



Ref. Certif. No.

JPTUV-031480

IEC SYSTEM FOR MUTUAL RECOGNITION OF TEST
CERTIFICATES FOR ELECTRICAL EQUIPMENT
(IECEE) CB SCHEME

SYSTEME CEI D'ACCEPTATION MUTUELLE DE
CERTIFICATS D'ESSAIS DES EQUIPEMENTS
ELECTRIQUES (IECEE) METHODE OC

CB TEST CERTIFICATE CERTIFICAT D'ESSAI OC

Product
Produit

LCD Monitor

Name and address of the applicant
Nom et adresse du demandeur

NEC Display Solutions, Ltd.
4-13-23 Shibaura
Minato-ku, Tokyo, 108-0023 JAPAN

Name and address of the manufacturer
Nom et adresse du fabricant

NEC Display Solutions, Ltd.
4-13-23 Shibaura
Minato-ku, Tokyo, 108-0023 JAPAN

Name and address of the factory
Nom et adresse de l'usine

See additional page(s)

Rating and principal characteristics
Valeurs nominales et caractéristiques principales

AC 100-240V; 50/60Hz: 1.64-0.65A; Class I

Trade mark (if any)
Marque de fabrique (si elle existe)

NEC

Model/type Ref.
Ref. de type

L279TV

Additional information (if necessary)
Information complémentaire (si nécessaire)

A sample of the product was tested and found
to be in conformity with
Un échantillon de ce produit a été essayé et a été
considéré conforme à la

IEC 60950-1:2005
National differences see test report

As shown in the Test Report Ref. No. which forms part
of this Certificate
Comme indiqué dans le Rapport d'essais numéro de
référence qui constitue une partie de ce Certificat

11019968 001

This CB Test Certificate is issued by the National Certification Body
Ce Certificat d'essai OC est établi par l'Organisme National de Certification



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Global Technology Assessment Center
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Web: www.tuv.com

Date: 26.03.2010

Signature:

Dipl.-Ing. W. Hsu

1. TPV Displays Polska Sp. z o.o.
ul. Zlotego Smoka 9
66-400 Gorzów Wlkp.
Poland
2. Toshin Technology Shenzhen Factory
Block 8, Townfull Industrial Park
Dalang Street
Baoan District, Shenzhen
P.R. China

Additional information (if necessary)
Information complémentaire (si nécessaire)

Date: 26.03.2010

Signature:


Dipl.-Ing. W. Hsu



Test Report issued under the responsibility of:



TEST REPORT

IEC 60950-1: 2005 (2nd Edition) and/or EN 60950-1:2006 Information technology equipment – Safety – Part 1: General requirements

Report Reference No: 11019968 001

Date of issue: March 23th, 2010

Total number of pages: 81

CB/CCA Testing Laboratory: TÜV Rheinland Taiwan Ltd., Taichung Laboratory.

Address: 10F, No. 219, Min Chuan Rd., Taichung 403, Taiwan

Applicant's name: NEC Display Solutions, Ltd.

Address: 4-13-23 Shibaura Minato-ku, Tokyo 108-0023 JAPAN

Manufacturer's name: Same as applicant

Address: Same as applicant

Factory's name: See page 5

Address: See page 5

Test specification:

Standard: ☒ IEC 60950-1:2005 (2nd Edition) and/or
☒ EN 60950-1:2006 + A11:2009

Test procedure: CB

Non-standard test method: N/A

Test Report Form No: IECEN60950_1C

Test Report Form(s) Originator: SGS Fimko Ltd

Master TRF: Dated 2007-06

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If this Test Report Form is used by non-CCA members, the CIG logo and the reference to the CCA Procedure shall be removed.

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

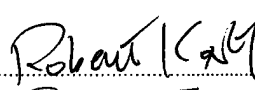
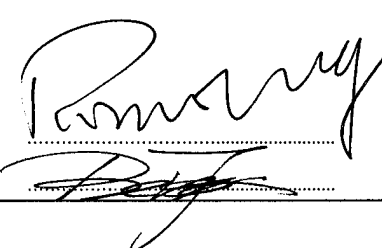
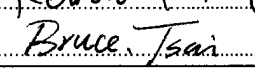
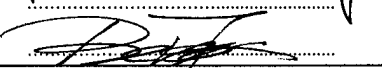
Test item description: LCD Monitor

Trade Mark: **NEC**

Manufacturer: Same as applicant

Model/Type reference: L279TV

Ratings: I/P: 100-240V~, 50/60Hz, 1.64-0.65A

Testing procedure and testing location:	
☒ CB/CCA Testing Laboratory: Testing location/ address..... :	Refer to cover page Refer to cover page
☐ Associated CB Laboratory: Testing location/ address..... :	
Tested by (name + signature) :	 
Approved by (+ signature) :	 
☐ Testing procedure: TMP Tested by (name + signature) : Approved by (+ signature) : Testing location/ address..... :	
☐ Testing procedure: WMT Tested by (name + signature) : Witnessed by (+ signature) : Approved by (+ signature) : Testing location/ address..... :	
☐ Testing procedure: SMT Tested by (name + signature) : Approved by (+ signature) : Supervised by (+ signature) : Testing location/ address..... :	
☐ Testing procedure: RMT Tested by (name + signature) : Approved by (+ signature) : Supervised by (+ signature) : Testing location/ address..... :	

All tests as described in Test Case and Measurement Sections were performed at the laboratory described on page 2.

Test item particulars	
Equipment mobility	☒ movable ☐ hand-held ☐ transportable ☒ stationary ☐ for building-in ☐ direct plug-in
Connection to the mains	☒ pluggable equipment ☐ permanent connection ☒ detachable power supply cord ☐ non-detachable power supply cord ☐ not directly connected to the mains
Operating condition	☒ continuous ☐ rated operating / resting time:
Access location	☒ operator accessible ☐ restricted access location
Over voltage category (OVC)	☐ OVC I ☒ OVC II ☐ OVC III ☐ OVC IV ☐ other:
Mains supply tolerance (%) or absolute mains supply values	± 10
Tested for IT power systems	☒ Yes ☐ No
IT testing, phase-phase voltage (V)	230V for Norway
Class of equipment	☒ Class I ☐ Class II ☐ Class III ☐ Not classified
Considered current rating (A)	16 (20A for North America countries)
Pollution degree (PD)	☐ PD 1 ☒ PD 2 ☐ PD 3
IP protection class	IPX0
Altitude during operation (m)	Not over 3048m
Altitude of test laboratory (m)	Not over 200m
Mass of equipment (kg)	Unit: 9.6kg Stand: 4.0kg Hood: 0.85kg Speaker: 0.37kg
Possible test case verdicts:	
- test case does not apply to the test object	N/A
- test object does meet the requirement	P (Pass)
- test object does not meet the requirement	F (Fail)
Testing	
Date of receipt of test item	February, 2010
Date(s) of performance of tests	February - March, 2010
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.

Note: This TRF includes EN Group Differences together with National Differences and Special National Conditions, if any. All Differences are located in the Appendix to the main body of this TRF.

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

General product information:

The equipment model L279TV is a 27" LCD monitor for general office use.

The equipment mobility is defined as movable with stand and stationary for mounted on the wall or ceiling.

This equipment can be either placed on a desk or mounted on the wall or ceiling, the user's manual specified the relevant information for mounting accessories, mounting location and installation instruction.

This unit can be operated in horizontal and vertical orientation (rotation the screen, turn clockwise from landscape to portrait or counter-clockwise from portrait to landscape).

This equipment consists of following critical components:

- TFT LCD module with lamp
- There is a non-approved built-in switching power supply provided inside of LCD monitor and evaluated with unit together (refer to appended table 1.5.1 for source details).
- DC/AC inverter board
- Secondary function control board (as main board, SELV circuits; with DisplayPort and DVI connector).
- Plastic enclosure (Mechanical enclosure).
- Metal enclosure (Fire enclosure).

Other comments:

Factory:

1. Toshin Technology Shenzhen Factory
Block 8, Townfull Industrial Park, Dalang Street, Baoan District, Shenzhen, P.R. China
2. TPV Displays Polska Sp. z o.o.
ul. Złotego Smoka 9, 66-400 Gorzów Wlkp., Poland

The manufacturer's declaration, that the samples tested represent the products from each factory, is available

Attachments to this Test Report:

- Photo Documentation
- National Differences
- Measurement Section

IEC/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	See appended table 1.5.1.	P
1.5.2	Evaluation and testing of components	Components certified to IEC standards and/or their harmonized standards, are used within their ratings and are checked for correct application.	P
1.5.3	Thermal controls	No thermal control.	N/A
1.5.4	Transformers	Transformers used are suitable for the intended application and comply with the relevant requirements of the standard and particularly with those of Annex C.	P
1.5.5	Interconnecting cables	Interconnection o/p cable to other device is carrying only SELV on an energy level below 240VA. Except for the insulation material, there are no further requirements for the o/p interconnection cable.	P
1.5.6	Capacitors bridging insulation	Between lines: min. X2 type capacitors according to IEC 60384-14 with 21 days damp heat test were used. Two Y2-type capacitors in series are according to IEC 60384-14 with 21 days damp heat test was provided between primary and SELV circuit. Between line/neutral and PB: Y2 capacitors according to IEC 60384-14.	P
1.5.7	Resistors bridging insulation	See below.	P
1.5.7.1	Resistors bridging functional, basic or supplementary insulation	The bleeder resistors are located after fuse and fuse as providing protective device while short circuit.	P

IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
1.5.7.2	Resistors bridging double or reinforced insulation between a.c. mains and other circuits		N/A
1.5.7.3	Resistors bridging double or reinforced insulation between a.c. mains and antenna or coaxial cable		N/A
1.5.8	Components in equipment for IT power systems		N/A
1.5.9	Surge suppressors	See below.	P
1.5.9.1	General		P
1.5.9.2	Protection of VDRs	Certified and suitable rating of varistor used. See appended table 1.5.1 for details.	P
1.5.9.3	Bridging of functional insulation by a VDR	A varistor provided and located after fuse which bridging functional insulation.	P
1.5.9.4	Bridging of basic insulation by a VDR		N/A
1.5.9.5	Bridging of supplementary, double or reinforced insulation by a VDR		N/A

1.6	Power interface		P
1.6.1	AC power distribution systems	TN power system. IT power system for Norway.	P
1.6.2	Input current	See appended table 1.6.2.	P
1.6.3	Voltage limit of hand-held equipment	This appliance is not hand-held equipment.	N/A
1.6.4	Neutral conductor	The neutral is not identified in the equipment. Reinforced insulation for rated voltage between secondary parts and primary phases.	P

1.7	Marking and instructions		P
1.7.1	Power rating	Marking plate is located on back of enclosure. Details see below.	P
	Rated voltage(s) or voltage range(s) (V)	See copy of marking plate.	P
	Symbol for nature of supply, for d.c. only	Mains from AC source.	N/A
	Rated frequency or rated frequency range (Hz) ...	See copy of marking plate.	P
	Rated current (mA or A)	See copy of marking plate.	P
	Manufacturer's name or trade-mark or identification mark	See copy of marking plate.	P
	Model identification or type reference	See copy of marking plate.	P

IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
	Symbol for Class II equipment only	Class I equipment.	N/A
	Other markings and symbols	Other markings and symbols do not give rise to misunderstanding.	P
1.7.2	Safety instructions and marking	See below.	P
1.7.2.1	General	The user's manual contains information for operation, installation, servicing, transport, storage and technical data. The operation guide is provided to the user.	P
1.7.2.2	Disconnect devices	Appliance inlet is provided as disconnection device.	P
1.7.2.3	Overcurrent protective device		N/A
1.7.2.4	IT power distribution systems	Shall be evaluated when submitted for Norway national approval.	N/A
1.7.2.5	Operator access with a tool	No operator access area with tool.	N/A
1.7.2.6	Ozone		N/A
1.7.3	Short duty cycles		N/A
1.7.4	Supply voltage adjustment		N/A
	Methods and means of adjustment; reference to installation instructions		N/A
1.7.5	Power outlets on the equipment		N/A
1.7.6	Fuse identification (marking, special fusing characteristics, cross-reference)	Marking on PCB under fuses as follow: F1 T5AH 250V F2 T5AH 250V F101 T1AH 250V F201 T2AH 250V	P
1.7.7	Wiring terminals	See below.	P
1.7.7.1	Protective earthing and bonding terminals	Appliance inlet provided. Terminal for protective bonding conductor marked with symbol according to IEC 60417-1-IEC-5019.	P
1.7.7.2	Terminals for a.c. mains supply conductors	The equipment is provided with an appliance inlet for connection of a detachable type power supply cord.	N/A
1.7.7.3	Terminals for d.c. mains supply conductors	No such conductors.	N/A

IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
1.7.8	Controls and indicators	See below.	P
1.7.8.1	Identification, location and marking	The marking and indication of the stand-by switch was located that indication of function is clearly.	P
1.7.8.2	Colours		N/A
1.7.8.3	Symbols according to IEC 60417	Marking according 60417-1-IEC- 5009 (line half inside circle) provided above the stand-by switch.	P
1.7.8.4	Markings using figures	No such devices.	N/A
1.7.9	Isolation of multiple power sources	Only one supply from the mains.	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 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
1.7.12	Removable parts	No removable parts provided.	N/A
1.7.13	Replaceable batteries	No batteries provided.	N/A
	Language(s)		—
1.7.14	Equipment for restricted access locations	Equipment is not intended for use in restricted access locations.	N/A

2	PROTECTION FROM HAZARDS		P
2.1	Protection from electric shock and energy hazards		P
2.1.1	Protection in operator access areas	See below.	P
2.1.1.1	Access to energized parts	No access with test finger and test pin to any parts with only basic insulation to ELV or hazardous voltage. Any hazardous parts accessible are unlikely.	P
	Test by inspection	Complied.	P

IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
	Test with test finger (Figure 2A)	Complied.	P
	Test with test pin (Figure 2B)	Complied.	P
	Test with test probe (Figure 2C)	No TNV circuit.	N/A
2.1.1.2	Battery compartments	No battery compartments.	N/A
2.1.1.3	Access to ELV wiring	No ELV wiring in operator accessible area.	N/A
	Working voltage (V_{peak} or V_{rms}); minimum distance through insulation (mm)		—
2.1.1.4	Access to hazardous voltage circuit wiring	No hazardous voltage wiring in operator accessible area.	N/A
2.1.1.5	Energy hazards	Energy dose not exceed 240VA between any two points in o/p connector of secondary circuit. See attachment measurement section table 2.1.1.5.	P
2.1.1.6	Manual controls	No manual controls.	N/A
2.1.1.7	Discharge of capacitors in equipment	No risk of electric shock, see below.	P
	Measured voltage (V); time-constant (s)	See attachment measurement section table 2.1.1.7.	—
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 maintenance work in operation mode necessary.	N/A
2.1.3	Protection in restricted access locations	The unit is not limited to be used in restricted access locations.	N/A

2.2	SELV circuits		P
2.2.1	General requirements	See below.	P
2.2.2	Voltages under normal conditions (V)	See attachment measurement section table 2.2.2.	P
2.2.3	Voltages under fault conditions (V)	See attachment measurement section table 2.2.3.	P
2.2.4	Connection of SELV circuits to other circuits	See sub-clauses 1.5.6, 2.2.2, 2.2.3 and 2.4.	P

IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
2.3	TNV circuits		N/A
2.3.1	Limits		N/A
	Type of TNV circuits		—
2.3.2	Separation from other circuits and from accessible parts		N/A
2.3.2.1	General requirements		N/A
2.3.2.2	Protection by basic insulation		N/A
2.3.2.3	Protection by earthing		N/A
2.3.2.4	Protection by other constructions		N/A
2.3.3	Separation from hazardous voltages		N/A
	Insulation employed.....		—
2.3.4	Connection of TNV circuits to other circuits		N/A
	Insulation employed.....		—
2.3.5	Test for operating voltages generated externally		N/A
2.4	Limited current circuits		P
2.4.1	General requirements	See below.	P
2.4.2	Limit values	See attachment measurement section table 2.4.2.	P
	Frequency (Hz)	Same as above.	—
	Measured current (mA).....	Same as above.	—
	Measured voltage (V)	Same as above.	—
	Measured circuit capacitance (nF or μ F).....	Same as above.	—
2.4.3	Connection of limited current circuits to other circuits	Output circuit as limited current circuit connected to other circuits.	P
2.5	Limited power sources		P
	a) Inherently limited output		N/A
	b) Impedance limited output	See attachment measurement section table 2.5.	P
	c) Regulating network limited output under normal operating and single fault condition	See attachment measurement section table 2.5.	P
	d) Overcurrent protective device limited output		N/A
	Max. output voltage (V), max. output current (A), max. apparent power (VA).....	See attachment measurement section table 2.5.	—

IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
	Current rating of overcurrent protective device (A)		—
2.6	Provisions for earthing and bonding		P
2.6.1	Protective earthing	One protective bonding conductor (green/yellow wire) connected reliably from the approved appliance inlet (hook-in and with secured heat shrink tube) to the PCB by the soldering pin.	P
2.6.2	Functional earthing	Secondary functional earthing is separated to primary by double or reinforce insulation or by basic insulation and protective earthing.	P
2.6.3	Protective earthing and protective bonding conductors	See below.	P
2.6.3.1	General	No power supply cord provided. See sub-clause 2.6.3.4.	P
2.6.3.2	Size of protective earthing conductors	No power cord provided.	N/A
	Rated current (A), cross-sectional area (mm ²), AWG		—
2.6.3.3	Size of protective bonding conductors	Evaluation by test. Rated current below 16A (20A for North America).	N/A
	Rated current (A), cross-sectional area (mm ²), AWG		—
	Protective current rating (A), cross-sectional area (mm ²), AWG		—
2.6.3.4	Resistance of earthing conductors and their terminations; resistance (Ω), voltage drop (V), test current (A), duration (min)	See attachment measurement section table 2.6.3.4 for test result.	P
2.6.3.5	Colour of insulation	See sub-clause 2.6.1.	P
2.6.4	Terminals	See sub-clauses 2.6.4.1 to 2.6.4.3.	N/A
2.6.4.1	General	See below.	N/A
2.6.4.2	Protective earthing and bonding terminals	Appliance inlet used.	N/A
	Rated current (A), type, nominal thread diameter (mm)		—

IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
2.6.4.3	Separation of the protective earthing conductor from protective bonding conductors	Appliance inlet provided. Only one protective bonding terminal provided.	N/A
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 DC output connector shall provide 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	Appliance inlet provided.	P
2.6.5.4	Parts that can be removed by an operator	Plug or inlet, the earth connection is made before and broken after the hazardous voltage removed. No other operator removable parts.	P
2.6.5.5	Parts removed during servicing	It is not necessary to disconnect the earth connection except for the removing of the earthed part itself.	P
2.6.5.6	Corrosion resistance	All safety earthing connections in compliance with Annex J.	P
2.6.5.7	Screws for protective bonding	Only ISO thread screw with spring washer used in metal chassis for protective bonding. No self-tapping or spaced thread screws.	P
2.6.5.8	Reliance on telecommunication network or cable distribution system	No TNV.	N/A

2.7	Overcurrent and earth fault protection in primary circuits		P
2.7.1	Basic requirements	Equipment relies on 16A (20A for North America countries) rated fuse or circuit breaker of the wall outlet installation protection of the building installation in regard to L to N short-circuit. Over current protection is provided by the built-in fuse.	P
	Instructions when protection relies on building installation	Neither pluggable equipment type B nor permanently connected equipment.	N/A

IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
2.7.2	Faults not simulated in 5.3.7	The protection devices are well dimensioned and mounted.	P
2.7.3	Short-circuit backup protection	Pluggable equipment type A, the building installation is considered as providing short-circuit backup protection.	P
2.7.4	Number and location of protective devices	Two built-in fuse provided on the mains conductor.	P
2.7.5	Protection by several devices	Two fuses provided.	P
2.7.6	Warning to service personnel	CAUTION DOUBLE POLE/NEUTRAL FUSING	P

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
2.8.5	Moving parts		N/A
2.8.6	Overriding		N/A
2.8.7	Switches and relays		N/A
2.8.7.1	Contact gaps (mm)		N/A
2.8.7.2	Overload test		N/A
2.8.7.3	Endurance test		N/A
2.8.7.4	Electric strength test		N/A
2.8.8	Mechanical actuators		N/A

2.9	Electrical insulation		P
2.9.1	Properties of insulating materials	Natural rubber, asbestos or hygroscopic materials are not used.	P
2.9.2	Humidity conditioning	Tested for 48 hrs.	P
	Relative humidity (%), temperature (°C)	95% R.H., 25°C	—
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	See below.	P
	Method(s) used	Method 1 used.	—

IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
2.10	Clearances, creepage distances and distances through insulation		P
2.10.1	General	See below.	P
2.10.1.1	Frequency	The frequency does not exceeding 30kHz.	P
2.10.1.2	Pollution degrees	Pollution degree 2.	P
2.10.1.3	Reduced values for functional insulation	See sub-clause 5.3.4.	P
2.10.1.4	Intervening unconnected conductive parts	No such conductive parts.	N/A
2.10.1.5	Insulation with varying dimensions	Not applicable.	N/A
2.10.1.6	Special separation requirements	No TNV circuit.	N/A
2.10.1.7	Insulation in circuits generating starting pulses	No lamps.	N/A
2.10.2	Determination of working voltage	See below.	P
2.10.2.1	General	The rms and the peak voltage were measured on the switching power supply. The unit was connected to a 240V TN power system.	P
2.10.2.2	RMS working voltage	See attachment measurement section table 2.10.2.	P
2.10.2.3	Peak working voltage	See attachment measurement section table 2.10.2.	P
2.10.3	Clearances	See below and alternative method of annex G is not considered.	P
2.10.3.1	General	Annex F and minimum clearances considered.	P
2.10.3.2	Mains transient voltages	Normal transient voltage considered.	P
	a) AC mains supply	Overvoltage category II for primary circuit and transient voltage 2500Vpeak.	P
	b) Earthed d.c. mains supplies		N/A
	c) Unearthed d.c. mains supplies		N/A
	d) Battery operation		N/A
2.10.3.3	Clearances in primary circuits	See appended table 2.10.3 and 2.10.4.	P
2.10.3.4	Clearances in secondary circuits	Refer to sub-clause 5.3.4.	N/A
2.10.3.5	Clearances in circuits having starting pulses		N/A
2.10.3.6	Transients from a.c. mains supply	See sub-clause 2.10.3.2.	P

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Clause	Requirement + Test	Result - Remark	Verdict
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	See sub-clause 2.10.3.6.	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
2.10.4	Creepage distances	See below.	P
2.10.4.1	General	See appended table 2.10.3 and 2.10.4.	P
2.10.4.2	Material group and comparative tracking index	Material group IIIb is assumed to be used.	P
	CTI tests	CTI rating for all materials are min. 100.	—
2.10.4.3	Minimum creepage distances	See appended table 2.10.3 and 2.10.4.	P
2.10.5	Solid insulation	Complied with 2.10.5.2 to 2.10.5.14 and 5.2.	P
2.10.5.1	General	See below.	P
2.10.5.2	Distances through insulation	See appended table 2.10.5.	P
2.10.5.3	Insulating compound as solid insulation	Certified sources of photo couplers used. No other components applied for. See sub-clause 2.10.5.2 and 2.10.10.	P
2.10.5.4	Semiconductor devices	For photo couplers see sub-clause 2.10.5.3.	P
2.10.5.5	Cemented joints		N/A
2.10.5.6	Thin sheet material – General	No thin sheet.	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	See sub-clause 2.10.5.12.	P

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Clause	Requirement + Test	Result - Remark	Verdict
2.10.5.12	Wire in wound components	Certified source of triple insulated wire used in T101 and T201.	P
	Working voltage	See attachment measurement section table C.2.	P
	a) Basic insulation not under stress		N/A
	b) Basic, supplementary, reinforced insulation	Reinforced insulation, 3 layers extruded type.	P
	c) Compliance with Annex U	Certified source.	P
	Two wires in contact inside wound component; angle between 45° and 90°	Prevented by margin tape.	P
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
	- Supplementary, reinforced insulation		N/A
2.10.6	Construction of printed boards	See below.	P
2.10.6.1	Uncoated printed boards	See appended table 2.10.3 and 2.10.4.	P
2.10.6.2	Coated printed boards		N/A
2.10.6.3	Insulation between conductors on the same inner surface of a printed board		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	See appended table 2.10.3 and 2.10.4.	P
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	Certified sources of photo couplers used.	P

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Clause	Requirement + Test	Result - Remark	Verdict
2.10.10	Test for Pollution Degree 1 environment and insulating compound	Certified sources of photo couplers used.	P
2.10.11	Tests for semiconductor devices and cemented joints		N/A
2.10.12	Enclosed and sealed parts		N/A

3	WIRING, CONNECTIONS AND SUPPLY		P
3.1	General		P
3.1.1	Current rating and overcurrent protection	All internal wires are UL recognized wiring which is PVC insulated, rated 300V, VW-1, min. 80°C. Internal wiring is PVC insulated, the wiring gauge is suitable for current intended to be carried.	P
3.1.2	Protection against mechanical damage	Wires do not touch sharp edges. Where they touch heatsinks additional tubing is provided so that the heatsink cannot damage the insulation and cause hazard.	P
3.1.3	Securing of internal wiring	Internal wires are secured by solder with glue or solder with solder pin so that a loosening of the terminal connection is unlikely.	P
3.1.4	Insulation of conductors	The insulation of the individual conductors is suitable for the application and the working voltage. For the insulation material see 3.1.1.	P
3.1.5	Beads and ceramic insulators		N/A
3.1.6	Screws for electrical contact pressure	No such screws provided.	N/A
3.1.7	Insulating materials in electrical connections	All connections are metal to metal.	P
3.1.8	Self-tapping and spaced thread screws	No screw used.	N/A
3.1.9	Termination of conductors	All conductors are reliably secured.	P
	10 N pull test	10N pull test performed for all relevant conductors. No hazards caused hereby.	P
3.1.10	Sleeving on wiring	No sleeving on internal wiring used as supplementary insulation.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict

3.2	Connection to a mains supply		P
3.2.1	Means of connection	Appliance inlet used.	P
3.2.1.1	Connection to an a.c. mains supply	Same as above.	P
3.2.1.2	Connection to a d.c. mains supply		N/A
3.2.2	Multiple supply connections	Single supply connection.	N/A
3.2.3	Permanently connected equipment	Unit is not permanently connected equipment.	N/A
	Number of conductors, diameter of cable and conduits (mm)		—
3.2.4	Appliance inlets	The appliance inlet complies with IEC/EN 60320-1. The power cord can be inserted without difficulties and is not intended to support the equipment.	P
3.2.5	Power supply cords	No power supply cords provided.	N/A
3.2.5.1	AC power supply cords	Same as above.	N/A
	Type		—
	Rated current (A), cross-sectional area (mm ²), AWG		—
3.2.5.2	DC power supply cords		N/A
3.2.6	Cord anchorages and strain relief		N/A
	Mass of equipment (kg), pull (N)		—
	Longitudinal displacement (mm)		—
3.2.7	Protection against mechanical damage	No parts under this unit likely to damage the power supply cord. Enclosure without sharp edges.	P
3.2.8	Cord guards	No cord guard.	N/A
	Diameter or minor dimension D (mm); test mass (g)		—
	Radius of curvature of cord (mm)		—
3.2.9	Supply wiring space	Appliance inlet provided.	N/A
3.3	Wiring terminals for connection of external conductors		N/A
3.3.1	Wiring terminals		N/A
3.3.2	Connection of non-detachable power supply cords		N/A
3.3.3	Screw terminals		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
3.3.4	Conductor sizes to be connected		N/A
	Rated current (A), cord/cable type, cross-sectional area (mm ²)		—
3.3.5	Wiring terminal sizes		N/A
	Rated current (A), type, nominal thread diameter (mm)		—
3.3.6	Wiring terminal design		N/A
3.3.7	Grouping of wiring terminals		N/A
3.3.8	Stranded wire		N/A

3.4	Disconnection from the mains supply		P
3.4.1	General requirement	See below.	P
3.4.2	Disconnect devices	Appliance inlet is provided as disconnection device.	P
3.4.3	Permanently connected equipment	Not permanently connected equipment.	N/A
3.4.4	Parts which remain energized	When power cord is removed from inlet (or wall socket) no remaining parts with hazardous voltage in the equipment.	P
3.4.5	Switches in flexible cords	Not such components.	N/A
3.4.6	Number of poles - single-phase and d.c. equipment	The appliance inlet disconnects both poles simultaneously.	P
3.4.7	Number of poles - three-phase equipment	Single phase.	N/A
3.4.8	Switches as disconnect devices	Refer to 3.4.2.	N/A
3.4.9	Plugs as disconnect devices	Same as above.	N/A
3.4.10	Interconnected equipment	Interconnection of the power supply to the other equipment by secondary output connectors only.	N/A
3.4.11	Multiple power sources	Single mains supply.	N/A

3.5	Interconnection of equipment		P
3.5.1	General requirements	The power supply is not considered for connection to TNV.	P
3.5.2	Types of interconnection circuits	Interconnection circuits of SELV through secondary output connectors.	P
3.5.3	ELV circuits as interconnection circuits	No ELV interconnection.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
3.5.4	Data ports for additional equipment	The data ports are comply with sub-clause 2.5.	P

4	PHYSICAL REQUIREMENTS		P
4.1	Stability		P
	Angle of 10°	The equipment does not overbalance when tilted to 10 degrees (evaluated in horizontal and vertical orientation).	P
	Test force (N)	Equipment is not a floor standing unit.	N/A

4.2	Mechanical strength		P
4.2.1	General	See below. After tests, unit complies with the requirements of sub-clauses 2.1.1 and 2.10.	P
4.2.2	Steady force test, 10 N	10N applied to all components other than enclosure.	P
4.2.3	Steady force test, 30 N	30N on internal enclosure.	P
4.2.4	Steady force test, 250 N	250N on top, side, bottom of enclosure and no damaged.	P
4.2.5	Impact test	See below.	P
	Fall test	No hazard as result from steel sphere ball impact test applied for top/side/bottom enclosure.	P
	Swing test	No hazard as result from steel sphere ball impact test for top/side/bottom enclosure.	P
4.2.6	Drop test; height (mm)		N/A
4.2.7	Stress relief test	After 7 hours at 70°C (highest temperature of inside plastic enclosure) and cooling down to room temperature, no shrinkage, distortion or loosening of any enclosure part that was noticeable on the equipment.	P
4.2.8	Cathode ray tubes	No CRT in the unit.	N/A
	Picture tube separately certified		N/A
4.2.9	High pressure lamps	No high pressure lamp provided.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
4.2.10	Wall or ceiling mounted equipment; force (N) :	No any hazards after applied additional force 32.46kg.	P

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 provided.	N/A
4.3.3	Adjustable controls	No controls provided.	N/A
4.3.4	Securing of parts	Mechanical fixings in such a way designed that they will withstand mechanical stress occurring in normal use.	P
4.3.5	Connection by plugs and sockets	Mismatching of connectors neither possible nor result in any hazards.	P
4.3.6	Direct plug-in equipment	Not direct plug-in equipment.	N/A
	Torque :		—
	Compliance with the relevant mains plug standard :		N/A
4.3.7	Heating elements in earthed equipment	No such elements.	N/A
4.3.8	Batteries	No batteries.	N/A
	- Overcharging of a rechargeable battery		N/A
	- Unintentional charging of a non-rechargeable battery		N/A
	- Reverse charging of a rechargeable battery		N/A
	- Excessive discharging rate for any battery		N/A
4.3.9	Oil and grease	Insulation in intended use not considered to be exposed to oil or grease.	N/A
4.3.10	Dust, powders, liquids and gases	Equipment is intended use not considered to be exposed to these.	N/A
4.3.11	Containers for liquids or gases	Neither container for liquids nor gases provided.	N/A
4.3.12	Flammable liquids :	No flammable liquids provided.	N/A
	Quantity of liquid (l) :		N/A
	Flash point (°C) :		N/A
4.3.13	Radiation	See below.	P
4.3.13.1	General	See below.	P

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Clause	Requirement + Test	Result - Remark	Verdict
4.3.13.2	Ionizing radiation		N/A
	Measured radiation (pA/kg)		—
	Measured high-voltage (kV)		—
	Measured focus voltage (kV)		—
	CRT markings		—
4.3.13.3	Effect of ultraviolet (UV) radiation on materials		N/A
	Part, property, retention after test, flammability classification		N/A
4.3.13.4	Human exposure to ultraviolet (UV) radiation		N/A
4.3.13.5	Laser (including LEDs)	The LED used as indicating light.	P
	Laser class		—
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
4.4.3	Protection in restricted access locations		N/A
4.4.4	Protection in service access areas		N/A

4.5	Thermal requirements		P
4.5.1	General	No exceeding temperature.	P
4.5.2	Temperature tests	See appended table 4.5.	P
	Normal load condition per Annex L	See Annex L.	—
4.5.3	Temperature limits for materials	See appended table 4.5.	P
4.5.4	Touch temperature limits	See appended table 4.5.	P
4.5.5	Resistance to abnormal heat	Phenolic bobbin material used in T101, T102, L301, L1 and L2, which are acceptable without test. For others, see appended table.	P

4.6	Openings in enclosures		P
4.6.1	Top and side openings	See below.	P
	Dimensions (mm)	See attachment measurement section table 4.6.1, 4.6.2.	—
4.6.2	Bottoms of fire enclosures	See below.	P

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Clause	Requirement + Test	Result - Remark	Verdict
	Construction of the bottom, dimensions (mm) :	See attachment measurement section table 4.6.1, 4.6.2.	—
4.6.3	Doors or covers in fire enclosures	No doors or covers provided.	N/A
4.6.4	Openings in transportable equipment		N/A
4.6.4.1	Constructional design measures		N/A
	Dimensions (mm) :		—
4.6.4.2	Evaluation measures for larger openings		N/A
4.6.4.3	Use of metallized parts		N/A
4.6.5	Adhesives for constructional purposes		N/A
	Conditioning temperature (°C), time (weeks) :		—

4.7	Resistance to fire		P
4.7.1	Reducing the risk of ignition and spread of flame	See below.	P
	Method 1, selection and application of components wiring and materials	Use of materials with the required flammability classes.	P
	Method 2, application of all of simulated fault condition tests		N/A
4.7.2	Conditions for a fire enclosure	See below.	P
4.7.2.1	Parts requiring a fire enclosure	With having the following parts: • Components in primary • Insulated wiring The fire enclosure is required.	P
4.7.2.2	Parts not requiring a fire enclosure	Fire enclosure is required. Refer to 4.7.2.1.	N/A
4.7.3	Materials		P
4.7.3.1	General	See appended table 1.5.1 for details.	P
4.7.3.2	Materials for fire enclosures	Metal chassis and plastic enclosure is rated 5VB.	P
4.7.3.3	Materials for components and other parts outside fire enclosures	Enclosure of speaker is rated HB or better.	P
4.7.3.4	Materials for components and other parts inside fire enclosures	The material is made of V-2 material.	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 components provided.	N/A

5	ELECTRICAL REQUIREMENTS AND SIMULATED ABNORMAL CONDITIONS	P
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IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
5.1	Touch current and protective conductor current		P
5.1.1	General	See sub-clauses 5.1.2 to 5.1.6.	P
5.1.2	Configuration of equipment under test (EUT)	See below.	P
5.1.2.1	Single connection to an a.c. mains supply	EUT has only single AC mains connection.	P
5.1.2.2	Redundant multiple connections to an a.c. mains supply		N/A
5.1.2.3	Simultaneous multiple connections to an a.c. mains supply		N/A
5.1.3	Test circuit	Test circuit in Figure 5A used.	P
5.1.4	Application of measuring instrument	Measuring instruments as in annex D used.	P
5.1.5	Test procedure	The touch current was measured from mains to metal chassis and to a 10 cm × 20 cm metal foil wrapped on accessible non-conductive parts (plastic enclosure).	P
5.1.6	Test measurements	See attachment measurement section table 5.1.6.	P
	Supply voltage (V)	See attachment measurement section table 5.1.6.	—
	Measured touch current (mA)	See attachment measurement section table 5.1.6.	—
	Max. allowed touch current (mA)	See attachment measurement section table 5.1.6.	—
	Measured protective conductor current (mA)		—
	Max. allowed protective conductor current (mA)...		—
5.1.7	Equipment with touch current exceeding 3,5 mA	Not exceeded.	N/A
5.1.7.1	General		N/A
5.1.7.2	Simultaneous multiple connections to the supply		N/A
5.1.8	Touch currents to telecommunication networks and cable distribution systems and from telecommunication networks	No TNV circuit connection.	N/A
5.1.8.1	Limitation of the touch current to a telecommunication network or to a cable distribution system		N/A
	Supply voltage (V)		—
	Measured touch current (mA)		—
	Max. allowed touch current (mA)		—

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Clause	Requirement + Test	Result - Remark	Verdict
5.1.8.2	Summation of touch currents from telecommunication networks		N/A
	a) EUT with earthed telecommunication ports :		N/A
	b) EUT whose telecommunication ports have no reference to protective earth		N/A

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

5.3	Abnormal operating and fault conditions		P
5.3.1	Protection against overload and abnormal operation	See appended table 5.3.	P
5.3.2	Motors	No motors.	N/A
5.3.3	Transformers	With the shorted o/p of the transformer, no high temperature of the transformer was recorded. Results of the short-circuit tests see appended table 5.3 and Annex C.	P
5.3.4	Functional insulation	Method c). See appended table 5.3	P
5.3.5	Electromechanical components	No electromechanical component provided.	N/A
5.3.6	Audio amplifiers in ITE		N/A
5.3.7	Simulation of faults	See appended table 5.3.	P
5.3.8	Unattended equipment		N/A
5.3.9	Compliance criteria for abnormal operating and fault conditions	See below.	P
5.3.9.1	During the tests	Neither fire burns the equipment nor molten metal.	P
5.3.9.2	After the tests	Electric strength test primary to secondary, primary to earth and primary to accessible enclosure wrapped with metal foil were passed.	P

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

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Clause	Requirement + Test	Result - Remark	Verdict
6.1.1	Protection from hazardous voltages		N/A
6.1.2	Separation of the telecommunication network from earth		N/A
6.1.2.1	Requirements		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
6.3	Protection of the telecommunication wiring system from overheating		N/A
	Max. output current (A)		—
	Current limiting method		—
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
A	ANNEX A, TESTS FOR RESISTANCE TO HEAT AND FIRE		P
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)		P
A.1.1	Samples		—

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

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Clause	Requirement + Test	Result - Remark	Verdict
B.1	General requirements		N/A
	Position		—
	Manufacturer		—
	Type		—
	Rated values		—
B.2	Test conditions		N/A
B.3	Maximum temperatures		N/A
B.4	Running overload test		N/A
B.5	Locked-rotor overload test		N/A
	Test duration (days)		—
	Electric strength test: test voltage (V)		—
B.6	Running overload test for d.c. motors in secondary circuits		N/A
B.6.1	General		N/A
B.6.2	Test procedure		N/A
B.6.3	Alternative test procedure		N/A
B.6.4	Electric strength test; test voltage (V)		N/A
B.7	Locked-rotor overload test for d.c. motors in secondary circuits		N/A
B.7.1	General		N/A
B.7.2	Test procedure		N/A
B.7.3	Alternative test procedure		N/A
B.7.4	Electric strength test; test voltage (V)		N/A
B.8	Test for motors with capacitors		N/A
B.9	Test for three-phase motors		N/A
B.10	Test for series motors		N/A
	Operating voltage (V)		—

C	ANNEX C, TRANSFORMERS (see 1.5.4 and 5.3.3)		P
	Position	T101, T201	—
	Manufacturer	Refer to appended table 1.5.1.	—
	Type	Refer to appended table 1.5.1.	—
	Rated values	Refer to appended table 1.5.1.	—
	Method of protection	Over current protection by circuit design.	—

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Clause	Requirement + Test	Result - Remark	Verdict
C.1	Overload test	See appended table 5.3.	P
C.2	Insulation	See appended table 5.2.	P
	Protection from displacement of windings..... :	See attachment measurement section table C.2.	P

D	ANNEX D, MEASURING INSTRUMENTS FOR TOUCH-CURRENT TESTS (see 5.1.4)		P
D.1	Measuring instrument	Figure D.1 used.	P
D.2	Alternative measuring instrument		N/A

E	ANNEX E, TEMPERATURE RISE OF A WINDING (see 1.4.13)		N/A
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F	ANNEX F, MEASUREMENT OF CLEARANCES AND CREEPAGE DISTANCES (see 2.10 and Annex G)		P
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G	ANNEX G, ALTERNATIVE METHOD FOR DETERMINING MINIMUM CLEARANCES		N/A
G.1	Clearances		N/A
G.1.1	General		N/A
G.1.2	Summary of the procedure for determining minimum clearances		N/A
G.2	Determination of mains transient voltage (V)		N/A
G.2.1	AC mains supply		N/A
G.2.2	Earthed d.c. mains supplies		N/A
G.2.3	Unearthed d.c. mains supplies		N/A
G.2.4	Battery operation		N/A
G.3	Determination of telecommunication network transient voltage (V)		N/A
G.4	Determination of required withstand voltage (V)		N/A
G.4.1	Mains transients and internal repetitive peaks		N/A
G.4.2	Transients from telecommunication networks		N/A
G.4.3	Combination of transients		N/A
G.4.4	Transients from cable distribution systems		N/A
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

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	b) Transients from a telecommunication network		N/A
G.6	Determination of minimum clearances		N/A
H	ANNEX H, IONIZING RADIATION (see 4.3.13)		N/A
J	ANNEX J, TABLE OF ELECTROCHEMICAL POTENTIALS (see 2.6.5.6)		P
	Metal(s) used		—
K	ANNEX K, THERMAL CONTROLS (see 1.5.3 and 5.3.8)		N/A
K.1	Making and breaking capacity		N/A
K.2	Thermostat reliability; operating voltage (V)		N/A
K.3	Thermostat endurance test; operating voltage (V) :		N/A
K.4	Temperature limiter endurance; operating voltage (V)		N/A
K.5	Thermal cut-out reliability		N/A
K.6	Stability of operation		N/A
L	ANNEX L, NORMAL LOAD CONDITIONS FOR SOME TYPES OF ELECTRICAL BUSINESS EQUIPMENT (see 1.2.2.1 and 4.5.2)		P
L.1	Typewriters		N/A
L.2	Adding machines and cash registers		N/A
L.3	Erasers		N/A
L.4	Pencil sharpeners		N/A
L.5	Duplicators and copy machines		N/A
L.6	Motor-operated files		N/A
L.7	Other business equipment	See summary of testing on page 3 for details.	P
M	ANNEX M, CRITERIA FOR TELEPHONE RINGING SIGNALS (see 2.3.1)		N/A
M.1	Introduction		N/A
M.2	Method A		N/A
M.3	Method B		N/A
M.3.1	Ringling signal		N/A
M.3.1.1	Frequency (Hz)		—
M.3.1.2	Voltage (V)		—
M.3.1.3	Cadence; time (s), voltage (V)		—

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M.3.1.4	Single fault current (mA)		—
M.3.2	Tripping device and monitoring voltage		N/A
M.3.2.1	Conditions for use of a tripping device or a monitoring voltage		N/A
M.3.2.2	Tripping device		N/A
M.3.2.3	Monitoring voltage (V)		N/A
N	ANNEX N, IMPULSE TEST GENERATORS (see 1.5.7.2, 1.5.7.3, 2.10.3.9, 6.2.2.1, 7.3.2, 7.4.3 and Clause G.5)		N/A
N.1	ITU-T impulse test generators		N/A
N.2	IEC 60065 impulse test generator		N/A
P	ANNEX P, NORMATIVE REFERENCES		—
Q	ANNEX Q, Voltage dependent resistors (VDRs) (see 1.5.9.1)		P
	a) Preferred climatic categories		P
	b) Maximum continuous voltage		P
	c) Pulse current		P
R	Annex R, EXAMPLES OF REQUIREMENTS FOR QUALITY CONTROL PROGRAMMES		N/A
R.1	Minimum separation distances for unpopulated coated printed boards (see 2.10.6.2)		N/A
R.2	Reduced clearances (see 2.10.3)		N/A
S	ANNEX S, PROCEDURE FOR IMPULSE TESTING (see 6.2.2.3)		N/A
S.1	Test equipment		N/A
S.2	Test procedure		N/A
S.3	Examples of waveforms during impulse testing		N/A
T	ANNEX T, GUIDANCE ON PROTECTION AGAINST INGRESS OF WATER (see 1.1.2)		N/A
			—
U	ANNEX U, INSULATED WINDING WIRES FOR USE WITHOUT INTERLEAVED INSULATION (see 2.10.5.4)		P
		Certified components used.	—

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V	ANNEX V, AC POWER DISTRIBUTION SYSTEMS (see 1.6.1)		P
V.1	Introduction	See below.	P
V.2	TN power distribution systems	Single-phase TN power system considered and used for testing.	P
W	ANNEX W, SUMMATION OF TOUCH CURRENTS		N/A
W.1	Touch current from electronic circuits		N/A
W.1.1	Floating circuits		N/A
W.1.2	Earthed circuits		N/A
W.2	Interconnection of several equipments		N/A
W.2.1	Isolation		N/A
W.2.2	Common return, isolated from earth		N/A
W.2.3	Common return, connected to protective earth		N/A
X	ANNEX X, MAXIMUM HEATING EFFECT IN TRANSFORMER TESTS (see clause C.1)		N/A
X.1	Determination of maximum input current		N/A
X.2	Overload test procedure		N/A
Y	ANNEX Y, ULTRAVIOLET LIGHT CONDITIONING TEST (see 4.3.13.3)		N/A
Y.1	Test apparatus		N/A
Y.2	Mounting of test samples		N/A
Y.3	Carbon-arc light-exposure apparatus		N/A
Y.4	Xenon-arc light exposure apparatus		N/A
Z	ANNEX Z, OVERVOLTAGE CATEGORIES (see 2.10.3.2 and Clause G.2)		P
AA	ANNEX AA, MANDREL TEST (see 2.10.5.8)		N/A
BB	ANNEX BB, CHANGES IN THE SECOND EDITION		—

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Clause	Requirement + Test				Result - Remark	Verdict																																																																								
EN 60950-1:2006 – CENELEC COMMON MODIFICATIONS																																																																														
Contents	Add the following annexes: Annex ZA (normative) Normative references to international publications with their corresponding European publications Annex ZB (normative) Special national conditions Annex ZC (informative) A-deviations					P																																																																								
General	Delete all the “country” notes in the reference document according to the following list: <table><tr><td>1.4.8</td><td>Note 2</td><td>1.5.1</td><td>Note 2 & 3</td><td>1.5.7.1</td><td>Note</td></tr><tr><td>1.5.8</td><td>Note 2</td><td>1.5.9.4</td><td>Note</td><td>1.7.2.1</td><td>Note 4, 5 & 6</td></tr><tr><td>2.2.3</td><td>Note</td><td>2.2.4</td><td>Note</td><td>2.3.2</td><td>Note</td></tr><tr><td>2.3.2.1</td><td>Note 2</td><td>2.3.4</td><td>Note 2</td><td>2.6.3.3</td><td>Note 2 & 3</td></tr><tr><td>2.7.1</td><td>Note</td><td>2.10.3.2</td><td>Note 2</td><td>2.10.5.13</td><td>Note 3</td></tr><tr><td>3.2.1.1</td><td>Note</td><td>3.2.4</td><td>Note 3.</td><td>2.5.1</td><td>Note 2</td></tr><tr><td>4.3.6</td><td>Note 1 & 2</td><td>4.7</td><td>Note 4</td><td>4.7.2.2</td><td>Note</td></tr><tr><td>4.7.3.1</td><td>Note 2</td><td>5.1.7.1</td><td>Note 3 & 4</td><td>5.3.7</td><td>Note 1</td></tr><tr><td>6</td><td>Note 2 & 5</td><td>6.1.2.1</td><td>Note 2</td><td>6.1.2.2</td><td>Note</td></tr><tr><td>6.2.2</td><td>Note 6.</td><td>2.2.1</td><td>Note 2</td><td>6.2.2.2</td><td>Note</td></tr><tr><td>7.1</td><td>Note 3</td><td>7.2</td><td>Note</td><td>7.3</td><td>Note 1 & 2</td></tr><tr><td>G.2.1</td><td>Note 2</td><td>Annex H</td><td>Note 2</td><td></td><td></td></tr></table>					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	4.7.3.1	Note 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
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																																																																									
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7.1	Note 3	7.2	Note	7.3	Note 1 & 2																																																																									
G.2.1	Note 2	Annex H	Note 2																																																																											
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.					P																																																																								
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					N/A																																																																								
1.7.2.1	Add the following NOTE: NOTE Z1 In addition, the instructions shall include, as far as applicable, a warning that excessive sound pressure from earphones and headphones can cause hearing loss					N/A																																																																								

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Clause	Requirement + Test	Result - Remark	Verdict												
2.7.1	Replace the subclause as follows: Basic requirements To protect against excessive current, short-circuits and earth faults in PRIMARY CIRCUITS, protective devices shall be included either as integral parts of the equipment or as parts of the building installation, subject to the following, a), b) and c): a) except as detailed in b) and c), protective devices necessary to comply with the requirements of 5.3 shall be included as parts of the equipment; b) for components in series with the mains input to the equipment such as the supply cord, appliance coupler, r.f.i. filter and switch, short-circuit and earth fault protection may be provided by protective devices in the building installation; 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.		P												
2.7.2	This subclause has been declared 'void'.		N/A												
3.2.3	Delete the NOTE in Table 3A, and delete also in this table the conduit sizes in parentheses.		N/A												
3.2.5.1	Replace "60245 IEC 53" by "H05 RR-F"; "60227 IEC 52" by "H03 VV-F or H03 VVH2-F"; "60227 IEC 53" by "H05 VV-F or H05 VVH2-F2". In Table 3B, replace the first four lines by the following: <table><tr><td> Up to and including 6</td><td></td><td>0,75 ^{a)}</td><td> </td></tr><tr><td> Over 6 up to and including 10</td><td>(0,75) ^{b)}</td><td>1,0</td><td> </td></tr><tr><td> Over 10 up to and including 16</td><td>(1,0) ^{c)}</td><td>1,5</td><td> </td></tr></table> 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.	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			N/A
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													
3.3.4	In Table 3D, delete the fourth line: conductor sizes for 10 to 13 A, and replace with the following: <table><tr><td> Over 10 up to and including 16</td><td>1,5 to 2,5</td><td> </td><td>1,5 to 4</td><td> </td></tr></table> Delete the fifth line: conductor sizes for 13 to 16 A.	Over 10 up to and including 16	1,5 to 2,5		1,5 to 4			N/A							
Over 10 up to and including 16	1,5 to 2,5		1,5 to 4												
4.3.13.6	Add the following NOTE: 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. Standards taking into account this Recommendation which demonstrate compliance with the applicable EU Directive are indicated in the OJEC.		N/A												

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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.		N/A
Bibliography	Additional EN standards.		—

ZA	NORMATIVE REFERENCES TO INTERNATIONAL PUBLICATIONS WITH THEIR CORRESPONDING EUROPEAN PUBLICATIONS	—
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ZB	SPECIAL NATIONAL CONDITIONS	P
1.2.4.1	In Denmark , certain types of Class I appliances (see 3.2.1.1) may be provided with a plug not establishing earthing conditions when inserted into Danish socket-outlets.	N/A
1.5.7.1	In Finland, Norway and Sweden , resistors bridging BASIC INSULATION in CLASS I PLUGGABLE EQUIPMENT TYPE A must comply with the requirements in 1.5.7.2.	N/A
1.5.8	In Norway , due to the IT power system used (see annex V, Figure V.7), capacitors are required to be rated for the applicable line-to-line voltage (230 V).	P
1.5.9.4	In Finland, Norway and Sweden , the third dashed sentence is applicable only to equipment as defined in 6.1.2.2 of this annex.	N/A
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 suojamaadoituskoskettimilla varustettuun pistorasiaan" In Norway: "Apparatet må tilkoples jordet stikkontakt" In Sweden: "Apparaten skall anslutas till jordat uttag"	N/A
1.7.5	In Denmark , socket-outlets for providing power to other equipment shall be in accordance with the Heavy Current Regulations, Section 107-2-D1, Standard Sheet DK 1-3a, DK 1-5a or DK 1-7a, when used on Class I equipment. For STATIONARY EQUIPMENT the socket-outlet shall be in accordance with Standard Sheet DK 1-1b or DK 1-5a.	N/A
2.2.4	In Norway , for requirements see 1.7.2.1, 6.1.2.1 and 6.1.2.2 of this annex.	N/A
2.3.2	In Finland, Norway and Sweden there are additional requirements for the insulation. See 6.1.2.1 and 6.1.2.2 of this annex.	N/A
2.3.4	In Norway , for requirements see 1.7.2.1, 6.1.2.1 and 6.1.2.2 of this annex.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict																								
2.6.3.3	In the United Kingdom , the current rating of the circuit shall be taken as 13 A, not 16 A.		P																								
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.		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.		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: <table border="0"> <tr> <td>SEV 6532-2.1991</td><td>Plug Type 15</td><td>3P+N+PE</td><td>250/400 V, 10 A</td></tr> <tr> <td>SEV 6533-2.1991</td><td>Plug Type 11</td><td>L+N</td><td>250 V, 10 A</td></tr> <tr> <td>SEV 6534-2.1991</td><td>Plug Type 12</td><td>L+N+PE</td><td>250 V, 10 A</td></tr> </table> 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: <table border="0"> <tr> <td>SEV 5932-2.1998</td><td>Plug Type 25</td><td>3L+N+PE</td><td>230/400 V, 16 A</td></tr> <tr> <td>SEV 5933-2.1998</td><td>Plug Type 21</td><td>L+N</td><td>250 V, 16 A</td></tr> <tr> <td>SEV 5934-2.1998</td><td>Plug Type 23</td><td>L+N+PE</td><td>250 V, 16 A</td></tr> </table>	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	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		N/A
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SEV 5934-2.1998	Plug Type 23	L+N+PE	250 V, 16 A																								
3.2.1.1	In Denmark, 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 poly-phase equipment and single-phase equipment having a RATED CURRENT exceeding 13 A is provided with a supply cord with a plug, this plug shall be in accordance with the Heavy Current Regulations, Section 107-2-D1 or EN 60309-2.		N/A																								
3.2.1.1	In Spain, supply cords of single-phase equipment having a rated current not exceeding 10 A shall be provided with a plug according to UNE 20315:1994. Supply cords of single-phase equipment having a rated current not exceeding 2,5 A shall be provided with a plug according to UNE-EN 50075:1993. CLASS I EQUIPMENT provided with socket-outlets with earth contacts or which are intended to be used in locations where protection against indirect contact is required according to the wiring rules, shall be provided with a plug in accordance with standard UNE 20315:1994. If poly-phase equipment is provided with a supply cord with a plug, this plug shall be in accordance with UNE-EN 60309-2.		N/A																								

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Clause	Requirement + Test	Result - Remark	Verdict
3.2.1.1	In the United Kingdom , apparatus which is fitted with a flexible cable or cord and is designed to be connected to a mains socket conforming to BS 1363 by means of that flexible cable or cord and plug, shall be fitted with a 'standard plug' in accordance with Statutory Instrument 1768:1994 - The Plugs and Sockets etc. (Safety) Regulations 1994, unless exempted by those regulations. NOTE 'Standard plug' is defined in SI 1768:1994 and essentially means an approved plug conforming to BS 1363 or an approved conversion plug.		N/A
3.2.1.1	In Ireland , apparatus which is fitted with a flexible cable or cord and is designed to be connected to a mains socket conforming to I.S. 411 by means of that flexible cable or cord and plug, shall be fitted with a 13 A plug in accordance with Statutory Instrument 525:1997 - National Standards Authority of Ireland (section 28) (13 A Plugs and Conversion Adaptors for Domestic Use) Regulations 1997.		N/A
3.2.4	In Switzerland , for requirements see 3.2.1.1 of this annex.		N/A
3.2.5.1	In the United Kingdom , a power supply cord with conductor of 1,25 mm ² is allowed for equipment with a rated current over 10 A and up to and including 13 A.		N/A
3.3.4	In the United Kingdom , the range of conductor sizes of flexible cords to be accepted by terminals for equipment with a RATED CURRENT of over 10 A up to and including 13 A is: • 1,25 mm ² to 1,5 mm ² nominal cross-sectional area.		N/A
4.3.6	In the United Kingdom , the torque test is performed using a socket outlet complying with BS 1363 part 1:1995, including Amendment 1:1997 and Amendment 2:2003 and the plug part of DIRECT PLUG-IN EQUIPMENT shall be assessed to BS 1363: Part 1, 12.1, 12.2, 12.3, 12.9, 12.11, 12.12, 12.13, 12.16 and 12.17, except that the test of 12.17 is performed at not less than 125 °C. Where the metal earth pin is replaced by an Insulated Shutter Opening Device (ISOD), the requirements of clauses 22.2 and 23 also apply.		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.		N/A
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.		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
6.1.2.1	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. 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 2.10.11 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. 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 60950-1:2006, 6.2.2.1; - the additional testing shall be performed on all 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.		N/A
6.1.2.2	In Finland, Norway and Sweden, the exclusions are applicable for PERMANENTLY CONNECTED EQUIPMENT, PLUGGABLE EQUIPMENT TYPE B and equipment intended to be used in a RESTRICTED ACCESS LOCATION where equipotential bonding has been applied, e.g. in a telecommunication centre, and which has provision for a permanently connected PROTECTIVE EARTHING CONDUCTOR and is provided with instructions for the installation of that conductor by a SERVICE PERSON.		N/A
7.2	In Finland, Norway and Sweden, for requirements see 6.1.2.1 and 6.1.2.2 of this annex. The term TELECOMMUNICATION NETWORK in 6.1.2 being replaced by the term CABLE DISTRIBUTION SYSTEM.		N/A
7.3	In Norway and Sweden, there are many buildings where the screen of the coaxial cable is normally not connected to the earth in the building installation.		N/A
7.3	In Norway, for installation conditions see EN 60728-11:2005.		N/A
ZC	A-DEVIATIONS (informative)		P

IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
1.5.1	Sweden (Ordinance 1990:944) Add the following: NOTE In Sweden, switches containing mercury are not permitted.		N/A
1.5.1	Switzerland (Ordinance on environmentally hazardous substances SR 814.081, Annex 1.7, Mercury - Annex 1.7 of SR 814.81 applies for mercury.) Add the following: NOTE In Switzerland, switches containing mercury such as thermostats, relays and level controllers are not allowed.		N/A
1.7.2.1	Denmark (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 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 installationsvejledning."		N/A
1.7.2.1	Germany (Gesetz über technische Arbeitsmittel und Verbraucherprodukte (Geräte- und Produktsicherheitsgesetz – GPSG) [Law on technical labour equipment and consumer products], of 6th January 2004, Section 2, Article 4, Clause (4), Item 2). If for the assurance of safety and health certain rules during use, amending or maintenance of a technical labour equipment or readymade consumer product are to be followed, a manual in German language has to be delivered when placing the product on the market. Of this requirement, rules for use even only by SERVICE PERSONS are not exempted.		P
1.7.5	Denmark (Heavy Current Regulations) With the exception of CLASS II EQUIPMENT provided with a socket outlet in accordance with the Heavy Current Regulations, Section 107-2-D1, Standard Sheet DK 1-4a, CLASS II EQUIPMENT shall not be fitted with socket-outlets for providing power to other equipment.		N/A
1.7.13	Switzerland (Ordinance on chemical hazardous risk reduction SR 814.81, Annex 2.15 Batteries) Annex 2.15 of SR 814.81 applies for batteries.		N/A
5.1.7.1	Denmark (Heavy Current Regulations, Chapter 707, clause 707.4) TOUCH CURRENT measurement results exceeding 3,5 mA r.m.s. are permitted only for PERMANENTLY CONNECTED EQUIPMENT and PLUGGABLE EQUIPMENT TYPE B.		N/A

IEC/EN 60950-1						
Clause	Requirement + Test			Result - Remark	Verdict	
1.5.1	TABLE: List of critical components					P
Object/part no.	Manufacturer/ trademark	Type/model	Technical data	Standard	Mark(s) of conformity ¹ .	
Plastic Enclosure	Teijin Chemicals Ltd Research & Development Div	TN-7500(v)	5VB, 2.0mm thick min., 60°C min.	UL 94	UL	
Metal Enclosure	--	--	Min. 0.81 mm thick.	--	--	
PCB	--	--	V-1 or better, 105°C min.	UL 94	UL	
Stand (Optional)	--	--	Metal with decorative part, min. HB, weight: 4.0kg	UL 94	UL	
Speaker (2 provided) (Optional)	--	--	8Ω, 2W max.	--	--	
- Enclosure	--	--	HB or better	UL 94	UL	
LCD Panel	LG Display	LM270WQ2	27", TFT type	--	--	
Insulation sheet	--	--	V-2 min.	UL 94	UL	
PTC (F281)	Tyco	MiniSMDC150/2 4	24.0V / 1.5A	EN 60730-1	TÜV	
Internal Switching Power Supply	Tabuchi	J810113X (X=0- 9)	I/P: 100-240ac, 50/60Hz, 2.03- 0.89A. O/P: 24Vdc/3.6A; 12Vdc/1.8A; 5.2Vdc/4.5A	--	--	
- AC Inlet (INLET1)	Yamate	AP-300	250Vac, 10A	IEC 60320-1, UL 498	VDE, UL	
- Fuse (F1, F2)	SKYGATE	SG5013P -R- Serie(s)	T5AH, 250V	IEC/EN 60127-2 UL 248-1	VDE, UL	
- Fuse (F101)	SKYGATE	SG5013P -R- Serie(s)	T1AH,250V	EN 60127-2	VDE, UL	
- Fuse (F201)	SKYGATE	SG5013P -R- Serie(s)	T2AH,250V	EN 60127-2	VDE, UL	

IEC/EN 60950-1					
Clause	Requirement + Test			Result - Remark	Verdict
- Varistor (VZ1) (Optional)	JOYIN	14S621K	385Vac; 505Vdc, Climatic category -40 / 85 / 56	IEC 61051-1, IEC 61051-2, UL 1449 (TYPE 3 SPD)	VDE, UL
- Thermistor (TH1, TH2) (Optional)	--	--	4A, 5Ω at 25°C	--	--
- X Capacitor (C1) (Optional)	Okaya	LE Series	Min. 250Vac, min. 100°C, max. 0.47μF	IEC 60384-14, UL 1414	ENEC, UL
- X Capacitor (C8) (Optional)	Okaya	LE Series	Min. 250Vac, min. 100°C, max. 0.22μF	IEC 60384-14, UL 1414	ENEC, UL
- Choke (L1, L2) (Optional)	TABUCHI	ZL25T97	105°C min.	--	--
- Choke (L301) (Optional)	TABUCHI	CHT183	130°C min.	--	--
- Y Capacitor (C2, C3, C4) (Optional) (Y2 type)	Murata	KY	Min. 250Vac, max. 100pF, min. 125°C	IEC 60384-14, UL 1414	VDE, UL
- Y Capacitor (C5, C6, C7) (Optional) (Y2 type)	Murata	KY	Min. 250Vac, max. 2200pF, min. 125°C	IEC 60384-14, UL 1414	VDE, UL
- Bridge Diode (DS1)	--	--	Min. 600V, min. 15A	--	--
- Transistor (Q201, Q202)	--	--	Min. 500V, 15A	--	--
- Electrolytic Capacitor (C304)	--	--	82μF, 450V min., 105°C min.	--	--
- Bleeder Resistors (R1)	--	--	680k ohm max., 1 W	--	--
- Transistor (Q101)	--	--	Min. 900V, 6A	--	--
- Transistor (Q301)	--	--	Min. 600V, 20A	--	--

IEC/EN 60950-1					
Clause	Requirement + Test			Result - Remark	Verdict
- Bridge Capacitor (C214, C215) (Y2 type) (Optional)	Murata	KY	Min. 250Vac, max. 470pF, min. 125°C	IEC 60384-14, UL 1414	VDE, UL
- Bridge Capacitor (C114, C115) (Y2 type) (Optional)	Murata	KY	Min. 250Vac, max. 100pF, min. 125°C	IEC 60384-14, UL 1414	VDE, UL
- Photo Coupler (PC101, PC102, PC103, PC201)	SHARP	PC123	Dti.=0.7mm, Ext.>8.0mm, Int.>5.0mm, 100°C min.	IEC 60950-1, EN 60950-1, IEC 60747-5-2, EN 60747-5-2, UL1577	VDE, UL
- Transformer (T101)	TABUCHI	STTX17	Class A	Applicable parts in IEC 60950-1 and according to IEC 60085	Accepted by TÜV Rheinland
- Transformer (T201)	TABUCHI	PTTX187	Class B	Applicable parts in IEC 60950-1 and according to IEC 60085	Accepted by TÜV Rheinland
- Triple Insulation Wire (used in T101, T201)	Furukawa	TEX-E	130 °C minimum	IEC 60065 IEC 60950-1 UL 2353 UL 1950	VDE, TÜV, UL
- Triple Insulation Wire (used in T101)	ONAMBA	O-TEM/B	130 °C minimum	IEC 60065 IEC 60950-1 UL 2353 UL 1950	TÜV, UL
- PCB	--	--	V-1 or better, 130°C min.	UL 94	UL
DC/AC Inverter	LG Innotek co., Ltd.	PNCP-M901A	O/P: 500Vrms min., 6.7mAms max.	--	--
- Transformer (T1, T2, T3, T4, T5, T6, T7, T8)	UNION COMPANY LIMITED.	U-1833-270D	105°C min.	--	--
- PCB	--	--	V-1 or better, min. 105°C	UL 94	UL
- Mylar sheet	--	--	V-2 min.	UL 94	UL

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

Supplementary information:

1. An asterisk indicates a mark that assures the agreed level of surveillance.
2. Used abbreviations: Dti.=distance through insulation, Int./Ext.=internal/external creepage distance.

1.6.2	TABLE: Electrical data (in normal conditions)						P
U (V) / F(Hz)	I (A)	I _{rated} (A)	P (W)	Fuse #	I _{fuse} (A)	Condition/status	
Test with DVI-1 mode							
90/50	1.50	--	131.3	F1, F2	1.50	Maximum normal load.	
90/60	1.50	--	131.9	F1, F2	1.50	Maximum normal load.	
100/50	1.35	1.64	130.3	F1, F2	1.35	Maximum normal load.	
100/60	1.34	1.64	129.9	F1, F2	1.34	Maximum normal load.	
240/50	0.64	0.65	127.6	F1, F2	0.64	Maximum normal load.	
240/60	0.61	0.65	128.1	F1, F2	0.61	Maximum normal load.	
254/50	0.64	--	127.5	F1, F2	0.64	Maximum normal load.	
254/60	0.61	--	128.4	F1, F2	0.61	Maximum normal load.	
264/50	0.64	--	126.4	F1, F2	0.64	Maximum normal load.	
264/60	0.61	--	126.8	F1, F2	0.61	Maximum normal load.	
Test with DVI-2 mode							
90/50	1.50	--	130.5	F1, F2	1.50	Maximum normal load.	
90/60	1.49	--	130.5	F1, F2	1.49	Maximum normal load.	
100/50	1.34	1.64	129.2	F1, F2	1.34	Maximum normal load.	
100/60	1.33	1.64	128.9	F1, F2	1.33	Maximum normal load.	
240/50	0.64	0.65	126.7	F1, F2	0.64	Maximum normal load.	
240/60	0.61	0.65	127.6	F1, F2	0.61	Maximum normal load.	
254/50	0.64	--	127.4	F1, F2	0.64	Maximum normal load.	
254/60	0.61	--	126.9	F1, F2	0.61	Maximum normal load.	
264/50	0.63	--	126.5	F1, F2	0.63	Maximum normal load.	
264/60	0.61	--	126.8	F1, F2	0.61	Maximum normal load.	
Test with DisplayPort mode							
90/50	1.49	--	130.2	F1, F2	1.49	Maximum normal load.	
90/60	1.48	--	130.2	F1, F2	1.48	Maximum normal load.	
100/50	1.33	1.64	129.8	F1, F2	1.33	Maximum normal load.	

IEC/EN 60950-1						
Clause	Requirement + Test				Result - Remark	Verdict
100/60	1.33	1.64	129.7	F1, F2	1.33	Maximum normal load.
240/50	0.63	0.65	126.7	F1, F2	0.63	Maximum normal load.
240/60	0.60	0.65	126.6	F1, F2	0.60	Maximum normal load.
254/50	0.63	--	125.9	F1, F2	0.63	Maximum normal load.
254/60	0.60	--	126.0	F1, F2	0.60	Maximum normal load.
264/50	0.62	--	125.8	F1, F2	0.62	Maximum normal load.
264/60	0.59	--	125.7	F1, F2	0.59	Maximum normal load.
Supplementary information:						

2.10.3 and 2.10.4	TABLE: Clearance and creepage distance measurements						P
Clearance (cl) and creepage distance (cr) at/of/between:	U peak (V)	U r.m.s. (V)	Required cl (mm)	cl (mm)	Required cr (mm)	cr (mm)	
For Unit:							
Basic/Supplementary:							
Primary parts to Earth parts	420	250	2.3	See below	2.5	See below	
▪ MT4 to metal chassis				2.6		2.6	
▪ L2 to metal chassis				28		28	
For SPS board:							
Functional:							
L/N before fuse	420	250	1.8	6.2	2.5	6.2	
Trace under fuse	420	250	1.8	3.4	2.5	3.4	
Basic/Supplementary:							
Primary parts to Earth or floating parts	420	250	2.3	See below	2.5	See below	
▪ L/N trace to Earth trace				8.2		8.2	
▪ Under C7				4.3		4.3	
▪ Under C4				4.3		4.3	
▪ Under C214				4.3		4.3	
▪ Under C215				4.5		4.5	
▪ Under C114				4.2		4.2	
▪ Under C115				4.3		4.3	

IEC/EN 60950-1						
Clause	Requirement + Test			Result - Remark		Verdict
▪ C212 to Core of T201				2.4		18
Reinforced:						
Primary components (with 10N) to secondary components (with 10N)	420	250	4.6	See below	5.0	See below
▪ C116 to Core of T101				14.9		14.9
Primary trace to secondary trace	420	250	4.6	See below	5.0	See below
▪ Under PC201				8.2		8.2
▪ Under PC102/PC101/PC103				8.2		8.2
▪ Under T201				21.7		21.7
▪ Under T101	572	296	5.3	11.9	6.0	11.9
Supplementary information:						
1. Altitude correction factor for clearances for an altitude of 3048 m (Based on IEC 60664-1:1992): 1.15. 2. Functional insulation, see clause 5.3.4 a). 3. Other functional insulation according to sub-clause 5.3.4 c). 4. Internal wires are fixed reliably. 5. One mylar sheet is between components of SPS and metal enclosure. 6. One mylar sheet is between traces of SPS and metal enclosure.						

2.10.5	TABLE: Distance through insulation measurements					P
Distance through insulation (DTI) at/of:		U peak (V)	U r.m.s. (V)	Test voltage (V)	Required DTI (mm)	DTI (mm)
Photo Coupler (reinforced insulation)		420	250	AC 3000	0.4	1.
Mylar sheet between power board and Chassis (basic insulation)		572	296	AC 3000	--	--
Supplementary information:						
1. For details refer to table 1.5.1.						

4.3.8	TABLE: Batteries		N/A
The tests of 4.3.8 are applicable only when appropriate battery data is not available			
Is it possible to install the battery in a reverse polarity position?			

IEC/EN 60950-1									
Clause	Requirement + Test				Result - Remark				Verdict
	Non-rechargeable batteries			Rechargeable batteries					
	Discharging		Un-intentional charging	Charging		Discharging		Reversed charging	
	Meas. current	Manuf. Specs.		Meas. current	Manuf. Specs.	Meas. current	Manuf. Specs.	Meas. current	Manuf. Specs.
Max. current during normal condition									
Max. current during fault condition									
Test results:									Verdict
- Chemical leaks									
- Explosion of the battery									
- Emission of flame or expulsion of molten metal									
- Electric strength tests of equipment after completion of tests									
Supplementary information:									

4.5	TABLE: Thermal requirements				P	
	Supply voltage (V):	A) 90V (Vertical position) B) 264V (Vertical position) C) 90V (Horizontal position) D) 264V (Horizontal position)			—	
	Ambient T _{min} (°C):	See below.			—	
	Ambient T _{max} (°C):	See below.			—	
Maximum measured temperature T of part/at::		T (°C)			Allowed T _{max} (°C)	
Supply Voltage		A)	B)	C)	D)	--
For SPS						
AC inlet		65.6	63.9	48.1	45.1	70
Wire of Line		70.7	69.2	49.3	46.4	105
C3 body		87.9	75.8	59.9	51.2	125
PCB near TH1		77.3	70.6	55.4	49.1	130
PCB near TH2		79.2	76.8	77.0	60.5	130

IEC/EN 60950-1					
Clause	Requirement + Test		Result - Remark		Verdict
C1 body	82.2	81.3	56.3	50.2	100
C8 body	84.9	83.1	65.1	54.4	100
L1 coil	85.5	83.4	74.0	55.6	105
L2 coil	84.6	83.0	71.4	54.1	105
C6 body	80.1	79.6	55.3	50.1	125
C304 body	84.9	82.9	74.8	65.3	105
PCB near DS1	89.8	88.4	88.0	68.3	130
C301 body	92.5	91.6	77.6	65.7	100
L301 coil	86.4	85.5	95.8	82.9	130
PCB near Q301	86.5	92.2	86.0	88.8	130
C201 body	85.6	87.5	79.3	79.0	100
PCB near Q202	89.7	88.9	84.1	82.8	130
C214 body	79.0	81.5	77.1	75.2	125
C114 body	73.8	73.9	53.6	51.2	125
C115 body	73.9	73.9	55.3	53.1	125
T201 coil	91.8	84.7	105.6	104.1	110
T201 core	89.2	88.1	93.0	94.7	110
PCB near Q101	84.9	84.1	84.1	83.3	130
T101 coil	80.6	78.5	72.6	70.2	90
T101 core	84.3	83.4	68.7	66.2	90
PC201 body	69.0	68.2	67.0	65.1	100
PC103 body	72.3	71.3	54.0	52.0	100
PC101 body	71.2	70.4	53.6	51.7	100
PC102 body	70.2	70.4	52.9	51.0	100
C117 body	76.5	76.6	62.5	60.3	105
C217 body	60.0	60.1	72.7	70.9	105
PCB near D108	67.2	66.3	65.3	63.6	130
PCB near D209	78.5	77.5	86.0	87.0	130
L101 coil	68.4	67.0	64.3	62.7	105
Measured at DC/AC inverter					
PCB near IC401S	74.3	72.3	73.4	71.7	130
PCB near IC401	77.5	76.5	71.4	70.0	130

IEC/EN 60950-1								
Clause	Requirement + Test		Result - Remark		Verdict			
PCB near IC100		74.3	73.8	69.1	67.4	130		
PCB near IC701		58.3	57.6	67.8	69.4	130		
PCB near U1		74.7	66.9	86.4	87.9	130		
T8 coil		76.4	75.2	99.5	100.5	105		
T8 core		70.1	69.5	96.6	94.4	105		
Measured at Unit								
Plastic enclosure inside near T201 of SPS		57.1	56.9	52.2	50.0	--		
Plastic enclosure outside near T201 of SPS		57.2	56.9	51.3	49.5	95		
Metal enclosure outside near DVI-1 port		55.2	55.1	47.7	46.1	70		
Handle		54.6	54.1	49.2	56.8	85		
Tamb		35.1	36.4	21.6	24.9	--		
Tma		40.0	40.0	40.0	40.0	--		
Supplementary information:								
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 maximum ambient temperature permitted by the manufacturer's specification is 40°C. Class A Tmax = 100°C – 10°C = 90°C Class B Tmax = 120°C – 10°C = 110°C								
3. All values for T(°C) are re-calculated from Tamb respectively.								
4. All tests are test with DVI-1 mode.								
Temperature T of winding:		t1 (°C)	R1 (Ω)	t2 (°C)	R2 (Ω)	T (°C)	Allowed Tmax (°C)	Insulation class
Supplementary information:								

4.5.5	TABLE: Ball pressure test of thermoplastic parts			P
	Allowed impression diameter (mm): ≤ 2 mm			—
Part		Test temperature (°C)	Impression diameter (mm)	
Bobbin of L1/L2 (Chang Chun / PBT-4115)		125	1.3	
Supplementary information:				
Phenolic bobbin material used in T101, T201, L301, L1 and L2 were acceptable without test.				

IEC/EN 60950-1					
Clause	Requirement + Test			Result - Remark	Verdict
4.7	Table: Resistance to fire				P
Part	Manufacturer of material	Type of material	Thickness (mm)	Flammability class	Evidence
Supplementary information: See the appended table 1.5.1 for details.					

5.2	TABLE: Electric strength tests, impulse tests and voltage surge tests			P
Test voltage applied between:		Voltage shape (AC, DC, impulse, surge)	Test voltage (V)	Breakdown Yes / No
Reinforced:				
Unit: primary to secondary		DC	4242	No
Unit: primary to plastic enclosure wrapped with metal foil		DC	4242	No
T101: primary to secondary		AC	3000	No
T101: core to secondary		AC	3000	No
T201: primary to secondary		AC	3000	No
Basic/supplementary:				
Unit: primary to Earth		DC	2636	No
T201: primary to core		AC	1864	No
T201: secondary to core		AC	1864	No
Supplementary information:				

5.3	TABLE: Fault condition tests						P
	Ambient temperature (°C) :					See below	—
	Power source for EUT: Manufacturer, model/type, output rating :					--	—
Component No.	Fault	Supply voltage (V)	Test time	Fuse #	Fuse current (A)	Observation	
PC201, pin 1 to 2	s-c	240	10 min	F1, F2	0.75 to 0.09	Unit shut down immediately. No damage, no hazard.	
PC201, Pin 3 to 4	s-c	240	30 min	F1, F2	0.75	Unit operated normally. No damage, no hazard.	

IEC/EN 60950-1						
Clause	Requirement + Test				Result - Remark	Verdict
PC201, Pin 1	o-c	240	10 min	F1, F2	0.75 to 0.09	Unit shut down immediately. No damage, no hazard.
PC103, Pin 1 to 2	s-c	240	30 min	F1, F2	0.75	Unit operated normally. No damage, no hazard.
PC103, Pin 3 to 4	s-c	240	10 min	F1, F2	0.75 to 0.09	Unit shut down immediately. No damage, no hazard.
PC103, Pin 1	o-c	240	30 min	F1, F2	0.75	Unit operated normally. No damage, no hazard.
PC103, Pin 4	o-c	240	30 min	F1, F2	0.75	Unit operated normally. No damage, no hazard.
PC101, Pin 1 to 2	s-c	240	10 min	F1, F2	0.75 to 0.09	Unit shut down immediately. No damage, no hazard.
PC101, Pin 3 to 4	s-c	240	10 min	F1, F2	0.75 to 0.09	Unit shut down immediately. No damage, no hazard.
PC101, Pin 1	o-c	240	10 min	F1, F2	0.75 to 0.09	Unit shut down immediately. No damage, no hazard.
PC101, Pin 4	o-c	240	30 min	F1, F2	0.75	Unit operated normally. No damage, no hazard.
PC102, Pin 1 to 2	s-c	240	10 min	F1, F2	0.75 to 0.3	Unit shut down immediately, except +5V. No damage, no hazard.
PC102, Pin 3 to 4	s-c	240	30 min	F1, F2	0.75	Unit operated normally. No damage, no hazard.
PC102, Pin 1	o-c	240	10 min	F1, F2	0.75 to 0.3	Unit shut down immediately, except +5V. No damage, no hazard.
PC102, Pin 4	o-c	240	10 min	F1, F2	0.75 to 0.3	Unit shut down immediately, except +5V. No damage, no hazard.
C116	s-c	240	10 min	F1, F2	0.75 to 0.09	Unit shut down immediately. No damage, no hazard.
Q201, Pin G to S	s-c	240	10 min	F1, F2	--	F1, F2 opened. No hazards.
PC201, Pin 4	o-c	240	10 min	F1, F2	0.75 to 0.09	Unit shut down immediately. No damage, no hazard.
Q201, Pin D to S	s-c	240	10 min	F1, F2	--	F1, F2 opened. No hazards.
Q201, Pin G to D	s-c	240	10 min	F1, F2	0.75 to 0.09	Unit shut down immediately. No damage, no hazard.
Q202, Pin G to D	s-c	240	10 min	F1, F2	0.75 to 0.3	Unit shut down immediately, except +5V. F201 opened. No hazard.

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Clause	Requirement + Test				Result - Remark	Verdict
Q202, Pin G to S	s-c	240	10 min	F1, F2	0.75 to 0.3	Unit shut down immediately, except +5V. No damage, no hazard.
Q202, Pin D to S	s-c	240	10 min	F1, F2	0.75 to 0.3	Unit shut down immediately, except +5V. No damage, no hazard.
R207	s-c	240	30 min	F1, F2	0.75	Unit operated normally. No damage, no hazard.
IC101, Pin 2 to 8	s-c	240	30 min	F1, F2	0.75	Unit operated normally. No damage, no hazard.
IC101, Pin 6 to 8	s-c	240	30 min	F1, F2	0.75	Unit operated normally. No damage, no hazard.
Q101, Pin G to S	s-c	240	10 min	F1, F2	0.75 to 0.09	Unit shut down immediately. F101 open. no hazard.
Q101, Pin D to S	s-c	240	10 min	F1, F2	0.75 to 0.09	Unit shut down immediately. F101 open. no hazard.
Q101, Pin G to D	s-c	240	10 min	F1, F2	0.75 to 0.09	Unit shut down immediately. No damage, no hazard.
R101	s-c	240	30 min	F1, F2	0.75	Unit operated normally. No damage, no hazard.
R305	s-c	240	30 min	F1, F2	0.75	Unit operated normally. No damage, no hazard.
Q301, Pin G to S	s-c	240	30 min	F1, F2	0.75	Unit operated normally. No damage, no hazard.
Q301, Pin G to D	s-c	240	10 min	F1, F2	--	F1, F2 opened. No hazards.
Q301, Pin D to S	s-c	240	10 min	F1, F2	--	F1, F2 opened. No hazards.
C301	s-c	240	10 min	F1, F2	--	F1, F2 opened. No hazards.
DS1	s-c	240	10 min	F1, F2	--	F1, F2 opened. No hazards.
C304	s-c	240	10 min	F1, F2	--	F1, F2 opened. No hazards.
Ventilation openings	blocked	240	4 h	F1, F2	0.75 to 0.4	Unit shut down. Maximum temperature of T201 coil = 93.2°C, T201 core = 84.6°C, T101 coil = 76.7°C, T101 coil = 73.0°C, Tamb = 24.4°C. No damage, no hazard.
T201, Pin 7 to 10, 11	s-c	240	10 min	F1, F2	0.75 to 0.3	Unit shut down immediately, except +5V. No damage, no hazard.

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Clause	Requirement + Test				Result - Remark	Verdict
T201, Pin 8 to 10, 11	s-c	240	10 min	F1, F2	0.75 to 0.3	Unit shut down immediately, except +5V. No damage, no hazard.
T201, Pin 9 to 10, 11	s-c	240	10 min	F1, F2	0.75 to 0.3	Unit shut down immediately, except +5V. No damage, no hazard.
T201, Pin 12 to 10, 11	s-c	240	10 min	F1, F2	0.75 to 0.3	Unit shut down immediately, except +5V. No damage, no hazard.
T201, Pin 2 to 4	s-c	240	10 min	F1, F2	0.75 to 0.3	Unit shut down immediately, except +5V. No damage, no hazard.
T101, Pin 12 to 13	s-c	240	10 min	F1, F2	0.75 to 0.09	Unit shut down immediately. No damage, no hazard.
T101, Pin 1 to 2	s-c	240	10 min	F1, F2	0.75 to 0.09	Unit shut down immediately. No damage, no hazard.
T101, Pin 4 to 6	s-c	240	10 min	F1, F2	0.75 to 0.09	Unit shut down immediately. No damage, no hazard.
T101, Pin 12 to 13	o-l	240	16 h	F1, F2	0.71 to 0.81 to 0.09	Unit shut down. The maximum temperature (at load: 6A) of T201 coil = 102.9°C, T201 core = 90.3°C, T101 coil = 130.4°C, T101 core = 127.8°C, Tamb = 25.2°C, No damage, no hazard.
T201, Pin 7 to 10, 11	o-l	240	8.5 h	F1, F2	0.74 to 1.31 to 0.4	Unit shut down, except +5V. The maximum temperature (at load: 8.5A) of T201 coil = 126.6°C, T201 core = 104.8°C, T101 coil = 126.6°C, T101 core = 75.6°C, Tamb = 24.4°C, No damage, no hazard.
T201, Pin 9 to 10, 11	o-l	240	13 h	F1, F2	0.74 to 1.02 to 0.4	Unit shut down, except +5V. The maximum temperature (at load: 7A) of T201 coil = 157.9°C, T201 core = 138.2°C, T101 coil = 100.9°C, T101 core = 99.6°C, Tamb = 27.8°C, F201 open. Q201, Q202, IC201, R201, R202 damage, no hazard.
+5.2V	s-c	240	10 min	F1, F2	0.75 to 0.09	Unit shut down immediately. No damage, no hazard.
+12V	s-c	240	10 min	F1, F2	0.75 to 0.3	Unit shut down immediately, except +5V. No damage, no hazard.

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Clause	Requirement + Test				Result - Remark	
+24V	s-c	240	10 min	F1, F2	0.75 to 0.4	Unit shut down immediately, except +5V. No damage, no hazard.
+12V to +24V	s-c	240	10 min	F1, F2	0.75 to 0.4	Unit shut down immediately, except +5V. No damage, no hazard.
+12V to +5.2V	s-c	240	10 min	F1, F2	0.75 to 0.09	Unit shut down immediately. No damage, no hazard.
+24V to +5.2V	s-c	240	10 min	F1, F2	0.75 to 0.09	Unit shut down immediately. No damage, no hazard.
Sound bar (P281) Pin 1,2,3,4,5,6,7,9 to G	o-l	240	1 min	--	--	Open circuit voltage measured 0V.
DVI 1 (P330), Pin 1,3,8,11,14,15,16,19,22,25,26,27,28 to G	o-l	240	1 min	--	--	Open circuit voltage measured 0V.
DVI 1 (P330), Pin 2,4,5,9,10,12,13,17,18,20,21,23,24 to G	o-l	240	10 min	--	--	Test point is unable to load. Open circuit voltage measured 3.24 V.
DVI 1 (P330), Pin 6,7 to G	o-l	240	10 min	--	--	Test point is unable to load. Open circuit voltage measured 5.06 V.
DVI 2 (P320), Pin 3,8,11,14,15,16,19,22,25,26,27,28 to G	o-l	240	1 min	--	--	Open circuit voltage measured 0V.
DVI 2 (P320), Pin 1,2,4,5,9,10,12,13,17,18,20,21,23,24 to G	o-l	240	10 min	--	--	Test point is unable to load. Open circuit voltage measured 3.28 V.
DVI 2 (P320), Pin 6,7 to G	o-l	240	10 min	--	--	Test point is unable to load. Open circuit voltage measured 5.06 V.
Display (P310) Pin 1,2,4,5,6,7,8,9,10,13,14,15,16,17,18,19,20 to G	o-l	240	1 min	--	--	Open circuit voltage measured 0V.
Display (P310) Pin 3,12 to G	o-l	240	10 min	--	--	Test point is unable to load. Open circuit voltage measured 3.3 V.

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Clause	Requirement + Test				Result - Remark	Verdict
USB port (P703) Pin 2,3,4 to G	o-l	240	1 min	--	--	Open circuit voltage measured 0V.
USB port (P704) Pin 2,3,4 to G	o-l	240	1 min	--	--	Open circuit voltage measured 0V.
USB port (P705) Pin 2,3,4 to G	o-l	240	1 min	--	--	Open circuit voltage measured 0V.
USB port (P701) Pin 1,2,3,4 to G	o-l	240	1 min	--	--	Open circuit voltage measured 0V.
USB port (P702) Pin 1,2,3,4 to G	o-l	240	1 min	--	--	Open circuit voltage measured 0V.
Sound bar (P281) Pin 8 to G	o-l	240	1 h	--	--	Open circuit voltage measured 12.17V, maximum available current measured 2400mA.
USB port (P703) Pin 1 to G	o-l	240	1 h	--	--	Open circuit voltage measured 5.1V, maximum available current measured 1100mA.
USB port (P704) Pin 1 to G	o-l	240	1 h	--	--	Open circuit voltage measured 5.1V, maximum available current measured 1200mA.
USB port (P705) Pin 1 to G	o-l	240	1 h	--	--	Open circuit voltage measured 5.1V, maximum available current measured 1100mA.
Display (P310) Pin 11 to G	o-l	240	1 h	--	--	Open circuit voltage measured 3.3V, maximum available current measured 430mA.
Supplementary information:						
1. Used abbreviation: s-c=short-circuited, o-c= open- circuited, o-l= overloaded.						
2. Maximum temperatures limitation of safety isolation transformers based on a test temperature of 40°C:						
- Class B: Tmax = 175 °C - (40-25) °C = 160 °C						
- Class A: Tmax = 150 °C - (40-25) °C = 135 °C						

List of test equipment used:

Clause	Measurement / testing	Testing / measuring equipment / material used	Range used	Calibration date
Supplementary information: No listing of test equipment used necessary for chosen test procedure.				

Clause	Requirement + Test	Result - Remark	Verdict
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2.1.1.5	TABLE: Energy hazard measurement				P
Voltage (rated) (V)	Current (rated) (A)	Voltage (max.) (V)	Current (max.) (A)	VA (max.) (VA)	
5.2	4.5	5.2	11.1	52.3	
12	1.8	12.2	11.7	133	
24	3.6	25.1	7.0	168.4	
Supplementary information: Supply voltage: 240V, 60Hz					

2.1.1.7	TABLE: Discharge test				P
Condition	τ calculated (s)	τ measured (s)	t u → 0V (s)	Comments	
Line to Neutral (Fuse in)	0.47	0.24	--	Vo=366V, 37% of Vo=128V	
Supplementary information: Supply voltage: 240V, 60Hz Overall capacity: 0.69 μ F (C1=0.47 μ F, C8=0.22 μ F) Discharge resistor: 680k Ω (R1=680k Ω)					

2.2.2	TABLE: SELV measurement (under normal conditions)				P
Transformer	Location	Voltage (max.) (V)		Voltage Limitation Component	
		V peak	V d.c.		
T201	Pin 7 to 10/11	13.3	--	--	
	Pin 8 to 10/11	26.4	--	--	
	Pin 9 to 10/11	13.1	--	--	
	Pin 12 to 10/11	26.3	--	--	
T101	Pin 12 to 13	55.6	--	--	
	After C116	--	5.6	C116	
Supplementary information: Supply voltage: 240V, 60Hz					

2.2.3	TABLE: SELV measurement (under fault conditions)				P
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Clause	Requirement + Test	Result - Remark	Verdict
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Location	Voltage (max.) (V)	Comments
+5.2V output	0	C116 short, +5.2V output shut down immediately.
Supplementary information: Supply voltage: 240V, 60Hz		

2.4.2	TABLE: Limited current circuit measurement					P
Location		Voltage (V)	Current (mA)	Freq. (Hz)	Limit (mA)	Comments
For SPS: ²						
Normal condition:						
C215 sec. pin to Earth		44mV	0.09	--	0.7	
C115 sec. pin to Earth		54mV	0.11	--	0.7	
Single condition:						
C215 sec. pin to Earth		46mV	0.09	--	0.7	C214 shorted
C115 sec. pin to Earth		52mV	0.1	--	0.7	C114 shorted
Measured at DC/AC inverter part: ³						
Normal condition:						
T4, pin 6 to Earth		--	--	--	--	Unit shut down immediately.
T4, pin 6 to pin 2		--	--	--	--	Unit shut down immediately.
T2, pin 6 to Earth		--	--	--	--	Unit shut down immediately.
T2, pin 6 to pin 2		--	--	--	--	Unit shut down immediately.
T1, pin 6 to Earth		--	--	--	--	Unit shut down immediately.
T1, pin 6 to pin 2		--	--	--	--	Unit shut down immediately.
Single fault, R241 shorted						
T4, pin 6 to Earth		--	--	--	--	Unit shut down immediately.
T4, pin 6 to pin 2		--	--	--	--	Unit shut down immediately.
Single fault, R50 shorted						
T4, pin 6 to Earth		9.9	4.95	57	39.9	
T4, pin 6 to pin 2		9.5	4.75	56	39.2	
T2, pin 6 to Earth		9.3	4.65	56	39.2	
T2, pin 6 to pin 2		9.6	4.8	57	39.9	
T1, pin 6 to Earth		9.0	4.5	57	39.9	

Clause	Requirement + Test	Result - Remark	Verdict
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T1, pin 6 to pin 2	9.7	4.85	56	39.2	
Single fault, U1, pin 6 to pin 13 shorted					
T4, pin 6 to Earth	--	--	--	--	Unit shut down immediately.
T4, pin 6 to pin 2	--	--	--	--	Unit shut down immediately.
T2, pin 6 to Earth	--	--	--	--	Unit shut down immediately.
T2, pin 6 to pin 2	--	--	--	--	Unit shut down immediately.
T1, pin 6 to Earth	--	--	--	--	Unit shut down immediately.
T1, pin 6 to pin 2	--	--	--	--	Unit shut down immediately.
Single fault, U1, pin 20 to pin 13 shorted					
T4, pin 6 to Earth	--	--	--	--	Unit shut down immediately.
T4, pin 6 to pin 2	--	--	--	--	Unit shut down immediately.
T2, pin 6 to Earth	--	--	--	--	Unit shut down immediately.
T2, pin 6 to pin 2	--	--	--	--	Unit shut down immediately.
T1, pin 6 to Earth	--	--	--	--	Unit shut down immediately.
T1, pin 6 to pin 2	--	--	--	--	Unit shut down immediately.
Single fault, Q1, pin 1 to pin 2 shorted					
T4, pin 6 to Earth	--	--	--	--	Unit shut down immediately.
T4, pin 6 to pin 2	--	--	--	--	Unit shut down immediately.
T2, pin 6 to Earth	--	--	--	--	Unit shut down immediately.
T2, pin 6 to pin 2	--	--	--	--	Unit shut down immediately.
T1, pin 6 to Earth	--	--	--	--	Unit shut down immediately.
T1, pin 6 to pin 2	--	--	--	--	Unit shut down immediately.
Single fault, Q1, pin 1 to pin 3 shorted					
T4, pin 6 to Earth	--	--	--	--	Unit shut down immediately.
T4, pin 6 to pin 2	--	--	--	--	Unit shut down immediately.
T2, pin 6 to Earth	--	--	--	--	Unit shut down immediately.
T2, pin 6 to pin 2	--	--	--	--	Unit shut down immediately.
T1, pin 6 to Earth	--	--	--	--	Unit shut down immediately.
T1, pin 6 to pin 2	--	--	--	--	Unit shut down immediately.
Single fault, Q1, pin 2 to pin 3 shorted					
T4, pin 6 to Earth	--	--	--	--	Unit shut down immediately.
T4, pin 6 to pin 2	--	--	--	--	Unit shut down immediately.
T2, pin 6 to Earth	--	--	--	--	Unit shut down immediately.

Clause	Requirement + Test				Result - Remark	Verdict
T2, pin 6 to pin 2	--	--	--	--	Unit shut down immediately.	
T1, pin 6 to Earth	--	--	--	--	Unit shut down immediately.	
T1, pin 6 to pin 2	--	--	--	--	Unit shut down immediately.	
Single fault, Q6, pin 1 to pin 2 shorted						
T4, pin 6 to Earth	--	--	--	--	Unit shut down immediately.	
T4, pin 6 to pin 2	--	--	--	--	Unit shut down immediately.	
T2, pin 6 to Earth	--	--	--	--	Unit shut down immediately.	
T2, pin 6 to pin 2	--	--	--	--	Unit shut down immediately.	
T1, pin 6 to Earth	--	--	--	--	Unit shut down immediately.	
T1, pin 6 to pin 2	--	--	--	--	Unit shut down immediately.	
Single fault, Q6, pin 1 to pin 3 shorted						
T4, pin 6 to Earth	--	--	--	--	Unit shut down immediately.	
T4, pin 6 to pin 2	--	--	--	--	Unit shut down immediately.	
T2, pin 6 to Earth	--	--	--	--	Unit shut down immediately.	
T2, pin 6 to pin 2	--	--	--	--	Unit shut down immediately.	
T1, pin 6 to Earth	--	--	--	--	Unit shut down immediately.	
T1, pin 6 to pin 2	--	--	--	--	Unit shut down immediately.	
Single fault, Q6, pin 2 to pin 3 shorted						
T4, pin 6 to Earth	--	--	--	--	Unit shut down immediately.	
T4, pin 6 to pin 2	--	--	--	--	Unit shut down immediately.	
T2, pin 6 to Earth	--	--	--	--	Unit shut down immediately.	
T2, pin 6 to pin 2	--	--	--	--	Unit shut down immediately.	
T1, pin 6 to Earth	--	--	--	--	Unit shut down immediately.	
T1, pin 6 to pin 2	--	--	--	--	Unit shut down immediately.	
Single fault, R69 shorted						
T2, pin 6 to Earth	--	--	--	--	Unit shut down immediately.	
T2, pin 6 to pin 2	--	--	--	--	Unit shut down immediately.	
Single fault, R129 shorted						
T1, pin 6 to Earth	--	--	--	--	Unit shut down immediately.	
T2, pin 6 to pin 2	--	--	--	--	Unit shut down immediately.	
Single fault, C7 shorted						
T1, pin 6 to Earth	--	--	--	--	Unit shut down immediately.	
T2, pin 6 to pin 2	--	--	--	--	Unit shut down immediately.	

Clause	Requirement + Test	Result - Remark	Verdict
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Single fault, C24 shorted					
T4, pin 6 to Earth	--	--	--	--	Unit shut down immediately.
T4, pin 6 to pin 2	--	--	--	--	Unit shut down immediately.
T2, pin 6 to Earth	--	--	--	--	Unit shut down immediately.
T2, pin 6 to pin 2	--	--	--	--	Unit shut down immediately.
T1, pin 6 to Earth	--	--	--	--	Unit shut down immediately.
T1, pin 6 to pin 2	--	--	--	--	Unit shut down immediately.
Single fault, Q3, pin 1 to pin 2 shorted					
T4, pin 6 to Earth	--	--	--	--	Unit shut down immediately.
T4, pin 6 to pin 2	--	--	--	--	Unit shut down immediately.
T2, pin 6 to Earth	--	--	--	--	Unit shut down immediately.
T2, pin 6 to pin 2	--	--	--	--	Unit shut down immediately.
T1, pin 6 to Earth	--	--	--	--	Unit shut down immediately.
T1, pin 6 to pin 2	--	--	--	--	Unit shut down immediately.
Single fault, Q3, pin 1 to pin 3 shorted					
T4, pin 6 to Earth	--	--	--	--	Unit shut down immediately.
T4, pin 6 to pin 2	--	--	--	--	Unit shut down immediately.
T2, pin 6 to Earth	--	--	--	--	Unit shut down immediately.
T2, pin 6 to pin 2	--	--	--	--	Unit shut down immediately.
T1, pin 6 to Earth	--	--	--	--	Unit shut down immediately.
T1, pin 6 to pin 2	--	--	--	--	Unit shut down immediately.
Single fault, Q3, pin 2 to pin 3 shorted					
T4, pin 6 to Earth	--	--	--	--	Unit shut down immediately.
T4, pin 6 to pin 2	--	--	--	--	Unit shut down immediately.
T2, pin 6 to Earth	--	--	--	--	Unit shut down immediately.
T2, pin 6 to pin 2	--	--	--	--	Unit shut down immediately.
T1, pin 6 to Earth	--	--	--	--	Unit shut down immediately.
T1, pin 6 to pin 2	--	--	--	--	Unit shut down immediately.
Supplementary information:					
1. Supply voltage: 240V, 60Hz					
2. Using the measuring instrument of Figure D.1.					
3. Using a non-inductive resistor of 2kΩ.					

Clause	Requirement + Test	Result - Remark	Verdict
2.5	TABLE: Limited power source measurement		P
	Limits	Measured	Verdict
According to Table 2B (normal condition) for USB port (P703), Uoc =5.1Vdc.			
current (in A)	8	1.2	P
apparent power (in VA)	100	5.4	P
According to Table 2B (single fault condition: IC704, Pin 8 to 7 short) for USB port (P703), Uoc=5.1Vdc.			
current (in A)	8	3.4	P
apparent power (in VA)	100	14.2	P
According to Table 2B (normal condition) for USB port (P704), Uoc =5.1Vdc.			
current (in A)	8	1.3	P
apparent power (in VA)	100	5.8	P
According to Table 2B (single fault condition: IC704, Pin 5 to 7 short) for USB port (P704), Uoc=5.1Vdc.			
current (in A)	8	3.4	P
apparent power (in VA)	100	14.2	P
According to Table 2B (normal condition) for USB port (P705), Uoc =5.0Vdc.			
current (in A)	8	1.3	P
apparent power (in VA)	100	5.8	P
According to Table 2B (single fault condition: IC704, Pin 8 to 7 short) for USB port (P705), Uoc=5.0Vdc.			
current (in A)	8	3.4	P
apparent power (in VA)	100	14.3	P
According to Table 2B (normal condition) for Sound bar (P281), Uoc =12.17Vdc.			
current (in A)	8	2.5	P
apparent power (in VA)	100	27.2	P
According to Table 2B (normal condition) for Display port (P310), Uoc =3.3Vdc.			
current (in A)	8	1.1	P
apparent power (in VA)	100	2.64	P
According to Table 2B (single fault condition: IC311, Pin 6 to 1 short) for Display port (P310), Uoc =3.3Vdc.			
current (in A)	8	3.0	P
apparent power (in VA)	100	6.3	P
According to Table 2B (normal condition) for DVI 1 (P330) (Pin 2,4,5,9,10,12,13,17,18,20,21,23,24 to G), Uoc =3.28Vdc.			
current (in A)	8	-- ^{1.}	P
apparent power (in VA)	100	-- ^{1.}	P

Clause	Requirement + Test	Result - Remark	Verdict
According to Table 2B (single fault condition: IC401 short) for Display port (P310) (Pin 2,4,5,9,10,12,13,17,18,20,21,23,24 to G), Uoc =3.3Vdc.			
current (in A)	8	3.0	P
apparent power (in VA)	100	6.3	P
According to Table 2B (normal condition) for DVI-1 (P330) (Pin 6,7 to G), Uoc =5.06Vdc.			
current (in A)	8	2.6	P
apparent power (in VA)	100	10.14	P
According to Table 2B (single fault condition: MD334, Pin 1 to 3 short) for DVI 1 (P310) (Pin 6 to G), Uoc =5.06Vdc.			
current (in A)	8	2.6	P
apparent power (in VA)	100	10.14	P
According to Table 2B (single fault condition: MD333, Pin 1 to 3 short) for DVI 1 (P310) (Pin 7 to G), Uoc =5.06Vdc.			
current (in A)	8	2.6	P
apparent power (in VA)	100	10.14	P
According to Table 2B (normal condition) for DVI-2 (P320) (Pin 1,2,4,5,9,10,13,17,18,20,21,23,24 to G), Uoc =3.28Vdc.			
current (in A)	8	-- ^{1.}	P
apparent power (in VA)	100	-- ^{1.}	P
According to Table 2B (single fault condition: IC401S short) for Display port (P320) (Pin 1,2,4,5,9,10,13,17,18,20,21,23,24 to G), Uoc =3.36Vdc.			
current (in A)	8	3.0	P
apparent power (in VA)	100	6.3	P
According to Table 2B (normal condition) for DVI-2 (P320) (Pin 6,7 to G), Uoc =5.07Vdc.			
current (in A)	8	-- ^{1.}	P
apparent power (in VA)	100	-- ^{1.}	P
According to Table 2B (single fault condition: MD324, Pin 1 to 3 short) for DVI 2 (P320) (Pin 6 to G), Uoc =5.07Vdc.			
current (in A)	8	2.6	P
apparent power (in VA)	100	10.14	P
According to Table 2B (single fault condition: MD323, Pin 1 to 3 short) for DVI 2 (P320) (Pin 6 to G), Uoc =5.07Vdc.			
current (in A)	8	2.6	P
apparent power (in VA)	100	10.14	P

Clause	Requirement + Test	Result - Remark	Verdict
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Supplementary information:

1. It can not be loaded.

2.6.3.4	TABLE: Resistance of earthing measurement		P
Location	Resistance measured (mΩ)	Comments	
Ground Pin of AC Inlet to Metal Enclosure	11	32A, 2 min, voltage drop: 0.36V	
Ground Pin of AC Inlet to Metal Enclosure	11	40A, 2 min, voltage drop: 0.46V	
Supplementary information:			

2.10.2	Table: Working voltage measurement			P
Location	RMS voltage (V)	Peak voltage (V)	Comments	
T101, pin 1 to pin 8/9/10/11	8.9	36		
T101, pin 1 to pin 12	180	388		
T101, pin 1 to pin 13	179	368		
T101, pin 2 to pin 8/9/10/11	10.4	38.4		
T101, pin 2 to pin 12	182	364		
T101, pin 2 to pin 13	180	364		
T101, pin 3 to pin 8/9/10/11	4.56	10.4		
T101, pin 3 to pin 12	47.2	73		
T101, pin 3 to pin 13	50.1	81		
T101, pin 4 to pin 8/9/10/11	5.3	19.6		
T101, pin 4 to pin 12	285	572		
T101, pin 4 to pin 13	283	496		
T101, pin 5 to pin 8/9/10/11	6.3	22		
T101, pin 5 to pin 12	55	108		
T101, pin 5 to pin 13	54.6	90		
T101, pin 6 to pin 8/9/10/11	8.1	18.8		
T101, pin 6 to pin 12	295	400		
T101, pin 6 to pin 13	296	448		
T201, pin 2 to pin 7	204	364		
T201, pin 2 to pin 8	189	344		

Clause	Requirement + Test		Result - Remark	Verdict
T201, pin 2 to pin 9	212	376		
T201, pin 2 to pin 10/11	197	344		
T201, pin 2 to pin 12	182	332		
T201, pin 3 to pin 7	55.7	84		
T201, pin 3 to pin 8	54.6	86		
T201, pin 3 to pin 9	55.6	85		
T201, pin 3 to pin 10/11	46.8	63		
T201, pin 3 to pin 12	43.2	85		
T201, pin 4 to pin 7	157	262		
T201, pin 4 to pin 8	168	288		
T201, pin 4 to pin 9	155	260		
T201, pin 4 to pin 10/11	164	276		
T201, pin 4 to pin 12	184	304		
T201, pin 5/6 to pin 7	54.3	83		
T201, pin 5/6 to pin 8	47.3	78		
T201, pin 5/6 to pin 9	49.4	79		
T201, pin 5/6 to pin 10/11	50.2	84		
T201, pin 5/6 to pin 12	50.2	83		
Under C215	70.4	89		
C114 to C115	217	356		
PC101, pin 3 to pin 1	205	344		
PC101, pin 4 to pin 1	204	344		
PC101, pin 3 to pin 2	159	328		
PC101, pin 4 to pin 2	159	328		
PC102, pin 3 to pin 1	153	310		
PC102, pin 4 to pin 1	154	310		
PC102, pin 3 to pin 2	156	312		
PC102, pin 4 to pin 2	158	310		
PC103, pin 3 to pin 1	142	292		
PC103, pin 4 to pin 1	143	292		
PC103, pin 3 to pin 2	142	292		
PC103, pin 4 to pin 2	143	292		
PC201, pin 3 to pin 1	151	308		

Clause	Requirement + Test	Result - Remark	Verdict
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PC201, pin 4 to pin 1	152	308	
PC201, pin 3 to pin 2	163	292	
PC201, pin 4 to pin 2	170	288	
Supplementary information: Supply voltage: 240V, 60Hz			

4.6.1, 4.6.2	Table: Enclosure opening measurements		P
Location		Size (mm)	Comments
For horizontal position (Metal enclosure):			
Top	Ø 3.5 Ø 1.8	Numerous circle openings.	
Right	Ø 1.8	Numerous circle openings.	
Left	Ø 3.5 Ø 1.8	Numerous circle openings.	
Rear	Ø 5 Ø 3.5 Ø 1.8	Numerous circle openings.	
Bottom	Ø 1.8	Numerous circle openings and spacing of holes centre to centre is at least 3.3 mm on thickness 0.81 mm metal barrier.	
For vertical position (Metal enclosure):			
Top	Ø 3.5 Ø 1.8	Numerous circle openings.	
Right	Ø 3.5 Ø 1.8	Numerous circle openings.	
Left	Ø 1.8	Numerous circle openings.	
Rear	Ø 5 Ø 3.5 Ø 1.8	Numerous circle openings.	
Bottom	Ø 1.8	Numerous circle openings and spacing of holes centre to centre is at least 3.3 mm on thickness 0.81 mm metal barrier.	
For horizontal position (Plastic enclosure):			
Top / Left / Right	Max. 2.5 × 20.9 Max. 2.5 × 19	Numerous rectangle openings.	
Bottom	Max. 2.5 × 20.9	Numerous rectangle openings.	

Clause	Requirement + Test	Result - Remark	Verdict
Rear	Max. 2.5×31.5 Max. 2.5×16.5	Numerous rectangle openings.	
Front	--	None	
For vertical position (Plastic enclosure):			
Right / Top / Bottom	Max. 2.5×20.9 Max. 2.5×19	Numerous rectangle openings.	
Right	Max. 2.5×20.9	Numerous rectangle openings.	
Rear	Max. 2.5×31.5 Max. 2.5×16.5	Numerous rectangle openings.	
Front	--	None	
Supplementary information:			

5.1.6	TABLE: Touch current and protective conductor current measurement			P
Condition	L → terminal A (mA)	N → terminal A (mA)	Limit (mA)	Comments
Unit on	0.11	0.11	3.5	To connector, switch "e" opened.
Unit on	0.11	0.11	3.5	To metal enclosure, switch "e" opened.
Unit on	0.01	0.01	0.25	To plastic enclosure wrapped with metal foil, switch "e" closed.
Supplementary information:				
Supply voltage: 264V				
Input frequency: 60Hz				
Overall capacity: C2=C3=C4=C114=C115=100pF; C214=C215=470pF, C5=C6=C7= 2200pF				

C.2	TABLE: Insulation of transformers						P
	Transformer part name : T101						—
	Manufacturer : See appended table 1.5.1.						—
	Type : See appended table 1.5.1.						—
Clearance (cl) and creepage distance (cr) at/of/between:	U peak (V)	U r.m.s. (V)	Required cl (mm)	cl (mm)	Required cr (mm)	cr (mm)	
Primary /input winding and secondary/output winding (internal)	420	250	4.6	Triple insulation wire used	5.0	Triple insulation wire used	
Primary/input winding and core (internal)			--	--	--	--	

Clause	Requirement + Test	Result - Remark	Verdict
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Secondary/output winding and core (internal)			4.6	Triple insulation wire used	5.0	Triple insulation wire used
Primary/input part and secondary/output part (external)			4.6	8.0	5.0	8.0
Primary/input part and core (external)			--	--	--	--
Primary/input part and secondary/output winding (external)			4.6	Triple insulation wire used	5.0	Triple insulation wire used
Secondary/output part and core (external)			4.6	5.0	5.0	9.2
Secondary/output part and primary/input winding (external)			4.6	8.0	5.0	8.0

Description of design:

(a) Bobbin

Primary/input pins..... :	1-2, 4-6
Secondary/output pins	12-13
Material (manufacturer, type, ratings)	1) Sumitomo Bakelite, Phenolic type PM-9820, V-0 2) Hitachi Chemical, Phenolic type CP-J-8600, CP-J-8800, V-0
Thickness (mm)..... :	0.64mm

(b) General

Concentric windings on EEH26 Ferrite Core type, transformer construction as below.

- Two layers of insulation tape between primary and secondary windings.
- Secondary windings are triple insulation wires, see appended table 1.5.1 and subclause 2.10.5.12, Annex U for details.
- Margin tape is 3.0mm width on bottom side.
- Core is considered as primary.

Supplementary information:

C.2	TABLE: Insulation of transformers	P
	Transformer part name	T201
	Manufacturer	See appended table 1.5.1.
	Type	See appended table 1.5.1.

Clause	Requirement + Test	Result - Remark	Verdict
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Clearance (cl) and creepage distance (cr) at/of/between:	U peak (V)	U r.m.s. (V)	Required cl (mm)	cl (mm)	Required cr (mm)	cr (mm)
Primary /input winding and secondary/output winding (internal)	572	296	5.3	11.7	6.0	11.7
Primary/input winding and core (internal)			2.7	Triple insulation wire used	3.0	Triple insulation wire used
Secondary/output winding and core (internal)			2.7	7.2	3.0	7.2
Primary/input part and secondary/output part (external)			5.3	11.0	6.0	11.0
Primary/input part and core (external)			2.7	5.5	3.0	5.5
Primary/input part and secondary/output winding (external)			5.3	11.0	6.0	11.0
Secondary/output part and core (external)			2.7	5.5	3.0	5.5
Secondary/output part and primary/input winding (external)			5.3	11.0	6.0	11.0

Description of design:

(a) Bobbin

Primary/input pins..... :	4-2
Secondary/output pins	10-9, 11-7, 8-10, 12-11
Material (manufacturer, type, ratings)	1) Sumitomo Bakelite, Phenolic type PM-9820, V-0 2) Hitachi Chemical, Phenolic type CP-J-8600, CP-J-8800, V-0
Thickness (mm)..... :	0.64mm

(b) General

Concentric windings on EPC31 Ferrite Core type, transformer construction as below.

- The primary and secondary windings are separated by the construction of bobbin.
- Primary windings are triple insulation wires, see appended table 1.5.1 and subclause 2.10.5.12, Annex U for details.
- Core is considered as floating.

Supplementary information:

National Differences			
Clause	Requirement – Test	Result – Remark	Verdict

EUROPEAN GROUP DIFFERENCES AND NATIONAL 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)		P
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. Translation to Norwegian (the Swedish text will		N/A

National Differences			
Clause	Requirement – Test	Result – Remark	Verdict
	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)		P
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

National Differences			
Clause	Requirement – Test	Result – Remark	Verdict

	Canadian National Differences		P
SPECIAL NATIONAL CONDITIONS			
1.1.1	All equipment is to be designed to allow installation in accordance with the National Electrical Code (NEC), ANSI/NFPA 70, the Canadian Electrical Code (CEC), Part I, CAN/CSA C22.1, and when applicable, the National Electrical Safety Code, IEEE C2. Also, unless marked or otherwise identified, installation is allowed per the Standard for the Protection of Electronic Computer/Data-Processing Equipment, ANSI/NFPA 75.	Unit was evaluated according to IEC 60950-1. The requirements have to be checked during national approval.	N/A
1.4.14	For Pluggable Equipment Type A, the protection in the installation is assumed to be 20A.	Considered.	P
1.5.5	For lengths exceeding 3.05 m, external interconnecting flexible cord and cable assemblies are required to be a suitable cable type (e.g., DP, CL2) specified in the CEC/NEC. For lengths 3.05 m or less, external interconnecting flexible cord and cable assemblies that are not types specified in the CEC are required to have special construction features and identification markings.	No interconnecting cable.	P
1.7.1	Equipment for use on a.c. mains supply systems with a neutral and more than one phase conductor (e.g. 120/240 V, 3-wire) require a special marking format for electrical ratings. A voltage rating that exceeds an attachment plug cap rating is only permitted if it does not exceed the extreme operating conditions in Table 2 of CAN/CSA C22.2 No. 235, and if it is part of a range that extends into the Table 2 "Normal Operating Conditions." Likewise, a voltage rating shall not be lower than the specified "Normal Operating Conditions," unless it is part of a range that extends into the "Normal Operating Conditions."	Single-phase equipment.	N/A
1.7.7	Wiring terminals intended to supply Class 2 outputs in accordance with CEC Part 1 or NEC shall be marked with the voltage rating and "Class 2" or equivalent. Marking shall be located adjacent to the terminals and shall be visible during wiring.		N/A
2.5	Where a fuse is used to provide Class 2, Limited Power Source, or TNV current limiting, it shall not be operator-accessible unless it is not interchangeable.		N/A

National Differences			
Clause	Requirement – Test	Result – Remark	Verdict
2.7.1	Suitable NEC/CEC branch circuit protection rated at the maximum circuit rating is required for all standard supply outlets and receptacles (such as supplied in power distribution units) if the supply branch circuit protection is not suitable. Power distribution transformers distributing power at 100 volts or more, and rated 10 kVA or more, require special transformer overcurrent protection.		N/A
3.2	Wiring methods (terminals, leads, etc.) used for the connection of the equipment to the mains shall be in accordance with the NEC/CEC.	Overall acceptance has to be evaluated during the national approval process.	N/A
3.2.1	Power supply cords are required to have attachment plugs rated not less than 125 percent of the rated current of the equipment.		N/A
3.2.1.2	Equipment connected to a centralized d.c. power system, and having one pole of the DC mains input terminal connected to the main protective earthing terminal in the equipment, is required to comply with special earthing, wiring, marking and installation instruction requirements.		N/A
3.2.3	Permanent connection of equipment to the mains supply by a power supply cord is not permitted, except for certain equipment, such as ATMs.	Not permanent connection equipment.	N/A
3.2.5	Power supply cords are required to be no longer than 4.5 m in length. Flexible power supply cords are required to be compatible with Tables 11 and 12 of the CEC and Article 400 of the NEC.		N/A
3.2.9	Permanently connected equipment is required to have a suitable wiring compartment and wire bending space.	Not permanent connection equipment.	N/A
3.3	Wiring terminals and associated spacings for field wiring connections shall comply with CSA C22.2 No. 0.	No wiring terminals.	N/A
3.3.3	Wire binding screws are not permitted to attach conductors larger than 10 AWG (5.3 mm ²).		N/A
3.3.4	Terminals for permanent wiring, including protective earthing terminals, are required to be suitable for Canadian/US wire gauge sizes, rated 125 percent of the equipment rating, and be specially marked when specified (1.7.7).	No such wiring.	N/A
3.4.2	Motor control devices are required for cord-connected equipment with a motor if the equipment is rated more than 12 A, or if the motor has a nominal voltage rating greater than 120 V, or is rated more than 1/3 hp (locked rotor current over 43 A).		N/A
3.4.8	Vertically-mounted disconnect switches and circuit breakers are required to have the "on" position indicated by the handle in the up position.		N/A

National Differences			
Clause	Requirement – Test	Result – Remark	Verdict
3.4.11	For computer room applications, equipment with battery systems capable of supplying 750 VA for five minutes are required to have a battery disconnect means that may be connected to the computer room remote power-off circuit.	Not such application.	N/A
4.3.12	The maximum quantity of flammable liquid stored in equipment is required to comply with NFPA 30.	No liquids provided.	N/A
4.3.13.5	Equipment with lasers is required to meet the Canadian Radiation Emitting Devices Act, REDR C1370 and/or Code of Federal Regulations 21 CFR 1040, as applicable.	No laser provided.	N/A
4.7	For computer room applications, automated information storage systems with combustible media greater than 0.76 m ³ (27 cu ft) are required to have a provision for connection of either automatic sprinklers or a gaseous agent extinguishing system with an extended discharge.	Not such application.	N/A
4.7.3.1	For computer room applications, enclosures with combustible material measuring greater than 0.9 m ² (10 sq ft) or a single dimension greater than 1.8 m (6 ft) are required to have a flame spread rating of 50 or less. For other applications, enclosures with the same dimensions require a flame spread rating of 200 or less.	Not such application.	N/A
Annex H	Equipment that produces ionizing radiation is required to comply with the Canadian Radiation Emitting Devices Act, REDR C1370 and/or Code of Federal Regulations, 21 CFR 1020, as applicable.	No ionizing radiation.	N/A
OTHER DIFFERENCES			
1.5.1	Some components and materials associated with the risk of fire, electric shock, or personal injury are required to have component or material ratings in accordance with the applicable national (Canadian and/or U.S.) component or material standard requirements. These components include: attachment plugs, battery packs (rechargeable type, used with transportable equipment), cathode ray tubes, circuit breakers, communication circuit accessories, connectors (used for current interruption of non-LPS circuits), cord sets and power supply cords, direct plug-in equipment, enclosures (outdoor), flexible cords and cables, fuses (branch circuit), fuseholders, ground-fault current interrupters, industrial control equipment, insulating tape, interconnecting cables, lampholders, limit controls, printed wiring, protectors for communications circuits, receptacles, solid state controls, supplementary protectors, switches (including interlock switches), thermal cutoffs, thermostats, (multi-	UL approved components used. Refer to table 1.5.1 of IEC 60950-1 test report for details.	P

National Differences			
Clause	Requirement – Test	Result – Remark	Verdict
	layer) transformer winding wire, transient voltage surge suppressors, tubing, wire connectors, and wire and cables.		
1.6.1.2	A circuit for connection to the DC Mains Supply is classified as either a SELV Circuit, TNV-2 Circuit or Hazardous Voltage Circuit depending on the maximum operating voltage of the supply. This maximum operating voltage shall include consideration of the battery charging “float voltage” associated with the intended supply system, regardless of the marked power rating of the equipment.		N/A
2.3.1	For TNV-2 and TNV-3 circuits with other than ringing signals and with voltages exceeding 42.4 V _{peak} or 60 V _{d.c.} , the maximum acceptable current through a 2000 ohm resistor (or greater) connected across the voltage source with other loads disconnected is 7.1 mA peak or 30 mA d.c. under normal operating conditions.	No TNV circuits.	N/A
2.3.2.1	In the event of a single fault between TNV and SELV circuits, the limits of 2.2.3 apply to SELV Circuits and accessible conductive parts.	No TNV circuits.	N/A
2.6.3.4	Protective bonding conductors of non-standard protective bonding constructions (e.g., printed circuit traces) may be subjected to the additional limited short circuit test conditions specified.	See appended table.	P
4.2.8.1	Enclosures around CRTs with a face diameter of 160 mm or more are required to reduce the risk of injury due to the implosion of the CRT.	No CRT.	N/A
4.2.11	For equipment intended for mounting on racks and provided with slide/rails allowing the equipment to slide away from the rack for installation, service and maintenance, additional construction, performance and marking requirements are applicable to determine the adequacy of the slide/rails.	Not such application.	N/A
4.3.2	Equipment with handles is required to comply with special loading tests.	No handles.	N/A
5.1.8.3	Equipment intended to receive telecommunication ringing signals is required to comply with a special touch current measurement tests.	No TNV circuits.	N/A
5.3.7	Internal (e.g., card cage) SELV circuit connectors and printed wiring board connectors that are accessible to the operator and that deliver power are to be overloaded. During abnormal operating testing, if a circuit is interrupted by the opening of a component, the test shall be repeated twice (three tests total) using new components as necessary.	Complied. Refer to table 5.3 of IEC 60950-1 test report for details.	P

National Differences			
Clause	Requirement – Test	Result – Remark	Verdict
6.4	Equipment intended for connection to telecommunication network outside plant cable is required to be protected against overvoltage from power line crosses in accordance with 6.4 and Annex NAC.	No TNV circuits.	N/A
M.2	Continuous ringing signals up to 16 mA only are permitted if the equipment is subjected to special installation and performance restrictions.	No TNV circuits.	N/A
Annex NAD	Equipment connected to a telecommunication and cable distribution networks and supplied with an earphone intended to be held against, or in the ear is required to comply with special acoustic pressure requirements.	No TNV circuits.	N/A
Annex NAF	Document (paper) shredders likely to be used in a home or home office (Pluggable Equipment Type A plug configuration) are required to comply with additional requirements, including markings/instructions, protection against inadvertent reactivation of a safety interlock, disconnection from the mains supply (via provision of an isolating switch), and protection against operator access (accessibility determined via new accessibility probe & probe/wedge).	Not such application.	N/A

National Differences			
Clause	Requirement – Test	Result – Remark	Verdict
	Korean National Differences		P
	Corresponding National Standard: K 60950-1		P
1.5.101	Addition: Plugs for the connection of the apparatus to the supply mains shall comply with the Korean requirement (KSC 8305).	To be evaluated when submitted for national approval.	N/A
8	Addition: EMC The apparatus shall comply with the relevant CISPR standards.	To be evaluated when submitted for national approval.	N/A

National Differences			
Clause	Requirement – Test	Result – Remark	Verdict
	US National Differences		P
SPECIAL NATIONAL CONDITIONS BASED ON FEDERAL REGULATIONS			
1.1.1	All equipment is to be designed to allow installation in accordance with the National Electrical Code (NEC), ANSI/NFPA 70, and when applicable, the National Electrical Safety Code, IEEE C2. Also, unless marked or otherwise identified, installation is allowed per the Standard for the Protection of Electronic Computer/Data-Processing Equipment, ANSI/NFPA 75.	Unit was evaluated according to IEC 60950-1. The requirements have to be checked during national approval.	P
1.4.14	For Pluggable Equipment Type A, the protection in the installation is assumed to be 20A.	Considered.	P
1.5.5	For lengths exceeding 3.05 m, external interconnecting flexible cord and cable assemblies are required to be a suitable cable type specified in the NEC. For lengths 3.05 m or less, external interconnecting flexible cord and cable assemblies that are not types specified in the NEC are required to have special construction features and identification markings.	No interconnecting cable.	N/A
1.7.1	Equipment for use on a.c. mains supply systems with a neutral and more than one phase conductor (e.g. 120/240 V, 3-wire) require a special marking format for electrical ratings.	Single-phase equipment.	N/A
2.5	Where a fuse is used to provide Class 2, Limited Power Source, or TNV current limiting, it shall not be operator-accessible unless it is not interchangeable.	No such fuse.	N/A
2.7.1	Suitable NEC branch circuit protection rated at the maximum circuit rating is required for all standard supply outlets and receptacles (such as supplied in power distribution units) if the supply branch circuit protection is not suitable. Power distribution transformers distributing power at 100 volts or more, and rated 10 kVA or more, require special transformer overcurrent protection.	No such components provided.	N/A
3.2	Wiring methods (terminals, leads, etc.) used for the connection of the equipment to the mains shall be in accordance with the NEC.	Overall acceptance has to be evaluated during the national approval process.	N/A
3.2.1	Power supply cords are required to have attachment plugs rated not less than 125 percent of the rated current of the equipment.		N/A
3.2.1.2	Equipment connected to a centralized d.c. power system, and having one pole of the DC mains input terminal connected to the main protective earthing terminal in the equipment, is required to comply with special earthing, wiring, marking and installation instruction requirements.		N/A

National Differences			
Clause	Requirement – Test	Result – Remark	Verdict
3.2.3	Permanent connection of equipment to the mains supply by a power supply cord is not permitted, except for certain equipment, such as ATMs.	Not permanent connection equipment.	N/A
3.2.5	Power supply cords are required to be no longer than 4.5 m in length and minimum length shall be 1.5 m. Flexible power supply cords are required to be compatible with Article 400 of the NEC.	No power supply cord provided.	N/A
3.2.9	Permanently connected equipment must have a suitable wiring compartment and wire bending space.	Not permanent connection equipment.	N/A
3.3.3	Wire binding screws are not permitted to attach conductors larger than 10 AWG (5.3 mm ²).	No binding screws.	N/A
3.3.4	Terminals for permanent wiring, including protective earthing terminals, must be suitable for U.S wire gauge sizes, rated 125 percent of the equipment rating, and be specially marked when specified (1.7.7).	No such wiring.	N/A
3.4.2	Motor control devices are required for cord-connected equipment with a motor if the equipment is rated more than 12 A, or if the motor has a nominal voltage rating greater than 120 V, or is rated more than 1/3 hp (locked rotor current over 43 A).	Equipment is not such a device.	N/A
3.4.8	Vertically-mounted disconnect switches and circuit breakers are required to have the "on" position indicated by the handle in the up position.	No such device incorporated.	N/A
3.4.11	For computer room applications, equipment with battery systems capable of supplying 750 VA for five minutes are required to have a battery disconnect means that may be connected to the computer room remote power-off circuit.	Not such application.	N/A
4.3.12	The maximum quantity of flammable liquid stored in equipment is required to comply with NFPA 30.	No liquids provided.	N/A
4.3.13.5	Equipment with lasers is required to meet the Code of Federal Regulations 21 CFR 1040.	No laser provided.	N/A
4.7	For computer room applications, automated information storage systems with combustible media greater than 0.76 m ³ (27 cu ft) are required to have a provision for connection of either automatic sprinklers or a gaseous agent extinguishing system with an extended discharge.	Not such application.	N/A
4.7.3.1	For computer room applications, enclosures with combustible material measuring greater than 0.9 m ² (10 sq ft) or a single dimension greater than 1.8 m (6 ft) are required to have a flame spread rating of 50 or less. For other applications, enclosures with the same dimensions require a flame spread rating of 200 or less.	Not such application.	N/A
Annex H	Equipment that produces ionizing radiation must comply with Federal Regulations, 21 CFR 1020	No ionizing radiation.	N/A

National Differences			
Clause	Requirement – Test	Result – Remark	Verdict

OTHER NATIONAL DIFFERENCES			
1.5.1	Some components and materials associated with the risk of fire, electric shock, or personal injury are required to have component or material ratings in accordance with the applicable national (U.S. and Canadian) component or material requirements. These components include: attachment plugs, battery packs (rechargeable type, used with transportable equipment), cathode ray tubes, circuit breakers, communication circuit accessories, connectors (used for current interruption of non-LPS circuits), cord sets and power supply cords, direct plug-in equipment, enclosures (outdoor), flexible cords and cables, fuses (branch circuit), fuseholders, ground-fault current interrupters, industrial control equipment, insulating tape, interconnecting cables, lampholders, limit controls, printed wiring, protectors for communications circuits, receptacles, solid state controls, supplementary protectors, switches (including interlock switches), thermal cutoffs, thermostats, (multi-layer) transformer winding wire, transient voltage surge suppressors, tubing, wire connectors, and wire and cables.	UL approved components used. Refer to table 1.5.1 of IEC 60950-1 test report for details.	P
1.6.1.2	A circuit for connection to the DC Mains Supply is classified as either a SELV Circuit, TNV-2 Circuit or Hazardous Voltage Circuit depending on the maximum operating voltage of the supply. This maximum operating voltage it to include consideration of the battery charging “float voltage” associated with the intended supply system, regardless of the marked power rating of the equipment.		N/A
2.3.1	For TNV-2 and TNV-3 circuits with other than ringing signals and with voltages exceeding 42.4 V _{peak} or 60 V _{d.c.} , the max. acceptable current through a 2000 ohm resistor (or greater) connected across the voltage source with other loads disconnected is 7.1 mA peak or 30 mA d.c. under normal operating conditions.	No TNV circuits.	N/A
2.3.2.1	In the event of a single fault between TNV and SELV circuits, the limits of 2.2.3 apply to SELV Circuits and accessible conductive parts.	No TNV circuits.	N/A
2.6.3.4	Protective bonding conductors of non-standard protective bonding constructions (e.g., printed circuit traces) may be subjected to the additional limited short circuit test conditions specified.	See appended table.	P
4.2.8.1	Enclosures around CRTs with a face diameter of 160 mm or more are required to reduce the risk of injury due to the implosion of the CRT.	No CRT.	N/A

National Differences			
Clause	Requirement – Test	Result – Remark	Verdict
4.2.11	For equipment intended for mounting on racks and provided with slide/rails allowing the equipment to slide away from the rack for installation, service and maintenance, additional construction, performance and marking requirements are applicable to determine the adequacy of the slide/rails.	Not such application.	N/A
4.3.2	Equipment with handles is required to comply with special loading tests.	No handles.	N/A
5.1.8.3	Equipment intended to receive telecommunication ringing signals is required to comply with a special touch current measurement tests.	No TNV circuits.	N/A
5.3.7	Internal (e.g., card cage) SELV circuit connectors and printed wiring board connectors that are accessible to the operator and that deliver power are to be overloaded. During abnormal operating testing, if a circuit is interrupted by the opening of a component, the test shall be repeated twice (three tests total) using new components as necessary.	Complied. Refer to table 5.3 of IEC 60950-1 test report for details.	P
6.4	Equipment intended for connection to telecommunication network outside plant cable is required to be protected against overvoltage from power line crosses in accordance with 6.4 and Annex NAC.	No TNV circuits.	N/A
M.2	Continuous ringing signals up to 16 mA only are permitted if the equipment is subjected to special installation and performance restrictions.	No TNV circuits.	N/A
Annex NAD	Equipment connected to a telecommunication and cable distribution networks and supplied with an earphone intended to be held against, or in the ear is required to comply with special acoustic pressure requirements.	No TNV circuits.	N/A
Annex NAF	Document (paper) shredders likely to be used in a home or home office (Pluggable Equipment Type A plug configuration) are required to comply with additional requirements, including markings/instructions, protection against inadvertent reactivation of a safety interlock, disconnection from the mains supply (via provision of an isolating switch), and protection against operator access (accessibility determined via new accessibility probe & probe/wedge).	Not such application.	N/A