance coupler is unlikely		N/A

<b>H</b>	<b>CRITERIA FOR TELEPHONE RINGING SIGNALS</b>		N/A
H.1	General requirements		N/A
H.2	Method A		N/A
H.3	Method B		N/A
H.3.1	Ringling signal		N/A
H.3.1.1	Frequency (Hz) .....		—
H.3.1.2	Voltage (V) .....		—
H.3.1.3	Cadence; time (s) and voltage (V) .....		—
H.3.1.4	Single fault current (mA):.....		—
H.3.2	Tripping device and monitoring voltage.....		N/A
H.3.2.1	Conditions for use of a tripping device or a monitoring voltage complied with		N/A
H.3.2.2	Tripping device		N/A
H.3.2.3	Monitoring voltage (V).....		—

<b>J</b>	<b>INSULATED WINDING WIRES FOR USE WITHOUT INTERLEAVED INSULATION</b>		P
	General requirements	See separate test report	—



EN 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
<b>K</b>	<b>SAFETY INTERLOCKS</b>		N/A
K.1	General requirements		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
K.7.1	Separation distance for contact gaps & interlock circuit elements (type & circuit location) .....		N/A
K.7.2	Overload test, Current (A) .....		N/A
K.7.3	Endurance test		N/A
K.7.4	Electric strength test		N/A
<b>L</b>	<b>DISCONNECT DEVICES</b>		P
L.1	General requirements		P
L.1.1	General		P
L.1.2	Permanently connected equipment		P
L.1.3	Parts that remain energized		N/A
L.1.4	Single phase equipment		P
L.1.5	Three-phase equipment		N/A
L.1.6	Switches as disconnect devices		N/A
L.1.7	Plugs as disconnect devices		P
L.1.8	Multiple power sources		N/A
<b>M</b>	<b>BATTERIES AND FUEL CELLS</b>		N/A
M.1	General requirements		N/A
M.2	Safety of battery cells and batteries		N/A
M.2.1	Requirements		N/A
M.2.2	Compliance and test method (identify method) ..		N/A
M.3	Protection in battery circuits		N/A
M.3.1	Requirements		N/A



EN 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
M.3.2	Test method		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	Endurance of a battery and its enclosure		N/A
M.4.1	Requirements		N/A
M.4.2	Compliance and test method		N/A
	Replaceable battery (instructional safeguard text):		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.2.2.3)		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 $V_z$ ( $m^3/s$ ) :		—
M.8.2.3	Correction factors..... :		—
M.8.2.4	Calculation of distance $d$ (mm) :		—
M.9	Preventing electrolyte spillage		N/A



EN 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
M.9.1	Protection from electrolyte spillage		N/A
M.9.2	Tray for preventing electrolyte spillage		N/A
M.10	Instructions to prevent reasonably foreseeable misuse (Determination of compliance: inspection, data review; or abnormal testing) .....		N/A
<b>N</b>	<b>ELECTROCHEMICAL POTENTIALS</b>		N/A
	Metal(s) used .....		—
<b>O</b>	<b>MEASUREMENT OF CREEPAGE DISTANCES AND CLEARANCES</b>		P
	Figures O.1 to O.20 of this Annex applied.....		—
<b>P</b>	<b>SAFEGUARDS AGAINST ENTRY OF FOREIGN OBJECTS, FOREIGN LIQUIDS, AND SPILLAGE OF INTERNAL LIQUIDS</b>		N/A
P.1	General requirements		N/A
P.2	Safeguards against entry of solid foreign objects		N/A
P.2.1	Top and side openings		N/A
	Location and Dimensions (mm) .....		—
P.2.2	Transportable equipment		N/A
P.2.2.1	Openings in transportable equipment provided with energy storage devices, such as batteries		N/A
P.2.2.2	Transportable equipment without batteries and having accessible floating conductive parts (identification of supplementary safeguard) .....		N/A
P.2.2.3	Openings in transportable equipment in relation to metallized parts of a barrier or enclosure (identification of supplementary safeguard) .....		N/A
P.3	Safeguards against spillage of internal liquids		N/A
P.3.1	General requirements		N/A
P.3.2	Determination of spillage consequences		N/A
	Non-transportable (identification of safeguards) ..		N/A
	Transportable (identification of safeguards) .....		N/A
<b>Q</b>	<b>INTERCONNECTION WITH BUILDING WIRING</b>		N/A
Q.1	Limited power sources		N/A
	- Inherently limited output		N/A
	- Impedance limited output		N/A



EN 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
	- Regulating network limited output under normal operating and simulated single fault condition		N/A
	- Overcurrent protective device limited output		N/A
	- an IC current limiter complying with G.13		N/A
Q.2	Compliance and test method		N/A
Q.3	Test for external circuits – paired conductor cable		N/A
	Maximum output current (A) .....		—
	Current limiting method .....		N/A
<b>R</b>	<b>LIMITED SHORT CIRCUIT TEST</b>		N/A
R.1	General requirements		N/A
R.2	Determination of the overcurrent protective device and circuit		N/A
R.3	Test method Supply voltage (V) and short-circuit current (A)). .....		N/A
<b>S</b>	<b>TESTS FOR RESISTANCE TO HEAT AND FIRE</b>		N/A
S.1	Flammability test for fire enclosures and fire barrier materials of equipment where the steady state power does not exceed 4 000 W		N/A
	Samples, material .....		—
	Wall thickness (mm) .....		—
	Conditioning (°C) .....		—
	Test flame according to IEC 60695-11-5 with conditions as set out		N/A
	- Material not consumed completely		N/A
	- Material extinguishes within 30s		N/A
	- No burning of layer or wrapping tissue		N/A
S.2	Flammability test for fire enclosure and fire barrier integrity		N/A
	Samples, material .....		—
	Wall thickness (mm) .....		—
	Conditioning (°C) .....		—
	Test flame according to IEC 60695-11-5 with conditions as set out		N/A
	Test specimen does not show any additional hole		N/A



EN 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
S.3	Flammability test for the bottom of a fire enclosure		N/A
	Samples, material .....		—
	Wall thickness (mm) .....		—
	Cheesecloth did not ignite		N/A
S.4	Flammability classification of materials		N/A
S.5	Flammability test for fire enclosures and fire barrier materials of equipment where the steady state power does not exceed 4 000 W		N/A
	Samples, material .....		—
	Wall thickness (mm) .....		—
	Conditioning (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

T	MECHANICAL STRENGTH TESTS	P
T.1	General requirements	P
T.2	Steady force test, 10 N	P
T.3	Steady force test, 30 N	N/A
T.4	Steady force test, 100 N	P
T.5	Steady force test, 250 N	N/A
T.6	Enclosure impact test	N/A
	Fall test	N/A
	Swing test	N/A
T.7	Drop test	P
T.8	Stress relief test	P
T.9	Glass breakage	N/A
T.9.1	General requirements	N/A
T.9.2	Impact test and compliance	N/A
	Impact energy (J) :	—
T.9.3	Fragmentation test and compliance	N/A



EN 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
T.10	Test for telescoping or rod antennas		N/A
	Torque value (Nm) :		—

<b>U</b>	<b>MECHANICAL STRENGTH OF CATHODE RAY TUBES (CRT) AND PROTECTION AGAINST THE EFFECTS OF IMPLOSION</b>		N/A
U.1	General requirements		N/A
U.2	Compliance and test method for non-intrinsically protected CRTs		N/A
U.3	Protective Screen		N/A

ANNEX 1: components					P
Object/Part No.	Manufacturer/ Trademark	Type/Model	Technical Data	Standard	Mark(s) of Conformity
Enclosure	Various	Various	PC, V-0, 130°C	--	UL
PCB	Various	Various	V-0, 130°C	--	UL
Transformer	Various	Various	0.32mH±5%	--	Tested with appliance



<b>5.4.1.5, 6.3.2, 9.0, B.2.6, B.2.7</b>	<b>TABLE: Thermal requirements</b>						P
	Supply voltage (V) .....	198V	264V				—
	Ambient T <sub>min</sub> (°C) .....	40.0	40.0				—
	Ambient T <sub>max</sub> (°C) .....	40.0	40.0				—
	Maximum measured temperature T of part/at:	T (°C)				Allowed T <sub>max</sub> (°C)	
	PCB	52.2	53.7			130	
	Enclosure	56.8	58.2			130	
	Internal wire	55.6	56.4			90	
	Transformer	65.3	66.2			110	
	Ambient	25.0	25.0			--	
Supplementary information:							
Temperature T of winding:	t <sub>1</sub> (°C)	R <sub>1</sub> (Ω)	t <sub>2</sub> (°C)	R <sub>2</sub> (Ω)	T (°C)	Allowed T <sub>max</sub> (°C)	Insulation class
--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--
Supplementary information:							

<b>5.4.1.11.3</b>	<b>TABLE: Ball pressure test of thermoplastics</b>					P
	Allowed impression diameter (mm) .....	≤ 2 mm				—
Part	Test temperature (°C)			Impression diameter (mm)		
Enclosure	550			0.67		
Supplementary information:						

<b>5.4.2, 5.4.3, 5.4.4.5 a), b)</b>	<b>TABLE: Minimum Clearances/Creepage distance</b>						P
Clearance (cl) and creepage distance (cr) at/of/between:	Up (V)	U r.m.s. (V)	Frequency (kHz) <sup>1)</sup>	Required cl (mm)	cl (mm) <sup>2)</sup>	Required <sup>3)</sup> cr (mm)	cr (mm)
Between primary circuits and enclosure	340	240	0.06	2.6	2.0	2.6	2.0
PCB: between L and N (F1 Before)	339	240	0.06	1.5	1.5	2.4	2.4





Between mains parts before fuse	340	240	0.06	1.3	1.4	2.5	2.6
Between primary and secondary circuits	340	240	0.06	2.6	2.6	5.0	5.1
Transformer T1: primary Winding and secondary winding Between	452	258	0.06	4.2	4.2	5.2	5.3
Supplementary information: Note 1: Only for frequency above 30 kHz Note 2: See table 5.4.2.8 if this is based on electric strength test (5.4.2.8) Note 3: Provide Material Group							

5.4.2.8	<b>TABLE: Clearances based on electric strength test</b>			N/A
Test voltage applied between:		Required cl (mm)	Test voltage (kV) peak/ r.m.s. / d.c.	Breakdown Yes / No
--		--	--	--
Supplementary information:				

5.4.4.2, 5.4.4.5c), 5.5.2.7	<b>TABLE Distance through insulation measurements</b>			P	
Distance through insulation di at/of:		Up (V)	Test voltage (V)	Required di (mm)	di (mm)
Enclosure		420	3000	0.4	1.5
Supplementary information:					

5.4.11	<b>TABLE: Electric strength tests</b>			P
Test voltage applied between:		Voltage shape (AC, DC)	Test voltage (V)	Breakdown Yes / No
Functional:				
--		--	--	--
Basic/supplementary:				
--		--	--	--
Reinforced:				
Input to enclosure		AC	4000	No
Routine Tests:				
--		--	--	--



Supplementary information:

5.6.6.4	TABLE: Resistance of protective conductors and terminations				N/A
Accessible part	Test current (A)	Duration (min)	Voltage drop (V)	Resistance ( $\Omega$ )	
--	--	--	--	--	

Supplementary information:

5.7.4.1	TABLE: Unearthed conductive parts accessible for ordinary person		N/A
Supply voltage (V): .....	--		--
Earthed neutral conductor [Voltage differences less than 1% or more]: .....	--		--
Specify method used for measurement as described in IEC60990, sub-clause 4.3:.....	--		--

5.7.4.1a)	TABLE: Unearthed conductive parts accessible (for ordinary person)		
Unearthed accessible part	Prospective touch voltage (V)	Touch current (mA)	
--	--	--	
--	--	--	
After fault of the applicable basic safeguard			
--	--	--	
--	--	--	
After fault of the applicable supplementary safeguard			
--	--	--	
--	--	--	

Supplementary Information:  
For fault conditions, identify the safeguard that was faulted e.g., "Accessible Part/basic insulation."

5.7.4.1b)	TABLE: Unearthed conductive parts accessible (>ES2 voltage limits)		N/A
Unearthed accessible part, at which the prospective touch voltage exceeds the ES2 limits	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	--	
	2	--	
	3	--	
	4	--	
	5	--	



	6	--
	8	--
<b>Supplementary Information:</b> If touch current measurements are not needed, indicate "N/A" in the space provided. IEC60990, sub-clause 6.2.2.7, Fault 7 not applicable. If the touch current did not exceed ES2 limits, indicate, "PASS."		

<b>5.7.4.2</b>	<b>TABLE: Unearthed conductive parts accessible to instructed persons</b>	N/A
Supply voltage (V): .....	--	---
Earthed neutral conductor [Voltage differences less than 1% or more]: .....	--	---
Specify method used for measurement as described in IEC60990, sub-clause 4.3 .....	--	---

<b>5.7.4.2 a)</b>	<b>TABLE: Unearthed conductive parts accessible to instructed persons</b>	N/A
Unearthed accessible part	Prospective touch voltage (V)	Touch current (mA)
--	--	--
--	--	--
--	--	--

<b>5.4.7.2 b)</b>	<b>TABLE: Unearthed conductive parts accessible (&gt;ES2 voltage limits)</b>	N/A
Unearthed accessible part, at which the prospective touch voltage exceeds the ES2 limits	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	--
	2	--
	3	--
	4	--
	5	--
	6	--
	8	--

<b>Supplementary Information:</b> If touch current measurements are not needed, indicate "N/A" in the space provided. IEC60990, sub-clause 6.2.2.7, Fault 7 not applicable. If the touch current did not exceed ES2 limits, indicate, "PASS."		
--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--	--

<b>5.7.5</b>	<b>TABLE: Earthed accessible conductive part</b>	N/A
Supply voltage .....	--	---
Earthed neutral conductor [Voltage differences less	--	---



than 1% or more]..... :		
Specify method used for measurement as described in IEC60990, sub-clause 4.3 .....	--	—
Earthed accessible conductive part	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	--
	2*	--
	3	--
	4	--
	5	--
	6	--
	8	--
Supplementary Information: IEC60990, sub-clause 6.2.2.7, Fault 7 not applicable. (* ) IEC60990, sub-clause 6.2.2.2 is not applicable if switch or disconnect device (e.g., appliance coupler) provided.		

8.5	<b>TABLE: Fan Blade Classification</b>		N/A
Variable	Value		
Mass, m	kg		
Fan blade radius, r	mm		
Rotational speed, N	rpm		
K factor (figure 47), K			
Classification formula	$\frac{N}{15,000} + \frac{K}{2,400} \leq 1$	$\frac{N}{22,000} + \frac{K}{3,600} \leq 1$	
Classification calculation			
Classification: MS .....			
Supplementary information:			

8.5.5.2.1	<b>TABLE: Rotating Solid Media</b>		N/A
Variable	Value		
Media thickness (mm) .....			
Total media mass, M (kg) .....			
Constant, S .....	0,250 (no deflector)	0,125 (deflector)	
Velocity, v (m/s) .....			



Media outer radius, $R_o$ (m).....:	
Force $\{F = S \times (mv^2)/R_o\}$ (N).....:	
Smallest dia of media, X (mm).....:	
Test Result.....:	
Supplementary information:	

8.5.5.2.2	<b>TABLE: High Pressure Lamp</b>	N/A
Description	Values	Energy Source Classification
Lamp type .....		—
Manufacturer .....		—
Cat no. ....		—
Pressure (cold) (MPa) .....		MS_
Pressure (operating) (MPa).....		MS_
Operating time (minutes).....		—
Explosion method.....		—
Max particle length escaping enclosure (mm) .:		MS_
Max particle length beyond 1 m (mm) .....		MS_
Overall result .....		
Supplementary information:		

B.2.5	TABLE: Input test						P
U (V)	I (A)	I rated (A)	P (W)	P rated (W)	Fuse No	I fuse (A)	Condition/status
240	725mA	750mA	--	--	F1	-	Maximum normal load
Supplementary information:							
Equipment may be have rated current or rated power or both. Both should be measured							

B.3 & B.4	TABLE: Abnormal operating and fault condition tests	P
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Ambient temperature (°C) .....						25.3°C		—
Power source for EUT: Manufacturer, model/type, output rating ..						--		—
Component No.	Abnormal/Fault	Supply voltage, (V)	Test time (ms)	Fuse no.	Fuse current, (A)	T-couple	Temp. (°C)	Observation
C1	Short circuit	250	1s	--	--	Unit shutdown immediately, F1 open.no hazard.	C1	Short circuit
Transformer (T1) pin 1-2	Short circuit	250	5 min	--	--	Unit shutdown immediately, no hazard.	Transformer (T1) pin 1-2	Short circuit
<p>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.</p>								



## **ANNEX A:**

### **Photo-documentation**

**Photo 1 General Appearance of the EUT**

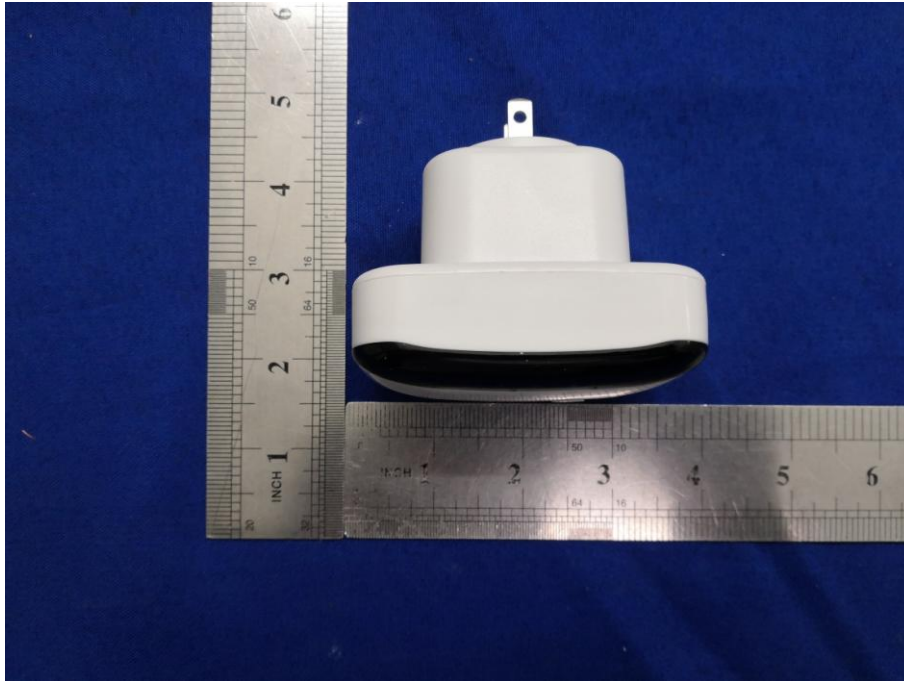


**Photo 2 General Appearance of the EUT**





**Photo 3 General Appearance of the EUT**



**Photo 4 General Appearance of the EUT**

