Test Report issued under the responsibility of:

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. .....:	32106
Date of issue .....:	October 12, 2011
Total number of pages	71 pages
CB/~~CCA~~ Testing Laboratory ....:	emitel (Shenzhen) Limited
Address .....:	Building 2, 171 Meihua Road, Futian District, Shenzhen, China P.C: 518049
Applicant's name.....:	GlobTek, Inc.
Address .....:	186 Veterans Dr. Northvale, NJ 07647 USA
Manufacturer's name .....:	Same as applicant
Address .....:	Same as applicant
Factory's name .....:	See page 6
Address .....:	See page 6
Test specification:	CB/CE
Standard.....:	☒ IEC 60950-1:2005 (2nd Edition) and/or ☒ EN 60950-1:2006
Test procedure .....:	CB scheme
Non-standard test method……..:	N/A
Test Report Form No. .....:	IECEN60950_1C (4_F510_40_Rev2_0)
Test Report Form(s) Originator.....:	SGS Fimko Ltd
Master TRF .....:	Dated 2007-06

This report is not valid as a CB Test Report unless signed by an approved CB Testing Laboratory and appended to a CB Test Certificate issued by an NCB in accordance with IECEE 02.
If this Test Report Form is used by non-CCA members, the CIG logo and the reference to the CCA Procedure shall be removed.
This report is not valid as a CCA Test Report unless signed by an approved CCA Testing Laboratory and appended to a CCA Test Certificate issued by an NCB in accordance with CCA

Test item description .....:	Switching Adapter
Trade Mark .....:	GlobTek, Inc.
Manufacturer .....:	Same as applicant
Model/Type reference .....:	GT-81090-WWVV-X.X-W2Z; GT-81090-WWVV-X.X-W2Z-USB (see Model Designations on page 6)
Ratings .....:	Input: 1) 100-240Vac; 2) 200-240 Vac; 3) 100-120Vac; 50/60Hz, 0.2A; Output: see Model Designation on page 6

Testing procedure and testing location:

☒	**CB/~~CCA~~ Testing Laboratory**:	emitel (Shenzhen) Limited
Testing location/ address ..... :		Building 2, 171 Meihua Road, Futian District, Shenzhen, China P.C: 518049
☐	**Associated CB Laboratory:**	N/A
Testing location/ address ..... :		N/A
Tested by (name + signature) ..... :		Stella Young
Approved by (+ signature) ..... :		Ivan Toa

Summary of testing:

Tests performed (name of test and test clause):	**Testing location:**
- 1.6.2 Input Current Test - 1.7.11 Durability of Marking Test - 2.1.1.5 Energy Hazard in Operator Access Area - 2.2.2 SELV Limits for Normal Conditions - 2.2.3 SELV Limits for Abnormal Conditions - 2.4.2 Limited Current Circuit Test - 2.5 Limited Power Source - 2.9.2 Humidity Conditioning - 2.10.2 Working Voltage over Insulation - 2.10.3 Clearance Measurement - 2.10.4 Creepage Distance Measurement - 4.2.2 Steady Force Test, 10N - 4.2.4 Steady Force Test, 250N - 4.2.6 Drop Test - 4.2.7 Stress Relief Test - 4.3.6 Torque Test - 4.5.2 Maximum Temperature Test - 4.5.5 Ball Pressure Test - 5.1.6 Touch Current Test - 5.2 Electric Strength Test - 5.3 Fault Condition Test Remark: The models GT-81090-0612-W2E and GT-81090-0612-4.0-W2E have been selected for multiple testing, if not specified, the model GT-81090-0612-W2E is the selected model for the tests.	emitel (Shenzhen) Limited Building 2, 171 Meihua Road, Futian District, Shenzhen, China P.C: 518049

Summary of compliance with National Differences:

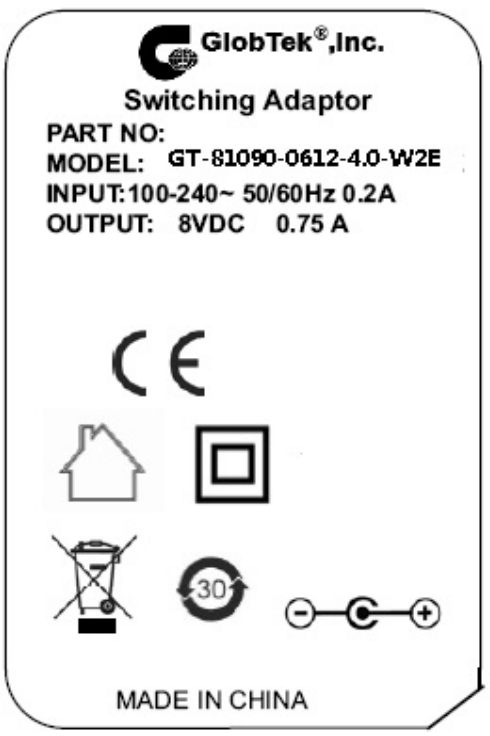
CH, DE, DK, ES, FI, IE, NO, SE.

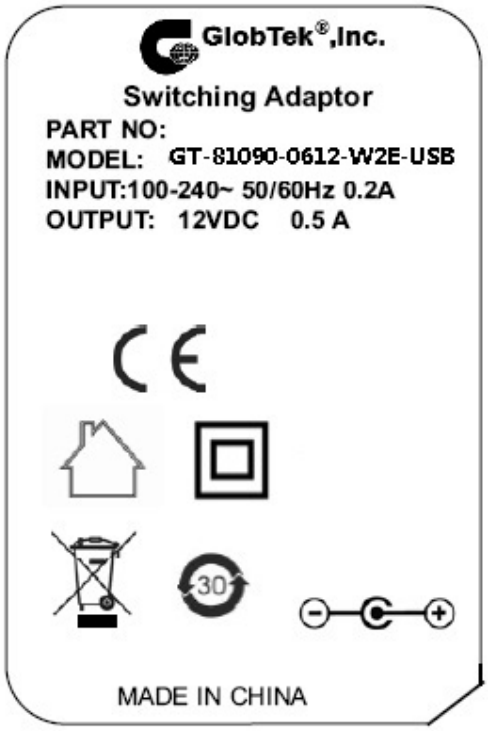
CH=Switzerland, DE=Germany, DK=Denmark, ES=Spain, FI=Finland, IE=Ireland, NO=Norway, SE=Sweden.

All national differences of EU group were considered according to EN 60950-1:2006+A11, Annex ZA, ZB and ZC on pages 33-40.

The European plug was evaluated according to EN 50075:1990 (see appended table on page 55), the British plug was evaluated according to BS1363-1:1995+A1+A2+A3 (see appended table on pages 56-58). Other plug shall be evaluated during national approval.

Copy of marking plate





This is a representative label. The others are identical with it except the model number and output ratings as listed in the Model Designation on page 6.

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 ..... :	±10% (as the client requested)
Tested for IT power systems ..... :	[√] Yes (only for Norway) [] No
IT testing, phase-phase voltage (V) ..... :	230 (only for Norway)
Class of equipment ..... :	[] Class I [√] Class II [] Class III [] Not classified
Considered current rating (A) ..... :	0.2A
Pollution degree (PD) ..... :	[] PD 1 [√] PD 2 [] PD 3
IP protection class ..... :	IPX0
Altitude during operation (m) ..... :	Up tp 2000
Altitude of test laboratory (m) ..... :	Below 2000
Mass of equipment (kg) ..... :	Approx. 0.07
Possible test case verdicts:	
- test case does not apply to the test object ..... :	N/A
- test object does meet the requirement ..... :	P (Pass)
- test object does not meet the requirement ..... :	F (Fail)
Testing ..... :	
Date of receipt of test item ..... :	Aug. 01, 2011
Date(s) of performance of tests ..... :	Aug. 01, 2011 – Aug. 19, 2011
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. **Note: This TRF includes EN Group Differences together with National Differences and Special National Conditions, if any. All Differences are located in the Appendix to the main body of this TRF.** Throughout this report a comma (point) is used as the decimal separator.	

All contents are come from TÜV Rheinland CB Report No. 16026402001 (dated on Nov. 15, 2010) with CB Certificate JPTUV-035964 except the followings:

1. Applicant and Manufacturer, factories list;
2. Model name and its description;
3. Marking.

Product photos are shown in pages 59-71.

Factories:
1. GlobTek, Inc.
186 Veterans Dr. Northvale, NJ 07647 USA
2 .GlobTek (Suzhou) Co., Ltd
Building 4, No. 76, Jin Ling East Rd., Suzhou Industrial Park, Suzhou, Jiangsu 215021, China.

Remark: the samples submitted for evaluation are representative of the products from each factory.

General product information:

Brief description of the test sample:

1. The product models GT-81090-WWVV-X.X-W2Z / GT-81090-WWVV-X.X-W2Z-USB are Switching Adapter (direct plug-in type) used for DC supply of IT or office equipment.
2. There are two constructions for the output: one is output cord, the other is USB port, details see Model Designation below.
3. The power supply's top enclosure is secured to bottom enclosure by ultrasonic welding.
4. The test items are pre-production samples without serial numbers.
5. The power pin parts of European plug and Korean plug were fixed into the enclosure of plug portion by a screw. The power pin parts of British plug, Australian plug and Japanese plug were molded into the enclosure of plug portion. It is impossible to remain in the mains socket-outlet after removal of the adapter, details see photos.
6. The maximum ambient temperature 50˚C.

Difference between models:

1. C1, C2, Q1, C3, D7, C8, C9, L2, Rl, R13, R14, R12, R15, R18, R6, R4, R5, R10, R11, R1, R2, R3, R9, R17, R16, C7, Z1: The parameter of these components depends on output power and output voltage.
2. Models GT-81090-0612-X.X-W2Z-USB using USB port output; GT-81090-0612-X.X-W2Z using output cord.

Model Designation:

GT-81090-WWVV-X.X-W2Z / GT-81090-WWVV-X.X-W2Z-USB:

- WW is the standard output wattage, with a maximum value of "6";
- VV is the standard rated output voltage designation, with a maximum value of "12";
- -X.X is optional or blank and denotes the output voltage differentiator, subtracting or adding X.X volts from standard output voltage VV in 0.1V increments, blank is to indicate the no voltage different.
- "Z" designates type of plug and can be E for European plug, U for British plug, blank for North American / Japan plug/Taiwan plug, C for Chinese plug, I for India plug, A for Australia plug, K for Korea plug, AR for Argentina plug

By multiplication of output voltage and output current, the type designations are limited through the Max. output power and output current.

1	GENERAL	P

1.5	Components		P
1.5.1	General	Components which were found to affect safety aspects comply with the requirements of this standard or within the safety aspects of the relevant IEC component standards.	P
	Comply with IEC 60950-1 or relevant component standard	(see appended table 1.5.1)	P
1.5.2	Evaluation and testing of components	Components which are certified to IEC and/or national standards are used correctly within their ratings. Components not covered by IEC standards are tested under the conditions present in the equipment.	P
1.5.3	Thermal controls	No thermal controls provided.	N/A
1.5.4	Transformers	Transformer used are suitable for their intended applicable and comply with the relevant requirements of the standard and particularly Annex C.	P
1.5.5	Interconnecting cables	Interconnection o/p cable to other device is carrying only SELV on an energy level below 240VA. → Except for the insulation material, there are no further requirements for the o/p interconnection cable.	P
1.5.6	Capacitors bridging insulation	Between the primary and secondary circuits capacitors subclass Y1 according to IEC60384-14 with 21 days damp heat test.	P
1.5.7	Resistors bridging insulation	Fusible resistor used.	P
1.5.7.1	Resistors bridging functional, basic or supplementary insulation	Fusible resistor used as functional insulation.	P
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
1.5.8	Components in equipment for IT power systems	No such component	N/A
1.5.9	Surge suppressors	No such components	N/A
1.5.9.1	General		N/A

IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
1.5.9.2	Protection of VDRs		N/A
1.5.9.3	Bridging of functional insulation by a VDR		N/A
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	IT power system for Norway only, TN power system for others.	P
1.6.2	Input current	(see appended table 1.6.2) The highest load according to 1.2.2.1 for this product is the operation with the Max. specified DC load.	P
1.6.3	Voltage limit of hand-held equipment	Not hand-held product	N/A
1.6.4	Neutral conductor	Double or Reinforce insulation for rated voltage between enclosure and primary phases.	P
1.7	Marking and instructions		P
1.7.1	Power rating		P
	Rated voltage(s) or voltage range(s) (V) ..... :	See page 1	P
	Symbol for nature of supply, for d.c. only ..... :	Mains from AC source	N/A
	Rated frequency or rated frequency range (Hz) ... :	50/60Hz	P
	Rated current (mA or A) ..... :	0.2A	P
	Manufacturer's name or trade-mark or identification mark ..... :	GlobTek	P
	Model identification or type reference ..... :	See Model Designation	P
	Symbol for Class II equipment only ..... :		P
	Other markings and symbols ..... :	Additional symbols or marking does not give rise to misunderstanding.	P
1.7.2	Safety instructions and marking	See below	P
1.7.2.1	General	User's manual provided that contains information regarding the Max. ambient temperature.	P

IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
1.7.2.2	Disconnect devices	Direct plug-in product. The plug is regarded as disconnect device and it is incorporated with adapter during normal use	N/A
1.7.2.3	Overcurrent protective device	Not such product	N/A
1.7.2.4	IT power distribution systems	Only for Norway	P
1.7.2.5	Operator access with a tool	No operator accessible area that needs to be accessed by the use of a tool.	N/A
1.2.7.6	Ozone	Not such product	N/A
1.7.3	Short duty cycles	Continuous operation	N/A
1.7.4	Supply voltage adjustment ..... :	No such device	N/A
	Methods and means of adjustment; reference to installation instructions ..... :		N/A
1.7.5	Power outlets on the equipment ..... :	No such device	N/A
1.7.6	Fuse identification (marking, special fusing characteristics, cross-reference) ..... :	Marking adjacent to fusible resistor (F1): 10Ω, 2W	P
1.7.7	Wiring terminals	See below	N/A
1.7.7.1	Protective earthing and bonding terminals ..... :	Class II product without earth connection.	N/A
1.7.7.2	Terminals for a.c. mains supply conductors	Direct plug-in product.	N/A
1.7.7.3	Terminals for d.c. mains supply conductors	Not DC mains supply	N/A
1.7.8	Controls and indicators	No safety related switch or indicator.	N/A
1.7.8.1	Identification, location and marking ..... :		N/A
1.7.8.2	Colours ..... :		N/A
1.7.8.3	Symbols according to IEC 60417 ..... :		N/A
1.7.8.4	Markings using figures ..... :		N/A
1.7.9	Isolation of multiple power sources ..... :	Only one supply	N/A
1.7.10	Thermostats and other regulating devices ..... :	No such device	N/A
1.7.11	Durability	The label was subjected to the testing. The label was rubbed with cloth soaked with water for 15s, and then again for 15s, with the cloth soaked with petroleum spirit. After this test there was no damage to the label. The marking on the label did not fade. There was no curling and lifting of the label edge.	P

IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
1.7.12	Removable parts	No removable part	N/A
1.7.13	Replaceable batteries ..... :	No battery provided	N/A
	Language(s) ..... :		—
1.7.14	Equipment for restricted access locations ..... :	Not limited for use in RAL	N/A
2	PROTECTION FROM HAZARDS		P
2.1	Protection from electric shock and energy hazards		P
2.1.1	Protection in operator access areas	No access with test finger and test pin to any parts with only basic insulation to hazardous voltage.	P
2.1.1.1	Access to energized parts	See above	P
	Test by inspection ..... :	See above	P
	Test with test finger (Figure 2A) ..... :	See above	P
	Test with test pin (Figure 2B) ..... :	See above	P
	Test with test probe (Figure 2C) ..... :	No TNV circuits.	N/A
2.1.1.2	Battery compartments	No battery compartment	N/A
2.1.1.3	Access to ELV wiring	No ELV wiring can be accessed by operator.	N/A
	Working voltage (Vpeak or Vrms); minimum distance through insulation (mm)		—
2.1.1.4	Access to hazardous voltage circuit wiring	No hazardous voltage wiring in operator accessible area.	N/A
2.1.1.5	Energy hazards ..... :	Energy does not exceed 240VA between any two points in accessible parts (o/p connector of secondary circuit). Results see appended table 2.1.1.5, no energy hazard in operator access area.	P
2.1.1.6	Manual controls	No such device	N/A
2.1.1.7	Discharge of capacitors in equipment	No X capacitor provided	N/A
	Measured voltage (V); time-constant (s)..... :		—
2.1.1.8	Energy hazards – d.c. mains supply	Connected to AC mains	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 ..... :	Product without audio amplifier	N/A

IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
2.1.2	Protection in service access areas	No operator accessible area that needs to be accessed by the use of a tool.	N/A
2.1.3	Protection in restricted access locations	Not intended for use in RAL.	N/A
2.2	SELV circuits		P
2.2.1	General requirements	The secondary circuits were tested as SELV, see 2.2.1 to 2.2.4	P
2.2.2	Voltages under normal conditions (V) ..... :	Between any conductors of the SELV circuits 42.4Vpeak or 60Vdc are not exceeded.	P
2.2.3	Voltages under fault conditions (V) ..... :	Single fault did not cause excessive voltage in accessible SELV circuits.	P
2.2.4	Connection of SELV circuits to other circuits ..... :	See 2.2.2 and 2.2.3	P
2.3	TNV circuits		N/A
2.3.1	Limits	No TNV circuits	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
2.4	Limited current circuits		P
2.4.1	General requirements		P
2.4.2	Limit values		P
	Frequency (Hz) ..... :	See appended table 2.4.2	—
	Measured current (mA)..... :	See appended table 2.4.2	—
	Measured voltage (V)..... :	See appended table 2.4.2	—
	Measured circuit capacitance (nF or µF)..... :	2200pF	—

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Clause	Requirement + Test	Result - Remark	Verdict
2.4.3	Connection of limited current circuits to other circuits	No direct connection between SELV and any primary circuits.	P
2.5	Limited power sources		P
	a) Inherently limited output		N/A
	b) Impedance limited output		N/A
	c) Regulating network limited output under normal operating and single fault condition	See appended table 2.5	P
	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) .:		—
2.6	Provisions for earthing and bonding		N/A
2.6.1	Protective earthing	Class II product	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
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

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Clause	Requirement + Test	Result - Remark	Verdict
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	Product relies on 16A rated fuse or circuit breaker of the wall outlet installation protection of the building installation in regard to L to N short circuit. Overcurrent protection is provided by the fusible resistor or current fuse.	P
	Instructions when protection relies on building installation	Not applicable for pluggable equipment type A.	N/A
2.7.2	Faults not simulated in 5.3.7	The protective device is well dimensioned and mounted.	P
2.7.3	Short-circuit backup protection	Pluggable equipment type A, building installation is considered as providing short-circuit backup protection.	P
2.7.4	Number and location of protective devices ..... :	Overcurrent protection by one built-in fusible resistor or current fuse.	P
2.7.5	Protection by several devices	Only one fusible resistor provided	N/A
2.7.6	Warning to service personnel ..... :	No service work necessary	N/A
2.8	Safety interlocks		N/A
2.8.1	General principles	No safety interlink used	N/A
2.8.2	Protection requirements		N/A
2.8.3	Inadvertent reactivation		N/A
2.8.4	Fail-safe operation		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
2.8.5	Moving parts		N/A
2.8.6	Overriding		N/A
2.8.7	Switches and relays		N/A
2.8.7.1	Contact gaps (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		N/A
2.8.8	Mechanical actuators		N/A
2.9	Electrical insulation		P
2.9.1	Properties of insulating materials	Natural rubber, asbestos or hygroscopic material are not used.	P
2.9.2	Humidity conditioning	120 hours	P
	Relative humidity (%), temperature (°C) ..... :	93% R.H., 40˚C	—
2.9.3	Grade of insulation	Insulation complies with 2.10, 4.5.1 and 5.2	P
2.9.4	Separation from hazardous voltages	Reinforced insulation	P
	Method(s) used ..... :	Method 1 used	—
2.10	Clearances, creepage distances and distances through insulation		P
2.10.1	General	See below	P
2.10.1.1	Frequency ..... :		P
2.10.1.2	Pollution degrees ..... :	P2	P
2.10.1.3	Reduced values for functional insualtion		N/A
2.10.1.4	Intervening unconnected conductive parts	No such part	N/A
2.10.1.5	Insulation with varying dimensions	No such transformer used	N/A
2.10.1.6	Special separation requirements	No TNV	N/A
2.10.1.7	Insulation in circuits generating starting pulses	No such circuit	N/A

IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
2.10.2	Determination of working voltage	The rms and peak voltage were measured on the direct plug-in adapter. The unit was connected to a 240Vac power supply and floating secondary circuits was assumed to be earthed at the point by which the highest working voltage is obtained. (Results see appended table 2.10.2)	P
2.10.2.1	General	See above	P
2.10.2.2	RMS working voltage	Results see appended table 2.10.2	P
2.10.2.3	Peak working voltage	Results see appended table 2.10.2	P
2.10.3	Clearances	See below and advantage of Annex G is not considered	P
2.10.3.1	General	See below, Annex G was not considered.	P
2.10.3.2	Mains transient voltages	See below	P
	a) AC mains supply .....:	Normal transient voltage considered (Overvoltage category II for primary circuit)	P
	b) Earthed d.c. mains supplies .....:	AC mains	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) Annex F and Min. clearances considered.	P
2.10.3.4	Clearances in secondary circuits	See 5.3.4	P
2.10.3.5	Clearances in circuits having starting pulses	No such circuits	N/A
2.10.3.6	Transients from a.c. mains supply .....:	See 2.10.3.2	N/A
2.10.3.7	Transients from d.c. mains supply .....:	AC mains	N/A
2.10.3.8	Transients from telecommunication networks and cable distribution systems .....:	No TNV circuits	N/A
2.10.3.9	Measurement of transient voltage levels	See 2.10.3.6	N/A
	a) Transients from a mains suplply		N/A
	For an a.c. mains supply .....:		N/A
	For a d.c. mains supply .....:		N/A

IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
	b) Transients from a telecommunication network :		N/A
2.10.4	Creepage distances	See below	P
2.10.4.1	General	See appended table 2.10.3 and 2.10.4	P
2.10.4.2	Material group and caomparative tracking index		P
	CTI tests ..... :	Material group IIIb is assumed to be used	—
2.10.4.3	Minimum creepage distances	(see appended table 2.10.3 and 2.10.4)	P
2.10.5	Solid insulation		P
2.10.5.1	General	See below	P
2.10.5.2	Distances through insulation	Enclosure provided (see appended table 2.10.5)	P
2.10.5.3	Insulating compound as solid insulation	No such component	N/A
2.10.5.4	Semiconductor devices	No such component	N/A
2.10.5.5.	Cemented joints	No such construction	N/A
2.10.5.6	Thin sheet material – General	Insulation tape around transformer body was used as double insulation.	P
2.10.5.7	Separable thin sheet material		P
	Number of layers (pcs) ..... :	2 layers	—
2.10.5.8	Non-separable thin sheet material	No such material	N/A
2.10.5.9	Thin sheet material – standard test procedure	Not use such method	N/A
	Electric strength test		—
2.10.5.10	Thin sheet material – alternative test procedure		P
	Electric strength test	(see appended table 5.2)	—
2.10.5.11	Insulation in wound components	Approved source of triple insulated wire used in T1 secondary winding for reinforced insulation	P
2.10.5.12	Wire in wound components	See above	P
	Working voltage ..... :	476Vpeak, 250Vrms	P
	a) Basic insulation not under stress ..... :		N/A
	b) Basic, supplemetary, reinforced insulation ..... :		N/A
	c) Compliance with Annex U ..... :	Approved source of triple insulated wire used in T1 secondary winding for reinforced insulation	P
	Two wires in contact inside wound component; angle between 45° and 90° ..... :	By insulation tape	P

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Clause	Requirement + Test	Result - Remark	Verdict
2.10.5.13	Wire with solvent-based enamel in wound components	No such construction	N/A
	Electric strength test		—
	Routine test		N/A
2.10.5.14	Additional insulation in wound components	No such construction	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	See below	P
2.10.6.1	Uncoated printed boards	(see appended table 2.10.3 and 2.10.4)	P
2.10.6.2	Coated printed boards	No coated PCB	N/A
2.10.6.3	Insulation between conductors on the same inner surface of a printed board	No multi-layer PCBs provided	N/A
2.10.6.4	Insulation between conductors on different layers of a printed board	No multi-layer PCBs provided	N/A
	Distance through insulation		N/A
	Number of insulation layers (pcs) .....:	Single layer PCB	N/A
2.10.7	Component external terminations	No such components	N/A
2.10.8	Tests on coated printed boards and coated components	No such boards and 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		N/A
2.10.11	Tests for semiconductor devices and cemented joints		N/A
2.10.12	Enclosed and sealed parts	No hermetically sealed component.	N/A

3	WIRING, CONNECTIONS AND SUPPLY	P
3.1	General	P

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Clause	Requirement + Test	Result - Remark	Verdict
3.1.1	Current rating and overcurrent protection	Internal wiring is PVC insulated, the wiring gauge is suitable for current intended to be carried. Internal wiring for primary power distribution protected by built-in current fuse or fusible resistor.	P
3.1.2	Protection against mechanical damage	Wires do not touch sharp edges which could damage the insulation and cause hazard.	P
3.1.3	Securing of internal wiring	The internal wiring are secured by solder pins or glue so that loosening of the terminal connection is unlikely.	P
3.1.4	Insulation of conductors	The insulation of the individual conductors are suitable for application and the working voltage. For the insulation material see 3.1.1 (See appended table 5.2)	P
3.1.5	Beads and ceramic insulators	Not used	N/A
3.1.6	Screws for electrical contact pressure	No such screws provided	N/A
3.1.7	Insulating materials in electrical connections	All current carrying connections are metal to metal	N/A
3.1.8	Self-tapping and spaced thread screws	Not used	N/A
3.1.9	Termination of conductors	All conductors are reliable secured.	P
	10 N pull test	Force of 10N applied to the termination points of the conductors.	P
3.1.10	Sleeving on wiring	No sleeving used to provide supplementary insulation.	N/A

3.2	Connection to a mains supply		P
3.2.1	Means of connection	A mains plug is part of direct plug-in product	P
3.2.1.1	Connection to an a.c. mains supply	See above	P
3.2.1.2	Connection to a d.c. mains supply	AC source	N/A
3.2.2	Multiple supply connections	Only one mains source	N/A
3.2.3	Permanently connected equipment	Direct plug-in product	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Number of conductors, diameter of cable and conduits (mm) ..... :		—
3.2.4	Appliance inlets	Direct plug-in product	N/A
3.2.5	Power supply cords	No power cord	N/A
3.2.5.1	AC power supply cords		N/A
	Type ..... :		—
	Rated current (A), cross-sectional area (mm^2), AWG ..... :		—
3.2.5.2	DC power supply cords	AC source	N/A
3.2.6	Cord anchorages and strain relief	No power cord	N/A
	Mass of equipment (kg), pull (N) ..... :		—
	Longitudinal displacement (mm) ..... :		—
3.2.7	Protection against mechanical damage		N/A
3.2.8	Cord guards	No cord guard provided	N/A
	Diameter or minor dimension D (mm); test mass (g) ..... :		—
	Radius of curvature of cord (mm) ..... :		—
3.2.9	Supply wiring space	Direct plug-in product	N/A

3.3	Wiring terminals for connection of external conductors		N/A
3.3.1	Wiring terminals	Direct plug-in product	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	Disconnect device provided	P
3.4.2	Disconnect devices	Direct plug-in product, the integral plug used as disconnect device	P

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Clause	Requirement + Test	Result - Remark	Verdict
3.4.3	Permanently connected equipment	Direct plug-in product	N/A
3.4.4	Parts which remain energized	There is no parts remained with hazardous voltage or energy in the product when SPS is separated from AC mains.	P
3.4.5	Switches in flexible cords	No power cord	N/A
3.4.6	Number of poles - single-phase and d.c. equipment	The mains plug disconnects both poles simultaneously	P
3.4.7	Number of poles - three-phase equipment	Single phase product	N/A
3.4.8	Switches as disconnect devices	Without switch	N/A
3.4.9	Plugs as disconnect devices	Direct plug-in product	N/A
3.4.10	Interconnected equipment	No interconnections using hazardous voltage.	N/A
3.4.11	Multiple power sources	Only one power source	N/A
3.5	Interconnection of equipment		P
3.5.1	General requirements	This power supply is not considered for connection to TNV	P
3.5.2	Types of interconnection circuits ..... :	SELV	P
3.5.3	ELV circuits as interconnection circuits	No ELV circuits	N/A
3.5.4	Data ports for additional equipment	No such port	N/A
4	PHYSICAL REQUIREMENTS		P
4.1	Stability		N/A
	Angle of 10°	Direct plug-in product	N/A
	Test force (N) ..... :		N/A
4.2	Mechanical strength		P
4.2.1	General	See below. After tests, unit complies with 2.1.1, 2.6.1, 2.10 and 4.4.1.	P
4.2.2	Steady force test, 10 N	10N applied to components other than parts serving as an enclosure.	P
4.2.3	Steady force test, 30 N	No internal enclosure	N/A
4.2.4	Steady force test, 250 N	250N applied to outer enclosure. No energy or other hazards.	P
4.2.5	Impact test	Direct plug-in product.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Fall test		N/A
	Swing test		N/A
4.2.6	Drop test; height (mm) ..... :	No hazard as result from drop test.	P
4.2.7	Stress relief test	After 7 hours at temperature of 92ºC and cooling down to room temperature, no shrinkage, distortion or loosening any enclosure part was noticeable on the adaptor. Test was performed for all source of enclosure material.	P
4.2.8	Cathode ray tubes	No CRT provided	N/A
	Picture tube separately certified ..... :		N/A
4.2.9	High pressure lamps	No high pressure lamps provided	N/A
4.2.10	Wall or ceiling mounted equipment; force (N) ..... :	Direct plug-in product	N/A
4.3	Design and construction		P
4.3.1	Edges and corners	All edges and corners are rounded and/ or smoothed.	P
4.3.2	Handles and manual controls; force (N)..... :	No handles or controls provided	N/A
4.3.3	Adjustable controls	No controls provided	N/A
4.3.4	Securing of parts	No connection likely to be exposed to mechanical stress is provided in unit.	P
4.3.5	Connection by plugs and sockets	No mismating of connectors, plugs or sockets possible.	P
4.3.6	Direct plug-in equipment	The prevention of imposing to undue strain on the socket-outlet was done by construction of the plug of adaptor.	P
	Torque ..... :	For European plug: 0.03Nm; For British plug: 0.02Nm	—
	Compliance with the relevant mains plug standard ..... :	See attached partial test reports	P
4.3.7	Heating elements in earthed equipment	No heating elements provided.	N/A
4.3.8	Batteries	No batteries provided	N/A
	- Overcharging of a rechargeable battery		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	- Unintentional charging of a non-rechargeable battery		N/A
	- Reverse charging of a rechargeable battery		N/A
	- Excessive discharging rate for any battery		N/A
4.3.9	Oil and grease	No such material	N/A
4.3.10	Dust, powders, liquids and gases	Product in intended use not considered to be exposed to these	N/A
4.3.11	Containers for liquids or gases	No container for liquid or gas	N/A
4.3.12	Flammable liquids ..... :	No such flammable liquid	N/A
	Quantity of liquid (l) ..... :		N/A
	Flash point (°C) ..... :		N/A
4.3.13	Radiation	No radiation emits	N/A
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	Laser (including LEDs)		N/A
	Laser class ..... :		—
4.3.13.6	Other types ..... :		N/A

4.4	Protection against hazardous moving parts		N/A
4.4.1	General	No moving parts	N/A
4.4.2	Protection in operator access areas ..... :		N/A
4.4.3	Protection in restricted access locations ..... :		N/A
4.4.4	Protection in service access areas		N/A

4.5	Thermal requirements		P
4.5.1	General	See below	P
4.5.2	Temperature tests	(see appended table 4.5.2)	P
	Normal load condition per Annex L ..... :	(see appended table 1.6.2)	—

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Clause	Requirement + Test	Result - Remark	Verdict
4.5.3	Temperature limits for materials	(see appended table 4.5.2)	P
4.5.4	Touch temperature limits	(see appended table 4.5.2)	P
4.5.5	Resistance to abnormal heat ..... :	(see appended table 4.5.5)	P
4.6	Openings in enclosures		N/A
4.6.1	Top and side openings	No any 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
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		N/A
	Conditioning temperature (°C), time (weeks) ..... :		—
4.7	Resistance to fire		P
4.7.1	Reducing the risk of ignition and spread of flame	Use of materials with the required flammability classes.	P
	Method 1, selection and application of components wiring and materials	(see appended table 4.7)	P
	Method 2, application of all of simulated fault condition tests		N/A
4.7.2	Conditions for a fire enclosure	See below	P
4.7.2.1	Parts requiring a fire enclosure	With having the following parts: components in primary; components in secondary; components having unenclosed arcing parts at hazardous voltage or energy level; insulating wire. The fire enclosure is required.	P
4.7.2.2	Parts not requiring a fire enclosure		N/A
4.7.3	Materials		P
4.7.3.1	General	Parts are mounted on PCB of flammability class V-0 or better.	P

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Clause	Requirement + Test	Result - Remark	Verdict
4.7.3.2	Materials for fire enclosures	The fire enclosure is V-1 or better material.	P
4.7.3.3	Materials for components and other parts outside fire enclosures	No part outside fire enclosure	N/A
4.7.3.4	Materials for components and other parts inside fire enclosures	Internal components except small parts are V-2 or better	P
4.7.3.5	Materials for air filter assemblies	No air filters	N/A
4.7.3.6	Materials used in high-voltage components	No high voltage components	N/A
5	ELECTRICAL REQUIREMENTS AND SIMULATED ABNORMAL CONDITIONS		P
5.1	Touch current and protective conductor current		P
5.1.1	General	See below	P
5.1.2	Configuration of equipment under test (EUT)	Product has only one mains connection.	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	Figure 5A used	P
5.1.4	Application of measuring instrument	Using measuring instrument in Annex D	P
5.1.5	Test procedure	Considered this information	P
5.1.6	Test measurements	See below	P
	Supply voltage (V) ..... :	See appended table 5.1.6	—
	Measured touch current (mA) ..... :	See appended table 5.1.6	—
	Max. allowed touch current (mA) ..... :	See appended table 5.1.6	—
	Measured protective conductor current (mA) ..... :		—
	Max. allowed protective conductor current (mA) .. :		—
5.1.7	Equipment with touch current exceeding 3,5 mA	Neither stationary permanently connected nor stationary pluggable type B product.	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	No TNV	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	(see appended table 5.2)	P
5.2.2	Test procedure	(see appended table 5.2)	P
5.3	Abnormal operating and fault conditions		P
5.3.1	Protection against overload and abnormal operation	Output overload test, the most unfavorable load test. (see appended table 5.3)	P
5.3.2	Motors	No motor	N/A
5.3.3	Transformers	With the shorted o/p of the transformer, no high temperature of the transformer was recorded. Results of the short-circuit tests see appended table 5.3 and Annex C.	P
5.3.4	Functional insulation ..... :	Method c). Test results see appended table 5.3	P
5.3.5	Electromechanical components	No such component	N/A
5.3.6	Audio amplifiers in ITE ..... :	No such device	N/A
5.3.7	Simulation of faults	Results see appended table	P
5.3.8	Unattended equipment	None of the listed components was provided	N/A
5.3.9	Compliance criteria for abnormal operating and fault conditions	No fire propagated beyond the product, no molten metal was emitted. Electric strength test between Pri. and SELV was passed.	P

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Clause	Requirement + Test	Result - Remark	Verdict
5.3.9.1	During the tests		P
5.3.9.2	After the tests		P
6	CONNECTION TO TELECOMMUNICATION NETWORKS		N/A
6.1	Protection of telecommunication network service persons, and users of other equipment connected to the network, from hazards in the equipment		N/A
6.1.1	Protection from hazardous voltages		N/A
6.1.2	Separation of the telecommunication network from earth		N/A
6.1.2.1	Requirements	No TNV	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	No TNV	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) ..... :	No TNV	—
	Current limiting method ..... :		—
7	CONNECTION TO CABLE DISTRIBUTION SYSTEMS		N/A
7.1	General	Not connected to cable distribution system	N/A
7.2	Protection of cable distribution system service persons, and users of other equipment connected to the system, from hazardous voltages in the equipment		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

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Clause	Requirement + Test	Result - Remark	Verdict

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)	Not such equipment	N/A
A.1.1	Samples ..... :		—
	Wall thickness (mm) ..... :		—
A.1.2	Conditioning of samples; temperature (°C) ..... :		N/A
A.1.3	Mounting of samples ..... :		N/A
A.1.4	Test flame (see IEC 60695-11-3)		N/A
	Flame A, B, C or D ..... :		—
A.1.5	Test procedure		N/A
A.1.6	Compliance criteria		N/A
	Sample 1 burning time (s)..... :		—
	Sample 2 burning time (s)..... :		—
	Sample 3 burning time (s)..... :		—
A.2	Flammability test for fire enclosures of movable equipment having a total mass not exceeding 18 kg, and for material and components located inside fire enclosures (see 4.7.3.2 and 4.7.3.4)		N/A
A.2.1	Samples, material ..... :	Certified source of material used.	—
	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

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Clause	Requirement + Test	Result - Remark	Verdict
A.3.2	Test procedure		N/A
A.3.3	Compliance criterion		N/A
B	ANNEX B, MOTOR TESTS UNDER ABNORMAL CONDITIONS (see 4.7.2.2 and 5.3.2)		N/A
B.1	General requirements	No motor provided	N/A
	Position ..... :		—
	Manufacturer ..... :		—
	Type ..... :		—
	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 ..... :	T1	—
	Manufacturer ..... :	GlobTek	—
	Type ..... :	See appended table 1.5.1	—

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Clause	Requirement + Test	Result - Remark	Verdict
	Rated values ..... :	Class B	—
	Method of protection ..... :	By protective circuits design	—
C.1	Overload test	(see appended table 5.3)	P
C.2	Insulation	(see appended table 5.2)	P
	Protection from displacement of windings ..... :	By insulation tape	P
D	ANNEX D, MEASURING INSTRUMENTS FOR TOUCH-CURRENT TESTS (see 5.1.4)		P
D.1	Measuring instrument		P
D.2	Alternative measuring instrument		N/A
E	ANNEX E, TEMPERATURE RISE OF A WINDING (see 1.4.13)		N/A
F	ANNEX F, MEASUREMENT OF CLEARANCES AND CREEPAGE DISTANCES (see 2.10 and Annex G)		P
G	ANNEX G, ALTERNATIVE METHOD FOR DETERMINING MINIMUM CLEARANCES		N/A
G.1	Clearances	This method was not considered	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

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Clause	Requirement + Test	Result - Remark	Verdict
	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 ..... :	No such metal(s) used	—
K	ANNEX K, THERMAL CONTROLS (see 1.5.3 and 5.3.8)		N/A
K.1	Making and breaking capacity	No thermal controls used	N/A
K.2	Thermostat reliability; operating voltage (V) ..... :		N/A
K.3	Thermostat endurance test; operating voltage (V) ..... :		N/A
K.4	Temperature limiter endurance; operating voltage (V) ..... :		N/A
K.5	Thermal cut-out reliability		N/A
K.6	Stability of operation		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	The equipment is operated according to the most unfaborable way of operation given in the operating instructions.	P
M	ANNEX M, CRITERIA FOR TELEPHONE RINGING SIGNALS (see 2.3.1)		N/A
M.1	Introduction	No telephone signal	N/A
M.2	Method A		N/A
M.3	Method B		N/A
M.3.1	Ringing signal		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
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	Not such equipment	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)		N/A
	a) Preferred climatic categories ..... :	No VDRs used	N/A
	b) Maximum continuous voltage ..... :		N/A
	c) Pulse current ..... :		N/A
R	ANNEX R, EXAMPLES OF REQUIREMENTS FOR QUALITY CONTROL PROGRAMMES		N/A
R.1	Minimum separation distances for unpopulated coated printed boards (see 2.10.6.2)	No coated PCB used	N/A
R.2	Reduced clearances (see 2.10.3)	Not inspected	N/A
S	ANNEX S, PROCEDURE FOR IMPULSE TESTING (see 6.2.2.3)		N/A
S.1	Test equipment	Not such equipment	N/A
S.2	Test procedure	Not such equipment	N/A
S.3	Examples of waveforms during impulse testing	Not such equipment	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)		P

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Clause	Requirement + Test	Result - Remark	Verdict
		Approved TIW used in T1	—
V	ANNEX V, AC POWER DISTRIBUTION SYSTEMS (see 1.6.1)		P
V.1	Introduction	TN and IT	P
V.2	TN power distribution systems		P
W	ANNEX W, SUMMATION OF TOUCH CURRENTS		N/A
W.1	Touch current from electronic circuits	Not connect to telecommunication networks	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
X.1	Determination of maximum input current	Not considered	N/A
X.2	Overload test procedure	Not considered	N/A
Y	ANNEX Y, ULTRAVIOLET LIGHT CONDITIONING TEST (see 4.3.13.3)		N/A
Y.1	Test apparatus ..... :	No such device	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)		P
AA	ANNEX AA, MANDREL TEST (see 2.10.5.8)		N/A
BB	ANNEX BB, CHANGES IN THE SECOND EDITION		—

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Clause	Requirement + Test	Result - Remark	Verdict

EN 60950-1:2006 – CENELEC COMMON MODIFICATIONS		
Contents	Add the following annexes: Annex ZA (normative) Normative references to international publications with their corresponding European publications Annex ZB (normative) Special national conditions Annex ZC (informative) A-deviations	P
General	Delete all the “country” notes in the reference document according to the following list: 1.4.8 Note 2; 1.5.1 Note 2 & 3; 1.5.7.1 Note 1.5.8 Note 2; 1.5.9.4 Note; 1.7.2.1 Note 4, 5 & 6 2.2.3 Note; 2.2.4 Note; 2.3.2 Note 2.3.2.1 Note 2; 2.3.4 Note 2; 2.6.3.3 Note 2 & 3 2.7.1 Note; 2.10.3.2 Note 2; 2.10.5.13 Note 3 3.2.1.1 Note; 3.2.4 Note 3.; 2.5.1 Note 2 4.3.6 Note 1 & 2; 4.7 Note 4; 4.7.2.2 Note 4.7.3.1 Note 2; 5.1.7.1 Note 3 & 4; 5.3.7 Note 1 6 Note 2 & 5; 6.1.2.1 Note 2; 6.1.2.2 Note 6.2.2 Note 6.; 2.2.1 Note 2; 6.2.2.2 Note 7.1 Note 3; 7.2 Note; 7.3 Note 1 & 2 G.2.1 Note 2; Annex H Note 2	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
1.5.1	Add the following NOTE: NOTE Z1 The use of certain substances in electrical and electronic equipment is restricted within the EU: see Directive 2002/95/EC	P
1.7.2.1	Add the following NOTE: NOTE Z1 In addition, the instructions shall include, as far as applicable, a warning that excessive sound pressure from earphones and headphones can cause hearing loss	N/A

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Clause	Requirement + Test	Result - Remark	Verdict

2.7.1	Replace the subclause as follows: Basic requirements To protect against excessive current, short-circuits and earth faults in PRIMARY CIRCUITS, protective devices shall be included either as integral parts of the equipment or as parts of the building installation, subject to the following, a), b) and c): a) except as detailed in b) and c), protective devices necessary to comply with the requirements of 5.3 shall be included as parts of the equipment; b) for components in series with the mains input to the equipment such as the supply cord, appliance coupler, r.f.i. filter and switch, short-circuit and earth fault protection may be provided by protective devices in the building installation; c) it is permitted for PLUGGABLE EQUIPMENT TYPE B or PERMANENTLY CONNECTED EQUIPMENT, to rely on dedicated overcurrent and short-circuit protection in the building installation, provided that the means of protection, e.g. fuses or circuit breakers, is fully specified in the installation instructions. If reliance is placed on protection in the building installation, the installation instructions shall so state, except that for PLUGGABLE EQUIPMENT TYPE A the building installation shall be regarded as providing protection in accordance with the rating of the wall socket outlet.	P
2.7.2	This subclause has been declared 'void'.	N/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
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	Add the following NOTE: NOTE Z1 Attention is drawn to 1999/519/EC: Council Recommendation on the limitation of exposure of the general public to electromagnetic fields 0 Hz to 300 GHz. Standards taking into account this Recommendation which demonstrate compliance with the applicable EU Directive are indicated in the OJEC.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
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
Biblio-graphy	Additional EN standards.		—
ZA	NORMATIVE REFERENCES TO INTERNATIONAL PUBLICATIONS WITH THEIR CORRESPONDING EUROPEAN PUBLICATIONS (UPDATED ACCORDING TO A11: 2009)		—
ZB	SPECIAL NATIONAL CONDITIONS (UPDATED ACCORDING TO A11: 2009)		P
1.2.4.1	In **Denmark**, certain types of Class I appliances (see 3.2.1.1) may be provided with a plug not establishing earthing conditions when inserted into Danish socket-outlets.		N/A
1.2.13.14	In **Norway** and **Sweden**, for requirements see 1.7.2.1 and 7.3 of this annex.		N/A
1.5.7.1	In **Finland, Norway** and **Sweden**, resistors bridging BASIC INSULATION in CLASS I PLUGGABLE EQUIPMENT TYPE A must comply with the requirements in 1.5.7.1. 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	In **Finland**, **Norway** and **Sweden**, CLASS I PLUGGABLE EQUIPMENT TYPE A intended for connection to other equipment or a network shall, if safety relies on connection to protective earth or if surge suppressors are connected between the network terminals and accessible parts, have a marking stating that the equipment must be connected to an earthed mains socket-outlet. The marking text in the applicable countries shall be as follows: In **Finland**: "Laite on liitettävä suojakoskettimilla varustettuun pistorasiaan" In **Norway**: “Apparatet må tilkoples jordet stikkontakt” In **Sweden**: “Apparaten skall anslutas till jordat uttag”		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	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.”	N/A
1.7.5	In **Denmark**, socket-outlets for providing power to other equipment shall be in accordance with the Heavy Current Regulations, Section 107-2-D1, Standard Sheet DK 1-3a, DK 1-5a or DK 1-7a, when used on Class I equipment. For STATIONARY EQUIPMENT the socket-outlet shall be in accordance with Standard Sheet DK 1-1b or DK 1-5a. For CLASS II EQUIPMENT the socket outlet shall be in accordance with Standard Sheet DKA 1-4a.	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

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Clause	Requirement + Test	Result - Remark	Verdict
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
3.2.1.1	In **Denmark**, supply cords of single-phase equipment having a rated current not exceeding13 A shall be provided with a plug according to the Heavy Current Regulations, Section 107-2-D1. CLASS I EQUIPMENT provided with socket-outlets with earth contacts or which are intended to be used in locations where protection against indirect contact is required according to the wiring rules shall be provided with a plug in accordance with standard sheet DK 2-1a or DK 2-5a. If poly-phase equipment and single-phase equipment having a RATED CURRENT exceeding 13 A is provided with a supply cord with a plug, this plug shall be in accordance with the Heavy Current Regulations, Section 107-2-D1 or EN 60309-2.		N/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
	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
	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

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Clause	Requirement + Test	Result - Remark	Verdict

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
4.3.6	In the **United Kingdom**, the torque test is performed using a socket outlet complying with BS 1363 part 1:1995, including Amendment 1:1997 and Amendment 2:2003 and the plug part of DIRECT PLUG-IN EQUIPMENT shall be assessed to BS 1363: Part 1, 12.1, 12.2, 12.3, 12.9, 12.11, 12.12, 12.13, 12.16 and 12.17, except that the test of 12.17 is performed at not less than 125 °C. Where the metal earth pin is replaced by an Insulated Shutter Opening Device (ISOD), the requirements of clauses 22.2 and 23 also apply.	N/A
	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	In **Finland**, **Norway** and **Sweden**, add the following text between the first and second paragraph of the compliance clause: If this insulation is solid, including insulation forming part of a component, it shall at least consist of either - two layers of thin sheet material, each of which shall pass the electric strength test below, or - one layer having a distance through insulation of at least 0,4 mm, which shall pass the electric strength test below. If this insulation forms part of a semiconductor component (e.g. an optocoupler), there is no distance through insulation requirement for the insulation consisting of an insulating compound completely filling the casing, so that CLEARANCES and CREEPAGE DISTANCES do not exist, if the component passes the electric strength test in accordance with the compliance clause below and in addition - passes the tests and inspection criteria of 2.10.11 with an electric strength test of 1,5 kV multiplied by 1,6 (the electric strength test of 2.10.10 shall be performed using 1,5 kV), and - is subject to ROUTINE TESTING for electric strength during manufacturing, using a test voltage of 1,5 kV.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict

	It is permitted to bridge this insulation with a capacitor complying with EN 132400:1994, subclass Y2. A capacitor classified Y3 according to EN 132400:1994, may bridge this insulation under the following conditions: - the insulation requirements are satisfied by having a capacitor classified Y3 as defined by EN 132400, which in addition to the Y3 testing, is tested with an impulse test of 2,5 kV defined in EN 60950-1:2006, 6.2.2.1; - the additional testing shall be performed on all the test specimens as described in EN 132400; - the impulse test of 2,5 kV is to be performed before the endurance test in EN 132400, in the sequence of tests as described in EN132400.	N/A
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	In **Norway** and **Sweden**, for requirements see 1.2.13.14 and 1.7.2.1 of this annex.	N/A
	In **Norway**, for installation conditions see EN 60728-11:2005.	N/A

ZC	A-DEVIATIONS (informative) (updated according to A11:2009)	P
1.5.1	**Sweden** (Ordinance 1990:944) Add the following: NOTE In Sweden, switches containing mercury are not permitted.	N/A
1.5.1	**Switzerland** (Ordinance on environmentally hazardous substances SR 814.081, Annex 1.7, Mercury - Annex 1.7 of SR 814.81 applies for mercury.) Add the following: NOTE In Switzerland, switches containing mercury such as thermostats, relays and level controllers are not allowed.	N/A
1.7.2.1	**Denmark** (Heavy Current Regulations) Supply cords of CLASS I EQUIPMENT, which is delivered without a plug, must be provided with a visible tag with the following text: Vigtigt! Lederen med grøn/gul isolation må kun tilsluttes en klemme mærket  eller If essential for the safety of the equipment, the tag must in addition be provided with a diagram, which shows the connection of the other conductors, or be provided with the following text: “For tilslutning af de øvrige ledere, se medfølgende installationsvejledning.”	N/A

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Clause	Requirement + Test	Result - Remark	Verdict

1.7.2.1	**Germany** (Gesetz über technische Arbeitsmittel und Verbraucherprodukte (Geräte- und Produktsicherheitsgesetz – GPSG) [Law on technical labour equipment and consumer products], of 6th January 2004, Section 2, Article 4, Clause (4), Item 2). If for the assurance of safety and health certain rules during use, amending or maintenance of a technical labour equipment or readymade consumer product are to be followed, a manual in German language has to be delivered when placing the product on the market. Of this requirement, rules for use even only by SERVICE PERSONS are not exempted.	N/A
1.7.5	**Denmark** (Heavy Current Regulations) With the exception of CLASS II EQUIPMENT provided with a socket outlet in accordance with the Heavy Current Regulations, Section 107-2-D1, Standard Sheet DK 1-4a, CLASS II EQUIPMENT shall not be fitted with socket-outlets for providing power to other equipment.	N/A
1.7.13	**Switzerland** (Ordinance on chemical hazardous risk reduction SR 814.81, Annex 2.15 Batteries) Annex 2.15 of SR 814.81 applies for batteries.	N/A
5.1.7.1	**Denmark** (Heavy Current Regulations, Chapter 707, clause 707.4) TOUCH CURRENT measurement results exceeding 3,5 mA r.m.s. are permitted only for PERMANENTLY CONNECTED EQUIPMENT and PLUGGABLE EQUIPMENT TYPE B.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict

1.5.1	TABLE: List of critical components				P
Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity[1])
Transformer (T1)	GlobTek	90E6PFA12-xxx, 90E6PFA12-xxx ("xxx" to denote the part number, can be any alphanumeric character for marketing purpose only)	Pri. winding (pin 1-2): φ0.19mm x 126Ts; Auxiliary primary winding (pin 3-4): φ0.19mm x 28Ts; Sec. winding (pin 5-8): φ0.37mm 1p x 15Ts; Class B	Applicable part of IEC60950-1 and according to IEC60085	Tested with appliance
Triple insulated wire for secondary winding	Furukawa Electric Co., Ltd.	TEX-E or TEX-B	130˚C, Class B	IEC/EN 60950-1	VDE 006735
Alt.	Cosmolink	TIW-M	130˚C, Class B	IEC/EN 60950-1	VDE 138053
Alt.	YongChang	STW-B	130˚C, Class B	IEC/EN 60950-1	VDE 40013359
Alt.	Great leoflon	TRW (B)	130˚C, Class B	IEC/EN 60950-1	VDE 136581
Insulation tape	Four Pillars (SYMBIO)	35660Y/35660/ MY130	130˚C	--	UL (E50292)
Fusible resistor (F1)	TZAI YUAN	KNF	10Ω, 2W	IEC60950-1	Tested with appliance
Alt.	VIS Electronics Ltd.	FRT	10Ω, 2W	IEC60950-1	Tested with appliance
Alt.	Jiangsu Xinyang Electronics Ltd.	RF10	10Ω, 2W	IEC60950-1	Tested with appliance
Alt.	Shimeng Electronic (Shenzhen) Co., Ltd.	FKN	10Ω, 2W	IEC60950-1	Tested with appliance
Alt.	Hua Sheng Electronics (Dongguan) Co., Ltd.	FKN	10Ω, 2W	IEC60950-1	Tested with appliance
Alt.	Shenzhen Great	RXF series	10Ω, 2W	IEC60950-1	Tested with appliance
Alt.	Shenzhen Kayocota	FRKNP series	10Ω, 2W	IEC60950-1	Tested with appliance
Y capacitor (CY1) (Optional)	TDK	CD	Max. 2200pF, 250Vac, 25/125/56/B, Y1	IEC/EN 60384-14	VDE 124321

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Clause	Requirement + Test	Result - Remark	Verdict

Alt.	Murata	KX	Max. 2200pF, 250Vac, 25/125/21/C, Y1	IEC/EN 60384-14	VDE 40002831
Alt.	Success	SE	Max. 2200pF, 250Vac, 30/125/56/C, Y1	IEC/EN 60384-14	VDE 126596
Alt.	Success	SB	Max. 2200pF, 250Vac, 30/125/56/C, Y1	IEC/EN 60384-14	VDE 128833
Alt.	JYA-NAY	JN	Max. 2200pF, 250Vac, 25/125/21, Y1	IEC/EN 60384-14	VDE 40001831
Alt.	Welson	WD	Max. 2200pF, 250Vac, 25/125/21/C, Y1	IEC/EN 60384-14	VDE 115455
Alt.	Nanjing Yuyue	CT7 (X1Y1)	Max. 2200pF, 250Vac, 25/125/21/C, Y1	IEC/EN 60384-14	VDE 115455
Diode (D1-D4) (Optional D1 & D4 or D2 & D3)	Various	Various	Min. 1A, Min. 500Vac	--	--
Electrolytic Cap. (C1, C2)	Various	Various	2.2μF-10.0μF, Min. 200Vdc, Min. 105˚C	--	--
Transistor (Q1)	Various	Various	Min. 400Vdc, Min. 0.5A	--	--
Choke(L1)	GlobTek	30D007520-XXX (“XXX” to denote the part number, can be any alphanumeric character for marketing purpose only)	0.09mm x 520Ts; 130˚C, Min. 2.0mH	--	Tested with appliance
European plug	GlobTek	DVE	2.5A, 250Vac	EN50075	TÜV Rheinland (J 2156136)
- Plug holder	Sabic Innovative Plastics	SE1X	PPE+PS, V-1, 105˚C	--	UL E161759
BS plug portion	GlobTek	DVE-UK	0.2A, 250Vac	BS 1363+A1+A2+A3	Tested with appliance
- Pin sleeving of BS plug	Nan Ya Plastics Corp.	6410G5	PA66, V-0, 130˚C	--	UL E130155

IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

Enclosure	Sabic Innovative Plastics	SE1X	PPE+PS, V-1, Min. 105˚C, Min. thickness 2.0mm	--	UL E161759
Alt.	Asahi Kasei	540V	PPE+PS, V-1, Min. 105˚C, Min. thickness 2.0mm	--	UL E82268
Alt.	Asahi Kasei	540Z	PPE+PS, V-1, Min. 105˚C, Min. thickness 2.0mm	--	UL E82268
PCB	Wuzhou	WZ-2	V-0 or better, Min. 130˚C	--	UL E243157
Alt.	Various	Various	V-0 or better, Min. 130˚C	--	UL
Primary lead wire	Dong Ju	1007	Min. 24AWG, VW-1, 80˚C, 300V	--	UL E189674
Alt.	Various	Various	Min. 24AWG, VW-1, 80˚C, 300V	--	UL
Output cord	Xin Ya Electronics	2468	Min. 24AWG, VW-1, 80˚C, 300V	--	UL E170689
Alt.	Various	Various	Min. 24AWG, VW-1, 80˚C, 300V	--	UL
Output cord (if the part in enclosure covered with heat shrinkable tube)	Various	Various	Min. 24AWG, VW-1, 60˚C	--	UL
Heat-shrinkable tube	Shenzhen Woer	RSFR	VW-1, 125˚C, 600V	--	UL
Alt.	Various	Various	VW-1, 125˚C, 600V	--	UL
Foam – between PWB and enclosure (optional)	Holy Foam Enterprises Ltd.	FR212	HF-1, BK, thickness: min.3.0 mm	ISO 9772	UL (E105037)
Alt.	Various	Various	HF-2 or better	ISO 9772	UL
[1]) An asterisk indicates a mark which assures the agreed level of surveillance					
Supplementary information:					

IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

1.6.2	TABLE: Electrical data (in normal conditions)					P
U (V)	I (mA)	Irated (mA)	P (W)	Fuse #	Ifuse (mA)	Condition/status
Model GT-81090-0612-W2E						
90	138	--	8.22	F1	138	Rated load at 50Hz
90	146	--	8.20	F1	146	Rated load at 60Hz
100	135	200	8.13	F1	135	Rated load at 50Hz
100	134	200	8.05	F1	134	Rated load at 60Hz
240	68	200	8.07	F1	68	Rated load at 50Hz
240	67	200	8.05	F1	67	Rated load at 60Hz
264	60	--	8.21	F1	60	Rated load at 50Hz
264	64	--	8.32	F1	64	Rated load at 60Hz
Model GT-81090-0612-4.0-W2E						
90	144	--	8.60	F1	144	Rated load at 50Hz
90	153	--	8.65	F1	153	Rated load at 60Hz
100	132	200	8.49	F1	132	Rated load at 50Hz
100	141	200	8.54	F1	141	Rated load at 60Hz
240	87	200	8.49	F1	87	Rated load at 50Hz
240	72	200	8.60	F1	72	Rated load at 60Hz
264	60	--	8.46	F1	60	Rated load at 50Hz
264	68	--	8.72	F1	68	Rated load at 60Hz
Supplementary information: --						

2.1.5	TABLE: Max. V, A, VA test			P
Voltage (rated) (V)	Current (rated) (A)	Voltage (Max.) (V)	Current (Max.) (A)	VA (Max.) (VA)
Model GT-81090-0612-W2E				
12	0.5	12.1	0.7	8.6
Model GT-81090-0612-4.0-W2E				
8.0	0.75	8.3	1.0	7.7
Supplementary information: Test voltage: 264V Test frequency: 60Hz				

2.2.2	TABLE: Hazardous voltage measurement			P
Transformer	Location	Max. Voltage		Voltage Limitation Component
		Vpeak	Vdc	
GT-81090-0612-W2E				

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Clause	Requirement + Test	Result - Remark	Verdict

T1	Pin A-B	51.6	--	T1
	Output	--	12.7	D7
Supplementary information: Test voltage: 264V Test frequency: 60Hz				

2.2.3	TABLE: SELV Voltage Measurement	N/A

Location	Voltage measured (V)	Comments
--	--	--
Supplementary information: Refer to table 2.2.2		

2.4.2	TABLE: limited current circuit measurement				P
Location	Voltage (mV)	Current (mV)	Freq. (Hz)	Limit (mA)	Comments
Model GT-81090-0612-W2E					
CY1	11.6	5.8	52.3	36.6	--
Supplementary information: 1. Capacitance of CY1: 2200pF; 2. Tested with 2k ohm resistor.					

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Clause	Requirement + Test	Result - Remark	Verdict

2.5	TABLE: limited power source measurement		P
	Limits	Measured	Verdict
Model GT-81090-0612-W2E			
Uoc=12.1V (measured under no load conditions)			
According to Table 2B (normal condition)			
Current (in A)	≤8	0.7	P
Apparent power (in VA)	≤100	8.6	P
According to Table 2B (IC1 pin 1-3 short-circuited)			
Current (in A)	≤8	0 (unit shut down immediately)	P
Apparent power (in VA)	≤100	0 (unit shut down immediately)	P
According to Table 2B (IC1 pin 4-5 short-circuited)			
Current (in A)	≤8	0 (unit shut down immediately)	P
Apparent power (in VA)	≤100	0 (unit shut down immediately)	P
According to Table 2B (R14 short-circuited)			
Current (in A)	≤8	0 (unit shut down immediately)	P
Apparent power (in VA)	≤100	0 (unit shut down immediately)	P
Model GT-81090-0612-4.0-W2E			
Uoc=8.3V (measured under no load conditions)			
According to Table 2B (normal condition)			
Current (in A)	≤8	1.0	P
Apparent power (in VA)	≤100	7.7	P
According to Table 2B (IC1 pin 1-3 short-circuited)			
Current (in A)	≤8	0 (unit shut down immediately)	P
Apparent power (in VA)	≤100	0 (unit shut down immediately)	P
According to Table 2B (IC1 pin 5-4 short-circuited)			
Current (in A)	≤8	0 (unit shut down immediately)	P
Apparent power (in VA)	≤100	0 (unit shut down immediately)	P
According to Table 2B (R14 short-circuited)			
Current (in A)	≤8	0 (unit shut down immediately)	P
Apparent power (in VA)	≤100	0 (unit shut down immediately)	P
Supplementary information: --			

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Clause	Requirement + Test	Result - Remark	Verdict

2.10.2	TABLE: Working voltage measurement		P
Location		RMS voltage (V)	Peak voltage (V)	Comments
Model GT-81090-0612-W2E				
T1	pin 1-A	205	336	
	pin 2-A	**247**	**476**	Highest working voltage
	pin 3-A	215	348	
	pin 4-A	216	424	
	Pin 1-B	205	372	
	pin 2-B	234	448	
	pin 3-B	215	352	
	pin 4-B	214	376	
	CY1	204	332	
Supplementary information: Test voltage: 240V Test frequency: 60Hz				

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Clause	Requirement + Test	Result - Remark	Verdict

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:						
Line to Neutral trace before F1	420	250	1.5	2.6	2.5	2.6
PCB trace under F1	420	250	1.5	2.6	2.5	2.6
Line to Circuit after F1	420	250	1.5	2.6	2.5	2.6
Basic/supplementary:						
--	--	--	--	--	--	--
Reinforced:						
Primary components to accessible enclosure	420	250	4.0	5.5	5.0	5.5
Unit: core of T1 (with 10N) → secondary components (with 10N) T1 core to C8	476	250	4.2	6.0	5.0	6.0
PCB: primary → secondary traces under transformer	476	250	4.2	6.0	5.0	6.0
PCB: primary → secondary traces under CY1	420	250	4.0	6.0	5.0	6.0
PCB: primary → secondary traces under ESD copper	420	250	4.0	5.0	5.0	6.0

Supplementary information:

1. The transformer core is considered as primary circuits;
2. Concentric windings on EF-16 size bobbin, 2 layers of insulation tape between primary (enameled copper wire) and secondary windings (triple insulation wire), 2 layers insulation on outer winding. Winding ends additionally fixed with tape, outer winding is primary. 2layers insulation tape wrapped on the secondary side of transformer, 2 layers insulation tape wrapped on transformer outside.
3. The fusible resistor was wrapped with heat shrinkable tube.
4. Internal wire was double fixed by soldering and glue.
5. Unless otherwise specified, the worst conditions of Cl.&Cr. In above mentioned locations have been considered and listed.

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Clause	Requirement + Test	Result - Remark	Verdict

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)
Enclosure		420	250	3000Vac	0.4	2.0
Supplementary information: 1. Further details are provided in table 1.5.1; 2. Test voltages are AC.						

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:										

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Clause	Requirement + Test	Result - Remark	Verdict

4.5	TABLE: Thermal requirements						P
	Supply voltage (V) .....:	90V, 60Hz		264V, 50Hz		--	—
	Ambient T_{min} (°C) .....:	50.0		50.0		--	—
	Ambient T_{max} (°C) .....:	50.0		50.0		--	—
Maximum measured temperature T of part/at::		T (°C)					Allowed T_{max} (°C)
--		H	V	H	V	--	
Model GT-81090-0612-W2E							
plug holder		52.4	53.0	51.2	51.8	--	--
primary lead wire		71.9	71.2	63.3	62.7	--	80
L1 winding		85.5	84.9	69.8	69.1	--	130
PCB under D1		82.5	81.8	70.3	69.9	--	130
electrolytic cap. C1		79.2	78.6	69.9	69.3	--	105
T1 winding		89.7	85.3	89.1	89.5	--	110
T1 core		85.5	89.3	84.9	85.3	--	110
PCB under Q1		94.0	93.2	90.2	90.1	--	130
PCB under D7		84.2	84.5	85.5	85.7	--	130
Y cap. CY1		76.1	76.1	76.4	76.6	--	125
output cord		65.7	66.1	65.9	66.3	--	80
electrolytic cap. C8		68.3	68.6	68.4	68.5	--	105
enclosure (inside)		66.2	67.3	66.0	69.3	--	105
enclosure (outside)		60.9	62.7	60.8	62.4	--	95
ambt.		50.0	50.0	50.0	50.0	--	--
Model GT-81090-0612-4.0-W2E							
plug holder		53.2	55.5	51.9	53.9	--	--
primary lead wire		74.6	75.5	62.3	63.0	--	80
L1 winding		95.4	96.6	71.0	71.4	--	130
PCB under D1		88.0	89.3	71.3	72.3	--	130
electrolytic cap. C1		82.6	83.0	69.5	69.6	--	105
T1 winding		100.6	102.3	94.9	96.4	--	110
T1 core		98.8	100.3	94.0	95.5	--	110
PCB under Q1		100.3	102.4	86.8	88.6	--	130
PCB under D7		88.7	90.2	88.3	89.8	--	130
Y cap. CY1		84.2	84.8	81.8	82.7	--	125
output cord		69.4	70.6	68.5	69.7	--	80

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Clause	Requirement + Test	Result - Remark	Verdict

electrolytic cap. C8	77.0	78.4	75.5	76.5	--	105
enclosure (inside)	79.9	81.7	76.2	77.9	--	105
enclosure (outside)	66.0	68.6	63.8	66.0	--	95
ambt.	50.0	50.0	50.0	50.0	--	--

Supplementary information: --

Temperature T of winding:	t_1 (°C)	R_1 (Ω)	t_2 (°C)	R_2 (Ω)	T (°C)	Allowed T_{max} (°C)	Insulation class
--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--

Supplementary information:

The temperatures were measured under worst case normal mode defined in 1.2.2.1 and as described in sub-clause 1.6.2 and at voltages as described above.

With a rated maximum ambient temperature of 50°C, all tests were performed in room temperature and converted to 50°C, the maximum temperature rises are calculated as follows:

Winding components providing safety isolation:

- Class B →Tmax=120°C - 10°C=110°C (10°C deceased by thermocouple method)

Components with maximum absolute temperature of:

- Output cord 80°C
- Line filter (L1) winding 130°C
- PCB 130°C
- Electrolytic Capacitor (C1, C8) 105°C
- Primary lead wire 80°C
- Y Capacitor (CY1) 125°C
- Enclosure (inside) 105°C

Operator touchable surface with maximum temperature sire of:

- 95°C

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

Part	Test temperature (°C)	Impression diameter (mm)
British pin sleeving	125	1.1
EUpin sleeving	125	1.5

Supplementary information:

The bobbin material of T1 is phenolic, no test is required.

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Clause	Requirement + Test	Result - Remark	Verdict

4.7	TABLE: Resistance to fire					N/A
Part	Manufacturer of material	Type of material	Thickness (mm)	Flammability class	Evidence	
Supplementary information:						

5.1.6	TABLE: touch current measurement			P
Condition	L → terminal A (mA)	N → terminal A (mA)	Limit (mA)	Comments
System ON	0.15	0.15	0.25	Test location; output connector
System ON	0.01	0.01	0.25	Test location; enclosure wrapped with metal foil
Supplementary information: Test voltage: 264Vac Test frequency: 60Hz Capacitance: CY1=2200pF				

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
Functional:				
Line to Neutral (fusible resistor open)		AC	1500	No
Basic/supplementary:				
--		--	--	--
--		--	--	--
Reinforced:				
Unit: primary circuit to secondary circuit		DC	4242	No
Unit: primary circuit to enclosure		AC	3000	No
Transformer: primary winding to secondary winding		AC	3000	No
Transformer: core to secondary winding		AC	3000	No
One layer of insulation tape		AC	3000	No
Supplementary information: core of transformer T1 is considered as primary circuit.				

5.3	TABLE: Fault condition tests		P
	Ambient temperature (°C) .....:	50°C, unless otherwise specified.	—

IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

	Power source for EUT: Manufacturer, model/type, output rating .....:	- -	—

Component No.	Fault	Supply voltage (V)	Test time	Fuse #	Fuse current (A)	Observation
Model GT-81090-0612-W2E						
D1	s-c	264	1s	F1	--	Fusible resistor opened immediately. No hazard. Repeat 10 times with each type of fusible resistor; get same result, no hazards.
C1	s-c	264	1s	F1	--	Fusible resistor opened immediately. No hazard. Repeat 10 times with each type of fusible resistor; get same result, no hazards.
D5	s-c	264	30 mins	F1	0.01	Unit shut down immediately and recoverable, no hazard.
Q1 pin G-S	s-c	264	30min	F1	0.01	Unit shut down immediately and recoverable, no hazard.
Q1 pin G-D	s-c	264	30min	F1	--	Fusible resistor opened immediately. Components R13, R14 damaged. No hazard. Repeat 10 times with each type of fusible resistor; get same result, no hazards.
Q1 pin D-S	s-c	264	30min	F1	--	Fusible resistor opened immediately. Components R13, R14 damaged. No hazard. Repeat 10 times with each type of fusible resistor; get same result, no hazards.
IC1 pin 1-3	s-c	264	60s	F1	--	Fusible resistor opened immediately. Component IC1 damaged. No hazard. Repeat 10 times with each type of fusible resistor; get same result, no hazards.
IC1 pin 1-4	s-c	264	30 mins	F1	0.01	Unit shut down immediately and recoverable, no hazard.
IC1 pin 5-3	s-c	264	30 mins	F1	0.01	Unit shut down immediately and recoverable, no hazard.
IC1 pin 5-4	s-c	264	30 mins	F1	0.01	Unit shut down immediately and recoverable, no hazard.

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Clause	Requirement + Test				Result - Remark	Verdict

R11	s-c	264	30 min	F1	0.01	Unit shut down immediately, no hazard.
T1 pin A-B	s-c	264	30 min	F1	0.01	Unit shut down immediately, no hazard.
T1 pin3-4	s-c	264	30 min	F1	0.01	Unit shut down immediately, no hazard.
T1 pin1-2	s-c	264	30 min	F1	0.01	Unit shut down immediately, no hazard.
D7	s-c	264	30 min	F1	0.01	Unit shut down immediately, no hazard.
output	s-c	264	30 min	F1	0.01	Unit shut down immediately, no hazard.
output	o-l	264	5hrs 26mins	F1	0.09	Output current overload to 0.75A, temperature was stable, no hazard. T1 core=99.7ºC, T1 winding=105.5ºC at ambient temperature 50ºC, no hazards.
Model GT-81090-0612-4.0-W2E						
output	s-c	264	30 min	F1	0.01	Unit shut down immediately, no hazard.
output	o-l	264	5hrs 21mins	F1	0.09	Output current overload to 0.95A, temperature was stable, no hazard. T1 core=105.9ºC, T1 winding=107.1ºC at ambient temperature 50ºC, no hazards.
Supplementary information: in fault column, where s-c=short-circuited, o-l=over-loaded, o-c=open-circuited.						

Appendix I: Plug Portion

EN 50075 (Partial)				
Clause	Requirement + Test		Result - Remark	Verdict
7	**Dimensions**			P
	Plug shall comply with Standard Sheet 1			P
	Between two pins (pin base)	18.0 – 19.2mm	18.4mm	P
	Between two pins (pin top)	17.0 – 18.0mm	17.3mm	P
	Diameter of pin (metallic part)	4 ± 0.06mm	4.0mm	P
	Diameter of pin (pin base)	Max. 4.0mm	3.8mm	P
	Diameter of pin (middle part)	Max. 3.8mm	3.5mm	P
	Pin length	19 ± 0.5mm	19.4mm	P
	Length of pin except metal part	10 ± 1.0mm	10.3mm	P
	Shape of pin top		Round shape	P
	Length of plug base	35.3 ± 0.7mm	35.5mm	P
	Width of plug base	13.7 ± 0.7mm	13.8mm	P
	Diagonal dimension of plug base within a distance of 18mm	< 26.1 ± 0.5mm < 26.1 ± 0.5mm	26.4mm 26.3mm	P

Note: only the dimensions of Euro-plug have been measured and recorded since it is a certified plug (see Table 1.5.1).

Appendix I: Plug Portion

BS 1363 (Partial)				
Clause	Requirement + Test		Result - Remark	Verdict
12	Construction			P
12.1	Disposition of the pins is same as Fig. 4			P
12.2	Plugs shall comply with Fig. 4			P
	The height of engagement surface panel	min. 6.35	6.42 mm	P
	Disposition of pins			P
	Between E and left plane	Max. 25.37mm	24.55mm	P
	Between E and right plane	Max. 25.37mm	24.55mm	P
	Between E and L	11.05 – 11.18mm	11.08mm	P
	Between E and N	11.05 – 11.18mm	11.08mm	P
	Between L or N and top plane	Max. 34.6	31.0mm	P
	Between E and L, N	22.10 – 22.36mm	22.20mm	P
	Radius of top right corner	Min. 15mm	15.50mm	P
	Radius of top left corner	Min. 15mm	15.50mm	P
	Shape of earth pin			P
	Length	22.23 – 23.23mm	22.33mm	P
	Width	7.80 – 8.05mm	8.00mm	P
	Thickness	3.90 – 4.05mm	4.00mm	P
	Length of chamfer	1.35 – 1.85mm	1.40mm	P
	Angle of chamfer	58° - 62°	59°	P
	Shape of L and N pin			P
	Length	17.20 – 18.20mm	17.80mm	P
	Width	6.22 – 6.48mm	6.30mm	P
	Thickness	3.90 – 4.05mm	4.00mm	P
	Length of insulating material	Max. 9.5mm	9.36mm	P
	Length of conductive material	Max. 9.2mm	8.44mm	P
	Length of chamfer	1.35 - 1.85mm	1.60mm	P
	Angle of chamfer	58° - 62°	59°	P
	Maintenance of these dimensions not rely on the terminal screws			P

Appendix I: Plug Portion

BS 1363 (Partial)			
Clause	Requirement + Test	Result - Remark	Verdict
	The plug portion should enter the gauge fully with a force less than 10N was applied to the centre of the sample at right angle.	Complied, sample was entered into the gauge fully with a force of 10N	P
12.3	No part of a line or neutral pin shall be less than 9.5mm from the periphery of the plug measured along the engagement surface.	Complied, both line and neutral pin are measured larger than 9.5mm	P
12.9	Plug pins were constructed of brass	Complied	P
12.9.1	Exposed surface of plug pins were smooth and free from burrs or sharp edges and other irregularities, which could cause damage or excessive wear to sockets or shutters.	Complied	P
12.9.4	The adaptor plug pins were tested as specified in the standard.	Complied. After being subjected to a forced of 1100N for L/N pin and 400N for ISOD pin, the pin portion could fit the relevant gauge.	P
12.9.5	The adaptor plug pins were tested as specified in the standard.	Complied. After being subjected to 5000 insertions and withdraws, the shutters of the socket-outlet can operate satisfactorily and the socket contact is safely shielded.	P
12.9.6	Each pin of the adaptor was subjected to a torque of 1Nm for 60s as specified in the standard.	Complied. After the test, the pin portion could fit the relevant gauge.	P
12.11	The adaptors were tested as specified in the standard. After being placed in an oven at 70cC for 1 hour, each pin of the samples was subjected for 60s to a pull of 100N in the oven.	Complied. After the above test, no plug pin was detached and the plug pins could fit the relevant gauge.	P
12.12	The degree of flexibility of mounting of the plug pins was checked according to 12.12.1	Complied. During the test, no declination was observed to the plug pins (limit: Max. 3º30')	P
12.16	Line and neutral plug pin shall be fitted with insulating sleeves. The dimensions of the pin and sleeve shall fall within the specific limit.	Complied. Both line and neutral pins were fitted with insulating sleeves.	P
12.17.1	Plug pin sleeve shall be compliance with 12.17.2 to 12.17.4	Complied	P
12.17.2	Electric strength test applied between the metal part of plug pin and the sleeve (1250 ± 30V)	Complied. No breakdown and flashover occur.	P
12.17.3	Abrasion test for plug pin sleeve The plug pin sleeves were subjected to 20000	Complied. After the test, the sleeves showed no damage	P

Appendix I: Plug Portion

BS 1363 (Partial)			
Clause	Requirement + Test	Result - Remark	Verdict
	movements of abrasion as specified in the standard.	that impaired further use and could satisfy the electric strength test in 12.17.2	
12.17.4	Resistance to deformation The plug pins with sleeves were placed in a heating cabinet at 200ºC and tested according to the standard for 120min.	Complied. After the tests, the thickness of sleeve of plug pins (line and neutral) remaining at the impression point were reduced by less than 5%.	P

Notes: Clause 12.4, 12.5, 12.6, 12.7, 12.8, 12.9.2, 12.9.3, 12.10, 12.14, 12.15 were not applicable.