Certificate of Compliance

with
European Low Voltage Directive
No. 10001 573 001

Type of equipment: **8 Port 1U Firewall**

Certificate holder: **AAEON Technology Inc.**

Type designation: **xxxxFWS-816xx-xxx-xxxxxxx**
(Where x can be 0- 9, A-Z, "-" or blank for marketing purpose)

Trademark: **AAEON**

Technical data: **Rating (s) :Input: 100-240Vac, 47-63Hz, 4-2A**

A sample of the equipment has been tested for CE-marking according to the EC Low Votlage Directive, 2006/95/EC

Standard used for showing compliance with the essential requirements of the directive:

Standard(s):	*Test report(s):*	*Issued by:*	*Date(s):*
IEC 60950-1:2001 EN 60950-1:2001 +A11:2004	10001 573 001	Cerpass	6/Dec/07

The referred test report(s) show that the product fulfills the requirements in the EC Low Voltage Directive for CE marking. On this basis, together with the manufacturer's own documented production control, the manufacturer (or his European authorized representative) can in his EC Declaration of Comformity verify compliance with the EC Low Voltage Directive.

CE

Edward Lin
Testing Department

Jackie Lin
Certification Department

TEST REPORT

IEC 60950-1 and/or EN 60950-1

Information technology equipment – Safety –

Part 1: General requirements

Report reference No	<10001 573 001>
Tested by (printed name and signature)	Sprewell Chien
Approved by (printed name and signature)	Edward Lin
Date of issue	December 6, 2007
Testing Laboratory Name	Cerpass Technology Corp.
Address	9F, No. 200, Gangcian Rd., Neihu District, Taipei City 114, Taiwan
Testing location	Same as above
Applicant's Name	AAEON Technology Inc.
Address	5F, No.135, Lane 235, Pao Chiao Rd., Hsin-Tien City, Taipei, Taiwan
Test specification	
Standard	IEC 60950-1:2001 EN 60950-1:2001+A11:2004
Test procedure	Service of CE Marking in LVD
Non-standard test method	N/A
Test item description	8 Port 1U Firewall
Manufacturer.....	Same as applicant
Trademark	See copy of marking plate
Model and/or type reference	xxxxFWS-816xx-xxx-xxxxxxx (Where x can be 0- 9, A-Z, "-" or blank for marketing purpose)
Serial number	Pre-production samples w/o serial numbers
Rating(s)	Input: 100-240Vac, 47-63Hz, 4-2A

Particulars: test item vs. test requirements
Equipment mobility .....: Movable
Operating condition .....: Continuous
Mains supply tolerance (%) .....: +10%, -10%
Tested for IT power systems .....: Yes (for Norway)
IT testing, phase-phase voltage (V) .....: IT, 230V (for Norway)
Class of equipment .....: Class I
Mass of equipment (kg).....: 6.4 kg
Protection against ingress of water .....: IPX0
Test case verdicts
Test case does not apply to the test object ..: N/A
Test item does meet the requirement .....: P(ass)
Test item does not meet the requirement ....: F(ail)
Testing
Date of receipt of test item .....: November 5, 2007
Date(s) of performance of test .....: November 5, 2007 - November 30, 2007
General remarks
This report shall not be reproduced except in full without the written approval of the testing laboratory.
The test results presented in this report relate only to the item(s) tested.
”(see remark #)" refers to a remark appended to the report.
"(see Annex #)" refers to an annex appended to the report.
Throughout this report a point is used as the decimal separator.
Factories:
AAEON Technology Inc. 5F, No.135, Lane 235, Pao Chiao Rd., Hsin-Tien City, Taipei, Taiwan
General description:
This equipment, model xxxxFWS-816xx-xxx-xxxxxxx, is 8 Port 1U Firewall which is intended to use within information technology equipment.
The equipment consists of building-in power supply, HDD, DC fan and mother board housed with metallic enclosure, and intended to be installed in a restricted access location only.
Two types of heat sink (with or without fin type) will be used for CPU.
Power cord complying with national standard must be provided when shipment.
The power supply for used with this product is approved components which is CB scheme tested according to IEC 60950-1. See appended table 1.5.1 for detail information about the switching power supply.
Other remarks:
Maximum specified ambient temperature: 40℃.

Copy of marking plate(s):

IEC 60950-1 / EN 60950-1			
Clause	Requirement – Test	Result – Remark	Verdict
1	GENERAL		**P**
1.5	Components		**P**
1.5.1	General	See below.	**P**
	Comply with IEC 60950 or relevant component standard	Components which were found to affect safety aspects comply with the requirements of this standard or with the safety aspects of the relevant IEC/EN component standards (see appended table 1.5.1).	**P**
1.5.2	Evaluation and testing of components	Components that are certified to IEC and /or national standards are used correctly within their ratings. Components not covered by IEC standards are tested under the conditions present in the equipment.	**P**
1.5.3	Thermal controls	No thermal control.	**N**
1.5.4	Transformers	Evaluated in approved SPS.	**P**
1.5.5	Interconnecting cables	Interconnecting cables comply with the relevant requirements of this standard.	**P**
1.5.6	Capacitors in primary circuits .....:	Evaluated in approved SPS.	**P**
1.5.7	Double insulation or reinforced insulation bridged by components		**N**
1.5.7.1	General		**N**
1.5.7.2	Bridging capacitors		**N**
1.5.7.3	Bridging resistors		**N**
1.5.7.4	Accessible parts		**N**
1.5.8	Components in equipment for IT power systems	Approved SPS is evaluated for IT power system	**P**
1.6	Power interface		**P**
1.6.1	AC power distribution systems	TN power system. IT power system for Norway only.	**P**
1.6.2	Input current	Highest load according to 1.2.2.1 for this equipment is operated on data link mode and loads the dummy loads of 2.5W in each USB port (Two provided). (see appended table)	**P**
1.6.3	Voltage limit of hand-held equipment	This appliance is not hand-held equipment.	**N**

IEC 60950-1 / EN 60950-1			
Clause	Requirement – Test	Result – Remark	Verdict
1.6.4	Neutral conductor	Neutral is isolated from earth with basic insulation throughout the equipment.	**P**
1.7	Marking and instructions		**P**
1.7.1	Power rating	See below.	**P**
	Rated voltage(s) or voltage range(s) (V) .....:	100-240Vac	**P**
	Symbol for nature of supply, for d.c. only .....:	Mains from AC source	**N**
	Rated frequency or rated frequency range (Hz) ..:	47-63Hz	**P**
	Rated current (mA or A) .....:	4-2A	**P**
	Manufacturer's name or trademark or identification mark .....:	See copy of marking plate	**P**
	Type/model or type reference.....:	xxxxFWS-816xx-xxx-xxxxxxx	**P**
	Symbol for Class II equipment only .....:	Class I equipment.	**N**
	Other symbols .....:	Additional symbols or markings do not give rise to misunderstanding.	**P**
	Certification marks .....:	No such mark.	**N**
1.7.2	Safety instructions	The user's manual contains information for operation, installation, servicing, transport, storage and technical data. The operation guide is provided to the user.	**P**
1.7.3	Short duty cycles	Equipment is designed for continuous operation.	**N**
1.7.4	Supply voltage adjustment .....:	No voltage selector.	**N**
	Methods and means of adjustment; reference to installation instructions .....:		**N**
1.7.5	Power outlets on the equipment .....:	No outlets.	**N**
1.7.6	Fuse identification (marking, special fusing characteristics, cross-reference) .....:	Evaluated in approved SPS.	**P**
1.7.7	Wiring terminals	See below.	**N**
1.7.7.1	Protective earthing and bonding terminals .....:	Appliance coupler was provided in approval SPS.	**N**
1.7.7.2	Terminal for a.c. mains supply conductors	The equipment is provided with appliance inlet, which is for connection of a detachable type power supply cord.	**N**
1.7.7.3	Terminals for d.c. mains supply conductors	AC mains supply only.	**N**
1.7.8	Controls and indicators	See below.	**P**

IEC 60950-1 / EN 60950-1			
Clause	Requirement – Test	Result – Remark	Verdict
1.7.8.1	Identification, location and marking .....:	The marking and indication of the power switch is located that indication of function is clearly.	**P**
1.7.8.2	Colours .....:	No safety relevant control or indicator.	**N**
1.7.8.3	Symbols according to IEC 60417 .....:	The power switch is marked with symbol according to 60417-1-IEC-5007 and 5008 (1 and 0).	**P**
1.7.8.4	Markings using figures .....:	No indicators for different positions.	**N**
1.7.9	Isolation of multiple power sources .....:	Single mains supply.	**N**
1.7.10	IT power distribution systems	It shall be evaluated when submitted for Norway national approval.	**N**
1.7.11	Thermostats and other regulating devices	No thermostats provided.	**N**
1.7.12	Language(s) .....:	User manual and marking label are in English. Versions of other languages will be provided when submitted for national approval.	**—**
1.7.13	Durability	The labels were subjected to the permanence of marking test. The labels were rubbed with cloth soaked with water for 15 s and then again for 15 s with the cloth soaked with petroleum spirit. After this test there was no damage to the labels. The marking on the labels did not fade. There was no curling or lifting of the label's edges.	**P**
1.7.14	Removable parts	No removable parts provided.	**N**
1.7.15	Replaceable batteries	Lithium battery for real time clock is exchangeable. Warning sentence is printed in manual.	**P**
	Language(s).....:	English. Versions in other languages have to be provided during the corresponding national approvals.	**—**
1.7.16	Operator access with a tool .....:	All other compartments containing a hazard are properly marked with the electric shock hazard symbol (ISO 3864, No. 5036).	**P**

IEC 60950-1 / EN 60950-1			
Clause	Requirement – Test	Result – Remark	Verdict
1.7.17	Equipment for restricted access locations.....:	The installation instruction contains a statement “The equipment can be installed in a restricted access location only”.	**P**
2	PROTECTION FROM HAZARDS		**P**
2.1	Protection from electric shock and energy hazards		**P**
2.1.1	Protection in operator access areas		**P**
2.1.1.1	Access to energized parts	See below.	**P**
	Test by inspection .....:	No access with test finger to any parts with only basic insulation to ELV or hazardous voltage. The test pin cannot touch hazardous voltage through any openings within the appliance.	**P**
	Test with test finger .....:	Ditto.	**P**
	Test with test pin .....:	Ditto.	**P**
	Test with test probe .....:	No TNV.	**N**
2.1.1.2	Battery compartments .....:	No battery compartments and TNV circuits.	**N**
2.1.1.3	Access to ELV wiring	No ELV wiring in operator accessible area.	**N**
	Working voltage (Vpeak or Vrms); minimum distance (mm) through insulation	Ditto.	—
2.1.1.4	Access to hazardous voltage circuit wiring	No hazardous voltage wiring in operator accessible area.	**N**
2.1.1.5	Energy hazards .....:	The energy exceeds 240VA between any two points in accessible parts (output connector of building-in SPS). Bare parts that present a hazardous energy level are located or guarded so that unintentional bridging by conductive materials that might be present is unlikely. (See appended table.)	**P**
2.1.1.6	Manual controls	No conductive shafts of operating knobs and handles.	**N**
2.1.1.7	Discharge of capacitors in equipment	Evaluated in approved SPS	**P**
	Time-constant (s); measured voltage (V).....:		—
2.1.2	Protection in service access areas	No maintenance work in operation mode necessary.	**N**

IEC 60950-1 / EN 60950-1			
Clause	Requirement – Test	Result – Remark	Verdict
2.1.3	Protection in restricted access locations	Bare parts that present a hazardous energy level are located or guarded so that unintentional bridging by conductive materials that might be present is unlikely.	**P**
2.2	SELV circuits		**P**
2.2.1	General requirements	See below.	**P**
2.2.2	Voltages under normal conditions (V) .....:	Between any conductor of the SELV circuits 42.4 V peak or 60 V d.c. are not exceeded.	**P**
2.2.3	Voltages under fault conditions (V).....:	Single fault did not cause excessive voltage in accessible SELV circuits. Limits of 71 V peak and 120 V d.c. were not exceed and SELV limits not for longer than 0.2 s.	**P**
2.2.3.1	Separation by double insulation or reinforced insulation (method 1)	Evaluated in approved SPS	**P**
2.2.3.2	Separation by earthed screen (method 2)		**N**
2.2.3.3	Protection by earthing of the SELV circuit (method 3)		**N**
2.2.4	Connection of SELV circuits to other circuits.....:	See 2.2.2 and 2.2.3. No direct connection between SELV and any primary circuits.	**P**
2.3	TNV circuits *No TNV circuit within this equipment.*		**N**
2.3.1	Limits		**N**
	Type of TNV circuits .....:		—
2.3.2	Separation from other circuits and from accessible parts		**N**
	Insulation employed.....:		—
2.3.3	Separation from hazardous voltages		**N**
	Insulation employed.....:		—
2.3.4	Connection of TNV circuits to other circuits		**N**
	Insulation employed.....:		—
2.3.5	Test for operating voltages generated externally		**N**
2.4	Limited current circuits		**N**
2.4.1	General requirements		**N**

IEC 60950-1 / EN 60950-1			
Clause	Requirement – Test	Result – Remark	Verdict
2.4.2	Limit values		**N**
	Frequency (Hz) ..... :		—
	Measured current (mA)..... :		—
	Measured voltage (V) ..... :		—
	Measured capacitance (µF)..... :		—
2.4.3	Connection of limited current circuits to other circuits		**N**
2.5	Limited power sources		**P**
	Inherently limited output		**N**
	Impedance limited output	See appended table 2.5.	**P**
	Overcurrent protective device limited output		**N**
	Regulating network limited output under normal operating and single fault condition		**N**
	Regulating network limited output under normal operating conditions and overcurrent protective device limited output under single fault condition		**N**
	Output voltage (V), output current (A), apparent power (VA)..... :	See appended table 2.5.	—
	Current rating of overcurrent protective device (A)		—
2.6	Provisions for earthing and bonding		**P**
2.6.1	Protective earthing	Metal chassis is connected reliably to the main protective earthing terminal.	**P**
2.6.2	Functional earthing	Secondary functional earthing is connected to protectively earthed conductive part that separated from primary by basic insulation.	**P**
2.6.3	Protective earthing and protective bonding conductors	Evaluated in approved SPS	**P**
2.6.3.1	General		**N**
2.6.3.2	Size of protective earthing conductors	No power cord provided.	**N**
	Rated current (A), cross-sectional area (mm2), AWG ..... :		—
2.6.3.3	Size of protective bonding conductors	See sub-clause 2.6.3.4, rated current below 16A.	—
	Rated current (A), cross-sectional area (mm2), AWG ..... :		—
2.6.3.4	Resistance (Ω) of earthing conductors and their terminations, test current (A) ..... :	See appended table 2.6.3.3.	—

IEC 60950-1 / EN 60950-1			
Clause	Requirement – Test	Result – Remark	Verdict
2.6.3.5	Colour of insulation .....:	Evaluated in approved SPS.	**P**
2.6.4	Terminals	Appliance inlet used.	**P**
2.6.4.1	General	See below.	**P**
2.6.4.2	Protective earthing and bonding terminals	Appliance inlet used.	**P**
	Rated current (A), type and nominal thread diameter (mm) .....:		**—**
2.6.4.3	Separation of the protective earthing conductor from protective bonding conductors	Evaluated in approved SPS	**P**
2.6.5	Integrity of protective earthing	See below.	**P**
2.6.5.1	Interconnection of equipment	This unit has its own earthing connection. Any other units connected via the output shall be provided SELV only.	**P**
2.6.5.2	Components in protective earthing conductors and protective bonding conductors	No switch or overcurrent protective device in protective earthing or bonding conductor.	**P**
2.6.5.3	Disconnection of protective earth	It is not possible to disconnect earth without disconnecting from mains as an appliance inlet is used.	**P**
2.6.5.4	Parts that can be removed by an operator	Ditto.	**P**
2.6.5.5	Parts removed during servicing	Ditto.	**P**
2.6.5.6	Corrosion resistance	All parts comprising the connections are plated and metal to metal which comply with Annex J.	**P**
2.6.5.7	Screws for protective bonding	No such screws provided.	**N**
2.6.5.8	Reliance on telecommunication network or cable distribution system	No TNV.	**N**

2.7	Overcurrent and earth fault protection in primary circuits		**P**
2.7.1	Basic requirements	Equipment relies on rated fuse or circuit breaker of the wall outlet installation protection of the building installation in case of L to N short circuit. Overcurrent protection is provided by approved SPS.	**P**
	Instructions when protection relies on building installation	Pluggable equipment type A.	**N**
2.7.2	Faults not covered in 5.3	The protection devices are well dimensioned and mounted.	**P**

IEC 60950-1 / EN 60950-1			
Clause	Requirement – Test	Result – Remark	Verdict
2.7.3	Short-circuit backup protection	Pluggable equipment type A, hence building installation is considered as providing short circuit backup protection.	**P**
2.7.4	Number and location of protective devices .....:	Overcurrent protection is provided by approved SPS.	**P**
2.7.5	Protection by several devices	One protective device in approved SPS.	**P**
2.7.6	Warning to service personnel .....:	Hazardous voltage may be still presented in the equipment after the internal fuse opens. However, as it is considered that the plug to the mains will be disconnected during service work, no marking were requested.	**N**
2.8	Safety interlocks *No such device within this equipment.*		**N**
2.8.1	General principles		**N**
2.8.2	Protection requirements		**N**
2.8.3	Inadvertent reactivation		**N**
2.8.4	Fail-safe operation		**N**
2.8.5	Moving parts		**N**
2.8.6	Overriding		**N**
2.8.7	Switches and relays		**N**
2.8.7.1	Contact gaps (mm) .....:		**N**
2.8.7.2	Overload test		**N**
2.8.7.3	Endurance test		**N**
2.8.7.4	Electric strength test		**N**
2.8.8	Mechanical actuators		**N**
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	Considered in approved SPS. Carried out for 120 hr.	**P**
	Humidity (%) .....:	95% R.H.	—
	Temperature (°C) .....:	40°C	—

IEC 60950-1 / EN 60950-1			
Clause	Requirement – Test	Result – Remark	Verdict
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**
2.10	Clearances, creepage distances and distances through insulation		**P**
2.10.1	General	Approved SPS is used. Hence requirements of below sub-clauses are in compliance with IEC/EN 60950-1.	**P**
2.10.2	Determination of working voltage		**P**
2.10.3	Clearances		**P**
2.10.3.1	General		**P**
2.10.3.2	Clearances in primary circuits	Clearances distances inside SPS have been evaluated during type approval and are in compliance with the requirements of this standard.	**P**
2.10.3.3	Clearances in secondary circuits	Sub-clause 5.3.4 considered.	**P**
2.10.3.4	Measurement of transient voltage levels	No transient voltage across the clearance lower than due or normal.	**N**
2.10.4	Creepage distances	Insulation between other parts in the equipment is functional. For details see sub-clause 5.3.4. Creepage distances inside SPS have been evaluated during type approval and are in compliance with the requirements of this standard.	**P**
	CTI tests .....:	CTI rating for all materials of IIIa + IIIb assumed.	**—**
2.10.5	Solid insulation	See bellow.	**P**
2.10.5.1	Minimum distance through insulation	Evaluated in approved SPS.	**P**
2.10.5.2	Thin sheet material	Ditto.	**P**
	Number of layers (pcs) .....:	Ditto.	**—**
	Electric strength test	Ditto.	**—**
2.10.5.3	Printed boards		**N**
	Distance through insulation		**N**
	Electric strength test for thin sheet insulating material		**—**
	Number of layers (pcs) .....:		**N**
2.10.5.4	Wound components		**N**

IEC 60950-1 / EN 60950-1			
Clause	Requirement – Test	Result – Remark	Verdict
	Number of layers (pcs) .....:		**N**
	Two wires in contact inside wound component; angle between 45° and 90° .....:		**N**
2.10.6	Coated printed boards		**N**
2.10.6.1	General		**N**
2.10.6.2	Sample preparation and preliminary inspection		**N**
2.10.6.3	Thermal cycling		**N**
2.10.6.4	Thermal ageing (°C) .....:		**N**
2.10.6.5	Electric strength test		**—**
2.10.6.6	Abrasion resistance test		**N**
	Electric strength test		**—**
2.10.7	Enclosed and sealed parts .....:	No hermetically sealed components.	**N**
	Temperature T1=T2 + Tma – Tamb +10K (°C)....:		**N**
2.10.8	Spacings filled by insulating compound.....:	Photo-couplers used in approved SPS	**N**
	Electric strength test	Ditto.	**—**
2.10.9	Component external terminations	Evaluated in approved SPS.	**P**
2.10.10	Insulation with varying dimensions	No such transformer used.	**N**

3	WIRING, CONNECTIONS AND SUPPLY		**P**
3.1	General		**P**
3.1.1	Current rating and overcurrent protection	All internal wires are UL recognized. Cross-sectional area of internal wiring is suitable for current intended to be carried. Internal wiring for power distribution protected by fuse in SPS.	**P**
3.1.2	Protection against mechanical damage	Wires do not touch sharp edges or heat sinks, which could damage insulation and cause hazard.	**P**
3.1.3	Securing of internal wiring	Internal wiring is secured reliable so that loosening of terminal connections is unlikely.	**P**
3.1.4	Insulation of conductors	Insulation of the conductor is suitable for the application. For insulation material see sub-clause 3.1.1.	**P**
3.1.5	Beads and ceramic insulators	Not used.	**N**

IEC 60950-1 / EN 60950-1			
Clause	Requirement – Test	Result – Remark	Verdict
3.1.6	Screws for electrical contact pressure	Evaluated in approved SPS.	**P**
3.1.7	Insulating materials in electrical connections	All connections are metal to metal.	**N**
3.1.8	Self-tapping and spaced thread screws	No self-tapping and spaced screws are used.	**N**
3.1.9	Termination of conductors	All conductors are reliable secured.	**P**
	10 N pull test	Break away or pivot on its terminal is unlikely.	**P**
3.1.10	Sleeving on wiring	Evaluated in approved SPS.	**P**
3.2	Connection to an a.c. mains supply or a d.c. mains supply		**P**
3.2.1	Means of connection .....:	See below.	**P**
3.2.1.1	Connection to an a.c. mains supply	Appliance coupler used.	**P**
3.2.1.2	Connection to a d.c. mains supply	AC mains supply only.	**N**
3.2.2	Multiple supply connections	Only one mains connection.	**N**
3.2.3	Permanently connected equipment	Not a permanently connected equipment.	**N**
	Number of conductors, diameter (mm) of cable and conduits .....:		**—**
3.2.4	Appliance inlets	Appliance coupler complies with IEC 60320-1. The connector can be easily inserted and does not support the equipment.	**P**
3.2.5	Power supply cords	No power cord provided.	**N**
3.2.5.1	AC power supply cords		**N**
	Type.....:		**—**
	Rated current (A), cross-sectional area (mm2), AWG.....:		**—**
3.2.5.2	DC power supply cords		**N**
3.2.6	Cord anchorages and strain relief		**N**
	Mass of equipment (kg), pull (N) .....:		**—**
	Longitudinal displacement (mm) .....:		**—**
3.2.7	Protection against mechanical damage	No parts under this unit likely to damage the power supply cord. No sharp edge.	**P**
3.2.8	Cord guards	No cord guard.	**N**
	D (mm); test mass (g) .....:	Ditto.	**—**
	Radius of curvature of cord (mm).....:	Ditto.	**—**
3.2.9	Supply wiring space		**N**

IEC 60950-1 / EN 60950-1			
Clause	Requirement – Test	Result – Remark	Verdict
3.3	Wiring terminals for connection of external conductors		**N**
3.3.1	Wiring terminals		**N**
3.3.2	Connection of non-detachable power supply cords		**N**
3.3.3	Screw terminals		**N**
3.3.4	Conductor sizes to be connected		**N**
	Rated current (A), cord/cable type, cross-sectional area (mm2) .....:		—
3.3.5	Wiring terminal sizes		**N**
	Rated current (A), type and nominal thread diameter (mm) .....:		—
3.3.6	Wiring terminals design		**N**
3.3.7	Grouping of wiring terminals		**N**
3.3.8	Stranded wire		**N**
3.4	Disconnection from the mains supply		**P**
3.4.1	General requirement	Disconnect device provided.	**P**
3.4.2	Disconnect devices	Appliance coupler in approved SPS.	**P**
3.4.3	Permanently connected equipment	Not a permanently connected equipment.	**N**
3.4.4	Parts which remain energized	No parts remaining energized after appliance inlet is disconnected.	**N**
3.4.5	Switches in flexible cords	No switches in flexible cords.	**N**
3.4.6	Single-phase equipment and d.c. equipment	Appliance coupler disconnects both poles simultaneously.	**P**
3.4.7	Three-phase equipment	Single-phase equipment.	**N**
3.4.8	Switches as disconnect devices	No switch as disconnect device.	**N**
3.4.9	Plugs as disconnect devices	No plugs as disconnect device.	**N**
3.4.10	Interconnected equipment	Interconnection with other equipment only via SELV outputs.	**N**
3.4.11	Multiple power sources	Only one power source.	**N**
3.5	Interconnection of equipment		**P**
3.5.1	General requirements	See below.	**P**

IEC 60950-1 / EN 60950-1			
Clause	Requirement – Test	Result – Remark	Verdict
3.5.2	Types of interconnection circuits .....:	Interconnection circuits of SELV through sec connector.	**P**
3.5.3	ELV circuits as interconnection circuits	No ELV interconnection.	**N**
4	PHYSICAL REQUIREMENTS		**P**
4.1	Stability		**P**
	Angle of 10°	This appliance is of a stable mechanical construction and does not overbalance when tilted to an angle of 10° from its normal upright position. Length and width exceed the height when equipment lied down.	**P**
	Test: force (N).....:	Equipment is not a floorstanding unit.	**N**
4.2	Mechanical strength		**P**
4.2.1	General	See below. After tests equipment still complies with sub-clauses 2.1.1, 2.6.1, 2.10 and 4.4.1.	**P**
4.2.2	Steady force test, 10 N		**N**
4.2.3	Steady force test, 30 N	Applied to internal enclosure of SPS. No damage.	**P**
4.2.4	Steady force test, 250 N	Applied to rear part near SPS of enclosure. No damage.	**P**
4.2.5	Impact test	After test, equipment still complies with sub-clause 4.2.1.	**P**
	Fall test	No hazard as result from steel sphere ball impact test applied for top enclosure.	**P**
	Swing test	No hazard as result from steel sphere ball impact test for side/rear enclosure.	**P**
4.2.6	Drop test	Moveable equipment without telephone handset.	**N**
4.2.7	Stress relief test	Metal chassis.	**N**
4.2.8	Cathode ray tubes	No CRT in the unit.	**N**
	Picture tube separately certified .....:	Ditto.	**N**
4.2.9	High pressure lamps	No high pressure lamp provided.	**N**
4.2.10	Wall or ceiling mounted equipment; force (N) .....:	Not wall or ceiling mounted equipment.	**N**

IEC 60950-1 / EN 60950-1			
Clause	Requirement – Test	Result – Remark	Verdict
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) ..... :	No handles or controls used.	**N**
4.3.3	Adjustable controls	No hazardous adjustable controls.	**N**
4.3.4	Securing of parts	Mechanical fixings are reliable designed to withstand mechanical stress occurring during normal use.	**P**
4.3.5	Connection of plugs and sockets	No misconnection of plugs, connections or sockets possible.	**P**
4.3.6	Direct plug-in equipment	EUT not of direct plug-in type.	**N**
	Dimensions (mm) of mains plug for direct plug-in :		**—**
	Torque and pull test of mains plug for direct plug-in; torque (Nm); pull (N) ..... :		—
4.3.7	Heating elements in earthed equipment	No heating elements.	**N**
4.3.8	Batteries	For RTC battery: Prevent from force charging by series circuit of a diode (DD5) with a 1 K ohm resistor (R554).	**P**
4.3.9	Oil and grease	Insulation in intended use not considered to be exposed to oil and grease.	**N**
4.3.10	Dust, powders, liquids and gases	EUT in intended use does not produce dust or use powders, liquids or gases.	**N**
4.3.11	Containers for liquids or gases	No such containers provided.	**N**
4.3.12	Flammable liquids..... :	No flammable liquids used.	**N**
	Quantity of liquid (l) ..... :		**N**
	Flash point (°C) ..... :		**N**
4.3.13	Radiation; type of radiation ..... :	No concerned radiation within this equipment.	**P**
4.3.13.1	General	Ditto.	**P**
4.3.13.2	Ionizing radiation	No ionizing radiation or flammable liquids present.	**P**
	Measured radiation (pA/kg) ..... :	Ditto.	**—**
	Measured high-voltage (kV) ..... :	Ditto.	**—**
	Measured focus voltage (kV) ..... :	Ditto.	**—**
	CRT markings ..... :	Ditto.	**—**
4.3.13.3	Effect of ultraviolet (UV) radiation on materials	No UV presents.	**N**

IEC 60950-1 / EN 60950-1			
Clause	Requirement – Test	Result – Remark	Verdict
	Part, property, retention after test, flammability classification .....:	Ditto.	**N**
4.3.13.4	Human exposure to ultraviolet (UV) radiation .....:	Ditto.	**N**
4.3.13.5	Laser (including LEDs)	AEL of LED far below the limiting values for LED Class 1.	**P**
	Laser class .....:	Below Class 1.	**—**
4.3.13.6	Other types .....:	No other type.	**N**
4.4	Protection against hazardous moving parts		**P**
4.4.1	General	See below.	**P**
4.4.2	Protection in operator access areas	No moving parts except for DC fan located within equipment which intended to be installed in a restricted access location only. Unintentional contact with inside DC fan is possible, when adding or removing devices. However, indication for power off equipment first in installation instruction provided.	**P**
4.4.3	Protection in restricted access locations	Ditto.	**P**
4.4.4	Protection in service access areas	Unintentional contact with inside DC fan is possible, when adding or removing devices. However, indication for power off equipment first in service manual provided.	**P**
4.5	Thermal requirements		**P**
4.5.1	Maximum temperatures	See appended table 4.5.1.	**P**
	Normal load condition per Annex L.....:	See appended table 1.6.2.	**P**
4.5.2	Resistance to abnormal heat		**N**
4.6	Openings in enclosures		**P**
4.6.1	Top and side openings	See below.	**P**
	Dimensions (mm) .....:	See appended table 4.6.1.	**—**
4.6.2	Bottoms of fire enclosures	See below.	**P**
	Construction of the bottom .....:	No openings.	**—**
4.6.3	Doors or covers in fire enclosures	No doors or covers provided.	**N**
4.6.4	Openings in transportable equipment	Not a transportable equipment.	**N**
4.6.5	Adhesives for constructional purposes		**N**
	Conditioning temperature (°C)/time (weeks) .....:		**—**

IEC 60950-1 / EN 60950-1			
Clause	Requirement – Test	Result – Remark	Verdict
4.7	Resistance to fire		**P**
4.7.1	Reducing the risk of ignition and spread of flame	Use of materials with the required flammability classes.	**P**
	Method 1, selection and application of components wiring and materials	Method 1 used.	**P**
	Method 2, application of all of simulated fault condition tests	Ditto.	**N**
4.7.2	Conditions for a fire enclosure	See below.	**P**
4.7.2.1	Parts requiring a fire enclosure	With having the following components: - Components in primary circuits - Insulated wiring - Components in secondary (not supplied by LPS) the fire enclosure is required.	**P**
4.7.2.2	Parts not requiring a fire enclosure		**N**
4.7.3	Materials		**P**
4.7.3.1	General	PCB rated accordingly. For details see table 1.5.1.	**P**
4.7.3.2	Materials for fire enclosures	Metal chassis.	**P**
4.7.3.3	Materials for components and other parts outside fire enclosures	None outside fire enclosure.	**N**
4.7.3.4	Materials for components and other parts inside fire enclosures	Internal components except small parts are V-2 or better.	**P**
4.7.3.5	Materials for air filter assemblies	No air filter provided.	**N**
4.7.3.6	Materials used in high-voltage components	No high voltage components provided.	**N**

5	ELECTRICAL REQUIREMENTS AND SIMULATED ABNORMAL CONDITIONS		**P**
5.1	Touch current and protective conductor current		**P**
5.1.1	General	See sub-clauses 5.1.2 to 5.1.6.	**P**
5.1.2	Equipment under test (EUT)	EUT has only one mains connection.	**P**
5.1.3	Test circuit	Equipment of figure 5A used.	**P**
5.1.4	Application of measuring instrument	Using measuring instrument in annex D.	**P**
5.1.5	Test procedure	The touch current was measured from primary to enclosure and output terminal.	**P**

IEC 60950-1 / EN 60950-1			
Clause	Requirement – Test	Result – Remark	Verdict
5.1.6	Test measurements	See below.	**P**
	Test voltage (V) .....:	See appended table 5.1.6.	—
	Measured touch current (mA) .....:	See appended table 5.1.6.	—
	Max. allowed touch current (mA) .....:	See appended table 5.1.6.	—
	Measured protective conductor current (mA) .....:	Not applicable.	—
	Max. allowed protective conductor current (mA) .:	Not applicable.	—
5.1.7	Equipment with touch current exceeding 3.5 mA :	Not exceeded.	**N**
5.1.8	Touch currents to and from telecommunication networks and cable distribution systems and from telecommunication networks	No TNV circuit connection.	**N**
5.1.8.1	Limitation of the touch current to a telecommunication network and a cable distribution system		**N**
	Test voltage (V) .....:		—
	Measured touch current (mA) .....:		—
	Max. allowed touch current (mA) .....:		—
5.1.8.2	Summation of touch currents from telecommunication networks .....:		**N**

5.2	Electric strength		**P**
5.2.1	General	See appended table 5.2.	**P**
5.2.2	Test procedure	See appended table 5.2.	**P**

5.3	Abnormal operating and fault condition		**P**
5.3.1	Protection against overload and abnormal operation	See below.	**P**
5.3.2	Motors	Approved components used. See appended table 1.5.1.	**P**
5.3.3	Transformers	Only used in approved SPS.	**P**
5.3.4	Functional insulation .....:	Method c). See appended table 5.3.	**P**
5.3.5	Electromechanical components	No electromechanical components.	**N**
5.3.6	Simulation of faults	Faults in primary/secondary components and operational insulation were already considered during the approval of the SPS. DC fan stalled and ventilation openings blocked tested. See appended table 5.3.	**P**

IEC 60950-1 / EN 60950-1			
Clause	Requirement – Test	Result – Remark	Verdict
5.3.7	Unattended equipment	None of the listed components provided.	**N**
5.3.8	Compliance criteria for abnormal operating and fault conditions	No fire occurs, no emit molten metal, no hazardous.	**P**
6	CONNECTION TO TELECOMMUNICATION NETWORKS		**N**
6.1	Protection of telecommunication network service persons, and users of other equipment connected to the network, from hazards in the equipment		**N**
6.1.1	Protection from hazardous voltages		**N**
6.1.2	Separation of the telecommunication network from earth		**N**
6.1.2.1	Requirements		**N**
	Test voltage (V) .....:		—
	Current in the test circuit (mA) .....:		—
6.1.2.2	Exclusions.....:		**N**
6.2	Protection of equipment users from overvoltages on telecommunication networks		**N**
6.2.1	Separation requirements		**N**
6.2.2	Electric strength test procedure		**N**
6.2.2.1	Impulse test		**N**
6.2.2.2	Steady-state test		**N**
6.2.2.3	Compliance criteria		**N**
6.3	Protection of the telecommunication wiring system from overheating		**N**
	Max. output current (A).....:		—
	Current limiting method .....:		—
7	CONNECTION TO CABLE DISTRIBUTION SYSTEMS		**N**
7.1	Protection of cable distribution system service persons, and users of other equipment connected to the system, from hazardous voltages in the equipment		**N**
7.2	Protection of equipment users from overvoltages on the cable distribution system		**N**
7.3	Insulation between primary circuits and cable distribution systems		**N**
7.3.1	General		**N**
7.3.2	Voltage surge test		**N**
7.3.3	Impulse test		**N**

IEC 60950-1 / EN 60950-1			
Clause	Requirement – Test	Result – Remark	Verdict
A	ANNEX A, TESTS FOR RESISTANCE TO HEAT AND FIRE		**N**
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.1.1	Samples.....:		—
	Wall thickness (mm).....:		—
A.1.2	Conditioning of samples; temperature (°C) .....:		**N**
A.1.3	Mounting of samples .....:		**N**
A.1.4	Test flame (see IEC 60695-11-3)		**N**
	Flame A, B, C or D .....:		—
A.1.5	Test procedure		**N**
A.1.6	Compliance criteria		**N**
	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.2.1	Samples, material.....:		—
	Wall thickness (mm).....:		—
A.2.2	Conditioning of samples		**N**
A.2.3	Mounting of samples .....:		**N**
A.2.4	Test flame (see IEC 60695-11-4)		**N**
	Flame A, B or C .....:		—
A.2.5	Test procedure		**N**
A.2.6	Compliance criteria		**N**
	Sample 1 burning time (s) .....:		—
	Sample 2 burning time (s) .....:		—
	Sample 3 burning time (s) .....:		—
A.2.7	Alternative test acc. to IEC 60695-2-2, cl. 4 and 8		**N**
	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.3.1	Mounting of samples		**N**
A.3.2	Test procedure		**N**
A.3.3	Compliance criterion		**N**

IEC 60950-1 / EN 60950-1			
Clause	Requirement – Test	Result – Remark	Verdict
B	ANNEX B, MOTOR TESTS UNDER ABNORMAL CONDITIONS (see 4.7.2.2 and 5.3.2)		**N**
B.1	General requirements		**N**
	Position .....:		—
	Manufacturer .....:		—
	Type .....:		—
	Rated values .....:		—
B.2	Test conditions		**N**
B.3	Maximum temperatures		**N**
B.4	Running overload test		**N**
B.5	Locked-rotor overload test		**N**
	Test duration (days) .....:		—
	Electric strength test: test voltage (V) .....:		—
B.6	Running overload test for d.c. motors in secondary circuits		**N**
B.7	Locked-rotor overload test for d.c. motors in secondary circuits		**N**
B.7.1	Test procedure		**N**
B.7.2	Alternative test procedure; test time (h).....:		**N**
B.7.3	Electric strength test		**N**
B.8	Test for motors with capacitors		**N**
B.9	Test for three-phase motors		**N**
B.10	Test for series motors		**N**
	Operating voltage (V) .....:		—

C	ANNEX C, TRANSFORMERS (see 1.5.4 and 5.3.3)		**N**
	Position .....:		—
	Manufacturer .....:		—
	Type .....:		—
	Rated values .....:		—
	Method of protection.....:		—
C.1	Overload test		**N**
C.2	Insulation		**N**
	Protection from displacement of windings.....:		**N**

D	ANNEX D, MEASURING INSTRUMENTS FOR TOUCH-CURRENT TESTS (see 5.1.4)		**P**
D.1	Measuring instrument		**P**

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Clause	Requirement – Test	Result – Remark	Verdict
D.2	Alternative measuring instrument		**N**
E	ANNEX E, TEMPERATURE RISE OF A WINDING (see 1.4.13)		**N**
F	ANNEX F, MEASUREMENT OF CLEARANCES AND CREEPAGE DISTANCES (see 2.10)		**P**
G	ANNEX G, ALTERNATIVE METHOD FOR DETERMINING MINIMUM CLEARANCES		**N**
G.1	Summary of the procedure for determining minimum clearances		**N**
G.2	Determination of mains transient voltage (V) .....:		**N**
G.2.1	AC mains supply		**N**
G.2.2	DC mains supply		**N**
G.3	Determination of telecommunication network transient voltage (V).....:		**N**
G.4	Determination of required withstand voltage (V)...:		**N**
G.5	Measurement of transient levels (V).....:		**N**
G.6	Determination of minimum clearances.....:		**N**
H	ANNEX H, IONIZING RADIATION (see 4.3.13)		**N**
J	ANNEX J, TABLE OF ELECTROCHEMICAL POTENTIALS (see 2.6.5.6)		**P**
	Metal used .....:	Metal alloy.	—
K	ANNEX K, THERMAL CONTROLS (see 1.5.3 and 5.3.7)		**N**
K.1	Making and breaking capacity		**N**
K.2	Thermostat reliability; operating voltage (V) .....:		**N**
K.3	Thermostat endurance test; operating voltage (V) .....:		**N**
K.4	Temperature limiter endurance; operating voltage (V) .....:		**N**
K.5	Thermal cut-out reliability		**N**
K.6	Stability of operation		**N**
L	ANNEX L, NORMAL LOAD CONDITIONS FOR SOME TYPES OF ELECTRICAL BUSINESS EQUIPMENT (see 1.2.2.1 and 4.5.1)		**P**
L.1	Typewriters		**N**
L.2	Adding machines and cash registers		**N**

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Clause	Requirement – Test	Result – Remark	Verdict
L.3	Erasers		**N**
L.4	Pencil sharpeners		**N**
L.5	Duplicators and copy machines		**N**
L.6	Motor-operated files		**N**
L.7	Other business equipment	See 1.6.2.	**P**
M	ANNEX M, CRITERIA FOR TELEPHONE RINGING SIGNALS (see 2.3.1)		**N**
M.1	Introduction		**N**
M.2	Method A		**N**
M.3	Method B		**N**
M.3.1	Ringing signal		**N**
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**
M.3.2.1	Conditions for use of a tripping device or a monitoring voltage		**N**
M.3.2.2	Tripping device		**N**
M.3.2.3	Monitoring voltage (V).....:		**N**
N	ANNEX N, IMPULSE TEST GENERATORS (see 2.10.3.4, 6.2.2.1, 7.3.2 and clause G.5)		**N**
N.1	ITU-T impulse test generators		**N**
N.2	IEC 60065 impulse test generator		**N**
P	ANNEX P, NORMATIVE REFERENCES		**P**
Q	ANNEX Q, BIBLIOGRAPHY		**P**
R	ANNEX R, EXAMPLES OF REQUIREMENTS FOR QUALITY CONTROL PROGRAMMES		**N**
R.1	Minimum separation distances for unpopulated coated printed boards (see 2.10.6)		**N**
R.2	Reduced clearances (see 2.10.3)		**N**
S	ANNEX S, PROCEDURE FOR IMPULSE TESTING (see 6.2.2.3)		**N**

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Clause	Requirement – Test	Result – Remark	Verdict
S.1	Test equipment		**N**
S.2	Test procedure		**N**
S.3	Examples of waveforms during impulse testing		**N**
T	ANNEX T, GUIDANCE ON PROTECTION AGAINST INGRESS OF WATER (see 1.1.2)		**N**
			—
U	ANNEX U, INSULATED WINDING WIRES FOR USE WITHOUT INTERLEAVED INSULATION (see 2.10.5.4)		**N**
			—
V	ANNEX V, AC POWER DISTRIBUTION SYSTEMS (see 1.6.1)		**P**
V.1	Introduction	See below.	**P**
V.2	TN power distribution systems	Considered.	**P**
V.3	TT power systems		**N**
V.4	IT power systems	Considered.	**P**
W	ANNEX W, SUMMATION OF TOUCH CURRENTS		**N**
W.1	Touch current from electronic circuits		**N**
W.1.2	Earthed circuits		**N**
W.2	Interconnection of several equipments		**N**
W.2.1	Isolation		**N**
W.2.2	Common return, isolated from earth		**N**
W.2.3	Common return, connected to protective earth		**N**
X	ANNEX X, MAXIMUM HEATING EFFECT IN TRANSFORMER TESTS (see clause C.1)		**N**
X.1	Determination of maximum input current		**N**
X.2	Overload test procedure		**N**
Y	ANNEX Y, ULTRAVIOLET LIGHT CONDITIONING TEST (see 4.3.13.3)		**N**
Y.1	Test apparatus .....:		**N**
Y.2	Mounting of test samples .....:		**N**
Y.3	Carbon-arc light-exposure apparatus .....:		**N**
Y.4	Xenon-arc light exposure apparatus .....:		**N**

IEC 60950-1 / EN 60950-1			
Clause	Requirement – Test	Result – Remark	Verdict
CENELEC COMMON MODIFICATIONS [C], SPECIAL NATIONAL CONDITIONS [S] AND A-DEVIATIONS (NATIONAL DEVIATIONS) [A] (EN 60950-1:2001, Annex ZB and Annex ZC)			**P**
General	C: Delete all the "country" notes in the reference document according to the following list: 1.1.5 Note 2, 1.5.8 Note 2, 1.6.1 Note 1.7.2 Note 4, 1.7.12 Note 2, 2.6 Note 2.2.3 Note, 2.2.4 Note, 2.3.2 Note 2, 7, 8 2.3.3 Note 1, 2, 2.3.4 Note 2,3, 2.7.1 Note 2.10.3.1 Note 4, 3.2.1.1 Note, 3.2.3 Note 1, 2 3.2.5.1 Note 2, 4.3.6 Note 1,2, 4.7.2.2 Note 4.7.3.1 Note 2, 6.1.2.1 Note, 6.1.2.2 Note 6.2.2 Note, 6.2.2.1 Note 2, 6.2.2.2 Note 7 Note 4, 7.1 Note G2.1 Note 1, 2, Annex H Note 2	Deleted.	**P**
1.2.4.1	S (DK): 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.	Appliance inlet provided in approved SPS.	**P**
1.5.1	A (SE, Ordinance 1990:944 and CH, Ordinance on environmentally hazardous substances SR 814.013, Annex 3.2, Mercury): Add NOTE – Switches containing mercury such as thermostats, relays and level controllers are not allowed.	No such switches.	**N**
1.5.8	S (NO): Due to the IT power system used (see annex V, Fig. V.7), capacitors are required to be rated for the applicable line-to-line voltage (230 V).	In approved SPS.	**P**
1.7.2	S (FI, NO, SE): 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:	Shall be evaluated when submitted to national approval.	**N**
	FI: "Laite on liitettävä suojamaadoituskoskettimilla varustettuun pistorasiaan"	Ditto.	**N**
	NO: "Apparatet må tilkoples jordet stikkontakt"	Ditto.	**N**
	SE: "Apparaten skall anslutas till jordat uttag"	Ditto.	**N**
	A (DK, Heavy Current Regulations): Supply cords of class I equipment, which is delivered without a plug, must be provided with a visible tag with the following text: Vigtigt! Lederen med grøn/gul isolation må kun tilsluttes en klemme mærket  eller  If essential for the safety of the equipment, the	No power supply cord provided.	**N**

IEC 60950-1 / EN 60950-1			
Clause	Requirement – Test	Result – Remark	Verdict
	tag must in addition be provided with a diagram which shows the connection of the other conductors, or be provided with the following text: "For tilslutning af de øvrige ledere, se medfølgende instalationsvejledning."		
1.7.5	S (DK): 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.	No socket-outlets.	**N**
1.7.5	A (DK, Heavy Current Regulations): CLASS II EQUIPMENT shall not be fitted with socket-outlets for providing power to other equipment.	Class I equipment.	**N**
1.7.12	A (DE, Gesetz über technische Arbeitsmittel (Gerätesicherheitsgesetz) [Law on technical labour equipment {Equipment safety law}], of 23rd October 1992, Article 3, 3rd paragraph, 2nd sentence, together with the "Allgemeine Verwaltungsvorschrift zur Durchführung des Zweiten Abschnitts des Gerätesicherheitsgesetzes" [General administrative regulation on the execution of the Second Section of the Equipment safety law], of 10th January 1996, article 2, 4th paragraph item 2): Directions for use with rules to prevent certain hazards for (among others) maintenance of the technical labour equipment, also for imported technical labour equipment shall be written in the German language. NOTE: Of this requirement, rules for use even only by service personnel are not exempted.	Shall be evaluated when submitted to national approval.	**P**
1.7.15	A (CH, Ordinance on environmentally hazardous substances SR 814.013): Annex 4.10 of SR 814.013 applies for batteries.	RTC battery are in compliance with requirements of IEC 60950-1. Overall compliance needs to be evaluated during the national approval process.	**N**
	A (DE, Regulation on protection against hazards by X-ray, of 8th January 1987, Article 5 [Operation of X-ray emission source], clauses 1 to 4): a) A licence is required by those who operate an X-ray emission source. b) A licence in accordance with Cl. 1 is not required by those who operate an X-ray emission source on which the electron acceleration voltage does not exceed 20 kV if 1) the local dose rate at a distance of 0,1 m from the surface does not exceed 1 µSv/h and 2) it is adequately indicated on the X-ray emission source that i) X-rays are generated and	This national difference was deleted by A11 of EN 60950-1.	**N**

IEC 60950-1 / EN 60950-1			
Clause	Requirement – Test	Result – Remark	Verdict
	ii) the electron acceleration voltage must not exceed the maximum value stipulated by the manufacturer or importer. c) A licence in accordance with Cl. 1 is also not required by persons who operate an X-ray emission source on which the electron acceleration voltage exceeds 20 kV if 1) the X-ray emission source has been granted a type approval and 2) it is adequately indicated on the X-ray emission source that i) X-rays are generated ii) the device stipulated by the manufacturer or importer guarantees that the maximum permissible local dose rate in accordance with the type approval is not exceeded and iii) the electron acceleration voltage must not exceed the maximum value stipulated by the manufacturer or importer. d) Furthermore, a licence in accordance with Cl. 1 is also not required by persons who operate X-ray emission sources on which the electron acceleration voltage does not exceed 30 kV if 1) the X-rays are generated only by intrinsically safe CRTs complying with Enclosure III, No. 6, 2) the values stipulated in accordance with Enclosure III, No. 6.2 are limited by technical measures and specified in the device and 3) it is adequately indicated on the X-ray emission source that the X-rays generated are adequately screened by the intrinsically safe CRT.		
2.2.4	S (NO): Requirements according to this annex, 1.7.2 and 6.1.2.1 apply.	Shall be evaluated when submitted to national approval.	**N**
2.3.2	S (NO): Requirements according to this annex, 6.1.2.1 apply.	Ditto.	**N**
2.3.3 and 2.3.4	S (NO): Requirements according to this annex, 1.7.2 and 6.1.2.1 apply.	Ditto.	**N**
2.6.3.3	S (GB): The current rating of the circuit shall be taken as 13 A, not 16 A.	Considered.	**P**
2.7.1	C: 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	Replaced.	**P**

IEC 60950-1 / EN 60950-1			
Clause	Requirement – Test	Result – Remark	Verdict
	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.		
	S (GB): To protect against excessive currents and short-circuits in the PRIMARY CIRCUIT OF DIRECT PLUG-IN EQUIPMENT, protective device shall be included as integral parts of the DIRECT PLUG-IN EQUIPMENT.	Not direct plug-in equipment.	**N**
2.7.2	C: Void.	Void.	**N**
2.10.2	C: Replace in the first line "(see also 1.4.7)" by "(see also 1.4.8)".	Replaced.	**P**
2.10.3.1	S (NO): Due to the IT power distribution system used (see annex V, Fig. V.7), the A.C. MAINS SUPPLY voltage is considered to be equal to the line-to-line voltage and will remain at 230 V in case of a single earth fault	Considered.	**P**
3.2.1.1	S (CH): 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, 16 A SEV 5934-2.1998, Plug type 23, L+N+PE 250 V, 16 A	No power supply cord provided.	**N**

IEC 60950-1 / EN 60950-1			
Clause	Requirement – Test	Result – Remark	Verdict
	S (DK): Supply cords of single-phase equipment having a rated current not exceeding 13 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 ply-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.	Ditto.	**N**
	S (ES): 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.	Ditto.	**N**
	S (GB): 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 Socket 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.	Ditto.	**N**

IEC 60950-1 / EN 60950-1			
Clause	Requirement – Test	Result – Remark	Verdict
	S (IE): 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.	Ditto.	**N**
3.2.3	C: Delete Note 1 and in Table 3A, delete the conduit sizes in parentheses.	Ditto.	**N**
3.2.5.1	C: 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[1)] Over 6 up to and including 10 (0,75)[2)] 1,0 Over 10 up to and including 16 (1,0)[3)] 1,5 In the Conditions applicable to Table 3B delete the words "in some countries" in condition [1)]. In Note 1, applicable to Table 3B, delete the second sentence.	Ditto.	**N**
3.2.5.1	S (GB): A power supply cord with conductor of 1,25 mm^2 is allowed for equipment with a rated current over 10 A and up to and including 13 A.	No power supply cord provided.	**N**
3.3.4	C: 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 | | Delete the fifth line: conductor sizes for 13 to 16 A.	Ditto.	**N**
3.3.4	S (GB): 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**
4.3.6	S (GB): The torque test is performed using a socket outlet complying with BS 1363 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, 12.16 and 12.17, except that the test of 12.17 is performed at not less than 125 °C.	Not direct plug-in equipment.	**N**

IEC 60950-1 / EN 60950-1			
Clause	Requirement – Test	Result – Remark	Verdict
	S (IE): 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.	Ditto.	**N**
4.3.13.6	C: Add the following note: NOTE Attention is drawn to 1999/519/EC: Council Recommendation on the limitation of exposure of the general public to electromagnetic fields 0 Hz to 300 GHz. Standards taking into account this recommendation are currently under development.	Added.	**N**
6.1.2.1	S (FI, NO, SE): Add the following text between the first and second paragraph: If this insulation is solid, including insulation forming part of a component, it shall at least consist of either - two layers of thin sheet material, each of which shall pass the electric strength test below, or - one layer having a distance through insulation of at least 0,4 mm, which shall pass the electric strength test below. If this insulation forms part of a semiconductor component (e.g. an optocoupler), there is no distance through insulation requirement for the insulation consisting of an insulating compound completely filling the casing, so that CLEARANCES AND CREEPAGE DISTANCES do not exist, if the component passes the electric strength test in accordance with the compliance clause below and in addition - passes the tests and inspection criteria of 2.10.8 with an electric strength test of 1,5 kV multiplied by 1,6 (the electric strength test of 2.10.7 shall be performed using 1,5 kV), and - is subject to ROUTINGE TESTING for electric strength during manufacturing, using a test voltage of 1,5 kV. It is permitted to bridge this insulation with a capacitor complying with EN 132400:1994, subclass Y2. A capacitor classified Y3 according to EN 132400:1994, may bridge this insulation under the following conditions: - the insulation requirements are satisfied by having a capacitor classified Y3 as defined by EN 132400, which in addition to the Y3 testing, is tested with an impulse test of 2,5 kV defined in EN 60950:2000, 6.2.2.1; - the additional testing shall be performed on all	No TNV.	**N**

IEC 60950-1 / EN 60950-1			
Clause	Requirement – Test	Result – Remark	Verdict
	the test specimens as described in EN 132400; - the impulse test of 2,5 kV is to be performed before the endurance test in EN 132400, in the sequence of tests as described in EN 132400.		
6.1.2.2	S (FI, NO, SE): The exclusions are applicable for PERMANENTLY CONNECTED EQUIPMENT and 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.	Ditto.	**N**
7.1	S (FI, NO, SE): Requirements according to this annex, 6.1.2.1 and 6.1.2.2 apply with the term TELECOMMUNICATION NETWORK in 6.1.2 being replaced by the term CABLE DISTRIBUTION SYSTEM.	Not such equipment.	**N**
G.2.1	S (NO): Due to the IT power distribution system used (see annex V, Fig. V.7), the A.C. MAINS SUPPLY voltage is considered to be equal to the line-to-line voltage, and will remain at 230 V in case of a single earth fault.	Annex G not applied for.	**N**
Annex H	C: Replace the last paragraph of this annex by: At any point 10 cm from the surface of the operator access area, the dose rate shall not exceed 1 µSv/h (0,1 mR/h) (see note). Account is taken of the background level. Replace the notes as follows: NOTE These values appear in Directive 96/29/Euratom. Delete Note 2.	No X-ray.	**N**
Annex P	C: Replace the text of this annex by: See annex ZA.	Replaced.	**P**
Annex Q	C: Replace the title of IEC 61032 by "Protection of persons and equipment by enclosures – Probes for verification". Add the following notes for the standards indicated: IEC 60127 NOTE Harmonized as EN 60127 (Series) (not modified) IEC 60269-2-1 NOTE Harmonized as HD 630.2.1 S4:2000 (modified) IEC 60529 NOTE Harmonized as EN 60529:1991 (not modified) IEC 61032 NOTE Harmonized as EN 61032:1998 (not modified) IEC 61140 NOTE Harmonized as EN 61140:2001 (not modified) ITU-T Recommendation K.31 NOTE in Europe, the suggested document is EN 50083-1.		**P**

IEC 60950-1 / EN 60950-1			
Clause	Requirement – Test	Result – Remark	Verdict

Annex ZA — **P**

C: NORMATIVE REFERENCES TO INTERNATIONAL PUBLICATIONS WITH THEIR RELEVANT EUROPEAN PUBLICATIONS

This European Standard incorporates, by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references, the latest edition of the publication referred to applies (including amendments).

NOTE When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

—	IEC 60050-151
—	IEC 60050-195
EN 60065:1998 + corr. June 1999	IEC 60065 (mod):1998
EN 60073:1996	IEC 60073:1996
HD 566 S1:1990	IEC 60085:1984
HD 214 S2:1980	IEC 60112:1979
HD 611.4.1.S1:1992	IEC 60216-4-1:1990
HD 21 [1)] Series	IEC 60227 (mod) Series
HD 22 [2)] Series	IEC 60245 (mod) Series
EN 60309 Series	IEC 60309 Series
EN 60317-43:1997	IEC 60317-43:1997
EN 60320 Series	IEC 60320 (mod) Series
HD 384.3 S2:1995	IEC 60364-3 (mod):1993
HD 384.4.41 S2:1996	IEC 60364-4-41 (mod):1992 [3)]
EN 132400:1994 [4)] + A2:1998 + A3:1998 + A4:2001	IEC 60384-14:1993
EN 60417-1	IEC 60417-1
HD 625.1 S1:1996 + corr. Nov. 1996	IEC 60664-1 (mod):1992
EN 60695-2-2:1994	IEC 60695-2-2:1991
EN 60695-2-11:2001	IEC 60695-2-11:2000
—	IEC 60695-2-20:1995
—	IEC 60695-10-2:1995
—	IEC 60695-11-3:2000
—	IEC 60695-11-4:2000
EN 60695-11-10:1999	IEC 60695-11-10:1999
EN 60695-11-20:1999	IEC 60695-11-20:1999
EN 60730-1:2000	IEC 60730-1:1999 (mod)
EN 60825-1:1994 + corr. Febr. 1995 + A11:1996 + corr. July 1997	IEC 60825-1:1993
EN 60825-2:2000	IEC 60825-2:2000
—	IEC 60825-9:1999
EN 60851-3:1996	IEC 60851-3:1996
EN 60851-5:1996	IEC 60825-5:1996
EN 60851-6:1996	IEC 60851-6:1996
—	IEC 60885-1:1987
EN 60990:1999	IEC 60990:1999
—	IEC 61058-1:2000
EN 61965:2001	IEC 61965:2000
EN ISO 178:1996	ISO 178:1993
EN ISO 179 Series	ISO 179 Series
EN ISO 180:2000	ISO 180:1993
—	ISO 261:1998
—	ISO 262:1998

IEC 60950-1 / EN 60950-1			
Clause	Requirement – Test	Result – Remark	Verdict
	EN ISO 527 Series — EN ISO 4892 Series — EN ISO 8256:1996 — EN ISO 9773:1998 — — 1) The HD 21 series is related to, but not directly equivalent with the IEC 60227 series 2) The HD 22 series is related to, but not directly equivalent with the IEC 60245 series 3) IEC 60364-4-41:1992 is superseded by IEC 60364-4-41:2001 4) EN 132400, Sectional Specification: Fixed capacitors for electromagnetic interference suppression and connection to the supply mains (Assessment level D), and its amendments are related to, but not directly equivalent to IEC 60384-14	ISO 527 Series ISO 386:1984 ISO 4892 Series ISO 7000:1989 ISO 8256:1990 ISO 9772:1994 ISO 9773:1998 ITU-T:1988 Recommendation K.17 ITU-T:2000 Recommendation K.21	

1.5.1	TABLE: list of critical components				P
Object/part no.	Manufacturer/ trademark	Type/model	Technical data	Standard	Mark(s) of conformity [1.]
Enclosure	--	--	Metal, 1.0mm thick min.	--	--
Switching Power supply	Zippy Technology Corp.	H1U-6250P	I/P: 100-240Vac, 47-63Hz, 4-2A. O/P: DC +5V/23A, +12V/16A, +3.3V/0-14A, -5V/0-0.2A, -12V/0-0.5A, +5Vsb/0.2A; Combined +5V & +3.3V Power 150W max.; Total Output Power 250W max. Tma=50°C. Class I	IEC/EN 60950-1:2001	CB issued by TÜV
DC Fan (Three provided)	Sunonwealth Electric Machine Industry Co., Ltd.	GM1204PQV1-8A	12Vdc, 0.23A, 15.3CFM	EN 60950-1:2001	TÜV
H.D.D. (Optional)	--	--	+5Vdc/0.46A max., +12Vdc/0.56A max.	EN 60950-1:2001	TÜV
RTC Battery (BT1)	Sony Energy Devices Corp.	CR2032	Max. abnormal charging current 10mA.	UL 1642	UL
Polyswitch (FS6, FS7 for USB)	Tyco Electronics Corp. Raychem Circuit Protection Div.	miniSMDC110	8Vdc, 1.1A..	EN 60730-1	TÜV
PCB	--	--	Min. V-1. Min. 105℃.	UL 796	UL
Note(s): 1. An asterisk indicates a mark that assures the agreed level of surveillance.					

1.6.2	TABLE: electrical data (in normal conditions)					P
Fuse #	Irated (A)	U (V)	P (W)	I (A)	Ifuse (A)	Condition/status
F1	--	90 / 47Hz	114.8	1.28	1.28	Maximum normal load.
F1	--	90 / 63Hz	114.8	1.28	1.28	Maximum normal load.
F1	4	100 / 47Hz	114.0	1.15	1.15	Maximum normal load.

F1	4	100 / 63Hz	114.0	1.15	1.15	Maximum normal load.
F1	2	240 / 47Hz	109.4	0.48	0.48	Maximum normal load.
F1	2	240 / 63Hz	109.4	0.50	0.50	Maximum normal load.
F1	--	254.4 / 47Hz	109.2	0.46	0.46	Maximum normal load.
F1	--	254.4 / 63Hz	109.2	0.49	0.49	Maximum normal load.
F1	--	264 / 47Hz	109.7	0.47	0.47	Maximum normal load.
F1	--	264 / 63Hz	109.7	0.47	0.47	Maximum normal load.
Note(s): Maximum normal load: This equipment is operated on data link mode and loads the dummy loads of 2.5W in each USB port (Two provided).						

2.1.1.5	TABLE: max. V, A, VA test				**P**
Voltage (rated) (V)	Current (rated) (A)	Voltage (max.) (V)	Current (max.) (A)	VA (max.) (VA)	
For LAN (RJ-45) port:					
--	--	0	0	0	
For CONSOLE port:					
--	--	10.87	0.0088	0.1	
USB (Upward) port:					
--	--	5.17	2.0	8.44	
USB (Downward) port:					
--	--	5.18	2.1	8.82	
Note(s):					

2.1.1.7	TABLE: discharge test			**N**
Condition	τ calculated (s)	τ measured (s)	t u→ 0V (s)	Comments
Note(s):				

2.2.2	TABLE: Hazardous voltage measurement			**N**
Transformer	Location	max. Voltage		Voltage Limitation Component
		V peak	V d.c.	
Note(s):				

2.2.3	TABLE: SEL voltage measurement	N

Location	Voltage measured (V)	Comments

Note(s):

2.4.2	TABLE: limited current circuit measurement	N

Location	Voltage (V)	Current (mA)	Freq. (kHz)	Limit (mA)	Comments

Note(s):

2.5	TABLE: limited power source measurement	P

	Limits	Measured	Verdict
According to Table 2B (normal condition) USB port (Upward), Uoc = 5.17Vdc			
current (in A)	8	2.0	**P**
apparent power (in VA)	5 x Uoc = 25.85	8.44	**P**
According to Table 2B (normal condition) USB port (Downward), Uoc = 5.18Vdc			
current (in A)	8	2.1	**P**
apparent power (in VA)	5 x Uoc = 25.90	8.82	**P**

Note(s):

2.6.3.3	TABLE: ground continue test	P

Location	Resistance measured (mΩ)	Comments
PE pin of AC inlet to metallic chassis	8.6	25A, 1min.

Note(s):

2.10.2	Table: working voltage measurement	N

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

Note(s):

2.10.3 and 2.10.4	TABLE: clearance and creepage distance measurements					**N**
Clearance cl and creepage distance dcr at/of:	U p (V)	U r.m.s. (V)	Required cl (mm)	cl (mm)	Required dcr (mm)	dcr (mm)
Note(s):						

2.10.5	TABLE: distance through insulation measurements				**N**
Distance through insulation di at/of:	U r.m.s. (V)	Test voltage (V)	Required di (mm)	di (mm)	
Note(s):					

4.5.1	TABLE: maximum temperatures			**P**
	test voltage (V) .....:	a) 90Vac b) 264Vac		—
	t1 (°C) .....:	--		—
	t2 (°C) .....:	--		—
Maximum temperature T of part/at:		T (°C)		allowed T_{max} (°C)
Condition: Normal operation				
Test Voltage:		a)	b)	--
For switching power supply:				
L1 coil		60.3	58.8	125
L2 coil		55.9	53.8	125
L3 coil		62.4	63.2	130
L10 coil		62.9	60.5	130
T1 coil		55.5	56.5	110
T2 coil		43.2	44.6	110
For main board:				
PCB near CPU		48.1	49.3	105
PCB near U11		51.7	52.4	105
PCB near U12		45.8	46.7	105
RTC Battery		42.2	43.2	--
PCB near U31		69.6	70.6	105
PCB near T1		44.7	46.2	105

For other parts:			
HDD	43.3	45.3	--
Enclosure outside, near switching power supply	41.4	42.5	70
Ambient	40.0	40.0	--

Temperature T of winding:	R_1 (Ω)	R_2 (Ω)	T (°C)	allowed T_{max} (°C)	insulation class

Note(s):

1. The temperatures were measured under worst normal mode defined in 1.2.2.1 and as described in sub-clause 1.6.2 and at voltages as described above.
2. The user's manual defines the T_{mra} at 40°C. Therefore the maximum permitted temperature are recalculated for the worst T_{amb} at 40°C.
3. Heat sink without fin type was used for CPU during heating test.

4.5.2	TABLE: ball pressure test of thermoplastic parts		**N**
	allowed impression diameter (mm) ..... :	≤ 2 mm	—

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

Note(s):

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

Location	Size (mm)	Comments
Top side	--	No openings.
Front side	--	No openings.
Rear side	Max. 6.8 mm diameter	Several hexagon openings provided, no hazardous parts within 5° projection area.
Right / Left side	Max. 3.2 mm diameter	Several ellipse openings provided, each do not exceed 5.0 mm in any dimension.
Rear opening for SPS	Max. 38 mm diameter	Covered by fan guard, no hazardous parts within 5° projection area.
Bottom side	--	No openings.
Note(s):		

4.7	Table: resistance to fire	**P**

Part	Manufacturer of material	Type of material	Thickness (mm)	Flammability class
PCB	--	--	--	Min. V-1

Note(s):				

5.1.6	TABLE: touch current measurement			**P**
Condition	L→ terminal A (mA)	N → terminal A (mA)	Limit (mA)	Comments
Switch On	1.1	1.1	3.5	To output terminal
Switch On	1.1	1.1	3.5	To metallic enclosure
Switch Off	0.01	2.5	3.5	To output terminal
Switch Off	0.01	2.5	3.5	To metallic enclosure
Note(s):				

5.2	TABLE: electric strength tests and impulse tests	**P**
Test voltage applied between:	Test voltage (V)	Breakdown
Unit: primary and PE	3000 Vdc	No
Unit: primary and secondary	4242 Vdc	No
Note(s):		

5.3	TABLE: fault condition tests		**P**
	ambient temperature (°C) ..... :	25°C if no otherwise specified.	—
	model/type of power supply ..... :	See appended table 1.5.1	—
	manufacturer of power supply ..... :	See appended table 1.5.1	—
	rated markings of power supply ..... :	See appended table 1.5.1	—

No.	Component no.	Fault	Test voltage (V)	Test time	Fuse no.	Fuse current (A)	Result
1	Ventilation openings	Block	240Vac	3.0 h	F1	0.14	Unit shut down. Max. temp. of T1 coil = 90.3°C, T2 coil = 71.9°C. No damage, no hazard.
2	DC Fan (Left)	Stall	240Vac	1.0 h	F1	0.5	Unit operated normally. Max. temp. of T1 coil = 40.6°C, T2 coil = 29.0°C. No damage, no hazard.
3	DC Fan (Middle)	Stall	240Vac	1.0 h	F1	0.5	Unit operated normally. Max. temp. of T1 coil = 40.2°C, T2 coil = 28.8°C. No damage, no hazard.
4	DC Fan (Right)	Stall	240Vac	1.5 h	F1	0.5	Unit operated normally. Max. temp. of T1 coil = 40.2°C, T2 coil = 28.7°C. No damage, no hazard.

5	DD5, Pin 1-2 (For RTC battery charging)	s-c	--	2 h	--	--	No hazards. Current = 3.2mA.
6	R554 (For RTC battery charging)	s-c	--	2 h	--	--	No hazards. Current = 0mA.
Note(s): In fault column: s-c=short-circuited. Heat sink without fin type was used for CPU during fault condition tests.							

C.2	Safety isolation transformer		**N**
	Construction details:		
Transformer part name:			
Manufacturer:			
Type:			
Recurring peak voltage			
Required clearance for reinforced insulation (from table 2H and 2J)			
Effective voltage rms			
Required creepage distance for reinforced insulation (from table 2L)			
Measured min. creepage distance			
Location		inside (mm)	outside (mm)
Measured min. clearances			
Location		inside (mm)	outside (mm)
Construction:			

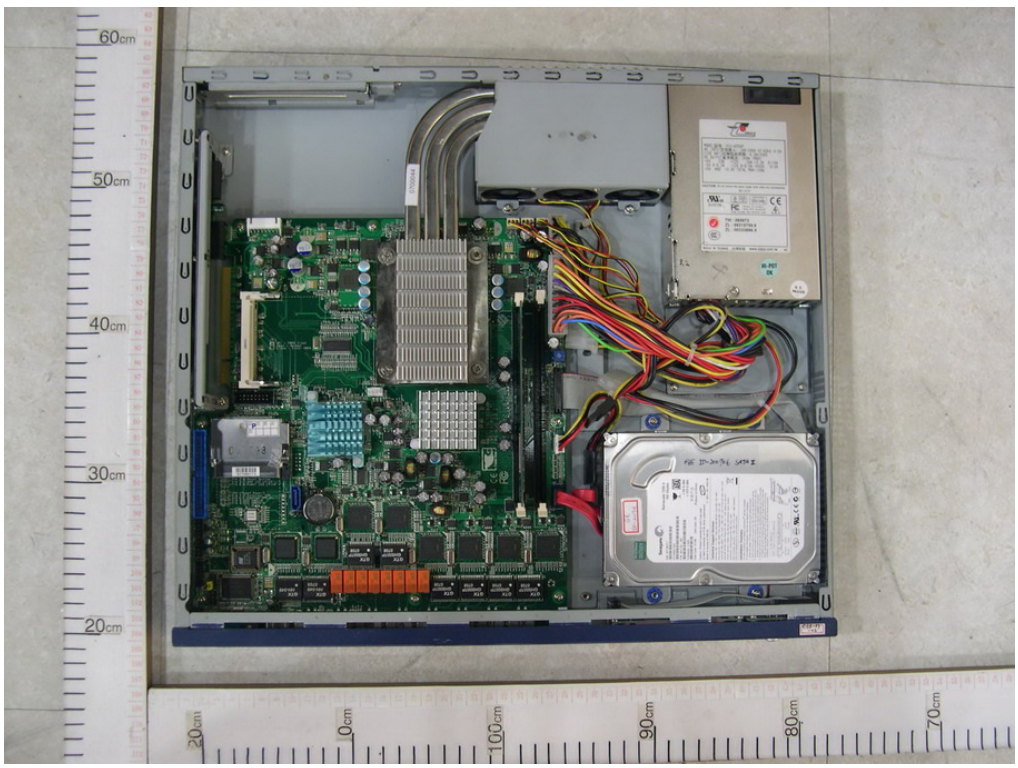
Pin numbers	
Prim.	
Sec.	
Bobbin	
Material	
Thickness	
Electric strength test	
With V a.c. after humidity treatment	
Result	

Photo(s)

Photo(s)

(Without fin type heat sink)

(With fin type heat sink)



Photo