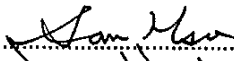
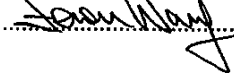


TEST REPORT IEC 60950 Safety of information technology equipment	
Report Reference No.	02NK95300
Compiled by (+ signature)	Sam Hsu 
Reviewed by (+ signature)	Zenon Wang 
Date of issue	October 02, 2002
This report is based on a blank test report that was prepared by FIMKO using information obtained from the TRF originator (see below). Total 40 Pages	
Testing laboratory name	UL International DEMKO A/S
Address	Lyskaer 8, DK-2730 Herlev, Denmark
Testing location	Lyskaer 8, DK-2730 Herlev, Denmark
Client name	Advantech Co., Ltd.
Address	No. 1 Alley 20, Lane 26, Rueiguang Road, Neihu District Taipei 114, Taiwan
Standard	IEC 60950, 3 rd Edition (1999)
Test procedure	CB Scheme
Procedure deviation	Argentina, Austria, Belgium, Brazil, Canada, China, Czech Republic, Denmark, Finland, France, Germany, Hungary, Ireland, Israel, Italy, Japan, Korea, Netherlands, Poland, Portugal, Russian, Singapore, Slovakia, Slovenia, South Africa, Spain, Switzerland, Turkey, United Kingdom, USA, CENELEC
Non-standard test method	N/A
Test Report Form/blank test report	
Test Report Form No.	I950__F/00-03
TRF originator	FIMKO
Master TRF	dated 00-02
Copyright reserved to the bodies participating in the IECEE Schemes (CB and CB-FCS) and/or the bodies participating in the C.I.G (CCA-ENEC).	
Test item description	Industrial Computer
Trademark	Advantech
Model and/or type reference	MIC-3036-X, MIC-3038XX, MIC-3056XX (where X may be any alphanumeric character or blank)
Manufacturer	Same as Applicant
	Factory: Advantech Co., Ltd. F1.4, No.108-3, Ming-Chuan Road, Shing-Tien City, Taipei, Taiwan
Rating(s)	I/P: 100-240 Vac, 47-63 Hz, 6-3 A

TRF No.: I950__F

TRF originator: FIMKO

Copy of marking plate:

INDUSTRIAL COMPUTER**MODEL: MIC-3036-X****RATING: 100-240 VAC, 47 - 63 Hz, 6 - 3 A**

**THIS DEVICE COMPLES WITH PART 15 FCC RULES OPERATION
ISSUBJECT TO THE FOLLOWING TWO CONDITIONS:**

- (1) THIS DEVICE MAY NOT CAUSE HARMFUL INTERFERENCE AND**
 - (2) THIS DEVICE MUST ACCEPT ANY INTERFERENCE RECEIVED
INCLUDING INTERFERENCE THAT MAY CAUSE UNDESIRED OPERATOR.**
- ADVANTECH CO., LTD.**

INDUSTRIAL COMPUTER**MODEL: MIC-3038XX****RATING: 100-240 VAC, 47 - 63 Hz, 6 - 3 A**

**THIS DEVICE COMPLES WITH PART 15 FCC RULES OPERATION
ISSUBJECT TO THE FOLLOWING TWO CONDITIONS:**

- (1) THIS DEVICE MAY NOT CAUSE HARMFUL INTERFERENCE AND**
 - (2) THIS DEVICE MUST ACCEPT ANY INTERFERENCE RECEIVED
INCLUDING INTERFERENCE THAT MAY CAUSE UNDESIRED OPERATOR.**
- ADVANTECH CO., LTD.**

INDUSTRIAL COMPUTER**MODEL: MIC-3056XX****RATING: 100-240 VAC, 47 - 63 Hz, 6 - 3 A**

**THIS DEVICE COMPLES WITH PART 15 FCC RULES OPERATION
ISSUBJECT TO THE FOLLOWING TWO CONDITIONS:**

- (1) THIS DEVICE MAY NOT CAUSE HARMFUL INTERFERENCE AND**
 - (2) THIS DEVICE MUST ACCEPT ANY INTERFERENCE RECEIVED
INCLUDING INTERFERENCE THAT MAY CAUSE UNDESIRED OPERATOR.**
- ADVANTECH CO., LTD.**

Particulars: test item vs. test requirements

Equipment mobility.....: Movable
 Operating condition.....: Continuous
 Mains supply tolerance (%): +6%, -10%
 Tested for IT power systems: No
 IT testing, phase-phase voltage (V): N/A
 Class of equipment.....: Class I (earthed).
 Mass of equipment (kg).....: 13.0 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.....: Pass
- test object does not meet the requirement: Fail

General remarks:

- "(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.

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.

This report is not valid as a CB Test Report unless appended to a CB Test Certificate issued by a NCB in accordance with IECEE 02.

General product information:

Brief description of the test equipment:

- The equipment is an Industrial Computer (desk top type with appliance inlet) for information technology equipment (scanner, notebook PC, LCD monitor, ..., etc.).
- The equipment was submitted and tested for use in a maximum Manufacturer's recommended ambient (Tmra) of 50°.
- Model MIC-3056XX is identical to Model MIC-3038XX except for size of enclosure, fans and model designation.
- Model MIC-3036-X is identical to Model MIC-3056XX except for size of enclosure, fans, power supply and model designation.

The Report contains the following Enclosures:**Enclosure 1**

:

National Deviation¹⁾

Total 23 Pages

Enclosure 2

:

Photographs.....

Total 10 Pages

Note: ¹⁾ Refer to CB Bulletin 103A, July, 2002

IEC 60950			
Clause	Requirement + Test	Result - Remark	Verdict

1	GENERAL		Pass
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1.5	Components		Pass
1.5.1	Comply with IEC60950 or relevant component standard	(see appended table 1.5.1)	Pass
1.5.2	Evaluation and testing of components	Components, which were found to affect safety aspects, are complied with the requirements of this standard or within the safety aspects of the relevant IEC component standards. (see appended table)	Pass
	Dimensions (mm) of mains plug for direct plug-in	The equipment is not direct plug-in type.	N/A
	Torque and pull test of mains plug for direct plug-in; torque (Nm); pull (N)	The equipment is not direct plug-in type.	N/A
1.5.3	Thermal controls	No thermal control.	N/A
1.5.4	Transformers	Evaluated as part of approved SPS.	N/A
1.5.5	Interconnecting cables	Interconnecting cable for Interconnection is carrying only SELV voltages on an energy level below 240 VA. Except for the insulation material, there is no further requirements to the o/p interconnection cable.	Pass
1.5.6	Capacitors in primary circuits	Evaluated as part of approved SPS.	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	TN system	N/A

1.6	Power interface		Pass
1.6.1	AC power distribution systems	AC power distribution systems are classify as TN.	Pass

IEC 60950			
Clause	Requirement + Test	Result - Remark	Verdict

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	This appliance is not a hand-held equipment.	N/A
1.6.4	Neutral conductor		N/A

1.7	Marking and instructions		Pass
1.7.1	Power rating	Rating marking readily visible to operator see below for details.	Pass
	Rated voltage(s) or voltage range(s) (V)	AC 100-240 VAC	Pass
	Symbol for nature of supply for d.c.	AC source	N/A
	Rated frequency or frequency range (Hz)	47-63Hz	Pass
	Rated current (A)	6-3 A	Pass
	Manufacturer's name/Trademark	Advantech Co., Ltd./Advantech	Pass
	Type/model	MIC-3036-X, MIC-3038XX, MIC-3056XX (X can be any alphanumeric character or blank)	Pass
	Symbol of Class II	Class I equipment	N/A
	Other symbols	Additional symbols may be provided when submitted for National Approval.	N/A
	Certification marks	UL	Pass
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	Equipment is designed for continuous operation.	N/A
1.7.4	Supply voltage adjustment		N/A
1.7.5	Power outlets on the equipment	No outlet	N/A
1.7.6	Fuse identification	Located in approved power supply.	N/A
1.7.7	Wiring terminals		N/A
1.7.7.1	Protective earthing and bonding terminals	In approved power supply	Pass
1.7.7.2	Terminal for a.c. mains supply conductors	Appliance inlet used	N/A

IEC 60950			
Clause	Requirement + Test	Result - Remark	Verdict
1.7.8	Controls and indicators	See below.	Pass
1.7.8.1	Identification, location and marking	The marking and indication of the power switch is located on the switch so that indication of function is clear.	Pass
1.7.8.2	Colours	No indicators with colors.	N/A
1.7.8.3	Symbols according to IEC 60417	Marking for the switch according 60417-1-IEC-5007/5008.	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	Only one supply from the mains.	N/A
1.7.10	IT power system		N/A
1.7.11	Thermostats and other regulating devices	No adjustable thermostats	N/A
1.7.12	Language	English	—
1.7.13	Durability	The marking(s) withstood the required test.	Pass
1.7.14	Removable parts	Markings is not placed on removable parts	N/A
1.7.15	Replaceable batteries	The equipment contains replaceable lithium battery, ■ not user replaceable type: the following warning in user manual or service instructions marked with: CAUTION: CAUTION: Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to manufacturer instructions.	Pass
	Language	English	—
1.7.16	Operator access with a tool.....	There is no hazard parts can be touched for operator access with a tool	Pass
1.7.17	Equipment for restricted access locations	No restricted access location	N/A

IEC 60950			
Clause	Requirement + Test	Result - Remark	Verdict

2	PROTECTION FROM HAZARDS		Pass
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2.1	Protection from electric shock and energy hazards		Pass
2.1.1	Protection in OPERATOR access areas	As the installation guide specifies directions for the operator how to add additional memory cards or add-on cards inside the enclosure, the inside of this INDUSTRIAL COMPUTER is considered as operator accessible area. Even the INDUSTRIAL COMPUTER enclosure is disassembled, the accessible SPS is covered by earthed metal enclosure. The construction of this metal enclosure prevents the access, using test pin or test finger or test probe, to any parts having only basic insulation to ELV or hazardous voltage.	Pass
2.1.1.1	Access to energized parts	See below	Pass
	Test by inspection	Operator cannot contact with any parts with only basic insulation to ELV or hazardous voltage.	Pass
	Test with test finger	No access with test finger to any parts with only basic insulation to ELV or hazardous voltage.	Pass
	Test with test pin	The test pin cannot touch hazardous voltage through and openings or seams of the whole enclosure.	Pass
	Test with test probe	No TNV circuits.	N/A
2.1.1.2	Battery compartments	No TNV circuits.	N/A
2.1.1.3	Access to ELV wiring	No ELV wiring in operator accessible area.	N/A
	Working voltage (V); distance (mm) through insulation		—
2.1.1.4	Access to hazardous voltage circuit wiring	No hazardous voltage wiring in operator accessible area.	N/A

IEC 60950			
Clause	Requirement + Test	Result - Remark	Verdict

2.1.1.5	Energy hazards	No hazardous voltage wiring in operator accessible area.	N/A
2.1.1.6	Manual controls	The equipment does not contain any knobs, handles, levers, or the like.	N/A
2.1.1.6	Manual controls		N/A
2.1.1.7	Discharge of capacitors in the primary circuit	Approved power supply used.	N/A
	Time-constant (s); measured voltage (V)		—
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	It is not intended to be used in restricted locations.	N/A

2.2	SELV circuits		Pass
2.2.1	General requirements	42.4V peak or 60VDC are not exceeded in SELV circuit under normal operation or single fault condition.	Pass
2.2.2	Voltages under normal conditions (V)	Between any SELV circuits 42.4V peak or 60VDC are not exceeded.	Pass
2.2.3	Voltages under fault conditions (V)	Under fault conditions voltages never exceed 42.4V peak and 60Vdc and do not exceed 71V peak or 120V dc for more than 0.2 sec.	Pass
2.2.3.1	Separation by double or reinforced insulation (method 1)	Considered in approved power supply.	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	See 2.2.2 and 2.2.3. No direct connection between SELV and any primary circuits.	N/A

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
	Insulation employed		—

IEC 60950			
Clause	Requirement + Test	Result - Remark	Verdict

2.3.3	Separation from hazardous voltages		N/A
	Insulation employed		—
2.3.4	Connection of TNV circuits to other circuits		N/A
	Insulation employed		—
2.3.5	Test for operating voltages generated externally		N/A

2.4	Limited current circuits		N/A
2.4.1	General requirements		N/A
2.4.2	Limit values		N/A
	Frequency (kHz).....		—
	Measured current (mA)		—
	Measured voltage (V).....		—
	Measured capacitance (μF)		—
2.4.3	Connection of limited current circuits to other circuits		N/A

2.5	Limited power sources		Pass
	Inherently limited output	The USB output comply with table 2B under normal operation condition.	Pass
	Impedance limited output	Polyswitch used in the equipment. See Table 1.5.1 for Polyswitch specifications.	Pass
	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)		—

2.6	Provisions for earthing and bonding		Pass
2.6.1	Protective earthing	Parts connected to protective earthing reliably.	Pass

IEC 60950			
Clause	Requirement + Test	Result - Remark	Verdict
2.6.2	Functional earthing	Secondary functional earthing is connected to protectively earthed conductive part that separated from primary by basic insulation.	Pass
2.6.3	Protective earthing and protective bonding conductors	See below.	Pass
2.6.3.1	Size of protective earthing conductors	Power supply cord suitable for application and subject to country's national code and regulations to be provided by the manufacturer	Pass
	Rated current (A), cross-sectional area (mm ²), AWG :		—
2.6.3.2	Size of protective bonding conductors	See 2.6.3.3	Pass
	Rated current (A), cross-sectional area (mm ²), AWG :		—
2.6.3.3	Rated current (A), type and nominal thread diameter (mm)..... :	See below.	Pass
	Resistance (Ω) of earthing conductors and their terminations, test current (A)..... :	Test current = 30 A Resistance < 0.1Ω (see appended table)	Pass
2.6.3.4	Colour of insulation :	Evaluated as part of the power supply.	N/A
2.6.4	Terminals	See 2.6.1	Pass
2.6.4.1	Protective earthing and bonding terminals	Appliance inlet used and the unit meet the test requirement of 2.6.3.3.	Pass
	Rated current (A), type and nominal thread diameter (mm)..... :		—
2.6.4.2	Separation of the protective earthing conductor from protective bonding conductors	Appliance inlet used.	Pass
2.6.5	Integrity of protective earthing	See below.	Pass
2.6.5.1	Interconnection of equipment	No interconnection of hazardous voltages.	N/A
2.6.5.2	Components in protective earthing conductors and protective bonding conductors	No switches or fuses in earthing conductors.	Pass
2.6.5.3	Disconnection of protective earth	Appliance inlet provided.	Pass

IEC 60950			
Clause	Requirement + Test	Result - Remark	Verdict

2.6.5.4	Parts that can be removed by an operator	It is not possible to disconnect earth without disconnecting mains and protective earth makes earlier and breaks later than the supply connectors. No other operator removable parts with safety critical earth connection.	Pass
2.6.5.5	Parts removed during servicing	Connections to protective earthing cannot be removed unless hazardous voltage is removed from the part simultaneously.	Pass
2.6.5.6	Corrosion resistance	All safety earthing connections in compliance with Annex J.	Pass
2.6.5.7	Screws for protective bonding	In approved power supply.	Pass
2.6.5.8	Reliance on telecommunication network	No TNV	N/A

2.7	Overcurrent and earth fault protection in primary circuits		Pass
2.7.1	Basic requirements	Approved Power Supply used	Pass
	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 :	One fuse in approved power supply	Pass
2.7.5	Protection by several devices		N/A
2.7.6	Warning to service personnel :		N/A

2.8	Safety interlocks		N/A
2.8.1	General principles		N/A
2.8.2	Protection requirements		N/A
2.8.3	Inadvertent reactivation		N/A
2.8.4	Fail-safe operation		N/A
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

IEC 60950			
Clause	Requirement + Test	Result - Remark	Verdict

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

2.9	Electrical insulation		N/A
2.9.1	Properties of insulating materials		N/A
2.9.2	Humidity conditioning		N/A
2.9.3	Requirements for insulation		N/A
2.9.4	Insulation parameters		N/A
2.9.5	Categories of insulation		N/A

2.10	Clearances, creepage distances and distances through insulation		Pass
2.10.1	General		Pass
2.10.2	Determination of working voltage	Considered in approved power supply.	N/A
2.10.3	Clearances		Pass
2.10.3.1	General		Pass
2.10.3.2	Clearances in primary circuit	The adequate clearance has been considered in approved power supply.	N/A
2.10.3.3	Clearances in secondary circuits	Functional insulation only. Waived by fault test per Sub-clause 5.3. See appended table 5.3.	Pass
2.10.3.4	Measurement of transient levels	Considered in approved power supply.	Pass
2.10.4	Creepage distances	(see appended table 2.10.3 and 2.10.4)	Pass
	CTI tests..... :		—
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		N/A
	Distance through insulation		N/A
	Electric strength test for thin sheet insulating material		—
	Number of layers (pcs)..... :		N/A

IEC 60950			
Clause	Requirement + Test	Result - Remark	Verdict

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 coated printed board 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
2.10.6.4	Thermal ageing (°C)..... :		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 components.	N/A
	Temperature $T_1=T_2 = T_{mra} - T_{amb} + 10K$ (°C)..... :		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	Insulation kept homogenous.	N/A

3	WIRING, CONNECTIONS AND SUPPLY		Pass
3.1	General		Pass
3.1.1	Current rating and overcurrent protection	All wires/conductors possess adequate cross-sectional areas for their intended application and Internal wiring are adequately insulated.	Pass
3.1.2	Protection against mechanical damage	The wires are well routed away from sharp edges, etc. and are adequately fixed to prevent excessive strain on wire and terminals.	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

IEC 60950			
Clause	Requirement + Test	Result - Remark	Verdict

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	Electrical screw connection is not used.	N/A
3.1.7	Non-metallic materials in electrical connections	No contact pressure through insulating material.	N/A
3.1.8	Self-tapping and spaced thread screws	Thread-cutting or space thread screws are not used for electrical connections.	N/A
3.1.9	Termination of conductors	All conductors are reliable secured.	Pass
	10 N pull test		Pass
3.1.10	Sleeving on wiring	Sleeving on wiring reliable kept in position by cable ties or by the use of heat shrunk sleeving.	Pass

3.2	Connection to a.c. mains supplies		Pass
3.2.1	Means of connection	Appliance inlet used.	Pass
3.2.2	Multiple supply connections	Single mains supply.	N/A
3.2.3	Permanently connected equipment	The equipment is not permanently connected.	N/A
	Number of conductors, diameter (mm) of cable and conduits		—
3.2.4	Appliance inlets	The appliance inlet complies with IEC 60320. The power cord can be inserted without difficulties and does not support the unit.	Pass
3.2.5	Power supply cords	Power supply cord suitable for application and subject to country's national code and regulations to be provided by the manufacturer	Pass
	Type		—

IEC 60950			
Clause	Requirement + Test	Result - Remark	Verdict

	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	No parts under this unit likely to damage the power supply cord. No sharp edges.	N/A
3.2.8	Cord guards	The equipment does not use a non-detachable power supply cord.	N/A
	D (mm); test mass (g)		—
	Radius of curvature of cord (mm)		—
3.2.9	Supply wiring space		N/A

3.3	Wiring terminals for connection of external conductors		N/A
3.3.1	Wiring terminals		N/A
3.3.2	Connection of non-detachable power supply cords		N/A
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		Pass
3.4.1	General requirement	The appliance inlet is considered to be the disconnect device.	Pass
3.4.2	Disconnect devices	Ref. to 3.4.1	Pass
3.4.3	Permanently connected equipment	Not permanently connected equipment.	N/A
3.4.4	Parts which remain energized	No parts remain energized when the disconnect device is removed.	N/A

IEC 60950			
Clause	Requirement + Test	Result - Remark	Verdict

3.4.5	Switches in flexible cords	The equipment does not use an isolating switch.	N/A
3.4.6	Single-phase equipment	Disconnect device disconnects both poles simultaneously.	Pass
3.4.7	Three-phase equipment	The equipment is single-phased.	N/A
3.4.8	Switches as disconnect devices	No such switch is provided.	N/A
3.4.9	Plugs as disconnect devices	The appliance inlet is considered to be the disconnect device.	N/A
3.4.10	Interconnected equipment	No interconnection of hazardous voltages.	N/A
3.4.11	Multiple power sources	One power source only.	N/A

3.5	Interconnection of equipment		Pass
3.5.1	General requirements		Pass
3.5.2	Types of interconnection circuits..... :	The power supply is considered for connection to SELV only.	Pass
3.5.3	ELV circuits as interconnection circuits	No ELV interconnection.	N/A

4	PHYSICAL REQUIREMENTS		Pass
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4.1	Stability		Pass
	Angle of 10°	This unit is of a stable mechanical construction and does not overbalance when tilted to an angle of 10 degrees from its normal upright position.	Pass
	Test: force (N)..... :	Not floor standing	N/A

4.2	Mechanical strength		Pass
4.2.1	General	See below.	Pass
4.2.2	Steady force test, 10 N	10N were applied to components. No energy or other hazards.	Pass
4.2.3	Steady force test, 30 N	No hazards as result of the 30N test.	Pass

IEC 60950			
Clause	Requirement + Test	Result - Remark	Verdict

4.2.4	Steady force test, 250 N	250N applied to all outer enclosure. No energy or other hazards.	Pass
4.2.5	Impact test	No hazard as result from impact test.	Pass
4.2.6	Drop test	Not hand-held equipment	N/A
4.2.7	Stress relief	Metal enclosure.	N/A
4.2.8	Cathode ray tubes	Not provided.	N/A
	Picture tube separately certified.....:		N/A
4.2.9	High pressure lamps		N/A
4.2.10	Wall or ceiling mounted equipment; force (N):		N/A

4.3	Design and construction		Pass
4.3.1	Edges and corners	All edges and corners judged to be sufficiently well rounded so as not to constitute a hazard.	Pass
4.3.2	Handles and manual controls; force (N):		N/A
4.3.3	Adjustable controls	Considered in approved power supply.	Pass
4.3.4	Securing of parts	Electrical and mechanical connections can be expected to withstand usual mechanical stress. For the protection, solder pins, cable ties and heat shrunk tubing are used.	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	No heating element.	N/A
4.3.8	Batteries	A device that prevent reverse polarity installation provided.	Pass
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 or employ powders, liquids, or gases.	N/A
4.3.11	Containers for liquids or gases	The equipment does not contain liquid.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict

4.3.12	Flammable liquids	Flammable liquid has not used.	N/A
	Quantity of liquid (l)		N/A
	Flash point (°C)		N/A
4.3.13	Radiation; type of radiation	Evaluated as an element of component evaluation.	N/A
	Equipment using lasers		N/A

4.4	Protection against hazardous moving parts		Pass
4.4.1	General	Equipment does not have any hazardous moving parts.	N/A
4.4.2	Protection in operator access areas	Fan guard used.	Pass
4.4.3	Protection in restricted access locations	No hazardous moving part in restricted access areas.	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)	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	The transformer bobbin has been tested during the approval evaluation of the power supply.	N/A

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 (No hazardous parts within 5° projection).	Pass
	Dimensions (mm)	See appended table.	—
4.6.2	Bottoms of fire enclosures	No bottom opening provided.	N/A
	Construction of the bottom		—
4.6.3	Doors or covers in fire enclosures		N/A
4.6.4	Openings in transportable equipment	Not transportable equipment.	N/A
4.6.5	Adhesives for constructional purposes		N/A
	Conditioning temperature/time		—

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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 with windings - wiring - semiconductor devices, transistors, diodes, integrated circuits - resistors, capacitors, inductors The fire enclosure is required.	Pass
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	N/A
4.7.3	Materials		Pass
4.7.3.1	General	See below.	Pass
4.7.3.2	Materials for fire enclosures	The fire enclosure is metal.	N/A
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	No air filter assemblies.	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
---	--	--	------

5.1	Touch current and protective conductor current		Pass
5.1.1	General	The touch current is secured by approval power supply.	Pass
5.1.2	Equipment under test (EUT)		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

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.....	No TNV	N/A

5.2	Electric strength		Pass
5.2.1	General	Based on the electric strength test the use of the insulating materials within the equipment is satisfactory.	Pass
5.2.2	Test procedure	No insulation breakdown detected during the test. (see appended table)	Pass

5.3	Abnormal operating and fault conditions		Pass
5.3.1	Protection against overload and abnormal operation	See below.	Pass
5.3.2	Motors	Approval DC Fan used. All disk drive motors evaluated as part of component evaluation.	Pass
5.3.3	Transformers	The protection of the power supply and transformer are approved with the approval of the power supply.	Pass

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5.3.4	Functional insulation	Functional insulation between the phases before the fuse complies with method (a), other operation insulation complies with method (c).	Pass
5.3.5	Electromechanical components	The equipment does not have any electromechanical components in the secondary.	Pass
5.3.6	Simulation of faults	<p>Faults in primary and secondary components and Functional insulation were already considered during the approval of the power supply.</p> <p>Blocked ventilation openings test: Result see appended table.</p> <p>Fan stalled test: Result see appended table.</p> <p>Connector overload test: Result see appended table.</p> <p>See appended table for other details.</p>	Pass
5.3.7	Unattended equipment	The equipment does not have any thermostats, temperature limiters, or thermal cut-outs.	N/A
5.3.8	Compliance criteria for abnormal operating and fault conditions	<p>No fire, emission of molten metal or deformation was noted during the tests.</p> <p>Electric Strength tests performed after abnormal and fault tests.</p>	Pass

6	CONNECTION TO TELECOMMUNICATION NETWORKS	N/A
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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

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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)		—
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)		—

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Clause	Requirement + Test	Result - Remark	Verdict

	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)		—
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 re-test		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 re-test, HF-1 or HF-2		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

A.7.9	Permitted re-test, HBF		N/A
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 (°C).....		N/A
A.8.4	Test procedure		N/A
A.8.5	Compliance criteria		N/A
A.8.6	Permitted re-test		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 re-test		N/A
A.10	Stress relief conditioning (see 4.2.7)		N/A
	Temperature (°C)		—

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

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Clause	Requirement + Test	Result - Remark	Verdict

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)		—

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		
C.2	Insulation		
	Protection from displacement of windings		

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		—

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Clause	Requirement + Test	Result - Remark	Verdict

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

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

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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⁾	
Enclosure	--	--	Metal, 1.0 mm thick minimum.	--	--	
Power Supply (for Model MIC-3036- X)	Zippy	PIU-6200P	Input: 100- 240Vac, 6- 3A, 47-63Hz. Output: +12Vdc/9A, +5Vdc/16A, +3.3Vdc/14A, - 12Vdc/0.7A, -5Vdc/0.2A, +5VSB/1.5A	IEC 60950	UL, TUV CB Cert. No. JPTUV-002570	
(for Model MIC- 3038XX)	Zippy	R2A-6300P-R	Input: 100- 240Vac, 6/3A, 60/50Hz. Output: +12Vdc/16A, +5Vdc/32A, +3.3Vdc/20A, - 12Vdc/0.8A, -5Vdc/0.5A, +5VSB/1.5A	IEC 60950	UL, TUV CB Cert. No. JPTUV- 002971A1	
(for Model MIC- 3056XX)	Zippy	R2A-6300P-R	Input: 100- 240Vac, 6/3A, 60/50Hz. Output: +12Vdc/16A, +5Vdc/32A, +3.3Vdc/20A, - 12Vdc/0.8A, -5Vdc/0.5A, +5VSB/1.5A	IEC 60950	UL, TUV CB Cert. No. JPTUV- 002971A1	
Power Supply Cord	Various	Various	min. 0.75mm ² /3C	--	--	
PCB	Various	Various	V-1, min. 105°C	UL94	UL	
Hard Disk (for Model MIC-3036- X)	Various	Various	+5/+12Vdc, 0.6/0.9A maximum	EN 60950	TUV, UL	
(for Model MIC- 3038XX)	Various	Various	+5Vdc, 0.5A maximum	EN 60950	TUV, UL	
(for Model MIC- 3056XX)	Various	Various	+5Vdc, 0.55A maximum	EN 60950	TUV, UL	
CD-ROM Drive (Optional) (for Models MIC- 3036-X, MIC- 3056XX)	Various	Various	+5Vdc, 1.5A maximum.	EN 60950	TUV, UL	

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Clause	Requirement + Test	Result - Remark	Verdict

1.5.1	TABLE: list of critical components (con't)					Pass
object/part No.	manufacturer/ trademark	type/model	technical data	Standard	mark(s) of conformity ¹⁾	
RTC Battery (for Model MIC-3036- X)	Tadiran	TL-5186	3.6Vdc, maximum abnormal charging current 15mA	--	UL	
Polyswitch (for Model MIC-3036- X)	Polytronics	SMD1812 series	trip current 5.2A	--	UL	
EMI Filter (for Model MIC- 3038XX)	Delta	06GeeG3E	250Vac, 6A	VDE 0563	VDE, UL	
DC Fan (two provided) (for Model MIC-3036- X)	Aavid	148A233	+12Vdc, 0.16A	EN 60950	TUV, UL	
	Bi-Sonic	BP802512M	+12Vdc, 0.16A	EN 60950	TUV, UL	
Rear Fan (for Model MIC- 3038XX)	Adda	AD0812UX- A76GL	+12Vdc, 0.3A	EN 60950	TUV, UL	
Left Fan (for Model MIC- 3038XX)	Delta	WFB1212H	+12Vdc, 0.45A	EN 60950	TUV, UL	
	Delta	AFB1512-F00	+12Vdc, 0.63A	EN 60950	TUV, UL	
DC Fan (three provided) (for Model MIC- 3056XX)	Delta	EFB0612HHA	+12Vdc, 0.25A	EN 60950	TUV, UL	

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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	
Model: MIC-3038XX							
F1	--	90/50	172	1.92	1.92	Max. normal load	
F1	6.0	100/50	171	1.72	1.72	Same as above.	
F1	3.0	240/50	163	0.77	0.77	Same as above.	
F1	--	254/50	162	0.74	0.74	Same as above.	
F1	--	90/60	172	1.92	1.92	Same as above.	
F1	6.0	100/60	171	1.72	1.72	Same as above.	
F1	3.0	240/60	163	0.80	0.80	Same as above.	
F1	--	254/60	162	0.78	0.78	Same as above.	
Model: MIC-3056XX							
F1	--	90/50	179	1.98	1.98	Max. normal load	
F1	6.0	100/50	177	1.74	1.74	Same as above.	
F1	3.0	240/50	166	0.78	0.78	Same as above.	
F1	--	254/50	165	0.75	0.75	Same as above.	
F1	--	90/60	179	1.98	1.98	Same as above.	
F1	6.0	100/60	177	1.77	1.77	Same as above.	
F1	3.0	240/60	166	0.81	0.81	Same as above.	
F1	--	254/60	165	0.79	0.79	Same as above.	
Model: MIC-3036-X							
F1	--	90/50	122	1.61	1.61	Max. normal load	
F1	6.0	100/50	121	1.52	1.52	Same as above.	
F1	3.0	240/50	121	0.98	0.98	Same as above.	
F1	--	254/50	122	0.94	0.94	Same as above.	
F1	--	90/60	122	1.55	1.55	Same as above.	
F1	6.0	100/60	122	1.48	1.48	Same as above.	
F1	3.0	240/60	121	0.96	0.96	Same as above.	
F1	--	254/60	122	0.92	0.92	Same as above.	
supplementary information: Max. normal load was defined as follows: Unit continuously crossed reading and writig data between HDD, CD-ROM drive, FDD, each USB port load 2.5W and working continuously.							

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Clause	Requirement + Test	Result - Remark	Verdict

2.5	TABLE: limited power source measurement						Pass
- The output of the AC adaptor is isolated from mains with an isolation transformer.							
The max. output load of the AC adaptor is limited through a regulating network: within the regulating network of the unit, the current is sensed through at R1, R7 and leaded to pin 3 of U1.							
- A regulating network limits the output in compliance with Table 8, both under normal operating conditions and after any single fault in the regulating network (open-circuit or short-circuit)							
1. According to Table 8 under normal operating conditions (Model: MIC-3038XX)							
Output Voltage (Voc)			Output Current (Isc)		VA		
V ac	V dc	Measured	Max Allowed	Measured	Max Allowed	Measured	
≤20	≤20	5.2	≤8.0	2.2	≤5 X Voc=26.0	8.78	
2. According to Table 8 under normal operating conditions (Model: MIC-3056XX)							
Output Voltage (Voc)			Output Current (Isc)		VA		
V ac	V dc	Measured	Max Allowed	Measured	Max Allowed	Measured	
≤20	≤20	5.2	≤8.0	2.2	≤5 X Voc=26.0	8.78	
3. According to Table 8 under normal operating conditions (Model: MIC-3036-X)							
Output Voltage (Voc)			Output Current (Isc)		VA		
V ac	V dc	Measured	Max Allowed	Measured	Max Allowed	Measured	
≤20	≤20	5.2	≤8.0	2.3	≤5 X Voc=26.0	8.11	
supplementary information:							

2.6.3.3 and 2.6.1	TABLE: earthing test			Pass
Location		resistant measures (Ω)	comments	
Model: MIC-3038XX				
Inlet earthed pin to metal enclosure		0.01	30A / 2 min	
Model: MIC-3056XX				
Inlet earthed pin to metal enclosure		0.01	30A / 2 min	
Model: MIC-3036-X				
Inlet earthed pin to metal enclosure		0.01	30A / 2 min	

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Clause	Requirement + Test	Result - Remark	Verdict

4.5	TABLE: temperature rise measurements		Pass
	test voltage (V)	90V/60Hz/2.0 hrs, 254V/60Hz/2.0 hrs	—
	t1 (°C)		—
	t2 (°C)		—
temperature rise dT of part/at:		dT (K)	Required dT (K)
Model: MIC-3038XX			
Ambient		25°C/25°C	--
Power 1			
T1 coil		06/06	40
T1 core		02/08	40
C42 body		08/05	35
LF1 coil		12/09	55
PWB near BD1 Heatsink		13/09	55
PWB near D7 Heatsink		11/10	55
Power 2			
T1 coil		09/08	40
T1 core		12/11	40
C42 body		11/08	35
LF1 coil		17/12	55
PWB near BD1 Heatsink		19/12	55
PWB near D7 Heatsink		13/12	55
PWB near D8 body		13/12	55
Main board			
PWB near Q2		22/21	55
PWB near U21		25/25	55
U22 body		26/26	55
U10 body		17/16	--
BT1 body		10/10	--
H.D.D body		08/07	--
Enclosure outside near power supply		07/07	20

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Clause	Requirement + Test	Result - Remark	Verdict

4.5	TABLE: temperature rise measurements (con't)		Pass
	test voltage (V)	90V/60Hz/2.0 hrs, 254V/60Hz/2.0 hrs	—
	t1 (°C)		—
	t2 (°C)		—
temperature rise dT of part/at:		dT (K)	Required dT (K)
Model: MIC-3056XX			
Ambient		24°C/24°C	--
Power 1			
T1 coil		8/8	40
T1 core		9/9	40
C42 body		9/6	35
LF1 coil		13/9	55
PWB near BD1 Heatsink		11/9	55
PWB near D7 Heatsink		20/20	55
Power 2			
T1 coil		5/5	40
T1 core		6/6	40
C42 body		7/5	35
LF1 coil		12/08	55
PWB near BD1 Heatsink		9/6	55
PWB near D7 Heatsink		19/19	55
PWB near D8 body		13/12	55
Main board			
PWB near Q2		30/30	55
PWB near U21		25/24	55
U22 body		26/26	--
U10 body		20/20	--
BT1 body		9/9	--
H.D.D body		9/9	--
CD-ROM body		16/16	--
F.D.D body		9/9	--
Enclosure outside near power supply		4/3	20

IEC 60950			
Clause	Requirement + Test	Result - Remark	Verdict

4.5	TABLE: temperature rise measurements		Pass
	test voltage (V)	90V/60Hz/2.0 hrs, 254V/60Hz/2.0 hrs	—
	t1 (°C)		—
	t2 (°C)		—
temperature rise dT of part/at:		dT (K)	Required dT (K)

Model: MIC-3036-X

Ambient				24°C/26°C		--	
T1 coil				18/16		40	
T1 core				19/17		40	
C10 body				20/18		35	
LA coil				26/19		55	
PWB near IC2 Heatsink				10/8		55	
CD-ROM body				12/10		--	
F.D.D body				11/9		--	
H.D.D body				15/13		--	
PWB near Q2				10/8		55	
PWB near U21				9/7		55	
U22 body				14/12		--	
U10 body				14/12		--	
BT1 body				5/3		--	
Enclosure outside near power				4/2		20	
Insulator for Ballast		R ₁ (Ω)	R ₂ (Ω)	dT (K)	required dT (K)		insulation class

comments:

The temperatures were measured under worst case normal mode defined in 1.2.2.1 and described in 1.6.2 at voltages as described in 1.4.5

With maximum of 50°C ambient temperature specified, the max. temperature rise is calculated as follows:

Winding components:

- class A →dT_{max} = 75K - 10K - (50-25)K = 40K

Components with:

- max. absolute temp. of 105°C (Line choke) →dT_{max} = (105-50)K = 55K

- max. absolute temp. of 85°C (Capacitor) →dT_{max} = (85-50)K = 35K

- max. absolute temp. of 105°C (PWB) →dT_{max} = (105-50)K = 55K

- when no class of insulation is given, min. insulation 105°C assumed.

User accessible area:

- material is metal (45K) →dT_{mx} = 45K-(50-25)K = 20K

IEC 60950			
Clause	Requirement + Test	Result - Remark	Verdict

4.6/4.6.1 & 4.6.2	TABLE: openings in enclosures		Pass
Location	size (mm)	comments	
Model MIC-3036-X			
Left side	Each measured 20x3.8 mm, cover two identical areas, overall area 77.5 by 174 mm each.	Foreign objects entering the enclosure will not contact bare parts at hazardous voltage or energy (No hazardous parts within 5° projection).	
Right side	Each measured 20x1.8 mm, overall area 263 by 72 mm.	Foreign objects entering the enclosure will not contact bare parts at hazardous voltage or energy (No hazardous parts within 5° projection).	
Rear side	Each measured 20x1.8 mm, overall area 72 by 20 mm.	Foreign objects entering the enclosure will not contact bare parts at hazardous voltage or energy (No hazardous parts within 5° projection).	
Model MIC-3038XX			
Left side	Each measured 5.9x5.98 mm, Cover two areas, overall area 118.5 by 115.5 mm, 118.5 by 36 mm.	Foreign objects entering the enclosure will not contact bare parts at hazardous voltage or energy (No hazardous parts within 5° projection).	
Right side	Each measured 9.8x3.4 mm, overall area 127 by 73.5 mm.	Foreign objects entering the enclosure will not contact bare parts at hazardous voltage or energy (No hazardous parts within 5° projection).	
Rear side	Each measured 5.9x5.9 mm, overall area 73 by 73 mm.	Foreign objects entering the enclosure will not contact bare parts at hazardous voltage or energy (No hazardous parts within 5° projection).	
Model MIC-3056XX			
Left side	Each measured 20x4.0 mm, Cover two areas, overall area 128 by 59 mm, 63 by 59 mm.	Foreign objects entering the enclosure will not contact bare parts at hazardous voltage or energy (No hazardous parts within 5° projection).	
Right side	Each measured 20x2.0 mm, overall area 260 by 72 mm.	Foreign objects entering the enclosure will not contact bare parts at hazardous voltage or energy (No hazardous parts within 5° projection).	

5.2.2	TABLE: electric strength tests		Pass
test voltage applied between:		test voltage (V)	breakdown Yes / No
Primary to Secondary		2500 Vdc	No
Primary to Earth		2500 Vdc	No
supplementary information: N/A			

IEC 60950			
Clause	Requirement + Test	Result - Remark	Verdict

5.3	TABLE: fault condition tests						Pass
	ambient temperature (°C): 50°C						—
	model/type of power supply:						—
	manufacturer of power supply:						—
	rated markings of power supply:						—
component No.	fault	test voltage (V)	test time	fuse No.	fuse current (A)	result	
Model: MIC-3038XX							
Ventilation openings	Blocked	240	3.0hrs	--	--	Normal operation, power 1 T1 coil 54°C, T1 core 57°C, power 2 T1 coil 63°C, T1 core 67°C, no breakdown, no hazards.	
Fan 1	Stalled	240	2.0hrs	--	--	Normal operation, power 1 T1 coil 31°C, T1 core 33°C, power 2 T1 coil 33°C, T1 core 36°C, no breakdown, no hazards.	
Fan 2	Stalled	240	1.5hrs	--	--	Normal operation, power 1 T1 coil 33°C, T1 core 35°C, power 2 T1 coil 35°C, T1 core 39°C, no breakdown, no hazards.	
Model: MIC-3056XX							
Ventilation openings	Blocked	240	3.0hrs	--	--	Normal operation, power 1 T1 coil 60°C, T1 core 61°C, power 2 T1 coil 49°C, T1 core 30°C, no breakdown, no hazards.	
Fan 1	Stalled	240	1.5hrs	--	--	Normal operation, power 1 T1 coil 33°C, T1 core 34°C, power 2 T1 coil 30°C, T1 core 30°C, no breakdown, no hazards.	
Fan 2	Stalled	240	1.2hrs	--	--	Normal operation, power 1 T1 coil 32°C, T1 core 33°C, power 2 T1 coil 29°C, T1 core 30°C, no breakdown, no hazards.	

IEC 60950			
Clause	Requirement + Test	Result - Remark	Verdict

5.3	TABLE: fault condition tests (con't)					Pass
	ambient temperature (°C): 50°C					—
	model/type of power supply:					—
	manufacturer of power supply:					—
	rated markings of power supply:					—
component No.	fault	test voltage (V)	test time	fuse No.	fuse current (A)	result
Fan 3	Stalled	240	1.5hrs	---	--	Normal operation, power 1 T1 coil 32°C, T1 core 33°C, power 2 T1 coil 29°C, T1 core 30°C, no breakdown, no hazards
Model: MIC-3036-X						
Ventilation openings	Blocked	240	3.0hrs	--	--	Normal operation, power T1 coil 90°C, T1 core 88°C, no breakdown, no hazards
Fan 1	Stalled	240	2.0hrs	--	--	Normal operation, power T1 coil 42°C, T1 core 42°C, no breakdown, no hazards
Fan 2	Stalled	240	2.0hrs	--	--	Normal operation, power T1 coil 50°C, T1 core 50°C, no breakdown, no hazards

IEC 60950			
Clause	Requirement + Test	Result - Remark	Verdict

5.3.6	TABLE: Overload of operator accessible connector test (US Deviation)				Pass
Connector Pin #s	Open Circuit voltage(V)	Maximum Available Current (mA)	Length of Test	Comment	
RJ-45 Lan1 pin 1-8	0	--	--	Circuit measures 0 Volts.	
RJ-45 Lan2 pin 1-8	0	--	--	Circuit measures 0 Volts.	
RJ-45 Lan3 pin 1-8	0	--	--	Circuit measures 0 Volts.	
USB port1 pin1-3	0	--	--	Circuit measures 0 Volts.	
USB port1 pin 4	5.2	2.2	1hr	No indication of dielectric breakdown. Cheesecloth and tissue paper remained intact.	
USB port2 pin 1-3	0	--	--	Circuit measures 0 Volts.	
USB port2 pin 4	5.2	2.2	1hr	No indication of dielectric breakdown. Cheesecloth and tissue paper remained intact.	
EGA com1 pin 1, 2, 5, 6, 8, 9	0	--	--	Circuit measures 0 Volts.	
EGA com1 pin 3,4,7	9.33	0	1 sec	Circuit measure less than 12.5 mA.	
EGA com2 pin 1, 2, 5, 6, 8, 9	0	--	--	Circuit measures 0 Volts.	
EGA com2 pin 3, 4, 7	9.33	0	1 sec	Circuit measure less than 12.5 mA.	
VGA D-sub pin 1-6, 8-10, 15	0	--	--	Circuit measures 0 Volts.	
VGA D-sub pin 7, 11, 14	5.07	0	1 sec	Circuit measure less than 12.5 mA.	
VGA D-sub pin 12, 13	3.0	0	1 sec	Circuit measure less than 12.5 mA.	
PS2 pin 1, 2, 6	5.15	0	1 sec	Circuit measure less than 12.5 mA.	
PS2 pin 3-5	0	--	--	Circuit measures 0 Volts.	

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 $t_2 + t_3$	
1/A			
2/A			
3/A			
4/A			
5/A			
6/B			
7/B			
8/B			
9/B			
10/B			

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 $t_2 + t_3$	
11			
12			
13			
14			
15			

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)
1/A				
2/A				
3/A				
4/A				
5/A				
6/B				
7/B				

IEC 60950			
Clause	Requirement + Test	Result - Remark	Verdict

8/B				
9/B				
10/B				

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
11				
12				
13				
14				
15				

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)
11				
12				
13				
14				
15				

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)	
1			
2			
3			

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)	
4			
5			

IEC 60950			
Clause	Requirement + Test	Result - Remark	Verdict

6		
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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)	
1/A			A			
2/A			B			
3/A			C			
4/A			D			
5/A						
6/B			A			
7/B			B			
8/B			C			
9/B			D			
10/B						

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)	
11			A			
12			B			
13			C			
14			D			
15						
supplementary information:						

ENCLOSURE No. 1

NATIONAL DEVIATIONS TO IEC 60950 (1999) THIRD EDITION

	Argentina*
	Austria*
	Belgium*
	Brazil*
	Canada
	China*
	Czech Republic*
	Denmark*
	Finland
	France*
	Germany*
	Hungary*
	Israel
	Ireland*
	Italy*
	Japan
Korea*	
Netherlands*	
Poland*	
Portugal*	
Russian *	
	Singapore*
	Slovakia*
	Slovenia*
South Africa*	
	Spain*
	Switzerland*
	Turkey*
	United Kingdom (GB)*
	USA
CENELEC	

*** The country have no national deviation according to IEC 60950 3rd Edition.**

(Total 23 Pages including this Cover Page)

National Deviations to IEC 60950 Standard:

IEC 60950, 3rd Edition (1999)
Information technology equipment including electrical business equipment

Country	Remark	Group differ.	National differ.	National Standard
AR Argentina	R	-	-	
AT Austria		Yes	-	
BE Belgium		Yes	-	
BR Brazil	R	-	-	
CA Canada		-	Yes	CAN/CSA C22.2 No. 60950/UL 60950 Third Edition
CH Switzerland		Yes	-	EN 60950:2000
CN China		-	-	
CZ Czech Republic		Yes	-	
DE Germany		Yes	Yes	EN 60950:2000
DK Denmark		Yes	Yes	EN 60950:2000
ES Spain		Yes	Yes	EN 60950:2000
FI Finland		Yes	Yes	EN 60950
FR France		Yes	-	
GB United Kingdom		Yes	Yes	BS EN 60950:2000
HU Hungary		Yes	-	MSZ EN 60950
IE Ireland		Yes	-	
IL Israel		-	-	
IT Italy		Yes	-	
JP Japan		-	Yes	J60950 (H14)
KR Korea		-	Yes	K60950
NL The Netherlands		Yes	-	
PL Poland	R	-	-	
PT Portugal		Yes	-	EN 60950:2000
RU Russia Federation	R	-	-	
SI Slovenia		Yes	-	
SK Slovakia		Yes		
SG Singapore		-	-	
TR Turkey		Yes	-	
US United States of America		-	Yes	UL 60950
ZA South Africa		-	-	SABS IEC 60950

IEC 60950			
Sub-Clause	Difference+ Test	Result - Remark	Verdict
(CA) Canadian Deviations IEC 60950 Third Edition			Pass
<p>General: Canada and the United States of America have adopted a single, bi-national standard, CAN/CSA C22.2 No. 60950/UL 60950, Third Edition, based on IEC 60950, Third Edition. This standard may be used for product certification immediately, however, the previous version of the standard may also be used until April 1, 2003.</p> <p><i>Note:</i> <i>The previous version is CAN/CSA C22.2 No. 950-95/UL 1950-1997, Third Edition, based on IEC 60950, 2nd Edition including Amendments 1, 2, 3 and 4. Refer to the "IEC 60950, 2nd Edition + Amds 1, 2, 3 & 4, CA" section of this bulletin for the national differences in this version of the standard.</i></p> <p>The following is a summary of the key national differences from IEC 60950, 3rd Edition. The standard (CAN/CSA C22.2 No. 60950/UL 60950, Third Edition) should be consulted for further details on the national differences summarized below.</p> <p>SPECIAL NATIONAL CONDITIONS</p> <p>Those requirements are identified as Special National Conditions since they are directly related to the Canadian Electrical Code (CEC), Part 1 and the Canadian Building Code, which are referenced in legislation and which form the basis for the rules and practices followed in electrical and other building installations in Canada.</p> <p>Notes:</p> <ul style="list-style-type: none"> • "CEC" denotes Canadian Electrical Code • "NEC" denotes US National Electrical Code • Due to common Canadian and US national differences, products that are in compliances with Canadian national differences are also considered in compliance with the US national differences. 			Pass
1.1.1	All equipment design and installations are required to be in accordance with the Canadian Electrical Code (CEC), Part 1, CAN/CSA C22.1, and with National Electrical Code (NEC), ANSI/NFPA 70, and, unless marked or otherwise identified, the Standard for the Protection of Electronic Computer/Data-Processing Equipment, ANSI/NFPA 75.		Pass
1.5.5	<p>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.</p> <p>For lengths 3.05 m or less, external interconnecting flexible cord and cable assemblies which are not types specified in the CEC/NEC are required to have special construction features and identification markings.</p>		N/A

IEC 60950			
Sub-Clause	Difference+ Test	Result - Remark	Verdict
1.7.1	<p>Equipment for use on a.c. mains supply systems with a neutral and more than one phase conductor (e.g. 120/240V, 3-wire) require a special marking format for electrical ratings.</p> <p>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 specified, "Normal Operating Conditions," unless it is part of a range that extends into the "Normal Operating Conditions."</p>	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.		N/A
2.7.1	<p>Suitable CEC/NEC branch circuit protection is required for all standard supply outlets, receptacles and medium-base or smaller lampholders if the supply branch circuit protection is not suitable.</p> <p>Power distribution transformers distributing power at 100 volts or more, and rated 10 kVA or more, require transformer overcurrent protection.</p>		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 CEC/NEC.	Appliance inlet used.	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.	Power supply cords have attachment plugs rated not less than 125% of the rated current of the equipment.	Pass
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	<p>Power supply cords are required to be no longer than 4.5 m in length.</p> <p>Flexible power supply cords are required to be compatible with Tables 11 & 12 of the CEC, and Article 400 of the NEC.</p>	Provide 18AWG/3C, <4.5m power supply cord.	Pass
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 CAN/CSA C22.2 No. 0.		N/A

IEC 60950			
Sub-Clause	Difference+ Test	Result - Remark	Verdict
3.3.3	Wire binding screws are not permitted to attach conductors larger than 10 AWG (5.3 mm).		N/A
3.3.4	Terminals for permanent wiring, including protective earthing terminals are required to be suitable for Canadian/U.S. wire gauge sizes, rated 125 percent of the equipment rating, and specially marked when specified (1.7.7).		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
3.4.10	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.		N/A
4.3.12	The maximum quantity of flammable liquid stored in equipment is required to comply with NFPA 30.	There are no flammable liquid stored in equipment	N/A
4.3.13	Equipment with lasers is required to meet Code of Federal Regulations 21 CFR 1040 and /or Canadian Radiation Emitting Devices Act, REDR C 1370, as applicable.	No laser.	N/A
4.7.1	For computer room applications, automated information storage systems with combustible media greater than 27 cubic feet are required to have a provision for connection of either automatic sprinklers or a gaseous agent extinguishing system with an extended discharge.		N/A
4.7.3.1	For computer room applications, enclosures with combustible material measuring greater than 0.9 m ² or a single dimension greater than 1.8 m, 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.		N/A
Annex H	Equipment that produces ionizing radiation is required to comply with Code of Federal Regulations, 21 CFR 1020 and/or Canadian Radiation Emitting Devices Act, REDR C1370, as applicable.	Not produce ionizing radiation.	N/A

IEC 60950			
Sub-Clause	Difference+ Test	Result - Remark	Verdict

OTHER DIFFERENCES:			Pass
The following key national differences are based on requirements other than national regulatory requirements. The bi-national standard (CAN/CSA C22.2 No. 60950/UL 60950, Third Edition) referenced above should be consulted for further details on the national differences summarized below.			
1.5.2	Components of equipment must be suitable for the application, and must comply with the requirements of the equipment standard and the applicable national (Canadian and/or U.S. component or material standards, as far as they may apply. The acceptance will be based on the following:	see appended table 1.5.1	Pass
(E)	A component Certified by a Canadian or U.S. National Certification Body (NCB) to a Canadian or U.S. component standard will be checked for correct application and use in accordance with its specified rating. Where necessary, it will also be subject to the applicable tests of the equipment standard.	see appended table 1.5.1	Pass
(F)	A component, which has a CB Test Certificate for compliance with a relevant IEC component standard, will be checked for correct application and use in accordance with its specified ratings. Where necessary, it will also be subject to the applicable tests of the equipment standard, and to the applicable tests of the Canadian and/or U.S. component or material standard, under the conditions occurring in the equipment.		N/A
(G)	A component, which has no approval as in (E) or (F) above or which is used not in accordance with its specified ratings, will be subject to the applicable tests of the equipment standard, and to the applicable tests of the Canadian and/or U.S. component or material standard, under the conditions occurring in the equipment.		N/A
(H)	Some components may require annual re-testing, which may be carried out by the manufacturer, CSA International or another laboratory.		N/A
2.3.1	For TNV-2 and TNV-3 circuits with other than ringing signals and with voltages exceeding 42.4 Vp or 60 Vd.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
2.6.3.3	When subject to impedance testing, protective earthing and bonding are required to be tested to the additional test conditions that originate in CAN/CSA C22.2 No. 0.4.		Pass
4.2.8.1	Enclosures around CRT's having a diagonal dimension of 160 mm or more are required to reduce the risk of injury due to the implosion of the CRT.	No CRT.	N/A

IEC 60950			
Sub-Clause	Difference+ Test	Result - Remark	Verdict
4.3.2	Equipment with handles is required to comply with special loading tests.		N/A
5.1.8.1.1	Equipment intended to receive telecommunication ringing signals is required to comply with a special touch current measurement tests		N/A
6.2.1	Enamel coating on winding wire not considered electrical separation unless subject to special investigation.		N/A
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..		N/A
6.5	Equipment connected to a telecommunications network and supplied with an earphone intended to be held against, or in the ear is required to comply with special acoustic pressure tests.		N/A
M.2	Continuous ringing signals up to 16 mA only are permitted if the equipment is subject to special installation and performance restrictions.		N/A
Annex NAB	Equipment connected to centralized d.c. power systems is required to comply with special earthing, wiring, marking and insulation requirements in accordance with Annex NAB and 3.6.1.		

IEC 60950			
Sub-Clause	Difference+ Test	Result - Remark	Verdict

(DE) German Deviations IEC 60950 Third Edition			N/A
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 German language. Note Of this requirement, rules for use even only by service personnel are not exempted.		N/A
Annex H (a)	a) A license is required by those who operate an X-ray emission source	No CRT.	N/A
Annex 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 μ S v/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
Annex H (c)	c) A license in accordance with Clause 1 is also not required by persons who operate an X-ray emission source on which the electron acceleration voltage exceeds 20 kV if: 1) The X-ray emission source has been granted a type approval and 2) it is adequately indicated on the X-ray emission source that i) X-rays are generated, ii) the device stipulated by the manufacturer or importer guarantees that the maximum permissible local dose rate in accordance with the type approval is not exceeded and iii) the electron acceleration voltage must not exceed the maximum value stipulated by the manufacturer or importer		N/A

IEC 60950			
Sub-Clause	Difference+ Test	Result - Remark	Verdict
Annex 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 measures and specified in the device and 3) it is adequately indicated on the X-ray emission source that the X-rays generated are adequately screened by the intrinsically safe CRT. 		N/A

(DK) Danish Deviations IEC 60950 Third Editio			N/A
1.2.4.1	In Denmark, certain types of Class I appliances (see sub-clause 3.2.1) may be provided with a plug not establishing earthing continuity when inserted into Danish socket-outlets.	It should be considered when national approval.	N/A
1.5.1	<p>Denmark (Heavy Current Regulations)</p> <p>Supply cords of CLASS I EQUIPMENT, which is delivered without a plug, must be provide with a Visible tag with the following test:</p> <p>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".</p> <p>"Vigtigt ! Lederen med grøn/gul isolation må kun tilsluttes en klemme mærket (IEC 417, No. 5019) eller (IEC 417, No. 5017)."</p>	It should be considered when national approval.	N/A
1.7.5	CLASS II EQUIPMENT shall not be fitted with socket-outlets for providing power to other equipment.	No socket outlet.	N/A
1.7.5	In Denmark, socket-outlets for providing power to other equipment shall be in accordance with the Heavy Current Regulations, 107-2-DI, Standard Sheet DK 1-3a, DK 1-5a or DK 1-7a, when used on Class I equipment.		N/A

IEC 60950			
Sub-Clause	Difference+ Test	Result - Remark	Verdict

3.2.1	<p>In Denmark, supply cords 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 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.</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>	Power supply cord suitable for application and subject to country's national code and regulations to be provided by the manufacturer.	N/A
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(ES) Spanish Deviations IEC 60950 Third Edition			N/A
	<p>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-EN 20315:1994.</p> <p>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</p> <p>CLASS I EQUIPMENT provided with a supply cord with a plug, this plug shall be in accordance with UNE-EN-60309-2.</p> <p>If poly-phase equipment is provided with a supply with a supply cord with a plug, this shall be in accordance with UNE-EN 60309-2.</p>	It should be considered when national approval.	N/A

(FI) Finnish Deviations IEC 60950 Third Edition			N/A
6.1.2.2	The exclusions are applicable for permanently connected equipment and pluggable equipment type B only.	No TNV circuit.	N/A

IEC 60950			
Sub-Clause	Difference+ Test	Result - Remark	Verdict

(GB) UK Deviations IEC 60950 Third Edition			N/A
3.2.1	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.	Power supply cord suitable for application and subject to country's national code and regulations to be provided by the manufacturer.	N/A
3.2.5	In the United Kingdom, 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	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.	The rating current lesser than 10 A.	N/A
4.3.6	The torque test is performed using a socket outlet complying with BS 1363: and the plug part OF DIRECT PLUG-IN EQUIPMENT shall be BS 1363: Part 1, 12.1, 12.2, 12.3, 12.9, 12.11, 12.12, 12.16, expect that test of 12.17 is performed at not less than 125 °C.	Not Direct Plug-In equipment	N/A

IEC 60950			
Sub-Clause	Difference+ Test	Result - Remark	Verdict

(IE) Ireland Deviations IEC 60950 Third Edition			N/A
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 I.S. 411 by means of that flexible cable or cord and plug, shall be fitted with a 13 A plug in accordance Statutory Instrument 526: 1997 – National Authority of Ireland (section 28) (13 A Plugs and Conversion Adaptors for Domestic Use) Regulations 1997.	Power supply cord suitable for application and subject to country's national code and regulations to be provided by the manufacturer.	N/A
4.3.6	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

(JP) Japanese Deviations IEC 60950 Third Edition			Pass
1.2	Add the following terms. Equipment, Class 01 Material, VTM	Added. See 1.2.4.101, 1.2.12.101	Pass
1.2.4.101	<p>CLASS 01 EQUIPMENT: Equipment where protection against electronic shock is achieved by:</p> <ul style="list-style-type: none"> a) using BASIC UNSULATION, and b) providing a means of connecting to the protective earthing conductor in the building wiring those conductive parts that are otherwise capable of assuming HAZARDOUS VOLTAGES if the BASIC INSULATION fails, and c) using a supply cord without earthing conductor and a plug without earthing wire although the equipment has externally an earth terminal or a lead wire for earthing. <p>Equipment provided with a cord set having a two-pin type plug with a lead wire for earthing is also regarded as Class 01.</p> <p>Note – Class 01 equipment may have a part constructed with Double Insulation or Reinforced Insulation as well as an operating part as SELV circuit.</p>	The unit is considered as Class I equipment and it should be considered in end application use.	N/A

IEC 60950			
Sub-Clause	Difference+ Test	Result - Remark	Verdict
1.2.12.1	<p>FLAMMABILITY CLASSIFICATION OF MATERIALS: The recognition of the burning behavior 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.</p> <p>Note1 – When applying the requirements in this standard, HF-1 CLASS FOAMED MATERIALS are regarded as better than those of CLASS HF-2, and HF-2 better than HBF.</p> <p>Note2 – Similarly, other MATERIALS, including rigid (engineering structural) foam of CLASSES 5V or V-0 are regarded as better than those of CLASS V-1, V-1 better than V-2, and V-2 better than HB.</p> <p>Note3 – Similarly, for thin MATERIALS, VTM-0 Class materials are regarded as better than those of VTM-1 Class, and VTM-1 better than VTM-2.</p>		N/A
1.2.12.101	<p>VTM CLASS MATERIAL: Thin MATERIALS fulfill the specified conditions during the test of clause A.101 applied for materials that the test and evaluation of clauses A.6 to A.10 is difficult to enforce. Materials are classified to three classifications as VTM-0, VTM-1 and VTM-2 according to the conditions after the removal of the test flame.</p>		N/A
1.7.101	<p>Marking for CLASS 01 EQUIPMENT</p> <p>For CLASS 01 EQUIPMENT, the following instruction shall be indicated on the visible place of the mains plug or the main body:</p> <p>“Provide an earthing connection”</p> <p>Moreover, for CLASS 01 EQUIPMENT, the following instruction shall be indicated on the visible place of the main body or written in the operating instructions:</p> <p>“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.”</p>		N/A
2.1.1.1	<p>Replace “ IEC 60083” to “ IEC 60083 or JIS C 8303” in 2.1.1.1b)</p>		N/A
2.6.3.1	<p>Add the following after 1st paragraph.</p> <p>This also applies to the conductor of lead wire for protective earthing of CLASS 01 EQUIPMENT.</p>		N/A

IEC 60950			
Sub-Clause	Difference+ Test	Result - Remark	Verdict
2.6.4.1	Replace 2 nd sentence in 1 st paragraph. For CLASS I EQUIPMENT with a DETACHABLE POWER SUPPLY CORD, the earthing terminal in appliance inlet is regarded as the main protective earthing terminal.	Replaced.	Pass
2.6.5.4	Replace 1 st sentence. Protective earthing of CLASS I EQUIPMENT shall make earlier and break later than the supply connections in each of the following:	Replaced.	Pass
2.6.101	Earthing of CLASS 01 EQUIPMENT Plugs with a lead wire for earthing shall not be used for equipment having a rated voltage exceeding 150V. For plugs with a lead wire for earthing, the lead wire shall not be earthed by a clip. CLASS 01 EQUIPMENT shall be provided with an earthing terminal or lead wire for earthing in the external where easily visible.		N/A
3.2.5	Delete 1) in Table 3B	Deleted.	Pass
4.2.8	Add the following informative remark after the last sentence: "IEC 61965 is also applicable instead of IEC 60065"	No Cathode Ray Tubes.	N/A
4.5.1	Add the following to suffix 5) as specified in "Conditions applicable to Table 4A, Parts 1 and 2" With regard to Table 4A, insulating materials complying with Japanese requirements (refer to Japanese differences for the current IEC 60335-1 (3 rd Edition) in CB Bulletin 101B) are also acceptable. Add a suffix 7) in "Conditions applicable to Table 4A, Parts 1 and 2". In the right column of Table 4A, Part1, add suffix 7) to "50" (K), corresponding to "-without T – marking " in the left column so as to become "50 7)". Add 7) to Table 4A, Part 2 as follows: 7) This value shall apply only to wiring or cords complying with relevant IEC standards. Others shall comply with Japanese requirements (refer to Japanese differences for the current IEC 60335-1 (3 rd Edition) in CB Bulletin 101B).		N/A
4.7.3.2	Add the following in 7 th paragraph. - for thin materials, e.g., flexible printed boards, etc., used inside equipment, be of FLAMMABILITY CLASS VTM-2 or better		N/A

IEC 60950			
Sub-Clause	Difference+ Test	Result - Remark	Verdict

5.1.6	Replace Table 5A			N/A	
	Type of equipment	Terminal A of measuring instrument connected to:	Maximum TOUCH CURRENT mA r.m.s. ¹⁾		Maximum PROTECTIVE CONDUCTOR CURRENT
	ALL equipment	Accessible parts and circuits not connected to protective earth	0,25		-
	HAND-HELD	Equipment main protective earthing terminal (if any) CLASS I EQUIPMENT	0,75		-
	MOVABLE (other than HAND_HELD, but including TRANSPORTABLE EQUIPMENT		3,5		-
	STATIONARY, PLUGGABLE TYPE A		3,5		-
	ALL other STATIONARY EQUIPMENT		3,5		-
	- not subject to the conditions of 5.1.7		-		5 % of input current
	- subject to the conditions of 5.1.7	-	-		-
	HAND-HELD	Equipment main protective earthing terminal (if any)	0,5		-
	Others	CLASS 0I EQUIPMENT	1,0		-
¹⁾ If peak values of TOUCH-CURRENT are measured, the maximum values obtained by multiplying the r.m.s. values by 1,414.					
5.3.8.2	Replace 3 rd Item as follows - BASIC INSULATION between the PRIMARY CIRCUIT and accessible conductive parts of CLASS I or EQUIPMENT;		Replaced.	Pass	
Annex A	Addition: Add the subclause A.101 with the title “Flammability tests for classifying materials VTM” and the following: Thin sheet materials shall comply with ISO 9773.			N/A	
Annex G	Addition: Add the following 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	Addition: Add “IEC 61965:2000, Mechanical Safety for Cathode Ray Tubes.”		No Cathode Ray Tubes.	N/A	
Annex U	Replacement: Replace 2 nd paragraph. This annex covers to round winding wires having diameters between 0.05 mm and 5.00 mm.			N/A	

IEC 60950															
Sub-Clause	Difference+ Test	Result - Remark	Verdict												
U.2.1 Electric strength	Replacement: The test sample is prepared according to IEC 60851-5 (1997), 4.4.1 (for twisted pairs). The sample is then subjected to the test of 5.2.2 if this standard, 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: <ul style="list-style-type: none">- for BASIC INSULATION or SUPPLEMENTARY INSULATION, 3000 V, or:- for REINFORCED INSULATION, 6000 V.		N/A												
U.2.2 Adherence and flexibility	Test 8 of IEC 60851-3:1996, 5.1.1, using the mandrel diameters of table U.1. The test sample is then examined in accordance with IEC60851-3:1996, 5.1.1.4, followed by the test of 5.2.2 of this standard expect applying the test between the wire and the mandrel. A test voltage shall not be less than twice the appropriate voltage in table 5B(see 5.2.2) of this standard. However, the minimum values shall be as follows: <ul style="list-style-type: none">- for BASIC INSULATION or SUPPLEMENTARY INSULATION, 1500 V, or;- for REINFORCED INSULATION, 3000V. <p>Table U.1 – Mandrel diameter</p> <table><tr><td>Nominal Conductor diameter (mm)</td><td>Mandrel diameter (mm +/- 0.2mm)</td></tr><tr><td>0.05 – 0.34</td><td>4.0</td></tr><tr><td>0.35 – 0.49</td><td>6.0</td></tr><tr><td>0.50 – 0.74</td><td>8.0</td></tr><tr><td>0.75 – 2.49</td><td>10.0</td></tr><tr><td>2.50 – 5.00</td><td>4 times of the diameter of conductor</td></tr></table> <p>1) in compliance with IEC 60371-43</p> <p>The tension to be applied to the wire during winding on the mandrel is calculated from the wire diameter to be equivalent to 118 MPa +/- 10% (118 N/square mm +/-10%).</p>	Nominal Conductor diameter (mm)	Mandrel diameter (mm +/- 0.2mm)	0.05 – 0.34	4.0	0.35 – 0.49	6.0	0.50 – 0.74	8.0	0.75 – 2.49	10.0	2.50 – 5.00	4 times of the diameter of conductor		N/A
Nominal Conductor diameter (mm)	Mandrel diameter (mm +/- 0.2mm)														
0.05 – 0.34	4.0														
0.35 – 0.49	6.0														
0.50 – 0.74	8.0														
0.75 – 2.49	10.0														
2.50 – 5.00	4 times of the diameter of conductor														

IEC 60950			
Sub-Clause	Difference+ Test	Result - Remark	Verdict

(KR) Korean Deviations IEC 60950 Third Edition			Pass
	LIMITATIONS Voltage ratings As national supply voltage is subject to increased to 220 V, an appliance rated 220 V only is to be allowed to obtain type approval in Korea. Either an appliance rated 110V or 220 V/110 V is not allowed. When an appliance is supplied in Korea, it shall be set to and marked with 220 V. But free voltage appliance by SMPS (Switching Mode Power Supply) is allowed and it shall be marked with "100 - 220 V".	100-240 Vac	Pass
	Frequency Only appliances having supply frequency of 60 Hz or a frequency range including 60Hz are accepted. When an appliance is supplied in Korea, it shall be set to and marked with 60 Hz.	47-63 Hz	Pass
	Instructions Instruction manuals and appliance markings related to safety, including nameplate shall be in Korean or graphic symbols in IEC Publication 417.	The instruction manual in Korean will be provided when the equipment will be applied for the national approval.	Pass
	More details are available from IECEE-KR (c/o KAITECH) on request. DEVIATIONS		N/A
1.5.101	Addition Plugs for the connection of the apparatus to the supply mains shall comply with the Korean requirement (KSC 8305).	Power supply cord suitable for application and subject to country's national code and regulations to be provided by the manufacturer.	N/A
7	The apparatus shall comply with the relevant CISPR requirements.	It should be provided when national approval.	N/A

IEC 60950			
Sub-Clause	Difference+ Test	Result - Remark	Verdict

(US) US Deviations IEC 60950 Third Edition			Pass
<p>The United States of America and Canada have adopted a single, bi-national standard, CAN/CSA C22.2 No. 60950/UL60950, Third Edition, based on IEC 60950, Third Edition.</p> <p>The following is a summary of the key national differences based on national regulatory requirements, such as the National Electrical Code (NEC), ANSI/NFPA 70-1999, which are referenced in legislation and which form the basis for the rules and practices followed in electrical and building installations. The bi-national standard referenced above should be consulted for further details on the national differences summarized below.</p>			Pass
1.1.1	All equipment is to be designed to allow installations in accordance with the National Electrical Code (NEC), ANSI/NFPA 70, and, unless marked or otherwise identified, the Standard for the Protection of Electronic Computer/Data-Processing Equipment, ANSI/NFPA 75.	Considered.	Pass
1.5.5	<p>For lengths exceeding 3.05m external interconnecting flexible cord and cable assemblies are required to be a suitable cable type (e.g. DP, CL2) specified in the NEC.</p> <p>For lengths 3.05m or less, external interconnecting flexible cord and cable assemblies which are not types specified in the NEC are required to have special construction features and identification markings.</p>		N/A
1.7.1	<p>Equipment for use on 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.</p> <p>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."</p>		N/A
2.5	Where a fuse is used to provide Class 2, LPS (or TNV) current limiting, it shall not be operator accessible unless it is not interchangeable.		N/A

IEC 60950			
Sub-Clause	Difference+ Test	Result - Remark	Verdict
2.7.1	Suitable NEC branch circuit protection is required for all standard supply outlets, receptacles and medium-base or smaller lampholders 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 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.		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.	Power supply cords have attachment plugs rated not less than 125% of the rated current of the equipment.	Pass
3.2.3	Permanent connection of equipment to the mains by a power supply cord is not permitted.	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 Article 400 of the NEC..	Provide 18AWG/3C, <4.5m power supply cord.	Pass
3.2.8	Permanently connected equipment is required to have a suitable wiring compartment and wiring bending space.	Not permanent connection equipment.	N/A
3.3	Wiring terminals end associated spacings for field wiring connections shall comply with CSA C22.2 No. 0.		N/A
3.3.3	Wire binding screws are not permitted to attach conductors larger than 10 AWG (5.3 mm).		N/A
3.3.4	Terminals for permanent wiring, including protective earthing terminals are required to be suitable for U.S./Canadian wire gauge sizes, rated 125 percent of the equipment rating, and specially marked when specified(1.7.7)		N/A
3.4.2	Motor control devices are required for cord-connected equipment with a motor (a) has a normal voltage rating greater than 120V, (b) is rated more than 12A, or (c) 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
3.4.10	For computer room applications, equipment with battery systems capable of supplying 750VA for five minutes are required to have a battery disconnect means that may be connected to the computer room remote power-off circuit.		N/A
4.3.12	The maximum quantity of flammable liquid stored in equipment is required to comply with NFPA 30.	Evaluated in component evaluation.	N/A

IEC 60950			
Sub-Clause	Difference+ Test	Result - Remark	Verdict
4.3.13	Equipment with lasers is required to meet Code of Federal Regulations 21CFR 1040 and Canadian Radiation Emitting Devices Act, REDR C1370.	Evaluated as an element of component evaluation.	N/A
4.7.1	For computer room applications, automated information storage systems with combustible media greater than 27 cubic feet are required to have a provision for connection of either automatic sprinklers or a gaseous agent extinguishing system with an extended discharge.		N/A
4.7.3.1	For computer room applications, enclosures with combustible material measuring greater than 0.9 m ² or a single dimension greater than 1.8 m, 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.		N/A
Annex H	Equipment that produces ionising radiations is required to comply with Code of Federal Regulations, 21 CFR 1020 and Canadian Radiation Emitting Devices Act, REDR C1370		N/A
The following key national differences are based on requirements other than national regulatory requirements. The bi-national standard referenced above should be consulted for further details on the national differences summarized below.			
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, cathode ray tubes, circuit breakers, communication circuit accessories, 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, surge suppressors, switches (including interlock switches), thermal cutoffs, thermostats, transformer winding wire, tubing, wire connectors, and wire and cables.	see appended table 1.5.1	Pass
2.3.1	For TNV-2 and TNV-3 circuit with other than ringing signals and with voltages exceeding 42.4Vp or 60 Vdc, 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 30mA d.c. under normal operating conditions .	Not connected to a centralized d.c. power system	N/A

IEC 60950			
Sub-Clause	Difference+ Test	Result - Remark	Verdict

2.6.3.3	When subject to impedance testing, protective earthing and bonding is to be tested subject per the specified test conditions that originate in CSA C22.2 No.0.4		Pass
4.2.8.1	Enclosure around CRTs with a face area of 160mm or more are required to reduce the risk of injury due to implosion of the CRT.	No CRT.	N/A
4.3.2	Equipment with handles is required to comply with special loading tests		N/A
5.1.8.1.1	Equipment intended to receive telecommunication ringing signals is required to comply with a special touch current measurement tests.	No TNV circuit.	N/A
6.2.1	Enamel coating on winding wire not considered electrical separation unless subjected to special investigation.		N/A
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.		N/A
6.5	Equipment connected to a telecommunications network and supplied with an earphone intended to be held against, or in the ear is required to comply with special acoustic pressure tests.		N/A
M.2	Continuous ringing signals up to 16mA only are permitted if the Equipment is subjected to special installation and performance restrictions.		N/A
Annex NAB	Equipment connected to centralized d.c power systems is required to comply with special earthing, wiring, marking and insulation requirements in accordance with Annex NAB and 3.6.1		N/A

Group-Differences/CENELEC common Deviations IEC 60950 Third Edition			Pass
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):		Pass
(a)	a) Except as detailed in b) and c), protective devices necessary to comply with the requirements of subclause 6.3 shall be included as parts of the equipment.		Pass

IEC 60950			
Sub-Clause	Difference+ Test	Result - Remark	Verdict
(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
(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. 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'.	Considered.	Pass
3.2.3	Delete the NOTE 1, and in table 3A delete the conduit sizes in parentheses.		N/A
3.2.5	Replace "60245 IEC 530" by "HO5 RR-F", "60227 IEC 52" by "HO3 W-F or HO3 WH2-F" "60227 IEC 53" by "HOS W-F or HO5 WH2-F2". In Table 3B, replace the first four lines by the following: <div style="margin-left: 40px;">Up to and including 6 0.75¹⁾</div> <div style="margin-left: 40px;">Over 6 up to and including 10 (0.75)²⁾ 1.0</div> <div style="margin-left: 40px;">Over 10 up to and including 16 (1.0)³⁾ 1.5 In the conditions applicable to table 3B, delete the words "in some countries" in condition 1). In Note 1, delete the second sentence.</div>	Power supply cord suitable for application and subject to country's national code and regulations to be provided by the manufacturer.	N/A
3.3.4	In Table 30, delete the fourth line - conductor sizes for 10 to 13 A. and replace with the following: Over 10 up to and including 16 <div style="margin-left: 40px;">1.5 to 2.5 1.5 to 4</div> Delete the fifth line - conductor sizes for 13 to 16A.		N/A

IEC 60950			
Sub-Clause	Difference+ Test	Result - Remark	Verdict
4.3.13	<p>Replace the second compliance paragraph by:</p> <p>For equipment using LEDs or lasers, compliance is checked according to EN 60825-1.</p> <p>NOTE 1 – if equipment falling within the scope of EN 60950 is inherently a class 1 laser product, i.e. it contains no embedded laser or LD of a higher class number, then a laser warning label or other laser warning statement is not required (see 1.1 of EN 60825-1).</p> <p>Renumber the NOTE below the third compliance paragraph 2S NOTE 2.</p>		N/A
Annex H	<p>Replace the last paragraph of this annex by:</p> <p>At any point 10 cm from the surface of the OPERATOR ACCESS AREA. the dose rate shall not exceed 1μSv/h (0.1 mR/h) (see note). Account is taken of the background level.</p> <p>Replace the NOTE as follows:</p> <p>NOTE – These values appear in directive 96/29/Euratom.</p>		N/A
Annex P	<p>Replace the text of this annex by:</p> <p>See annex ZA</p>	Considered.	Pass
Annex Q	<p>Add the following notes for the standards indicated:</p> <p>IEC 60127 series</p> <p>NOTE: Harmonized as EN 60127 series (not modified)</p> <p>IEC 60529</p> <p>NOTE: Harmonized as EN 60629:1991 (not modified)</p> <p>IEC 61032</p> <p>NOTE: Harmonized as EN 61032:1998 (not modified)</p>	Considered.	Pass

ENCLOSURE No. 2

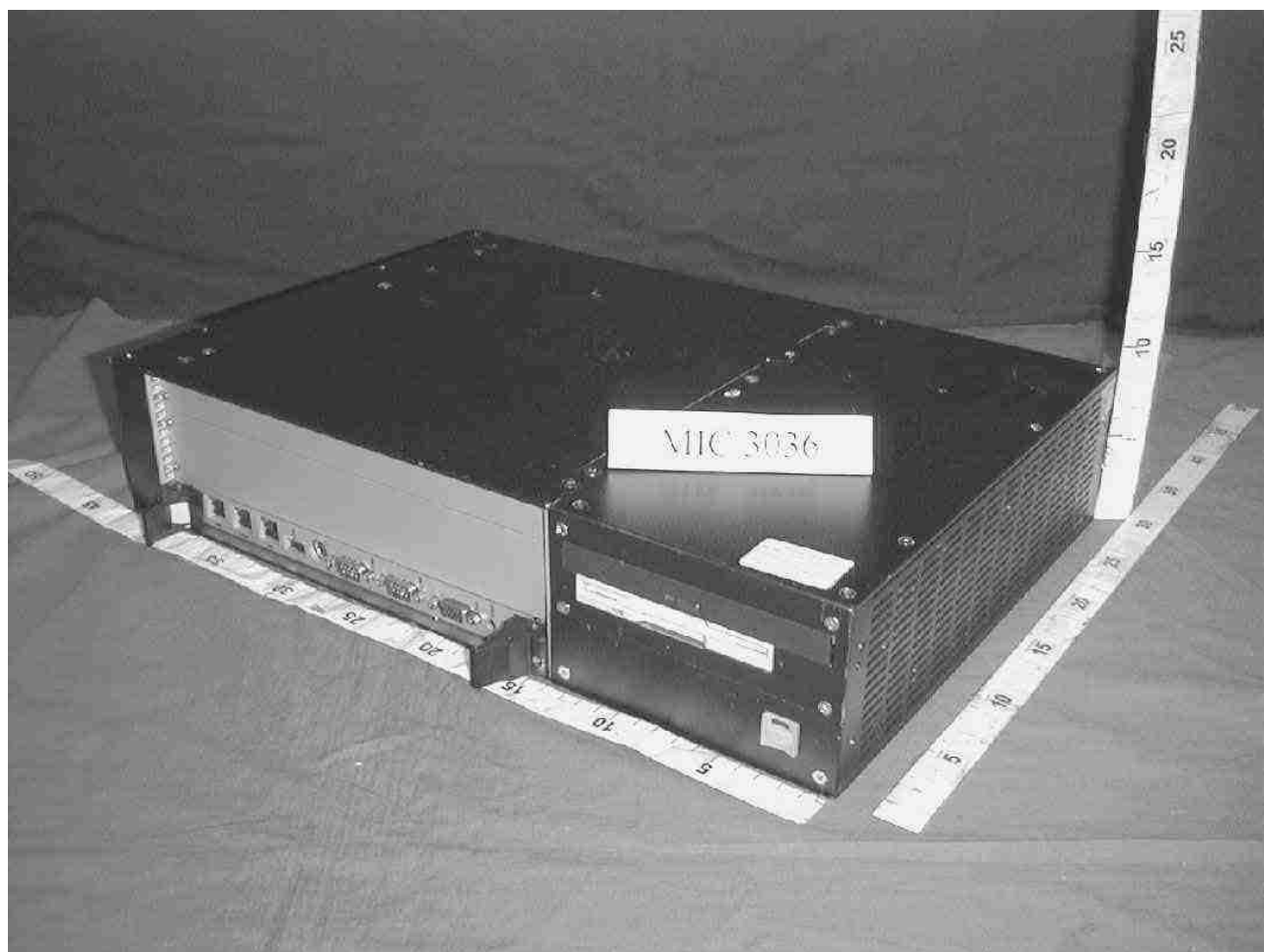
Photographs

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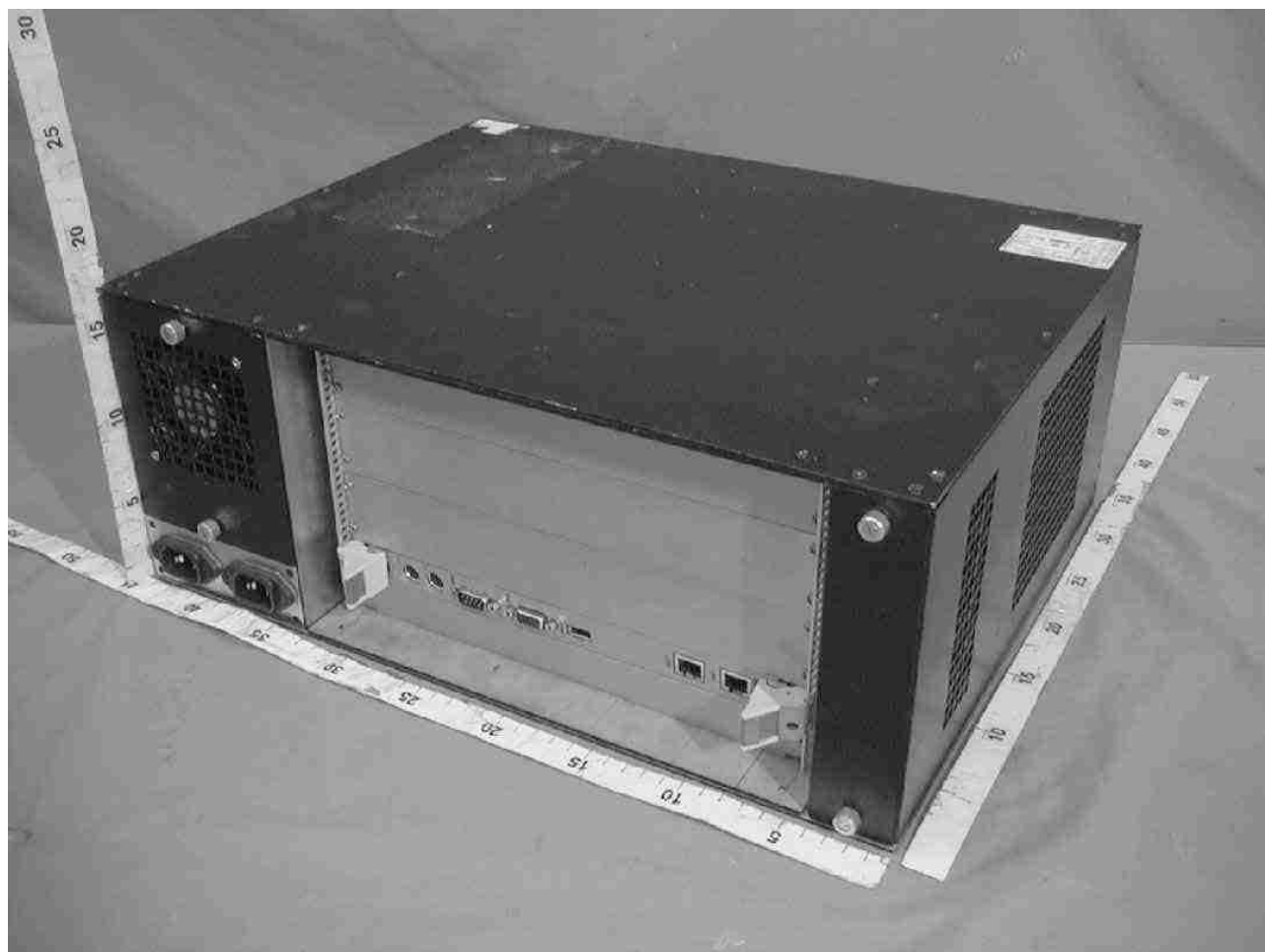
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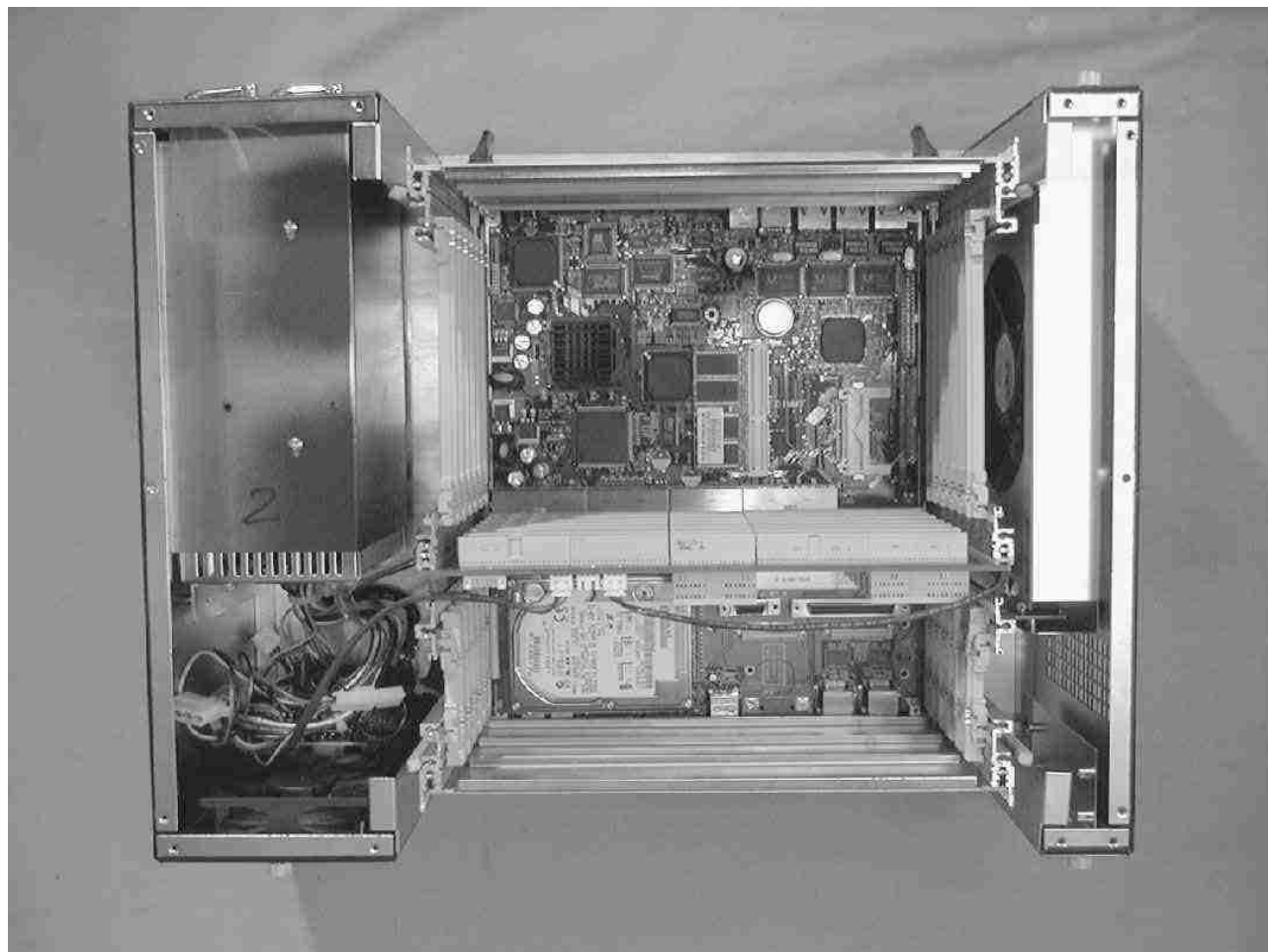
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Model MIC-3038XX



Model MIC-3038XX



Model MIC-3056XX



Model MIC-3056XX



Model MIC-3056XX

