Test Report issued under the responsibility of:

TEST REPORT

IEC 60950-1

Information technology equipment – Safety – Part 1: General requirements

Report Number. .....:	**T221-0014/15**
Date of issue .....:	**2015-05-04**
Total number of pages.....	**152 pages**
Applicant's name.....:	**GlobTek, Inc.**
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

If this Test Report Form is used by non-IECEE members, the IECEE/IEC logo and the reference to the CB Scheme procedure shall be removed.

This report is not valid as a CB Test Report unless signed by an approved CB Testing Laboratory and appended to a CB Test Certificate issued by an NCB in accordance with IECEE 02.

General disclaimer:

The test results presented in this report relate only to the object tested.
This report shall not be reproduced, except in full, without the written approval of the Issuing CB Testing Laboratory. The authenticity of this Test Report and its contents can be verified by contacting the NCB, responsible for this Test Report.

Test item description .....:	ITE POWER SUPPLY
Trade Mark .....:	GlobTek, Inc.
Manufacturer.....:	GlobTek, Inc.
Model/Type reference.....:	GT-83081–WWVV-X.X-W2Z - WW is the standard output wattage, with a maximum value of "12" - VV is the standard rated output voltage designation, with a maximum value of "15" - -X.X is optional or blank and denotes the output voltage differentiator, subtracting or adding X.X volts from standard output voltage VV in 0.1V increments, blank is to indicate the no voltage different. - Z designates type of plug and can be E for European plug, U for British plug, blank for North American / Japan plug/Taiwan plug, C for Chinese plug, I for India plug, A for Australia plug, K for Korea plug, AR for Argentina plug, BR for Brazilian plug, SA for South African plug
Ratings .....:	GT-83081-WW05-X.X-W2Z Input: 100 – 240 V~; 50/60 Hz; 0,5 A Output: 3,3 – 5 V⎓; Max. 2,0 A; Max. 10 W GT-83081-WW09-X.X-W2Z Input: 100 – 240 V~; 50/60 Hz; 0,5 A Output: 5,1 – 8,9 V⎓; Max. 2 A; Max. 10 W GT-83081-WW09-W2Z Input: 100 – 240 V~; 50/60 Hz; 0,5 A Output: 9,0 V⎓; Max. 1,2 A; Max. 12 W GT-83081-WW12-X.X-W2Z Input: 100 – 240 V~; 50/60 Hz; 0,5 A Output: 9,1 – 12,0 V⎓; Max. 1,2 A; Max. 12 W GT-83081-WW15-X.X-W2Z Input: 100 – 240 V~; 50/60 Hz; 0,5 A Output: 12,1 – 15,0 V⎓; Max. 0,99 A; Max. 12 W

Testing procedure and testing location:			
☒	**CB Testing Laboratory:**	SIQ Testing and Certification GmbH Testing Laboratory is accredited by Slovenian Accreditation, Reg. No.: LP-009	
Testing location/ address.....:		Angerstraße 11, D-86807 Buchloe Germany	
☐	**Associated CB Testing Laboratory:**		
Testing location/ address.....:			
Tested by (name + signature) .....:		Alexander Mayr	
Approved by (name + signature) .....:		Klaus Völk	
☐	**Testing procedure: TMP/CTF Stage 1:**		
Testing location/ address.....:			
Tested by (name + signature) .....:			
Approved by (name + signature) .....:			
☐	**Testing procedure: WMT/CTF Stage 2:**		
Testing location/ address.....:			
Tested by (name + signature) .....:			
Witnessed by (name + signature).....:			
Approved by (name + signature) .....:			
☐	**Testing procedure: SMT/CTF Stage 3 or 4:**		
Testing location/ address.....:			
Tested by (name + signature) .....:			
Witnessed by (name + signature).....:			
Approved by (name + signature) .....:			
Supervised by (name + signature) .....:			

List of Attachments:

1. Test Report (73 pages)
2. National Differences – Enclosure No. 1 (33 pages)
3. European Group Differences and National Differences according to EN 60950-1:2006 + A1:2010 + A2:2013 + A11:2009 + A12:2011 – Enclosure No. 1a (21 pages)
4. Pictures – Enclosure No. 2 (4 pages)
5. Schematics, Layouts, Transformer data - Enclosure No. 3 (21 pages)

Summary of testing:

Tests performed (name of test and test clause):	**Testing location:**
1.6.2 Input Test	**SIQ Testing and Certification GmbH**
2.10.2 Working Voltage measurement on PCB and Transformer	**Angerstraße 11, D-86807 Buchloe Germany**
5.2 Electric Strength Test	

Summary of compliance with National Differences

List of countries addressed:

Argentina**, Australia, Austria***, Bahrain**, Belarus**, Belgium***, Brazil**, Bulgaria***, Canada, China, Cyprus***, Colombia**, Croatia**, Czech Republic***, Denmark***, Finland***, France***, Germany***, Greece***, Hungary***, India**, Indonesia**, Iran**, Ireland***, Israel, Italy***, Japan*, Kazakhstan**, Kenya**, Korea, Lybia**, Malaysia**, Mexico**, Netherlands***, New Zealand*, Norway***, Pakistan**, Poland***, Portugal***, Romania***, Russian Federation**, Saudi Arabia**, Serbia**, Singapore**, Slovakia***, Slovenia***, South Africa**, Spain***, Sweden, Switzerland, Thailand**, Turkey***, Ukraine**, United Arab Emirates**, United Kingdom, Uruguay**, USA, Vietnam**

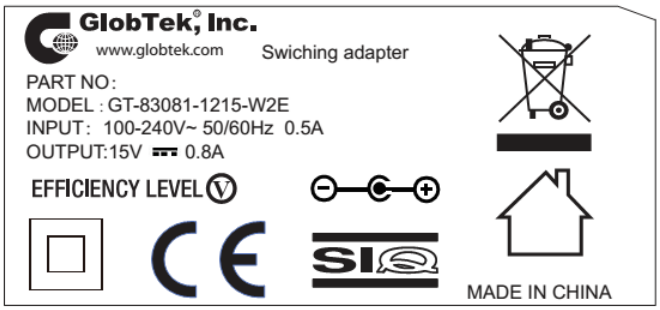
* No national differences to IEC 60950-1:2005 (2nd edition) (+ A1 + A2) declared

** No national differences to IEC 60950-1:2005 (2nd edition) + A1 + A2 or IEC 60950-1:2001 (1st edition) declared
*** EU group differences

☒ **The product fulfils the requirements of EN 60950-1:2006 + A1:2010 + A2:2013 + A11:2009 + A12:2011 (see Enclosure No. 1a).**

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 NCBs that own these marks.



Note:

This is a representative label, the others are identical to this except for the model name and output ratings as listed in the Model/Type reference.

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 ..... :	±10%
Tested for IT power systems ..... :	[X] Yes [] No
IT testing, phase-phase voltage (V) ..... :	230 (for Norway only)
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 (13 A for UK; 20 A for America and Canada)
Pollution degree (PD) ..... :	[] PD 1 [X] PD 2 [] PD 3
IP protection class ..... :	IPX0
Altitude during operation (m) ..... :	Up to 2000
Altitude of test laboratory (m) ..... :	627
Mass of equipment (kg) ..... :	Approx. 0,09

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 ..... :	2015-04-01
Date(s) of performance of tests ..... :	From 2015-04-08 to 2015-04-15

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 / ☐ point is used as the decimal separator.

Manufacturer's Declaration per sub-clause 4.2.5 of IECEE 02:

The application for obtaining a CB Test Certificate includes more than one factory location and a declaration from the Manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided.....:

☒ **Yes**

☐ **Not applicable**

When differences exist; they shall be identified in the General product information section.

Name and address of factory (ies) ..... :

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

General product information:

Information about the Product:

1. The equipment models are Switching Adapter (direct plug-in type) used for DC supply of IT or office equipment. The output cord is non-detachable..
2. The power supply's top enclosure is secured to bottom enclosure by ultrasonic welding.
3. The plug pin holder of European plug and Korean plug was fixed into the enclosure of plug portion by a screw. The pin parts of British plug, Australian plug, Japanese plug, South Africa plug and Argentinean plug were moulded into the enclosure of plug portion. It is impossible to remain in the mains socket-outlet after removal of the adapter,
4. EUT intended to be used at altitude 2000m that specified in operation instruction.
5. The maximum ambient temperature is 45°C for models with PCB layout version REV 7.01, and 40°C for other models.
6. The European plug was evaluated according to EN 50075:1990; the British plug was evaluated according to BS1363-1:1995+A1+A2+A3; the Australian plug was evaluated according to AS/NZS 3112:2011; the Japanese plug was evaluated according to JIS C 8303; the Korean plug was evaluated according to KSC 8305; the Argentinean plug was evaluated according IRAM 2063:2009, the South Africa plug was evaluated according to SANS 164-1 and SANS 164-3.

Explanation of the test program (according to IECEE CB Scheme OD 2020 from 2014):

This report has been judged on the basis of CB test report No. 16064104 001, issued 2014-10-21 by TÜV Rheinland (Guangdong) Ltd.; No.199 Kezhu Road, Guangzhou Science City 510663 Guangzhou, China.

After review following tests were performed:

- Input current measurement
- Working voltage measurement
- Electric strength test

Based on those results the test results from test report No. 16064104 001 were considered acceptable and the test results were adopted to this test report.
In addition the model was checked and compared with the model in the test report No. 16064104 001 for any constructional changes. No changes found.

Abbreviations used in the report:

- normal conditions	**N.C.**	- single fault conditions	**S.F.C**
- functional insulation	**OP**	- basic insulation	**BI**
- double insulation	**DI**	- supplementary insulation	**SI**
- between parts of opposite polarity	**BOP**	- reinforced insulation	**RI**

Indicate used abbreviations (if any)

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

1	**GENERAL**		P

1.5	**Components**		P
1.5.1	General		P
	Comply with IEC 60950-1 or relevant component standard	(see appended tables 1.5.1)	P
1.5.2	Evaluation and testing of components	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	No thermal controls.	N/A
1.5.4	Transformers	(see list of safety critical components table 1.5.1 and the transformer drawings in the Enclosure No. 3)	P
1.5.5	Interconnecting cables	Interconnection o/p cable to other device is carrying only SELV on an energy level below 240 VA. →Except for the insulation material, there are no further requirements for the o/p interconnection cable.	P
1.5.6	Capacitors bridging insulation	Double / reinforced insulation is bridged by a single capacitor. Circuit complies with 2.4; capacitor complies with IEC60384-14 2nd ed., class Y1.	P
1.5.7	Resistors bridging insulation		N/A
1.5.7.1	Resistors bridging functional, basic or supplementary insulation		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
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	No such resistors are bridging double/reinforced insulation.	N/A
1.5.8	Components in equipment for IT power systems		P
1.5.9	Surge suppressors		P
1.5.9.1	General	Only for PCB layout version REV 4.01 and REV 7.01: Optional surge suppressors used between Line and Neutral.	P
1.5.9.2	Protection of VDRs	The current fuse or fusible resistor (F1 or F1+ F2) provide the protection.	P
1.5.9.3	Bridging of functional insulation by a VDR	Separately approved VDR used.	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	No VDR bridging double or reinforced insulation.	N/A
1.6	**Power interface**		P
1.6.1	AC power distribution systems		P
1.6.2	Input current	(see appended table 1.6.2)	P
1.6.3	Voltage limit of hand-held equipment	The equipment is not hand-held.	N/A
1.6.4	Neutral conductor	Class II equipment. The neutral is not identified in the equipment. Double or reinforced insulation for rated voltage between accessible parts and primary phases.	P
1.7	**Marking and instructions**		P
1.7.1	Power rating and identification markings		P
1.7.1.1	Power rating marking		P
	Multiple mains supply connections.....:	One rated voltage only.	N/A
	Rated voltage(s) or voltage range(s) (V) ..... :	100 – 240 V~	P
	Symbol for nature of supply, for d.c. only..... :	Not connected to d.c. mains.	N/A
	Rated frequency or rated frequency range (Hz) ... :	50/60 Hz	P
	Rated current (mA or A) ..... :	0,5 A	P

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
1.7.1.2	Identification markings		P
	Manufacturer's name or trade-mark or identification mark .....:	See page 2.	P
	Model identification or type reference .....:	See page 2.	P
	Symbol for Class II equipment only .....:	Appropriate symbol provided.	P
	Other markings and symbols .....:	Additional symbols or marking does not give rise to misunderstanding.	P
1.7.1.3	Use of graphical symbols		P
1.7.2	Safety instructions and marking		N/A
1.7.2.1	General		N/A
1.7.2.2	Disconnect devices	Mains plug considered as disconnect device and is provided as part of the equipment.	N/A
1.7.2.3	Overcurrent protective device		N/A
1.7.2.4	IT power distribution systems	Only for Norway	P
1.7.2.5	Operator access with a tool	No operator accessible area that needs to be accessed by the use of a tool.	N/A
1.7.2.6	Ozone	Unit does not produce ozone.	N/A
1.7.3	Short duty cycles	The equipment is intended for continuous operation.	N/A
1.7.4	Supply voltage adjustment .....:	No voltage selector.	N/A
	Methods and means of adjustment; reference to installation instructions .....:	No voltage selector.	N/A
1.7.5	Power outlets on the equipment .....:	No standard power outlet.	N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
1.7.6	Fuse identification (marking, special fusing characteristics, cross-reference) ..... :	For PCB layout version REV 2.02: Fusible resistor (3.3Ω, 1W) or current fuse used. Marking adjacent to fusible resistor or fuse: F1 T1AL 250V or 3.3ohm 1W For PCB layout version REV 4.01 and REV 7.01: Current fuse used for F1. Marking adjacent to current fuse: F1 T6.3AL 250V Fusible resistor (3.3Ω, 1W) or current fuse used for F2. Marking adjacent to fusible resistor or fuse: F2 T1AL 250V or 3.3ohm 1W	P
1.7.7	Wiring terminals		N/A
1.7.7.1	Protective earthing and bonding terminals ..... :	Class II direct plug-in equipment.	N/A
1.7.7.2	Terminals for a.c. mains supply conductors	Class II direct plug-in equipment.	N/A
1.7.7.3	Terminals for d.c. mains supply conductors	Not intended for connection to DC mains.	N/A
1.7.8	Controls and indicators	There are no controls affecting safety.	N/A
1.7.8.1	Identification, location and marking ..... :	No switch provided.	N/A
1.7.8.2	Colours ..... :	No indicators with colors.	N/A
1.7.8.3	Symbols according to IEC 60417..... :	There are no switches in the equipment.	N/A
1.7.8.4	Markings using figures ..... :	No controls in the sense of this clause.	N/A
1.7.9	Isolation of multiple power sources ..... :	Only one connection supplying hazardous voltages and energy levels to the equipment.	N/A
1.7.10	Thermostats and other regulating devices ..... :	No thermostats or other regulating devices.	N/A
1.7.11	Durability	The marking withstands required tests.	P
1.7.12	Removable parts	No removable parts.	N/A
1.7.13	Replaceable batteries ..... :	No lithium battery in the equipment.	N/A
	Language(s) .....:		—

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
1.7.14	Equipment for restricted access locations..... :	Equipment not intended for installation in RAL.	N/A

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

2	**PROTECTION FROM HAZARDS**		P
2.1	**Protection from electric shock and energy hazards**		P
2.1.1	Protection in operator access areas	There is adequate protection against operator contact with bare parts at hazardous voltage.	P
2.1.1.1	Access to energized parts		P
	Test by inspection .....:	Verified.	P
	Test with test finger (Figure 2A) .....:	Verified.	P
	Test with test pin (Figure 2B) .....:	Verified.	P
	Test with test probe (Figure 2C) .....:	No TNV circuit.	N/A
2.1.1.2	Battery compartments	No battery compartment.	N/A
2.1.1.3	Access to ELV wiring	No ELV wiring.	N/A
	Working voltage (Vpeak or Vrms); minimum distance through insulation (mm)		—
2.1.1.4	Access to hazardous voltage circuit wiring		N/A
2.1.1.5	Energy hazards .....:	No energy hazard in operator access area. (see appended table 2.1.1.5)	P
2.1.1.6	Manual controls	No shafts of knobs etc. at ELV or hazardous voltage.	N/A
2.1.1.7	Discharge of capacitors in equipment		N/A
	Measured voltage (V); time-constant (s) .....:	The capacitance of the input circuit is ≤ 0,1μF, no measurement is performed.	—
2.1.1.8	Energy hazards – d.c. mains supply		N/A
	a) Capacitor connected to the d.c. mains supply ...:	Unit not connected to DC mains.	N/A
	b) Internal battery connected to the d.c. mains supply .....:	No battery provided.	N/A
2.1.1.9	Audio amplifiers .....:	No audio amplifier within the unit.	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**	P

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
2.2.1	General requirements	SELV limits (at accessible parts) are not exceeded under normal condition and after a single fault. (see appended table 2.2)	P
2.2.2	Voltages under normal conditions (V) ..... :	Within SELV limits. (See appended table 2.2)	P
2.2.3	Voltages under fault conditions (V) ..... :	Single fault conditions: < 60 Vdc. See enclosed test results.	P
2.2.4	Connection of SELV circuits to other circuits ..... :	The Output of the transformer represents hazard secondary voltage. The output of the unit is rated SELV. Therefore, SELV reliability testing was performed to make sure, that in case of one failure the output will remain SELV.	P
2.3	**TNV circuits**		N/A
2.3.1	Limits		N/A
	Type of TNV circuits..... :	No TNV circuits in the equipment.	—
2.3.2	Separation from other circuits and from accessible parts		N/A
2.3.2.1	General requirements		N/A
2.3.2.2	Protection by basic insulation		N/A
2.3.2.3	Protection by earthing		N/A
2.3.2.4	Protection by other constructions ..... :		N/A
2.3.3	Separation from hazardous voltages		N/A
	Insulation employed ..... :		—
2.3.4	Connection of TNV circuits to other circuits		N/A
	Insulation employed ..... :		—
2.3.5	Test for operating voltages generated externally		N/A
2.4	**Limited current circuits**		P
2.4.1	General requirements		P
2.4.2	Limit values		P
	Frequency (Hz)..... :	50,3 kHz	—
	Measured current (mA) ..... :	2,16	—

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
	Measured voltage (V) .....:	4,32	—
	Measured circuit capacitance (nF or µF).....:	2,2 nF	—
2.4.3	Connection of limited current circuits to other circuits	LCC only connected to SELV.	P
2.5	**Limited power sources**		P
	a) Inherently limited output		N/A
	b) Impedance limited output		N/A
	c) Regulating network limited output under normal operating and single fault condition	(see appended table 2.5)	P
	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).....:	No such overcurrent protective device provided.	—
	Current rating of overcurrent protective device (A) .:		—
2.6	**Provisions for earthing and bonding**		N/A
2.6.1	Protective earthing	Class II equipment without earthing.	N/A
2.6.2	Functional earthing		N/A
	Use of symbol for functional earthing .....:	No functional earthing.	N/A
2.6.3	Protective earthing and protective bonding conductors		N/A
2.6.3.1	General		N/A
2.6.3.2	Size of protective earthing conductors		N/A
	Rated current (A), cross-sectional area (mm^2), AWG .....:	Class II equipment without earthing.	—
2.6.3.3	Size of protective bonding conductors		N/A
	Rated current (A), cross-sectional area (mm^2), AWG .....:	Class II equipment without earthing.	—
	Protective current rating (A), cross-sectional area (mm^2), AWG .....:	Class II equipment without earthing.	—
2.6.3.4	Resistance of earthing conductors and their terminations; resistance (Ω), voltage drop (V), test current (A), duration (min) .....:	Class II equipment without earthing.	N/A
2.6.3.5	Colour of insulation .....:	Class II equipment without earthing.	N/A
2.6.4	Terminals		N/A
2.6.4.1	General		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
2.6.4.2	Protective earthing and bonding terminals		N/A
	Rated current (A), type, nominal thread diameter (mm)..... :	Class II equipment without earthing.	—
2.6.4.3	Separation of the protective earthing conductor from protective bonding conductors		N/A
2.6.5	Integrity of protective earthing		N/A
2.6.5.1	Interconnection of equipment		N/A
2.6.5.2	Components in protective earthing conductors and protective bonding conductors		N/A
2.6.5.3	Disconnection of protective earth		N/A
2.6.5.4	Parts that can be removed by an operator		N/A
2.6.5.5	Parts removed during servicing		N/A
2.6.5.6	Corrosion resistance		N/A
2.6.5.7	Screws for protective bonding		N/A
2.6.5.8	Reliance on telecommunication network or cable distribution system		N/A
2.7	**Overcurrent and earth fault protection in primary circuits**		P
2.7.1	Basic requirements	Equipment relies on 16A rated fuse or circuit breaker of the wall outlet installation protection of the building installation in regard to L to N short circuit. Over-current protection is provided by the built-in fusible resistor or current fuse.	P
	Instructions when protection relies on building installation		N/A
2.7.2	Faults not simulated in 5.3.7		P
2.7.3	Short-circuit backup protection	Pluggable equipment type A. Building installation is considered as providing short-circuit backup protection.	P
2.7.4	Number and location of protective devices ..... :	Over current protection by one fusible resistor or current fuse.	P
2.7.5	Protection by several devices	Only one protective device. See Sub-clause 2.7.4.	N/A
2.7.6	Warning to service personnel ..... :	Not permanently connected equipment or equipment provided with non-reversible plug.	N/A

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

2.8	**Safety interlocks**		N/A
2.8.1	General principles	No safety interlock.	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**		P
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.	P
2.9.2	Humidity conditioning	120 h	P
	Relative humidity (%), temperature (°C) .....:	95 %RH, 30°C	—
2.9.3	Grade of insulation	Insulation is considered to be functional, basic, supplementary, reinforced or double.	P
2.9.4	Separation from hazardous voltages		P
	Method(s) used .....:	Accessible conductive parts, SELV circuits or TNV circuits are separated from parts at hazardous voltage by double or reinforced insulation (Method 1).	—

2.10	**Clearances, creepage distances and distances through insulation**		P
2.10.1	General		P
2.10.1.1	Frequency .....:	50/60 Hz	P

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
2.10.1.2	Pollution degrees ..... :	Pollution degree 2	P
2.10.1.3	Reduced values for functional insulation	Functional insulation Line to Neutral before fuse or fusible resistor complies with 2.10.3 & 2.10.4. Other functional insulations comply with 5.3.4 c).	P
2.10.1.4	Intervening unconnected conductive parts	No such parts.	N/A
2.10.1.5	Insulation with varying dimensions	No such transformer used.	N/A
2.10.1.6	Special separation requirements	No TNV circuits.	N/A
2.10.1.7	Insulation in circuits generating starting pulses	No such circuit.	N/A
2.10.2	Determination of working voltage	See appended table 2.10.2.	P
2.10.2.1	General		P
2.10.2.2	RMS working voltage	Considered.	P
2.10.2.3	Peak working voltage	Considered.	P
2.10.3	Clearances		P
2.10.3.1	General		P
2.10.3.2	Mains transient voltages		P
	a) AC mains supply ..... :	Overvoltage Category II (2500Vpeak)	P
	b) Earthed d.c. mains supplies ..... :	Unit not intended for connection to DC mains.	N/A
	c) Unearthed d.c. mains supplies ..... :	Unit not intended for connection to DC mains.	N/A
	d) Battery operation ..... :	No battery.	N/A
2.10.3.3	Clearances in primary circuits	(see appended table 2.10.3 and 2.10.4)	P
2.10.3.4	Clearances in secondary circuits	See 5.3.4	P
2.10.3.5	Clearances in circuits having starting pulses		N/A
2.10.3.6	Transients from a.c. mains supply ..... :	Secondary circuit is not earthed therefore same transients as for a.c. mains considered.	P
2.10.3.7	Transients from d.c. mains supply ..... :	Unit not intended for connection to DC mains.	N/A
2.10.3.8	Transients from telecommunication networks and cable distribution systems ..... :	Unit not intended for connection to telecommunication network or cable distribution system.	N/A
2.10.3.9	Measurement of transient voltage levels	Measurement not relevant.	N/A
	a) Transients from a mains supply		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
	For an a.c. mains supply .....:		N/A
	For a d.c. mains supply .....:		N/A
	b) Transients from a telecommunication network :		N/A
2.10.4	Creepage distances		P
2.10.4.1	General		P
2.10.4.2	Material group and comparative tracking index		P
	CTI tests .....:	Material group IIIb is assumed to be used	—
2.10.4.3	Minimum creepage distances	(see appended table 2.10.3 and 2.10.4)	P
2.10.5	Solid insulation		P
2.10.5.1	General		P
2.10.5.2	Distances through insulation	(see appended table 2.10.5)	P
2.10.5.3	Insulating compound as solid insulation	No such potted components.	N/A
2.10.5.4	Semiconductor devices		N/A
2.10.5.5.	Cemented joints		N/A
2.10.5.6	Thin sheet material – General		N/A
2.10.5.7	Separable thin sheet material		N/AA
	Number of layers (pcs) .....:	No such transformer used.	—
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		N/A
	Electric strength test		—
2.10.5.11	Insulation in wound components	Transformers provided with triple insulated wire complying with 2.10.5.12.	P
2.10.5.12	Wire in wound components	Approved source of triple insulated wire used in T1 secondary winding for reinforced insulation.	P
	Working voltage .....:	See appended table 2.10.2.	P
	a) Basic insulation not under stress .....:		N/A
	b) Basic, supplementary, reinforced insulation .....:	All used triple insulated wires are in compliance with Annex U.	N/A
	c) Compliance with Annex U .....:	Approved triple insulated wires are used. See list of critical components.	P

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
	Two wires in contact inside wound component; angle between 45° and 90° ..... :	By tubing or insulation tape.	P
2.10.5.13	Wire with solvent-based enamel in wound components	No TNV circuits.	N/A
	Electric strength test		—
	Routine test		N/A
2.10.5.14	Additional insulation in wound components		N/A
	Working voltage ..... :	No such construction.	N/A
	- Basic insulation not under stress ..... :		N/A
	- Supplementary, reinforced insulation ..... :		N/A
2.10.6	Construction of printed boards		P
2.10.6.1	Uncoated printed boards	(see appended table 2.10.3 and 2.10.4)	P
2.10.6.2	Coated printed boards		N/A
2.10.6.3	Insulation between conductors on the same inner surface of a printed board	No multi-layer PCBs provided.	N/A
2.10.6.4	Insulation between conductors on different layers of a printed board		N/A
	Distance through insulation		N/A
	Number of insulation layers (pcs)..... :	No multi-layer PCBs provided.	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

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

3	**WIRING, CONNECTIONS AND SUPPLY**		P
3.1	**General**		P
3.1.1	Current rating and overcurrent protection	Secondary output cord are UL recognized wiring which is PVC insulated, rated VW-1, min. 80°C, min. 300V, the wiring gauge is suitable for current intended to be carried. Internal wiring for primary power distribution protected by built-in fuse or fusible resistor.	P
3.1.2	Protection against mechanical damage	Wire ways are smooth and free from edges. Wires are adequately fixed to prevent excessive strain on wire and terminals and avoiding damage to the insulation of the conductors.	P
3.1.3	Securing of internal wiring	Internal wiring is secured against excessive strain, loosening of terminals and damage to the conductor insulation.	P
3.1.4	Insulation of conductors	(see appended table 5.2)	P
3.1.5	Beads and ceramic insulators	No beads or similar ceramic insulators on conductors.	N/A
3.1.6	Screws for electrical contact pressure		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.	P
	10 N pull test	Force of 10 N applied to the termination points of the conductors.	P
3.1.10	Sleeving on wiring	Sleeves are not used as supplementary insulation.	N/A

3.2	**Connection to a mains supply**		P
3.2.1	Means of connection		P

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
3.2.1.1	Connection to an a.c. mains supply	Unit provided with a mains plug that is part of direct plug-in equipment.	P
3.2.1.2	Connection to a d.c. mains supply		N/A
3.2.2	Multiple supply connections	Only one supply connection.	N/A
3.2.3	Permanently connected equipment		N/A
	Number of conductors, diameter of cable and conduits (mm) .....:	The equipment is not intended for permanent connection to the mains.	—
3.2.4	Appliance inlets	Direct plug-in equipment.	N/A
3.2.5	Power supply cords		N/A
3.2.5.1	AC power supply cords		N/A
	Type .....:	No power cord.	—
	Rated current (A), cross-sectional area (mm^2), AWG .....:		—
3.2.5.2	DC power supply cords		N/A
3.2.6	Cord anchorages and strain relief		N/A
	Mass of equipment (kg), pull (N) .....:		—
	Longitudinal displacement (mm) .....:		—
3.2.7	Protection against mechanical damage		N/A
3.2.8	Cord guards		N/A
	Diameter or minor dimension D (mm); test mass (g) .....:	No cord guard provided.	—
	Radius of curvature of cord (mm).....:		—
3.2.9	Supply wiring space	Not permanently connected equipment or equipment with connection of ordinary non-detachable power supply cord.	N/A

3.3	**Wiring terminals for connection of external conductors**		N/A
3.3.1	Wiring terminals	Direct plug-in equipment.	N/A
3.3.2	Connection of non-detachable power supply cords		N/A
3.3.3	Screw terminals		N/A
3.3.4	Conductor sizes to be connected		N/A
	Rated current (A), cord/cable type, cross-sectional area (mm^2) .....:		—
3.3.5	Wiring terminal sizes		N/A
	Rated current (A), type, nominal thread diameter (mm) .....:		—

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
3.3.6	Wiring terminal design		N/A
3.3.7	Grouping of wiring terminals		N/A
3.3.8	Stranded wire		N/A
3.4	**Disconnection from the mains supply**		P
3.4.1	General requirement		P
3.4.2	Disconnect devices	Plug of this direct plug-in equipment was used as disconnected device.	P
3.4.3	Permanently connected equipment	Not permanently connected equipment.	N/A
3.4.4	Parts which remain energized	No parts remain energized.	N/A
3.4.5	Switches in flexible cords		N/A
3.4.6	Number of poles - single-phase and d.c. equipment	The disconnect device disconnects both poles simultaneously.	P
3.4.7	Number of poles - three-phase equipment	Single phase equipment.	N/A
3.4.8	Switches as disconnect devices	No switch as disconnect device.	N/A
3.4.9	Plugs as disconnect devices	Plug of this direct plug-in equipment was used as disconnected device.	N/A
3.4.10	Interconnected equipment	No interconnections using hazardous voltages or hazardous energy levels.	N/A
3.4.11	Multiple power sources	One power source only.	N/A
3.5	**Interconnection of equipment**		P
3.5.1	General requirements		P
3.5.2	Types of interconnection circuits .....:	SELV circuit or limited current circuit.	P
3.5.3	ELV circuits as interconnection circuits		N/A
3.5.4	Data ports for additional equipment	No such ports.	N/A

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

4	**PHYSICAL REQUIREMENTS**		P
4.1	**Stability**		N/A
	Angle of 10°		N/A
	Test force (N) .....:	The unit is not floor standing.	N/A

4.2	**Mechanical strength**		P
4.2.1	General		P
	Rack-mounted equipment.		N/A
4.2.2	Steady force test, 10 N	10N applied to components other than parts serving as an enclosure.	P
4.2.3	Steady force test, 30 N	No internal enclosure.	N/A
4.2.4	Steady force test, 250 N	No hazard. The test was performed with 250N to outer enclosure. .	P
4.2.5	Impact test	Unit is classified as direct plug-in and therefore this test is not applicable.	N/A
	Fall test		N/A
	Swing test		N/A
4.2.6	Drop test; height (mm) .....:	1m, three impacts. No hazard as result from drop test. Test was performed for all sources of enclosure material.	P
4.2.7	Stress relief test	After 7 hours at temperature of 89°C and cooling down to room temperature, no shrinkage, distortion or loosening any enclosure part was noticeable on the adapter. Test was performed for all sources of enclosure material.	P
4.2.8	Cathode ray tubes		N/A
	Picture tube separately certified .....:	No cathode ray tubes.	N/A
4.2.9	High pressure lamps		N/A
4.2.10	Wall or ceiling mounted equipment; force (N) .....:	Unit is not intended to be mounted on a wall or ceiling.	N/A

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

4.3	**Design and construction**		P
4.3.1	Edges and corners	All edges and corners are rounded and/or smoothed.	P
4.3.2	Handles and manual controls; force (N) ..... :	No knobs, grips, handles, lever, etc.	N/A
4.3.3	Adjustable controls	No hazardous adjustable controls.	N/A
4.3.4	Securing of parts		P
4.3.5	Connection by plugs and sockets	Secondary Connectors do not comply with IEC60320 or IEC60083 or IEC60309 connectors.	P
4.3.6	Direct plug-in equipment	The prevention of imposing to undue strain on the socket outlet was done by construction of the plug of adapter.	P
	Torque ..... :	Max. 0,08 Nm	—
	Compliance with the relevant mains plug standard ..... :	See attached results.	P
4.3.7	Heating elements in earthed equipment	The equipment does not have any heating elements.	N/A
4.3.8	Batteries	No batteries in the equipment.	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	Insulation is not exposed to oil, grease etc.	N/A
4.3.10	Dust, powders, liquids and gases	The equipment does not generate dust, powder, does not contain liquid or gas. The unit is specified for office environment.	N/A
4.3.11	Containers for liquids or gases		N/A
4.3.12	Flammable liquids ..... :	No containers for liquids or gases in the equipment.	N/A
	Quantity of liquid (l) ..... :		N/A
	Flash point (°C) ..... :		N/A
4.3.13	Radiation		N/A
4.3.13.1	General		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
4.3.13.2	Ionizing radiation		N/A
	Measured radiation (pA/kg) .....:		—
	Measured high-voltage (kV) .....:		—
	Measured focus voltage (kV) .....:		—
	CRT markings .....:		—
4.3.13.3	Effect of ultraviolet (UV) radiation on materials		N/A
	Part, property, retention after test, flammability classification .....:		N/A
4.3.13.4	Human exposure to ultraviolet (UV) radiation .....:	No such exposure.	N/A
4.3.13.5	Lasers (including laser diodes) and LEDs	No such components.	N/A
4.3.13.5.1	Lasers (including laser diodes)		N/A
	Laser class .....:		—
4.3.13.5.2	Light emitting diodes (LEDs)	No such components.	—
4.3.13.6	Other types .....:	No such components.	
4.4	**Protection against hazardous moving parts**		N/A
4.4.1	General		N/A
4.4.2	Protection in operator access areas .....:	No hazardous moving parts.	N/A
	Household and home/office document/media shredders		N/A
4.4.3	Protection in restricted access locations .....:		N/A
4.4.4	Protection in service access areas		N/A
4.4.5	Protection against moving fan blades		N/A
4.4.5.1	General		N/A
	Not considered to cause pain or injury. a)……..:		N/A
	Is considered to cause pain, not injury. b) ……..:		N/A
	Considered to cause injury. c) ……..:		N/A
4.4.5.2	Protection for users		N/A
	Use of symbol or warning ……..:		N/A
4.4.5.3	Protection for service persons		N/A
	Use of symbol or warning ……..:		N/A
4.5	**Thermal requirements**		P
4.5.1	General		P
4.5.2	Temperature tests		P

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
	Normal load condition per Annex L ..... :	Rated load, as specified by Manufacturer.	—
4.5.3	Temperature limits for materials	(see appended table 4.5)	P
4.5.4	Touch temperature limits	(see appended table 4.5)	P
4.5.5	Resistance to abnormal heat ..... :	(see appended table 4.5.5)	P
4.6	**Openings in enclosures**		N/A
4.6.1	Top and side openings		N/A
	Dimensions (mm) ..... :	No openings provided.	—
4.6.2	Bottoms of fire enclosures		N/A
	Construction of the bottomm, dimensions (mm) .. :	No bottom openings	—
4.6.3	Doors or covers in fire enclosures	No doors or covers in fire enclosure.	N/A
4.6.4	Openings in transportable equipment		N/A
4.6.4.1	Constructional design measures		N/A
	Dimensions (mm) ..... :	No openings provided.	—
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	No barrier secured by adhesive inside enclosure.	N/A
	Conditioning temperature (°C), time (weeks) ..... :		—
4.7	**Resistance to fire**		P
4.7.1	Reducing the risk of ignition and spread of flame		P
	Method 1, selection and application of components wiring and materials	(see appended table 4.7)	P
	Method 2, application of all of simulated fault condition tests		N/A
4.7.2	Conditions for a fire enclosure	Fire enclosure as part of equipment.	P
4.7.2.1	Parts requiring a fire enclosure		P
4.7.2.2	Parts not requiring a fire enclosure		N/A
4.7.3	Materials		P
4.7.3.1	General	Components and materials have adequate flammability classification. Refer to “List of Critical Components”.	P
4.7.3.2	Materials for fire enclosures	The fire enclosure is V-1 or better material.	P

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
4.7.3.3	Materials for components and other parts outside fire enclosures	No parts outside the fire enclosure.	N/A
4.7.3.4	Materials for components and other parts inside fire enclosures	All internal materials are rated V-2 or better or are mounted on a PWB rated V-1 or better.	P
4.7.3.5	Materials for air filter assemblies	No air filters in the equipment.	N/A
4.7.3.6	Materials used in high-voltage components	No parts exceeding 4kV.	N/A

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

5	**ELECTRICAL REQUIREMENTS AND SIMULATED ABNORMAL CONDITIONS**		P
5.1	**Touch current and protective conductor current**		P
5.1.1	General	(see appended Table 5.1)	P
5.1.2	Configuration of equipment under test (EUT)		P
5.1.2.1	Single connection to an a.c. mains supply		P
5.1.2.2	Redundant multiple connections to an a.c. mains supply		N/A
5.1.2.3	Simultaneous multiple connections to an a.c. mains supply		N/A
5.1.3	Test circuit	According to Fig. 5A	P
5.1.4	Application of measuring instrument		P
5.1.5	Test procedure	The touch current was measured from mains to DC output connector and to a 100 mm x 200 mm metal foil wrapped on accessible nonconductive parts (plastic enclosure).	P
5.1.6	Test measurements		P
	Supply voltage (V) ..... :	264V / 60Hz	—
	Measured touch current (mA) ..... :	(See appended table 5.1)	—
	Max. allowed touch current (mA) ..... :	0,25 mA to unearthed accessible parts	—
	Measured protective conductor current (mA) ..... :	Not applicable. Class II equipment.	—
	Max. allowed protective conductor current (mA)... :	See above.	—
5.1.7	Equipment with touch current exceeding 3,5 mA	Neither stationary permanently connected equipment nor stationary pluggable equipment type B.	N/A
5.1.7.1	General ..... :		N/A
5.1.7.2	Simultaneous multiple connections to the supply		N/A
5.1.8	Touch currents to telecommunication networks and cable distribution systems and from telecommunication networks		N/A
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) ..... :		—

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

	Max. allowed touch current (mA) .....:		—
5.1.8.2	Summation of touch currents from telecommunication networks		N/A
	a) EUT with earthed telecommunication ports .....:		N/A
	b) EUT whose telecommunication ports have no reference to protective earth		N/A

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

5.3	**Abnormal operating and fault conditions**		P
5.3.1	Protection against overload and abnormal operation	(see appended table 5.3)	P
5.3.2	Motors	No motor provided.	N/A
5.3.3	Transformers	(see appended Annex C)	P
5.3.4	Functional insulation.....:	Method a) and c) used.	P
5.3.5	Electromechanical components		N/A
5.3.6	Audio amplifiers in ITE .....:	No such components.	N/A
5.3.7	Simulation of faults		P
5.3.8	Unattended equipment	The unit is intended for continuous operation. There is no thermal sensor or cut-off for operational condition.	N/A
5.3.9	Compliance criteria for abnormal operating and fault conditions		P
5.3.9.1	During the tests	No flame, melted metal, no fire- cheese cloth on top and tissue paper on bottom remain clean.	P
5.3.9.2	After the tests	The tested units passed the electric strength test.	P

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

6	**CONNECTION TO TELECOMMUNICATION NETWORKS**		N/A
6.1	**Protection of telecommunication network service persons, and users of other equipment connected to the network, from hazards in the equipment**		N/A
6.1.1	Protection from hazardous voltages		N/A
6.1.2	Separation of the telecommunication network from earth		N/A
6.1.2.1	Requirements	Not connected to telecommunication network.	N/A
	Supply voltage (V) ..... :		—
	Current in the test circuit (mA) ..... :		—
6.1.2.2	Exclusions ..... :		

6.2	**Protection of equipment users from overvoltages on telecommunication networks**		N/A
6.2.1	Separation requirements		N/A
6.2.2	Electric strength test procedure		N/A
6.2.2.1	Impulse test		N/A
6.2.2.2	Steady-state test		N/A
6.2.2.3	Compliance criteria		N/A

6.3	**Protection of the telecommunication wiring system from overheating**		N/A
	Max. output current (A) ..... :		—
	Current limiting method ..... :		—

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

7	**CONNECTION TO CABLE DISTRIBUTION SYSTEMS**		N/A
7.1	**General**	Not connected to cable distribution system.	N/A
7.2	Protection of cable distribution system service persons, and users of other equipment connected to the system, from hazardous voltages in the equipment		N/A
7.3	Protection of equipment users from overvoltages on the cable distribution system		N/A
7.4	Insulation between primary circuits and cable distribution systems		N/A
7.4.1	General		N/A
7.4.2	Voltage surge test		N/A
7.4.3	Impulse test		N/A

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

A	**ANNEX A, TESTS FOR RESISTANCE TO HEAT AND FIRE**		N/A
A.1	**Flammability test for fire enclosures of movable equipment having a total mass exceeding 18 kg, and of stationary equipment (see 4.7.3.2)**	Approved materials are used. See list of critical components.	N/A
A.1.1	Samples ..... :		—
	Wall thickness (mm) ..... :		—
A.1.2	Conditioning of samples; temperature (°C) ..... :		N/A
A.1.3	Mounting of samples ..... :		N/A
A.1.4	Test flame (see IEC 60695-11-3)		N/A
	Flame A, B, C or D ..... :		—
A.1.5	Test procedure		N/A
A.1.6	Compliance criteria		N/A
	Sample 1 burning time (s)..... :		—
	Sample 2 burning time (s)..... :		—
	Sample 3 burning time (s)..... :		—
A.2	**Flammability test for fire enclosures of movable equipment having a total mass not exceeding 18 kg, and for material and components located inside fire enclosures (see 4.7.3.2 and 4.7.3.4)**		N/A
A.2.1	Samples, material ..... :		—
	Wall thickness (mm) ..... :		—
A.2.2	Conditioning of samples; temperature (°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

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
A.3.2	Test procedure		N/A
A.3.3	Compliance criterion		N/A
B	**ANNEX B, MOTOR TESTS UNDER ABNORMAL CONDITIONS (see 4.7.2.2 and 5.3.2)**		N/A
B.1	**General requirements**	No motor provided.	N/A
	Position .....:		—
	Manufacturer .....:		—
	Type .....:		—
	Rated values .....:		—
B.2	**Test conditions**		N/A
B.3	**Maximum temperatures**		N/A
B.4	**Running overload test**		N/A
B.5	**Locked-rotor overload test**		N/A
	Test duration (days) .....:		—
	Electric strength test: test voltage (V) .....:		—
B.6	**Running overload test for d.c. motors in secondary circuits**		N/A
B.6.1	General		N/A
B.6.2	Test procedure		N/A
B.6.3	Alternative test procedure		N/A
B.6.4	Electric strength test; test voltage (V) .....:		N/A
B.7	**Locked-rotor overload test for d.c. motors in secondary circuits**		N/A
B.7.1	General		N/A
B.7.2	Test procedure		N/A
B.7.3	Alternative test procedure		N/A
B.7.4	Electric strength test; test voltage (V) .....:		N/A
B.8	**Test for motors with capacitors**		N/A
B.9	**Test for three-phase motors**		N/A
B.10	**Test for series motors**		N/A
	Operating voltage (V) .....:		—
C	**ANNEX C, TRANSFORMERS (see 1.5.4 and 5.3.3)**		P
	Position .....:	T1	—
	Manufacturer .....:	GlobTek, Inc.	—

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
	Type ..... :	See list of critical components	—
	Rated values ..... :	Class B	—
	Method of protection ..... :	Primary current limitation.	—
C.1	**Overload test**	(see appended table 5.3)	P
C.2	**Insulation**	(see appended tables 5.2 and C2)	P
	Protection from displacement of windings ..... :	Triple insulated wire is used. No special precaution is required.	P
D	**ANNEX D, MEASURING INSTRUMENTS FOR TOUCH-CURRENT TESTS (see 5.1.4)**		P
D.1	**Measuring instrument**		P
D.2	**Alternative measuring instrument**		N/A
E	**ANNEX E, TEMPERATURE RISE OF A WINDING (see 1.4.13)**		N/A
F	**ANNEX F, MEASUREMENT OF CLEARANCES AND CREEPAGE DISTANCES (see 2.10 and Annex G)**		P
G	**ANNEX G, ALTERNATIVE METHOD FOR DETERMINING MINIMUM CLEARANCES**		N/A
G.1	**Clearances**		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

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
G.5	**Measurement of transient voltages (V)**		N/A
	a) Transients from a mains supply		N/A
	For an a.c. mains supply		N/A
	For a d.c. mains supply		N/A
	b) Transients from a telecommunication network		N/A
G.6	**Determination of minimum clearances .....:**		N/A
H	**ANNEX H, IONIZING RADIATION (see 4.3.13)**		N/A
J	**ANNEX J, TABLE OF ELECTROCHEMICAL POTENTIALS (see 2.6.5.6)**		N/A
	Metal(s) used .....:	No risk of corrosion.	—
K	**ANNEX K, THERMAL CONTROLS (see 1.5.3 and 5.3.8)**		N/A
K.1	Making and breaking capacity		N/A
K.2	Thermostat reliability; operating voltage (V) .....:		N/A
K.3	Thermostat endurance test; operating voltage (V) .....:		N/A
K.4	Temperature limiter endurance; operating voltage (V) .....:		N/A
K.5	Thermal cut-out reliability		N/A
K.6	Stability of operation		N/A
L	**ANNEX L, NORMAL LOAD CONDITIONS FOR SOME TYPES OF ELECTRICAL BUSINESS EQUIPMENT (see 1.2.2.1 and 4.5.2)**		P
L.1	Typewriters		N/A
L.2	Adding machines and cash registers		N/A
L.3	Erasers		N/A
L.4	Pencil sharpeners		N/A
L.5	Duplicators and copy machines		N/A
L.6	Motor-operated files		N/A
L.7	Other business equipment	Rated load, as specified by Manufacturer.	P
M	**ANNEX M, CRITERIA FOR TELEPHONE RINGING SIGNALS (see 2.3.1)**		N/A
M.1	Introduction		N/A
M.2	Method A		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
M.3	Method B		N/A
M.3.1	Ringing signal		N/A
M.3.1.1	Frequency (Hz) ..... :		—
M.3.1.2	Voltage (V) ..... :		—
M.3.1.3	Cadence; time (s), voltage (V) ..... :		—
M.3.1.4	Single fault current (mA) ..... :		—
M.3.2	Tripping device and monitoring voltage ..... :		N/A
M.3.2.1	Conditions for use of a tripping device or a monitoring voltage		N/A
M.3.2.2	Tripping device		N/A
M.3.2.3	Monitoring voltage (V) ..... :		N/A
N	**ANNEX N, IMPULSE TEST GENERATORS (see 1.5.7.2, 1.5.7.3, 2.10.3.9, 6.2.2.1, 7.3.2, 7.4.3 and Clause G.5)**		N/A
N.1	ITU-T impulse test generators		N/A
N.2	IEC 60065 impulse test generator		N/A
P	**ANNEX P, NORMATIVE REFERENCES**		—
Q	**ANNEX Q, Voltage dependent resistors (VDRs) (see 1.5.9.1)**		P
	a) Preferred climatic categories ..... :	See appended table 1.5.1	P
	b) Maximum continuous voltage ..... :	See appended table 1.5.1	P
	c) Combination pulse current ..... :	See appended table 1.5.1	P
	Body of the VDR Test according to IEC60695-11-5.....:	See appended table 1.5.1	P
	Body of the VDR. Flammability class of material (min V-1).....:	See appended table 1.5.1	P
R	**ANNEX R, EXAMPLES OF REQUIREMENTS FOR QUALITY CONTROL PROGRAMMES**		N/A
R.1	Minimum separation distances for unpopulated coated printed boards (see 2.10.6.2)		N/A
R.2	Reduced clearances (see 2.10.3)		N/A
S	**ANNEX S, PROCEDURE FOR IMPULSE TESTING (see 6.2.2.3)**		N/A
S.1	Test equipment		N/A
S.2	Test procedure		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
S.3	Examples of waveforms during impulse testing		N/A
T	**ANNEX T, GUIDANCE ON PROTECTION AGAINST INGRESS OF WATER (see 1.1.2)**		N/A
			—
U	**ANNEX U, INSULATED WINDING WIRES FOR USE WITHOUT INTERLEAVED INSULATION (see 2.10.5.4)**		P
		See list of critical components. All used triple insulated wires are already approved to Annex U. No additional tests considered required.	—
V	**ANNEX V, AC POWER DISTRIBUTION SYSTEMS (see 1.6.1)**		P
V.1	Introduction		P
V.2	TN power distribution systems		P
W	**ANNEX W, SUMMATION OF TOUCH CURRENTS**		N/A
W.1	Touch current from electronic circuits		N/A
W.1.1	Floating circuits		N/A
W.1.2	Earthed circuits		N/A
W.2	Interconnection of several equipments		N/A
W.2.1	Isolation		N/A
W.2.2	Common return, isolated from earth		N/A
W.2.3	Common return, connected to protective earth		N/A
X	**ANNEX X, MAXIMUM HEATING EFFECT IN TRANSFORMER TESTS (see clause C.1)**		P
X.1	Determination of maximum input current		P
X.2	Overload test procedure		P
Y	**ANNEX Y, ULTRAVIOLET LIGHT CONDITIONING TEST (see 4.3.13.3)**		N/A
Y.1	Test apparatus .....:		N/A
Y.2	Mounting of test samples .....:		N/A
Y.3	Carbon-arc light-exposure apparatus .....:		N/A
Y.4	Xenon-arc light exposure apparatus .....:		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
Z	**ANNEX Z, OVERVOLTAGE CATEGORIES (see 2.10.3.2 and Clause G.2)**		N/A
AA	**ANNEX AA, MANDREL TEST (see 2.10.5.8)**		N/A
BB	**ANNEX BB, CHANGES IN THE SECOND EDITION**		—
CC	**ANNEX CC, Evaluation of integrated circuit (IC) current limiters**		N/A
CC.1	General	No such components.	N/A
CC.2	Test program 1……..:		N/A
CC.3	Test program 2……..:		N/A
CC.4	Test program 3.....:		N/A
CC.5	Compliance.....:		N/A
DD	**ANNEX DD, Requirements for the mounting means of rack-mounted equipment**		N/A
DD.1	General		N/A
DD.2	Mechanical strength test, variable N……..:		N/A
DD.3	Mechanical strength test, 250N, including end stops……:		N/A
DD.4	Compliance……..:		N/A
EE	**ANNEX EE, Household and home/office document/media shredders**		N/A
EE.1	General		N/A
EE.2	Markings and instructions		N/A
	Use of markings or symbols……:		N/A
	Information of user instructions, maintenance and/or servicing instructions……:		N/A
EE.3	Inadvertent reactivation test……:		N/A
EE.4	Disconnection of power to hazardous moving parts:		N/A
	Use of markings or symbols……:		N/A
EE.5	Protection against hazardous moving parts		N/A
	Test with test finger (Figure 2A) ……:		N/A
	Test with wedge probe (Figure EE1 and EE2) ……:		N/A

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

1.5.1	TABLE: List of critical components					P
Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity[1])
Transformer (T1)	GlobTek	90E12PF03-xxx 90E12PF05-xxx 90E12PF09-xxx 90E12PF15-xxx ("xxx" to denote the part number, can be any alphanumeric character for marketing purposes only.)	Pri. Winding (pin 1-2): Φ0,25mmx126Ts Auxiliary primary winding (pin 3-4): Φ0,23mmx26Ts Sec. Winding of 90E12PF03-xxx (pin 5-6): Φ0,55mmx2px7Ts 90E12PF05-xxx (pin 5-6): Φ0,4mmx2px9Ts 90E12PF09-xxx (pin 5-6): Φ0,6mmx14Ts 90E12PF15-xxx (pin 5-6): Φ0,45mm x7Ts Class B	Applicable parts in IEC/EN 60950-1 and according to IEC 60085	Tested within the unit.
Triple insulated wire for secondary winding	Furukawa Electric Co., Ltd.	TEX-E	Class B	IEC/EN 60950-1	VDE 006735
(alternative)	Cosmolink	TIW-M	Class B	IEC/EN 60950-1	VDE 138053
(alternative)	YongChang	STW-B	Class B	IEC/EN 60950-1	VDE 40013359
(alternative)	Great leoflon	TRW (B)	Class B	IEC/EN 60950-1	VDE 136581
For current fuse or fusible resistor:					
Use on PCB version REV 2.02					
Current fuse (F1) (alternative with fusible resistor)	Walter	2010	T1AL, 250VAC	IEC/EN 60127-1 IEC/EN 60127-3	VDE 40009852 UL
(alternative)	Conquer	MST	T1AL, 250VAC	IEC/EN 60127-1 IEC/EN 60127-3	VDE 40017118 UL

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

Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity[1])
(alternative)	Lanson	SMT	T1AL, 250VAC	IEC/EN 60127-1 IEC/EN 60127-3	VDE 40012592 UL
(alternative)	Wickmann	392	T1AL, 250VAC	IEC/EN 60127-1 IEC/EN 60127-3	VDE 126983 UL
(alternative)	Bussmann	SS-5	T1AL, 250VAC	IEC/EN 60127-1 IEC/EN 60127-3	VDE 40015513 UL
(alternative)	Belfuse	RST	T1AL, 250VAC	IEC/EN 60127-1 IEC/EN 60127-3	VDE 40011144 UL
(alternative)	Smart	SPT series	T1AL, 250VAC	IEC/EN 60127-1 IEC/EN 60127-3	VDE 40014285 UL
(alternative)	Sunny East	TSP series	T1AL, 250VAC	IEC/EN 60127-1 IEC/EN 60127-3	VDE 40027173 UL
Fusible resistor (F1) (alternative with current fuse)	TZAI YUAN	KNF	3,3Ω, 1W	IEC/EN 60950-1	Tested within the unit.
(alternative)	Jiangsu Xinyang Electronics Ltd.	RF10	3,3Ω, 1W	IEC/EN 60950-1	Tested within the unit.
(alternative)	Chien Tung Electronics Technology (shenzhen) Co., Ltd.	FKN	3,3Ω, 1W	IEC/EN 60950-1	Tested within the unit.
(alternative)	Hua Sheng Electronics	FKN	3,3Ω, 1W	IEC/EN 60950-1	Tested within the unit.
(alternative)	Shenzhen Great	RXF series	3,3Ω, 1W	IEC/EN 60950-1	Tested within the unit.
(alternative)	Shenzhe Kayocota	FRKNP series	3,3Ω, 1W	IEC/EN 60950-1	Tested within the unit.
Use on PCB version REV 4.01 and REV 7.01					
Current Fuse (F1)	Conquer	PTU	T6,3AL, 250Vac, sub- miniature fuse	IEC/EN 60127-1 IEC/EN 60127-3	VDE 40001462

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

Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity[1])
(alternative)	Walter	ICP	T6,3AL, 250Vac, sub- miniature fuse	IEC/EN 60127-1 IEC/EN 60127-3	VDE 40012824
(alternative)	Schurter	SPT series	T6,3AL, 250Vac, sub- miniature fuse	IEC/EN 60127-1 IEC/EN 60127-3	VDE 40015228
(alternative)	Littelfuse	677 series	T6,3AL, 250Vac, sub- miniature fuse	IEC/EN 60127-1 IEC/EN 60127-3	VDE 40006258
Current fuse (F2) (alternative with fusible resistor)	Walter	2010	T1AL, 250VAC	IEC/EN 60127	VDE 40009852
(alternative)	Conquer	MST	T1AL, 250VAC	IEC/EN 60127	VDE 40017118
(alternative)	Lanson	SMT	T1AL, 250VAC	IEC/EN 60127	VDE 40012592
(alternative)	Wickmann	392	T1AL, 250VAC	IEC/EN 60127	VDE 126983
(alternative)	Bussmann	SS-5	T1AL, 250VAC	IEC/EN 60127	VDE 40015513
(alternative)	Belfuse	RST	T1AL, 250VAC	IEC/EN 60127	VDE 40011144
(alternative)	Smart	SPT series	T1AL, 250VAC	IEC/EN 60127	VDE 40014285
(alternative)	Sunny East	TSP series	T1AL, 250VAC	IEC/EN 60127	VDE 40027173
Fusible resistor (F2) (alternative with current fuse)	TZAI YUAN	KNF	3,3Ω, 1W	IEC/EN 60950-1	Tested within the unit.
(alternative)	VIS Electronics Ltd.	FRT	3,3Ω, 1W	IEC/EN 60950-1	Tested within the unit.
(alternative)	Chien Tung Electronics Technology (shenzhen) Co., Ltd.	FKN	3,3Ω, 1W	IEC/EN 60950-1	Tested within the unit.

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

Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity[1])
(alternative)	Hua Sheng Electronics	FKN	3,3Ω, 1W	IEC/EN 60950-1	Tested within the unit.
(alternative)	Shenzhen Great	RXF series	3,3Ω, 1W	IEC/EN 60950-1	Tested within the unit.
(alternative)	Shenzhe Kayocota	FRKNP series	3,3Ω, 1W	IEC/EN 60950-1	Tested within the unit.
Varistor (MOV1) (Optional)	Brightking Inc.	xxDyyyK (xx: 14, 20; yyy: 471, 511)	Min 300Vac, 385Vdc	IEC/EN 61051-2 IEC/EN 60950-1 2nd Annex Q	VDE 40005858 UL
(alternative)	Joyin Co., Ltd	xxSyyyK (xx: 10, 14, 20; yyy: 471, 511)	Min 300Vac, 385Vdc	IEC/EN 61051-2 IEC/EN 60950-1 2nd Annex Q	VDE 0004658 UL
(alternative)	Joyin Co., Ltd	xxNyyyK (xx: 14, 20; yyy: 471, 511)	Min 300Vac, 385Vdc	IEC/EN 61051-2 IEC/EN 60950-1 2nd Annex Q	VDE 5937 UL
(alternative)	Joyin Co., Ltd.	10S471K, 10S561K , 10S681K	Min 300Vac, 385Vdc	IEC/EN 61051-2 IEC/EN 60950-1 2nd Annex Q	VDE 40004658 UL
(alternative)	Success Electronics Co., Ltd.	SVR10D471K xxxxH, SVR10D561K xxxxH, SVR10D681K xxxxH (xxxx=A~Z,0~9)	Min 300Vac, 385Vdc	IEC/EN 61051-2 IEC/EN 60950-1 2nd Annex Q	VDE 40030401 UL
(alternative)	Thinking Electronic Industrial Co Ltd (Wujin Thinking Electronic Co,. Ltd)	TVR10yyy-D series (yyy: 471, 511)	Min 300Vac, 385Vdc	IEC/EN 61051-2 IEC/EN 60950-1 2nd Annex Q	VDE 40027807 UL
(alternative)	Thinking Electronic Industrial Co Ltd (Wujin Thinking Electronic Co., Ltd)	TVR10yyy-V series (yyy: 471, 511)	Min 300Vac, 385Vdc	IEC/EN 61051-2 IEC/EN 60950-1 2nd Annex Q	VDE 5944 UL

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

Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity[1])
(alternative)	Thinking Electronic Industrial Co Ltd (Wujin Thinking Electronic Co., Ltd)	TVRxxyyy series (xx: 14, 20; yyy: 471, 511)	Min 300Vac, 385Vdc	IEC/EN 61051-2 IEC/EN 60950-1 2nd Annex Q	VDE 5944 UL
(alternative)	Thinking Electronic Industrial Co., Ltd.	TVR10471-D TVR10561-D TVR10681-D	Min 300Vac, 385Vdc	IEC/EN 61051-2 IEC/EN 60950-1 2nd Annex Q	VDE 40021243 UL
(alternative)	Xianhua	FNR-10K471, FNR-14K471	Min 300Vac, 385Vdc	IEC/EN 61051-2 IEC/EN 60950-1 2nd Annex Q	VDE 40008242 UL
(alternative)	JYA-NAY	10D471K, 14D471K	Min 300Vac, 385Vdc	IEC/EN 61051-2 IEC/EN 60950-1 2nd Annex Q	VDE 40023949
Y capacitor (CY1) (Optional)	TDK	CD	Max. 2200pF, AC 250V, 25/125/56/B, Y1 type.	IEC/EN 60384-14	VDE 124321 UL
(alternative)	Murata	KX	Max. 2200pF, AC 250V, 25/125/56/B, Y1 type.	IEC/EN 60384-14	VDE 40002831 UL
(alternative)	Success	SE	Max. 2200pF, AC 250V, 25/125/56/B, Y1 type.	IEC/EN 60384-14	VDE 126596 UL
(alternative)	Success	SB	Max. 2200pF, AC 250V, 25/125/56/B, Y1 type.	IEC/EN 60384-14	VDE 128833 UL
(alternative)	JYA-NAY	JN	Max. 2200pF, AC 250V, 25/125/56/B, Y1 type.	IEC/EN 60384-14	VDE 40001831 UL
(alternative)	Welson	WD	Max. 2200pF, AC 250V, 25/125/56/B, Y1 type.	IEC/EN 60384-14	VDE 115455 UL
(alternative)	Samwha	SD	Max. 2200pF, AC 250V, 25/125/56/B, Y1 type.	IEC/EN 60384-14	VDE 40015804 UL

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

Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity[1])
(alternative)	Yuyue	CT7	Max. 2200pF, AC 250V, 25/125/56/B, Y1 type.	IEC/EN 60384-14	VDE 40008010 UL
Opto Coupler (U3)	Sharp	PC817; PC123	Cr. =Min. 6,4mm, Dti.>0,4mm	IEC/EN 60950-1	VDE 40008087 UL
(alternative)	Lite-on	LTV-817	Cr.=Min. 7,0mm, Dti.>0,4mm	IEC/EN 60950-1	VDE 40015248 UL
(alternative)	EVERLIGHT	EL817	Cr. =Min. 5,2mm, Dti. = 0,8mm	IEC/EN 60950-1	VDE 132249 UL
(alternative)	Cosmo	K1010; KP1010	Cr. =Min. 5,3mm, Dti. = 0,5mm	IEC/EN 60950-1	VDE 101347 UL
(alternative)	Q.T.C Corporation	H11A817B	Cr. > 7,0mm, Dti. > 1mm	IEC/EN 60950-1	VDE 40011272 UL
(alternative)	BRIGHT	BPC817B, BPC817C	Cr. >5,2mm, Dti. = 0,8mm	IEC/EN 60950-1	VDE 40007240 UL
(alternative)	NEC	PS2561	Cr. =Min. 7,0mm Dti. = 0,4mm	IEC/EN 60950-1	VDE 40008862 UL
Line Filter (LF1)	GlobTek	30C040120-XXX ("XXX" to denote the part number, can be any alphanumeric character for marketing purposes only.	Pin 1-2: Φ0.12x110Ts; Pin 3-4: Φ0.12x110Ts ; 130 C, Min.25mH	IEC/EN 60950-1	Tested within the unit.
European plug	GlobTek	W2	2,5A, 250VAC	EN 50075	TÜV Rheinland (J 2156136)
- Plug holder	SABIC Inc.	SE1X	PPHOX, V-1, 110°C.	IEC/EN 60950-1 (QMFZ2)	Tested within the unit. UR E161759

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

Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity[1])
British plug	GlobTek	W2U	0,5A, 250VAC	BS 1363-1+ A1+A2+A3	TÜV Rheinland (JPTUV-059411)
- Pin sleeve of British plug	Nan Ya plastic Corp.	6410G5	PA66, V-0, 130°C	IEC/EN 60950-1 (QMFZ2)	Tested within the unit. UR E130155
Australian plug	GlobTek	W2U	0,5A, 250VAC	AS/NZS 3112+A1	TÜV Rheinland (JPTUV-059411)
- Pin sleeve for AU plug	Dupont	FR50	PA66, V-0, 130 C	IEC/EN 60950-1 (QMFZ2)	Tested within the unit. UR E41938
Japanese plug	GlobTek	W2	0,5A, 250VAC	JIS C 8303	TÜV Rheinland (JPTUV-059411)
Korean plug	GlobTek	W2K	0,5A, 250VAC	KSC 8305	TÜV Rheinland (JPTUV-059411)
- Plug holder	SABIC INNOVATIVE PLASTICS US L L C	SE1X	PPHOX, V-1, 110°C.	IEC/EN 60950-1 (QMFZ2)	Tested within the unit. UR E161759
Argentinean plug	GlobTek	W2AR	0,5A, 250VAC	IRAM 2061:2009	TÜV Rheinland (JPTUV-059411)
- Pin sleeve for AR plug	Dupont	FR50	PA66, V-0, 130 C	IEC/EN 60950-1 (QMFZ2)	Tested within the unit. UR E41938
South Africa plug	GlobTek	W2SA	0,5A, 250VAC	SANS 164-1	TÜV Rheinland (JPTUV-059411)
South Africa plug	GlobTek	W2SA	0,5A, 250VAC	SANS 164-3	TÜV Rheinland (JPTUV-059411)

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

Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity[1])
Enclosure	SABIC Innovative Plastics	SE1X	PPHOX, V-1,105°C min. thickness: 2,0mm	IEC/EN 60950-1 (QMFZ2)	Tested within the unit. UR E161723
(alternative)	Asahi Kasei	540V	PPE+PS, V-1,105°C min. thickness: 2,0mm	IEC/EN 60950-1 (QMFZ2)	Tested within the unit. UR E82268
(alternative)	BAYER	6485	PC, V-0, 115°C. min. thickness: 2,0mm	IEC/EN 60950-1 (QMFZ2)	Tested within the unit. UR E41613
PCB	WuZhou	WZ-4	V-0 or better, min. 130°C	IEC/EN 60950-1 (ZPMV2)	Tested within the unit. UR E170968
(alternative)	interchangeable	interchangeable	V-0 or better, min. 130°C	(ZPMV2)	UR
Mylar sheet	SUMITOMO BAKELITE CO LTD	AM-DP 901	PC, V-0, thickness min.: 0,4mm. min.105°C,	IEC/EN 60950-1 (QMFZ2)	Tested within the unit. UR E41429
(alternative)	interchangeable	interchangeable	PC, V-0, thickness min.: 0,4mm. min.105°C,	(QMFZ2)	UR
Primary lead wire	Dong Ju	1007	80°C, Min. 22AWG, VW-1, 300V	IEC/EN 60950-1 (AVLV2)	Tested within the unit. UR E189674
(alternative)	interchangeable	interchangeable	80°C, Min. 22AWG, VW-1, 300V	(AVLV2)	UR
Output cord	Xin Ya Electronics	2468	80 C, 24AWG Min. VW-1	IEC/EN 60950-1 (AVLV2)	Tested within the unit. UR E170689
(alternative)	interchangeable	interchangeable	80 C, 24AWG Min. VW-1	(AVLV2)	UR
Output cord (if the part in enclosure covered with heat shrinkable tube)	interchangeable	interchangeable	60 C, 24AWG Min. VW-1	(AVLV2)	UR

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

Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity[1])
Heat-shrinkable tube	Shenzhen Woer	RSFR	125°C, VW-1, 600V	IEC/EN 60950-1 (YDPU2)	Tested within the unit. UR E203950
(alternative)	interchangeable	interchangeable	125°C, VW-1, 600V	(YDPU2)	UR
Foam – Provided between PWB and enclosure. (Optional)	Holy Foam Enterprises Ltd.	FR212	HF-1, BK, thickness: min.3,0mm	IEC/EN 60950-1 ISO 9772 (QMFZ2)	Tested within the unit. UR E105037
(alternative)	interchangeable	interchangeable	HF-2 or better	(QMFZ2)	UR
Use on PCB version REV 7.01					
Fusible resistor (F2) (alternative with current fuse)	TZAI YUAN	KNF	3,3Ω, 1W; 10Ω, 2W	IEC/EN 60950-1	Tested within the unit.
(alternative)	VIS Electronics Ltd.	FRT	3,3Ω, 1W; 10Ω, 2W	IEC/EN 60950-1	Tested within the unit.
(alternative)	Jiangsu Xinyang Electronics Ltd.	RF10	3,3Ω, 1W; 10Ω, 2W	IEC/EN 60950-1	Tested within the unit.
(alternative)	Chien Tung Electronics Technology (shenzhen) Co., Ltd.	FKN	3,3Ω, 1W; 10Ω, 2W	IEC/EN 60950-1	Tested within the unit.
(alternative)	Hua Sheng Electronics	FKN	3,3Ω, 1W; 10Ω, 2W	IEC/EN 60950-1	Tested within the unit.
(alternative)	Shenzhen Great	RXF series	3,3Ω, 1W; 10Ω, 2W	IEC/EN 60950-1	Tested within the unit.
(alternative)	Shenzhe Kayocota	FRKNP series	3,3Ω, 1W; 10Ω, 2W	IEC/EN 60950-1	Tested within the unit.

Supplementary information:

[1]) **Provided evidence ensures the agreed level of compliance. See OD-CB2039**.

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

1.5.1	TABLE: Opto Electronic Devices	P

Manufacturer.....:	See appended table 1.5.1
Type.....:	See appended table 1.5.1
Separately tested.....:	Tested within the unit.
Bridging insulation.....:	Reinforced
External creepage distance .....:	See appended table 1.5.1
Internal creepage distance.....:	See appended table 1.5.1
Distance through insulation.....:	See appended table 1.5.1
Tested under the following conditions.....:	Tested within the unit.
Input.....:	Tested within the unit.
Output.....:	Tested within the unit.

supplementary information
Separately approved optocouplers used.

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

1.6.2	TABLE: Electrical data (in normal conditions)					P
U (V)	I (A)	Irated (A)	P (W)	Fuse #	Ifuse (A)	Condition/status
Model: GT-83081-0705-1.7-W2E (PCB layout version REV 4.01)						
90	0,19	--	9,4	F1/F2	--	Rated load at 50 Hz
90	0,18	--	9,4	F1/F2	--	Rated load at 60 Hz
100	0,18	0,5	9,4	F1/F2	--	Rated load at 50 Hz
100	0,17	0,5	9,4	F1/F2	--	Rated load at 60 Hz
240	0,09	0,5	10,1	F1/F2	--	Rated load at 50 Hz
240	0,10	0,5	10,2	F1/F2	--	Rated load at 60 Hz
264	0,08	--	10,4	F1/F2	--	Rated load at 50 Hz
264	0,09	--	10,8	F1/F2	--	Rated load at 60 Hz
Model: GT-83081-1005-W2E (PCB layout version REV 2.02)						
90	0,23	--	13,58	F1	--	Rated load at 50 Hz
90	0,25	--	13,70	F1	--	Rated load at 60 Hz
100	0,22	0,5	13,45	F1	--	Rated load at 50 Hz
100	0,22	0,5	13,50	F1	--	Rated load at 60 Hz
240	0,13	0,5	13,50	F1	--	Rated load at 50 Hz
240	0,12	0,5	13,49	F1	--	Rated load at 60 Hz
264	0,13	--	13,72	F1	--	Rated load at 50 Hz
264	0,11	--	13,72	F1	--	Rated load at 60 Hz
Model: GT-83081-1005-W2E (PCB layout version REV 7.01)						
90	0,24	--	13,42	F1/F2	--	Rated load at 50 Hz
90	0,24	--	13,42	F1/F2	--	Rated load at 60 Hz
100	0,22	0,5	13,18	F1/F2	--	Rated load at 50 Hz
100	0,22	0,5	13,25	F1/F2	--	Rated load at 60 Hz
240	0,11	0,5	12,92	F1/F2	--	Rated load at 50 Hz
240	0,11	0,5	12,96	F1/F2	--	Rated load at 60 Hz
264	0,10	--	13,07	F1/F2	--	Rated load at 50 Hz
264	0,10	--	13,14	F1/F2	--	Rated load at 60 Hz
Model: GT-83081-1005-W2E (PCB layout version REV 7.01, tested with fusible resistor (F2) 10ohm/1W)						
90	0,24	--	13,93	F1/F2	--	Rated load at 50 Hz
90	0,23	--	13,93	F1/F2	--	Rated load at 60 Hz
100	0,22	0,5	13,64	F1/F2	--	Rated load at 50 Hz

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

U (V)	I (A)	Irated (A)	P (W)	Fuse #	Ifuse (A)	Condition/status
100	0,21	0,5	13,65	F1/F2	--	Rated load at 60 Hz
240	0,10	0,5	13,20	F1/F2	--	Rated load at 50 Hz
240	0,10	0,5	13,25	F1/F2	--	Rated load at 60 Hz
264	0,10	--	13,33	F1/F2	--	Rated load at 50 Hz
264	0,09	--	13,39	F1/F2	--	Rated load at 60 Hz
Model: GT-83081-1212-2.0-W2E (PCB layout version REV 2.02)						
90	0,26	--	15,55	F1	--	Rated load at 50 Hz
90	0,28	--	15,51	F1	--	Rated load at 60 Hz
100	0,24	0,5	15,34	F1	--	Rated load at 50 Hz
100	0,25	0,5	15,30	F1	--	Rated load at 60 Hz
240	0,15	0,5	15,46	F1	--	Rated load at 50 Hz
240	0,13	0,5	15,45	F1	--	Rated load at 60 Hz
264	0,15	--	15,68	F1	--	Rated load at 50 Hz
264	0,14	--	15,69	F1	--	Rated load at 60 Hz
Model: GT-83081-1212-2.0-W2E (PCB layout version REV 7.01)						
90	0,28	--	15,48	F1/F2	--	Rated load at 50 Hz
90	0,28	--	15,41	F1/F2	--	Rated load at 60 Hz
100	0,25	0,5	15,20	F1/F2	--	Rated load at 50 Hz
100	0,25	0,5	15,17	F1/F2	--	Rated load at 60 Hz
240	0,12	0,5	15,09	F1/F2	--	Rated load at 50 Hz
240	0,13	0,5	15,04	F1/F2	--	Rated load at 60 Hz
264	0,12	--	15,22	F1/F2	--	Rated load at 50 Hz
264	0,12	--	15,12	F1/F2	--	Rated load at 60 Hz
Model: GT-83081-1212-2.0-W2E (PCB layout version REV 7.01, tested with fusible resistor (F2) 10ohm/1W)						
90	0,27	--	15,93	F1/F2	--	Rated load at 50 Hz
90	0,26	--	15,76	F1/F2	--	Rated load at 60 Hz
100	0,24	0,5	15,56	F1/F2	--	Rated load at 50 Hz
100	0,24	0,5	15,44	F1/F2	--	Rated load at 60 Hz
240	0,12	0,5	15,13	F1/F2	--	Rated load at 50 Hz
240	0,11	0,5	15,07	F1/F2	--	Rated load at 60 Hz
264	0,11	--	15,18	F1/F2	--	Rated load at 50 Hz
264	0,11	--	15,15	F1/F2	--	Rated load at 60 Hz

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

U (V)	I (A)	Irated (A)	P (W)	Fuse #	Ifuse (A)	Condition/status
Model: GT-83081-1215-W2E (PCB layout version REV 2.02) **						
90	0,28	--	15,1	F1	--	Rated load at 50 Hz
90	0,28	--	15,0	F1	--	Rated load at 60 Hz
100	0,25	0,5	14,8	F1	--	Rated load at 50 Hz
100	0,26	0,5	14,8	F1	--	Rated load at 60 Hz
240	0,14	0,5	14,5	F1	--	Rated load at 50 Hz
240	0,13	0,5	14,5	F1	--	Rated load at 60 Hz
264	0,13	--	14,4	F1	--	Rated load at 50 Hz
264	0,13	--	14,4	F1	--	Rated load at 60 Hz
Model: GT-83081-1215-W2E (PCB layout version REV 7.01)						
90	0,27	--	14,96	F1/F2	--	Rated load at 50 Hz
90	0,27	--	14,95	F1/F2	--	Rated load at 60 Hz
100	0,24	0,5	14,74	F1/F2	--	Rated load at 50 Hz
100	0,24	0,5	14,78	F1/F2	--	Rated load at 60 Hz
240	0,12	0,5	14,42	F1/F2	--	Rated load at 50 Hz
240	0,12	0,5	14,48	F1/F2	--	Rated load at 60 Hz
264	0,11	--	14,72	F1/F2	--	Rated load at 50 Hz
264	0,12	--	14,76	F1/F2	--	Rated load at 60 Hz
Model: GT-83081-1215-W2E (PCB layout version REV 7.01, tested with fusible resistor (F2) 10ohm/1W)						
90	0,26	--	15,31	F1/F2	--	Rated load at 50 Hz
90	0,26	--	15,26	F1/F2	--	Rated load at 60 Hz
100	0,24	0,5	14,95	F1/F2	--	Rated load at 50 Hz
100	0,23	0,5	14,95	F1/F2	--	Rated load at 60 Hz
240	0,11	0,5	14,53	F1/F2	--	Rated load at 50 Hz
240	0,11	0,5	14,56	F1/F2	--	Rated load at 60 Hz
264	0,11	--	14,50	F1/F2	--	Rated load at 50 Hz
264	0,10	--	14,53	F1/F2	--	Rated load at 60 Hz

Supplementary information: The steady-state input current did not exceed the rated current at the rated voltage by more than 10% under the maximum normal load.

** Test was performed at SIQ.

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

2.1.1.5 c) 1)	TABLE: max. V, A, VA test	P

Voltage (rated) (V)	Current (rated) (A)	Voltage (max.) (V)	Current (max.) (A)	VA (max.) (VA)
Model: GT-83081-1005-W2E				
5	2,0	5,17	3,1	14,8
Model: GT-83081-1212-2.0-W2E				
10,0	1,2	10,08	2,0	19,7
Model: GT-83081-1215-W2E				
15,0	0,99	15,0	1,68	23,7
supplementary information:				
/				

2.1.1.5 c) 2)	TABLE: stored energy	N/A

Capacitance C (µF)	Voltage U (V)	Energy E (J)
supplementary information:		

2.2	TABLE: evaluation of voltage limiting components in SELV circuits	P

Component (measured between)	max. voltage (V) (normal operation)		Voltage Limiting Components
	V peak	V d.c.	
Secondary winding(Pin A-B)	69,0	--	T1
C8	--	15,2	SELV
Output	--	15,1	SELV

Fault test performed on voltage limiting components	Voltage measured (V) in SELV circuits (V peak or V d.c.)
C8(short D8)	0 (unit protection immediately)
Output(Short L1)	14.9
supplementary information:	
Model: GT-83081-1215-W2E (PCB layout version REV 7.01)	

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

2.5	TABLE: Limited power sources					P
Circuit output tested:						
Note: Measured Uoc (V) with all load circuits disconnected:						
Components	Sample No.	Uoc (V)	I_{sc} (A)		VA	
			Meas.	Limit	Meas.	Limit
Model: GT-83081-1215-W2E (PCB layout version REV 7.01)						
Normal condition	--	15,0	1,68	8	23,7	100
U3 pin 1-2 SC	--	--	0 *	8	0 *	100
U3 pin 1 OC	--	--	0 *	8	0 *	100
U3 pin 3 OC	--	--	0 *	8	0 *	100
U3 pin 3-4 SC	--	--	0 *	8	0 *	100
R11 SC	--	--	0 **	8	0 **	100
Model: GT-83081-1212-2.0-W2E (PCB layout version REV 7.01)						
Normal condition	--	10,08	2,0	8	19,7	100
U3 pin 1-2 SC	--	--	0 *	8	0 *	100
U3 pin 1 OC	--	--	0 *	8	0 *	100
U3 pin 3 OC	--	--	0 *	8	0 *	100
U3 pin 3-4 SC	--	--	0 *	8	0 *	100
R11 SC	--	--	0 **	8	0 **	100
Model: GT-83081-1005-W2E (PCB layout version REV 7.01)						
Normal condition	--	5,17	3,1	8	14,8	100
U3 pin 1-2 SC	--	--	0 *	8	0 *	100
U3 pin 1 OC	--	--	0 *	8	0 *	100
U3 pin 3 OC	--	--	0 *	8	0 *	100
U3 pin 3-4 SC	--	--	0 *	8	0 *	100
R11 SC	--	--	0 **	8	0 **	100

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

supplementary information:
Sc=Short circuit, Oc=Open circuit
* Unit shut down immediately.
** F2 opened immediately.

2.10.2	Table: working voltage measurement			P
Location	RMS voltage (V)	Peak voltage (V)	Comments	
Model: GT-83081-1215-W2E (PCB layout version REV 2.02) **				
T1 pin 1 to Pin 5	189,2	355		
T1 pin 2 to Pin 5	245,5	480		
T1 pin 3 to Pin 5	189,7	356		
T1 pin 4 to Pin 5	193,0	439		
T1 pin 1 to Pin 6	191,1	406		
T1 pin 2 to Pin 6	233,0	468		
T1 pin 3 to Pin 6	190,9	368		
T1 pin 4 to Pin 6	190,4	384		
U3 pin 3 to Pin 1	227,3	370		
U3 pin 3 to Pin 2	218,3	366		
U3 pin 4 to Pin 1	229,6	366		
U3 pin 4 to Pin 2	224,9	366		
CY1	187,6	354		
Model: GT-83081-1215-W2E (PCB layout version REV 7.01)				
Pin 1-Pin 7	218	348		
Pin 2-Pin 7	278	508		
Pin 3-Pin 7	220	356		
Pin 4-Pin 7	223	436		
Pin 1-Pin 8	218	396		
Pin 2-Pin 8	266	486		
Pin 3-Pin 8	220	372		
Pin 4-Pin 8	220	380		
U3 pin 3 to Pin 1	231	372		
U3 pin 3 to Pin 2	230	368		

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

U3 pin 4 to Pin 1	231	372	
U3 pin 4 to Pin 2	230	368	
Y capacitor	218	348	
supplementary information:			
Input voltage: 240 Vac. Test Condition was: rated load The following terminals were connected together: Minus of the output, Neutral. ** Test was performed at SIQ.			

2.10.3 and 2.10.4	TABLE: Clearance and creepage distance measurements	P

Clearance (cl) and creepage distance (cr) at/of/between:	U peak (V)	U r.m.s. (V)	Required cl (mm)	cl (mm)	Required cr (mm)	cr (mm)
Functional: (For PCB layout REV 2.02)						
Line to Neutral trace before F1	420	250	1,5	3,0	2,5	3,0
PCB trace under F1	420	250	1,5	2,7	2,5	2,7
Line to circuit after F1	420	250	1,5	3,0	2,5	3,0
Functional: (For PCB layout REV 4.01 and PCB layout version REV 7.01)						
Line to Neutral trace before F1	420	250	1,5	2,1	2,5	2,7
PCB trace under F1	420	250	1,5	4,0	2,5	4,0
Line to circuit after F1	420	250	1,5	2,2	2,5	2,7
PCB trace under F2	420	250	1,5	2,7	2,5	2,7
Basic/supplementary:						
Reinforced:						
Primary components to accessible enclosure	420	250	4,0	5,5	5,0	5,5
Sec. component C7 to T1 core	508	278	4,2	7,0	5,6	7,0
Sec. component U2 to T1 core	508	278	4,2	7,0	5,6	7,0
Sec. component D8 to T1 core	508	278	4,2	6,2	5,6	6,2
Primary trace to secondary trace of PCB under T1	508	278	4,2	6,2	5,6	6,2

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

Clearance (cl) and creepage distance (cr) at/of/between:	U peak (V)	U r.m.s. (V)	Required cl (mm)	cl (mm)	Required cr (mm)	cr (mm)
Primary trace to secondary trace of PCB under CY1	420	250	4,0	4,3	5,0	6,0
Primary trace to secondary trace of PCB under U3	420	250	4,0	4,3	5,0	6,0

Supplementary information:

1. Fusible resistor or current fuse F1/F2 was covered by heat shrinkable tube.
2. The transformer core is considered as primary circuit.
3. Concentric windings on EF-20 size bobbin. 2 layer of insulation tape between primary (enamelled copper wire) and secondary windings (triple insulation wire), 2 layers on outer winding. Winding ends additionally fixed with tape, outer winding is primary.
4. Unless otherwise specified, the worst conditions of Cl. & Cr. in above mentioned locations have been considered and listed.

2.10.5	**TABLE: Distance through insulation measurements**	P

Distance through insulation (DTI) at/of:	U peak (V)	U rms (V)	Test voltage (V)	Required DTI (mm)	DTI (mm)
Enclosure	420	250	3000 Vac	0,4	2,0

Supplementary information:

Separately approved optocoupler. See appended table 1.5.1

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

4.3.8	TABLE: Batteries								N/A
The tests of 4.3.8 are applicable only when appropriate battery data is not available									N/A
Is it possible to install the battery in a reverse polarity position?									N/A
	Non-rechargeable batteries			Rechargeable batteries					
	Discharging		Un-intentional charging	Charging		Discharging		Reversed charging	
	Meas. current	Manuf. Specs.		Meas. current	Manuf. Specs.	Meas. current	Manuf. Specs.	Meas. current	Manuf. Specs.
Max. current during normal condition									
Max. current during fault condition									
Test results:									Verdict
- Chemical leaks									N/A
- Explosion of the battery									N/A
- Emission of flame or expulsion of molten metal									N/A
- Electric strength tests of equipment after completion of tests									N/A
Supplementary information:									

4.3.8	TABLE: Batteries	N/A
Battery category .....: (Lithium, NiMh, NiCad, Lithium Ion …) Manufacturer .....: Type / model .....: Voltage .....: Capacity .....: mAh Tested and Certified by (incl. Ref. No.).....: Circuit protection diagram:		

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

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 requirements						P
	Supply voltage (V)	90V / 60Hz	264V / 50Hz				—
	Ambient T_{min} (°C)	40,0	40,0				—
	Ambient T_{max} (°C)	40,0	40,0				—
Maximum measured temperature T of part/at.....:		T (°C)					Allowed T_{max} (°C)
Model: GT-83081-1005-W2E (PCB layout version REV 2.02)							
Plug portion		48,4	46,6				--
Primary lead wire		63,8	55,6				80
PCB under D1		76,3	61,9				130
Electrolytic capacitor (C1)		76,9	64,5				105
Electrolytic capacitor (C2)		83,9	74,9				105
Electrolytic capacitor (C3)		83,1	78,6				105
Line Filter (LF1)		93,6	71,2				130
T1 winding		94,0	93,2				110
T1 core		92,7	91,9				--
PCB under U1		96,5	90,3				130
Opto-coupler (U3)		74,4	72,4				100
Y capacitor (CY1)		86,9	86,9				125
PCB under D8		104,2	105,0				130
Output cord		63,7	63,0				80
Enclosure (inside)		66,7	64,7				105
Enclosure (outside)		58,9	57,3				95
Model: GT-83081-1212-2.0-W2E (PCB layout version REV 2.02)							
Plug portion		50,3	49,4				--
Primary lead wire		74,0	61,2				80
PCB under D1		81,5	64,1				130
Electrolytic capacitor (C1)		83,6	67,4				105
Electrolytic capacitor (C2)		86,7	77,0				105
Electrolytic capacitor (C3)		87,1	82,7				105
Line Filter (LF1)		110,7	76,3				130
T1 winding		96,2	97,2				110
T1 core		95,2	96,4				--
PCB under U1		101,2	90,7				130

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

Opto-coupler (U3)	74,1	73,9				100
Y capacitor (CY1)	91,6	93,3				125
PCB under D8	111,7	113,7				130
Electrolytic capacitor (C8)	75,9	78,5				105
Output cord	61,1	62,2				80
Enclosure (inside)	71,7	71,0				105
Enclosure (outside)	63,8	63,7				95
Model: GT-83081-1215-W2E (PCB layout version REV 2.02)						
Plug portion	51,7	48,2				--
Primary lead wire	76,2	62,6				80
PCB under D1	85,7	66,2				130
Electrolytic capacitor (C1)	84,2	66,1				105
Electrolytic capacitor (C2)	92,9	78,0				105
Electrolytic capacitor (C3)	88,4	80,1				105
Line Filter (LF1)	109,0	74,6				130
T1 winding	96,4	95,8				110
T1 core	95,2	94,3				--
PCB under U1	105,8	90,9				130
Opto-coupler (U3)	76,1	74,6				100
Y capacitor (CY1)	91,3	91,9				125
PCB under D8	101,4	107,3				130
Electrolytic capacitor (C8)	79,2	81,7				105
Output cord	60,6	61,5				80
Enclosure (inside)	71,9	71,1				105
Enclosure (outside)	62,3	61,7				95
Model: GT-83081-1005-W2E (PCB layout version REV 4.01)						
Plug portion	47,4	48,4				--
Primary lead wire	73,6	63,0				80
PCB under D1	78,8	62,2				130
Electrolytic capacitor (C1)	81,7	65,3				105
Electrolytic capacitor (C2)	87,1	74,4				105
Electrolytic capacitor (C3)	88,9	81,0				105
Line Filter (LF1)	99,5	70,6				130
T1 winding	100,7	98,7				110
T1 core	99,6	98,1				--

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

PCB under U1	114,6	105,0				130
Opto-coupler (U3)	78,6	75,7				100
Y capacitor (CY1)	101,3	101,0				125
PCB under D8	89,0	88,0				130
Electrolytic capacitor (C8)	78,1	77,0				105
Output cord	63,0	62,0				80
Enclosure (inside)	72,3	71,6				105
Enclosure (outside)	62,7	62,1				95
Model: GT-83081-1212-2.0-W2E (PCB layout version REV 4.01)						
Plug portion	49,6	49,2				--
Primary lead wire	73,8	63,8				80
PCB under D1	85,2	67,5				130
Electrolytic capacitor (C1)	86,9	70,1				105
Electrolytic capacitor (C2)	100,0	84,9				105
Electrolytic capacitor (C3)	92,8	86,8				105
Line Filter (LF1)	111,1	78,3				130
T1 winding	103,4	106,0				110
T1 core	101,2	103,9				--
PCB under U1	124,7	122,1				130
Opto-coupler (U3)	79,3	78,8				100
Y capacitor (CY1)	108,7	115,1				125
PCB under D8	84,0	86,8				130
Electrolytic capacitor (C8)	74,1	75,8				105
Output cord	62,0	62,7				80
Enclosure (inside)	73,8	74,8				105
Enclosure (outside)	64,2	64,9				95
Model: GT-83081-1215-W2E (PCB layout version REV 4.01)						
Plug portion	47,3	44,8				--
Primary lead wire	72,7	59,7				80
PCB under D1	80,8	62,0				130
Electrolytic capacitor (C1)	83,0	64,2				105
Electrolytic capacitor (C2)	92,0	74,6				105
Electrolytic capacitor (C3)	89,4	78,5				105
Line Filter (LF1)	103,1	69,9				130
T1 winding	98,8	96,6				110

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

T1 core	92,2	90,0				--
PCB under U1	124,2	105,7				130
Opto-coupler (U3)	73,1	70,6				100
Y capacitor (CY1)	90,7	94,7				125
PCB under D8	68,8	69,8				130
Electrolytic capacitor (C8)	64,4	65,0				105
Output cord	53,5	53,6				80
Enclosure (inside)	65,4	64,7				105
Enclosure (outside)	56,1	55,7				95

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

With a rated maximum ambient temperature of 40°C, all test data have been converted to ambient temperature 40°C, the maximum temperature are calculated as follows:

Winding components providing safety isolation:
- Class B Tmax = 120°C-10°C = 110°C (10°C decreased by thermocouple method)

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

Supplementary information:

4.5	TABLE: Thermal requirements						P
	Supply voltage (V)	90V / 60Hz	90V / 60Hz	264V / 50Hz	264V / 50Hz		—
	Ambient T_{min} (°C)	45,0	45,0	45,0	45,0		—
	Ambient T_{max} (°C)	45,0	45,0	45,0	45,0		—
Maximum measured temperature T of part/at.....:		T (°C)					Allowed T_{max} (°C)
Orientation		Horizontal	Vertical	Horizontal	Vertical		--
Model: GT-83081-1005-W2E (PCB layout version REV 7.01, tested with fusible resistor (F2) 10ohm/1W)							
Plug portion		53,0	49,0	49,1	52,7		--
MOV		74,3	83,5	66,8	71,6		85
Primary lead wire		74,7	76,0	67,6	73,8		80

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

PCB under D1	107,8	101,3	79,1	84,3		130
E-cap (C1)	93,2	85,9	71,4	75,3		105
E-cap (C2)	99,7	91,7	82,9	86,8		105
E-cap (C3)	98,1	93,6	84,5	91,4		105
LF1 (winding)	109,7	100,0	77,3	80,5		130
T1 winding	107,9	106,9	101,4	106,2		110
T1 core	107,3	105,5	101,4	105,7		110
PCB under U1	116,0	109,1	99,6	104,1		130
Opto-coupler (U3)	86,8	79,9	80,9	85,8		100
Y cap (CY1)	104,4	96,4	99,5	103,5		125
PCB under D8	118,0	109,5	115,3	118,9		130
E-cap (C8)	96,5	88,0	93,2	96,9		105
LF2 (winding)	87,4	79,6	84,3	88,4		130
Output cord	71,8	63,3	69,5	72,7		80
Enclosure (inside)	85,8	77,0	81,1	84,6		105
Enclosure (outside)	74,7	65,4	70,8	74,0		95
Model: GT-83081-1212-2.0-W2E (PCB layout version REV 7.01, tested with fusible resistor (F2) 10ohm/1W)						
Plug portion	54,0	57,5	50,2	52,8		--
MOV	82,5	81,0	73,5	74,8		85
Primary lead wire	75,1	72,4	70,6	72,5		80
PCB under D1	117,6	117,1	94,7	95,4		130
E-cap (C1)	100,4	100,0	76,8	76,9		105
E-cap (C2)	101,3	101,1	86,8	86,8		105
E-cap (C3)	103,2	103,5	88,6	90,3		105
LF1 (winding)	116,8	114,2	82,4	81,3		130
T1 winding	104,2	105,3	102,0	102,5		110
T1 core	104,1	105,1	102,0	102,4		110
PCB under U1	117,4	110,6	104,2	104,6		130
Opto-coupler (U3)	83,7	87,2	80,5	83,9		100
Y cap (CY1)	100,5	101,4	99,4	99,6		125
PCB under D8	116,9	114,9	119,7	116,4		130
E-cap (C8)	86,0	88,2	86,4	88,0		105
LF2 (winding)	79,1	81,3	78,9	80,6		130
Output cord	69,6	71,9	69,6	71,5		80
Enclosure (inside)	79,4	79,5	77,4	77,5		105

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

Enclosure (outside)	69,1	69,0	67,5	67,6		95
Model: GT-83081-1215-W2E (PCB layout version REV 7.01, tested with fusible resistor (F2) 10ohm/1W)						
Plug portion	54,4	57,2	50,5	52,9		--
MOV	83,2	82,1	69,5	70,4		85
Primary lead wire	74,4	75,0	72,1	73,3		80
PCB under D1	113,7	113,8	81,5	81,6		130
E-cap (C1)	98,3	98,5	73,2	73,0		105
E-cap (C2)	101,6	101,4	82,5	82,1		105
E-cap (C3)	102,6	103,8	86,3	87,7		105
LF1 (winding)	115,5	113,5	78,1	77,1		130
T1 winding	103,6	103,2	99,4	98,5		110
T1 core	102,6	102,5	98,6	98,0		110
PCB under U1	81,7	83,2	76,9	78,1		130
Opto-coupler (U3)	93,2	93,2	90,9	90,6		100
Y cap (CY1)	100,8	99,9	104,5	102,7		125
PCB under D8	79,6	80,8	80,2	81,1		130
E-cap (C8)	72,8	74,0	72,3	73,3		105
LF2 (winding)	117,6	118,1	96,1	96,3		130
Output cord	64,9	66,5	64,5	65,8		80
Enclosure (inside)	77,4	78,9	74,5	75,7		105
Enclosure (outside)	70,3	72,5	67,8	69,7		95

Supplementary information:

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

With a rated maximum ambient temperature of 45°C, all test data have been converted to ambient temperature 45°C, the maximum temperature are calculated as follows:

Winding components providing safety isolation:
- Class B Tmax = 120°C-10°C = 110°C (10°C decreased by thermocouple method)

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

Supplementary information:

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

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

Part	Test temperature (°C)	Impression diameter (mm)
Plug holder of European plug	125	1,2
Pin sleeve of British plug	125	1,2
Pin sleeve of Australian plug	125	1,1
Enclosure(model SE1X)	125	1,1
Enclosure(model 540V)	125	1,2
Enclosure(model 6485)	125	1,2
PCB	125	1,2

Supplementary information:

Approved materials used. See appended table 1.5.1

4.7	TABLE: Resistance to fire				P
Part	Manufacturer of material	Type of material	Thickness (mm)	Flammability class	Evidence

Supplementary information:

Approved materials used. See appended table 1.5.1

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

5.1	TABLE: touch current measurement			P
Measured between:	Measured (mA)	Limit (mA)	Comments/conditions	
L to output connector	0,17	0,25	System ON	
N to output connector	0,17	0,25	System ON	
L to Enclosure	0,01	0,25	System ON	
Nto Enclosure	0,01	0,25	System ON	
supplementary information:				
Model: GT-83081-1215-W2E (PCB layout version REV 7.01)				

5.2	TABLE: Electric strength tests, impulse tests and voltage surge tests		P
Test voltage applied between:	Voltage shape (AC, DC, impulse, surge)	Test voltage (V)	Breakdown Yes / No
Functional:			
Line to Neutral (fuse or fusible resistor open)	AC	1500	No
Basic/supplementary:			
Reinforced:			
Primary to secondary **	AC	3000	No
Primary to accessible enclosure (wrapped with aluminum foil) **	AC	3000	No
Transformer: Primary winding to secondary winding	AC	3000	No
Transformer: Core to secondary winding	AC	3000	No
Mylar sheet(required by client)	AC	3000	No
1 layer insulation tape	AC	3000	No
Supplementary information: Core of transformer T1 is considered as primary circuit ** Test was performed at SIQ.			

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

5.3	TABLE: Fault condition tests		P
	Ambient temperature (°C) .....:	45, unless otherwise specified.	—
	Power source for EUT: Manufacturer, model/type, output rating .....:	--	—

Com-ponent No.	Fault	Supply voltage (V)	Test time	Fuse #	Fuse current (A)	Observation
Model: GT-83081-1215-W2E (PCB layout version REV 2.02)						
D1	s-c	264	1s	--	--	Fusible resistor opened immediately, D3 damaged, no hazards. Repeat 10 times with each type of fusible resistor, no hazards.
D1	s-c	264	1s	--	--	Fuse opened immediately, D3 damaged, no hazards.
C1	s-c	264	1s	--	--	Fusible resistor opened immediately, D1, D2, D3, D4 damaged, no hazards. Repeat 10 times with each type of fusible resistor, no hazards.
C1	s-c	264	1s	--	--	Fuse opened immediately, D1, D2, D3, D4 damaged, no hazards.
R2	s-c	264	30min	--	0,13	Normal operational, no hazard.
C6	s-c	264	5min	--	0,03	Unit shut down immediately, no hazard.
D5	s-c	264	5min	--	0,03	Unit shut down immediately, no hazard.
C3	s-c	264	5min	--	0,01	Unit shut down immediately, no hazard.
R5	s-c	264	30min	--	0,13	Unit shut down immediately, no hazard.
R11	s-c	264	5min	--	0,01	Unit shut down immediately, no hazard.
T1 Pin 1-2	s-c	264	5min	--	0,01	Unit shut down immediately, no hazard.
T1 Pin 3-4	s-c	264	5min	--	0,06	Unit shut down immediately, no hazard.
T1 Pin 7-8	s-c	264	5min	--	0,02	Unit shut down immediately, no hazard.
U3 Pin 3	o-c	264	5min	--	0,03	Unit shut down immediately, no hazard.

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

Com-ponent No.	Fault	Supply voltage (V)	Test time	Fuse #	Fuse current (A)	Observation
U3 Pin 3-4	s-c	264	5min	--	0,01	Unit shut down immediately, no hazard.
U3 Pin 1-2	s-c	264	5min	--	0,02	Unit shut down immediately, no hazard.
U1 Pin 1-5	s-c	264	5min	--	0,01	Unit shut down immediately, no hazard.
U1 Pin 6-8	s-c	264	1s	--	--	Fusible resistor opened immediately, D1, D2, D3, D4 damaged, no hazards. Repeat 10 times with each type of fusible resistor, no hazards.
U1 Pin 6-8	s-c	264	1s	--	--	Fuse opened immediately, D3 damaged, no hazards.
Output	s-c	264	5min	--	0,03	Unit shut down immediately, no hazard.
Output	o-l	264	8hrs	--	0,24	Output current overload to 1,37A, temperature was stable, no component damaged, T1 winding =120,0 °C, T1 core = 115,8 °C, at ambient temperature 40,0 °C, no hazards.
Model: GT-83081-1212-2.0-W2E (PCB layout version REV 2.02)						
Output	s-c	264	5min	--	0,03	Unit shut down immediately, no hazard.
Output	o-l	264	6hrs	--	0,18	Output current overload to 1,80A, temperature was stable, no component damaged, T1 winding =113,6°C, T1 core = 111,9°C, at ambient temperature 40,0 °C, no hazards.
Model: GT-83081-1005-W2E (PCB layout version REV 2.02)						
Output	s-c	264	5min	--	0,03	Unit shut down immediately, no hazard.
Output	o-l	264	6hrs	--	0,17	Output current overload to 3,3A, temperature was stable, no component damaged, T1 winding =123,9°C, T1 core = 120,2°C, at ambient temperature 40,0 °C, no hazards.
Model: GT-83081-1215-W2E (PCB layout version REV 4.01)						
D1	s-c	264	1s	--	--	Fuse F1 opened immediately no hazard.

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

Com-ponent No.	Fault	Supply voltage (V)	Test time	Fuse #	Fuse current (A)	Observation
C1	s-c	264	1s	--	--	Fuse F1 opened immediately no hazard.
U1 Pin 6-8	s-c	264	1s	--	--	Fuse F1 opened immediately no hazard.
Model: GT-83081-1215-W2E (PCB layout version REV 7.01)						
Output	s-c	264	30min	F1/F12	0,03	Unit shut down immediately, no hazard.
Output	o-l	264	4,5hrs	F1/F12	0,15	Output current overload to 1,2A, temperature was stable, no component damaged, T1 winding =113,7°C, T1 core = 112,0°C, at ambient temperature 40,0 °C, no hazards.
Model: GT-83081-1212-2.0-W2E (PCB layout version REV 7.01)						
Output	s-c	264	30min	F1/F12	0,03	Unit shut down immediately, no hazard.
Output	o-l	264	4,9hrs	F1/F12	0,17	Output current overload to 2,0A, temperature was stable, no component damaged, T1 winding =112,3°C, T1 core = 112,1°C, at ambient temperature 40,0 °C, no hazards.
Model: GT-83081-1005-W2E (PCB layout version REV 7.01)						
Output	s-c	264	30min	F1/F12	0,03	Unit shut down immediately, no hazard.
Output	o-l	264	5,9hrs	F1/F12	0,17	Output current overload to 2,0A, temperature was stable, no component damaged, T1 winding =112,3°C, T1 core = 111,7°C, at ambient temperature 40,0 °C, no hazards.
Model: GT-83081-1215-W2E (PCB layout version REV 7.01, tested with fusible resistor (F2) 10ohm/1W)						
D1	s-c	264	1s	--	--	Fusible resistor opened immediately, D3 damaged, no hazards. Repeat 10 times with each type of fusible resistor, no hazards.
C1	s-c	264	1s	--	--	Fusible resistor opened immediately, D1, D2, D3, D4 damaged, no hazards. Repeat 10 times with each type of fusible resistor, no hazards.

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

Com-ponent No.	Fault	Supply voltage (V)	Test time	Fuse #	Fuse current (A)	Observation
U1 Pin 6-8	s-c	264	1s	--	--	Fusible resistor opened immediately, D1, D2, D3, D4 damaged, no hazards. Repeat 10 times with each type of fusible resistor, no hazards.
Output	s-c	264	5min	--	0,03	Unit shut down immediately, no hazard.
Output	o-l	264	3,5hrs	--	0,14	Output current overload to 1,6A, temperature was stable, no component damaged, T1 winding =104,7°C, T1 core = 104,3°C, at ambient temperature 45,0 °C, no hazards.
Model: GT-83081-1212-2.0-W2E (PCB layout version REV 7.01, tested with fusible resistor (F2) 10ohm/1W)						
Output	s-c	264	5min	--	0,03	Unit shut down immediately, no hazard.
Output	o-l	264	3,5hrs	--	0,16	Output current overload to 2,0A, temperature was stable, no component damaged, T1 winding =123,6°C, T1 core = 123,4°C, at ambient temperature 45,0 °C, no hazards.
Model: GT-83081-1005-W2E (PCB layout version REV 7.01, tested with fusible resistor (F2) 10ohm/1W)						
Output	s-c	264	5min	--	0,03	Unit shut down immediately, no hazard.
Output	o-l	264	3,5hrs	--	0,13	Output current overload to 2,0A, temperature was stable, no component damaged, T1 winding =124,7°C, T1 core = 124,3°C, at ambient temperature 45,0 °C, no hazards.
Supplementary information: In fault column, where s-c=short-circuited, o-l= over-loaded, o-c= open-circuited.						

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

C.2	TABLE: transformers						P
Loc.	Tested insulation	Working voltage peak / V (2.10.2)	Working voltage rms / V (2.10.2)	Required electric strength (5.2)	Required clearance / mm (2.10.3)	Required creepage distance / mm (2.10.4)	Required distance thr. insul. (2.10.5)
Primary winding to secondary winding	Reinforced	508	278	3000Vac	4,2	5,6	0,4
Core to secondary winding	Reinforced	508	278	3000Vac	4,2	5,6	0,4
Loc.	Tested insulation			Test voltage/ V	Measured clearance / mm	Measured creepage dist./ mm	Measured distance thr. insul. / mm; number of layers
Primary winding to secondary winding	Reinforced			3000Vac	6,2	6,2	TIW used
Core to secondary winding	Reinforced			3000Vac			TIW used
supplementary information:							
Concentric windings on EF-20 size bobbin. 2 layer of insulation tape between primary (enamelled copper wire) and secondary windings (triple insulation wire), 2 layers on outer winding. Winding ends additionally fixed with tape, outer winding is primary.							

C.2	TABLE: transformers	P
See enclosure No. 3 for transformer specifications.		

Enclosure No. 1

National differences to IEC60950-1:2005/Am 1/Am 2

(33 pages including this cover page)

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

AUSTRALIA-Differences to IEC 60950-1:2005 AS/NZS 60950.1-2011 (2011-05-06)

Appendix ZZ (normative)
Variations to IEC 60950-1:2005 (2nd Ed.) for application in Australia and New Zealand

ZZ.1 Introduction

This Appendix sets out variations and additional requirements to cover issues which have not been addressed by the International Standard. These variations indicate national variations for purposes of the IECEE CB System and will be published in the IECEE CB Bulletin.

ZZ.2 Variations

The following variations apply to the source text:

1.2	Insert the following between 'person, service' and 'range, rated frequency': POTENTIAL IGNITION SOURCE 1.2.12	Considered.	P
1.2.12.201	Insert a new Clause 1.2.12.201 after Clause 1.2.12.15 as follows: **1.2.12.201** **POTENTIAL IGNITION SOURCE** Possible fault which can start a fire if the open-circuit voltage measured across an interruption or faulty contact exceeds a value of 50 V (peak) a.c. or d.c. and the product of the peak value of this voltage and the measured r.m.s. current under normal operating conditions exceeds 15 VA. Such a faulty contact or interruption in an electrical connection includes those which may occur in CONDUCTIVE PATTERNS on PRINTED BOARDS. NOTE 201: An electronic protection circuit may be used to prevent such a fault from becoming a POTENTIAL IGNITION SOURCE. NOTE 202: This definition is from AS/NZS 60065:2003.		N/A
1.5.1	1. Add the following to the end of the first paragraph: 'or the relevant Australian/New Zealand Standard.' 2. In NOTE 1, add the following after the word 'standard': 'or an Australian/New Zealand Standard'		N/A
1.5.2	Add the following to the end of the first and third dash items: 'or the relevant Australian/New Zealand Standard'		N/A
3.2.5.1	Modify Table 3B as follows: 1. Delete the first four rows and replace with the following:	No cord provided.	N/A

RATED CURRENT OF EQUIPMENT (A)	***Minimum conductor sizes***	
	Nominal cross-sectional area mm²	**AWG or Kcmil (cross-sectional area in mm²)** **See note 2**
Over 0.2 up to and including 3	0,5 a)	18 [0,8]

IEC 60950-1			
Clause	Difference – Test	Result – Remark	Verdict
	Over 3 up to and including 7,5 0,75 16 [1,3] Over 7,5 up to and including 10 (0,75)[b)] 1,00 16 [1,3] Over 10 up to and including 16 (1,0)[c)] 1,5 14 [2]		
	2. Delete NOTE 1. 3. Delete Footnote [a] and replace with the following: [a] This nominal cross-sectional area is only allowed for Class II appliances if the length of the power supply cord, measured between the point where the cord, or cord guard, enters the appliance, and the entry to the plug does not exceed 2 m (0,5 mm^2 three-core supply flexible cords are not permitted; see AS/NZS 3191).		N/A
4.1.201	Insert a new Clause 4.1.201 after Clause 4.1 as follows: **4.1.201 Display devices used for television purposes** Display devices which may be used for television purposes, with a mass of 7 kg or more, shall comply with the requirements for stability and mechanical hazards, including the additional stability requirements for television receivers, specified in AS/NZS 60065.		N/A
4.3.6	Delete the third paragraph and replace with the following: Equipment with a plug portion, suitable for insertion into a 10 A 3-pin flatpin 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.		N/A
4.3.13.5	Add the following to the end of the first paragraph: ‘, or AS/NZS 2211.1’.		N/A
4.7	Add the following paragraph: ‘For alternate tests refer to Clause 4.7.201.’		N/A

IEC 60950-1			
Clause	Difference – Test	Result – Remark	Verdict
4.7.201	Insert a new Clause 4.7.201 after Clause 4.7.3.6 as follows: **4.7.201 Resistance to fire – Alternative tests** **4.7.201.1 General** Parts of non-metallic material shall be resistant to ignition and spread of fire. This requirement does not apply to decorative trims, knobs and other parts unlikely to be ignited or to propagate flames from inside the apparatus, or the following: (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. (b) The following parts which would contribute negligible fuel to a fire: - small mechanical parts, the mass of which does not exceed 4g, such as mounting parts, gears, cams, belts and bearings; - small electrical components, such as capacitors with a volume not exceeding 1,750 mm^3, 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. 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 the fire from one part to another. 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. 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. When the glow-wire test is carried out, the parts shall be placed in the same orientation as they would be in normal use. These tests are not carried out on internal wiring.	The flame rating of the components was evaluated to the requirements of IEC. The PCB board is specified min. V-1. Therefore no needle test was considered as required.	N/A

IEC 60950-1			
Clause	Difference – Test	Result – Remark	Verdict
4.7.201.2	**Testing of non-metallic materials** 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. 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 be not 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.	Approved materials are used. See list of critical components.	N/A
4.7.201.3	**Testing of insulating materials** Parts 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. The test shall be also carried out on other parts of insulating material which are within a distance of 3 mm of the connection. NOTE: Contacts in components such as switch contacts are considered to be connections. For parts which withstand the glow-wire test but produce a flame, other parts above the connection within the envelope of a vertical cylinder having a diameter of 20 mm and a height of 50 mm shall be subjected to the needle-flame test. However, parts shielded by a barrier which meets the needle-flame test shall not be tested. The needle-flame test shall be made in accordance with AS/NZS 60695.11.5 with the following modifications: **Clause of AS/NZS 4695.11.5** — **Change** 9 Test procedure	Approved materials are used. See list of critical components.	N/A

IEC 60950-1				
Clause	Difference – Test		Result – Remark	Verdict
	9.2 Application of needleflame	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: The duration of application of the test flame shall be 30 s ±1 s.		
	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.		
	The needle-flame test shall not be carried out on parts of material classified as V-0 or V-1 according to AS/NZS 60695.11.10, provided that the sample tested was not thicker than the relevant part.			

IEC 60950-1			
Clause	Difference – Test	Result – Remark	Verdict
4.7.201.4	**Testing in the event of non-extinguishing material** If parts, other than enclosures, do not withstand the glow wire tests of 4.7.201.3, by failure to extinguish within 30 s after the removal of the glow wire tip, the needle-flame test detailed in 4.7.201.3 shall be made on all parts of non-metallic material which are within a distance of 50 mm or which are likely to be impinged upon by flame during the tests of 4.7.201.3. Parts shielded by a separate barrier which meets the needle-flame test need not be tested. NOTE 1: If the enclosure does not withstand the glow-wire test the equipment is considered to have failed to meet the requirements of Clause 4.7.201 without the need for consequential testing. NOTE 2: If other parts do not withstand the glow-wire test due to ignition of the tissue paper and if this indicates that burning or glowing particles can fall onto an external surface underneath the equipment, the equipment is considered to have failed to meet the requirements of Clause 4.7.201 without the need for consequential testing. NOTE 3: Parts likely to be impinged upon by the flame are considered to be those within the envelope of a vertical cylinder having a radius of 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.	Approved materials are used. See list of critical components.	N/A

IEC 60950-1			
Clause	Difference – Test	Result – Remark	Verdict
4.7.201.5	**Testing of printed boards** The base material of printed boards shall be subjected to the needle-flame test of Clause 4.7.201.3. 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. The test is not carried out if the — - Printed board does not carry any POTENTIAL IGNITION SOURCE; - Base material of printed boards, on which the available apparent power at a connection exceeds 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; or - Base material of printed boards, on which the available apparatus 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 or the printed boards are contained in a metal enclosure, having openings only for connecting wires which fill the openings completely. 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	Approved PCB materials are used. See list of critical components.	N/A
6.2.2	For Australia only, delete the first paragraph and Note, and replace with the following: 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

IEC 60950-1			
Clause	Difference – Test	Result – Remark	Verdict
6.2.2.1	For Australia only, delete the first paragraph including the Notes, and replace with the following: In Australia only, the electrical separation is subjected to 10 impulses of alternating polarity, using the impulse test generator reference 1 of Table N.1. The interval between successive impulses is 60 s and the initial voltage, U_c, is: (i) for 6.2.1 a): 7,0 kV for hand-held telephones and for headsets and 2,5 kV for other equipment; and (ii) 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. 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.		N/A
6.2.2.2	For Australia only, delete the second paragraph including the Note, and replace with the following: In Australia only, the a.c. test voltage is: (i) for 6.2.1 a): 3 kV; and (ii) 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. 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.		N/A
7.3	Add the following before the first paragraph: Equipment providing functions that fall only within the scope of AS/NZS 60065 and that incorporate a PSTN interface, are not required to comply with this Clause where the only ports provided on the equipment, in addition to a coaxial cable connection and a PSTN interface, are audio or video ports and analogue or data ports not intended to be used for telecommunications purposes.		N/A
Annex P	Add the following Normative References: AS/NZS 3191, Electric flexible cords AS/NZS 3112, Approval and test specification—Plugs and socket-outlets	Considered. IEC approved material and components are used.	P
Index	1. Insert the following between ‘asbestos, not to be used as insulation’ and ‘attitude see orientation’: AS/NZS 2211.1.....4.3.13.5 AS/NZS 3112.....4.3.6 AS/NZS 3191..... 3.2.5.1 (Table 3B) AS/NZS 60064.....4.1.201 AS/NZS 60695.2.11..... 4.7.201.2, 4.7.201.3 AS/NZS 60695.11.10..... 4.7.201.1, 4.7.201.5 AS/NZS 60695.11.5.....4.7.201.3 2. Insert the following between ‘positive temperature coefficient (PTC) device’ and ‘powder’: potential ignition source 1.2.201, 4.7.201.3, 4.7.201.5		P

IEC 60950-1/Am1			
Clause	Difference – Test	Result – Remark	Verdict
KOREA - Differences to IEC 60950-1, Second Edition (2005) + A1:2009 (2012-05-31)			
1.5.101	Plugs for the connection of the apparatus to the supply mains shall comply with the Korean requirement (KSC 8305).	No power supply cord provided.	N/A
8: EMC	The apparatus shall comply with the relevant CISPR standards	Must be verified during national approval.	N/A

ATTACHMENT TO TEST REPORT IEC 60950-1 with A1: 2009 and A2:2013 U.S.A. NATIONAL DIFFERENCES Information technology equipment – Safety – Part 1: General requirements	
Differences according to ..... :	UL 60950-1-07(Second Edition) + A1: 2011 + A2: 2014
Attachment Form No. ..... :	US_ND_IEC60950_1F
Attachment Originator ..... :	UL
Master Attachment ..... :	Date 2014-07

U.S.A. National Differences to IEC 60950-1+ A1+ A2			
Clause	Requirement + Test	Result - Remark	Verdict
Special national conditions			
1.1.1	All equipment is designed as to allow installation in accordance with the National Electrical Code (NEC), ANSI/NFPA 70, Canadian Electrical Code (CEC), Part I, CAN/CSA C22.1, and if applicable, the National Electrical Safety Code, IEEE C2		P
	Also, unless marked or otherwise identified, installation is allowed per the Standard for the Protection of Electronic Computer/Data-Processing Equipment, ANSI/NFPA 75		N/A
1.1.2	Baby monitors are required to additionally comply with ASTM F2951, Consumer Safety Specification for Baby Monitors		N/A
1.4.14	For Pluggable Equipment Type A, the protection in the installation is assumed to be 20A		P
1.5.5	For lengths exceeding 3,05 m, external interconnecting flexible cord and cable assemblies are required to be a suitable cable type (e.g., DP, CL2) specified in the /NEC		N/A
	For lengths 3,05 m or less, external interconnecting flexible cord and cable assemblies that are not types specified in the NEC are required to have special construction features and identification markings		N/A

U.S.A. National Differences to IEC 60950-1+ A1+ A2			
Clause	Requirement + Test	Result - Remark	Verdict
1.7.1	Equipment for use on a.c. mains supply systems with a neutral and more than one phase conductor (e.g. 120/240 V, 3-wire) require a special marking format for electrical ratings	Single phase unit.	N/A
	A voltage rating that exceeds an attachment plug cap rating is only permitted if it does not exceed the extreme operating conditions in Table 2 of CAN/CSA C22.2 No. 235, and		N/A
	- if it is part of a range that extends into the Table 2 "Normal Operating Conditions"		N/A
	Likewise, a voltage rating is not to be lower than the specified "Normal Operating Conditions," unless it is part of a range that extends into the "Normal Operating Conditions"		N/A
1.7.7	Wiring terminals intended to supply Class 2 outputs in accordance with NEC or CEC Part 1 or NEC are marked with the voltage rating and “Class 2” or equivalent		N/A
	- Marking is located adjacent to the terminals		N/A
	- Marking is visible during wiring		N/A
2.5	Fuse providing Class 2, Limited Power Source, or TNV current limiting is not operator-accessible unless it is not interchangeable		N/A
2.6	Equipment with isolated ground (earthing) receptacles is in compliance with NEC 250.146(D) and CEC 10-112 and 10-906(8)		N/A
2.7.1	Suitable NEC/CEC branch circuit protection rated at the maximum circuit rating is provided for all standard supply outlets and receptacles (such as supplied in power distribution units) if the supply branch circuit protection is not suitable.		N/A
	Power distribution transformers distributing power at 100 volts or more, and rated 10 kVA or more, provided with special transformer overcurrent protection		N/A
3.2	Wiring methods (terminals, leads, etc.) used for the connection of the equipment to the mains is in accordance with the NEC/CEC		N/A
3.2.1	Attachment plugs of power supply cords are rated not less than 125 percent of the rated current of the equipment	No power supply cord provided.	N/A
3.2.1.2	Equipment connected to a centralized d.c. power system, and having one pole of the DC mains input terminal connected to the main protective earthing terminal in the equipment comply with special earthing, wiring, marking and installation instruction requirements	The unit is not intended for direct connection to d.c. mains.	N/A

U.S.A. National Differences to IEC 60950-1+ A1+ A2			
Clause	Requirement + Test	Result - Remark	Verdict
3.2.3	Permanent connection of equipment to the mains supply by a power supply cord is not permitted, except for certain equipment, such as ATMs	No cord provided.	N/A
3.2.5	Power supply cords are no longer than 4.5 m in length		N/A
	Minimum cord length is 1.5 m, with certain constructions such as external power supplies allowed to consider both input and output cord lengths into the requirement		N/A
	Flexible power supply cords are compatible with Article 400 of the NEC, and Tables 11 and 12 of the CEC		N/A
3.2.9	Permanently connected equipment has a suitable wiring compartment and wire bending space		N/A
3.3	Wiring terminals and associated spacings for field wiring connections comply with CSA C22.2 No. 0		N/A
3.3.3	Wire binding screws are not attached with conductors larger than 10 AWG (5,3 mm2)		N/A
3.3.4	Terminals for permanent wiring, including protective earthing terminals, are suitable for Canadian/US wire gauge sizes, are		N/A
	- rated 125 per cent of the equipment rating, and		N/A
	- are specially marked when specified (1.7.7)		N/A
3.3.5	Revise first column of Table 3E to “Smaller of the rated current of the equipment or the protective current rating of the circuit under consideration”		N/A
3.4.2	Motor control devices are provided for cord-connected equipment with a motor if the equipment is rated more than 12 A,		N/A
	- or if the motor has a nominal voltage rating greater than 120 V		N/A
	- or is rated more than 1/3 hp (locked rotor current over 43 A)		N/A
3.4.8	Vertically-mounted disconnect switches and circuit breakers have the "on" position indicated by the handle in the up position		N/A
3.4.11	For computer room applications, equipment with battery systems capable of supplying 750 VA for five minutes have a battery disconnect means that may be connected to the computer room remote power-off circuit		N/A
4.3.12	The maximum quantity of flammable liquid stored in equipment complies with NFPA 30		N/A
4.3.13.5.1	Equipment with lasers meets the U.S. Code of Federal Regulations 21 CFR 1040 (and the Canadian Radiation Emitting Devices Act, REDR C1370).		N/A

U.S.A. National Differences to IEC 60950-1+ A1+ A2			
Clause	Requirement + Test	Result - Remark	Verdict
4.7	For computer room applications, automated information storage systems with combustible media greater than 0,76 m3 (27 cu ft) have a provision for connection of either automatic sprinklers or a gaseous agent extinguishing system with an extended discharge		N/A
4.7.3.1	For computer room applications, enclosures with combustible material measuring greater than 0,9m2 (10 sq ft) or a single dimension greater than 1,8 m (6 ft) have a flame spread rating of 50 or less		N/A
	For other applications, enclosures with the same dimensions require a flame spread rating of 200 or less		N/A
4.7.3.1	Non-metallic enclosures of equipment for use in spaces used for environmental air (plenums) are required to comply with UL 2043		N/A
Annex H	Equipment that produces ionizing radiation complies with U.S. Code of Federal Regulations, 21 CFR 1020 (and the Canadian Radiation Emitting Devices Act, REDR C1370)		N/A
Other National Differences			
1.5.1	Some components and materials associated with the risk of fire, electric shock, or personal injury have component or material ratings in accordance with the applicable national (Canadian and/or U.S.) component or material standard requirements. These components include: attachment plugs, battery backup systems, battery packs, cathode ray tubes, circuit breakers, communication circuit accessories, connectors (used for current interruption of non-LPS circuits), cord sets and power supply cords, direct plug-in equipment, electrochemical capacitor modules (energy storage modules with ultracapacitors), enclosures (outdoor), flexible cords and cables, fuses (branch circuit), fuseholders, ground-fault current interrupters, industrial control equipment, insulating tape, interconnecting cables, lampholders, limit controls, printed wiring, protectors for communications circuits, receptacles, solid state controls, supplementary protectors, switches (including interlock switches), thermal cut-offs, thermostats, (multi-layer) transformer winding wire, surge protective devices, tubing, vehicle battery adapters, wire connectors, and wire and cables	The components fulfil the requirements of the standard and in addition P1 and P2 of UL60950 and CSA 22.2-60950 was applied.	P
1.6.1.2	A circuit for connection to the DC Mains Supply is classified as a SELV Circuit, TNV-2 Circuit or Hazardous Voltage Circuit depending on the maximum operating voltage of the supply		N/A

U.S.A. National Differences to IEC 60950-1+ A1+ A2			
Clause	Requirement + Test	Result - Remark	Verdict
	This maximum operating voltage includes consideration of the battery charging “float voltage” associated with the intended supply system, regardless of the marked power rating of the equipment		N/A
2.3.1	For TNV-2 and TNV-3 circuits with other than ringing signals and with voltages exceeding 42,4 Vpeak or 60 Vd.c., the maximum acceptable current through a 2000 ohm resistor (or greater) connected across the voltage source with other loads disconnected is 7.1 mA peak or 30 mA d.c. under normal operating conditions		N/A
2.3.2.1	In the event of a single fault between TNV and SELV circuits, the limits of 2.2.3 apply to SELV Circuits and accessible conductive parts		N/A
2.6.2	Equipment with functional earthing marked with the functional earthing symbol (IEC 60417-6092)		N/A
2.6.3.4	Protective bonding conductors of non-standard protective bonding constructions (e.g., printed circuit traces) may be subjected to the additional limited short circuit test conditions specified		N/A
4.2.8.1	Enclosures around CRTs with a face diameter of 160 mm or more reduce the risk of injury due to the implosion of the CRT		N/A
4.3.2	Equipment with handles complies with special loading tests		N/A
4.3.8	Battery packs for both portable and stationary applications comply with special component requirements		N/A
5.1.8.3	Equipment intended to receive telecommunication ringing signals comply with a special touch current measurement tests		N/A
5.3.7	Internal (e.g., card cage) SELV circuit connectors and printed wiring board connectors that are accessible to the operator and that deliver power are overloaded		N/A
	During abnormal operating testing, if a circuit is interrupted by the opening of a component, the test is repeated twice (three tests total) using new components as necessary		N/A
6.4	Equipment intended for connection to telecommunication network outside plant cable is protected against overvoltage from power line crosses in accordance with 6.4 and Annex NAC		N/A
Annex EE	Articulated accessibility probe (Fig EE.3) is used for assessing accessibility to document/media shredders instead of the Figure 2A test finger		N/A

U.S.A. National Differences to IEC 60950-1+ A1+ A2			
Clause	Requirement + Test	Result - Remark	Verdict
Annex M.2	Continuous ringing signals up to 16 mA only are permitted if the equipment is subjected to special installation and performance restrictions		N/A
Annex NAD	Equipment connected to a telecommunication and cable distribution networks and supplied with an earphone intended to be held against, or in the ear comply with special acoustic pressure requirements		N/A

CANADA NATIONAL DIFFERENCES to IEC 60950-1, Second Edition (2005) + A1:2009 + A2:2013 (2014-09-13) National standard: CAN/CSA-C22.2 NO. 60950-1A-07

IEC 60950-1, CANADA NATIONAL DIFFERENCES			
Clause	Requirement + Test	Result - Remark	Verdict
Special national conditions			
1.1.1	All equipment is to be designed to allow installation in accordance with the National Electrical Code (NEC), ANSI/NFPA 70, the Canadian Electrical Code (CEC), Part I, CAN/CSA C22.1, and when applicable, the National Electrical Safety Code, IEEE C2.		P
	Also, unless marked or otherwise identified, installation is allowed per the Standard for the Protection of Electronic Computer/Data-Processing Equipment, ANSI/NFPA 75.		N/A
1.1.2	Baby monitors are required to comply with ASTM F2951, Consumer Safety Specification for Baby Monitors		N/A
1.4.14	For Pluggable Equipment Type A, the protection in the installation is assumed to be 20A.		P
1.5.5	For lengths exceeding 3,05 m, external interconnecting flexible cord and cable assemblies are required to be a suitable cable type (e.g., DP, CL2) specified in the CEC/NEC.		N/A
	For lengths 3,05 m or less, external interconnecting flexible cord and cable assemblies that are not types specified in the CEC are required to have special construction features and identification markings.		N/A
1.7.1	Equipment for use on a.c. mains supply systems with a neutral and more than one phase conductor (e.g. 120/240 V, 3-wire) require a special marking format for electrical ratings.	Single phase unit.	N/A

IEC 60950-1, CANADA NATIONAL DIFFERENCES			
Clause	Requirement + Test	Result - Remark	Verdict
	A voltage rating that exceeds an attachment plug cap rating is only permitted if it does not exceed the extreme operating conditions in Table 2 of CAN/CSA C22.2 No. 235, and if it is part of a range that extends into the Table 2 "Normal Operating Conditions." Likewise, a voltage rating shall not be lower than the specified "Normal Operating Conditions," unless it is part of a range that extends into the "Normal Operating Conditions."		N/A
1.7.7	Wiring terminals intended to supply Class 2 outputs in accordance with CEC Part 1 or NEC shall be marked with the voltage rating and “Class 2” or equivalent.		N/A
	Marking shall be located adjacent to the terminals and shall be visible during wiring.		N/A
2.5	Where a fuse is used to provide Class 2, Limited Power Source, or TNV current limiting, it shall not be operator-accessible unless it is not interchangeable.		N/A
2.6	Equipment with isolated ground (earthing) receptacles is required to comply with NEC 250.146(D) and CEC 10-112 and 10-906(8).		N/A
2.7.1	Suitable NEC/CEC branch circuit protection rated at the maximum circuit rating is required for all standard supply outlets and receptacles (such as supplied in power distribution units) if the supply branch circuit protection is not suitable.		N/A
	Power distribution transformers distributing power at 100 volts or more, and rated 10 kVA or more, require special transformer overcurrent protection.		N/A
3.2	Wiring methods (terminals, leads, etc.) used for the connection of the equipment to the mains shall be in accordance with the NEC/CEC.		N/A
3.2.1	Power supply cords are required to have attachment plugs rated not less than 125 percent of the rated current of the equipment.		N/A
3.2.1.2	Equipment connected to a centralized d.c. power system, and having one pole of the DC mains input terminal connected to the main protective earthing terminal in the equipment, is required to comply with special earthing, wiring, marking and installation instruction requirements.		N/A
3.2.3	Permanent connection of equipment to the mains supply by a power supply cord is not permitted, except for certain equipment, such as ATMs.		N/A
3.2.5	Power supply cords are required to be no longer than 4.5 m in length.		N/A
	Minimum cord length is required to be 1,5 m, with certain constructions such as external power supplies allowed to consider both input and output cord lengths into the requirement.		N/A

IEC 60950-1, CANADA NATIONAL DIFFERENCES			
Clause	Requirement + Test	Result - Remark	Verdict
	Flexible power supply cords are required to be compatible with Article 400 of the NEC, and Tables 11 and 12 of the CEC.		N/A
3.2.9	Permanently connected equipment is required to have a suitable wiring compartment and wire bending space.		N/A
3.3	Wiring terminals and associated spacings for field wiring connections shall comply with CSA C22.2 No. 0.		N/A
3.3.3	Wire binding screws are not permitted to attach conductors larger than 10 AWG (5,3 mm2).		N/A
3.3.4	Terminals for permanent wiring, including protective earthing terminals, are required to be suitable for Canadian/US wire gauge sizes,		N/A
	- rated 125 percent of the equipment rating, and		N/A
	- are specially marked when specified (1.7.7).		N/A
3.3.5	First column of Table 3E revised to require “Smaller of the RATED CURRENT of the equipment or the PROTECTIVE CURRENT RATING of the circuit under consideration.”		N/A
3.4.2	Motor control devices are required for cord-connected equipment with a motor if the equipment is rated more than 12 A,		N/A
	or if the motor has a nominal voltage rating greater than 120 V,		N/A
	or is rated more than 1/3 hp (locked rotor current over 43 A).		N/A
3.4.8	Vertically-mounted disconnect switches and circuit breakers are required to have the "on" position indicated by the handle in the up position.		N/A
3.4.11	For computer room applications, equipment with battery systems capable of supplying 750 VA for five minutes are required to have a battery disconnect means that may be connected to the computer room remote power-off circuit.		N/A
4.3.12	The maximum quantity of flammable liquid stored in equipment is required to comply with NFPA 30.		N/A
4.3.13.5.1	Equipment with lasers is required to meet the Canadian Radiation Emitting Devices Act, REDR C1370 and/or Code of Federal Regulations 21 CFR 1040, as applicable.		N/A
4.7	For computer room applications, automated information storage systems with combustible media greater than 0,76 m3 (27 cu ft) are required to have a provision for connection of either automatic sprinklers or a gaseous agent extinguishing system with an extended discharge.		N/A

IEC 60950-1, CANADA NATIONAL DIFFERENCES			
Clause	Requirement + Test	Result - Remark	Verdict
4.7.3.1	For computer room applications, enclosures with combustible material measuring greater than 0,9 m2 (10 sq ft) or a single dimension greater than 1,8 m (6 ft) are required to have a flame spread rating of 50 or less.		N/A
	For other applications, enclosures with the same dimensions require a flame spread rating of 200 or less.		N/A
Annex H	Equipment that produces ionizing radiation is required to comply with the Canadian Radiation Emitting Devices Act, REDR C1370 and/or Code of Federal Regulations, 21 CFR 1020, as applicable.		N/A
Other National Differences			
1.5.1	Some components and materials associated with the risk of fire, electric shock, or personal injury are required to have component or material ratings in accordance with the applicable national (Canadian and/or U.S.) component or material standard requirements. These components include: attachment plugs, battery packs (rechargeable type, used with transportable equipment), cathode ray tubes, circuit breakers, communication circuit accessories, connectors (used for current interruption of non-LPS circuits), cord sets and power supply cords, direct plug-in equipment, enclosures (outdoor), flexible cords and cables, fuses (branch circuit), fuseholders, ground-fault current interrupters, industrial control equipment, insulating tape, interconnecting cables, lampholders, limit controls, printed wiring, protectors for communications circuits, receptacles, solid state controls, supplementary protectors, switches (including interlock switches), thermal cutoffs, thermostats, (multi-layer) transformer winding wire, transient voltage surge suppressors, tubing, wire connectors, and wire and cables.	The components fulfil the requirements of the standard and in addition P1 and P2 of UL60950 and CSA 22.2-60950 was applied.	P
1.6.1.2	A circuit for connection to the DC Mains Supply is classified as a SELV Circuit, TNV-2 Circuit or Hazardous Voltage Circuit depending on the maximum operating voltage of the supply.		N/A
	This maximum operating voltage shall include consideration of the battery charging “float voltage” associated with the intended supply system, regardless of the marked power rating of the equipment.		N/A
2.3.1	For TNV-2 and TNV-3 circuits with other than ringing signals and with voltages exceeding 42.4 Vpeak or 60 Vd.c., the maximum acceptable current through a 2000 ohm resistor (or greater) connected across the voltage source with other loads disconnected is 7.1 mA peak or 30 mA d.c. under normal operating conditions.		N/A

IEC 60950-1, CANADA NATIONAL DIFFERENCES			
Clause	Requirement + Test	Result - Remark	Verdict
2.3.2.1	In the event of a single fault between TNV and SELV circuits, the limits of 2.2.3 apply to SELV Circuits and accessible conductive parts.		N/A
2.6.2	Equipment with functional earthing is required to be marked with the functional earthing symbol (IEC 60417-6092)		N/A
2.6.3.4	Protective bonding conductors of non-standard protective bonding constructions (e.g., printed circuit traces) may be subjected to the additional limited short circuit test conditions specified.		N/A
4.2.8.1	Enclosures around CRTs with a face diameter of 160 mm or more are required to reduce the risk of injury due to the implosion of the CRT.		N/A
4.3.2	Equipment with handles is required to comply with special loading tests.		N/A
4.3.8	Battery packs for both portable and stationary applications are required to comply with special component requirements.		N/A
5.1.8.3	Equipment intended to receive telecommunication ringing signals is required to comply with a special touch current measurement tests.		N/A
5.3.7	Internal (e.g., card cage) SELV circuit connectors and printed wiring board connectors that are accessible to the operator and that deliver power are to be overloaded.		N/A
	During abnormal operating testing, if a circuit is interrupted by the opening of a component, the test shall be repeated twice (three tests total) using new components as necessary.		N/A
6.4	Equipment intended for connection to telecommunication network outside plant cable is required to be protected against overvoltage from power line crosses in accordance with 6.4 and Annex NAC.		N/A
Annex EE	Articulated accessibility probe (Fig EE.3) required for assessing accessibility to document/media shredders instead of the Figure 2A test finger.		N/A
M.2	Continuous ringing signals up to 16 mA only are permitted if the equipment is subjected to special installation and performance restrictions.		N/A
Annex NAD	Equipment connected to a telecommunication and cable distribution networks and supplied with an earphone intended to be held against, or in the ear is required to comply with special acoustic pressure requirements.		N/A
GENERAL	All warnings should be in French language.		N/A

IEC 60950-1/Am1			
Clause	Difference – Test	Result – Remark	Verdict
ISRAEL-Differences to IEC 60950-1:2005 (2011-03-02)			
ISRAEL STANDARD SI 60950 PART 1 **INFORMATION TECHNOLOGY EQUIPMENT - SAFETY: GENERAL REQUIREMENTS** **TRANSLATION OF ISRAEL NATIONAL DEVIATIONS ONLY**			
1.	**Scope (with national deviations)**		—
1.1.1	**Equipment covered by this Standard** This Standard is applicable to mains-powered or battery-powered information technology equipment, including electrical business equipment and associated equipment, with a rated voltage not exceeding 600 V. This Standard is also applicable to the information technology equipment mentioned below: - equipment designed for use as telecommunication terminal equipment and telecommunication network infrastructure equipment, independent of the source of power; - equipment designed and intended to be connected directly to, or used as infrastructure equipment in, a cable distribution system, independent of the source of power; - equipment designed to use the general a.c. mains supply as a communication transmission medium (see clause 6, Note 4 and subclause 7.1, Note 4). This Standard is also applicable to components and subassemblies intended for incorporation in information technology equipment. It is not expected that such components and subassemblies comply with every aspect of the Standard, provided that the complete information technology equipment, incorporating such components and subassemblies, does comply. **Note** 1: Examples of aspects with which uninstalled components and subassemblies may not comply include the marking of the power rating and access to hazardous parts. **Note** 2: This Standard may be applied to the electronic parts of equipment even if that equipment does not wholly fall within its Scope, such as large-scale air conditioning systems, fire detection systems and fire extinguishing systems. Different requirements may be necessary for some applications. This Standard specifies requirements intended to reduce risks of fire ignition, electric shock or bodily injury for the operator and layman who may come into contact with the equipment and, where specifically stated, for a service person. This Standard is intended to reduce such risks with respect to installed equipment, whether it consists of a system or interconnected units or independent units, subject to installing, operating and maintaining the equipment in the manner prescribed by the manufacturer. Examples of equipment that is in the scope of this Standard are the following:		—

IEC 60950-1/Am1			
Clause	Difference – Test	Result – Remark	Verdict
			—

Generic product type	Specific examples of generic type
Banking equipment	Monetary processing machines (counting, dispensing, etc.) for bills and coins, including automated teller machines (ATM)
Data and text processing machines and associated equipment	Data preparation equipment, data processing equipment, data storage equipment, personal computers, plotters, printers, scanners, text processing equipment and visual display units
Data network equipment	Bridges, data circuit terminating equipment, data terminal equipment and routers
Electrical and electronic retail equipment	Cash registers, point of sale terminals including associated electronic scales
Electrical and electronic office machines	Calculators, copying machines(A), dictation equipment, document shredding machines, duplicators, erasers, micrographic office equipment, motor-operated files, paper trimmers (punchers, cutting machines, separators), paper jogging machines, pencil sharpeners, staplers and typewriters
Other information technology equipment	Photoprinting equipment, public information terminals and multimedia equipment
Postage equipment	Mail processing machines and postage machines
Telecommunication network infrastructure equipment	Billing equipment, multiplexers, network powering equipment, network terminating equipment, radio base stations, repeaters, transmission equipment and telecommunication switching equipment
Telecommunication terminal equipment	Facsimile equipment, key telephone systems, modems, PABXs(B), pagers, telephone answering machines and telephone sets (wired and wireless)

(A) Commonly known as "copiers".
(B) PABX - Private Automatic Branch Exchange.

Note 3:

The requirements of Israel Standard SI 60065(C) may also be used to meet safety requirements for multimedia equipment. See IEC Guide 112, Guide on the safety of multimedia equipment.

The list of equipment (brought in the above table) is not intended to be comprehensive and exhaustive, and equipment that is not listed is not necessarily excluded from the Scope, Equipment complying with the relevant requirements in this Standard is considered suitable for use with process control equipment, automatic test equipment and similar systems requiring information processing facilities. However, this Standard does not include requirements for performance or functional characteristics of equipment.

(C) In preparation

IEC 60950-1/Am1			
Clause	Difference – Test	Result – Remark	Verdict
1.1.2	**Additional requirements** Requirements additional to those specified in this Standard may be necessary for: - equipment intended for operation in special environments (for example, extremes of temperature; very high concentration of dust, moisture or vibration; flammable gases; and corrosive or explosive atmospheres); - electromedical applications with physical connections to the patient; - equipment intended to be used in vehicles, on board ships or aircraft, in tropical countries, or at altitudes greater than 2,000 m. - equipment intended for use where ingress of water may be possible. For guidance on such requirements and on relevant testing, see Annex T. **Note:** Attention is drawn to the fact that government authorities of some countries impose additional requirements.		N/A
1.1.3	**Exclusions** This Standard does not apply to: - power supply systems which are not an integral part of the equipment, such as motor-generator sets, battery backup systems and transformers; - building installation wiring; - devices requiring no electric power.		—
National deviations to the clauses of the International Standard			
1.6	**Power interface** The clause is applicable with the following addition:		N/A
1.6.1	**AC Power distribution systems** A note shall be added to the clause as follows: **Note:** In Israel, this clause is applicable subject to the Electricity Law, 1954, its regulations and revisions.		N/A
1.7	**Marking and instructions** The clause is applicable with the following additions: - Subclause 1.7.201 shall be added at the beginning of the clause as follows:		N/A
1.7.201	**Marking in the Hebrew language** The marking in the Hebrew language shall be in	Must be verified during national approval.	N/A

IEC 60950-1/Am1			
Clause	Difference – Test	Result – Remark	Verdict
	accordance with the Consumer Protection Order (Marking of goods), 1983. In addition to the marking required by clause 1.7.1, the following details shall be marked in the Hebrew language. The details shall be marked on the apparatus or on its package, or on a label properly attached to the apparatus or on the package, by bonding or sewing, in a manner that the label cannot be easily removed. 1. Name of the apparatus and it commercial designation; 2. Manufacturer's name and address. If the apparatus is imported, the importer's name and address; 3. Manufacturer's registered trademark, if any; 4. Name of the model and serial number, if any; **5.** Country of manufacture.		
1.7.2	**Safety instructions and marking**		N/A
1.7.2.1	**General** The following shall be added to the clause: All the instructions and warnings related to safety shall also be written in the Hebrew language. - At the end of clause 1, clause 1.201 shall be added as follows:		N/A
1.201	**Power Consumption in standby mode** The equipment shall comply with the requirements of the Energy Sources Regulations (Maximum electrical power in standby mode for domestic and office electrical appliances), 2011, with a permitted deviation of up to 10%	To be checked during national approval.	N/A
2.	**Protection from hazards** The clause is applicable with the following additions:		N/A
2.9.4	**Separation from hazardous voltages** The following shall be added at the beginning of the clause: In Israel, according to the Electricity Law, 1954, and the Electricity Regulations (Earthing and means of protection against electricity of voltages up to 1,000V) 1991, seven means of protection against electrocution are permitted, as follows: 1. TN-S - Network system earthing; TN-C-S -		N/A

IEC 60950-1/Am1			
Clause	Difference – Test	Result – Remark	Verdict
	Network system earthing; 2. TT - Network system earthing; 3. IT - Network Insulation Terre; 4. Isolated transformer; 5. Safety extra low voltage (SELV or ELV); 6. Residual current circuit breaker (30 ma = IΔ); **7.** Reinforced insulation; Double insulation (class II) ⧈ . Clause 2.201 shall be added at the end of the clause, as follows:		
2.201	**Prevention of electromagnetic interference** **-** Prior to carrying out the tests in accordance with the clauses of this Standard, the compliance of the apparatus with the relevant requirements specified in the appropriate part of the Standard series, SI 961, shall be checked. The apparatus shall meet the requirements in the appropriate part of the Standard series, SI 961. - If there are components in the apparatus for the prevention of electromagnetic interference, these components shall not reduce the safety level of the apparatus as required by this Standard.		N/A
3.	**Wiring, connections and supply** The clause is applicable with the following additions:		N/A
3.2	**Connection to a mains supply**		N/A
3.2.1	**Means of connection**		N/A
3.2.1.1	**Connection to an a.c. mains supply** After the note, the following note shall be added: **Note:** In Israel, the feed plug shall comply with the requirements of Israel Standard SI 32 Part 1.1.		N/A
3.2.1.2	**Connection to a d.c. mains supply** At the end of the first paragraph, the following note shall be added: **Note:** At the time of issue of this Standard, there is no Israel Standard for connection accessories to d.c.		—

IEC 60950-1/Am1				
Clause	Difference – Test		Result – Remark	Verdict
Annex P	**ANNEX P** **(normative) Normative references** The annex is applicable with the following national deviations: - The following Israel Standards have been inserted in place of some of the International Standards specified in this annex of the Standard, as follows:			N/A
	The referenced International Standard	**The substituted Israel Standard**	**Comments**	
	IEC 60065: 2001	SI 250[(A)] - Safety requirements for mains operated electronic and related apparatus for household and similar general use	The Israel Standard, excluding national deviations in it, is identical to the Standard of the International Electrotechnical Commission, IEC 65:1985, including its amendments	
	IEC 60083	SI 32 Part 1.1 [(a)] – Plugs and socket-outlets for household and similar purposes: Plugs and socket-outlets for single phase up to 16A – General requirements national modifications and	The Israeli Standard, excluding national modifications and additions noted, is identical to the International Standard, IEC 60884-1 – Third edition:2002-06	
	IEC 60227 (all parts)	SI 473, all parts - Cables, cords and insulated conductors for nominal voltage up to 1000 volt	The Israeli Standard, excluding national modifications and additions noted, is identical to the I Standard series, IEC 60227 (all parts)	
	IEC 60245 (all parts)	SI 60245 Part 1 – Rubber insulated cables – Rated voltages up to and including 450/750 V	The Israeli Standard series, excluding national modifications and additions noted, is identical to the Standard series, IEC 60245 (all parts)	
	IEC 60309 (all parts)	SI 1109, all parts - Plugs, socket-outlets and couplers for industrial purposes	SI 1109, part 1 and part 2, excluding national deviations in them, are identical to the Standards of the International Electrotechnical Commission IEC 60309-1-1999 and IEC 60309-2-1999, respectively.	
	IEC 60317 (all parts)	SI 1067 Part 1 – Enamelled round copper wires with high mechanical properties	The Israel Standard is identical to the Standard of the International Electrotechnical Commission IEC 317-1 (1980)	
		SI 1067 Part 2 - Self-fluxing enamelled[(B)] round copper wires	The Israel Standard is identical to the Standard of the International Electrotechnical Commission IEC 317-4 (1980)	
		SI 1067 Part 3 – Enamelled round copper wires with a temperature index of 180°C	The Israel Standard is identical to the Standard of the International Electrotechnical Commission IEC 317-8 (1980)	
	IEC 60320 (all parts)	SI 60320 Part 1 - Appliance couplers for household and similar general purposes: General requirements	The Israel Standard, excluding national deviations in it, is identical to the Standard of the International Electrotechnical Commission, IEC	

IEC 60950-1/Am1				
Clause	Difference – Test		Result – Remark	Verdict
			60320-1 (2001)	
		SI 60320 Part 2.1 - Appliance couplers for household and similar general purposes: Sewing machine couplers	The Israel Standard, excluding national deviations in it, is identical to the Standard of the International Electrotechnical Commission, IEC 60320-2.1 (2000)	
		SI 60320 Part 2.2 - Appliance couplers for household and similar general purposes: Interconnection couplers for household and similar equipment	The Israel Standard, excluding national deviations in it, is identical to the Standard of the International Electrotechnical Commission, IEC 60320-2.2 (1998)	
		SI 60320 Part 2.3 -Appliance couplers for household and similar general purposes: Interconnection couplers for household and similar equipment Appliance coupler for household and similar general purposes: Appliance coupler with a degree of protection higher than IPX0	The Israel Standard, excluding national deviations in it, is identical to the Standard of the International Electrotechnical Commission, IEC 60320-2.3 (1998)	
	IEC 60364-1:2001	Electricity Law, 1954, with its Regulations and updates	-	
	IEC 60730-1: 1999 Amendment 1 (2003)	SI 60730 Part 1 - Automatic electrical controls for household and similar use: General requirements	The Israel Standard, excluding national deviations in it, is identical to the Standard of the International Electrotechnical Commission, IEC 60730-1 Edition 3.2:2007-03.	
	IEC 60825-1	SI 60825 Part 1 - Safety of laser products: Equipment classification, requirements and user's guide	The Israel Standard, excluding national deviations in it, is identical to the Standard of the International Electrotechnical Commission, IEC 60825-1 2nd Edition:2007-03	
	IEC 60947-1; 2004	SI 60947 Part 1 -Low-voltage switchgear and controlgear: General rules	The Israel Standard, excluding national modifications and additions noted, is identical to Standard of the International Electrotechnical Commission, IEC 60947-1Edition 5.0:2007-06.	
	IEC 61058-1: 2000	SI 61058 Part 1 - Switches for appliances: General requirements	The Israel Standard, excluding national modifications and additions noted, is identical to the Standard of the International Electrotechnical Commission, IEC 61058-1 Edition 3.1:2001:	
	ISO 3864 (all parts)	SI 3864 Part 1 -Graphical symbols	The Israel Standard, excluding national modifications and additions noted, is identical to the Standard of the International Electrotechnical Commission IEC 3864-1 (First Edition:2002-05-15	
	Notes:			

IEC 60950-1/Am1			
Clause	Difference – Test	Result – Remark	Verdict
	(a) The standard is being revised (b) In the International Standard series, there are parts not yet adopted as Israeli Standards. This table notes the relevant Israeli Standards, and in the Comments column, the corresponding parts of the International Standard series. (c) Not relevant to the translation.		N/A
The following shall be added to the annex: Israeli Standards SI 961 (all parts) – Electromagnetic compatibility Israeli Laws, Regulations and documents Electricity Law, 1954, with its Regulations and updates Consumer Protection Order (Marking of goods), 1983, Kovetz HaTakanot 4465 dated 1983-02-24 Energy Sources Regulations (Maximum electrical power in standby mode for domestic and office electrical appliances), 2011			N/A

IEC 60950-1/Am1			
Clause	Difference – Test	Result – Remark	Verdict
CHINA-Differences to IEC 60950-1:2005 (ed. 2) (2013-09-26) (GB4943.1-2011 Information technology equipment – Safety – Part 1: General requirements)			
1.1.2	Revise the third dashed paragraph as: —equipment intended to be used in vehicles, on board ships or aircraft, at altitudes greater than 5000m;	Considered	P
1.4.5	At the end of the third dashed paragraph ,added following paragraph: If the equipment is intended for direct connection to an AC mains supply, the tolerances on RATED VOLTAGE shall be taken as +10%,-10% unless a wider tolerance is declared by the manufacturer. Delete the contents which behind the first dash.		P
1.4.12.1	Tma in clause 1.4.12.1 amended as: Tma: is the maximum ambient temperature permitted by the manufacturer's specification, or 35 °C, whichever is greater. And 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 is to be operated at 2000m-5000m above sea leave, its temperature test conditions and temperature limits are considered.	Manufacturer specifies ambient temperature >35°C	P
1.5.2	Add a note behind the first dash : A component used shall comply with related requirements corresponding altitude of 5000m.	Unit not specified for altitude more than 2000m	N/A
1.7	Add one paragraph before the last paragraph: The required marking and instruction should be given in normative Chinese unless otherwise specified.	Chinese label will be verified during national approval.	N/A
1.7.1	Based on the AC mains supply of China, 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.	The rated voltage range and frequency range is covering China mains voltage 220V/50Hz.	P

IEC 60950-1/Am1			
Clause	Difference – Test	Result – Remark	Verdict
1.7.2.1	Add requirements of warning for equipment intended to be used at altitudes not exceeding 2000m or at non-tropical climate regions: 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."  If only symbol used, the explanation of the symbol shall be contained in the instruction manual. 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 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.	Unit not intended for altitude above 2000m and not specified for tropical conditions. Appropriate labels must be attached to the units shipped to China.	N/A
2.7.1	Amended 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.	Unit provides appropriate internal protection.	P

IEC 60950-1/Am1			
Clause	Difference – Test	Result – Remark	Verdict
2.9 2.9.	Humidity conditioning This section applies for equipment to be operated at tropical climatic conditions, humidity conditioning dealt with tropical climatic conditions. For equipment not to be operated at tropical climatic conditions, its humidity conditioning complies with rules of CTL 624/07. First section of Clause 2.9.2 amended as two 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℃ 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 t 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.	Unit not intended for tropical conditions.	N/A
2.10.3.1	Change 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 GB/T 16935.1. 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/T 16935.1. 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.	Unit verified for altitude <2000m.	P

IEC 60950-1/Am1			
Clause	Difference – Test	Result – Remark	Verdict
2.10.3.4	Add a new section above Table 2K and in Clause 2.10.3.4: minimum CLEARANCES determined by above rules apply for equipment to be operated up to 2000m above sea level. 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/T 16935.1. 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/T 16935.1. Add "(apply for up to 2000m)" in header of Table 2K, 2L and 2M.	Unit verified for altitude <2000m.	N/A
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.	Has to be verified during national approval.	N/A
4.2.8	Clause 4.2.8 cathode ray tubes quoted Clause 18 of GB8898-2011. Delete note of Clause 4.2.8.	No CRT used.	N/A
Annex E	Last section of Annex E amended as: 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. And 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.	No linear transformer used.	N/A
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 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. A component that has been demonstrated to comply with National Industry standards or the relevant national standard shall be subjected to the applicable tests of this standard as part of the equipment.	Unit verified for altitude <2000m.	N/A

IEC 60950-1/Am1			
Clause	Difference – Test	Result – Remark	Verdict
Annex BB (informative)	Amended as : The differences between Chinese national standards GB 4943.1-2011 and GB 4943-2001.	Considered.	--
Annex DD (normative)	Added annex DD: Instructions of the new safety warning labels.	Unit shipped to China must be marked with appropriate warning labels	N/A
Other amendments	In accordance with the relevant CTL decisions and the amendments of IEC 60950-1, the specific requirements or mistakes in IEC standard are corrected or editorially modified in this part, Including clause 1.7, 2.1.1.7, 2.9.2, Table 2H, Figure 2H, F.8, F.9, M.3 and Annex U.	Considered.	P
Quoting standards and reference documents	The principles of quoting and referring to other standards in Annex P and reference documents of IEC 60950-1 are as follows: If the date of the reference document is given, only that edition applies, excluding any subsequent corrigenda and amendments. However, parties to agreements based on this part are encouraged to investigate the possibility of applying the most recent editions of the reference documents. For undated references, the latest edition of the referenced document applies, including any corrigenda and amendments. For the usage of international standards in Chinese national standards and industry standards is various, in the aim of achieving easy operation and based on the requirements of GB/T 1.1 and GB/T 20000.2, when quoting an entire international standard in the normative quoting files and reference documents of Annex P of this part, the principles of quotation are as follows: - If there is no national standard or industry standard corresponding to the international standard, then the international standard is quoted; - If there is national standard or industry standard corresponding to the international standard, then either the national or industry standard is quoted; - If the date of the national standard or industry standard is not given, the latest edition of the standard applies; - The national standard or industry standard number, corresponding international standard number and the consistency level code should be identified in parentheses behind the listed national standard or industry standard. When quoting several chapters or clauses of the international standard, the principles of quotation are as follows: - If there is no national standard or industry standard corresponding to the international standard, then the international standard is quoted;	Considered.	P

IEC 60950-1/Am1			
Clause	Difference – Test	Result – Remark	Verdict
	- If there is national standard or industry standard corresponding to the international standard, then either the national or industry standard is quoted. Meanwhile, in order to retain the relevant information on international standards, informative annex CC is increased, which gives the table about the comparison of the normative quoting files and reference documents in IEC 60950-1: 2005.		

Enclosure No. 1a

European Group Differences and National Differences according to EN 60950-1:2006 +A1:2010 +A2:2013 + A11:2009 + A12:2011

(21 pages including this cover page)

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_1F
Attachment Originator..... :	SGS Fimko Ltd
Master Attachment..... :	Date 2014-02

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

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
	Clauses, subclauses, notes, tables and figures which are additional to those in IEC60950-1 and it´s amendmets are prefixed “Z”		P
Contents (A2:2013)	Add the following annexes: Annex ZA (normative) — Normative references to international publications with their corresponding European publications Annex ZB (normative) — Special national conditions Annex ZD (informative) — IEC and CENELEC code designations for flexible cords		P
General	Delete all the “country” notes in the reference document (IEC 60950-1:2005) according to the following list: 1.4.8 Note 2; 1.5.1 Note 2 & 3; 1.5.7.1 Note 1.5.8 Note 2; 1.5.9.4 Note; 1.7.2.1 Note 4, 5 & 6 2.2.3 Note; 2.2.4 Note; 2.3.2 Note 2.3.2.1 Note 2; 2.3.4 Note 2; 2.6.3.3 Note 2 & 3 2.7.1 Note; 2.10.3.2 Note 2; 2.10.5.13 Note 3 3.2.1.1 Note; 3.2.4 Note 3.; 2.5.1 Note 2 4.3.6 Note 1 & 2; 4.7 Note 4; 4.7.2.2 Note 4.7.3.1Note 2; 5.1.7.1 Note 3 & 4; 5.3.7 Note 1 6 Note 2 & 5; 6.1.2.1 Note 2; 6.1.2.2 Note 6.2.2 Note; 6.2.2.1 Note 2; 6.2.2.2 Note 7.1 Note 3; 7.2 Note; 7.3 Note 1 & 2 G.2.1 Note 2; Annex H Note 2		P
General (A1:2010)	Delete all the “country” notes in the reference document (IEC 60950-1:2005/A1:2010) according to the following list: 1.5.7.1 Note; 6.1.2.1 Note 2 6.2.2.1 Note 2; EE.3 Note		P

IEC 60950-1, GROUP DIFFERENCES (CENELEC common 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.		P
1.1.1 (A1:2010)	**Replace** the text of NOTE 3 by the following. NOTE 3 The requirements of EN 60065 may also be used to meet safety requirements for multimedia equipment. See IEC Guide 112, Guide on the safety of multimedia equipment. For television sets EN 60065 applies.		N/A
1.3.Z1	Add the following subclause: 1.3.Z1 Exposure to excessive sound pressure The apparatus shall be so designed and constructed as to present no danger when used for its intended purpose, either in normal operating conditions or under fault conditions, particularly providing protection against exposure to excessive sound pressures from headphones or earphones. NOTE Z1 A new method of measurement is described in EN 50332-1, Sound system equipment: Headphones and earphones associated with portable audio equipment - Maximum sound pressure level measurement methodology and limit considerations - Part 1: General method for "one package equipment", and in EN 50332-2, Sound system equipment: Headphones and earphones associated with portable audio equipment - Maximum sound pressure level measurement methodology and limit considerations - Part 2: Guidelines to associate sets with headphones coming from different manufacturers.	No headphones or earphones provided.	N/A
(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 *		N/A
1.7.2.1 (A1:2010)	In addition, for a PORTABLE SOUND SYSTEM, the instructions shall include a warning that excessive sound pressure from earphones and headphones can cause hearing loss.		N/A
1.7.2.1 (A12.2011)	In EN 60950-1:2006/A12:2011 Delete NOTE Z1 and the addition for Portable Sound System. Add the following clause and annex to the existing standard and amendments.		N/A
	Zx Protection against excessive sound pressure from personal music players		N/A

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
	Zx.1 General This sub-clause specifies requirements for protection against excessive sound pressure from personal music players that are closely coupled to the ear. It also specifies requirements for earphones and headphones intended for use with personal music players. A personal music player is a portable equipment for personal use, that: – is designed to allow the user to listen to recorded or broadcast sound or video; and – primarily uses headphones or earphones that can be worn in or on or around the ears; and – allows the user to walk around while in use. NOTE 1 Examples are hand-held or body-worn portable CD players, MP3 audio players, mobile phones with MP3 type features, PDA's or similar equipment. A personal music player and earphones or headphones intended to be used with personal music players shall comply with the requirements of this sub-clause. The requirements in this sub-clause are valid for music or video mode only. The requirements do not apply: – while the personal music player is connected to an external amplifier; or – while the headphones or earphones are not used. NOTE 2 An external amplifier is an amplifier which is not part of the personal music player or the listening device, but which is intended to play the music as a standalone music player. The requirements do not apply to: – hearing aid equipment and professional equipment; NOTE 3 Professional equipment is equipment sold through special sales channels. All products sold through normal electronics stores are considered not to be professional equipment.	Switch mode power supply. No provisions for playing music provided.	N/A
	– analogue personal music players (personal music players without any kind of digital processing of the sound signal) that are brought to the market before the end of 2015. NOTE 4 This exemption has been allowed because this technology is falling out of use and it is expected that within a few years it will no longer exist. This exemption will not be extended to other technologies. For equipment which is clearly designed or intended for use by young children, the limits of EN 71-1 apply.		N/A

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
	Zx.2 Equipment requirements No safety provision is required for equipment that complies with the following: – equipment provided as a package (personal music player with its listening device), where the acoustic output $L_{Aeq,T}$ is ≤ 85 dBA measured while playing the fixed “programme simulation noise” as described in EN 50332-1; and – a personal music player provided with an analogue electrical output socket for a listening device, where the electrical output is ≤ 27 mV measured as described in EN 50332-2, while playing the fixed “programme simulation noise” as described in EN 50332-1. NOTE 1 Wherever the term acoustic output is used in this clause, the 30 s A-weighted equivalent sound pressure level $L_{Aeq,T}$ is meant. See also Zx.5 and Annex Zx. All other equipment shall: a) protect the user from unintentional acoustic outputs exceeding those mentioned above; and b) have a standard acoustic output level not exceeding those mentioned above, and automatically return to an output level not exceeding those mentioned above when the power is switched off; and		N/A

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

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
	Zx.3 Warning The warning shall be placed on the equipment, or on the packaging, or in the instruction manual and shall consist of the following: – the symbol of Figure 1 with a minimum height of 5 mm; and – the following wording, or similar: “To prevent possible hearing damage, do not listen at high volume levels for long periods.”  **Figure 1 – Warning label (IEC 60417-6044)** Alternatively, the entire warning may be given through the equipment display during use, when the user is asked to acknowledge activation of the higher level.		N/A
	Zx.4 Requirements for listening devices (headphones and earphones)		N/A
	Zx.4.1 Wired listening devices with analogue input With 94 dBA sound pressure output $L_{Aeq,T}$, the input voltage of the fixed “programme simulation noise” described in EN 50332-2 shall be ≥ 75 mV. This requirement is applicable in any mode where the headphones can operate (active or passive), including any available setting (for example built-in volume level control). NOTE The values of 94 dBA – 75 mV correspond with 85dBA – 27 mV and 100 dBA – 150 mV.		N/A

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

IEC 60950-1, GROUP DIFFERENCES (CENELEC common 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): 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;	Unit provides appropriate internal protection.	P
	c) it is permitted for PLUGGABLE EQUIPMENT TYPE B or PERMANENTLY CONNECTED EQUIPMENT, to rely on dedicated overcurrent and short-circuit protection in the building installation, provided that the means of protection, e.g. fuses or circuit breakers, is fully specified in the installation instructions. If reliance is placed on protection in the building installation, the installation instructions shall so state, except that for PLUGGABLE EQUIPMENT TYPE A the building installation shall be regarded as providing protection in accordance with the rating of the wall socket outlet.		N/A
2.7.2	This subclause has been declared ‘void’.		N/A
3.2.3	Delete the NOTE in Table 3A, and delete also in this table the conduit sizes in parentheses.		N/A
3.2.5.1	Replace “60245 IEC 53” by “H05 RR-F”; “60227 IEC 52” by “H03 VV-F or H03 VVH2-F”; “60227 IEC 53” by “H05 VV-F or H05 VVH2-F2”. In Table 3B, replace the first four lines by the following: Up to and including 6 | 0,75 a) | Over 6 up to and including 10| (0,75) b) 1,0 | Over 10 up to and including 16| (1,0) c) 1,5 | In the conditions applicable to Table 3B delete the words “in some countries” in condition a). In NOTE 1, applicable to Table 3B, delete the second sentence.		N/A
3.2.5.1 (A2:2013)	NOTE Z1 The harmonised code designations corresponding to the IEC cord types are given in Annex ZD	Considered.	P

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
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).	EUT does not produce 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.	EUT does not produce radiation.	N/A
Bibliography	Additional EN standards.		—

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.	Class II equipment.	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.	Equipment not intended for connection to cable distribution systems	N/A

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.	No resistors bridging basic insulation.	N/A
1.5.8	In **Norway**, due to the IT power system used (see annex V, Figure V.7), capacitors are required to be rated for the applicable line-to-line voltage (230 V).		P
1.5.9.4	In **Finland**, **Norway** and **Sweden**, the third dashed sentence is applicable only to equipment as defined in 6.1.2.2 of this annex.		N/A

ZB ANNEX (normative) SPECIAL NATIONAL CONDITIONS (EN)			
Clause	Requirement + Test	Result - Remark	Verdict
1.7.2.1	In **Finland**, **Norway** and **Sweden**, CLASS I PLUGGABLE EQUIPMENT TYPE A intended for connection to other equipment or a network shall, if safety relies on connection to protective earth or if surge suppressors are connected between the network terminals and accessible parts, have a marking stating that the equipment must be connected to an earthed mains socket-outlet. The marking text in the applicable countries shall be as follows: In **Finland**: "Laite on liitettävä suojakoskettimilla varustettuun pistorasiaan" In **Norway**: “Apparatet må tilkoples jordet stikkontakt” In **Sweden**: “Apparaten skall anslutas till jordat uttag”		N/A
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).”		

ZB ANNEX (normative) SPECIAL NATIONAL CONDITIONS (EN)			
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 nettplugg og/eller via annet jordtilkoplet utstyr – og er tilkoplet et kabel-TV nett, kan forårsake brannfare. For å unngå dette skal det ved tilkopling av utstyret til kabel-TV nettet installeres en galvanisk isolator mellom utstyret og kabel- TV nettet.” Translation to Swedish: ”Utrustning som är kopplad till skyddsjord via jordat vägguttag och/eller via annan utrustning och samtidigt är kopplad till kabel-TV nät kan i vissa fall medföra risk för brand. För att undvika detta skall vid anslutning av utrustningen till kabel-TV nät galvanisk isolator finnas mellan utrustningen och kabel-TV nätet.”		N/A
1.7.2.1 (A2:2013)	In **Denmark**, CLASS I PLUGGABLE EQUIPMENT TYPE A intended for connection to other equipment or a network shall, if safety relies on connection to protective earth or if surge suppressors are connected between the network terminals and accessible parts, have a marking stating that the equipment must be connected to an earthed mains socket-outlet. The marking text in **Denmark** shall be as follows: In **Denmark**: “Apparatets stikprop skal tilsluttes en stikkontakt med jord, som giver forbindelse til stikproppens jord.”		N/A
1.7.5 1.7.5 (A11:2009)	In **Denmark**, socket-outlets for providing power to other equipment shall be in accordance with the Heavy Current Regulations, Section 107-2-D1, Standard Sheet DK 1-3a, DK 1-5a or DK 1-7a, when used on Class I equipment. For STATIONARY EQUIPMENT the socket-outlet shall be in accordance with Standard Sheet DK 1-1b or DK 1-5a. For **CLASS II EQUIPMENT** the socket outlet shall be in accordance with Standard Sheet DKA 1-4a.	No socket outlet provided.	N/A

ZB ANNEX (normative) SPECIAL NATIONAL CONDITIONS (EN)			
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. 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	No socket outlet provided.	N/A
2.2.4	In **Norway**, for requirements see 1.7.2.1, 6.1.2.1 and 6.1.2.2 of this annex.		N/A
2.3.2	In **Finland**, **Norway** and **Sweden** there are additional requirements for the insulation. See 6.1.2.1 and 6.1.2.2 of this annex.		N/A
2.3.4	In **Norway**, for requirements see 1.7.2.1, 6.1.2.1 and 6.1.2.2 of this annex.	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.	Class II equipment without earthing.	N/A
2.7.1	In the **United Kingdom**, to protect against excessive currents and short-circuits in the PRIMARY CIRCUIT of DIRECT PLUG-IN EQUIPMENT, tests according to 5.3 shall be conducted, using an external protective device rated 30 A or 32 A. If these tests fail, suitable protective devices shall be included as integral parts of the DIRECT PLUG-IN EQUIPMENT, so that the requirements of 5.3 are met.	Unit provides appropriate internal protection.	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		N/A

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+PE 250 V, 10 A In general, EN 60309 applies for plugs for currents exceeding 10 A. However, a 16 A plug and socket-outlet system is being introduced in Switzerland, the plugs of which are according to the following dimension sheets, published in February 1998: SEV 5932-2.1998: Plug Type 25 , 3L+N+PE 230/400 V, 16 A SEV 5933-2.1998:Plug Type 21, L+N, 250 V, 16A SEV 5934-2.1998: Plug Type 23, L+N+PE .250 V, 16 A		N/A
3.2.1.1	In **Denmark**, supply cords of single-phase equipment having a rated current not exceeding13 A shall be provided with a plug according to the Heavy Current Regulations, Section 107-2-D1. CLASS I EQUIPMENT provided with socket-outlets with earth contacts or which are intended to be used in locations where protection against indirect contact is required according to the wiring rules shall be provided with a plug in accordance with standard sheet DK 2-1a or DK 2-5a. If poly-phase equipment and single-phase equipment having a RATED CURRENT exceeding 13 A is provided with a supply cord with a plug, this plug shall be in accordance with the Heavy Current Regulations, Section 107-2-D1 or EN 60309-2.		N/A

ZB ANNEX (normative) SPECIAL NATIONAL CONDITIONS (EN)			
Clause	Requirement + Test	Result - Remark	Verdict
3.2.1.1 (A2:2013)	In **Denmark**, supply cords of single-phase equipment having a rated current not exceeding 13 A shall be provided with a plug according to DS 60884-2-D1. CLASS I EQUIPMENT provided with socket-outlets with earth contacts or which are intended to be used in locations where protection against indirect contact is required according to the wiring rules shall be provided with a plug in accordance with standard sheet DK 2-1a or DK 2-5a. If a single-phase equipment having a RATED CURRENT exceeding 13 A or if a poly-phase equipment is provided with a supply cord with a plug, this plug shall be in accordance with the standard sheets DK 6-1a in DS 60884-2-D1 or EN 60309-2. Justification the Heavy Current Regulations, 6c		N/A
3.2.1.1	In **Spain**, supply cords of single-phase equipment having a rated current not exceeding 10 A shall be provided with a plug according to UNE 20315:1994. Supply cords of single-phase equipment having a rated current not exceeding 2,5 A shall be provided with a plug according to UNE-EN 50075:1993. CLASS I EQUIPMENT provided with socket-outlets with earth contacts or which are intended to be used in locations where protection against indirect contact is required according to the wiring rules, shall be provided with a plug in accordance with standard UNE 20315:1994. If poly-phase equipment is provided with a supply cord with a plug, this plug shall be in accordance with UNE-EN 60309-2.		N/A
3.2.1.1	In the **United Kingdom**, apparatus which is fitted with a flexible cable or cord and is designed to be connected to a mains socket conforming to BS 1363 by means of that flexible cable or cord and plug, shall be fitted with a ‘standard plug’ in accordance with Statutory Instrument 1768:1994 - The Plugs and Sockets etc. (Safety) Regulations 1994, unless exempted by those regulations. NOTE ‘Standard plug’ is defined in SI 1768:1994 and essentially means an approved plug conforming to BS 1363 or an approved conversion plug.		N/A

ZB ANNEX (normative) SPECIAL NATIONAL CONDITIONS (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.		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 mm^2 to 1,5 mm^2 nominal cross-sectional area.		N/A
4.3.6	In the **United Kingdom**, the torque test is performed using a socket outlet complying with BS 1363 part 1:1995, including Amendment 1:1997 and Amendment 2:2003 and the plug part of DIRECT PLUG-IN EQUIPMENT shall be assessed to BS 1363: Part 1, 12.1, 12.2, 12.3, 12.9, 12.11, 12.12, 12.13, 12.16 and 12.17, except that the test of 12.17 is performed at not less than 125 °C. Where the metal earth pin is replaced by an Insulated Shutter Opening Device (ISOD), the requirements of clauses 22.2 and 23 also apply.		P
4.3.6	In **Ireland**, DIRECT PLUG-IN EQUIPMENT is known as plug similar devices. Such devices shall comply with Statutory Instrument 526:1997 - National Standards Authority of Ireland (Section 28) (Electrical plugs, plug similar devices and sockets for domestic use) Regulations, 1997.		N/A

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

ZB ANNEX (normative) SPECIAL NATIONAL CONDITIONS (EN)			
Clause	Requirement + Test	Result - Remark	Verdict
	It is permitted to bridge this insulation with an optocoupler complying with 2.10.5.4 b). It is permitted to bridge this insulation with a capacitor complying with EN 60384-14:2005, subclass Y2. A capacitor classified Y3 according to EN 60384-14:2005, may bridge this insulation under the following conditions: - the insulation requirements are satisfied by having a capacitor classified Y3 as defined by EN 60384-14, which in addition to the Y3 testing, is tested with an impulse test of 2,5 kV defined in EN 60950-1:2006, 6.2.2.1; - the additional testing shall be performed on all the test specimens as described in EN 60384-14: - the impulse test of 2,5 kV is to be performed before the endurance test in EN 60384-14, in the sequence of tests as described in EN 60384-14.		N/A
6.1.2.2	In **Finland**, **Norway** and **Sweden**, the exclusions are applicable for PERMANENTLY CONNECTED EQUIPMENT, PLUGGABLE EQUIPMENT TYPE B and equipment intended to be used in a RESTRICTED ACCESS LOCATION where equipotential bonding has been applied, e.g. in a telecommunication centre, and which has provision for a permanently connected PROTECTIVE EARTHING CONDUCTOR and is provided with instructions for the installation of that conductor by a SERVICE PERSON.		N/A
7.2	In **Finland**, **Norway** and **Sweden**, for requirements see 6.1.2.1 and 6.1.2.2 of this annex. The term TELECOMMUNICATION NETWORK in 6.1.2 being replaced by the term CABLE DISTRIBUTION SYSTEM.	Equipment not intended for connection to cable distribution systems	N/A
7.3 (A11:2009)	In **Norway** and **Sweden**, for requirements see 1.2.13.14 and 1.7.2.1 of this annex.		N/A

Annex ZD
(informative)

IEC and CENELEC code designations for flexible cords

Type of flexible cord	Code designations	
	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

Clause	Requirement	Verdict
Denmark national differences (2013-07-04) **National standard: DS/EN 60950-1:2006 + A11:2009 + A1:2010 + A12:2011 + A2:2013**		
1.2.4.1	In **Denmark**, certain types of Class I appliances (see 3.2.1.1) may be provided with a plug not establishing earthing conditions when inserted into Danish socket-outlets.	N/A
1.7.5	In Denmark, socket-outlets for providing power to other equipment shall be in accordance with the Heavy Current Regulations, Section 107-2-D1, Standard Sheet DK 1-3a, DK 1-5a or DK 1-7a, when used on Class I equipment. For STATIONARY EQUIPMENT the socket-outlet shall be in accordance with Standard Sheet DK 1-1b or DK 1-5a. For CLASS II EQUIPMENT the socket outlet shall be in accordance with Standard Sheet DKA 1-4a.	N/A
3.2.1.1	In **Denmark**, supply cords of single-phase equipment having a rated current not exceeding13 A shall be provided with a plug according to the Heavy Current Regulations, Section 107-2-D1. CLASS I EQUIPMENT provided with socket-outlets with earth contacts or which are intended to be used in locations where protection against indirect contact is required according to the wiring rules shall be provided with a plug in accordance with standard sheet DK 2-1a or DK 2-5a. If poly-phase equipment and single-phase equipment having a RATED CURRENT exceeding 13 A is provided with a supply cord with a plug, this plug shall be in accordance with the Heavy Current Regulations, Section 107-2-D1 or EN 60309-2.	N/A

Clause	Requirement	Verdict
Sweden national differences (2013-06-25) **National standard: SS-EN 60950-1:2006 + A11:2009 + A1:2010 + A12:2011**		
Various	Please see the EN version of the standard where the Swedish National and Special National Deviations are stated.	P