CE *CERTIFICATE OF COMPLIANCE*

Manufacturer .....: **Advantech Co., Ltd.**

Address.....: **4F, No. 108-3, Ming Chuan Rd.**
Hsin Tien City, Taipei Hsien
Taiwan, R. O. C.

Description of EUT ...: Disk Array

Model Designation ....: RAID-500YY
(The YY in the model designation may be any alphanumeric character or blank to denote the input is DC type.)

Tested According to ..: 73/23/EEC
IEC 60 950:1991 + A1 + A2 + A3 + A4 + A11
EN 60 950:1992 + A1 + A2 + A3 + A4 + A11

This evaluation was carried out to the best of our knowledge and ability, and our responsibility is limited to the exercise of reasonable care. This certification is not intended to relieve the sellers from their contractual obligations.

Issued Date.....: May 12, 1999

Issued Agency..: **Safety Services International Inc.**
7F, No. 758, Chung-Cheng Road
Chungho City, Taipei Hsien
Taiwan, R. O. C.

Tested by .....: *Ellen Hsieh*
Ellen Hsieh / Project Engineer

Reviewed by.....: *Wilson Wang*
Wilson Wang / Engineering Manager

Approved by ....: *Peter Wang*
Peter Wang / Director

Safety Services International Inc. 新安科技有限公司 SSI TEL:(02)225-1600

LOW VOLTAGE DIRECTIVE TEST REPORT

IEC 60 950 / EN 60 950

Safety of information technology equipment including electrical business equipment

Report Reference No.	SSI9904L034	
Compiled by (+ signature)	Ellen Hsieh Project Engineer	Ellen Hsieh
Reviewed by (+ signature)	Wilson Wang Engineering Manager	Wilson Wang
Approved by (+ signature)	Peter S.T. Wang Managing Director	Peter Wang
Date of Issue	May 12 , 1999	
Testing laboratory	**Safety Services International Inc.**	
Address	7th Floor, No. 758 Chung-Cheng Road Chungho City, Taipei Hsien	
Testing location	Taiwan, Republic of China	
Applicant	**Advantech Co., Ltd.**	
Address	4F, No. 108-3, Ming Chuan Rd. Hsin Tien City, Taipei Hsien Taiwan, R. O. C.	
Standard	IEC 60 950:1991 + A1 + A2 + A3 + A4 + A11 EN 60 950:1992 + A1 + A2 + A3 + A4 + A11	
Test Report Form No.	LVD60950	
Test procedure	SSI LVD type test approval	
Procedure deviation	N/A	
Non-standard test method	N/A	
Type of test object	Disk Array	
Trademark	N/A	
Model/type reference	**RAID-500YY** (The YY in the model designation may be any alphanumeric character or blank to denote the input is DC type.)	
Manufacturer	Advantech Co., Ltd. 4F, No. 108-3, Ming Chuan Rd. Hsin Tien City, Taipei Hsien Taiwan, R. O. C.	
Rating	-48 Vdc, 17 A	

Test item particulars:

Equipment mobility	: movable
Operating condition	: continuous
Tested for IT power systems	: No
IT testing, phase-phase voltage (V)	: N.A.
Class of equipment	: Class III
Mass of equipment (kg)	: approx. 25 kg
Protection against ingress of water	: IP 20

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 remark #)" refers to a remark 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 testing laboratory.

Comments:

This test-report includes the following documents:

1. Test report - (29 pages)
2. Photos - (3 pages)
3. Test records - (2 pages)
4. Test instrument list - (3 pages)

Brief description of the test sample:

The equipment is a disk array, intended for used with PC system.

The equipment is provided with a building-in switching power supply, which is manufactured by PRT, model PRMD320-1, rated input -48 Vdc, 17 A; output +5 / -5 / +12 / -12 Vdc, 32 / 1 / 11 / 1 A.

This report does not cover the evaluation of the power supply since the input rating of the power supply is lower than 75 Vdc.

The disk array was provided with 8 HDD and link up PC system for maximum normal operation during the test.

The YY in the model designation may be any alphanumeric character or blank to denote the input is DC type.

The above model was evaluated for use in a maximum air ambient of 25°C.

The test sample is pre-production without serial number.

Clause	Requirement - Test	Result - Remark	Verdict
1	**GENERAL**		**Pass**
1.5	**Components**		**Pass**
1.5.1	Comply with IEC 60 950 or relevant component standard	Safety involved components comply with the requirements of this standard or within the safety aspects of the relevant IEC component standards (refer to appended table 1.5.1 below).	Pass
1.5.2	Evaluation and testing of components	Components which are certified to IEC and/or national standards are used correctly within their ratings. Components not covered by IEC standards are tested under the conditions present in the equipment.	Pass
	Dimensions of mains plug for direct plug-in..... :	The equipment is not direct plug-in type unit.	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 unit.	N.A.
1.5.3	Transformers	The transformer is an integral part of the power supply and not consider in this report..	N.A.
1.5.4	Flammability class of high voltage components .. :	No high voltage components used.	N.A.
1.5.5	Interconnecting cables	Interconnection cable carries only SELV voltages on an energy level below 240 VA. Except the insulation material, no further requirements to the interconnection cable is required necessary.	Pass
1.5.6	Capacitors	No primary line capacitors provided.	N.A.
1.6	**Power interface**		**Pass**
1.6.1	Steady state input current ..... :	Refer to appended table 1.6 below for input test result.	—
1.6.2	Rated voltage of hand-held equipment	This appliance is not a hand-held equipment.	N.A.
1.6.3	Neutral conductor insulated from earth	Class III equipment, no neutral conductor provided.	N.A.
1.6.4	Components connected between phase and earth in equipment intended for IT power system	Equipment is not intended for the IT power system.	N.A.
1.6.5	Rated supply tolerance..... :	-48 Vdc, 17 A	Pass

1.7	Marking and instructions		Pass
1.7.1	Rated voltage (V)..... :	Equipment is not for direct connection to the supply mains.	N.A.
	Rated frequency (Hz) ..... :	Same as above.	N.A.
	Rated current (A)..... :	Same as above.	N.A.
	Manufacturer ..... :	Advantech Co., Ltd.	Pass
	Trademark..... :	Not shown	N.A.
	Type/model..... :	RAID-500YY	Pass
	Symbol of Class II..... :	The unit is a Class III equipment.	N.A.
	Certification marks..... :	CE mark	Pass
1.7.2	Safety instructions	Operation/installation instruction is provided with each unit.	Pass
1.7.3	Short time/intermittent operation	Equipment is designed for continuous operation.	N.A.
1.7.4	Marking for voltage setting/frequency setting ..... :	No setting required.	N.A.
1.7.5	Marking at outlets ..... :	No outlet provided.	N.A.
1.7.6	Marking at fuseholders..... :	No fuse/fuseholder provided.	N.A.
1.7.7.1	Protective earthing terminals..... :	Class III equipment, no protective earthing terminal provided.	N.A.
1.7.7.2	Terminals for external primary power supply conductors ..... :	The equipment does not provided with power supply cord terminals.	N.A.
1.7.8.1	Clear indications and location of switches and controls ..... :	All controls and indicators are clearly marked and indicated.	Pass
1.7.8.2	Colours of controls and indicators..... :	Refer to 1.7.8.1 above.	Pass
1.7.8.3	Symbols according to IEC 417..... :	The IEC 417 symbols No. 5007 and 5008 (I and O) are marked on or adjacent to the power switch.	Pass
1.7.8.4	Figures used for indicating positions of controls.. :	"O" is used for off position indication.	Pass
1.7.8.5	Location of markings and indications for switches and controls ..... :	Located on or adjacent to the switch actuator.	Pass
1.7.9	Supply when more than one power supply..... :		N.A.
1.7.10	Instructions for installation to IT power system	Equipment is not intended for IT power system.	N.A.
1.7.11	Instructions when protection relies on building installation.		N.A.
1.7.12	Marking when leakage current is more than 3.5 mA	Leakage current less than 3.5 mA.	N.A.
1.7.13	Marking at thermostats	No thermostate provided .	N.A.
1.7.14	Language of safety markings/instructions	Installation instruction and equipment markings are in English.	Pass
	Language..... :	English.	—

1.7.15	Durability and legibility	The label was subjected to the permanence of marking test. After this test there was no damaging to the label, no curling/lifting at the label edge, and the marking did not fade.	Pass
1.7.16	Placing of markings		Pass
1.7.17	Warning text for replaceable lithium batteries	The lithium battery is not user replaceable.	N.A.
	Language.....:		—
1.7.18	Operator access with a tool.....:	There is no operator accessible area inside the unit.	N.A.

2	**FUNDAMENTAL DESIGN REQUIREMENTS**	**Pass**

2.1	**Protection against electric shock and energy hazards**		**Pass**
2.1.2	Protection against electric shock	The equipment is a Class III unit, there is no shock hazard inside the unit.	N.A.
2.1.3.1	Internal wiring at ELV	The equipment is a Class III unit, all internal wiring are SELV.	N.A.
2.1.3.2	Operator accessible insulation of internal wiring at hazardous voltage	No hazardous voltage wiring in operator accessible area.	N.A.
2.1.4	Unintentional contact in services access area	No bare live parts inside the unit.	Pass
2.1.5	Energy hazard		Pass
2.1.6	Clearances behind conductive enclosures	Refer to 4.2.3 below for steady force test result.	Pass
2.1.7	Knobs, handles etc.	Operating handles are not connected to any Harzard voltage and ELV circuit.	Pass
2.1.8	Insulation of conductive handles, knobs etc.	Operating handles are not manually moved in normal use.	N.A.
2.1.9	Insulation of capacitors conductive casings	Casings of capacitors are considered as if directly connected to the respective circuitry. None at hazardous voltage accessible	N.A.
2.1.10	Risk of electric shock from the pins of a plug	Class III equipment, no mains circuit plug provided.	N.A.
	Measured voltage (V).....:		—

2.2	**Insulation**.		**N.A.**
2.2.1	Method of insulation	The insulation was provided in the power supply and not considered in this report.	N.A.
2.2.2	Insulation materials	Refer to 2.2.1 above.	N.A.
2.2.3	Humidity treatment	Refer to 2.2.1 above.	N.A.

2.2.4	Electric strength	Refer to 2.2.1 above.	N.A.
2.2.5	Insulation parameters	Refer to 2.2.1 above.	N.A.
2.2.6	Categories of insulation	Refer to 2.2.1 above.	N.A.
2.2.7	Determination of working voltages	Refer to 2.2.1 above	N.A.
2.2.7.1	General rules for working voltages	Refer to 2.2.1 above	N.A.
2.2.7.2	Clearances in primary circuits	Refer to 2.2.1 above.	N.A.
2.2.7.3	Clearances in secondary circuits	Refer to 2.2.1 above.	N.A.
2.2.7.4	Creepage distances	Refer to 2.2.1 above.	N.A.
2.2.7.5	Electric strength tests	Refer to 2.2.1 above.	N.A.
2.2.8	Double or reinforced insulation bridged by components	Class III equipment, no bridged double or reinforced insulation provided.	N.A.
2.2.8.1	Bridging capacitors	Refer to 2.2.8 above.	N.A.
2.2.8.2	Bridging resistors	No bridging resistor provided.	N.A.
2.2.8.3	Accessible parts	Refer to 2.2.8 above.	N.A.

2.3	**Safety extra-low voltage (SELV) circuits**		**Pass**
2.3.1	Voltage (V) of SELV circuits under normal operating conditions and after a single fault ..... :	Class III equipment, no electrical insulation is required.	Pass
2.3.2	Voltage (V) between any two parts of SELV circuit(s), and for Class I equipment between any part of SELV circuit and protective earthing terminal ..... :	The equipment is a Class III unit.	Pass
2.3.3	Voltage (V) in accessible parts of SELV in the event of a single fault condition ..... :	The unit is a Class III equipment.	Pass
	Method used for separation ..... :		—
2.3.8	Construction of SELV circuits	The equipment is a Class III unit, no IEC83 or IEC 320 compatible connectors are used.	Pass
2.3.9	SELV circuits connected to other circuits	The equipment is a Class III unit, no primary circuit provided.	N.A.

2.4	**Limited current circuits**		**N.A.**
	Test voltage (V) ..... :		—
2.4.2	Measured current (mA) ..... :		N.A.
2.4.3	Measured capacitance (μF) ..... :		N.A.
2.4.4	Measured charge (μC) ..... :		N.A.
2.4.5	Measured energy (mJ) ..... :		N.A.

2.5	**Provisions for protective earthing**		**N.A.**
2.5.1	Reliable connection	The unit is a Class III equipment.	N.A.

2.5.2	Earthing in Class II equipment	The unit is a Class III equipment.	N.A.
2.5.3	Switches/fuses in earthing conductors	The unit is a Class III equipment, no earthing conductor provided.	N.A.
2.5.4	Assured earth connection in systems	The equipment does not comprise class I and class II equipment.	N.A.
2.5.5	Green/yellow insulation	Refer to 2.5.3 above.	N.A.
2.5.6	Continuity of earth connections	Refer to 2.5.3 above.	N.A.
2.5.7	Operator-removable parts with earth connections	Refer to 2.5.3 above.	N.A.
2.5.8	Protective earth disconnection	Refer to 2.5.3 above.	N.A.
2.5.9	Protective earthing terminals	Refer to 2.5.3 above.	N.A.
2.5.10	Risk of corrosion	Refer to 2.5.3 above.	N.A.
2.5.11	Earth connector resistance $\leq 0.1\ \Omega$	Refer to 2.5.3 above.	N.A.
	Test current (A)..... :	.	—

2.6	**Primary power isolation**		**Pass**
2.6.1	Disconnect device	The equipment is a Class III equipment, no disconnect device provided.	N.A.
2.6.2	Type of disconnect device..... :	Refer to 2.6.1 above.	N.A.
2.6.3	Disconnect device in permanently connected equipment	The equipment is accomplished with installation instruction in accordance with 1.7.2, refer to 1.7.2 above	Pass
2.6.4	Protection	Refer to 2.6.1 above.	N.A.
2.6.5	Isolating switch in a flexible cord	No isolating switch provided.	N.A.
2.6.6	Disconnection of both poles simultaneously	Refer to 2.6.1 above.	N.A.
2.6.7	Disconnection of all phases	Single phase equipment.	N.A.
2.6.8	Marking at switch	Refer to 2.6.1 above.	N.A.
2.6.9	Installation instructions	Refer to 1.7.2 above.	Pass
	Language..... :	English	—
2.6.11	Disconnection of group of units		N.A.
2.6.12	Marking at each disconnect device	Refer to 2.6.1 above.	N.A.

2.7	**Overcurrent and earth fault protection in primary circuits**		**N.A.**
2.7.1	Type of protective device ..... :	The equipment is a Class III unit, no primary circuit provided.	N.A.
2.7.2	Protection against faults not covered in 5.4		N.A.
2.7.3	Adequate breaking capacity..... :	Refer to 2.7.1 above.	N.A.
2.7.4	Number and location ..... :	Refer to 2.7.1 above.	N.A.
2.7.5	Protection by several devices	Refer to 2.7.1 above.	N.A.
2.7.6	Warning to service personnel	Refer to 2.7.1 above.	N.A.

2.8	**Safety interlocks**		**N.A.**
2.8.2	Design	No operator accessible area inside the equipment, no safety interlock is provided.	N.A.
2.8.3	Protection against inadvertent reactivation	Refer to 2.8.2 above.	N.A.
2.8.4	Reliability	Refer to 2.8.2 above.	N.A.
2.8.5	Override system	Refer to 2.8.2 above.	N.A.
2.8.6.1	Contact Gap	Refer to 2.8.2 above.	N.A.
2.8.6.2	Switch performing 50 cycles	Refer to 2.8.2 above.	N.A.
2.8.6.3	Electric strength test: test voltage (V) ..... :	Refer to 2.8.2 above.	N.A.
2.8.7	Protection against overstress	Refer to 2.8.2 above.	N.A.

2.9	**Clearances, creepage distances and distances through insulation**		**N.A.**
	Nominal voltage (V)..... :	-48 Vdc	—
2.9.2	Clearances	The equipment is a Class III unit, no clearances, creepage distances, or distances through insulation required.	N.A.
2.9.3	Creepage distances	Refer to 2.9.2 above.	N.A.
	CTI tests ..... :		—
2.9.4.1	Distances through insulation	Refer to 2.9.2 above.	N.A.
2.9.4.2	Thin sheet material	The equipment is a Class III unit, no thin sheet material provided.	N.A.
	Number of layers/pieces ..... :		—
	Electrical strength test (V) ..... :		N.A.
2.9.4.3	Printed boards	Refer to 2.9.2 above.	N.A.
	Distance (mm) through insulation ..... :		N.A.
	Electric strength test at voltage (V) for thin sheet insulating material..... :		N.A.
	Number of layers/pieces ..... :		N.A.
2.9.4.4	Wound components without interleaved insulation	Refer to 2.9.2 above.	N.A.
	Electric strength test at voltage (V) for accessible insulation of wire..... :		N.A.
	Tests for additional thin film or other insulation		N.A.
	Two wires in contact inside component; angle > 45°		N.A.
	Routine testing for finished component		N.A.
2.9.5	Distances on coated printed boards	No coated printed boards provided.	N.A.
	Routine testing for electric strength		N.A.

2.9.6	Internal creepage distances in hermetically sealed components	No hermetically sealed components.	N.A.
2.9.7	Internal distances in potted components		N.A.
2.9.8	Spacings between external terminations of components		N.A.

2.10	**Connection to other equipment**		**Pass**
2.10.1	Connection of SELV and TNV circuits.....:	Refer to 2.10.2 and 2.10.3 below.	N.A.
2.10.2	Type of interconnection circuits.....:	No ELV or TNV interconnection.	Pass
2.10.3	Connection to host equipment	No ELV or TNV interconnection.	N.A.

2.11	**Limited power source**		**N.A.**
	Use of limited power source.....:		N.A.

3	**WIRING, CONNECTIONS AND SUPPLY**	**Pass**

3.1	**General**		**Pass**
3.1.1	Cross-sectional area and protection	All internal wire gauges are suitable for the current intended to carry.	N.A.
	Protection of internal wiring and interconnecting cables	No internal primary wiring and/or interconnecting cables provided.	N.A.
3.1.2	Wireways	All wires are properly dressed away from touching sharp edges, moving parts or heatsinks.	Pass
3.1.3	Fixing of internal wiring	All Internal wires are properly secured and routed away from excessive strain or damage of conductor insulation.	Pass
3.1.4	Fixing of uninsulated conductors	All uninsulated conductors are properly secured in place.	Pass
3.1.5	Suitable insulation.....:	All internal wires are UL recognized.	Pass
3.1.6	Wires coloured green/yellow (only for protective earth connection)	No protective earthing provided.	N.A.
3.1.7	Fixing of beads and similar insulators	No beads or similar ceramic insulators provided.	N.A.
3.1.8	Required electrical contact pressure	No protective earthing provided.	N.A.
3.1.9	Reliable electrical connections		Pass
3.1.10	End of stranded conductor	No soft soldering is consolidated to stranded conductors.	Pass
3.1.11	Use of spaced thread screws	No spaced treaded or threaded-cutting screws are used.	Pass

3.2	Connection to primary power		N.A.
3.2.1	Type of connection ..... :	Class III equipment, non provided .	N.A.
	Provision for permanent connection ..... :	The unit is not connected to primary circuit.	N.A.
3.2.2	Provision for permanent connection ..... :	The unit is not connected to primary circuit.	N.A.
3.2.3	Appliance inlet	No appliance inlet provided.	N.A.
3.2.4	Type and cross-sectional area (mm²) of power supply cord ..... :	Class III equipment, no power supply cord provided.	N.A.
3.2.5	Cord anchorage	Class III equipment, no power supply cord provided.	N.A.
	Test: 25 times; 1 s; pull (N) ..... :		—
	Longitudinal displacement ≤ 2 mm ..... :		N.A.
3.2.6	Protection of power supply cord	Class III equipment, no power supply cord provided.	N.A.
3.2.7	Cord guard opening parts		N.A.
	D (mm)..... :		—
	Test: mass (g) ..... :		—
	Radius of curvature of the cord ≤ 1.5 D		N.A.
3.2.8	Supply wiring space	Class III equipment, no power supply cord provided.	N.A.

3.3	Wiring terminals for external power supply conductors		Pass
3.3.1	Terminals	The equipment is provided with field wiring terminals.	Pass
3.3.2	Special non-detachable cord		N.A.
	Type of connection ..... :	Refer to 3.2.8 above.	—
	Pull test at 5 N		N.A.
3.3.3	Screws and nuts		Pass
3.3.4	Fixing of conductors		Pass
3.3.5	Connection of connectors		Pass
3.3.6	Size of terminals	No primary wiring terminal provided.	N.A.
	Nominal thread diameter (mm) ..... :		—
3.3.7	Protection against damage of conductors	No wiring terminal provided.	N.A.
3.3.8	Terminal location	No ordinary non-detachable power supply cord provided.	N.A.
3.3.9	Test with 8 mm stranded wire	The wiring terminals provided and have been evaluated and approved by UL conductors	N.A.

4	PHYSICAL REQUIREMENTS		Pass

4.1	Stability and mechanical hazards		Pass
4.1.1	Stability tests		Pass
	Angle of 10°	This equipment does not become physical unstable when tilted to an angle of 10° under its normal use position.	Pass
	Test: force (N)..... :	The equipment is not a floor-standing unit.	N.A.
4.1.2	Protection against personal injury	There is no hazardous moving part inside the unit.	N.A.
4.1.3	Warning and means provided for stopping the moving part..... :	Refer to 4.1.2 above, warning wording or stopping means are not necessary.	N.A.
4.1.4	Edges and corners	All edges and corners of the exterior enclosure are properly rounded.	Pass
4.1.5	Enclosure of a high pressure lamp	No high pressure lamp provided.	N.A.

4.2	Mechanical strength and stress relief		Pass
4.2.2	Internal enclosures 30 N ± 3 N; 5 s	No operator accessible internal enclosure provided	N.A.
4.2.3	External enclosures 250 N ± 10 N; 5 s	250 N force is applied on external enclosure for 5 seconds.	Pass
4.2.4	Steel sphere tests		N.A.
	Fall test	Unit is provided with metal enclosure, no tests are deemed necessary.	N.A.
	Swing test	Unit is provided with metal enclosure, no tests are deemed necessary.	N.A.
4.2.5	Drop test	The unit is not a hand-held or direct plug-in equipment.	N.A.
4.2.6	Heat test for enclosures of moulded or formed thermoplastic: 7 h; T (°C) ..... :	Metallic enclosure, not applicable.	N.A.
4.2.7	Compliance	Metallic enclosure, not applicable.	Pass
4.2.8	Mechanical strength of cathode ray tubes	Equipment does not provided with cathode ray tube.	N.A.

4.3	Construction details		Pass
4.3.1	Changing of setting for different power supply voltages	No setting required.	N.A.
4.3.2	Adjustment of accessible control devices	No accessible control device provided.	N.A.
4.3.4	Prevention of dangerous concentration of dust, liquid and gas	The equipment does not produce dust or employing powders, liquids or gases.	N.A.
4.3.5	Fixing of knobs, grips, handles, levers		Pass

	Test: force (N)..... :	The handles, knobs, grips, levers and the like will not result in hazard if work loose in normal use.	—
4.3.6	Driving belts/couplings shall not ensure electrical insulation	No driving belt provided.	N.A.
4.3.7	Retaining of sleeves	No sleeving provided.	N.A.
4.3.9	Protection of loosening parts	Wire, screw, nut, washer, spring or similar part can be expected to withstand the mechanical stress, and not likely to become loose or fall out of position. Furthermore, solder pins, cable ties and used for protection.	Pass
4.3.11	Resistance to oil and grease	No oil, grease or similar substances provided inside the unit.	N.A.
4.3.12	Protection against harmful concentration of ionizing radiation, ultraviolet light, laser or flammable gases	No ionizing radiation or ultraviolet light or laser can be generated.	N.A.
4.3.13	Securing of screwed connections	No screwed connection provided.	N.A.
4.3.15	Openings in the top of enclosure	No openings provided on top of enclosure.	N.A.
	Dimensions..... :		—
4.3.16	Openings in the sides of enclosure	No openings provided on sides of enclosure.	N.A.
	Dimensions..... :		—
4.3.17	Interchangeable plugs and sockets	No plugs or socket provided within the unit.	N.A.
4.3.18	Torque test of equipment with built-on plug		N.A.
	Additional torque (Nm) ..... :	The equipment is not a direct plug-in unit.	N.A.
4.3.19	Protection against excessive pressure	Equipment does not contain liquid in normal use.	N.A.
4.3.20	Protection of heating elements in Class I equipment	Equipment does not contain heating element.	N.A.
4.3.21	Protection of lithium batteries		Pass
	Construction of protection circuit..... :	The lithium battery did not cause a fire hazard, explosion, or chemical hazard. The reverse polarity is not likely to occur due to the battery is polarized.	Pass
4.3.22	Ageing of barrier/screen secured with adhesive		N.A.
	Day 1: temperature (°C); time (weeks) ..... :		N.A.
	Day 8 / 22 / 57: a) temperature (°C) for 1 h b) temperature (°C) for 4 h c) temperature (°C) over 8 h ..... :		N.A.

	Day 9 / 23 / 58: a) relative humidity (%) for 72 h b) temperature (°C) for 1 h c) temperature (°C) for 4 h d) temperature (°C) over 8 h .....:		N.A.

4.4	**Resistance to fire**		**Pass**
4.4.2	Minimizing the risk of ignition	Class III equipment with external limited power source power supply, no risk of ignition, no fire enclosure required.	Pass
4.4.3.2	Flammability of materials and components	Metal enclosure, no flammability rating required..	N.A.
4.4.3.4	Wiring harnessed	All wiring are UL Recognized with PVC insulation, and rated VW-1.	Pass
4.4.3.5	Cord anchorage bushings	No cord anchorage bushing provided.	N.A.
4.4.3.6	Air filter assemblies	No air filter assembly provided.	N.A.
4.4.4	Flammability of outer enclosures and decorative parts	Refer to 4.4.3.2 above.	N.A.
4.4.5.1	Components which require fire enclosure	Refer to 4.4.3.2 above.	N.A.
4.4.6	Fire enclosure construction	Refer to 4.4.3.2 above.	N.A.
4.4.7	Doors and covers	Refer to 4.4.3.2 above.	N.A.
4.4.8	Protection against spreading of flammable liquids	No flammable liquids is used in equipment.	N.A.

5	**THERMAL AND ELECTRICAL REQUIREMENTS**	**Pass**

5.1	**Heating**		**Pass**
	Heating tests	Refer to appended table 5.1 below for heating test result.	Pass

5.2	**Earth leakage current**		**N.A.**
5.2.2	Leakage current	Class III equipment, no leakage current test is considered necessary.	N.A.
	Test voltage (V) .....:		—
	Measured current (mA) .....:		—
	Max. allowed current (mA) .....:		—
5.2.4	Three-phase equipment	Class III equipment, no leakage current test is considered necessary.	N.A.
	Test voltage (V) .....:		—
	Measured current (mA) .....:		—
	Max. allowed current (mA) .....:		—

5.2.5	Equipment with earth leakage current exceeding 3.5 mA	Measured earth leakage current less than 3.5 mA.	N.A.
	Test voltage (V) ..... :		—
	Measured current (mA) ..... :		—
	Max. allowed current (mA) ..... :		—
	Cross-sectional area (mm^2) of internal protective earthing conductor..... :		—
	Warning label		N.A.

5.3	**Electric strength**		**N.A.**
	Electric strength test	Class III equipment, no electric strength test is considered necessary.	N.A.

5.4	**Abnormal operating and fault conditions**		**Pass**
5.4.2	Motors	No motor provided.	N.A.
5.4.3	Transformers	The transformer is an integral part of the power supply and not consider in this report..	N.A.
5.4.4	Compliance of operational insulation		N.A.
	Method used..... :	The insulation was provided in the power supply and not consider in this report..	N.A.
5.4.5	Electromechanical components in secondary circuits	No electromechanical components provided in secondary circuits.	N.A.
5.4.6	Other components and circuits	Refer to appended table 5.4 below for fault condition test result.	Pass
5.4.7	Test in any expected condition and foreseeable misuse	The equipment is so designed that no foreseeable misuse is likely to happen.	Pass
5.4.8	Unattended use of equipment having thermostats, temperature limiters etc.	The equipment is not intended for unattended use.	N.A.
5.4.9	Compliance		N.A.
5.4.10	Ball pressure test of thermoplastics		N.A.

6	**CONNECTION TO TELECOMMUNICATION NETWORKS**	**N.A.**

6.2	**TNV circuits and protection against electric shock**		**N.A.**
6.2.1.1	Limits of the TNV circuits		N.A.
6.2.1.1 a	continuous voltages		N.A.
6.2.1.1 b	telephone ringing signals		N.A.
6.2.1.1 c	telegraph or teletypewriter signals		N.A.

6.2.1.2	Insulation between TNV circuits and unearthed operator-accessible conductive parts ..... :		N.A.
	Insulation between TNV circuits and unearthed SELV circuits ..... :		N.A.
	Voltages on accessible parts in the event of a single insulation fault or component failure..... :		N.A.
6.2.1.3	TNV circuit connected to an SELV circuit that has one pole connected to earth..... :		N.A.
6.2.1.4	TNV circuit separated from circuits at hazardous voltages		N.A.
	Method used..... :		N.A.
6.2.1.5	Connection of TNV circuits to other circuits		N.A.
6.2.1.5	TNV circuit supplied conductively from a secondary circuit..... :		N.A.
6.2.2.1	Protection against contact with TNV circuits		N.A.
6.2.2.2	Battery compartment		N.A.

6.3	**Protection of telecommunication network service personnel, and other users of the telecommunication network, from hazards in the equipment**		**N.A.**
6.3.1	Protection from hazardous voltages		N.A.
6.3.2	Use of protective earthing		N.A.
	Language of installation instructions..... :		N.A.
6.3.3	Particular requirements for pluggable equipment type A		N.A.
	Insulation between TNV circuit and circuitry that may be earthed..... :		N.A.

6.4	**Protection of the equipment user from voltages on the telecommunication network**		**N.A.**
6.4.2.1	Impulse test: separation between telecommunication network conductors and:		N.A.
6.4.2.1 a	unearthed conductive parts/non-conductive parts of the equipment which are held or touched during normal use; test at 2.5 kV		N.A.
6.4.2.1 b	parts and circuitry that can be touched by the test finger; test at 1.5 kV		N.A.
6.4.2.1 c	circuitry which is provided for connection of other equipment; test at 1.5 kV		N.A.
6.4.2.2	Electric strength test: separation between telecommunication network conductors and:		N.A.
6.4.2.2 a	unearthed conductive parts/non-conductive parts of the equipment which are held or touched during normal use; test at 1.5 kV		N.A.
6.4.2.2 b	parts and circuitry that can be touched by the test finger; test at 1.0 kV		N.A.
6.4.2.2 c	circuitry which is provided for connection of other equipment; test at 1.0 kV		N.A.

6.4.2.3	Compliance criteria		N.A.

A	**ANNEX A, TESTS FOR RESISTANCE TO HEAT AND FIRE** Equipment is provided with metal enclosure.		**N.A.**
A.1	Flammability test for fire enclosures of moveable equipment having a total mass exceeding 18 kg, and of stationary equipment		N.A.
A.2	Flammability test for fire enclosures of moveable equipment having a total mass not exceeding 18 kg, and for materials located within fire enclosures		N.A.
A	Preconditioning: 7 days (168 h); temperature (°C)..... :		—
	Mounting of samples during test..... :		—
	Wall thickness ..... :		—
	Sample 1 burning time ..... :		N.A.
	Sample 2 burning time ..... :		N.A.
	Sample 3 burning time ..... :		N.A.
	Material: compliance with the requirements		N.A.
	Information about the tested material:		N.A.
	Manufacturer ..... :		—
	Type..... :		—
	Additional information..... :		—

B	**ANNEX B, MOTOR TESTS UNDER ABNORMAL CONDITIONS**		**N.A.**
	Position ..... :		—
	Manufacturer ..... :		—
	Type..... :		—
	Rated voltage (V) or current (A)..... :		—
B.2	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 motor in secondary circuits		N.A.
B.7.2	Test time (h) ..... :		N.A.
B.7.3	Test time (h) ..... :		N.A.
B.8	Test for motors with capacitor		N.A.
B.9	Test for three-phase motors		N.A.

B.10	Test for series motors		N.A.

C	**ANNEX C, TRANSFORMERS**		**N.A.**
	Position ..... :		—
	Manufacturer ..... :		—
	Type ..... :		—
	Rated values ..... :		—
	Temperatures		Pass
C.1	Overload test		N.A.
	Conventional transformer		N.A.
	Safety isolating transformer		N.A.
	Ferro-resonant transformer		N.A.
	Type of thermal cut-out ..... :		—
C.2	Safety isolating transformers		N.A.
	Precautions ..... :		N.A.
	Retaining of end turns of all windings		N.A.
	Earthing test at 25 A		N.A.
C.3	Electric strength test		N.A.

H	**ANNEX H, IONIZING RADIATION**		**N.A.**
	Ionizing radiation		N.A.
	Measured radiation ..... :		—
	Measured high-voltage ..... :		—
	Measured focus voltage ..... :		—
	CRT markings ..... :		—
	Approved by ..... :		—
	Publication used ..... :		—

U	**ANNEX U, INSULATED WINDING WIRES FOR USE AS MULTIPLE LAYER INSULATION**		**N.A.**
U.1	Wire construction		N.A.
	Number of spirally wrapped layers of polyimide tape ..... :		—
U.2	Conformance tests		N.A.
	Temperature (°C); humidity (%) ..... :		—
U.2.1	Electric strength		N.A.
	Test voltage (V) ..... :		—

U.2.2	Adherence and flexibility		N.A.
	Electric strength test: test voltage (V); temperature (°C)..... :		—
U.2.3	Heat shock		N.A.
	Electric strength test: test voltage (V) ..... :		—
U.2.4	Retention of electric strength after bending..... :		—
	Electric strength test: test voltage (V) ..... :		—
U.2.5	Resistance to abrasion		N.A.
U.3	Production line test		N.A.
	Routine testing for electric strength: test voltage (V) ..... :		—

1.5.1	TABLE: list of critical components			Pass
object/part No.	manufacturer/trade mark	type/model	technical data	mark(s) of conformity[1])
Power Supply	PRT	PRMD320-1	i/p: -48 Vdc, 17 A o/p: +5 Vdc/32 A, -5 Vdc/1 A +12 Vdc/11 A, -12 Vdc/1 A	--
Fan (for system)	Adda	AD0912HB-3A73GL	12 Vdc, 0.25 A	UL
Fan (for each HDD)	Sunon	KD1204PFB2-8	12 Vdc, 0.6 W	UL
Battery (RTC)	DALLAS	DS1225Y-150	--	UL
Hard Disk Drive	Seagete	ST3 or ST5 Series	5Vdc/0.5A, 12Vdc/0.5A	TÜV
* Additional testing and evaluation may be required based on auditing agency's discretion.				

1.6	TABLE: electrical data (in normal conditions)					Pass
fuse #	I_{rated} (A)	U (V)	P (W)	I (A)	I_{fuse} (A)	condition/status
--	17	-48 Vdc	82.56	1.72	--	Maximum normal load.
Comments:						

2.9	TABLE: clearance and creepage distance measurements					N.A.
clearance cl and creepage distance dcr at/of:	Up (V)	U r.m.s. (V)	required cl (mm)	cl (mm)	required dcr (mm)	dcr (mm)

Note: Creepage distances and clearances between primary and secondary are all in approved switching power supply.

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

5.1	TABLE: temperature rise measurements		Pass
	test voltage (V)..... :	-48 Vdc -48 Vdc (locked fan)	—
	t1 (°C)..... :		—
	t2 (°C)..... :		—

temperature rise dT of part/at:	dT (°K)	required dT (°K)
Ambient	27.5/27.4	--
NF1 coil (Power supply)	2.3/2.9	80
T1 coil (Power supply)	1.8/1.9	65
L4 coil (Power supply)	6.8/7.2	80
U8 body	4.8/11.1	80
Heatsink of U11	11.0/16.4	80
U10 body	10.0/12.5	80
U4 body	10.4/11.9	80
Top of C11	2.0/3.6	60
U1 body	4.5/7.1	80
HDD body	1.5/2.8	--
Outside enclosure	0.1/0.8	45

temperature rise dT of winding:	R1 (Ω)	R2 (Ω)	dT (°K)	required dT (°K)	insulation class

Comments:

5.3	TABLE: electric strength measurements		N.A.
test voltage applied between:		test voltage (V)	breakdown

5.4	TABLE: fault condition tests							Pass
	ambient temperature (°C)..... :					27.4		—
	model/type of power supply..... :							—
	manufacturer of power supply..... :							—
	rated markings of power supply..... :							—
No.	component No.	fault	test voltage (V)	test time	fuse No.	fuse current (A)	result	
--	Fan	locked	-48 Vdc	2 hr.	--	1.7	Refer to temperature rise measurements. No damage, no hazard.	
supplementary information								
oc: open circuited sc: short circuited								

5.4.10	TABLE: ball pressure test of thermoplastics		N.A.
	required impression diameter (mm)..... :	≤ 2 mm	—
part:		test temperature (°C)	impression diameter (mm)

	SPECIAL NATIONAL CONDITIONS AND NATIONAL DEVIATIONS **S = Special National Condition** **D = National Deviation** **C = CENELEC Common Modification** **F = other informationAT=Austria, GB=Great Britain, CH=Switzerland, DE=Germany, DK=Denmark, FI=Finland, FR=France, NO=Norway, SE=Sweden.**		**Pass**
1.1.3	D (CH): this standard applies to all equipment designed and intended to be connected to a telecommunication network terminal	Not intended to be connected to a telecommunication network terminal.	N.A.
1.2.4.1	S (DK): certain types of Class I appliances (see 3.2.1) may be provided with a plug not establishing earthing continuity when inserted into Danish socket-outlets	Not applied for.	N.A.
1.5.1	F: mains plugs used in different countries		Pass
	D (SE): add the following: NOTE: Switches containing mercury such as thermostats, relays and level controllers are not allowed	No switch contains mercury provided.	Pass
1.7	F: certification mark used on certified product		N.A.
	F (SE, DE): the following text shall be added to a separate power supply unit:		N.A.
	(SE) "Endast för kontorsmaskin"	The equipment is not a separate power supply unit.	N.A.
	(DE) "For IEC 60 950 only"	Equipment is not a separate power supply unit.	N.A.
1.7.1	S (GB): marking shall refer to 240 V or 415 V, these being the voltages of the public supply system	240 V is not considered applicable on this equipment.	N.A.
1.7.2	C: delete note 4	deleted.	Pass
	S (NO): add the following to Note 4: If separation between the mains and a communication system/network, other than public telecommunication networks, relies upon connection to safety earth, the equipment shall have a marking stating that it must be connected to an earthed mains socket-outlet. NOTE: For requirements for equipment to be connected to a public telecommunication network see 6.2.1.4. Text is:		N.A.
	"Apparatet må kun tilkoples jordet stikkontakt" or	Not intended to be connected to a communication system/network.	N.A.
	"Jordet stikkontakt skal benyttes når apparatet tilkoples datanett"	Same as above.	N.A.

	S (SE): if the separation between the mains and a SELV terminal relies upon connection to the safety earth, the apparatus shall have a marking stating that it must be connected to an earthed mains socket-outlet when a SELV circuit is connected to a network passing both unearthed and earthed electrical environment. The marking text shall be in Swedish and as follows: "Apparaten skall anslutas till jordat uttag när den ansluts till ett nätverk."	The separation between the mains and a SELV terminal is not relies upon connection to the safety earth.	N.A.
	D (DK): supply cords of Class I appliances, which are delivered without a plug must be provided with a visible tag with the following text: "Vigtigt! Lederen med grϕn/gul isolation mä kun tilsluttes en klemme mærket [earth symbol] eller [earth symbol in circle]." If essential for the safety of the appliance, 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 ϕvrige ledere, se medfϕ lgende installationsvejledning."	The equipment is not a Class I appliance.	N.A.
	D (GB): power supply cords of Class I equipment must be provided with a label with the following text in legible characters: IMPORTANT The cores in this mains lead are coloured in accordance with the following code: - green and yellow: earth - blue: neutral - brown: live	The equipment is not a Class I appliance.	N.A.
1.7.5	S (DK): socket-outlets for providing power to other appliances shall be in accordance with the Heavy Current Regulations, Section 107-2-DI, Standard Sheet DK 1-3a, DK 1-5a or DK 1-7a, when used on appliances of Class I	The equipment is not a Class I appliance.	N.A.
	D (DK): Class II appliances shall not be fitted with socket-outlets for providing power to other appliances I	The equipment is not a Class II appliance.	N.A.
1.7.11	C: replace "2.7.2" by "2.7"	Replaced.	Pass
1.7.14	D (DE): directions for use with rules to prevent certain hazards for (among others) maintenance of the technical labour equipment, also for imported technical labour equipment shall be written in the German language. NOTE: Of this requirement, rules for use even only by service personnel are not exempted	The equipment is not a technical labour equipment.	N.A.

1.7.17	D (CH): annex 4.10 of SR 814.013 (Ordinance on environmentally hazardous substances) applies for batteries	Not applied for.	N.A.
	F: warning texts for lithium batteries	No lithium battery provided.	N.A.
	Languages.....		—
1.7.18	D (SE): equipment provided with built-in batteries, not replaceable by the user, shall be marked with the recycling symbol if the batteries have a content of mercury or cadmium exceeding 0.025% by weight.		Pass
2.3.3	C: delete method 4 and the line in note 1 relating to this method	Method 4 is not used.	Pass
2.3.6	C: delete the note	Deleted.	Pass
	S (DK, FR): method 3 is not acceptable	Method 3 is not used.	Pass
2.3.7	C: replace the text of this subclause by: Void	Replaced.	Pass
2.3.9	S (NO): marking and insulation requirements according to this annex, 1.7.2 and 6.2.1.4 b) apply	Not applied for.	N.A.
2.5.2	C: delete the note	Deleted.	Pass
	S (DK): replace the first sentence by the following: Class II equipment shall have no provision for protective earthing, except that permanently connected equipment may be provided with a means for maintaining the continuity of protective earthing circuits to other equipment in a system, if the earth connection is separated from parts at hazardous voltages by double or reinforced insulation	Replaced. The equipment is not a Class II unit.	N.A.

2.7.1	C: replace the text of this subclause by: Basic requirements: To protect against excess current, short-circuits and earth faults in primary circuits, protective devices shall be included either as integral parts of the equipment or as a part the building installation, subject to all of the following, a), b) and c): a) Except as detailed in b), protective devices necessary to comply with the requirements of 5.4 shall be included as integral parts of the equipment. b) For components in series with the mains input to the equipment such as the supply cord, appliance coupler, RFI filter and switch, short circuit and earth fault protection may be provided by protective devices in the installation. c) If reliance is placed on protection in the building installation, the installation instructions shall comply with 1.7.11 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 and 1.7.11 does not apply.	Replaced. Replace requirements are considered, refer to 2.7.1 above.	Pass
2.7.2	C: replace the text of this subclause by: Void	Replaced.	Pass
2.8.4	C: delete the note	Deleted.	Pass
2.9.1	S (NO): due to the IT power systems used, mains supply voltage is considered to be equal to phase-phase voltage	The equipment is not considered for use with IT power system.	N.A.
2.11	C: delete notes 1, 2 and 3	Deleted.	Pass
	D (NO): Table 8 - Limits of inherently limited power sources In Norway, the maximum value of VA for values of Uoc exceeding 10 V is 50. Table 9 - Limits for power sources not inherently limited (overcurrent protective device required) In Norway, the maximum value of VA is 50	The power supply is not a limited power source.	N.A.
	D (DK, FI): a limited power source shall incorporate an isolating transformer and shall comply with the following: - the open circuit voltage shall not exceed 42.4 V peak or d.c. and shall not generate voltages above that value; - the current which may be drawn for more than two minutes at any load, including short-circuits, shall not exceed 0.2 A	The power supply is not a limited power source.	N.A.

3.2.1	S (DK): supply cords of single phase appliances having a rated current not exceeding 10 A shall be provided with a plug according to [EN 60 950:92, page 8, 1st table]. If poly-phase appliances and single-phase appliances having a rated current exceeding 10 A are provided with a supply cord with a plug, this plug shall be in accordance with [EN 60 950:92, page 8, 2nd table]	The equipment does not provided with power supply cord.	N.A.
3.2.2	C: delete the note and in table 10, delete the values in parentheses	Deleted.	Pass
3.2.4	C: replace "245 IEC 53" by "H05 RR-F", "227 IEC 52" by "H03 VV-F or H03 VVH2-F" and "227 IEC 53" by "H05 VV-F or H05 VVH2-F". In Table 11, replace the first four lines by the following: Up to and including 6; 0.75 1) Over 6; up to and including 10; 1.0 Over 10; up to and including 16; 1.5 In the conditions applicable to table 11, delete the words "in some countries" in condition 1 and delete conditions 2 and 3. Delete the note	The equipment does not provided with socket-outlet.	N.A.
	S (GB): a power supply cord with conductor of 1.25 mm² is allowed for equipment with rated current over 10 A and up to and including 13 A.	The equipment does not provided with socket-outlet.	N.A.
3.3.5	C: in table 13, replace the fourth and the fifth lines by: Over 10; up to and including 16; 1.5 to 2.5; 1.5 to 4	Replaced. The rated current of equipment is less than 10 A.	N.A.
	S (GB): the range of conductor sizes of flexible cords to be accepted by terminals for equipment with a rated current of over 10 A and up to and including 13 A is: - 1.24 mm² to 1.5 mm² nominal cross-sectional area	The rated current of equipment is less than 10 A.	N.A.
5.1	S (NO): to prevent fire risk, temperature rise limits for wooden support shall be taken into account. The temperature rise limit is 65 K for equipment in general and 60 K for equipment for continuous operation	The equipment does not provided with socket-outlet.	N.A.
5.4.9	D (NO): the electric strength test after the tests of 5.4.4, 5.4.5, 5.4.6, 5.4.7 and 5.4.8 includes testing of basic insulation in Class I equipment	The electric strength test is not considered necessary.	N.A.

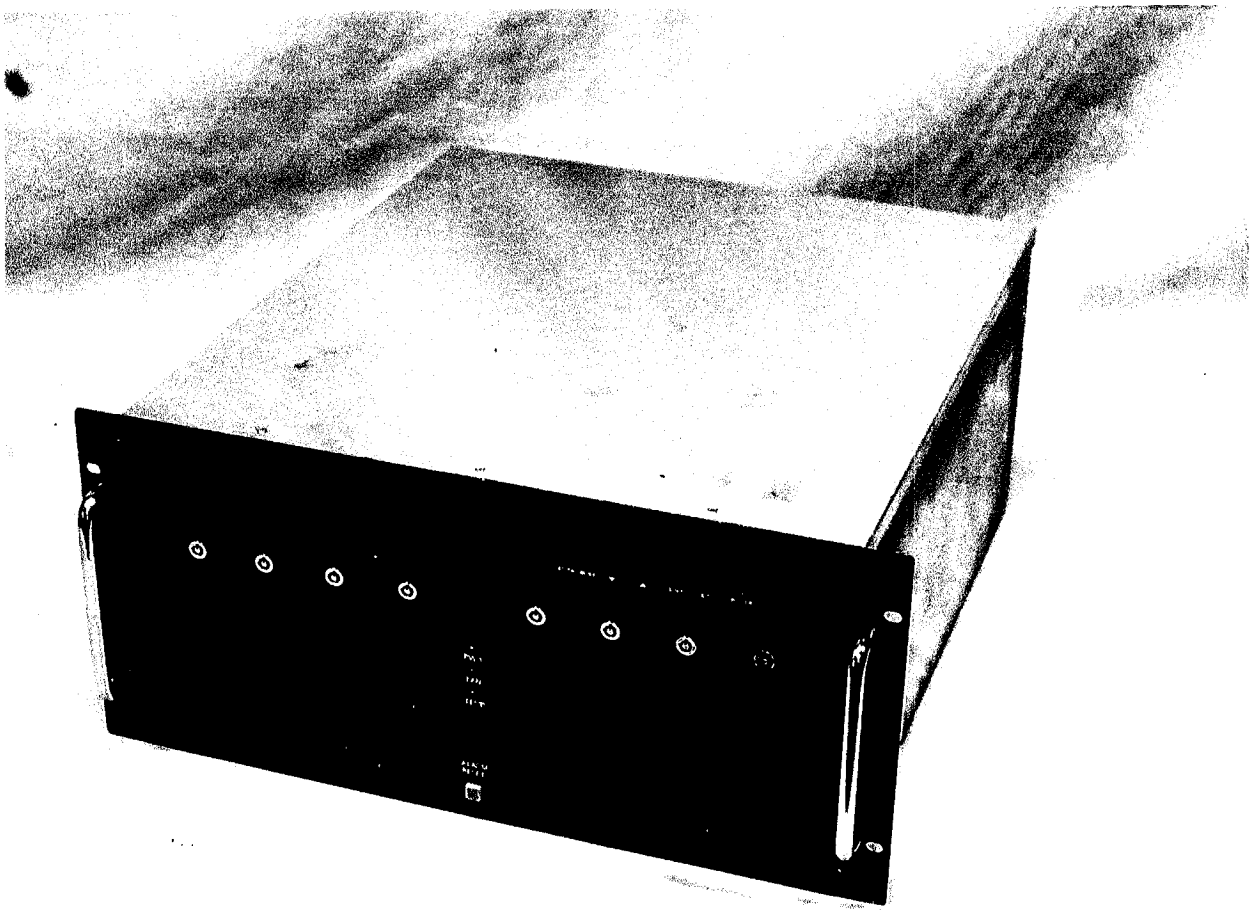
6.1	S (CH): protective means in the equipment shall not prevent transient surge protection in the telecommunication network from operating properly (d.c. spark-over voltage of the surge suppressor installed in the telecommunication network: approx. 245 V)		N.A.
6.2.1.1	C: add at the end of the subclause: In the event of a single insulation fault or component failure TNV circuits shall not exceed the limits of figure 15		N.A.
6.2.1.2 and 6.2.1.3	C: add at the end of each subclause: This subclause only applies to TNV circuits normally operating in excess of the limits of SELV circuits		N.A.
6.2.1.4	C: delete the notes		N.A.
6.2.1.4 b	S (FI): this method is only permitted for permanently connected equipment or for pluggable equipment type B		N.A.
	S (NO): insulation between parts conductively connected to the supply mains and parts connected to a public telecommunication network shall comply with the requirements for double or reinforced insulation		N.A.
6.3.3	C: in the second paragraph, replace "for functional reasons" by "to enable the equipment to function"		N.A.
6.4.1	C: delete note 2		N.A.
	S (FI): for pluggable equipment it is forbidden to use surge suppressors between telecommunication network and conductive metallic parts which are permitted to be accessible		N.A.
6.4.2.1	C: delete note 2		N.A.
	D (AT): equipment shall comply with Uc = 2.0 kV in cases b) and c)		N.A.

Annex H	D (DE): a) A licence is required by those who operate an X-ray emission source. b) A licence 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 μSv/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. c) A licence in accordance with clause 1 is also not required by persons who operate ann X-ray emission source on which the electron acceleration voltage exceeds 20 kV if 1) the X-ray emission source has been granted a type approval and 2) it is adequately indicated on the X-ray emission source that i) X-rays are generated ii) the device stipulated by the manufacturer or importer guarantees that the maximum permissible local dose rate in accordance with the type approval is not exceeded and iii) the electron acceleration voltage must not exceed the maximum value stipulated by the manufacturer or importer. d) Furthermore, a licence in accordance with clause 1 is also not required by persons who operate X-ray emission sources on which the electron acceleration voltage does not exceed 30 kV if 1) the X-rays are generated only by intrinsically safe CRTs complying with Enclosure III, No. 6, 2) the values stipulated in accordance with Enclosure III, No. 6.2 are limited by technical measures and specified in the device and 3) it is adequately indicated on the X-ray emission source that the X-rays generated are adequately screened by the intrinsically safe CRT.	This unit does not employ a CRT.	N.A.

Annex Q	C: Add for IEC 529: NOTE: Endorsed by EN 60 529:1991 (not modified) Add for IEC 707: NOTE: Endorsed by HD 441:1983 (not modified) Add for IEC 1058-1: NOTE: Endorsed by EN 61 058-1:1992 (not modified)	Wordings added.	N.A.
	F (NO): compliance with the standard for radio interference suppression is necessary for achieving type approvals. The appliance shall comply with EN 55 022 Class B limits or EN 55 014 depending on the appliance	The equipment comply with EN 55 022 class B limits.	Pass

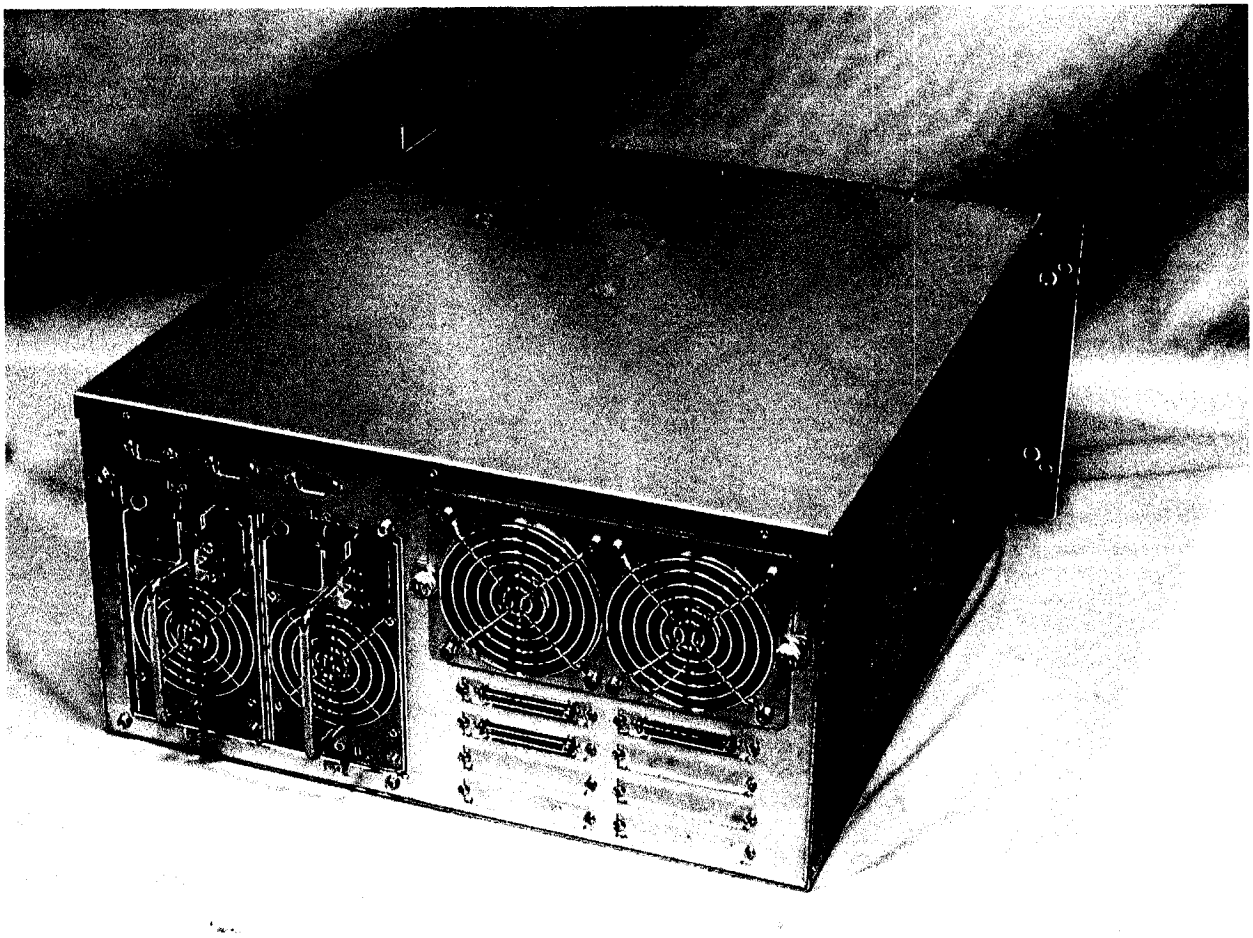
Appendix - Photo

1. Front View Model: RAID-500YY



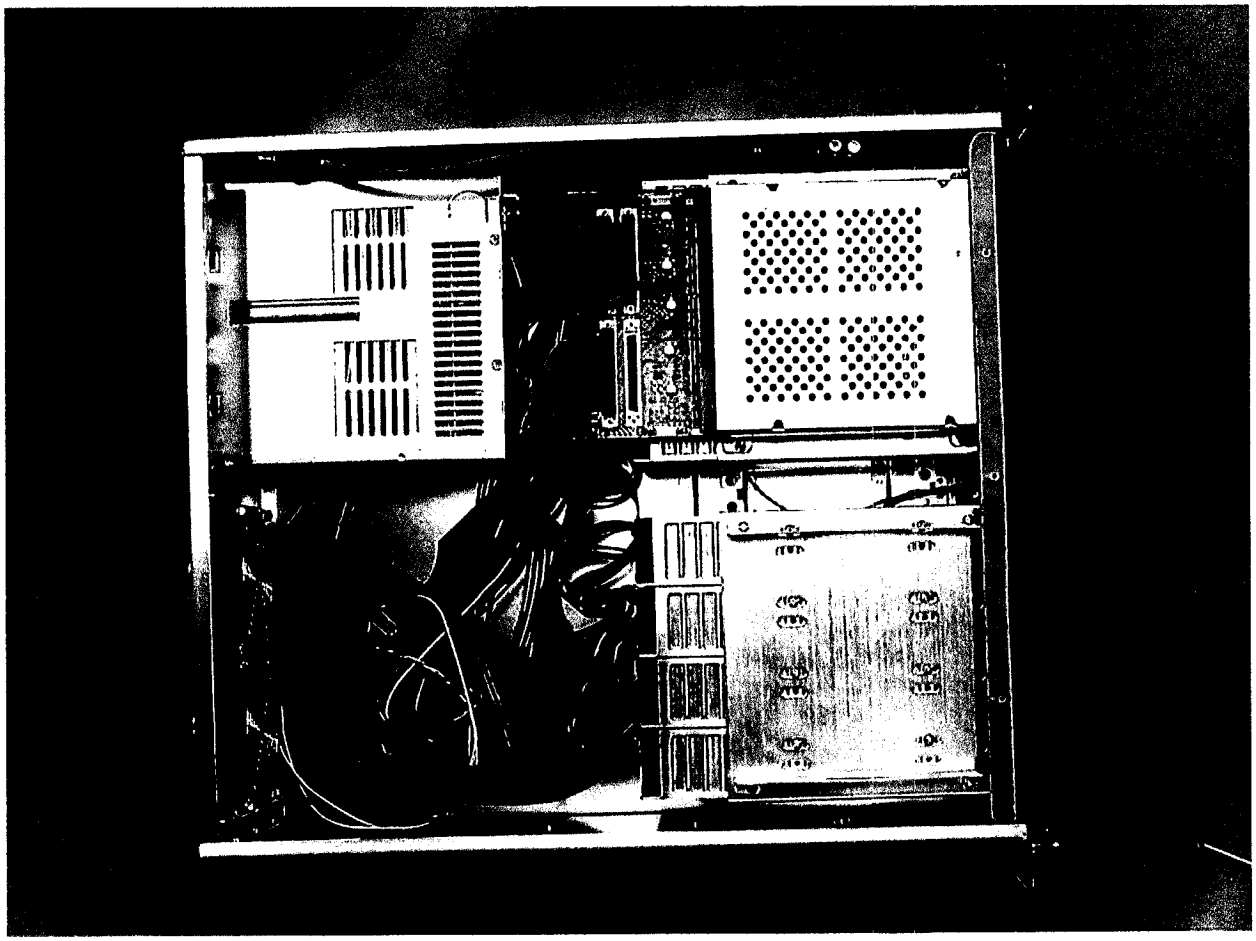
Appendix - Photo

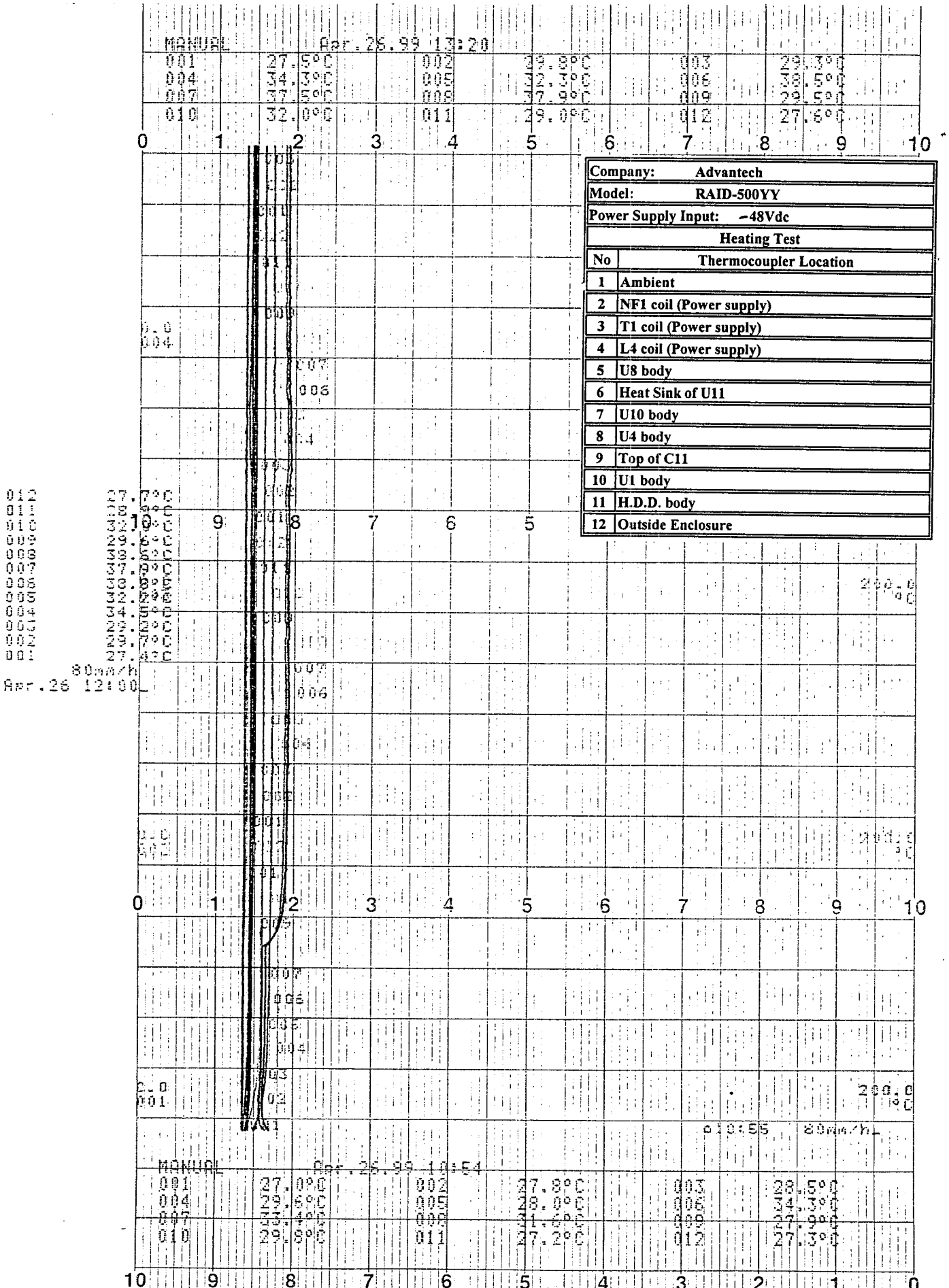
2. Rear View Model: RAID-500YY



Appendix - Photo

3. Inside View Model: RAID-500YY

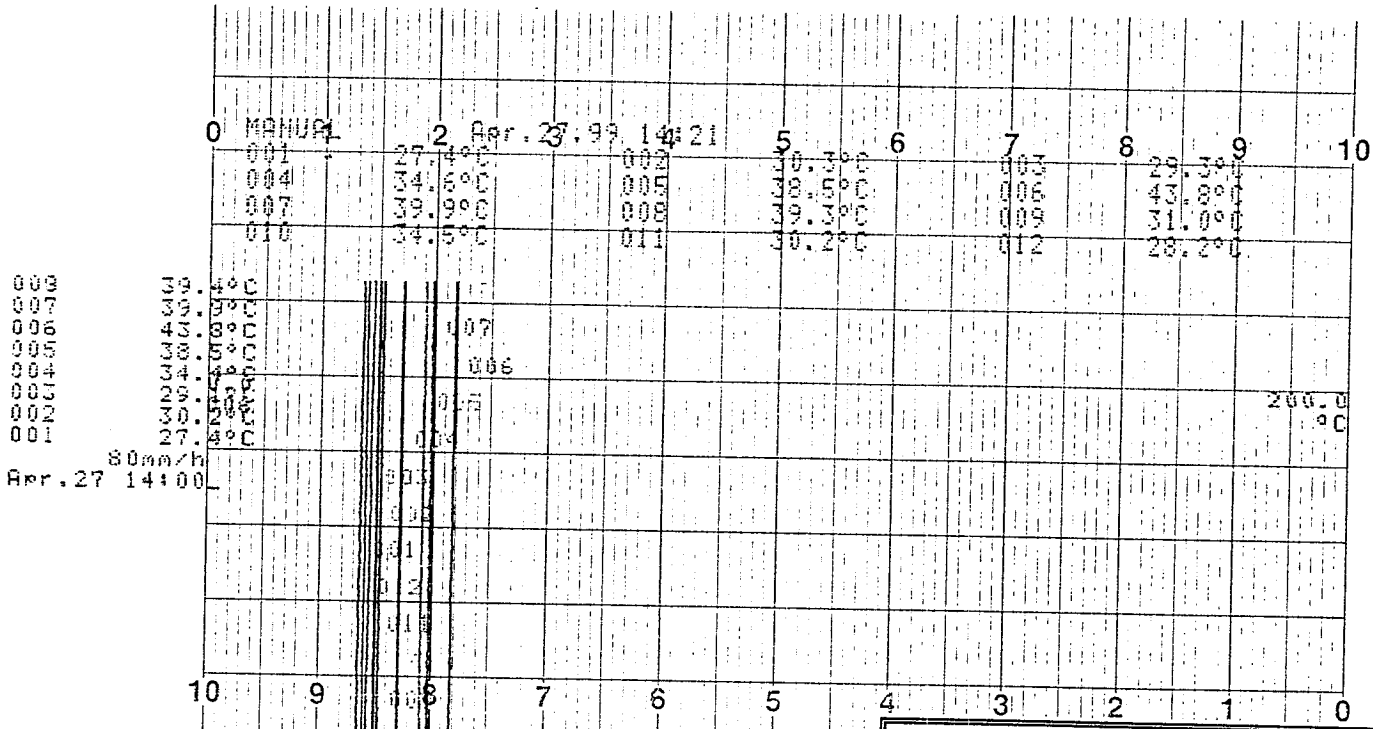


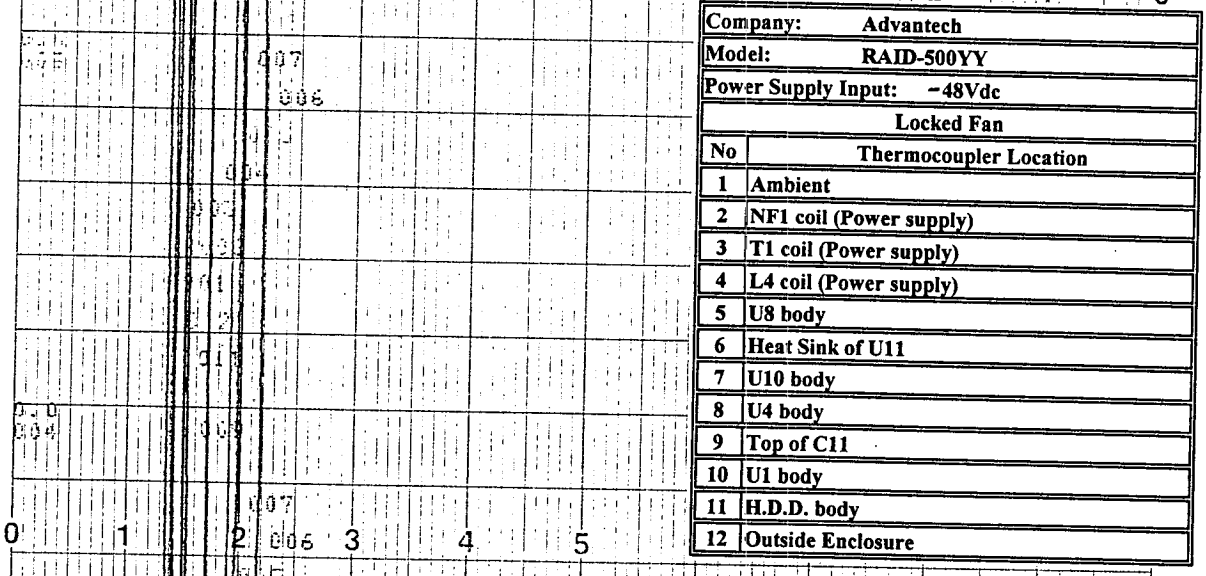


Company:	Advantech
Model:	RAID-500YY
Power Supply Input:	-48Vdc

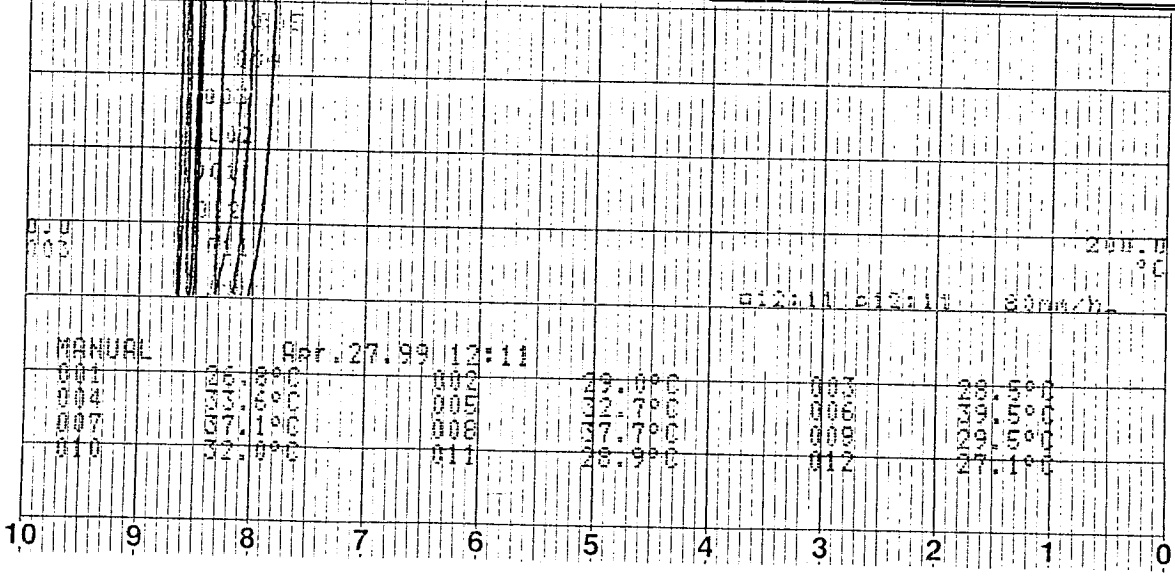
Heating Test

No	Thermocoupler Location
1	Ambient
2	NF1 coil (Power supply)
3	T1 coil (Power supply)
4	L4 coil (Power supply)
5	U8 body
6	Heat Sink of U11
7	U10 body
8	U4 body
9	Top of C11
10	U1 body
11	H.D.D. body
12	Outside Enclosure





Company:	Advantech
Model:	RAID-500YY
Power Supply Input:	-48Vdc
	Locked Fan
No	Thermocoupler Location
1	Ambient
2	NF1 coil (Power supply)
3	T1 coil (Power supply)
4	L4 coil (Power supply)
5	U8 body
6	Heat Sink of U11
7	U10 body
8	U4 body
9	Top of C11
10	U1 body
11	H.D.D. body
12	Outside Enclosure



4. Test Instrument List

Appendix - Instrument List

The product was evaluated/tested with the SSI laboratory test equipments listed below:

ID Code	Equipment Name	Specification	Manufacturer	Model No.	Serial No.	Last Cal. Date	Cal. Due Date
A1	Caliper	8 inch / 20 cm	Mitutoyo	CD-8	7112523	19980626	19990625
A4	Impact Test Ball		ED&D	ITB-01	n/a	19990420	20010419
A5	Ball Pressure Apparatus		ED&D	BPT-01	n/a	19990420	20010419
A6	Test Pin Probe		ED&D	TPP-01	n/a	19990420	20010419
A8	Micrometer	0-25 mm			367306	19980818	19990817
A9	Stop Watch				86102411-2	19981202	19991201
A10	Caliper	8 inch / 20 cm	METR.	ISO-G	n/a	19980908	19990907
A11	Stop Watch				86102411-1	19981024	19991023
B1	DC Power Supply	3A/50V	MRL	TH-009	n/a	n/a	n/a
B2	DC Power Supply	3A/300V	Good Will	GPR-25H30	3041198	n/a	n/a
B3	DC Power Supply	60 KVdc, 5mA	Spellman	RMP60PN300	C13764-009	n/a	n/a
B4	DC Power Supply	3A/50V	MRL	TH-009	n/a	n/a	n/a
C1	Dielectric Tester	5000 V ac/dc	Good Will	GPT-515AD	3060994	19980626	19990625
C2	Dielectric Tester	5000 V ac/dc	Extech	7021	831957	19980722	19990721
C4	Dielectric Tester	5000 V ac/dc	Good Will	GPT-515AD	9080678	19990128	20000127
D1	Digital Multi-Meter	Portable	Appa	96	00116852	19980702	19990701
D2	Digital Multi-Meter	Portable	Appa	96	00219262	19980702	19990701
D3	Digital Multi-Meter	Portable	Appa	101	06500926	19980722	19990721
D4	Digital Multi-Meter	4.5digit	Fluke	8842A	5665271	19980626	19990625
D5	Digital Multi-Meter	Portable	Yokogawa	7537	92AF0066	19980626	19990625
D6	Digital Multi-Meter	Portable	Appa	97	6191488	19981104	19991103
D7	Digital Multi-Meter	Portable	Appa	97	71906249	19981202	19991201
D8	Digital Multi-Meter	portable	Appa	97	71906252	19981104	19991103
D9	Digital Multi-Meter	portable	Appa	97	71906256	19981202	19991201

ID Code	Equipment Name	Specification	Manufacturer	Model No.	Serial No.	Last Cal. Date	Cal. Due Date
E1	Electronic Load	150 Wx1	Kikusui	PLZ150W	28072705	19990111	20000110
E2	Electronic Load	150 Wx1	Kikusui	PLZ150W	28022519	19980626	19990625
E4	Electronic Load	4 channels	Prodigit	MPAL-700	87248	19980626	19990625
E5	Electronic Load	4 channels	Prodigit	MPAL-3311	88354	19980722	19990721
E6	Electronic Load	4 channels	Prodigit	MPAL-3322	91272	19980722	19990721
E7	Electronic Load	4 channels	Prodigit	MPAL-600	87135	19990112	20000111
E8	Electronic Load	4 channels	Prodigit	3301A	70601A026	19980917	19990916
E9	Electronic Load	4 channels	Prodigit	3301A	70601A019	19980917	19990916
E10	Electronic Load	1 channels	Prodigit	3302	710020281	19980917	19990916
E11	Electronic Load	1 channels	Prodigit	3302	710020282	19981202	19991201
E12	Electronic Load	4 channels	Prodigit	3301A	70601A021	19980908	19990907
E13	Electronic Load	4 channels	Prodigit	3301A	71001A030	19981214	19991213
F1	Frequency Converter	500 VA	AC Power	AMP-105W	862014	n/a	n/a
F2	Frequency Converter	500 VA	AC Power	AMP-105W	862032	19980702	19990701
F3	Frequency Converter	500 VA	Extech	CFW-105	821537	n/a	n/a
F4	Frequency Converter	3000 VA	Extech	CFW-130	821676	19990119	20000118
F5	Frequency Converter	1000 VA	Extech	CFW-110	E000054	19990420	20000419
F6	Frequency Converter	1000 VA	Extech	CFW-110	850585	19990420	20000419
F7	Frequency Converter	5000 VA	Extech	CFW-150	E990653	19980918	19990917
F8	Frequency Converter	1000 VA	Extech	CFW-110	E000242	19980908	19990907
F9	Frequency Converter	1000 VA	Extech	CFW-110	E000243	19981202	19991201
F10	Frequency Converter	1000 VA	Extech	CFW-110	E000244	19981202	19991201
G1	Grounding Tester	30 A	Good Will	GCT-630	2110593	19980710	19990709
G3	Grounding Tester	30 A	Extech	5030T	5030DT	19981202	19991201
H1	Humidity Chamber		Kson	THS-C3L-100	612	19980818	19990817
H2	Oven		Shiny	S0-B1-S	P965005	19980818	19990817
H3	Thermo Hygrograph		Isuzu	3-3122	71260637	19990205	20000204
H4	Thermo Hygrograph		Isuzu	3-3122	71260640	19990205	20000204
I1	HV Probe	1000:1, 40 kV	YEW	7511	93AC0104	n/a	n/a
J1	Leakage Current Meter		Yokogawa	3226	67NJ0259	19980626	19990625
J2	Leakage Current Meter		Yokogawa	3226	63NJ0213	19980603	19990602
J3	Leakage Current Meter		Simpson	228	20751	n/a	19990912

ID Code	Equipment Name	Specification	Manufacturer	Model No.	Serial No.	Last Cal. Date	Cal. Due Date
K1	Oscilloscope	portable	Fluke	93	DM5540290	19980702	19990701
K2	Oscilloscope	storage	Kenwood	CS-5170	4100089	19980702	19990701
K3	Oscilloscope	storage	Topward	9040	943105	19980626	19990625
K4	Oscilloscope Probe	100:1	Stack	CP-241	n/a	n/a	N/a
K5	Oscilloscope Probe	10:1	Philips	PM-8918	n/a	n/a	N/a
K6	Oscilloscope Probe		Tekfronix	THS730A	B012179	19981202	19991201
M1	Power (V-A-W) Meter		Topward	1301	948874	19980626	19990625
M2	Power (V-A-W) Meter		Topward	1301	967186	19990226	20000225
M3	Power (V-A-W) Meter		Protronix	1201	903253	19990111	20000110
M4	Power (V-A-W) Meter		IDRC	CP-210A	226374	19980304	19990802
N1	Push-Pull Scale	0-50 KG	Imada	FB	411126	19990226	20000225
O1	Radiation Meter		Victoreen	440RF/D	230	19980909	19990908
P1	Signal Generator	10 Hz-1 MHz	TRIO	AG-203	1110019	N/a	N/a
P2	Signal Generator	10 Hz-1 MHz	Good Well	GAG-809	7650938	N/a	N/a
Q1	Temperature Recorder	2 channels	Yokogawa	2455	72JV0027	19980626	19990625
Q2	Temperature Recorder	20 channels	Yokogawa	HR1300	43VH0429	19980626	19990625
Q3	Temperature Recorder	20 channels	Yokogawa	HR1300	43VH0430	19980710	19990709
Q4	Temperature Recorder	30 channels	Yokogawa	388056	49VA0747	19980710	19990709
Q5	Temperature Recorder	20 channels	Yokogawa	DR130	47JE0094	19980513	19990512
Q6	Temperature Recorder	20 channels	Yokogawa	DR130	47JE0184	19980513	19990512
Q7	Temperature Recorder	6 channels	Yokogawa	μR1000	47XE0757	19980926	19990925
Q8	Temperature Recorder	6 channels	Yokogawa	μR1000	47XE0756	19980926	19990925
Q9	Temperature Recorder	20 channels	Yokogawa	DR130	47JE0451	19981202	19991201
Q10	Temperature Recorder	30 channels	Yokogawa	DR230	47JA0286	19981104	19991103
Q11	Temperature Recorder	6 channels	Yokogawa	μR1000	47XE0755	19981127	19991126
Q12	Temperature Recorder	6 channels	Yokogawa	μR1000	47XE0758	19980908	19990907
Q13	Temperature Recorder	20 channels	Yokogawa	DR130	47JE0447	19980908	19990907
Q14	Temperature Recorder	20 channels	Yokogawa	DR130	47JE0449	19981127	19991126
Q15	Temperature Recorder	20 channels	Yokogawa	DR130	7700GE845	n/a	19990818
Q16	Temperature Recorder	20 channels	Yokogawa	DR130	7700GE847	n/a	19990818
R1	Isulation Resistance Meter		Zentech	702A	804586	19981124	19991123