Test Report issued under the responsibility of:

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TEST REPORT

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

Report Reference No. .....:	32107
Date of issue .....:	October 12, 2011
Total number of pages	95 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-81091-WWVV-X.X-T2 (for details see model designation on page 6)
Ratings .....:	Input: 100-240Vac, 50/60Hz, 1.5A; 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:

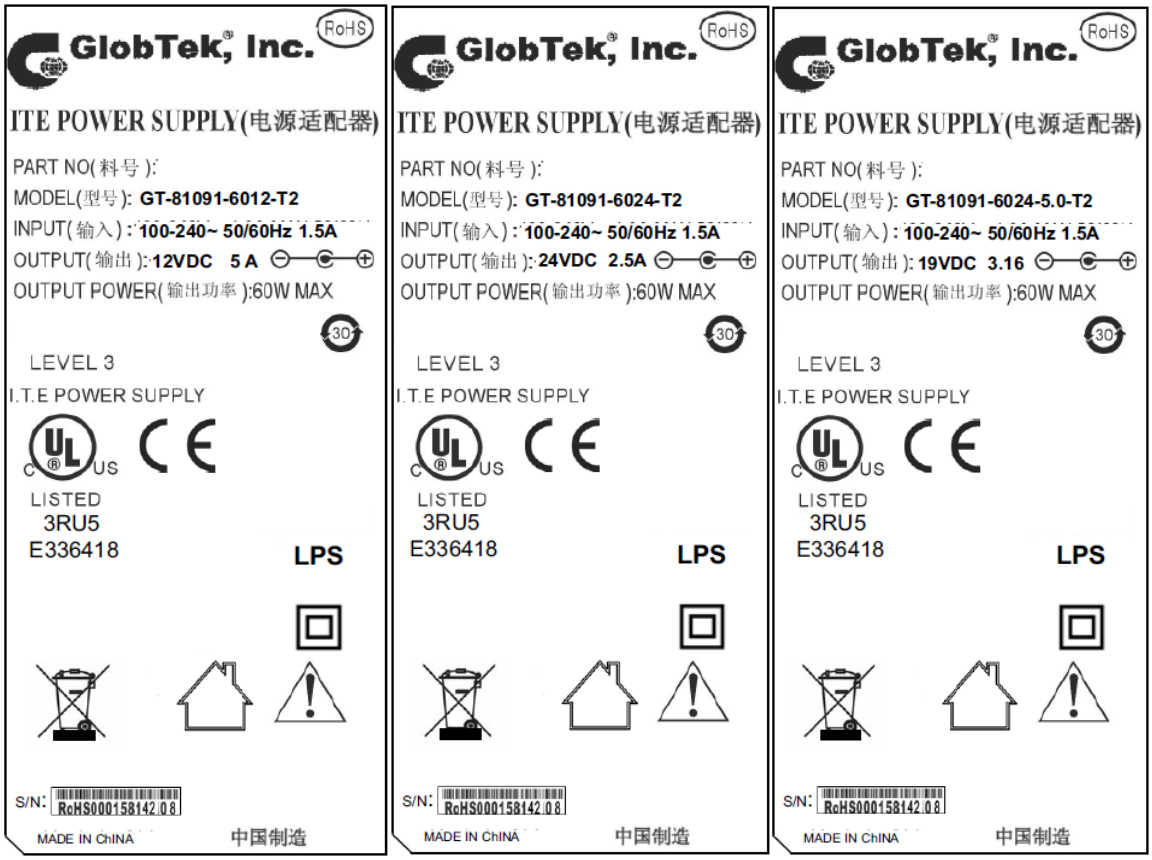
Tests performed (name of test and test clause):	**Testing location:**
- 1.6.2 Input Current Test - 1.7.11 Durability of Marking Test - 2.1.1.5 Energy Hazard in Operator Access Area - 2.1.1.7 Discharge of Capacitor - 2.2.2 SELV Limits for Normal Conditions - 2.2.3 SELV Limits for Abnormal Conditions - 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 - 4.1 Stability Test - 4.2.2 Steady Force Test, 10N - 4.2.4 Steady Force Test, 250N - 4.2.5 Impact Test - 4.2.6 Drop Test - 4.2.7 Stress Relief 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: 1. The models GT-81091-6012-T2, GT-81091-6024-T2 and GT-81091-6024-5.0-T2 have been selected for multiple testing. If no specify, model GT-81091-6024-T2 was the selected model for testing. 2. All the tests were done with the sample within common choke (LF1) inside except for the input test.	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, GB, IE, KR, NO, SE.

CH=Switzerland, DE=Germany, DK=Denmark, ES=Spain, FI=Finland, GB=United Kingdom, IE=Ireland, KR=Republic of Korea, NO=Norway, SE=Sweden.

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 difference 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) ..... :	1.5A
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. 0.3
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. 16022317001 (dated on Mar. 18, 2010) and TÜV Rheinland CB Report No. 16022317002 with CB Certificate JPTUV-031361-M1 (dated on Jun. 24, 2010)except the followings:

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

All national differences of EU group were considered according to EN 60950-1:2006 and A11, annex ZA, annex ZB and annex ZC on pages 34-41.

Australian national differences were considered according to AS/NZS 60950.1:2003+A1+A2+A3 on pages 64-70; Chinese national differences were considered according to GB 4943-2001 on page 86; Japanese national differences were considered according to J60950 (H19) on pages 71-84; Korean national differences were considered according to K60950 on page 85.

Product photos are shown in pages 87-97.

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-81091-WWVV-X.X-T2 are Class II switching Adapter (desktop type) used for DC supply of IT or office equipment. The output cord is non-detachable.
2. The power supply's top enclosure is secured to bottom enclosure by ultrasonic welding.
3. The test items are pre-production samples without serial numbers.
4. The maximum ambient temperature 40˚C.

Difference between models:
E1, R2, R2A, R3, R3A, R4, R4A-R4C, R5, R5A, R8, R10, R12, R12A-C, R14, R16, R15, R15A, C9, Q2, Q3, R21 and R22: The parameter of these components depends on output power and output voltage.

Model designation:

GT-81091-WWVV-X.X-T2:
- WW is the standard output wattage, with a maximum value of "60";
- VV is the standard rated output voltage designation, with a maximum value of "24";
- -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.

Appendix I: Other Country National Differences

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 lines: X2 capacitor (CX1, CX2) according to IEC 60384-14 with 21 days damp heat test; Between the primary and secondary circuits capacitors subclass Y1 (CY1) according to IEC60384-14 with 21 days damp heat test.	P
1.5.7	Resistors bridging insulation	No such resistor used	N/A
1.5.7.1	Resistors bridging functional, basic or supplementary insulation		N/A
1.5.7.2	Resistors bridging double or reinforced insulation between a.c. mains and other circuits		N/A

Appendix I: Other Country National Differences			
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	See below	P
1.5.9.1	General	Optional approved surge suppressor (MOV1) used between L and N, for details see appended table 1.5.1	P
1.5.9.2	Protection of VDRs	The current fuse (F1) provides the protection	P
1.5.9.3	Bridging of functional insulation by a VDR	See 1.5.9.1	P
1.5.9.4	Bridging of basic insulation by a VDR		N/A
1.5.9.5	Bridging of supplementary, double or reinforced insulation by a VDR		N/A

1.6	Power interface		P
1.6.1	AC power distribution systems	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	See below	P
	Rated voltage(s) or voltage range(s) (V) .....:	AC 100-240V	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) .....:	1.5A	P
	Manufacturer's name or trade-mark or identification mark .....:	GlobTek	P
	Model identification or type reference .....:	See model designation on page 6	P
	Symbol for Class II equipment only .....:		P

Appendix I: Other Country National Differences			
	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
1.7.2.2	Disconnect devices	Appliance inlet used as disconnect device	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) ..... :	The rating of current fuse "T3.15AL250V" is marked on PCB adjacent to fuse	P
1.7.7	Wiring terminals	See below	N/A
1.7.7.1	Protective earthing and bonding terminals ..... :	Class II product	N/A
1.7.7.2	Terminals for a.c. mains supply conductors	Appliance inlet used	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

Appendix I: Other Country National Differences

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
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		P
	Measured voltage (V); time-constant (s)..... :	(see appended table)	—

Appendix I: Other Country National Differences			
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
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

Appendix I: Other Country National Differences

	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	—
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) ..... :		—

Appendix I: Other Country National Differences			
2.6.4.3	Separation of the protective earthing conductor from protective bonding conductors		N/A
2.6.5	Integrity of protective earthing		N/A
2.6.5.1	Interconnection of equipment		N/A
2.6.5.2	Components in protective earthing conductors and protective bonding conductors		N/A
2.6.5.3	Disconnection of protective earth		N/A
2.6.5.4	Parts that can be removed by an operator		N/A
2.6.5.5	Parts removed during servicing		N/A
2.6.5.6	Corrosion resistance		N/A
2.6.5.7	Screws for protective bonding		N/A
2.6.5.8	Reliance on telecommunication network or cable distribution system		N/A

2.7	Overcurrent and earth fault protection in primary circuits		P
2.7.1	Basic requirements	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 fuse.	P
2.7.5	Protection by several devices	Only one fuse 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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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	48 hours	P
	Relative humidity (%), temperature (°C) ..... :	93% R.H., 30˚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 2.10.3, 2.10.4 and 2.10.5	P
2.10.1.1	Frequency ..... :	Less than 30kHz	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
2.10.2	Determination of working voltage	The rms and peak voltage were measured on the 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

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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
	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

Appendix I: Other Country National Differences

2.10.5.2	Distances through insulation	Enclosure, optocoupler 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 wrapped transformer body was used as double insulation.	P
2.10.5.7	Separable thin sheet material	See above and clause 5.2	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 ..... :	504Vpeak, 272Vrms	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
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

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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
3.1.1	Current rating and overcurrent protection	Secondary output cable is UL recognized wiring which is PVC insulated, rated VW-1, min. 80℃, 300V, or 60℃ wire covered with heat-shirnkable tube. 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.	P
3.1.2	Protection against mechanical damage	Wires do not touch sharp edges which could damage the insulation and cause hazard.	P

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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 is 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	Appliance inlet used	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	Not such equipment	N/A
	Number of conductors, diameter of cable and conduits (mm) .....:		—
3.2.4	Appliance inlets		P
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) .....:		—

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	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	Not permanent connection or non-detachable power cord type	N/A

3.3	Wiring terminals for connection of external conductors		N/A
3.3.1	Wiring terminals	Appliance inlet used	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	Appliance inlet is used as disconnect device	P
3.4.3	Permanently connected equipment	Not such equipment	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 appliance inlet 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	See Cl. 3.4.2	N/A

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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 ..... :	Interconnection circuits of SELV through the connector. No ELV interconnection circuits.	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		P
	Angle of 10°		P
	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	No hazard result from steel sphere ball impact test	P
	Fall test		P
	Swing test		P
4.2.6	Drop test; height (mm) ..... :	No hazard as result from drop test.	P

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4.2.7	Stress relief test	After 7 hours at temperature of 100ºC 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) ..... :	Not such equipment	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	Not direct plug-in equipment	N/A
	Torque ..... :		—
	Compliance with the relevant mains plug standard ..... :		N/A
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
	- 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

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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)	—
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) .. :		—

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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
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

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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)	EUT 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	The touch current was measured from mains to DC output connector and to a 100 mm x 200 mm metal foil wrapped on accessible non-conductive parts (plastic enclosure)	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
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

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	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
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

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	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

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

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	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
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

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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	—
	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

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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
	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

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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
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	—

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

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

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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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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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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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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).	P
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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	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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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
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

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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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	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  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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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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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	90E331960-xxx ("xxx" to denote the part number, can be any alphanumeric character for marketing purpose only)	Pri. winding (pin 1-2): φ0.45mm x 2P x 37Ts; Auxiliary primary winding (pin 4-5): φ0.30mm x 2p x 8Ts; Sec. winding (pin 8.9-7.6): φ0.65mm x 2p x 5Ts x 2; 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 Ieoflon	TRW (B)	130˚C, Class B	IEC/EN 60950-1	VDE 136581
- Insulation tape	Four Pillars (SYMBIO)	35660Y/35660/MY130	130˚C	--	UL (E50292)
- Alt.	Various	Various	130˚C	--	UL (E50292)
Transformer (T1) – used in GT-81091-6024-X.X-T2	Globtek	90E336024-xxx ("xxx" to denote the part number, can be any alphanumeric character for marketing purpose only)	Pri. winding (pin 1-2): φ0.45mm x 2P x 37Ts; Auxiliary primary winding (pin 4-5): φ0.30mm x 2p x 8Ts; Sec. winding (pin 8.9-7.6): φ0.7mm x 2p x 10Ts; 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 Ieoflon	TRW (B)	130˚C, Class B	IEC/EN 60950-1	VDE 136581
- Insulation tape	Four Pillars (SYMBIO)	35660Y/35660/MY130	130˚C	--	UL (E50292)
- Alt.	Various	Various	130˚C	--	UL (E50292)

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Common choke (LF1) (optional)	Globtek	30R200010-xxx ("xxx" to denote the part number, can be any alphanumeric character for marketing purpose only)	Pri. winding (pin 1-3): φ0.60mm x 10Ts; pin 2-4: φ0.60mm x 10Ts; Min. 100μH, 130˚C	--	Tested with appliance
Common choke (LF2)	Globtek	30R020055-xxx ("xxx" to denote the part number, can be any alphanumeric character for marketing purpose only)	Pri. winding (pin 1-3): φ0.45mm x 55Ts; pin 2-4: φ0.45mm x 55Ts; Min. 10mH, 130˚C	--	Tested with appliance
Fuse (F1)	Wickmann	392	T3.15AL, 250Vac, sub-miniature fuse	IEC/EN 60127-1 IEC/EN 60127-3	VDE
Alt.	Walter	2010 series	T3.15AL, 250Vac, sub-miniature fuse	IEC/EN 60127-1 IEC/EN 60127-3	VDE
Alt.	Lanson	SMT	T3.15AL, 250Vac, sub-miniature fuse	IEC/EN 60127-1 IEC/EN 60127-3	VDE
Alt.	Conquer	MST	T3.15AL, 250Vac, sub-miniature fuse	IEC/EN 60127-1 IEC/EN 60127-3	VDE
Alt.	Bussmann	SS-5	T3.15AL, 250Vac, sub-miniature fuse	IEC/EN 60127-1 IEC/EN 60127-3	VDE
Alt.	Belfuse	RST	T3.15AL, 250Vac, sub-miniature fuse	IEC/EN 60127-1 IEC/EN 60127-3	VDE
Varistor (MOV1) (optional)	Uppermost	V07K300, V10K300	300 VAC, 385 VDC	IEC/EN 61051-1, IEC/EN 61051-2	VDE
Alt.	JYA-NAY	7D471K, 10D471K	300 VAC, 385 VDC	IEC/EN 61051-1, IEC/EN 61051-2	VDE
Alt.	Centra Science	CNR07D471K, CNR10D471K	300 VAC, 385 VDC	IEC/EN 61051-1, IEC/EN 61051-2	VDE
Alt.	Joyin	JVR07N471K, JVR10N471K	300 VAC, 385 VDC	IEC/EN 61051-1, IEC/EN 61051-2	VDE
Alt.	Walsin	VZ7D471KBS, VZ10D471KBS	300 VAC, 385 VDC	IEC/EN 61051-1, IEC/EN 61051-2	VDE

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Alt.	Song Long	SAS-471KD07, SAS-471KD10, MOV-471KD07, MOV-471KD10	300 VAC, 385 VDC	IEC/EN 61051-1, IEC/EN 61051-2	VDE
Alt.	Matsushita	07DK471U, 10DK471U	300 VAC, 385 VDC	IEC/EN 61051-1, IEC/EN 61051-2	VDE
Alt.	Thinking	TVR07471, TVR10471	300 VAC, 385 VDC	IEC/EN 61051-1, IEC/EN 61051-2	VDE
Alt.	Fenghua	FNR-07K471, FNR-10K471	300 VAC, 385 VDC	IEC/EN 61051-1, IEC/EN 61051-2	VDE
Alt.	Brightking	07D471K, 10D471K	300 VAC, 385 VDC	IEC/EN 61051-1, IEC/EN 61051-2	VDE
Thermistor (NTC1) (optional)	Various	Various	Min. 1.5Ω, Min. 3A	--	UL
Storage cap. (E1)	Various	Various	56μF-200μF, min. 400Vdc, 105˚C	--	--
Optocoupler U2	Sharp	PC817; PC123	Cr.=Min. 4.8 mm; Dti.>0.4 mm	IEC/EN 60950-1	VDE
Alt.	Lite-on	LTV-817	Cr.=Min. 5.2 mm; Dti.=0.8 mm	IEC/EN 60950-1	VDE
Alt.	Cosmo	K1010; KP1010	Cr.=Min. 5.3 mm; Dti.=0.5 mm	IEC/EN 60950-1	VDE
Alt.	Everlight	EL817	Cr.=Min. 5.0 mm; Dti.>0.48 mm	IEC/EN 60950-1	VDE
Alt.	NEC	PS2561	Cr.=Min. 4 mm; Dti.=0.4 mm	IEC/EN 60950-1	VDE
Alt.	(QT) Fairchild	H11A817	Cr.=Min. 7 mm; Dti.=1 mm	IEC/EN 60950-1	VDE
Alt.	Bright	BPC817B, BPC817C	Cr.=Min. 7.62 mm; Dti.=0.5 mm	IEC/EN 60950-1	VDE
X capacitor (CX1 optional)	Chiefcon	CKX	Max. 0.33μF, AC 275 V, 40/100/21/C, X2	IEC/EN 60384-14	VDE
Alt.	UTX	HQX	Max. 0.33μF, AC 275 V, 25/100/21/C, X2	IEC/EN 60384-14	VDE

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Alt.	PILKOR	PCX2 335M, PCX2 337	Max. 0.33µF, AC 275 V, 40/100/21/C, X2	IEC/EN 60384-14	VDE
Alt.	ISKRA	KNB1560 KNB1530	Max. 0.33µF, AC 275 V, 40/100/56/B, X2	IEC/EN 60384-14	VDE
Alt.	Carli	MPX	Max. 0.33µF, AC 275 V, 40/100/21/C, X2	IEC/EN 60384-14	VDE
Alt.	Okaya	PA or RE	Max. 0.33µF, AC 275 V, 40/100/56/C, X2	IEC/EN 60384-14	VDE
Alt.	SSE	SX1	Max. 0.33µF, AC 275 V, 40/100/21/C, X2	IEC/EN 60384-14	VDE
Alt.	Taishing	MPX	Max. 0.33µF, AC 275 V, 40/100/21/C, X2	IEC/EN 60384-14	VDE
Alt.	Teapo	XG-H	Max. 0.33µF, AC 275 V, 40/100/21, X2	IEC/EN 60384-14	VDE
Alt.	Strong	MPX	Max. 0.33µF, AC 275 V, 40/100/21, X2	IEC/EN 60384-14	VDE
Alt.	Xinhua	MPX	Max. 0.33µF, AC 275 V, 40/100/21, X2	IEC/EN 60384-14	VDE
Alt.	Shenzhen Jinghao	CBB62B	Max. 0.33µF, AC 275 V, 40/100/21, X2	IEC/EN 60384-14	VDE
Alt.	JOEY	MPX	Max. 0.33µF, AC 275 V, 40/100/21, X2	IEC/EN 60384-14	VDE
Alt.	Yuon Yu	MPX	Max. 0.33µF, AC 275 V, 40/100/21, X2	IEC/EN 60384-14	VDE
Alt.	Yimanfeng	MPX/MKP	Max. 0.33µF, AC 275 V, 40/100/21, X2	IEC/EN 60384-14	VDE
X capacitor (CX2, optional)	Chiefcon	CKX	Max. 0.15µF, AC 275 V, 40/100/21/C, X2	IEC/EN 60384-14	VDE
Alt.	UTX	HQX	Max. 0.15µF, AC 275 V, 25/100/21/C, X2	IEC/EN 60384-14	VDE
Alt.	PILKOR	PCX2 335M, PCX2 337	Max. 0.15µF, AC 275 V, 40/100/21/C, X2	IEC/EN 60384-14	VDE

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Alt.	ISKRA	KNB1560 KNB1530	Max. 0.15µF, AC 275 V, 40/100/56/B, X2	IEC/EN 60384-14	VDE
Alt.	Carli	MPX	Max. 0.15µF, AC 275 V, 40/100/21/C, X2	IEC/EN 60384-14	VDE
Alt.	Okaya	PA or RE	Max. 0.15µF, AC 275 V, 40/100/56/C, X2	IEC/EN 60384-14	VDE
Alt.	SSE	SX1	Max. 0.15µF, AC 275 V, 40/100/21/C, X2	IEC/EN 60384-14	VDE
Alt.	Taishing	MPX	Max. 0.15µF, AC 275 V, 40/100/21/C, X2	IEC/EN 60384-14	VDE
Alt.	Teapo	XG-H	Max. 0.15µF, AC 275 V, 40/100/21, X2	IEC/EN 60384-14	VDE
Alt.	Strong	MPX	Max. 0.15µF, AC 275 V, 40/100/21, X2	IEC/EN 60384-14	VDE
Alt.	Xinhua	MPX	Max. 0.15µF, AC 275 V, 40/100/21, X2	IEC/EN 60384-14	VDE
Alt.	Shenzhen Jinghao	CBB62B	Max. 0.15µF, AC 275 V, 40/100/21, X2	IEC/EN 60384-14	VDE
Alt.	JOEY	MPX	Max. 0.15µF, AC 275 V, 40/100/21, X2	IEC/EN 60384-14	VDE
Alt.	Yuon Yu	MPX	Max. 0.15µF, AC 275 V, 40/100/21, X2	IEC/EN 60384-14	VDE
Y capacitor (CY1) (Optional)	TDK	CD	Max. 2200pF, 250Vac, 25/125/56/B, Y1	IEC/EN 60384-14	VDE 124321
Alt.	Murata	KX, KY	Max. 2200pF, 250Vac, 25/125/21/C, Y1	IEC/EN 60384-14	VDE 40002831
Alt.	Success	SE, SB	Max. 2200pF, 250Vac, 30/125/56/C, Y1	IEC/EN 60384-14	VDE 126596
Alt.	JYA-NAY	JN, JY	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

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Alt.	Samwha	SD	Max. 2200pF, 250Vac, 25/125/21, Y1	IEC/EN 60384-14	VDE 115455
Alt.	Yuyue	CT7	Max. 2200pF, 400Vac, 25/125/21, Y1	IEC/EN 60384-14	VDE 115455
Inlet (CN1)	Rong Feng	RF-180	2.5A, 250Vac, C8 type	IEC/EN 60320-1	VDE
Alt.	Sun Fair	S-01	2.5A, 250Vac, C8 type	IEC/EN 60320-1	VDE
Alt.	Tecx-Unions Tech.	SO-222	2.5A, 250Vac, C8 type	IEC/EN 60320-1	VDE
Alt.	Bei Er Jia	ST-A03 Series	2.5A, 250Vac, C8 type	IEC/EN 60320-1	VDE
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	Wu Zhou	WZ-2	V-0 or better, Min. 130˚C	--	UL E243157
Alt.	Various	Various	V-0 or better, Min. 130˚C	--	UL
Output cord	LICHENG	1571	Min. 20AWG, VW-1, 80˚C	--	UL E170689
Alt.	Various	Various	Min. 20AWG, VW-1, 80˚C	--	UL
Output cord (if the part in enclosure covered with heat shrinkable tube)	Various	Various	Min. 20AWG, 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
[1]) An asterisk indicates a mark which assures the agreed level of surveillance					
Supplementary information: --					

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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-81091-6012-T2 (with common choke LF1)						
90	1327	--	69.0	F1	1327	Rated load at 50Hz
90	1250	--	69.4	F1	1250	Rated load at 60Hz
100	1223	1500	68.6	F1	1223	Rated load at 50Hz
100	1126	1500	68.6	F1	1126	Rated load at 60Hz
240	520	1500	66.7	F1	520	Rated load at 50Hz
240	591	1500	66.9	F1	591	Rated load at 60Hz
264	465	--	66.6	F1	465	Rated load at 50Hz
264	535	--	67.0	F1	535	Rated load at 60Hz
Model GT-81091-6012-T2 (without common choke LF1)						
90	1325	--	68.8	F1	1325	Rated load at 50Hz
90	1245	--	69.2	F1	1245	Rated load at 60Hz
100	1219	1500	68.3	F1	1219	Rated load at 50Hz
100	1120	1500	68.5	F1	1120	Rated load at 60Hz
240	518	1500	66.7	F1	518	Rated load at 50Hz
240	590	1500	66.6	F1	590	Rated load at 60Hz
264	465	--	66.7	F1	465	Rated load at 50Hz
264	534	--	66.9	F1	534	Rated load at 60Hz
Model GT-81091-6024-T2 (with common choke LF1)						
90	1160	--	67.8	F1	1160	Rated load at 50Hz
90	1112	--	67.5	F1	1112	Rated load at 60Hz
100	1034	1500	67.3	F1	1034	Rated load at 50Hz
100	1012	1500	66.9	F1	1012	Rated load at 60Hz
240	523	1500	67.1	F1	523	Rated load at 50Hz
240	551	1500	66.8	F1	551	Rated load at 60Hz
264	468	--	67.3	F1	468	Rated load at 50Hz
264	496	--	67.1	F1	496	Rated load at 60Hz
Model GT-81091-6024-T2 (without common choke LF1)						
90	1150	--	66.8	F1	1150	Rated load at 50Hz
90	1108	--	66.4	F1	1108	Rated load at 60Hz
100	1028	1500	66.9	F1	1028	Rated load at 50Hz
100	1006	1500	65.8	F1	1006	Rated load at 60Hz
240	518	1500	66.9	F1	518	Rated load at 50Hz
240	546	1500	67.0	F1	546	Rated load at 60Hz

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264	458	--	66.7	F1	458	Rated load at 50Hz
264	492	--	66.5	F1	492	Rated load at 60Hz
Model GT-81091-6024-5.0-T2 (with common choke LF1)						
90	1192	--	69.4	F1	1192	Rated load at 50Hz
90	1150	--	69.8	F1	1150	Rated load at 60Hz
100	1052	1500	68.8	F1	1052	Rated load at 50Hz
100	1031	1500	69.3	F1	1031	Rated load at 60Hz
240	535	1500	68.1	F1	535	Rated load at 50Hz
240	544	1500	68.3	F1	544	Rated load at 60Hz
264	480	--	68.4	F1	480	Rated load at 50Hz
264	500	--	68.8	F1	500	Rated load at 60Hz
Model GT-81091-6024-5.0-T2 (without common choke LF1)						
90	1186	--	68.3	F1	1186	Rated load at 50Hz
90	1145	--	68.9	F1	1145	Rated load at 60Hz
100	1040	1500	69.0	F1	1040	Rated load at 50Hz
100	1027	1500	68.9	F1	1027	Rated load at 60Hz
240	530	1500	67.9	F1	530	Rated load at 50Hz
240	543	1500	68.2	F1	543	Rated load at 60Hz
264	497	--	68.1	F1	497	Rated load at 50Hz
264	498	--	68.5	F1	498	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-81091-6024-T2				
24	2.5	24.0	3.48	81.2
Model GT-81091-6024-5.0-T2				
19	3.16	19.5	3.68	70.1
Model GT-81091-6012-T2				
12	5	12.2	6.69	79.1
Supplementary information: Test voltage: 264V Test frequency: 60Hz				

2.1.1.7	TABLE: discharge test			P
Condition	Tau calculated (s)	Tau measured (s)	t u -> 0V	Comments

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Model GT-81091-6024-T2				
System on	0.96	0.81	2.95	Vo=352 V, 37%Vo=130V, Vtc=112V
Model GT-81091-6012-T2				
System on	0.96	0.69	1.54	Vo=682 V, 37%Vo=136.2V, Vtc=40V
Note(s): 1. Overall capacity: CX1=0.33μF, CX2=0.15μF 2. Discharge resistor: 2MΩ (RA=RB=1MΩ)				

2.2.2	TABLE: Hazardous voltage measurement	P

Transformer	Location	Max. Voltage		Voltage Limitation Component
		Vpeak	Vdc	
Model GT-81091-6024-T2				
T1	Pin 6-9	114	--	--
	Output	--	24	Q2, Q3
Model GT-81091-6012-T2				
T1	Pin 6-9	58.2	--	--
	Output	--	13.1	Q2, Q3
Supplementary information: Test voltage: 264V Test frequency: 60Hz				

2.2.3	TABLE: SELV Voltage Measurement	N/A

Location	Voltage measured (V)	Comments
Model GT-81091-6024-T2		
Output	0 (unit shut down)	Short Q2 pin D-S
Model GT-81091-6012-T2		
Output	0 (unit shut down)	Short Q2 pin D-S
Output	0 (unit shut down)	Short Q3 pin D-S
Supplementary information: Refer to table 2.2.2		

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2.4.2	TABLE: limited current circuit measurement				P
Location	Voltage (mV)	Current (mV)	Freq. (Hz)	Limit (mA)	Comments
Model GT-81091-6024-T2					
CY1	0.18	0.36	60	0.7	Annex D.1 used
Model GT-81091-6012-T2					
CY1	0.12	0.24	60	0.7	Annex D.1 used
Supplementary information: 1. Capacitance of CY1: 2200pF; 2. Tested with 2k ohm resistor.					

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2.5	TABLE: limited power source measurement		P
	Limits	Measured	Verdict
Model GT-81091-6024-T2			
Uoc=24.0V (measured under no load conditions)			
According to Table 2B (normal condition)			
Current (in A)	≤8	3.48	P
Apparent power (in VA)	≤100	81.2	P
According to Table 2B (U2 pin1-2 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 (U2 pin1 open-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 (U2 pin3-4 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 (U2 pin3 open-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 (R12 short-circuited)			
Current (in A)	≤8	0 (fuse opened immediately)	P
Apparent power (in VA)	≤100	0 (fuse opened immediately)	P
Model GT-81091-6024-5.0-T2			
Uoc=19.5V (measured under no load conditions)			
According to Table 2B (normal condition)			
Current (in A)	≤8	3.68	P
Apparent power (in VA)	≤100	70.1	P
According to Table 2B (U2 pin1-2 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 (U2 pin1 open-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 (U2 pin3-4 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 (U2 pin3 open-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 (R12 short-circuited)			
Current (in A)	≤8	0 (fuse opened immediately)	P

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Apparent power (in VA)	≤100	0 (fuse opened immediately)	P
Model GT-81091-6012-T2			
Uoc=12.2V (measured under no load conditions)			
According to Table 2B (normal condition)			
Current (in A)	≤8	6.69	P
Apparent power (in VA)	≤100	79.1	P
According to Table 2B (U2 pin1-2 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 (U2 pin1 open-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 (U2 pin3-4 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 (U2 pin3 open-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 (R12 short-circuited)			
Current (in A)	≤8	0 (fuse opened immediately)	P
Apparent power (in VA)	≤100	0 (fuse opened immediately)	P
Supplementary information: Test voltage: 264V Test frequency: 60Hz			

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2.10.2	TABLE: Working voltage measurement		P
Location	RMS voltage (V)	Peak voltage (V)	Comments
Model GT-81091-6024-T2			
T1 pin 1-6	**264**	460460	The max. RMS voltage
pin 2-6	193	336	
pin 4-6	252	**552**	The max. Peak voltage
pin 5-6	245	464	
Pin 1-9	239	432	
pin 2-9	189	312	
pin 4-9	245	452	
pin 5-9	242	380	
CY1	223	356	
U2 pin 1-3	240	384	
U2 pin 2-3	240	376	
U2 pin 1-4	238	376	
U2 pin 2-4	237	376	
Model GT-81091-6012-T2			
T1 pin 1-6	**272**	**504**	Highest working voltage
pin 2-6	203	344	
pin 4-6	230	496	
pin 5-6	234	412	
Pin 1-9	257	484	
pin 2-9	201	336	
pin 4-9	235	448	
pin 5-9	233	372	
CY1	224	360	
U2 pin 1-3	214	356	
U2 pin 2-3	214	356	
U2 pin 1-4	214	356	
U2 pin 2-4	214	356	
Supplementary information: Test voltage: 240V Test frequency: 60Hz			

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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:						
PCB traces under F1	420	250	1.5	2.8	2.5	2.8
Line trace to neutral trace	420	250	1.5	2.8	2.5	2.8
Basic/supplementary:						
--	--	--	--	--	--	--
Reinforced:						
Primary components to accessible enclosure	420	250	4.0	6.0	5.0	6.0
PCB traces under T1	504	272	4.4	6.0	5.8	6.0
PCB traces under U1	420	250	4.0	7.0	5.0	7.0
Two pins between CY1	420	250	4.0	6.0	5.0	7.0
T1 primary winding/core to secondary pin	504	272	4.4	6.0	5.8	6.0
T1 core to secondary component (LF3)	420	250	4.0	4.5	5.0	6.0
Supplementary information: 1. The transformer core is considered as primary circuits; 2. Concentric windings on POT3319 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. Unless otherwise specified, the worst conditions of Cl.&Cr. In above mentioned locations have been considered and listed.						

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

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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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4.5	TABLE: Thermal requirements						P
	Supply voltage (V) .....:	90V, 60Hz		264V, 50Hz		--	—
	Ambient T_{min} (°C) .....:	40.0		40.0		--	—
	Ambient T_{max} (°C) .....:	40.0		40.0		--	—
Maximum measured temperature T of part/at::		T (°C)					Allowed T_{max} (°C)
--		H	V	H	V	--	--
Model GT-81091-6024-T2							
Inlet (near pin)		64.0	63.4	56.3	55.9	--	70
PCB under BD1		100.7	97.6	78.5	76.3	--	130
X capacitor CX1		82.8	81.9	73.8	73.3	--	100
Varistor		78.6	78.7	69.2	69.4	--	85
T1 winding		101.8	99.4	95.2	93.7	--	110
T1 core		96.9	93.0	88.5	85.9	--	110
Linear filter winding LF1		93.4	92.1	79.1	78.0	--	130
Linear filter winding LF2		102.9	100.0	80.4	78.2	--	130
PCB under Q1		96.7	93.6	83.5	81.2	--	130
PCB under Q2		83.2	83.4	84.0	84.6	--	130
Electrolitic cap. E1		93.7	90.3	81.5	78.9	--	105
Electrolitic cap. E4		76.4	75.2	77.0	76.6	--	105
Y cap. CY1		88.6	84.2	80.7	77.4	--	125
Optocoupler U2		85.1	84.8	82.3	82.5	--	100
Output cord		64.7	61.5	62.6	60.0	--	80
Enclosure (inside)		89.5	82.2	79.8	74.0	--	105
Enclosure (outside)		83.0	71.1	74.4	65.3	--	95
Ambt.		40.0	40.0	40.0	40.0	--	--
Model GT-81091-6024-5.0-T2							
Inlet (near pin)		63.5	63.2	57.9	58.8	--	70
PCB under BD1		99.1	97.6	76.5	75.7	--	130
X capacitor CX1		90.7	91.3	78.6	77.8	--	100
Varistor		79.2	78.9	72.1	72.0	--	85
T1 winding		103.5	103.3	92.9	91.7	--	110
T1 core		101.2	97.1	84.8	82.2	--	110
Linear filter winding LF1		97.6	96.9	79.2	78.8	--	130
Linear filter winding LF2		102.4	101.2	80.5	79.8	--	130
PCB under Q1		103.5	101.7	84.7	83.7	--	130

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PCB under Q2	97.3	95.8	92.4	91.7	--	130
Electrolitic cap. E1	97.6	98.6	85.3	84.2	--	105
Electrolitic cap. E4	85.0	82.9	79.9	78.9	--	105
Y cap. CY1	95.4	92.6	80.8	79.2	--	125
Optocoupler U2	92.9	93.2	87.6	87.2	--	100
Output cord	67.9	67.3	62.6	62.9	--	80
Enclosure (inside)	97.6	94.5	85.2	81.1	--	105
Enclosure (outside)	88.8	76.1	77.0	67.9	--	95
Ambt.	40.0	40.0	40.0	40.0	--	--
Model GT-81091-6012-T2						
Inlet (near pin)	67.1	68.6	56.8	57.3	--	70
PCB under BD1	110.0	108.7	81.3	81.7	--	130
X capacitor CX1	91.3	91.4	76.4	76.8	--	100
Varistor	83.2	83.4	73.8	73.0	--	85
T1 winding	108.7	108.7	102.7	102.9	--	110
T1 core	108.4	107.7	100.7	100.9	--	110
Linear filter winding LF1	108.5	106.9	90.6	90.0	--	130
Linear filter winding LF2	105.7	104.3	95.3	96.2	--	130
PCB under Q1	104.6	104.1	85.7	85.8	--	130
PCB under Q2	98.0	97.8	90.8	90.1	--	130
Electrolitic cap. E1	97.1	96.4	77.0	76.6	--	105
Electrolitic cap. E4	101.5	103.7	77.8	78.8	--	105
Y cap. CY1	91.1	90.5	79.8	79.2	--	125
Optocoupler U2	96.9	97.4	89.8	90.2	--	100
Output cord	74.6	74.0	68.0	69.1	--	80
Enclosure (inside)	89.8	94.7	70.0	75.4	--	105
Enclosure (outside)	73.1	84.6	60.1	64.7	--	95
Ambt.	40.0	40.0	40.0	40.0	--	--
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
--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--

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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 40°C, all tests were performed in room temperature and converted to 40°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 (LF1, LF2) winding	130°C
- PCB	130°C
- Electrolytic Capacitor (E1, E4)	105°C
- Optocoupler U2	100°C
- X capacitor (CX1)	100°C
- Y Capacitor (CY1)	125°C
- Enclosure (inside)	105°C
- Varistor	85°C
- Appliance inlet	70°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)
PCB	125	0.9

Supplementary information:

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

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

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System ON	0.01	0.01	0.25	To accessible enclosure wrapped with metal foil
System ON	0.21	0.21	0.25	To output terminal
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		AC	3000	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) .....:				40°C, unless otherwise specified.		—
	Power source for EUT: Manufacturer, model/type, output rating .....:				- -		—
Component No.	Fault	Supply voltage (V)	Test time	Fuse #	Fuse current (A)	Observation	
Model GT-81091-6024-T2							
MOV1	SC	264	1s	F1	--	Fuse opened immediately, no hazard.	
E1	SC	264	1s	F1	--	Fuse opened immediately, no hazard.	
BD1	SC	264	1s	F1	--	Fuse opened immediately, no hazard.	

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RA	SC	264	30 mins	F1	0.50	Normal operation. No hazard.
R12	SC	264	1s	F1	--	Fuse opened immediately, Q1, U1 damaged, no hazard.
R10	SC	264	30 mins	F1	0.50	Normal operation. No hazard.
C2	SC	264	30 mins	F1	0.05	Unit shuf down immediately, recoverable, no hazard.
D1	SC	264	30 mins	F1	0.54	The input power increased to 70W, temperature was stable, no component damaged. Max. T1 winding = 139.8□, T1 core = 125.5□, ambt. temperature = 40□, no hazard.
T1 pin 1-2	SC	264	30 mins	F1	0.04	Unit shuf down immediately, recoverable, no hazard.
T1 pin 4-5	SC	264	4 mins	F1	0.75	The input power increased to 106.5 W for 4 mins and then fuse opened. No hazard.
T1 pin 6-9	SC	264	30 mins	F1	0.05	Unit shuf down immediately, U4 damaged, no hazard.
Q1 S-G	SC	264	30 mins	F1	0.04	Unit shuf down immediately, recoverable, no hazard.
Q1 G-D	SC	264	1s	F1	--	Fuse opened immediately, U1, Q1, R12, R12A, R12B, R12C damaged, no hazard.
Q1 S-D	SC	264	1s	F1	--	Fuse opened immediately, U1, Q1, R12, R12A, R12B, R12C damaged, no hazard.
Q2 S-G	SC	264	30 mins	F1	0.50	Normal operation, no hazard.
Q2 G-D	SC	264	30 mins	F1	0.04	Unit shut down immediately, Q2 damaged, no hazard.
Q2 S-D	SC	264	30 mins	F1	0.04	Unit shut down immediately, Q2 damaged, no hazard.
Q3 S-G	SC	264	3 hrs	F1	0.50	Normal operation, no hazard.
Q3 G-D	SC	264	30 mins	F1	0.04	Unit shut down immediately, Q2 damaged, no hazard.
Q3 S-D	SC	264	30 mins	F1	0.04	Unit shut down immediately, Q2 damaged, no hazard.
U2 pin 1-2	SC	264	30 mins	F1	0.07	Unit shuf down immediately, recoverable, no hazard.
U2 pin 1	OC	264	30 mins	F1	0.06	Unit shuf down immediately, recoverable, no hazard.
U2 pin 3-4	SC	264	30 mins	F1	0.06	Unit shuf down immediately, recoverable, no hazard.
U2 pin 3	OC	264	30 mins	F1	0.06	Unit shuf down immediately, recoverable, no hazard.

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D2	SC	264	30 mins	F1	0.05	Unit shuf down immediately, Q2 damaged, no hazard.
U1 pin 4-5	SC	264	30 mins	F1	0.04	Unit shuf down immediately, recoverable, no hazard.
Output	SC	264	30 mins	F1	0.05	Unit shuf down immediately, recoverable, no hazard.
Output	OL	264	7 hrs	F1	0.63	Output current overload to 3.2A, temperature was stable, no component damaged, max. T1 winding=103.7□, T1 core=101.8□, ambt. temperature=40□, no hazards.
Model GT-81091-6024-5.0-T2						
output	s-c	264	30 min	F1	0.06	Unit shut down immediately, no hazard.
output	o-l	264	7hrs	F1	0.57	Output current overload to 3.46A, temperature was stable, no hazard. T1 core=98.9ºC, T1 winding=101.0ºC at ambient temperature 40ºC, no hazards.
Model GT-81091-6012-T2						
output	s-c	264	30 min	F1	0.06	Unit shut down immediately, no hazard.
output	o-l	264	7hrs	F1	0.61	Output current overload to 7.0A, temperature was stable, no hazard. T1 core=120.1ºC, T1 winding=122.2ºC at ambient temperature 40ºC, no hazards.
Supplementary information: in fault column, where s-c=short-circuited, o-l=over-loaded, o-c=open-circuited.						

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<table>
<tr><th colspan="4">AUSTRALIAN NATIONAL DIFFERENCES</th></tr>
<tr><td colspan="4">This national differences according to CB Bulletin No. 112A, December 2006 (AS/NZS 60950.1:2003+A1+A2+A3)
(IEC Publication 60950-1:2001)</td></tr>
<tr><td>Clause</td><td>Requirement + Test</td><td>Result - Remark</td><td>Verdict</td></tr>
<tr><td colspan="4">Annex ZZ Variations</td></tr>
<tr><td>1.2</td><td>Between the definitions for “Person, service” and “Range, rated frequency” insert the following:

Potential ignition source 1.2.12.201</td><td>Inserted</td><td>P</td></tr>
<tr><td>1.2.12.15</td><td>After the definition of 1.2.12.15, add the following:
1.2.12.201 Potential ignition source:
Possible fault which can start a fire if the open-circuit voltage measured across an interruption or faulty contact exceeds a value of 50Vpeak a.c. or d.c. and the product of the peak value of this voltage and the measured r.m.s. current under normal operating conditions exceeds 15VA.
Such a faulty contact or interruption in an electrical connection includes those which may occur in conductive patterns on printed boards.
NOTE 201: An electronic protection circuit may be used to prevent such a fault from becoming a potential ignition source.
NOTE 202: This definition is from AS/NZS 60065:2003.</td><td>Added</td><td>P</td></tr>
<tr><td>1.5.1</td><td>Add the following to the end of first paragraph:
“or the relevant Australian/New Zealand Standard.”</td><td>Added</td><td>P</td></tr>
<tr><td>1.5.2</td><td>Add the following to the end of first and third dash items:
“or the relevant Australian/New Zealand Standard.”</td><td>Added</td><td>P</td></tr>
<tr><td>2.1</td><td>Delete the Note</td><td>Deleted</td><td>N/A</td></tr>
<tr><td>3.2.3</td><td>Delete Note 2.</td><td>Deleted</td><td>N/A</td></tr>
<tr><td>3.2.5</td><td>Modify Table 3B as followings:

<table>
<tr><td>Rated current of equipment A</td><td>Nominal Cross-sectional area mm^2</td><td>AWG or kcmil (cross-sectional area in mm^2) see note 2</td></tr>
<tr><td>Over 0.2 up to and including 3</td><td>0.51)</td><td>18 [0.8]</td></tr>
<tr><td>Over 3 up to end including 7.5</td><td>0.75</td><td>16 [1.3]</td></tr>
<tr><td>Over 7.5 up to and including 10</td><td>(0.75)2) 1.00</td><td>16 [1.3]</td></tr>
<tr><td>Over 10 up to and including 16</td><td>(1.0)3) 1.50</td><td>14 [2.0]</td></tr>
</table>

Replace footnote 1) with the following:
1) This nominal cross-sectional area is only allowed for</td><td>Replaced</td><td>N/A</td></tr>
</table>

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AUSTRALIAN NATIONAL DIFFERENCES			
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Clause	Requirement + Test	Result - Remark	Verdict
Annex ZZ Variations			
	Class II appliances if the length of the power supply cord, measured between the point where the cord, or cord guard, enters the appliances, and the entry to the plug does not exceed 2m (0.5^2 three-core supply flexible cords are not permitted; see AS/NZS 3191). Delete Note 1.		
4.1.201	Add the following after the last Paragraph of Clause 4.1: 4.1.201 Display devices used for television purposes Display devices which may be used for television purposes, with a mass of 7Kg or more, shall comply with the requirements for stability and mechanical hazards, including the additional stability requirements for television receivers, specified in AS/NZS 60065.	No such device	N/A
4.3.6	Replace paragraph three with: Equipment with a plug portion, suitable for insertion into a 10A 3-pin flat-pin socket-outlet complying with AS/NZS 3112, shall comply with the requirements in AS/NZS 3112 for equipment with integral pins for insertion into socket-outlets.	Not direct plug-in equipment	N/A
4.3.13.5	Add the following to the end of the first paragraph: ", or AS/NZS 2211.1"	Added	P
4.7	Add the following paragraph: For alternative tests refer to clause 4.7.201.	Added	P
4.7.201	Add the following after clause 4.7.3.6: 4.7.201 Resistance to fire – Alternative tests	Added	P
4.7.201.1	General Parts of non-metallic material shall be resistant to ignition and spread of fire. This requirement does not apply to decorative trims, knobs and other parts unlikely to be ignited or to propagate flames originating from inside the apparatus, or the following: Components that are contained in an enclosure having a flammability category of FV-0 according to AS/NZS 4695.707 and having openings only for the connecting wires filling the openings completely, and for the ventilation not exceeding 1mm in width regardless of the length. The following parts which would contribute negligible fuel to a fire: Small mechanical parts, the mass of which does not exceed 4g, such as mounting parts, gears, cams, belts and bearings; Small electrical components, such as capacitors with a volume not exceeding 1750mm^3, integrated circuits, transistors and optocoupler packages, if these components are mounted on material flammability category FV-1 or better according to AS/NZS 4695.707	Enclosure, PCB, bobbin	P

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This national differences according to CB Bulletin No. 112A, December 2006 (AS/NZS 60950.1:2003+A1+A2+A3) (IEC Publication 60950-1:2001)			
Clause	Requirement + Test	Result - Remark	Verdict
Annex ZZ Variations			
	NOTE – In considering how to minimize propagation of fire and what "small parts" are, account should be taken of the cumulative effect of small parts adjacent to each other for the possible effect of propagating fire from one part to another. Compliance is checked by tests of 4.7.201.2, 4.7.201.3, 4.7.201.4 and 4.7.201.5. For the base materials of printed boards, compliance is checked by the test of 4.7.201.5. The tests shall be carried out on parts of non-metallic material, which have been removed from the apparatus. When the glow-wire test is carried out, the parts shall be placed in the same orientation, as they would be in normal use. These tests are not carried out on internal wiring.		
4.7.201.2	Parts of non-metallic material are subjected to glow wire test of AS/NZS 4695.2.11, which is carried out at 550˚C. Parts for which the glow-wire test can not be carried out, such as those made of soft or foamy material, shall meet the requirements specified in ISO 9772 for category FH-3 material. The glow-wire test shall be not carried out on parts of materials classified at least FH-3 according to ISO 9772 provided that the sample was not thicker than the relevant part.	Enclosure	P
4.7.201.3	Testing of insulating materials Parts of insulating materials supporting potential ignition sources shall be subject to the glow-wire test of AS/NZS 4695.2.11, which is carried out at 750˚C. The test shall be also carried out on other parts of insulating material which are within a distance of 3,, of the connection. NOTE – Contacts in components such as switch contacts are considered to be connections. For parts, which withstand the glow-wire test but produce a flame, other parts above the connection within the envelope of a vertical cylinder having a diameter of 20mm and a height of 50mm shall be subjected to the needle-flame test. However, parts shielded by a barrier which meets the needle-flame test shall not be tested. The needle-flame test shall be made in accordance with AS/NZS 4695.2.2 with the following modifications: 5 Severities Replace with: The duration of application of the test flame shall be 30s±1s. 8 Test procedure 8.2 Modification:	PCB, bobbin	P

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This national differences according to CB Bulletin No. 112A, December 2006 (AS/NZS 60950.1:2003+A1+A2+A3) (IEC Publication 60950-1:2001)			
Clause	Requirement + Test	Result - Remark	Verdict
Annex ZZ Variations			
	Replace the first sentence with: The specimen shall be arranged so that the flame can be applied to a vertical or horizontal edge as shown in the examples of figure 1. 8.4 Modification: The first paragraph does not apply. Addition: If possible, the flame shall be applied at least 10mm from a corner. 8.5 Replacement: The test shall be made on one specimen. If the specimen does not withstand the test, the test may be repeated on two further specimens, both of which shall then withstand the test. 10 Evaluation of test results Replace with: The duration of burning (tb) shall not exceed 30s. However, for printed circuit boards, it shall not exceed 15s. The needle-flame test shall not be carried out on parts of material classified as V-0 or V-1 according to IEC 60695-11-10, provided that the sample tested was not thicker than the relevant part.		
4.7.201.4	Testing in the event of non-extinguishing material if parts, other than enclosures, do not withstand the glow-wire tests of 4.7.201.3, by failure to extinguish within 30s after the removal of the glow-wire tip, the needle-flame test detailed in 4.7.201.3 is made on all parts of non-metallic material which are within a distance of 50mm or which are likely to be impinged upon by flame during the tests of 4.7.201.3. Parts shielded by a separate barrier which meets the needle-flame test need not to be tested. NOTE 1 – If the enclosure does not withstand the glow-wire test the equipment is considered to have failed to meet the requirement of Clause 4.7.201 without the need for consequential testing. NOTE 2 – If other parts do not withstand the glow-wire test due to ignition of the tissue paper and if this indicates that burring or glowing particles can fall onto an external surface underneath the equipment, the equipment is considered to have failed to meet the requirement of clause 4.7.201 without the need for consequential testing. NOTE 3 – Parts likely to be impinged upon by the flame are considered to be those within the envelope of a vertical cylinder having a radius of 10mm and a height equal to the height of the flame, positioned above the point of the material supporting in contact	Added	N/A

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This national differences according to CB Bulletin No. 112A, December 2006 (AS/NZS 60950.1:2003+A1+A2+A3) (IEC Publication 60950-1:2001)			
Clause	Requirement + Test	Result - Remark	Verdict
Annex ZZ Variations			
	with or in close proximity to connections.		
4.7.201.5	Testing of printed boards The base material of printed boards is subjected to needle-flame test to Clause 4.7.201.3. The flame is applied to the edge of the board where the heat sink effect is lowest when the board is positioned as in normal use. The flame shall not be applied to an edge, consisting of broken perforations, unless the edge is less than 3mm for a potential ignition source. The test is not carried out if the – Printed board does not carry any potential ignition source; Base material of printed boards, on which the available apparent power at a connection exceeds 15VA operating at a voltage exceeding 50V and equal or less than 400Vpeak a.c. or d.c. under normal operating conditions, is of flammability category FV-1 or better according to AS/NZS 4695.707, or the printed boards are protected by an enclosure meeting the flammability category FV-0 according to AS/NZS 4695.707, or made of metal, having openings only for connecting wires which fill the opening completely, or Base material of printed boards, on which the available apparatus power at a connection exceeds 15VA operating at a voltage exceeding 400Vpeak a.c. or d.c. under normal operating conditions, and base material printed boards supporting spark gaps which provide protection against overvoltages, is of flammability category FV-09 according to AS/NZS 4695.707 or the printed boards are contained in a metal enclosure, having openings only for connecting wires fill the openings completely. Compliance is determined using the smallest thickness of the material. NOTE – Available apparent power is the maximum apparent power, which can be drawn from the supplying circuit through a resistive load whose value is chosen to maximize the apparent power for more than 2 min when the circuit supplied is disconnected.	Added	N/A
6.2.2	Add the following after the first paragraph: In Australia (this variation does not apply in New Zealand), compliance with 6.2.2 is checked by the tests of both 6.2.2.1 and 6.2.2.2. Delete the note.	No TNV	N/A
6.2.2.1	Delete Note 2. Add the following after the first paragraph: In Australia (this variation does not apply in New Zealand), the electrical separation is subjected to 10	No TNV	N/A

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AUSTRALIAN NATIONAL DIFFERENCES			
This national differences according to CB Bulletin No. 112A, December 2006 (AS/NZS 60950.1:2003+A1+A2+A3) (IEC Publication 60950-1:2001)			
Clause	Requirement + Test	Result - Remark	Verdict
Annex ZZ Variations			
	impulses of alternating polarity, using the impulse test generator of annex N for 10/700 µs impulses. The interval between successive impulses is 60s and the initial voltage, Uc, is: - for 6.2.1 a): 7.0KV for hand-held telephones and for headsets and 2.5KV for other equipment; and - for 6.2.1 b) and 6.2.1 c): 1.5KV NOTE 201 – The 7KV impulse simulates lighting surges on typical rural and semi-rural network lines. NOTE 202 – The 2.5KV impulse for 6.2.1 a) was chosen to ensure adequacy of the insulation concerned and dose not necessarily simulate likely overvoltages.		
6.2.2.2	Delete the note. Add the following after the second paragraph: In Australia (this variation does not apply in New Zealand), the a.c. test voltage is: - for 6.2.1 a): 3KV; and - for 6.2.1 b) and 6.2.1 c): 1.5KV. NOTE 201 – Where there are capacitors across the insulation under test, it is recommended that d.c. test voltages are used. NOTE 202 – The 3KV and 1.5KV values have been determined considering the low frequency induced voltages from the power supply distribution system.	No TNV	N/A
7.2	Add the following before the first paragraph: Equipment providing functions that fall only within the scope of AS/NZS 60065 and that incorporate a PSTN interface, are not required to comply with this Clause where the only ports provided on the equipment, in addition to a coaxial cable connection and a PSTN interface, are audio or video ports and analogue or data ports not intended to be used for telecommunications purposes.	Not connected to cable distribution system.	N/A
Annex M.2	Delete the second and third equations and replace with: $I_{ts} = \frac{t_1 - 600}{600} \times \frac{I_{pp}}{2\sqrt{2}} + \frac{1200 - t_1}{600} \times \frac{I_p}{\sqrt{2}}$ for (600 ms < t_1 < 1 200 ms) $I_{ts} = \frac{I_{pp}}{2\sqrt{2}}$ for (t_1 ≥ 1 200 ms)	No TNV	N/A
Annex P	Add the following Normative References to Annex P: IEC 60065, Audio, Video and similar electronic apparatus – Safety requirements AS/NZS 3191, Approval and test specification – Electric flexible cords AS/NZS 3112, Approval and test specification – Plugs and socket-outlets AS/NZS 4695.707, Fire hazard testing of	Added	P

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This national differences according to CB Bulletin No. 112A, December 2006 (AS/NZS 60950.1:2003+A1+A2+A3) (IEC Publication 60950-1:2001)			
Clause	Requirement + Test	Result - Remark	Verdict
Annex ZZ Variations			
	electrotechnical products – Methods of test for the determination of the flammability of solid electrical insulating materials when exposed to an igniting source		
Annex ZZ.2	Add the following after Clause 3.2.5.1: 4.1.201 Add the following after the last Paragraph of Clause 4.1: 4.1.201 Display devices used for television purposes Display devices which may be used for television purposes, with a mass of 7Kg or more, shall comply with the requirements for stability and mechanical hazards, including the additional stability requirements for television receivers, specified in AS/NZS 60065.	No such device	N/A
	Add the following after Clause 6.2.2.2: 7.2 Add the following before the first paragraph: Equipment provides functions that fall only within the scope of AS/NZS 60065 and that incorporate a PSTN interface, are not required to comply with this Clause where the only ports provided in the equipment, in addition to a coaxial cable connection and a PSTN interface, are audio or video ports and analogue or data ports not intended to be used for telecommunications purposes.	Not connected to cable distribution system.	N/A

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JAPAN NATIONAL DIFFERENCES			
Japanese National Differences according to CB Bulletin Bo. 112A, December 2006 (J 60950(H19)) IEC Publication 60950:1999			
J 60950(H19):2007 Test report (Deviations from IEC 60950 3 rd edition, 1999) Special National conditions, National deviation and other information according to MITI Ordinance No. 85.			
Clause	Requirement + Test	Result - Remark	Verdict
1.2	Add the following terms. Equipment, Class 01 1.2.4.101 Material, VTM 1.2.12.101	Added	P
1.2.4.101	Add this sub-clause: CLASS 01 EQUIPMENT: Equipment where protection against electric shock is achieved by: a) using BASIC INSULATION, and b) providing a means of connecting to the protective earthing conductor in the building wiring those conductive parts that are otherwise capable of assuming HAZARDOUS VOLTAGES if the BASIC INSULATION fails, and c) using a supply cord without earthing conductor and a plug without earthing wire although the equipment has externally an earth terminal or a lead wire for earthing. Equipment provided with a cord set having a teo-pin type plug with a lead wire for earthing is also regarded as Class 01. NOTE – Class 01 equipment may have a part constructed with Double Insulation or Reinforced Insulation as well as an operating part as SELV circuit.	Added	N/A
	Replace the first sentence of this Sub-Clause by: FLAMMABILITY CLASSIFICATION OF MATERIALS: The recognition of the burning behavior of materials and their ability to extinguish if ignited. Materials are classified as in 1.2.12.2 to 1.2.12.9, and 1.2.12.101 when tested in accordance with Annex A.	Replaced	N/A
	Add the following NOTE 3: NOTE3 – Similarly, for thin MATERIALS, VTM-0 Class materials are regarded as better than those of VTM-1 Class, and VTM-1 better than VTM-2.	Added	P
	Add this sub-clause: VTM CLASS MATERIAL: Thin MATERIALS fulfill the specified conditions during the test of Sub-Clause A.101 applied for materials that the test and evaluation of clauses A.6 to A.10 is different to execute. Materials are classified to three classifications as VTM-0, VTM-1 and VTM-2 according to the state after the removal	Added	N/A

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JAPAN NATIONAL DIFFERENCES			
Japanese National Differences according to CB Bulletin Bo. 112A, December 2006 (J 60950(H19)) IEC Publication 60950:1999			
J 60950(H19):2007 Test report (Deviations from IEC 60950 3 rd edition, 1999) Special National conditions, National deviation and other information according to MITI Ordinance No. 85.			
Clause	Requirement + Test	Result - Remark	Verdict
	of the test flame.		
1.7.101	Add this sub-clause: Marking for CLASS 01 EQUIPMENT For CLASS 01 EQUIPMENT, the following instruction shall be indicated on the visible place of the mains plug or the main body: “Provide an earthing connection” *Example in Japanese:* 必ず接地接続を行って下さい Moreover, for CLASS 01 EQUIPMENT, the following instruction shall be indicated on the visible place of the main body or written in the operating instructions: “Provide an earthing connection before the mains plug is connected to the mains. And, when disconnecting the earthing connection, be sure to disconnect after pulling out the mains plug from the mains.” *Example in Japanese:* 接地接続は必ず、電源プラグを電源につなぐ前に行って下さい。又、接地接続を外す場合は、必ず電源プラグを電源から切り離してから行って下さい。		N/A
2.1.1.1	In the Item b) of this Sub-Clause, replace “IEC 60083” to “IEC 60083 or JIS C 8303”.	Not direct plug-in equipment	N/A
2.6.3.1	Add the following after 1st paragraph of this Sub-Clause. This also applies to the conductor of lead wire for protective earthing of CLASS 01 EQUIPMENT.	Added	N/A
2.6.4.1	Replace the second sentence in the first paragraph of this Sub-Clause by: For CLASS I EQUIPMENT with a DETACHABLE POWER SUPPLY CORD, the earthing terminal in the appliance inlet is regarded as the main protective earthing terminal.		N/A
2.6.5.4	Replace the first sentence of this Sub-Clause by: Protective earthing connections of CLASS I EQUIPMENT shall make earlier and break later than the supply connections in each of the		N/A

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JAPAN NATIONAL DIFFERENCES			
Japanese National Differences according to CB Bulletin Bo. 112A, December 2006 (J 60950(H19)) IEC Publication 60950:1999			
J 60950(H19):2007 Test report (Deviations from IEC 60950 3 rd edition, 1999) Special National conditions, National deviation and other information according to MITI Ordinance No. 85.			
Clause	Requirement + Test	Result - Remark	Verdict
	following:		
2.6.101	Add this Sub-Clause: Earthing of CLASS 01 EQUIPMENT Plugs with a lead wire for earthing shall not be used for equipment having a rated voltage exceeding 150V. For plugs with a lead wire for earthing, the lead wire shall not be earthed by a clip. CLASS 01 EQUIPMENT shall be provided with an earthing terminal or lead wire for earthing in the external where easily visible.	Not such equipment	N/A
3.2.5	Delete 1) in Table 3B.	Deleted	N/A
4.2.8	Add the following informative remark after the last sentence. Remark – IEC 61965 is also applicable instead of IEC 60065.	Added	N/A
4.5.1	In the right column of “Table 4A – Temperature rise limits, Part 1”, add a suffix symbol 7) to “50” (K), corresponding to “- without T – marking” in the left column, so as to become “$50^{7)}$”.	Added	P
	Add the following to Suffix 5) of Table 4A (part one and part two). With regard to “Table 4A – Temperature rise limits, Part 1”, insulating materials complying with Japanese requirements (see Attachment below) are also acceptable.	Added	P
	Added the following to Suffix 7) in Table 4A (part one and part two). 7) This value shall apply only to wiring or cords complying with relevant IEC standards. Others shall comply with Japanese requirements (see Attachment below)	Added	P

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Attachment

The insulating materials shall not be exposed to the temperature exceeding the values when the appliance is operated at rated voltage and normal operating condition.

These values may be increased by;

- 8 degrees for Duty 2 appliance, and
- 16 degrees for Duty 3 appliance.

In order to classify the appliances, following assumptions are to be used.

- Duty 1 appliances: considered to be connected to supply mains throughout the years such as refrigerators
- Duty 2 appliances: considered to be connected to be in between Duty 1 and Duty 3 such as room heaters
- Duty 3 appliances: considered to be connected to supply mains when it is operated for rather short time such as portable coffee mill.

Permissible temperature limits of insulating materials

Natural materials	
Material	Permissible temperature limit (°C)
Bituminous compound for filter	75, (105) 1)
Paper, cotton, silk, other natural fiber and wood	90, (105) 2)
Oil denatured natural resin	105
Silica powder	500
Mica (Hard)	500, (600) 3)
(Soft)	650, (850) 3)

Notes: 1) Value applies to thermal insulating materials.

2) Value applies to materials impregnated with varnish.

3) Value in parenthesis is applied when mechanical external force is absent.

Mica splittings and untreated mica papers

Lining	Adhesive							Permissible Temperature Limit (°C)
	a	b	c	d	e	f	g	

None	X	X	X	X	X			130
						X		155
						X		180; 450, (700) [1];
						X		600, (800) [2]
							X	600, (700) [1]; 700, (850) [2]
Paper	X	X	X	X				130
Polyethylene terephtalate film				X				130
Glass fabric				X				130
					X			155
						X		180
Polyester nonwoven fabric, Polyester woven, and Polyethylene naphthalate film				X				130
					X			155
Polyamide-imide film, Aramide film, and Polymide film						X		155
							X	180

a: with asphalt base

b: with natural resin or denatured natural resin base

c: with ceramic base

d: with oil-denatured synthetic resin, alkyd orthophatalate resin or cross-linked polyester base.

e: with silicon–denatured synthetic resin, isophatalate alkyd resin, telephatalate alkyd resin or epoxy resin.

f: with silicon resin.

g: inorganic

Notes: 1) value applies to hard mica-made heating substrate.

2) value applies to soft mica-made heating substrate.

Remarks: value in parenthesis is applied when mechanical external force is absent.

Organic materials (Thermosetting Resins)

Material	Permissible temperature limit (°C)
laminated melamine resin mixed with glass fiber	75, (100) [1]
moulded temaine resin mixed with:	
cellulose	120
inorganics	140
laminated phenol resin with:	
cotton fiber base	115, (85) [2]
paper base	120, (70) [3]
polyamide cloth base	75
inorganics	140
moulded phenol resin with:	
inorganics	150, (160) [1]
others	140, (150) [1]
moulded melamine phenol resin with the gravity of less than 1.55	130

moulded urea resin mixed with cellulose	90
unsaturated polyester-casting	120
laminated unsaturated polyester mixed with inorganics	140
moulded unsaturated polyester mixed with: other than organics inorganic powder glass fiber	 120 140 155
epoxy resin-casting	120
laminated epoxy resin mixed with: inorganic other than inorganics	 130, (140) [1] 110, (90) [3]
moulded epoxy resin mixed with inorganics	130
laminated diallyl phthalate resin mixed with inorganics	140
moulded diallyl phthalate resin mixed with: other than inorganics inorganic powder glass fiber	 130 150 155
xylene resin-casting	140
polyamide-imide film	180
laminated silicone resin mixed with inorganics	180, (220) [1]
moulded silicon resins mixed with inorganics	180, (240) [4]
polymide film	210
laminated polymide	190
polybutadiene-casting	120
moulded polybutadiene mixed with inorganics	130
laminated dipheny oxide mixed with inorganics	180

Notes: 1) Values apply to thermal insulating materials.

2) Values apply to materials with a thickness less than 0.8 mm.

3) Values apply to materials with a thickness less than 0.8 mm when treated to retard flame.

4) Values apply to materials used for thermal insulation and to seal outlets of sheathed heating wires.

Organic materials (Thermoplastic Resins)

Material	Permissible temperature limit (°C)
methacrylic resin, cellulose resin, cellulose acetate butylate resin, ulcanise, polyethylene	50
foamed polyethylene compound for insulated conductors, polyvinyl chloride	60
polyethylene compound for insulated conductors, heat-resistant polyvinyl chloride, cross-linked polyvinyl chloride compound for insulated conductors	75
cross-linked polyethylene, chlorinated polyethylene compound for insulated conductors	90
acrylonitrile acrylic rubber styrene resin, acrylontirile chlorinate polyethylene styrene resin	55
acrylonitrile styrene resin, acrylonitrile butadiene resin,	

Appendix I: Other Country National Differences

acrylonitrile butadiene chlorinated polyethylene resin	
: general	55
: reinforced with glass fiber	80
polypropylene : general	105, (85) [3]
: reinforced with glass fiber	110
denatured polyphenyle oxide : general	75
: reinforced with glass fiber	100
Polystyrene	50, (70) [1]
polyacetal : general	100
: reinforced with glass fiber	120
polyamide : general	90
: reinforced with glass fiber	120
polycarbonate : general	110
: reinforced with glass fiber	120
polyethylene terephtalate : general	120
: reinforced with glass fiber	130
polybutylene terephtalate : general	120
: reinforced with glass fiber	135
heat resistant polyethylene terephthalate film	135
fluorinated polyvinylidene compound for insulated conductors, polychlorotrifluoroethylene (ethylene-trifluoride resin), ethylene-tetrafleorethylene copomylene for insulated conductors	150
tetrafluoroethylene hexafluoropropylene resin	200
polytetrafluoroethylene(ethylene-tetrafluoride), perflouroalkoxy compound for insulated conductors	250
aramide(aromatic polyamide paper)	220
Polysulfone	140, (150) [2]
polyethylene naphthalate	155
polyallylate : general	120
: reinforced with glass fiber	130

Notes : 1) Values apply to capacitor dielectrics.

2) Values apply to thermal insulating material

3) Values apply to materials with a thickness of less than 0.8 mm

4) Inorganic materials

Inorganic materials

Material	Permission temperature limit (°C)
glass fiber (only alkaline free)	300
lead glass	380
borosilicate glass	490
quartz glass	800
ceramic	800, (1000) [1]

Note: 1) Value apply to materials used as electric heating elements

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Rubber compounds

Material	Permission temperature limit (°C)
natural rubber, polyurethane rubber, ebonite	60
nitrile rubber, styrene butadiene rubber, chloroprene rubber	75
butyl rubber	80
ethylene propylene (diene) rubber, chlorosulfonated polyethylene rubber	90
silicone rubber	180, (200) [1)]

Note : 1) Value apply to thermal insulating material and sealing compounds for sheathed heating elements.

Sleeves, Cloth, Tapes and like

Material	Impergnat or coating	Permission temperature limit (°C)
rayon, cellulose acetate, vinylon	adhesive, oil varnish	105
paper, cotton fabric, silk fabric, polyamide, polyester fabric, polyester nonwoven fabric	oil varnish	105
polyester fabric, polyester nonwoven fabric	alkyd resin varnish	120
glass fabric	(ditto)	130
paper	Iso or terephtalate alkyd resin varnish, epoxy resin varnish, alkyd resin varnish	105
polyester fabric, polyester nonwoven fabric	(ditto)	120
glass fabric, aramide paper	Iso or terephtalate, alkyd resin varnish, epoxy resin varnish silicone resin varnish, silicone rubber	155 180
vulcanised fiber		105
heat resistant fiber		120

4.7.3.2	Add the following in 7th paragraph of this Sub-Clause. - for thin materials, e.g., flexible printed boards, ect., used inside equipment, be of FLAMMABILITY CLASS VTM-2 or better.	Added	N/A
5.1.6	Replace Table 5A of this Sub-Clause by:	Information considered	P

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Table 5A – Maximum current

Type of equipment	Terminal A of measuring instrument connected to:	Maximum TOUCH CURRENT mA r.m.s. [1)]	Maximum PROTECTIVE CONDUCTOR CURRENT
ALL equipment	Accessible parts and circuits not connected to protective earth	0,25	-
HAND-HELD	Equipment main protective earthing terminal (if any) CLASS I EQUIPMENT	0,75	-
MOVABLE (other than HAND-HELD, but including TRANSPORTABLE EQUIPMENT		3,5	-
STATIONARY, PLUGGABLE TYPE A		3,5	-
ALL other STATIONARY EQUIPMENT - not subject to the conditions of 5.1.7 - subject to the conditions of 5.1.7		3,5 -	- 5 % of input current
HAND-HELD	Equipment main protective earthing terminal (if any) CLASS 0I EQUIPMENT	0,5	-
Others		1,0	-

[1)] If peak values of TOUCH-CURRENT are measured, the maximum values obtained by multiplying the r.m.s. values by 1,414.

5.3.8.2	Replace 3rd Item of the Sub-Clause by: - BASIC INSULATION between the PRIMARY CIRCUIT and accessible conductive parts of CLASS I or 01 EQUIPMENT;	Replaced	P
Annex A	Add this Sub-Clause: *Flammability tests for classifying materials VTM* Thin sheet materials shall comply with ISO 9773.	Added	N/A

Appendix I: Other Country National Differences

<table>
<tr><td>Annex G</td><td>Add the following new note below Table G.1:
2. In Japan, MAINS TRANSIENT VOLTAGE for equipment with a Nominal AC MAINS SUPPLY VOLTAGE of 100V is to be decided based on the column where Nominal AC MAINS SUPPLY VOLTAGE in Table G.1 is 150V.</td><td>Alternative Annex G not considered.</td><td>N/A</td></tr>
<tr><td>Annex P</td><td>Add “IEC 61965:2000, Mechanical Safety for Cathode Ray Tubes”.</td><td>Added</td><td>N/A</td></tr>
<tr><td>Annex U</td><td>Replace the second paragraph by:
This annex covers to round winding wires having diameters between 0.05mm and 5.00mm.</td><td>Replaced</td><td>P</td></tr>
<tr><td>U.2.1</td><td>Replace the text of this Sub-Clause by:
The test sample is prepared according to IEC 60851-5:1996, 4.4.1 (for a twisted pair). The sample is then subjected to the test of 5.2.2 of this standard, with a test voltage not less than twice the appropriate voltage in Table 5B (see 5.2.2) of this standard. However, the minimum values shall be as follows:
- for BASIC INSULATION or SUPPLEMENTARY INSULATION, 3000V, or;
- for REINFORCED INSULATION, 6000V.</td><td>Replaced</td><td>P</td></tr>
<tr><td>U.2.2</td><td>Replace this Sub-Clause by:
Test 8 of IEC 60851-3:1996, 5.1.1, using the mandrel diameters of Table U.1. The test sample is then examined in accordance with IEC 60851-3:1996, 5.1.1.4, followed by the test of 5.2.2 of this standard except applying the test voltage between the wire and the mandrel. A test voltage shall be the appropriate voltage in Table 5B (see 5.2.2) of this standard. However, the minimum values shall be as followings:
- for BASIC INSULATION or SUPPLEMENTARY INSULATION, 1500V, or;
- for REINFORCED INSULATION, 3000V.
Table U.1 Table U.1 - Mandrel diameter
<table>
<tr><th>Nominal Conductor diameter mm</th><th>Mandrel diameter mm ± 0,2 mm</th></tr>
<tr><td>0,05 – 0,34
0.35 – 0,49
0,50 – 0,74
0,75 – 2,49
2,50 – 5,00</td><td>4,0
6,0
8,0
10,0
4 times of the diameter of conductor [1)]</td></tr>
<tr><td colspan="2">[1)] in compliance with IEC 60317-43.</td></tr>
</table>
The tension to be applied to the wire during winding on the mandrel is calculated from the wire diameter to be equivalent to 118Mpa ± 10% (118N/mm^2 ± 10%)</td><td>Replaced</td><td>P</td></tr>
</table>

Appendix I: Other Country National Differences

U.2.3	Replace the first paragraph of this Sub-Clause by: Test 9 of IEC 60851-6:1996, followed by the electric strength test of 5.2.2 of this standard except applying the test voltage between the wire and the mandrel. A test voltage shall be the appropriate voltage in Table 5B (see 5.2.2) of this standard. However, the minimum values shall be as follows: - for BASIC INSUALTINO or SUPPLEMENTARY INSULATION, 1500, or; - for REINFORCED INSULATION, 3000V.	Replaced	P
U.2.4	Replace the third paragraph of this Sub-Clause, which is describing the test voltage, by: The test voltage shall not be less than the appropriate voltage in Table 5B (see 5.2.2) of this standard. However, the minimum values shall be as follows: - for BASIC INSULATION or SUPPLEMENTARY INSULATION, 1500V, or; - for REINFORCED INSULATION, 3000V It is applied between the shot and the conductor.	Replaced	P
U.3.1	Replace the text of this Sub-Clause by: The test voltage for ROUTINE TESTING shall be the appropriate voltage in Table 5B (see 5.2.2) of this standard. However, the minimum values shall be as follows: - for BASIC INSULATION or SUPPLEMENTARY INSULATION, 1500Vrms or 2100Vpeak, or; - for REINFORCED INSULATION, 3000Vrms or 4200Vpeak.	Replaced	P
U.3.2	Replace the text of this Sub-Clause by: Twisted pair samples shall be tested in accordance with IEC 60851-5:1996, 4.4.1. The minimum breakdown voltage shall not be less than twice the appropriate voltage in Table 5B (see 5.2.2) of this standard. However, the minimum values shall be as follows: - for BASIC INSULATION or SUPPLEMENTARY INSULATION, 3000Vrms or 4200Vpeak, or; - for REINFORCED INSULATION, 6000Vrms or 8400Vpeak.	Replaced	P
Annex JA	Add Annex JA (Document shredding machines) Document shredding machines shall also comply with the requirements of this Annex except those of ATATIONARY EQUIPMENT used by connecting directly to an AC MAINS SUPPLY of three-phase 200V or more.	Not such product	-
JA.1	Markings and instructions In the easily visible part near the document-slot, by a method capable to make out clearly and not easily disappeared, and by easily		N/A

Appendix I: Other Country National Differences

	understandable wording, shall indicate the symbol of:  And, also the following precautions for use: - that use by an infant/child may cause a hazard of injury ect.; - that a hand can be drawn into the mechanical section for shredding when touching the document-slot; - that clothes can be drawn into the mechanical section for shredding when touching the document-slot; - that hairs can be drawn into the mechanical section for shredding when touching the document-slot; - In case of equipment incorporating a commutator motor, that equipment may catch fire or explode by spraying of flammable gas.		
JA.2	INADVERTENT REACTIVATION Any safety interlock which can be operated by means of the test finger, Figure JA.1, is considered to cause reactivation of the hazard. Compliance is checked by inspection and, where necessary, by a test with the test finger, Figure JA.1.		N/A

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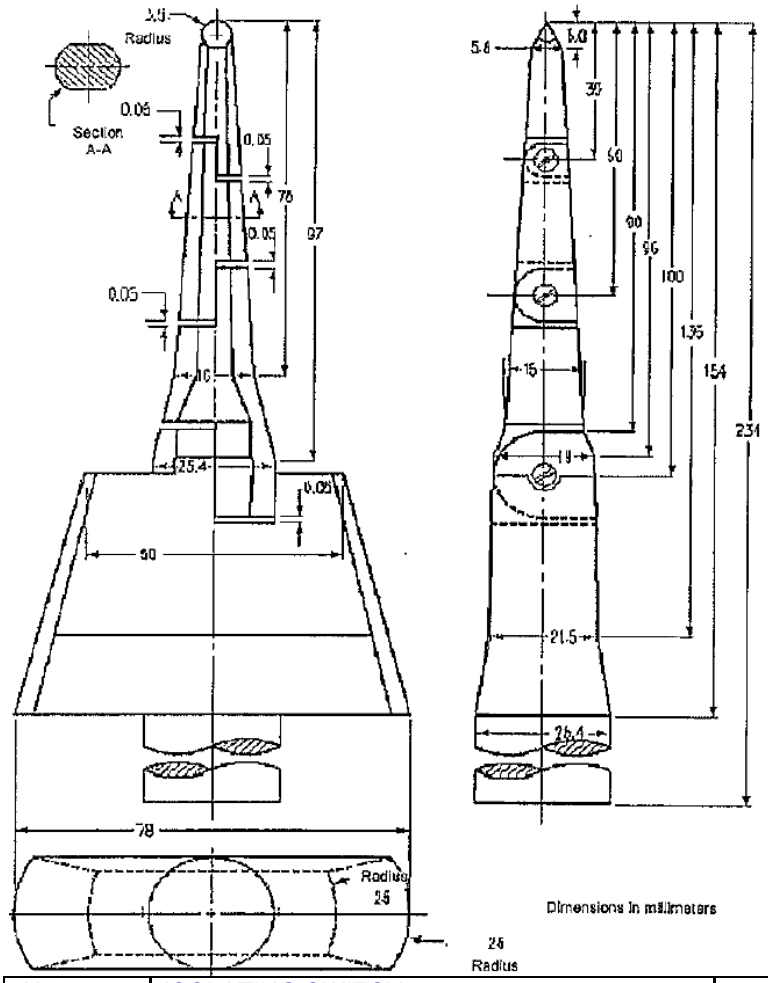
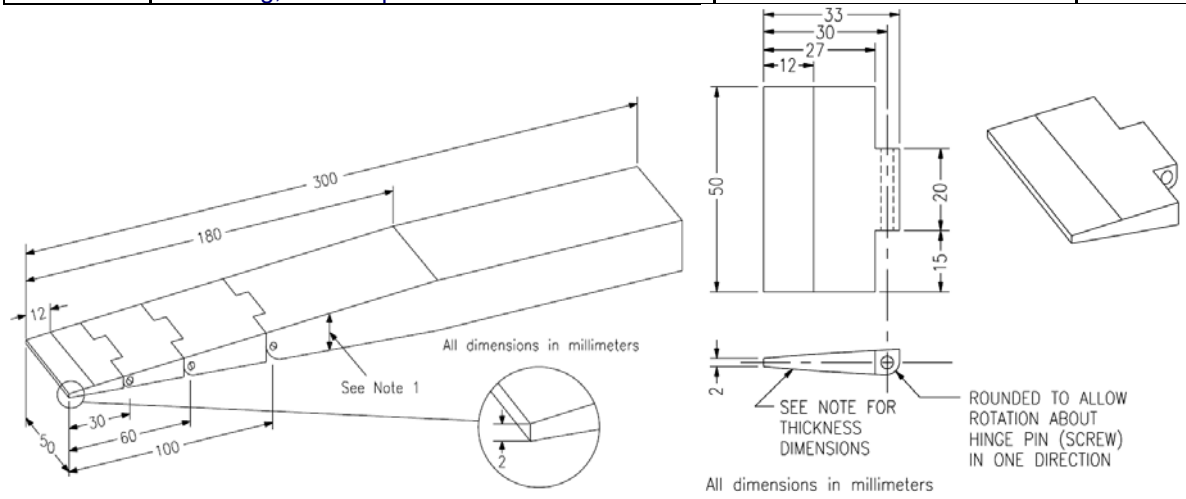


JA.3	ISOLATING SWITCH Document shredding machines shall incorporate an isolating switch complying with sub-clause 3.4.2 as the device disconnecting the power of hazardous moving parts. For this switch, two-position (single-use) switch or multi-position (multifunction) switch (e.g., slide switch) may be used. If two-position switch, the position for “ON” and “OFF” shall be indicated in accordance with sub-clause 1.7.8. If multi-position switch, the position for “OFF” shall be indicated in accordance with sub-clause 1.7.8 and other positions shall be indicated with proper terms or symbols. Compliance is checked by inspection.		N/A
JA.4	PROTECTION IN OPERATOR ACCESS AREAS Any warning shall not be used instead of the		N/A

Appendix I: Other Country National Differences

	structure for preventing access to hazardous moving parts. Document shredding machines shall comply with the following requirements. Push the test finger, Figure JA.1, into all openings in MECHANICAL ENCLOSURES without applying additional force. It shall not be possible to touch hazardous moving parts with the test finger. The document shredding machine is installed as intended, and all face of MECHANICAL ENCLOSURES are subjected to this test. Before testing with the test finger, remove the parts detachable without a tool. Push the wedge-probe, Figure JA.2, into the document-slot. And, against all directions of openings, if straight-cutting type, a force of 45N shall apply to the probe, and 90N if cross-cutting type. In this case, the weight of the probe shall not influence the test. Before testing with the test finger, remove the parts detachable without a tool. It shall not be possible to touch any hazardous moving parts, including the shredding roller or the mechanical section for shredding, with the probe.		



(Details of the top of wedge)

Distance from probe tip	Probe thickness
0 mm	2 mm
12 mm	4 mm
180 mm	24 mm

Note 1 – The probe shall be of changing the thickness linearly. However, the slope shall be changed at the respective points shown in the table.
Note 2 – The allowable dimensional tolerance of the probe is +/- 0.127mm.

Figure JA.2 Wedge-probe

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KOREA NATIONAL DIFFERENCES			
Korean National Differences according to CB Bulletin No. 112A, December 2006 (K 60950-1) IEC Publication 60950-1:2005			
Clause	Requirement + Test	Result - Remark	Verdict
1.5.101	Plugs for the connection of the apparatus to the supply mains shall comply with the Korean requirement (KSC 8305).	Not direct plug-in equipment	N/A
8 : EMC	The apparatus shall comply with the relevant CISPR standards	To be evaluated in the national approval.	N/A

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Chinese NATIONAL DIFFERENCES			
Chinese National Differences according to CB Bulletin No. 112A, December 2006 (GB4943-2001) IEC Publication 60950-1:2005			
Clause	Requirement + Test	Result - Remark	Verdict
1.4.5	If the equipment is intended for direct connection to an AC MAINS SUPPLY, the tolerance on RATED VOLTAGE shall be taken as +10% and -10%, unless	Considered	P
1.7.1	When single rated voltage is given, it should be marked 220V; when a rating voltage range is given, the voltage range shall have hyphen (-) between the minimum and maximum RATED VOLTAGES and should cover 220V; When multiple RATED VOLTAGES are given, they shall be separated by a solidus (/) and one of them must be 220V and also factory default setting should be 220V. RATED FREQUENCY or RATED FREQUENCY RANGE should be 50Hz or cover 50Hz, unless the equipment is designed for d.c. only;	The input voltage range is 100-240V	P
1.7.2	Instructions and equipment marking related to safety shall be written in simplified Chinese in which the equipment is to be installed	Should be evaluated during national approval	N/A
3.2.1	Plugs of apparatus which are intended for the connection of the mains supply should comply wwith requirement of GB1002	Should be evaluated during national approval	N/A