ZHANMEI LIGHTING APPLIANCE FACTORY

CE LVD REPORT

Prepared For :	ZHANMEI LIGHTING APPLIANCE FACTORY Building D the Third Industrial Park, Zhuyuan Xiaolan Town, Zhongshan City, Guangdong Province, China
Product Name:	POWER SUPPLY
Model :	ZE-050102A (See Annex)
Prepared By :	Shenzhen BST Technology Co., Ltd. Building No.23-24, Zhiheng Industrial Park, Guankouer Road, Nantou, Nanshan District,Shenzhen,Guangdong,China
Test Date:	Jul. 08- 18, 2016
Date of Report :	Jul. 18, 2016
Report No.:	BSTDG1607650200001SR-2

LVD Report

EN60950-1

Information technology equipment - Safety - Part 1: General requirements

Testing laboratory	:	Shenzhen BST Technology Co.,Ltd.
Address	:	Building No.23-24, Zhiheng Industrial Park, Guankouer Road, Nantou, Nanshan District,Shenzhen,Guangdong,China
Testing location	:	Shenzhen BST Technology Co.,Ltd.
Applicant	:	ZHANMEI LIGHTING APPLIANCE FACTORY
Address	:	Building D the Third Industrial Park, Zhuyuan Xiaolan Town, Zhongshan City, Guangdong Province, China
Standard	:	EN 60950-1:2006+A11:2009+A1:2010+A12:2011+A2:2013
Test Result	:	Compliance with EN60950-1:2006+A11:2009+A1:2010+A12:2011+A2:2013
Procedure deviation	:	N/A.
Non-standard test method	:	N/A.
Type of test object	:	POWER SUPPLY
Trademark	:	N/A
Model/type reference	:	ZE-050102A (See Annex)
Rating	:	Input: 220-240V~, 50/60Hz Output: DC5V,1A
Manufacturer	:	ZHANMEI LIGHTING APPLIANCE FACTORY
Address	:	Building D the Third Industrial Park, Zhuyuan Xiaolan Town, Zhongshan City, Guangdong Province, China

Test item particulars :

Equipment mobility	:	Build-in 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)

Name and address of the testing laboratory : **Shenzhen BST Technology Co.,Ltd.**
Building No.23-24, Zhiheng Industrial Park,
Guankouer Road, Nantou, Nanshan
District,Shenzhen,Guangdong,China

Test by : Janice. Li — Jul. 18, 2016
Signature — Date
Technician
Title

Review by : Apple Li — Jul. 18, 2016
Signature — Date
Project Engineer
Title

Approved by : Jul. 18, 2016
Signature — Date
Christina Deng/ Manager
Name and Title

General remarks:	
"(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.	Attached with: A. photo documentation B. General product information: General product information: The series products have the same circuit diagram, PCB layout and functionality. The differences are the model name and appearance, so, we select ZE-050102A to test.

Artwork of Marking Label

POWER SUPPLY
Model : ZE-050102A
Input: 220-240V~, 50/60Hz
Output: DC5V,1A

ZHANMEI LIGHTING APPLIANCE FACTORY

EN 60950-1			
Clause	Requirement - Test	Result - Remark	Verdict
1	GENERAL		P
1.5	Components		P
1.5.1	General		P
	Comply with IEC 60950-1 or relevant component standard	(See appended table 1.5.1)	P
1.5.2	Evaluation and testing of components	Certified components are used in accordance with their ratings, certifications and they comply with applicable parts of this standard. Components not certified are used in accordance with their ratings and they comply with applicable parts of IEC 60950-1 and the relevant component standard. Components, for which no relevant IEC-standard exists, have been tested under the conditions occurring in the equipment, using applicable parts of IEC 60950-1.	P
1.5.3	Thermal controls	No thermal controls device	N
1.5.4	Transformers	See annex C	P
1.5.5	Interconnecting cables		P
1.5.6	Capacitors bridging insulation		P
1.5.7	Resistors bridging insulation		N
1.5.7.1	Resistors bridging functional, basic or supplementary insulation		N
1.5.7.2	Resistors bridging double or reinforced insulation between a.c. mains and other circuits		N
1.5.7.3	Resistors bridging double or reinforced insulation between a.c. mains and antenna or coaxial cable		N
1.5.8	Components in equipment for IT power systems		N
1.5.9	Surge suppressors	No such components	N
1.5.9.1	General		N
1.5.9.2	Protection of VDRs		N
1.5.9.3	Bridging of functional insulation by a VDR		N
1.5.9.4	Bridging of basic insulation by a VDR		N
1.5.9.5	Bridging of supplementary, double or reinforced insulation by a VDR		N

EN 60950-1			
Clause	Requirement - Test	Result - Remark	Verdict
1.6	Power interface		P
1.6.1	AC power distribution systems	TN power distribution system	P
1.6.2	Input current	(see appended table 1.6.2)	P
1.6.3	Voltage limit of hand-held equipment	Not hand-held equipment	N
1.6.4	Neutral conductor		N
1.7	Marking and instructions		P
1.7.1	Power rating		P
	Rated voltage(s) or voltage range(s) (V)	220-240V	P
	Symbol for nature of supply, for d.c. only.....	AC supply	N
	Rated frequency or rated frequency range (Hz)	50/60Hz	P
	Rated current (mA or A)		P
	Manufacturer's name or trademark or identification mark	See marking label	P
	Model identification or type reference.....	See the label	P
	Symbol for Class II equipment only	Class II Symbol ⧈ is applied to the label.	P
	Other markings and symbols	Other symbols do not give rise to misunderstanding.	P
1.7.2	Safety instructions and marking		P
1.7.2.1	General		P
1.7.2.2	Disconnect devices		P
1.7.2.3	Overcurrent protective device		N
1.7.2.4	IT power distribution systems		N
1.7.2.5	Operator access with a tool		N
1.7.2.6	Ozone		N
1.7.3	Short duty cycles	Continuous operation	N
1.7.4	Supply voltage adjustment	No voltage adjustment	N
	Methods and means of adjustment; reference to installation instructions.....		N
1.7.5	Power outlets on the equipment	No standard power outlets	N
1.7.6	Fuse identification (marking, special fusing characteristics, cross-reference		P
1.7.7	Wiring terminals		P

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Clause	Requirement - Test	Result - Remark	Verdict

1.7.7.1	Protective earthing and bonding terminals	Class II equipment.	N
1.7.7.2	Terminals for a.c. mains supply conductors		P
1.7.7.3	Terminals for d.c. mains supply conductors		N
1.7.8	Controls and indicators		P
1.7.8.1	Identification, location and marking	The markings and indication of controls and indicators are located that indication of function is clearly.	P
1.7.8.2	Colours ……:	No safety related indicator used.	N
1.7.8.3	Symbols according to IEC 60417 ……:		N
1.7.8.4	Markings using figures ……..:		N
1.7.9	Isolation of multiple power sources ……:	No multiple power sources	N
1.7.10	Thermostats and other regulating devices ...:		N
1.7.11	Durability		P
1.7.12	Removable parts		N
1.7.13	Replaceable batteries	No batteries	N
	Language		N
1.7.14	Equipment for restricted access locations		N

2	PROTECTION FROM HAZARDS		P
2.1	Protection from electric shock and energy hazards		P
2.1.1	Protection in operator access areas		P
2.1.1.1	Access to energized parts		P
	Test by inspection	All accessible circuits are SELV circuits	P
	Test with test finger (Figure 2A) ……:		P
	Test with test pin (Figure 2B) ……..:		P
	Test with test probe (Figure 2C) ……:	No TNV	N
2.1.1.2	Battery compartments ……..:	No battery compartments	N
2.1.1.3	Access to ELV wiring		N
	Working voltage (V); minimum distance (mm) through insulation		N
2.1.1.4	Access to hazardous voltage circuit wiring		N
2.1.1.5	Energy hazards ……:		N
2.1.1.6	Manual controls		N
2.1.1.7	Discharge of capacitors in equipment		N

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Clause	Requirement - Test	Result - Remark	Verdict
	Time-constant (s); measured voltage (V) ….:		N
2.1.1.8	Energy hazards – d.c. mains supply		N
	a) Capacitor connected to the d.c. mains supply ……..……:		N
	b) Internal battery connected to the d.c. mains supply……..….:		N
2.1.1.9	Audio amplifiers ……:		N
2.1.2	Protection in service access areas	No bare parts operating at hazardous voltages in a service access area.	N
2.1.3	Protection in restricted access locations	The unit is not limited to be used in restricted access locations.	N
2.2	SELV circuits		P
2.2.1	General requirements		P
2.2.2	Voltages under normal conditions (V).....	<42.4Vp or 60V d.c.	P
2.2.3	Voltages under fault conditions (V).....	<42.4Vp or 60V d.c.	P
2.2.4	Connection of SELV circuits to other circuits...	Connect to SELV circuit only	P
2.3	TNV circuits		N
2.3.1	Limits	No TNV circuits	N
	Type of TNV circuits.....		N
2.3.2	Separation from other circuits and from accessible parts		N
2.3.2.1	General requirements		N
2.3.2.2	Protection by basic insulation		N
2.3.2.3	Protection by earthing		N
2.3.2.4	Protection by other constructions.....		N
2.3.3	Separation from hazardous voltages		N
	Insulation employed		N
2.3.4	Connection of TNV circuits to other circuits		N
	Insulation employed		N
2.3.5	Test for operating voltages generated externally		N
2.4	Limited current circuits		P
2.4.1	General requirements		P
2.4.2	Limit values	0.7mA (peak value) or 2mA(dc)	P

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Clause	Requirement - Test	Result - Remark	Verdict

	Frequency (Hz)	＜1KHz	--
	Measured current (mA)	0.04mA	--
	Measured voltage (V).....	＜450V Peak	--
	Measured circuit capacitance (nF or μF)	＜0.1uF	--
2.4.3	Connection of limited current circuits to other circuits	Meet with 2.4.2	P

2.5	Limited power sources		P
	a) Inherently limited output		P
	b) Impedance limited output		N
	c) Regulating network limited output under normal operating and single fault condition	Maximum output current less than 8A	P
	d) Overcurrent protective device limited output	--	N
	Max. output voltage (V), max. output current (A), max. apparent power (VA)	--	N
	Current rating of overcurrent protective device (A)	--	N

2.6	Provisions for earthing and bonding		N
2.6.1	Protective earthing	Class II equipment.	N
2.6.2	Functional earthing		N
2.6.3	Protective earthing and protective bonding conductors		N
2.6.3.1	General		N
2.6.3.2	Size of protective earthing conductors		N
	Rated current (A), cross-sectional area (mm^2), AWG		—
2.6.3.3	Size of protective bonding conductors		N
	Rated current (A), cross-sectional area (mm^2), AWG		—
2.6.3.4	Resistance of earthing conductors and their terminations, resistance (Ω), voltage drop (V), test current (A), duration (min)		N
2.6.3.5	Colour of insulation		N
2.6.4	Terminals		N
2.6.4.1	General		N
2.6.4.2	Protective earthing and bonding terminals		N

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Clause	Requirement - Test	Result - Remark	Verdict

	Rated current (A), type, nominal thread diameter (mm).....		N
2.6.4.3	Separation of the protective earthing conductor from protective bonding conductors		N
2.6.5	Integrity of protective earthing		N
2.6.5.1	Interconnection of equipment		N
2.6.5.2	Components in protective earthing conductors and protective bonding conductors		N
2.6.5.3	Disconnection of protective earth		N
2.6.5.4	Parts that can be removed by an operator		N
2.6.5.5	Parts removed during servicing		N
2.6.5.6	Corrosion resistance		N
2.6.5.7	Screws for protective bonding		N
2.6.5.8	Reliance on telecommunication network or cable distribution system		N

2.7	Overcurrent and earth fault protection in primary circuits		P
2.7.1	Basic requirements		P
	Instructions when protection relies on building installation		N
2.7.2	Faults not simulated in 5.3.		P
2.7.3	Short-circuit backup protection	By building installation	P
2.7.4	Number and location of protective devices	Fuse “FS1” is located in Line.	P
2.7.5	Protection by several devices		P
2.7.6	Warning to service personnel	Not intended for any service or repair.	N

2.8	Safety interlocks		N
2.8.1	General principles	No safety interlocks	N
2.8.2	Protection requirements		N
2.8.3	Inadvertent reactivation		N
2.8.4	Fail-safe operation		N
2.8.5	Moving parts		N
2.8.6	Overriding		N
2.8.7	Switches and relays		N

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Clause	Requirement - Test	Result - Remark	Verdict
2.8.7.1	Contact gaps (mm)		N
2.8.7.2	Overload test		N
2.8.7.3	Endurance test		N
2.8.7.4	Electric strength test		N
2.8.8	Mechanical actuators		N
2.9	Electrical insulation		P
2.9.1	Properties of insulating materials		P
2.9.2	Humidity conditioning	48Hours	P
	Relative humidity (%), temperature (°C) …..:	94%RH, 30℃	P
2.9.3	Grade of insulation	The adequate levels of safety insulation is provided and maintained to comply with the requirements of this standard.	P
2.9.4	Separation from hazardous voltages		P
	Method(s) used ……..……:	Method 1	P
2.10	Clearances, creepage distances and distances through insulation		P
2.10.1	General		P
2.10.1.1	Frequency……..……:		P
2.10.1.2	Pollution degrees……..……:	Pollution Degree 2	P
2.10.1.3	Reduced values for functional insulation		N
2.10.1.4	Intervening unconnected conductive parts		N
2.10.1.5	Insulation with varying dimensions		N
2.10.1.6	Special separation requirements		N
2.10.1.7	Insulation in circuits generating starting pulses		N
2.10.2	Determination of working voltage	(See appended table 2.10.3 and 2.10.4)	P
2.10.2.1	General	(See appended table 2.10.3 and 2.10.4)	P
2.10.2.2	RMS working voltage		N
2.10.2.3	Peak working voltage		P
2.10.3	Clearances		P
2.10.3.1	General		P
2.10.3.2	Mains transient voltages		P

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Clause	Requirement - Test	Result - Remark	Verdict
	a) AC mains supply ……..……:		P
	b) Earthed d.c. mains supplies ……..……:		N
	c) Unearthed d.c. mains supplies ……...:		N
	d) Battery operation ……..……:		N
2.10.3.3	Clearances in primary circuits	(see appended table 2.10.3 and 2.10.4)	P
2.10.3.4	Clearances in secondary circuits		N
2.10.3.5	Clearances in circuits having starting pulses		N
2.10.3.6	Transients from a.c. mains supply ……....:	2500Vp	P
2.10.3.7	Transients from d.c. mains supply ……..:		N
2.10.3.8	Transients from telecommunication networks and cable distribution systems ……..:		N
2.10.3.9	Measurement of transient voltage levels		N
	a) Transients from a mains supply		N
	For an a.c. mains supply ……..……:		N
	For a d.c. mains supply ……..…..:		N
	b) Transients from a telecommunication network		N
2.10.4	Creepage distances		P
2.10.4.1	General		P
2.10.4.2	Material group and comparative tracking index		P
	CTI tests ……...:	Material group IIIb are assumed to be used	P
2.10.4.3	Minimum creepage distances	(see appended table 2.10.3 and 2.10.4)	P
2.10.5	Solid insulation		P
2.10.5.1	General		P
2.10.5.2	Distances through insulation		N
2.10.5.3	Insulating compound as solid insulation		N
2.10.5.4	Semiconductor devices		N
2.10.5.5	Cemented joints		N
2.10.5.6	Thin sheet material - General		P
2.10.5.7	Separable thin sheet material	Insulating tapes on the transformer.	P
	Number of layers (pcs).....	Three layers	P
2.10.5.8	Non-separable thin sheet material		N

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Clause	Requirement - Test	Result - Remark	Verdict
2.10.5.9	Thin sheet material – standard test procedure		N
	Electric strength test		N
2.10.5.10	Thin sheet material – alternative test procedure		P
	Electric strength test	(see appended table 2.10.5)	P
2.10.5.11	Insulation in wound components		P
2.10.5.12	Wire in wound components	Use with triple insulation wire.	P
	Working voltage ……:		P
	a) Basic insulation not under stress ……..:		N
	b) Basic, supplementary, reinforced insulation ……:	Reinforced insulation	P
	c) Compliance with Annex U ……..:		N
	Two wires in contact inside wound components; angle between 45° and 90° …:		N
2.10.5.13	Wire with solvent-based enamel in wound components		N
	Electric strength test		N
	Routine test		N
2.10.5.14	Additional insulation in wound components		N
	Working voltage ……:		N
	- Basic insulation not under stress ……..:		N
	- Supplementary, reinforced insulation ……..:		N
2.10.6	Construction of printed boards		P
2.10.6.1	Uncoated printed boards	(see appended table 2.10.3 and 2.10.4)	P
2.10.6.2	Coated printed boards		N
2.10.6.3	Insulation between conductors on the same inner surface of a printed board		N
2.10.6.4	Insulation between conductors on different layers of a printed board		N
	Distance through insulation		N
	Number of insulation layers (pcs) ……..:		N
2.10.7	Component external terminations		N
2.10.8	Tests on coated printed boards and coated components		N
2.10.8.1	Sample preparation and preliminary inspection		N

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Clause	Requirement - Test	Result - Remark	Verdict
2.10.8.2	Thermal conditioning		N
2.10.8.3	Electric strength test		N
2.10.8.4	Abrasion resistance test		N
2.10.9	Thermal cycling		N
2.10.10	Test for Pollution Degree 1 environment and insulating compound		N
2.10.11	Tests for semiconductor devices and cemented joints		N
2.10.12	Enclosed and sealed parts:	No enclosed or hermetically sealed components.	N
3	WIRING, CONNECTIONS AND SUPPLY		P
3.1	General		P
3.1.1	Current rating and overcurrent protection		P
3.1.2	Protection against mechanical damage		P
3.1.3	Securing of internal wiring		P
3.1.4	Insulation of conductors		P
3.1.5	Beads and ceramic insulators		N
3.1.6	Screws for electrical contact pressure		N
3.1.7	Insulating materials in electrical connections		N
3.1.8	Self-tapping and spaced thread screws		N
3.1.9	Termination of conductors		P
	10 N pull test		P
3.1.10	Sleeving on wiring		N
3.2	Connection to a mains supply		P
3.2.1	Means of connection ……:	Direct plug-in equipment.	P
3.2.1.1	Connection to an a.c. mains supply		P
3.2.1.2	Connection to a d.c. mains supply	The equipment is not for connection to a d.c. mains supply.	N
3.2.2	Multiple supply connections	Only one supply connection.	N
3.2.3	Permanently connected equipment	The equipment is not intended for permanent connection to the mains.	N
	Number of conductors, diameter of cable and conduits (mm) ……...:		N
3.2.4	Appliance inlets		N
3.2.5	Power supply cords		P

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Clause	Requirement - Test	Result - Remark	Verdict
3.2.5.1	AC power supply cords		P
	Type ……..:		N
	Rated current (A), cross-sectional area (mm^2), AWG ……..:		N
3.2.5.2	DC power supply cords		N
3.2.6	Cord anchorages and strain relief		N
	Mass of equipment (kg), pull (N) ……..:		N
	Longitudinal displacement (mm) ……..:		N
3.2.7	Protection against mechanical damage		N
3.2.8	Cord guards		N
	Diameter or minor dimension D (mm); test mass (g) ……..:		N
	Radius of curvature of cord (mm) ……..:		N
3.2.9	Supply wiring space		N
3.3	Wiring terminals for connection of external conductors		N
3.3.1	Wiring terminals		N
3.3.2	Connection of non-detachable power supply cords		N
3.3.3	Screw terminals		N
3.3.4	Conductor sizes to be connected		N
	Rated current (A), cord/cable type, cross-sectional area (mm^2) ……..:		N
3.3.5	Wiring terminal sizes		N
	Rated current (A), type, nominal thread diameter (mm) ……...:		N
3.3.6	Wiring terminals design		N
3.3.7	Grouping of wiring terminals		N
3.3.8	Stranded wire		N

3.4	Disconnection from the mains supply		P
3.4.1	General requirement		P
3.4.2	Disconnect devices	The plug of direct plug-in equipment used as disconnect device.	P
3.4.3	Permanently connected equipment	Not permanently connected equipment.	N
3.4.4	Parts which remain energized		N

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Clause	Requirement - Test	Result - Remark	Verdict
3.4.5	Switches in flexible cords		N
3.4.6	Number of poles – single-phase and d.c. equipment	The disconnect device disconnects both poles simultaneously.	P
3.4.7	Number of poles – three-phase equipment	Single-phase equipment	N
3.4.8	Switches as disconnect devices		N
3.4.9	Plugs as disconnect devices		N
3.4.10	Interconnected equipment		N
3.4.11	Multiple power sources	One power source only.	N
3.5	Interconnection of equipment		N
3.5.1	General requirements		N
3.5.2	Types of interconnection circuits.....		N
3.5.3	ELV circuits as interconnection circuits		N
3.5.4	Data ports for additional equipment		N
4	PHYSICAL REQUIREMENTS		P
4.1	Stability		N
	Angle of 10°		N
	Test force (N) ……..:		N
4.2	Mechanical strength		P
4.2.1	General		P
4.2.2	Steady force test, 10 N		P
4.2.3	Steady force test, 30 N		N
4.2.4	Steady force test, 250 N		P
4.2.5	Impact test		N
	Fall test		N
	Swing test		N
4.2.6	Drop test; height (mm) ……..:	No damage after 1m drop.	P
4.2.7	Stress relief test	70 °C/7h	P
4.2.8	Cathode ray tubes		N
	Picture tube separately certified ……..:		N
4.2.9	High pressure lamps	No such component.	N
4.2.10	Wall or ceiling mounted equipment; force (N) ……:		N

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Clause	Requirement - Test	Result - Remark	Verdict

4.3	Design and construction		P
4.3.1	Edges and corners	Smooth	P
4.3.2	Handles and manual controls; force (N) ……:		N
4.3.3	Adjustable controls		N
4.3.4	Securing of parts		N
4.3.5	Connection by plugs and sockets		N
4.3.6	Direct plug-in equipment	Yes	P
	Torque(Nm)……	0,06Nm.	P
	Compliance with the relevant mains plug standard ……..:	See 12.1, 12.2, 12.3, 12.9, 12.11, 12.16 and 12.17	N
4.3.7	Heating elements in earthed equipment		N
4.3.8	Batteries	Without batteries	N
	- Overcharging of a rechargeable battery		N
	- Unintentional charging of a non-rechargeable battery		N
	- Reverse charging of a rechargeable battery		N
	- Excessive discharging rate for any battery		N
4.3.9	Oil and grease		N
4.3.10	Dust, powders, liquids and gases		N
4.3.11	Containers for liquids or gases		N
4.3.12	Flammable liquids ……:		N
	Quantity of liquid (l) ……..:		N
	Flash point (°C) ……:		--
4.3.13	Radiation ……:		N
4.3.13.1	General		N
4.3.13.2	Ionizing radiation		N
	Measured radiation (pA/kg) ……:		--
	Measured high-voltage (kV) ……..:		--
	Measured focus voltage (kV) ……:		--
	CRT markings ……:		--
4.3.13.3	Effect of ultraviolet (UV) radiation on materials		N
	Part, property, retention after test, flammability classification ……:		N
4.3.13.4	Human exposure to ultraviolet (UV) radiation ……..:		--

EN 60950-1			
Clause	Requirement - Test	Result - Remark	Verdict
4.3.13.5	Laser (including LEDs)	LED	P
	Laser class ……:		--
4.3.13.6	Other types ……:	The equipment does not generate other type of radiation.	N
4.4	Protection against hazardous moving parts		N
4.4.1	General	No hazardous moving parts	N
4.4.2	Protection in operator access areas		N
4.4.3	Protection in restricted access locations		N
4.4.4	Protection in service access areas		N
4.5	Thermal requirements		P
4.5.1	General		P
4.5.2	Temperature tests	(see appended table 4.5)	P
	Normal load condition per Annex L ……:		P
4.5.3	Temperature limits for materials	(see appended table 4.5)	P
4.5.4	Touch temperature limits	(see appended table 4.5)	P
4.5.5	Resistance to abnormal heat ……..:	(see appended table 4.5.5)	P
4.6	Openings in enclosures		N
4.6.1	Top and side openings		N
	Dimensions (mm) ……..:		N
4.6.2	Bottoms of fire enclosures		N
	Construction of the bottom, dimensions (mm) …….. ……..:		N
4.6.3	Doors or covers in fire enclosures		N
4.6.4	Openings in transportable equipment		N
4.6.4.1	Constructional design measures		N
	Dimensions (mm) ……..:		N
4.6.4.2	Evaluation measures for larger openings		N
4.6.4.3	Use of metallized parts		N
4.6.5	Adhesives for constructional purposes		N
	Conditioning temperature (°C), time (weeks) ……...:		N
4.7	Resistance to fire		P

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Clause	Requirement - Test	Result - Remark	Verdict
4.7.1	Reducing the risk of ignition and spread of flame		P
	Method 1, selection and application of components wiring and materials	Materials with suitable flammability classification are used.	P
	Method 2, application of all of simulated fault condition tests		N
4.7.2	Conditions for a fire enclosure		P
4.7.2.1	Parts requiring a fire enclosure	The fire enclosure is required to cover all parts.	P
4.7.2.2	Parts not requiring a fire enclosure		N
4.7.3	Materials		P
4.7.3.1	General		P
4.7.3.2	Materials for fire enclosures		P
4.7.3.3	Materials for components and other parts outside fire enclosures		P
4.7.3.4	Materials for components and other parts inside fire enclosures		P
4.7.3.5	Materials for air filter assemblies	No air filters provided.	N
4.7.3.6	Materials used in high-voltage components		N
5	ELECTRICAL REQUIREMENTS AND SIMULATED ABNORMAL CONDITIONS		P
5.1	Touch current and protective conductor current		P
5.1.1	General		P
5.1.2	Configuration of equipment under test (EUT)		P
5.1.2.1	Single connection to an a.c. mains supply		P
5.1.2.2	Redundant multiple connections to an a.c. mains supply		N
5.1.2.3	Simultaneous multiple connections to an a.c. mains supply		N
5.1.3	Test circuit	Test circuit as in Figure 5A is used.	P
5.1.4	Application of measuring instrument	Measuring instrument as in Annex D	P
5.1.5	Test procedure		P
5.1.6	Test measurements		P
	Supply voltage (V) ……...:	264V	--
	Measured touch current (mA) ……:	0,05mA	--
	Max. allowed touch current (mA) ……:	0,25 mA	--
	Measured protective conductor current (mA) ……:		--

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Clause	Requirement - Test	Result - Remark	Verdict

	Max. allowed protective conductor current (mA) ……:		--
5.1.7	Equipment with touch current exceeding 3.5 mA		N
5.1.7.1	General ……...:		N
5.1.7.2	Simultaneous multiple connections to the supply		N
5.1.8	Touch currents to telecommunication networks and cable distribution systems and from telecommunication networks		N
5.1.8.1	Limitation of the touch current to a telecommunication network or to a cable distribution system		N
	Supply voltage (V) ……:		--
	Measured touch current (mA) ……..:		--
	Max. allowed touch current (mA) ……:		--
5.1.8.2	Summation of touch currents from telecommunication networks		N
	a) EUT with earthed telecommunication ports ……:		N
	b) EUT whose telecommunication ports have no reference to protective earth		N

5.2	Electric strength		P
5.2.1	General		P
5.2.2	Test procedure	(see appended table 5.2)	P

5.3	Abnormal operating and fault conditions		P
5.3.1	Protection against overload and abnormal operation	(see appended table 5.3)	P
5.3.2	Motors	No motors	N
5.3.3	Transformers	Transformer constructed in accordance with the applicable Clause and Annex C.	P
5.3.4	Functional insulation ……..:	Complies with a) and c).	P
5.3.5	Electromechanical components	No electromechanical component provided.	P
5.3.6	Audio amplifiers in ITE ……..:		N
5.3.7	Simulation of faults	Results see appended table 5.3.	P

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Clause	Requirement - Test	Result - Remark	Verdict
5.3.8	Unattended equipment	The equipment does not have any thermostats, temperature limiters, or thermal cut-outs.	N
5.3.9	Compliance criteria for abnormal operating and fault conditions	No flames emitted, no molten material emitted and no hazards.	P
5.3.9.1	During the tests		P
5.3.9.2	After the tests		P
6	CONNECTION TO TELECOMMUNICATION NETWORKS		N
6.1	Protection of telecommunication network service persons, and users of other equipment connected to the network, from hazards in the equipment		N
6.1.1	Protection from hazardous voltages		N
6.1.2	Separation of the telecommunication network from earth		N
6.1.2.1	Requirements		N
	Supply voltage (V) ……:		N
	Current in the test circuit (mA) ……..:		N
6.1.2.2	Exclusions ……..:		N
6.2	Protection of equipment users from over voltages on telecommunication networks		N
6.2.1	Separation requirements		N
6.2.2	Electric strength test procedure		N
6.2.2.1	Impulse test		N
6.2.2.2	Steady-state test		N
6.2.2.3	Compliance criteria		N
6.3	Protection of the telecommunication wiring system from overheating		N
	Max. output current (A) ……:		N
	Current limiting method ……:		N
7	CONNECTION TO CABLE DISTRIBUTION SYSTEMS		N
7.1	General		N
7.2	Protection of cable distribution system service persons, and users of other equipment connected to the system, from hazardous voltages in the equipment		N
7.3	Protection of equipment users from overvoltages on the cable distribution system		N

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Clause	Requirement - Test	Result - Remark	Verdict

7.4	Insulation between primary circuits and cable distribution systems		N
7.4.1	General		N
7.4.2	Voltage surge test		N
7.4.3	Impulse test		N

A	ANNEX A, TESTS FOR RESISTANCE TO HEAT AND FIRE		N
A.1	Flammability test for fire enclosures of movable equipment having a total mass exceeding 18 kg, and of stationary equipment (see 4.7.3.2)		N
A.1.1	Samples ……..:		N
	Wall thickness (mm) ……..:		N
A.1.2	Conditioning of samples; temperature (°C) ..:		N
A.1.3	Mounting of samples ……..:		N
A.1.4	Test flame (see IEC 60695-11-3)		N
	Flame A, B, C or D ……..:		N
A.1.5	Test procedure		N
A.1.6	Compliance criteria		N
	Sample 1 burning time (s) ……...:		N
	Sample 2 burning time (s) ……...:		N
	Sample 3 burning time (s) ……...:		N
A.2	Flammability test for fire enclosures of movable equipment having a total mass not exceeding 18 kg, and for material and components located inside fire enclosures (see 4.7.3.2 and 4.7.3.4)		N
A.2.1	Samples, material ……..:		N
	Wall thickness (mm) ……..:		N
A.2.2	Conditioning of samples; temperature (^{o}C) ..:		N
A.2.3	Mounting of samples ……..:		N
A.2.4	Test flame (see IEC 60695-11-4)		N
	Flame A, B or C ……..:		N
A.2.5	Test procedure		N
A.2.6	Compliance criteria		N
	Sample 1 burning time (s) ……...:		N
	Sample 2 burning time (s) ……...:		N
	Sample 3 burning time (s) ……...:		N
A.2.7	Alternative test acc. to IEC 60695-11-5, cl. 5 and 9		N

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Clause	Requirement - Test	Result - Remark	Verdict

	Sample 1 burning time (s) ……...:		N
	Sample 2 burning time (s) ……...:		N
	Sample 3 burning time (s) ……...:		N
A.3	Hot flaming oil test (see 4.6.2)		N
A.3.1	Mounting of samples		N
A.3.2	Test procedure		N
A.3.3	Compliance criterion		N

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Clause	Requirement - Test	Result - Remark	Verdict

B	ANNEX B, MOTOR TESTS UNDER ABNORMAL CONDITIONS (see 4.7.2.2 and 5.3.2)		N
B.1	General requirements		N
	Position ……..:		N
	Manufacturer ……..:		N
	Type ……..:		N
	Rated values ……..:		N
B.2	Test conditions		N
B.3	Maximum temperatures		N
B.4	Running overload test		N
B.5	Locked-rotor overload test		N
	Test duration (days) ……..:		N
	Electric strength test: test voltage (V) ……:		N
B.6	Running overload test for d.c. motors in secondary circuits		N
B.6.1	General		N
B.6.2	Test procedure		N
B.6.3	Alternative test procedure		N
B.6.4	Electric strength test; test voltage (V) ……:		N
B.7	Locked-rotor overload test for d.c. motors in secondary circuits		N
B.7.1	General		N
B.7.2	Test procedure		N
B.7.3	Alternative test procedure		N
B.7.4	Electric strength test; test voltage (V) ……:		N
B.8	Test for motors with capacitors		N
B.9	Test for three-phase motors		N
B.10	Test for series motors		N
	Operating voltage (V) ……...:		N

C	ANNEX C, TRANSFORMERS (see 1.5.4 and 5.3.3)		P
	Position ……...:	TR1	--
	Manufacturer ……..:	See transformer specification for details.	--
	Type ……..:	See transformer specification for details.	--

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Clause	Requirement - Test	Result - Remark	Verdict

	Rated values ……..:	See transformer specification for details.	--
	Method of protection …….:	Inherently	--
C.1	Overload test	(see appended table 5.3)	P
C.2	Insulation		P
	Protection from displacement of windings …:	Bobbin and tapes	P

D	ANNEX D, MEASURING INSTRUMENTS FOR TOUCH-CURRENT TESTS (see 5.1.4)		P
D.1	Measuring instrument		P
D.2	Alternative measuring instrument		N
E	ANNEX E, TEMPERATURE RISE OF A WINDING (see 1.4.13)		N

F	ANNEX F, MEASUREMENT OF CLEARANCES AND CREEPAGE DISTANCES (see 2.10 and Annex G)		P

G	ANNEX G, ALTERNATIVE METHOD FOR DETERMINING MINIMUM CLEARANCES		N
G.1	Clearances		N
G.1.1	General		N
G.1.2	Summary of the procedure for determining minimum clearances		N
G.2	Determination of mains transient voltage (V)		N
G.2.1	AC mains supply ……...:		N
G.2.2	Earthed d.c. mains supplies ……:		N
G.2.3	Unearthed d.c. mains supplies ……..…:		N
G.2.4	Battery operation ……...:		N
G.3	Determination of telecommunication network transient voltage (V) ……..:		N
G.4	Determination of required withstand voltage (V) ……:		N
G.4.1	Mains transients and internal repetitive peaks ……..:		N
G.4.2	Transients from telecommunication networks ……..:		N
G.4.3	Combination of transients		N
G.4.4	Transients from cable distribution systems		N

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Clause	Requirement - Test	Result - Remark	Verdict

G.5	Measurement of transient voltages (V)		N
	a) Transients from a mains supply		N
	For an a.c. mains supply		N
	For a d.c. mains supply		N
	b) Transients from a telecommunication network		N
G.6	Determination of minimum clearances ……..:		N

H	ANNEX H, IONIZING RADIATION (see 4.3.13)		N
J	ANNEX J, TABLE OF ELECTROCHEMICAL POTENTIALS (see 2.6.5.6)		N
	Metal(s) used		N
K	ANNEX K, THERMAL CONTROLS (see 1.5.3 and 5.3.8)		N
K.1	Making and breaking capacity		N
K.2	Thermostat reliability; operating voltage (V) ……:		N
K.3	Thermostat endurance test; operating voltage (V) ……:		N
K.4	Temperature limiter endurance; operating voltage (V) ……:		N
K.5	Thermal cut-out reliability		N
K.6	Stability of operation		N
L	ANNEX L, NORMAL LOAD CONDITIONS FOR SOME TYPES OF ELECTRICAL BUSINESS EQUIPMENT (see 1.2.2.1 and 4.5.1)		P
L.1	Typewriters		N
L.2	Adding machines and cash registers		N
L.3	Erasers		N
L.4	Pencil sharpeners		N
L.5	Duplicators and copy machines		N
L.6	Motor-operated files		N
L.7	Other business equipment		P

M	ANNEX M, CRITERIA FOR TELEPHONE RINGING SIGNALS (see 2.3.1)		N
M.1	Introduction		N
M.2	Method A		N
M.3	Method B		N
M.3.1	Ringing signal		N

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Clause	Requirement - Test	Result - Remark	Verdict

M.3.1.1	Frequency (Hz) ……..:		N
M.3.1.2	Voltage (V) .....:		N
M.3.1.3	Cadence; time (s), voltage (V) ……:		N
M.3.1.4	Single fault current (mA) ……..:		N
M.3.2	Tripping device and monitoring voltage ……:		N
M.3.2.1	Conditions for use of a tripping device or a monitoring voltage		N
M.3.2.2	Tripping device		N
M.3.2.3	Monitoring voltage (V) .....:		N
N	ANNEX N, IMPULSE TEST GENERATORS (see 1.5.7.2, 1.5.7.3, 2.10.3.9, 6.2.2.1, 7.3.2, 7.4.3 and Clause G.5)		N
N.1	ITU-T impulse test generators		N
N.2	IEC 60065 impulse test generator		N

Q	ANNEX Q, Voltage dependent resistors (VDRs) (see 1.5.9.1)		N
	a) Preferred climatic categories .....:		N
	b) Maximum continuous voltage ……..:		N
	c) Pulse current ……..:		N

R	ANNEX R, EXAMPLES OF REQUIREMENTS FOR QUALITY CONTROL PROGRAMMES		N
R.1	Minimum separation distances for unpopulated coated printed boards (see 2.10.6.2)		N
R.2	Reduced clearances (see 2.10.3)		N

S	ANNEX S, PROCEDURE FOR IMPULSE TESTING (see 6.2.2.3)		N
S.1	Test equipment		N
S.2	Test procedure		N
S.3	Examples of waveforms during impulse testing		N

T	ANNEX T, GUIDANCE ON PROTECTION AGAINST INGRESS OF WATER (see 1.1.2)		N
		See separate test report	N
U	ANNEX U, INSULATED WINDING WIRES FOR USE WITHOUT INTERLEAVED INSULATION (see 2.10.5.4)		P

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		See separate test report	P
V	ANNEX V, AC POWER DISTRIBUTION SYSTEMS (see 1.6.1)		P
V.1	Introduction		P
V.2	TN power distribution systems		N
W	ANNEX W, SUMMATION OF TOUCH CURRENTS		N
W.1	Touch current from electronic circuits		N
W.1.1	Floating circuits		N
W.1.2	Earthed circuits		N
W.2	Interconnection of several equipments		N
W.2.1	Isolation		N
W.2.2	Common return, isolated from earth		N
W.2.3	Common return, connected to protective earth		N
X	ANNEX X, MAXIMUM HEATING EFFECT IN TRANSFORMER TESTS (see clause C.1)		P
X.1	Determination of maximum input current		N
X.2	Overload test procedure		P
Y	ANNEX Y, ULTRAVIOLET LIGHT CONDITIONING TEST (see 4.3.13.3)		N
Y.1	Test apparatus ……..:		N
Y.2	Mounting of test samples ……..:		N
Y.3	Carbon-arc light-exposure apparatus ……:		N
Y.4	Xenon-arc light exposure apparatus ……..:		N
Z	ANNEX Z, OVERVOLTAGE CATEGORIES (see 2.10.3.2 and Clause G.2)		P
AA	ANNEX AA, MANDREL TEST (see 2.10.5.8)		N
BB	ANNEX BB, CHANGES IN THE SECOND EDITION		P

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Contents	Add the following annexes: Annex ZA (normative) Normative references to international publications with their corresponding European publications Annex ZB (normative) Special national conditions Annex ZC (informative) A-deviations	P
General	Delete all the “country” notes in the reference document according to the following list: 1.4.8 Note 2; 1.5.1 Note 2 & 3; 1.5.7.1 Note 1.5.8 Note 2; 1.5.9.4 Note; 1.7.2.1 Note 4, 5 & 6 2.2.3 Note; 2.2.4 Note; 2.3.2 Note 2.3.2.1 Note 2; 2.3.4 Note 2; 2.6.3.3 Note 2 & 3 2.7.1 Note; 2.10.3.2 Note 2; 2.10.5.13 Note 3 3.2.1.1 Note; 3.2.4 Note 3.; 2.5.1 Note 2 4.3.6 Note 1 & 2; 4.7 Note 4; 4.7.2.2 Note 4.7.3.1 Note 2; 5.1.7.1 Note 3 & 4; 5.3.7 Note 1 6 Note 2 & 5; 6.1.2.1 Note 2; 6.1.2.2 Note 6.2.2 Note 6.; 2.2.1 Note 2; 6.2.2.2 Note 7.1 Note 3; 7.2 Note; 7.3 Note 1 & 2 G.2.1 Note 2; Annex H Note 2	P
1.3.Z1	Add the following subclause: 1.3.Z1 Exposure to excessive sound pressure The apparatus shall be so designed and constructed as to present no danger when used for its intended purpose, either in normal operating conditions or under fault conditions, particularly providing protection against exposure to excessive sound pressures from headphones or earphones. NOTE Z1 A new method of measurement is described in EN 50332-1, Sound system equipment: Headphones and earphones associated with portable audio equipment - Maximum sound pressure level measurement methodology and limit considerations - Part 1: General method for “one package equipment”, and in EN 50332-2, Sound system equipment: Headphones and earphones associated with portable audio equipment - Maximum sound pressure level measurement methodology and limit considerations - Part 2: Guidelines to associate sets with headphones coming from different manufacturers.	N
1.5.1	Add the following NOTE: NOTE Z1 The use of certain substances in electrical and electronic equipment is restricted within the EU: see Directive 2002/95/EC	P
1.7.2.1	Add the following NOTE: NOTE Z1 In addition, the instructions shall include, as far as applicable, a warning that excessive sound pressure from earphones and headphones can cause hearing loss	N

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2.7.1	Replace the subclause as follows: Basic requirements To protect against excessive current, short-circuits and earth faults in PRIMARY CIRCUITS, protective devices shall be included either as integral parts of the equipment or as parts of the building installation, subject to the following, a), b) and c): a) except as detailed in b) and c), protective devices necessary to comply with the requirements of 5.3 shall be included as parts of the equipment; b) for components in series with the mains input to the equipment such as the supply cord, appliance coupler, r.f.i. filter and switch, short-circuit and earth fault protection may be provided by protective devices in the building installation; c) it is permitted for PLUGGABLE EQUIPMENT TYPE B or PERMANENTLY CONNECTED EQUIPMENT, to rely on dedicated overcurrent and short-circuit protection in the building installation, provided that the means of 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 instructions shall so state, except that for PLUGGABLE EQUIPMENT TYPE A the building installation shall be regarded as providing protection in accordance with the rating of the wall socket outlet.	P
2.7.2	This subclause has been declared 'void'.	N
3.2.3	Delete the NOTE in Table 3A, and delete also in this table the conduit sizes in parentheses.	N
3.2.5.1	Replace "60245 IEC 53" by "H05 RR-F"; "60227 IEC 52" by "H03 VV-F or H03 VVH2-F"; "60227 IEC 53" by "H05 VV-F or H05 VVH2-F2". In Table 3B, replace the first four lines by the following: | Up to and including 6 | | 0,75 [a)] | | Over 6 up to and including 10 | (0,75) [b)] 1,0 | | Over 10 up to and including 16 | (1,0) [c)] 1,5 | In the conditions applicable to Table 3B delete the words "in some countries" in condition [a)]. In NOTE 1, applicable to Table 3B, delete the second sentence.	N
3.3.4	In Table 3D, delete the fourth line: conductor sizes for 10 to 13 A, and replace with the following: | Over 10 up to and including 16 | 1,5 to 2,5 | 1,5 to 4 | Delete the fifth line: conductor sizes for 13 to 16 A.	N
4.3.13.6	Add the following NOTE: NOTE Z1 Attention is drawn to 1999/519/EC: Council Recommendation on the limitation of exposure of the general public to electromagnetic fields 0 Hz to 300 GHz. Standards taking into account this Recommendation which demonstrate compliance with the applicable EU Directive are indicated in the OJEC.	N

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Annex H	Replace the last paragraph of this annex by: At any point 10 cm from the surface of the OPERATOR ACCESS AREA, the dose rate shall not exceed 1 µSv/h (0,1 mR/h) (see NOTE). Account is taken of the background level. Replace the notes as follows: NOTE These values appear in Directive 96/29/Euratom. Delete NOTE 2.	N
Biblio-graphy	Additional EN standards.	—

ZA	NORMATIVE REFERENCES TO INTERNATIONAL PUBLICATIONS WITH THEIR CORRESPONDING EUROPEAN PUBLICATIONS	—

ZB	SPECIAL NATIONAL CONDITIONS	N
1.2.4.1	In **Denmark**, certain types of Class I appliances (see 3.2.1.1) may be provided with a plug not establishing earthing conditions when inserted into Danish socket-outlets.	N
1.5.7.1	In **Finland**, **Norway** and **Sweden**, resistors bridging BASIC INSULATION in CLASS I PLUGGABLE EQUIPMENT TYPE A must comply with the requirements in 1.5.7.2.	N
1.5.8	In **Norway**, due to the IT power system used (see annex V, Figure V.7), capacitors are required to be rated for the applicable line-to-line voltage (230 V).	N
1.5.9.4	In **Finland**, **Norway** and **Sweden**, the third dashed sentence is applicable only to equipment as defined in 6.1.2.2 of this annex.	N
1.7.2.1	In **Finland**, **Norway** and **Sweden**, CLASS I PLUGGABLE EQUIPMENT TYPE A intended for connection to other equipment or a network shall, if safety relies on connection to protective earth or if surge suppressors are connected between the network terminals and accessible parts, have a marking stating that the equipment must be connected to an earthed mains socket-outlet. The marking text in the applicable countries shall be as follows: In Finland: "Laite on liitettävä suojamaadoituskoskettimilla varustettuun pistorasiaan" In Norway: “Apparatet må tilkoples jordet stikkontakt” In Sweden: “Apparaten skall anslutas till jordat uttag”	N
1.7.5	In **Denmark**, socket-outlets for providing power to other equipment shall be in accordance with the Heavy Current Regulations, Section 107-2-D1, Standard Sheet DK 1-3a, DK 1-5a or DK 1-7a, when used on Class I equipment. For STATIONARY EQUIPMENT the socket-outlet shall be in accordance with Standard Sheet DK 1-1b or DK 1-5a.	N
2.2.4	In **Norway**, for requirements see 1.7.2.1, 6.1.2.1 and 6.1.2.2 of this annex.	N
2.3.2	In **Finland**, **Norway** and **Sweden** there are additional requirements for the insulation. See 6.1.2.1 and 6.1.2.2 of this annex.	N
2.3.4	In **Norway**, for requirements see 1.7.2.1, 6.1.2.1 and 6.1.2.2 of this annex.	N

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2.6.3.3	In the **United Kingdom**, the current rating of the circuit shall be taken as 13 A, not 16 A.	N
2.7.1	In the **United Kingdom**, to protect against excessive currents and short-circuits in the PRIMARY CIRCUIT of DIRECT PLUG-IN EQUIPMENT, tests according to 5.3 shall be conducted, using an external protective device rated 30 A or 32 A. If these tests fail, suitable protective devices shall be included as integral parts of the DIRECT PLUG-IN EQUIPMENT, so that the requirements of 5.3 are met.	N
2.10.5.13	In **Finland**, **Norway** and **Sweden**, there are additional requirements for the insulation, see 6.1.2.1 and 6.1.2.2 of this annex.	N
3.2.1.1	In **Switzerland**, supply cords of equipment having a RATED CURRENT not exceeding 10 A shall be provided with a plug complying with SEV 1011 or IEC 60884-1 and one of the following dimension sheets: SEV 6532-2.1991 Plug Type 15 3P+N+PE 250/400 V, 10 A SEV 6533-2.1991 Plug Type 11 L+N 250 V, 10 A SEV 6534-2.1991 Plug Type 12 L+N+PE 250 V, 10 A In general, EN 60309 applies for plugs for currents exceeding 10 A. However, a 16 A plug and socket-outlet system is being introduced in Switzerland, the plugs of which are according to the following dimension sheets, published in February 1998: SEV 5932-2.1998 Plug Type 25 3L+N+PE 230/400 V, 16 A SEV 5933-2.1998 Plug Type 21 L+N 250 V, 16 A SEV 5934-2.1998 Plug Type 23 L+N+PE 250 V, 16 A	N
3.2.1.1	In **Denmark**, supply cords of single-phase equipment having a rated current not exceeding13 A shall be provided with a plug according to the Heavy Current Regulations, Section 107-2-D1. 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 poly-phase equipment and single-phase equipment having a RATED CURRENT exceeding 13 A is provided with a supply cord with a plug, this plug shall be in accordance with the Heavy Current Regulations, Section 107-2-D1 or EN 60309-2.	N
3.2.1.1	In **Spain**, supply cords of single-phase equipment having a rated current not exceeding 10 A shall be provided with a plug according to UNE 20315:1994. Supply cords of single-phase equipment having a rated current not exceeding 2,5 A shall be provided with a plug according to UNE-EN 50075:1993. 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 UNE 20315:1994. If poly-phase equipment is provided with a supply cord with a plug, this plug shall be in accordance with UNE-EN 60309-2.	N

EN 60950-1			
Clause	Requirement - Test	Result - Remark	Verdict

3.2.1.1	In the **United Kingdom**, apparatus 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 and plug, shall be fitted with a 'standard plug' in accordance with Statutory Instrument 1768:1994 - The Plugs and Sockets etc. (Safety) Regulations 1994, unless exempted by those regulations. NOTE 'Standard plug' is defined in SI 1768:1994 and essentially means an approved plug conforming to BS 1363 or an approved conversion plug.	N
3.2.1.1	In **Ireland**, apparatus which is fitted with a flexible cable or cord and is designed to be connected to a mains socket conforming to I.S. 411 by means of that flexible cable or cord and plug, shall be fitted with a 13 A plug in accordance with Statutory Instrument 525:1997 - National Standards Authority of Ireland (section 28) (13 A Plugs and Conversion Adaptors for Domestic Use) Regulations 1997.	N
3.2.4	In **Switzerland**, for requirements see 3.2.1.1 of this annex.	N
3.2.5.1	In the **United Kingdom**, a power supply cord with conductor of 1,25 mm2 is allowed for equipment with a rated current over 10 A and up to and including 13 A.	N
3.3.4	In the **United Kingdom**, the range of conductor sizes of flexible cords to be accepted by terminals for equipment with a RATED CURRENT of over 10 A up to and including 13 A is: • 1,25 mm^2 to 1,5 mm^2 nominal cross-sectional area.	N
4.3.6	In the **United Kingdom**, the torque test is performed using a socket outlet complying with BS 1363 part 1:1995, including Amendment 1:1997 and Amendment 2:2003 and the plug part of DIRECT PLUG-IN EQUIPMENT shall be assessed to BS 1363: Part 1, 12.1, 12.2, 12.3, 12.9, 12.11, 12.12, 12.13, 12.16 and 12.17, except that the test of 12.17 is performed at not less than 125 °C. Where the metal earth pin is replaced by an Insulated Shutter Opening Device (ISOD), the requirements of clauses 22.2 and 23 also apply.	N
4.3.6	In **Ireland**, DIRECT PLUG-IN EQUIPMENT is known as plug similar devices. Such devices shall comply with Statutory Instrument 526:1997 - National Standards Authority of Ireland (Section 28) (Electrical plugs, plug similar devices and sockets for domestic use) Regulations, 1997.	N
5.1.7.1	In **Finland**, **Norway** and **Sweden** TOUCH CURRENT measurement results exceeding 3,5 mA r.m.s. are permitted only for the following equipment: • STATIONARY PLUGGABLE EQUIPMENT TYPE A that ○ is intended to be used in a RESTRICTED ACCESS LOCATION where equipotential bonding has been applied, for example, in a telecommunication centre; and ○ has provision for a permanently connected PROTECTIVE EARTHING CONDUCTOR; and ○ is provided with instructions for the installation of that conductor by a SERVICE PERSON; • STATIONARY PLUGGABLE EQUIPMENT TYPE B; • STATIONARY PERMANENTLY CONNECTED EQUIPMENT.	N

EN 60950-1			
Clause	Requirement - Test	Result - Remark	Verdict

6.1.2.1	In **Finland**, **Norway** and **Sweden**, add the following text between the first and second paragraph of the compliance clause: If this insulation is solid, including insulation forming part of a component, it shall at least consist of either - two layers of thin sheet material, each of which shall pass the electric strength test below, or - one layer having a distance through insulation of at least 0,4 mm, which shall pass the electric strength test below. 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 and CREEPAGE DISTANCES do not exist, if the component passes the electric strength test in accordance with the compliance clause below and in addition - passes the tests and inspection criteria of 2.10.11 with an electric strength test of 1,5 kV multiplied by 1,6 (the electric strength test of 2.10.10 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 kV. It is permitted to bridge this insulation with a capacitor complying with EN 132400:1994, subclass Y2. A capacitor classified Y3 according to EN 132400:1994, may bridge this insulation under the following conditions: - the insulation requirements are satisfied by having a capacitor classified Y3 as defined by EN 132400, which in addition to the Y3 testing, is tested with an impulse test of 2,5 kV defined in EN 60950-1:2006, 6.2.2.1; - the additional testing shall be performed on all the test specimens as described in EN 132400; - the impulse test of 2,5 kV is to be performed before the endurance test in EN 132400, in the sequence of tests as described in EN 132400.	N
6.1.2.2	In **Finland**, **Norway** and **Sweden**, the exclusions are applicable for PERMANENTLY CONNECTED EQUIPMENT, PLUGGABLE EQUIPMENT TYPE B and equipment intended to be used in a RESTRICTED ACCESS LOCATION where equipotential bonding has been applied, e.g. in a telecommunication centre, and which has provision for a permanently connected PROTECTIVE EARTHING CONDUCTOR and is provided with instructions for the installation of that conductor by a SERVICE PERSON.	N
7.2	In **Finland**, **Norway** and **Sweden**, for requirements see 6.1.2.1 and 6.1.2.2 of this annex. The term TELECOMMUNICATION NETWORK in 6.1.2 being replaced by the term CABLE DISTRIBUTION SYSTEM.	N
7.3	In **Norway** and **Sweden**, there are many buildings where the screen of the coaxial cable is normally not connected to the earth in the building installation.	N
7.3	In **Norway**, for installation conditions see EN 60728-11:2005.	N

EN 60950-1			
Clause	Requirement - Test	Result - Remark	Verdict

ZC	A-DEVIATIONS (informative)	P
1.5.1	**Sweden** (Ordinance 1990:944) Add the following: NOTE In Sweden, switches containing mercury are not permitted.	N
1.5.1	**Switzerland** (Ordinance on environmentally hazardous substances SR 814.081, Annex 1.7, Mercury - Annex 1.7 of SR 814.81 applies for mercury.) Add the following: NOTE In Switzerland, switches containing mercury such as thermostats, relays and level controllers are not allowed.	N
1.7.2.1	**Denmark** (Heavy Current Regulations) Supply cords of CLASS I EQUIPMENT, which is delivered without a plug, must be provided with a visible tag with the following text: Vigtigt! Lederen med grøn/gul isolation må kun tilsluttes en klemme mærket  eller  If essential for the safety of the equipment, the tag must in addition be provided with a diagram, which shows the connection of the other conductors, or be provided with the following text: “For tilslutning af de øvrige ledere, se medfølgende installationsvejledning.”	N
1.7.2.1	**Germany** (Gesetz über technische Arbeitsmittel und Verbraucherprodukte (Geräte- und Produktsicherheitsgesetz – GPSG) [Law on technical labour equipment and consumer products], of 6th January 2004, Section 2, Article 4, Clause (4), Item 2). If for the assurance of safety and health certain rules during use, amending or maintenance of a technical labour equipment or readymade consumer product are to be followed, a manual in German language has to be delivered when placing the product on the market. Of this requirement, rules for use even only by SERVICE PERSONS are not exempted.	N
1.7.5	**Denmark** (Heavy Current Regulations) With the exception of CLASS II EQUIPMENT provided with a socket outlet in accordance with the Heavy Current Regulations, Section 107-2-D1, Standard Sheet DK 1-4a, CLASS II EQUIPMENT shall not be fitted with socket-outlets for providing power to other equipment.	N
1.7.13	**Switzerland** (Ordinance on chemical hazardous risk reduction SR 814.81, Annex 2.15 Batteries) Annex 2.15 of SR 814.81 applies for batteries.	N
5.1.7.1	**Denmark** (Heavy Current Regulations, Chapter 707, clause 707.4) TOUCH CURRENT measurement results exceeding 3,5 mA r.m.s. are permitted only for PERMANENTLY CONNECTED EQUIPMENT and PLUGGABLE EQUIPMENT TYPE B.	N

EN 60950-1			
Clause	Requirement - Test	Result - Remark	Verdict
1	Plug portion		--
	CEE 7 Standard Sheet		N
	EN 50075		N
2	Dimensions		--
	Checking dimensions by measuring and by gauges according to Standard sheet		N
	The edges of the metal-pins, Chamfered or rounded off?	Rounded-off	N
3	Protection against electric shock		--
a	Test finger (75N, 1 min in 35℃) or Applicable appliance standard		N
b	Single pole insertion. Checked with gauge:Fig 4 or C19A or C19B (CEE 7)		N
c	Compression test 150 N, 5 min.		N
d	External parts made of insulating material		N
4	Construction		--
a	Test on pins which are not solid		N
b	Pins shall be locked against rotation 0.4 Nm 1 min.		N
c	Pins shall be adequately fixed in the body 1 min. Temperature 70℃ 40 N for plugs≤2.5 A 50 N for plugs ＞2.5 A	40N	N
d	Pins of copper or copper alloy min 58% copper or equivalent	58% copper	N
e	Plug shall not impose undue strain on fixed socket-outlets, 0.25 Nm		N
f	Abrasion test on the insulating sleeves 20 000 movements		N
5	Resistance of insulating material to abnormal heat, to fire and to tracking		--
a	Compression test 1 h in 80℃		N
b	Glow-wire test 750℃		N
c	Resistance to tracking 175V (other than ordinary)		N

EN 60950-1			
Clause	Requirement - Test	Result - Remark	Verdict
12.1	Dimensions (Checked according to figure 4)		N
12.2	Outline of plug shall not exceed the dimension shown in Figure 4a) for a distance of not less than 6.35mm from the engagement surface		N
	Pin disposition, length and body outline shall be checked by use of the gauge shown in Figure 5		N
12.3	L/N pin was more than 9.5mm from the periphery of the plug measured along the engagement surface		N
12.4	A fuse link complying with BS 1362:1973		N
12.5	For non-rewireable plugs, the fuse link is retained by means of a fuse carrier, this device shall be either: - non-detachable during normal replacement of the fuse-link; - readily identifiable in relation to its plug by means of marking.		N
12.6	The base and cover of non-rewireable plugs shall be permanently attached to each other, such that the flexible cord cannot be separated without making the plug permanently useless.		N
12.7	After the test in clause 16. Use test probe 11 of BS 3042:1992 is applied a force 30N. During and after the test, it was not possible to touch the live parts.		N
12.8	Appliance was complied with clause 15.2.		N
12.9	Plug pins shall be constructed of brass.		N
	Plug pins and ISODs complied with 12.9.1.		N
	For non-solid plug shall comply with 12.9.2.		N
	All seams and joints of non-solid plug pins shall be closed over their entire length.		N
	For solid pins: Apply a force of 1100N at a rate not exceeding 10mm/min. After this test the plug was fit the gauge to fig.5.		N
	For ISODs: Apply a force of 400 + 10/0N at a rate 10+/-2mm/min. Deflection not exceeds 1.5mm. After this test the plug was fit the gauge to fig.5.		N

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Clause	Requirement - Test	Result - Remark	Verdict

	Plug pins and ISODs shall have adequate mechanical strength to ensure that they cannot be distorted by twisting. Apply a torque 1 Nm±10% for 60s. After each pin has been separately twisted, the plug was fit the gauge in fig. 5. Repeated with opposite direction.		N
12.10	Terminals of earthing and neutral plug pin shall be formed as one piece with or shall be permanently connected to the pin in such a way that efficient electrical connection is made that cannot work loose in use. This connection shall not be made by means of a screw.		N
12.11	Plug shall be so designed that when fully assembled the pins are adequately retained in position such that there is no likelihood of them becoming detached from the plug during normal use.		N
	Each pin is subjected for 60s to a pull of 100N without jerks in the direction of the major axis. The plug is mounted using the steel plate shown in fig.7. The apparatus is placed within an oven and the pull is applied at least 1 h after the plug body has attained the test temperature of 70°C±5°C while maintained at this temperature. After the test, the plug pin shall fit into the gauge and comply with 12.2.1.		N
12.12	The degree of flexibility of mounting of the plug pins or the angular movement of the pins in the base shall be not greater than 3°30'. See fig.8.		N
	Test procedure refers to standard. During each test, the declination from the horizontal measured on the scale was not exceed 3°30' and comply with 12.2.1.		N
12.13	Suitable means shall be provided for withdrawing the plug without subjecting the flexible cord to stress.		N
12.14	Non-rewirable plugs shall be fitted with flexible cords in accordance with 19.4.		N
12.15	Conductive component parts of plugs shall be so located and separated that, in normal use, they cannot be displaced so as to affect adversely the safety or proper operation of the plug.		N

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Clause	Requirement - Test	Result - Remark	Verdict

12.16	Live and neutral plug pins shall be fitted with insulating sleeves. See fig.4. Sleeves shall not be fitted to any earthing plug pin.		N
12.17	Plug pin sleeves shall have adequate electric strength, resistance to abrasion and resistance to deformation due to overheating of pins.		N
	During the test of sub-clause 12.17.2, no breakdown or flashover occurred.		N
	12.17.3 (abrasion test – 10 000 times in each direction), 20 000 movements at a rate of 25 movements to 30 movements per min. (fig.9). After the test, the sleeve shall show no damage and also shall not have been penetrated or creased.		N
	12.17.4 (pressure test at high temperature) (fig.10) Pin on the apparatus with a force of 2.5N on the specimen, then placed in a heating cabinet at 200°C for a period of 120 minutes. The thickness of the insulation remaining at the point of impression is measured and shall not have been reduced by more than 50%.		N

1.6.2	TABLE: electrical data (in normal conditions)					P
fuse #	Irated (mA)	U (V)	P (W)	I (A)	Ifuse (A)	condition/status
F1	--	220V/50Hz	4.7	0.08	--	Max normal load operation
F1	--	2200V/60Hz	4.7	0.08	--	Max normal load operation
F1	--	240V/50Hz	5.3	0.11	--	Max normal load operation
F1	--	240V/60Hz	5.3	0.11	--	Max normal load operation
F1	--	264V/50Hz	4.9	0.10	--	Max normal load operation
F1	--	264V/60Hz	4.9	0.10	--	Max normal load operation
Supplementary information: Rating input: 220-240Vac, 50/60Hz						

2.10.3 and 2.10.4	TABLE: clearance and creepage distance measurements					P
clearance (cl) and creepage distance (cr) at/of/between:	U peak (V)	U r.m.s. (V)	required cl (mm)	cl (mm)	required cr (mm)	cr (mm)
Two terminals of F1	0	0	2.0	>2.0	2.5	>2.5
Primary traces of T1 to secondary trace (Pin1-Pin5)	300	212	4.0	>4.0	4.5	>4.5
Primary traces of T1 to secondary trace (Pin1-Pin6)	301	213	4.0	>4.0	4.5	>4.5

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Clause	Requirement - Test	Result - Remark	Verdict

clearance (cl) and creepage distance (cr) at/of/between:	U peak (V)	U r.m.s. (V)	required cl (mm)	cl (mm)	required cr (mm)	cr (mm)
Primary traces of T1 to secondary trace (Pin2-Pin5)	322	228	4.0	>4.0	4.7	>4.7
Primary traces of T1 to secondary trace (Pin2-Pin6)	320	226	4.0	>4.0	4.7	>4.7
Primary traces of T1 to secondary trace (Pin3-Pin5)	294	208	4.0	>4.0	4.5	>4.5
Primary traces of T1 to secondary trace (Pin3-Pin6)	296	209	4.0	>4.0	4.5	>4.5
Primary traces of T1 to secondary trace (Pin4-Pin5)	294	208	4.0	>4.0	4.5	>4.5
Primary traces of T1 to secondary trace (Pin4-Pin6)	294	208	4.0	>4.0	4.5	>4.5
Supplementary information:						

2.10.5	TABLE: distance through insulation measurements	P

distance through insulation (DTI) at/of:	U peak (V)	U rms (V)	test voltage (V)	required DTI (mm)	DTI (mm)
Bobbin of transformer T1	332	235	3000Vac	0.4	0.8
Supplementary information:					

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Clause	Requirement - Test	Result - Remark	Verdict

4.3.8	TABLE: batteries								N
The tests of 4.3.8 are applicable only when appropriate battery data is not available				--					--
Is it possible to install the battery in a reverse polarity position?				--					--
	Non-rechargeable batteries			Rechargeable batteries					
	Discharging		Un-intentional charging	Charging		Discharging		Reversed charging	
	Meas. current	Manuf. Specs.		Meas. current	Manuf. Specs.	Meas. current	Manuf. Specs.	Meas. current	Manuf. Specs.
Max. current during normal condition	--	--	--	--	--	--	--	--	--
Max. current during fault condition	--	--	--	--	--	--	--	--	--
Test results:									Verdict
- Chemical leaks						--			--
- Explosion of the battery						--			--
- Emission of flame or expulsion of molten metal						--			--
- Electric strength tests of equipment after completion of tests						--			--
Supplementary information:									

4.5	TABLE: thermal requirements						P
	supply voltage (V) ..... :	198V/50Hz		264V/50Hz		--	—
	ambient Tmin (°C) ..... :	See below	--	See below	--	--	—
	ambient Tmax (°C) ..... :	See below	--	See below	--	--	—

Maximum measured temperature T of part/at:	T (°C)					allowed T_{max} (°C)
Test condition: horizontal location						
Capacitor	39.6		40.8		--	105
Fuse	42.6		44.3		--	105
PCB under T1	486		50.7		---	130
Winding of T1	62.8		63.5		--	130

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Clause	Requirement - Test	Result - Remark	Verdict

Maximum measured temperature T of part/at:	T (°C)					allowed T_{max} (°C)
Ambient	25.6		25.6		--	--

temperature T of winding:	t_1 (°C)	R_1 (Ω)	t_2 (°C)	R_2 (Ω)	T (°C)	allowed T_{max} (°C)	insulation class
--	--	--	--	--	--	--	--

4.5.5	TABLE: ball pressure test of thermoplastic parts		P
	allowed impression diameter (mm) .....:	≤2mm	—

part	test temperature (°C)	impression diameter (mm)
PCB	125	0.6
Supplementary information:		

5.2	TABLE: electric strength tests, impulse tests and voltage surge tests			P
test voltage applied between:		voltage shape (AC, DC, impulse, surge)	test voltage (V)	breakdown Yes / No
Live parts to accessible plastic enclosure with metal foil.		AC	3000	No
Live parts to output terminal		AC	3000	No
Transformer: primary and secondary pins		AC	3000	No
One layer insulation tape of transformer		AC	3000	No
supplementary information				

5.3	TABLE: fault condition tests		P
	ambient temperature (°C) .....:	See below	—
	power source for EUT: manufacturer, model/type, output rating .....:	--	—

component No.	fault	supply voltage (V)	test time	fuse No.	fuse current (A)	Observation
Transformer (T1) pin 1-2	Short circuit	264	5 min	--	0.022→0	Unit shutdown immediately, no hazard.
Transformer output	Overload	264	40min	--	0.096→0.036 → 0	Maximum temperature of T1 winding: 78.7°C, enclosure outside: 56.8°C, ambient: 25.4°C, no damage, no hazard.

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Clause	Requirement - Test	Result - Remark	Verdict

component No.	fault	supply voltage (V)	test time	fuse No.	fuse current (A)	Observation
Supplementary information:						

Annex: component list					
object/part No.	manufacturer/ trademark	type/model	technical data	standard	mark(s) of conformity
Fuse	Various	Various	250V	--	VDE
capacitor	Various	Various	400V~	--	VDE
Transformer	Various	Various	Class B, 130°C	--	Test with appliance
PCB	Various	Various	V-1 130°C	--	UL

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Clause	Requirement - Test	Result - Remark	Verdict

ANNEX A

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Differences according to .....:EN 60950-1:2006/A11:2009/A1:2010/A12:2011			
Clause	Requirements + Test	Result-Remark	Verdict
Contents	Add the following annexes: Annex ZA (normative) Normative references to international Publications with their corresponding European Publications Annex ZB (normative) Special national conditions		P
General	Delete all the country notes in the reference document (IEC 60950-1:2005) according to the following list: 1.4.8 Note 2 1.5.1 Note 2 & 3 1.5.7.1 Note 1.5.8 Note 2 1.5.9.4 Note 1.7.2.1 Note 4, 5 & 6 2.2.3 Note 2.2.4 Note 2.3.2 Note 2.3.2.1 Note 2 2.3.4 Note 2 2.6.3.3 Note 2 & 3 2.7.1 Note 2.10.3.2 Note 2 2.10.5.13 Note 3 3.2.1.1 Note 3.2.4 Note 3. 2.5.1 Note 2 4.3.6 Note 1 & 2 4.7 Note 4 4.7.2.2 Note 4.7.3.1Note 2 5.1.7.1 Note 3 & 4 5.3.7 Note 1 6 Note 2 & 5 6.1.2.1 Note 2 6.1.2.2 Note 6.2.2 Note 6.2.2.1 Note 2 6.2.2.2 Note 7.1 Note 3 7.2 Note 7.3 Note 1 & 2 G.2.1 Note 2 Annex H Note 2		P
General (A1:2010)	Delete all the country notes in the reference documents (IEC 60850-1:2005/A1:2010) according to the following list: 1.5.7.1 Note 6.1.2.1 Note 2 6.2.2.1 Note2 EE.3 Note		P

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirements + Test	Result-Remark	Verdict
1.3.Z1	Add the following subclause: 1.3.Z1 Exposure to excessive sound pressure The apparatus shall be so designed and constructed as to present no danger when used for its intended purpose, either in normal operating conditions or under fault conditions, particularly providing protection against exposure to excessive sound pressures from headphones or earphones.		N
1.7.2.1 (A1:2010)	In addition , for a portable sound system , the instructions shall include a warning that excessive sound pressure from earphone and headphone can cause hearing loss.		N
1.7.2.1 (A12:2011)	In EN 60950-1:2006/A12:2011 Delete Note Z1 and the addition for portable sound System.		N

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Clause	Requirement - Test	Result - Remark	Verdict

	Add the following clause and annex to the existing Standard and amendments. **ZX Protection against excessive sound pressure from personal music player**		
	ZX.1 General A personal music player is portable equipment for personal use , that: -is designed to allow the user to listen to recorded or broadcast sound or video; and -primarily uses headphones or earphones that can be worn in or on or around while in use. A personal music player and earphone or headphones intended to be used with personal music player shall comply with the requirements of this sub-clause. The requirements in this sub-clause are valid for music or video mode only.		N
	For equipment which is clearly designed or intended for use by young children, the limits of EN 71-1 apply.		N
	Zx.2 Equipment requirements No safety provision is required for equipment that complies with the following: -equipment provided as a package (personal music player with its listening device),where the acoustic output LAeq,T is ≤ 85 dBA measured while playing the fixed programme simulate noise as described in En 50332-1; and -a personal music player provided with an analogue electrical output socket for listening device, where the electrical output is ≦27mV measured as		N
IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirements + Test	Result-Remark	Verdict
	Described in EN 50332-1. All other equipment shall: a) protect the user from unintentional acoustic outputs exceeding those mentioned above; and b) have a standard acoustic output level not exceeding those mentioned above, and c) Provide a means to actively inform the user of the increased sound pressure when the equipment is operated with an acoustic output exceeding those mentioned above. Any means used shall be acknowledged by the user before activating a mode of operation which allows for an acoustic output		N

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Clause	Requirement - Test	Result - Remark	Verdict

	exceeding those mentioned above. The acknowledged does not need to be repeated more than once every 20h of cumulative listening time. d) have a waring as specified in Zx.3;and e) not exceed the following: 1)equipment provided as package (player with its listening device),the acoustic output shall be ⩽ 100 dBA measured while playing the fixed "programme simulation noise" described in EN 50332-1; and 2) a personal music player provided with an analogue electrical output socket for a listening device, the electrical output shall be ⩽150 mV measured as described in EN 50332-2, while playing the fixed "programme simulation noise" described in EN 50332-1.		
	Zx.3 Warning The warning shall be placed on the equipment, or on the packaging, or in the instruction manual and shall consist of the following: the symbol of Figure 1 with a minimum height of 5 mm; and the following wording, or similar: "To prevent possible hearing damage, do not listen at high volume levels for long periods."  **Figure 1 – Warning label (IEC 60417-6044)**	The waring was showed in user manual with words former.	N

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirements + Test	Result-Remark	Verdict
	Alternatively, the entire warning may be given through the equipment display during use, when the user is asked to acknowledge activation of the higher level.		
	Zx.4 Requirements for listening devices (headphones and earphones)	No earphone with the equipment.	N
	Zx.4.1 Wired listening devices with analogue input With 94 dBA sound pressure output LAeq,T, the input voltage of the fixed "programme simulation		N

EN 60950-1			
Clause	Requirement - Test	Result - Remark	Verdict
	noise" described in EN 50332-2 shall be ⩾75 mV. This requirement is applicable in any mode where the headphones can operate (active or passive), including any available setting (for example built-in volume level control).		
	Zx.4.2 Wired listening devices with digital Input With any playing device playing the fixed "programme simulation noise" described in EN 50332-1 (and respecting the digital interface standards, where a digital interface standard exists that specifies the equivalent acoustic level), the acoustic output LAeq,T of the listening device shall be ⩽100 dBA.		N
	Zx.4.3 Wireless listening devices In wireless mode: with any playing and transmitting device playing the fixed programme simulation noise described in EN 50332-1; andrespecting the wireless transmission standards,where an air interface standard exists that specifies the equivalent acoustic level; and with volume and sound settings in the listening device (for example built-in volume level control, additional sound feature like equalization, etc.) set to the combination of positions that maximize the measured acoustic output for the abovementioned programme simulation noise, the acoustic output LAeq,T of the listening device shall be ⩽ 100 dBA.		N
	Zx.5 Measurement methods Measurements shall be made in accordance with EN 50332-1 or EN 50332-2 as applicable. Unless stated otherwise, the time interval T shall be 30 s.	The test result is 56.8	N

ANNEX A:

Photo-documentation

Photo 1 General appearance of EUT

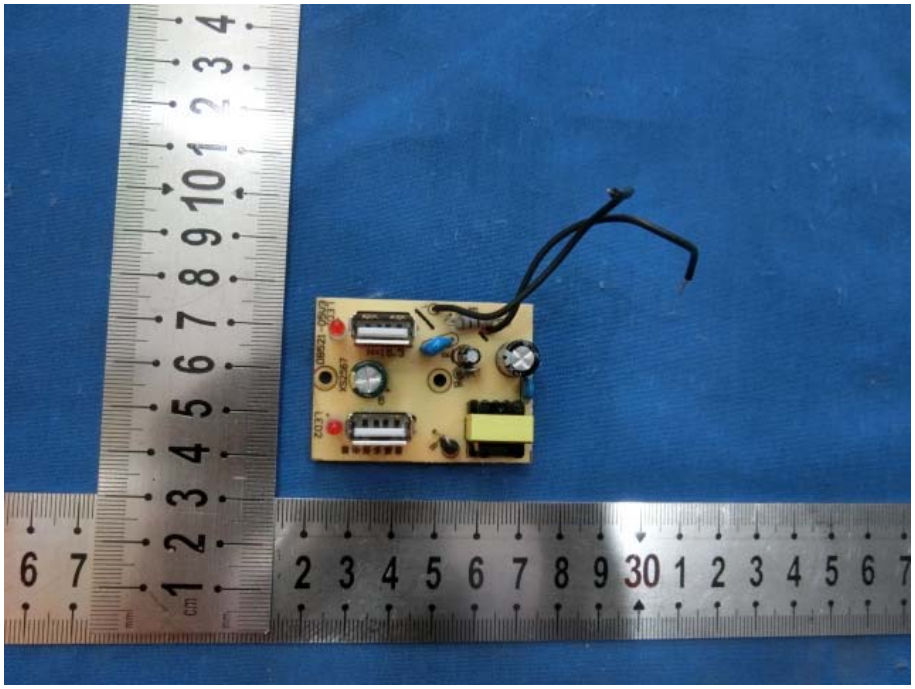

Photo 2 General appearance of EUT

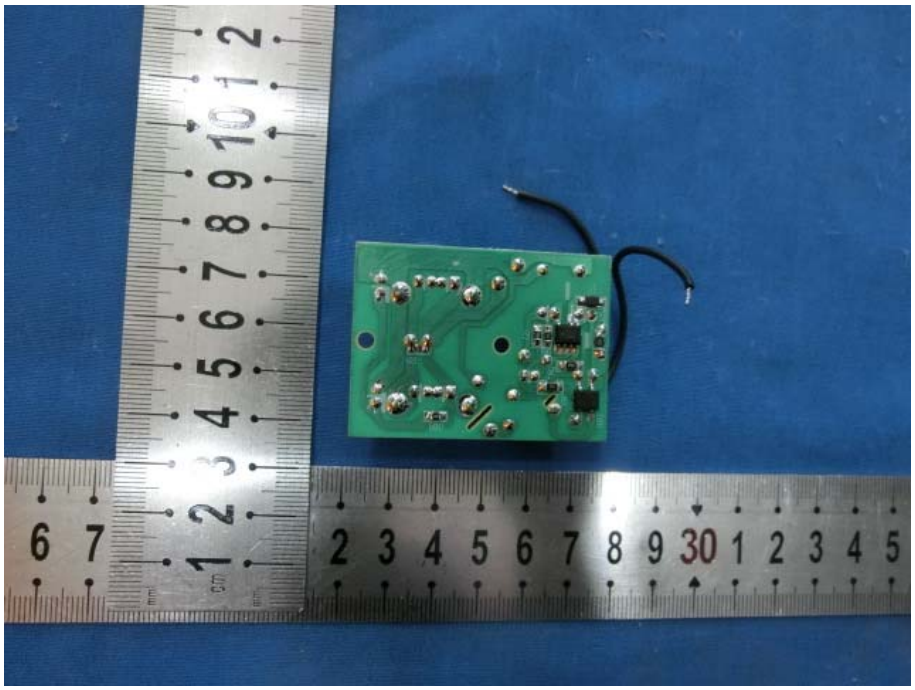

Photo 3 General appearance of EUT