

Test Report issued under the responsibility of:





TEST REPORT

IEC 60950-1

Information technology equipment - Safety -**Part 1: General requirements**

Report Number....:: SHES150700404301

Date of issue....:: 2016-01-29 Total number of pages 52 pages

GlobTek, Inc. Applicant's name:

Address....: 186 Veterans Dr. Northvale, NJ 07647, USA

Test specification:

Standard: IEC 60950-1: 2005 (Second Edition) + Am 1: 2009 + Am 2: 2013

Test procedure:: **CB Scheme**

Non-standard test method: N/A

Test Report Form No.: IEC60950_1F Test Report Form(s) Originator: SGS Fimko Ltd Master TRF: Dated 2014-02

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General disclaimer:

The test results presented in this report relate only to the object tested.

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Test item description....:: I.T.E. Power Supply (Switch Mode)

GlobTek[®],Inc. Trade Mark.....::

Same as applicant Manufacturer:

 $GT-46050-WW05-W2Z^{*****}$ (Each * = 0-9 or A-Z or ()[] or Model/Type reference....::

blank for marketing purposes)

Input: 100 - 240 V; 50 - 60 Hz; 0,3 A Ratings....::

DC-Output: See page 6 – 7 for details

Class II



Test	ing procedure and testing location:		
\boxtimes	SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd.	SGS-CSTC Standards Co., Ltd.	Technical Services (Shanghai)
Test	ing location/ address:	588 West Jindu Road, 201612 Shanghai, Chir	Xinqiao Town, Songjiang, na
	Associated CB Testing Laboratory:		
Test	ing location/ address:		
Test	ed by (name + signature)	Will Zhou M Zhou	
App	roved by (name + signature):	Cherry Sun Cheny S	
	Tablia a supra dama TMD/OTE Come de		
Ш	Testing procedure: TMP/CTF Stage 1:		
Test	ing location/ address		
Test	ed by (name + signature):		
App	roved by (name + signature):		
	Tariana and have MATIOTE Orange	T	
Ш	Testing procedure: WMT/CTF Stage 2:		
Test	ing location/ address		
Test	ed by (name + signature):		
Witn	essed by (name + signature):		
App	roved by (name + signature):		
	Testing procedure: SMT/CTF Stage 3 or 4:		
Test	ing location/ address:		
Test	ed by (name + signature):		
Witn	essed by (name + signature):		
App	roved by (name + signature):		
Sup	ervised by (name + signature):		



List of Attachments (including a total number of	pages in each attachment):	
Attachment 1 – 3 pages of Photos documents;		
Attachment 2 – 2 pages of Circuit diagram and PCB layout;		
Attachment 3– 1 page of User manual;		
Attachment 4 – 19 pages of European group differen	ces and national differences;	
Attachment 5– 7 pages deviations of Australia and/or	New Zealand;	
Attachment 6 – 1 page deviation of Korea;		
Attachment 7– 12 pages deviation of JAPAN;		
Attachment 8 – 4 pages of REGULATORY REQUIRE	EMENTS FOR SINGAPORE:	
Attachment 9 – 6 pages of deviation of China.	,	
The second of th		
Summary of testing:		
_	s of IEC 60950-1:2005 (Second Edition) + Am 1:2009	
+ Am 2:2013.		
When determining the test conclusion, the Measurer	ment Uncertainty of test has been considered.	
The EMC for Korean deviations is not evaluated.		
After evaluation, models GT-46050-0505-W2Z repre	esentative for test for these models with max. output	
power.		
Heating test (4.5):		
Heating test (4.5): Ta = 40 °C (declared by manufacturer)		
Tamb = 40 °C		
Tests were carried out at 90 Va.c. and 264 Va.c		
K-type thermocouple used for temperature measure		
Tests performed (name of test and test	Testing location:	
clause):	SGS-CSTC Standards Technical Services	
☐ 1. GENERAL	(Shanghai) Co., Ltd.	
□ 2. PROTECTION FROM HAZARDS □ 2. PROTECTION FROM HAZARDS □ 3. PROTECTION FROM HAZ	588 West Jindu Road, Xinqiao Town, Songjiang, 201612 Shanghai, China	
□ 3. WIRING, CONNECTIONS AND SUPPLY	201012 Sharighai, Ghina	
☐ 4. PHYSICAL REQUIREMENTS ☐ 5. FLEOTRICAL REQUIREMENTS AND		
☑ 5. ELECTRICAL REQUIREMENTS AND SIMULATED ABNORMAL CONDITIONS		
6. CONNECTION TO TELECOMMUNICATION NETWORKS		
7. CONNECTION TO CABLE DISTRIBUTION		
SYSTEMS		



Summary of compliance with National Differences:

List of countries addressed

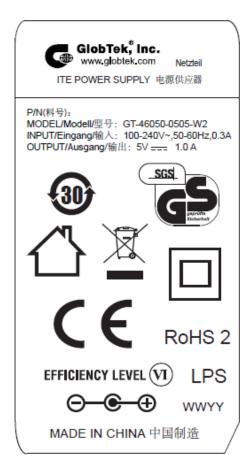
- 1. EU Group Differences (EN 60950-1: 2006 + A11: 2009 + A1: 2010 + A12: 2011+ A2: 2013)
- 2. EU Special National Conditions: none
- 3. Compliance with the National requirements of JP (J60950-1(H22)), KR (K60950-1) and AS/NZS (AS/NZS 60950.1:2011 +A1:2012) as given in CB Bulletin was also confirmed.
- Risk analysis and evaluation for PAHS has been performed (AfPS GS 2014:01 PAK, EK1 374-089 Rev2): see PAHS risk assessment report no. SHES1507004043IT/CHEM
- 5. CN have not informed its national differences to IEC 60950-1: 2005 (Second Edition) + A1: 2009, the national differences to IEC 60950-1: 2005 have been used.
- BR had not informed its national differences to IEC 60950-1: 2005 (Second Edition) + A1: 2009 + A2: 2013 in CB Bulletin.

The product fulfils the above requirements.

Copy of marking plate:

The artwork below may be only a draft. The use of certification marks on a product must be authorized by the respective National Certification Body that own these marks.

(Additional requirements for markings. See 1.7 NOTE)



Remark: The marking for GT-46050-0505-W2 is representative all models of GT-46050-WW05-W2Z****** Marking for other models are same as above except model name and output parameters.



	<u> </u>
Test item particulars:	
Equipment mobility:	[] movable [] hand-held [] transportable [] stationary [] for building-in [x] direct plug-in
Connection to the mains	[x] pluggable equipment [x] type A [] type B [] permanent connection [] detachable power supply cord [] non-detachable power supply cord [] not directly connected to the mains
Operating condition	[x] continuous [] rated operating / resting time:
Access location:	[x] operator accessible [] restricted access location
Over voltage category (OVC):	[] OVC I [x] OVC II [] OVC III [] OVC IV [] other:
Mains supply tolerance (%) or absolute mains supply values:	\pm 10% according to manufacturer
Tested for IT power systems:	[x] Yes [] No
IT testing, phase-phase voltage (V)	N/A
Class of equipment:	[] Class I [x] Class II [] Class III [] Not classified
Considered current rating of protective device as part of the building installation (A)	16 A
Pollution degree (PD)	[] PD 1 [x] PD 2 [] PD 3
IP protection class:	IP20
Altitude during operation (m):	≤ 2000 m
Altitude of test laboratory (m):	≤ 100 m
Mass of equipment (kg):	0,058 kg
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::	2015-08-03
Date (s) of performance of tests:	2015-08-03 to 2015-08-26
General remarks:	



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

"(see appended table)" refers to a table appended to the report.

Throughout this report a comma is used as the decimal separator.

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Manufacturer's Dec	claration per sub-clause 4.2.5 o	f IECEE 02:
includes more than of declaration from the sample(s) submitted representative of the	btaining a CB Test Certificate one factory location and a Manufacturer stating that the for evaluation is (are) products from each factory has	
When differences e	exist; they shall be identified in	the General product information section.
Name and address	of factory (ies)	: Factory inspection:
		1, GlobTek (Suzhou) Co.,Ltd.
		Building 4, 76 Jinling East Road, Suzhou Industrial Park, Suzhou, 215021 Jiangsu, China
		No Factory inspection:
		2, GlobTek, Inc.
		186 Veterans Dr. Northvale, NJ 07647 USA
General product in	formation:	
Product name	I.T.E. Power Supply (Switch M	Mode)
Model	GT-46050-WW05-W2Z****** (purposes)	Each * = 0-9 or A-Z or ()[] or blank for marketing
		can be E for European plug, U for British plug, ban plug/Taiwan plug, C for Chinese plug, A for

Each * = 0.9 or A-Z or ()[] or blank for marketing purposes.

The EUT are Class II switching power adaptors for ITE and designed for

All models are identical except for model No. and output ratings

Input: 100 - 240 V; 50 - 60 Hz; 0,3 A

DC-Output: 5 V; Max1,0 A; Max. 5W

continuous operation. They are indoor use only.

Model

Power rating

Functions



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u	1110	, , ,	\mathbf{I}	·

Examples of model name and relevant output ratings.:

Model	wattage
GT-46050-0505-W2	5
GT-46050-0305-W2	3

Abbreviations used in the report:

 normal conditions functional insulation double insulation between parts of opposite 	N.C. OP DI	single fault conditionsbasic insulationsupplementary insulation	S.F.C BI SI
polarity	ВОР	- reinforced insulation	RI



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

1 GENERAL —

1.5	Components		_
1.5.1	General		Р
	Comply with IEC 60950-1 or relevant component standard	(see appended tables 1.5.1)	Р
1.5.2	Evaluation and testing of components	Certified components are used in accordance with their ratings, certifications and they comply with applicable parts of this standard. Components not certified are used in accordance with their ratings and they comply with applicable parts of IEC 60950-1 and the relevant component standard. Components, for which no relevant IEC-standard exists, have been tested under the conditions occurring in the equipment, using applicable parts of IEC 60950-1.	P
1.5.3	Thermal controls		N/A
1.5.4	Transformers		Р
1.5.5	Interconnecting cables		Р
1.5.6	Capacitors bridging insulation	Refer to appended table 1.5.1.	N/A
1.5.7	Resistors bridging insulation		Р
1.5.7.1	Resistors bridging functional, basic or supplementary insulation	All resistors are after Fusible Resistor (RF3), there are only functional insulation.	Р
1.5.7.2	Resistors bridging double or reinforced insulation between a.c. mains and other circuits		N/A
1.5.7.3	Resistors bridging double or reinforced insulation between a.c. mains and antenna or coaxial cable		N/A
1.5.8	Components in equipment for IT power systems		N/A
1.5.9	Surge suppressors	The VDR (MOV1) are in compliance with Annex Q	Р
1.5.9.1	General	A fusible resistor (RF3) is connected in series with the VDR (MOV1)	Р
1.5.9.2	Protection of VDRs		Р



	IEC 60950-1				
Clause	Requirement + Test	Result - Remark	Verdict		
1.5.9.3	Bridging of functional insulation by a VDR	Certified VDR (MOV1) connected between line and neutral, located after fuse resistor RF3	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		_
1.6.1	AC power distribution systems		Р
1.6.2	Input current	(see appended table 1.6.2)	Р
1.6.3	Voltage limit of hand-held equipment	Not a hand-held equipment.	N/A
1.6.4	Neutral conductor		Р

1.7	Marking and instructions		_
1.7.1	Power rating and identification markings		Р
1.7.1.1	Power rating marking		Р
	Multiple mains supply connections		N/A
	Rated voltage(s) or voltage range(s) (V)	100 - 240 V	Р
	Symbol for nature of supply, for d.c. only:		N/A
	Rated frequency or rated frequency range (Hz):	50 - 60 Hz	Р
	Rated current (mA or A)	0,3 A	Р
1.7.1.2	Identification markings		Р
	Manufacturer's name or trade-mark or identification mark	Trade mark : GlobTek®,Inc.	Р
	Model identification or type reference	GT-46050-WW05-W2Z****** (Each * = 0-9 or A-Z or ()[] or blank for marketing purposes)	Р
	Symbol for Class II equipment only	Class II symbol used in label.	Р
	Other markings and symbols		Р
1.7.1.3	Use of graphical symbols		Р
1.7.2	Safety instructions and marking	See below.	Р
1.7.2.1	General		Р
1.7.2.2	Disconnect devices	Plug	Р
1.7.2.3	Overcurrent protective device	Not pluggable equipment type B or permanently connected equipment.	N/A

Р



	IEC 60950-1		
Clause	Requirement + Test	Result - Remark	Verdict
1.7.2.4	IT power distribution systems		N/A
1.7.2.5	Operator access with a tool	No tool used for access to operator access area.	N/A
1.7.2.6	Ozone	Not produce ozone.	N/A
1.7.3	Short duty cycles	Equipment is designed for continuous operation.	N/A
1.7.4	Supply voltage adjustment:	No voltage adjustment.	N/A
	Methods and means of adjustment; reference to installation instructions:		N/A
1.7.5	Power outlets on the equipment	No power outlet.	N/A
1.7.6	Fuse identification (marking, special fusing characteristics, cross-reference):	Provide a fuse resistor: RF3: 10 ohm 1W	Р
1.7.7	Wiring terminals		N/A
1.7.7.1	Protective earthing and bonding terminals		N/A
1.7.7.2	Terminals for a.c. mains supply conductors		N/A
1.7.7.3	Terminals for d.c. mains supply conductors		N/A
1.7.8	Controls and indicators		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	No control uses figures.	N/A
1.7.9	Isolation of multiple power sources:	No multiple power source.	N/A
1.7.10	Thermostats and other regulating devices:	No such device.	N/A
1.7.11	Durability	The marking withstands required tests.	Р
1.7.12	Removable parts	No marking placed on removable parts	Р
1.7.13	Replaceable batteries		N/A
	Language(s)		
1.7.14	Equipment for restricted access locations:		N/A
2	PROTECTION FROM HAZARDS		_
2.1	Protection from electric shock and energy hazar	ds	_
2.1.1	Protection in operator access areas		Р
			1

Access to energized parts

2.1.1.1



	IEC 60950-1		
Clause	Requirement + Test	Result - Remark	Verdict
	Test by inspection	See below.	Р
	Test with test finger (Figure 2A)	No access.	P
	Test with test pin (Figure 2B)		P
	Test with test probe (Figure 2C)	No TNV circuit.	N/A
2.1.1.2	Battery compartments		N/A
2.1.1.3	Access to ELV wiring	No internal wiring at ELV.	N/A
	Working voltage (Vpeak or Vrms); minimum distance through insulation (mm)		_
2.1.1.4	Access to hazardous voltage circuit wiring	All accessible parts are separated from internal wiring at hazardous voltage by double or reinforced insulation.	N/A
2.1.1.5	Energy hazards	No energy hazard in operator access area. Checked by means of the test finger. (see appended table)	P
2.1.1.6	Manual controls	No such part.	N/A
2.1.1.7	Discharge of capacitors in equipment		N/A
	Measured voltage (V); time-constant (s)		_
2.1.1.8	Energy hazards – d.c. mains supply		N/A
	a) Capacitor connected to the d.c. mains supply		N/A
	b) Internal battery connected to the d.c. mains supply :		N/A
2.1.1.9	Audio amplifiers		N/A
2.1.2	Protection in service access areas		N/A
2.1.3	Protection in restricted access locations		N/A
2.2	SELV circuits		

2.2	SELV circuits		_
2.2.1	General requirements		Р
2.2.2	Voltages under normal conditions (V):	(see appended table 2.2)	Р
2.2.3	Voltages under fault conditions (V):	(see appended table 2.2)	Р
2.2.4	Connection of SELV circuits to other circuits:	SELV circuits are only connected to other SELV circuits.	Р

2.3	TNV circuits		
2.3.1	Limits	No TNV circuit.	N/A
	Type of TNV circuits:		
2.3.2	Separation from other circuits and from accessible parts		N/A



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Clause	Requirement + Test Result - Remark	Verdict
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	
2.4.1	General requirements	N/A
2.4.2	Limit values	N/A
	Frequency (Hz)	
	Measured current (mA)	
	Measured voltage (V)	_
	Measured circuit capacitance (nF or μF)	_
2.4.3	Connection of limited current circuits to other circuits	N/A
		L
2.5	Limited power sources	_
	a) Inherently limited output	Р
	b) Impedance limited output	N/A
	c) Regulating network or IC current limiter, limits output under normal operating and single fault condition (see appended table 2.5)	Р
	Use of integrated circuit (IC) current limiters	N/A
	d) Overcurrent protective device limited output	N/A
	Max. output voltage (V), max. output current (A), max. apparent power (VA):	_
	Current rating of overcurrent protective device (A) .:	
2.6	Provisions for earthing and bonding	
2.6.1	Protective earthing	N/A
2.6.2	Functional earthing	N/A
0.00	Use of symbol for functional earthing	N/A
2.6.3	Protective earthing and protective bonding conductors	N/A



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Clause	Requirement + Test	Result - Remark	Verdict	
2.6.3.1	General		N/A	
2.6.3.2	Size of protective earthing conductors		N/A	
	Rated current (A), cross-sectional area (mm²), AWG:		_	
2.6.3.3	Size of protective bonding conductors		N/A	
	Rated current (A), cross-sectional area (mm²), AWG:		_	
	Protective current rating (A), cross-sectional area (mm²), AWG:		N/A	
2.6.3.4	Resistance of earthing conductors and their terminations; resistance (Ω) , voltage drop (V), test current (A), duration (min):		N/A	
2.6.3.5	Colour of insulation:		N/A	
2.6.4	Terminals		N/A	
2.6.4.1	General		N/A	
2.6.4.2	Protective earthing and bonding terminals		N/A	
	Rated current (A), type, nominal thread diameter (mm):			
2.6.4.3	Separation of the protective earthing conductor from protective bonding conductors		N/A	
2.6.5	Integrity of protective earthing		N/A	
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		_
2.7.1	Basic requirements	Protective devices are integrated in equipment.	Р
	Instructions when protection relies on building installation	The equipment is pluggable Type A.	N/A
2.7.2	Faults not simulated in 5.3.7		Р
2.7.3	Short-circuit backup protection		Р
2.7.4	Number and location of protective devices:	Only one Fuse resistor in Line	N/A



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Clause	Requirement + Test	Result - Remark	Verdict
-		,	
2.7.5	Protection by several devices		N/A
2.7.6	Warning to service personnel:		N/A

2.8	Safety interlocks		
2.8.1	General principles	No safety interlock 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
	Protection against extreme hazard		N/A
2.8.5	Moving parts		N/A
2.8.6	Overriding		N/A
2.8.7	Switches, relays and their related circuits		N/A
2.8.7.1	Separation distances for contact gaps and their related circuits (mm)		N/A
2.8.7.2	Overload test		N/A
2.8.7.3	Endurance test		N/A
2.8.7.4	Electric strength test		N/A
2.8.8	Mechanical actuators		N/A

2.9	Electrical insulation		_
2.9.1	Properties of insulating materials	Neither natural rubber, materials containing asbestos nor hygroscopic materials are used as insulation. No driving belts or couplings used.	Р
2.9.2	Humidity conditioning	Tested for 120 hrs.	Р
	Relative humidity (%), temperature (°C):	95%, 40 °C	
2.9.3	Grade of insulation	Insulation is considered to be functional, basic, supplementary, reinforced or double insulation.	Р
2.9.4	Separation from hazardous voltages		Р
	Method(s) used:	b) (Method 1)	_

2.10	Clearances, creepage distances and distances through insulation	_	
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IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
2.10.1	General	All hazardous voltage parts have been enclosed in power supply unit, which has been certified seperately. All circuits external to the power supply are SELV or protective earth. The insulation is functional.	Р
2.10.1.1	Frequency		Р
2.10.1.2	Pollution degrees	2	Р
2.10.1.3	Reduced values for functional insulation		Р
2.10.1.4	Intervening unconnected conductive parts		N/A
2.10.1.5	Insulation with varying dimensions		N/A
2.10.1.6	Special separation requirements		N/A
2.10.1.7	Insulation in circuits generating starting pulses		N/A
2.10.2	Determination of working voltage		Р
2.10.2.1	General		Р
2.10.2.2	RMS working voltage	(See appended table 2.10.2)	Р
2.10.2.3	Peak working voltage	(See appended table 2.10.2)	Р
2.10.3	Clearances	(see appended table 2.10.3 and 2.10.4)	Р
2.10.3.1	General		Р
2.10.3.2	Mains transient voltages		Р
	a) AC mains supply	Overvoltage Category II	Р
	b) Earthed d.c. mains supplies		N/A
	c) Unearthed d.c. mains supplies		N/A
	d) Battery operation		N/A
2.10.3.3	Clearances in primary circuits	(see appended table 2.10.3 and 2.10.4)	Р
2.10.3.4	Clearances in secondary circuits		N/A
2.10.3.5	Clearances in circuits having starting pulses		N/A
2.10.3.6	Transients from a.c. mains supply	Overvoltage category II for secondary circuit and transient voltage 1500Vpeak.	Р
2.10.3.7	Transients from d.c. mains supply		N/A
2.10.3.8	Transients from telecommunication networks and cable distribution systems		N/A
2.10.3.9	Measurement of transient voltage levels		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



	IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict	
	b) Transients from a telecommunication network :		N/A	
2.10.4	Creepage distances	(see appended table 2.10.3 and 2.10.4)	Р	
2.10.4.1	General		Р	
2.10.4.2	Material group and comparative tracking index		Р	
	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)	Р	
2.10.5	Solid insulation		Р	
2.10.5.1	General		Р	
2.10.5.2	Distances through insulation	(see appended table 2.10.5)	Р	
2.10.5.3	Insulating compound as solid insulation		N/A	
2.10.5.4	Semiconductor devices		Р	
2.10.5.5.	Cemented joints		N/A	
2.10.5.6	Thin sheet material – General		Р	
2.10.5.7	Separable thin sheet material	Reinforced insulation.	Р	
	Number of layers (pcs):	Two layers used, each of which complies with the required electric strength test (see appended table 2.10.5)	_	
2.10.5.8	Non-separable thin sheet material		N/A	
2.10.5.9	Thin sheet material – standard test procedure		N/A	
	Electric strength test		_	
2.10.5.10	Thin sheet material – alternative test procedure		Р	
	Electric strength test	(see appended table 2.10.5)		
2.10.5.11	Insulation in wound components		Р	
2.10.5.12	Wire in wound components	Certified source of triple	Р	
	Working voltage		Р	
	a) Basic insulation not under stress		N/A	
	b) Basic, supplementary, reinforced insulation:		N/A	
	c) Compliance with Annex U	Triple insulation wire uesd as secondary winding.	Р	
	Two wires in contact inside wound component; angle between 45° and 90°	Insulation tube	Р	
2.10.5.13	Wire with solvent-based enamel in wound components		N/A	
	Electric strength test		_	
	Routine test		N/A	



	IEC 60950-1				
Clause	Requirement + Test	Result - Remark	Verdict		
2.10.5.14	Additional insulation in wound components		N/A		
2.10.5.14	'		N/A		
	Working voltage				
	- Basic insulation not under stress		N/A		
0.40.0	- Supplementary, reinforced insulation		N/A		
2.10.6	Construction of printed boards		Р		
2.10.6.1	Uncoated printed boards	(see appended table 2.10.3 and 2.10.4)	Р		
2.10.6.2	Coated printed boards		N/A		
2.10.6.3	Insulation between conductors on the same inner surface of a printed board		N/A		
2.10.6.4	Insulation between conductors on different layers of a printed board		N/A		
	Distance through insulation		N/A		
	Number of insulation layers (pcs)		N/A		
2.10.7	Component external terminations		N/A		
2.10.8	Tests on coated printed boards and coated components		N/A		
2.10.8.1	Sample preparation and preliminary inspection		N/A		
2.10.8.2	Thermal conditioning		N/A		
2.10.8.3	Electric strength test		N/A		
2.10.8.4	Abrasion resistance test		N/A		
2.10.9	Thermal cycling		N/A		
2.10.10	Test for Pollution Degree 1 environment and insulating compound		N/A		
2.10.11	Tests for semiconductor devices and cemented joints		N/A		
2.10.12	Enclosed and sealed parts		N/A		

3	WIRING, CONNECTIONS AND SUPPLY		
3.1	General		_
3.1.1	Current rating and overcurrent protection	Adequate cross sectional areas on internal wiring.	Р
3.1.2	Protection against mechanical damage	The wires are routed away from sharp edges and parts which could damage insulation.	Р
3.1.3	Securing of internal wiring	Internal wiring is secured against excessive strain, loosening of terminals and damage to the conductor insulation.	P
3.1.4	Insulation of conductors		Р



	IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict	
3.1.5	Beads and ceramic insulators	No such component.	N/A	
3.1.6	Screws for electrical contact pressure		N/A	
3.1.7	Insulating materials in electrical connections	No contact pressure through insulating material.	N/A	
3.1.8	Self-tapping and spaced thread screws		N/A	
3.1.9	Termination of conductors	Terminations cannot become displaced so that clearances and creepage distances can be reduced.	Р	
	10 N pull test		Р	
3.1.10	Sleeving on wiring		N/A	

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3.2	Connection to a mains supply		
3.2.1	Means of connection		Р
3.2.1.1	Connection to an a.c. mains supply	The equipment is provided with appliance inlet.	Р
3.2.1.2	Connection to a d.c. mains supply		N/A
3.2.2	Multiple supply connections		N/A
3.2.3	Permanently connected equipment	Not permanently connected equipment.	N/A
	Number of conductors, diameter of cable and conduits (mm):		_
3.2.4	Appliance inlets	Direct plug-in equipment	N/A
3.2.5	Power supply cords	Direct plug-in equipment	N/A
3.2.5.1	AC power supply cords		N/A
	Type:		
	Rated current (A), cross-sectional area (mm²), AWG:		_
3.2.5.2	DC power supply cords		N/A
3.2.6	Cord anchorages and strain relief		N/A
	Mass of equipment (kg), pull (N):		
	Longitudinal displacement (mm):		
3.2.7	Protection against mechanical damage	Direct plug-in equipment	N/A
3.2.8	Cord guards		N/A
	Diameter or minor dimension D (mm); test mass (g)		_
	Radius of curvature of cord (mm):		_
3.2.9	Supply wiring space		N/A



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

3.3	Wiring terminals for connection of external conductors		_
3.3.1	Wiring terminals	The equipment is not permanently connected of provided with a non-detachable power suppy cord.	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 (mm²)		
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		_
3.4.1	General requirement		Р
3.4.2	Disconnect devices	The plug of direct plug-in is considered to be the disconnect device.	Р
3.4.3	Permanently connected equipment	Not permanently connected equipment.	N/A
3.4.4	Parts which remain energized	No parts remain energized after the disconnect device is pull out.	Р
3.4.5	Switches in flexible cords	No switch in flexible cord.	N/A
3.4.6	Number of poles - single-phase and d.c. equipment	Disconnect device disconnects both poles simultaneously.	Р
3.4.7	Number of poles - three-phase equipment	Single phase equipment.	N/A
3.4.8	Switches as disconnect devices		N/A
3.4.9	Plugs as disconnect devices	The plug of direct plug-in is considered to be the disconnect device.	Р
3.4.10	Interconnected equipment	No interconnections using hazardous voltages.	N/A
3.4.11	Multiple power sources		N/A

3.5	Interconnection of equipment	_
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IEC 60950-1				
Clause	Requirement + Test	Result - Remark	Verdict	
3.5.1	General requirements		Р	
3.5.2	'	SELV and LCC circuit	P	
3.5.3	ELV circuits as interconnection circuits	No ELV interconnection.	N/A	
3.5.4	Data ports for additional equipment		N/A	

4	PHYSICAL REQUIREMENTS		
4.1	Stability		_
	Angle of 10°	Direct plug in equipment.	N/A
	Test force (N)	Not floor-standing equipment.	N/A

4.2	Mechanical strength		
4.2.1	General		Р
	Rack-mounted equipment.		N/A
4.2.2	Steady force test, 10 N	No hazard.	Р
4.2.3	Steady force test, 30 N		N/A
4.2.4	Steady force test, 250 N	No hazard.	Р
4.2.5	Impact test		N/A
	Fall test		N/A
	Swing test		N/A
4.2.6	Drop test; height (mm)	1000 mm	Р
4.2.7	Stress relief test	89 °C; 7 h	Р
4.2.8	Cathode ray tubes	No cathode ray tube.	N/A
	Picture tube separately certified		N/A
4.2.9	High pressure lamps	No high pressure lamp.	N/A
4.2.10	Wall or ceiling mounted equipment; force (N):	Not intended to be mounted on a wall or ceiling.	N/A

4.3	Design and construction		_
4.3.1	Edges and corners	All edges and corners are rounded and smoothed.	Р
4.3.2	Handles and manual controls; force (N):		N/A
4.3.3	Adjustable controls	No adjustable control.	N/A
4.3.4	Securing of parts		Р
4.3.5	Connection by plugs and sockets		N/A
4.3.6	Direct plug-in equipment		Р



IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
	Torque:	Less than 0.25 Nm	
		Plug used:	
		US, EU, AU UK and CN plug.	
		1) US plug:	
		The dimension complied with	
		the requirement of ANSI/NEMA	
		WD6 and testing complied with	
		UL1310 as below	
		a) Weight and Moment test:	
		Result:	
		W=58,0g (≤794g)	
		S=15,8mm	
		X=9,97mm	
		Z=12,75mm	
		WY/Z=73,69g (≤1361g)	
		WY/S=59,47g (≤1361g)	
		WX=578.26gm (≤57104gm)	
		b) Blade securement test	
		Result:	
		Blade 1: 0,01mm	
		Blade 2: 0,01mm	
		Blade 1 and 2: 0,01mm	
		The blades did not loosen	
		by more than 2,4 mm or pull	
		out	
		All testing repeat two times	
		c) Security of Input contacts	
		Result:	
		Blade 1: 0.01mm Blade 2: 0.01mm	
		Biade 2: 0.01mm Both Blades: 0.01mm	
		The blades did not loosen	
		to a degree that would	
		introduce a risk of a fire or	
		an electric shock	
		All testing repeat two times	
		d) Resistance to crushing	
		Result:	
		There was no splitting,	
		cracking or shattering of the	
		enclosure that would	
		expose internal wiring or	
		hazardous live parts	



	IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict	
	Compliance with the relevant mains plug standard	e) Rod pressure: Result: The equipment was connected to 264Vac, 60Hz, during this test, peak voltage and touch current were monitored between earth ground and all parts of the enclosure (the outer foil wrap). Following the	P	
		test, the sample was subjected to the Electric Strength Test. Max. voltage=26.6Vpk f) The perimeter of the face section from which the blades project do not less than 7.9 mm from any point on either blade		
		Electric Strength tests performed after all tests as above. (see appended table 5.2) 2) EU plug: The main plug has been evaluated according to EN50075, Report No. TP- 12065 (TP12100042-ETS) 3) AU plug:		
		The main plug has been evaluated according to AS/NZS 3112: 2011 + A1I 2012, Report No. TP-12064 (TP12100040-ETS) 4) UK plug: The main plug has been evaluated according to BS 1361-1: 1995 + A1: 1997 + A2: 2003+ A3: 2007+ A4: 2012, Report No. TP-12066		
		(TP12100043-ETS) 5) CN plug:The plug have to be Checked The plug have to be checked during national approval		



	IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict	
4.3.7	Heating elements in earthed equipment		N/A	
4.3.8	Batteries		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 oil and grease.	N/A	
4.3.10	Dust, powders, liquids and gases	Not intend to product dust, or using powders, liquids and gases.	N/A	
4.3.11	Containers for liquids or gases	No such containers used.	N/A	
4.3.12	Flammable liquids	No flammable liquids.	N/A	
	Quantity of liquid (I)		N/A	
	Flash point (°C)		N/A	
4.3.13	Radiation		N/A	
4.3.13.1	General		N/A	
4.3.13.2	Ionizing radiation	No ionizing radiation.	N/A	
	Measured radiation (pA/kg)		_	
	Measured high-voltage (kV):			
	Measured focus voltage (kV)			
	CRT markings			
4.3.13.3	Effect of ultraviolet (UV) radiation on materials	No UV lamp used.	N/A	
	Part, property, retention after test, flammability classification		N/A	
4.3.13.4	Human exposure to ultraviolet (UV) radiation:	No UV radiation.	N/A	
4.3.13.5	Lasers (including laser diodes) and LEDs		N/A	
4.3.13.5.1	Lasers (including laser diodes)		N/A	
	Laser class			
4.3.13.5.2	Light emitting diodes (LEDs)		N/A	
4.3.13.6	Other types:		N/A	

4.4	Protection against hazardous moving parts		_
4.4.1	General	No moving parts.	N/A
4.4.2	Protection in operator access areas:		N/A
	Household and home/office document/media shredders		N/A
4.4.3	Protection in restricted access locations:		N/A



	IEC 60950-1		
Clause	Requirement + Test	Result - Remark	Verdict
4.4.4	Protection in service access areas		N/A
4.4.5	Protection against moving fan blades		N/A
4.4.5.1	General		N/A
	Not considered to cause pain or injury. a)		N/A
	Is considered to cause pain, not injury. b)		N/A
	Considered to cause injury. c)		N/A
4.4.5.2	Protection for users		N/A
	Use of symbol or warning		N/A
4.4.5.3	Protection for service persons		N/A
	Use of symbol or warning		N/A

4.5	Thermal requirements		_
4.5.1	General		Р
4.5.2	Temperature tests		Р
	Normal load condition per Annex L:	Rated load with continuous operation.	_
4.5.3	Temperature limits for materials	(see appended table 4.5)	Р
4.5.4	Touch temperature limits	(see appended table 4.5)	Р
4.5.5	Resistance to abnormal heat:	(see appended table 4.5.5)	Р

4.6	Openings in enclosures		_
4.6.1	Top and side openings	No opening in the equipment.	Р
	Dimensions (mm):		
4.6.2	Bottoms of fire enclosures	No opening in the equipment.	Р
	Construction of the bottomm, dimensions (mm):		_
4.6.3	Doors or covers in fire enclosures	No cover can be removed by hand.	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	
4.7.1	Reducing the risk of ignition and spread of flame	Р



IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
	Method 1, selection and application of components wiring and materials	(See appended table 4.7)	Р
	Method 2, application of all of simulated fault condition tests		N/A
4.7.2	Conditions for a fire enclosure		Р
4.7.2.1	Parts requiring a fire enclosure	The fire enclosure covers all parts.	Р
4.7.2.2	Parts not requiring a fire enclosure		N/A
4.7.3	Materials		Р
4.7.3.1	General	Components and materials have adequate flammability classification. See appended table 1.5.1.	Р
4.7.3.2	Materials for fire enclosures	The fire enclosure is V-1 material.	Р
4.7.3.3	Materials for components and other parts outside fire enclosures	No parts outside the fire enclosure.	N/A
4.7.3.4	Materials for components and other parts inside fire enclosures		Р
4.7.3.5	Materials for air filter assemblies	No air filter.	N/A
4.7.3.6	Materials used in high-voltage components	No high-voltage component.	N/A

5	ELECTRICAL REQUIREMENTS AND SIMULATED ABNORMAL CONDITIONS		
5.1	Touch current and protective conductor current		
5.1.1	General	(see appended Table 5.1)	Р
5.1.2	Configuration of equipment under test (EUT)		Р
5.1.2.1	Single connection to an a.c. mains supply		Р
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		Р
5.1.4	Application of measuring instrument	Measuring instrument D1 is used.	Р
5.1.5	Test procedure		Р
5.1.6	Test measurements		Р
	Supply voltage (V):	(see appended table 5.1)	
	Measured touch current (mA)	(see appended table 5.1)	
	Max. allowed touch current (mA)	(see appended table 5.1)	_
	Measured protective conductor current (mA):		

N/A

N/A

N/A



5.1.8.2

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Clause	Requirement + Test	Result - Remark	Verdict
	Max. allowed protective conductor current (mA):		_
5.1.7	Equipment with touch current exceeding 3,5 mA		N/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 circuit provided	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)		

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

Max. allowed touch current (mA):

a) EUT with earthed telecommunication ports:

b) EUT whose telecommunication ports have no

Summation of touch currents from

telecommunication networks

reference to protective earth

5.3	Abnormal operating and fault conditions		_
5.3.1	Protection against overload and abnormal operation	(see appended table 5.3)	Р
5.3.2	Motors	No motors.	N/A
5.3.3	Transformers	See Annex C and appended table C.2.	Р
5.3.4	Functional insulation:	Complies with a), b) and c).	Р
5.3.5	Electromechanical components	No such components.	N/A
5.3.6	Audio amplifiers in ITE	No audio amplifier.	N/A
5.3.7	Simulation of faults	(see appended table 5.3)	Р
5.3.8	Unattended equipment		N/A
5.3.9	Compliance criteria for abnormal operating and fault conditions	No fire or molten metal occurred and no deformation of enclosure during the tests.	Р
5.3.9.1	During the tests	No fire or molten metal occurred and no deformation of enclosure during the tests.	Р



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Clause	Requirement + Test	Result - Remark	Verdict
5.3.9.2	After the tests	Electric strength test made.	Р
6	CONNECTION TO TELECOMMUNICATION NETV	VORKS	
6.1	Protection of telecommunication network servic equipment connected to the network, from haza		_
6.1.1	Protection from hazardous voltages		N/A
6.1.2	Separation of the telecommunication network from e	earth	N/A
6.1.2.1	Requirements		N/A
	Supply voltage (V):		
	Current in the test circuit (mA):		_
6.1.2.2	Exclusions:		N/A
	,		
6.2	Protection of equipment users from overvoltage networks	s on telecommunication	_
6.2.1	Separation requirements		N/A
6.2.2	Electric strength test procedure		N/A
6.2.2.1	Impulse test		N/A
6.2.2.2	Steady-state test		N/A
6.2.2.3	Compliance criteria		N/A
6.3	Protection of the telecommunication wiring syst	em from overheating	_
	Max. output current (A)		_
	Current limiting method		
	T		
7	CONNECTION TO CABLE DISTRIBUTION SYSTE	EMS	<u> </u>
7.1	General		N/A
7.2	Protection of cable distribution system service persons, and users of other equipment connected to the system, from hazardous voltages in the equipment		N/A
7.3	Protection of equipment users from overvoltages on the cable distribution system		N/A
7.4	Insulation between primary circuits and cable distribution systems		N/A
7.4.1	General		N/A
7.4.2	Voltage surge test		N/A
7.4.3	Impulse test		N/A

A	ANNEX A, TESTS FOR RESISTANCE TO HEAT AND FIRE	_
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IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
	T		
A.1	Flammability test for fire enclosures of movable equipment having a total mass exceeding 18 kg, and of stationary equipment (see 4.7.3.2)		N/A
A.1.1	Samples:		_
	Wall thickness (mm):		—
A.1.2	Conditioning of samples; temperature (°C):		N/A
A.1.3	Mounting of samples		N/A
A.1.4	Test flame (see IEC 60695-11-3)		N/A
	Flame A, B, C or D		_
A.1.5	Test procedure		N/A
A.1.6	Compliance criteria		N/A
	Sample 1 burning time (s)		_
	Sample 2 burning time (s)		_
	Sample 3 burning time (s)		_
A.2	Flammability test for fire enclosures of movable not exceeding 18 kg, and for material and componencies (see 4.7.3.2 and 4.7.3.4)		N/A
A.2.1	Samples, material		_
	Wall thickness (mm):		_
A.2.2	Conditioning of samples; temperature (°C):		N/A
A.2.3	Mounting of samples		N/A
A.2.4	Test flame (see IEC 60695-11-4)		N/A
	Flame A, B or C		_
A.2.5	Test procedure		N/A
A.2.6	Compliance criteria		N/A
	Sample 1 burning time (s)		_
	Sample 2 burning time (s)		_
	Sample 3 burning time (s)		_
A.2.7	Alternative test acc. to IEC 60695-11-5, cl. 5 and 9		N/A
	Sample 1 burning time (s)		_
	Sample 2 burning time (s)		_
	Sample 3 burning time (s)		_
A.3	Hot flaming oil test (see 4.6.2)		N/A
A.3.1	Mounting of samples		N/A
A.3.2	Test procedure		N/A
A.3.3	Compliance criterion		N/A



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Clause	Requirement + Test		Result - Remark	Verdict

ANNEX B, MOTOR TESTS UNDER ABNORMAL CONDITIONS (see 4.7.2.2 and 5.3.2)	_
General requirements	N/A
Position:	_
Manufacturer	
Type	
Rated values	
Test conditions	N/A
Maximum temperatures	N/A
Running overload test	N/A
Locked-rotor overload test	N/A
Test duration (days):	_
Electric strength test: test voltage (V)	
Running overload test for d.c. motors in secondary circuits	N/A
General	N/A
Test procedure	N/A
Alternative test procedure	N/A
Electric strength test; test voltage (V)	N/A
Locked-rotor overload test for d.c. motors in secondary circuits	N/A
General	N/A
Test procedure	N/A
Alternative test procedure	N/A
Electric strength test; test voltage (V):	N/A
Test for motors with capacitors	N/A
Test for three-phase motors	N/A
Test for series motors	N/A
Operating voltage (V)	_
	General requirements Position Manufacturer Type Rated values Test conditions Maximum temperatures Running overload test Locked-rotor overload test Test duration (days) Electric strength test: test voltage (V) Running overload test for d.c. motors in secondary circuits General Test procedure Alternative test procedure Electric strength test; test voltage (V) Locked-rotor overload test for d.c. motors in secondary circuits General Test procedure Alternative test procedure Electric strength test; test voltage (V) Locked-rotor overload test for d.c. motors in secondary circuits General Test procedure Alternative test procedure Electric strength test; test voltage (V) Test for motors with capacitors Test for three-phase motors Test for series motors

С	ANNEX C, TRANSFORMERS (see 1.5.4 and 5.3.3)		
	Position	T1: Primary to secondary.	_
	Manufacturer	(See appended table 1.5.1)	_
	Туре	(See appended table 1.5.1)	_
	Rated values	(See appended table 1.5.1)	_
	Method of protection:	Inherent protection	_



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Clause	Requirement + Test	Result - Remark	Verdict
Γ			1
C.1	Overload test	(See appended table 5.3)	Р
C.2	Insulation	(see appended tables 5.2 and C2)	Р
	Protection from displacement of windings:	(see appended table C.2)	Р
D	ANNEX D, MEASURING INSTRUMENTS FOR TO (see 5.1.4)	UCH-CURRENT TESTS	_
D.1	Measuring instrument	Figure D.1 used.	Р
D.2	Alternative measuring instrument		N/A
			-
E	ANNEX E, TEMPERATURE RISE OF A WINDING	(see 1.4.13)	_
			-
F	ANNEX F, MEASUREMENT OF CLEARANCES A (see 2.10 and Annex G)	ND CREEPAGE DISTANCES	_
			1
G	ANNEX G, ALTERNATIVE METHOD FOR DETER CLEARANCES	MINING MINIMUM	_
G.1	Clearances		N/A
G.1.1	General		N/A
G.1.2	Summary of the procedure for determining minimum clearances		N/A
G.2	Determination of mains transient voltage (V)		N/A
G.2.1	AC mains supply		N/A
G.2.2	Earthed d.c. mains supplies		N/A
G.2.3	Unearthed d.c. mains supplies		N/A
G.2.4	Battery operation		N/A
G.3	Determination of telecommunication network transient voltage (V):		N/A
G.4	Determination of required withstand voltage (V)		N/A
G.4.1	Mains transients and internal repetitive peaks:		N/A
G.4.2	Transients from telecommunication networks:		N/A
G.4.3	Combination of transients		N/A
G.4.4	Transients from cable distribution systems		N/A
G.5	Measurement of transient voltages (V)		N/A
	a) Transients from a mains supply		N/A
	For an a.c. mains supply		N/A
	For a d.c. mains supply		N/A
	b) Transients from a telecommunication network		N/A



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G.6	Determination of minimum clearances:		N/A
Н	ANNEX H, IONIZING RADIATION (see 4.3.13)		_
	T		
J	ANNEX J, TABLE OF ELECTROCHEMICAL POTE	ENTIALS (see 2.6.5.6)	
	Metal(s) used		
K	ANNEX K, THERMAL CONTROLS (see 1.5.3 and	5.3.8)	_
K.1	Making and breaking capacity		N/A
K.2	Thermostat reliability; operating voltage (V):		N/A
K.3	Thermostat endurance test; operating voltage (V)		N/A
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 SOBUSINESS EQUIPMENT (see 1.2.2.1 and 4.5.2)	ME TYPES OF ELECTRICAL	_
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		Р
М	ANNEX M, CRITERIA FOR TELEPHONE RINGING	SIGNALS (see 2.3.1)	
M.1	Introduction	- 5.511/LO (500 2.0.1)	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
191.0.2	Tripping device and monitoring voltage		1 11/7



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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 17.3.2, 7.4.3 and Clause G.5)	1.5.7.2, 1.5.7.3, 2.10.3.9, 6.2.2.1,	
N.1	ITU-T impulse test generators		N/A
N.2	IEC 60065 impulse test generator		N/A
P	ANNEX P, NORMATIVE REFERENCES		_
Q	ANNEX Q, Voltage dependent resistors (VDRs)	(see 1.5.9.1)	
	- Preferred climatic categories	Certified VDR used. (see appended table 1.5.1)	Р
	- Maximum continuous voltage:	Certified VDR used. (see appended table 1.5.1)	Р
	- Combination pulse current:	Certified VDR used. (see appended table 1.5.1)	Р
	Body of the VDR Test according to IEC60695-11-5		Р
	Body of the VDR. Flammability class of material (min V-1):		Р
R	ANNEX R, EXAMPLES OF REQUIREMENTS FOR PROGRAMMES	R QUALITY CONTROL	
R.1	Minimum separation distances for unpopulated coated printed boards (see 2.10.6.2)		N/A
R.2	Reduced clearances (see 2.10.3)		N/A
S	ANNEX S, PROCEDURE FOR IMPULSE TESTING	G (see 6.2.2.3)	
S.1	Test equipment		N/A
S.2	Test procedure		N/A
S.3	Examples of waveforms during impulse testing		N/A
Т	ANNEX T, GUIDANCE ON PROTECTION AGAINS (see 1.1.2)	ST INGRESS OF WATER	
			_



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	1 2 12 2 2 2 2 2		
U	ANNEX U, INSULATED WINDING WIRES FOR USE	WITHOUT INTERLEAVED	_
	INSULATION (see 2.10.5.4)		
		The TIW of T1 was certified by UL.	
V	ANNEX V, AC POWER DISTRIBUTION SYSTEMS ((see 1.6.1)	<u> </u>
V.1	Introduction	IT and TN	Р
V.2	TN power distribution systems		Р
W	ANNEX W, SUMMATION OF TOUCH CURRENTS		_
W.1	Touch current from electronic circuits		N/A
W.1.1	Floating circuits		N/A
W.1.2	Earthed circuits		N/A
W.2	Interconnection of several equipments		N/A
W.2.1	Isolation		N/A
W.2.2	Common return, isolated from earth		N/A
W.2.3	Common return, connected to protective earth		N/A
Х	ANNEX X, MAXIMUM HEATING EFFECT IN TRANS	SFORMER TESTS (see clause	
X.1	Determination of maximum input current		Р
X.2	Overload test procedure		Р
Υ	ANNEX Y, ULTRAVIOLET LIGHT CONDITIONING	TEST (see 4.3.13.3)	_
Y.1	Test apparatus:	· · · · · · · · · · · · · · · · · · ·	N/A
Y.2	Mounting of test samples:		N/A
Y.3	Carbon-arc light-exposure apparatus:		N/A
Y.4	Xenon-arc light exposure apparatus:		N/A
Z	ANNEX Z, OVERVOLTAGE CATEGORIES (see 2.1	0.3.2 and Clause G.2)	
AA	ANNEX AA, MANDREL TEST (see 2.10.5.8)		_
			<u> </u>
BB	ANNEX BB, CHANGES IN THE SECOND EDITION		_
CC	ANNEX CC, Evaluation of integrated circuit (IC) of	urrent limiters	_
CC.1	General		N/A





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CC.2	Test program 1		N/A	
CC.3	Test program 2		N/A	
CC.4	Test program 3		N/A	
CC.5	Compliance:		N/A	

DD	ANNEX DD, Requirements for the mounting means of rack-mounted equipment	
DD.1	General	N/A
DD.2	Mechanical strength test, variable N	
DD.3	Mechanical strength test, 250N, including end stops	
DD.4	Compliance:	N/A

EE	ANNEX EE, Household and home/office document/media shredders	
EE.1	General	N/A
EE.2	EE.2 Markings and instructions	
	Use of markings or symbols	N/A
	Information of user instructions, maintenance and/or servicing instructions:	N/A
EE.3	Inadvertent reactivation test	N/A
EE.4	EE.4 Disconnection of power to hazardous moving parts:	
	Use of markings or symbols	N/A
EE.5	Protection against hazardous moving parts	N/A
	Test with test finger (Figure 2A):	
	Test with wedge probe (Figure EE1 and EE2):	



IEC 60950-1					
Claus	se	Requirement + Test		Result - Remark	Verdict

1.5.1	TABLE: List of critical components				Р
Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity ¹)
Plastic Enclosure	SABIC Innovative Plastics	SE1X(GG)(f1) 945	Min. V-1, min. 1,7 mm thickness, 105 °C	UL94	UL
PCB	Interchangeable	Interchangeable	Min. V-0, min. 130 °C		UL
Fusible resistor (RF3)	Great Electronics Co. Ltd.	RXF-1W	10Ω, 1W	UL 1412	UL
Alternative	Aahui Changsheng Electronics CO LTD	RXF21-1W	10Ω, 1W	UL 1412	UL
Varistor (MOV1) (optional)	Centra Science Corp.	CNR-14V511K, CNR-14D511K	320Vac, 410Vdc, (Flame class of body coating complied with V- 0)	IEC 61051-1, IEC 61051-2, IEC 61051-2-2, UL 1449 3rd SPD type 3 approved	VDE, UL
Alternative	Centra Science Corp.	CNR-10V471K, CNR-14D471K	300Vac, 385Vdc, (Flame class of body coating complied with V- 0)	IEC 61051-1, IEC 61051-2, IEC 61051-2-2, UL 1449 3rd SPD type 3 approved	VDE, UL
Alternative	Joyin Co Ltd	10N511K, 14N511K, 14S511K	320Vac, 418Vdc, (Flame class of body coating complied with V- 0)	IEC 61051-1, IEC 61051-2, IEC 61051-2-2, UL 1449 3rd, IEC 60950- 1:2005, Annex Q.	VDE, UL



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

Alternative	Joyin Co Ltd	14N471K, 10N471K	300Vac, 385Vdc, (Flame class of body coating complied with V- 0)	IEC 61051-1, IEC 61051-2, IEC 61051-2-2, UL 1449 3rd, IEC 60950- 1:2005, Annex Q.	VDE, UL
Alternative	Thinking Electronicl ndustrial Co Ltd	TVR 14471, TVR 10471-V	300Vac, 385Vdc, (Flame class of body coating complied with V- 0)	IEC 61051-1, IEC 61051-2, IEC 61051-2-2, UL 1449 3rd, IEC 60950- 1:2005, Annex Q.	VDE, UL
Alternative	Thinking ElectronicI ndustrial Co Ltd	TVR 1471 (for VDE), TVR 10471K (for UL)	300Vac, 385Vdc, (Flame class of body coating complied with V- 0)	IEC 61051-1, IEC 61051-2, IEC 61051-2-2, UL 1449 3rd SPD type 3 approved	VDE, UL
Alternative	Thinking Electronicl ndustrial Co Ltd	TVR 14511	320Vac, 410Vdc, (Flame class of body coating complied with V- 0)	IEC 61051-1, IEC 61051-2, IEC 61051-2-2, UL 1449 3rd, IEC 60950- 1:2005, Annex Q.	VDE, UL
Alternative	Thinking Electronic Industrial Co Ltd	TVR10511 (for VDE), TVR 10511K (for UL)	320Vac, 410Vdc, (Flame class of body coating complied with V- 0)	IEC 61051-1, IEC 61051-2, IEC 61051-2-2, UL 1449 3rd SPD type 3 approved	VDE, UL



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

Alternative	Ceramate Technical Co Ltd	GNR 14D511K	320Vac, 410Vdc, (Flame class of body coating complied with V- 0)	IEC 61051-1, IEC 61051-2, IEC 61051-2-2, UL 1449 3rd SPD type 3 approved	VDE, UL
Alternative	Ceramate Technical Co Ltd	GNR 14D471K, GNR10D471K	300Vac, 385Vdc, (Flame class of body coating complied with V- 0)	IEC 61051-1, IEC 61051-2, IEC 61051-2-2, UL 1449 3rd SPD type 3 approved	VDE, UL
Alternative	Success Electronics Co Ltd	SVR10D471K, SVR14D471K	300Vac, 385Vdc, (Flame class of body coating complied with V- 0)	IEC 61051-1, IEC 61051-2, IEC 61051-2-2, UL 1449 3rd SPD type 3 approved	VDE, UL
Alternative	Success Electronics Co Ltd	SVR14D511K, SVR10D511K	320Vac, 415Vdc, (Flame class of body coating complied with V-0	VIEC 61051-1, IEC 61051-2, IEC 61051-2-2, UL 1449 3rd SPD type 3 approved	VDE, UL
Transformer (T1)	Electric Co Ltd or GLOBTEK/BOA M/HAOPUWEI	XF00865	Class B	IEC 60950-1:2005 + A1 + A2 EN 60950-1: 2006 + A11 + A1 + A12+ A2	Tested with appliance
Bobbin	Chang Chun Plastics Co Ltd	T375J , T375HF	Phenolic, V-0, min. thickness 0.71 mm, 150 °C		UL
Alternative	Sumitomo Bakelite Co Ltd	PM-9820	V-0; 150 °C; PHENOLIC		UL



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

Таре	3M Company Electrical Markets DIV (EMD)	1350F-(#), 1350T-1	130 °C		UL
Alternative	Bondtec Pacific Co Ltd	370S	130 °C		UL
Triple Insulated wire (Used in T1)	Great Leoflon Industrial Co Ltd	TRW(B) series	130 °C	IEC/EN 60950- 1, UL 2353	VDE, UL
Wire	Interchangeable	Interchangeable	130 °C		UL

Supplementary information:

- 1) Provided evidence ensures the agreed level of compliance. See OD-CB2039.
- 2) For all transformers under all manufactures.







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

1.5.1	TABLE: Opto Electronic Devices	N/A	
Manufactu	irer:		
Туре	:		
Separately	/ tested:		
Bridging in	nsulation:		
External creepage distance:			
Internal cre	eepage distance:		
Distance th	hrough insulation:		
Tested und	der the following conditions:		
Input	······································		
Output	:		
supplemen	ntary information		



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

1.6.2	1.6.2 TABLE: Electrical data (in normal conditions)						Р
U (V)	I (A)	Irated (A)	P (W)	Fuse #	Ifuse (A)	Condition/status	,
90/50Hz	0,122		6,8	RF3	0,122	Loaded with 5 V / 1,0 A.	
100/50Hz	0,111	0,3	6,8	RF3	0,111	Loaded with 5 V / 1,0 A.	
240/50Hz	0,063	0,3	6,6	RF3	0,063	Loaded with 5 V / 1,0 A.	
254/50Hz	0,060		6,7	RF3	0,060	Loaded with 5 V / 1,0 A.	
264/50Hz	0,058		6,6	RF3	0,058	Loaded with 5 V / 1,0 A.	
90/60Hz	0,124		6,8	RF3	0,124	Loaded with 5 V / 1,0 A.	
100/60Hz	0,113	0,3	6,8	RF3	0,113	Loaded with 5 V / 1,0 A.	
240/60Hz	0,063	0,3	6,6	RF3	0,063	Loaded with 5 V / 1,0 A.	
254/60Hz	0,061		6,6	RF3	0,061	Loaded with 5 V / 1,0 A.	
264/60Hz	0,059		6,7	RF3	0,059	Loaded with 5 V / 1,0 A.	
Supplementary information:							

2.1.1.5 c) 1)	TABLE: max. V, A, VA test				Р	
Voltage (rated) (Vd.c.)		Current (rated) (A)	Voltage (max.) (V)	Current (max.) (A)	VA (ma (VA)	x.)
5		1,0	4,87	1,2	5,8	
supplementary information:						
The above measurements are the maximum values (max. V and max. A not obtained at the same time).						

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

2.2	TABLE: evaluation of voltage limiting components in SELV circuits				
Component (measured between)		max. voltage (V) (normal operation)		Voltage Limiting Com	ponents
		V peak	V d.c.		
T1 (7-RTN)		28,2			
Fault test pe	erformed on voltage limiting components	Voltage measured (V) in SELV circui (V peak or V d.c.)		ts	





5,8

100

100



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

supplementary information:	

2.5	TABLE: Limited power sources					Р			
Circuit outpo	Circuit output tested:								
Note: Meas	Note: Measured Uoc (V) with all load circuits disconnected:								
Compone		est condition	'SC (/ 1)		I _{sc} (A)		A		
	(Single fau	(Single fault)		Meas.	Limit	Meas.		Limit	
Output		Normal condition	5,0	1,19	8	5,8		100	

1,2

8

8

5,0

0,1

supplementary information:

1) Unit shut down;

Output

Output

2) Oc= open circuit, Sc = short circuit.

Oc RS6

Sc RS9



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

2.10.2	Table: working voltage measurement					
Location		RMS voltage (V)	RMS voltage (V) Peak voltage (V)			
T1 (1-6, RT	N)	177	344			
T1 (1-7)		167	336			
T1 (2-6, RT	N)	206	472	Max RMS & Peak		
T1 (2-7)		204	472			
T1 (3-6, RT	N)	186	360			
T1 (3-7)		191	372			
T1 (5-6, RT	N)	190	428			
T1 (5-7)		194	432			
T1 (6)-CS2		184	360			
T1 (7)-CS2		185	364			
T1 (6)-RS1	1	176	348			
supplement	tary information:	·	•	·		

2.10.3 and 2.10.4 TABLE: Clearance and creepage distance measurements							
Clearance (cl) distance (cr) a	and creepage at/of/between:	U peak (V)	U r.m.s. (V)	Required cl (mm) 5)	cl (mm)	Required cr (mm)	cr (mm)
Functional:							
Between fusible resistor (RF3) trace		420	250	1,5	13,9	2,5	13,9
Traces of L and N before fusible resistor (RF3)		420	250	1,5	10,3	2,5	10,3
Basic/supplem	nentary:						
		-	1		1		
Reinforced:							
Primary compo → secondary components		420	250	4,0	See as below	5,0	See as below
Line wire→ ou (user accessib	iter of enclosure ble)	420	250	4,0	9,6	5,0	9,6

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Clause	Requirement + Test				Result - Remar	·k	Verdict
replaceable	(behind the e plug module → closure (user	420	250	4,0	8,2	5,0	8,2
T1 core → C3 (without tape of around core of T1)		472	250	4,2	6,9	5,0	6,9
Primary trace → secondary trace		472	250	4,2	4,3	5,0	5,5
DS1 →CS6	6 trace	472	250	4,2	6,8	5,0	6,8
T1 (6) → CS2 trace		472	250	4,2	4,3	5,0	5,5
Supplemer	ntary information:						

2.10.5	TABLE: Distance through insulation measurements							
Distance through insulation (DTI) at/of:		U peak (V)	U rms (V)	Test voltage (V)	Required DTI (mm)	DTI (mm)		
Polyester tape (One layer for testing) Material used: 1) 3M type 1350F-(#) 2) 3M type 1350T-1 3) Bondtec Pacific type 370S)		472	250	3000Va c	-	Two layers		
3) Bondtec Pacific type 370S) Plastic enclosure Material used: 1) SABIC Type SE1X(GG)(f1) Supplementary information:		472	250	3000Va c	0,4	1,7		



				90					
				IEC 60950	-1				
Clause	Requirem	ent + Test				Result - Re	mark		Verdict
	1								1
4.3.8	TABLE:	Batteries							N/A
The tests of data is not a		applicable	only when ap	propriate b	attery				N/A
Is it possible	e to install	the battery	in a reverse p	oolarity pos	sition?				N/A
	Non-re	chargeable	batteries			Rechargeal	ole batterie	es	
	Discha	arging	Un- intentional	Chai	rging	Discha	arging	Reve charç	
	Meas. current	Manuf. Specs.	charging	Meas. current	Manuf. Specs.		Manuf. Specs.	Meas. current	Manuf. Specs.
Max. current during normal condition		1	ł	1					
Max. current during fault condition	-	-	1	1					1
Test results	s:								Verdict
- Chemical leaks									
- Explosion of the battery									
- Emission	of flame or	expulsion	of molten met	al					
- Electric st	rength test	s of equipn	nent after com	pletion of	tests				
Supplemen	tary inform	ation:							<u> </u>







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Cla	ause	Requirement + Test	Result - Remark	Verdict

4.3.8	TABLE: Batteries	N/A
Battery cate	gory:	
Manufacture	er:	
Type / mode	el:	
Voltage	:	
Capacity	:	
Tested and	Certified by (incl. Ref. No.):	
Circuit prote	ction diagram:	

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







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

4.5	TABLE: Thermal	requireme	nts						Р
	Supply voltage (V)		:	90V/ 60Hz	90V/ 60Hz	264V/ 60Hz	264V/ 60Hz		_
	Ambient T _{min} (°C)		:	40	40	40	40		_
	Ambient T _{max} (°C)		:	40	40	40	40	_	_
Maximum r	neasured temperatu	ire T of part	/at:		Т	(°C)			Allowed T (°C) T _{ma} =40°C
Test condit	ion			Vertic al	Horiz on tal	Vertic al	Horiz on tal		
Plug Holde	r body			58,0	59,6	51,3	51,5		105,0
Internal wir	es body			57,2	58,4	50,4	50,5		80,0
MOV1 bod	у			73,6	76,3	60,8	60,8		85,0
C1 body				78,4	82,2	65,8	66,0		105,0
PCB body	near BD1			78,7	83,1	64,8	65,4		130,0
T1 Top side	e coil			88,8	95,2	79,1	80,1		110,0
T1 core				84,1	90,2	75,3	76,4		110,0
T1 Bottom	side coil			92,5	99,3	80,8	81,6		110,0
Output wire	e body			54,8	57,4	52,8	53,2		60,0
Inside of er	nclosure near T1			72,5	77,7	65,8	66,8		105,0
Surface of	Surface of enclosure near T1				58,1	51,6	52,6		95,0
Supplementary information: For component with temperature marking, allowed				l T= Tma	ax + Tai	mb – Tm	ıa(Tma =	: 40 °C. Taml	o= 40 °C) :
	re T of winding:	t ₁ (°C)	$R_1 (\Omega)$			2 (Ω)	T (°C)	Allowed T _{max} (°C)	Insulation class
Supplemen	ntary information:								

4.5.5	TABLE: Ball pressure test of thermoplastic parts				
	Allowed impression diameter (mm):	≤ 2 mm	≤ 2 mm		
Part		Test temperature (°C)	Impression (mm		
Material	der, 2.05 x 2piece used: C Type SE1X(GG)(f1)	125	1,83	3	
Supplem	entary information:	•			



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Clause	Requirement + Test		Result - Remark	Verdict

4.7	TABL	ABLE: Resistance to fire						
Part		Manufacturer of material	Type of material	Thickness (mm)	Flammability class	Evidence		
Supplementary information:								
Refer to app	ended	l table 1.5.1.						

5.1	TABLE: touch current measurement				
Measured b	etween:	Measured (mA)	Limit (mA)	Comments/conditions	
Plastic enclosure(foil)		0,032	0,25		
Output connector		0,032	0,25		
supplementary information:					

5.2	TABLE: Electric strength tests, impulse tests and voltage surge tests					
Test voltage applied between:		Voltage shape (AC, DC, impulse, surge)	Test voltage (V)	Breakdo wn Yes / No		
Funcional:						
Basic						
Reinforced:						
Unit: Primar	y / SELV	DC	4242	No		
Unit: Primar	y / Enclosure with foil	DC	4242	No		
Insulation ta	pes	DC	4242	No		

Supplementary information:

All testing Including after Humidity required of clause 2.9, there are including unit, transformer and all material of transformer, see appended tables 1.5.1

5.3	TABLE: Fault condition tests			
	Ambient temperature (°C): 25 °C			
	Power source for EUT: Manufacturer, model/type, output rating:		_	





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Clause	Requirement + Test		Result - Remark	Verdict

Component No.	Fault	Supply voltage (V)	Test time	Fuse #	Fuse current (A)	Observation
BD1 (V V+)	s-c	240	1 s	RF3	10Ω, 1W	RF3 opened, NT, NB, NC, Repeat 9 times result were same I/P: 0A
C2	s-c	240	1 s	RF3	10Ω, 1W	RF3 opened, NT, NB, NC, Repeat 9 times result were same I/P: 0A
T1 (3-5)	s-c	240	30 min	RF3	10Ω, 1W	Unit shutdown, NT, NB, NC, IP(US1) I/P: 0,005A
T1 (6-7)	Overload	240	30 min	RF3	10Ω, 1W	Unit shutdown, NT, NB, NC, IP(US1) I/P: 0,005A
T1 (7) after D53	Overload	240	2h 51 min	RF3	10Ω, 1W	CT at 0.1A (Output load:1A, total 1.1A), increased to 0.2A, Unit shutdown, NT, NC, NB, IP(US1), T1 coil=85°C, Ambient air=26°C I/P: 0,05 A
+5V - RTN	s-c	240	30 min	RF3	10Ω, 1W	Unit shutdown, NT, NB, NC, IP(US1) I/P: 0,003A
+5V output	Overload	240	2h 51 min	RF3	10Ω, 1W	CT at 1,1A, increased to 1,2 A, Unit shutdown, NT, NC, NB, IP(US1), T1 coil=78°C, Ambient air=24,9°C I/P: 0,049 A
used 32A curre	ent protect	<u>, </u>				
BD1 (V V+)	S-C	240	1 s	RF3	10Ω, 1W	RF3 opened, NT, NB, NC, Repeat 9 times result were same I/P: 0A







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

C2	s-c	240	1 s	RF3		RF3 opened, NT, NB, NC, Repeat 9 times result were same I/P: 0A
----	-----	-----	-----	-----	--	--

Supplementary information:

- 1) s-c: short circuit, o-c: open circuit, o-l: overload.
- 2) YC: Cheesecloth charred or flamed
- NT: Tissue paper remained intact
- RF: Repeat all fuse result were the same.
- YT: Tissue paper charred or flamed
- IP: Internal protection operated (list component)
- I/P: Input current
- RF: Repeat all fuse result were same
- IP: Internal protection operated (list component)



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

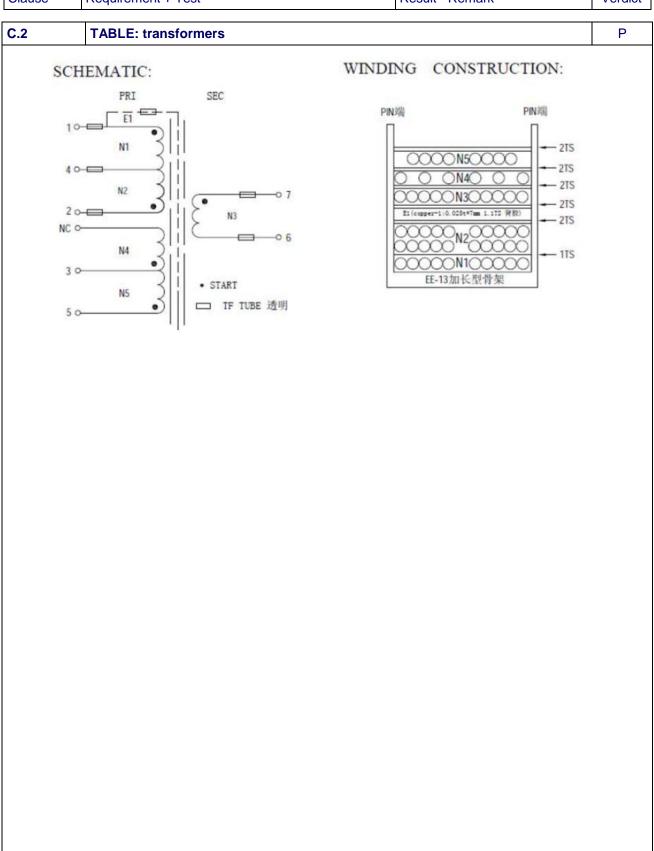
C.2	TABLE: transform	ers					Р
Loc.	Tested insulation	Working voltage peak / V	Working voltage rms / V	Required electric strength (5.2)	Required clearance / mm (2.10.3)	Required creepage distance / mm (2.10.4)	Required distance thr. insul.
T1	Reinforced: Primary to secondary	472	250	3000 Va.c.	4,2	5,0	0,4
T1	Reinforced: Secondary winding to core	472	250	3000 Va.c.	4,2	5,0	0,4
Loc.	Tested insulation			Test voltage/ V	Measured clearance / mm	Measured creepage dist./ mm	Measured distance thr. insul. / mm; number of layers
T1	Reinforced: Primary t	o secondar	у	3000 Va.c.	6,3	6,3	TIW
T1	Reinforced: Seconda	ry winding t	to core	3000 Va.c.	7,6	7,6	TIW

supplementary information:

All testing Including after Humidity required of clause 2.9, there are including unit, transformer and all material of transformer, see appended tables 1.5.1



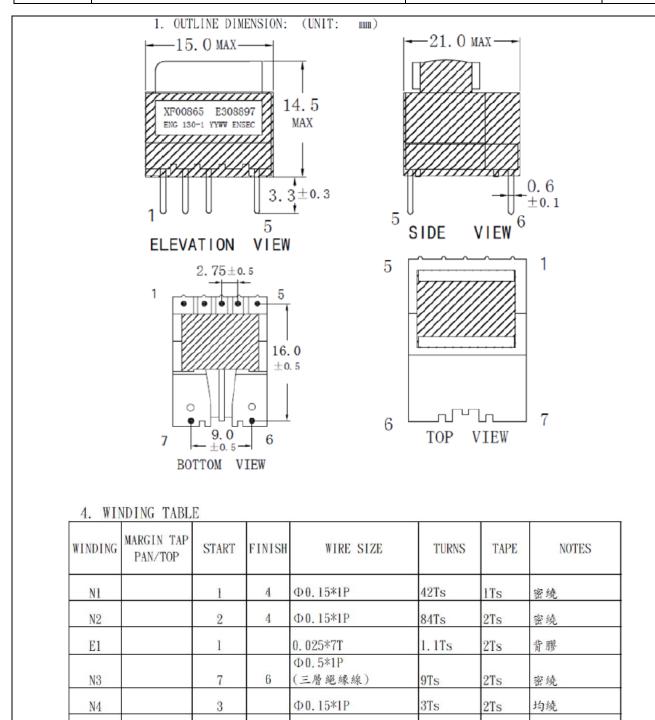
IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict



居中密绕



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



*****End of Test report****

Ф0.15*1Р

25Ts

2Ts

5

N₅



Report No.: SHES150700404301

Attachment 1 Photo documentation

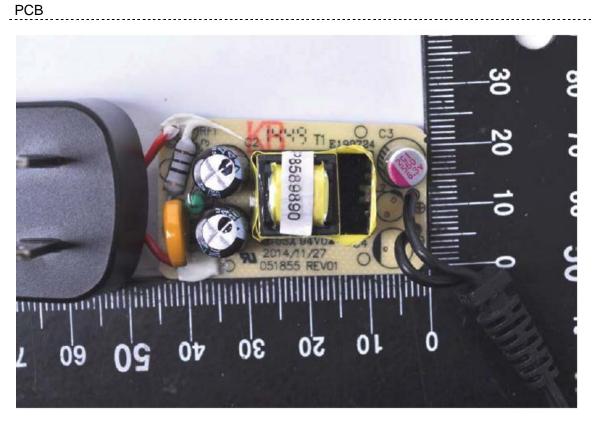
Whole unit



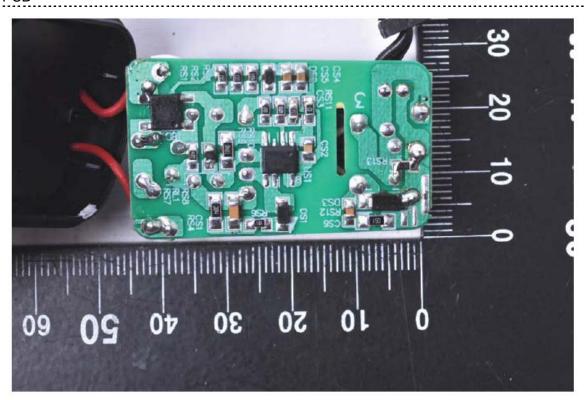
Side view



Attachment 1 Photo documentation



PCB





Report No.:

SHES150700404301

Attachment 1 Photo documentation

Internal view

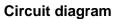


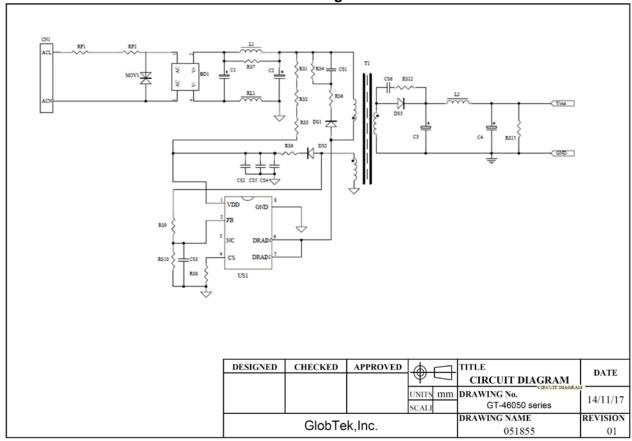
Internal view





Attachment 2: Circuit diagram and PCB layout Report No.: SHES150700404301

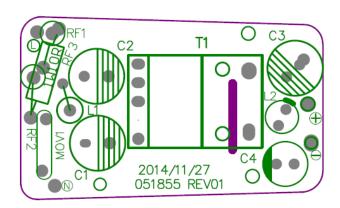


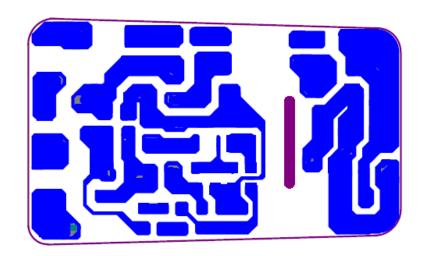


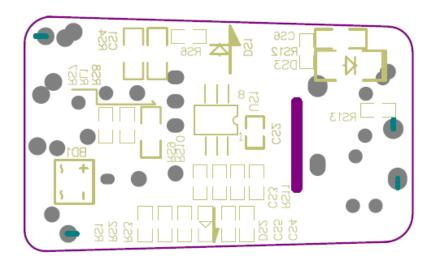


Attachment 2: Circuit diagram and PCB layout Report No.: SHES150700404301

PCB Layout







*****End of attachment 2*****



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<u>Aattachment 3 Safety Information in User Manual</u>

Allgemeines (General)

To comply with the published safety standards, the following must be considered when using this switching power supply.

Um den zur Zeit gültigen Sicherheitsbestimmungen zu genügen, müssen die folgenden Hinweise beim Einsatz dieses Schaltnetzteils berücksichtigt werden:

- 1. The appliance is used for IT and similar electronic apparatus. It is certified according to the relevant safety standards IEC60950 and EN60950.
 - Dieses Netzgerät ist ein Tischgerät IT und Datenverarbeitungseräten. Es ist geprüft nach den einschlägigen Bestimmungen IEC60950, und EN60950.
- 2. The output power taken from the supply must not exceed the rating given on the switching power supply. Die Ausgangsleistung darf die auf dem Netzgerät angegebenen Werte nicht übersteigen.
- 3. The appliance is not intended to be repaired by service personnel in case of failure or component defect (unit can be thrown away)
 - In einem Fehlerfall werden Teile des Gerätes,bzw. das Gerät selbst nicht durch den Kundendienst repariert.Das Gerät muss entsorgt werden.
- 4. The mains plug is used as the disconnect device, the disconnect device shall remain readily operable. Die Steckdose muß in der Nähe der Einrichtung angebracht und leicht zugänglich sein.
- 5. The appliance shall not be exposed to dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on the appliance.
 - Das Gerät darf nicht Spritzwasser oder tropfenden Flüssigkeiten ausgesetzt werden. Kein mit Wasser gefüllten Gefäße auf dem Gerät abstellen.
- 6. The switching power supply should be used in ventilated condition, should not cover the power supply with other things.

Das Batterieladegerät sollte unter belüfteter Bedingung benutzt werden. Der Netzanschluss darf nicht mit anderen Dingen bedecken werden.

*********End of Attachment 3********



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IEC60950_1E - ATTACHMENT						
	Clause	Requirement + Test		Result - Rei	mark	Verdict

Attachment 4 Deviation of EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES

ATTACHMENT TO TEST REPORT IEC 60950-1 EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES

Information technology equipment – Safety –

Part 1: General requirements

Differences according to.....: EN 60950-1:2006/A11:2009/A1:2010/A12:2011/A2:2013

Attachment Form No...... EU_GD_IEC60950_1E

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EN 60950-1:2006/A11:2009/A1:2010/A12:2011/A2:2013 - CENELEC COMMON MODIFICATIONS

	1EC 00930-1, GROC	DP DIFFERE	NCES (CENEL	LEC COMMING	n modifications EN)	1
Clause	Requirement + Te	st		Resul	t - Remark	Verdict
	Clauses, subclaus IEC60950-1 and i				additional to those in	Р
Contents	Add the following	annexes:				Р
	Annex ZA (norma	tive)		with their co	international orresponding European	
(A2:2013)	Annex ZB (norma Annex ZD (inform				ns e designations for	
General	Delete all the "cou		the reference	document (IEC 60950-1:2005)	Р
	1.4.8 Note 2 1.5.8 Note 2 2.2.3 Note 2.3.2.1 Note 2 2.7.1 Note 3.2.1.1 Note 4.3.6 Note 1 & 2 4.7.3.1Note 2 6 Note 2 & 5 6.2.2 Note 7.1 Note 3 G.2.1 Note 2	5.1.7.1	Note 2 & 3 Note Note Note 2 Note 2 Note 3. Note 4 Note 3 & 4 Note 2	1.7.2.1 2.3.2 2.6.3.3 2.10.5.13 2.5.1 4.7.2.2	Note Note 4, 5 & 6 Note Note 2 & 3 Note 3 Note 2 Note Note 1 Note Note Note Note Note Note Note Note	
General (A1:2010)	Delete all the "country" notes in the reference document (IEC 60950-1:2005/A1:2010) according to the following list: 1.5.7.1 Note 6.1.2.1 Note 2			Р		
	6.2.2.1 Note	2	EE.3	Note		



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		1 490 2 01 10	repertitor or 20 reer	00 10 100 1
		NT		
Clause	Requirement + Test		Result - Remark	Verdict

	IEC 60950-1, GROUP DIFFERENCES (CENELEC c	ommon modifications EN)	
Clause	Requirement + Test	Result - Remark	Verdict
General (A2:2013)	Delete all the "country" notes in the reference document (IEC 60950-1:2005/A2:2013) according to the following list: 2.7.1 Note * 2.10.3.1 Note 2 6.2.2. Note * Note of secretary: Text of Common Modification remains unchanged.		Р
1.1.1 (A1:2010)	Replace the text of NOTE 3 by the following. NOTE 3 The requirements of EN 60065 may also be used to meet safety requirements for multimedia equipment. See IEC Guide 112, Guide on the safety of multimedia equipment. For television sets EN 60065 applies.		
1.3.Z1	Add the following subclause: 1.3.Z1 Exposure to excessive sound pressure	No headphone and earphone.	N/A
	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.		
(A12:2011)	In EN 60950-1:2006/A12:2011 Delete the addition of 1.3.Z1 / EN 60950-1:2006 Delete the definition 1.2.3.Z1 / EN 60950-1:2006 /A1:2010		N/A
1.5.1 (Added info*)	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. New Directive 2011/65/11 *		Р
1.7.2.1 (A1:2010)	In addition, for a PORTABLE SOUND SYSTEM, the instructions shall include a warning that excessive sound pressure from earphones and headphones can cause hearing loss.	No headphone and earphone.	N/A
1.7.2.1 (A12.2011)	In EN 60950-1:2006/A12:2011 Delete NOTE Z1 and the addition for Portable Sound System. Add the following clause and annex to the existing standard and amendments.		N/A



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		1 490 0 01 10	report ton or 201001	00 10 100 1
IEC60950_1E - ATTACHMENT			NT	
Clause	Requirement + Test		Result - Remark	Verdict

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



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		1 490 1 01 10	report tion of Louis	00 10 100 1
IEC60950_1E - ATTACHMENT			NT	
Clause	Requirement + Test		Result - Remark	Verdict

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)						
Clause	Requirement + Test	Result - Remark	Verdic			
	 analogue personal music players (personal music players without any kind of digital processing of the sound signal) that are brought to the market before the end of 2015. NOTE 4 This exemption has been allowed because this technology is falling out of use and it is expected that within a few years it will no longer exist. This exemption will not be extended to other technologies. For equipment which is clearly designed or intended for use by young children, the limits of 		N/A			
	EN 71-1 apply. Zx.2 Equipment requirements		N/A			
	No safety provision is required for equipment that complies with the following:		IN/A			
	 equipment provided as a package (personal music player with its listening device), where 					
	the acoustic output L _{Aeq,T} is ≤ 85 dBA measured while playing the fixed "programme simulation noise" as described in EN 50332-1; and					
	 a personal music player provided with an analogue electrical output socket for a listening device, where the electrical output is ≤ 27 mV measured as described in EN 50332-2, while playing the fixed "programme simulation noise" as described in EN 50332-1. 					
	NOTE 1 Wherever the term acoustic output is used in this clause, the 30 s A-weighted equivalent sound pressure level LAeq,T is meant. See also Zx.5 and Annex Zx.					
	All other equipment shall:					
	 a) protect the user from unintentional acoustic outputs exceeding those mentioned above; and 					
	b) have a standard acoustic output level not exceeding those mentioned above, and automatically return to an output level not exceeding those mentioned above when the power is switched off; and					



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		1 490 0 01 10	report ton or 201001	00 10 100 1
IEC60950_1E - ATTACHMENT			NT	
Clause	Requirement + Test		Result - Remark	Verdict

	IEC 60950-1, GROUP DIFFERENCES (CENELEC c	ommon modifications EN)	
Clause	Requirement + Test	Result - Remark	Verdic
	c) provide a means to actively inform the user of the increased sound pressure when the equipment is operated with an acoustic output exceeding those mentioned above. Any means used shall be acknowledged by the user before activating a mode of operation which allows for an acoustic output exceeding those mentioned above. The acknowledgement does not need to be repeated more than once every 20 h of cumulative listening time; and		N/A
	NOTE 2 Examples of means include visual or audible signals. Action from the user is always required.		
	NOTE 3 The 20 h listening time is the accumulative listening time, independent how often and how long the personal music player has been switched off.		
	d) have a warning as specified in Zx.3; and		
	e) not exceed the following:		
	 equipment provided as a package (player with Its listening device), the acoustic output shall be ≤ 100 dBA measured while playing the fixed "programme simulation noise" described in EN 50332-1; and 		
	2) a personal music player provided with an analogue electrical output socket for a listening device, the electrical output shall be ≤ 150 mV measured as described in EN 50332-2, while playing the fixed "programme simulation noise" described in EN 50332-1.		
	For music where the average sound pressure (long term LAeq,T) measured over the duration of the song is lower than the average produced by the programme simulation noise, the warning does not need to be given as long as the average sound pressure of the song is below the basic limit of 85 dBA. In this case T becomes the duration of the song.		
	NOTE 4 Classical music typically has an average sound pressure (long term $L_{\text{Aeq,T}}$) which is much lower than the average programme simulation noise. Therefore, if the player is capable to analyse the song and compare it with the programme simulation noise, the warning does not need to be given as long as the average sound pressure of the song is below the basic limit of 85 dBA.		
	For example, if the player is set with the programme simulation noise to 85 dBA, but the average music level of the song is only 65 dBA, there is no need to give a warning or ask an acknowledgement as long as the average sound level of the song is not above the basic limit of 85 dBA.		



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		1 490 0 01 10	Troport Tro.: Office 1001	00 10 100 1
IEC60950_1E - ATTACHMENT		NT		
Clause	Requirement + Test		Result - Remark	Verdict

	ment 4 Deviation of EUROPEAN GROUP DIFFERENCES AN IEC 60950-1, GROUP DIFFERENCES (CENELEC commo	
Clause	Requirement + Test Resul	t - Remark Verdic
	 Zx.3 Warning The warning shall be placed on the equipment, or on the packaging, or in the instruction manual and shall consist of the following: the symbol of Figure 1 with a minimum height of 5 mm; and the following wording, or similar: 	N/A
	"To prevent possible hearing damage, do not listen at high volume levels for long periods." Figure 1 – Warning label (IEC 60417-6044) Alternatively, the entire warning may be given through the equipment display during use, when the user is asked to acknowledge activation of the higher level.	
	Zx.4 Requirements for listening devices (headphones	and earphones) N/A
	Zx.4.1 Wired listening devices with analogue input With 94 dBA sound pressure output LAeq,T, the input voltage of the fixed "programme simulation noise" described in EN 50332-2 shall be ≥ 75 mV. This requirement is applicable in any mode where the headphones can operate (active or passive), including any available setting (for example built-in volume level control). NOTE The values of 94 dBA − 75 mV correspond with 85dBA	N/A



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		1 490 1 01 10	report ton or 201001	00 10 100 1
IEC60950_1E - ATTACHMENT		NT		
Clause	Requirement + Test		Result - Remark	Verdict

	IEC 60950-1, GROUP DIFFERENCES (CENELEC c	ommon modifications EN)	
Clause	Requirement + Test	Result - Remark	Verdict
	Zx.4.2 Wired listening devices with digital input With any playing device playing the fixed "programme simulation noise" described in EN 50332-1 (and respecting the digital interface standards, where a digital interface standard exists that specifies the equivalent acoustic level), the acoustic output LAeq, T of the listening device shall be ≤ 100 dBA.		N/A
	This requirement is applicable in any mode where the headphones can operate, including any available setting (for example built-in volume level control, additional sound feature like equalization, etc.).		
	NOTE An example of a wired listening device with digital input is a USB headphone.		
	Zx.4.3 Wireless listening devices		N/A
	In wireless mode:		
	 with any playing and transmitting device playing the fixed programme simulation noise described in EN 50332-1; and 		
	 respecting the wireless transmission standards, where an air interface standard exists that specifies the equivalent acoustic level; and 		
	 with volume and sound settings in the listening device (for example built-in volume level control, additional sound feature like equalization, etc.) set to the combination of positions that maximize the measured acoustic output for the abovementioned programme simulation noise, the acoustic output LAeq,T of the listening device shall be ≤ 100 dBA. 		
	NOTE An example of a wireless listening device is a Bluetooth headphone.		
	Zx.5 Measurement methods		N/A
	Measurements shall be made in accordance with EN 50332-1 or EN 50332-2 as applicable. Unless stated otherwise, the time interval T shall be 30 s.		
	NOTE Test method for wireless equipment provided without listening device should be defined.		



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		1 490 0 01 10	report ton or 201001	00 10 100 1
IEC60950_1E - ATTACHMENT		NT		
Clause	Requirement + Test		Result - Remark	Verdict

	IEC 60950-1, GROUP DIFFERENCES (CENELEC c	ommon modifications EN)	
Clause	Requirement + Test	Result - Remark	Verdict
2.7.1	Replace the subclause as follows: Basic requirements To protect against excessive current, short-circuits and earth faults in PRIMARY CIRCUITS, protective devices shall be included either as integral parts of the equipment or as parts of the building installation, subject to the following, a), b) and c):	The equipment is provided with a fuse and complies with a).	Р
	 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.		N/A
	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.		
2.7.2	This subclause has been declared 'void'.		
3.2.3	Delete the NOTE in Table 3A, and delete also in this table the conduit sizes in parentheses.	Not permanently connected equipment.	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	No power supply cord provided.	N/A



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		1 490 0 01 10	Troport Tro.: Office 1001	00 10 100 1
IEC60950_1E - ATTACHMENT		NT		
Clause	Requirement + Test		Result - Remark	Verdict

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)				
Clause	Requirement + Test	Result - Remark	Verdict	
3.2.5.1 (A2:2013)	NOTE Z1 The harmonised code designations corresponding to the IEC cord types are given in Annex ZD		N/A	
3.3.4	In Table 3D, delete the fourth line: conductor sizes for 10 to 13 A, and replace with the following: Over 10 up to and including 16 1,5 to 2,5 1,5 to 4 Delete the fifth line: conductor sizes for 13 to 16 A		N/A	
4.3.13.6 (A1:2010)	Replace the existing NOTE by the following: NOTE Z1 Attention is drawn to: 1999/519/EC: Council Recommendation on the limitation of exposure of the general public to electromagnetic fields 0 Hz to 300 GHz, and 2006/25/EC: Directive on the minimum health and safety requirements regarding the exposure of workers to risks arising from physical agents (artifical optical radiation).		N/A	
	Standards taking into account mentioned Recommendation and Directive which demonstrate compliance with the applicable EU Directive are indicated in the OJEC.		N/A	
Annex H	Replace the last paragraph of this annex by: At any point 10 cm from the surface of the OPERATOR ACCESS AREA, the dose rate shall not exceed 1 µSv/h (0,1 mR/h) (see NOTE). Account is taken of the background level. Replace the notes as follows: NOTE These values appear in Directive 96/29/Euratom. Delete NOTE 2.	No ionizing radiation.	N/A	
Bibliography	Additional EN standards.		_	
	1	1	I.	

ZA	NORMATIVE REFERENCES TO INTERNATIONAL PUBLICATIONS WITH	
	THEIR CORRESPONDING EUROPEAN PUBLICATIONS	

	ZB ANNEX (normative) SPECIAL NATIONAL CONDITIONS (EN)			
Clause	Requirement + Test	Result - Remark	Verdict	
1.2.4.1	In Denmark , certain types of Class I appliances (see 3.2.1.1) may be provided with a plug not establishing earthing conditions when inserted into Danish socket-outlets.	Shall be evaluated when marketed in Denmark.	N/A	
1.2.13.14 (A11:2009)	In Norway and Sweden , for requirements see 1.7.2.1 and 7.3 of this annex.	Not intended to be connected to cable distribution system.	N/A	



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		1 490 10 01 10	Troport Tron On Editor	00 10 100 1
IEC60950_1E - ATTACHMENT		NT		
Clause	Requirement + Test		Result - Remark	Verdict

	ZB ANNEX (normative) SPECIAL NATIONAL CONDITIONS (EN)				
Clause	Requirement + Test	Result - Remark	Verdict		
1.5.7.1 (A11:2009)	In Finland, Norway and Sweden , resistors bridging BASIC INSULATION in CLASS I PLUGGABLE EQUIPMENT TYPE A must comply with the requirements in 1.5.7.1. In addition when a single resistor is used, the resistor must withstand the resistor test in 1.5.7.2.	Shall be evaluated when marketed in Finland, Norway and Sweden.	N/A		
1.5.8	In Norway , due to the IT power system used (see annex V, Figure V.7), capacitors are required to be rated for the applicable line-to-line voltage (230 V).		N/A		
1.5.9.4	In Finland , Norway and Sweden , the third dashed sentence is applicable only to equipment as defined in 6.1.2.2 of this annex.	No TNV circuit.	N/A		



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IEC60950_1E - ATTACHMENT				
Clause	Requirement + Test	Result	- Remark	Verdict

	ZB ANNEX (normative)				
	SPECIAL NATIONAL CONDITIONS (EN)				
Clause	Requirement + Test	Result - Remark	Verdic		
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"	Shall be evaluated when marketed in Finland, Norway and Sweden.	N/A		
1.7.2.1 (A11:2009)	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)."				



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		IEC60950_1E - ATTACHME	NT	
Clause	Requirement + Test		Result - Remark	Verdict

Attachr	Attachment 4 Deviation of EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES			
	ZB ANNEX (normative) SPECIAL NATIONAL CONDITIONS (EN)			
01		T		
Clause	Requirement + Test	Result - Remark	Verdict	
	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		N/A	
	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."			
ı	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 medfőra risk főr			
	brand. Főr att undvika detta skall vid anslutning av utrustningen till kabel-TV nät			
	galvanisk isolator finnas mellan utrustningen och kabel-TV nätet."			
1.7.2.1 (A2:2013)	In Denmark , CLASS I PLUGGABLE EQUIPMENT TYPE A intended for connection to other equipment or a network shall, if safety relies on connection to protective earth or if surge suppressors are connected between the network terminals and accessible parts, have a marking stating that the equipment must be connected to an earthed mains socket-outlet.	Shall be evaluated when marketed in Denmark.	N/A	
	The marking text in Denmark shall be as follows: In Denmark : "Apparatets stikprop skal tilsluttes en stikkontakt med jord, som giver forbindelse til stikproppens jord."			
1.7.5	In Denmark , socket-outlets for providing power to other equipment shall be in accordance with the Heavy Current Regulations, Section 107-2-D1, Standard Sheet DK 1-3a, DK 1-5a or DK 1-7a, when used on Class I equipment. For STATIONARY EQUIPMENT the socket-outlet shall be in accordance with Standard Sheet DK 1-1b or DK 1-5a.		N/A	
1.7.5 (A11:2009)	For CLASS II EQUIPMENT the socket outlet shall be in accordance with Standard Sheet DKA 1-4a.			



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		IECCOCCO 1E ATTACHMENT			
IEC60950_1E - ATTACHMENT					
	Clause	Requirement + Test		Result - Remark	Verdict

	ZB ANNEX (normative) SPECIAL NATIONAL CONDITION		
Clause	Requirement + Test	Result - Remark	Verdict
1.7.5 (A2:2013)	In Denmark , socket-outlets for providing power to other equipment shall be in accordance with the DS 60884-2-D1:2011.		N/A
	For class I equipment the following Standard Sheets are applicable: DK 1-3a, DK 1-1c, DK 1-1d, DK 1-5a or DK 1-7a, with the exception for STATIONARY EQUIPMENT where the socket-outlets shall be in accordance with Standard Sheet DK 1-1b, DK 1-1c, DK 1-1d or DK 1-5a.		
	Socket outlets intended for providing power to Class II apparatus with a rated current of 2,5 A shall be in accordance with DS 60884-2-D1 standard sheet DKA 1-4a. Other current rating socket outlets shall be in compliance with by DS 60884-2-D1 Standard Sheet DKA 1-3a or DKA 1-3b.		
	Justification the Heavy Current Regulations, 6c		
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.	No TNV circuit.	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.	No TNV circuit.	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.		Р
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.	Direct plug-in equipment.	P
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.	No TNV circuit.	N/A
3.2.1.1	In Switzerland , supply cords of equipment having a RATED CURRENT not exceeding 10 A shall be provided with a plug complying with SEV 1011 or IEC 60884-1 and one of the following dimension sheets: SEV 6532-2.1991 Plug Type 15 3P+N+PE 250/400 V, 10 A	Shall be evaluated when marketed in Switzerland.	N/A



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Clause	Requirement + Test		Result - Remark	Verdict

Attachment 4 Deviation of EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES					
	ZB ANNEX (normative) SPECIAL NATIONAL CONDITIONS (EN)				
Clause	Requirement + Test	Result - Remark	Verdict		
	SEV 6533-2.1991 Plug Type 11 L+N 250 V, 10 A SEV 6534-2.1991 Plug Type 12 L+N	N+PE			
	250 V, 10 A	N+FC			
	In general, EN 60309 applies for plugs for currents exceeding 10 A. However, a 16 A pand socket-outlet system is being introduce Switzerland, the plugs of which are according the following dimension sheets, published in February 1998:	d in ng to			
	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 16 A	250 V,			
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 socker	5,	N/A		
	outlets with earth contacts or which are inte to be used in locations where protection againdirect contact is required according to the rules shall be provided with a plug in accord with standard sheet DK 2-1a or DK 2-5a.	nded ainst wiring			
	If poly-phase equipment and single-phase equipment having a RATED CURRENT exceeding 13 A is provided with a supply cowith a plug, this plug shall be in accordance the Heavy Current Regulations, Section 107 or EN 60309-2.	with			



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Clause	Requirement + Test		Result - Remark	Verdict

Attacnn	nent 4 Deviation of EUROPEAN GROUP DIFFEREN ZB ANNEX (normative)		ENCES
	SPECIAL NATIONAL CONDITION		
Clause	Requirement + Test	Result - Remark	Verdict
3.2.1.1 (A2:2013)	In Denmark , supply cords of single-phase equipment having a rated current not exceeding 13 A shall be provided with a plug according to DS 60884-2-D1.	Shall be evaluated when marketed Denmark.	N/A
	CLASS I EQUIPMENT provided with socket- outlets with earth contacts or which are intended to be used in locations where protection against indirect contact is required according to the wiring rules shall be provided with a plug in accordance with standard sheet DK 2-1a or DK 2-5a.		
	If a single-phase equipment having a RATED CURRENT exceeding 13 A or if a poly-phase equipment is provided with a supply cord with a plug, this plug shall be in accordance with the standard sheets DK 6-1a in DS 60884-2-D1 or EN 60309-2.		
	Justification the Heavy Current Regulations, 6c		
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.	Shall be evaluated when marketed Spain.	N/A
	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.		
3.2.1.1	In the United Kingdom , apparatus which is fitted with a flexible cable or cord and is designed to be connected to a mains socket conforming to BS 1363 by means of that flexible cable or cord and plug, shall be fitted with a 'standard plug' in accordance with Statutory Instrument 1768:1994 - The Plugs and Sockets etc. (Safety) Regulations 1994, unless exempted by those regulations. NOTE 'Standard plug' is defined in SI 1768:1994 and essentially means an approved plug conforming to BS 1363 or an approved conversion plug.	Shall be evaluated when marketed United Kingdom.	N/A



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Clause	Requirement + Test		Result - Remark	Verdict

Attachment 4 Deviation of EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES

	ZB ANNEX (normative)		
	SPECIAL NATIONAL CONDITIONAL	ONS (EN)	
Clause	Requirement + Test	Result - Remark	Verdict
3.2.1.1	In Ireland , apparatus which is fitted with a flexible cable or cord and is designed to be connected to a mains socket conforming to I.S. 411 by means of that flexible cable or cord and plug, shall be fitted with a 13 A plug in accordance with Statutory Instrument 525:1997 - National Standards Authority of Ireland (section 28) (13 A Plugs and Conversion Adaptors for Domestic Use) Regulations 1997.	Shall be evaluated when marketed in Ireland.	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 mm2 is allowed for equipment with a rated current over 10 A and up to and including 13 A.		N/A
3.3.4	In the United Kingdom , the range of conductor sizes of flexible cords to be accepted by terminals for equipment with a RATED CURRENT of over 10 A up to and including 13 A is: • 1,25 mm² to 1,5 mm² 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.	Direct plug-in equipment.	P
4.3.6	In Ireland , DIRECT PLUG-IN EQUIPMENT is known as plug similar devices. Such devices shall comply with Statutory Instrument 526:1997 - National Standards Authority of Ireland (Section 28) (Electrical plugs, plug similar devices and sockets for domestic use) Regulations, 1997.	Shall be evaluated when marketed in Irelan.	N/A



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Clause	Requirement + Test		Result - Remark	Verdict

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	SPECIAL NATIONAL CONDITION		
Clause	Requirement + Test	Result - Remark	Verdict
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		N/A
6.1.2.1 (A1:2010)	In Finland, Norway and Sweden, add the following text between the first and second paragraph of the compliance clause: If this insulation is solid, including insulation forming part of a component, it shall at least consist of either - two layers of thin sheet material, each of which shall pass the electric strength test below, or - one layer having a distance through insulation of at least 0,4 mm, which shall pass the electric strength test below. Alternatively for components, there is no distance through insulation requirements for the insulation consisting of an insulating compound completely filling the casing, so that CLEARANCES and CREEPAGE DISTANCES do not exist, if the component passes the electric strength test in accordance with the compliance clause below and in addition - passes the tests and inspection criteria of 2.10.11 with an electric strength test of 1,5 kV multiplied by 1,6 (the electric strength test of 2.10.10 shall be performed using 1,5 kV), and - is subject to ROUTINE TESTING for electric strength during manufacturing, using a test voltage of 1,5 kV.	No TNV circuit.	N/A



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Clause	Requirement + Test		Result - Remark	Verdict

Attachment 4 Deviation of EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES

	ZB ANNEX (normative)		
	SPECIAL NATIONAL CONDITION	ONS (EN)	
Clause	Requirement + Test	Result - Remark	Verdict
	It is permitted to bridge this insulation with an optocoupler complying with 2.10.5.4 b).	No TNV circuit.	N/A
	It is permitted to bridge this insulation with a capacitor complying with EN 60384-14:2005, subclass Y2.		
	A capacitor classified Y3 according to EN 60384-14:2005, may bridge this insulation under the following conditions:		
	- the insulation requirements are satisfied by having a capacitor classified Y3 as defined by EN 60384-14, which in addition to the Y3 testing, is tested with an impulse test of 2,5 kV defined in EN 60950-1:2006, 6.2.2.1;		
	- the additional testing shall be performed on all the test specimens as described in EN 60384-14:		
	- the impulse test of 2,5 kV is to be performed before the endurance test in EN 60384-14, in the sequence of tests as described in EN 60384-14.		
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.	No TNV circuit.	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	Not intended to be connected to cable distribution system.	N/A
	6.1.2 being replaced by the term CABLE DISTRIBUTION SYSTEM.		
7.3 (A11:2009)	In Norway and Sweden , for requirements see 1.2.13.14 and 1.7.2.1 of this annex.	Not intended to be connected to cable distribution system.	N/A



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IEC60950_1E - ATTACHMENT				
Clause	Requirement + Test		Result - Remark	Verdict

Attachment 4 Deviation of EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES Annex ZD (informative)

IEC and CENELEC code designations for flexible cords

Type of flexible cord	Code desig	nations
	IEC	CENELEC
PVC insulated cords		
Flat twin tinsel cord	60227 IEC 41	H03VH-Y
Light polyvinyl chloride sheathed flexible cord	60227 IEC 52	H03VV-F H03VVH2-F
Ordinary polyvinyl chloride sheathed flexible cord	60277 IEC 53	H05VV-F H05VVH2-F
Rubber insulated cords		
Braided cord	60245 IEC 51	H03RT-F
Ordinary tough rubber sheathed flexible cord	60245 IEC 53	H05RR-F
Ordinary polychloroprene sheathed flexible cord	60245 IEC 57	H05RN-F
Heavy polychloroprene sheathed flexible cord	60245 IEC 66	H07RN-F
Cords having high flexibility		
Rubber insulated and sheathed cord	60245 IEC 86	H03RR-H
Rubber insulated, crosslinked PVC sheathed cord	60245 IEC 87	H03RV4-H
Crosslinked PVC insulated and sheathed cord	60245 IEC 88	H03V4V4-H

^{*****}End of Attachment 4*****



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Sub-clause	•••			lication	Verdict
	in Australia and/or N	lew Zealand (AS/NZS 60950.	1:2011 +A1:2012)	
ZZ1	have not been address	sed by the Into purposes of the	ernational Stand	uirements to cover issues which lard. These variations indicate ystem and will be published in	-
ZZ2	The variations are as	follows:			-
1.2.12.201	Add the definition of "SOURCE"	POTENTIAL I	GNITION		Noted
1.5.1	Add the following to the or the relevant Austra				Р
	In Note 1, add the following after the word 'standard': 'or an Australian/New Zealand Standard.'				
1.5.2	.2 Add the following to the end of the first and third dash items: 'or the relevant Australian/New Zealand Standard'			Р	
3.2.5.1	Modify Table 3B as follows:			N/A	
	Delete the first four ro	ws and replac	e with		
		Minimum c	onductor sizes		
	RATED CURRENT of equipment A	Nominal cross-sectional area mm²	[cross-sectional area in mm ²] see Note 2		
	Over 0.2 up to and including 3 Over 3 up to and including 7.5 Over 7.5 up to and including 10 Over 10 up to and including 16	0,5 a 0,75 (0,75) b 1,00 (1,0) c 1,5	18 [0,8] 16 [1,3] 16 [1,3] 14 [2]		
	replace footnote a) ar a) This nominal cross allowed for Class II ap power supply cord, m where the cord, or co appliance, and the en exceed 2 m (0,5 mm² cords are not permitte	-sectional area opliances if the easured between rd guard, enter try to the plug three-core su	a is only e length of the een the point rs the does not pply flexible		N/A
	Delete Note 1.				N/A
4.1.201	Insert a new Clause 4 follows:	.1.201 after C	lause 4.1 as		N/A
	4.1.201 Display devic purposes	es used for tel	evision		
	Display devices which purposes, with a mas comply with the requiremental mechanical hazards, stability requirements specified in AS/NZS 6	s of 7 kg or morements for sta including the a for television i	ore, shall ability and additional		N/A



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Sub-clause	Variations to IEC 60950-1:2005 +A1:2009 for app	lication	Verdict
	in Australia and/or New Zealand (AS/NZS 60950.	1:2011 +A1:2012)	
4.3.6	Delete the third paragraph and replace with the following:	See annex 6 for details	Р
	Equipment with a plug portion, suitable for insertion into a 10 A 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.		
4.3.13.5	Add the following after each reference to 'IEC 60825-1':		N/A
	', or AS/NZS 60825.1.'		
	Add the following after 'IEC 60825-2' in line two of the first paragraph:		N/A
	'or AS/NZS 60825.2'		_
4.7	Add the following paragraph: For alternative tests refer to Clause 4.7.201.		Р
4.7.201	Add the following after clause 4.7.3.6		Р
	Resistance to fire — Alternative tests		
4.7.201.1	Parts of non-metallic material shall be resistant to ignition and the spread of fire		Р
	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:		Р
	a) Components that are contained in an enclosure having a flammability category of V-0 according to AS/NZS 60695.11.10 and having openings only for the connecting wires filling the openings completely, and for ventilation not exceeding 1mm in width regardless of length.		Р
	b) The following parts which would contribute negligible fuel to a fire:		Р
	- small mechanical parts, the mass of which does not exceed 4 g, such as mounting parts, gears, cams, belts and bearings;		Р
	- small electrical components, such as capacitors with a volume not exceeding 1 750 mm³, integrated circuits, transistors and optocoupler packages, if these components are mounted on material of flammability category V-1 or better, according to AS/NZS 60695.11.10.		Р
	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.		Р



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Sub-clause	Variations to IEC 60950-1:2005 +A1:2009 for application in Australia and/or New Zealand (AS/NZS 60950.1:2011 +A1:2012)	
	Compliance shall be checked by the tests of 4.7.201.2, 4.7.201.3, 4.7.201.4 and 4.7.201.5	N/A
	For the base material of printed boards, compliance shall be 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.	N/A
	When the glow-wire test is carried out, they are placed in the same orientation as they would be in normal use.	N/A
	These tests are not carried out on internal wiring.	N/A
4.7.201.2	Parts of non-metallic material shall be subject to the glow-wire test of AS/NZS 60695.2.11 which shall be carried out at 550°C.	N/A
	Parts for which the glow-wire test cannot 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 not be carried out on parts of material classified at least FH-3 according to ISO 9772 provided that the sample tested was not thicker than the relevant part.	N/A
4.7.201.3	Part of insulating material supporting potential ignition sources shall be subject to the glow-wire test of AS/NZS 60695.2.11 which shall be carried out at 750°C.	N/A
	The test shall be also carried out on other parts of insulating material which are within a distance of 3 mm of the connection	N/A
	NOTE – Contacts in components such as switch contacts are considered to be connections.	N/A
	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 20 mm and a height of 50 mm shall be subjected to the needle-flame test.	N/A
	However, parts shielded by a barrier which meets the needle-flame test need not be tested.	N/A



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Sub-clause	Variations to IEC 609	950-1:2005 +A1:2009 for app	lication	Verdict
	in Australia and/or N	lew Zealand (AS/NZS 60950.	1:2011 +A1:2012)	
	The needle-flame test with AS/NZS 60695.1 modifications:	t shall be made in accordance 1.5 with the following		N/A
	Clause of AS/NZS 60695.11.5	Change		
	9 Test procedure			
	9.2 Application of needle-flame	Replace the first paragraph 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. If possible the flame shall be applied at least 10 mm from a corner		
		Replace the second paragraph with:		
	9.3 Number of test specimens	Replace with: 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 withstand the test.		
	11 Evaluation of test results	Replace with: The duration of burning (t _b) shall not exceed 30 s. However, for printed circuit boards, it shall not exceed 15 s.		
	parts of material class to AS/NZS 60695.11.	t shall not be carried out on sified as V-0 or V-1 according 10, provided that the sample than the relevant part.		N/A
4.7.201.4	glow wire tests of 4.7. within 30 s after the rethe needle-flame test made on all parts of n are within a distance of to be impinged upon 84.7.201.3. Parts shield	closures, do not withstand the 201.3, by failure to extinguish emoval of the glow-wire tip, detailed in 4.7.201.3 shall be on-metallic material which of 50 mm or which are likely by flame during the tests of ded by a separate barrier lle-flame test shall not be		N/A
	wire test the appliance is	re does not withstand the glow- s considered to have failed to of Clause 4.7.201 without the testing.		N/A
	test due to ignition of the indicates that burning or an external surface und apparatus is considered	do not withstand the glow-wire e tissue paper and if this reglowing particles can fall onto erneath the apparatus, the to have failed to meet the 4.7.201 without the need for		N/A



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Sub-clause	Variations to IEC 60950-1:2005 +A1:2009 for appl	lication	Verdict
	in Australia and/or New Zealand (AS/NZS 60950.1	1:2011 +A1:2012)	
	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 10 mm and a height equal to the height of the flame, positioned above the point of the material supporting, in contact with, or in close proximity to, connections.		N/A
4.7.201.5	The base material of printed boards shall be subject to the needle-flame test of Clause 4.7.201.3.		N/A
	The flame shall be 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 3 mm from a potential ignition source.		N/A
	The test is not carried out if:		Р
	- the printed board does not carry any potential ignition source		N/A
	- base material of printed boards, on which the available power at a connection exceeds 15 VA operating at a voltage exceeding 50 V and equal or less than 400 V (peak) a.c. or d.c. under normal operating conditions, is of flammability category V-1 or better according to AS/NZS 60695.11.10, or the printed boards are protected by an enclosure meeting the flammability category V-0 according to AS/NZS 60695.11.10, or made of metal, having openings only for connecting wires which fill the openings completely		Р
	- base material of printed boards, on which the available power at a connection exceeds 15 VA operating at a voltage exceeding 400 V (peak) a.c. or d.c. under normal operating conditions, and base material of printed boards supporting spark gaps which provides protection against overvoltages, is of flammability category V-0 according to AS/NZS 60695.11.10		Р
	- the printed boards are contained in a metal enclosure, having openings only for connecting wires which fill the openings completely		N/A
	Compliance shall be 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 maximise the apparent power for more than 2 min when the circuit supplied is disconnected.		N/A
6.2.2	For Australia only, delete the first paragraph and Note, and replace with the following:		N/A



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Sub-clause	Variations to IEC 60950-1:2005 +A1:2009 for appl	ication
	in Australia and/or New Zealand (AS/NZS 60950.1	:2011 +A1:2012)
	In Australia only, compliance with 6.2.2 shall be checked by the tests of both 6.2.2.1 and 6.2.2.2.	N/A
6.2.2.1	For Australia only, delete the first paragraph including the Notes, and replace with the following:	N/A
	In Australia only, the electrical separation is subjected to 10 impulses of alternating polarity, using the impulse test generator reference 1 of annex N. The interval between successive impulses is 60 s and the initial voltage, Uc, is:	N/A
	for 6.2.1 a): 7.0 kV for hand-held telephones and for headsets and 2.5 kV for other equipment; and for 6.2.1 b) and 6.2.1 c): 1.5 kV.	
	NOTE 201 – The 7 kV impulse simulates lightning surges on typical rural and semi-rural network lines.	N/A
	NOTE 202 – The value of 2.5 kV for 6.2.1 a) was chosen to ensure the adequacy of the insulation concerned and does not necessarily simulate likely overvoltages.	
6.2.2.2	For Australia only, delete the second paragraph including the Note, and replace with the following:	N/A
	In Australia only, the a.c. test voltage is:	N/A
	for 6.2.1 a): 3 kV; and for 6.2.1 b) and 6.2.1 c): 1.5 kV.	
	NOTE 201 – Where there are capacitors across the insulation under test, it is recommended that d.c. test voltages are used.	N/A
	NOTE 202 – The 3 kV and 1.5 kV values have been determined considering the low frequency induced voltages from the power supply distribution system.	
7.3	Add the following before the first paragraph:	N/A
	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.	
Annex P	Add the following Normative References:	P
	AS/NZS 3191, Electric flexible cords	
	AS/NZS 3112, Approval and test specification— Plugs and socket-outlets	



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Attachment 5 Deviations of Australia and/or New Zealand

Sub-clause	Variations to IEC 60950-1:2005 +A1:2009 for application	
	in Australia and/or New Zealand (AS/NZS 60950.1:2011 +A1:2012)	
Index	1. Insert the following between 'asbestos, not to be used as insulation' and 'attitude see orientation': ASNZS 3112	Р
	potential ignition source	

********End of Attachment 5*******



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Attachment 6 Deviations of Korea

Sub-clause	Variations to IEC 60950-1:2005 for application		Verdict
	in Korea (K60950-1)		
1.5.101	Addition Plugs for the connection of the apparatus to the supply mains shall comply with the Korean requirement (KSC 8305).	The plug portion shall be evaluated when submitted for national approval.	N/A
8 EMC	Addition The apparatus shall comply with the relevant CISPR standards	The EMC for Korean deviations is not evaluated.	N/A

*********End of Attachment 6********



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	IEC 60950-1 ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict	

Attachment 7 Deviation of JAPAN

ATTACHMENT TO TEST REPORT IEC 60950-1 JAPAN NATIONAL DIFFERENCES

Information technology equipment – Safety – Part 1: General requirements

Differences according to J60950-1(H22)

Attachment Form No...... JP_ND_IEC60950_1A

Attachment Originator: -

Master Attachment 2010-11

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National D	National Differences - Japan		
1.2.4.1	Add the following new NOTE.		N/A
	NOTE Even if the equipment is designed as Class I, the equipment is regarded as Class 0I equipment when a 2-pin adaptor with an earthing lead wire or a cord set having a 2-pin plug with an earthing lead wire is provided or recommended.		
1.2.4.3A	Add the following new clause.		N/A
	1.2.4.3A CLASS 0I EQUIPMENT		
	Equipment having attachment plug without earthing blade, where protection against electric shock is achieved by:		
	 using BASIC INSULATION, and providing externally an earth terminal or a lead wire for earthing in order to connect those conductive parts that might assume a HAZARDOUS VOLTAGES in the event of BASIC INSULATION fault to the PROTECTIVE EARTHING CONDUCTOR in the building wiring. 		
	NOTE Class 0I equipment may have a part constructed with Double Insulation or Reinforced Insulation. circuit.		

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	IEC 60950-1 ATTACHMENT				
Clause	Requirement + Test	Result - Remark	Verdict		
	Attachment 7 Deviation	of JAPAN	<u>.</u>		
1.3.2	Add the following notes after the first paragraph: NOTE 1 Transportable or similar equipment that is relocated frequently for intended usage should not be designed as Class I or Class 0I equipment unless it is intended to be installed by service personnel.		N/A		
	NOTE 2 Considering wiring circumstance in Japan, equipment intended to be installed where the provision for earthling connection is unlikely should not be designed as Class I or Class 0I equipment unless it is intended to be installed by service personnel.				
1.5.1	Replace the first paragraph with the following: Where safety is involved, components shall comply either with the requirements of this standard or with the safety aspects of the relevant JIS component standard or IEC component standards in case there is no applicable JIS component standard is available. However, in case a component that falls within the scope of the METI Ministerial ordinance (No. 85:1962) is properly used in accordance with its marked ratings, the requirements of 1.5.4, 2.8.7 and 3.2.5 apply, and in addition, a cord connector of power supply cord set matching with an appliance inlet specified in the standard sheets of IEC 60320-1, shall comply with relevant standard sheet of IEC 60320-1.		P		
	NOTE 1 A JIS or an IEC component standard is considered relevant only if the component in question clearly falls within its scope.				





	IEC 60950-1 ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict	
	Attachment 7 Deviation	of JAPAN		
1.5.2	Replace the first sentence in the first dashed paragraph with the following:		Р	
	- a component that has been demonstrated to comply with a JIS component standard harmonized with the relevant IEC component standard, or where such JIS component standard is not available, a component that has been demonstrated to comply with the relevant IEC component standard shall be checked for correct application and use in accordance with its rating.			
	Add a NOTE after the first dashed paragraph as follows:			
	NOTE 1 See 1.7.5A when Type C.14 appliance coupler rated 10 A per IEC 60320-1 is used with an equipment rated not more than 125 V and rated more than 10 A.			
	Replace the first sentence in the third dashed paragraph as follows:			
	 where no relevant IEC component standard or JIS component standard harmonized with the relevant IEC component standard exists, or where components are used in circuits not in accordance with their specified rating, the components shall be tested under the conditions occurring in the equipment. 			
1.5.6	In this sub-clause, add "JIS C 5101-14:1998 or" before the reference number, IEC 60384-14:1993.		Р	
1.5.7.2	In this sub-clause, add "JIS C 5101-14:1998 or" before the reference number, IEC 60384-14:1993.		N/A	
1.5.8	In the first paragraph, add "JIS C 5101-14:1998 or" before the reference number, IEC 60384-14:1993.		N/A	
1.7.1	Replace the fifth dashed paragraph with the following: - manufacturer's or responsible company's name or trade-mark or identification mark;		P	
1.7.5	In the second paragraph, add "or JIS C 8303:2007" after the reference number, IEC/TR 60083:1997".		N/A	



	IEC 60950-1 ATTACHN	IENT			
Clause	Requirement + Test	Result - Remark	Verdict		
	Attachment 7 Deviation of JAPAN				
1.7.5A	Add the following new clause after 1.7.5 1.7.5A Appliance Couplers If an appliance coupler according to IEC 60320- 1, C.14(rated current: 10 A) is used in equipment whose rated voltage is less than 125 V and the rated current is over 10 A, the		N/A		
	following instruction or equivalent shall be described in the user instruction. " Use only designated cord set attached in this equipment"				
1.7.12	Replace first sentence with the following: Instructions and equipment marking related to safety shall be in Japanese.		N/A		
1.7.17A	Add the following new clause after 1.7.17 1.7.17A Marking for CLASS 0I EQUIPMENT For CLASS 0I EQUIPMENT, the following instruction shall be marked on the visible place of the mains plug or the main body: 必ず接地接続を行って下さい "Provide an earthing connection" Moreover, for CLASS 0I EQUIPMENT, the following or equivalent instruction shall be indicated on the visible place of the main body or written in the operating instructions: 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。 "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."		N/A		
2.1.1.1	In item b) of this sub-clause, replace "IEC 60083" with "JIS C 8303:2007 or Article 1 of the Ministerial Ordinance (No. 85:1962)"	•	N/A		
2.6.3.2	Add the following after the first paragraph. This also applies to the conductor of lead wire for protective earthing of CLASS 0I EQUIPMENT.	•	N/A		

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IEC 60950-1 ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	Attachment 7 Deviation	of JAPAN	· · · · · · · · · · · · · · · · · · ·
2.6.4.2	Replace the first paragraph with the following.		N/A
	Equipment required to have protective earthing shall have a main protective earthing terminal. For equipment with a DETACHABLE POWER SUPPLY CORD, the earthing terminal in the appliance inlet is regarded as the main protective earthing terminal except for CLASS 0I EQUIPMENT providing separate main protective earthing terminal other than appliance inlet.		
2.6.5.4	Replace the first sentence with the following.		N/A
	Protective earthing connections of CLASS I EQUIPMENT shall make earlier and break later than the supply connections in each of the following:		
2.6.5.8A	Add the following new clause after 2.6.5.8		N/A
	2.6.5.8A Earthing of CLASS 0I EQUIPMENT		
	Plugs with a lead wire for earthing shall not be used for equipment having a rated voltage exceeding 150 V.		
	For plugs with a lead wire for earthing, the lead wire shall not be earthed by a clip.		
	CLASS 0I EQUIPMENT shall be provided with an earthing terminal or a lead wire for earthing in the external location where easily visible.		
2.10.3.1	In this sub-clause, replace IEC 60664-1 with JIS C 0664:2003.		Р
2.10.3.2	In the second paragraph, replace IEC 60664-1 with JIS C 0664:2003.		Р
3.2.3	Add the following after Table 3A:		N/A
	Table 3A applies when cables complying with JIS C 3662 or JIS C 3663 are used. In case of other cables, the cable entries shall be so designed that a conduit suitable for the cable used can be fitted.		

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	IEC 60950-1 ATTACHN	MENT					
Clause	Requirement + Test	Result - Remark	Verdict				
Attachment 7 Deviation of JAPAN							
3.2.5.1	Add the following to the last of first dashed paragraph.		N/A				
	Or mains cords shall be of the sheathed type complying with Appendix 1 of Article 1 of the Ministerial Ordinance (No. 85:1962) on stipulating technical requirements for the Electrical Appliance.						
	Add the following to the last of second dashed paragraph.						
	Or mains cords shall be of the sheathed type complying with Appendix 1 of Article 1 of the Ministerial Ordinance (No. 85:1962) on stipulating technical requirements for the Electrical Appliance.						
	Delete 1) in Table 3B.						
3.3.4	Add the following note to Table 3D:		N/A				
	NOTE For cables other than those complying with JIS C 3662 or JIS C 3663, terminals shall be suitable for the size of the intended cables.						
3.3.7	Add the following after the first sentence:		N/A				
	This requirement is not applicable to the external earting terminal of Class 0I equipment.						
4.3.4	Add the following after the first sentence:		N/A				
	This requirement also applies to those connections in Class 0I equipment, where CLEARANCE or CREEPAGE DISTANCES over BASIC INSULATION would be reduced to less than the values specified in 2.10.						
4.3.13.5	Replace the first paragraph with the following:		N/A				
	Except as permitted below, equipment shall be classified and labelled according to JIS C 6802:2005, and JIS C 6803:2006 or IEC 60825-2:2000, as applicable.						
	Replace IEC 60825-1 in the second and the last paragraph with JIS C 6802:2005.						



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	l l	EC 60950-1 ATTACHN	IENT		
Clause	Requirement + Test		Result - Re	mark	Verdict
	Attach	ment 7 Deviation	of JAPAN	l	· ·
4.5	Add the following NOTE to NOTE: In case no data available, Appendix 4, Interpretation on the Notipulating Technical Electrical Appliances Distribution Policy Group may apply.	a for the material is 4. (1). b. 3 of the Ministerial Ordinance Specifications for (Commerce and			P
5.1.3	Add a note after the first p NOTE Attention should majority of three-phase points of delta connection, a case, the test is conducted from IEC 60990, figure 13	d be drawn to that ower system in Japan and therefore, in that d using the test circuit			N/A
5.1.6	Type of equipment All equipment HAND-HELD MOVABLE (other than HAND-HELD, but including TRANSPORTABLE EQUIPMENT STATIONARY, PLUGGABLE TYPE A All other STATIONARY EQUIPMENT - not subject to the conditions of 5.1.7 - subject to the conditions of 5.1.7 HAND-HELD Others	Terminal A of measuring instrument connected to: Accessible parts and circuits not connected to protective earth Equipment main protective earthing terminal (if any) CLASS I EQUIPMENT Equipment main protective earthing terminal (if any) CLASS OI EQUIPMENT CURRENT are measured, th	Maximum TOUCH CURRENT mA r.m.s. 1) 0,25 0,75 3,5 3,5 - 0,5 1,0	Maximum PROTECTIVE CONDUCTOR CURRENT 5 % of input current	P
6	Replace IEC 60664-1 in 0664.	NOTE 4 with JIS C			N/A
7	Replace IEC 60664-1 in 0664:2003.	NOTE 3 with JIS C			N/A

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	IEC 60950-1 ATTACHMENT				
Clause	Requirement + Test	Result - Remark	Verdict		
	Attachment 7 Deviation	of JAPAN			
7.2	Add the following after the paragraph:		N/A		
	However, the separation requirements and tests of 6.2.1 a), b) and c) do not apply to a CABLE DISTRIBUTION SYSTEM if all of the following apply: - the circuit under consideration is a TNV-1 CIRCUIT; and - the common or earthed side of the circuit is connected to the screen of the coaxial cable and to all accessible parts and circuits (SELV, accessible metal parts and LIMITED CURRENT CIRCUITS, if any); and - the screen of the coaxial cable is intended to be connected to earth in the building installation.				
W.1	Replace the second and the third sentence in the first paragraph with the following:		N/A		
	This distinction between earthed and unearthed (floating) circuit is not the same as between CLASS I EQUIMENT, CLASS 0I EQUIPMENT and CLASS II EQUIPMENT. Floating circuits can exist in CLASS I EQUIPMENT or CLASS 0I EQUIPMENT and earthed circuits in CLASS II EQUIPMENT.				









	IEC 60950-1 ATTACHM	MENT	
Clause	Requirement + Test	Result - Remark	Verdict
	Attachment 7 Deviation	of JAPAN	<u> </u>
Annex JA	If two-position switch, the positions 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.		N/A
	Compliance is checked by inspection		
	JA.4 Protection against hazardous moving parts Any warning shall not be used instead of the structure for preventing access to hazardous moving parts. Document shredding machines shall comply with the following requirements. Insert the test finger, Figure JA.1, into all openings in MECHANICAL ENCLOSURES without applying appreciable force. It shall not be possible to touch hazardous moving parts with the test finger. This consideration applies to all sides of MECHANICAL ENCLOSURES when the equipment is mounted as intended. Before testing with the test finger, remove the parts detachable without a tool.		
	Insert the wedge-probe, Figure JA.2, into the document-slot. And, against all directions of openings, if straight-cutting type, a force of 45 N shall apply to the probe, and 90 N if crosscutting type. In this case, the weight of the probe is to be factored into the overall applied force. Before testing with the wedge-probe, 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 shedding, with the probe.		

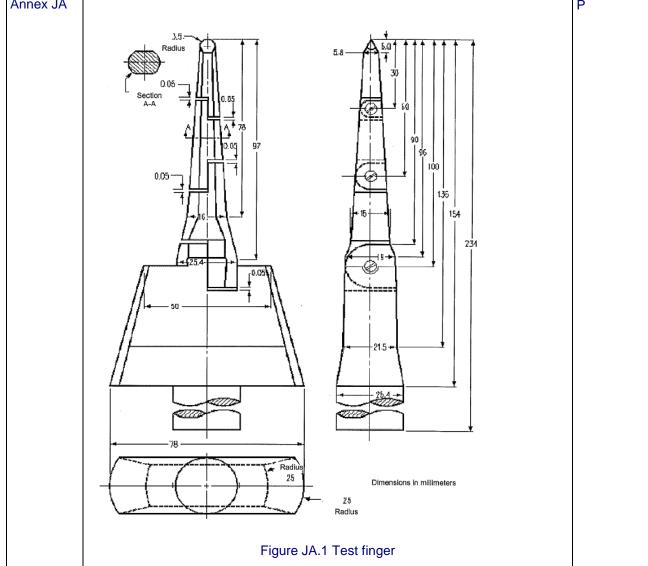


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IEC 60950-1 ATTACHMENT				
Clause	Requirement + Test	Result - Remark	Verdict	

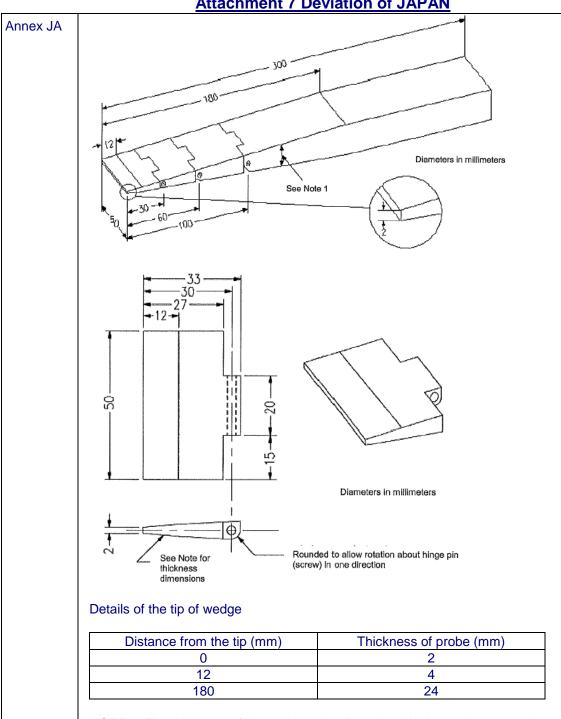
Attachment 7 Deviation of JAPAN Annex JA



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IEC 60950-1 ATTACHMENT Result - Remark Clause Requirement + Test Verdict

Attachment 7 Deviation of JAPAN



NOTE 1 The thickness of the probe varies linearly, with slope changes at the respective points shown in the table.

NOTE2 The allowable dimensional tolerance of the probe is +/- 0.127 mm.

Figure JA.2 Wedge-probe

********End of Attachment 7*******



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Attachment 8 REGULATORY REQUIREMENTS FOR SINGAPORE

No	Items	Requirements	Result - Remark	Verdict			
	The following is the national differences in accordance with safety authority website www.spring.gov.sg/safety , ref. Singapore Consumer Protection (Safety Requirements) – Information Booklet – Chapter 7.						
The Sa compl the Sa	aints, incidents and fety Authority's Re	REQUIREMENTS nitors the safety of the controlled goods of accidents reported to the authority. Exquirements are to be	cperiences gained are tran	slated into			
safety	standards.						
No	Items	Requirements	Result - Remark	Verdict			
		Applicable to all products					
1	Test certificate / Test report	Test certificate / Test report more than three (3) years old shall be rejected.		Р			
		Applicable to all electrical produ	ucts				
2	All appliances	All appliances must be tested to 230 VAC.		Р			
3	Voltage selector (voltage mismatch	Appliance fitted with voltage selector shall be tested as follows:		N/A			
	test)	Connect appliance to 230 VAC mains with voltage selector switch to settings not suitable for operation at 230 VAC.					
4	Tropical condition test	All appliances (with tropical test requirements in applicable Standards) shall comply with the tropical condition test as stated in the relevant IEC Standards.		Р			
5	Class I appliances (3-pin mains plug)	All Class I appliances must be fitted with 3-pin mains plugs complied with SS 145/SS 472 that are registered with the Safety Authority.		N/A			
6	Class II appliances (mains plug)	a) All Class II appliances must be fitted with 2-pin mains plug (Appendix T) complied with EN 50075.		Р			
	(mains plug)	b) Class II appliances that are fitted with 3- pin mains plugs must use plugs that are complied with SS 145 and registered with the Safety Authority.					
7	Appliances rated ≥ 3 kW or connected to fixed wiring	Electric appliance ≥ 3 kW must be connected to fixed wiring. All connection to fixed wiring must be in accordance with Code of Practice CP5.		N/A			



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Attachment 8 REGULATORY REQUIREMENTS FOR SINGAPORE

No	Items	Requirements	Result - Remark	Verdict
8	Detachable power cord set (consists of mains plug, mains cord and appliance connector	Detachable power cord set must be listed in the test report critical component list.		N/A
9	Circuit diagrams	Circuit diagrams must be indicated with component's values for products tested to IEC 60065 and IEC 60950.		Р
10	Circuit diagrams of electronic modules in electrical appliances	Circuit diagrams of the electronic modules in the electrical appliances must be provided.		P
11	Controlled goods likely to be treated as toy by children	Controlled goods, having an enclosure, which is shaped and decorated so that it is likely to be treated as a toy by children, shall not be accepted for certification and registration.		N/A
		Applicable to electric airpot		
12	Reboil Switch	No part of the reboil switch is allowed to protrude into the water pot, even if it is located above the maximum water level mark.		N/A
		Applicable to AC adaptor		
13	3-pin AC adaptor (Appendix V)	Test report showing that the 3-pin complied with sub-clauses 12.1 & 12.3 of SS 246 must be submitted.		N/A
14	2-pin AC adaptor (Appendix V)	The 2-pin (Appendix T) shall comply with EN 50075.	See annex 5 for details	Р
15	Detachable power supply cord set not supplied by Registered Supplier	Registered Supplier who is not supplying the detachable power supply cord set together with the AC Adaptor must provide written instruction to its customer on the type of approved detachable power cord set to use.		N/A
		Applicable to computer produc	ets	
16	CD/DVD ROM (used in personal computer)	Test certificate showing that CD/DVD ROM has complied with IEC 825 must be provided.		N/A
17	Modem Card (used in personal computer)	Modem card incorporated in the personal computer must be tested at set level (subclauses 5.1 & 6 of IEC 60950) or at component level.		N/A



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Attachment 8 REGULATORY REQUIREMENTS FOR SINGAPORE

No	Items	Requirements	Result - Remark	Verdict		
	Applicable to ceiling fan and cycle fan					
18	Ceiling fan and cycle fan	a) These appliances must be tested to sub-clauses 5.7 and 5.8 of SS 360: 1992.		N/A		
		b) Installation instruction must mention the 3 expansion bolts for fastening the main suspension, safety cord, expansion bolt with hook for fastening safety cord and mounting plate. (Appendix Q)				
		c) Drawing (Appendix P) to show that the wires within the motor shaft are not stressed must be provided.				
	Applio	able to portable/wall socket-outlet and p	oortable cable reel			
19	Portable/wall socket-outlet and portable cable reel	a) If residual current device (RCD) is incorporated, its tripping current must be less than 30mA and operating time must be less than 0.1 second and testing to sub-clauses 9.9.2.1, 9.9.2.2, 9.9.2.3 and 9.16 of SS 97: Part 1: 2000 are required.		N/A		
		b) The shutters screening the current- carrying socket contacts shall not be opened by the insertion of any corresponding SINGLE pin of the plug into any current-carrying socket aperture.				
		Applicable to roaster				
20	Roaster	A metal ring (Appendix U) must be provided to prevent the roaster from falling off in case the glass bowl shattered.		N/A		
	A	pplicable to Residual Current Circuit Bro	eaker (RCCB)			
21	RCCB	Registration of RCCB is limited to 30 mA sensitivity and the operating time must be less than 0.1 second. Electronic RCCB will not be accepted for registration.		N/A		
	Appli	icable to electric instantaneous and stor	age water heater			
22	Instantaneous electric water heater and mains pressure electric storage water heater	Heating elements used must not be of the "bare-element" type.		N/A		
23	Water heater incorporated with residual current device(RCD)	Testing to sub-clauses 9.9.2.1, 9.9.2.2, 9.9.2.3 and 9.16 of SS 97: Part 1: 2000 are required.		N/A		



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Attachment 8 REGULATORY REQUIREMENTS FOR SINGAPORE

No	Items	Requirements	Result - Remark	Verdict	
		Applicable to multiway adapto	or		
24	Multiway adaptor with 3-pin socket-outlets or combination of 3-pin and 2-pin socket-outlets	a) The socket contacts of the adaptor shall only accept 13A 3-pin mains plug complying with SS 145 and/or 2.5A 2-pin mains plug complying with EN 50075. b) The shutters screening the current-carrying socket contacts shall not be opened by the insertion of any corresponding SINGLE pin of the plug into any current-carrying socket aperture. c) A barrier or other acceptable means shall be provided on the engagement surface of the 2.5A 2-pin socket-outlet of the adaptor to PREVENT entry of any types of 2-pin mains plugs except those complying with EN 50075. (note: shutters cannot be regarded as barriers) d) Adaptor incorporates with switch would require additional test to sub-clauses 13.11, 17.1.3 and 18.1.3 of SS 145: Part 2: 1997.		N/A	
	Applicable to plasma/LCD display monitor				
25	Plasma/LCD display monitor with TV tuner	Plasma/LCD display monitor tested to IEC 60950 would require additional test to clauses 9 (related to antenna only), 10.1, 10.2, 10.3 and 12.5 of IEC 60065.		N/A	

********End of Attachment 8*******



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	IEC 60950_1A ATTACHMENT				
Clause	Requirement + Test		Result - Remark	Verdict	

Attachment 9 Deviation of China

ATTACHMENT TO TEST REPORT IEC 60950-1 CHINA NATIONAL DIFFERENCES

Information technology equipment Safety - Part 1: General requirements

Differences according to GB 4943.1--2011

Attachment Form No...... CN_ND_IEC60950_1A

Attachment Originator: CQC

Master Attachment Date 2012-10

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	China National Differences	
1.5. 2	Add a note behind the first dashed paragraph. Note: A component used shall comply with related requirements corresponding altitude of 5000m.	N/A
1.7	Add a paragraph before the last paragraph: The required marking and instruction should be given in normative Chinese unless otherwise specified.	Р
1.7.1	Amend dashed paragraph at the fifth paragraph: The RATED VOLTAGE should be 220V (single phase) or 380V (three-phases) for single rated voltage, for RATED VOLTAGE RANGE, it should cover 220V or 380V (three-phases), for multiple RATED VOLTAGES, one of them should be 220V or 380V (three-phases) and set on 220V or 380V (three-phases) when manufactured. And the RATED FREQUENCY or RATED FREQUENCY RANGE should be 50Hz or include 50Hz.	P



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IEC 60950_1A ATTACHMENT				
Clause	Requirement + Test		Result - Remark	Verdict

1.7.2.1	Add requirements of warning for equipment intended to be used at altitude not exceeding 2000m or at non-tropical climate regions:	N/A
	For equipment intended to be used at altitude not exceeding 2000m, a warning label containing the following or a similar appropriate wording, or a symbol as in annex DD shall fixed to the equipment at readily visible place. "Only used at altitude not exceeding 2000m."	
	For equipment intended to be used in not-tropical climate regions, a warning label containing the following or a similar appropriate wording, or a symbol as in annex DD shall fixed to the equipment at readily visible place. "Only used in not-tropical climate regions."	
	If only the symbol used, the explanation of the symbol shall be contained in the instruction manual.	
	The above statements shall be given in a language acceptable to the regions where the apparatus is intended to be used.	
2.7.1	Amended the first paragraph as: Protection in PRIMARY CIRCUITS against overcurrent short-circuits and earth faults shall be provided as an integral part of the equipment except special provisions. And the protective device shall meet the requirement of Clause 5.3. Delete note of Clause 2.7.1.	Р



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sections: Where required by 2.9.1, 2.10.8.3, 2.10.10 or 2.10.11, humidity conditioning is conducted for 120 h in a cabinet or room containing air with ambient temperature 40±2°C and a relative humidity of (93±3)%. During this conditioning the component or subassembly is not energized. For equipment not to be operated at tropical climatic conditions, Where required by 2.9.1, 2.10.8.3, 2.10.10 or 2.10.11, humidity conditioning is conducted for 48 h in a cabinet or room containing air with a relative humidity of (93±3) %. The temperature of the air, at all places where samples can be located, is maintained within 2°C of any convenient value between 20°C and 30°C such that condensation does not occur. Due to pretreatment of equipment operated at high allitude area is humidity conditioning withstand hot shock, specific requirements are to be considered. Add note: For equipment to be operated at 2000 m - 5000m above sea level, assessment and requirement of humidity conditioning for Insulation material properties are considered. 2.10.3.1 Amend the third paragraph of Clause 2.10.3.1 to be: These requirements apply for equipment to be operated up to 2000 m above sea level. For equipment to be operated at more than 2000 m above sea level at minimum CLEARANCE shall be multiplied by the factor 1.48 corresponding altitude of 5000m given in Table A.2 of IEC 60664-1. Linear interpolation is permitted between the nearest two points in Table A.2 of IEC 60664-1. Linear interpolation is permitted between the nearest two points in Table A.2. The calculated minimum CLEARANCE using this multiplication factor shall be rounded up to the next higher 0.1 mm increment.			1	1
120 h in a cabinet or room containing air with ambient temperature 40±2°C and a relative humidity of (93±3)%. During this conditioning the component or subassembly is not energized. For equipment not to be operated at tropical climatic conditions, Where required by 2.9.1, 2.10.8.3, 2.10.10 or 2.10.11, humidity conditioning is conducted for 48 h in a cabinet or room containing air with a relative humidity of (93±3) %. The temperature of the air, at all places where samples can be located, is maintained within 2°C of any convenient value between 20°C and 30°C such that condensation does not occur. Due to pretreatment of equipment operated at high altitude area is humidity conditioning withstand hot shock, specific requirements are to be considered. Add note: For equipment to be operated at 2000 m - 5000m above sea level, assessment and requirement of humidity conditioning for Insulation material properties are considered. Amend the third paragraph of Clause 2.10.3.1 to be: These requirements apply for equipment to be operated up to 2000 m above sea level. For equipment to be operated at more than 2000 m above sea level, the minimum CLEARANCE shall be multiplied by the factor 1.48 corresponding altitude of 50000 mg given in Table A.2 of IEC 60664-1. For equipment to be operated at more than 5000 m above sea level, the minimum CLEARANCE shall be multiplied by the factor given in Table A.2 of IEC 60664-1. Linear interpolation is permitted between the nearest two points in Table A.2 of IEC 60664-1. Linear interpolation is permitted between the nearest two points in Table A.2 of IEC 60664-1 in the multiplied by the factor given in Table A.2 of IEC 60664-1 in minimum CLEARANCE shall be multiplied by the factor given in Table A.2 of IEC 60664-1 in minimum CLEARANCE shall be multiplied by the factor given in Table A.2 of IEC 60664-1 in minimum CLEARANCE shall be multiplied by the factor shall be rounded up to the next higher 0,1 mm increment.	2.9.2	sections: Where required by 2.9.1, 2.10.8.3, 2.10.10 or		Р
climatic conditions, Where required by 2.9.1, 2.10.8.3, 2.10.10 or 2.10.11, humidity conditioning is conducted for 48 h in a cabinet or room containing air with a relative humidity of (93±3) %. The temperature of the air, at all places where samples can be located, is maintained within 2 °C of any convenient value between 20 °C and 30 °C such that condensation does not occur. Due to pretreatment of equipment operated at high altitude area is humidity conditioning withstand hot shock, specific requirements are to be considered. Add note: For equipment to be operated at 2000 m - 5000m above sea level, assessment and requirement of humidity conditioning for Insulation material properties are considered. 2.10.3.1 Amend the third paragraph of Clause 2.10.3.1 to be: These requirements apply for equipment to be operated up to 2000 m above sea level. For equipment to be operated at more than 2000 m above sea level and up to 5000m above sea level, the minimum CLEARANCE shall be multiplied by the factor 1.48 corresponding altitude of 5000m given in Table A.2 of IEC 60664-1. For equipment to be operated at more than 5000 m above sea level, the minimum CLEARANCE shall be multiplied by the factor given in Table A.2 of IEC 60664-1. Linear interpolation is permitted between the nearest two points in Table A.2. The calculated minimum CLEARANCE using this multiplication factor shall be rounded up to the next higher 0,1 mm increment.		120 h in a cabinet or room containing air with ambient temperature 40±2°C and a relative humidity of (93±3)%. During this conditioning the		
high altitude area is humidity conditioning withstand hot shock, specific requirements are to be considered. Add note: For equipment to be operated at 2000 m - 5000m above sea level, assessment and requirement of humidity conditioning for Insulation material properties are considered. 2.10.3.1 Amend the third paragraph of Clause 2.10.3.1 to be: These requirements apply for equipment to be operated up to 2000 m above sea level. For equipment to be operated at more than 2000 m above sea level, the minimum CLEARANCE shall be multiplied by the factor 1.48 corresponding altitude of 5000m given in Table A.2 of IEC 60664-1. For equipment to be operated at more than 5000 m above sea level, the minimum CLEARANCE shall be multiplied by the factor given in Table A.2 of IEC 60664-1. Linear interpolation is permitted between the nearest two points in Table A.2. The calculated minimum CLEARANCE using this multiplication factor shall be rounded up to the next higher 0,1 mm increment. 2.10.3.3& Add "(applicable for altitude up to 2000m)" in		climatic conditions, Where required by 2.9.1, 2.10.8.3, 2.10.10 or 2.10.11, humidity conditioning is conducted for 48 h in a cabinet or room containing air with a relative humidity of (93±3) %. The temperature of the air, at all places where samples can be located, is maintained within 2 °C of any convenient value between 20 °C and 30 °C		
m - 5000m above sea level, assessment and requirement of humidity conditioning for Insulation material properties are considered. 2.10.3.1 Amend the third paragraph of Clause 2.10.3.1 to be: These requirements apply for equipment to be operated up to 2000 m above sea level. For equipment to be operated at more than 2000 m above sea level, the minimum CLEARANCE shall be multiplied by the factor 1.48 corresponding altitude of 5000m given in Table A.2 of IEC 60664-1. For equipment to be operated at more than 5000 m above sea level, the minimum CLEARANCE shall be multiplied by the factor given in Table A.2 of IEC 60664-1. Linear interpolation is permitted between the nearest two points in Table A.2. The calculated minimum CLEARANCE using this multiplication factor shall be rounded up to the next higher 0,1 mm increment. 2.10.3.3& Add "(applicable for altitude up to 2000m)" in		high altitude area is humidity conditioning withstand hot shock, specific requirements are to		
be: These requirements apply for equipment to be operated up to 2000 m above sea level. For equipment to be operated at more than 2000 m above sea level and up to 5000m above sea level, the minimum CLEARANCE shall be multiplied by the factor 1.48 corresponding altitude of 5000m given in Table A.2 of IEC 60664-1. For equipment to be operated at more than 5000 m above sea level, the minimum CLEARANCE shall be multiplied by the factor given in Table A.2 of IEC 60664-1. Linear interpolation is permitted between the nearest two points in Table A.2. The calculated minimum CLEARANCE using this multiplication factor shall be rounded up to the next higher 0,1 mm increment. 2.10.3.3& Add "(applicable for altitude up to 2000m)" in		m - 5000m above sea level, assessment and requirement of humidity conditioning for Insulation		
equipment to be operated at more than 2000 m above sea level and up to 5000m above sea level, the minimum CLEARANCE shall be multiplied by the factor 1.48 corresponding altitude of 5000m given in Table A.2 of IEC 60664-1. For equipment to be operated at more than 5000 m above sea level, the minimum CLEARANCE shall be multiplied by the factor given in Table A.2 of IEC 60664-1. Linear interpolation is permitted between the nearest two points in Table A.2. The calculated minimum CLEARANCE using this multiplication factor shall be rounded up to the next higher 0,1 mm increment. 2.10.3.3& Add "(applicable for altitude up to 2000m)" in	2.10.3.1	be: These requirements apply for equipment to be		Р
		equipment to be operated at more than 2000 m above sea level and up to 5000m above sea level, the minimum CLEARANCE shall be multiplied by the factor 1.48 corresponding altitude of 5000m given in Table A.2 of IEC 60664-1. For equipment to be operated at more than 5000 m above sea level, the minimum CLEARANCE shall be multiplied by the factor given in Table A.2 of IEC 60664-1. Linear interpolation is permitted between the nearest two points in Table A.2. The calculated minimum CLEARANCE using this multiplication factor shall be rounded up to the next higher 0,1 mm		
	2.10.3.3& 2.10.3.4			Р

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2.10.3.4	Add a new section above Table 2K and in Clause		Р
2.10.3.4	2.10.3.4:		T [*]
	Minimum CLEARANCES determined by above rules apply for equipment to be operated up to 2000m above sea level. For equipment operated		
	at 2000 m - 5000m above sea level, the minimum CLEARANCE shall be multiplied by the factor 1.48 corresponding altitude of 5000m given in Table A.2 of GB/T16935.1 (IEC 60664-1) . For		
	equipment to be operated at more than 5000 m above sea level, the minimum CLEARANCE shall be multiplied by the factor given in Table A.2 of GB/T16935.1.		
3.2.1.1	Add a paragraph before the last paragraph: Plugs connected to AC mains supply shall comply with GB 1002 or GB 1003 or GB/T 11918 as applicable.	The plug portion shall be evaluated when submitted for national approval.	N/A
4.2.8	Clause 4.2.8 cathode ray tubes quoted Clause 18 of GB8898-2011.		N/A
	Delete note of Clause 4.2.8.		
Annex E	Amend last section:		N/A
	For comparison of winding temperatures determined by the resistance method of this annex with the temperature limits of Table 4B, 35 °C shall be added to the calculated temperature rise.		
	Add note: for equipment not to be operated at tropical climatic conditions, 25 °C shall be added to the calculated temperature rise to compare with the temperature of Table 4B.		
Annex G.6	Change the second section of Clause G.6 to be: For equipment to be operated at 2000 m - 5000m above sea level, the minimum CLEARANCE shall be multiplied by the factor 1.48 corresponding altitude of 5000m given in Table A.2 of GB/T16935.1. For equipment to be operated at more than 5000 m above sea level, the minimum		Р
	CLEARANCE shall be multiplied by the factor given in Table A.2 of IEC 60664-1. Linear interpolation is permitted between the nearest two points in Table A.2. The calculated minimum CLEARANCE using this multiplication factor shall be rounded up to the next higher 0,1 mm increment.		



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Annex DD (normative)	Added annex DD: Instructions for the new safety warning labels.	N/A
(normativo)	DD.1 Altitude warning label	
	Meaning of the label: Evaluation for apparatus only based on altitude not exceeding 2000m, therefor it's the only operating condition applied for the equipment .There may be some potential safety hazard if the equipment is used at altitude above 2000m.	
	DD.2 Climate warning label	
	Meaning of the label: Evaluation for apparatus only based on temperate climate condition, therefor it's the only operating condition applied for the equipment .There may be some potential safety hazard if the equipment is used in tropical climate region.	
Annex EE (informative)	Added annex EE: Illustration relative to safety explanation in normative Chinese、Tibetan、Mongolian、Zhuang Language and Uighur.	N/A

	Special national conditions	
1.1.2	GB4943.1-2011 applies to equipment used	Р
	at altitudes not exceeding 5000m above sea level,	
	primarily in regions with moderate or tropical	
	climates.	
	Revise the third dashed paragraph of 1.1.2 as: ——equipment intended to be used in vehicles, on board ships or aircraft, at altitudes greater than 5000m;	
1.4.5	Amend the second paragraph by the following:	Р
	If the equipment is intended for direct connection to an AC mains supply, the tolerances on RATED VOLTAGE shall be taken as +10% and -10%.	



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	Attachment 9 Deviation of	of China	,	
1.4.12.1	Tma: The maximum ambient temperature permitted by the manufacturer's specification, or 35 °C, whichever is greater.		Р	
	Add note 1: For equipment not to be operated at tropical climatic conditions, Tma is the maximum ambient temperature permitted by the manufacturer's specification, or 25 °C, whichever is greater.			
	Add note 2: For equipment to be operated at 2000m-5000m above sea leave, its temperature test conditions and temperature limits are under consideration.			

********End of Attachment 9********