SAFETY TEST REPORT

FOR

Eva Water Guard

Model No.: 20EBG8701

of

Applicant：Eve Systems GmbH

Address：Rotkreuzplatz 1 80634 München Germany

Tested and Prepared
by

Worldwide Testing Services (Taiwan) Co., Ltd.

EN 60950-1:2006+A11:2009+A1:2010+A12:2011+A2:2013

Testing Laboratory
1477

Report No.: W6M21906-19111-L

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TEST REPORT

IEC 60950-1: 2005 (2nd Edition) and/or EN 60950-1:2006
Information technology equipment – Safety –

Part 1: General requirements

Report Reference No. ..... :	W6M21906-19111-L	
Complied by （+ signature） ..... :	Aslan Chen	Aslan Chen
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Testing Laboratory ..... :	Worldwide Testing Services(Taiwan) Co., Ltd.	
Address ..... :	1F, NO. 35, ALY 21, LN. 228, ANKANG RD., NEIHU DIST., TAIPEI 11491, TAIWAN, R.O.C.	
Testing location ..... :	As above	
Applicant's name ..... :	Eve Systems GmbH	
Address ..... :	Rotkreuzplatz 1 80634 München Germany	
Manufacturer's name ..... :	Eve Systems GmbH	
Address ..... :	Rotkreuzplatz 1 80634 München Germany	
Test specification:		
Standard ..... :	EN 60950-1:2006+A11:2009+A1:2010+A12:2011+A2:2013	
Test procedure ..... :	CE Marking serial in LVD	
Non-standard test method ..... :	N/A	
Test item description ..... :	Eve Water Guard	
Trade Mark ..... :	eve	
Model/Type reference ..... :	20EBG8701	
Series model ..... :	--	
Ratings ..... :	100-240 V ~,50/60 Hz,50 mA	

Copy of marking plate:

Note:
Company or brand name will screen on this rating label or one side of enclosure.

Test item particulars..... :	
Equipment mobility ..... :	[] 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 [] not directly connected to the mains
Operating condition ..... :	[×] continuous [] rated operating / resting time:
Access location ..... :	[×] operator accessible [] restricted access location
Over voltage category (OVC) ..... :	[] OVC I [×] OVC II [] OVC III [] OVC IV [] other:
Mains supply tolerance (%) or absolute mains supply values ..... :	Rated voltage of -10 % and +6 % were considered.
Tested for IT power systems ..... :	[] Yes [X] No
IT testing, phase-phase voltage (V) ..... :	N/A
Class of equipment ..... :	[] Class I [X] Class II [] Class III [] Not classified
Considered current rating of protective device as part of the building installlation (A) ..... :	16 A
Pollution degree (PD) ..... :	[] PD 1 [X] PD 2 [] PD 3
IP protection class ..... :	IPXX
Altitude during operation (m) ..... :	Up to and including 2000 m sea level
Altitude of test laboratory (m) ..... :	Not over 2000 m sea level
Mass of equipment (kg) ..... :	0.166 kg
Possible test case verdicts:	
- test case does not apply to the test object..... :	N/A (or N)
- test object does meet the requirement..... :	P (Pass)
- test object does not meet the requirement ..... :	F (Fail)
Testing..... :	
Date of receipt of test item..... :	August 29, 2019
Date(s) of performance of tests..... :	August 29, 2019 ~ October 07, 2019
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. The decision rule is : Measurement uncertainty is not taken into account.	
General information: - The equipment of operating temperature is 40 degree Celsius maximum by manufacturer declared.	

IEC/EN 60950-1			
Clause	Requirement - Test	Result-Remark	Verdict
1	**GENERAL**		P
1.5	**Components**		
1.5.1	General	Refer to below	P
	Comply with IEC 60950-1 or IEC 62368-1 or relevant component standard	Components which were found to affect safety aspects comply with the requirement of this standard or within the safety aspects of the relevant IEC .(see appended table 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. Component not covered by IEC standards are tested under the conditions present in the equipment.	P
1.5.3	Thermal controls	No such devices were employed.	N/A
1.5.4	Transformers	Transformers used are suitable for their intended applications and comply with relevant parts of this standard and particularly Annex C.	P
1.5.5	Interconnecting cables	Interconnecting cable for Interconnection is carrying only SELV voltages on an energy level below 240 VA. Except for the insulation material, there is no further requirements to the o/p interconnection cable.	P
1.5.6	Capacitors bridging insulation		N/A
1.5.7	Resistors bridging insulation		N/A
1.5.7.1	Resistors bridging functional, basic or supplementary insulation		N/A
1.5.7.2	Resistors bridging double or reinforced insulation between a.c. mains and other circuits		N/A
1.5.7.3	Resistors bridging double or reinforced insulation between a.c. mains and antenna or coaxial cable		N/A
1.5.7.4	Accessible parts	No limited accessible parts.	P
1.5.8	Components in equipment for IT power systems	Class III equipment	N/A
1.5.9	Surge suppressors	Refer to below	P
1.5.9.1	General	Varistor was complied with Annex Q in this sense of standard and varistor was recognized by third party approval.	P

IEC/EN 60950-1			
Clause	Requirement - Test	Result-Remark	Verdict
1.5.9.2	Protection of VDRs	Varistor was located afer fuse whch served as protecion to varistor.	P
1.5.9.3	Bridging of functional insulation by a VDR	This component have located between Line conductor and Neutral conductor was separated from functional insulation.	P
1.5.9.4	Bridging of basic insulation by a VDR		N/A
1.5.9.5	Bridging of supplementary, double or reinforced insulation by a VDR		N/A
1.6	**Power interface**		P
1.6.1	AC power distribution systems	TN AC power distribution system	P
1.6.2	Input current	Maximum normal load according to 1.2.2.1 for this equipment. That input current is not more than 10% of rating current.(see appended table)	P
1.6.3	Voltage limit of hand-held equipment	This appliance is not designed for the hand-held equipment which voltage doesn't exceed 250V.	N/A
1.6.4	Neutral conductor	Neutral conductors were separated by plastic enclosure.	P
1.7	**Marking and instructions**		P
1.7.1	Power rating and identification markings	Refer to below	P
1.7.1.1	Power rating marking		P
	Rated voltage(s) or voltage range(s) (V) :	100 ~240 ~	P
	Symbol for nature of supply, for d.c. only:	Equipment is directly connected to AC power distrubtion system.	N/A
	Rated frequency or rated frequency range (Hz):	50/60 Hz	P
	Rated current (mA or A):	50 mA	P
	the equipment, or a system, has multiple MAINS SUPPLY connections	Only one AC mains connection	N/A
1.7.1.2	Identification markings	See below	P
	Manufacturer's name or trade-mark or identification mark :	eve	N/A
	Model identification or type reference :	20EBG8701	P
	Symbol for Class II equipment only :	Symbol of Class II ⧈(IEC 60417-5172) is applied to power rating label.	P
	Other markings and symbols :	No other markings and symbols	N/A
1.7.1.3	Use of graphical symbols	See below	P
	Graphical symbols shall be in accordance with IEC 60417 or ISO 3864-2 or ISO 7000	Refer to sub clause 1.7.1.1 and 1.7.1.2	P

IEC/EN 60950-1			
Clause	Requirement - Test	Result-Remark	Verdict
1.7.2	Safety instructions and marking	Installation instruction with directions to maintain the requirements of IEC/EN 60950-1,and included the requirements of the IEC/EN 60950 must be observed with the installation.	P
1.7.2.1	General	Refer to above	P
1.7.2.2	Disconnect devices	Direct plug-in equipment	N/A
1.7.2.3	Overcurrent protective device	Not a pluggable equipment Type B or permanently connected equipment	N/A
1.7.2.4	IT power distribution systems	No connecting to IT power distribution system.	N/A
1.7.2.5	Operator access with a tool	No operator accessible area which needs to be accessed by the use of a tool	N/A
1.7.2.6	Ozone	No Ozone produces within this equipment.	N/A
1.7.3	Short duty cycles	The unit is designed for continuous operation condition.	N/A
1.7.4	Supply voltage adjustment	Autoranging voltage	N/A
	Methods and means of adjustment; reference to installation instructions :	Refefr to above	N/A
1.7.5	Power outlets on the equipment	No power outlet provided	N/A
1.7.6	Fuse identification (marking, special fusing characteristics, cross-reference) :	Fuse is not user replaceable and is not intended to be installed in an Operator Access Area. Fuse provided with an unambiguous cross reference F1 T1 A/300 V was marked on fuse of top cover.	P
1.7.7	Wiring terminals	No wiring terminals was employed.	N/A
1.7.7.1	Protective earthing and bonding terminals:	No protective earthing and bonding teminals	N/A
1.7.7.2	Terminals for a.c. mains supply conductors	Not a permanently equipment connected to a.c. mains supply	N/A
1.7.7.3	Terminals for d.c. mains supply conductors	Not a permanently equipment connected to d.c. mains supply	N/A
1.7.8	Controls and indicators	No controls or indicator is used.	N/A
1.7.8.1	Identification, location and marking:	The function of controls affecting safety is obvious without knowledge of language etc. No safety involved indicator	N/A
1.7.8.2	Colours	For functional indication a LED lights when the equipment is operating.	N/A

IEC/EN 60950-1			
Clause	Requirement - Test	Result-Remark	Verdict
1.7.8.3	Symbols according to IEC 60417:	Symbol of alternating current  (IEC 60417-5032) and  (IEC 60417-5957) were marked on the label.	P
1.7.8.4	Markings using figures :	No switch using figures for different position.	N/A
1.7.9	Isolation of multiple power sources:	Single power souce.	N/A
1.7.10	Thermostats and other regulating device:	No use thermostats and similar regulating devices.	N/A
1.7.11	Durability	The label was subjected to the permanence of marking test. The label was rubbed by cloth soaked with water for 15s and then again for 15s with cloth soaked with petroleum spirit. After this test there was no damage to the label. The marking on the label did not fade. There was neither curling nor lifting of the label edge.	P
1.7.12	Removable parts	Markings are not placed on the removable parts	P
1.7.13	Replaceable batteries :	No battery is applied.	N/A
	Language(s) :		—
1.7.14	Equipment for restricted access locations:	Not limited for used in restricted access locations.	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	There is adequate protection against operator contact with bare parts at ELV or hazardous voltage or parts separated from these with basic or functional insulation only (except protective earth),also after operator detachable parts are removed and doors and covers are opened.	P
2.1.1.1	Access to energized parts	Refer to above	P
	Test by inspection :	Refer to above	P
	Test with test finger (Figure 2A) :	Refer to above	P
	Test with test pin (Figure 2B) :	Refer to above	P
	Test with test probe (Figure 2C) :	No TNV circuit.	N/A
2.1.1.2	Battery compartments	No battery compartment.	N/A
2.1.1.3	Access to ELV wiring	No ELV wiring.	N/A
	Working voltage (Vpeak or Vrms); minimum distance through insulation (mm)		—

IEC/EN 60950-1			
Clause	Requirement - Test	Result-Remark	Verdict
2.1.1.4	Access to hazardous voltage circuit wiring	No access to hazardous voltage circuit wiring	N/A
2.1.1.5	Energy hazards :	There is no energy hazard in operator access area.	N/A
2.1.1.6	Manual controls	No shafts of knobs etc. at ELV or hazardous voltage.	N/A
2.1.1.7	Discharge of capacitors in equipment	No charging of capacitor used.	N/A
	Measured voltage (V); time-constant (s):		—
2.1.1.8	Energy hazards – d.c. mains supply	No DC manis supply	N/A
	a) Capacitor connected to the d.c. mains supply :		N/A
	b) Internal battery connected to the d.c. mains supply :		N/A
2.1.1.9	Audio amplifiers :		N/A
2.1.2	Protection in service access areas	No bare parts at hazardous voltages in service access areas	N/A
2.1.3	Protection in restricted access locations	Equipment not intended for installation in RAL.	N/A
2.2	**SELV circuits**		P
2.2.1	General requirements	See below	P
2.2.2	Voltages under normal conditions (V) :	All Secondary circuits are SELV. (see appended table 2.2.2)	P
2.2.3	Voltages under fault conditions (V) :		P
2.2.4	Connection of SELV circuits to other circuits	SELV circuit is only connected to SELV curcuits.	P
2.3	**TNV circuits : *No TNV circuits in the eequipment***		N/A
2.3.1	Limits		N/A
	Type of TNV circuits:		—
2.3.2	Separation from other circuits and from accessible parts		N/A
2.3.2.1	General requirements		N/A
2.3.2.2	Protection by basic insulation		N/A
2.3.2.3	Protection by earthing		N/A
2.3.2.4	Protection by other constructions:		N/A
2.3.3	Separation from hazardous voltages		N/A
	Insulation employed:		—
2.3.4	Connection of TNV circuits to other circuits		N/A
	Insulation employed:		—
2.3.5	Test for operating voltages generated externally		N/A

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Clause	Requirement - Test	Result-Remark	Verdict
2.4	**Limited current circuits : *No Limited current circuits***		N/A
2.4.1	General requirements		N/A
2.4.2	Limit values		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		N/A
2.5	**Limited power sources :**		N/A
	a) Inherently limited output		N/A
	b) Impedance limited output		N/A
	c) Regulating network limited output under normal operating and single fault condition		N/A
	d) Overcurrent protective device limited output		N/A
	Max. output voltage (V), max. output current (A), max. apparent power (VA):	(see appended table 2.5)	—
	Current rating of overcurrent protective device (A) :		—
	Use of integrated circuit (IC) current limiters		N/A
2.6	**Provisions for earthing and bonding : *Class II equipment***		N/A
2.6.1	Protective earthing		N/A
2.6.2	Functional earthing		N/A
2.6.3	Protective earthing and protective bonding conductors		N/A
2.6.3.1	General		N/A
2.6.3.2	Size of protective earthing conductors		N/A
	Rated current (A), cross-sectional area (mm^2), AWG:		—
2.6.3.3	Size of protective bonding conductors		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):		N/A
2.6.3.5	Colour of insulation:		N/A

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Clause	Requirement - Test	Result-Remark	Verdict
2.6.4	Terminals		N/A
2.6.4.1	General		N/A
2.6.4.2	Protective earthing and bonding terminals		N/A
	Rated current (A), type, nominal thread diameter (mm):		—
2.6.4.3	Separation of the protective earthing conductor from protective bonding conductors		N/A
2.6.5	Integrity of protective earthing		N/A
2.6.5.1	Interconnection of equipment		N/A
2.6.5.2	Components in protective earthing conductors and protective bonding conductors		N/A
2.6.5.3	Disconnection of protective earth		N/A
2.6.5.4	Parts that can be removed by an operator		N/A
2.6.5.5	Parts removed during servicing		N/A
2.6.5.6	Corrosion resistance		N/A
2.6.5.7	Screws for protective bonding		N/A
2.6.5.8	Reliance on telecommunication network or cable distribution system		N/A
2.7	**Overcurrent and earth fault protection in primary circuits**		P
2.7.1	Basic requirements	Protective devices are integrated in the equipment	P
	Instructions when protection relies on building installation		N/A
2.7.2	Faults not simulated in 5.3.7	Protection from faults not covered in 5.3 shall be provided by installation.	P
2.7.3	Short-circuit backup protection	The building installation is considered as providing short-circuit backup protection.	P
2.7.4	Number and location of protective devices :	There has a fuse on line circuit. That fuse can support an enough rating current path when fault condition.	P
2.7.5	Protection by several devices	One protective device in the "LIVE" phase	P
2.7.6	Warning to service personnel:		N/A
2.8	**Safety interlocks : *No such devices used in the equipment***		N/A
2.8.1	General principles	No safety interlock or similar devices used within the EUT	N/A
2.8.2	Protection requirements		N/A
2.8.3	Inadvertent reactivation		N/A

IEC/EN 60950-1			
Clause	Requirement - Test	Result-Remark	Verdict
2.8.4	Fail-safe operation		N/A
	Protection against extreme hazard		N/A
2.8.5	Moving parts		N/A
2.8.6	Overriding		N/A
2.8.7	Switches, relays and their related circuits		N/A
2.8.7.1	Separation distances for contact gaps and their related circuits (mm) :		N/A
2.8.7.2	Overload test		N/A
2.8.7.3	Endurance test		N/A
2.8.7.4	Electric strength test	(see appended table 5.2)	N/A
2.8.8	Mechanical actuators		N/A
2.9	**Electrical insulation**		
2.9.1	Properties of insulating materials	Natural rubber, hygroscopic materials or asbestos are not used	P
2.9.2	Humidity conditioning		P
	Relative humidity (%), temperature (°C):	Humidity treatment performed for tropical conditions test duration 120 h at 40 ℃ and reality humidity 96 %.	—
2.9.3	Grade of insulation	Functional, Basic, Reinforced insulation.	P
2.9.4	Separation from hazardous voltages	Refer to above	P
	Method(s) used :	Accessible conductive parts, SELV circuits was separated from parts at hazardous voltage by double or reinforced insulation. Method 1 is considered.	—
2.10	**Clearances, creepage distances and distances through insulation**		P
2.10.1	General	Pollution degree 2 applicable.	P
2.10.1.1	Frequency :	Low to 30 KHz	P
2.10.1.2	Pollution degrees :	Pollution degree 2 applicable.	P
2.10.1.3	Reduced values for functional insualtion	Functional insulation Line to Neutral before fuse complies with 2.10.3 & 2.10.4. Other functional insulations comply with 5.3.4 c).See subclause 5.3	P
2.10.1.4	Intervening unconnected conductive parts	Distance to unconnected conductive parts considered during evaluation of clearances and creepage distances.	P
2.10.1.5	Insulation with varying dimensions	No such transformer used.	N/A
2.10.1.6	Special separation requirements	No TNV circuits.	N/A

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Clause	Requirement - Test	Result-Remark	Verdict
2.10.1.7	Insulation in circuits generating starting pulses	No such circuit.	N/A
2.10.2	Determination of working voltage	Working voltages were measured at the upper range (240 Vac) after determination that the internal working voltages were higher at that range.	P
2.10.2.1	General		P
2.10.2.2	RMS working voltage	(see appended table 2.10.3 and 2.10.4)	P
2.10.2.3	Peak working voltage	(see appended table 2.10.3 and 2.10.4)	P
2.10.3	Clearances	(see appended table 2.10.3 and 2.10.4)	P
2.10.3.1	General		P
2.10.3.2	Mains transient voltages		P
	a) AC mains supply :	OVC II, 2500 Vpeak	P
	b) Earthed d.c. mains supplies :		N/A
	c) Unearthed d.c. mains supplies :		N/A
	d) Battery operation :		N/A
2.10.3.3	Clearances in primary circuits	(see appended table 2.10.3 and 2.10.4)	P
2.10.3.4	Clearances in secondary circuits	See 5.3.4	P
2.10.3.5	Clearances in circuits having starting pulses		N/A
2.10.3.6	Transients from a.c. mains supply :	2500 Vpeak	P
2.10.3.7	Transients from d.c. mains supply :	The equipment not intended for connection to DC mains supply.	N/A
2.10.3.8	Transients from telecommunication networks and cable distribution systems :	No connected to telecommunication networks and cable distribution systems .Refer to clause 6 and clause 7	N/A
2.10.3.9	Measurement of transient voltage levels	Refer to above	N/A
	a) Transients from a mains suplply	Refer to above	N/A
	For an a.c. mains supply :	Refer to above	N/A
	For a d.c. mains supply :	Refer to above	N/A
	b) Transients from a telecommunication network :	Refer to above	N/A
2.10.4	Creepage distances	(see appended table 2.10.3 and 2.10.4)	P
2.10.4.1	General		P
2.10.4.2	Material group and caomparative tracking index		P
	CTI tests:	Material group IIIb; 100 ≦ CTI < 175 assumed.	—
2.10.4.3	Minimum creepage distances	(see table 2.10.3 and 2.10.4)	P

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Clause	Requirement - Test	Result-Remark	Verdict
2.10.5	Solid insulation	(see appended table 2.10.5)	P
2.10.5.1	General	Transformer bobbin and optocoupler and plasatic enclosure	P
2.10.5.2	Distances through insulation	(see appended table 1.5 1 and 2.10.5)	P
2.10.5.3	Insulating compound as solid insulation		N/A
2.10.5.4	Semiconductor devices	(see appended table 1.5 1 and 2.10.5)	P
2.10.5.5.	Cemented joints		N/A
2.10.5.6	Thin sheet material – General	Insulation tape for transformer	P
2.10.5.7	Separable thin sheet material	Two layers insulation tape for reinforced insulation	P
	Number of layers (pcs):		—
2.10.5.8	Non-separable thin sheet material		N/A
2.10.5.9	Thin sheet material – standard test procedure		N/A
	Electric strength test		N/A
2.10.5.10	Thin sheet material – alternative test procedure	(see appended table 5.2)	P
	Electric strength test	(see appended table 2.10.5)	—
2.10.5.11	Insulation in wound components	Transformers provided with triple insulated wire complying with 2.10.5.12.	P
2.10.5.12	Wire in wound components	Approved triple insulated wire is used inside transformers.See appended table 1.5.1.	P
	Working voltage:	(see appended table 2.10.3 and 2.10.4)	P
	a) Basic insulation not under stress :		N/A
	b) Basic, supplemetary, reinforced insulation:		N/A
	c) Compliance with Annex U :	Certified triple insulation wound wiring by UL	P
	Two wires in contact inside wound component; angle between 45° and 90°:	Two wires are separated by single layer of thin sheet material.	P
2.10.5.13	Wire with solvent-based enamel in wound components		N/A
	Electric strength test		—
	Routine test		N/A
2.10.5.14	Additional insulation in wound components		N/A
	Working voltage :		N/A
	- Basic insulation not under stress :		N/A
	- Supplemetary, reinforced insulation :		N/A
2.10.6	Construction of printed boards		P

IEC/EN 60950-1			
Clause	Requirement - Test	Result-Remark	Verdict
2.10.6.1	Uncoated printed boards	(see appended table 2.10.3 and 2.10.4)	P
2.10.6.2	Coated printed boards	PCB does not serve as insulation barrier.	N/A
2.10.6.3	Insulation between conductors on the same inner surface of a printed board		N/A
2.10.6.4	Insulation between conductors on different layers of a printed board	Primary and secondary of PCB traces do not overlap.	N/A
	Distance through insulation		N/A
	Number of insulation layers (pcs):		N/A
2.10.7	Component external terminations		N/A
2.10.8	Tests on coated printed boards and coated components		N/A
2.10.8.1	Sample preparation and preliminary inspection		N/A
2.10.8.2	Thermal conditioning		N/A
2.10.8.3	Electric strength test		N/A
2.10.8.4	Abrasion resistance test		N/A
2.10.9	Thermal cycling		N/A
2.10.10	Test for Pollution Degree 1 environment and insulating compound	No optocouplers used.	N/A
2.10.11	Tests for semiconductor devices and cemented joints	No optocouplers used.	N/A
2.10.12	Enclosed and sealed parts	No optocouplers used.	N/A

3	**WIRING, CONNECTIONS AND SUPPLY**		P
3.1	General		P
3.1.1	Current rating and overcurrent protection	Adequate cross sectional areas on internal wiring	P
3.1.2	Protection against mechanical damage	Wire ways are smooth and free from edges. Wires are adequately fixed to prevent excessive strain on wire and terminals and avoiding damage to the insulation of the conductors.	P
3.1.3	Securing of internal wiring	Internal wiring is secured against excessive strain, loosening of terminals and damage to the conductor insulation.	P
3.1.4	Insulation of conductors		P
3.1.5	Beads and ceramic insulators	No beads or similar ceramic insulators on conductors.	N/A
3.1.6	Screws for electrical contact pressure	Class II equipment. No electrical screw connections to earthing terminals.	N/A

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Clause	Requirement - Test	Result-Remark	Verdict
3.1.7	Insulating materials in electrical connections	No contact pressure through insulating material.	N/A
3.1.8	Self-tapping and spaced thread screws	Thread-cutting or space thread screws are not used for electrical connections.	N/A
3.1.9	Termination of conductors	Terminations cannot become displaced so that clearances and creepage distances can be reduced.	P
	10 N pull test	Force 10N applied to the termination points of the conductors	P
3.1.10	Sleeving on wiring	No sleeving was used as supplementary insulation on internal wiring	N/A
3.2	**Connection to a mains supply**		P
3.2.1	Means of connection		P
3.2.1.1	Connection to an a.c. mains supply	Direct plug-in units is provided with a mains plug.	P
3.2.1.2	Connection to a d.c. mains supply	- Not a permanently equipment - No non-detachable power cord is applied.	N/A
3.2.2	Multiple supply connections	No multiple mains supply are applied for the equipment.	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	Direct plug-in equipment	N/A
3.2.5	Power supply cords	See above	N/A
3.2.5.1	AC power supply cords	See above	N/A
	Type :		—
	Rated current (A), cross-sectional area (mm^2), AWG :		—
3.2.5.2	DC power supply cords		N/A
3.2.6	Cord anchorages and strain relief		N/A
	Mass of equipment (kg), pull (N) :		—
	Longitudinal displacement (mm) :		—
3.2.7	Protection against mechanical damage	No sharp points or cutting edges on the equipment surfaces.	P
3.2.8	Cord guards		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
			N/A

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Clause	Requirement - Test	Result-Remark	Verdict
3.3	**Wiring terminals for connection of external conductors : *Direct plug-in equipment***		N/A
3.3.1	Wiring terminals		N/A
3.3.2	Connection of non-detachable power supply cords		N/A
3.3.3	Screw terminals		N/A
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		N/A
	Rated current (A), type, nominal thread diameter (mm):		—
3.3.6	Wiring terminal design		N/A
3.3.7	Grouping of wiring terminals		N/A
3.3.8	Stranded wire		N/A
3.4	**Disconnection from the mains supply**		P
3.4.1	General requirement	Refer to below	P
3.4.2	Disconnect devices	A mains supply plug that is part of direct plug-in equipment.	P
3.4.3	Permanently connected equipment	Not a permanently connected equipment	N/A
3.4.4	Parts which remain energized	No parts remain energized.	N/A
3.4.5	Switches in flexible cords	Direct plug-in equipment	N/A
3.4.6	Number of poles - single-phase and d.c. equipment	The disconnect device disconnects both poles simultaneously.	P
3.4.7	Number of poles - three-phase equipment	Single phase equipment.	N/A
3.4.8	Switches as disconnect devices	No switch as disconnect device.	N/A
3.4.9	Plugs as disconnect devices		P
3.4.10	Interconnected equipment	No interconnections using hazardous voltages or hazardous energy levels.	N/A
3.4.11	Multiple power sources	One power source only.	N/A
3.5	**Interconnection of equipment**		P
3.5.1	General requirements	The equipment is interconnected to SELV. No ELV interconnection circuits.	P
3.5.2	Types of interconnection circuits :	Refer to above	P
3.5.3	ELV circuits as interconnection circuits	No ELV circuit within the equipment.	N/A
3.5.4	Data ports for additional equipment	No additional 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°	Direct plud-in equipment	N/A
	Test force (N) :		N/A
4.2	**Mechanical strength**		P
4.2.1	General	The equipment of mass is less than 7 kg and no door, castor, drawers used. Not a floor-standarding equipment.	N/A
	Rack-mounted equipment.	Not an rack-mounted equipment	N/A
4.2.2	Steady force test, 10 N	(see apended table 4.2.2)	P
4.2.3	Steady force test, 30 N	No cover or door which on the enclosure was not employed.	N/A
4.2.4	Steady force test, 250 N	(see appended table 4.2.4)	P
4.2.5	Impact test	Direct plug-in equipment	N/A
	Fall test	(see apended table 4.2.5)	—
	Swing test		—
4.2.6	Drop test; height (mm) :	(see appended table 4.2.6)	P
4.2.7	Stress relief test	Overall plastic enclosure was conducted at 7 hrs, 70 ℃. No risk of shrinkage or distortion on enclosures due to release of internal stresses.	P
4.2.8	Cathode ray tubes	No CRTs is provided.	N/A
	Picture tube separately certified :		N/A
4.2.9	High pressure lamps	No such parts	N/A
4.2.10	Wall or ceiling mounted equipment; force (N) :	The equipment is not intended to be mounted on a wall or ceiling.	N/A
4.2.11	Rotating solid media	No such parts used.	N/A
	Test to cover on the door:		N/A
4.3	**Design and construction**		P
4.3.1	Edges and corners	No dangerous edges or corners on the exterior enclosure.	P
4.3.2	Handles and manual controls; force (N):	No handles and manual controls are provided with hazardous live voltage.	N/A
4.3.3	Adjustable controls	No such device used.	N/A
4.3.4	Securing of parts	Mechanical fixings in such a way designed that they will withstand mechanical stress occurring in normal use.	P
4.3.5	Connection by plugs and sockets	No mismatch of connectors, plug or sockets possible.	P

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Clause	Requirement - Test	Result-Remark	Verdict
4.3.6	Direct plug-in equipment		P
	Torque:	0.082 N m	—
	Compliance with the relevant mains plug standard :	(see aooended table 1.5.1)	P
4.3.7	Heating elements in earthed equipment	No such parts used.	N/A
4.3.8	Batteries	No battery used.	N/A
	- Overcharging of a rechargeable battery		N/A
	- Unintentional charging of a non-rechargeable battery		N/A
	- Reverse charging of a rechargeable battery		N/A
	- Excessive discharging rate for any battery	(see appended table 4.3.8)	N/A
4.3.9	Oil and grease	Insulation intended to be used not considered exposing to oil or grease.	N/A
4.3.10	Dust, powders, liquids and gases	The equipment is not intended to be used exposing to dust, powers, liquids and gases.	N/A
4.3.11	Containers for liquids or gases	No container for liquids or gases.	N/A
4.3.12	Flammable liquids :	No flammable liquids provided.	N/A
	Quantity of liquid (l) :		N/A
	Flash point (°C) :		N/A
4.3.13	Radiation	Refer to sub clause 4.3.13.5	P
4.3.13.1	General		N/A
4.3.13.2	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		N/A
	Part, property, retention after test, flammability classification :		N/A
4.3.13.4	Human exposure to ultraviolet (UV) radiation :		N/A
4.3.13.5	Lasers (including laser diodes) and LEDs	The LED is considered to comply with the requirements of Class 1 LED product	P
4.3.13.5.1	Lasers (including laser laser diodes)		N/A
	Laser class :		—
4.3.13.5.2	Light emitting diodes (LEDs)	The visible LED indicators are diffuse type. Only used in low power applications.	P

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Clause	Requirement - Test	Result-Remark	Verdict
4.3.13.6	Other types :		N/A
4.4	**Protection against hazardous moving parts : *No hazardous moving parts used.***		N/A
4.4.1	General		N/A
4.4.2	Protection in operator access areas :		N/A
	Household and home/office document/media shredders		N/A
4.4.3	Protection in restricted access locations :		N/A
4.4.4	Protection in service access areas		N/A
4.4.5	Protection against moving fan blades		N/A
4.4.5.1	General		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		N/A
	Use of symbol or warning:		N/A
4.4.5.3	Protection for service persons		N/A
	Use of symbol or warning :		N/A
4.5	**Thermal requirements**		P
4.5.1	General	The equipment of accessible parts, insulation material, plastic material were measured at manufacture's declared as ambient temperature. No excess temperature are attended.(see appended table 4.5.2)	P
4.5.2	Temperature tests	Refer to below	P
	Normal load condition per Annex L	With maximum load until to temperature steadily state	—
4.5.3	Temperature limits for materials	(see appended table 4.5.2)	P
4.5.4	Touch temperature limits		P
4.5.5	Resistance to abnormal heat :	(see appended table 4.5.5)	P
4.6	**Openings in enclosures : *No openings provided***		N/A
4.6.1	Top and side openings		N/A
	Dimensions (mm) :		—
4.6.2	Bottoms of fire enclosures		N/A
	Construction of the bottomm, dimensions (mm) :		—
4.6.3	Doors or covers in fire enclosures		N/A
4.6.4	Openings in transportable equipment		N/A

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Clause	Requirement - Test	Result-Remark	Verdict
4.6.4.1	Constructional design measures		N/A
	Dimensions (mm) :		—
4.6.4.2	Evaluation measures for larger openings		N/A
4.6.4.3	Use of metallized parts		N/A
4.6.5	Adhesives for constructional purposes	Double adhesive tapes served as fixing silicone rubber as barrier.A sample of the equipment of enclosure with the barrier in an oven. Refer to below for detail.	P
	Conditioning temperature (°C), time (weeks):	100 °C ± 2 °C for one week; and Upon completion of the temperature conditioning, subject the sample to the following: - remove the sample from oven and leave it at any convenient temperature between 20 °C and 30 °C for 1 h; - place the sample in a freezer at - 40 °C ± 2 °C for 4 h; - place the sample in a cabinet at 91 % to 95 % relative humidity for 72 h; - place the sample in an oven at the temperature used for the temperature conditioning for 4 h. The period of time taken for the transition from remove oven for 8 h at convenient temperature between 20 ℃ ~ 30 ℃. After this testing, sample was subjected to mechanical test as sub 4.2.. The barriers did not fall of or partly dislodge as a result of these tests.	—
4.7	**Resistance to fire**		P
4.7.1	Reducing the risk of ignition and spread of flame	Refer to below	P
	Method 1, selection and application of components wiring and materials	(see appended table 1.5.1)	P
	Method 2, application of all of simulated fault condition tests	(see appended table 5.3)	P
4.7.2	Conditions for a fire enclosure	Components in primary circuits that considered to have a risk of ignition.	P
4.7.2.1	Parts requiring a fire enclosure	Fire enclosure with V-1 flammability category.	P
4.7.2.2	Parts not requiring a fire enclosure	Refer to above	N/A
4.7.3	Materials		P

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Clause	Requirement - Test	Result-Remark	Verdict
4.7.3.1	General	Components and materials have adequate flammability classification.	P
4.7.3.2	Materials for fire enclosures	The fire enclosure is minimum V-1 material.	P
4.7.3.3	Materials for components and other parts outside fire enclosures	No parts outside the fire enclosure.	N/A
4.7.3.4	Materials for components and other parts inside fire enclosures	All internal materials are rated V-2 or better or are mounted on a PWB rated V-1 or better.	P
4.7.3.5	Materials for air filter assemblies	No air filter provided.	N/A
4.7.3.6	Materials used in high-voltage components	No high voltage components provided.	N/A
5	**ELECTRICAL REQUIREMENTS AND SIMULATED ABNORMAL CONDITIONS**		P
5.1	**Touch current and protective conductor current**		P
5.1.1	General	Equipment designed for connection to only one power source.	P
5.1.2	Configuration of equipment under test (EUT)		P
5.1.2.1	Single connection to an a.c. mains supply		P
5.1.2.2	Redundant multiple connections to an a.c. mains supply		N/A
5.1.2.3	Simultaneous multiple connections to an a.c. mains supply		N/A
5.1.3	Test circuit	Single phase equipment intended only for connection to star TN system. Using figure 5A.	P
5.1.4	Application of measuring instrument	Measuring instrument D1 was used.	P
5.1.5	Test procedure		P
5.1.6	Test measurements		P
	Supply voltage (V) :	254 Vac, 60 Hz	—
	Measured touch current (mA) :	(see appended table 5.1)	—
	Max. allowed touch current (mA) :	Class II equipment , 0.25 mA	—
	Measured protective conductor current (mA) :		—
	Max. allowed protective conductor current (mA):		—
5.1.7	Equipment with touch current exceeding 3,5 mA		N/A
5.1.7.1	General :		N/A
5.1.7.2	Simultaneous multiple connections to the supply		N/A
5.1.8	Touch currents to telecommunication networks and cable distribution systems and from telecommunication networks		N/A

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Clause	Requirement - Test	Result-Remark	Verdict
5.1.8.1	Limitation of the touch current to a telecommunication network or to a cable distribution system		N/A
	Supply voltage (V) :		—
	Measured touch current (mA) :		—
	Max. allowed touch current (mA) :		—
5.1.8.2	Summation of touch currents from telecommunication networks		N/A
	a) EUT with earthed telecommunication ports :		N/A
	b) EUT whose telecommunication ports have no reference to protective earth		N/A
5.2	**Electric strength**		P
5.2.1	General	Based on the electric strength test the use of the insulating materials within the equipment is satisfactory. (see appended table 5.2)	P
5.2.2	Test procedure	No insulation breakdown detected during the test. (see appended table 5.2)	P
5.3	**Abnormal operating and fault conditions**		P
5.3.1	Protection against overload and abnormal operation	(see appended table 5.3)	P
5.3.2	Motors	No motor in the equipment	N/A
5.3.3	Transformers	Transformers are constructed in accordance with the applicable Clause and Annex C.	P
5.3.4	Functional insulation:	Functional insulation complies with the requirement (c).	P
5.3.5	Electromechanical components		N/A
5.3.6	Audio amplifiers in ITE:		N/A
5.3.7	Simulation of faults	(See appended table 5.3)	P
5.3.8	Unattended equipment	The equipment's do not have any thermostats, temperature limiters, or thermal cut-outs which functioned during the heating test.	N/A
5.3.9	Compliance criteria for abnormal operating and fault conditions	(See appended table 5.3)	P
5.3.9.1	During the tests	No fire and molten metal and deformed enclosure occur.	P
5.3.9.2	After the tests	No fire and molten metal and deformed enclosure occur.	P
6	**CONNECTION TO TELECOMMUNICATION NETWORKS**		N/A

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Clause	Requirement - Test	Result-Remark	Verdict
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		N/A
	Supply voltage (V) :		—
	Current in the test circuit (mA) :		—
6.1.2.2	Exclusions :		N/A
6.2	**Protection of equipment users from overvoltages on telecommunication networks**		N/A
6.2.1	Separation requirements		N/A
6.2.2	Electric strength test procedure		N/A
6.2.2.1	Impulse test		N/A
6.2.2.2	Steady-state test		N/A
6.2.2.3	Compliance criteria		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		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		N/A
7.3	Protection of equipment users from overvoltages on the cable distribution system		N/A
7.4	Insulation between primary circuits and cable distribution systems		N/A
7.4.1	General		N/A
7.4.2	Voltage surge test		N/A
7.4.3	Impulse test		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)		N/A
A.1.1	Samples:		—
	Wall thickness (mm):		—

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Clause	Requirement - Test	Result-Remark	Verdict
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 (°C) ...		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
	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		N/A
	Position :		—
	Manufacturer:		—
	Type :		—

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Clause	Requirement - Test	Result-Remark	Verdict
	Rated values :		—
B.2	Test conditions		N/A
B.3	Maximum temperatures		N/A
B.4	Running overload test		N/A
B.5	Locked-rotor overload test		N/A
	Test duration (days) :		—
	Electric strength test: test voltage (V):		—
B.6	Running overload test for d.c. motors in secondary circuits		N/A
B.6.1	General		N/A
B.6.2	Test procedure		N/A
B.6.3	Alternative test procedure		N/A
B.6.4	Electric strength test; test voltage (V) :		N/A
B.7	Locked-rotor overload test for d.c. motors in secondary circuits		N/A
B.7.1	General		N/A
B.7.2	Test procedure		N/A
B.7.3	Alternative test procedure		N/A
B.7.4	Electric strength test; test voltage (V) :		N/A
B.8	Test for motors with capacitors		N/A
B.9	Test for three-phase motors		N/A
B.10	Test for series motors		N/A
	Operating voltage (V) :		—

C	**ANNEX C, TRANSFORMERS (see 1.5.4 and 5.3.3)**		P
	Position :	Refer to Cl.1.5.1	—
	Manufacturer :	See appended table 1.5.1.	—
	Type :	See appended table 1.5.1.	—
	Rated values :	See appended table 1.5.1.	—
	Method of protection:	See appended table 1.5.1.	—
C.1	Overload test	protection by regulating network	—
C.2	Insulation	(see appended table 5.3)	P
	Protection from displacement of windings:	(see appended table 5.2)	P

D	**ANNEX D, MEASURING INSTRUMENTS FOR TOUCH-CURRENT TESTS (see 5.1.4)**		P
D.1	Measuring instrument	Measuring instrument D1 was used.	P
D.2	Alternative measuring instrument		N/A

E	**ANNEX E, TEMPERATURE RISE OF A WINDING (see 1.4.13)**	P

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Clause	Requirement - Test	Result-Remark	Verdict
F	**ANNEX F, MEASUREMENT OF CLEARANCES AND CREEPAGE DISTANCES (see 2.10 and Annex G)**		P
G	**ANNEX G, ALTERNATIVE METHOD FOR DETERMINING MINIMUM CLEARANCES**		N/A
G.1	Clearances		N/A
G.1.1	General		N/A
G.1.2	Summary of the procedure for determining minimum clearances		N/A
G.2	Determination of mains transient voltage (V)		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) :		N/A
G.4	Determination of required withstand voltage (V)		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)		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 :		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		N/A
K.2	Thermostat reliability; operating voltage (V) :		N/A
K.3	Thermostat endurance test; operating voltage (V):		N/A

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Clause	Requirement - Test	Result-Remark	Verdict
K.4	Temperature limiter endurance; operating voltage (V) :		N/A
K.5	Thermal cut-out reliability		N/A
K.6	Stability of operation	(see appended table 5.3)	N/A
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		N/A
L.2	Adding machines and cash registers		N/A
L.3	Erasers		N/A
L.4	Pencil sharpeners		N/A
L.5	Duplicators and copy machines		N/A
L.6	Motor-operated files		N/A
L.7	Other business equipment	Eva Water Guard with maximum load	P
M	**ANNEX M, CRITERIA FOR TELEPHONE RINGING SIGNALS (see 2.3.1)**		N/A
M.1	Introduction		N/A
M.2	Method A		N/A
M.3	Method B		N/A
M.3.1	Ringing signal		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 :		N/A
M.3.2.1	Conditions for use of a tripping device or a monitoring voltage		N/A
M.3.2.2	Tripping device		N/A
M.3.2.3	Monitoring voltage (V) :		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		N/A
N.2	IEC 60065 impulse test generator		N/A
P	**ANNEX P, NORMATIVE REFERENCES**		—
Q	**ANNEX Q, Voltage dependent resistors (VDRs) (see 1.5.9.1)**		P
	- Preferred climatic categories .....:	Minimum climatic category -10 ℃ to +85°C; min. 21 days damp heat steady state test.	P

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Clause	Requirement - Test	Result-Remark	Verdict
	- Maximum continuous voltage .....:	See appended table 1.5.1	P
	- Combination pulse current .....:	See appended table 1.5.1	P
	- Body of the VDR Test according to IEC60695-11-5.....:	See appended table 1.5.1	P
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		N/A
S.2	Test procedure		N/A
S.3	Examples of waveforms during impulse testing		N/A
T	**ANNEX T, GUIDANCE ON PROTECTION AGAINST INGRESS OF WATER (see 1.1.2)**		N/A
		See separate test report	—
U	**ANNEX U, INSULATED WINDING WIRES FOR USE WITHOUT INTERLEAVED INSULATION (see 2.10.5.4)**		N/A
		See separate test report	—
V	**ANNEX V, AC POWER DISTRIBUTION SYSTEMS (see 1.6.1)**		P
V.1	Introduction		P
V.2	TN power distribution systems		P
W	**ANNEX W, SUMMATION OF TOUCH CURRENTS**		N/A
W.1	Touch current from electronic circuits		N/A
W.1.1	Floating circuits		N/A
W.1.2	Earthed circuits		N/A
W.2	Interconnection of several equipments		N/A
W.2.1	Isolation		N/A
W.2.2	Common return, isolated from earth		N/A
W.2.3	Common return, connected to protective earth		N/A
X	**ANNEX X, MAXIMUM HEATING EFFECT IN TRANSFORMER TESTS (see clause C.1)**		N/A

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Clause	Requirement - Test	Result-Remark	Verdict
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 :		N/A
Y.2	Mounting of test samples :		N/A
Y.3	Carbon-arc light-exposure apparatus :		N/A
Y.4	Xenon-arc light exposure apparatus :		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
CC.5	Compliance		N/A
DD	**ANNEX DD, Requirements for the mounting means of rack-mounted equipment**		N/A
DD.1	General		N/A
DD.2	Mechanical strength test, variable N:		N/A
DD.3	Mechanical strength test, 250N, including end stops:		N/A
DD.4	Compliance:		N/A
EE	**ANNEX EE, Household and home/office document/media shredders**		N/A
EE.1	General		N/A
EE.2	Markings and instructions		N/A
	Use of markings or symbols:		N/A
	Information of user instructions, maintenance and/or servicing instructions:		N/A
EE.3	Inadvertent reactivation test:		N/A
EE.4	Disconnection of power to hazardous moving parts:		N/A
	Use of markings or symbols:		N/A
EE.5	Protection against hazardous moving parts		N/A
	Test with test finger (Figure 2A) :		N/A

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Clause	Requirement - Test	Result-Remark	Verdict
	Test with wedge probe (Figure EE1 and EE2) :		N/A

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Clause	Requirement - Test	Result-Remark	Verdict

EN 60950-1:2006/A11:2009/A1:2010/A12:2011/A2:2013 – CENELEC COMMON MODIFICATIONS		
Contents (A2:2013)	Add the following annexes: Annex ZA (normative) Normative references to international publications with their corresponding European publications Annex ZB (normative) Special national conditions Annex ZD (informative) IEC and CENELEC code designations for flexible cords	P
General	Delete all the “country” notes in the reference document (IEC 60950-1:2005) according to the following list: 1.4.8Note 2 1.5.1 Note 2 & 3 1.5.7.1 Note 1.5.8Note 2 1.5.9.4 Note 1.7.2.1 Note 4, 5 & 6 2.2.3 Note 2.2.4 Note 2.3.2 Note 2.3.2.1 Note 2 2.3.4 Note 2 2.6.3.3 Note 2 & 3 2.7.1 Note 2.10.3.2 Note 2 2.10.5.13 Note 3 3.2.1.1 Note 3.2.4 Note 3.2.5.1 Note 2 4.3.6 Note 1 & 2 4.7 Note 4 4.7.2.2 Note 4.7.3.1Note 2 5.1.7.1 Note 3 & 4 5.3.7 Note 1 6 Note 2 & 5 6.1.2.1 Note 2 6.1.2.2 Note 6.2.2 Note 6.2.2.1 Note 2 6.2.2.2 Note 7.1 Note 3 7.2 Note 7.3 Note 1 & 2 G.2.1 Note 2 Annex H Note 2	P
General (A1:2010)	Delete all the “country” notes in the reference document (IEC 60950-1:2005/A1:2010) according to the following list: 1.5.7.1Note 6.1.2.1 Note 2 6.2.2.1 Note 2 EE.3 Note	P
General (A2:2013)	Delete all the “country” notes in the reference document(IEC 60950-1:2005/A1:2010) according to the following list: 2.7.1 Note* 6.1.2.1 Note2 6.2.2 Note 2 * Note of secretary : Text of Common Modification remains unchanged.	P
1.1.1 (A1:2010)	Replace the text of NOTE 3 by the following NOTE3 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.	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.	N/A

IEC/EN 60950-1			
Clause	Requirement - Test	Result-Remark	Verdict
(A12:2011)	In EN 60950-1:2006/A12:2011 Delete the addition of 1.3.Z1 / EN 60950-1:2006 Delete the definition 1.2.3.Z1 / EN 60950-1:2006 /A1:2010		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		P
1.7.2.1 (A1:2010)	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.		N/A
1.7.2.1 (A12.2011)	In EN 60950-1:2006/A12:2011 Delete NOTE Z1 and the addition for Portable Sound System. Add the following clause and annex to the existing standard and amendments.		N/A
	Zx Protection against excessive sound pressure from personal music players		N/A
	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. 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.		N/A

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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 LAeq,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 LAeq,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. 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 LAeq,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 LAeq,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.		N/A

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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.		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 LAeq,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.		N/A
	Zx.4.2 Wired listening devices with digital input With any playing device playing the fixed “programme simulation noise” described in EN 50332-1 (and respecting the digital interface standards, where a digital interface standard exists that specifies the equivalent acoustic level), the acoustic output LAeq,T of the listening device shall be ≤ 100 dBA. 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.		N/A

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Clause	Requirement - Test	Result-Remark	Verdict
	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 abovementioned programme simulation noise, the acoustic output LAeq,T of the listening device shall be ≤ 100 dBA. NOTE An example of a wireless listening device is a Bluetooth headphone.		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.		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.		N/A
2.7.2	This subclause has been declared 'void'.		N/A
3.2.3	Delete the NOTE in Table 3A, and delete also in this table the conduit sizes in parentheses.		N/A
3.2.5.1	Replace "60245 IEC 53" by "H05 RR-F"; "60227 IEC 52" by "H03 VV-F or H03 VVH2-F"; "60227 IEC 53" by "H05 VV-F or H05 VVH2-F2".In Table 3B, replace the first four lines by the following: Up to and including 6 | 0,75 [a)] | Over 6 up to and including 10| (0,75) [b)] 1,0 | Over 10 up to and including 16| (1,0) [c)] 1,5 | In the conditions applicable to Table 3B delete the words "in some countries" in condition [a)]. In NOTE 1, applicable to Table 3B, delete the second sentence.		N/A

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Clause	Requirement - Test	Result-Remark	Verdict
3.2.5.1 (A2:2013)	NOTE Z1 The harmonised code designations corresponding to the IEC cord types are given in Annex ZD		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		N/A
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 (artifical optical radiation).		N/A
	Standards taking into account mentioned Recommendation and Directive which demonstrate compliance with the applicable EU Directive are indicated in the OJEC.		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.		N/A
Bibliography	Additional EN standards.		P
ZA	**NORMATIVE REFERENCES TO INTERNATIONAL PUBLICATIONS WITH THEIR CORRESPONDING EUROPEAN PUBLICATIONS**		—

ZB ANNEX (normative) **SPECIAL NATIONAL CONDITIONS (EN)**		
Clause	Requirement + Test	Verdict
1.2.4.1	In **Denmark**, certain types of Class I appliances (see 3.2.1.1) may be provided with a plug not establishing earthing conditions when inserted into Danish socket-outlets.	N/A
1.2.13.14 (A11:2009 –	In **Norway** and **Sweden**, for requirements see 1.7.2.1 and 7.3 of this annex.	N/A
1.5.7.1 (A11:2009)	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.	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).	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.	N/A
1.7.2.1 (A11:2009	In **Denmark**, **Finland, Norway** and **Sweden**, CLASS I PLUGGABLE EQUIPMENT TYPE A intended for connection to other equipment or a network shall, if safety	N/A

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Clause	Requirement - Test	Result-Remark	Verdict
)	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” In **Norway** and **Sweden**, the screen of the cable distribution system is normally not earthed at the entrance of the building and there is normally no equipotential bonding system within the building. Therefore the protective earthing of the building installation need to be isolated from the screen of a cable distribution system. It is however accepted to provide the insulation external to the equipment by an adapter or an interconnection cable with galvanic isolator, which may be provided by e.g. a retailer. The user manual shall then have the following or similar information in Norwegian and Swedish language respectively, depending on in what country the equipment is intended to be used in: “Equipment connected to the protective earthing of the building installation through the mains connection or through other equipment with a connection to protective earthing – and to a cable distribution system using coaxial cable, may in some circumstances create a fire hazard. Connection to a cable distribution system has therefore to be provided through a device providing electrical isolation below a certain frequency range (galvanic isolator, see EN 60728-11).” NOTE In Norway, due to regulation for installations of cable distribution systems, and in Sweden, a galvanic isolator shall provide electrical insulation below 5 MHz. The insulation shall withstand a dielectric strength of 1,5 kV r.m.s., 50 Hz or 60 Hz, for 1 min. Translation to Norwegian (the Swedish text will also be accepted in Norway): “Utstyr som er koplet til beskyttelsesjord via nettplugg og/eller via annet jordtilkoplet utstyr – og er tilkoplet et kabel-TV nett, kan forårsake brannfare. For å unngå dette skal det ved tilkopling av utstyret til kabel-TV nettet installeres en galvanisk isolator mellom utstyret og kabel- TV nettet.” Translation to Swedish: ”Utrustning som är kopplad till skyddsjord via jordat vägguttag och/eller via annan utrustning och samtidigt är kopplad till kabel-TV nät kan i vissa fall medföra risk för brand. För att undvika detta skall vid anslutning av utrustningen till kabel-TV nät galvanisk isolator finnas mellan utrustningen och kabel-TV nätet.”	
1.7.2.1 (A2:2013)	In **Denmark**, 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 **Denmark** shall be as follows: In **Denmark**: “Apparatets stikprop skal tilsluttes en stikkontakt med jord, som giver forbindelse til stikproppens jord.”	N/A

IEC/EN 60950-1			
Clause	Requirement - Test	Result-Remark	Verdict
1.7.5	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		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		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.		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.		N/A
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.		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.		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, 16A SEV 5934-2.1998: Plug Type 23, L+N+PE 250 V, 16 A		N/A

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Clause	Requirement - Test	Result-Remark	Verdict
3.2.1.1	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 polyphase 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		N/A
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		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.		N/A
3.2.1.1	In the **United Kingdom**, apparatus which is fitted with a flexible cable or cord and is designed to be connected to a mains socket conforming to BS 1363 by means of that flexible cable or cord and plug, shall be fitted with a 'standard plug' in accordance with Statutory Instrument 1768:1994 - The Plugs and Sockets etc. (Safety) Regulations 1994, unless exempted by those regulations. NOTE 'Standard plug' is defined in SI 1768:1994 and essentially means an approved plug conforming to BS 1363 or an approved conversion plug.		N/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.		N/A
3.2.4	In **Switzerland**, for requirements see 3.2.1.1 of this annex.		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.		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.		N/A

IEC/EN 60950-1			
Clause	Requirement - Test	Result-Remark	Verdict
4.3.6	In the **United Kingdom**, the torque test is performed using a socket outlet complying with BS 1363 part 1:1995, including Amendment 1:1997 and Amendment 2:2003 and the plug part of DIRECT PLUG-IN EQUIPMENT shall be assessed to BS 1363: Part 1, 12.1, 12.2, 12.3, 12.9, 12.11, 12.12, 12.13, 12.16 and 12.17, except that the test of 12.17 is performed at not less than 125 °C. Where the metal earth pin is replaced by an Insulated Shutter Opening Device (ISOD), the requirements of clauses 22.2 and 23 also apply.		P
4.3.6	In **Ireland**, DIRECT PLUG-IN EQUIPMENT is known as plug similar devices. Such devices shall comply with Statutory Instrument 526:1997 - National Standards Authority of Ireland (Section 28) (Electrical plugs, plug similar devices and sockets for domestic use) Regulations, 1997.		N/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.		N/A
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 requirements 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;		N/A

IEC/EN 60950-1			
Clause	Requirement - Test	Result-Remark	Verdict
	-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.		
6.1.2.2	In **Finland**, **Norway** and **Sweden**, the exclusions are applicable for PERMANENTLY CONNECTED EQUIPMENT, PLUGGABLE EQUIPMENT TYPE B and equipment intended to be used in a RESTRICTED ACCESS LOCATION where equipotential bonding has been applied, e.g. in a telecommunication centre, and which has provision for a permanently connected PROTECTIVE EARTHING CONDUCTOR and is provided with instructions for the installation of that conductor by a SERVICE PERSON.		N/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.		N/A
7.3 (A11:2009)	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

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])
Plastic enclosure including plug holder	CHI MEI	PA-765 (+)	V-1,1.5 mm min. 80 ℃	UL 94 IEC 60695-11-10 IEC 60695-11-20	UL(E56070)
PCB	Paiching Industrial Co Ltd	5	V-0, 130 ℃ thickness1.5 mm	UL94	UL(E156181)
Fuse (RF1)	Conquer	MST	1 A, 250 V	IEC 60127:2006 IEC 60127-1:2006/ AMD1:2011 IIEC 60127-12006/ AMD2:2015 IEC 60127-3:2015	VDE(40017118)
Varistor (VR1)	DongGuan Littelfuse Electronics Co., Ltd.	LA-Series (V320LA20P)	Overvoltage category IV 6 kV(1.2/50 μs) /3 kA(8/20 μs) VDR's body with V-1 flammability category 300 V rms; 385 V d.c., diameter : 14 mm 55/085/56	IEC 61051-1: 2007 IEC 61051-2 +Am1:2009 IEC 61051-2-2:1992 IEC 61051-2: 1992 IEC 60950-1:2013 Annex Q	VDE(116895)
Transformer (T1)	SHYANG JENN INDUSTRIES CO.,LTD.	EE-13 1680μH (J-XZ-EE-13-2713)	Class B	Tested with apparatus	--
Silicone rubber between primary circuits and secondary circuits	Haurjye Tech	E1SP1105522N	Area in diameter : 35.75 mm thickness:0.5 mm, 150 ℃ HB 75	UL 94 IEC 60695-11-10 IEC 60695-11-20	UL(E55519)
- double coated adhesive tape	3M	#8053 with 3M® Laminating Adhesive #467, #468	-40 ℃ ~ 80 ℃	ANSI/UL 969	UL (MH26206)

Exchangeable plug	Shenzhen Shi Ying Yuan Electronics Co.,Ltd.	--	250 V 2.5 A min.	EN 50075 CEE7 standard XVI CEE7/16(EU plug) BS 1363 (GB plug) AS/NZS 60950.1: 2015(AU plug)	Intertek for EU plug and GB plug (13120076HKG-005) AU plug (certificate SAA-170226-EA)
R11 (R_{sense})	--	--	1 k Ω, 1/5 W	--	--
Primary wires	Dongguan Wenchang	UL 1007,	22AWG 80 ℃,300 V	ANSI/UL 758 IEC TS 60695-11 -21	UL (E214500)
Inductor (L1)	HDT	DPU0406K	3.3 μH, Class A	Tested with apparatus	--
Rectifier diode (D17,D20)	--	--	700 V,1 A	--	--
Ripple capacitor (C4,C5)	--	--	6.8 μF,400 V 105 ℃	--	--
Supplementary information:					

1.5.1	TABLE: Opto Electronic Devices	N/A
Manufacturer ..... :		
Type..... :		
Separately tested..... :		
Bridging insulation ..... :		
External creepage distance..... :		
Internal creepage distance..... :		
Distance through insulation ..... :		
Tested under the following conditions..... :		
Input..... :		
Output..... :		
supplementary information		

1.6.2		TABLE: Electrical data (in normal conditions)					P
Fuse #	I rated (mA)	U (V)	Frequency (Hz)	Current (mA)	I fuse (mA)	P (W)	Condition/status
RF1	--	90	50	23	23	0.23	Rated voltage of tolerance - 10 % detection device immersion into the water
RF1	50	100	50	22	22	0.22	Rated voltage detection device immersion into the water
RF1	50	240	50	21	21	0.51	Rated voltage detection

							device immersion into the water
RF1	--	254	50	21	21	0.53	Rated voltage of tolerance +6 % detection device immersion into the water
RF1	--	90	60	22	22	0.23	Rated voltage of tolerance -10 % detection device immersion into the water
RF1	50	100	60	22	22	0.23	Rated voltage detection device immersion into the water
RF1	50	240	60	21	21	0.52	Rated voltage detection device immersion into the water
RF1	--	254	60	22	22	0.53	Rated voltage of tolerance +6 % detection device immersion into the water
Supplementary information: for reference							

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:		

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

2.5	TABLE: limited power sources				N/A
Circuit output tested:					
Measured Uoc (V) with all load circuits disconnected:					
	I_{sc} (A)		VA		
	Meas.	Limit	Meas.	Limit	
Normal condition					
Single fault: …..					
supplementary information:					
Sc=Short circuit, Oc=Open circuit					

2.10.2	Table: working voltage measurement		P
Location	RMS voltage (V)	Peak voltage (V)	Comments
Transformer			
Pin1 to Pin 7	**178**	**389**	Maximum V_{rms} and V_{peak}
Pin2 to Pin 7	175	384	
Pin4 to Pin 7	158	287	
Pin5 to Pin 7	158	287	
Pin1 to Pin 9	175	386	
Pin2 to Pin 9	170	386	
Pin4 to Pin 9	160	292	
Pin5 to Pin 9	163	290	
supplementary information:			

2.10.3 and 2.10.4	TABLE: Clearance and creepage distance measurements					P
Clearance (cl) and creepage distance (cr) at/of/between:	U peak (V)	U r.m.s. (V)	Required cl (mm)	cl (mm)	Required cr (mm)	cr (mm)
Functional:						
Between Line conductor and Neutral conductor on the PCB traces side	420	250	1.5	9.2	2.0	9.2
Between fuse two soldering pads on the PCB traces side	420	250	1.5	2.9	2.0	2.9
Bwtween vaistor two soldering pad on the PCB traces side	420	250	1.5	3.3	2.0	3.3
Basic/supplementary:						
--	--	--	--	--	--	
Reinforced:						
Between accessible part on the edges and plug with hazardous voltage	420	250	4.0	> 10	5.0	> 10
Between primary soldering pad on the PCB trace side and secondary soldering pad on the PCB trace side.	420 (389)	250 (178)	4.0	> 10	5.0	> 10
Between accessible enclosure and inner hazardous voltage	420	250	4.0	> 10	5.0	> 10
Beween inner hazardous voltage terminal (covering by silcone rubber) and secondary circuits on the PCB tracec side	420	250	4.0	> 10	5.0	> 10
Beween inner hazardous voltage terminal (black colour conductor) and transformer of secondary pins on the PCB tracec side	420	250	40.	5.3	5.0	5.3
Beween inner hazardous voltage terminal (red colour conductor) and LED(D15) soldering pad on the PCB tracec side	420	250	4.0	5.3	5.0	5.3
Supplementary information:						

2.10.5	TABLE: Distance through insulation measurements				P
Distance through insulation (DTI) at/of:	U peak (V)	U rms (V)	Test voltage (V)	Required DTI (mm)	DTI (mm)
Silicone rubber	420	250	3000	0.4	0.55
Plastic enclosure	420	250	3000	0.4	1.7
Transformer of bobbin	420	250	3000	0.4	1.4
Supplementary information:					

4.2.2/4.2.3/4.2.4	Steady force test		P
Position	Test force	Duration	Result
L1	10 N ± 1 N	5	Remain reinforced clearance and creepage minimum distances to transformer.
RF1	10 N ± 1 N	5	Remain reinforced clearance and creepage minimum distances to transformer.
C6	10 N ± 1 N	5	Remain reinforced clearance and creepage minimum distances to transformer.
Position	Test force	Duration	Result
No parts or components need to be applied to this force.	30 N± 3 N	--	--
Position	Test force	Duration	Result
Top of enclosure	250 N ± 10 N	5	No cracks, dents and chips are regarded to reducing clearance distances and creepage can be touched hazardous voltage.
Bottom of enclosure	250 N ± 10 N	5	No cracks, dents and chips are regarded to reducing clearance distances and creepage can be touched hazardous voltage.
Sides of enclosure	250 N ± 10 N	5	No cracks, dents and chips are regarded to reducing clearance distances and creepage can be touched hazardous voltage.
Exchangeable plug holder	250 N ± 10 N	5	No cracks, dents and chips are regarded to reducing clearance distances and creepage can be touched hazardous voltage. Exchangeable plug holder was not removed.
Supplementary information: --			

4.2.6	Drop test		P
Position	Material/Manufacturer/ Model No.	Thickness (mm)	Results
Top of enclosure	ABS/ CHI MEI/ PA-765 (+)	1.7	The equipment no damages, no hazardous things caused.
Bottom of enclosure	ABS/ CHI MEI/ PA-765 (+)	1.7	The equipment no damages, no hazardous things caused.
Sides of enclosure	ABS/ CHI MEI/ PA-765 (+)	1.7	The equipment no damages, no hazardous things caused.

Supplementary information

A sample of the complete equipment is subjected to three impacts that result from being dropped onto a horizontal surface in positions likely to produce the most adverse results.

The height of the drop shall be:

− 750 mm ± 10 mm for desk-top equipment as described above;

− 750 mm ± 10 mm for movable equipment as described above;

− 1 000 mm ± 10 mm for hand-held equipment, direct plug-in equipment and transportable equipment.

After this testing, the sample was subjected to electric strength test 3000 V, and insulation did'nt break down.

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.	
Max. Current during normal condition										
Max. Current during fault condition:										
Test results:										Verdict
- Chemical leaks										
- Explosion of the battery										
- Emission of flame or expulsion of molten metal										
- Electric strength tests of equipment after completion of tests										
Supplementary information:										
4.3.8	TABLE: Batteries									N/A
Battery category.....:										
Manufacturer.....:										
Type / model .....:										
Voltage.....:										
Capacity.....:										
Tested and Certified by (incl. Ref. No.) .....:										
Circuit protection diagram :										

4.5	TABLE: maximum temperatures					P
	Test voltage (V) :	90 V/ 50 Hz Horizontal orient		254 V/ 60 Hz Horizontal orient		—
	t_{amb1} (° C):	26.5		24.5		—
	t_{amb2} (° C):	26.8		25.7		—
Thermal coupler wire no.	Maximum temperature T of part / at:	T (° C)		T (° C)		Allowed Tmax (° C)
		t_m	t_c	t_m	t_c	
001	Internal wire(L)	32.2	45.4	31.3	45.6	80
002	T1 core	32.5	45.7	31.6	45.9	110
003	T1 coil	32	45.2	31.2	45.5	110
004	PCB near T1	32.6	45.8	31.5	45.8	105
005	C3 near C6	33.5	46.7	32	46.3	85
006	L1 coil	34.1	47.3	32.6	46.9	100
007	C4 near C5	31.7	44.9	30.9	45.2	85
008	U1	30.8	44	29.5	43.8	--

009	PCB near U1	30.7	43.9	29.5	43.8	105
010	U2	30.9	44.1	29.7	44	--
011	PCB near U2	30.8	44	29.4	43.7	105
013	Enclosure inside near T1	30.4	43.6	28.6	42.9	--
014	Enclosure outside near T1	28.7	41.9	26.7	41	95
015	Plug blade(L)	30.6	43.8	28	42.3	--
030	Ambient temperature	26.8	40	25.7	40	--
	Test voltage (V) :	90 V/ 50 Hz Vertical orient		254 V/ 60 Hz Vertical orient		—
	t_{amb1} (° C):	24.5		24.3		—
	t_{amb2} (° C):	24.7		24.7		—
Thermal coupler wire no.	Maximum temperature T of part / at:	T (° C)		T (° C)		Allowed Tmax (° C)
		t_m	t_m	t_m	t_c	
001	Internal wire(L)	28.5	43.8	29.5	45.1	80
002	T1 core	29.1	44.4	30.3	45.9	110
003	T1 coil	28.7	44	29.8	45.4	110
004	PCB near T1	29.1	44.4	30.6	46.2	105
005	C3 near C6	29.8	45.1	30.5	46.1	85
006	L1 coil	30.3	45.6	30.9	46.5	100
007	C4 near C5	28.2	43.5	29.1	44.7	85
008	U1	27.5	42.8	27.9	43.5	--
009	PCB near U1	27.5	42.8	27.8	43.4	105
010	U2	27.6	42.9	28	43.6	--
011	PCB near U2	27.6	42.9	28	43.6	105
013	Enclosure inside near T1	27.3	42.6	27.6	43.2*	--
014	Enclosure outside near T1	26.1	41.4	26.1	41.7	95
015	Plug blade(L)	26.2	41.5	26.1	41.7	--
030	Ambient temperature	24.7	40	24.4	40	--

Comments: The temperatures were measured by thermal coupe (type T) method under normal mode defined in 1.4.3 and as described in 1.6.2 at voltage described in 1.4.5.The worse case normal mode is defined with max. Load of the equipment.
With max. Ambient temperature specified as 40 ℃,therefore, the maximum temperature rise is calculated as follows: $t_c = t_m$ corrected ($t_m - t_a$+ 40 ℃ or max. rated ambient),
Unit:
Allowed T_{max}(° C) ＞ (T_{max} +T_{abm}-T_{ma})
T_{max}.: The tempeature of the given part measured under the prescribed test conditions;
T_{amb}.: The ambient temperature during test ;
T_{ma} : The maximum ambient temperature permitted by the manufacturer's specification when no class of insulation is given, min. Insulation 105 ℃ assumed PCB
* indication to sub clause 4.2.4 for determination test temperature.

Temperature T of winding:	R1 (Ω)	R2 (Ω)	T (° C)	Allowed T_{max} (° C)	Insulation class
No used resistance method					

4.5.5	**TABLE: Ball pressure test of thermoplastic parts**		**P**
	Allowed impression diameter (mm) .....:	≤ 2 mm	—

Part	Samples thickness (mm)	Test temperature (°C)	Impression diameter (mm)

Plug holder	2.2	125	0.6
Bobbin of transformer (Bobbin was made by phenolic material that temperature can be subject to 150 ℃,no need to be tested to this item	1.3	--	--
Supplementary information:			

4.7	TABLE: Resistance to fire				P
Part	Manufacturer of material	Type of material	Thickness (mm)	Flammability class	Evidence
Plastic enclosure	CHI MEI	ABS	1.7	V-0	UL (E56070)
Silcone rubber	Haurjye Tech	Silcone rubber	0.55	HB75	UL(E55519)
Supplementary information:					

5.1.6	TABLE: touch current measurement		P
Measured between:	Measured (mA)	Limit (mA)	Comments/conditions
Line and accessible enclosure with aluminium foil 10 cm × 20 cm	0.021	0.25	254 V/60 Hz
Neutral and accessible enclosure with aluminium foil 10 cm × 20 cm	0.019	0.25	254 V/60 Hz

5.2	TABLE: Electric strength tests, impulse tests and voltage surge tests		P
Test voltage applied between:	Voltage shape (AC, DC, impulse, surge)	Test voltage (V)	Breakdown Yes/No
Reinforced:			
L/N to plastic case covered with aluminium foil 10 cm × 20 cm	AC	3000 Vac	No
Transformer(T1) : primary wound wires to secondary wound wires	AC	3000 Vac	No
Transformer(T1) : core to secondary wound wires	AC	3000 Vac	No
One layer Insulating tape	AC	3000 Vac	No
Supplementary information:			

5.3	TABLE：Fault condition tests						P
	Ambient temperature (°C) :				See observation		—
	Power source for EUT: Manufacturer, model/type, output rating：				See appended table 1.5.1		—
Component No.	Fault	Supply voltage (V)	Test time	Fuse #	Test current(A)	Observation	
U1	Pin5 to Pin4 (S-C)	240	1s	RF1	--	RF1 & U1 damaged, No fire, No hazards caused.	
C5	S-C	240	1s	RF1	--	RF1 are damaged, No fire, No hazards caused.	
D19	S-C	240	1 hr	RF1	0.008	Output protection, No fire, No hazards caused. EUT can be worked when it was resetting.	

Transformer (T1)	Output overload	240	7 hr	RF1	0.042 → 0.059→ 0.109 → 0.140 → 0.007	Transformer output terminals were loaded to 0.7 A then the equipment shut down. No damaged Transformer coil：40.3 ℃ Transformer core：31.8 ℃ Limited value : 175 ℃ Room ambient：22.9 ℃
Transformer (T1)	Pin9 to Pin7 (S-C)	240	1 hr	RF1	0.004	Output protection, No fire, No hazards caused, EUT can be worked when it was resetting.

C.2	**TABLE: transformers**						**P**
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)
T1	Reinforced insulation	420	250	3000	4.0	5.0	0.4
Loc.	Tested insulation			Test voltage/ V	Measured clearance / mm	Measured creepage dist./ mm	Measured distance thr. insul. / mm; number of layers
T1	Between primary wound wires and secondary wound wires			3000	Triple insulation windings	Triple insulation windings	0.4 /2 or 3 layers
T1	Between core and secondary wound wires			3000	Triple insulation windings	Triple insulation windings	0.4 /2 or 3 layers
supplementary information:							
Core is considered as primary part, Windings was wrapped up on the type EE-13 core, Three layers tape cover all coil. Primary wound windings were wrapped up on the outer side. Two layers insulated between primary and secondary windings, Secondary windings used triple insulated windings. Primary windings used polyurethane enameled wire. Insulation tape covers all core to add clearance and creepage distances.							

	Test equipment list					
Code No.	**Test equipment**	**Mode No.**	**Serial No.**	**Manufacturer**	**Cal. Date**	**Next Cal. Date**
HR01	Hybrid Recorder	DR232-02-00-1D (DR 230)	91KC39010	YOKOGAWA	2019/04/29	2020/4/28
DPO01	Digital Phosphor Oscilloscope	DPO3012	C011022	Tektronix	2019/1/31	2020/1/30
PM01	Power Analyzer	CP-600	660480	iDRC	2019/04/18	2020/4/17
TC03	Line Leakage Tester 99hr/60min/60sec	7630	1332027	EEC	2019/7/8	2020/7/7
TH01	Temperature & Humidity Chamber	GTH-225-40-CP-AR	MAA1102-006	Giant Force	2019/4/23	2020/4/22
BP01	Ball pressure tester	BPT-1	9122506	ASIA QTECH	2018/5/21	2021/5/20
SOT01	Socket-outlet torque tester	65-DPI	9122905	ASIA QTECH	2019/5/30	2020/5/29
W03	Balance Weight Set	E816-368	7082502	Asia Qtech	2017/8/30	2020/8/29
MT01	Measuring Tape	8m	04093-1	KING LIFE	2018/5/22	2021/5/21
CA01	Electrical Safety Compliance Analyzer	7740	1350080	EXTECH	2019/3/11	2020/3/10
TM01	Timer	ONstart 310	1487740	Kalenji	2019/6/6	2020/6/5
TP02	IEC jointed test finger B of IEC 61032	TFP-1	9122502	ASIA QTECH	2018/5/11	2021/5/10
EL02	DC Electronic Load	3311C	30702C 567	Prodigit	2019/07/08	2020/7/7
PP01	Push/Pull dynamometer 2N ～300N	NK-300	71960	ALGOL	2019/5/15	2020/5/14