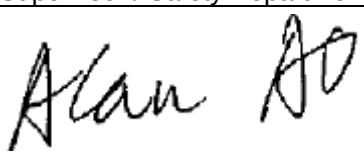
TEST REPORT

To:	TP-LINK TECHNOLOGIES CO., LTD.
Address:	Building 24 (floors1,3,4,5) and 28 (floors1-4) Central Science and Technology Park, Shennan Rd, Nanshan, Shenzhen, China

Factory name:	TP-LINK TECHNOLOGIES CO., LTD.		
Location:	Building 24 (floors1,3,4,5) and 28 (floors1-4) Central Science and Technology Park, Shennan Rd, Nanshan, Shenzhen, China	Standards used:	☒ EN 60950-1:2006 + A11: 2009 + A1: 2010 + A12: 2011 + A2: 2013 ☒ IEC 60950-1:2005 (Second Edition) + Am 1: 2009 + Am 2: 2013
 300Mbps Wireless N Ceiling Mount Acess Point Model: EAP115		Start date:	April 07, 2016
		Finish date:	May 06, 2016
		Sample No:	--
		Sections examined:	All clauses
		Re-testing:	None
		Remark / Note:	None

CONCLUSION: **The sample satisfies to the clauses examined**

Test done by Alan Alan Supervisor / Safety Department	Approved by Carter LEE Supervisor / Safety Department
	
Date: August 19, 2016	Date: August 19, 2016

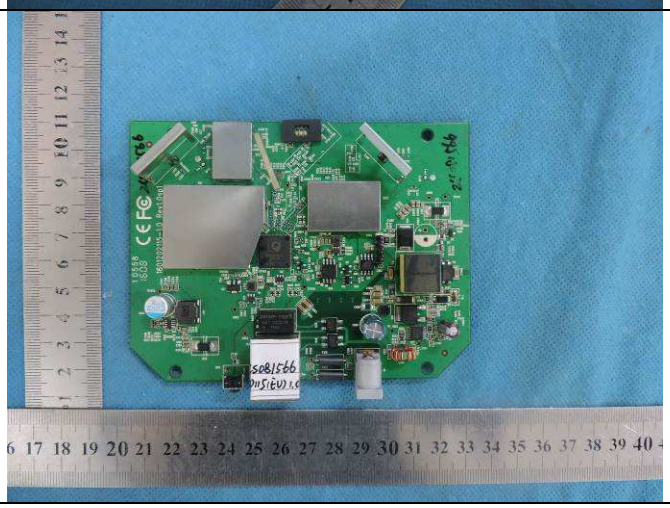
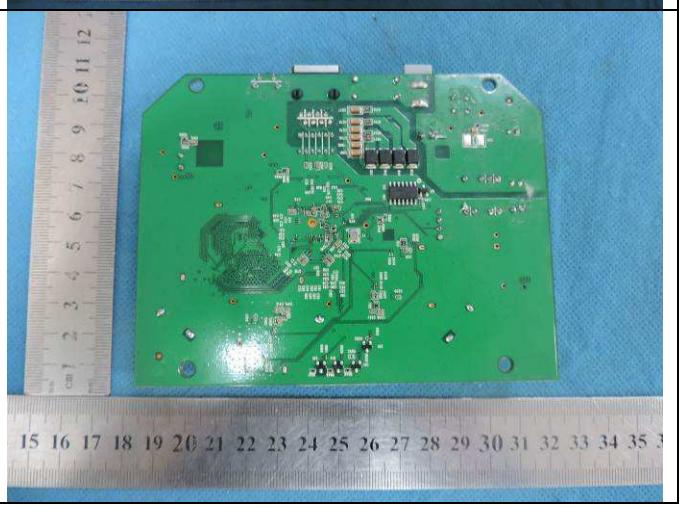
History of Remark-Note

Clause	N/A	Picture of the problem
Description of the problem:		N/A
N/A		
		N/A
Modification result:		
N/A		
Clause	N/A	Picture of the problem
Description of the problem:		N/A
N/A		
		N/A
Modification result:		
N/A		

Open View





Test item description .....:	300Mbps Wireless N Ceiling Mount Acess Point
Trade Mark .....:	TP-LINK
Manufacturer .....:	TP-LINK TECHNOLOGIES CO., LTD.
Model/Type reference.....:	EAP115
Ratings .....:	Main unit input: 12Vdc, 1.0A or 48Vdc from POE; Adaptor input: 100-240Vac, 50/60Hz, 0.3A Adaptor output: 12Vdc, 1.0A

Copy of marking plate:

Summary of testing:

The equipment under test (EUT) has been evaluated at maximum ambient (Tma) of +40°C according to the manufacturer's declaration.

All tests were measured under the worst case:

- EUT supplied by a external adaptor or POE port of indoor use apparatus in the same building, all ports and wireless fuctional were operated normally.

- Only horizontal position and vertical position was tested during 4.5.1 heating test, due to after construction review, this position was considered as the worst case for heating test.

General remarks:

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 Issuing testing laboratory.

"(see Enclosure #)" refers to additional information appended to the report.
"(see appended table)" refers to a table appended to the report.

Throughout this report a ☐ comma / ☒ point is used as the decimal separator.

General product information:

1. The equipment is "300Mbps Wireless N Ceiling Mount Acess Point" which supplied by a certified adapter with 12Vdc, 1A or a device with POE port and used as information technology equipment.
2. The equipment may ship with an external power adapter. See appended table 1.5.1 for details. And the adapters' evaluation is not covered by this test report.
3. Maximum ambient (Tma) of +40°C according to the manufacturer's declaration.

Test item particulars ..... :	
Equipment mobility ..... :	[X] movable [] hand-held [] transportable [] stationary [] for building-in [] direct plug-in
Connection to the mains ..... :	[] pluggable equipment [] type A [] type B [] permanent connection [] detachable power supply cord [] non-detachable power supply cord [X] not directly connected to the mains
Operating condition ..... :	[X] continuous [] rated operating / resting time:
Access location ..... :	[X] operator accessible [] restricted access location
Over voltage category (OVC) ..... :	[] OVC I [] OVC II [] OVC III [] OVC IV [X] other: DC power supply
Mains supply tolerance (%) or absolute mains supply values ..... :	N/A
Tested for IT power systems ..... :	[] Yes [X] No
IT testing, phase-phase voltage (V) ..... :	N/A
Class of equipment ..... :	[] Class I [] Class II [X] Class III [] Not classified
Considered current rating of protective device as part of the building installation (A) ..... :	Considered in a certified adaptor
Pollution degree (PD) ..... :	[] PD 1 [X] PD 2 [] PD 3
IP protection class ..... :	IPX0
Altitude during operation (m) ..... :	Below 2000 m
Altitude of test laboratory (m) ..... :	Below 2000 m
Mass of equipment (kg) ..... :	0.060kg (excluding adaptor)

Possible test case verdicts:	
- test case does not apply to the test object..... :	N/A (Not applicable)
- test object does meet the requirement ..... :	P (Pass)
- test object does not meet the requirement ..... :	F (Fail)
- test object does not demand…….. :	ND (Not demanded)
Testing ..... :	
Date of receipt of test item ..... :	April 07, 2016
Date(s) of performance of tests ..... :	April 07, 2016 to May 06, 2016

IEC 60950-1			
Clause	Requirement – Test	Result - Remark	Verdict
1	**GENERAL**		P
1.5	**Components**		P
1.5.1	General	Components, which were found to affect safety aspects, are conformed to the relevant IEC component standards and/or comply with the requirements of this standard.	P
	Comply with IEC 60950-1 or relevant component standard	(see appended tables 1.5.1)	P
1.5.2	Evaluation and testing of components	Components which are certified to IEC and/or national standards are used correctly within their ratings. Components not covered by IEC standards are tested under the conditions presented in the equipment.	P
1.5.3	Thermal controls	No thermal controls used.	N/A
1.5.4	Transformers	POE transformer userd in SELV circuits comply with the relevant requirements of this standard. See annex C.	P
1.5.5	Interconnecting cables	Interconnecting cable for Interconnection is carrying only SELV voltages with power consumption below 240 VA.	P
1.5.6	Capacitors bridging insulation	No such components.	N/A
1.5.7	Resistors bridging insulation	No such components.	N/A
1.5.7.1	Resistors bridging functional, basic or supplementary insulation	No such components.	N/A
1.5.7.2	Resistors bridging double or reinforced insulation between a.c. mains and other circuits	No such components.	N/A
1.5.7.3	Resistors bridging double or reinforced insulation between a.c. mains and antenna or coaxial cable	No such components.	N/A
1.5.8	Components in equipment for IT power systems	Class III equipment	N/A
1.5.9	Surge suppressors	No such components.	N/A
1.5.9.1	General	No such components.	N/A

IEC 60950-1			
Clause	Requirement – Test	Result - Remark	Verdict
1.5.9.2	Protection of VDRs	No such components.	N/A
1.5.9.3	Bridging of functional insulation by a VDR	No such components.	N/A
1.5.9.4	Bridging of basic insulation by a VDR	No such components.	N/A
1.5.9.5	Bridging of supplementary, double or reinforced insulation by a VDR	No such components.	N/A
1.6	**Power interface**		P
1.6.1	AC power distribution systems	Class III equipment, supplied by SELV.	N/A
1.6.2	Input current	(see appended table 1.6.2)	P
1.6.3	Voltage limit of hand-held equipment	Not such equipment	N/A
1.6.4	Neutral conductor	Class III equipment, supplied by SELV.	N/A
1.7	**Marking and instructions**		P
1.7.1	Power rating and identification markings	See below.	P
1.7.1.1	Power rating marking	See below.	P
	Multiple mains supply connections.....:	No such construction.	N/A
	Rated voltage(s) or voltage range(s) (V) .....:	12Vdc DC source or 48Vdc from POE	P
	Symbol for nature of supply, for d.c. only.....:	⎓ used	P
	Rated frequency or rated frequency range (Hz) ....:	The EUT is supplied by DC.	N/A
	Rated current (mA or A) .....:	1.0A	P
1.7.1.2	Identification markings	See below.	P
	Manufacturer's name or trade-mark or identification mark .....:	Trade-mark: TP-LINK	P
	Model identification or type reference .....:	EAP115	P
	Symbol for Class II equipment only .....:	Class III equipment, supplied by SELV.	N/A
	Other markings and symbols .....:	Additional symbols or markings do not give risk to misunderstanding.	P
1.7.1.3	Use of graphical symbols	Considered.	P
1.7.2	Safety instructions and marking	See below.	P

IEC 60950-1			
Clause	Requirement – Test	Result - Remark	Verdict
1.7.2.1	General	Safety related information in English has been evaluated. Manufacturer commits to provide them in the language of the countries where the product will be distributed.	P
1.7.2.2	Disconnect devices	No such device	N/A
1.7.2.3	Overcurrent protective device	No such device	N/A
1.7.2.4	IT power distribution systems	Not IT power distribution systems	N/A
1.7.2.5	Operator access with a tool	No tool is necessary to operate this product.	N/A
1.7.2.6	Ozone	This equipment is not intended to produce the ozone.	N/A
1.7.3	Short duty cycles	This equipment is a continuously operation equipment.	N/A
1.7.4	Supply voltage adjustment ..... :	No such device.	N/A
	Methods and means of adjustment; reference to installation instructions ..... :	No such device.	N/A
1.7.5	Power outlets on the equipment ..... :	No power outlets.	N/A
1.7.6	Fuse identification (marking, special fusing characteristics, cross-reference) ..... :	Class III equipment, supplied by SELV.	N/A
1.7.7	Wiring terminals	No such terminals	N/A
1.7.7.1	Protective earthing and bonding terminals ..... :		N/A
1.7.7.2	Terminals for a.c. mains supply conductors		N/A
1.7.7.3	Terminals for d.c. mains supply conductors	The equipment is not intended to be connected to the d.c. mains	N/A
1.7.8	Controls and indicators	No safety relevant switch or control.	N/A
1.7.8.1	Identification, location and marking ..... :	See below.	N/A
1.7.8.2	Colours ..... :	No safety relevant control or indicator.	N/A
1.7.8.3	Symbols according to IEC 60417 ..... :	No safety relevant control or indicator.	N/A
1.7.8.4	Markings using figures ..... :	No safety relevant switch.	N/A
1.7.9	Isolation of multiple power sources ..... :	Not used.	N/A

IEC 60950-1			
Clause	Requirement – Test	Result - Remark	Verdict
1.7.10	Thermostats and other regulating devices ..... :	No thermostat or other regulating devices.	N/A
1.7.11	Durability	The marking was legible after testing.	P
1.7.12	Removable parts	No safety marking placed on removable parts.	N/A
1.7.13	Replaceable batteries ..... :	No such part	N/A
	Language(s) ..... :		—
1.7.14	Equipment for restricted access locations ..... :	No such part	N/A
2	**PROTECTION FROM HAZARDS**		P
2.1	**Protection from electric shock and energy hazards**		N/A
2.1.1	Protection in operator access areas	Class III equipment, supplied by SELV and no hazard voltage generated inside.	N/A
2.1.1.1	Access to energized parts	Class III equipment, supplied by SELV and no hazard voltage generated inside.	N/A
	Test by inspection ..... :	Class III equipment, supplied by SELV and no hazard voltage generated inside.	N/A
	Test with test finger (Figure 2A) ..... :	Class III equipment, supplied by SELV and no hazard voltage generated inside.	N/A
	Test with test pin (Figure 2B) ..... :	Class III equipment, supplied by SELV and no hazard voltage generated inside.	N/A
	Test with test probe (Figure 2C) ..... :	No TNV circuit in the equipment.	N/A
2.1.1.2	Battery compartments	No such construction	N/A
2.1.1.3	Access to ELV wiring	No ELV wiring in the equipment.	N/A
	Working voltage (Vpeak or Vrms); minimum distance through insulation (mm)		—
2.1.1.4	Access to hazardous voltage circuit wiring	No hazardous voltage wiring in operator accessible area.	N/A
2.1.1.5	Energy hazards ..... :	There is no energy hazardous part in accessible area.	N/A
2.1.1.6	Manual controls	No such device.	N/A

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Clause	Requirement – Test	Result - Remark	Verdict
2.1.1.7	Discharge of capacitors in equipment	No such component	N/A
	Measured voltage (V); time-constant (s) ..... :		—
2.1.1.8	Energy hazards – d.c. mains supply	This product is not intended to be connected to d.c. mains supply.	N/A
	a) Capacitor connected to the d.c. mains supply .. :	This product is not intended to be connected to d.c. mains supply.	N/A
	b) Internal battery connected to the d.c. mains supply ..... :	This product is not intended to be connected to d.c. mains supply.	N/A
2.1.1.9	Audio amplifiers ..... :	No such parts	N/A
2.1.2	Protection in service access areas	No maintenance works necessary in operation mode.	N/A
2.1.3	Protection in restricted access locations	It is not intended to be used in restricted locations.	N/A
2.2	**SELV circuits**		P
2.2.1	General requirements	Class III equipment, supplied by SELV and there is no hazardous voltage inside the EUT.	P
2.2.2	Voltages under normal conditions (V) ..... :	Class III equipment, supplied by SELV and there is no hazardous voltage inside the EUT.	P
2.2.3	Voltages under fault conditions (V) ..... :	Class III equipment, supplied by SELV and there is no hazardous voltage inside the EUT.	P
2.2.4	Connection of SELV circuits to other circuits ..... :	SELV circuit only the connection to SELV or LCC circuit.	P
2.3	**TNV circuits**		N/A
2.3.1	Limits	No TNV circuit.	N/A
	Type of TNV circuits ..... :		—
2.3.2	Separation from other circuits and from accessible parts	No TNV circuit.	N/A

IEC 60950-1			
Clause	Requirement – Test	Result - Remark	Verdict
2.3.2.1	General requirements	No TNV circuit.	N/A
2.3.2.2	Protection by basic insulation	No TNV circuit.	N/A
2.3.2.3	Protection by earthing	No TNV circuit.	N/A
2.3.2.4	Protection by other constructions ..... :	No TNV circuit.	N/A
2.3.3	Separation from hazardous voltages	No TNV circuit.	N/A
	Insulation employed ..... :	No TNV circuit.	N/A
2.3.4	Connection of TNV circuits to other circuits	No TNV circuit.	N/A
	Insulation employed ..... :	No TNV circuit.	—
2.3.5	Test for operating voltages generated externally	No TNV circuit.	N/A
2.4	**Limited current circuits**		N/A
2.4.1	General requirements	No limited current circuit	N/A
2.4.2	Limit values	No limited current circuit	N/A
	Frequency (Hz)..... :		—
	Measured current (mA) ..... :		—
	Measured voltage (V)..... :		—
	Measured circuit capacitance (nF or µF) ..... :		—
2.4.3	Connection of limited current circuits to other circuits	No limited current circuit	N/A
2.5	**Limited power sources**		N/A
	a) Inherently limited output	No output circutis and ports	N/A
	b) Impedance limited output	No output circutis and ports	N/A
	c) Regulating network or IC current limiter, limits output under normal operating and single fault condition	No output circutis and ports	N/A
	Use of integrated circuit (IC) current limiters	No output circutis and ports	N/A
	d) Overcurrent protective device limited output	No output circutis and ports	—
	Max. output voltage (V), max. output current (A), max. apparent power (VA) ..... :	No output circutis and ports	—
	Current rating of overcurrent protective device (A) .:	No such device.	—
2.6	**Provisions for earthing and bonding**		N/A
2.6.1	Protective earthing	Class III equipment, no protective earthing.	N/A

IEC 60950-1			
Clause	Requirement – Test	Result - Remark	Verdict
2.6.2	Functional earthing	Class III equipment, no protective earthing.	N/A
	Use of symbol for functional earthing .....:	Class III equipment, no protective earthing.	N/A
2.6.3	Protective earthing and protective bonding conductors	Class III equipment, no protective earthing.	N/A
2.6.3.1	General	Class III equipment, no protective earthing.	N/A
2.6.3.2	Size of protective earthing conductors	Class III equipment, no protective earthing.	N/A
	Rated current (A), cross-sectional area (mm^2), AWG .....:		—
2.6.3.3	Size of protective bonding conductors	Class III equipment, no protective earthing.	N/A
	Rated current (A), cross-sectional area (mm^2), AWG .....:		—
	Protective current rating (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).....:	Class III equipment, no protective earthing.	N/A
2.6.3.5	Colour of insulation .....:	Class III equipment, no protective earthing.	N/A
2.6.4	Terminals	Class III equipment, no protective earthing.	N/A
2.6.4.1	General	Class III equipment, no protective earthing.	N/A
2.6.4.2	Protective earthing and bonding terminals	Class III equipment, no protective earthing.	N/A
	Rated current (A), type, nominal thread diameter (mm).....:		—
2.6.4.3	Separation of the protective earthing conductor from protective bonding conductors	Class III equipment, no protective earthing.	N/A
2.6.5	Integrity of protective earthing	Class III equipment, no protective earthing.	N/A
2.6.5.1	Interconnection of equipment	Class III equipment, no protective earthing.	N/A
2.6.5.2	Components in protective earthing conductors and protective bonding conductors	Class III equipment, no protective earthing.	N/A

IEC 60950-1			
Clause	Requirement – Test	Result - Remark	Verdict
2.6.5.3	Disconnection of protective earth	Class III equipment, no protective earthing.	N/A
2.6.5.4	Parts that can be removed by an operator	Class III equipment, no protective earthing.	N/A
2.6.5.5	Parts removed during servicing	Class III equipment, no protective earthing.	N/A
2.6.5.6	Corrosion resistance	Class III equipment, no protective earthing.	N/A
2.6.5.7	Screws for protective bonding	Class III equipment, no protective earthing.	N/A
2.6.5.8	Reliance on telecommunication network or cable distribution system	Class III equipment, no protective earthing.	N/A
2.7	**Overcurrent and earth fault protection in primary circuits**		N/A
2.7.1	Basic requirements	Class III equipment. Not connect to a.c. mains directly.	N/A
	Instructions when protection relies on building installation		N/A
2.7.2	Faults not simulated in 5.3.7	Class III equipment. Not connect to a.c. mains directly.	N/A
2.7.3	Short-circuit backup protection	Class III equipment. Not connect to a.c. mains directly.	N/A
2.7.4	Number and location of protective devices .....:	Class III equipment. Not connect to a.c. mains directly.	N/A
2.7.5	Protection by several devices		N/A
2.7.6	Warning to service personnel .....:	No service work necessary for the product	N/A
2.8	**Safety interlocks**		N/A
2.8.1	General principles	There is no safety interlock in the equipment.	N/A
2.8.2	Protection requirements	There is no safety interlock in the equipment.	N/A
2.8.3	Inadvertent reactivation	There is no safety interlock in the equipment.	N/A
2.8.4	Fail-safe operation	There is no safety interlock in the equipment.	N/A

IEC 60950-1			
Clause	Requirement – Test	Result - Remark	Verdict
	Protection against extreme hazard	There is no safety interlock in the equipment.	N/A
2.8.5	Moving parts	There is no safety interlock in the equipment.	N/A
2.8.6	Overriding	There is no safety interlock in the equipment.	N/A
2.8.7	Switches, relays and their related circuits	There is no safety interlock in the equipment.	N/A
2.8.7.1	Separation distances for contact gaps and their related circuits (mm) ..... :	There is no safety interlock in the equipment.	N/A
2.8.7.2	Overload test	There is no safety interlock in the equipment.	N/A
2.8.7.3	Endurance test	There is no safety interlock in the equipment.	N/A
2.8.7.4	Electric strength test	There is no safety interlock in the equipment.	N/A
2.8.8	Mechanical actuators	There is no safety interlock in the equipment.	N/A
2.9	**Electrical insulation**		N/A
2.9.1	Properties of insulating materials	Class III equipment, no critical insulation in the EUT.	N/A
2.9.2	Humidity conditioning	Class III equipment, no critical insulation in the EUT.	N/A
	Relative humidity (%), temperature (℃) ....:		—
2.9.3	Grade of insulation	Class III equipment, no critical insulation in the EUT.	N/A
2.9.4	Separation from hazardous voltages	Class III equipment, no critical insulation in the EUT.	N/A
	Method(s) used .....:		—
2.10	**Clearances, creepage distances and distances through insulation**		N/A
2.10.1	General	See below.	N/A
2.10.1.1	Frequency .....:	Class III equipment, no critical insulation in the EUT.	N/A
2.10.1.2	Pollution degrees .....:	Class III equipment, no critical insulation in the EUT.	N/A

IEC 60950-1			
Clause	Requirement – Test	Result - Remark	Verdict
2.10.1.3	Reduced values for functional insulation	Class III equipment, no critical insulation in the EUT.	P
2.10.1.4	Intervening unconnected conductive parts	Class III equipment, no critical insulation in the EUT.	N/A
2.10.1.5	Insulation with varying dimensions	No such insulation.	N/A
2.10.1.6	Special separation requirements	No such insulation.	N/A
2.10.1.7	Insulation in circuits generating starting pulses	No such parts.	N/A
2.10.2	Determination of working voltage	Class III equipment, no critical insulation in the EUT.	N/A
2.10.2.1	General	Class III equipment, no critical insulation in the EUT.	N/A
2.10.2.2	RMS working voltage	Class III equipment, no critical insulation in the EUT.	N/A
2.10.2.3	Peak working voltage	Class III equipment, no critical insulation in the EUT.	N/A
2.10.3	Clearances	Class III equipment, no critical insulation in the EUT. Only the functional Insulation inside the EUT.	N/A
2.10.3.1	General	Class III equipment, no critical insulation in the EUT. Only the functional Insulation inside the EUT.	N/A
2.10.3.2	Mains transient voltages	Class III equipment; not directly connected to the a.c. mains.	N/A
	a) AC mains supply ..... :	Class III equipment; not directly connected to the a.c. mains.	N/A
	b) Earthed d.c. mains supplies ..... :	The equipment is not intended to be supplied by the d.c. mains.	N/A
	c) Unearthed d.c. mains supplies ..... :	The equipment is not intended to be supplied by the d.c. mains.	N/A
	d) Battery operation ..... :	No such battery used	N/A
2.10.3.3	Clearances in primary circuits	Class III equipment, no critical insulation in the EUT. Only the functional Insulation inside the EUT.	N/A

IEC 60950-1			
Clause	Requirement – Test	Result - Remark	Verdict
2.10.3.4	Clearances in secondary circuits	Class III equipment, no critical insulation in the EUT.	N/A
2.10.3.5	Clearances in circuits having starting pulses	No such circuit.	N/A
2.10.3.6	Transients from a.c. mains supply ..... :	Class III equipment. Not connect to a.c. mains directly.	N/A
2.10.3.7	Transients from d.c. mains supply ..... :	The equipment is not intended to be connected to the d.c. mains.	N/A
2.10.3.8	Transients from telecommunication networks and cable distribution systems ..... :	The equipment is not connected to the telecommunication network.	N/A
2.10.3.9	Measurement of transient voltage levels	Class III equipment. Not connect to mains directly.	N/A
	a) Transients from a mains supply	Class III equipment. Not connect to mains directly.	N/A
	For an a.c. mains supply ..... :	Class III equipment. Not connect to mains directly.	N/A
	For a d.c. mains supply ..... :	Class III equipment. Not connect to mains directly.	N/A
	b) Transients from a telecommunication network :	The equipment is not connected to the telecommunication network.	N/A
2.10.4	Creepage distances	Class III equipment, no critical insulation in the EUT. Only the functional Insulation inside the EUT.	N/A
2.10.4.1	General	Class III equipment, no critical insulation in the EUT. Only the functional Insulation inside the EUT.	N/A
2.10.4.2	Material group and comparative tracking index	Class III equipment, no critical insulation in the EUT. Only the functional Insulation inside the EUT.	N/A
	CTI tests..... :		—
2.10.4.3	Minimum creepage distances	Class III equipment, no critical insulation in the EUT. Only the functional Insulation inside the EUT.	N/A

IEC 60950-1			
Clause	Requirement – Test	Result - Remark	Verdict
2.10.5	Solid insulation	Class III equipment, no critical insulation in the EUT. Only the functional Insulation inside the EUT.	N/A
2.10.5.1	General	Class III equipment, no critical insulation in the EUT. Only the functional Insulation inside the EUT.	N/A
2.10.5.2	Distances through insulation	Class III equipment, no critical insulation in the EUT. Only the functional Insulation inside the EUT.	N/A
2.10.5.3	Insulating compound as solid insulation		N/A
2.10.5.4	Semiconductor devices	Class III equipment, no critical insulation in the EUT. Only the functional Insulation inside the EUT.	N/A
2.10.5.5.	Cemented joints	Class III equipment, no critical insulation in the EUT. Only the functional Insulation inside the EUT.	N/A
2.10.5.6	Thin sheet material – General	Class III equipment, no critical insulation in the EUT. Only the functional Insulation inside the EUT.	N/A
2.10.5.7	Separable thin sheet material	Class III equipment, no critical insulation in the EUT. Only the functional Insulation inside the EUT.	N/A
	Number of layers (pcs)..... :		—
2.10.5.8	Non-separable thin sheet material	Class III equipment, no critical insulation in the EUT. Only the functional Insulation inside the EUT.	N/A
2.10.5.9	Thin sheet material – standard test procedure	Class III equipment, no critical insulation in the EUT. Only the functional Insulation inside the EUT.	N/A
	Electric strength test		—
2.10.5.10	Thin sheet material – alternative test procedure	Class III equipment, no critical insulation in the EUT. Only the functional Insulation inside the EUT.	N/A

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Clause	Requirement – Test	Result - Remark	Verdict
	Electric strength test		—
2.10.5.11	Insulation in wound components	Class III equipment, no critical insulation in the EUT. Only the functional Insulation inside the EUT.	N/A
2.10.5.12	Wire in wound components	Class III equipment, no critical insulation in the EUT. Only the functional Insulation inside the EUT.	N/A
	Working voltage ..... :	Class III equipment, no critical insulation in the EUT. Only the functional Insulation inside the EUT.	N/A
	a) Basic insulation not under stress ..... :		N/A
	b) Basic, supplementary, reinforced insulation ..... :	Class III equipment, no critical insulation in the EUT. Only the functional Insulation inside the EUT.	N/A
	c) Compliance with Annex U ..... :	Class III equipment, no critical insulation in the EUT. Only the functional Insulation inside the EUT.	N/A
	Two wires in contact inside wound component; angle between 45° and 90° ..... :	Class III equipment, no critical insulation in the EUT. Only the functional Insulation inside the EUT.	N/A
2.10.5.13	Wire with solvent-based enamel in wound components	No such construction.	N/A
	Electric strength test	No such construction.	—
	Routine test	No such construction.	N/A
2.10.5.14	Additional insulation in wound components	No such construction.	N/A
	Working voltage ..... :	No such construction.	N/A
	- Basic insulation not under stress ..... :	No such construction.	N/A
	- Supplementary, reinforced insulation ..... :	No such construction.	N/A
2.10.6	Construction of printed boards	Class III equipment, no critical insulation in the EUT. Only the functional Insulation inside the EUT.	N/A

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Clause	Requirement – Test	Result - Remark	Verdict
2.10.6.1	Uncoated printed boards	Class III equipment, no critical insulation in the EUT. Only the functional Insulation inside the EUT.	N/A
2.10.6.2	Coated printed boards	No such printed board used.	N/A
2.10.6.3	Insulation between conductors on the same inner surface of a printed board	No such printed board used.	N/A
2.10.6.4	Insulation between conductors on different layers of a printed board	No such printed board used.	N/A
	Distance through insulation	No such printed board used.	N/A
	Number of insulation layers (pcs)..... :	No such printed board used.	N/A
2.10.7	Component external terminations	Not used.	N/A
2.10.8	Tests on coated printed boards and coated components	No such construction.	N/A
2.10.8.1	Sample preparation and preliminary inspection	No such construction.	N/A
2.10.8.2	Thermal conditioning	No such construction.	N/A
2.10.8.3	Electric strength test	No such construction.	N/A
2.10.8.4	Abrasion resistance test	No such construction.	N/A
2.10.9	Thermal cycling	No such component	N/A
2.10.10	Test for Pollution Degree 1 environment and insulating compound	Degree 2 was considered	N/A
2.10.11	Tests for semiconductor devices and cemented joints	No such device	N/A
2.10.12	Enclosed and sealed parts	No such construction	N/A
3	**WIRING, CONNECTIONS AND SUPPLY**		P
3.1	**General**		P
3.1.1	Current rating and overcurrent protection	There is no such consturciton	N/A
3.1.2	Protection against mechanical damage	There is no such consturciton	N/A
3.1.3	Securing of internal wiring	There is no such consturciton	N/A
3.1.4	Insulation of conductors	There is no such consturciton	N/A
3.1.5	Beads and ceramic insulators	There is no such consturciton	N/A
3.1.6	Screws for electrical contact pressure	There is no such consturciton	N/A
3.1.7	Insulating materials in electrical connections	There is no such consturciton	N/A
3.1.8	Self-tapping and spaced thread screws	There is no such consturciton	N/A
3.1.9	Termination of conductors	There is no such consturciton	N/A

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Clause	Requirement – Test	Result - Remark	Verdict
	10 N pull test	There is no such consturciton	N/A
3.1.10	Sleeving on wiring	There is no such consturciton	N/A
3.2	**Connection to a mains supply**		N/A
3.2.1	Means of connection	See below.	N/A
3.2.1.1	Connection to an a.c. mains supply	Class III equipment; not directly connect to a.c. mains.	N/A
3.2.1.2	Connection to a d.c. mains supply	Not connect to d.c. mains.	N/A
3.2.2	Multiple supply connections	Only one supply connection	N/A
3.2.3	Permanently connected equipment	The equipment is not intended for permanent connection to the mains.	N/A
	Number of conductors, diameter of cable and conduits (mm) .....:		—
3.2.4	Appliance inlets	No such parts.	N/A
3.2.5	Power supply cords	No such parts.	N/A
3.2.5.1	AC power supply cords	No such parts.	N/A
	Type .....:		—
	Rated current (A), cross-sectional area (mm^2), AWG .....:		—
3.2.5.2	DC power supply cords	No used.	N/A
3.2.6	Cord anchorages and strain relief	No such parts.	N/A
	Mass of equipment (kg), pull (N) .....:		—
	Longitudinal displacement (mm) .....:		—
3.2.7	Protection against mechanical damage		N/A
3.2.8	Cord guards	No such parts.	N/A
	Diameter or minor dimension D (mm); test mass (g) .....:		—
	Radius of curvature of cord (mm) .....:		—
3.2.9	Supply wiring space		N/A
3.3	**Wiring terminals for connection of external conductors**		N/A
3.3.1	Wiring terminals	No such terminals	N/A
3.3.2	Connection of non-detachable power supply cords	No such parts	N/A
3.3.3	Screw terminals	No such terminals	N/A

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Clause	Requirement – Test	Result - Remark	Verdict
3.3.4	Conductor sizes to be connected		N/A
	Rated current (A), cord/cable type, cross-sectional area (mm^2) .....:		—
3.3.5	Wiring terminal sizes	No such terminals	N/A
	Rated current (A), type, nominal thread diameter (mm) .....:		—
3.3.6	Wiring terminal design	No such terminals	N/A
3.3.7	Grouping of wiring terminals	No such terminals	N/A
3.3.8	Stranded wire	No such parts	N/A
3.4	**Disconnection from the mains supply**		N/A
3.4.1	General requirement	Class III equipment, not directly connect to mains.	N/A
3.4.2	Disconnect devices	Class III equipment, not directly connect to mains.	N/A
3.4.3	Permanently connected equipment	No permanently connected equipment.	N/A
3.4.4	Parts which remain energized	Class III equipment, not directly connect to mains.	N/A
3.4.5	Switches in flexible cords	No such construction.	N/A
3.4.6	Number of poles - single-phase and d.c. equipment	Class III equipment, not directly connect to mains.	N/A
3.4.7	Number of poles - three-phase equipment		N/A
3.4.8	Switches as disconnect devices	No such construction.	N/A
3.4.9	Plugs as disconnect devices		N/A
3.4.10	Interconnected equipment	Class III equipment, not directly connect to mains.	N/A
3.4.11	Multiple power sources	Class III equipment, not directly connect to mains.	N/A
3.5	**Interconnection of equipment**		P
3.5.1	General requirements	See below.	P
3.5.2	Types of interconnection circuits .....:	SELV circuit only	P
3.5.3	ELV circuits as interconnection circuits	No ELV interconnection circuits.	N/A
3.5.4	Data ports for additional equipment	No data ports used	N/A

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Clause	Requirement – Test	Result - Remark	Verdict
4	**PHYSICAL REQUIREMENTS**		P
4.1	**Stability**		N/A
	Angle of 10°	For the equipment, the mass is less than 7kg.	N/A
	Test force (N) ..... :	Not floor-standing equipment.	N/A
4.2	**Mechanical strength**		P
4.2.1	General	Class III equipment, supplied by SELV and there is no hazardous voltage inside the EUT.	P
	Rack-mounted equipment.	Not such equipment	N/A
4.2.2	Steady force test, 10 N	Class III equipment, supplied by SELV and there is no hazardous voltage inside the EUT.	N/A
4.2.3	Steady force test, 30 N	Class III equipment, supplied by SELV and there is no hazardous voltage inside the EUT.	N/A
4.2.4	Steady force test, 250 N	Class III equipment, supplied by SELV and there is no hazardous voltage inside the EUT.	N/A
4.2.5	Impact test	Class III equipment, supplied by SELV and there is no hazardous voltage inside the EUT.	N/A
	Fall test	Class III equipment, supplied by SELV and there is no hazardous voltage inside the EUT.	N/A
	Swing test	Class III equipment, supplied by SELV and there is no hazardous voltage inside the EUT.	N/A
4.2.6	Drop test; height (mm) ..... :	Class III equipment, supplied by SELV and there is no hazardous voltage inside the EUT.	N/A

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Clause	Requirement – Test	Result - Remark	Verdict
4.2.7	Stress relief test	Class III equipment, supplied by SELV and there is no hazardous voltage inside the EUT.	N/A
4.2.8	Cathode ray tubes	Class III equipment, supplied by SELV and there is no hazardous voltage inside the EUT.	N/A
	Picture tube separately certified .....:	Class III equipment, supplied by SELV and there is no hazardous voltage inside the EUT.	N/A
4.2.9	High pressure lamps	Class III equipment, supplied by SELV and there is no hazardous voltage inside the EUT.	N/A
4.2.10	Wall or ceiling mounted equipment; force (N) .....:	Test with a force 50N conducted and an acceptable result attained.	P
4.3	**Design and construction**		P
4.3.1	Edges and corners	Edges and corners of the enclosure are rounded.	P
4.3.2	Handles and manual controls; force (N) .....:	No such device.	N/A
4.3.3	Adjustable controls	No such device.	N/A
4.3.4	Securing of parts	Electrical and mechanical connections and parts withstand usual mechanical stress.	P
4.3.5	Connection by plugs and sockets	No mismatch of connectors, plugs or sockets possible.	P
4.3.6	Direct plug-in equipment	Class III equipment.	N/A
	Torque .....:		—
	Compliance with the relevant mains plug standard .....:	No such part	N/A
4.3.7	Heating elements in earthed equipment	No such device.	N/A
4.3.8	Batteries	No batteries used	N/A
	- Overcharging of a rechargeable battery	No batteries used	N/A
	- Unintentional charging of a non-rechargeable battery	No batteries used	N/A

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Clause	Requirement – Test	Result - Remark	Verdict
	- Reverse charging of a rechargeable battery	No batteries used	N/A
	- Excessive discharging rate for any battery	No batteries used	N/A
4.3.9	Oil and grease	No oil and grease inside the equipment.	N/A
4.3.10	Dust, powders, liquids and gases	The equipment is not intended to be exposed to dust, powers, liquids and gases.	N/A
4.3.11	Containers for liquids or gases	No container for liquids or gases provided.	N/A
4.3.12	Flammable liquids .....:	No flammable liquids in the equipment.	N/A
	Quantity of liquid (l) .....:	No flammable liquids in the equipment.	N/A
	Flash point (°C) .....:	No flammable liquids in the equipment.	N/A
4.3.13	Radiation	See below.	P
4.3.13.1	General	LED only for indicating	P
4.3.13.2	Ionizing radiation	No ionizing radiation.	N/A
	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	No UV radiation.	N/A
	Part, property, retention after test, flammability classification .....:	No UV radiation.	N/A
4.3.13.4	Human exposure to ultraviolet (UV) radiation .....:	No UV radiation.	N/A
4.3.13.5	Lasers (including laser diodes) and LEDs	LED only for indicating	P
4.3.13.5.1	Lasers (including laser diodes)	No such devices.	N/A
	Laser class .....:		—
4.3.13.5.2	Light emitting diodes (LEDs)		—
4.3.13.6	Other types .....:	No such devices.	N/A

4.4	**Protection against hazardous moving parts**		N/A
4.4.1	General	No hazardous moving part in operator access areas.	N/A

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Clause	Requirement – Test	Result - Remark	Verdict
4.4.2	Protection in operator access areas .....:	No hazardous moving part in operator access areas.	N/A
	Household and home/office document/media shredders	No hazardous moving part in restricted access areas.	N/A
4.4.3	Protection in restricted access locations .....:	No hazardous moving in the service access area	N/A
4.4.4	Protection in service access areas	No hazardous part in operator access areas.	N/A
4.4.5	Protection against moving fan blades	Not moving fan blades used.	N/A
4.4.5.1	General	Not moving fan blades used.	N/A
	Not considered to cause pain or injury. a)……..:		N/A
	Is considered to cause pain, not injury. b) ……..:		N/A
	Considered to cause injury. c) ……..:		N/A
4.4.5.2	Protection for users	Not moving fan blades used.	N/A
	Use of symbol or warning ……..:	Not moving fan blades used.	N/A
4.4.5.3	Protection for service persons	Not moving fan blades used.	N/A
	Use of symbol or warning ……..:		N/A

4.5	**Thermal requirements**		P
4.5.1	General	See below.	P
4.5.2	Temperature tests	(see appended table 4.5)	P
	Normal load condition per Annex L .....:		—
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 .....:	No such construction inside EUT.	N/A

4.6	**Openings in enclosures**		P
4.6.1	Top and side openings	Side openings provide protection against external subject into the equipment and also no hazardous voltage and energy inside the equipment.	P

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Clause	Requirement – Test	Result - Remark	Verdict
	Dimensions (mm) .....:	Openings with 1mm width regardness lenth used.	—
4.6.2	Bottoms of fire enclosures	No bottom openings	P
	Construction of the bottomm, dimensions (mm) ..:		—
4.6.3	Doors or covers in fire enclosures	No such construction	N/A
4.6.4	Openings in transportable equipment	Not such equipment	N/A
4.6.4.1	Constructional design measures	Not such equipment	N/A
	Dimensions (mm) .....:		—
4.6.4.2	Evaluation measures for larger openings	No such construction	N/A
4.6.4.3	Use of metallized parts	No such construction	N/A
4.6.5	Adhesives for constructional purposes	No such construction	N/A
	Conditioning temperature (°C), time (weeks).....:		—
4.7	**Resistance to fire**		P
4.7.1	Reducing the risk of ignition and spread of flame	See below.	P
	Method 1, selection and application of components wiring and materials	Selection of components for the simulation of faults with acceptable results.	P
	Method 2, application of all of simulated fault condition tests	Method 1 used.	N/A
4.7.2	Conditions for a fire enclosure	See below	P
4.7.2.1	Parts requiring a fire enclosure	Fire enclosure used, see appended tabel 1.5.1	P
4.7.2.2	Parts not requiring a fire enclosure		N/A
4.7.3	Materials		P
4.7.3.1	General	See appended table 1.5.1	P
4.7.3.2	Materials for fire enclosures	Enclosure material rated V-0	P
4.7.3.3	Materials for components and other parts outside fire enclosures	No such parts	N/A
4.7.3.4	Materials for components and other parts inside fire enclosures	All components were equipped on min.V-1 PCB.	P
4.7.3.5	Materials for air filter assemblies	No such devices	N/A
4.7.3.6	Materials used in high-voltage components	No such devices	N/A
5	**ELECTRICAL REQUIREMENTS AND SIMULATED ABNORMAL CONDITIONS**		P

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Clause	Requirement – Test	Result - Remark	Verdict
5.1	**Touch current and protective conductor current**		N/A
5.1.1	General	Class III equipment, supplied by SELV.	N/A
5.1.2	Configuration of equipment under test (EUT)	Class III equipment, supplied by SELV.	N/A
5.1.2.1	Single connection to an a.c. mains supply	Class III equipment, supplied by SELV.	N/A
5.1.2.2	Redundant multiple connections to an a.c. mains supply	Class III equipment, supplied by SELV.	N/A
5.1.2.3	Simultaneous multiple connections to an a.c. mains supply	Class III equipment, supplied by SELV.	N/A
5.1.3	Test circuit	Class III equipment, supplied by SELV.	N/A
5.1.4	Application of measuring instrument	Class III equipment, supplied by SELV.	N/A
5.1.5	Test procedure	Class III equipment, supplied by SELV.	N/A
5.1.6	Test measurements	Class III equipment, supplied by SELV.	N/A
	Supply voltage (V) ..... :		—
	Measured touch current (mA) ..... :		—
	Max. allowed touch current (mA) ..... :		—
	Measured protective conductor current (mA) ..... :		—
	Max. allowed protective conductor current (mA)... :		—
5.1.7	Equipment with touch current exceeding 3,5 mA	Class III equipment, supplied by SELV.	N/A
5.1.7.1	General ..... :	Class III equipment, supplied by SELV.	N/A
5.1.7.2	Simultaneous multiple connections to the supply	No such construction.	N/A
5.1.8	Touch currents to telecommunication networks and cable distribution systems and from telecommunication networks	The equipment is not connected to a telecommunication system and a cable distribution system.	N/A
5.1.8.1	Limitation of the touch current to a telecommunication network or to a cable distribution system	The equipment is not connected to a telecommunication system and a cable distribution system.	N/A

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Clause	Requirement – Test	Result - Remark	Verdict
	Supply voltage (V) ..... :		—
	Measured touch current (mA) ..... :		—
	Max. allowed touch current (mA) ..... :		—
5.1.8.2	Summation of touch currents from telecommunication networks	Not connect to telecommunication networks.	N/A
	a) EUT with earthed telecommunication ports ..... :	Not connect to telecommunication networks.	N/A
	b) EUT whose telecommunication ports have no reference to protective earth	Not connect to telecommunication networks.	N/A
5.2	**Electric strength**		N/A
5.2.1	General	Class III equipment. This clause has been considered during the certified power adapter approvals.	N/A
5.2.2	Test procedure	Class III equipment. This clause has been considered during the certified power adapter approvals.	N/A
5.3	**Abnormal operating and fault conditions**		P
5.3.1	Protection against overload and abnormal operation	See below.	N/A
5.3.2	Motors	No motor used	N/A
5.3.3	Transformers	Class III equipment, supplied by SELV.	N/A
5.3.4	Functional insulation..... :	Comply with the functional insulation.	P
5.3.5	Electromechanical components	No electromechanical component.	N/A
5.3.6	Audio amplifiers in ITE ..... :	No such parts	N/A
5.3.7	Simulation of faults		N/A
5.3.8	Unattended equipment	The equipment was not for unattended use.	N/A
5.3.9	Compliance criteria for abnormal operating and fault conditions		N/A
5.3.9.1	During the tests		N/A
5.3.9.2	After the tests		N/A

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Clause	Requirement – Test	Result - Remark	Verdict
6	**CONNECTION TO TELECOMMUNICATION NETWORKS**		N/A
6.1	**Protection of telecommunication network service persons, and users of other equipment connected to the network, from hazards in the equipment**		N/A
6.1.1	Protection from hazardous voltages		N/A
6.1.2	Separation of the telecommunication network from earth		N/A
6.1.2.1	Requirements	No TNV circuit.	N/A
	Supply voltage (V) ..... :		—
	Current in the test circuit (mA) ..... :		—
6.1.2.2	Exclusions ..... :	No TNV circuit.	N/A
6.2	**Protection of equipment users from overvoltages on telecommunication networks**		N/A
6.2.1	Separation requirements	No TNV circuit.	N/A
6.2.2	Electric strength test procedure	No TNV circuit.	N/A
6.2.2.1	Impulse test	No TNV circuit.	N/A
6.2.2.2	Steady-state test	No TNV circuit.	N/A
6.2.2.3	Compliance criteria	No TNV circuit.	N/A
6.3	**Protection of the telecommunication wiring system from overheating**		N/A
	Max. output current (A) ..... :		—
	Current limiting method ..... :		—
7	**CONNECTION TO CABLE DISTRIBUTION SYSTEMS**		N/A
7.1	**General**	No connection to the cable distribution system.	N/A
7.2	Protection of cable distribution system service persons, and users of other equipment connected to the system, from hazardous voltages in the equipment	No connection to the cable distribution system.	N/A
7.3	Protection of equipment users from overvoltages on the cable distribution system	No connection to the cable distribution system.	N/A
7.4	Insulation between primary circuits and cable distribution systems	No connection to the cable distribution system.	N/A
7.4.1	General	No connection to the cable distribution system.	N/A

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Clause	Requirement – Test	Result - Remark	Verdict
7.4.2	Voltage surge test	No connection to the cable distribution system.	N/A
7.4.3	Impulse test	No connection to the cable distribution system.	N/A
A	**ANNEX A, TESTS FOR RESISTANCE TO HEAT AND FIRE**		N/A
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)**	The mass of the EUT is less than 18 kg.	N/A
A.1.1	Samples ..... :		—
	Wall thickness (mm) ..... :		—
A.1.2	Conditioning of samples; temperature (°C) ..... :		N/A
A.1.3	Mounting of samples ..... :		N/A
A.1.4	Test flame (see IEC 60695-11-3)		N/A
	Flame A, B, C or D ..... :		—
A.1.5	Test procedure		N/A
A.1.6	Compliance criteria		N/A
	Sample 1 burning time (s) ..... :		—
	Sample 2 burning time (s) ..... :		—
	Sample 3 burning time (s) ..... :		—
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
A.2.1	Samples, material ..... :		—
	Wall thickness (mm) ..... :		—
A.2.2	Conditioning of samples; temperature (℃) ... . :		N/A
A.2.3	Mounting of samples ..... :		N/A
A.2.4	Test flame (see IEC 60695-11-4)		N/A
	Flame A, B or C ..... :		—
A.2.5	Test procedure		N/A
A.2.6	Compliance criteria		N/A
	Sample 1 burning time (s) ..... :		—
	Sample 2 burning time (s) ..... :		—
	Sample 3 burning time (s) ..... :		—
A.2.7	Alternative test acc. to IEC 60695-11-5, cl. 5 and 9		N/A

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Clause	Requirement – Test	Result - Remark	Verdict
	Sample 1 burning time (s) ..... :		—
	Sample 2 burning time (s) ..... :		—
	Sample 3 burning time (s) ..... :		—
A.3	**Hot flaming oil test (see 4.6.2)**		N/A
A.3.1	Mounting of samples		N/A
A.3.2	Test procedure		N/A
A.3.3	Compliance criterion		N/A
B	**ANNEX B, MOTOR TESTS UNDER ABNORMAL CONDITIONS (see 4.7.2.2 and 5.3.2)**		N/A
B.1	**General requirements**	No motor used.	N/A
	Position ..... :		—
	Manufacturer ..... :		—
	Type ..... :		—
	Rated values ..... :		—
B.2	**Test conditions**	No motor used.	N/A
B.3	**Maximum temperatures**	No motor used.	N/A
B.4	**Running overload test**	No motor used.	N/A
B.5	**Locked-rotor overload test**	No motor used.	N/A
	Test duration (days) ..... :		—
	Electric strength test: test voltage (V) ..... :		—
B.6	**Running overload test for d.c. motors in secondary circuits**	No motor used.	N/A
B.6.1	General	No motor used.	N/A
B.6.2	Test procedure	No motor used.	N/A
B.6.3	Alternative test procedure	No motor used.	N/A
B.6.4	Electric strength test; test voltage (V) ..... :	No motor used.	N/A
B.7	**Locked-rotor overload test for d.c. motors in secondary circuits**	No motor used.	N/A
B.7.1	General	No motor used.	N/A
B.7.2	Test procedure	No motor used.	N/A
B.7.3	Alternative test procedure	No motor used.	N/A
B.7.4	Electric strength test; test voltage (V) ..... :	No motor used.	N/A
B.8	**Test for motors with capacitors**	No motor used.	N/A

IEC 60950-1			
Clause	Requirement – Test	Result - Remark	Verdict
B.9	**Test for three-phase motors**	No motor used.	N/A
B.10	**Test for series motors**	No motor used.	N/A
	Operating voltage (V) .....:		—
C	**ANNEX C, TRANSFORMERS (see 1.5.4 and 5.3.3)**		P
	Position .....:	T3 in secondary circuits	—
	Manufacturer .....:	See appended tabel 1.5.1	—
	Type .....:	See appended tabel 1.5.1	—
	Rated values .....:	See appended tabel 1.5.1	—
	Method of protection .....:	By protection circuit	—
C.1	**Overload test**	See appended table 5.3	P
C.2	**Insulation**	Class III equipment, supplied by SELV, no insulation required	N/A
	Protection from displacement of windings .....:	Class III equipment, supplied by SELV, no insulation required	N/A
D	**ANNEX D, MEASURING INSTRUMENTS FOR TOUCH-CURRENT TESTS (see 5.1.4)**		N/A
D.1	**Measuring instrument**	Class III equipment, supplied by SELV and no direct connection to the mains.	N/A
D.2	**Alternative measuring instrument**		N/A
E	**ANNEX E, TEMPERATURE RISE OF A WINDING (see 1.4.13)**		N/A
F	**ANNEX F, MEASUREMENT OF CLEARANCES AND CREEPAGE DISTANCES (see 2.10 and Annex G)**		N/A
G	**ANNEX G, ALTERNATIVE METHOD FOR DETERMINING MINIMUM CLEARANCES**		N/A
G.1	**Clearances**	Not used.	N/A
G.1.1	General	Not used.	N/A
G.1.2	Summary of the procedure for determining minimum clearances	Not used.	N/A

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Clause	Requirement – Test	Result - Remark	Verdict
G.2	**Determination of mains transient voltage (V)**	Not used.	N/A
G.2.1	AC mains supply .....:		N/A
G.2.2	Earthed d.c. mains supplies .....:		N/A
G.2.3	Unearthed d.c. mains supplies .....:		N/A
G.2.4	Battery operation .....:		N/A
G.3	**Determination of telecommunication network transient voltage (V) .....:**	Not used.	N/A
G.4	**Determination of required withstand voltage (V)**	Not used.	N/A
G.4.1	Mains transients and internal repetitive peaks .....:		N/A
G.4.2	Transients from telecommunication networks .....:		N/A
G.4.3	Combination of transients		N/A
G.4.4	Transients from cable distribution systems		N/A
G.5	**Measurement of transient voltages (V)**	Not used.	N/A
	a) Transients from a mains supply		N/A
	For an a.c. mains supply		N/A
	For a d.c. mains supply		N/A
	b) Transients from a telecommunication network		N/A
G.6	**Determination of minimum clearances .....:**	Not used.	N/A

H	**ANNEX H, IONIZING RADIATION (see 4.3.13)**		N/A

J	**ANNEX J, TABLE OF ELECTROCHEMICAL POTENTIALS (see 2.6.5.6)**		N/A
	Metal(s) used .....:		—

K	**ANNEX K, THERMAL CONTROLS (see 1.5.3 and 5.3.8)**		N/A
K.1	Making and breaking capacity	No thermal control in the EUT.	N/A
K.2	Thermostat reliability; operating voltage (V) .....:	No thermal control in the EUT.	N/A
K.3	Thermostat endurance test; operating voltage (V) .....:	No thermal control in the EUT.	N/A
K.4	Temperature limiter endurance; operating voltage (V) .....:	No thermal control in the EUT.	N/A
K.5	Thermal cut-out reliability	No thermal control in the EUT.	N/A
K.6	Stability of operation	No thermal control in the EUT.	N/A

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Clause	Requirement – Test	Result - Remark	Verdict
L	**ANNEX L, NORMAL LOAD CONDITIONS FOR SOME TYPES OF ELECTRICAL BUSINESS EQUIPMENT (see 1.2.2.1 and 4.5.2)**		P
L.1	Typewriters	No such device in the EUT.	N/A
L.2	Adding machines and cash registers	No such device in the EUT.	N/A
L.3	Erasers	No such device in the EUT.	N/A
L.4	Pencil sharpeners	No such device in the EUT.	N/A
L.5	Duplicators and copy machines	No such device in the EUT.	N/A
L.6	Motor-operated files	No such device in the EUT.	N/A
L.7	Other business equipment	Considered, see operation condition in page 4 under "Summary of testing".	P
M	**ANNEX M, CRITERIA FOR TELEPHONE RINGING SIGNALS (see 2.3.1)**		N/A
M.1	Introduction	No phone ringing was generated in the EUT.	N/A
M.2	Method A	No phone ringing was generated in the EUT.	N/A
M.3	Method B	No phone ringing was generated in the EUT.	N/A
M.3.1	Ringing signal	No phone ringing was generated in the EUT.	N/A
M.3.1.1	Frequency (Hz) .....:		—
M.3.1.2	Voltage (V) .....:		—
M.3.1.3	Cadence; time (s), voltage (V) .....:		—
M.3.1.4	Single fault current (mA) .....:		—
M.3.2	Tripping device and monitoring voltage .....:	No phone ringing was generated in the EUT.	N/A
M.3.2.1	Conditions for use of a tripping device or a monitoring voltage	No phone ringing was generated in the EUT.	N/A
M.3.2.2	Tripping device	No phone ringing was generated in the EUT.	N/A
M.3.2.3	Monitoring voltage (V) .....:	No phone ringing was generated in the EUT.	N/A
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/A
N.1	ITU-T impulse test generators	Not used.	N/A

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Clause	Requirement – Test	Result - Remark	Verdict
N.2	IEC 60065 impulse test generator	Not used.	N/A
P	**ANNEX P, NORMATIVE REFERENCES**		—
Q	**ANNEX Q, Voltage dependent resistors (VDRs) (see 1.5.9.1)**		N/A
	- Preferred climatic categories .....:	No such device	N/A
	- Maximum continuous voltage .....:	No such device	N/A
	- Combination pulse current .....:	No such device	N/A
	Body of the VDR Test according to IEC60695-11-5.....:	No such device	N/A
	Body of the VDR. Flammability class of material (min V-1).....:	No such device	N/A
R	**ANNEX R, EXAMPLES OF REQUIREMENTS FOR QUALITY CONTROL PROGRAMMES**		N/A
R.1	Minimum separation distances for unpopulated coated printed boards (see 2.10.6.2)		N/A
R.2	Reduced clearances (see 2.10.3)		N/A
S	**ANNEX S, PROCEDURE FOR IMPULSE TESTING (see 6.2.2.3)**		N/A
S.1	Test equipment	Not used.	N/A
S.2	Test procedure	Not used.	N/A
S.3	Examples of waveforms during impulse testing	Not used.	N/A
T	**ANNEX T, GUIDANCE ON PROTECTION AGAINST INGRESS OF WATER (see 1.1.2)**		N/A
			—
U	**ANNEX U, INSULATED WINDING WIRES FOR USE WITHOUT INTERLEAVED INSULATION (see 2.10.5.4)**		N/A
			—
V	**ANNEX V, AC POWER DISTRIBUTION SYSTEMS (see 1.6.1)**		N/A
V.1	Introduction	Class III equipment, no direct connection to the mains.	N/A

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Clause	Requirement – Test	Result - Remark	Verdict
V.2	TN power distribution systems	Class III equipment, no direct connection to the mains.	N/A
W	**ANNEX W, SUMMATION OF TOUCH CURRENTS**		N/A
W.1	Touch current from electronic circuits	Class III equipment	N/A
W.1.1	Floating circuits	Class III equipment	N/A
W.1.2	Earthed circuits	Class III equipment	N/A
W.2	Interconnection of several equipments	Class III equipment	N/A
W.2.1	Isolation	Class III equipment	N/A
W.2.2	Common return, isolated from earth	Class III equipment	N/A
W.2.3	Common return, connected to protective earth	Class III equipment	N/A
X	**ANNEX X, MAXIMUM HEATING EFFECT IN TRANSFORMER TESTS (see clause C.1)**		N/A
X.1	Determination of maximum input current		N/A
X.2	Overload test procedure		N/A
Y	**ANNEX Y, ULTRAVIOLET LIGHT CONDITIONING TEST (see 4.3.13.3)**		N/A
Y.1	Test apparatus .....:	Not used.	N/A
Y.2	Mounting of test samples .....:	Not used.	N/A
Y.3	Carbon-arc light-exposure apparatus .....:	Not used.	N/A
Y.4	Xenon-arc light exposure apparatus .....:	Not used.	N/A
Z	**ANNEX Z, OVERVOLTAGE CATEGORIES (see 2.10.3.2 and Clause G.2)**		N/A
AA	**ANNEX AA, MANDREL TEST (see 2.10.5.8)**		N/A
BB	**ANNEX BB, CHANGES IN THE SECOND EDITION**		—
CC	**ANNEX CC, Evaluation of integrated circuit (IC) current limiters**		N/A
CC.1	General		N/A
CC.2	Test program 1.....:		N/A
CC.3	Test program 2.....:		N/A
CC.4	Test program 3.....:		N/A

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Clause	Requirement – Test	Result - Remark	Verdict
CC.5	Compliance.....:		N/A
DD	**ANNEX DD, Requirements for the mounting means of rack-mounted equipment**		N/A
DD.1	General	No such construction.	N/A
DD.2	Mechanical strength test, variable N……..:	No such construction.	N/A
DD.3	Mechanical strength test, 250N, including end stops……:	No such construction.	N/A
DD.4	Compliance…….. :	No such construction.	N/A
EE	**ANNEX EE, Household and home/office document/media shredders**		N/A
EE.1	General	No such device.	N/A
EE.2	Markings and instructions	No such device.	N/A
	Use of markings or symbols……:	No such device.	N/A
	Information of user instructions, maintenance and/or servicing instructions……:	No such device.	N/A
EE.3	Inadvertent reactivation test……:	No such device.	N/A
EE.4	Disconnection of power to hazardous moving parts:	No such device.	N/A
	Use of markings or symbols……:	No such device.	N/A
EE.5	Protection against hazardous moving parts	No such device.	N/A
	Test with test finger (Figure 2A) ……:	No such device.	N/A
	Test with wedge probe (Figure EE1 and EE2) ……:	No such device.	N/A

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Clause	Requirement – Test	Result - Remark	Verdict

Group differences		
COMMON MODIFICATIONS		
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
Contents (A2: 2013)	Add the following: Annex ZD (informative) IEC and CENELEC code designations for flexible cords	N/A
Whole document (A2: 2013)	Delete all the “country” notes in the reference document according to the following list: 2.7.1 Note * 2.10.3.1 Note 2 6.2.2 Note * Note of secretary: Text of Common Modification remains unchanged For special national conditions, see Annex ZB.	N/A
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
General (A1:2010)	In IEC 60950-1:2005/A1 delete all the “country” notes according to the following list: - 1.5.7.1: Note - 6.1.2.1: Note 2 - 6.2.2.1: Note 2 - EE.3: Note	P
1.1.1 (A1:2010)	Replace the text of NOTE 3 by the following NOTE 3 The requirements of EN 60065 may also be used to meet safety requirements for multimedia equipment. See IEC Guide 112, Guide on the safety of multimedia equipment. For television sets EN 60065 applies.	Not such equipment N/A

IEC 60950-1			
Clause	Requirement – Test	Result - Remark	Verdict
1.2.3 (A1:2010)	Add the following definition: **1.2.3.Z1** **PORTABLE SOUND SYSTEM** small battery powered audio equipment: − whose prime purpose is to listen to recorded or broadcasted sound; and − that uses headphones or earphones that can be worn in or on or around the ears; and − that allows the user to walk around NOTE Examples are mini-disk or CD players; MP3 audio players or similar equipment.	Not such equipment	N/A
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.	Not such equipment	N/A
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	Not such equipment	N/A
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	Not such equipment	N/A

IEC 60950-1			
Clause	Requirement – Test	Result - Remark	Verdict
1.7.2.1 (A1:2010)	Delete NOTE Z1. Add the following paragraph at the end of the subclause: In addition, for a PORTABLE SOUND SYSTEM, the instructions shall include a warning that excessive sound pressure from earphones and headphones can cause hearing loss.	Not such equipment	N/A
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.	Not such equipment	N/A
2.7.2	This subclause has been declared 'void'.	Not such equipment	N/A
3.2.3	Delete the NOTE in Table 3A, and delete also in this table the conduit sizes in parentheses.	Not such equipment	N/A

IEC 60950-1			
Clause	Requirement – Test	Result - Remark	Verdict
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.	Class III equipment	N/A
3.2.5.1 (A2: 2013)	Add the following Note: NOTE Z1 The harmonised code designations corresponding to the IEC cord types are given in Annex ZD.	Class III equipment,	N/A
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.	Class III equipment,	N/A
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.	Added.	N/A

IEC 60950-1			
Clause	Requirement – Test	Result - Remark	Verdict
4.3.13.6 (A1:2010)	Replace the existing NOTE by the following: 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, and 2006/25/EC: Directive on the minimum health and safety requirements regarding the exposure of workers to risks arising from physical agents (artificial optical radiation). Standards taking into account mentioned Recommendation and Directive which demonstrate compliance with the applicable EU Directive are indicated in the OJEC.	Replaced.	N/A
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.	No such devices	N/A

IEC 60950-1			
Clause	Requirement – Test	Result - Remark	Verdict
Biblio-graphy	Add the following standards: EN 50332-1:2000, 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” EN 50332-2:2003, Sound system equipment: Headphones and earphones associated with portable audio equipment - Maximum sound pressure level measurement methodology and limit considerations - Part 2: Matching of sets with headphones if either or both are offered separately Add the following notes for the standards indicated: IEC 60127 NOTE Harmonized in EN 60127 series (not modified). IEC 60369-2-1 NOTE Harmonized as HD 60369-2-1:2005 (modified). IEC 60364-4-41 NOTE Harmonized as HD 384.4.41 S2:1996 (modified). IEC 60529 NOTE Harmonized as EN 60529:1991 (not modified). IEC 60664-4 NOTE Harmonized as EN 60664-4:2006 (not modified). IEC 60728-11 NOTE Harmonized as EN 60728-11:2005 (modified). IEC 60896-21 NOTE Harmonized as EN 60896-21:2004 (not modified). IEC 60896-22 NOTE Harmonized as EN 60896-22:2004 (not modified). IEC 61032 NOTE Harmonized as EN 61032:1998 (not modified).	Added.	P

IEC 60950-1			
Clause	Requirement – Test	Result - Remark	Verdict
	IEC 61140 NOTE Harmonized as EN 61140:2002 (not modified). IEC 61558-1 NOTE Harmonized as EN 61558-1:2005 (not modified). IEC 61643-21 NOTE Harmonized as EN 61643-21:2001 (not modified). IEC 61643-311 NOTE Harmonized as EN 61643-311:2001 (not modified). IEC 61643-321 NOTE Harmonized as EN 61643-321:2002 (not modified). IEC 61643-331 NOTE Harmonized as EN 61643-331:2003 (not modified). IEC 61965 NOTE Harmonized as EN 61965:2003 (not modified). ISO 4892 NOTE Harmonized in EN ISO 4892 series (not modified).		
Biblio-graphy (A1:2010)	Add the following note for the standard indicated: IEC 60908 NOTE Harmonized as EN 60908.		—

IEC 60950-1			
Clause	Requirement – Test	Result - Remark	Verdict

ZA
(A2: 2013)

Normative references to international publications with their corresponding European publications

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

NOTE When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

Publication	Year	Title	EN/HD	Year
-	-	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"	EN 50332-1	-
-	-	Sound system equipment: Headphones and earphones associated with portable audio equipment — Maximum sound pressure level measurement methodology and limit considerations — Part 2: Matching of sets with headphones if either or both are offered separately	EN 50332-2	-
-	-	Insulating, sheathing and covering materials for low-voltage energy cables	EN 50363	all parts
-	-	Electrical test methods for low voltage energy cables	EN 50395	-
-	-	Non electrical test methods for low voltage energy cables	EN 50396	-
IEC 60065 (mod) A1 (mod) A2 (mod)	2001 2005 2010	Audio, video and similar electronic apparatus – Safety requirements	EN 60065 A1 A11 A2 A12	2002 2006 2008 2010 2011
IEC 60068-2-78	-	Environmental testing – Part 2-78: Tests – Test Cab: Damp heat, steady state	EN 60068-2-78	-

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IEC 60950-1			
Clause	Requirement – Test	Result - Remark	Verdict

Publication	Year	Title	EN/HD	Year
IEC 60073	-	Basic and safety principles for man-machine interface, marking and identification – Coding principles for indication devices and actuators	EN 60073	-
IEC/TR 60083	-	Plugs and socket-outlets for domestic and similar general use standardized in member countries of IEC	-	-
IEC 60085	2004	Electrical insulation – Thermal evaluation and designation	EN 60085	2004 1)
IEC 60112	-	Method for the determination of the proof and the comparative tracking indices of solid insulating materials	EN 60112	-
IEC 60127-1	-	Miniature fuses – Part 1: Definitions for miniature fuses and general requirements for miniature fuse-links	EN 60127-1	-
IEC 60227-1	2007	Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V – Part 1: General requirements	- 2)	-
IEC 60227-2 A1	1997 2003	Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V – Part 2: Test methods	- 2)	-
IEC 60245	all parts	Rubber insulated cables – Rated voltages up to and including 450/750V	- 3)	-
IEC 60309	all parts	Plugs, socket-outlets and couplers for industrial purposes – Part 1: General requirements	EN 60309	all parts
IEC 60317	all parts	Specifications for particular types of winding wires	EN 60317	all parts
IEC 60317-43	-	Specifications for particular types of winding wires – Part 43: Aromatic polyimide tape wrapped round copper wire, class 240	EN 60317-43	-

1) IEC 60085:2004 is superseded by IEC 60085:2007 which is harmonised as EN 60085:2008.

2) The HD 21 series is related to, but not directly equivalent with the IEC 60227 series. Also EN 50363, EN 50395 and EN 50396 are to be taken into account.

3) The HD 22 series is related to, but not directly equivalent with the IEC 60245 series. Also EN 50363, EN 50395 and EN 50396 are to be taken into account.

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IEC 60950-1			
Clause	Requirement – Test	Result - Remark	Verdict

Publication	Year	Title	EN/HD	Year
IEC 60320	all parts	Appliance couplers for household and similar general purposes	EN 60320	all parts
IEC 60364-1 (mod)	2001	Electrical installations of buildings – Part 1: Fundamental principles, assessment of general characteristics, definitions	HD 384.1 S2	2001
IEC 60384-14	2005	Fixed capacitors for use in electronic equipment – Part 14: Sectional specification: Fixed capacitors for electromagnetic interference suppression and connection to the supply mains	EN 60384-14	2005
IEC 60417	Data-base	Graphical symbols for use on equipment	-	-
IEC 60664-1 A1 A2	1992 2000 2002	Insulation coordination for equipment within low-voltage systems – Part 1: Principles, requirements and tests	EN 60664-1	2003 4)
IEC 60695-2-11	-	Fire hazard testing – Part 2-11: Glowing/hot-wire based test methods – Glow-wire flammability test method for end-products	EN 60695-2-11	-
IEC 60695-2-20	-	Fire hazard testing – Part 2-20: Glowing/hot-wire based test methods – Hot-wire coil ignitability – Apparatus, test method and guidance	-	-
IEC 60695-10-2	-	Fire hazard testing – Part 10-2: Abnormal heat – Ball pressure test	EN 60695-10-2	-
IEC 60695-10-3	-	Fire hazard testing – Part 10-3: Abnormal heat – Mould stress relief distortion test	EN 60695-10-3	-
IEC 60695-11-3	-	Fire hazard testing – Part 11-3: Test flames –500 W flames – Apparatus and confirmational test methods	EN 60695-11-3	-
IEC 60695-11-4	-	Fire hazard testing – Part 11-4: Test flames –50 W flame – Apparatus and confirmational test method	EN 60695-11-4	-

4) IEC 60664-1:1992 is superseded by IEC 60664-1:2007 which is harmonised as EN 60664-1:2007.

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IEC 60950-1			
Clause	Requirement – Test	Result - Remark	Verdict

	Publication	Year	Title	EN/HD	Year	—
	IEC 60695-11-5	2004	Fire hazard testing – Part 11-5: Test flames – Needle-flame test method – Apparatus, confirmatory test arrangement and guidance	EN 60695-11-5	2004	
	IEC 60695-11-10	-	Fire hazard testing – Part 11-10: Test flames – 50 W horizontal and vertical flame test methods	EN 60695-11-10	-	
	IEC 60695-11-20	-	Fire hazard testing – Part 11-20: Test flames – 500 W flame test methods	EN 60695-11-20	-	
	IEC 60730-1 (mod) A1	1999 2003	Automatic electrical controls for household and similar use – Part 1: General requirements	EN 60730-1 A1	2000 [5)] 2004	
	IEC 60747-5-5	2007	Semiconductor devices – Discrete devices – Part 5-5: Optoelectronic devices – Photocouplers	EN 60747-5-5	2011	
	IEC 60825-1	-	Safety of laser products – Part 1: Equipment classification and requirements	EN 60825-1	-	
	IEC 60825-2	-	Safety of laser products – Part 2: Safety of optical fibre communication systems (OFCS)	EN 60825-2	-	
	IEC/TR 60825-9	-	Safety of laser products – Part 9: Compilation of maximum permissible exposure to incoherent optical radiation	-	-	
	IEC 60825-12	-	Safety of laser products – Part 12: Safety of free space optical communication systems used for transmission of information	EN 60825-12	-	
	IEC 60851-3	2009	Winding wires – Test methods – Part 3: Mechanical properties	EN 60851-3	2009	
	IEC 60851-5	2008	Winding wires – Test methods – Part 5: Electrical properties	EN 60851-5	2008	
	IEC 60851-6 A1 A2	1996 1997 2003	Winding wires – Test methods – Part 6: Thermal properties	EN 60851-6 A1 A2	1996 1997 2004	
	5) IEC 60730-1:1999 is superseded by IEC 60730-1:2000 which is harmonised as EN 60730-1:2011, modified.					

IEC 60950-1			
Clause	Requirement – Test	Result - Remark	Verdict

Publication	Year	Title	EN/HD	Year	—
IEC 60885-1	1987	Electrical test methods for electric cables – Part 1: Electrical tests for cables, cords and wires for voltages up to and including 450/750 V	-	-	
IEC 60906-1	-	IEC system of plugs and socket-outlets for household and similar purposes – Part 1: Plugs and socket-outlets 16 A 250 V a.c.	-	-	
IEC 60906-2	-	IEC system of plugs and socket-outlets for household and similar purposes – Part 2: Plugs and socket-outlets 15 A 125 V a.c. and 20 A 125 V a.c.	-	-	
IEC 60947-1	-	Low-voltage switchgear and controlgear – Part 1: General rules	EN 60947-1	-	
IEC 60990	1999	Methods of measurement of touch current and protective conductor current	EN 60990	1999	
IEC 60998-1	-	Connecting devices for low-voltage circuits for household and similar purposes – Part 1: General requirements	EN 60998-1	-	
IEC 60999-1	-	Connecting devices – Electrical copper conductors – Safety requirements for screw-type and screwless-type clamping units – Part 1: General requirements and particular requirements for clamping units for conductors from 0,2 mm² up to 35 mm² (included)	EN 60999-1	-	
IEC 60999-2	-	Connecting devices – Electrical copper conductors – Safety requirements for screw-type and screwless-type clamping units – Part 2: Particular requirements for clamping units for conductors above 35 mm² up to 300 mm² (included)	EN 60999-2	-	
IEC 61051-2	1991	Varistors for use in electronic equipment – Part 2: Sectional specification for surge suppression varistors	-	-	
IEC 61058-1 (mod) A1 A2	2000 2001 2007	Switches for appliances – Part 1: General requirements	EN 61058-1 A2	2002 2008	

IEC 60950-1			
Clause	Requirement – Test	Result - Remark	Verdict

Publication	Year	Title	EN/HD	Year	—
IEC 62133	2012	Secondary cells and batteries containing alkaline or other non-acid electrolytes – Safety requirements for portable sealed secondary cells, and for batteries made from them, for use in portable applications	EN 62133	2013	
IEC 62368-1	-	Audio/video, information and communication technology equipment – Part 1: Safety requirements	FprEN 62368	-	
IEC 62471 (mod)	2006	Photobiological safety of lamps and lamp systems	EN 62471	2008	
ISO 178	-	Plastics - Determination of flexural properties	EN ISO 178	-	
ISO 179	all parts	Plastics - Determination of Charpy impact properties	EN ISO 179	all parts	
ISO 180	-	Plastics - Determination of Izod impact strength	EN ISO 180	-	
ISO 261	-	ISO general purpose metric screw threads - General plan	-	-	
ISO 262	-	ISO general purpose metric screw threads - Selected sizes for screws, bolts and nuts	-	-	
ISO 527	all parts	Plastics – Determination of tensile properties	EN ISO 527	all parts	
ISO 3864	all parts	Graphical symbols – Safety colours and safety signs	-	-	
ISO 4892-1	-	Plastics – Methods of exposure to laboratory light sources – Part 1: General guidance	EN ISO 4892-1	-	
ISO 4892-2	-	Plastics – Methods of exposure to laboratory light sources – Part 2: Xenon-arc lamps	EN ISO 4892-2	-	
ISO 4892-4	-	Plastics – Methods of exposure to laboratory light sources – Part 4: Open-flame carbon-arc lamps	-	-	
ISO 7000	-	Graphical symbols for use on equipment – Registered symbols	-	-	
ISO 8256	-	Plastics – Determination of tensile-impact strength	EN ISO 8256	-	

IEC 60950-1			
Clause	Requirement – Test	Result - Remark	Verdict

	Publication	Year	Title	EN/HD	Year	—
	ISO 9772	-	Cellular plastics – Determination of horizontal burning characteristics of small specimens subjected to a small flame	-	-	
	ISO 9773	-	Plastics – Determination of burning behaviour of thin flexible vertical specimens in contact with a small-flame ignition source	EN ISO 9773	-	
	ITU-T Recommendation K44	-	Resistibility tests for telecommunication equipment exposed to overvoltages and overcurrents – Basic Recommendation	-	-	

IEC 60950-1			
Clause	Requirement – Test	Result - Remark	Verdict
ZB	**Special national conditions** Special national condition: National characteristic or practice that cannot be changed even over a long period, e.g. climatic conditions, electrical earthing conditions. NOTE If it affects harmonization, it forms part of the European Standard. For the countries in which the relevant special national conditions apply these provisions are normative, for other countries they are informative.		P
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.	Class III equipment	N/A
1.2.13.14 (A11:2009)	Add as new SNC: In **Norway** and **Sweden**, for requirements see 1.7.2.1 and 7.3 of this annex.	Not such equipment	N/A
1.5.7.1 (A11:2009)	Replace the existing SNC by the following: In **Finland, Norway** and **Sweden**, resistors bridging BASIC INSULATION in CLASS I PLUGGABLE EQUIPMENT TYPE A must comply with the requirements in 1.5.7.1. In addition when a single resistor is used, the resistor must withstand the resistor test in 1.5.7.2.	Class III equipment	N/A
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).	Class III equipment	N/A
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.	Not such equipment	N/A

IEC 60950-1			
Clause	Requirement – Test	Result - Remark	Verdict
1.7.2.1 (A2: 2013)	In **Denmark**, **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 **Denmark**: “Apparatets stikprop skal tilsluttes en stikkontakt med jord, som giver forbindelse til stikproppens jord.” In **Finland**: "Laite on liitettävä suojakoskettimilla varustettuun pistorasiaan" In **Norway**: “Apparatet må tilkoples jordet stikkontakt” In **Sweden**: “Apparaten skall anslutas till jordat uttag”	Class III equipment	N/A
1.7.5 (A2: 2013)	In **Denmark**, socket-outlets for providing power to other equipment shall be in accordance with the DS 60884-2-D1:2011. For class I equipment the following Standard Sheets are applicable: DK 1-3a, DK 1-1c, DK 1-1d, DK 1-5a or DK 1-7a, with the exception for STATIONARY EQUIPMENT where the socket-outlets shall be in accordance with Standard Sheet DK 1-1b, DK 1-1c, DK 1-1d or DK 1-5a. Socket outlets intended for providing power to Class II apparatus with a rated current of 2,5 A shall be in accordance with DS 60884-2-D1 standard sheet DKA 1-4a. Other current rating socket outlets shall be in compliance with by DS 60884-2-D1 Standard Sheet DKA 1-3a or DKA 1-3b. Justification the Heavy Current Regulations, 6c	Class III equipment	N/A
2.2.4	In **Norway**, for requirements see 1.7.2.1, 6.1.2.1 and 6.1.2.2 of this annex.	Not such equipment	N/A
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.	Not such equipment	N/A

IEC 60950-1			
Clause	Requirement – Test	Result - Remark	Verdict
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/A
2.6.3.3	In the **United Kingdom**, the current rating of the circuit shall be taken as 13 A, not 16 A.	Class III equipment	N/A
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.	Class III equipment	N/A
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/A
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	Class III equipment	N/A

IEC 60950-1			
Clause	Requirement – Test	Result - Remark	Verdict
3.2.1.1 (A2: 2013)	In **Denmark**, supply cords of single-phase equipment having a rated current not exceeding 13 A shall be provided with a plug according to DS 60884-2-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 a single-phase equipment having a RATED CURRENT exceeding 13 A or if a poly-phase equipment is provided with a supply cord with a plug, this plug shall be in accordance with the standard sheets DK 6-1a in DS 60884-2-D1 or EN 60309-2. Justification the Heavy Current Regulations, 6c	Class III equipment	N/A
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.	Class III equipment	N/A

IEC 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.	Class III equipment	N/A
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.	Class III equipment	N/A
3.2.4	In **Switzerland**, for requirements see 3.2.1.1 of this annex.	Class III equipment	N/A
3.2.5.1	In the **United Kingdom**, a power supply cord with conductor of 1,25 mm^2 is allowed for equipment with a rated current over 10 A and up to and including 13 A.	Class III equipment	N/A
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.	Class III equipment	N/A
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 ℃. Where the metal earth pin is replaced by an Insulated Shutter Opening Device (ISOD), the requirements of clauses 22.2 and 23 also apply.	Class III equipment	N/A

IEC 60950-1			
Clause	Requirement – Test	Result - Remark	Verdict
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.	Class III equipment	N/A
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.	Class III equipment	N/A

IEC 60950-1			
Clause	Requirement – Test	Result - Remark	Verdict
6.1.2.1 (A1:2010)	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. Alternatively for components, 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 an optocoupler complying with 2.10.5.4 b). It is permitted to bridge this insulation with a capacitor complying with EN 60384-14:2005, subclass Y2. A capacitor classified Y3 according to EN 60384-14:2005, may bridge this insulation under the following conditions: - the insulation requirements are satisfied by having a capacitor classified Y3 as defined by EN 60384-14, 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 60384-14; - the impulse test of 2,5 kV is to be performed before the endurance test in EN 60384-14, in the sequence of tests as described in EN 60384-14.	Class III equipment	N/A

IEC 60950-1			
Clause	Requirement – Test	Result - Remark	Verdict
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.	Class III equipment	N/A
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.	Not such equipment	N/A
7.3 (A11:2009)	Delete the existing SNC for Norway and Sweden (based on NOTE 1 of IEC 60950-1:2005 + corr. 1). Add as new SNC (based on future NOTE 3 of IEC 60950-1:200X): In **Norway** and **Sweden**, for requirements see 1.2.13.14 and 1.7.2.1 of this annex.		N/A
7.3	In **Norway**, for installation conditions see EN 60728-11:2005.		N/A

IEC 60950-1			
Clause	Requirement – Test	Result - Remark	Verdict
ZC	**A-deviations** A-deviation: National deviation due to regulations, the alteration of which is for the time being outside the competence of the CENELEC national member. This European Standard falls under Directives RTTED (1999/5/EC) and LVD (2006/95/EC). NOTE (from CEN/CENELEC IR Part 2:2002 , 2.17) Where standards fall under EC Directives, it is the view of the Commission of the European Communities (OJ No C 59, 1982-03-09) that the effect of the decision of the Court of Justice in case 815/79 Cremonini/Vrankovich (European Court Reports 1980, p. 3583) is that compliance with A-deviations is no longer mandatory and that the free movement of products complying with such a standard should not be restricted except under the safeguard procedure provided for in the relevant Directive. A-deviations in an EFTA-country are valid instead of the relevant provisions of the European Standard in that country until they have been removed.		P
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.	No such devices	N/A
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/A
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/A
(A12:2011)	**Zx. Protection against excessive sound pressure from personal music players**		N/A

IEC 60950-1			
Clause	Requirement – Test	Result - Remark	Verdict
	Zx.1 General This sub-clause specifies requirements for protection against excessive sound pressure from personal music players that are closely coupled to the ear. It also specifies requirements for earphones and headphones intended for use with personal music players. A personal music player is a 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 the ears; and - allows the user to walk around while in use. NOTE 1 Examples are hand-held or body-worn portable CD players, MP3 audio players, mobile phones with MP3 type features, PDA$s or similar equipment. A personal music player and earphones or headphones intended to be used with personal music players shall comply with the requirements of this sub-clause. The requirements in this sub-clause are valid for music or video mode only. The requirements do not apply: - while the personal music player is connected to an external amplifier; or - while the headphones or earphones are not used. NOTE 2 An external amplifier is an amplifier which is not part of the personal music player or the listening device, but which is intended to play the music as a standalone music player. The requirements do not apply to: - hearing aid equipment and professional equipment; NOTE 3 Professional equipment is equipment sold through special sales channels. All products sold through normal electronics stores are considered not to be professional equipment.	Not such equipment	N/A

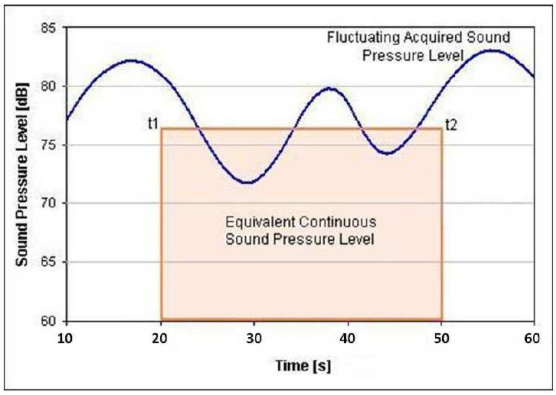
IEC 60950-1			
Clause	Requirement – Test	Result - Remark	Verdict
	- analogue personal music players (personal music players without any kind of digital processing of the sound signal) that are brought to the market before the end of 2015 NOTE 4 This exemption has been allowed because this technology is falling out of use and it is expected that within a few years it will no longer exist. This exemption will not be extended to other technologies. For equipment which is clearly designed or intended for use by young children, the limits of EN 71-1 apply.	Not such equipment	N/A

IEC 60950-1			
Clause	Requirement – Test	Result - Remark	Verdict
	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 $L_{Aeq,T}$ is ≤ 85 dBA measured while playing the fixed “programme simulation noise" as described in EN 50332-1; and - a personal music player provided with an analogue electrical output socket for a listening device, where the electrical output is ≤ 27 mV measured as described in EN 50332-2, while playing the fixed “programme simulation noise" as described in EN 50332-1. NOTE 1 Wherever the term acoustic output is used in this clause, the 30 s A-weighted equivalent sound pressure level $L_{Aeq,T}$ is meant. See also Zx.5 and Annex Zx. 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 automatically return to an output level not exceeding those mentioned above when the power is switched off; 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 exceeding those mentioned above. The acknowledgement does not need to be repeated more than once every 20 h of cumulative listening time; and NOTE 2 Examples of means include visual or audible signals. Action from the user is always required.	Not such equipment	N/A

IEC 60950-1			
Clause	Requirement – Test	Result - Remark	Verdict
	NOTE 3 The 20 h listening time is the accumulative listening time, independent how often and how long the personal music player has been switched off. d) have a warning as specified in Zx.3; and e) not exceed the following: 1) equipment provided as a 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. For music where the average sound pressure (long term $L_{Aeq,T}$) measured over the duration of the song is lower than the average produced by the programme simulation noise, the warning does not need to be given as long as the average sound pressure of the song is below the basic limit of 85 dBA. In this case T becomes the duration of the song. NOTE 4 Classical music typically has an average sound pressure (long term $L_{Aeq,T}$) which is much lower than the average programme simulation noise. Therefore, if the player is capable to analyse the song and compare it with the programme simulation noise, the warning does not need to be given as long as the average sound pressure of the song is below the basic limit of 85 dBA. For example, if the player is set with the programme simulation noise to 85 dBA, but the average music level of the song is only 65 dBA, there is no need to give a warning or ask an acknowledgement as long as the average sound level of the song is not above the basic limit of 85 dBA.	Not such equipment	N/A

IEC 60950-1			
Clause	Requirement – Test	Result - Remark	Verdict
	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) 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.	Not such equipment	N/A
	Zx.4 Requirements for listening devices (headphones and earphones)		N/A
	Zx.4.1 Wired listening devices with analogue input With 94 dBA sound pressure output $L_{Aeq,T}$, the input voltage of the fixed "programme simulation 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). NOTE The values of 94 dBA - 75 mV correspond with 85dBA - 27 mV and 100 dBA - 150 mV.	Not such equipment	N/A

IEC 60950-1			
Clause	Requirement – Test	Result - Remark	Verdict
	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 $L_{Aeq,T}$ of the listening device shall be ≤ 100 dBA. This requirement is applicable in any mode where the headphones can operate, including any available setting (for example built-in volume level control, additional sound feature like equalization, etc.). NOTE An example of a wired listening device with digital input is a USB headphone.	Not such equipment	N/A
	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; and - respecting 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 above-mentioned programme simulation noise, the acoustic output $L_{Aeq,T}$ of the listening device shall be ≤ 100 dBA. NOTE An example of a wireless listening device is a Bluetooth headphone.	Not such equipment	N/A
	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. NOTE Test method for wireless equipment provided without listening device should be defined.	Not such equipment	N/A

IEC 60950-1			
Clause	Requirement – Test	Result - Remark	Verdict
Annex Zx (A12:2011)	**Significance of $L_{Aeq,T}$ in EN 50332-1 and additional information** $L_{Aeq,T}$ is derived from the general formula for equivalent sound pressure: $$L_{eq} = 10\log\left[\frac{1}{t_2 - t_1}\int_{t_1}^{t_2}\frac{p_A^2}{p_0^2}dt\right]$$ This can be represented graphically as follows:  In EN 50332-1 the measurement time interval (t2 -t1) is 30 s. In practice, and for the purposes of listening to personal music player content, $L_{Aeq,T}$ has a time interval T (t2 - t1) in the order of minutes / hours and not seconds. 6.5 (Limitation value) of EN 50332-1:2000 acknowledges this fact and states that the 100 dB limit equates to a long time average of 90 dB $L_{Aeq,T}$. By using the IEC 60268-1 “programme simulation noise" test signal, this also takes the spectral content into account. The SCENHIR[1] report states that 80 dBA is considered safe for an exposure time of 40 h/week. Most persons do not listen to 40 h/week to their personal music player. In addition, not all music tracks are at the same level of the simulated noise signal. Whilst modern music tends to be at around the same level, most of the available music is at a lower average level. Therefore, the working group[2] considers a value of 85 dBA to be safe for an overwhelming majority of the users of personal music players.	Not such equipment	N/A

IEC 60950-1			
Clause	Requirement – Test	Result - Remark	Verdict
	[1] SCENIHR opinion of 23 Sept 2008: Potential health risks of exposure to noise from personal music players and mobile phones including a music playing function [2] CENELEC TC108X/WG03		N/A

ZD	**IEC and CENELEC code designations for flexible cords**			N/A
	Type of flexible cord	Code designations		N/A
		IEC	CENELEC	
	PVC insulated cords			
	Flat twin tinsel cord	60227 IEC 41	H03VH-Y	
	Light polyvinyl chloride sheathed flexible cord	60227 IEC 52	H03VV-F	
			H03VVH2-F	
	Ordinary polyvinyl chloride sheathed flexible cord	60227 IEC 53	H05VV-F	
			H05VVH2-F	
	Rubber insulated cords			
	Braided cord	60245 IEC 51	H03RT-F	
	Ordinary tough rubber sheathed flexible cord	60245 IEC 53	H05RR-F	
	Ordinary polychloroprene sheathed flexible cord	60245 IEC 57	H05RN-F	
	Heavy polychloroprene sheathed flexible cord	60245 IEC 66	H07RN-F	
	Cords having high flexibility			
	Rubber insulated and sheathed cord	60245 IEC 86	H03RR-H	
	Rubber insulated, crosslinked PVC sheathed cord	60245 IEC 87	H03RV4-H	
	Crosslinked PVC insulated and sheathed cord	60245 IEC 88	H03V4V4-H	

IEC 60950-1			
Clause	Requirement – Test	Result - Remark	Verdict

1.5.1	TABLE: List of critical components				P
Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity[1])
AC adapter (EU plug)	TP-LINK TECHNOLOGIES CO., LTD.	T120100-2C1	Input: 100-240Vac, 50/60Hz, 0.3A; Output: 12Vdc, 1.0A (LPS), 40°C	IEC 60950-1: 2005+A1: 2009+A2: 2013	CB by TUVRheinland, Report No.: 17056101 001
AC adapter (UK plug)	TP-LINK TECHNOLOGIES CO., LTD.	T120100-2D1	Input: 100-240Vac, 50/60Hz, 0.3A; Output: 12Vdc, 1.0A (LPS), 40°C	IEC 60950-1: 2005+A1: 2009+A2: 2013	CB by TUVRheinland, Report No.: 17056101 001
AC adapter (AU plug)	TP-LINK TECHNOLOGIES CO., LTD.	T120100-2E1	Input: 100-240Vac, 50/60Hz, 0.3A; Output: 12Vdc, 1.0A (LPS), 40°C	IEC 60950-1: 2005+A1: 2009+A2: 2013	CB by TUVRheinland, Report No.: 17056101 001
PCB	HUIZHOU CHINA EAGLE ELECTRONIC TECHNOLOGY CO LTD	CA-F121	V-0, 130°C	UL 796	UL
Or	Interchangeable	Interchangeable	V-1 or better, min. 105°C	UL 796	UL
-Description: Interchangeability based on specified rating					
Enclosure	LG CHEMICAL (GUANZHOU) ENGINEERING PLASTICS CO LTD	LUPOY GP-1006F(f1), LUPOY GP-1006F(m)(f1)	V-0, min. 110°C, thickness: 1.5 mm min.	UL 94	UL
Or	Interchangeable	--	V-0, min. 80°C, thickness: 1.5 mm min.	UL 94	UL
-Description: Interchangeability based on specified rating					
POE transformer (T3)	Interchangeable	--	130°C	IEC 60950	Test with equipment
-Description: Interchangeability based on specified rating					

IEC 60950-1			
Clause	Requirement – Test	Result - Remark	Verdict

Supplementary information:

[1]) An asterisk indicates a mark which assures the agreed level of surveillance

1.6.2	TABLE: Electrical data (in normal conditions)					P
U (V)	I (A)	Irated (A)	P (W)	Fuse #	Ifuse (A)	Condition/status
12Vdc	0.20	1.0	2.4	--	--	EUT supplied by a external adaptor, all ports and wireless fuctional were operated normally.
48Vdc(for POE port)	0.067	--	3.2	--	--	EUT supplied by a POE device with 48V output, all ports and wireless fuctional were operated normally.
Supplementary information:						

2.1.1.5 c) 1)	TABLE: max. V, A, VA test				N/A
Voltage (rated) (V)	Current (rated) (A)	Voltage (max.) (V)	Current (max.) (A)	VA (max.) (VA)	
--	--	--	--	--	
supplementary information:					
--					

2.1.1.5 c) 2)	TABLE: stored energy		N/A
Capacitance C (µF)	Voltage U (V)	Energy E (J)	
--	--	--	
supplementary information:			
--			

2.1.1.7	TABLE: discharge test				N/A
Condition	τ calculated (s)	τ measured (s)	t u→0V	Comments	
--	--	--	--	--	
supplementary information:					

2.2	TABLE: evaluation of voltage limiting components in SELV circuits	N/A

IEC 60950-1			
Clause	Requirement – Test	Result - Remark	Verdict

Component (measured between)	max. voltage (V) (normal operation)		Voltage Limiting Components
	V peak	V d.c.	
--	--	--	--
Fault test performed on voltage limiting components	Voltage measured (V) in SELV circuits (V peak or V d.c.)		
--	--		
supplementary information:			
This product SELV only connect to SELV or LCC circuit.			

2.4	TABLE: limited current circuit measurement			N/A
Location	Voltage (V)	Current (mA)	Comments	
--	--	--	--	
supplementary information:				

2.5	TABLE: limited power sources(for data port)				N/A
Circuit output tested:					
Measured Uoc (V) with all load circuits disconnected:					
Location	Isc (A)		VA		
	Meas.	Limit	Meas.	Limit	
--	--	--	--	--	
--	--	--	--	--	
--	--	--	--	--	
supplementary information:					
Sc=Short circuit, Oc=Open circuit Supplied by DC power supply.					

2.6.3.4 and 2.6.1	TABLE: ground continue test		N/A
Location	resistant measures (Ω)	comments	
--	--	--	
supplementary information:			

IEC 60950-1			
Clause	Requirement – Test	Result - Remark	Verdict

2.10.2	Table: working voltage measurement			N/A
Location		RMS voltage (V)	Peak voltage (V)	Comments
--		--	--	--
supplementary information:				
--				

2.10.3 and 2.10.4	TABLE: Clearance and creepage distance measurements					N/A
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)
Functional:						
--	--	--	--	--	--	--
Basic/supplementary:						
--	--	--	--	--	--	--
Reinforced:						
--	--	--	--	--	--	--
Supplementary information:						

2.10.5	TABLE: Distance through insulation measurements				N/A
Distance through insulation (DTI) at/of:	U peak (V)	U rms (V)	Test voltage (V)	Required DTI (mm)	DTI (mm)
--	--	--	--	--	--
Supplementary information:					

4.3.8	TABLE: Batteries								N/A
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.
--	--			--	--	--	--	--	--

IEC 60950-1			
Clause	Requirement – Test	Result - Remark	Verdict

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:		

4.3.8	TABLE: Batteries	N/A
Battery category.....: --		
Manufacturer.....: --		
Type / model.....: --		
Voltage.....: --		
Capacity.....: --		
Tested and Certified by (incl. Ref. No.).....: --		
Circuit protection diagram: --		
--		

MARKINGS AND INSTRUCTIONS (1.7.13)	
Location of replaceable battery	--
Language(s) ……:	--
Close to the battery ……:	--
In the servicing instructions ……:	--
In the operating instructions ……:	--

4.5	TABLE: Thermal requirements						P
	Supply voltage (V) .....:	Supply by adapter 12Vdc					—
	Ambient T_{min} (°C) .....:	--	--	--	--	--	—
	Ambient T_{max} (°C) .....:	--	--	--	--	--	—
Maximum measured temperature T of part/at::		T (°C)					Allowed Tmax (°C)
Test condition		Horizontal		Vertical		--	--

IEC 60950-1			
Clause	Requirement – Test	Result - Remark	Verdict

	Mea. value	Shirt to 40°C	Mea. value	Shirt to 40°C	--	--
Enclosure near DC jack	29.0	43.6	29.2	43.7	--	80
Inductor L414 winding	29.4	44.0	29.7	44.2	--	130
E-capacitor C996	29.8	44.4	30.3	44.8	--	105
PCB near U2	30.5	45.1	30.4	44.9	--	105
PCB near U3	40.3	54.9	31.2	45.7	--	105
PCB near U6	34.2	48.8	34.7	49.2	--	105
PCB near network transformer T2	33.2	47.8	32.1	46.6	--	105
Transformer T3 winding	32.2	46.8	31.3	45.8	--	110
Transformer T3 core	29.5	44.1	29.2	43.7	--	110
Enclosure inside near U3	29.0	43.6	30.4	44.9	--	80
Enclosure outside near U3	28.1	42.7	28.7	43.2	--	80
Ambient	25.4	40.0	25.5	40.0	--	--

Supplementary information:

Temperature T of winding:42.2	t_1 (℃)	R_1 (Ω)	t_2 (℃)	R_2 (Ω)	T (°C)	Allowed Tmax (°C)	Insulation class
--	--	--	--	--	--	--	--

Supplementary information: EUT power from adapter 12Vdc.

4.5	TABLE: Thermal requirements						P
	Supply voltage (V) .....:	Supply by POE 48Vdc					—
	Ambient T_{min} (°C) .....:	--	--	--	--	--	—
	Ambient T_{max} (°C) .....:	--	--	--	--	--	—
Maximum measured temperature T of part/at::		T (°C)					Allowed Tmax (°C)
Test condition		Horizontal		Vertical		--	--
		Mea. value	Shirt to 40°C	Mea. value	Shirt to 40°C	--	--
Enclosure near DC jack		31.2	45.8	32.5	47.0	--	80
Inductor L414 winding		30.5	45.1	31.3	45.8	--	130
E-capacitor C996		30.3	44.9	31.6	46.1	--	105
PCB near U2		30.8	45.4	31.7	46.2	--	105

IEC 60950-1			
Clause	Requirement – Test	Result - Remark	Verdict

PCB near U3	41.2	55.8	42.1	56.6	--	105
PCB near U6	35.6	50.2	37.6	52.1	--	105
PCB near network transformer T2	34.7	49.3	35.8	50.3	--	105
Transformer T3 winding	33.6	48.2	34.7	49.2	--	110
Transformer T3 core	30.1	44.7	30.5	45.0	--	110
Enclosure inside near U3	30.0	44.6	31.2	45.7	--	80
Enclosure outside near U3	29.8	44.4	30.0	44.5	--	80
Ambient	25.3	39.9	25.4	39.9	--	--

Supplementary information:

Temperature T of winding:42.2	t_1 (℃)	R_1 (Ω)	t_2 (℃)	R_2 (Ω)	T (°C)	Allowed Tmax (°C)	Insulation class
--	--	--	--	--	--	--	--

Supplementary information: EUT power from POE 48Vdc

4.5.5	TABLE: Ball pressure test of thermoplastic parts		N/A
	Allowed impression diameter (mm) ..... :	≤ 2 mm	—

Part	Test temperature (°C)	Impression diameter (mm)
--	--	--

Supplementary information:

4.6	TABLE: Openings in enclosures	P

Location	dimensions	Comments
--	--	--

Supplementary information:

4.7	TABLE: Resistance to fire	P

Part	Manufacturer of material	Type of material	Thickness (mm)	Flammability class	Evidence

IEC 60950-1			
Clause	Requirement – Test	Result - Remark	Verdict

Enclosure	LG CHEMICAL (GUANZHOU) ENGINEERING PLASTICS CO LTD	LUPOY GP-1006F(f1), LUPOY GP-1006F(m)(f1)	Required thickness: 1.5 mm min., measured thickness: 1.5 mm min.	V-0	UL
Supplementary information:					

5.1	TABLE: touch current measurement			N/A
Measured between:		Measured (mA)	Limit (mA)	Comments/conditions
--		--	--	--
supplementary information:				
--				

5.2	TABLE: Electric strength tests, impulse tests and voltage surge tests			N/A
Test voltage applied between:		Voltage shape (AC, DC, impulse, surge)	Test voltage (V)	Breakdown Yes / No
Functional:				
--		--	--	--
Basic/supplementary:				
--		--	--	--
Reinforced:				
--		--	--	--
Supplementary information:				

5.3	TABLE: Fault condition tests		P
	Ambient temperature (°C) ..... :	26.0	—
	Power source for EUT: Manufacturer, model/type, output rating ..... :	See below	—

Component No.	Fault	Supply voltage (V)	Test time	Fuse #	Fuse current (A)	Observation

IEC 60950-1			
Clause	Requirement – Test	Result - Remark	Verdict

EUT power from adapter 12Vdc and normally operation:						
C1107	SC	12Vdc	30min	--	--	Unit can't working, no damage, no hazard.
D26	SC	12Vdc	30min	--	--	Unit normal working, no damage, no hazard.
T3 pin 7-10	SC	12Vdc	30min	--	--	Unit can't working, no damage, no hazard.
D25	SC	12Vdc	30min	--	--	Unit can't working, no damage, no hazard.
D28	SC	12Vdc	30min	--	--	Unit can't working, no damage, no hazard.
U2 pin(1-2)	SC	12Vdc	30min	--	--	Unit normal working, no damage, no hazard.
U2 pin(3-4)	SC	12Vdc	30min	--	--	Unit normal working, no damage, no hazard.
C996	SC	12Vdc	30min	--	--	Unit normal working, no damage, no hazard.
EUT power from POE 48Vdc and normally operation:						
C1107	SC	48Vdc	30min	--	--	Unit can't working, no damage, no hazard.
D26	SC	48Vdc	30min	--	--	Unit normal working, no damage, no hazard.
T3 pin 7-10	SC	48Vdc	30min	--	--	Unit can't working, no damage, no hazard.
T3 pin 7-10	Overload	48Vdc	30min	--	--	Max. overload current load is 0.4A, when load 0.5A the EUT shut down. T3 coil: 50.1°C T3 core:42.2°C Ambient: 26.0°C
T3 pin 1-2	SC	48Vdc	30min	--	--	Unit can't working, no damage, no hazard.
T3 pin 3-5	SC	48Vdc	30min	--	--	Unit can't working, no damage, no hazard.
D25	SC	48Vdc	30min	--	--	Unit can't working, no damage, no hazard.

IEC 60950-1			
Clause	Requirement – Test	Result - Remark	Verdict

D28	SC	48Vdc	30min	--	--	Unit can't working, no damage, no hazard.
U2 pin(1-2)	SC	48Vdc	30min	--	--	Unit can't working, no damage, no hazard.
U2 pin(3-4)	SC	48Vdc	30min	--	--	Unit can't working, no damage, no hazard.
C996	SC	48Vdc	30min	--	--	Unit can't working, no damage, no hazard.
Supplementary information:						

C.2	TABLE: transformers						N/A
Loc.	Tested insulation	Working voltage peak / V (2.10.2)	Working voltage rms / V (2.10.2)	Required electric strength (5.2)	Required clearance / mm (2.10.3)	Required creepage distance / mm (2.10.4)	Required distance thr. insul. (2.10.5)
--	--	--	--	--	--	--	--
Loc.	Tested insulation			Test voltage/ V	Measured clearance / mm	Measured creepage dist./ mm	Measured distance thr. insul. / mm; number of layers
--	--			--	--	--	--
supplementary information:							
Not: POE transformer has no insulation fuction							

C.2	TABLE: transformers	N/A
Not: POE transformer has no insulation fuction		

**********end**********