CERTIFICATE OF COMPLIANCE

Ref No.: NEI-LVD-1-S1103011
Date of Issue: 2011-05-12

The product listed in follows is conformity with Low Voltage Directive 2006/95/EC in order to comply with the requirements in the Council Directive 2006/95/EC relating to electrical equipment designed for use within certain voltage limits.

Equipment	**1U 10LANs Network Appliance**
Model No.	**xxxxFWS-7800xx-xxx-xxxxxxx (Where x is 0-9, A-Z, - or blank for marketing purpose, and no impact safety related construction)**
Trade Name	**AAEON Technology Inc.**
Applicant	**AAEON TECHNOLOGY INC**
Address	**5TH FL 135 LANE 235 PAO CHIAO RD HSIN-TIEN, TAIPEI 231 TAIWAN**

For the safety evaluation of the compliance with this Directive 2006/95/EC, the following standard were applied:

IEC 60950-1:2005 (2nd Edition); Am 1:2009
EN 60950-1:2006+A11:2009+A1:2010

The test data, data evaluation and equipment configuration contained in our test report (Ref No.: NEI-LVD-1-S1103011) were obtained utilizing the test procedures, test instruments, test sites that has been accredited by the Authority of TÜV and TAF according to the ISO-17025 quality assessment standard and technical standard(s). The test data contained in the referenced test report relate only to the EUT sample and item(s) tested.

Jackie Chiu
Authorized Signatory

Neutron Engineering Inc.
B1, No. 37, Lane 365, YangGuang St., NeiHu District 114., Taipei, Taiwan.
TEL：+886-2-26573299 FAX：+886-2-26573331

Testing Laboratory
0659

CE

EU Declaration of Conformity

Product	: 1U 10LANs Network Appliance
Type Designation	: xxxxFWS-7800xx-xxx-xxxxxxx (Where x is 0-9, A-Z, - or blank for marketing purpose, and no impact safety related construction)
Manufacturer	: AAEON TECHNOLOGY INC
Manufacturer Address	: 5TH FL 135 LANE 235 PAO CHIAO RD HSIN-TIEN, TAIPEI 231 TAIWAN

The product above is conformity with Low Voltage Directive 2006/95/EC in order to comply with the requirements in the Council Directive 2006/95/EC relating to electrical equipment designed for use within certain voltage limits.

For the safety evaluation of the compliance with this Directive 2006/95/EC, the following standard were applied:

IEC 60950-1:2005 (2nd Edition); Am 1:2009
EN 60950-1:2006+A11:2009+A1:2010

The following manufacturer / within Europe is responsible for this declaration:

Company Name: _____

Company Address: _____

Name: _____

Position: _____

Legal Signature: _____

Place: _____ *Date:* _____

NEUTRON ENGINEERING INC.

TEST REPORT

IEC 60950-1
Information technology equipment – Safety – Part 1: General requirements

Report Number. ..... :	NEI-LVD-1-S1103011
Tested by (+ signature) ..... :	Anthony Hsu
Approved by (+ signature) ..... :	Fred Chiu
Date of issue ..... :	2011-05-12
Total number of pages	45
Testing Laboratory ..... :	Neutron Engineering Inc.
Address ..... :	B1, No. 37, Lane 365, YangGuang St., NeiHu District 114, Taipei, Chinese Taipei
Applicant's name ..... :	**AAEON TECHNOLOGY INC**
Address ..... :	5TH FL 135 LANE 235 PAO CHIAO RD HSIN-TIEN, TAIPEI 231 TAIWAN
Manufacturer's name……..:	**AAEON TECHNOLOGY INC**
Address ..... :	5TH FL 135 LANE 235 PAO CHIAO RD HSIN-TIEN, TAIPEI 231 TAIWAN
Test specification:	
Standard..... :	IEC 60950-1:2005 (2nd Edition); Am 1:2009 EN 60950-1:2006+A11:2009+A1:2010
Test procedure ..... :	Service of CE Marking in LVD
Non-standard test method……..:	N/A
Test Report Form No. ..... :	IEC60950_1B (LVD)
Master TRF ..... :	Dated 2010-04
Test item description .....:	1U 10LANs Network Appliance
Trade Mark..... :	AAEON Technology Inc.
Manufacturer ..... :	AAEON TECHNOLOGY INC 5TH FL 135 LANE 235 PAO CHIAO RD HSIN-TIEN, TAIPEI 231 TAIWAN
Model/Type reference ..... :	xxxxFWS-7800xx-xxx-xxxxxxx (Where x is 0-9, A-Z, - or blank for marketing purpose, and no impact safety related construction)
Ratings ..... :	I/P: 100-240 Vac, 60-50 Hz, 5-2.5 A.

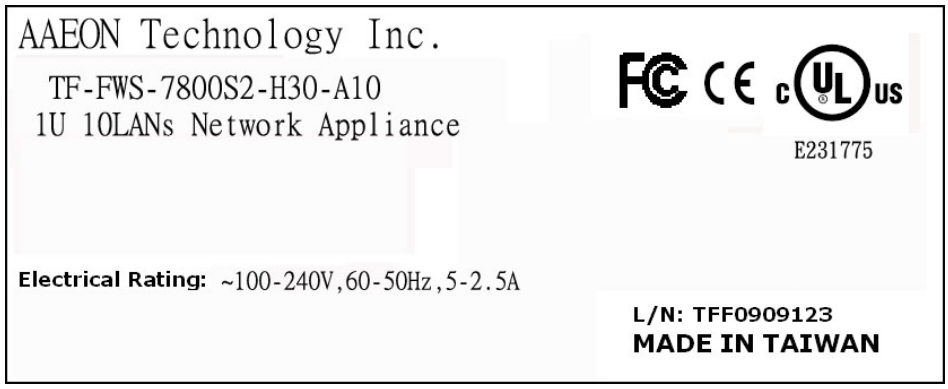
List of Attachments (including a total number of pages in each attachment):

- European Group difference and nation differences (14 pages)
- Photos documentation (7 pages)

Copy of marking plate

The artwork below may be only a draft.

(Additional requirements for markings. See 1.7 NOTE)



Test item particulars ..... :	
Equipment mobility ..... :	[X] movable [] hand-held [] transportable [] stationary [] for building-in [] direct plug-in
Connection to the mains ..... :	[X] pluggable equipment [X] type A [] type B [] permanent connection [X] 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, -10
Tested for IT power systems ..... :	[] Yes [X] No
IT testing, phase-phase voltage (V) ..... :	N.A.
Class of equipment ..... :	[X] Class I [] Class II [] Class III [] Not classified
Considered current rating of protective device as part of the building installlation (A) ..... :	20A
Pollution degree (PD) ..... :	[] PD 1 [X] PD 2 [] PD 3
IP protection class ..... :	IPX0
Altitude during operation (m) ..... :	Up to 2000 m
Altitude of test laboratory (m) ..... :	Not over 2000 m
Mass of equipment (kg) ..... :	Approx. 7.62 kg
Possible test case verdicts:	
- test case does not apply to the test object ..... :	N/A (or N)
- test object does meet the requirement ..... :	P (Pass)
- test object does not meet the requirement ..... :	F (Fail)
Testing ..... :	
Date of receipt of test item ..... :	2011-03-11
Date(s) of performance of tests ..... :	2011-03-11 to 2011-03-28

General remarks:

The test results presented in this report relate only to the object tested.
This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory.
"(see Enclosure #)" refers to additional information appended to the report.
"(see appended table)" refers to a table appended to the report.

Throughout this report a ☐ comma / ☒ point is used as the decimal separator.

Name and address of factory (ies) .....:	AAEON TECHNOLOGY INC 5TH FL 135 LANE 235 PAO CHIAO RD HSIN-TIEN, TAIPEI 231 TAIWAN

General product information:

- The equipment is class I 1U 10LANs Network Appliance for the use in information technology equipment.
- There are two types of optional used module (LAN module and SFP module)
- Maximum normal load: Unit was connected to PC thru connector (2 RJ45 ports) to transmission the signals, the dummy loads of 0.5A for each USB (3 USB ports), additional power 80% load and operated continuously.
- The test samples were pre-production samples without serial numbers.

Model Differences

All models are identical except model designation.

Technical Considerations

- The product was submitted and tested for use at the maximum ambient temperature (Tma) permitted by the manufacturer's specification of: 40 ºC
- The statement for LDMs:
  A. This end product is for use with field installable LDMs not provided with the product when shipped from the original equipment manufacturer. This end product was evaluated with representative LDMs during the Type Test investigation.
  B. The end product with LDMs installed is required to comply with IEC 60950-1, IEC 60825-1 and IEC 60825-2, including any declared national differences.
  C. The decision on certification of the end product without the LDMs rests with the recognizing NCB.

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)

IEC60950_1B			
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	Components which were found to affect safety aspects comply with the requirements of this standard or within the safety aspects of the relevant IEC component standards. (see appended table 1.5.1)	**P**
1.5.2	Evaluation and testing of components	Components which are certified to IEC and /or national standards are used correctly within their ratings. Components not covered by IEC standards are tested under the conditions present in the equipment.	**P**
1.5.3	Thermal controls	No thermal control.	**N/A**
1.5.4	Transformers	Evaluated during separate certification of power supply.	**N/A**
1.5.5	Interconnecting cables	Interconnecting cables comply with the relevant requirements of this standard.	**P**
1.5.6	Capacitors bridging insulation	X and Y capacitors evaluated as part of Power Supply.	**P**
1.5.7	Resistors bridging insulation	Evaluated during separate certification of power supply.	**P**
1.5.7.1	Resistors bridging functional, basic or supplementary insulation	Same as above.	**N/A**
1.5.7.2	Resistors bridging double or reinforced insulation between a.c. mains and other circuits	Same as above.	**N/A**
1.5.7.3	Resistors bridging double or reinforced insulation between a.c. mains and antenna or coaxial cable	Same as above.	**N/A**
1.5.8	Components in equipment for IT power systems		**N/A**
1.5.9	Surge suppressors	Evaluated during separate certification of power supply.	**P**
1.5.9.1	General		**N/A**
1.5.9.2	Protection of VDRs		**N/A**
1.5.9.3	Bridging of functional insulation by a VDR		**N/A**
1.5.9.4	Bridging of basic insulation by a VDR		**N/A**

IEC60950_1B			
Clause	Requirement + Test	Result - Remark	Verdict
1.5.9.5	Bridging of supplementary, double or reinforced insulation by a VDR		**N/A**
1.6	**Power interface**		**P**
1.6.1	AC power distribution systems	TN power system.	**P**
1.6.2	Input current	Highest load according to 1.2.2.1 for this equipment is the operation with the max. Results. (see appended table 1.6.2)	**P**
1.6.3	Voltage limit of hand-held equipment	This appliance is not a hand-held equipment.	**N/A**
1.6.4	Neutral conductor	Neutral insulation is provided in the power supply.	**N/A**
1.7	**Marking and instructions**		**P**
1.7.1	Power rating and identification markings		**P**
1.7.1.1	Power rating marking	See below	**P**
	Multiple mains supply connections.....:		**N/A**
	Rated voltage(s) or voltage range(s) (V) .....:	100-240 Vac	**P**
	Symbol for nature of supply, for d.c. only .....:	Mains from AC source.	**N/A**
	Rated frequency or rated frequency range (Hz) ....:	60-50 Hz	**P**
	Rated current (mA or A) .....:	5-2.5 A	**P**
1.7.1.2	Identification markings		**P**
	Manufacturer's name or trade-mark or identification mark .....:	AAEON TECHNOLOGY INC	**P**
	Model identification or type reference .....:	xxxxFWS-7800xx-xxx-xxxxxxx (Where x is 0-9, A-Z, - or blank for marketing purpose)	**P**
	Symbol for Class II equipment only .....:		**N/A**
	Other markings and symbols .....:	The additional marking does not give rise to misunderstandings.	**P**
1.7.2	Safety instructions and marking	Safety instruction provided.	**P**
1.7.2.1	General	See below.	**P**
1.7.2.2	Disconnect devices		**N/A**
1.7.2.3	Overcurrent protective device	Not for pluggable equipment type B or permanently connected equipment.	**N/A**

IEC60950_1B			
Clause	Requirement + Test	Result - Remark	Verdict
1.7.2.4	IT power distribution systems		**N/A**
1.7.2.5	Operator access with a tool		**N/A**
1.2.7.6	Ozone		**N/A**
1.7.3	Short duty cycles	Equipment designed for continuous operation.	**N/A**
1.7.4	Supply voltage adjustment .....:	No adjustment provided.	**N/A**
	Methods and means of adjustment; reference to installation instructions .....:		**N/A**
1.7.5	Power outlets on the equipment .....:	No socket-outlet.	**N/A**
1.7.6	Fuse identification (marking, special fusing characteristics, cross-reference) .....:	Provied in approved power supply.	**P**
1.7.7	Wiring terminals	See below.	**P**
1.7.7.1	Protective earthing and bonding terminals .....:	Appliance inlet used as protective earthing terminal	**P**
1.7.7.2	Terminals for a.c. mains supply conductors	Appliance inlet used as protective earthing terminal	**P**
1.7.7.3	Terminals for d.c. mains supply conductors	Mains from AC source only.	**N/A**
1.7.8	Controls and indicators	See below.	**P**
1.7.8.1	Identification, location and marking .....:	The function of controls affecting safety is obvious without knowledge of language etc.	**P**
1.7.8.2	Colours .....:	LED as indicator is provided, however it will not affect safety.	**P**
1.7.8.3	Symbols according to IEC 60417.....:	The mains switch is marked with the symbols: "0" and "I" (60417-1-IEC-5007 and IEC-5008).	**P**
1.7.8.4	Markings using figures .....:	No indicators for different positions.	**N/A**
1.7.9	Isolation of multiple power sources .....:	Single mains supply.	**N/A**
1.7.10	Thermostats and other regulating devices .....:	No adjustable thermostat.	**N/A**

IEC60950_1B			
Clause	Requirement + Test	Result - Remark	Verdict
1.7.11	Durability	The label was subjected to the permanence of marking test. The label was rubbed with cloth soaked with water for 15 sec. and then again for 15 sec. with the cloth soaked with petroleum spirit. After this test there was no damage to the label. The marking on the label did not fade. There was no curling nor lifting of the label edge.	**P**
1.7.12	Removable parts	No removable part.	**N/A**
1.7.13	Replaceable batteries .....:	The required warning is in both the operation and service manuals.	**P**
	Language(s) .....:	Only English language reviewed. May be provided in other languages upon request from the manufacturer.	—
1.7.14	Equipment for restricted access locations.....:	Equipment not intended for installation in a RESTRICTED ACCESS LOCATION.	**N/A**

2	**PROTECTION FROM HAZARDS**		**P**
2.1	Protection from electric shock and energy hazards		**P**
2.1.1	Protection in operator access areas	See below.	**P**
2.1.1.1	Access to energized parts	The product is supplied from an approved SPS that provides only SELV. Furthermore there are no hazardous voltages inside the equipment	**P**
	Test by inspection .....:	Ditto.	**P**
	Test with test finger (Figure 2A) .....:	Ditto.	**P**
	Test with test pin (Figure 2B) .....:	Ditto.	**P**
	Test with test probe (Figure 2C) .....:	No TNV circuit.	**N/A**
2.1.1.2	Battery compartments		**N/A**
2.1.1.3	Access to ELV wiring	No ELV wiring in operator accessible area.	**N/A**
	Working voltage (Vpeak or Vrms); minimum distance through insulation (mm)		—

IEC60950_1B			
Clause	Requirement + Test	Result - Remark	Verdict
2.1.1.4	Access to hazardous voltage circuit wiring	No hazardous voltage wiring in operator accessible area.	**N/A**
2.1.1.5	Energy hazards .....:	No energy hazard in operator access area.	**P**
2.1.1.6	Manual controls	No such controls provided.	**N/A**
2.1.1.7	Discharge of capacitors in equipment	Done in the approved power supply.	**N/A**
	Measured voltage (V); time-constant (s) .....:		**—**
2.1.1.8	Energy hazards – d.c. mains supply		**N/A**
	a) Capacitor connected to the d.c. mains supply ..:		**N/A**
	b) Internal battery connected to the d.c. mains supply .....:		**N/A**
2.1.1.9	Audio amplifiers .....:		**N/A**
2.1.2	Protection in service access areas	No service access areas.	**N/A**
2.1.3	Protection in restricted access locations	The unit is not intended to be used in restricted locations.	**N/A**

2.2	**SELV circuits**		**P**
2.2.1	General requirements	See below.	**P**
2.2.2	Voltages under normal conditions (V) ..... :	All accessible voltages are less than 42.4 Vp or 60 V dc and are classified as SELV.	**P**
2.2.3	Voltages under fault conditions (V) ..... :		**N/A**
2.2.4	Connection of SELV circuits to other circuits .....:	SELV circuits only connected to other secondary circuits.	**P**

2.3	**TNV circuits**		**N/A**
2.3.1	Limits		**N/A**
	Type of TNV circuits ..... :		**—**
2.3.2	Separation from other circuits and from accessible parts		**N/A**
2.3.2.1	General requirements		**N/A**
2.3.2.2	Protection by basic insulation		**N/A**
2.3.2.3	Protection by earthing		**N/A**
2.3.2.4	Protection by other constructions ..... :		**N/A**
2.3.3	Separation from hazardous voltages		**N/A**
	Insulation employed..... :		**—**

IEC60950_1B			
Clause	Requirement + Test	Result - Remark	Verdict
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**		**N/A**
2.4.1	General requirements		**N/A**
2.4.2	Limit values		**N/A**
	Frequency (Hz)..... :		—
	Measured current (mA)..... :		—
	Measured voltage (V) ..... :		—
	Measured circuit capacitance (nF or µF)..... :		—
2.4.3	Connection of limited current circuits to other circuits		**N/A**

2.5	**Limited power sources**		**P**
	a) Inherently limited output		**N/A**
	b) Impedance limited output	EN 60730-1, clause 15, 17, J15 and J17 approved poly switches used. (see appended table 1.5.1)	**P**
	c) Regulating network limited output under normal operating and single fault condition		**N/A**
	d) Overcurrent protective device limited output		**N/A**
	Max. output voltage (V), max. output current (A), max. apparent power (VA)..... :	Results see appended table 2.5.	—
	Current rating of overcurrent protective device (A) .:		—
	Use of integrated circuit (IC) current limiters		—

2.6	**Provisions for earthing and bonding**		**P**
2.6.1	Protective earthing	Provided in approved power supply.	**P**
2.6.2	Functional earthing	Secondary functional earthing is connected to protectively earthed conductive part that separated from primary by basic or reinforced insulation.	**P**
2.6.3	Protective earthing and protective bonding conductors	See below.	**P**

IEC60950_1B			
Clause	Requirement + Test	Result - Remark	Verdict
2.6.3.1	General	See below.	**P**
2.6.3.2	Size of protective earthing conductors		**N/A**
	Rated current (A), cross-sectional area (mm^2), AWG ..... :		—
2.6.3.3	Size of protective bonding conductors	See sub-clause 2.6.3.4.	**P**
	Rated current (A), cross-sectional area (mm^2), AWG ..... :		—
	Protective current rating (A), cross-sectional area (mm^2), AWG ..... :		**N/A**
2.6.3.4	Resistance of earthing conductors and their terminations; resistance (Ω), voltage drop (V), test current (A), duration (min) ..... :	See appended table 2.6.3.4.	**P**
2.6.3.5	Colour of insulation..... :		**N/A**
2.6.4	Terminals	See below.	**P**
2.6.4.1	General	Appliance inlet used, which is considered as protective earthing terminal.	**P**
2.6.4.2	Protective earthing and bonding terminals	Appliance inlet considered as protective earthing terminal.	**P**
	Rated current (A), type, nominal thread diameter (mm) ..... :		—
2.6.4.3	Separation of the protective earthing conductor from protective bonding conductors	The protective bonding conductor is connected to the approved appliance inlet within the approved power supply.	**P**
2.6.5	Integrity of protective earthing	See below.	**P**
2.6.5.1	Interconnection of equipment	This unit has its own earthing connection. Any other units connected via the interconnection cable to other unit shall provide SELV only.	**P**
2.6.5.2	Components in protective earthing conductors and protective bonding conductors	No switches or overcurrent earthing conductor.	**P**
2.6.5.3	Disconnection of protective earth	It is not possible to disconnect earth without disconnecting mains as an appliance inlet is used.	**P**
2.6.5.4	Parts that can be removed by an operator	Plug or inlet, earthing connected before and disconnected after hazardous voltage. No other operator removable parts.	**P**

IEC60950_1B			
Clause	Requirement + Test	Result - Remark	Verdict
2.6.5.5	Parts removed during servicing	It is not necessary to disconnect earthing except for the removing of the earthed parts itself.	**P**
2.6.5.6	Corrosion resistance		**N/A**
2.6.5.7	Screws for protective bonding	No self tapping screws are used.	**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 or 20A or circuit breaker of the wall outlet installation protection of the building installation in regard to L to N short circuit. Overcurrent protection is provided by the built-in device fuse inside the approved power supply.	**P**
	Instructions when protection relies on building installation		**N/A**
2.7.2	Faults not simulated in 5.3.7		**N/A**
2.7.3	Short-circuit backup protection	Pluggable equipment type A, the building installation is considered as providing short-circuit backup protection.	**P**
2.7.4	Number and location of protective devices ..... :	Over current protective by one building-in fuse.	**P**
2.7.5	Protection by several devices	Only one protective device. See sub-clause 2.7.4.	**P**
2.7.6	Warning to service personnel..... :	No service work necessary	**N/A**
2.8	**Safety interlocks**		**N/A**
2.8.1	General principles		**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**

IEC60950_1B			
Clause	Requirement + Test	Result - Remark	Verdict
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	Natural rubber, asbestos or hygroscopic material is not used.	**P**
2.9.2	Humidity conditioning	Humidity treatment performed for 120 h.	**P**
	Relative humidity (%), temperature (°C) ..... :	93 % R.H, 40 °C.	—
2.9.3	Grade of insulation	Please refer to 5.2, 2.10 abd 4.5.	**P**
2.9.4	Separation from hazardous voltages		**N/A**
	Method(s) used ..... :		—
2.10	**Clearances, creepage distances and distances through insulation**		**P**
2.10.1	General	See 2.10.3, 2.10.4.	**P**
2.10.1.1	Frequency .....:		**N/A**
2.10.1.2	Pollution degrees .....:	2.	**P**
2.10.1.3	Reduced values for functional insualtion		**N/A**
2.10.1.4	Intervening unconnected conductive parts		**N/A**
2.10.1.5	Insulation with varying dimensions		**N/A**
2.10.1.6	Special separation requirements		**N/A**
2.10.1.7	Insulation in circuits generating starting pulses		**N/A**
2.10.2	Determination of working voltage	Evaluated as part of approved power supply.	**P**
2.10.2.1	General		**N/A**
2.10.2.2	RMS working voltage		**N/A**
2.10.2.3	Peak working voltage		**N/A**
2.10.3	Clearances	Refer 5.3.4 for functional insulation.	**P**

IEC60950_1B			
Clause	Requirement + Test	Result - Remark	Verdict
2.10.3.1	General		**P**
2.10.3.2	Mains transient voltages		**P**
	a) AC mains supply .....:	Evaluated as part of approved power supply.	**P**
	b) Earthed d.c. mains supplies .....:		**N/A**
	c) Unearthed d.c. mains supplies .....:		**N/A**
	d) Battery operation .....:		**N/A**
2.10.3.3	Clearances in primary circuits	Evaluated as part of approved power supply.	**P**
2.10.3.4	Clearances in secondary circuits	Refer 5.3.4 for functional insulation.	**P**
2.10.3.5	Clearances in circuits having starting pulses		**N/A**
2.10.3.6	Transients from a.c. mains supply .....:		**N/A**
2.10.3.7	Transients from d.c. mains supply .....:		**N/A**
2.10.3.8	Transients from telecommunication networks and cable distribution systems .....:		**N/A**
2.10.3.9	Measurement of transient voltage levels		**N/A**
	a) Transients from a mains suplply		**N/A**
	For an a.c. mains supply .....:		**N/A**
	For a d.c. mains supply .....:		**N/A**
	b) Transients from a telecommunication network :		**N/A**
2.10.4	Creepage distances	See appended table 2.10.3 and 2.10.4.	**P**
2.10.4.1	General	Refer 5.3.4 for functional insulation.	**P**
2.10.4.2	Material group and caomparative tracking index	CTI rating for all material of min. 100.	**P**
	CTI tests .....:		—
2.10.4.3	Minimum creepage distances		**N/A**
2.10.5	Solid insulation		**N/A**
2.10.5.1	General		**N/A**
2.10.5.2	Distances through insulation		**N/A**
2.10.5.3	Insulating compound as solid insulation		**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**

IEC60950_1B			
Clause	Requirement + Test	Result - Remark	Verdict
2.10.5.7	Separable thin sheet material		**N/A**
	Number of layers (pcs) .....:		—
2.10.5.8	Non-separable thin sheet material		**N/A**
2.10.5.9	Thin sheet material – standard test procedure		**N/A**
	Electric strength test		—
2.10.5.10	Thin sheet material – alternative test procedure		**N/A**
	Electric strength test		—
2.10.5.11	Insulation in wound components		**N/A**
2.10.5.12	Wire in wound components		**N/A**
	Working voltage .....:		**N/A**
	a) Basic insulation not under stress .....:		**N/A**
	b) Basic, supplemetary, reinforced insulation .....:		**N/A**
	c) Compliance with Annex U .....:		**N/A**
	Two wires in contact inside wound component; angle between 45° and 90° .....:		**N/A**
2.10.5.13	Wire with solvent-based enamel in wound components		**N/A**
	Electric strength test		—
	Routine test		**N/A**
2.10.5.14	Additional insulation in wound components		**N/A**
	Working voltage .....:		**N/A**
	- Basic insulation not under stress .....:		**N/A**
	- Supplemetary, reinforced insulation .....:		**N/A**
2.10.6	Construction of printed boards		**N/A**
2.10.6.1	Uncoated printed boards		**N/A**
2.10.6.2	Coated printed boards		**N/A**
2.10.6.3	Insulation between conductors on the same inner surface of a printed board		**N/A**
2.10.6.4	Insulation between conductors on different layers of a printed board		**N/A**
	Distance through insulation		**N/A**
	Number of insulation layers (pcs).....:		**N/A**
2.10.7	Component external terminations		**N/A**
2.10.8	Tests on coated printed boards and coated components		**N/A**
2.10.8.1	Sample preparation and preliminary inspection		**N/A**

IEC60950_1B			
Clause	Requirement + Test	Result - Remark	Verdict
2.10.8.2	Thermal conditioning		**N/A**
2.10.8.3	Electric strength test		**N/A**
2.10.8.4	Abrasion resistance test		**N/A**
2.10.9	Thermal cycling		**N/A**
2.10.10	Test for Pollution Degree 1 environment and insulating compound		**N/A**
2.10.11	Tests for semiconductor devices and cemented joints		**N/A**
2.10.12	Enclosed and sealed parts		**N/A**
3	**WIRING, CONNECTIONS AND SUPPLY**		**P**
3.1.1	Current rating and overcurrent protection	All internal wires are UL recognized wiring which is PVC insulated, rated VW-1, min. 80 °C, Internal wiring gauge is suitable for current intended to be carried.	**P**
3.1.2	Protection against mechanical damage	Wires do not touch sharp edges and heatsinks which could damage the insulation and cause hazard.	**P**
3.1.3	Securing of internal wiring	The wires are secured by soldering and quick connector so that a loosening of the terminal connection is unlikely.	**P**
3.1.4	Insulation of conductors	The insulation of the individual conductors is suitable for the application and the working voltage. For the insulation material see 3.1.1.	**P**
3.1.5	Beads and ceramic insulators	Not used.	**N/A**
3.1.6	Screws for electrical contact pressure	No such screws.	**N/A**
3.1.7	Insulating materials in electrical connections	All current carrying connections are metal to metal.	**N/A**
3.1.8	Self-tapping and spaced thread screws	No self-tapping or spaced thread screws used.	**N/A**
3.1.9	Termination of conductors	All conductors are reliably secured.	**P**
	10 N pull test	Complied.	**P**
3.1.10	Sleeving on wiring		**P**

IEC60950_1B			
Clause	Requirement + Test	Result - Remark	Verdict

3.2	**Connection to a mains supply**		**P**
3.2.1	Means of connection	See below.	**P**
3.2.1.1	Connection to an a.c. mains supply	Appliance inlet.	**P**
3.2.1.2	Connection to a d.c. mains supply		**N/A**
3.2.2	Multiple supply connections	Single mains supply.	**N/A**
3.2.3	Permanently connected equipment	Not a permanently connected equipment.	**N/A**
	Number of conductors, diameter of cable and conduits (mm) ..... :		**—**
3.2.4	Appliance inlets	The appliance inlet complies with IEC 60320-1. The power cord can be inserted without difficulties and does not support the unit.	**P**
3.2.5	Power supply cords	No power supply cord provided.	**N/A**
3.2.5.1	AC power supply cords		**N/A**
	Type ..... :		**—**
	Rated current (A), cross-sectional area (mm^2), AWG ..... :		**—**
3.2.5.2	DC power supply cords	AC mains designed.	**N/A**
3.2.6	Cord anchorages and strain relief	No cord anchorage or strain relief.	**N/A**
	Mass of equipment (kg), pull (N) ..... :		**—**
	Longitudinal displacement (mm) ..... :		**—**
3.2.7	Protection against mechanical damage	No parts under this unit likely to damage the power supply cord. No sharp edges.	**P**
3.2.8	Cord guards		**N/A**
	Diameter or minor dimension D (mm); test mass (g) ..... :		—
	Radius of curvature of cord (mm)..... :		—
3.2.9	Supply wiring space		**N/A**

3.3	**Wiring terminals for connection of external conductors**		**N/A**
3.3.1	Wiring terminals		**N/A**
3.3.2	Connection of non-detachable power supply cords		**N/A**

IEC60950_1B			
Clause	Requirement + Test	Result - Remark	Verdict
3.3.3	Screw terminals		**N/A**
3.3.4	Conductor sizes to be connected		**N/A**
	Rated current (A), cord/cable type, cross-sectional area (mm^2)..... :		—
3.3.5	Wiring terminal sizes		**N/A**
	Rated current (A), type, nominal thread diameter (mm) ..... :		—
3.3.6	Wiring terminal design		**N/A**
3.3.7	Grouping of wiring terminals		**N/A**
3.3.8	Stranded wire		**N/A**
3.4	**Disconnection from the mains supply**		**P**
3.4.1	General requirement	The appliance inlet is condidered to be the disconnet device.	**P**
3.4.2	Disconnect devices	Appliance inlet.	**P**
3.4.3	Permanently connected equipment	Not permanently connected equipment.	**N/A**
3.4.4	Parts which remain energized		**N/A**
3.4.5	Switches in flexible cords	No isolation switch in flexible cord.	**N/A**
3.4.6	Number of poles - single-phase and d.c. equipment	The plug disconnects both poles simultaneously.	**P**
3.4.7	Number of poles - three-phase equipment	Single phase.	**N/A**
3.4.8	Switches as disconnect devices		**N/A**
3.4.9	Plugs as disconnect devices		**N/A**
3.4.10	Interconnected equipment	Interconnection to other devices by secondary output cable only.	**N/A**
3.4.11	Multiple power sources	Only one power source.	**N/A**
3.5	**Interconnection of equipment**		**P**
3.5.1	General requirements		**P**
3.5.2	Types of interconnection circuits ..... :	Interconnection circuits of SELV through the connector. No ELV interconnection.	**P**
3.5.3	ELV circuits as interconnection circuits	No ELV interconnection.	**N/A**
3.5.4	Data ports for additional equipment	See appended table 2.5 for detail.	**P**

IEC60950_1B			
Clause	Requirement + Test	Result - Remark	Verdict

4	**PHYSICAL REQUIREMENTS**		**P**
4.1	Stability		**P**
	Angle of 10°	Length and width by far exceeds height.	**P**
	Test force (N) .....:	Equipment is not a floorstanding unit.	**N/A**

4.2	**Mechanical strength**		**P**
4.2.1	General	See below. After tests, unit comply with 2.1.1, 2.6.1, 2.10 and 4.4.1.	**P**
	Rack-mounted equipment.		**N/A**
4.2.2	Steady force test, 10 N		**N/A**
4.2.3	Steady force test, 30 N		**N/A**
4.2.4	Steady force test, 250 N	250N applied to all outer enclosure. No energy or other hazards.	**P**
4.2.5	Impact test	No hazard as result from impact test.	**P**
	Fall test		**P**
	Swing test		**N/A**
4.2.6	Drop test; height (mm) .....:		**N/A**
4.2.7	Stress relief test		**N/A**
4.2.8	Cathode ray tubes		**N/A**
	Picture tube separately certified .....:		**N/A**
4.2.9	High pressure lamps		**N/A**
4.2.10	Wall or ceiling mounted equipment; force (N) .....:		**N/A**
4.2.11	Rotating solid media		**N/A**
	Test to cover on the door……..:		**N/A**

4.3	**Design and construction**		**P**
4.3.1	Edges and corners	All edges and corners are judged to be sufficiently well rounded so as not to constitute a hazard.	**P**
4.3.2	Handles and manual controls; force (N)..... :	50N	**P**

IEC60950_1B			
Clause	Requirement + Test	Result - Remark	Verdict
4.3.3	Adjustable controls	No adjustable controls provided.	**N/A**
4.3.4	Securing of parts	Electrical and mechanical connections can be expected to withstand usual mechanical stress. For the protection, solder pins, cable ties and heat shrunk tubing are used.	**P**
4.3.5	Connection by plugs and sockets	No mismatching connector, plug or socket possible.	**N/A**
4.3.6	Direct plug-in equipment		**N/A**
	Torque .....:		**—**
	Compliance with the relevant mains plug standard .....:		**N/A**
4.3.7	Heating elements in earthed equipment	No heating elements.	**N/A**
4.3.8	Batteries	(see appended table 5.3)	**P**
	- Overcharging of a rechargeable battery		**N/A**
	- Unintentional charging of a non-rechargeable battery	Battery is protected against charging current by multiple components.	**P**
	- Reverse charging of a rechargeable battery		**N/A**
	- Excessive discharging rate for any battery		**N/A**
4.3.9	Oil and grease		**N/A**
4.3.10	Dust, powders, liquids and gases		**N/A**
4.3.11	Containers for liquids or gases		**N/A**
4.3.12	Flammable liquids .....:		**N/A**
	Quantity of liquid (l) .....:		**N/A**
	Flash point (°C) .....:		**N/A**
4.3.13	Radiation	See below.	**P**
4.3.13.1	General		**P**
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**

IEC60950_1B			
Clause	Requirement + Test	Result - Remark	Verdict
4.3.13.4	Human exposure to ultraviolet (UV) radiation .....:		**N/A**
4.3.13.5	Lasers (including laser diodes) and LEDs	See below.	**P**
4.3.13.5.1	Lasers (including laser laser diodes)	See the statement in General Product Information for LDMs.	**P**
	Laser class .....:	Less than Class 1.	—
4.3.13.5.2	Light emitting diodes (LEDs)	This product contains only visible indicator LEDs.	**P**
4.3.13.6	Other types .....:		**N/A**
4.4	**Protection against hazardous moving parts**		**P**
4.4.1	General	DC fan of equipment is protected by enclosure.	**P**
4.4.2	Protection in operator access areas .....:	Operator can not access any hazardous moving part.	**P**
	Household and home/office document/media shredders		**N/A**
4.4.3	Protection in restricted access locations .....:	No limited for restricted access locations.	**P**
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	See appended table 4.5.	**P**
	Normal load condition per Annex L .....:		—
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 .....:		**N/A**

IEC60950_1B			
Clause	Requirement + Test	Result - Remark	Verdict
4.6	**Openings in enclosures**		**P**
4.6.1	Top and side openings	See below.	**P**
	Dimensions (mm) .....:	(see appended table)	—
4.6.2	Bottoms of fire enclosures	See below.	**P**
	Construction of the bottomm, dimensions (mm) ...:	(see appended table)	—
4.6.3	Doors or covers in fire enclosures		**N/A**
4.6.4	Openings in transportable equipment		**N/A**
4.6.4.1	Constructional design measures		**N/A**
	Dimensions (mm) .....:		—
4.6.4.2	Evaluation measures for larger openings		**N/A**
4.6.4.3	Use of metallized parts		**N/A**
4.6.5	Adhesives for constructional purposes		**N/A**
	Conditioning temperature (°C), time (weeks).....:		—
4.7	**Resistance to fire**		**P**
4.7.1	Reducing the risk of ignition and spread of flame	See below.	**P**
	Method 1, selection and application of components wiring and materials	Use of materials with the required flammability classes.	**P**
	Method 2, application of all of simulated fault condition tests	Method 2 no used.	**N/A**
4.7.2	Conditions for a fire enclosure	See below.	**P**
4.7.2.1	Parts requiring a fire enclosure	With having the following parts: - components in primary - components in secondary (not supplied by LPS) - insulated wiring The fire enclosure is required.	**P**
4.7.2.2	Parts not requiring a fire enclosure	See 4.7.2.1.	**N/A**
4.7.3	Materials	See below.	**P**
4.7.3.1	General	See appended table 1.5.1 for PCB.	**P**
4.7.3.2	Materials for fire enclosures	See appended table 1.5.1 for enclosure material.	**P**
4.7.3.3	Materials for components and other parts outside fire enclosures	No such component.	**N/A**

IEC60950_1B			
Clause	Requirement + Test	Result - Remark	Verdict
4.7.3.4	Materials for components and other parts inside fire enclosures	Internal components except small parts are V-2, HF-2 or better.	**P**
4.7.3.5	Materials for air filter assemblies	No air filter assemblies.	**N/A**
4.7.3.6	Materials used in high-voltage components	No high voltage component.	**N/A**
5	**ELECTRICAL REQUIREMENTS AND SIMULATED ABNORMAL CONDITIONS**		**P**
5.1	**Touch current and protective conductor current**		**P**
5.1.1	General	See sub-clauses 5.1.2 to 5.1.6.	**P**
5.1.2	Configuration of equipment under test (EUT)	EUT has only one mains connection.	**P**
5.1.2.1	Single connection to an a.c. mains supply		**P**
5.1.2.2	Redundant multiple connections to an a.c. mains supply		**N/A**
5.1.2.3	Simultaneous multiple connections to an a.c. mains supply		**N/A**
5.1.3	Test circuit	Using figure 5 A.	**P**
5.1.4	Application of measuring instrument	Using measuring instrument in annex D.	**P**
5.1.5	Test procedure	The touch current was measured from mains to SELV connector and to metal case.	**P**
5.1.6	Test measurements	(see appended table 5.1.6)	**P**
	Supply voltage (V) .....:		—
	Measured touch current (mA) .....:		—
	Max. allowed touch current (mA) .....:		—
	Measured protective conductor current (mA) .....:		—
	Max. allowed protective conductor current (mA)....:		—
5.1.7	Equipment with touch current exceeding 3,5 mA		**N/A**
5.1.7.1	General .....:		**N/A**
5.1.7.2	Simultaneous multiple connections to the supply		**N/A**
5.1.8	Touch currents to telecommunication networks and cable distribution systems and from telecommunication networks		**N/A**
5.1.8.1	Limitation of the touch current to a telecommunication network or to a cable distribution system		**N/A**

IEC60950_1B			
Clause	Requirement + Test	Result - Remark	Verdict
	Supply voltage (V) .....:		—
	Measured touch current (mA) .....:		—
	Max. allowed touch current (mA) .....:		—
5.1.8.2	Summation of touch currents from telecommunication networks		**N/A**
	a) EUT with earthed telecommunication ports .....:		**N/A**
	b) EUT whose telecommunication ports have no reference to protective earth		**N/A**
5.2	**Electric strength**		**P**
5.2.1	General	(see appended table 5.2)	**P**
5.2.2	Test procedure	(see appended table 5.2)	**P**
5.3	**Abnormal operating and fault conditions**		**P**
5.3.1	Protection against overload and abnormal operation	(see appended table 5.3)	**P**
5.3.2	Motors	Approved DC Fan used.	**P**
5.3.3	Transformers	No safety isolation transformer except in approved switching power supply.	**N/A**
5.3.4	Functional insulation.....:	Method c) considered. Due to all components are mounted on PCB of flammability V-1 min.	**P**
5.3.5	Electromechanical components	No electromechanical component.	**N/A**
5.3.6	Audio amplifiers in ITE .....:		**N/A**
5.3.7	Simulation of faults	(see appended table 5.3)	**P**
5.3.8	Unattended equipment		**N/A**
5.3.9	Compliance criteria for abnormal operating and fault conditions	No fire occurred. No molten metal was emitted.	**P**
5.3.9.1	During the tests	No fire propagated beyond the equipment. No molten metal was emitted.	**P**
5.3.9.2	After the tests	Electric strength test primary → SELV.	**P**
6	**CONNECTION TO TELECOMMUNICATION NETWORKS**		**N/A**

IEC60950_1B			
Clause	Requirement + Test	Result - Remark	Verdict
6.1	Protection of telecommunication network service persons, and users of other equipment connected to the network, from hazards in the equipment		**N/A**
6.1.1	Protection from hazardous voltages		**N/A**
6.1.2.1	Requirements		**N/A**
	Supply voltage (V) .....:		—
	Current in the test circuit (mA) .....:		—
6.1.2.2	Exclusions .....:		**N/A**
6.2	**Protection of equipment users from overvoltages on telecommunication networks**		**N/A**
6.2.1	Separation requirements		**N/A**
6.2.2	Electric strength test procedure		—
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) .....:		**N/A**
	Current limiting method .....:		**N/A**
7	**CONNECTION TO CABLE DISTRIBUTION SYSTEMS**		**N/A**
7.1	General		**N/A**
7.2	Protection of cable distribution system service persons, and users of other equipment connected to the system, from hazardous voltages in the equipment		**N/A**
7.3	Protection of equipment users from overvoltages on the cable distribution system		**N/A**
7.4	Insulation between primary circuits and cable distribution systems		**N/A**
7.4.1	General		**N/A**
7.4.2	Voltage surge test		**N/A**
7.4.3	Impulse test		**N/A**

IEC60950_1B			
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)		**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**

IEC60950_1B			
Clause	Requirement + Test	Result - Remark	Verdict
A.3.1	Mounting of samples		**N/A**
A.3.2	Test procedure		**N/A**
A.3.3	Compliance criterion		**N/A**
B	**ANNEX B, MOTOR TESTS UNDER ABNORMAL CONDITIONS (see 4.7.2.2 and 5.3.2)**		**N/A**
B.1	General requirements		**N/A**
	Position .....:		—
	Manufacturer .....:		—
	Type .....:		—
	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)**		**N/A**
	Position .....:		—

IEC60950_1B			
Clause	Requirement + Test	Result - Remark	Verdict
	Manufacturer .....:		—
	Type .....:		—
	Rated values .....:		—
	Method of protection.....:		—
C.1	Overload test		**N/A**
C.2	Insulation		**N/A**
	Protection from displacement of windings.....:		**N/A**
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)**		**N/A**
G	**ANNEX G, ALTERNATIVE METHOD FOR DETERMINING MINIMUM CLEARANCES**		**N/A**
G.1	Clearances		—
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**

IEC60950_1B			
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)**		**P**
	Metal(s) used .....:		—
K	**ANNEX K, THERMAL CONTROLS (see 1.5.3 and 5.3.8)**		**N/A**
K.1	Making and breaking capacity		**N/A**
K.2	Thermostat reliability; operating voltage (V) .....:		**N/A**
K.3	Thermostat endurance test; operating voltage (V) :		**N/A**
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	See 1.6.2	**P**
M	**ANNEX M, CRITERIA FOR TELEPHONE RINGING SIGNALS (see 2.3.1)**		**N/A**
M.1	Introduction		**N/A**
M.2	Method A		**N/A**
M.3	Method B		**N/A**
M.3.1	Ringing signal		**N/A**

IEC60950_1B			
Clause	Requirement + Test	Result - Remark	Verdict
M.3.1.1	Frequency (Hz) .....:		—
M.3.1.2	Voltage (V) .....:		—
M.3.1.3	Cadence; time (s), voltage (V) .....:		—
M.3.1.4	Single fault current (mA) .....:		—
M.3.2	Tripping device and monitoring voltage .....:		**N/A**
M.3.2.1	Conditions for use of a tripping device or a monitoring voltage		**N/A**
M.3.2.2	Tripping device		**N/A**
M.3.2.3	Monitoring voltage (V) .....:		**N/A**
N	**ANNEX N, IMPULSE TEST GENERATORS (see 1.5.7.2, 1.5.7.3, 2.10.3.9, 6.2.2.1, 7.3.2, 7.4.3 and Clause G.5)**		**N/A**
N.1	ITU-T impulse test generators		**N/A**
N.2	IEC 60065 impulse test generator		**N/A**
P	**ANNEX P, NORMATIVE REFERENCES**		—
Q	**ANNEX Q, Voltage dependent resistors (VDRs) (see 1.5.9.1)**		**N/A**
	a) Preferred climatic categories .....:		**N/A**
	b) Maximum continuous voltage .....:		**N/A**
	c) Pulse current .....:		**N/A**
R	**ANNEX R, EXAMPLES OF REQUIREMENTS FOR QUALITY CONTROL PROGRAMMES**		**N/A**
R.1	Minimum separation distances for unpopulated coated printed boards (see 2.10.6.2)		**N/A**
R.2	Reduced clearances (see 2.10.3)		**N/A**
S	**ANNEX S, PROCEDURE FOR IMPULSE TESTING (see 6.2.2.3)**		**N/A**
S.1	Test equipment		**N/A**
S.2	Test procedure		**N/A**
S.3	Examples of waveforms during impulse testing		**N/A**
T	**ANNEX T, GUIDANCE ON PROTECTION AGAINST INGRESS OF WATER (see 1.1.2)**		**N/A**
		See separate test report	—

IEC60950_1B			
Clause	Requirement + Test	Result - Remark	Verdict

U	**ANNEX U, INSULATED WINDING WIRES FOR USE WITHOUT INTERLEAVED INSULATION (see 2.10.5.4)**		**N/A**
		See separate test report	—

V	**ANNEX V, AC POWER DISTRIBUTION SYSTEMS (see 1.6.1)**		**N/A**
V.1	Introduction		**N/A**
V.2	TN power distribution systems		**N/A**

W	**ANNEX W, SUMMATION OF TOUCH CURRENTS**		**N/A**
W.1	Touch current from electronic circuits		**N/A**
W.1.1	Floating circuits		**N/A**
W.1.2	Earthed circuits		**N/A**
W.2	Interconnection of several equipments		**N/A**
W.2.1	Isolation		**N/A**
W.2.2	Common return, isolated from earth		**N/A**
W.2.3	Common return, connected to protective earth		**N/A**

X	**ANNEX X, MAXIMUM HEATING EFFECT IN TRANSFORMER TESTS (see clause C.1)**		**N/A**
X.1	Determination of maximum input current		**N/A**
X.2	Overload test procedure		**N/A**

Y	**ANNEX Y, ULTRAVIOLET LIGHT CONDITIONING TEST (see 4.3.13.3)**		**N/A**
Y.1	Test apparatus .....:		**N/A**
Y.2	Mounting of test samples .....:		**N/A**
Y.3	Carbon-arc light-exposure apparatus .....:		**N/A**
Y.4	Xenon-arc light exposure apparatus .....:		**N/A**

Z	**ANNEX Z, OVERVOLTAGE CATEGORIES (see 2.10.3.2 and Clause G.2)**	**N/A**

AA	**ANNEX AA, MANDREL TEST (see 2.10.5.8)**	**N/A**

BB	**ANNEX BB, CHANGES IN THE SECOND EDITION**	—

CC	**ANNEX CC, Evaluation of integrated circuit (IC) current limiters**	**N/A**

IEC60950_1B			
Clause	Requirement + Test	Result - Remark	Verdict
CC.1	General		**N/A**
CC.2	Test program 1……:		**N/A**
CC.3	Test program 2……:		**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**

IEC60950_1B			
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])
Metal Enclosure	--	--	Metal, minimum 1.0 mm thickness.	--	--
PWB	Various	Various	V-1 or better, minimum 105 degree C	UL796	UL
Switch Power Supply	FSP GROUP INC	FSP300-701UJ	I/P: 100-240 Vac, 60-50 Hz, 5-2.5 A. o/p: +3.3 V/14 A, +5.0 V/16 A, +12 V1/16 A, +12 V2/16 A, -12 V/0.5 A, +5 Vsb/3A. +3.3 V and +5 V are 120W max., +3.3 V, Total power 300 W.	EN 60950-1, IEC 60950-1	TÜV, CB by TÜV
DC Fan (3 provided)	Sunonwealth Electric Machine Industry Co Ltd	GM1204PQB1-8A series	Rated 12Vdc, 15.3CFM	EN 60950-1	TÜV
HDD (Optional)	Various	Various	5Vdc, maximum 2 A	EN 60950-1, IEC60950-1	TÜV
	Various	Various	Rated 5/12Vdc, 1.5A max	EN 60950-1, IEC60950-1	TÜV
Polyswitch (FS2, FS3 for rear USB port and PS2 port)	LITTELFUSE INC	1206L110 series	6Vdc, 1.1A	EN 60730-1 (clauses 15, 17, J15 and J17)	TÜV
Polyswitch (FS1, FS2 for front USB ports)	LITTELFUSE INC	1206L110 series	6Vdc, 1.1A	EN 60730-1 (clauses 15, 17, J15 and J17)	TÜV
RTC Battery	PANASONIC CORPORATION, PANASONIC CORPORATION OF NORTH AMERICA	CR2032	Rated 3.0Vdc, Maximum. Abnormal Charging Current 10mA.	UL1642	UL

IEC60950_1B			
Clause	Requirement + Test	Result - Remark	Verdict

	TOSHIBA HOME APPLIANCES CORP	CR2032	Rated 3.0Vdc, Maximum. Abnormal Charging Current 10mA.	UL1642	UL
	Vic-Dawn Enterprise Co Ltd	CR2032	Rated 3.0Vdc, Maximum. Abnormal Charging Current 10mA.	UL1642	UL
	Varta Microbattery GMBH	CR2032	Rated 3.0Vdc, Maximum. Abnormal Charging Current 5mA	UL1642	UL
	Varta Consumer Batteries GMBH & Co KGAA	CR2032	Rated 3.0Vdc, Maximum. Abnormal Charging Current 5mA	UL1642	UL
	Sony Energy Devices Corp	CR2032	Rated 3.0Vdc, Maximum. Abnormal Charging Current 10mA	UL1642	UL
	Mitsubishi Electric Home Appliance Co., Ltd.	CR2032	Rated 3.0Vdc, Maximum. Abnormal Charging Current 10mA	UL1642	UL
	Hitachi Maxell Ltd	CR2032	Rated 3.0Vdc, Maximum. Abnormal Charging Current 10mA	UL1642	UL
Supplementary information: 1) An asterisk indicates a mark that assures the agreed level of surveillance.					

1.5.1	**TABLE: Opto Electronic Devices**	**N/A**

Manufacturer.....:

Type .....:

Separately tested .....:

Bridging insulation.....:

IEC60950_1B			
Clause	Requirement + Test	Result - Remark	Verdict

External creepage distance .....:

Internal creepage distance .....:

Distance through insulation .....:

Tested under the following conditions .....:

Input .....:

Output .....:

supplementary information

1.6.2	TABLE: Electrical data (in normal conditions)					P
U (V)	I (A)	Irated (A)	P (W)	Fuse #	Ifuse (A)	Condition/status
90V/50Hz	3.4	--	303.1	In SPS	3.4	Maximum normal load
90V/60Hz	3.41	--	303.3	In SPS	3.41	Maximum normal load
100V/50Hz	3.04	5	302.6	In SPS	3.04	Maximum normal load
100V/60Hz	3.05	5	302.9	In SPS	3.05	Maximum normal load
240V/50Hz	1.21	2.5	278.6	In SPS	1.21	Maximum normal load
240V/60Hz	1.21	2.5	278.4	In SPS	1.21	Maximum normal load
254V/50Hz	1.18	--	278.0	In SPS	1.18	Maximum normal load
254V/60Hz	1.19	--	278.0	In SPS	1.19	Maximum normal load
264V/50Hz	1.13	--	278.0	In SPS	1.13	Maximum normal load
264V/60Hz	1.15	--	278.0	In SPS	1.15	Maximum normal load

Supplementary information:

Maximum Normal Load:
Unit was connected to PC thru connector (2 RJ45 ports) to transmission the signals, the dummy loads of 0.5A for each USB (3 USB ports), additional power 80% load and operated continuously.

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

IEC60950_1B			
Clause	Requirement + Test	Result - Remark	Verdict

Voltage (rated) (V)	Current (rated) (A)	Voltage (max.) (V)	Current (max.) (A)	VA (max.) (VA)
supplementary information:				

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

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

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

Component (measured between)	max. voltage (V) (normal operation)		Voltage Limiting Components
	V peak	V d.c.	

Fault test performed on voltage limiting components	Voltage measured (V) in SELV circuits (V peak or V d.c.)
supplementary information:	

2.5	**TABLE: limited power sources**	**P**

	Limits	Measured	Verdict
1. According to Table 2B, Rear USB, Uoc = 4.97 V			
current (in A)	< 8A	1.8	P
apparent power (in VA)	< 100	7.02	P

IEC60950_1B			
Clause	Requirement + Test	Result - Remark	Verdict

2. According to Table 2B , PS2, Uoc = 4.99 V			
current (in A)	< 8A	2.0	P
apparent power (in VA)	< 100	8.06	P
3. According to Table 2B , RJ45 pin 1-8 to return, Uoc = 0 V			
current (in A)	< 8A	--	P
apparent power (in VA)	< 100	--	P
4. According to Table 2B , Front USB 1, Uoc = 4.96 V			
current (in A)	< 8A	2.7	P
apparent power (in VA)	< 100	10.8	P
5. According to Table 2B , Front USB 2, Uoc = 4.96 V			
current (in A)	< 8A	2.7	P
apparent power (in VA)	< 100	10.7	P
6. According to Table 2B , COM port pin 3, 4, 7 to return, Uoc = 10.54 V			
current (in A)	< 8A	0.009	P
apparent power (in VA)	< 100	0.06	P
7. According to Table 2B , COM port pin 1, 2, 5, 6, 8, 9 to return, Uoc = 0 V			
current (in A)	< 8A	--	P
apparent power (in VA)	< 100	--	P
Supplementary information:			

2.6.3.4	TABLE: Ground continue test	**P**
Location	Resistant measured (Ω)	Comments
Inlet earth pin to chassis	0.018	32A for 2 min.
Supplementary information:		

2.10.2	**Table: working voltage measurement**	**N/A**

Location	RMS voltage (V)	Peak voltage (V)	Comments

IEC60950_1B			
Clause	Requirement + Test	Result - Remark	Verdict

supplementary information:

2.10.3 and 2.10.4	TABLE: Clearance and creepage distance measurements					N/A
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:						
Basic/supplementary:						
Reinforced:						
Supplementary information:						

2.10.5	TABLE: Distance through insulation measurements				N/A
Distance through insulation (DTI) at/of:	U peak (V)	U rms (V)	Test voltage (V)	Required DTI (mm)	DTI (mm)
Supplementary information:					

IEC60950_1B			
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			
Is it possible to install the battery in a reverse polarity position?			

	Non-rechargeable batteries			Rechargeable batteries					
	Discharging		Un-intentional charging	Charging		Discharging		Reversed charging	
	Meas. current	Manuf. Specs.		Meas. current	Manuf. Specs.	Meas. current	Manuf. Specs.	Meas. current	Manuf. Specs.
Max. current during normal condition									
Max. current during fault condition									

Test results:		Verdict
- Chemical leaks		
- Explosion of the battery		
- Emission of flame or expulsion of molten metal		
- Electric strength tests of equipment after completion of tests		
Supplementary information:		

4.3.8	**TABLE: Batteries**	**N/A**

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

IEC60950_1B			
Clause	Requirement + Test	Result - Remark	Verdict

4.5	**TABLE: Thermal requirements**						**P**
	Supply voltage (V) ..... :	See below.	See below.	See below.	See below.	--	—
	Ambient T_{min} (°C) ..... :	--	--	--	--	--	—
	Ambient T_{max} (°C) ..... :	--	--	--	--	--	—
Maximum measured temperature T of part/at::		T (°C)					Allowed T_{max} (°C)
Test voltage		90 Vac, 60 Hz	Shift to Tma = 40°C	264 Vac, 60 Hz	Shift to Tma = 40°C	--	--
01. T1 coil (power board)		56.4	72.3	58.8	74.6	--	110
02. T1 core (power board)		41.4	57.3	41.8	57.6	--	110
03. T2 coil (power board)		40.9	56.8	40.3	56.1	--	110
04. T2 core (power board)		39.9	55.8	39.2	55.0	--	110
05. Body of M5 (power board)		38.5	54.4	38.8	54.6	--	100
06. Body of M4 (power board)		38.6	54.5	38.8	54.6	--	100
07. L1 (power board)		51.6	67.5	40.4	56.2	--	105
08. L2 (power board)		54.1	70.0	41.3	57.1	--	105
09. L10 (power board)		69.8	85.7	50.7	66.5	--	105
10. T3 coil (power board)		42.6	58.5	43.0	58.8	--	105
11. Power switch		36.5	52.4	35.9	51.7	--	85
12. inlet near L		37.5	53.4	35.5	51.3	--	70
13. PWB near U23 (main board)		47.5	63.4	47.4	63.2	--	105
14. PWB near U24 (main board)		36.5	52.4	36.8	52.6	--	105
15. BAT1 (main board)		33.9	49.8	34.2	50.0	--	100
16. FS3 (main board)		32.3	48.2	32.3	48.1	--	105
17. FS1 (SELV board)		33.6	49.5	33.3	49.1	--	105
18. RELAY4 (SELV board)		36.2	52.1	36.2	52.0	--	105
19. PWB near U2 (SELV board)		40.2	56.1	39.8	55.6	--	105
20. HDD		30.5	46.4	30.2	46.0	--	--
21. PWB near U3 (LAN module)		47.6	63.5	47.8	63.6	--	105
22. RELAY4 (LAN module)		35.0	50.9	34.8	50.6	--	105
23. External enclosure near T1		26.5	42.4	26.3	42.1	--	70
24. Ambient		24.1	40.0	24.2	40.0	--	--

IEC60950_1B			
Clause	Requirement + Test	Result - Remark	Verdict

Supplementary information:

1. The temperatures were measured under the worst case of normal mode defined in sub-clause 1.2.2.1 and as described in sub-clause 1.6.2 at voltages as described above.
2. With a specified ambient temperature of + 40 °C. Therefore the maximum temperatures measured are recalculated as follows: T + (40 – T_{amb}), where T is the maximum temperature measured during test and Tamb is the ambient temperature during the test.
3. The maximum temperatures are calculated as follows:

   Winding components (with safety isolation):

   - PWB: 105 degree C: Tmax = 105 °C

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:

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

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

Supplementary information:

4.6.1, 4.6.2	**Table: Enclosure openings**	**P**

Location	Size (mm)	Comments
Top	--	No openings.
Front side	3.4 x 2.4 max.	Numerous rectangle openings.
Rear side	3 x 3 max.	Numerous rectangle openings, the openings located at fan's vent.
Both Right and Left sides	3.4 x 2.4 max.	Numerous rectangle openings.
Bottom	--	No openings.

Note(s):

1) No hazardous voltage and energy hazardous conductive parts were located within 5° projection under those openings.

IEC60950_1B			
Clause	Requirement + Test	Result - Remark	Verdict

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

5.1	TABLE: touch current measurement		P
Measured between:	Measured (mA)	Limit (mA)	Comments/conditions
L and secondary (Power switch ON)	0.006	0.25	Switch “e” close
N and secondary (Power switch ON)	0.006	0.25	Switch “e” close
L and earth(enclosure) (Power switch ON)	0.216	3.5	Switch “e” open
N and earth(enclosure) (Power switch ON)	0.218	3.5	Switch “e” open
L and secondary (Power switch OFF)	0.006	0.25	Switch “e” close
N and secondary (Power switch OFF)	0.006	0.25	Switch “e” close
L and earth(enclosure) (Power switch OFF)	0.377	3.5	Switch “e” open
N and earth(enclosure) (Power switch OFF)	0.058	3.5	Switch “e” open
supplementary information:			

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:			
--	--	--	--
--	--	--	--
Basic/supplementary:			
Primary to Earth (Enclosure)	DC	3000	No
--	--	--	--

IEC60950_1B			
Clause	Requirement + Test	Result - Remark	Verdict

Reinforced:			
Primary to SELV	DC	4242	No
--	--	--	--
Supplementary information:			

5.3	**TABLE: Fault condition tests**		**P**
	Ambient temperature (°C) .....:	See below.	—
	Power source for EUT: Manufacturer, model/type, output rating .....:	See table 1.5.1 for details.	—

Component No.	Fault	Supply voltage (V)	Test time	Fuse #	Fuse current (A)	Observation
Right CPU fan	Locked	240	2hr	In SPS	1.21	Unit operated normally, no damaged, no hazards. T1 coil/core = 55.3 / 41.1°C T2 coil/core = 39.7 / 38.6°C Ambient = 24.7°C
Left CPU fan	Locked	240	2hr	In SPS	1.21	Unit operated normally, no damaged, no hazards. T1 coil/core = 55.4 / 41.0°C T2 coil/core = 39.6 / 38.6°C Ambient = 25.0°C
Front power fan	Locked	240	2hr	In SPS	1.21	Unit operated normally, no damaged, no hazards. T1 coil/core = 60.0 / 44.1°C T2 coil/core = 43.3 / 41.9°C Ambient = 25.2°C
Rear power fan	Locked	240	2hr	In SPS	1.21	Unit operated normally, no damaged, no hazards. T1 coil/core = 62.2 / 45.7°C T2 coil/core = 45.2 / 44.0°C Ambient = 24.9°C
System fan	Locked	240	2hr	In SPS	1.21	Unit operated normally, no damaged, no hazards. T1 coil/core = 56.2 / 42.1°C T2 coil/core = 40.6 / 39.7°C Ambient = 24.9°C
Openings	Blocked	240	2hr	In SPS	1.21 to 0.14	After 25 min, unit shutdown, no damaged, no hazards. T1 coil/core = 69.3 / 61.1°C T2 coil/core = 57.8 / 56.5°C Ambient = 24.2°C

IEC60950_1B			
Clause	Requirement + Test	Result - Remark	Verdict

RTC battery reverse charging current (D7)	Short	240	--	--	--	Reverse electric current 3.2mA, no hazards.
RTC battery (R424)	Short	240	--	--	--	Reverse current = 0 mA
Supplementary information:						

C.2	**TABLE: transformers**						**N/A**
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)
Loc.	Tested insulation			Test voltage/ V	Measured clearance / mm	Measured creepage dist./ mm	Measured distance thr. insul. / mm; number of layers
supplementary information:							

C.2	**TABLE: transformers**	**N/A**

IEC60950_1B			
Clause	Requirement + Test	Result - Remark	Verdict
Transformer			

IEC60950_1B - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

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
Attachment Form No. .....:	EU_GD_IEC60950_1B
Attachment Originator.....:	SGS Fimko Ltd
Master Attachment.....:	Date (2010-04)

EN 60950-1:2006/A11:2009/A1:2010 – CENELEC COMMON MODIFICATIONS

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
Contents	Add the following annexes: Annex ZA (normative) Normative references to international publications with their corresponding European publications Annex ZB (normative) Special national conditions		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

IEC60950_1B - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
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.	Added.	N/A
1.5.1	Add the following NOTE: NOTE Z1 The use of certain substances in electrical and electronic equipment is restricted within the EU: see Directive 2002/95/EC	Added.	P
1.7.2.1 (A1:2010)	In addition, for a PORTABLE SOUND SYSTEM, the instructions shall include a warning that excessive sound pressure from earphones and headphones can cause hearing loss.	Added.	N/A
2.7.1	Replace the subclause as follows: Basic requirements To protect against excessive current, short-circuits and earth faults in PRIMARY CIRCUITS, protective devices shall be included either as integral parts of the equipment or as parts of the building installation, subject to the following, a), b) and c): a) except as detailed in b) and c), protective devices necessary to comply with the requirements of 5.3 shall be included as parts of the equipment; b) for components in series with the mains input to the equipment such as the supply cord, appliance coupler, r.f.i. filter and switch, short-circuit and earth fault protection may be provided by protective devices in the building installation;	Replaced.	P

IEC60950_1B - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
	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.		
2.7.2	This subclause has been declared 'void'.	Declared.	N/A
3.2.3	Delete the NOTE in Table 3A, and delete also in this table the conduit sizes in parentheses.	Delete.	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.	Replaced.	N/A
3.3.4	In Table 3D, delete the fourth line: conductor sizes for 10 to 13 A, and replace with the following: Over 10 up to and including 16 | 1,5 to 2,5 | 1,5 to 4 | Delete the fifth line: conductor sizes for 13 to 16 A	Delete.	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).	Replaced.	N/A

IEC60950_1B - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
	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.	Replaced.	N/A
Bibliography	Additional EN standards.	Added.	—

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.	No power supply cord provided.	N/A
1.2.13.14	In **Norway** and **Sweden**, for requirements see 1.7.2.1 and 7.3 of this annex.	The equipment is not connected to the cable distribution systems.	N/A
1.5.7.1	In **Finland, Norway** and **Sweden**, resistors bridging BASIC INSULATION in CLASS I PLUGGABLE EQUIPMENT TYPE A must comply with the requirements in 1.5.7.1. In addition when a single resistor is used, the resistor must withstand the resistor test in 1.5.7.2.	No such resistors.	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).	Considered.	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.	No TNV circuit within the equipment.	N/A

IEC60950_1B - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

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” 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).”	Shall be evaluated during the national approval.	N/A

IEC60950_1B - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

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.”		
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.	No socket-outlets 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.	No TNV circuits within the equipment.	N/A
2.3.2	In **Finland**, **Norway** and **Sweden** there are additional requirements for the insulation. See 6.1.2.1 and 6.1.2.2 of this annex.	No TNV circuits within the equipment.	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 circuits within the equipment.	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.	Considered. However, test was performed with 16 A for representative.	P

IEC60950_1B - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

ZB ANNEX (normative) **SPECIAL NATIONAL CONDITIONS (EN)**			
Clause	Requirement + Test	Result - Remark	Verdict
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.	The equipment is not direct plug-in equipment.	N/A
2.10.5.13	In **Finland**, **Norway** and **Sweden**, there are additional requirements for the insulation, see 6.1.2.1 and 6.1.2.2 of this annex.	No TNV circuits within the equipment.	N/A
3.2.1.1	In **Switzerland**, supply cords of equipment having a RATED CURRENT not exceeding 10 A shall be provided with a plug complying with SEV 1011 or IEC 60884-1 and one of the following dimension sheets: SEV 6532-2.1991 Plug Type 15 3P+N+PE 250/400 V, 10 A SEV 6533-2.1991 Plug Type 11 L+N 250 V, 10 A SEV 6534-2.1991 Plug Type 12 L+N+PE 250 V, 10 A In general, EN 60309 applies for plugs for currents exceeding 10 A. However, a 16 A plug and socket-outlet system is being introduced in Switzerland, the plugs of which are according to the following dimension sheets, published in February 1998: SEV 5932-2.1998: Plug Type 25 , 3L+N+PE 230/400 V, 16 A SEV 5933-2.1998:Plug Type 21, L+N, 250 V, 16A SEV 5934-2.1998: Plug Type 23, L+N+PE 250 V, 16 A	No power supply cord provided.	N/A

IEC60950_1B - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

ZB ANNEX (normative) **SPECIAL NATIONAL CONDITIONS (EN)**			
Clause	Requirement + Test	Result - Remark	Verdict
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.	No power supply cord provided.	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.	No power supply cord provided.	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.	No power supply cord provided.	N/A

IEC60950_1B - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

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.	No power supply cord provided.	N/A
3.2.4	In **Switzerland**, for requirements see 3.2.1.1 of this annex.	Shall be evaluated during the national approval.	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.	No power supply cord provided.	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.	No power supply cord provided.	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.	The equipment is not direct plug-in equipment.	N/A
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.	The equipment is not direct plug-in equipment.	N/A

IEC60950_1B - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

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.	The equipment is not 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	No TNV circuits within the equipment.	N/A

IEC60950_1B - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

ZB ANNEX (normative) **SPECIAL NATIONAL CONDITIONS (EN)**			
Clause	Requirement + Test	Result - Remark	Verdict
	strength during manufacturing, using a test voltage of 1,5 kV. It is permitted to bridge this insulation with an optocoupler complying with 2.10.5.4 b). It is permitted to bridge this insulation with a capacitor complying with EN 60384-14:2005, subclass Y2. A capacitor classified Y3 according to EN 60384-14:2005, may bridge this insulation under the following conditions: - the insulation requirements are satisfied by having a capacitor classified Y3 as defined by EN 60384-14, which in addition to the Y3 testing, is tested with an impulse test of 2,5 kV defined in EN 60950-1:2006, 6.2.2.1; - the additional testing shall be performed on all the test specimens as described in EN 60384-14; - the impulse test of 2,5 kV is to be performed before the endurance test in EN 60384-14, in the sequence of tests as described in EN 60384-14.		
6.1.2.2	In **Finland**, **Norway** and **Sweden**, the exclusions are applicable for PERMANENTLY CONNECTED EQUIPMENT, PLUGGABLE EQUIPMENT TYPE B and equipment intended to be used in a RESTRICTED ACCESS LOCATION where equipotential bonding has been applied, e.g. in a telecommunication centre, and which has provision for a permanently connected PROTECTIVE EARTHING CONDUCTOR and is provided with instructions for the installation of that conductor by a SERVICE PERSON.	No TNV circuits within the equipment.	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.	The equipment is not connected to the distribution systems.	N/A
7.3	In **Norway** and **Sweden**, for requirements see 1.2.13.14 and 1.7.2.1 of this annex.		N/A
7.3	In **Norway**, for installation conditions see EN 60728-11:2005.		N/A

IEC60950_1B - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT IEC 60950-1
FINLAND NATIONAL DIFFERENCES
Information technology equipment – Safety –
Part 1: General requirements

Differences according to ..... :	EN 60950-1:2006/A11:2009/A1:2010
Attachment Form No..... :	FI_ND_IEC60950_1B
Attachment Originator ..... :	SGS Fimko Ltd
Master Attachment..... :	Date (2010-04)

	National Differences		P
General	See also Group Differences (EN 60950-1:2006/A11/A1)		P
1.5.7.1	In **Finland** 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 such resistors.	N/A
1.5.9.4	In **Finland,** the third dashed sentence is applicable only to equipment as defined in 6.1.2.2 of this annex.	No TNV circuits within the equipment.	N/A
1.7.2.1	In **Finland**,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 in Finland shall be as follows: "Laite on liitettävä suojakoskettimilla varustettuun pistorasiaan"	Shall be evaluated during the national approval.	N/A
2.3.2	In **Finland,** there are additional requirements for the insulation. See 6.1.2.1 and 6.1.2.2 of this annex.	No TNV circuits within the equipment.	N/A
2.10.5.13	In **Finland,** there are additional requirements for the insulation, see 6.1.2.1 and 6.1.2.2 of this annex.	No TNV circuits within the equipment.	N/A

IEC60950_1B - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
5.1.7.1	In **Finland,** 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.	The equipment is not such equipment.	N/A
6.1.2.1 (A1:2010)	In **Finland,** 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 requirement for the insulation consisting of an insulating compound completely filling the casing, so that CLEARANCES and CREEPAGE DISTANCES do not exist, if the component passes the electric strength test in accordance with the compliance clause below and in addition - passes the tests and inspection criteria of 2.10.11 with an electric strength test of 1,5 kV multiplied by 1,6 (the electric strength test of 2.10.10 shall be performed using 1,5 kV), and - is subject to ROUTINE TESTING for electric strength during manufacturing, using a test voltage of 1,5 kV.	No TNV circuits within the equipment.	N/A

IEC60950_1B - ATTACHMENT			
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 60384-14:2005 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 60384-14:2005; - the impulse test of 2,5 kV is to be performed before the endurance test in EN 60384-14:2005, in the sequence of tests as described in EN 60384-14:2005.		
6.1.2.2	In **Finland,** the exclusions are applicable for PERMANENTLY CONNECTED EQUIPMENT, PLUGGABLE EQUIPMENT TYPE B and equipment intended to be used in a RESTRICTED ACCESS LOCATION where equipotential bonding has been applied, e.g. in a telecommunication centre, and which has provision for a permanently connected PROTECTIVE EARTHING CONDUCTOR and is provided with instructions for the installation of that conductor by a SERVICE PERSON.	No TNV circuits within the equipment.	N/A
7.2	In **Finland,** 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.	The equipment is not connected to the distribution systems.	N/A

PHOTOS

Overall of Enclosure (1/2)

Overall of Enclosure (2/2)

PHOTOS

Front view

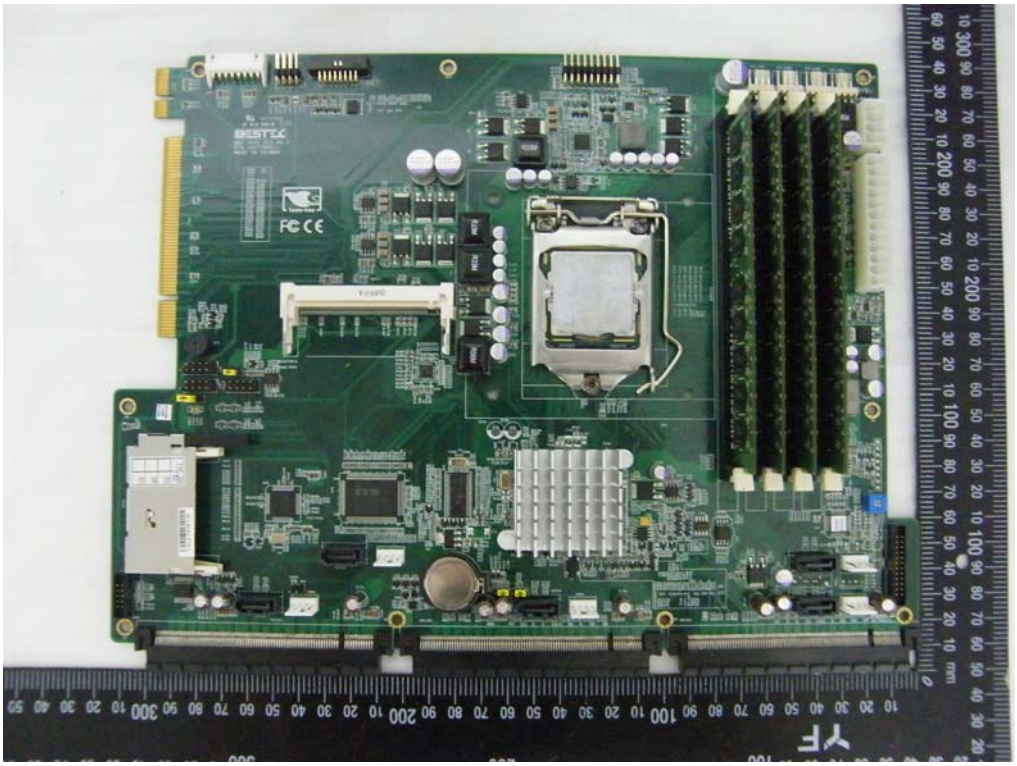
Rear view

PHOTOS

Interior view

Interior view

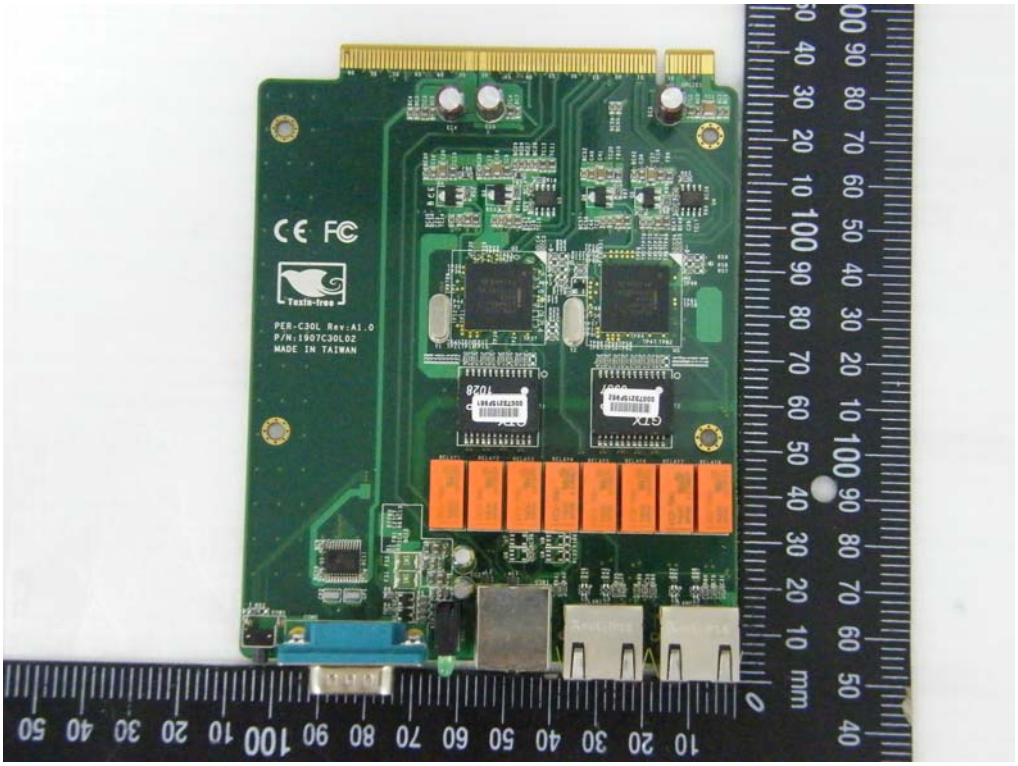
PHOTOS



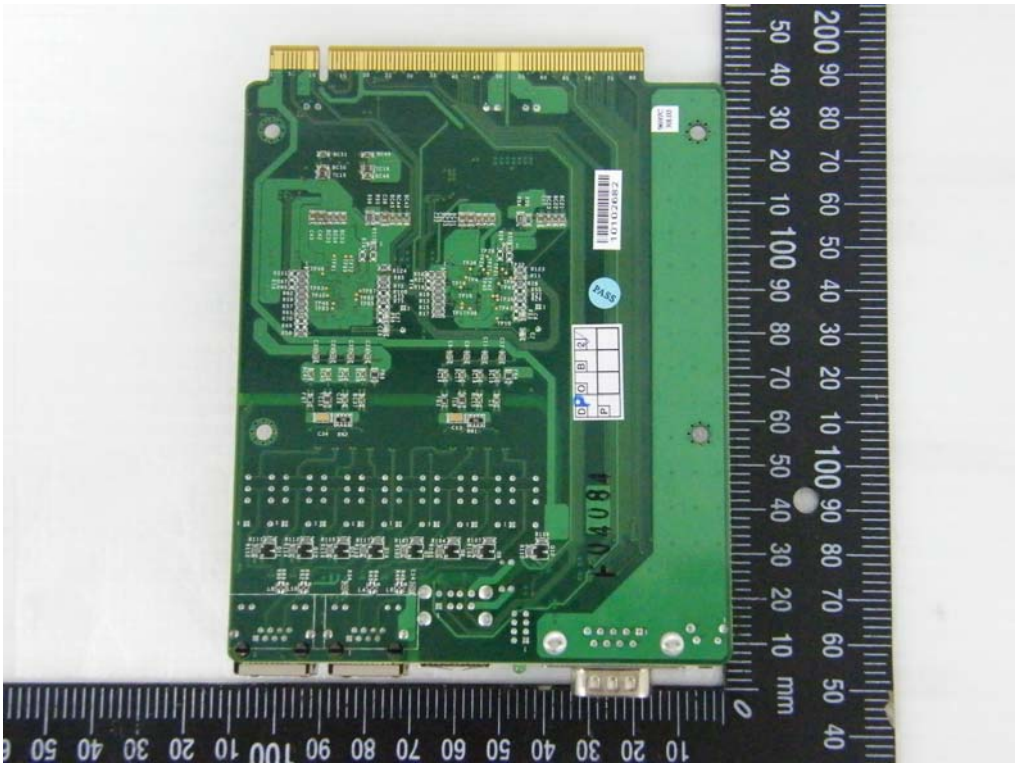
Top of main board

Bottom of main board

PHOTOS

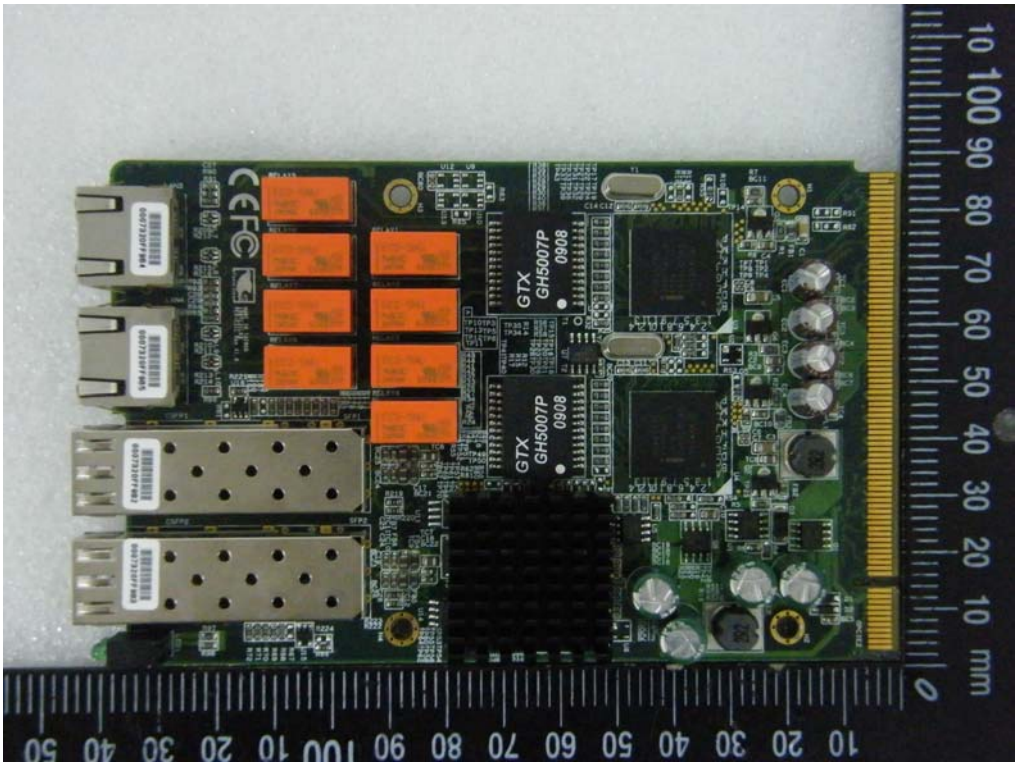


Top of SELV board

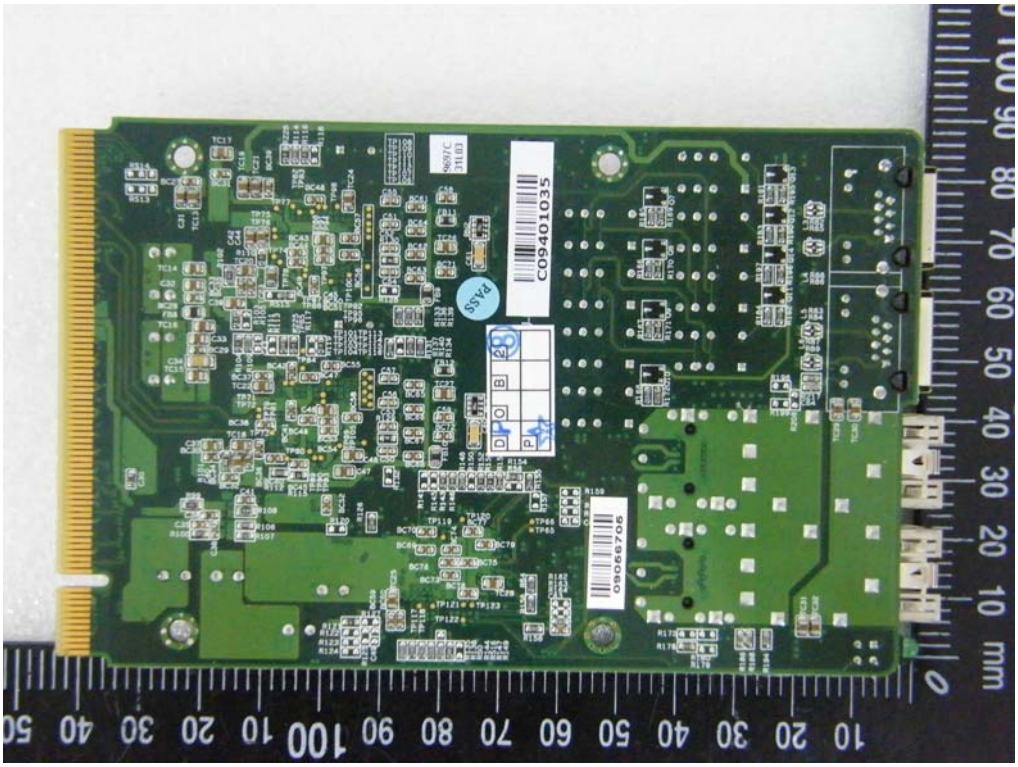


Bottom of SELV board

PHOTOS

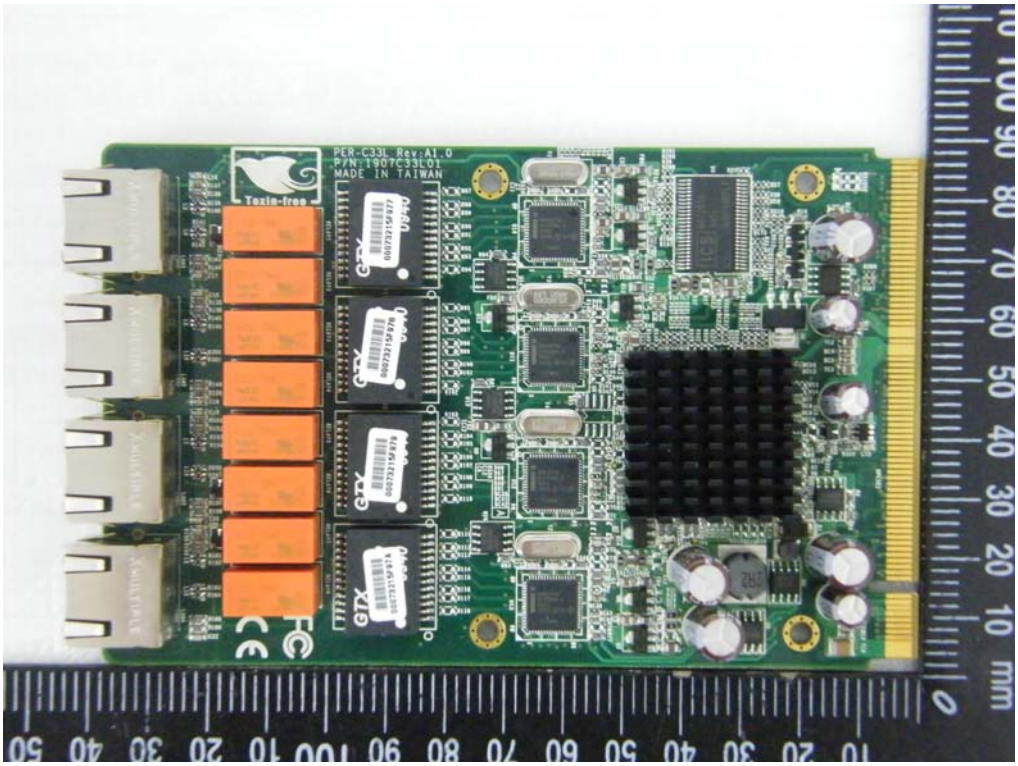


Top of SFP module

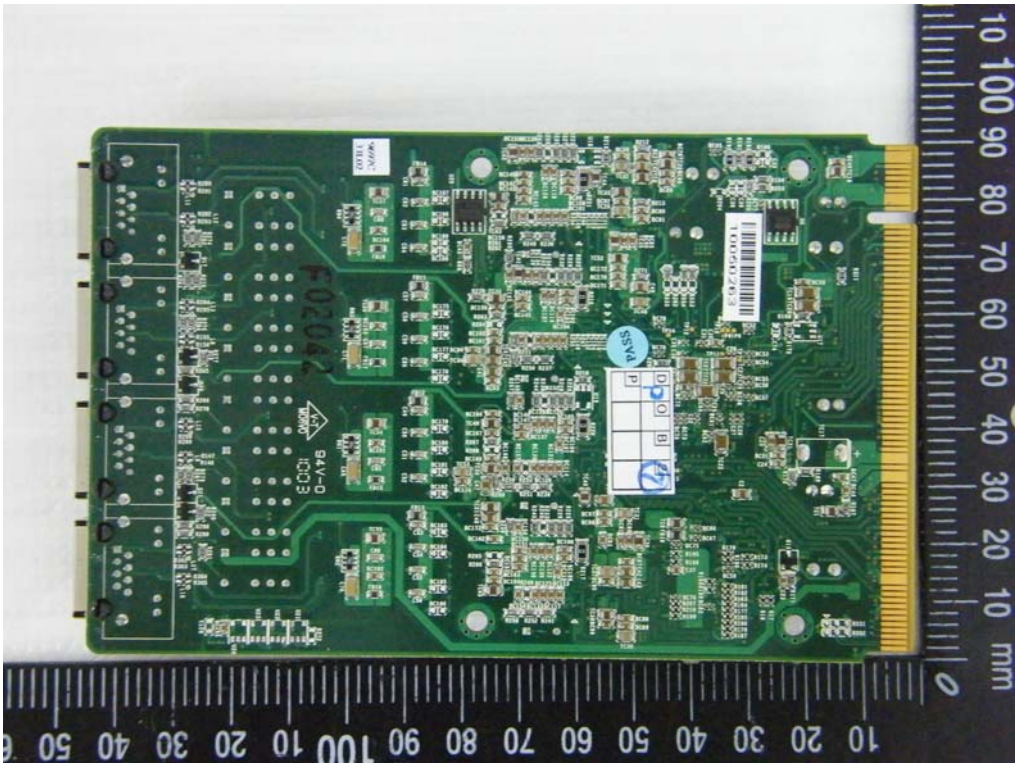


Bottom of SFP module

PHOTOS



Top of LAN module



Bottom of LAN module