CERTIFICATE OF COMPLIANCE

Ref No.: NEI-LVD-1-S1108039
Date of Issue: September 22, 2011

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	**Fanless embedded controller**
Model No.	**xxxxxAEC-6612-xxyxxxxx (Where y is M or blank, x is 0-9, A-Z, - or blank for marketing purpose)**
Trade Name	**AAEON Technology Inc.**
Applicant	**AAEON Technology Inc.**
Address	**5F, No.135, Lane 235, Pao Chiao Rd. Hsin-Tien Dist., New Taipei City, Taiwan, R.O.C.**

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+A12:2011

The test data, data evaluation and equipment configuration contained in our test report (Ref No.: NEI-LVD-1-S1108039) 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	: Fanless embedded controller
Type Designation	: xxxxxAEC-6612-xxyxxxxx (Where y is M or blank, x is 0-9, A-Z, - or blank for marketing purpose)
Manufacturer	: AAEON Technology Inc.
Manufacturer Address	: 5F, No.135, Lane 235, Pao Chiao Rd. Hsin-Tien Dist., New Taipei City, Taiwan, R.O.C.

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+A12:2011

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-S1108039
Tested by (+ signature).....:	Andrew Lin
Approved by (+ signature) .....:	Fred Chiu
Date of issue.....:	2011-09-22
Total number of pages	36
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 .....:	**5F, No.135, Lane 235, Pao Chiao Rd. Hsin-Tien Dist., New Taipei City, Taiwan, R.O.C.**
Manufacturer's name……..:	**AAEON Technology Inc.**
Address .....:	**5F, No.135, Lane 235, Pao Chiao Rd. Hsin-Tien Dist., New Taipei City, Taiwan, R.O.C.**
Test specification:	
Standard .....:	IEC 60950-1:2005 (2nd Edition); Am 1:2009 EN 60950-1:2006+A11:2009+A1:2010+A12:2011
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 .....:	Fanless embedded controller
Trade Mark .....:	**AAEON Technology Inc.**
Manufacturer .....:	**AAEON Technology Inc.**
Model/Type reference.....:	**xxxxxAEC-6612-xxyxxxxx (Where y is M or blank, x is 0-9, A-Z, - or blank for marketing purpose)**
Ratings .....:	**I/P: 9-30 Vdc, 6-2 A**

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

- European Group difference and nation differences (2 pages)
- Photos documentation (5 pages)

Copy of marking plate

The artwork below may be only a draft.

(Additional requirements for markings. See 1.7 NOTE)

Note(s):

1. All models rating label are in the same design except for type designation.

2. The above label is a draft of an artwork for marking plate pending approval by National Certification Bodies and it shall not be affixed to products prior to such an approval.

Test item particulars.....:	
Equipment mobility ..... :	[] movable [] hand-held [] transportable [] stationary [X] for building-in [] direct plug-in
Connection to the mains..... :	[] pluggable equipment [] type A [] type B [] permanent connection [] detachable power supply cord [] non-detachable power supply cord [X] 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 [X] other: not directly connected to the mains
Mains supply tolerance (%) or absolute mains supply values ..... :	**N.A.**
Tested for IT power systems ..... :	[] Yes [X] No
IT testing, phase-phase voltage (V) ..... :	**N.A.**
Class of equipment ..... :	[] Class I [] Class II [X] Class III [] Not classified
Considered current rating of protective device as part of the building installlation (A) ..... :	not directly connected to the mains
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 2000m
Mass of equipment (kg) ..... :	Approx. 1.4
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..... :	2011-08-30
Date(s) of performance of tests..... :	2011-08-30 to 2011-09-09

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:

Report Summary
All applicable tests according to the referenced standard(s) have been carried out.

Product Description
The equipment is a Fanless embedded controller for use in information technology equipment.

Model Differences
- All models are identical except for model designation.

Technical Considerations
1. The product was submitted and tested for use at the maximum ambient temperature (Tma) permitted by the manufacturer's specification of: 40 ºC
2. The following circuit locations (with circuit/schematic designation) were investigated as a limited power source (LPS): USB, COM, VGA, LAN.
3. "The power supply model no. **FSP060-DBAB1** has been investigated in accordance with IEC 60950-1, Ed. 2, Issued 2010-01-01, and locally certificated by TUV. Due to the lack of CB certification, the entire report for the power supply was reviewed and determined the power supply meets the requirements of the applicable IEC standard. The manufacturer is obligated to provide a complete copy of the CB test report for the power supply upon request by other NCBs."

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 - ATTACHMENT			
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		**N/A**
1.5.4	Transformers		**N/A**
1.5.5	Interconnecting cables	Interconnecting cables comply with the relevant requirements of this standard.	**P**
1.5.6	Capacitors bridging insulation		**N/A**
1.5.7	Resistors bridging insulation		**N/A**
1.5.7.1	Resistors bridging functional, basic or supplementary insulation		**N/A**
1.5.7.2	Resistors bridging double or reinforced insulation between a.c. mains and other circuits		**N/A**
1.5.7.3	Resistors bridging double or reinforced insulation between a.c. mains and antenna or coaxial cable		**N/A**
1.5.8	Components in equipment for IT power systems		**N/A**
1.5.9	Surge suppressors		**N/A**
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**
1.5.9.5	Bridging of supplementary, double or reinforced insulation by a VDR		**N/A**

IEC60950_1B - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
1.6	**Power interface**		**P**
1.6.1	AC power distribution systems		**N/A**
1.6.2	Input current	(see appended table 1.6.2)	**P**
1.6.3	Voltage limit of hand-held equipment		**N/A**
1.6.4	Neutral conductor		**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) ..... :	9-30 (optional)	**P**
	Symbol for nature of supply, for d.c. only..... :	**DC symbol used.**	**P**
	Rated frequency or rated frequency range (Hz) .... :		**N/A**
	Rated current (mA or A) ..... :	6A- 2A (optional)	**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 ..... :		**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**
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 is 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**

IEC60950_1B - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
1.7.5	Power outlets on the equipment ..... :	**No power outlets.**	**N/A**
1.7.6	Fuse identification (marking, special fusing characteristics, cross-reference) ..... :		**N/A**
1.7.7	Wiring terminals	**See below.**	**N/A**
1.7.7.1	Protective earthing and bonding terminals ..... :	**Class III equipment.**	**N/A**
1.7.7.2	Terminals for a.c. mains supply conductors	**No direct connection to AC mains supply.**	**N/A**
1.7.7.3	Terminals for d.c. mains supply conductors	**No direct connection to DC mains supply.**	**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 ..... :	Only functional indicators use colour.	**P**
1.7.8.3	Symbols according to IEC 60417..... :		**N/A**
1.7.8.4	Markings using figures ..... :		**N/A**
1.7.9	Isolation of multiple power sources ..... :		**N/A**
1.7.10	Thermostats and other regulating devices ..... :		**N/A**
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.**	¾

IEC60950_1B - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
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	The equipment includes SELV circuits. For details see below.	**P**
2.1.1.1	Access to energized parts		**P**
	Test by inspection ..... :	See below.	**P**
	Test with test finger (Figure 2A) ..... :	The test finger was unable to contact bare hazardous parts, basic insulation, or ELV circuits.	**P**
	Test with test pin (Figure 2B) ..... :	The test pin was unable to contact bare hazardous parts.	**P**
	Test with test probe (Figure 2C) ..... :		**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)		¾
2.1.1.4	Access to hazardous voltage circuit wiring		**N/A**
2.1.1.5	Energy hazards ..... :	No energy hazardous parts in operator access area.	**P**
2.1.1.6	Manual controls		**N/A**
2.1.1.7	Discharge of capacitors in equipment		**N/A**
	Measured voltage (V); time-constant (s)..... :		¾
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**

IEC60950_1B - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
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	**No TNV circuits.**	**N/A**
	Type of TNV circuits..... :		—
2.3.2	Separation from other circuits and from accessible parts		**N/A**
2.3.2.1	General requirements		**N/A**
2.3.2.2	Protection by basic insulation		**N/A**
2.3.2.3	Protection by earthing		**N/A**
2.3.2.4	Protection by other constructions ..... :		**N/A**
2.3.3	Separation from hazardous voltages		**N/A**
	Insulation employed ..... :		—
2.3.4	Connection of TNV circuits to other circuits		**N/A**
	Insulation employed ..... :		—
2.3.5	Test for operating voltages generated externally		**N/A**

2.4	**Limited current circuits**		**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**	(see appended table 2.5)	**P**
	a) Inherently limited output		**N/A**

IEC60950_1B - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	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) ..... :		—
	Current rating of overcurrent protective device (A) .:		—
	Use of integrated circuit (IC) current limiters	(See Annex CC)	—

2.6	**Provisions for earthing and bonding**		**N/A**
2.6.1	Protective earthing	Class lll equipment.	**N/A**
2.6.2	Functional earthing		**N/A**
2.6.3	Protective earthing and protective bonding conductors		**N/A**
2.6.3.1	General		**N/A**
2.6.3.2	Size of protective earthing conductors		**N/A**
	Rated current (A), cross-sectional area (mm^2), AWG ..... :		—
2.6.3.3	Size of protective bonding conductors		**N/A**
	Rated current (A), cross-sectional area (mm^2), AWG ..... :		—
	Protective current rating (A), cross-sectional area (mm^2), AWG ..... :		**N/A**
2.6.3.4	Resistance of earthing conductors and their terminations; resistance (Ω), voltage drop (V), test current (A), duration (min)..... :		**N/A**
2.6.3.5	Colour of insulation ..... :		**N/A**
2.6.4	Terminals		**N/A**
2.6.4.1	General		**N/A**
2.6.4.2	Protective earthing and bonding terminals		**N/A**
	Rated current (A), type, nominal thread diameter (mm)..... :		—
2.6.4.3	Separation of the protective earthing conductor from protective bonding conductors		**N/A**
2.6.5	Integrity of protective earthing		**N/A**
2.6.5.1	Interconnection of equipment		**N/A**

IEC60950_1B - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
2.6.5.2	Components in protective earthing conductors and protective bonding conductors		**N/A**
2.6.5.3	Disconnection of protective earth		**N/A**
2.6.5.4	Parts that can be removed by an operator		**N/A**
2.6.5.5	Parts removed during servicing		**N/A**
2.6.5.6	Corrosion resistance		**N/A**
2.6.5.7	Screws for protective bonding		**N/A**
2.6.5.8	Reliance on telecommunication network or cable distribution system		**N/A**
2.7	**Overcurrent and earth fault protection in primary circuits**		**N/A**
2.7.1	Basic requirements		**N/A**
	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		**N/A**
2.7.4	Number and location of protective devices .....:		**N/A**
2.7.5	Protection by several devices		**N/A**
2.7.6	Warning to service personnel .....:		**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**
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**

IEC60950_1B - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
2.9	**Electrical insulation**		**P**
2.9.1	Properties of insulating materials	**Natural rubber, asbestos or hygroscopic materials are not used.**	**P**
2.9.2	Humidity conditioning		**N/A**
	Relative humidity (%), temperature (°C) .....:		¾
2.9.3	Grade of insulation	**The adequate levels of safety insulation is provided and maintained to comply with the requirements of this standard.**	**P**
2.9.4	Separation from hazardous voltages		**N/A**
	Method(s) used .....:		¾

2.10	**Clearances, creepage distances and distances through insulation**		**P**
2.10.1	General	All circuits are SELV. Only functional insulation has been required.	**P**
2.10.1.1	Frequency .....:		**N/A**
2.10.1.2	Pollution degrees .....:		**N/A**
2.10.1.3	Reduced values for functional insualtion	See sub-clause 5.3.4(c).	**P**
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		**N/A**
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		**N/A**
2.10.3.1	General		**N/A**
2.10.3.2	Mains transient voltages		**N/A**
	a) AC mains supply .....:		**N/A**
	b) Earthed d.c. mains supplies .....:		**N/A**
	c) Unearthed d.c. mains supplies .....:		**N/A**
	d) Battery operation .....:		**N/A**

IEC60950_1B - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
2.10.3.3	Clearances in primary circuits		**N/A**
2.10.3.4	Clearances in secondary circuits	See sub-clause 2.10.1.3.	**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		**N/A**
2.10.4.1	General		**N/A**
2.10.4.2	Material group and caomparative tracking index		**N/A**
	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**
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**

IEC60950_1B - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	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**
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**

IEC60950_1B - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
3.1.1	Current rating and overcurrent protection	**All internal wires are UL recognized wiring which is PVC insulated, rated VW-1, minimum 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, solder pins and quick connect terminals so that a loosening of the terminal connection is unlikely.**	**P**
3.1.4	Insulation of conductors		**N/A**
3.1.5	Beads and ceramic insulators	**Not used.**	**N/A**
3.1.6	Screws for electrical contact pressure	**Not used.**	**N/A**
3.1.7	Insulating materials in electrical connections		**N/A**
3.1.8	Self-tapping and spaced thread screws		**N/A**
3.1.9	Termination of conductors	**All terminations are fixed reliable.**	**P**
	10 N pull test	**Complied.**	**P**
3.1.10	Sleeving on wiring	**No sleeving used to provide supplementary insulation.**	**N/A**

3.2	**Connection to a mains supply**		**N/A**
3.2.1	Means of connection	Class lll equipment.	**N/A**
3.2.1.1	Connection to an a.c. mains supply		**N/A**
3.2.1.2	Connection to a d.c. mains supply		**N/A**
3.2.2	Multiple supply connections		**N/A**
3.2.3	Permanently connected equipment		**N/A**
	Number of conductors, diameter of cable and conduits (mm) .....:		¾
3.2.4	Appliance inlets		**N/A**
3.2.5	Power supply cords		**N/A**

IEC60950_1B - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
3.2.5.1	AC power supply cords		**N/A**
	Type .....:		¾
	Rated current (A), cross-sectional area (mm^2), AWG .....:		¾
3.2.5.2	DC power supply cords		**N/A**
3.2.6	Cord anchorages and strain relief		**N/A**
	Mass of equipment (kg), pull (N) .....:		¾
	Longitudinal displacement (mm) .....:		¾
3.2.7	Protection against mechanical damage		**N/A**
3.2.8	Cord guards		**N/A**
	Diameter or minor dimension D (mm); test mass (g) .....:		¾
	Radius of curvature of cord (mm) .....:		¾
3.2.9	Supply wiring space		**N/A**

3.3	**Wiring terminals for connection of external conductors**		**N/A**
3.3.1	Wiring terminals	**Class III equipment.**	**N/A**
3.3.2	Connection of non-detachable power supply cords		**N/A**
3.3.3	Screw terminals		**N/A**
3.3.4	Conductor sizes to be connected		**N/A**
	Rated current (A), cord/cable type, cross-sectional area (mm^2) .....:		¾
3.3.5	Wiring terminal sizes		**N/A**
	Rated current (A), type, nominal thread diameter (mm) .....:		¾
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**		**N/A**
3.4.1	General requirement		**N/A**
3.4.2	Disconnect devices		**N/A**
3.4.3	Permanently connected equipment		**N/A**
3.4.4	Parts which remain energized		**N/A**
3.4.5	Switches in flexible cords		**N/A**

IEC60950_1B - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
3.4.6	Number of poles - single-phase and d.c. equipment		**N/A**
3.4.7	Number of poles - three-phase equipment		**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		**N/A**
3.4.11	Multiple power sources		**N/A**
3.5	**Interconnection of equipment**		**P**
3.5.1	General requirements		**P**
3.5.2	Types of interconnection circuits .....:	Interconnection circuits are SELV CIRCUITS.	**P**
3.5.3	ELV circuits as interconnection circuits		**N/A**
3.5.4	Data ports for additional equipment	See clause 2.5.	**P**
4	**PHYSICAL REQUIREMENTS**		**P**
4.1	Stability		**N/A**
	Angle of 10°		**N/A**
	Test force (N) .....:		**N/A**
4.2	**Mechanical strength**		**P**
4.2.1	General	**No energy hazards and no hazardous voltage inside the equipment.**	**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		**N/A**
4.2.5	Impact test		**N/A**
	Fall test		**N/A**
	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**

IEC60950_1B - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
4.2.10	Wall or ceiling mounted equipment; force (N) ..... :	50 **N applied for downward through the geometric centre. No damaged and no hazards.**	**P**
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	**Edges and corners of the enclosure are rounded.**	**P**
4.3.2	Handles and manual controls; force (N) .....:		**N/A**
4.3.3	Adjustable controls	**No control device.**	**N/A**
4.3.4	Securing of parts	**No loosening of parts impairing creepage distances or clearances is likely to occur.**	**P**
4.3.5	Connection by plugs and sockets	**SELV connector do not comply with IEC 60320-1 or IEC 60083.**	**P**
4.3.6	Direct plug-in equipment	**Not direct plug-in type.**	**N/A**
	Torque .....:		**N/A**
	Compliance with the relevant mains plug standard .....:		¾
4.3.7	Heating elements in earthed equipment	**No heating element.**	**N/A**
4.3.8	Batteries	**See below.**	**P**
	- Overcharging of a rechargeable battery		**N/A**
	- Unintentional charging of a non-rechargeable battery	**RTC battery is protected against charging current by multiple components (D12 and R859) within the system clock integrated circuit package. Max reverse charging current 10 mA.**	**P**
	- Reverse charging of a rechargeable battery		**N/A**
	- Excessive discharging rate for any battery		**N/A**
4.3.9	Oil and grease	**No oil or grease.**	**N/A**

IEC60950_1B - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
4.3.10	Dust, powders, liquids and gases	**The equipment in intended use not considered to be exposed to dust, powers, liquids and gases.**	**N/A**
4.3.11	Containers for liquids or gases	**No container for liquid or gas.**	**N/A**
4.3.12	Flammable liquids ..... :	**No flammable liquid.**	**N/A**
	Quantity of liquid (l) ..... :	**Ditto.**	**N/A**
	Flash point (°C) ..... :	**Ditto.**	**N/A**
4.3.13	Radiation	**See below.**	**P**
4.3.13.1	General		**P**
4.3.13.2	Ionizing radiation	**The equipment does not generate ionizing radiation.**	**N/A**
	Measured radiation (pA/kg) ..... :		¾
	Measured high-voltage (kV) ..... :		¾
	Measured focus voltage (kV) ..... :		¾
	CRT markings ..... :		¾
4.3.13.3	Effect of ultraviolet (UV) radiation on materials	**The equipment does not produce significant UV radiation.**	**N/A**
	Part, property, retention after test, flammability classification ..... :		**N/A**
4.3.13.4	Human exposure to ultraviolet (UV) radiation ..... :	**The equipment does not produce significant UV radiation.**	**N/A**
4.3.13.5	Lasers (including laser diodes) and LEDs	**the limit for LED Class 1 equipment.**	**P**
4.3.13.5.1	Lasers (including laser laser diodes)		**N/A**
	Laser class ..... :		—
4.3.13.5.2	Light emitting diodes (LEDs)	**Laser Class 1.**	**P**
4.3.13.6	Other types ..... :		**N/A**

4.4	**Protection against hazardous moving parts**		**N/A**
4.4.1	General		**N/A**
4.4.2	Protection in operator access areas ..... :		**N/A**
	Household and home/office document/media shredders		**N/A**

IEC60950_1B - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
4.4.3	Protection in restricted access locations ..... :		**N/A**
4.4.4	Protection in service access areas		**N/A**
4.4.5	Protection against moving fan blades		**N/A**
4.4.5.1	General		**N/A**
	Not considered to cause pain or injury. a)……..:		**N/A**
	Is considered to cause pain, not injury. b) ……:		**N/A**
	Considered to cause injury. c) ……:		**N/A**
4.4.5.2	Protection for users		**N/A**
	Use of symbol or warning …… . ……:		**N/A**
4.4.5.3	Protection for service persons		**N/A**
	Use of symbol or warning …… . ……:		**N/A**
4.5	**Thermal requirements**		**P**
4.5.1	General		**P**
4.5.2	Temperature tests	**(see appended table 4.5)**	**P**
	Normal load condition per Annex L ..... :		¾
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**
4.6	**Openings in enclosures**		**P**
4.6.1	Top and side openings	**See below.**	**P**
	Dimensions (mm) ..... :	**(see appended table)**	¾
4.6.2	Bottoms of fire enclosures	**See below.**	**P**
	Construction of the bottomm, dimensions (mm) ... :	**(see appended table)**	¾
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) ..... :		¾
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)..... :		¾

IEC60950_1B - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

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:** **l Components in secondary (not supplied by LPS).** **l Insulated wiring.** **the fire enclosure is required.** However, with this unit as a building-in type, the meeting of the requirements are to be observed with the approval of the end system.	**P**
4.7.2.2	Parts not requiring a fire enclosure	**See clasue 4.7.2.1.**	**N/A**
4.7.3	Materials	**See below.**	**P**
4.7.3.1	General	**PCB rated V-1 or better.**	**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 components.**	**N/A**
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 provided.**	**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**		**N/A**
5.1.1	General	**Class lll equipment.**	**N/A**
5.1.2	Configuration of equipment under test (EUT)		**N/A**

IEC60950_1B - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
5.1.2.1	Single connection to an a.c. mains supply		**N/A**
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		**N/A**
5.1.4	Application of measuring instrument		**N/A**
5.1.5	Test procedure		**N/A**
5.1.6	Test measurements		**N/A**
	Supply voltage (V) ..... :		¾
	Measured touch current (mA) ..... :		¾
	Max. allowed touch current (mA) ..... :		¾
	Measured protective conductor current (mA) ..... :		¾
	Max. allowed protective conductor current (mA).... :		¾
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**
	Supply voltage (V) ..... :		¾
	Measured touch current (mA) ..... :		¾
	Max. allowed touch current (mA) ..... :		¾
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**		**N/A**
5.2.1	General	**Class III equipment.**	**N/A**
5.2.2	Test procedure		**N/A**

IEC60950_1B - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
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		**N/A**
5.3.3	Transformers	**No safety isolation transformer.**	**N/A**
5.3.4	Functional insulation ..... :	**Method c).**	**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	**Neither thermostat or temperature limiter nor thermal cut-out provided.**	**N/A**
5.3.9	Compliance criteria for abnormal operating and fault conditions	**See below.**	**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		**N/A**

6	**CONNECTION TO TELECOMMUNICATION NETWORKS**		**N/A**
6.1	Protection of telecommunication network service persons, and users of other equipment connected to the network, from hazards in the equipment		**N/A**
6.1.1	Protection from hazardous voltages		**N/A**
6.1.2.1	Requirements	**No TNV circuits.**	**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		**N/A**
6.2.2.1	Impulse test		**N/A**
6.2.2.2	Steady-state test		**N/A**
6.2.2.3	Compliance criteria		**N/A**

IEC60950_1B - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

6.3	**Protection of the telecommunication wiring system from overheating**		**N/A**
	Max. output current (A) ..... :		¾
	Current limiting method ..... :		¾

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 - ATTACHMENT			
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 ..... :		**N/A**
	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 ..... :		**N/A**
	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 - ATTACHMENT			
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) ..... :		—

IEC60950_1B - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
C	**ANNEX C, TRANSFORMERS (see 1.5.4 and 5.3.3)**		**N/A**
	Position ..... :		—
	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)**		**N/A**
D.1	Measuring instrument		**N/A**
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		**N/A**
G.1.1	General		**N/A**
G.1.2	Summary of the procedure for determining minimum clearances		**N/A**
G.2	Determination of mains transient voltage (V)		**N/A**
G.2.1	AC mains supply ..... :		**N/A**
G.2.2	Earthed d.c. mains supplies ..... :		**N/A**
G.2.3	Unearthed d.c. mains supplies ..... :		**N/A**
G.2.4	Battery operation ..... :		**N/A**
G.3	Determination of telecommunication network transient voltage (V) ..... :		**N/A**
G.4	Determination of required withstand voltage (V)		**N/A**
G.4.1	Mains transients and internal repetitive peaks ..... :		**N/A**

IEC60950_1B - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
G.4.2	Transients from telecommunication networks ..... :		**N/A**
G.4.3	Combination of transients		**N/A**
G.4.4	Transients from cable distribution systems		**N/A**
G.5	Measurement of transient voltages (V)		**N/A**
	a) Transients from a mains supply		**N/A**
	For an a.c. mains supply		**N/A**
	For a d.c. mains supply		**N/A**
	b) Transients from a telecommunication network		**N/A**
G.6	Determination of minimum clearances ..... :		**N/A**
H	**ANNEX H, IONIZING RADIATION (see 4.3.13)**		**N/A**
J	**ANNEX J, TABLE OF ELECTROCHEMICAL POTENTIALS (see 2.6.5.6)**		**N/A**
	Metal(s) used ..... :		—
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		**P**

IEC60950_1B - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
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**
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**

IEC60950_1B - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
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**
			—
U	**ANNEX U, INSULATED WINDING WIRES FOR USE WITHOUT INTERLEAVED INSULATION (see 2.10.5.4)**		**N/A**
			—
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**

IEC60950_1B - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
Z	**ANNEX Z, OVERVOLTAGE CATEGORIES (see 2.10.3.2 and Clause G.2)**		**N/A**
AA	**ANNEX AA, MANDREL TEST (see 2.10.5.8)**		**N/A**
BB	**ANNEX BB, CHANGES IN THE SECOND EDITION**		—
CC	**ANNEX CC, Evaluation of integrated circuit (IC) current limiters**		**P**
CC.1	General	Use approved IC	**P**
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 - ATTACHMENT			
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])
Enclosure	**--**	**--**	**Metal, thickness 0.8 mm min.**	**--**	**--**
PCB	**Various**	**Various**	**V-1 or better, 105 °C**	**UL 796**	**UL**
Switching Power Adaptor (Optional)	**FSP Group Inc.**	**FSP060-DBAB1**	**I/P: 100-240 Vac, 50-60 Hz, 1.5 A** **O/P: 12 Vdc, 5.0 A, 40 °C**	**IEC/EN 60950-1**	**TÜV**
HDD (Optional)	**Various**	**Various**	**5 Vdc, 1.5 A max.**	**EN 60950-1**	**TÜV**
RTC Battery (BAT1A)	**Mitsubishi Electric Home Appliance Co Ltd**	**CR2032**	**3 V, Maximum abnormal charging current 10 mA**	**UL 1642**	**UL**
Poly Switch (FS3) for VGA port	**LITTELFUSE INC**	**1206L110 series**	**6 V, 1.1 A**	**EN 60730-1**	**TÜV**
Current-Limited Power Switch (U18, U21, U65) for USB ports	**RICHTEK TECHNOLOGY CORP**	**RT9702A**	**5.5Vdc max., 1.1A**	**UL 2367**	**UL**
Poly Switch (FS1) for COM2	**LITTELFUSE INC**	**1206L050/15**	**15 V, 0.5 A**	**EN 60730-1**	**TÜV**

Supplementary information:

1) An asterisk indicates a mark that assures the agreed level of surveillance.

2) In the technical data column of optocoupler, where “Dti” means distance through insulation, “Int. cr” means internal creepage distance, and “Ext. cr” means external creepage distance.

1.5.1	TABLE: Opto Electronic Devices	N/A

Manufacturer ..... :

Type..... :

IEC60950_1B - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

Separately tested..... :
Bridging insulation ..... :
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
9 Vdc	3.88	6	34.92	--	--	**Maximum normal load.**
12 Vdc	2.87	5	34.44	--	--	**Maximum normal load.**
30 Vdc	1.15	2	34.5	--	--	**Maximum normal load.**

Supplementary information:
Maximum normal load: **The unit installed with reading/writing between HDD, each USB output loaded at rated load (5Vdc/0.5A), VGA transmission signal to other PC, CPU usage 100% and operated continuously.**

2.5	TABLE: limited power sources		P
	Limits	Measured	Verdict
1. According to Table 2B (normal condition), COM1, COM3, COM4, COM5, COM6 (**Pin 1, 2, 5, 6, 8, 9** to return, Uoc = **0** V			
current (in A)	< 8A	**--**	P
apparent power (in VA)	< 100	**--**	P
2. According to Table 2B (normal condition), COM1, COM3, COM4, COM5, COM6 (**Pin 3, 4, 7** to return, Uoc = **-9.46** V			
current (in A)	< 8A	**0.013**	P
apparent power (in VA)	< 100	**0.0426**	P
3. According to Table 2B (normal condition), **COM2, Pin 1, 2, 5, 6, 8** to return, Uoc = **0** V			
current (in A)	< 8A	**--**	P

IEC60950_1B - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

apparent power (in VA)	< 100	**--**	P
4. According to Table 2B (normal condition), COM2 (**Pin 3, 4, 7** to return, Uoc = **-9.46** V			
current (in A)	< 8A	**0.013**	P
apparent power (in VA)	< 100	**0.0426**	P
5. According to **Table 2B (normal condition),** COM2, **Pin 9** to return (JP3 pin 1-2 short), Uoc = 11.88 V			
current (in A)	< 8A	0.8	P
apparent power (in VA)	< 100	8.68	P
6. According to **Table 2B (normal condition),** COM2, **Pin 9** to return (JP3 pin 3-4 short), Uoc = 4.94 V			
current (in A)	< 8A	0.8	P
apparent power (in VA)	< 100	3.216	P
5. According to Table 2B (normal condition), **VGA, Pin 1-8, 11, 13, 14** to return, Uoc = **0** V			
current (in A)	< 8A	**--**	P
apparent power (in VA)	< 100	**--**	P
6. According to Table 2B (normal condition), **VGA, Pin 9** to return, Uoc = **4.86** V			
current (in A)	< 8A	**1.5**	P
apparent power (in VA)	< 100	**5.85**	P
7. According to Table 2B (normal condition), **VGA, Pin 10** to return, Uoc = **4.55** V			
current (in A)	< 8A	**0**	P
apparent power (in VA)	< 100	**0**	P
8. According to Table 2B (normal condition), **VGA, Pin 12, 15** to return, Uoc = **4.77** V			
current (in A)	< 8A	**0.001**	P
apparent power (in VA)	< 100	**0.0019**	P
9. According to Table 2B (normal condition), **USB1-6, Pin 1** to return, Uoc = **5.024** V			
current (in A)	< 8A	**1.6**	P
apparent power (in VA)	< 100	**6.51**	P
Supplementary information:			
10. According to Table 2B (normal condition), **LAN1, 2, Pin 1-8** to return, Uoc = **0** V			
current (in A)	< 8A	**--**	P
apparent power (in VA)	< 100	**--**	P
supplementary information:			
The DIO port does not complies with clause 2.5 that additional equipment should be complies with clause 4.7.			

IEC60950_1B - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

4.5	TABLE: Thermal requirements						P
	Supply voltage (V) ..... :	9Vdc-**Horizontal**	**9Vdc**-Vertical	**12Vdc**-Vertical	**30Vdc**-Vertical	--	—
	Ambient T_{min} (°C) ..... :	--	--	--	--	--	—
	Ambient T_{max} (°C) ..... :	--	--	--	--	--	—
Maximum measured temperature T of part/at::		T (°C)					Allowed T_{max} (°C)
01. PWB near U20 (main board)		**71.6**	**72.9**	**70.8**	**73.1**	--	**105**
02. PWB near U9 (main board)		**73.5**	**75.0**	**72.9**	**75.3**	--	**105**
03. BAT1A (main board)		**62.1**	**63.7**	**62.1**	**64.1**	--	**100**
04. L1 (PER-P21D board)		**72.9**	**73.9**	**65.5**	**74.1**	--	**105**
05. HDD		**71.1**	**72.5**	**66.9**	**72.8**	--	**--**
06. Metal enclosure near U20		**56.8**	**58.6**	**57.1**	**58.7**	--	**70**
07. Ambient		**40.0**	**40.0**	**40.0**	**40.0**	--	**--**

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.

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:

4.6.1, 4.6.2	Table: enclosure openings	P

Location	Size (mm)	Comments
Horizontal condition		
Top side	**--**	**No openings.**
Bottom side	**Diameter = 2.9 max.**	**Numerous circular openings covering two areas, each 15.2 mm by 90.6 mm.**
	Diameter = 3.2 max.	**Eight openings.**
Both Right and Left sides	**--**	**No openings.**

IEC60950_1B - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

Front side	**--**	**No openings.**
Rear side	**53 x 8.0**	**One square opening provided for CF card used.**
Vertical condition		
Front side	**--**	**No openings.**
Rear side	**Diameter = 2.9 max.**	**Numerous circular openings covering two areas, each 15.2 mm by 90.6 mm.**
	Diameter = 3.2 max.	**Eight openings.**
Both Right and Left sides	**--**	**No openings.**
Bottom side	**--**	**No openings.**
Top side	**53 x 8.0**	**One square opening provided for CF card used.**
Supplementary information: The equipment is building-in type. Compliance shall be evaluated for the final system.		

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

Component No.	Fault	Supply voltage (V)	Test time	Fuse #	Fuse current (A)	Observation
RTC battery (D12 short)	**Short**	**30Vdc**	**--**	**--**	**--**	**Reverse current = 3.08 mA**
RTC battery (R859)	**Short**	**30Vdc**	**--**	**--**	**--**	**Reverse current = 0 mA**
Openings (Vertical)	Blocked	30Vdc	2.5 hr	--	--	**Unit operated normally, no damaged, no hazards. PWB near U9 = 76.7 °C, Ambient = 38.1 °C**
Supplementary information:						

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/A12:2011
Attachment Form No. .....:	EU_GD_IEC60950_1B_II
Attachment Originator.....:	SGS Fimko Ltd
Master Attachment.....:	Date 2011-08

EN 60950-1:2006/A11:2009/A1:2010/A12:2011 – 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
(A12:2011)	In EN 60950-1:2006/A12:2011 Delete the addition of 1.3.Z1 / EN 60950-1:2006 Delete the definition 1.2.3.Z1 / EN 60950-1:2006 /A1:2010	Delete.	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
1.7.2.1 (A12.2011)	In EN 60950-1:2006/A12:2011 Delete NOTE Z1 and the addition for Portable Sound System. Add the following clause and annex to the existing standard and amendments.	Added.	N/A
	Zx Protection against excessive sound pressure from personal music players		

IEC60950_1B - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

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

IEC60950_1B - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
	Zx.2 Equipment requirements No safety provision is required for equipment that complies with the following: - equipment provided as a package (personal music player with its listening device), where the acoustic output $L_{Aeq,T}$ is ≤ 85 dBA measured while playing the fixed "programme simulation noise" as described in EN 50332-1; and - a personal music player provided with an analogue electrical output socket for a listening device, where the electrical output is ≤ 27 mV measured as described in EN 50332-2, while playing the fixed "programme simulation noise" as described in EN 50332-1. NOTE 1 Wherever the term acoustic output is used in this clause, the 30 s A-weighted equivalent sound pressure level $L_{Aeq,T}$ is meant. See also Zx.5 and Annex Zx. All other equipment shall: a) protect the user from unintentional acoustic outputs exceeding those mentioned above; and b) have a standard acoustic output level not exceeding those mentioned above, and automatically return to an output level not exceeding those mentioned above when the power is switched off; and c) provide a means to actively inform the user of the increased sound pressure when the equipment is operated with an acoustic output exceeding those mentioned above. Any means used shall be acknowledged by the user before activating a mode of operation which allows for an acoustic output exceeding those mentioned above. The acknowledgement does not need to be repeated more than once every 20 h of cumulative listening time; and NOTE 2 Examples of means include visual or audible signals. Action from the user is always required. NOTE 3 The 20 h listening time is the accumulative listening time, independent how often and how long the personal music player has been switched off. d) have a warning as specified in Zx.3; and e) not exceed the following: 1) equipment provided as a package (player with Its listening device), the acoustic output shall be ≤ 100 dBA measured while playing the fixed "programme simulation noise" described in EN 50332-1; and		

IEC60950_1B - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
	2) a personal music player provided with an analogue electrical output socket for a listening device, the electrical output shall be ≤ 150 mV measured as described in EN 50332-2, while playing the fixed “programme simulation noise” described in EN 50332-1. For music where the average sound pressure (long term $L_{Aeq,T}$) measured over the duration of the song is lower than the average produced by the programme simulation noise, the warning does not need to be given as long as the average sound pressure of the song is below the basic limit of 85 dBA. In this case T becomes the duration of the song. NOTE 4 Classical music typically has an average sound pressure (long term $L_{Aeq,T}$) which is much lower than the average programme simulation noise. Therefore, if the player is capable to analyse the song and compare it with the programme simulation noise, the warning does not need to be given as long as the average sound pressure of the song is below the basic limit of 85 dBA. For example, if the player is set with the programme simulation noise to 85 dBA, but the average music level of the song is only 65 dBA, there is no need to give a warning or ask an acknowledgement as long as the average sound level of the song is not above the basic limit of 85 dBA. **Zx.3 Warning** The warning shall be placed on the equipment, or on the packaging, or in the instruction manual and shall consist of the following: - the symbol of Figure 1 with a minimum height of 5 mm; and - the following wording, or similar: “To prevent possible hearing damage, do not listen at high volume levels for long periods.”  **Figure 1 – Warning label (IEC 60417-6044)** Alternatively, the entire warning may be given through the equipment display during use, when the user is asked to acknowledge activation of the higher level.		

IEC60950_1B - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
	Zx.4 Requirements for listening devices (headphones and earphones)		
	Zx.4.1 Wired listening devices with analogue input With 94 dBA sound pressure output $L_{Aeq,T}$, the input voltage of the fixed "programme simulation noise" described in EN 50332-2 shall be ≥ 75 mV. This requirement is applicable in any mode where the headphones can operate (active or passive), including any available setting (for example built-in volume level control). NOTE The values of 94 dBA – 75 mV correspond with 85dBA – 27 mV and 100 dBA – 150 mV. **Zx.4.2 Wired listening devices with digital input** With any playing device playing the fixed "programme simulation noise" described in EN 50332-1 (and respecting the digital interface standards, where a digital interface standard exists that specifies the equivalent acoustic level), the acoustic output $L_{Aeq,T}$ of the listening device shall be ≤ 100 dBA. This requirement is applicable in any mode where the headphones can operate, including any available setting (for example built-in volume level control, additional sound feature like equalization, etc.). NOTE An example of a wired listening device with digital input is a USB headphone.		
	Zx.4.3 Wireless listening devices In wireless mode: - with any playing and transmitting device playing the fixed programme simulation noise described in EN 50332-1; and - respecting the wireless transmission standards, where an air interface standard exists that specifies the equivalent acoustic level; and - with volume and sound settings in the listening device (for example built-in volume level control, additional sound feature like equalization, etc.) set to the combination of positions that maximize the measured acoustic output for the abovementioned programme simulation noise, the acoustic output $L_{Aeq,T}$ of the listening device shall be ≤ 100 dBA. NOTE An example of a wireless listening device is a Bluetooth headphone.		

IEC60950_1B - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
	Zx.5 Measurement methods Measurements shall be made in accordance with EN 50332-1 or EN 50332-2 as applicable. Unless stated otherwise, the time interval T shall be 30 s. NOTE Test method for wireless equipment provided without listening device should be defined.		
2.7.1	Replace the subclause as follows: Basic requirements To protect against excessive current, short-circuits and earth faults in PRIMARY CIRCUITS, protective devices shall be included either as integral parts of the equipment or as parts of the building installation, subject to the following, a), b) and c): a) except as detailed in b) and c), protective devices necessary to comply with the requirements of 5.3 shall be included as parts of the equipment; b) for components in series with the mains input to the equipment such as the supply cord, appliance coupler, r.f.i. filter and switch, short-circuit and earth fault protection may be provided by protective devices in the building installation; c) it is permitted for PLUGGABLE EQUIPMENT TYPE B or PERMANENTLY CONNECTED EQUIPMENT, to rely on dedicated overcurrent and short-circuit protection in the building installation, provided that the means of protection, e.g. fuses or circuit breakers, is fully specified in the installation instructions. If reliance is placed on protection in the building installation, the installation instructions shall so state, except that for PLUGGABLE EQUIPMENT TYPE A the building installation shall be regarded as providing protection in accordance with the rating of the wall socket outlet.	Replaced.	P
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

IEC60950_1B - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
3.2.5.1	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). Standards taking into account mentioned Recommendation and Directive which demonstrate compliance with the applicable EU Directive are indicated in the OJEC.	Replaced.	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.		—

IEC60950_1B - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
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).”		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.		N/A

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

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

EUROPEAN GROUP DIFFERENCES	
Differences according to.....:	EN 60950-1:2006+A11:2009

	CENELEC COMMON MODIFICATIONS (EN)	
ZA	**Normative references to international publications with their corresponding European publications**	—

ZB	**ANNEX ZB, SPECIAL NATIONAL CONDITIONS (EN)**		
1.2.13.14	In **Norway** and **Sweden**, for requirements see 1.7.2.1 and 7.3 of this annex.		N/A
1.5.7.1	**Replace** the existing SNC by the following: In **Finland, Norway** and **Sweden**, resistors bridging BASIC INSULATION in CLASS I PLUGGABLE EQUIPMENT TYPE A must comply with the requirements in 1.5.7.1. In addition when a single resistor is used, the resistor must withstand the resistor test in 1.5.7.2.		N/A
1.7.2.1	**Add** as new SNC: In **Norway** and **Sweden**, the screen of the cable distribution system is normally not earthed at the entrance of the building and there is normally no equipotential bonding system within the building. Therefore the protective earthing of the building installation need to be isolated from the screen of a cable distribution system. It is however accepted to provide the insulation external to the equipment by an adapter or an interconnection cable with galvanic isolator, which may be provided by e.g. a retailer. The user manual shall then have the following or similar information in Norwegian and Swedish language respectively, depending on in what country the equipment is intended to be used in: “Equipment connected to the protective earthing of the building installation through the mains connection or through other equipment with a connection to protective earthing – and to a cable distribution system using coaxial cable, may in some circumstances create a fire hazard. Connection to a cable distribution system has therefore to be provided through a device providing electrical isolation below a certain frequency range (galvanic isolator, see EN 60728-11).” NOTE In Norway, due to regulation for installations of cable distribution systems, and in Sweden, a galvanic isolator shall provide electrical insulation below 5 MHz. The insulation shall withstand a dielectric strength of 1,5 kV r.m.s., 50 Hz or 60 Hz, for 1 min.		N/A

EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
	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	**Add** the following paragraph to the existing SNC for **Denmark**: For CLASS II EQUIPMENT the socket outlet shall be in accordance with Standard Sheet DKA 1-4a.		N/A
7.3	**Delete** the existing SNC for Norway and Sweden (based on NOTE 1 of IEC 60950-1:2005 + corr. 1). **Add** as new SNC (based on future NOTE 3 of IEC 60950-1:200X): In **Norway** and **Sweden**, for requirements see 1.2.13.14 and 1.7.2.1 of this annex.		N/A

ZC	**ANNEX ZC, NATIONAL DEVIATIONS (EN)**		
1.5.1	Sweden **Delete** the A-deviation.		N/A
1.7.2.1	Denmark **Delete** the A-deviation.		N/A
1.7.5	Denmark **Delete** the A-deviation.		N/A
5.1.7.1	Denmark **Delete** the A-deviation.		N/A

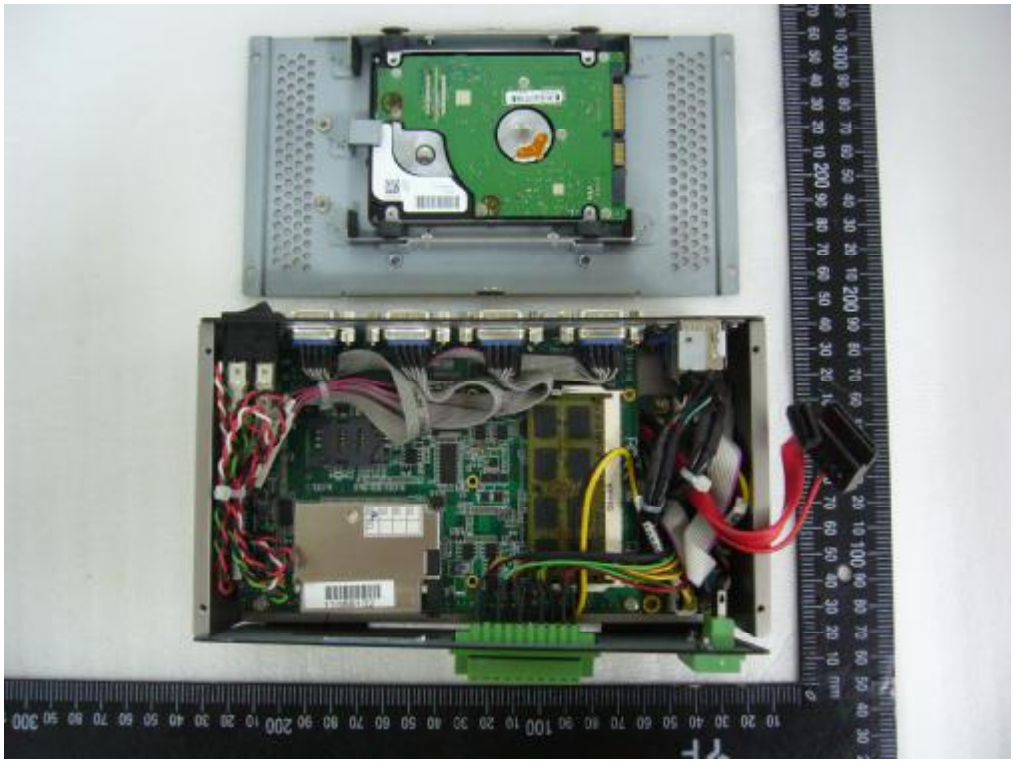
PHOTOS

PHOTOS

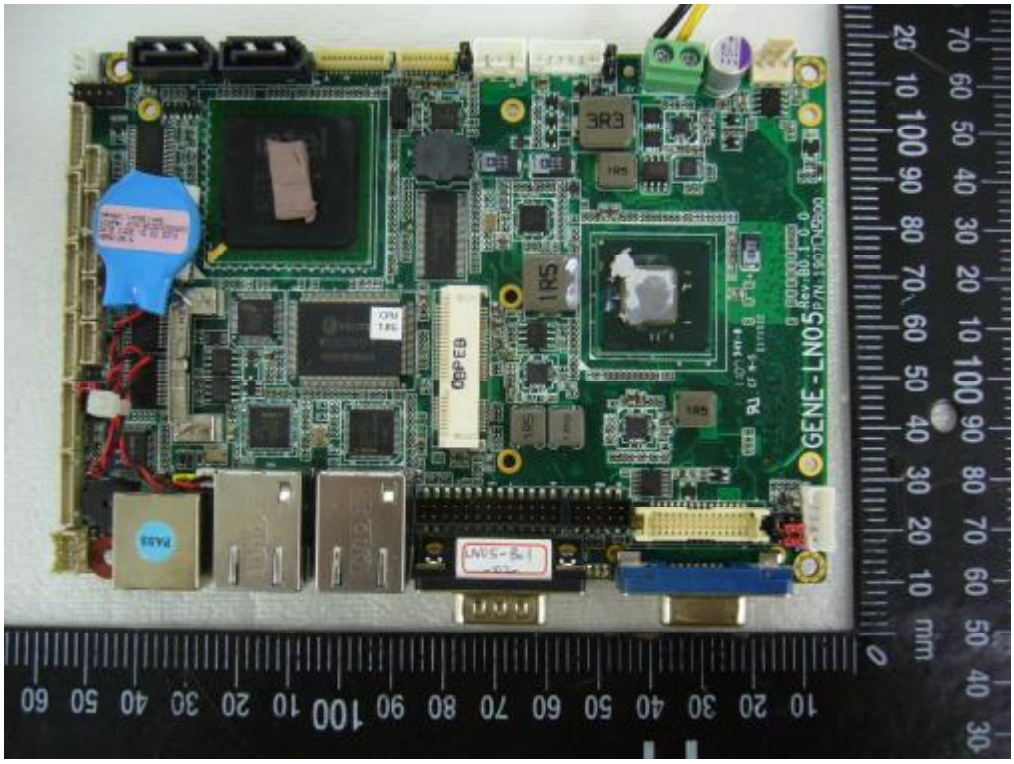

USB
LAN1
LAN2
COM1
VGA
α525
COM6
STS
HDD
COM2
COM3
COM4
COM5
USB
POWER

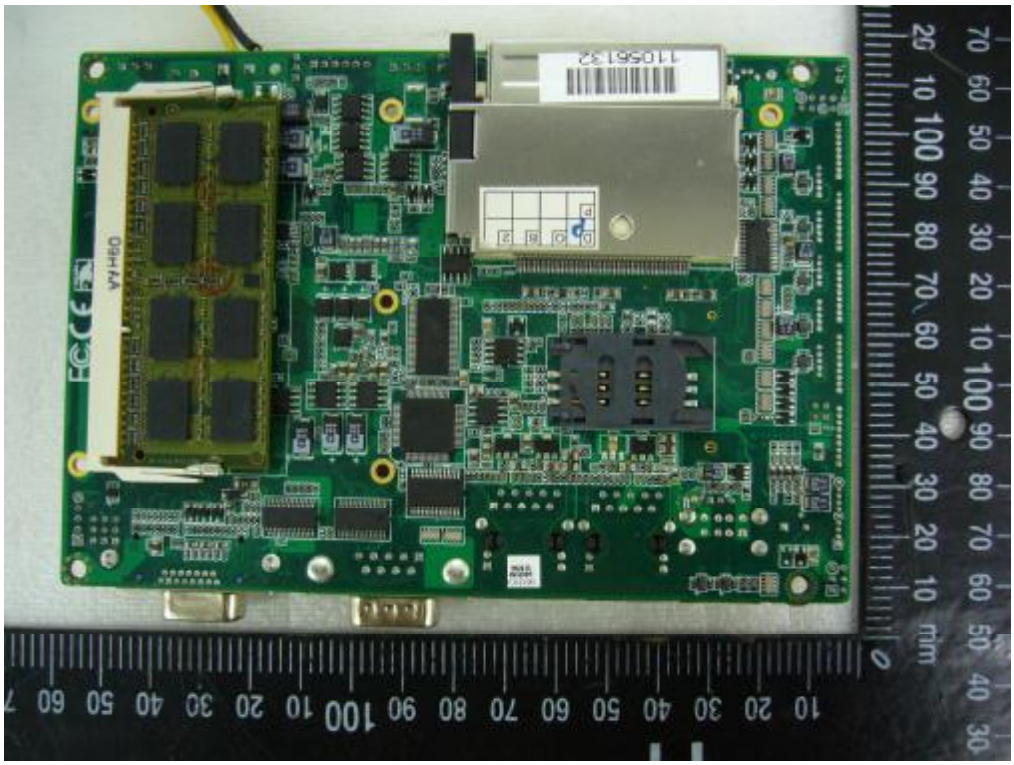

DIO
DC 9-30V
1
10

PHOTOS



PHOTOS





PHOTOS