

## COVER PAGE FOR TEST REPORT

<b>Test Item Description</b>	: 1) 2-Bay Network Storage 2) Network Video Recorder
<b>Model/Type Reference</b>	: 1) DNS-320XXXX (X= any alphanumeric character or blank) 2) DNS-322L,DNS-326
<b>Rating(s)</b>	: 12Vdc, 3A
<b>Standards</b>	: <input checked="" type="checkbox"/> IEC 60950-1:2005 (2nd Edition) <input checked="" type="checkbox"/> EN 60950-1:2006 + A11 :2009
<b>Applicant Name and Address</b>	: D-Link Corporation No.289, Sinhu 3rd Rd., Neihu District, Taipei City 114, Taiwan
<b>Factory Location(s)</b>	: 1) Alpha Networks(Dongguan) Co.,Ltd Xin An District, Chang An Town, DongGuan City, GuangDong Province, China  2) ALPHA NETWORKS INC. No. 8, Li-hsin 7th Rd, Science-based Industrial Park, Hsinchu 300, Taiwan
<p>This Report includes the following parts, in addition to this cover page:</p> <ol style="list-style-type: none"> <li>1. Specific Technical Criteria</li> <li>2. Clause Verdicts</li> <li>3. Critical Components</li> <li>4. Test Results</li> <li>5. Enclosures</li> </ol>	
<p>This is to certify that representative samples of the products covered by this Test Report have been investigated by "Netmag Technology Corporation " in accordance with the above referenced Standards. The products have been found to comply with the requirements. This report shall not be reproduced, except in full, or with the written approval of "Netmag Technology Corporation"</p>	

**Issued by**

**Netmag Technology Corporation**

**Electrical Testing Laboratory**

No.8 Li-shing 7<sup>th</sup> Rd., Science-based industrial Park,

Hsinchu, Taiwan, R.O.C.

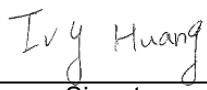
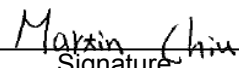

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## TEST REPORT

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

<b>Report Reference No</b> .....	RSA1111CE03A (Project No: EMD2011110018)	
<b>Testing Laboratory</b> .....	Netmag Technology Corporation	
<b>Address</b> .....	No.8 Li-shing 7 <sup>th</sup> Rd., Science-based industrial Park, Hsinchu, Taiwan, R.O.C.	
<b>Tested by</b> .....	Ivy Hung _____ Print	 _____ Signature
<b>Reviewed by</b> .....	Martin Chiu _____ Print	 _____ Signature
<b>Approved by</b> .....	Gemmy Liu _____ Print	 _____ Signature
<b>Applicant's name</b> .....	D-Link Corporation	
<b>Address</b> .....	No.289, Sinhu 3rd Rd., Neihu District, Taipei City 114, Taiwan	
<b>Manufacturer's name</b> .....	D-Link Corporation	
<b>Address</b> .....	No.289, Sinhu 3rd Rd., Neihu District, Taipei City 114, Taiwan	
<b>Test specification:</b>		
<b>Standard</b> .....	<input checked="" type="checkbox"/> IEC 60950-1:2005 (2nd Edition) <input checked="" type="checkbox"/> EN 60950-1:2006+ A11 :2009	
<b>Test procedure</b> .....	CE marking service	
<b>Non-standard test method</b> .....	N/A	
<b>Test Report Form No</b> .....	IECEN60950_1C	
<b>Test Report Form(s) Originator</b> .....	SGS Fimko Ltd	
<b>Master TRF</b> .....	Dated 2007-01	
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<b>Test item description</b> .....	1) 2-Bay Network Storage 2) Network Video Recorder	
<b>Trade Mark</b> .....	<b>D-Link</b> <sup>®</sup>	
<b>Manufacturer</b> .....	D-Link Corporation	
<b>Model/Type reference</b> .....	1) DNS-320XXXX (X= any alphanumeric character or blank) 2) DNS-322L, DNS-326	
<b>Ratings</b> .....	12Vdc, 3A	

**Summary of testing:**

**Tests performed (name of test and test clause):**

The maximum ambient temperature is specified as 40 °C.

"Maximum normal load" was defined as follows:

The unit connects with computer via cable transfer data continuously.

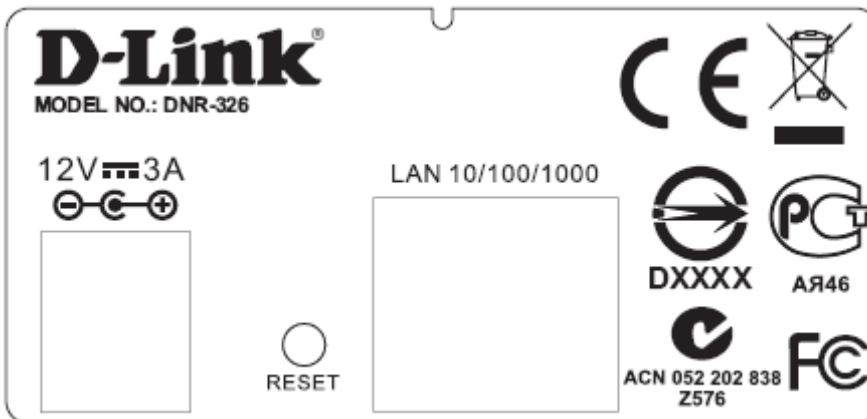
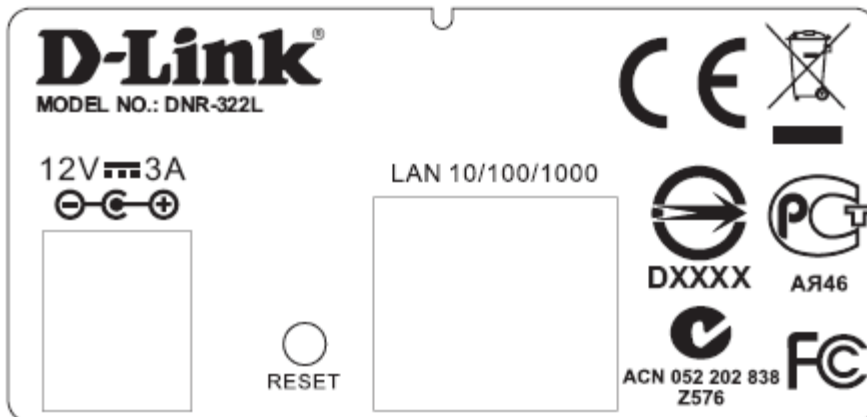
The following tests were conducted:

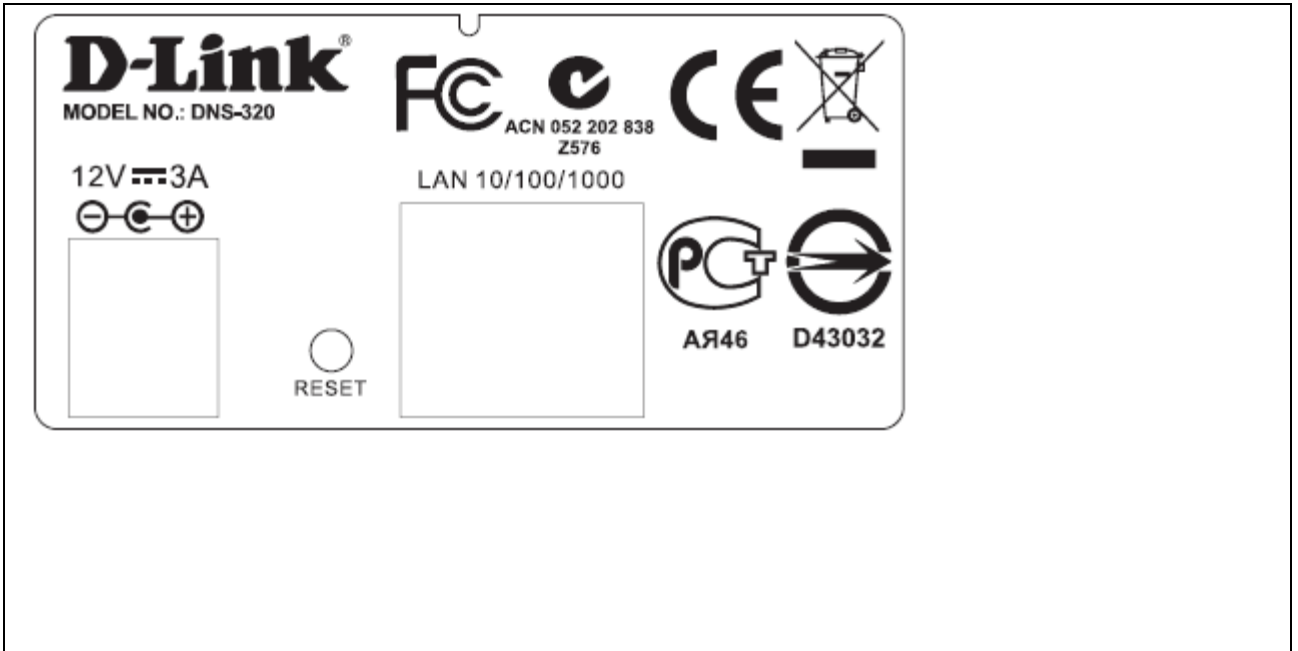
- Input: Single-Phase (1.6.2)
- Heating (4.5.1, 1.4.12, 1.4.13)
- Abnormal Operation (5.3.1 - 5.3.9)

**Testing location:**

Unless otherwise indicated, all tests were conducted at Netmag Technology Corporation / SCIENCEBASED INDUSTRIAL PARK, 8 LI-SHING 7TH RD, HSINCHU 300, TAIWAN.

**Copy of marking plate:**





<b>Test item particulars</b> .....	
Equipment mobility .....	<input checked="" type="checkbox"/> movable <input type="checkbox"/> hand-held <input type="checkbox"/> transportable <input type="checkbox"/> stationary <input type="checkbox"/> for building-in <input type="checkbox"/> direct plug-in
Connection to the mains .....	<input type="checkbox"/> pluggable equipment <input type="checkbox"/> permanent connection <input type="checkbox"/> detachable power supply cord <input type="checkbox"/> non-detachable power supply cord <input checked="" type="checkbox"/> not directly connected to the mains
Operating condition .....	<input checked="" type="checkbox"/> continuous <input type="checkbox"/> rated operating / resting time:
Over voltage category (OVC) .....	<input type="checkbox"/> OVC I <input type="checkbox"/> OVC II <input type="checkbox"/> OVC III <input type="checkbox"/> OVC IV <input checked="" type="checkbox"/> others
Mains supply tolerance (%) .....	N/A
Tested for IT power systems .....	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
IT testing, phase-phase voltage (V) .....	N/A
Class of equipment .....	<input type="checkbox"/> Class I <input type="checkbox"/> Class II <input checked="" type="checkbox"/> Class III <input type="checkbox"/> Not classified
Pollution degree (PD) .....	<input type="checkbox"/> PD 1 <input checked="" type="checkbox"/> PD 2 <input type="checkbox"/> PD 3
IP protection class .....	IPX0
Altitude during operation (m) .....	≤ 2000 m
Mass of equipment (kg) .....	0.9
<b>Possible test case verdicts:</b>	
- test case does not apply to the test object .....	N/A
- test object does meet the requirement .....	P (Pass)
- test object does not meet the requirement .....	F (Fail)
<b>Testing</b> .....	
Date of receipt of test item .....	Dec, 2011
Date(s) of performance of tests .....	Dec, 2011
<b>General remarks:</b>	
<p>The test results presented in this report relate only to the object tested.  This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory.  "(See Enclosure #)" refers to additional information appended to the report.  "(See appended table)" refers to a table appended to the report.</p> <p><b>Note: This TRF includes EN Group Differences together with National Differences and Special National Conditions, if any. All Differences are located in the Appendix to the main body of this TRF.</b>  Throughout this report a point is used as the decimal separator.</p>	
<b>General product information:</b>	
DNS-320 is class III equipment for Network Storage.	
Model differences:	
<p>The model DNS-326 is similar DNS-320 except for front panel, product description and model designation.  The model DNS-326 is similar DNS-322L except for product description and model designation.</p>	

**Other comments:**

Factory(ies):

- 1) Alpha Networks(Dongguan) Co.,Ltd.  
Xin An District, Chang An Town, DongGuan City, GuangDong Province, China.
- 2) ALPHA NETWORKS INC.  
No. 8, Li-hsin 7th Rd, Science-based Industrial Park, Hsinchu 300, Taiwan.

Definition of variable(s):

Variable:	Range of variable:	Content:
DNS-320XXXX	X	X= any alphanumeric character or blank. The variable word "X" just for marketing purpose.
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Attachments to this Test Report:

- Photo Documentation : Page 42 – 51.
- Appendix Diagrams : Page 52 – 54.

IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
1	GENERAL		
1.5	Components		P
1.5.1	General		P
	Comply with IEC 60950 or relevant component standard	(see appended table 1.5.1)	P
1.5.2	Evaluation and testing of components	<p>- Certified components are used in accordance with their ratings, certifications and they comply with applicable parts of this Standard.</p> <p>- Components not certified are used in accordance with their ratings and they comply with applicable parts of IEC 60950-1 and the relevant component Standard.</p> <p>- Components, for which no relevant IEC Standard exist, have been tested under the conditions occurring in the equipment, using applicable parts of IEC 60950-1.</p>	P
1.5.3	Thermal controls		N/A
1.5.4	Transformers		N/A
1.5.5	Interconnecting cables	INTERCONNECTING CABLES used complied with the relevant requirements of standards.	P
1.5.6	Capacitors bridging insulation		N/A
1.5.7	Resistors bridging insulation		N/A
1.5.7.1	Resistors bridging functional, basic or supplementary insulation		N/A
1.5.7.2	Resistors bridging double or reinforced insulation between a.c. mains and other circuits		N/A
1.5.7.3	Resistors bridging double or reinforced insulation between a.c. mains and antenna or coaxial cable		N/A
1.5.7.4	Accessible parts		N/A
1.5.8	Components in equipment for IT power systems		N/A
1.5.9	Surge suppressors		N/A
1.5.9.1	General		N/A
1.5.9.2	Protection of VDRs		N/A

IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
1.5.9.3	Bridging of functional insulation by a VDR		N/A
1.5.9.4	Bridging of basic insulation by a VDR		N/A
1.5.9.5	Bridging of supplementary, double or reinforced insulation by a VDR		N/A

1.6	Power interface		P
1.6.1	AC power distribution systems	This Unit did not provided with a means for direct connection to the AC MAINS SUPPLY.	N/A
1.6.2	Input current	(see appended table 1.6.2)	P
1.6.3	Voltage limit of hand-held equipment		N/A
1.6.4	Neutral conductor		N/A

1.7	Marking and instructions		P
1.7.1	Power rating	See below.	P
	Rated voltage(s) or voltage range(s) (V) .....	12 Vdc	P
	Symbol for nature of supply, for d.c. only .....		P
	Rated frequency or rated frequency range (Hz) .....	--	N/A
	Rated current (mA or A) .....	3A	P
	Manufacturer's name or trade-mark or identification mark .....	D-Link Corporation or <b>D-Link®</b>	P
	Model identification or type reference .....	1) DNS-320XXXX (X= any alphanumeric character or blank) 2) DNS-322L,DNS-326	P
	Symbol for Class II equipment only .....		N/A
	Other markings and symbols .....	Additional markings are used and are defined in the installation instructions.	P
1.7.2	Safety instructions and marking	Operating/safety instructions made available to the USER.	P
1.7.2.1	General		P
1.7.2.2	Disconnect devices		N/A
1.7.2.3	Overcurrent protective device		N/A
1.7.2.4	IT power distribution systems		N/A
1.7.2.5	Operator access with a tool		N/A
1.7.2.6	Ozone		N/A
1.7.3	Short duty cycles		N/A
1.7.4	Supply voltage adjustment .....		N/A



IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
	Methods and means of adjustment; reference to installation instructions .....		N/A
1.7.5	Power outlets on the equipment .....		N/A
1.7.6	Fuse identification (marking, special fusing characteristics, cross-reference) .....		N/A
1.7.7	Wiring terminals		N/A
1.7.7.1	Protective earthing and bonding terminals .....		N/A
1.7.7.2	Terminals for a.c. mains supply conductors		N/A
1.7.7.3	Terminals for d.c. mains supply conductors		N/A
1.7.8	Controls and indicators		P
1.7.8.1	Identification, location and marking .....		P
1.7.8.2	Colours .....	Only functional indicators use color.	P
1.7.8.3	Symbols according to IEC 60417 .....		N/A
1.7.8.4	Markings using figures .....		N/A
1.7.9	Isolation of multiple power sources .....		N/A
1.7.10	Thermostats and other regulating devices .....		N/A
1.7.11	Durability	All required markings meet requirements of this standard.	P
1.7.12	Removable parts		N/A
1.7.13	Replaceable batteries .....		N/A
	Language(s) .....		—
1.7.14	Equipment for restricted access locations .....		N/A

2	PROTECTION FROM HAZARDS		P
2.1	Protection from electric shock and energy hazards		P
2.1.1	Protection in operator access areas	Unit supplied by SELV and LPS.	P
2.1.1.1	Access to energized parts	Ditto.	P
	Test by inspection .....		N/A
	Test with test finger (Figure 2A) .....		N/A
	Test with test pin (Figure 2B) .....		N/A
	Test with test probe (Figure 2C) .....		N/A
2.1.1.2	Battery compartments		N/A
2.1.1.3	Access to ELV wiring		N/A
	Working voltage ( $V_{peak}$ or $V_{rms}$ ); minimum distance through insulation (mm)		—
2.1.1.4	Access to hazardous voltage circuit wiring		N/A

IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
2.1.1.5	Energy hazards .....	There is no energy hazard accessible to an OPERATOR.	P
2.1.1.6	Manual controls		N/A
2.1.1.7	Discharge of capacitors in equipment	Evaluated as part of Power Supply unit.	N/A
	Measured voltage (V); time-constant (s) .....		—
2.1.1.8	Energy hazards – d.c. mains supply		N/A
	a) Capacitor connected to the d.c. mains supply ..		N/A
	b) Internal battery connected to the d.c. mains supply .....		N/A
2.1.1.9	Audio amplifiers .....		N/A
2.1.2	Protection in service access areas		N/A
2.1.3	Protection in restricted access locations		N/A

2.2	SELV circuits		P
2.2.1	General requirements		P
2.2.2	Voltages under normal conditions (V) .....		P
2.2.3	Voltages under fault conditions (V) .....	Evaluated as part of Power Supply unit.	P
2.2.4	Connection of SELV circuits to other circuits .....	SELV CIRCUITS are only connected to other SELV CIRCUITS.	P

2.3	TNV circuits		N/A
2.3.1	Limits		N/A
	Type of TNV circuits .....		—
2.3.2	Separation from other circuits and from accessible parts		N/A
2.3.2.1	General requirements		N/A
2.3.2.2	Protection by basic insulation		N/A
2.3.2.3	Protection by earthing		N/A
2.3.2.4	Protection by other constructions .....		N/A
2.3.3	Separation from hazardous voltages		N/A
	Insulation employed.....		—
2.3.4	Connection of TNV circuits to other circuits		N/A
	Insulation employed.....		—
2.3.5	Test for operating voltages generated externally		N/A

IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
2.4	Limited current circuits		N/A
2.4.1	General requirements		N/A
2.4.2	Limit values		N/A
	Frequency (Hz).....:		—
	Measured current (mA).....:		—
	Measured voltage (V).....:		—
	Measured circuit capacitance (nF or $\mu$ F).....:		—
2.4.3	Connection of limited current circuits to other circuits		N/A
2.5	Limited power sources		P
	a) Inherently limited output	The external power supply is certified and its output terminal comply with L.P.S.	P
	b) Impedance limited output		N/A
	c) Regulating network limited output under normal operating and single fault condition		N/A
	d) Overcurrent protective device limited output		N/A
	Max. output voltage (V), max. output current (A), max. apparent power (VA).....:		—
	Current rating of overcurrent protective device (A)		—
2.6	Provisions for earthing and bonding		N/A
2.6.1	Protective earthing		N/A
2.6.2	Functional earthing		N/A
2.6.3	Protective earthing and protective bonding conductors		N/A
2.6.3.1	General		N/A
2.6.3.2	Size of protective earthing conductors		N/A
	Rated current (A), cross-sectional area ( $\text{mm}^2$ ), AWG.....:		—
2.6.3.3	Size of protective bonding conductors		N/A
	Rated current (A), cross-sectional area ( $\text{mm}^2$ ), AWG.....:		—
2.6.3.4	Resistance of earthing conductors and their terminations; resistance ( $\Omega$ ), voltage drop (V), test current (A), duration (min).....:		N/A
2.6.3.5	Colour of insulation.....:		N/A
2.6.4	Terminals		N/A

IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
2.6.4.1	General		N/A
2.6.4.2	Protective earthing and bonding terminals		N/A
	Rated current (A), type, nominal thread diameter (mm) .....		—
2.6.4.3	Separation of the protective earthing conductor from protective bonding conductors		N/A
2.6.5	Integrity of protective earthing		N/A
2.6.5.1	Interconnection of equipment		N/A
2.6.5.2	Components in protective earthing conductors and protective bonding conductors		N/A
2.6.5.3	Disconnection of protective earth		N/A
2.6.5.4	Parts that can be removed by an operator		N/A
2.6.5.5	Parts removed during servicing		N/A
2.6.5.6	Corrosion resistance		N/A
2.6.5.7	Screws for protective bonding		N/A
2.6.5.8	Reliance on telecommunication network or cable distribution system		N/A

2.7	Overcurrent and earth fault protection in primary circuits		N/A
2.7.1	Basic requirements		N/A
	Instructions when protection relies on building installation		N/A
2.7.2	Faults not simulated in 5.3.7		N/A
2.7.3	Short-circuit backup protection		N/A
2.7.4	Number and location of protective devices .....		N/A
2.7.5	Protection by several devices		N/A
2.7.6	Warning to service personnel .....		N/A

2.8	Safety interlocks		N/A
2.8.1	General principles		N/A
2.8.2	Protection requirements		N/A
2.8.3	Inadvertent reactivation		N/A
2.8.4	Fail-safe operation		N/A
2.8.5	Moving parts		N/A
2.8.6	Overriding		N/A
2.8.7	Switches and relays		N/A
2.8.7.1	Contact gaps (mm) .....		N/A

IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
2.8.7.2	Overload test		N/A
2.8.7.3	Endurance test		N/A
2.8.7.4	Electric strength test		N/A
2.8.8	Mechanical actuators		N/A

2.9	Electrical insulation		N/A
2.9.1	Properties of insulating materials		N/A
2.9.2	Humidity conditioning		N/A
	Relative humidity (%), temperature (°C) .....		—
2.9.3	Grade of insulation		N/A
2.9.4	Separation from hazardous voltages		N/A
	Method(s) used .....		—

2.10	Clearances, creepage distances and distances through insulation		P
2.10.1	General		P
2.10.1.1	Frequency .....	The frequency does not exceed 30kHz.	P
2.10.1.2	Pollution degrees .....	2	P
2.10.1.3	Reduced values for functional insulation	Refer to clause 5.3.4.	P
2.10.1.4	Intervening unconnected conductive parts		N/A
2.10.1.5	Insulation with varying dimensions		N/A
2.10.1.6	Special separation requirements		N/A
2.10.1.7	Insulation in circuits generating starting pulses		N/A
2.10.2	Determination of working voltage		N/A
2.10.2.1	General		N/A
2.10.2.2	RMS working voltage		N/A
2.10.2.3	Peak working voltage		N/A
2.10.3	Clearances		N/A
2.10.3.1	General		N/A
2.10.3.2	Mains transient voltages		N/A
	a) AC mains supply .....		N/A
	b) Earthed d.c. mains supplies .....		N/A
	c) Unearthed d.c. mains supplies .....		N/A
	d) Battery operation .....		N/A
2.10.3.3	Clearances in primary circuits		N/A
2.10.3.4	Clearances in secondary circuits		N/A

IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
2.10.3.5	Clearances in circuits having starting pulses		N/A
2.10.3.6	Transients from a.c. mains supply .....		N/A
2.10.3.7	Transients from d.c. mains supply .....		N/A
2.10.3.8	Transients from telecommunication networks and cable distribution systems .....		N/A
2.10.3.9	Measurement of transient voltage levels		N/A
	a) Transients from a mains supply		N/A
	For an a.c. mains supply .....		N/A
	For a d.c. mains supply .....		N/A
	b) Transients from a telecommunication network ..		N/A
2.10.4	Creepage distances		N/A
2.10.4.1	General		N/A
2.10.4.2	Material group and comparative tracking index		N/A
	CTI tests .....		—
2.10.4.3	Minimum creepage distances		N/A
2.10.5	Solid insulation		N/A
2.10.5.1	General		N/A
2.10.5.2	Distances through insulation		N/A
2.10.5.3	Insulating compound as solid insulation		N/A
2.10.5.4	Semiconductor devices		N/A
2.10.5.5.	Cemented joints		N/A
2.10.5.6	Thin sheet material – General		N/A
2.10.5.7	Separable thin sheet material		N/A
	Number of layers (pcs) .....		—
2.10.5.8	Non-separable thin sheet material		N/A
2.10.5.9	Thin sheet material – standard test procedure		N/A
	Electric strength test		—
2.10.5.10	Thin sheet material – alternative test procedure		N/A
	Electric strength test		—
2.10.5.11	Insulation in wound components		N/A
2.10.5.12	Wire in wound components		N/A
	Working voltage .....		N/A
	a) Basic insulation not under stress .....		N/A
	b) Basic, supplementary, reinforced insulation .....		N/A
	c) Compliance with Annex U .....		N/A

IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
	Two wires in contact inside wound component; angle between 45° and 90° .....		N/A
2.10.5.13	Wire with solvent-based enamel in wound components		N/A
	Electric strength test		—
	Routine test		N/A
2.10.5.14	Additional insulation in wound components		N/A
	Working voltage .....		N/A
	- Basic insulation not under stress .....		N/A
	- Supplementary, reinforced insulation .....		N/A
2.10.6	Construction of printed boards		N/A
2.10.6.1	Uncoated printed boards		N/A
2.10.6.2	Coated printed boards		N/A
2.10.6.3	Insulation between conductors on the same inner surface of a printed board		N/A
2.10.6.4	Insulation between conductors on different layers of a printed board		N/A
	Distance through insulation		N/A
	Number of insulation layers (pcs) .....		N/A
2.10.7	Component external terminations		N/A
2.10.8	Tests on coated printed boards and coated components		N/A
2.10.8.1	Sample preparation and preliminary inspection		N/A
2.10.8.2	Thermal conditioning		N/A
2.10.8.3	Electric strength test		N/A
2.10.8.4	Abrasion resistance test		N/A
2.10.9	Thermal cycling		N/A
2.10.10	Test for Pollution Degree 1 environment and insulating compound		N/A
2.10.11	Tests for semiconductor devices and cemented joints		N/A
2.10.12	Enclosed and sealed parts		N/A
3	WIRING, CONNECTIONS AND SUPPLY		P
3.1	General		P
3.1.1	Current rating and overcurrent protection	Internal wiring gauge is suitable for current intended to be carried.	P

IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
3.1.2	Protection against mechanical damage	Wires do not touch sharp edges and heatsinks which could damage the insulation and cause hazard.	P
3.1.3	Securing of internal wiring	.	P
3.1.4	Insulation of conductors		P
3.1.5	Beads and ceramic insulators		N/A
3.1.6	Screws for electrical contact pressure		N/A
3.1.7	Insulating materials in electrical connections		N/A
3.1.8	Self-tapping and spaced thread screws		N/A
3.1.9	Termination of conductors	All conductors are reliably secured.	P
	10 N pull test		P
3.1.10	Sleeving on wiring		P

3.2	Connection to a mains supply		N/A
3.2.1	Means of connection		N/A
3.2.1.1	Connection to an a.c. mains supply		N/A
3.2.1.2	Connection to a d.c. mains supply		N/A
3.2.2	Multiple supply connections		N/A
3.2.3	Permanently connected equipment		N/A
	Number of conductors, diameter of cable and conduits (mm) .....		—
3.2.4	Appliance inlets		N/A
3.2.5	Power supply cords		N/A
3.2.5.1	AC power supply cords		N/A
	Type .....		—
	Rated current (A), cross-sectional area (mm <sup>2</sup> ), AWG .....		—
3.2.5.2	DC power supply cords		N/A
3.2.6	Cord anchorages and strain relief		N/A
	Mass of equipment (kg), pull (N) .....		—
	Longitudinal displacement (mm) .....		—
3.2.7	Protection against mechanical damage		N/A
3.2.8	Cord guards		N/A
	Diameter or minor dimension D (mm); test mass (g) .....		—
	Radius of curvature of cord (mm).....		—



IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
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	Conductor sizes to be connected		N/A
	Rated current (A), cord/cable type, cross-sectional area (mm <sup>2</sup> ).....:		—
3.3.5	Wiring terminal sizes		N/A
	Rated current (A), type, nominal thread diameter (mm) .....		—
3.3.6	Wiring terminal design		N/A
3.3.7	Grouping of wiring terminals		N/A
3.3.8	Stranded wire		N/A

3.4	Disconnection from the mains supply		N/A
3.4.1	General requirement		N/A
3.4.2	Disconnect devices		N/A
3.4.3	Permanently connected equipment		N/A
3.4.4	Parts which remain energized		N/A
3.4.5	Switches in flexible cords		N/A
3.4.6	Number of poles - single-phase and d.c. equipment		N/A
3.4.7	Number of poles - three-phase equipment		N/A
3.4.8	Switches as disconnect devices		N/A
3.4.9	Plugs as disconnect devices		N/A
3.4.10	Interconnected equipment		N/A
3.4.11	Multiple power sources		N/A

3.5	Interconnection of equipment		P
3.5.1	General requirements	See below.	P
3.5.2	Types of interconnection circuits .....	Interconnection circuits are SELV CIRCUITS.	P
3.5.3	ELV circuits as interconnection circuits		N/A
3.5.4	Data ports for additional equipment	The unit power supplied by L.P.S.	P

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

4	PHYSICAL REQUIREMENTS		P
4.1	Stability		P
	Angle of 10°	The mass of unit is not more than 7kg.	N/A
	Test force (N) .....		N/A

4.2	Mechanical strength		P
4.2.1	General		P
4.2.2	Steady force test, 10 N		N/A
4.2.3	Steady force test, 30 N		N/A
4.2.4	Steady force test, 250 N		N/A
4.2.5	Impact test		N/A
	Fall test		N/A
	Swing test		N/A
4.2.6	Drop test; height (mm) .....		N/A
4.2.7	Stress relief test		N/A
4.2.8	Cathode ray tubes		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) .....	Wall mounted equipment; 50N. The test with self-tapping screws which were provided from Manufacturer.	P

4.3	Design and construction		P
4.3.1	Edges and corners	Edges and corners of the enclosure are rounded and smoothed.	P
4.3.2	Handles and manual controls; force (N).....		N/A
4.3.3	Adjustable controls		N/A
4.3.4	Securing of parts	Electrical and mechanical connections can be expected to withstand usual mechanical stress.	P
4.3.5	Connection by plugs and sockets		N/A
4.3.6	Direct plug-in equipment		N/A
	Torque .....		—
	Compliance with the relevant mains plug standard .....		N/A

IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
4.3.7	Heating elements in earthed equipment		N/A
4.3.8	Batteries	The battery is a Alkaline Battery.	P
	- Overcharging of a rechargeable battery		N/A
	- Unintentional charging of a non-rechargeable battery		N/A
	- Reverse charging of a rechargeable battery		N/A
	- Excessive discharging rate for any battery		N/A
4.3.9	Oil and grease		N/A
4.3.10	Dust, powders, liquids and gases		N/A
4.3.11	Containers for liquids or gases		N/A
4.3.12	Flammable liquids .....		N/A
	Quantity of liquid (l) .....		N/A
	Flash point (°C) .....		N/A
4.3.13	Radiation		P
4.3.13.1	General		P
4.3.13.2	Ionizing radiation		N/A
	Measured radiation (pA/kg) .....		—
	Measured high-voltage (kV) .....		—
	Measured focus voltage (kV) .....		—
	CRT markings .....		—
4.3.13.3	Effect of ultraviolet (UV) radiation on materials		N/A
	Part, property, retention after test, flammability classification .....		N/A
4.3.13.4	Human exposure to ultraviolet (UV) radiation .....		N/A
4.3.13.5	Laser (including LEDs)	The LED used as indicating light.	P
	Laser class .....	CLASS I	—
4.3.13.6	Other types .....		N/A
4.4	Protection against hazardous moving parts		P
4.4.1	General	No hazardous moving part presents.	P
4.4.2	Protection in operator access areas .....		P
4.4.3	Protection in restricted access locations .....		N/A
4.4.4	Protection in service access areas		P

IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
4.5	Thermal requirements		P
4.5.1	General		P
4.5.2	Temperature tests	See appended table 4.5.	P
	Normal load condition per Annex L .....	Permitted rises based on manufacturer's specified T <sub>mra</sub> of 40°C.	—
4.5.3	Temperature limits for materials	See appended table 4.5.	P
4.5.4	Touch temperature limits	See appended table 4.5.	P
4.5.5	Resistance to abnormal heat .....		N/A
4.6	Openings in enclosures		P
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).	P
	Dimensions (mm) .....	See Enclosure/Diagram.	—
4.6.2	Bottoms of fire enclosures		P
	Construction of the bottom, dimensions (mm) .....	See Enclosure/Diagram.	—
4.6.3	Doors or covers in fire enclosures	Doors and/or covers are intended only for occasional use. Information regarding their proper removal and replacement is provided.	P
4.6.4	Openings in transportable equipment		N/A
4.6.4.1	Constructional design measures		N/A
	Dimensions (mm) .....		—
4.6.4.2	Evaluation measures for larger openings		N/A
4.6.4.3	Use of metallized parts		N/A
4.6.5	Adhesives for constructional purposes		N/A
	Conditioning temperature (°C), time (weeks) .....		—
4.7	Resistance to fire		P
4.7.1	Reducing the risk of ignition and spread of flame	Method 1.	P
	Method 1, selection and application of components wiring and materials	(see appended table 4.7)	P
	Method 2, application of all of simulated fault condition tests		N/A
4.7.2	Conditions for a fire enclosure	See 4.7.2.2.	N/A
4.7.2.1	Parts requiring a fire enclosure		N/A

IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
4.7.2.2	Parts not requiring a fire enclosure	Circuit supplied by a limited power source complying with 2.5 and with components mounted on materials of Class V-1 or better.	P
4.7.3	Materials		P
4.7.3.1	General		P
4.7.3.2	Materials for fire enclosures	The propagation of fire is minimized through satisfying the requirement of constructions and materials.	P
4.7.3.3	Materials for components and other parts outside fire enclosures		N/A
4.7.3.4	Materials for components and other parts inside fire enclosures	- All internal materials are min. V-2 or are mounted on a PWB min. V-1; - All Internal wiring is insulated with PVC, TFE, PTFE, FEP, neoprene, polyimide or marked VW-1 or FT-1 or better.	P
4.7.3.5	Materials for air filter assemblies		N/A
4.7.3.6	Materials used in high-voltage components		N/A

5	ELECTRICAL REQUIREMENTS AND SIMULATED ABNORMAL CONDITIONS		P
5.1	Touch current and protective conductor current		N/A
5.1.1	General		N/A
5.1.2	Configuration of equipment under test (EUT)		N/A
5.1.2.1	Single connection to an a.c. mains supply		N/A
5.1.2.2	Redundant multiple connections to an a.c. mains supply		N/A
5.1.2.3	Simultaneous multiple connections to an a.c. mains supply		N/A
5.1.3	Test circuit		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
	Supply voltage (V) .....		—
	Measured touch current (mA) .....		—
	Max. allowed touch current (mA) .....		—
	Measured protective conductor current (mA) .....		—

IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
	Max. allowed protective conductor current (mA) .....		—
5.1.7	Equipment with touch current exceeding 3,5 mA		N/A
5.1.7.1	General .....		N/A
5.1.7.2	Simultaneous multiple connections to the supply		N/A
5.1.8	Touch currents to telecommunication networks and cable distribution systems and from telecommunication networks		N/A
5.1.8.1	Limitation of the touch current to a telecommunication network or to a cable distribution system	Evaluated as part of power supply unit.	N/A
	Supply voltage (V) .....		—
	Measured touch current (mA) .....		—
	Max. allowed touch current (mA) .....		—
5.1.8.2	Summation of touch currents from telecommunication networks		N/A
	a) EUT with earthed telecommunication ports .....		N/A
	b) EUT whose telecommunication ports have no reference to protective earth		N/A

5.2	Electric strength		N/A
5.2.1	General		N/A
5.2.2	Test procedure		N/A

5.3	Abnormal operating and fault conditions		P
5.3.1	Protection against overload and abnormal operation	See table 5.3.	P
5.3.2	Motors		N/A
5.3.3	Transformers		N/A
5.3.4	Functional insulation .....	FUNCTIONAL INSULATION complies with the requirements of (c).	P
5.3.5	Electromechanical components	No electromechanical component provided.	P
5.3.6	Audio amplifiers in ITE .....		N/A
5.3.7	Simulation of faults	See table 5.3.	P
5.3.8	Unattended equipment		N/A
5.3.9	Compliance criteria for abnormal operating and fault conditions	See below.	P

IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
5.3.9.1	During the tests	No fire, emission of molten metal or deformation was noted during the tests.	P
5.3.9.2	After the tests		N/A

6	CONNECTION TO TELECOMMUNICATION NETWORKS		N/A
6.1	Protection of telecommunication network service persons, and users of other equipment connected to the network, from hazards in the equipment		N/A
6.1.1	Protection from hazardous voltages		N/A
6.1.2	Separation of the telecommunication network from earth		N/A
6.1.2.1	Requirements		N/A
	Supply voltage (V) .....		—
	Current in the test circuit (mA) .....		—
6.1.2.2	Exclusions .....		N/A

6.2	Protection of equipment users from overvoltages on telecommunication networks		N/A
6.2.1	Separation requirements		N/A
6.2.2	Electric strength test procedure		N/A
6.2.2.1	Impulse test		N/A
6.2.2.2	Steady-state test		N/A
6.2.2.3	Compliance criteria		N/A

6.3	Protection of the telecommunication wiring system from overheating		N/A
	Max. output current (A) .....		—
	Current limiting method .....		—

7	CONNECTION TO CABLE DISTRIBUTION SYSTEMS		N/A
7.1	General		N/A
7.2	Protection of cable distribution system service persons, and users of other equipment connected to the system, from hazardous voltages in the equipment		N/A
7.3	Protection of equipment users from overvoltages on the cable distribution system		N/A
7.4	Insulation between primary circuits and cable distribution systems		N/A
7.4.1	General		N/A
7.4.2	Voltage surge test		N/A

IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
7.4.3	Impulse test		N/A

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



IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
A.3.1	Mounting of samples		N/A
A.3.2	Test procedure		N/A
A.3.3	Compliance criterion		N/A

B	ANNEX B, MOTOR TESTS UNDER ABNORMAL CONDITIONS (see 4.7.2.2 and 5.3.2)		N/A
B.1	General requirements		N/A
	Position .....		—
	Manufacturer .....		—
	Type .....		—
	Rated values .....		—
B.2	Test conditions		N/A
B.3	Maximum temperatures		N/A
B.4	Running overload test		N/A
B.5	Locked-rotor overload test		N/A
	Test duration (days) .....		—
	Electric strength test: test voltage (V) .....		—
B.6	Running overload test for d.c. motors in secondary circuits		N/A
B.6.1	General		N/A
B.6.2	Test procedure		N/A
B.6.3	Alternative test procedure		N/A
B.6.4	Electric strength test; test voltage (V) .....		N/A
B.7	Locked-rotor overload test for d.c. motors in secondary circuits		N/A
B.7.1	General		N/A
B.7.2	Test procedure		N/A
B.7.3	Alternative test procedure		N/A
B.7.4	Electric strength test; test voltage (V) .....		N/A
B.8	Test for motors with capacitors		N/A
B.9	Test for three-phase motors		N/A
B.10	Test for series motors		N/A
	Operating voltage (V) .....		—

C	ANNEX C, TRANSFORMERS (see 1.5.4 and 5.3.3)		N/A
	Position .....		—

IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
	Manufacturer .....		—
	Type .....		—
	Rated values .....		—
	Method of protection .....		—
C.1	Overload test		N/A
C.2	Insulation		N/A
	Protection from displacement of windings .....		N/A
D	ANNEX D, MEASURING INSTRUMENTS FOR TOUCH-CURRENT TESTS (see 5.1.4)		N/A
D.1	Measuring instrument		N/A
D.2	Alternative measuring instrument		N/A
E	ANNEX E, TEMPERATURE RISE OF A WINDING (see 1.4.13)		N/A
F	ANNEX F, MEASUREMENT OF CLEARANCES AND CREEPAGE DISTANCES (see 2.10 and Annex G)		P
G	ANNEX G, ALTERNATIVE METHOD FOR DETERMINING MINIMUM CLEARANCES		N/A
G.1	Clearances		N/A
G.1.1	General		N/A
G.1.2	Summary of the procedure for determining minimum clearances		N/A
G.2	Determination of mains transient voltage (V)		N/A
G.2.1	AC mains supply .....		N/A
G.2.2	Earthed d.c. mains supplies .....		N/A
G.2.3	Unearthed d.c. mains supplies .....		N/A
G.2.4	Battery operation .....		N/A
G.3	Determination of telecommunication network transient voltage (V) .....		N/A
G.4	Determination of required withstand voltage (V)		N/A
G.4.1	Mains transients and internal repetitive peaks .....		N/A
G.4.2	Transients from telecommunication networks .....		N/A
G.4.3	Combination of transients		N/A
G.4.4	Transients from cable distribution systems		N/A
G.5	Measurement of transient voltages (V)		N/A

IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
	a) Transients from a mains supply		N/A
	For an a.c. mains supply		N/A
	For a d.c. mains supply		N/A
	b) Transients from a telecommunication network		N/A
G.6	Determination of minimum clearances .....		N/A
H	ANNEX H, IONIZING RADIATION (see 4.3.13)		N/A
J	ANNEX J, TABLE OF ELECTROCHEMICAL POTENTIALS (see 2.6.5.6)		N/A
	Metal(s) used .....		—
K	ANNEX K, THERMAL CONTROLS (see 1.5.3 and 5.3.8)		N/A
K.1	Making and breaking capacity		N/A
K.2	Thermostat reliability; operating voltage (V) .....		N/A
K.3	Thermostat endurance test; operating voltage (V) :		N/A
K.4	Temperature limiter endurance; operating voltage (V) .....		N/A
K.5	Thermal cut-out reliability		N/A
K.6	Stability of operation		N/A
L	ANNEX L, NORMAL LOAD CONDITIONS FOR SOME TYPES OF ELECTRICAL BUSINESS EQUIPMENT (see 1.2.2.1 and 4.5.2)		P
L.1	Typewriters		N/A
L.2	Adding machines and cash registers		N/A
L.3	Erasers		N/A
L.4	Pencil sharpeners		N/A
L.5	Duplicators and copy machines		N/A
L.6	Motor-operated files		N/A
L.7	Other business equipment		P
M	ANNEX M, CRITERIA FOR TELEPHONE RINGING SIGNALS (see 2.3.1)		N/A
M.1	Introduction		N/A
M.2	Method A		N/A
M.3	Method B		N/A
M.3.1	Ringling signal		N/A

IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
M.3.1.1	Frequency (Hz) .....		—
M.3.1.2	Voltage (V) .....		—
M.3.1.3	Cadence; time (s), voltage (V) .....		—
M.3.1.4	Single fault current (mA) .....		—
M.3.2	Tripping device and monitoring voltage .....		N/A
M.3.2.1	Conditions for use of a tripping device or a monitoring voltage		N/A
M.3.2.2	Tripping device		N/A
M.3.2.3	Monitoring voltage (V) .....		N/A
N	ANNEX N, IMPULSE TEST GENERATORS (see 1.5.7.2, 1.5.7.3, 2.10.3.9, 6.2.2.1, 7.3.2, 7.4.3 and Clause G.5)		N/A
N.1	ITU-T impulse test generators		N/A
N.2	IEC 60065 impulse test generator		N/A
P	ANNEX P, NORMATIVE REFERENCES		—
Q	ANNEX Q, Voltage dependent resistors (VDRs) (see 1.5.9.1)		N/A
	a) Preferred climatic categories .....		N/A
	b) Maximum continuous voltage .....		N/A
	c) Pulse current .....		N/A
R	Annex R, EXAMPLES OF REQUIREMENTS FOR QUALITY CONTROL PROGRAMMES		N/A
R.1	Minimum separation distances for unpopulated coated printed boards (see 2.10.6.2)		N/A
R.2	Reduced clearances (see 2.10.3)		N/A
S	ANNEX S, PROCEDURE FOR IMPULSE TESTING (see 6.2.2.3)		N/A
S.1	Test equipment		N/A
S.2	Test procedure		N/A
S.3	Examples of waveforms during impulse testing		N/A
T	ANNEX T, GUIDANCE ON PROTECTION AGAINST INGRESS OF WATER (see 1.1.2)		N/A
			—

IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
U	ANNEX U, INSULATED WINDING WIRES FOR USE WITHOUT INTERLEAVED INSULATION (see 2.10.5.4)		N/A
			—
V	ANNEX V, AC POWER DISTRIBUTION SYSTEMS (see 1.6.1)		N/A
V.1	Introduction		N/A
V.2	TN power distribution systems		N/A
W	ANNEX W, SUMMATION OF TOUCH CURRENTS		N/A
W.1	Touch current from electronic circuits		N/A
W.1.1	Floating circuits		N/A
W.1.2	Earthed circuits		N/A
W.2	Interconnection of several equipments		N/A
W.2.1	Isolation		N/A
W.2.2	Common return, isolated from earth		N/A
W.2.3	Common return, connected to protective earth		N/A
X	ANNEX X, MAXIMUM HEATING EFFECT IN TRANSFORMER TESTS (see clause C.1)		N/A
X.1	Determination of maximum input current		N/A
X.2	Overload test procedure		N/A
Y	ANNEX Y, ULTRAVIOLET LIGHT CONDITIONING TEST (see 4.3.13.3)		N/A
Y.1	Test apparatus .....		N/A
Y.2	Mounting of test samples .....		N/A
Y.3	Carbon-arc light-exposure apparatus .....		N/A
Y.4	Xenon-arc light exposure apparatus .....		N/A
Z	ANNEX Z, OVERVOLTAGE CATEGORIES (see 2.10.3.2 and Clause G.2)		P
AA	ANNEX AA, MANDREL TEST (see 2.10.5.8)		N/A
BB	ANNEX BB, CHANGES IN THE SECOND EDITION		—

IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
<b>EN 60950-1:2006 – CENELEC COMMON MODIFICATIONS</b>			
Contents	Add the following annexes: Annex ZA (normative) Normative references to international publications with their corresponding European publications Annex ZB (normative) Special national conditions Annex ZC (informative) A-deviations		P
General	Delete all the "country" notes in the reference document according to the following list: 1.4.8 Note 2                      1.5.1 Note 2 & 3                      1.5.7.1 Note 1.5.8 Note 2                      1.5.9.4 Note                      1.7.2.1 Note 4, 5 & 6 2.2.3 Note                      2.2.4 Note                      2.3.2 Note 2.3.2.1 Note 2                      2.3.4 Note 2                      2.6.3.3 Note 2 & 3 2.7.1 Note                      2.10.3.2 Note 2                      2.10.5.13 Note 3 3.2.1.1 Note                      3.2.4 Note 3.                      2.5.1 Note 2 4.3.6 Note 1 & 2                      4.7 Note 4                      4.7.2.2 Note 4.7.3.1 Note 2                      5.1.7.1 Note 3 & 4                      5.3.7 Note 1 6 Note 2 & 5                      6.1.2.1 Note 2                      6.1.2.2 Note 6.2.2 Note 6.                      2.2.1 Note 2                      6.2.2.2 Note 7.1 Note 3                      7.2 Note                      7.3 Note 1 & 2 G.2.1 Note 2                      Annex H Note 2		P
1.3.Z1	Add the following subclause: 1.3.Z1 Exposure to excessive sound pressure The apparatus shall be so designed and constructed as to present no danger when used for its intended purpose, either in normal operating conditions or under fault conditions, particularly providing protection against exposure to excessive sound pressures from headphones or earphones. NOTE Z1 A new method of measurement is described in EN 50332-1, Sound system equipment: Headphones and earphones associated with portable audio equipment - Maximum sound pressure level measurement methodology and limit considerations - Part 1: General method for "one package equipment", and in EN 50332-2, Sound system equipment: Headphones and earphones associated with portable audio equipment - Maximum sound pressure level measurement methodology and limit considerations - Part 2: Guidelines to associate sets with headphones coming from different manufacturers.		N/A
1.5.1	Add the following NOTE: NOTE Z1 The use of certain substances in electrical and electronic equipment is restricted within the EU: see Directive 2002/95/EC		N/A
1.7.2.1	Add the following NOTE: NOTE Z1 In addition, the instructions shall include, as far as applicable, a warning that excessive sound pressure from earphones and headphones can cause hearing loss		N/A

IEC/EN 60950-1															
Clause	Requirement + Test	Result - Remark	Verdict												
2.7.1	<p>Replace the subclause as follows:</p> <p>Basic requirements</p> <p>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):</p> <p>a) except as detailed in b) and c), protective devices necessary to comply with the requirements of 5.3 shall be included as parts of the equipment;</p> <p>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;</p> <p>c) it is permitted for PLUGGABLE EQUIPMENT TYPE B or PERMANENTLY CONNECTED EQUIPMENT, to rely on dedicated overcurrent and short-circuit protection in the building installation, provided that the means of protection, e.g. fuses or circuit breakers, is fully specified in the installation instructions.</p> <p>If reliance is placed on protection in the building installation, the installation instructions shall so state, except that for PLUGGABLE EQUIPMENT TYPE A the building installation shall be regarded as providing protection in accordance with the rating of the wall socket outlet.</p>		N/A												
2.7.2	This subclause has been declared 'void'.		N/A												
3.2.3	Delete the NOTE in Table 3A, and delete also in this table the conduit sizes in parentheses.		N/A												
3.2.5.1	<p>Replace "60245 IEC 53" by "H05 RR-F";</p> <p>"60227 IEC 52" by "H03 VV-F or H03 VVH2-F";</p> <p>"60227 IEC 53" by "H05 VV-F or H05 VVH2-F2".</p> <p>In Table 3B, replace the first four lines by the following:</p> <table border="1" data-bbox="384 1305 1262 1402"> <tr> <td>  Up to and including 6</td> <td></td> <td>0,75<sup>a)</sup></td> <td> </td> </tr> <tr> <td>  Over 6 up to and including 10</td> <td>(0,75)<sup>b)</sup></td> <td>1,0</td> <td> </td> </tr> <tr> <td>  Over 10 up to and including 16</td> <td>(1,0)<sup>c)</sup></td> <td>1,5</td> <td> </td> </tr> </table> <p>In the conditions applicable to Table 3B delete the words "in some countries" in condition<sup>a)</sup>.</p> <p>In NOTE 1, applicable to Table 3B, delete the second sentence.</p>	Up to and including 6		0,75 <sup>a)</sup>		Over 6 up to and including 10	(0,75) <sup>b)</sup>	1,0		Over 10 up to and including 16	(1,0) <sup>c)</sup>	1,5			N/A
Up to and including 6		0,75 <sup>a)</sup>													
Over 6 up to and including 10	(0,75) <sup>b)</sup>	1,0													
Over 10 up to and including 16	(1,0) <sup>c)</sup>	1,5													
3.3.4	<p>In Table 3D, delete the fourth line: conductor sizes for 10 to 13 A, and replace with the following:</p> <table border="1" data-bbox="384 1585 1358 1621"> <tr> <td>  Over 10 up to and including 16</td> <td>1,5 to 2,5</td> <td> </td> <td>1,5 to 4</td> <td> </td> </tr> </table> <p>Delete the fifth line: conductor sizes for 13 to 16 A.</p>	Over 10 up to and including 16	1,5 to 2,5		1,5 to 4			N/A							
Over 10 up to and including 16	1,5 to 2,5		1,5 to 4												
4.3.13.6	<p>Add the following NOTE:</p> <p>NOTE Z1 Attention is drawn to 1999/519/EC: Council Recommendation on the limitation of exposure of the general public to electromagnetic fields 0 Hz to 300 GHz. Standards taking into account this Recommendation which demonstrate compliance with the applicable EU Directive are indicated in the OJEC.</p>		N/A												

IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
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 1 <math>\mu</math>Sv/h (0,1 mR/h) (see NOTE). Account is taken of the background level.</p> <p>Replace the notes as follows:</p> <p>NOTE These values appear in Directive 96/29/Euratom.</p> <p>Delete NOTE 2.</p>		N/A
Bibliography	Additional EN standards.		—

ZA	NORMATIVE REFERENCES TO INTERNATIONAL PUBLICATIONS WITH THEIR CORRESPONDING EUROPEAN PUBLICATIONS		—
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ZB	SPECIAL NATIONAL CONDITIONS		N/A
1.2.4.1	In <b>Denmark</b> , certain types of Class I appliances (see 3.2.1.1) may be provided with a plug not establishing earthing conditions when inserted into Danish socket-outlets.		N/A
1.5.7.1	In <b>Finland, Norway and Sweden</b> , resistors bridging BASIC INSULATION in CLASS I PLUGGABLE EQUIPMENT TYPE A must comply with the requirements in 1.5.7.2.		N/A
1.5.8	In <b>Norway</b> , due to the IT power system used (see annex V, Figure V.7), capacitors are required to be rated for the applicable line-to-line voltage (230 V).		N/A
1.5.9.4	In <b>Finland, Norway and Sweden</b> , the third dashed sentence is applicable only to equipment as defined in 6.1.2.2 of this annex.		N/A
1.7.2.1	<p>In <b>Finland, Norway and Sweden</b>, CLASS I PLUGGABLE EQUIPMENT TYPE A intended for connection to other equipment or a network shall, if safety relies on connection to protective earth or if surge suppressors are connected between the network terminals and accessible parts, have a marking stating that the equipment must be connected to an earthed mains socket-outlet.</p> <p>The marking text in the applicable countries shall be as follows:</p> <p>In Finland: "Laitte on liitettävä suojavaadoituskoskettimilla varustettuun pistorasiaan"</p> <p>In Norway: "Apparatet må tilkoples jordet stikkontakt"</p> <p>In Sweden: "Apparaten skall anslutas till jordat uttag"</p>		N/A
1.7.5	In <b>Denmark</b> , socket-outlets for providing power to other equipment shall be in accordance with the Heavy Current Regulations, Section 107-2-D1, Standard Sheet DK 1-3a, DK 1-5a or DK 1-7a, when used on Class I equipment. For STATIONARY EQUIPMENT the socket-outlet shall be in accordance with Standard Sheet DK 1-1b or DK 1-5a.		N/A
2.2.4	In <b>Norway</b> , for requirements see 1.7.2.1, 6.1.2.1 and 6.1.2.2 of this annex.		N/A
2.3.2	In <b>Finland, Norway and Sweden</b> there are additional requirements for the insulation. See 6.1.2.1 and 6.1.2.2 of this annex.		N/A
2.3.4	In <b>Norway</b> , for requirements see 1.7.2.1, 6.1.2.1 and 6.1.2.2 of this annex.		N/A
2.6.3.3	In the <b>United Kingdom</b> , the current rating of the circuit shall be taken as 13 A, not 16 A.		N/A



IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
2.7.1	In the <b>United Kingdom</b> , to protect against excessive currents and short-circuits in the PRIMARY CIRCUIT of DIRECT PLUG-IN EQUIPMENT, tests according to 5.3 shall be conducted, using an external protective device rated 30 A or 32 A. If these tests fail, suitable protective devices shall be included as integral parts of the DIRECT PLUG-IN EQUIPMENT, so that the requirements of 5.3 are met.		N/A
2.10.5.13	In <b>Finland, Norway and Sweden</b> , there are additional requirements for the insulation, see 6.1.2.1 and 6.1.2.2 of this annex.		N/A
3.2.1.1	In <b>Switzerland</b> , supply cords of equipment having a RATED CURRENT not exceeding 10 A shall be provided with a plug complying with SEV 1011 or IEC 60884-1 and one of the following dimension sheets: SEV 6532-2.1991 Plug Type 15 3P+N+PE 250/400 V, 10 A SEV 6533-2.1991 Plug Type 11 L+N 250 V, 10 A SEV 6534-2.1991 Plug Type 12 L+N+PE 250 V, 10 A In general, EN 60309 applies for plugs for currents exceeding 10 A. However, a 16 A plug and socket-outlet system is being introduced in Switzerland, the plugs of which are according to the following dimension sheets, published in February 1998: SEV 5932-2.1998 Plug Type 25 3L+N+PE 230/400 V, 16 A SEV 5933-2.1998 Plug Type 21 L+N 250 V, 16 A SEV 5934-2.1998 Plug Type 23 L+N+PE 250 V, 16 A		N/A
3.2.1.1	In <b>Denmark</b> , supply cords of single-phase equipment having a rated current not exceeding 13 A shall be provided with a plug according to the Heavy Current Regulations, Section 107-2-D1. CLASS I EQUIPMENT provided with socket-outlets with earth contacts or which are intended to be used in locations where protection against indirect contact is required according to the wiring rules shall be provided with a plug in accordance with standard sheet DK 2-1a or DK 2-5a. If poly-phase equipment and single-phase equipment having a RATED CURRENT exceeding 13 A is provided with a supply cord with a plug, this plug shall be in accordance with the Heavy Current Regulations, Section 107-2-D1 or EN 60309-2.		N/A
3.2.1.1	In <b>Spain</b> , supply cords of single-phase equipment having a rated current not exceeding 10 A shall be provided with a plug according to UNE 20315:1994. Supply cords of single-phase equipment having a rated current not exceeding 2,5 A shall be provided with a plug according to UNE-EN 50075:1993. CLASS I EQUIPMENT provided with socket-outlets with earth contacts or which are intended to be used in locations where protection against indirect contact is required according to the wiring rules, shall be provided with a plug in accordance with standard UNE 20315:1994. If poly-phase equipment is provided with a supply cord with a plug, this plug shall be in accordance with UNE-EN 60309-2.		N/A
3.2.1.1	In the <b>United Kingdom</b> , apparatus which is fitted with a flexible cable or cord and is designed to be connected to a mains socket conforming to BS 1363 by means of that flexible cable or cord and plug, shall be fitted with a 'standard plug' in accordance with Statutory Instrument 1768:1994 - The Plugs and Sockets etc. (Safety) Regulations 1994, unless exempted by those regulations. NOTE 'Standard plug' is defined in SI 1768:1994 and essentially means an approved plug conforming to BS 1363 or an approved conversion plug.		N/A

IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
3.2.1.1	In <b>Ireland</b> , apparatus which is fitted with a flexible cable or cord and is designed to be connected to a mains socket conforming to I.S. 411 by means of that flexible cable or cord and plug, shall be fitted with a 13 A plug in accordance with Statutory Instrument 525:1997 - National Standards Authority of Ireland (section 28) (13 A Plugs and Conversion Adaptors for Domestic Use) Regulations 1997.		N/A
3.2.4	In <b>Switzerland</b> , for requirements see 3.2.1.1 of this annex.		N/A
3.2.5.1	In the <b>United Kingdom</b> , a power supply cord with conductor of 1,25 mm <sup>2</sup> is allowed for equipment with a rated current over 10 A and up to and including 13 A.		N/A
3.3.4	In the <b>United Kingdom</b> , 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 <sup>2</sup> to 1,5 mm <sup>2</sup> nominal cross-sectional area.		N/A
4.3.6	In the <b>United Kingdom</b> , the torque test is performed using a socket outlet complying with BS 1363 part 1:1995, including Amendment 1:1997 and Amendment 2:2003 and the plug part of DIRECT PLUG-IN EQUIPMENT shall be assessed to BS 1363: Part 1, 12.1, 12.2, 12.3, 12.9, 12.11, 12.12, 12.13, 12.16 and 12.17, except that the test of 12.17 is performed at not less than 125 °C. Where the metal earth pin is replaced by an Insulated Shutter Opening Device (ISOD), the requirements of clauses 22.2 and 23 also apply.		N/A
4.3.6	In <b>Ireland</b> , DIRECT PLUG-IN EQUIPMENT is known as plug similar devices. Such devices shall comply with Statutory Instrument 526:1997 - National Standards Authority of Ireland (Section 28) (Electrical plugs, plug similar devices and sockets for domestic use) Regulations, 1997.		N/A
5.1.7.1	In <b>Finland, Norway and Sweden</b> TOUCH CURRENT measurement results exceeding 3,5 mA r.m.s. are permitted only for the following equipment: • STATIONARY PLUGGABLE EQUIPMENT TYPE A that - is intended to be used in a RESTRICTED ACCESS LOCATION where equipotential bonding has been applied, for example, in a telecommunication centre; and - has provision for a permanently connected PROTECTIVE EARTHING CONDUCTOR; and - is provided with instructions for the installation of that conductor by a SERVICE PERSON; • STATIONARY PLUGGABLE EQUIPMENT TYPE B; • STATIONARY PERMANENTLY CONNECTED EQUIPMENT.		N/A

IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
6.1.2.1	<p>In <b>Finland, Norway and Sweden</b>, add the following text between the first and second paragraph of the compliance clause:</p> <p>If this insulation is solid, including insulation forming part of a component, it shall at least consist of either</p> <ul style="list-style-type: none"> <li>- two layers of thin sheet material, each of which shall pass the electric strength test below, or</li> <li>- one layer having a distance through insulation of at least 0,4 mm, which shall pass the electric strength test below.</li> </ul> <p>If this insulation forms part of a semiconductor component (e.g. an optocoupler), there is no distance through insulation requirement for the insulation consisting of an insulating compound completely filling the casing, so that CLEARANCES and CREEPAGE DISTANCES do not exist, if the component passes the electric strength test in accordance with the compliance clause below and in addition</p> <ul style="list-style-type: none"> <li>- passes the tests and inspection criteria of 2.10.11 with an electric strength test of 1,5 kV multiplied by 1,6 (the electric strength test of 2.10.10 shall be performed using 1,5 kV), and</li> <li>- is subject to ROUTINE TESTING for electric strength during manufacturing, using a test voltage of 1,5 kV.</li> </ul> <p>It is permitted to bridge this insulation with a capacitor complying with EN 132400:1994, subclass Y2.</p> <p>A capacitor classified Y3 according to EN 132400:1994, may bridge this insulation under the following conditions:</p> <ul style="list-style-type: none"> <li>- the insulation requirements are satisfied by having a capacitor classified Y3 as defined by EN 132400, which in addition to the Y3 testing, is tested with an impulse test of 2,5 kV defined in EN 60950-1:2006, 6.2.2.1;</li> <li>- the additional testing shall be performed on all the test specimens as described in EN 132400;</li> <li>- the impulse test of 2,5 kV is to be performed before the endurance test in EN 132400, in the sequence of tests as described in EN 132400.</li> </ul>		N/A
6.1.2.2	<p>In <b>Finland, Norway and Sweden</b>, the exclusions are applicable for PERMANENTLY CONNECTED EQUIPMENT, PLUGGABLE EQUIPMENT TYPE B and equipment intended to be used in a RESTRICTED ACCESS LOCATION where equipotential bonding has been applied, e.g. in a telecommunication centre, and which has provision for a permanently connected PROTECTIVE EARTHING CONDUCTOR and is provided with instructions for the installation of that conductor by a SERVICE PERSON.</p>		N/A
7.2	<p>In <b>Finland, Norway and Sweden</b>, for requirements see 6.1.2.1 and 6.1.2.2 of this annex.</p> <p>The term TELECOMMUNICATION NETWORK in 6.1.2 being replaced by the term CABLE DISTRIBUTION SYSTEM.</p>		N/A
7.3	<p>In <b>Norway and Sweden</b>, there are many buildings where the screen of the coaxial cable is normally not connected to the earth in the building installation.</p>		N/A
7.3	<p>In <b>Norway</b>, for installation conditions see EN 60728-11:2005.</p>		N/A
ZC	A-DEVIATIONS (informative)		

IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
1.5.1	<b>Sweden</b> (Ordinance 1990:944) Add the following: NOTE In Sweden, switches containing mercury are not permitted.		N/A
1.5.1	<b>Switzerland</b> (Ordinance on environmentally hazardous substances SR 814.081, Annex 1.7, Mercury - Annex 1.7 of SR 814.81 applies for mercury.) Add the following: NOTE In Switzerland, switches containing mercury such as thermostats, relays and level controllers are not allowed.		N/A
1.7.2.1	<b>Denmark</b> (Heavy Current Regulations) Supply cords of CLASS I EQUIPMENT, which is delivered without a plug, must be provided with a visible tag with the following text: <p style="text-align: center;">Vigtigt! Lederen med grøn/gul isolation må kun tilsluttes en klemme mærket</p>  eller  If essential for the safety of the equipment, the tag must in addition be provided with a diagram, which shows the connection of the other conductors, or be provided with the following text: "For tilslutning af de øvrige ledere, se medfølgende installationsvejledning."		N/A
1.7.2.1	<b>Germany</b> (Gesetz über technische Arbeitsmittel und Verbraucherprodukte (Geräte- und Produktsicherheitsgesetz – GPSG) [Law on technical labour equipment and consumer products], of 6th January 2004, Section 2, Article 4, Clause (4), Item 2). If for the assurance of safety and health certain rules during use, amending or maintenance of a technical labour equipment or readymade consumer product are to be followed, a manual in German language has to be delivered when placing the product on the market. Of this requirement, rules for use even only by SERVICE PERSONS are not exempted.		N/A
1.7.5	<b>Denmark</b> (Heavy Current Regulations) With the exception of CLASS II EQUIPMENT provided with a socket outlet in accordance with the Heavy Current Regulations, Section 107-2-D1, Standard Sheet DK 1-4a, CLASS II EQUIPMENT shall not be fitted with socket-outlets for providing power to other equipment.		N/A
1.7.13	<b>Switzerland</b> (Ordinance on chemical hazardous risk reduction SR 814.81, Annex 2.15 Batteries) Annex 2.15 of SR 814.81 applies for batteries.		N/A
5.1.7.1	<b>Denmark</b> (Heavy Current Regulations, Chapter 707, clause 707.4) TOUCH CURRENT measurement results exceeding 3,5 mA r.m.s. are permitted only for PERMANENTLY CONNECTED EQUIPMENT and PLUGGABLE EQUIPMENT TYPE B.		N/A

National Differences			
Clause	Requirement + Test	Result - Remark	Verdict

EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES			
Differences according to.....: EN 60950-1:2006+A11:2009			

CENELEC COMMON MODIFICATIONS (EN)			N/A
<b>ZA</b>	Normative references to international publications with their corresponding European publications		—

ANNEX ZB, SPECIAL NATIONAL CONDITIONS (EN)			N/A
1.2.13.14	In <b>Norway</b> and <b>Sweden</b> , for requirements see 1.7.2.1 and 7.3 of this annex.		N/A
1.5.7.1	<b>Replace</b> the existing SNC by the following: In <b>Finland, Norway</b> and <b>Sweden</b> , resistors bridging BASIC INSULATION in CLASS I PLUGGABLE EQUIPMENT TYPE A must comply with the requirements in 1.5.7.1. In addition when a singleresistor is used, the resistor must withstand the resistor test in 1.5.7.2.		N/A
1.7.2.1	<b>Add</b> as new SNC: In <b>Norway</b> and <b>Sweden</b> , the screen of the cable distribution system is normally not earthed at the entrance of the building and there is normally no equipotential bonding system within the building. Therefore the protective earthing of the building installation need to be isolated from the screen of a cable distribution system. It is however accepted to provide the insulation external to the equipment by an adapter or an interconnection cable with galvanic isolator, which may be provided by e.g. a retailer. The user manual shall then have the following or similar information in Norwegian and Swedish language respectively, depending on in what country the equipment is intended to be used in: "Equipment connected to the protective earthing of the building installation through the mains connection or through other equipment with a connection to protective earthing – and to a cable distribution system using coaxial cable, may in some circumstances create a fire hazard. Connection to a cable distribution system has therefore to be provided through a device providing electrical isolation below a certain frequency range (galvanic isolator, see EN 60728-11)." NOTE In Norway, due to regulation for installations of cable distribution systems, and in Sweden, a galvanic isolator shall provide electrical insulation below 5 MHz. The insulation shall withstand a dielectric strength of 1,5 kV r.m.s., 50 Hz or 60 Hz, for 1 min. Translation to Norwegian (the Swedish text will also be accepted in Norway):		N/A

National Differences			
Clause	Requirement + Test	Result - Remark	Verdict

EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES			
Differences according to.....: EN 60950-1:2006+A11:2009			

	<p>“Utstyr som er koplet til beskyttelsesjord via nettplugg og/eller via annet jordtilkoplet utstyr – og er tilkoplet et kabel-TV nett, kan forårsake brannfare. For å unngå dette skal det ved tilkopling av utstyret til kabel-TV nettet installeres en galvanisk isolator mellom utstyret og kabel-TV nettet.” Translation to Swedish: ”Utrustning som är kopplad till skyddsjord via jordat vägguttag och/eller via annan utrustning och samtidigt är kopplad till kabel-TV nät kan i vissa fall medföra risk för brand. För att undvika detta skall vid anslutning av utrustningen till kabel-TV nät galvanisk isolator finnas mellan utrustningen och kabel-TV nätet.”</p>		N/A
1.7.5	<p><b>Add</b> the following paragraph to the existing SNC for <b>Denmark</b>: For CLASS II EQUIPMENT the socket outlet shall be in accordance with Standard Sheet DKA 1-4a.</p>		N/A
7.3	<p><b>Delete</b> the existing SNC for Norway and Sweden (based on NOTE 1 of IEC 60950-1:2005 + corr. 1). <b>Add</b> as new SNC (based on future NOTE 3 of IEC 60950-1:200X): In <b>Norway</b> and <b>Sweden</b>, for requirements see 1.2.13.14 and 1.7.2.1 of this annex.</p>		N/A

ZC	ANNEX ZC, NATIONAL CONDITIONS (EN)		N/A
1.5.1	<b>Sweden</b>	<b>Delete</b> the A-deviation.	N/A
1.7.2.1	<b>Denmark</b>	<b>Delete</b> the A-deviation.	N/A
1.7.5	<b>Denmark</b>	<b>Delete</b> the A-deviation.	N/A
5.1.7.1	<b>Denmark</b>	<b>Delete</b> the A-deviation.	N/A

1.5.1 TABLE: List of critical components						P
Object/part no.	Manufacturer/ trademark	Type/model	Technical data	Standard	Mark(s) of conformity <sup>1</sup> .	
Power Adapter (Optional)	Asian Power Devices Inc	DA-48Q12	L.P.S. I/P:100- 240Vac, 50- 60Hz,1.2A; O/P: 12Vdc, 4 A.	EN 60950-1: 2006+A11	TUV-GS	
	Asian Power Devices Inc	WA-36C12R	L.P.S. I/P: 100- 240V, 50-60Hz 1A MAX, O/P:12Vdc, 3A	EN 60950-1: 2006+A11	Nemko-GS	
	Various	Various	L.P.S. O/P:12Vdc, 3 A min.	EN 60950-1: 2006+A11	--	
Printed Wiring Boards	Various	Various	Min V-1, 105 degree C.	UL 94	UL	
Plastic Enclosure	SABIC	940A	V-1, 80 degree C.	UL 94	UL	
	Various	Various	HB or better, 60 degree C min.	UL 94	UL	
DC Fan (One provided)	ADDA	AD0405HB-G73	5Vdc, 0.25A, 6.7CFM	EN 60950-1: 2006+A11	TUV	
Hard Disk Drive (Max. Two provided) (Optional)	Various	Various	5Vdc, 1.05A; 12Vdc, 1.3A	EN 60950-1: 2006+A11	--	
Supplementary information:						
1. An asterisk indicates a mark that assures the agreed level of surveillance.						

1.6.2 TABLE: Electrical data (in normal conditions)							P
U (V)	I (A)	I rated (A)	P (W)	Fuse #	I fuse (A)	Condition/status	
12	2.4	3	28.8	--	--	Maximum normal load	
Supplementary information:							
Maximum normal load: The unit connects with computer via cable transfer data continuously. HDD were load test condition as below : HDD 5Vdc and 12Vdc were load 0.6A and 0.6A additional. Total HDD power load: 5Vdc was load 1.05A , 12Vdc was load 1.3A.							

2.10.3 and 2.10.4 TABLE: Clearance and creepage distance measurements							N/A
Clearance (cl) and creepage distance (cr) at/of/between:	U peak (V)	U r.m.s. (V)	Required cl (mm)	cl (mm)	Required cr (mm)	cr (mm)	
Supplementary information:							



2.10.5	TABLE: Distance through insulation measurements					N/A
Distance through insulation (DTI) at/of:		U peak (V)	U r.m.s. (V)	Test voltage (V)	Required DTI (mm)	DTI (mm)
Supplementary information:						

4.3.8	TABLE: Batteries								N/A	
The tests of 4.3.8 are applicable only when appropriate battery data is not available										
Is it possible to install the battery in a reverse polarity position?										
		Non-rechargeable batteries			Rechargeable batteries					
		Discharging		Un-intentional charging	Charging		Discharging		Reversed charging	
		Meas. current	Manuf. Specs.		Meas. current	Manuf. Specs.	Meas. current	Manuf. Specs.	Meas. current	Manuf. Specs.
Max. current during normal condition										
Max. current during fault condition										
Test results:										
- Chemical leaks										Verdict
- Explosion of the battery										
- Emission of flame or expulsion of molten metal										
- Electric strength tests of equipment after completion of tests										
Supplementary information:										

4.5	TABLE: Thermal requirements							P
Supply voltage (V) .....		12Vdc	12Vdc	--	--	--	—	
Ambient T <sub>min</sub> (°C) .....		See below	See below	--	--	--	—	
Ambient T <sub>max</sub> (°C) .....		See below	See below	--	--	--	—	
Maximum measured temperature T of part/at::			T (°C)				Allowed T <sub>max</sub> (°C)	



01.Room Ambient	22.9	40.0	--	--	--	--
02.BT1 body	37.1	54.2	--	--	--	105
03.U6 body	50.7	67.8	--	--	--	105
04.L9 body	40.8	57.9	--	--	--	105
05.L16 body	37.3	54.4	--	--	--	105
06.U3 body	46.9	64.0	--	--	--	105
07.U4 body	48.3	65.4	--	--	--	105
08.L6 body	47.2	64.3	--	--	--	105
09.T1 body	41.2	58.3	--	--	--	105
10.L4 body	41.3	58.4	--	--	--	105
11.HDD P4 body	39.4	56.5	--	--	--	105
12.HDD P3 body	37.8	54.9	--	--	--	105
13.Metal outside near P3	37.4	54.5	--	--	--	70
14.Plastic inside near P3	30.1	47.2	--	--	--	60
15. Plastic outside near P3	25.8	42.9	--	--	--	95
16.Bottom inside	32.6	49.7	--	--	--	60
17.Bottom outside	30.0	47.1	--	--	--	95
19.HDD outside	37.7	54.8	--	--	--	70
20.HDD inside	33.9	51.0	--	--	--	70

Supplementary information:

Temperature T of winding:	t <sub>1</sub> (°C)	R <sub>1</sub> (Ω)	t <sub>2</sub> (°C)	R <sub>2</sub> (Ω)	T (°C)	Allowed T <sub>max</sub> (°C)	Insulation class

Supplementary information:

HDD were load test condition as below :

HDD 5Vdc and 12Vdc were load 0.6A and 0.6A additional. Total HDD power load: 5Vdc was load 1.05A ,12Vdc was load 1.3A.

4.5.5	TABLE: Ball pressure test of thermoplastic parts			N/A
	Allowed impression diameter (mm) .....: ≤ 2 mm			—
Part	Test temperature (°C)		Impression diameter (mm)	

Supplementary information:

4.7	Table: Resistance to fire					P
Part	Manufacturer of material	Type of material	Thickness (mm)	Flammability class	Evidence	

--	--	--	--	--	--
Supplementary information:					
<ul style="list-style-type: none"> <li>- Circuit supplied by a limited power source complying with clause 2.5 and with components mounted on materials of Class V-1 or better.</li> <li>- See table 1.5.1.</li> </ul>					

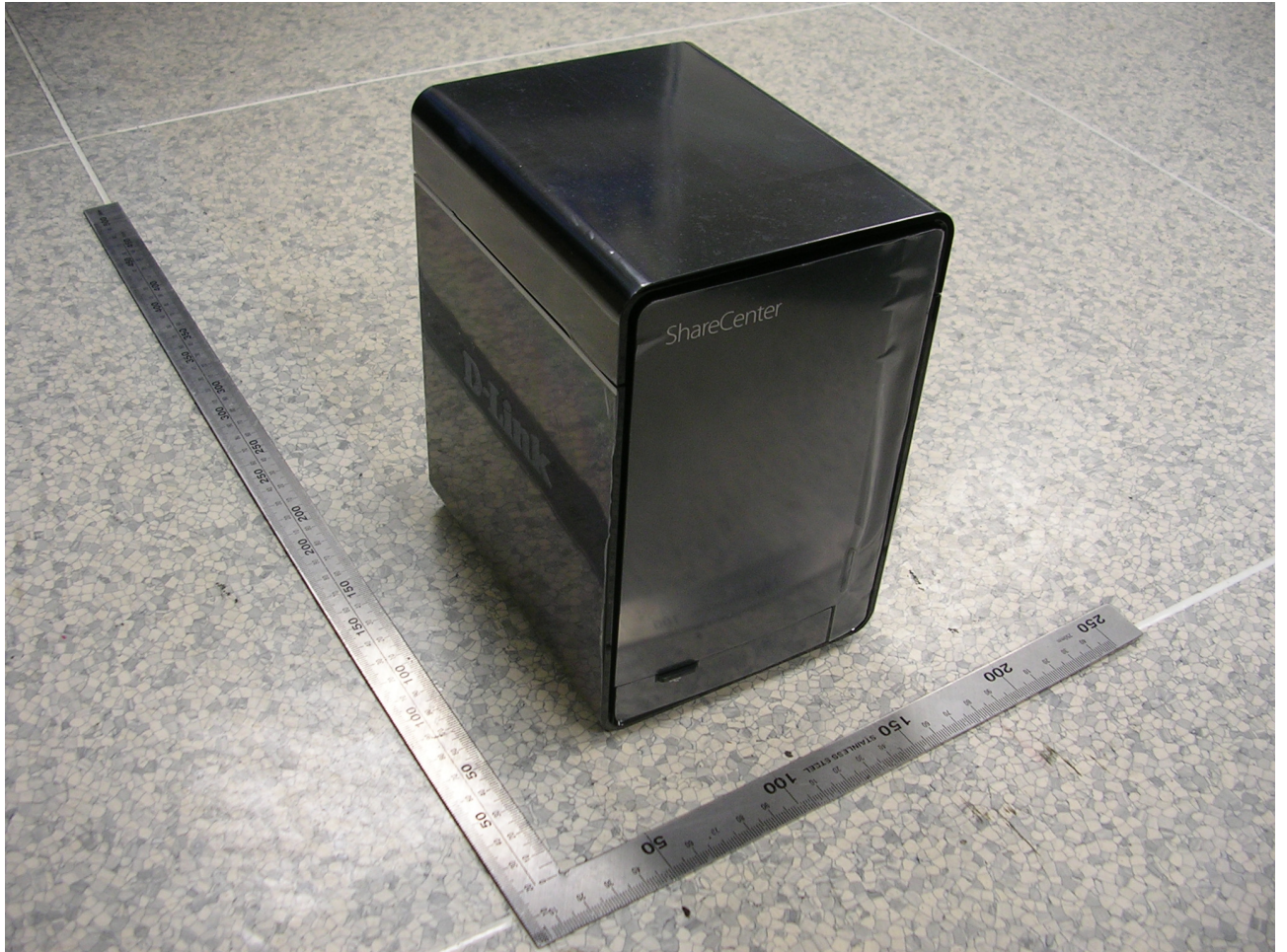
5.2	TABLE: Electric strength tests, impulse tests and voltage surge tests			N/A
Test voltage applied between:		Voltage shape (AC, DC, impulse, surge)	Test voltage (V)	Breakdown Yes / No
Supplementary information:				

5.3	TABLE: Fault condition tests					P
Ambient temperature (°C) .....		See below.			—	
Power source for EUT: Manufacturer, model/type, output rating .....		Asian Power Devices Inc., Model: WA-36C12R, I/P: 100- 240V, 50-60Hz 1A MAX,O/P:12Vdc, 3A			—	
Component No.	Fault	Supply voltage (V)	Test time	Fuse #	Fuse current (A)	Observation
1.All opening	Blocked	12Vdc	4hr	--	--	NC, NT, normal operating Ambient = 22.9 / 40.0 °C.
2.DC Fan	Locked	12Vdc	4hr	--	--	NC, NT, normal operating Ambient = 23.8 / 40.0 °C.
Supplementary information:						
HDD 5Vdc and 12Vdc were load 0.6A and 0.6A additional. Total HDD power load: 5Vdc was load 1.05A , 12Vdc was load 1.3A.						

## Enclosure Photographs

Supplement Id	Description
3-01	Front and top view of DNS-320
3-02	Front and top view of DNS-322
3-03	Rear and bottom view
3-04	Internal view
3-05	Adaptor

3-01. Front and top view of DNS-320



3-02. Front and top view of DNS-322

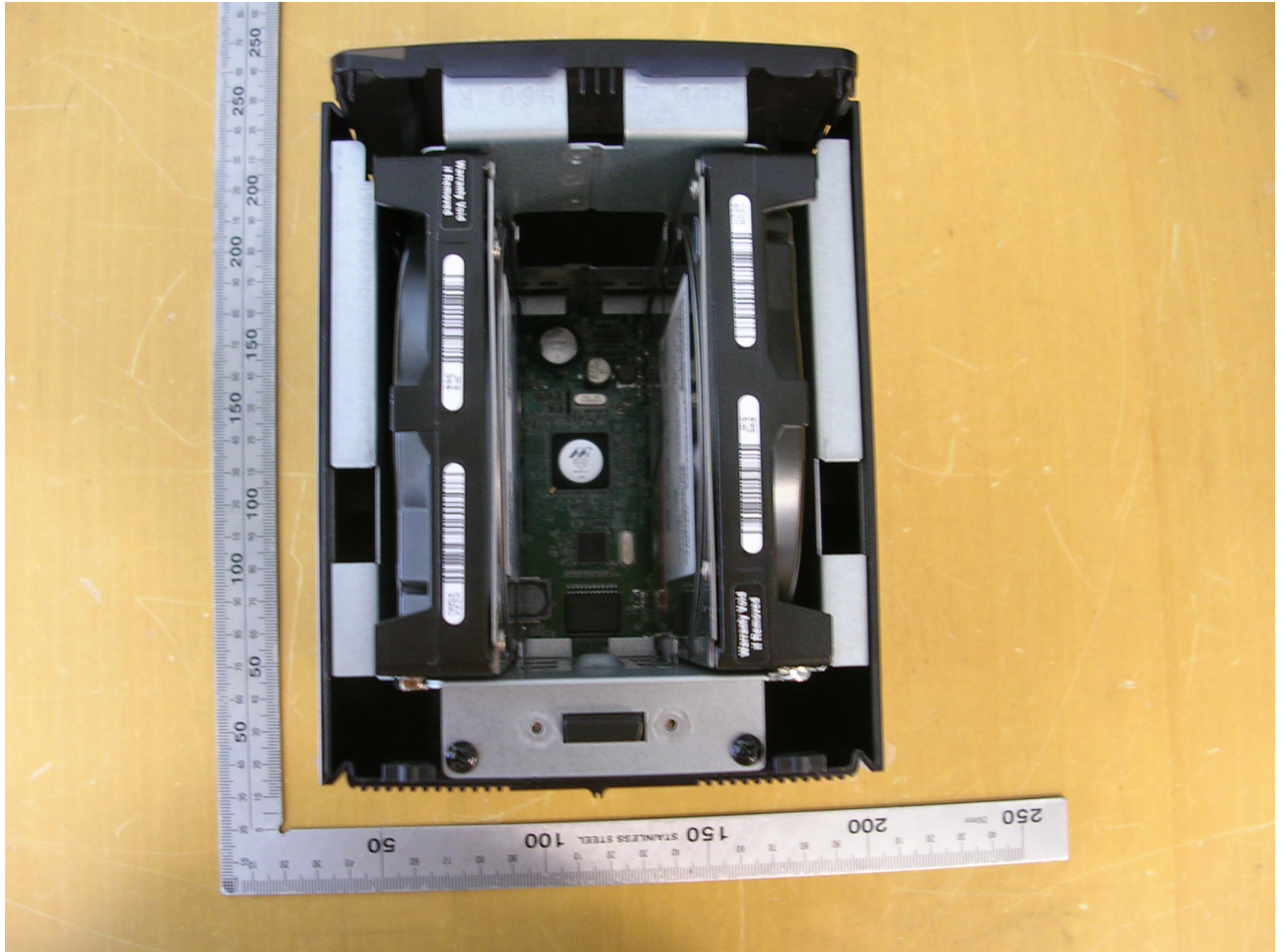




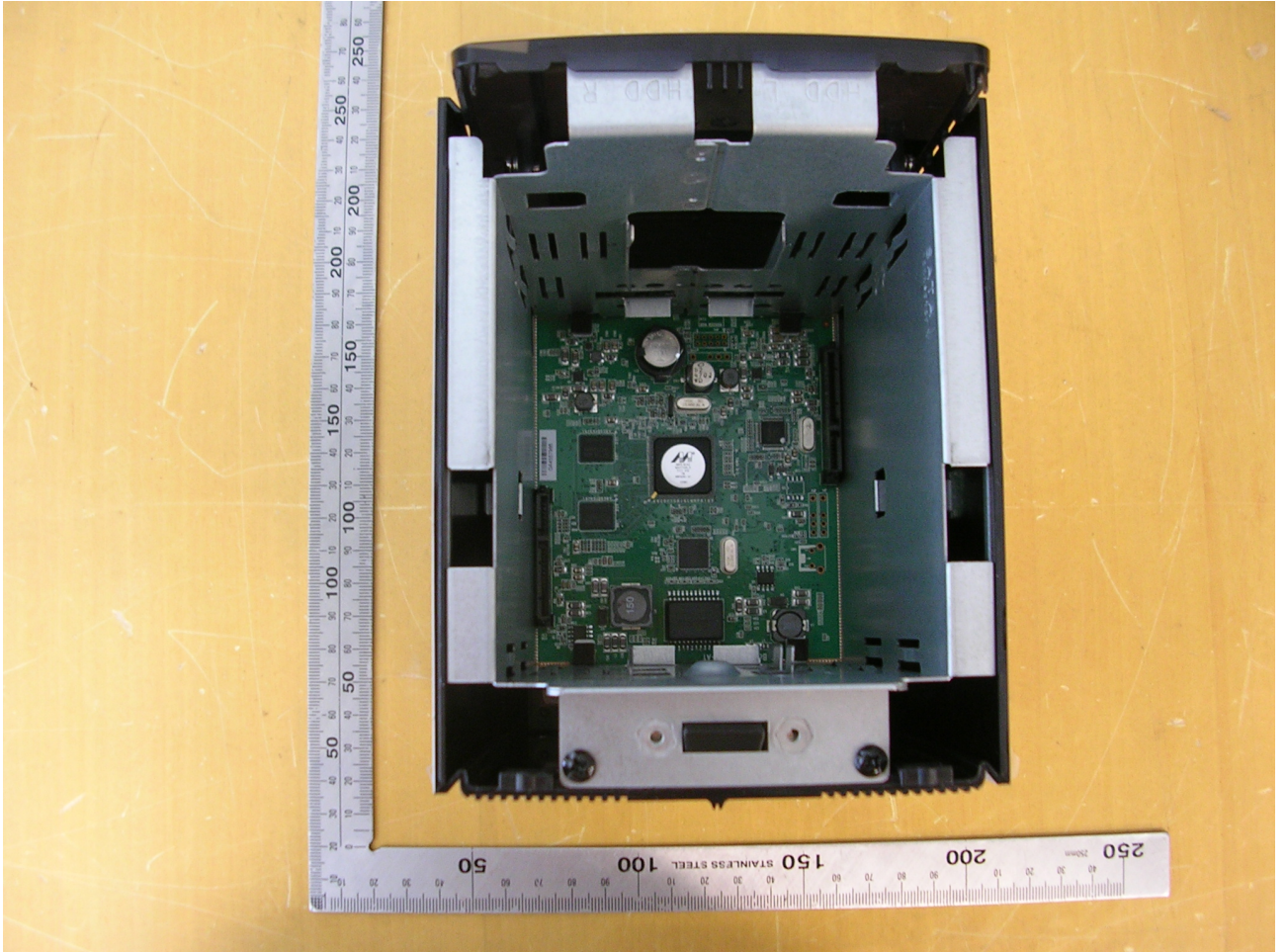
3-03. Rear and bottom view



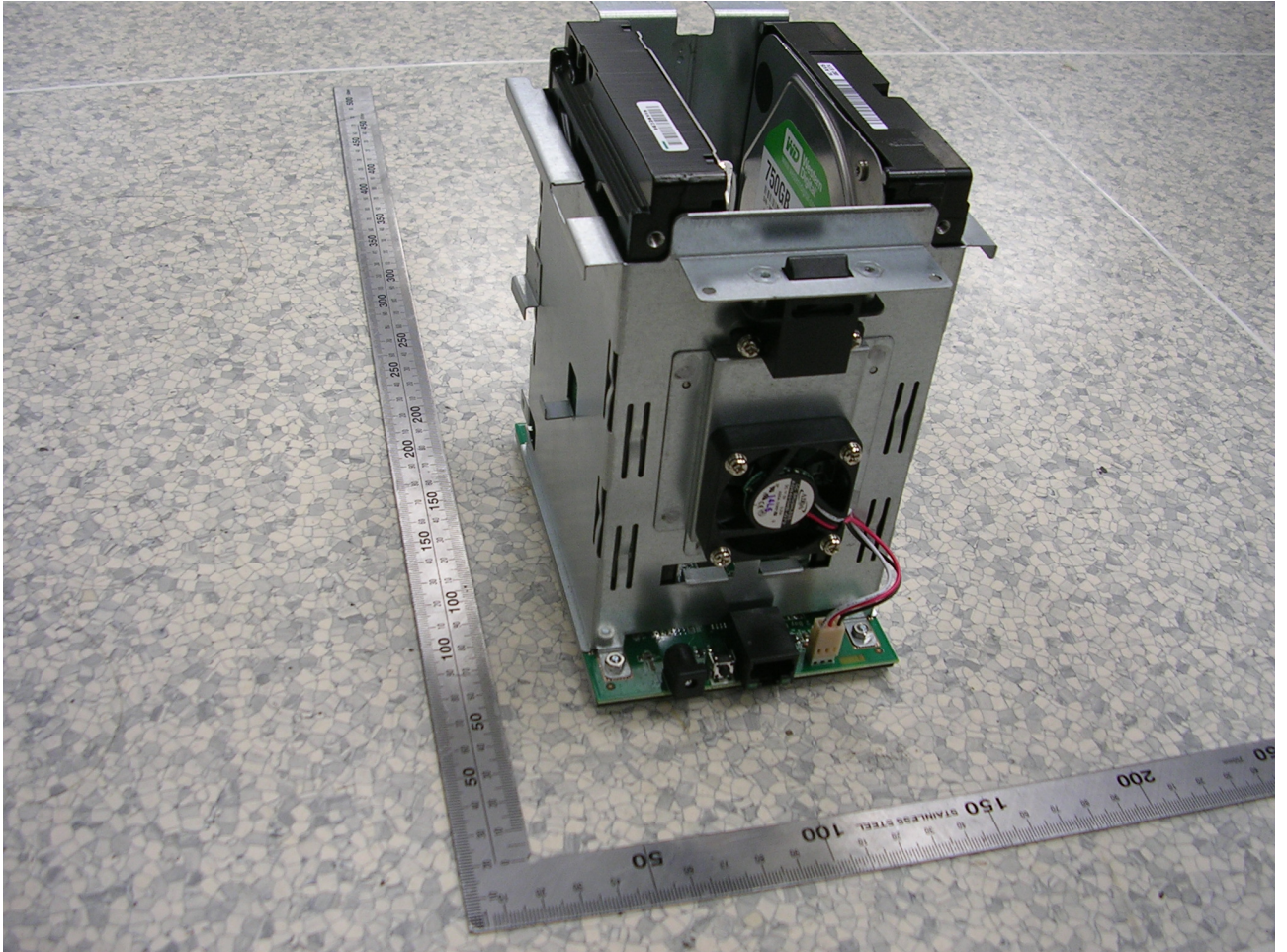
3-04. Internal view



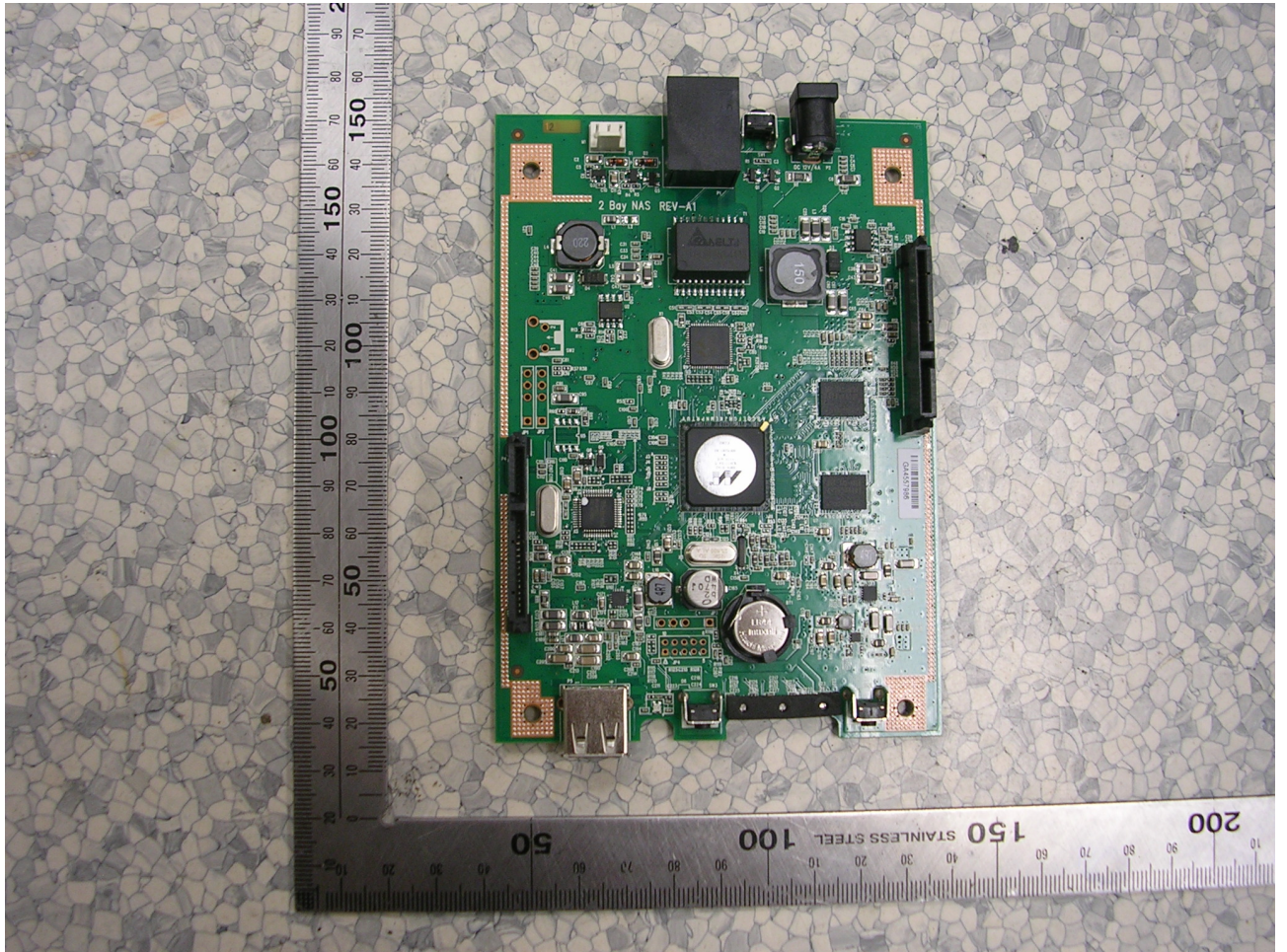




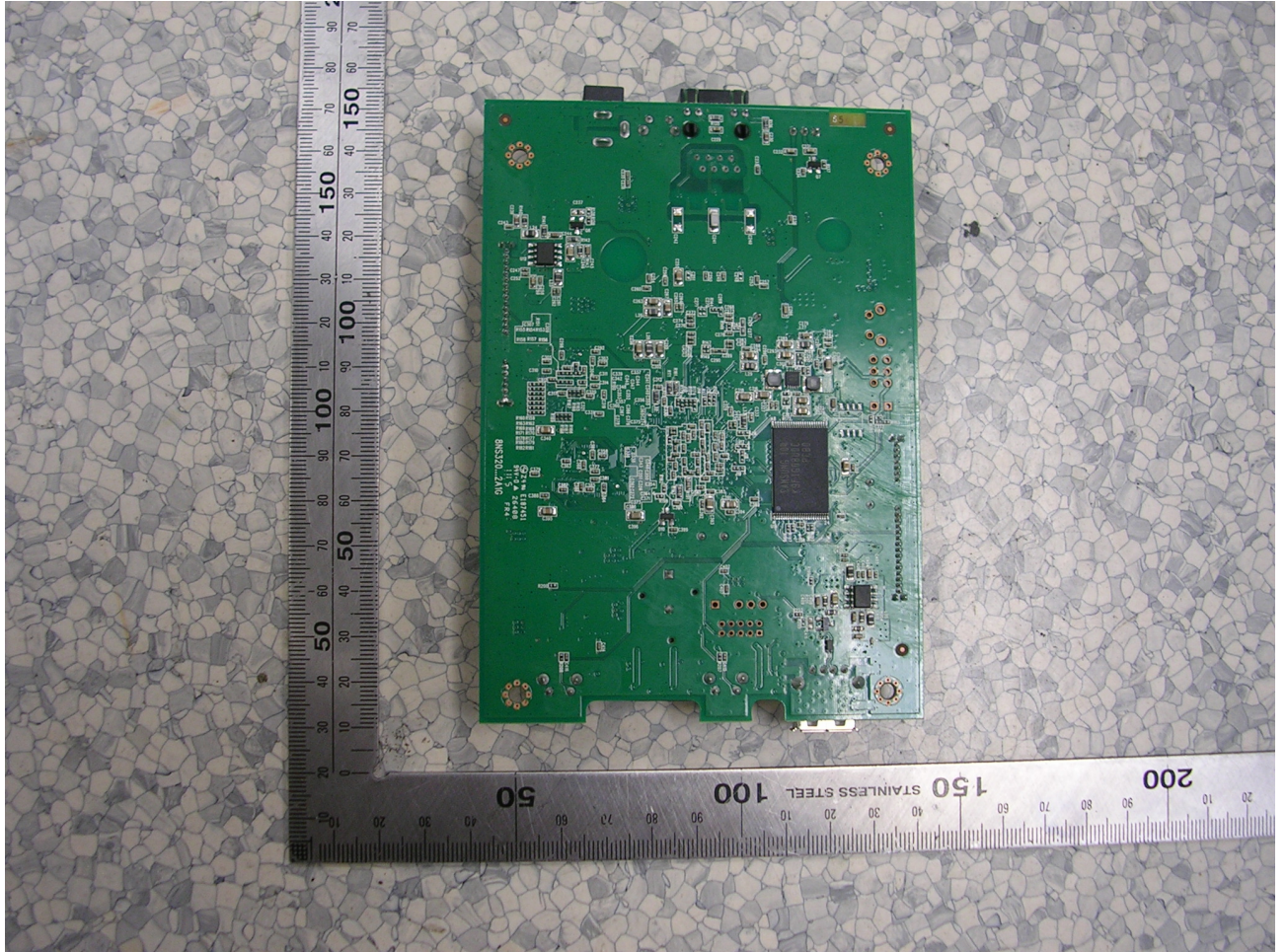














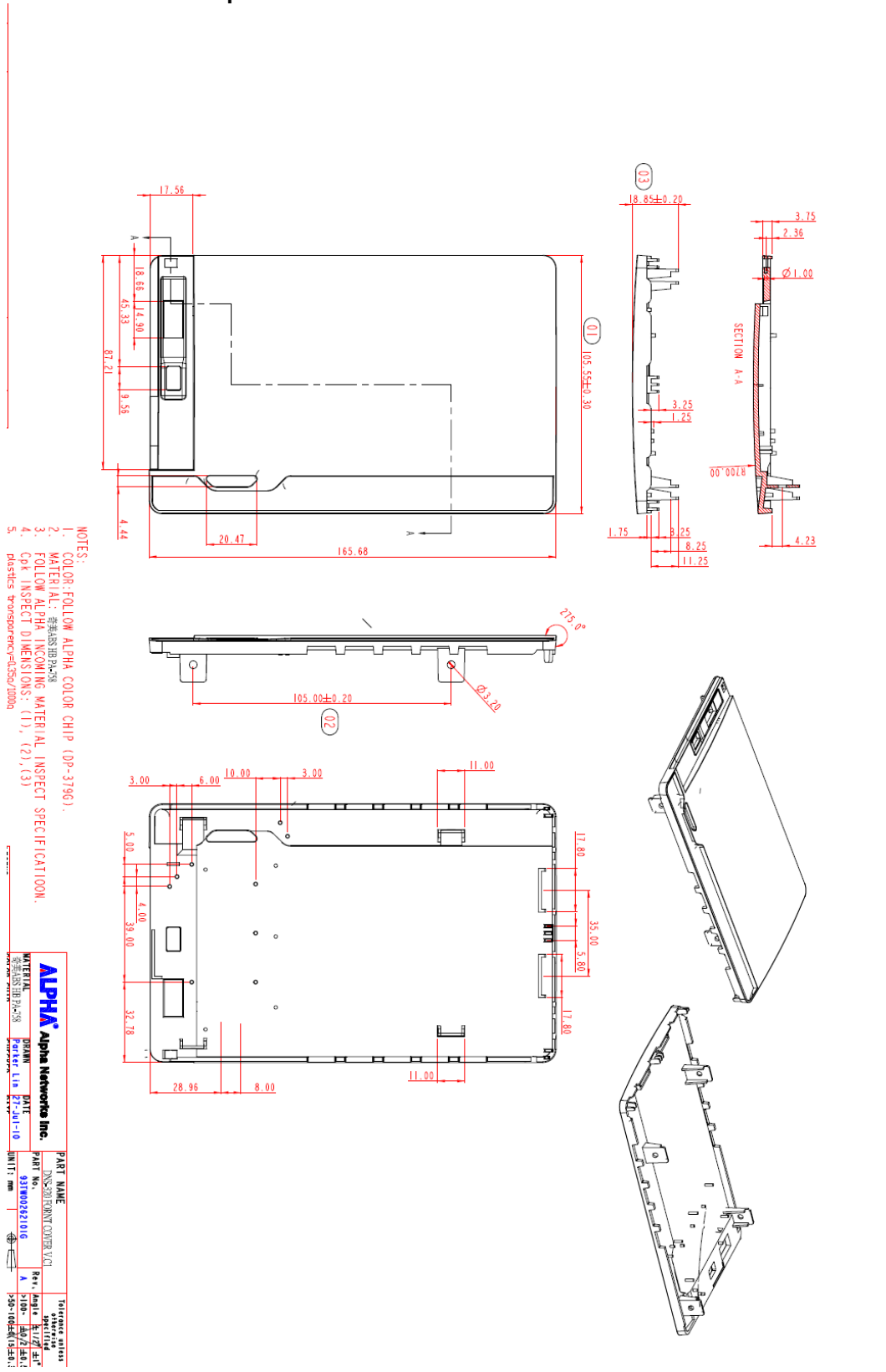
3-05 Adaptor



## Enclosure Diagrams

<b>Supplement Id</b>	<b>Description</b>
<b>4-01</b>	<b>Dimension of top cover for DNS-320.</b>
<b>4-02</b>	<b>Dimension of metal enclosure bottom cover.</b>

4-01 Dimension of top cover for DNS-320.



4-02 Dimension of bottom cover for DNS-320.

