

COVER PAGE FOR TEST REPORT

Test Item Description:	Open Frame Display Monitor
Model/Type Reference:	OPD-215AX-YY, where X, Y may be any alphanumeric character or blank.
Rating(s):	I/P: 12 Vdc, 5.0A
Standards:	IEC60950, Third Edition (1999)
Applicant Name and Address:	AAEON TECHNOLOGY INC 5TH FL 135 LANE 235 PAO CHIAO RD HSIN-TIEN TAIPEI TAIWAN
Factory Location(s):	SAME AS APPLICANT

This Report includes the following parts, in addition to this cover page:

1. Specific Technical Criteria
2. Clause Verdicts
3. Critical Components
4. Test Results
5. National Differences
6. Enclosures

All applicable tests according to the above standard(s) have been carried out.

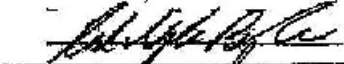
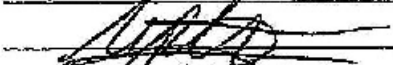
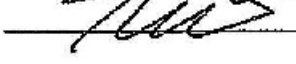

Test results are valid only for the tested equipment.

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TEST REPORT IEC 60950 Safety of information technology equipment	
Report Reference No	E231775-A3-CB-1
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Date of issue	2003-05-21
CB Testing Laboratory	UL International Demko A/S
Address	Lyskaer 8, 2730, Herlev, Denmark
Testing location/procedure	CBTL <input checked="" type="checkbox"/> SMT <input type="checkbox"/> TMP <input type="checkbox"/>
Address	UL International Demko A/S, Lyskaer 8, 2730, Herlev, Denmark
Applicant's name	AAEON TECHNOLOGY INC
Address	5TH FL 135 LANE 235 PAO CHIAO RD HSIN-TIEN TAIPEI TAIWAN
Test specification:	
Standard	IEC60950, Third Edition (1999)
Test procedure	CB Scheme
Non-standard test method	N/A
Test Report Form No.	I950__F/00-03
TRF originator	FIMKO
Master TRF	dated 00-02
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Test item description	Open Frame Display Monitor
Trade Mark	AAEON
	
Model/Type reference	OPD-215AX-YY, where X, Y may be any alphanumeric character or blank.
Manufacturer	SAME AS APPLICANT
Rating	I/P: 12 Vdc, 5.0A

Marking Plate - Refer to Enclosure titled Miscellaneous for copy.

Particulars: test item vs. test requirements

Equipment mobility: movable
 Operating condition: continuous
 Mains supply tolerance (%): No direct connection to mains supply - no tolerances applied.
 Test for IT power systems: No
 IT testing, phase-phase voltage (V): N/A
 Class of equipment: Class III (supplied by SELV).
 Mass of equipment (kg): 5.5 kg
 Protection against ingress of water: IP20

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)

General remarks:

This report is not valid as a CB Test Report unless signed by an approved CB Testing Laboratory and appended to a CB Test Certificate issued by a NCB in accordance with IEC 60364-4-41.

The test results presented in this report relate only to the object tested.
 This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory.

"(see Enclosure #)" refers to additional information appended to the report.
 "(see appended table)" refers to a table appended to the report.
 Throughout this report a point is used as the decimal separator.

General Product Information:	
Report Summary	
All applicable tests according to the referenced standard(s) have been carried out.	
Product Description	
USL/CNL Electrical components mounted on the PWB, inverter, and LCD panel housed by polymeric enclosure.	
Model Differences	
N/A	
Additional Information	
N/A	
Engineering Consideration	
The product was submitted and tested for use at the manufacturer's recommended ambient temperature (Tmra) of	50
The following accessible locations (with circuit/schematic designation) are within a limited current circuit.....	Secondary output connector, CN2, CN3
Engineering Conditions of Acceptability	
When installed in an end-product, consideration must be given to the following:	

IEC 60950			
Clause	Requirement + Test	Result - Remark	Verdict

1	GENERAL		Pass
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1.5	Components		Pass
1.5.1	Comply with IEC 950 or relevant component standard	(see appended table 1.5.1)	Pass
1.5.2	Evaluation and testing of components	Components certified to IEC harmonized standard and checked for correct application. Components not certified are used in accordance with their ratings and they comply with applicable parts of IEC 60950 and the relevant component Standard. Components, for which no relevant IEC-Standard exist, have been tested under the conditions occurring in the equipment, using applicable parts of IEC 60950.	Pass
	Dimensions (mm) of mains plug for direct plug-in :	Not direct plug-in unit.	N/A
	Torque and pull test of mains plug for direct plug-in; torque (Nm); pull (N)		N/A
1.5.3	Thermal controls	There are no thermal controller used.	N/A
1.5.4	Transformers		N/A
1.5.5	Interconnecting cables	Interconnecting cables comply with the relevant requirements of this standard.	Pass
1.5.6	Capacitors in primary circuits		N/A
1.5.7	Double or reinforced insulation bridged by components		N/A
1.5.7.1	Bridging capacitors		N/A
1.5.7.2	Bridging resistors		N/A
1.5.7.3	Accessible parts		N/A
1.5.8	Components in equipment for IT power systems	The equipment does not connect to AC mains supply directly.	N/A

IEC 60950			
Clause	Requirement + Test	Result - Remark	Verdict

1.6	Power Interface		Pass
1.6.1	AC power distribution systems		N/A
1.6.2	Input current	The steady state input current of the equipment did not exceed the RATED CURRENT by more than 10% under NORMAL LOAD. (see appended table 1.6.2)	Pass
1.6.3	Voltage limit of hand-held equipment	The unit is not a hand-held equipment.	N/A
1.6.4	Neutral conductor		N/A

IEC 60950			
Clause	Requirement + Test	Result - Remark	Verdict
1.7	Marking and Instructions		Pass
1.7.1	Power rating	Unit not provided with means for connection to mains.	N/A
	Rated voltage(s) or voltage range(s) (V)	Optional, 12 Vdc	Pass
	Symbol for nature of supply for d.c.....	Optional provided.	Pass
	Rated frequency or frequency range (Hz)	dc	N/A
	Rated current (A).....	Optional, 5.0 A	Pass
	Manufacturer's name/Trademark	AAEON TECHNOLOGY INC. / AAEON	Pass
	Type/model	OPD-215AX-YY, where X, Y may be any alphanumeric character or blank.	Pass
	Symbol of Class II	Class III equipment.	N/A
	Other symbols	Additional symbols may be provided when submitted for National Approval.	Pass
	Certification marks		N/A
1.7.2	Safety instructions	Safety instructions in English. Other languages will be provided when submitted for national approval.	Pass
1.7.3	Short duty cycles		N/A
1.7.4	Supply voltage adjustment		N/A
1.7.5	Power outlets on the equipment.....	No standard power outlets are provided.	N/A
1.7.6	Fuse identification		N/A
1.7.7	Wiring terminals		N/A
1.7.7.1	Protective earthing and bonding terminals		N/A
1.7.7.2	Terminal for a.c. mains supply conductors		N/A
1.7.8	Controls and indicators		Pass
1.7.8.1	Identification, location and marking		N/A
1.7.8.2	Colours.....	A green LED is illuminated when the unit is operating and only functional indicators use color.	Pass

IEC 60950			
Clause	Requirement + Test	Result - Remark	Verdict
1.7.8.3	Symbols according to IEC 60417	The stand-by switch is marked with the correct symbol (60417-1-IEC-5009).	Pass
1.7.8.4	Markings using figures	Figures are not used for indicating different positions of controls.	N/A
1.7.9	Isolation of multiple power sources		N/A
1.7.10	IT power system		N/A
1.7.11	Thermostats and other regulating devices	No thermostats or similar regulating devices.	N/A
1.7.12	Language	Reviewed only English markings/instructions. May be provided in other languages upon request from the manufacturer.	-
1.7.13	Durability	The marking(s) withstood the required test.	Pass
1.7.14	Removable parts		N/A
1.7.15	Replaceable batteries	There are no lithium batteries in the equipment.	N/A
	Language		-
1.7.16	Operator access with a tool.....		N/A
1.7.17	Equipment for restricted access locations.....	Equipment not intended for installation in a RESTRICTED ACCESS LOCATION.	N/A
2	PROTECTION FROM HAZARDS		Pass

IEC 60950			
Clause	Requirement + Test	Result - Remark	Verdict
2.1	Protection from electric shock and energy hazards		Pass
2.1.1	Protection in OPERATOR access areas		Pass
2.1.1.1	Access to energized parts	The operator has access to bare parts of LIMITED CURRENT CIRCUITS.	Pass
	Test by inspection		N/A
	Test with test finger		N/A
	Test with test pin		N/A
	Test with test probe	No TNV present.	N/A
2.1.1.2	Battery compartments		N/A
2.1.1.3	Access to ELV wiring	No ELV circuit presented.	N/A
	Working voltage (V); distance (mm) through insulation		-
2.1.1.4	Access to hazardous voltage circuit wiring	No internal wiring accessible to the user.	N/A
2.1.1.5	Energy hazards	No energy hazard in operator access area. The connectors of the equipment below 240VA.	Pass
2.1.1.6	Manual controls	The equipment does not contain any knobs, handles, levers, or the like.	N/A
2.1.1.7	Discharge of capacitors in the primary circuit		N/A
	Time-constant (s); measured voltage (V)		-
2.1.2	Protection in service access areas	No bare parts operating at HAZARDOUS VOLTAGES in a service access area.	N/A
2.1.3	Protection in restricted access locations		N/A

IEC 60950			
Clause	Requirement + Test	Result - Remark	Verdict

2.2	SELV Circuits		Pass
2.2.1	General requirements	SELV levels are maintained after single fault condition.	Pass
2.2.2	Voltages under normal conditions (V)	All accessible voltages are less than 42.4 Vp or 60 V dc and are classified as SELV.	Pass
2.2.3	Voltages under fault conditions (V)	Under fault conditions voltages never exceed 71V peak and 120Vdc and do not exceed 42.4V peak or 60V dc for more than 0.2 sec.	Pass
2.2.3.1	Separation by double or reinforced insulation (method 1)		N/A
2.2.3.2	Separation by earthed screen (method 2)		N/A
2.2.3.3	Protection by earthing of the SELV circuit (method 3)		N/A
2.2.4	Connection of SELV circuits to other circuits	SELV connected to limited current circuit.	Pass

2.3	TNV Circuits		N/A
2.3.1	Limits	No TNV circuit.	N/A
	Type of TNV circuits		-
2.3.2	Separation from other circuits and from accessible parts		N/A
	Insulation employed		-
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

IEC 60950			
Clause	Requirement + Test	Result - Remark	Verdict

2.4	Limited Current Circuits		Pass
2.4.1	General requirements		Pass
2.4.2	Limit values	70 mA peak.	Pass
	Frequency (Hz)	>1KHz	-
	Measured current (mA)	The steady-state current drawn through a non-inductive resistor did not exceed 70 mA peak.	-
	Measured voltage (V)	980V	-
	Measured capacitance (εgF)	Maximum normal circuit voltage less than 15 kV peak or dc. Circuit capacitance is 22pF.	-
2.4.3	Connection of limited current circuits to other circuits	The LIMITED CURRENT CIRCUIT connected to other circuits complies with the requirements of Sub-clause 2.4.1.	Pass

2.5	Limited Power Sources		N/A
	Inherently limited output		N/A
	Impedance limited output		N/A
	Overcurrent protective device limited output		N/A
	Regulating network limited output under normal operating and single fault condition		N/A
	Regulating network limited output under normal operating conditions and overcurrent protective device limited output under single fault condition		N/A
	Output voltage (V), output current (A), apparent power (VA)		-
	Current rating of overcurrent protective device (A) :		-

IEC 60950			
Clause	Requirement + Test	Result - Remark	Verdict

2.6	Provisions for Earthing and Bonding		N/A
2.6.1	Protective earthing	Class III equipment.	N/A
2.6.2	Functional earthing		N/A
2.6.3	Protective earthing and protective bonding conductors		N/A
2.6.3.1	Size of protective earthing conductors		N/A
	Rated current (A), cross-sectional area (mm ²), AWG :		-
2.6.3.2	Size of protective bonding conductors		N/A
	Rated current (A), cross-sectional area (mm ²), AWG :		-
2.6.3.3	Rated current (A), type and nominal thread diameter (mm)..... :		N/A
	Resistance (Ohm) of earthing conductors and their terminations, test current (A)..... :		N/A
2.6.3.4	Colour of insulation :		N/A
2.6.4	Terminals		N/A
2.6.4.1	Protective earthing and bonding terminals		N/A
	Rated current (A), type and nominal thread diameter (mm)..... :		-
2.6.4.2	Separation of the protective earthing conductor from protective bonding conductors		N/A
2.6.5	Integrity of protective earthing		N/A
2.6.5.1	Interconnection of equipment		N/A
2.6.5.2	Components in protective earthing conductors and protective bonding conductors		N/A
2.6.5.3	Disconnection of protective earth		N/A
2.6.5.4	Parts that can be removed by an operator		N/A
2.6.5.5	Parts removed during servicing		N/A
2.6.5.6	Corrosion resistance		N/A
2.6.5.7	Screws for protective bonding		N/A
2.6.5.8	Reliance on telecommunication network		N/A

IEC 60950			
Clause	Requirement + Test	Result - Remark	Verdict

2.7	Overcurrent and Earth Fault Protection in Primary Circuits		N/A
2.7.1	Basic requirements	The equipment does not connected to primary circuit directly.	N/A
	Instructions when protection relies on building installation		N/A
2.7.2	Faults not covered in 5.3		N/A
2.7.3	Short-circuit backup protection		N/A
2.7.4	Number and location of protective devices :		N/A
2.7.5	Protection by several devices		N/A
2.7.6	Warning to service personnel..... :		N/A

2.8	Safety Interlocks		N/A
2.8.1	General principles	No safety interlock used.	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	Interlocks with moving parts		N/A
2.8.6	Overriding an interlock		N/A
2.8.7	Switches and relays in interlock systems		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 (V)		N/A
2.8.8	Mechanical actuators		N/A

IEC 60950			
Clause	Requirement + Test	Result - Remark	Verdict

2.9	Electrical Insulation		Pass
2.9.1	Properties of insulating materials	Natural rubber, materials containing asbestos and hygroscopic materials are not used as insulation.	Pass
2.9.2	Humidity conditioning		N/A
2.9.3	Requirements for insulation		N/A
2.9.4	Insulation parameters		Pass
2.9.5	Categories of insulation	Functional.	Pass

IEC 60950			
Clause	Requirement + Test	Result - Remark	Verdict
2.10	Clearances, Creepage Distances and Distances Through Insulation		Pass
2.10.1	General	See below.	Pass
2.10.2	Determination of working voltage		N/A
2.10.3	Clearances	All critical clearance distances are covered in power supply evaluation.	Pass
2.10.3.1	General		Pass
2.10.3.2	Clearances in primary circuit		N/A
2.10.3.3	Clearances in secondary circuits	(see appended table 2.10.3 and 2.10.4)	Pass
2.10.3.4	Measurement of transient levels		N/A
2.10.4	Creepage distances	(see appended table 2.10.3 and 2.10.4)	Pass
	CTI tests..... :	Material group IIIb; $100 \leq CTI < 175$.	-
2.10.5	Solid insulation		N/A
2.10.5.1	Minimum distance through insulation		N/A
2.10.5.2	Thin sheet material		N/A
	Number of layers (pcs)..... :		-
	Electric strength test..... :		-
2.10.5.3	Printed boards	PWB is not used as reinforced or supplementary insulation.	N/A
	Distance through insulation		N/A
	Electric strength test for thin sheet insulating material :		-
	Number of layers (pcs)..... :		N/A
2.10.5.4	Wound components		N/A
	Number of layers (pcs)..... :		N/A
	Two wires in contact inside component; angle between 45° and 90°		N/A
2.10.6	Coated printed boards	No special coating used.	N/A
2.10.6.1	General		N/A
2.10.6.2	Sample preparation and preliminary inspection		N/A
2.10.6.3	Thermal cycling		N/A

IEC 60950			
Clause	Requirement + Test	Result - Remark	Verdict
2.10.6.4	Thermal ageing (ϕ XC..... :		N/A
2.10.6.5	Electric strength test..... :		-
2.10.6.6	Abrasion resistance test		N/A
	Electric strength test..... :		-
2.10.7	Enclosed and sealed parts..... :	No hermetically sealed or enclosed components used.	N/A
	Temperature $T_1=T_2 + T_{mra} - T_{amb} + 10K$ (ϕ XC..... :		N/A
2.10.8	Spacings filled by insulating compound :		N/A
	Electric strength test..... :		-
2.10.9	Component external terminations		N/A
2.10.10	Insulation with varying dimensions		N/A
3	WIRING, CONNECTIONS AND SUPPLY		Pass

IEC 60950			
Clause	Requirement + Test	Result - Remark	Verdict
3.1	General		Pass
3.1.1	Current rating and overcurrent protection	All internal wiring used in the distribution of primary power protected against overcurrent were evaluated as an element of power supply certification.	Pass
3.1.2	Protection against mechanical damage	The wires are routed away from sharp edges and parts which could damage insulation.	Pass
3.1.3	Securing of internal wiring	The wires are positioned in such a manner that prevents excessive strain, loosening of terminal connections and damage of conductor insulation.	Pass
3.1.4	Insulation of conductors	Insulation on internal conductors is considered to be of adequate quality and suitable for the application and the working voltages involved. All internal wirings are UL Recognized and rated minimum 300 Vac.	Pass
3.1.5	Beads and ceramic insulators	The equipment does not have any beads or similar insulators.	N/A
3.1.6	Screws for electrical contact pressure	The equipment does not have any screw-type connections.	N/A
3.1.7	Non-metallic materials in electrical connections	No contact pressure through insulating material.	Pass
3.1.8	Self-tapping and spaced thread screws	Thread-cutting or space thread screws are not used for electrical connections. Machine screws only.	N/A
3.1.9	Termination of conductors		N/A
	10 N pull test		N/A
3.1.10	Sleeving on wiring	Not provided.	N/A

IEC 60950			
Clause	Requirement + Test	Result - Remark	Verdict

3.2	Connection to A.C. Mains Supplies		N/A
3.2.1	Means of connection	No connected to mains directly.	N/A
3.2.2	Multiple supply connections		N/A
3.2.3	Permanently connected equipment		N/A
	Number of conductors, diameter (mm) of cable and conduits.....		-
3.2.4	Appliance inlets		N/A
3.2.5	Power supply cords		N/A
	Type		-
	Rated current (A), cross-sectional area (mm ²),AWG		-
3.2.6	Cord anchorages and strain relief		N/A
	Mass of equipment (kg), pull (N)		-
	Longitudinal displacement (mm)		-
3.2.7	Protection against mechanical damage		N/A
3.2.8	Cord guards		N/A
	D (mm); test mass (g)		-
	Radius of curvature of cord (mm).....		-
3.2.9	Supply wiring space		N/A

IEC 60950			
Clause	Requirement + Test	Result - Remark	Verdict

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
3.3.4	Rated current (A), cord/cable type, cross-sectional area (mm ²)	:	N/A
3.3.5	Rated current (A), type and nominal thread diameter (mm).....	:	N/A
3.3.6	Wiring terminals design		N/A
3.3.7	Grouping of wiring terminals		N/A
3.3.8	Stranded wire		N/A

3.4	Disconnection From the A.C. Mains Supply		N/A
3.4.1	General requirement		N/A
3.4.2	Disconnect devices	Unit does not have direct connection to mains power.	N/A
3.4.3	Permanently connected equipment	Not permanently connected equipment.	N/A
3.4.4	Parts which remain energized		N/A
3.4.5	Switches in flexible cords		N/A
3.4.6	Single-phase equipment		N/A
3.4.7	Three-phase equipment		N/A
3.4.8	Switches as disconnect devices		N/A
3.4.9	Plugs as disconnect devices		N/A
3.4.10	Interconnected equipment		N/A
3.4.11	Multiple power sources		N/A

IEC 60950			
Clause	Requirement + Test	Result - Remark	Verdict

3.5	Interconnection of Equipment		Pass
3.5.1	General requirements		Pass
3.5.2	Types of interconnection circuits	Interconnection circuits are SELV CIRCUITS.	Pass
3.5.3	ELV circuits as interconnection circuits	No ELV circuits.	N/A

4	PHYSICAL REQUIREMENTS		Pass
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4.1	Stability		N/A
	Angle of 10Q		N/A
	Test: force (N)		N/A

4.2	Mechanical strength		Pass
4.2.1	General		Pass
4.2.2	Steady force test, 10 N	No energy or other hazards.	Pass
4.2.3	Steady force test, 30 N		N/A
4.2.4	Steady force test, 250 N		N/A
4.2.5	Impact test		N/A
4.2.6	Drop test		N/A
4.2.7	Stress relief		N/A
4.2.8	Cathode ray tubes	The equipment does not have any CRT _i !	N/A
	Picture tube separately certified		N/A
4.2.9	High pressure lamps	The equipment does not have any high pressure lamps.	N/A
4.2.10	Wall or ceiling mounted equipment; force (N)	Not wall mounted equipment.	N/A

IEC 60950			
Clause	Requirement + Test	Result - Remark	Verdict
4.3	Design and Construction		Pass
4.3.1	Edges and corners		Pass
4.3.2	Handles and manual controls; force (N)..... :		N/A
4.3.3	Adjustable controls	The equipment does not have a voltage selector.	N/A
4.3.4	Securing of parts	Electrical and mechanical connections can be expected to withstand usual mechanical stress.	Pass
4.3.5	Connection of plugs and sockets	The equipment does not have any interchangeable plugs/sockets.	N/A
4.3.6	Direct plug-in equipment	Not direct plug-in equipment.	N/A
	Torque (Nm)..... :		-
4.3.7	Heating elements in earthed equipment	The equipment does not have any heating elements.	N/A
4.3.8	Batteries		N/A
4.3.9	Oil and grease	The insulation of the internal wiring is not exposed to oil, grease, etc.	N/A
4.3.10	Dust, powders, liquids and gases	The equipment does not produce dust or employ powders, liquids or gases.	N/A
4.3.11	Containers for liquids or gases	The equipment does not contain liquids.	N/A
4.3.12	Flammable liquids :	The equipment does not use any flammable liquids.	N/A
	Quantity of liquid (l) :		N/A
	Flash point (°XC :		N/A
4.3.13	Radiation; type of radiation :	The equipment does not generate ionizing radiation or contain flammable liquids or gases.	N/A
	Equipment using lasers		N/A

IEC 60950			
Clause	Requirement + Test	Result - Remark	Verdict

4.4	Protection Against Hazardous Moving Parts		N/A
4.4.1	General	Equipment does not have any hazardous moving parts.	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		Pass
4.5.1	Temperature rises	(see appended table 4.5.1)	Pass
	Normal load condition per Annex L :	Operated in the most unfavorable way of operation given in the operating instructions until steady conditions established.	Pass
4.5.2	Resistance to abnormal heat		N/A

IEC 60950			
Clause	Requirement + Test	Result - Remark	Verdict
4.6	Openings in Enclosures		Pass
4.6.1	Top and side openings	Foreign objects entering the enclosure will not contact bare parts at hazardous voltage or energy.	Pass
	Dimensions (mm)..... :	Rear Side: Provided with numerous openings, covering two identical areas, each open measured 3.0 mm diameter, covering area of 122 by 59 mm. Side: Provided with numerous openings, covering an area on each side, each open measured 3.0 mm diameter, covering area of 59 by 38 mm.	-
4.6.2	Bottoms of fire enclosures	No openings.	N/A
	Construction of the bottom..... :		-
4.6.3	Doors or covers in fire enclosures	The equipment does not have any doors or covers.	N/A
4.6.4	Openings in transportable equipment	Unit not transportable.	N/A
4.6.5	Adhesives for constructional purposes	Adhesives not used for securement of internal barriers or screens.	N/A
	Conditioning temperature/time..... :		-

IEC 60950			
Clause	Requirement + Test	Result - Remark	Verdict

4.7	Resistance to Fire		Pass
4.7.1	Reducing the risk of ignition and spread of flame	Method 1: Selection and application of components and materials which minimize the possibility of ignition and spread of flame.	Pass
4.7.2	Conditions for a fire enclosure	With having the following components: - components in secondary circuits supplied by limited power source complying with 2.5 and mounted on materials of flammability class V-1. The fire enclosure is not required.	N/A
4.7.2.1	Parts requiring a fire enclosure	See 4.7.2	Pass
4.7.2.2	Parts not requiring a fire enclosure	See 4.7.2	Pass
4.7.3	Materials		N/A
4.7.3.1	General	See below.	Pass
4.7.3.2	Materials for fire enclosures	The fire enclosure is metal.	Pass
4.7.3.3	Materials for components and other parts outside fire enclosures	Decorative parts and parts outside of the fire enclosure are made of minimum HB material.	N/A
4.7.3.4	Materials for components and other parts inside fire enclosures	All internal materials are rated V-2 or better or are mounted on a PWB rated V-1 or better. Internal wiring is UL Recognized, rated VW-1 or FT-1. See Table 1.5.1 for material information.	Pass
4.7.3.5	Materials for air filter assemblies	The equipment does not have any air filters.	N/A
4.7.3.6	Materials used in high-voltage components	No high-voltage components.	N/A

5	ELECTRICAL REQUIREMENTS AND SIMULATED ABNORMAL CONDITIONS	Pass
---	--	------

IEC 60950			
Clause	Requirement + Test	Result - Remark	Verdict

5.1	Touch current and protective conductor current		N/A
5.1.1	General	No connected to mains directly.	N/A
5.1.2	Equipment under test (EUT)		N/A
5.1.3	Test circuit		N/A
5.1.4	Application of measuring instrument		N/A
5.1.5	Test procedure		N/A
5.1.6	Test measurements		N/A
	Test voltage (V)..... :		-
	Measured current (mA) :		-
	Max. allowed current (mA) :		-
5.1.7	Equipment with touch current exceeding 3.5 mA .. :		N/A
5.1.8	Touch currents to and from telecommunication networks		N/A
5.1.8.1	Limitation of the touch current to a telecommunication network		N/A
	Test voltage (V)..... :		-
	Measured current (mA) :		-
	Max. allowed current (mA) :		-
5.1.8.2	Summation of touch currents from telecommunication networks		N/A

5.2	Electric Strength		N/A
5.2.1	General	Class III equipment.	N/A
5.2.2	Test procedure		N/A

IEC 60950			
Clause	Requirement + Test	Result - Remark	Verdict

5.3	Abnormal Operating and Fault Conditions		Pass
5.3.1	Protection against overload and abnormal operation	See below.	Pass
5.3.2	Motors		N/A
5.3.3	Transformers		N/A
5.3.4	Functional insulation	Functional insulation complies with the requirements (a), (b), or (c).	Pass
5.3.5	Electromechanical components		N/A
5.3.6	Simulation of faults	Faults in primary and secondary components and Functional insulation were already considered during the approval of the power adaptor. Blocked ventilation openings test: Result see appended table. No other abnormal test is necessary.	Pass
5.3.7	Unattended equipment		N/A
5.3.8	Compliance criteria for abnormal operating and fault conditions	No fire, emission of molten metal or deformation was noted during the tests.	Pass

6	CONNECTION TO TELECOMMUNICATION NETWORKS		N/A
---	---	--	-----

6.1	Protection of telecommunication network service personnel, and users of other equipment connected to the network, from hazards in the equipment		N/A
6.1.1	Protection from hazardous voltages		N/A
6.1.2	Separation of the telecommunication network from earth		N/A
6.1.2.1	Requirements		N/A
	Test voltage (V).....		-
	Current in the test circuit(mA)		-
6.1.2.2	Exclusions		N/A

IEC 60950			
Clause	Requirement + Test	Result - Remark	Verdict

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 Telecommunication Wiring System From Overheating		N/A
	Max. output current (A)		-
	Current limiting method		-

A	ANNEX A, TESTS FOR RESISTANCE TO HEAT AND FIRE		N/A
---	---	--	-----

A.1	Flammability test for fire enclosures of movable equipment having a total mass exceeding 18 kg, and of stationary equipment (see 4.7.3.2)		N/A
A.1.1	Samples, material		-
	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		N/A
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)		-

IEC 60950			
Clause	Requirement + Test	Result - Remark	Verdict

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.2.6	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 60695-2-2, cl. 4, 8		N/A
	Sample 1 burning time (s)		-
	Sample 2 burning time (s)		-
	Sample 3 burning time (s)		-

A.3	High current arcing ignition test (see 4.7.3.2)		N/A
A.3.1	Samples, material		-
	Wall thickness (mm).....		-
A.3.5	Compliance criteria		N/A
	Sample 1 number of arcs to ignition (pcs)		-
	Sample 2 number of arcs to ignition (pcs)		-
	Sample 3 number of arcs to ignition(pcs)		-
	Sample 4 number of arcs to ignition(pcs)		-
	Sample 5 number of arcs to ignition (pcs)		-

IEC 60950			
Clause	Requirement + Test	Result - Remark	Verdict

A.4	Hot wire ignition test (see 4.7.3.2)		N/A
A.4.1	Samples, material		-
	Wall thickness (mm).....		-
A.4.5	Compliance criteria		N/A
	Sample 1 ignition time (s).....		-
	Sample 2 ignition time (s).....		-
	Sample 3 ignition time (s).....		-
	Sample 4 ignition time (s).....		-
	Sample 5 ignition time (s).....		-

A.5	Hot flaming oil test (see 4.6.2)		N/A
-----	---	--	-----

A.6	Flammability tests for classifying materials V-0, V-1 or V-2		N/A
A.6.1	Samples, material		-
	Wall thickness (mm).....		-
A.6.5	Compliance criteria		N/A
A.6.6	Permitted retest		N/A

A.7	Flammability test for classifying foamed materials HF-1, HF-2 or HFB		N/A
A.7.1	Sample, material		-
	Wall thickness (mm).....		-
A.7.4	Compliance criteria		N/A
A.7.5	Compliance criteria, HF-2		N/A
A.7.6	Compliance criteria, HF-1		N/A
A.7.7	Compliance criteria, HBF		N/A
A.7.8	Permitted retest, HF-1 or HF-2		N/A
A.7.9	Permitted retest, HBF		N/A

IEC 60950			
Clause	Requirement + Test	Result - Remark	Verdict

A.8	Flammability test for classifying materials HB		N/A
A.8.1	Samples, material		-
	Sample thickness (mm).....		-
A.8.2	Conditioning of samples; temperature (ϕ XC		N/A
A.8.4	Test procedure		N/A
A.8.5	Compliance criteria		N/A
A.8.6	Permitted retest		N/A

A.9	Flammability test for classifying materials 5V		N/A
A.9.1	Samples, material		-
	Sample thickness (mm).....		-
A.9.4	Test procedure, test bars		N/A
A.9.5	Test procedure, test plaques		N/A
A.9.6	Compliance criteria		N/A
A.9.7	Permitted retest		N/A

A.10	Stress relief conditioning (see 4.2.7)		N/A
	Temperature (ϕ XC		-

IEC 60950			
Clause	Requirement + Test	Result - Remark	Verdict

B	ANNEX B, MOTOR TESTS UNDER ABNORMAL CONDITIONS (see 4.7.2.2 and 5.3.2)		N/A
B.1	General requirements		N/A
	Position		-
	Manufacturer		-
	Type		-
	Rated values		-
B.2	Test conditions		N/A
B.3	Maximum temperatures		N/A
B.4	Running overload test		N/A
B.5	Locked-rotor overload test		N/A
	Test duration (days)		-
	Electric strength test: test voltage (V).....		-
B.6	Running overload test for DC motors in secondary circuits		N/A
B.7	Locked-rotor overload test for DC motors in secondary circuits		N/A
B.7.1	Test procedure		N/A
B.7.2	Alternative test procedure; test time (h)		N/A
B.7.3	Electric strength test		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)		-

IEC 60950			
Clause	Requirement + Test	Result - Remark	Verdict

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

G	ANNEX G, ALTERNATIVE METHOD FOR DETERMINING MINIMUM CLEARANCES		N/A
G.1	Summary of the procedure for determining minimum clearances		N/A
G.2	Determination of mains transient voltage (V)		N/A
G.3	Determination of telecommunication network transient voltage (V)		N/A
G.4	Determination of required withstand voltage (V) ...		N/A
G.5	Measurement of transient levels (V).....		N/A
G.6	Determination of minimum clearances		N/A

H	ANNEX H, IONIZING RADIATION (see 4.3.13)		N/A
	Ionizing radiation		N/A
	Measured radiation (mR/h)		-
	Measured high-voltage (kV)		-
	Measured focus voltage (kV)		-
	CRT markings		-

J	ANNEX J, TABLE OF ELECTROCHEMICAL POTENTIALS (see 2.6.5.6)		N/A
	Metal used		-

IEC 60950			
Clause	Requirement + Test	Result - Remark	Verdict

K	ANNEX K, THERMAL CONTROLS (see 1.5.3 and 5.3.7)		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

M	ANNEX M, CRITERIA FOR TELEPHONE RINGING SIGNALS (see 2.3.1)		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 (f)..... :		-
M.3.1.2	Voltage (V) :		-
M.3.1.3	Cadence; time (s), voltage (V) :		-
M.3.1.4	Single fault current (mA) :		-
M.3.2	Tripping device and monitoring voltage..... :		N/A
M.3.2.1	Conditions for use of a tripping device or a monitoring voltage		N/A
M.3.2.2	Tripping device		N/A
M.3.2.3	Monitoring voltage (V) :		N/A

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

IEC 60950			
Clause	Requirement + Test	Result - Remark	Verdict

1.5.1	TABLE: list of critical components					Pass
object/part No.	manufacturer/ trademark	type/model	technical data	standard	mark(s) of conformity ¹⁾	
Power adaptor	EDAC	EA1050A-120	I/P: 100-240 Vac, 50-60Hz, 1.8A ; O/P: 12Vdc, 5.0A.	IEC 60950	UL ,CUL, Demko CB Cert. No DK- 4436	
LCD panel	Fujitsu Limited	FLC38XGC6V- 06	15.0" TFT- LCD	--	--, --	
DC/AC Inverter	Inn Sun Enterprise Co., Ltd	8592F-01	I/P: 12.0 Vdc, 1.74 A max, O/P: 1500 Vac max, 14.0 mA max	--	--, --	
Transformer in DC/AC Inverter (T1, T2)	Taiwan Transformer Electronics Co., Ltd.	TME2023-082IS- 13	Class 105 ϕ X	--	--, --	
Capacitor in DC/AC Inverter(C23, C24, C25, C26)	--	--	22 pF, 3 KV.	--	--, --	
Enclosure	--	--	Metal, nominal 1 mm thick, overall 443 by 336 by 60 mm width.	--	--, --	
PWB	--	--	min. 94 V-1, 105 ϕ X	--	--, --	
¹⁾ an asterisk indicates a mark which assures the agreed level of surveillance						

IEC 60950			
Clause	Requirement + Test	Result - Remark	Verdict

1.6.2	TABLE: electrical data (in normal conditions)					Pass
fuse #	I rated (A)	U (V)	P (W)	I (mA)	I fuse (mA)	condition/status
--	5.0	12Vdc	20.04	1670	--	Maximum normal load
supplementary information:						
"Maximum Normal Load" Unit was connected to computer with full raster, maximum brightness and contrast.						

2.10.3 and 2.10.4	TABLE: clearance and creepage distance measurements					Pass
clearance cl and creepage distance dcr at/of:	Up (V)	U r.m.s. (V)	required cl (mm)	cl (mm)	required dcr (mm)	dcr (mm)
-	-	-	-	-	-	-
supplementary information:						
All circuits are SELV, only functional insulation required.						

2.10.5	TABLE: distance through insulation measurements				N/A
distance through insulation di at/of:	U r.m.s. (V)	test voltage (V)	required di (mm)	di (mm)	
supplementary information:					

IEC 60950			
Clause	Requirement + Test	Result - Remark	Verdict

4.5	TABLE: temperature rise measurements				Pass
	test voltage (V)	12 Vdc, 3hrs			
	t1 (C)	-			
	t2 (C)	-			
temperature rise dT of part/at:		dT (K)	required dT (K)		
Ambient		--	--		
DC Inlet body		10.53	40		
L24 coil		23.15	55		
PWB near U16		26.28	55		
U5 body		31.78	40		
T1 coil for Inverter		9.6	55		
T1 core for Inverter		36.8	55		
L1 coil for Inverter		43.0	55		
C1 body for Inverter		37.5	40		
Panel body		24.28	45		
Enclosure inside near U10		9.58	20		
Enclosure outside near U10		6.85	20		
temperature rise dT of winding:		R ₁ (Ω)	R ₂ (Ω)	dT (K)	required dT (K) insulation class
-		-	-	-	-
supplementary information:					
<p>The temperatures were measured by thermal couple (type T) method under worst case normal mode as described in 1.6.1 at voltage described in 1.6.5. The worst case normal mode is defined with max load of the adaptor.</p> <p>With max. ambient temperature specified as 50°C, the maximum emperature rise is calculated as follows:</p> <p>Components with: max. absolute temp. of 90°C (Inlet Body, C1), dT_{max} = (9-50)K = 40K max. absolute temp. of 105°C (PCB), dT_{max} = (10-50)K = 55K</p> <p>User accessible area: - enclosure outside surface, steel (45K), dT_{mx} = 45K-(50-25)K = 20K; - enclosure outside surface, polymeric(70K), dT_{mx} = 70K-(50-25)K = 45K</p>					

IEC 60950			
Clause	Requirement + Test	Result - Remark	Verdict

4.5.2	TABLE: ball pressure test of thermoplastics		N/A
	allowed impression diameter (mm)..... :		
part	test temperature (.C)	impression diameter (mm)	
supplementary information:			

5.2	TABLE: electric strength tests and impulse tests		N/A
	test voltage applied between:	test voltage (V)	breakdown Yes / No
supplementary information:			

5.3	TABLE: fault condition tests					Pass
	ambient temperature (°XC	See below.				
	model/type of power supply	see appended table 1.5.1				
	manufacturer of power supply..... :	see appended table 1.5.1				
	rated markings of power supply	see appended table 1.5.1				—
component No.	fault	test voltage (V)	test time	fuse No.	fuse current (A)	result
1	Blocked Opening	12 V dc	4-hr	--	--	NC, NT, dT of T1 Coil of Inverter:14.8°C; dT of T1 Core of Inverter:41.33°C; Ambient 25°C
supplementary information:						
Comments Key: NC - Cheesecloth remained intact NT - Tissue paper remained intact						

IEC 60950			
Clause	Requirement + Test	Result - Remark	Verdict

A.6.5	TABLE: flammability test for classifying materials V-0, V-1 or V-2		N/A
sample No. / ref.	afterflame time (s) t_1 or t_2	afterflame + afterglow (s) after 2nd flame application $t_2 + t_3$	
supplementary information:			

A.6.6	TABLE: flammability re-test for classifying materials V-0, V-1 or V-2		N/A
sample No.	afterflame time (s) t_1 or t_2	afterflame + afterglow (s) after 2nd flame application $t_2 + t_3$	
supplementary information:			

A.7.4, A.7.5, A.7.6 and A.7.7	TABLE: flammability test for classifying foam materials HF-1, HF-2 or HBF			N/A
sample No. / ref.	flame time (s)	glow time (s)	flaming/glowing distance from the end (mm)	comment (for A.7.7 burning rate mm/min)
supplementary information:				

A.7.8	TABLE: flammability re-test for classifying foam materials HF-1 or HF-2			N/A
sample No.	flame time (s)	glow time (s)	flaming/glowing distance from the end (mm)	comment
supplementary information:				

IEC 60950			
Clause	Requirement + Test	Result - Remark	Verdict

A.7.9	TABLE: flammability re-test for classifying foam materials HBF			N/A
sample No.	flame time (s)	glow time (s)	flaming/glowing distance from the end (mm)	comment (for A.7.7 burning rate mm/min)
supplementary information:				

A.8.5	TABLE: flammability test for classifying materials HB		N/A
sample No.	flaming/glowing rate mm/min	flaming/glowing distance from reference mark (mm)	
supplementary information:			

A.8.6	TABLE: flammability re-test for classifying materials HB		N/A
sample No.	flaming/glowing rate mm/min	flaming/glowing distance from reference mark (mm)	
supplementary information:			

A.9.6	TABLE: flammability test for classifying materials 5V				N/A
sample	test bars		test plaques		
No./ref.	flaming + glowing time (s)	burning distance (mm)	position	flaming + glowing time (s)	burning distance (mm)
supplementary information:					

IEC 60950			
Clause	Requirement + Test	Result - Remark	Verdict

A.9.7	TABLE: flammability re-test for classifying materials 5V				N/A
sample	test bars		test plaques		
No.	flaming + glowing time (s)	burning distance (mm)	position	flaming + glowing time (s)	burning distance (mm)
supplementary information:					

Enclosure

National Differences

(Total 32 Pages including this Cover Page)

Argentina
Australia / New Zealand
Austria**
Belgium**
China*
Czech Republic*
Denmark
Finland
France**
Germany
Greece**
Group
Hungary*
India*
Ireland
Israel*
Italy**
Japan
Korea
Netherlands**
Norway
Poland*
Russia*
Singapore
Slovakia*
Slovenia*
South Africa*
Spain
Sweden
Switzerland
USA / Canada
United Kingdom
Yugoslavia*

* No National Differences Declared

** Only Group Differences

IEC 60950			
SubClause	Difference + Test	Result - Remark	Verdict

Argentina - Differences to IEC60950, Third Edition (1999)			
1.5.2	Certified plug according to IRAM 2063 (two prong) or IRAM 2073 (three prong) are used in accordance with their ratings		N/A
1.7.2	Operating/safety instructions made available to the user in Spanish. Product information appears on the product.	Reviewed only English markings/instructions. May be provided in other languages when the equipment will be applied for other national certificated.	N/A
1.7.12	Language of safety markings/instructions is Spanish	Reviewed only English markings/instructions. May be provided in other languages when the equipment will be applied for other national certificated.	N/A
General	Household power supply sources are 220 V a.c., 50 Hz		N/A

IEC 60950			
SubClause	Difference + Test	Result - Remark	Verdict

Australia / New Zealand - Differences to IEC60950, Third Edition (1999)			
1.2.12.11	POTENTIAL IGNITION SOURCE Possible fault such as a faulty contact or interruption in an electrical connection, including a conductive pattern on printed boards, which can start a fire if, under normal operating conditions, the open circuit voltage exceeds 50 V (peak) ac or dc and the product of this open circuit voltage and the measured current through this possible fault exceeds 15 VA		N/A
1.5.1	Add to the first paragraph: "or the relevant Australian or New Zealand Standard".		N/A
1.5.2	Add to the first and third dashed items after the words "IEC Component Standard": "or the relevant Australian or New Zealand Standard".		N/A
1.6.1	Add: AC power distribution systems classified as TT or IT are not allowed	Evaluated during separate certification of power supply.	N/A
1.7.12	Add to the first paragraph: In Australia and New Zealand all safety instructions shall be in English.	Reviewed only English markings/instructions.	Pass

IEC 60950			
SubClause	Difference + Test	Result - Remark	Verdict

3.2.5	Substitute for Table 3B: SIZES OF CONDUCTORS			N/A
	Rated current of Equipment (A)	Minimum conductor sizes		
		Nominal kcmil (cross section area in mm2)	AWG or kcmil (see Note 1)	
	Over 0.2 up to and including	3	0.5*	18 [0.8]
	Over 3 up to and including	7.5	0.75	16 [1.3]
	Over 7.5 up to and including	10	(0.75) 1.00	16 [1.3]
	Over 10 up to and including	16	(1.0) 1.5	14 [2]
	Over 16 up to and including	25	2.5	12 [3]
	Over 25 up to and including	32	4	10 [5]
	Over 32 up to and including	40	6	8 [8]
	Over 40 up to and including	63	10	6 [13]
	Over 63 up to and including	80	16	4 [21]
	Over 80 up to and including	100	25	2 [33]
	Over 100 up to and including	125	35	1 [42]
	Over 125 up to and including	160	50	0 [53]
	Over 160 up to and including	190	70	000 [85]
	Over 190 up to and including	230	95	0000 [107]
	Over 230 up to and including	260	120	250 kcmil [126]
	Over 260 up to and including	300	150	300 kcmil [152]
	Over 300 up to and including	340	185	400 kcmil [202]
	Over 340 up to and including	400	240	500 kcmil [253]
	Over 400 up to and including	460	300	600 kcmil [304]
	<p>*This nominal cross-sectional area is only allowed for Class II appliances if the length of the power supply cord, measured between the point where the cord or cord guard, enters the appliance, and the entry to the plug, does not exceed 2 m (0.5 mm² three-core supply flexible cords are not permitted; see Note 2 to Table 2.17 of AS/NZS 3191).</p> <p>NOTE 1: AWG and kcmil sizes are provided for information only. These items are commonly used to designate wire sizes in North America.</p>			
4.3.6	Replace the third paragraph:			N/A
	Equipment having pins for insertion into socket-outlets shall comply with 2.8.1, 2.8.4, 2.10, 2.12.6 and 2.14.6 of AS/NZS 3112, using the 10 A gauge in Appendix A of AS/NZS 3112.			

IEC 60950			
SubClause	Difference + Test	Result - Remark	Verdict
4.3.6	<p>The equipment is inserted, as in normal use, into a socket outlet capable of accepting a 10 A plug complying with Fig. 2.1(a) of AS/NZS 3112. The socket outlet has a horizontal pivot at a distance of 8 mm behind the engagement face of the socket, and in the plane of the lower intersection of the center-lines of the contact apertures.</p> <p>The additional torque to be applied to maintain the engagement face in the vertical plane shall not exceed 0.25 Nm</p>		N/A
4.3.13	For the purpose of this standard compliance with AS/NZS 2211.1 is deemed to be compliance with IEC60825.1		N/A
4.7	Add after the clause: For alternative resistance to fire test methods, refer to AS/NZS, Annex YY.		N/A
6.2.2	<p>Replace the first paragraph by:</p> <p>In Australia (not in New Zealand), compliance with 6.2.2 is checked by the tests of both 6.2.2.1 and 6.2.2.2.</p>	No TNV present.	N/A
6.2.2.1	<p>In Australia, the electrical separation is subjected to 10 impulses of alternating polarity, using the impulses test generator of Annex N for 10/700Egs impulses. The interval between successive impulses is 60 s and the initial voltage, U_c is:</p> <p>- for 6.2.1a): 7.0 kV for hand-held telephones and for headsets; 2.5 kV for other equipment;</p> <p>-for 6.2.1b) and 6.2.1c): 1.5 kV.</p> <p>NOTES: 1. The 7 kV impulse is to simulate lightning surges on typical Australian rural and semi-rural network lines. 2. The value of 2.5 kV for case (a) has been chosen primarily to ensure adequacy of the insulation concerned, and it does not necessarily simulate likely overvoltages.</p>		N/A

IEC 60950			
SubClause	Difference + Test	Result - Remark	Verdict
6.2.2.2	<p>In Australia, the electrical separation is subjected to an electric strength test according to 5.2.2.</p> <p>The a.c. test voltage is:</p> <p>-for 6.2.1a): 3 kV -for 6.2.1b) and 6.2.1c): 1.5 kV</p> <p>NOTES:</p> <ol style="list-style-type: none">1. Where there are capacitors across the insulation under test, it is recommended that d.c. test voltages are used.2. The 3 kV and 1.5 kV values have been determined considering the low frequency induced voltages from the power supply distribution system.		N/A

IEC 60950			
SubClause	Difference + Test	Result - Remark	Verdict

Denmark - Differences to IEC60950, Third Edition (1999)			
1.2.4.1	Certain types of Class I appliances (see sub-clause 3.2.1) may be provided with plug not establishing earthing continuity when inserted into Danish socket-outlets.	Evaluated during separate certification of power supply.	N/A
1.7.2	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 marked (IEC 417, No. 5019) eller (IEC 417, No. 5017)." 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
1.7.5.a	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.		N/A
1.7.5.b	Class II equipment shall not be fitted with socket-outlets for providing power to other equipment.		N/A
1.7.15	Caution text concerning lithium batteries: ADVARSEL! Lithiumbatteri - Eksplosionsfare ved fejlagtig håndtering. Udskiftning må kun ske med batteri af samme fabrikat og type. Lever det brugte batteri tilbage til leverandøren. The size of the warning must be a minimum of 26 x 52 mm, the background shall be yellow colour with black frame, and the text in black colour. A white background is acceptable in the User's Instruction and in the Service Manual.	There are no lithium batteries used.	N/A

IEC 60950			
SubClause	Difference + Test	Result - Remark	Verdict
3.2.1	<p>Supply cord of single-phase equipment having a rated current not exceeding 10 A shall be provided with a plug according to the Heavy Current Regulations, Section 107-2-D1.</p> <p>Class I equipment provided with socket-outlets with earth contact 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.</p> <p>If poly-phase equipment and single-phase equipment having a rated current exceeding 10 A is provided with a supply cord with a plug, this plug shall be in accordance with the Heavy Current Regulations, Section 107-1-D1 or EN 60309-2.</p>		N/A
Finland - Differences to IEC60950, Third Edition (1999)			
6.1.2.2	The exclusions are applicable for PERMANENTLY CONNECTED EQUIPMENT and PLUGGABLE-EQUIPMENT TYPE B only.		N/A

IEC 60950			
SubClause	Difference + Test	Result - Remark	Verdict

Germany - Differences to IEC60950, Third Edition (1999)			
1.7.12	Directions for use with rules to prevent certain hazards for (among others) maintenance of the technical labour equipment, also for imported technical labour equipment shall be written in the German language. NOTE: Of this requirement, rules for use even only by service personnel are not exempted.	Reviewed only English markings/instructions. May be provided in other languages when the equipment will be applied for other national certificated.	N/A
H.a	a) A license is required by those who operate an X-ray emission source		N/A
H.b	b) A license in accordance with Clause 1 is not required by those who operate an X-ray emission source on which the electron acceleration voltage does not exceed 20 kV if: 1) The local dose rate at a distance of 0.1 m from the surface does not exceed 1 $\mu\text{gSv/h}$ and 2) it is adequately indicated on the X-ray emission source that i) X-rays are generated and ii) the electron acceleration voltage must not exceed the maximum value stipulated by the manufacturer or importer		N/A

IEC 60950			
SubClause	Difference + Test	Result - Remark	Verdict
H.c	<p>c) A license in accordance with Clause 1 is also not required by persons who operate a X-ray emission source on which the electron acceleration voltage exceeds 20 kV if:</p> <ol style="list-style-type: none"> 1) The X-ray emission source has been granted a type approval and 2) It is adequately indicated on the X-ray emission source that <ol style="list-style-type: none"> i) X-rays are generated ii) the device stipulated by the manufacturer or importer guarantees that the maximum permissible local dose rate in accordance with the type approval is not exceeded and iii) the electron acceleration voltage not exceed the maximum value stipulated by the manufacturer or importer 		N/A
H.d	<p>d) Furthermore, a license in accordance with Clause 1 is also not required by persons who operate X-ray emission source on which the electron acceleration voltage does not exceed 30 kV if:</p> <ol style="list-style-type: none"> 1) the X-rays are generated only intrinsically safety CRTs complying with Enclosure III, No. 6 2) the values stipulated in accordance with Enclosure III, No. 6.2 are limited by technical measured and specified in the device and 3) it is adequately indicated on the X-ray emission source that the X-rays generated are adequately screened by the intrinsically safe CRT. 		N/A

IEC 60950			
SubClause	Difference + Test	Result - Remark	Verdict

Group - Differences to IEC60950, Third Edition (1999)			
2.7.1	Replace the text of this Sub-Clause by: 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)	Evaluated as an element of power supply certification.	N/A
2.7.1.a	a).Except as detailed in b) and c), protective devices necessary to comply with the requirements of subclause 5.3 shall be Included as parts of the equipment		N/A
2.7.1.b	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.		N/A
2.7.1.c	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 instruction.		N/A
2.7.1.c	If reliance is placed on protection in the building installation. the installation instructions shall so state, except that for PLUGGABLE EQUIPMENT TYPE A the building Installation shall be regarded as providing protection in accordance with the rating of the wall socket outlet.		N/A
2.7.2	This subclause has been declared 'void'		N/A
3.2.3	Delete NOTE 1, and in table 3A delete the conduit sizes in parentheses.		N/A
3.2.5	Replace as follows: "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-F"	Evaluated as an element of power supply certification.	N/A

IEC 60950			
SubClause	Difference + Test	Result - Remark	Verdict
Q	<p>Add the following notes for the standards indicated:</p> <p>IEC 60127 series NOTE. Harmonized as EN 60127 series (not modified)</p> <p>IEC 60529 NOTE: Harmonized as EN 60529: 1991 (not modified)</p> <p>IEC 61032 NOTE: Harmonized as EN 61032: 1998 (not modified)</p>		N/A
Ireland - Differences to IEC60950, Third Edition (1999)			
3.2.1	<p>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.</p>		N/A
4.3.6	<p>DIRECT PLUG-IN EQUIPMENT 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.</p>	It should be provided when national approval.	N/A

IEC 60950			
SubClause	Difference + Test	Result - Remark	Verdict

Japan - Differences to IEC60950, Third Edition (1999)			
1.2.4.101	Addition: Definition of CLASS 0I EQUIPMENT		N/A
1.2.12.1	Replacement: FLAMMABILITY CLASSIFICATION OF MATERIALS: "The recognition of the burning behaviour of materials and their ability to extinguish if ignited. Materials are classified as in 1.2.12.2 to 1.2.12.9, and 1.2.12.101 when tested in accordance with annex A"	Not direct plug-in unit.	N/A
1.2.12.101	Addition: Definition of VTM CLASS MATERIAL	Class III unit. It should be evaluated during separate certification of power supply.	N/A
1.7.101	Addition:Marking for CLASS 0I EQUIPMENT The following instruction is indicated on the visible place of the mains plug or the main body: "Provide an earthing connection"		N/A
1.7.101	The following instruction is indicated on the visible place on the main body or written in the operating instructions: "Provide an earthing connection before the mains plug is connected to the mains. And, when disconnecting the earthing connection, be sure to disconnect after pulling out the mains plug from the mains."		N/A
2.1.1.1	Replace: "IEC 60083" by "IEC 60083 or JIS C 8303" in 2.1.1.1 b)	Class III unit. It should be evaluated during separate certification of power supply.	N/A
2.6.3.1	Add the following after 1st paragraph: "This also applies to the conductor of lead wire for protective earthing of CLASS 0I EQUIPMENT"		N/A
2.6.4.1	Replace 2nd sentence in 1st paragraph: "For CLASS I EQUIPMENT with a DETACHABLE POWER SUPPLY CORD, the earthing terminal in the appliance inlet is regarded as the main protective earthing terminal"		N/A
2.6.5.4	Replace 1st sentence: "Protective earthing connections of CLASS I EQUIPMENT shall make earlier and break later than the supply connections in each of the following:"		N/A

IEC 60950			
SubClause	Difference + Test	Result - Remark	Verdict
2.6.101	Addition:Earthing of CLASS 0I EQUIPMENT Plugs with a lead wire for earthing not used for equipment having a rated voltage exceeding 150 V		N/A
2.6.101	For plugs with a lead wire for earthing, the lead wire is not earthed by a clip		N/A
2.6.101	CLASS 0I EQUIPMENT provided with an earthing terminal or lead wire for earthing in the external where easily visible	Class III unit. It should be evaluated during separate certification of power supply.	N/A
3.2.5	Delete the following statement from a note 1 in Table 3B: "For RATED CURRENT up to 3A, a nominal cross-sectional area of 0.5 mm ² is permitted in some countries provided that the length of the cord does not exceed 2 m"		N/A
4.2.8	Add the following informative remark after the last sentence: "IEC 61965 is also applicable instead of IEC 60065"		N/A
4.5.1	Add the following to note 5) of Table 4A, Part 2: "With regard to Table 4A, insulating materials complying with Japanese requirements (refer to Japanese differences for IEC 60335-1 3rd Edition in CB Bulletin 101B) are also acceptable"		N/A
4.5.1	Add a note reference 7) to "50", in the right column of Table 4A, Part 1 and add a note 7 to Table 4A, Part 2 as follows: "7) This value apply only to wiring or cords complying with relevant IEC standards. Others comply with Japanese requirements (refer to Japanese differences for IEC 60335-1 3rd Edition in CB Bulletin 101B)"		N/A
4.7.3.2	Add the following in 7th paragraph: "- for thin materials, e.g., flexible printed boards, etc., used inside equipment, be of FLAMMABILITY CLASS VTM-2 or better"		N/A
5.1.6	Replace Table 5A to include maximum TOUCH CURRENT values for CLASS 0I EQUIPMENT		N/A
5.3.8.2	Replace 3rd Item as follows: "- BASIC INSULATION between the PRIMARY CIRCUIT and accessible conductive parts of CLASS I or 0I EQUIPMENT;"		N/A

IEC 60950			
SubClause	Difference + Test	Result - Remark	Verdict
Annex A	Add the subclause A.101 titled: "Flammability tests for classifying materials VTM" and the following: "Thin sheet materials shall comply with ISO 9773"		N/A
Annex G	Add to the Note for Table G.1. "2. In Japan, MAINS TRANSIENT VOLTAGE for equipment with a Nominal AC MAINS SUPPLY VOLTAGE of 100V is to be decided based on the column where Nominal AC MAINS SUPPLY VOLTAGE in Table G.1 is 150V"		N/A
Annex P	Add: "IEC 61965:2000, Mechanical Safety for Cathode Ray Tubes"		N/A
Annex U	Replace 2nd paragraph as follows: "This annex covers to round winding wires having diameters between 0.05 mm and 5.00 mm"		N/A
U.2.1	Replacement:Electric strength "The test sample is prepared per IEC 60851-5:1997, 4.4.1 (for a twisted pair and subjected to the test of 5.2.2, with a test voltage not less than twice the appropriate voltage in table 5B (see 5.2.2) of this standard. However, the minimum values shall be as follows: - for BASIC INSULATION or SUPPLEMENTARY INSULATION, 3000 V, or; - for REINFORCED INSULATION, 6000 V"		N/A
U.2.2	Replacement:Flexibility and adherence Test 8 of IEC 60851-3:1996, 5.1.1, using the mandrel diameter of Table U.1 (mm)		N/A
U.2.2	Test voltage not less than twice the appropriate voltage in table 5B (see 5.2.2) of this standard and not less than: - 1500 V for BASIC INSULATION or SUPPLEMENTARY INSULATION, or; - 3000 V for REINFORCED INSULATION		N/A

IEC 60950			
SubClause	Difference + Test	Result - Remark	Verdict

Korea - Differences to IEC60950, Third Edition (1999)			
1.5.101	Addition: Plugs for the connection of the apparatus to the supply mains comply with the Korean requirement (KSC 8305)		N/A
7	Addition: EMC. The apparatus shall complies with the relevant CISPR requirements		N/A

IEC 60950			
SubClause	Difference + Test	Result - Remark	Verdict

Norway - Differences to IEC60950, Third Edition (1999)			
1.5.8	Due to the IT power system used (see annex V, figure V.7), capacitors are required to be rated for the applicable phase-to-phase voltage (230 V).	It should be evaluated during separate certification of power supply.	N/A
1.7.2	CLASS I PLUGGABLE EQUIPMENT TYPE A intended for connection to other equipment or a communication network where safety relies on connection to protective earth, require a marking stating that the equipment must be connected to an earthed mains socket-outlet.		N/A
2.2.4	Requirements according to sub-clauses 1.7.2 and 6.1.2.1 apply for this clause.		N/A
2.3.2	Requirements according to sub-clause 6.1.2.1 apply for this clause.		N/A
2.3.3	Requirements according to sub-clause 6.1.2.1 apply for this clause.		N/A
2.3.4	Requirements according to sub-clauses 1.7.2 and 6.1.2.1 apply for this clause.		N/A
2.10.3.1	Due to the IT power distribution system used (see annex V, figure V.7), the A.C. MAINS SUPPLY voltage is considered to be equal to the line-to-line voltage, and will remain at 230 V in case of a single earth fault.		N/A
6.1.2.1	Note 2. Add the following text between the first and second paragraph: If this insulation is solid, including insulation forming part of a component, it shall at least consist of either - two layers of thin sheet material, each of which shall pass the electric strength test below, or - one layer having a distance through insulation of at least 0.4 mm, which shall pass the electric strength test below.		N/A

IEC 60950			
SubClause	Difference + Test	Result - Remark	Verdict
6.1.2.1	<p>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:</p> <ul style="list-style-type: none"> - passes the tests and inspection criteria of 2.10.8 with an electric strength test of 1.5 kV multiplied by 1.6 (the electric strength test of 2.10.7 shall be performed using 1.5 kV); and - is subject to ROUTINE TESTING for electric strength during manufacturing, using a test voltage of 1.5 kV. 		N/A
6.1.2.1	It is permitted to bridge this insulation with a capacitor complying with EN 132400:1994, subclass Y2.		N/A
6.1.2.2	The exclusions are applicable for PERMANENTLY CONNECTED EQUIPMENT and PLUGGABLE-EQUIPMENT TYPE B only.		N/A
G.2	Due to the IT power distribution system used (see annex V, figure V.7), the A.C. MAINS SUPPLY voltage is considered to be equal to the line-to-line voltage, and will remain at 230 V in case of a single earth fault.		N/A

IEC 60950			
SubClause	Difference + Test	Result - Remark	Verdict

Singapore - Differences to IEC60950, Third Edition (1999)			
2.9.2	<p>(a) After the first paragraph, insert the following: Under tropical conditions, the duration of the humidity conditioning is 5 days (120h) at a temperature: 40 °C with relative humidity 90% to 95%.</p> <p>Conditions described in IEC Publications 60068-2-3: 1969 - "Test Ca: Damp Heat, Steady State" (temperature: 40 °C, relative humidity: 90% to 95 %) apply to insulation to be used under tropical conditions. The additional requirement on humidity conditioning is drawn from Clause 10.2 of IEC 60065: 1998</p>		N/A
2.10.6.5	<p>Delete "(48 h)"</p> <p>Explanation: To be consistent with 2.9.2</p>		N/A
3.2.8	Replace "23°C ± 2°C" by "27°C ± 0.5°C"		N/A
General	<p>IT Power Systems are not allowed in the Republic of Singapore and all clauses related to IT Power Systems are not applicable.</p> <p>For a.c. power distribution systems, only TN-S and TT systems are allowed</p>		N/A

IEC 60950			
SubClause	Difference + Test	Result - Remark	Verdict

Spain - Differences to IEC60950, Third Edition (1999)			
3.2.1	<p>Supply cords of single-phase equipment having a rated current not exceeding:</p> <ul style="list-style-type: none"> - 2.5 A shall be provided with a plug according to UNE EN 50075:1993 - 10 A shall be provided with a plug according to UNE 20315:1994 <p>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 UNE 20315:1994</p> <p>If poly-phase equipment is provided with a supply cord with a plug, this plug shall be in accordance with the UNE-EN 60309-2.</p>		N/A

IEC 60950			
SubClause	Difference + Test	Result - Remark	Verdict

Sweden - Differences to IEC60950, Third Edition (1999)			
1.5.1	Add the following: NOTE: Switches containing mercury such as thermostats, relays and level controllers are not allowed.	There are no any switches containing mercury.	N/A
1.7.2	If the separation between the mains and a SELV terminal relies upon connection to safety earth, the apparatus shall have a marking stating that it must be connected to an earthed mains socket-outlet. The marking text shall be in Swedish and as follows: "Apparaten skall anslutas till jordat uttag nar den ansluts till ett natverk".	Evaluated as an element of power supply certification.	N/A
6.1.2.1	Note 1. Add the following text between the first and second paragraph: If this insulation is solid, including insulation forming part of a component, it shall at least consist of either - two layers of thin sheet material, each of which shall pass the electric strength test below, or - one layer having a distance through insulation of at least 0.4 mm, which shall pass the electric strength test below.		N/A
6.1.2.1	If this insulation forms part of a semiconductor component e.g. an optocoupler, there is no distance through insulation requirement for the insulation consisting of an insulating compound completely filling the casing, so that CLEARANCES and CREEPAGE DISTANCES do not exist, if the component passes the electric strength test in accordance with the compliance clause below and in addition: - passes the tests and inspection criteria of 2.10.8 with an electric strength test of 1.5 kV multiplied by 1.6 (the electric strength test of 2.10.7 shall be performed using 1.5 kV): and - is subject to ROUTINE TESTING for electric strength during manufacturing, using a test voltage of 1.5 kV.		N/A
6.1.2.1	It is permitted to bridge this insulation with a capacitor complying with EN 132400:1994, subclass Y2.		N/A

IEC 60950			
SubClause	Difference + Test	Result - Remark	Verdict
6.1.2.2	The exclusions are applicable for PERMANENTLY CONNECTED EQUIPMENT and PLUGGABLE-EQUIPMENT TYPE B only.		N/A
Switzerland - Differences to IEC60950, Third Edition (1999)			
1.5.1	Add the following: NOTE: Switches containing mercury such as thermostats, relays and level controllers are not allowed.	There are no any switches containing mercury.	N/A
1.7.15	Annex 4.10 of SR 814.013 (Ordinance on environmentally hazardous substances) applies for batteries.		N/A
3.2.1	Supply cords of equipment having a rated current not exceeding 10 A shall be provided with a plug complying with SEV 1011 or IEC 884-1 and one of the following dimension sheets: SEV 6532-2.1991 Plug Type 15 3P+N+PE 250/400 V,10 A SEV 6533-2.1991 Plug Type 11 L+N 250 V,10 A SEV 6534-2.1991 Plug Type 12 L+N+PE 250 V,10 A EN 60309 applies for plugs for currents exceeding 10 A.		N/A
6.1	Protective means in the equipment shall not prevent transient surge protection in the telecommunication network from operating properly (d.c. spark-over voltage of the surge suppressor installed in the telecommunication network: approx. 245 V).		N/A

IEC 60950			
SubClause	Difference + Test	Result - Remark	Verdict

USA / Canada - Differences to IEC60950, Third Edition (1999)			
1.1	Equipment able to be installed in accordance with the National Electrical Code ANSI/NFPA 70 and the Canadian Electrical Code, Part1.		Pass
1.1.1	Equipment able to be installed in accordance with ANSI/NFPA 75 and NEC Art. 645 unless intended for use outside of computer room and provided with such instructions		Pass
1.1.2	Equipment in wire-line communication facilities serving high-voltage electric power stations operating at greater than 1kV are excluded		N/A
1.1.2	Special requirements apply to equipment intended for use outdoors		N/A
1.5.1	All IEC standards for components identified in Annex P.1 replaced by the relevant requirements of CSA and UL component standards in Annex P.1		Pass
1.5.1	All IEC standards for components identified in Annex P.2 alternatively satisfied by the relevant requirements of CSA and UL component standards in Annex P.2		Pass
1.5.5	Interconnecting cables acceptable for the application regarding voltage, current, temperature, flammability, mechanical serviceability and the like	Interconnecting cables comply with the relevant requirements of this standard.	Pass
1.5.5	For other than limited power and TNV circuits, the type of output circuit identified for output connector		N/A
1.5.5	External cable assemblies which exceed 3.05 m in length to be types specified in the NEC and CEC		N/A
1.5.5	Detachable external interconnecting cables 3.05 m or less in length and provided with equipment marked to identify the responsible organization and the designation for the cable		N/A
1.5.5	Building wiring and cable for use in ducts, plenums and other air handling space subject to special requirements and excluded from scope	There are no any Telephone line and extension cords.	N/A
1.5.5	Telephone line and extension cords and the like comply with UL 1863 and CSA C22.2 No. 233		N/A
1.7.1	Special marking format for equipment intended for use on a supply system with an earthed neutral and more than one phase conductor		N/A
1.7.1	Equipment voltage rating not higher than rating of the plug except under special conditions		N/A

IEC 60950			
SubClause	Difference + Test	Result - Remark	Verdict
1.7.2	Wiring terminals supplying Class 2 outputs marked with voltage rating and "Class 2" or equivalent		N/A
1.7.6	Special fuse replacement marking for operator accessible fuses		N/A
1.7.6	Lamp replacement information indicated on lampholder in operator access area		N/A
1.7.7	Identification of terminal connection of the equipment earthing conductor	Class III unit.	N/A
2.1.1	Screw shell of Edison-base lampholder tied to the neutral conductor		N/A
2.1.1.1	Bare TNV conductive parts in the interior of equipment normally protected against contact by a cover intended for occasional removal are exempt provided instructions include directions for disconnection of TNV prior to removal of the cover	No TNV present.	N/A
2.3.1.b	Other telecommunication signaling systems (e.g., message waiting) than described in 2.3.1(b) are subject to M.4.		N/A
2.3.1.b	For TNV-2 and TNV-3 circuits with other than ringing signals and with voltages exceeding 42.4 Vp or 60 V d.c., the maximum current limit through the 2000 Ohm resistor with loads disconnected is 7.1 mA peak or 30 mA d.c. under normal conditions		N/A
2.3.1.b	Limits for measurements across 5000 Ohm resistor in the event of a single fault are replaced after 200 ms with the limits of M.3.1.4		N/A
2.3.2	Enamel coating on signal transformer winding wire allowed as an alternative to Basic insulation in specific telecommunication applications when subjected to special construction requirements and routine testing		N/A
2.5	Overcurrent protection device required for Class 2 and Class 3 limiting in accordance with the NEC, or the Limited Power Source definition, not interchangeable with devices of higher ratings if operator replaceable		N/A
2.5	VA for limited power source measured after 60 s of operation		N/A
2.6	Protective earthing terms applied per CEC, Part 1, Sec. 0 and NEC Art. 100		N/A

IEC 60950			
SubClause	Difference + Test	Result - Remark	Verdict
2.6	Units having receptacles for output a.c. power connectors which are generated from an internal separately derived source have the grounded circuit conductor suitably bonded to earth		N/A
2.6.3.3	Capacity of connection between earthing terminal and parts required to be earthed subject to special conditions based on the current rating of the circuit		N/A
2.6.3.3	Protective bonding conductors and their terminals of non-standard constructions (e.g. PWB traces) evaluated to limited short-circuit test of CSA C22.2 No.4		N/A
2.6.4.1	Field wiring terminals for earthing conductors must be suitable for wire sizes (gauge) used in US and Canada		N/A
2.7.1	Data for selection of special external branch circuit overcurrent devices marked on the appliance		N/A
2.7.1	Standard supply outlets protected by overcurrent device in accordance with the NEC, and CEC, Part 1		N/A
2.7.1	Overcurrent protection for individual transformers that distribute power to other units over branch circuit wiring		N/A
2.7.1	Additional requirements for overcurrent protection apply to equipment provided with panelboards		N/A
2.7.1	Non-motor-operated equipment requiring special overcurrent protective device marked with device rating		N/A
2.10.5.4	Multi-layer winding wire subject to UL wire requirements in addition to 2.10.5.4 and Annex U		N/A
3.1.1	Permissible combinations of internal wiring/external cable sizes for overcurrent and short circuit protection		N/A
3.1.1	All interconnecting cables protected against overcurrent and short circuit	Interconnecting cables comply with the relevant requirements of this standard.	Pass
3.2	Wiring methods permit connection of equipment to primary power supply in accordance with the NEC and CEC, Part 1		N/A
3.2.1	Permitted use for flexible cords and plugs		N/A
3.2.1	Flexible cords provided with attachment plug rated 125% of equipment current rating		N/A

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SubClause	Difference + Test	Result - Remark	Verdict
3.2.1	Class II equipment provided with 15 or 20 A standard supply outlets, Edison-base lampholders or single pole disconnect device provided with a polarized type attachment plug		N/A
3.2.3	Permanently connected equipment has provision for connecting and securing a field wiring system (i.e. conduit, or leads etc.) per the NEC and CEC, Part 1		N/A
3.2.3	Permanently connected equipment may have terminals or leads not smaller than No. 18 AWG (0.82 mm ²) and not less than 152 mm in length for connection of field installed wiring		N/A
3.2.3	If supply wires exceed 60 ϕ XC, marking indicates use of 75 ϕ XC or 90 ϕ XC wiring for supply cnection as appropriate		N/A
3.2.3	Equipment intended solely for installation in Restricted Access Locations using low voltage d.c. systems may not need provision for connecting and securing a field wiring system. A method of securing wiring or instructions must be provided to ensure the wiring is protected from abuse		N/A
3.2.3	Equipment compatible with suitable trade sizes of conduits and cables		N/A
3.2.5	Length of power supply cord 1.5 to 4.5 m unless shorter length used when intended for a special installation		N/A
3.2.5	Conductors in power supply cords sized according to NEC and CEC, Part I		N/A
3.2.5	Power supply cords and cord sets incorporate flexible cords suitable for the particular application		N/A
3.2.6	Strain relief provided for non-detachable interconnecting cables not supplied by a limited power source		N/A
3.2.9	Adequate wire bending space and volume of field wiring compartment to properly make the field connections		N/A
3.3	Field wiring terminals provided for interconnection of units for other then LPS or Class 2 circuits also comply with 3.3		N/A
3.3	Interconnection of units by LPS or Class 2 conductors may have field wiring connectors other than those specified in 3.3 if wiring is reliably separated		N/A

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SubClause	Difference + Test	Result - Remark	Verdict
3.3.1	Terminals for the connection of neutral conductor identified by a distinctive white marking or other equally effective means		N/A
3.3.3	Wire binding screw terminal permitted for connection of No. 10 AWG (5.3 mm ²) or smaller conductor if provided with upturned lugs, cupped washer or equivalent retention		N/A
3.3.4	Terminals suitable to accept wire sizes (gauge) used in the U.S. and Canada		N/A
3.3.4	Terminals accept current-carrying conductors rated 125% of the equipment current rating		N/A
3.3.6	Field wiring terminals marked to indicate the material(s) of the conductor appropriate for the terminals used		N/A
3.3.6	Connection of an aluminum conductor not permitted to terminal for equipment earthing conductor		N/A
3.3.6	Field wiring connections made through the use of suitable pressure connectors (including set screw type), solder lugs or splices to flexible leads		N/A
3.3.8	Connectors and field wiring terminals involving external Class 2 or Class 3 circuits provided with marking indicating minimum Class of wiring to be used		N/A
3.3.8	Marking located adjacent to terminals and visible during wiring		N/A
3.4.2	Separate motor control device(s) required for cord-connected equipment rated more than 12 A, or with motor rated more than 1/3 hp or more than 120 V		N/A
3.4.8	Vertically mounted disconnect devices, oriented so up position of handle is "on"		N/A
3.4.10	For computer-room applications, equipment with battery systems capable of supplying 750 VA for 5 min require battery disconnect means		N/A
3.6	Connections to a centralized DC power system comply with requirements for branch circuits in Sub-clause 3.2	The unit does not connect to centralized DC power system.	N/A
3.6	Earthing of d.c. powered equipment provided		N/A
3.6	Overcurrent and earth fault protection in accordance with 2.7 either provided in equipment or as part of building installation		N/A

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SubClause	Difference + Test	Result - Remark	Verdict
3.6	Equipment with earthed terminal (terminal for the grounded conductor) of power source connected to frame of the unit provided with special instructions and provision for earthing		N/A
3.6	Equipment with means for connecting supply to earthing electrode conductor has no switches or protective devices between supply connection and earthing electrode connection		N/A
3.6	Special markings and instructions for equipment with provisions to connect earthed conductor of a DC supply circuit to earthing conductor at the equipment		N/A
3.6	Special markings and instructions for equipment with earthed conductor of a DC supply circuit connected to the earthing conductor at the equipment		N/A
3.6	Terminals and leads provided for permanent connection of DC powered equipment to supply marked to indicate polarity if reverse polarity may result in a hazard		N/A
4.2.8.1	Special opening restrictions for enclosures around CRTs with face dimension of 160 mm or more	The equipment does not have any CRT's	N/A
4.2.9	Compartment housing high-pressure lamp marked to indicate risk of explosion	The equipment does not have any high pressure lamps.	N/A
4.3.2	Loading test for equipment with handle(s) used to support more than 9 kg tested at four times the weight of the unit		N/A
4.3.6	In addition to the IEC requirements, Direct Plug-in Equipment comply with UL 1310 or CSA 223 mechanical assembly requirements		N/A
4.3.12	The maximum quantity of flammable liquid stored in equipment comply with ANSI/NFPA 30(Table NAE. 7)	The equipment does not use any flammable liquids.	N/A
4.3.12	Equipment using replenishable liquids marked to indicate type of liquid to be used		N/A
4.3.13	Equipment which produces x-radiation and does not comply with 4.3.12 under all conditions of servicing marked to indicate the presence of radiation where readily visible		N/A
4.3.13	Requirements contained in the applicable national codes and regulations apply to lasers (21 CFR 1040 and REDR C1370)		N/A

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SubClause	Difference + Test	Result - Remark	Verdict
4.7.1	Automated information storage equipment intended to contain more than 0.76 mm ³ of combustible media requires provision for automatic sprinklers or a gaseous agent extinguishing system		N/A
4.7.3	Equipment for use in environmental air space other than ducts or plenums provided with metal enclosure or with non-metallic enclosure having adequate fire-resistance and low smoke producing characteristics		N/A
4.7.3	Low smoke-producing characteristics evaluated according to UL 2043		N/A
4.7.3	Equipment for installation in space used for environmental air as described in Sec. 300-22(c) of the NEC provided with instructions indicating suitability for installation in such locations		N/A
4.7.3.1	Flame spread rating for external surface of combustible material with exposed area greater than 0.93 m ² or a single dimension greater than 1.8 m; 50 or less for computer room applications or 200 or less for other applications		N/A
4.7.3.4	Wire marked "VW-1" or "FT-1" considered equivalent		Pass
5.1.8.1.1	Touch current due to ringing voltage for equipment containing telecommunication network leads		N/A
5.1.8.2	When multiple ports receive ringing voltage, simulated ringing applied to 3 % if ports in excess of 3		N/A
5.1.8.2	Special earthing provisions and instructions for equipment with high touch current due to telecommunication network connections		N/A
5.3.6	Overloading of SELV connectors and printed wiring board receptacles accessible to the operator		N/A
5.3.6	Tests interrupted by opening of a component repeated two additional times		N/A
5.3.8.1	Test interrupted by opening of wire or trace continued by shorting gap		N/A
6	Specialized instructions, as appropriate, provided for equipment which may be connected to a telecommunications network	No TNV present	N/A
6	Marking identifying function of telecommunication type connectors not used for connection to a telecommunication network		N/A

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SubClause	Difference + Test	Result - Remark	Verdict
6.2.1	Special requirements for enameled wiring used as electrical separation provided between parts connected to telecommunication network and telecommunication circuitry intentionally isolated from network		N/A
6.2.1	Digital line termination equipment (e.g., NCTE) subject to separation requirements.		N/A
6.3	Equipment remotely powered over telecommunication wiring systems provided with specialized markings adjacent to the connection		N/A
6.3	Overcurrent protection incorporated into equipment to provide power over telecommunication wiring system not interchangeable with devices of higher ratings if operator replaceable		N/A
6.4	Additional requirements for equipment intended for connection to a telecommunication network using cable subject to overvoltage from power line failures (Fig. 6C)		N/A
6.4	Where 26 AWG line cord required by Fig. 6C, either the cord is provided with the equipment or described in the safety instructions		N/A
6.5	Acoustic pressure from an ear piece less than 136 dBA for short duration disturbances, and less than 125 dBA for handsets, 118 dBA for headsets, and 121 dBA for insert earphones, for long duration disturbances		N/A
Annex NAB	Equipment intended for connection to centralized d.c. power systems is required to comply with special earthing, wiring, and supply voltage tolerance requirements		N/A
Annex NAC	Equipment intended for use with a generic secondary protector marked with suitable instructions	No TNV present	N/A
Annex NAC	Equipment intended for use with a specific primary or secondary protector marked with suitable instructions		N/A
H	Ionizing radiation measurements are made under single fault conditions in accordance with the requirements of the Code of Federal Regulations 21 CFR 1020 and the Canadian Radiation Emitting Devices Act, REDR C1370		N/A
M.2	Continuous ringing signals evaluated to Method A subjected to special accessibility considerations		N/A

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SubClause	Difference + Test	Result - Remark	Verdict
M.4	Special requirements for message waiting and similar telecommunications signals		N/A
United Kingdom - Differences to IEC60950, Third Edition (1999)			
3.2.1	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 1786: 1994 - The Plugs and Sockets etc. (Safety) Regulations 1994, unless exempted by those regulations. NOTE: "Standard plug" is defined in SI 1786: 1994 and essentially means an approved plug conforming to BS 1363 or an approved conversion plug.		N/A
3.2.5	A power supply cord with conductor of 1.25 mm ² is allowed for equipment with a rated current over 10A and up to and including 13A.		N/A
3.3.4	The range of conductor sizes of flexible cords to be accepted by terminals for equipment with a rated current of over 10A up to and including 13A is: 1.25 mm ² to 1.5 mm ² nominal cross-sectional area.	Evaluated as an element of power supply certification.	N/A
4.3.6	This test should be performed using an appropriate socket outlet with an earthing contact.		N/A

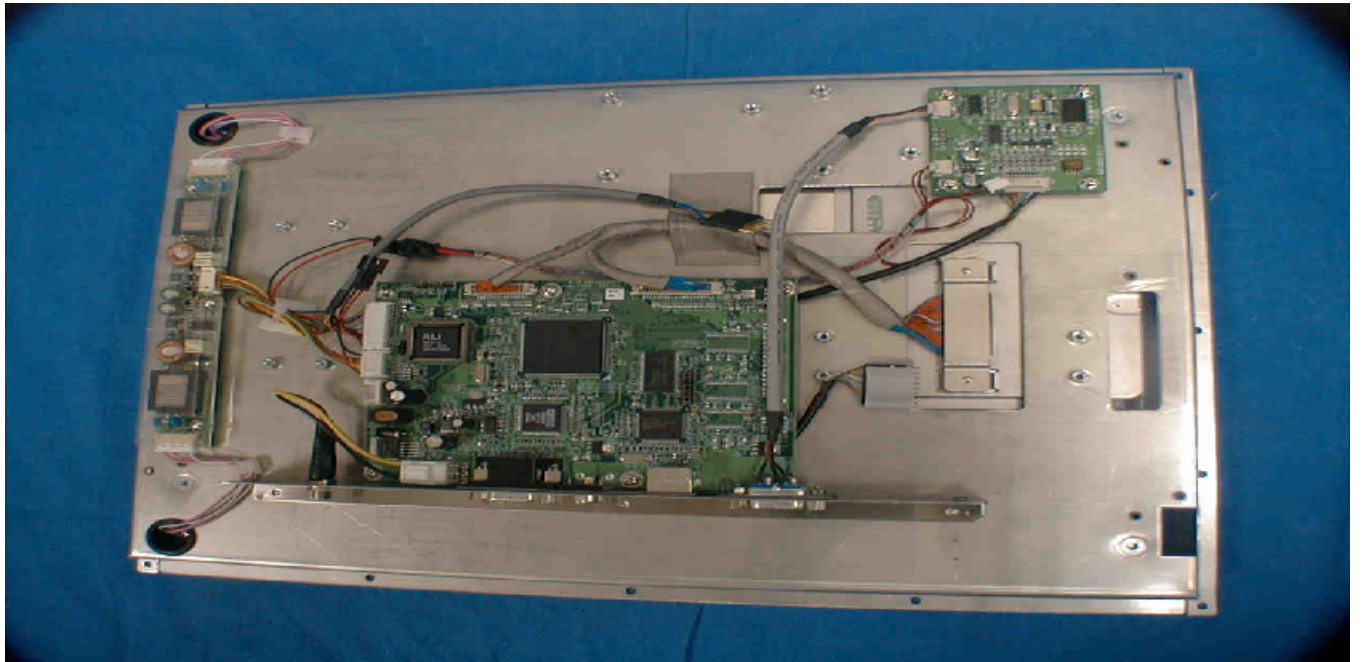
Enclosure
Photographs

(Total 4 Pages including this Cover Page)

Supplement Id	Description
3-01	Front view
3-02	Rear view
3-03	Interior view



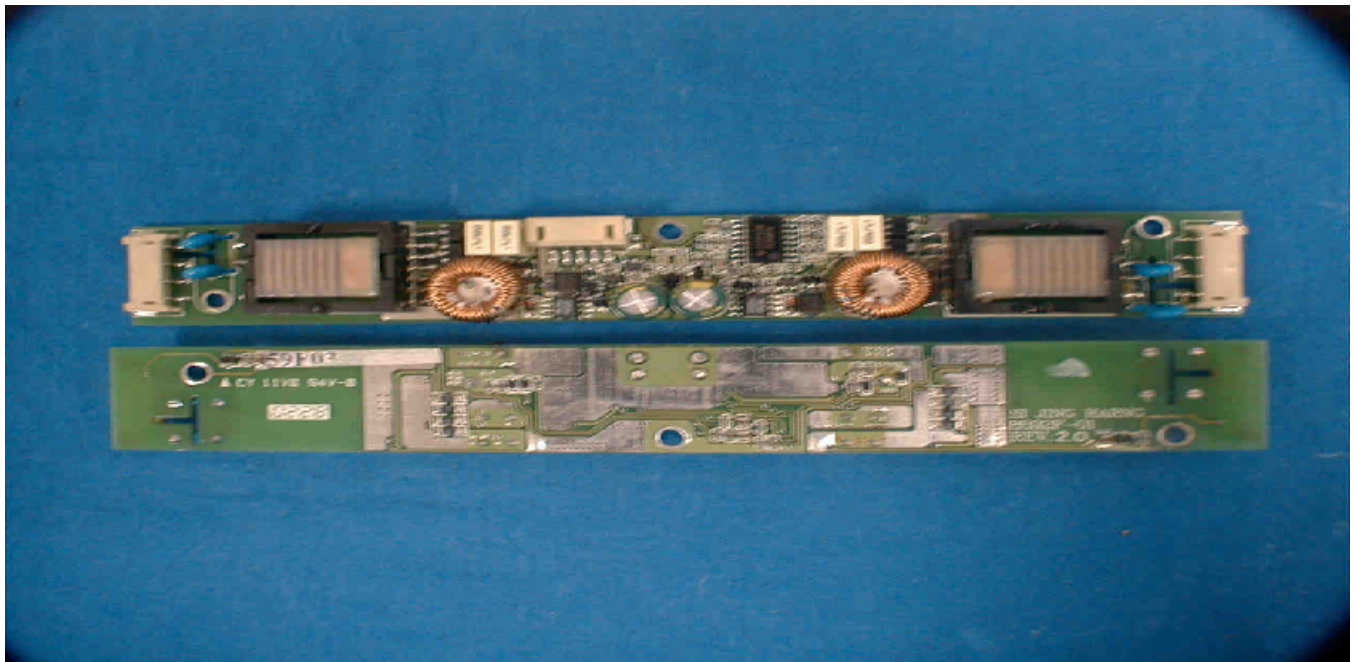




Enclosure
Schematics + PWB

(Total 2 Pages including this Cover Page)

Supplement Id	Description
5-01	Inverter



Enclosure
Miscellaneous

(Total 2 Pages including this Cover Page)

Supplement Id	Description
7-01	Label



型號 MODEL: OPD-215AB -E1

輸入 DC INPUT : 12V = 5.0A

工單 LN :

客戶名稱 CN :

中央處理器 CPU :

硬碟 HDD :

軟碟 FDD :

記憶體 Memory:

其它 Other:

15" LCD 螢幕

Open Frame Display Monitor,

15" TFT, 60W DC/12 ADPS



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出版日期: A3101