

IEC SYSTEM FOR CONFORMITY TESTING
AND CERTIFICATION OF ELECTRICAL
EQUIPMENT (IECEE)
CB SCHEME

SYSTÈME CEI D'ESSAIS DE CONFORMITÉ
ET DE CERTIFICATION DES EQUIPEMENTS
ELECTRIQUE (IECEE)
METHODE OC

CB TEST CERTIFICATE CERTIFICAT D'ESSAI OC

Product

Produit

Name and address of the applicant

Nom et adresse du demandeur

Name and address of the manufacturer

Nom et adresse du fabricant

Name and address of the factory

Nom et adresse de l'usine

Rating and principal characteristics

Valeurs nominales et caractéristiques principales

Trade mark (if any)

Marque de fabrique (si elle existe)

Model/type Ref.

Ref. de type

Additional information (if necessary)

Information complémentaire (si nécessaire)

A sample of the product was tested and found
to be in conformity with

*Un échantillon de ce produit a été essayé et a été
considéré conforme à la*

as shown in the Test Report Ref. No.

which form part of this certificate

*comme indiqué dans le Rapport d'essais numéro
de référence*

qui constitue une partie de ce certificat

This CB Test Certificate is issued by the National Certification Body

Ce Certificat d'essai OC est établi par l'Organisme National de Certification

LCD Monitor

Acer Incorporated
8F, 88, Sec. 1, Hsin Tai Wu Rd.
HSICHIH, TAIPEI HSIEN 221, TAIWAN, R.O.C.

Acer Incorporated
8F, 88, Sec. 1, Hsin Tai Wu Rd.
HSICHIH, TAIPEI HSIEN 221, TAIWAN, R.O.C.

(See appendix for factories information)

Input Rating : DC 12V, 3A
Protection Class : III

Not shown

AL5XX
X = 0-9, A-Z or blank

For differences between the models, refer to the test report

PUBLICATION

IEC 60950:1991+A1+A2+A3+A4
inclusive CENELEC Common Modifications
National differences see test report

EDITION

12003279 001



TÜV Rheinland Japan Ltd.
3-19-5 Shin-Yokohama
222-0033 Japan

Date 11.09.2002

Signature

Dipl.-Ing. M. Lechtermann

Appendix to CB Certificate JPTUV-004843
Report Number: 12003279 001

PAGE 1 OF 1

Name and address of the manufacturer

Acer Incorporated
8F, 88, Sec. 1, Hsin Tai Wu Rd.
Hsichih, Taipei Hsien 221
Taiwan, R.O.C.

Name and address of the factory(ies)

Proview Technology (ShenZhen) Co., Ltd.

Building No. 21, North Shatakok
Free Trade Zone
ShenZhen, Guandong, P.R. China

GPI (Dong Guan) Computer Co., Ltd.

1st Row Yin Shan Rd., Yin Hwu Ind.
Area Qingxi Town
Dongguan, Guangdong
P.R. China

Proview Electronics (Taiwan) Co., Ltd.

13, Lane 195, Yong Fong Rd.
Tou Cheng City, Taipei 236
Taiwan, R.O.C.

Date: 11.09.2002



Dipl.-Ing. M. Lechtermann

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Yokohama Laboratory

Festo Building 5F
1-26-10, Hayabuchi, Tsuzuki-ku
Yokohama 224-0025, Japan

Tel. : (045) 592-1371
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TEST REPORT

IEC 950

Safety of information technology equipment

Report

Reference No.....: <12003279 001>

Compiled by (+ signature): *E. Chow*

Approved by (+ signature).....: *M. Kera*

Date of issue: Sep. 09, 2002

Contents.....: 84 pages

.....:

This report is based on a blank test report that was prepared by KEMA using information obtained from the TRF originator (see below).



Testing laboratory

Name.....: TÜV Rheinland Japan Ltd., Yokohama Laboratories

Address: Festo Bldg. 5F, 1-26-10 Hayabuchi, Tsuzuki-Ku,
Yokohama 224-0025, Japan

Testing location: TÜV Rheinland Japan Ltd., Yokohama Laboratories

.....:

Client

Name.....: ACER Incorporated

Address: 8F., 88, Sec. 1, Hsin Tai Wu Rd, Hsichih, Taipei Hsien 221,
Taiwan, R.O.C.

.....:

Test specification

Standard: IEC 60950:1991+A1:1992 + A2:1993 + A3:1995 + A4:1996
EN 60950:1992+A1:1993+A2:1993+A3:1995+A4:1997+A11:1997
EMKO-TSE(74-SEC)207/94, UL1950, C22.2 No.950, AS 3260

Test procedure: CB-scheme

Procedure deviation: Argentina, Austria, Australia, Belgium, Brazil, Canada, China, The
Czech Republic, Denmark, Finland, France, Germany, Greece,
Hungary, India, Ireland, Japan, Israel, Italy, The Republic of Korea,
The Netherlands, Norway, Poland, Portugal, Russian Federation,
Singapore, Slovakia, Slovenia, South Africa, Spain, Sweden,
Switzerland, United Kingdom, United States of America

Non-standard test method: N.A.

.....:

<p>Test Report Form/blank test report</p> <p>Test Report Form No. : I950__D/97-06</p> <p>TRF originator. : FIMKO</p> <p>Master TRF..... : reference No. I950 D, dated 97-02</p> <p>Copyright reserved to the bodies participating in the Committee of Certification Bodies (CCB) and/or the bodies participating in the CENELEC Certification Agreement (CCA).</p>	
<p>Test item</p> <p>Description..... : LCD Monitor</p> <p>Trademark : Not shown</p> <p>Model and/or type reference..... : AL5XX, (X=0-9, A-Z or blank)</p> <p>Manufacturer : Same as client</p> <p>Rating(s)..... : DC 12V, 3A</p> <p>..... :</p>	
<p>Particulars: test item vs. test requirements</p> <p>Equipment mobility..... : Movable equipment</p> <p>Operating condition : Continuous</p> <p>Tested for IT power systems : No mains connection</p> <p>IT testing, phase-phase voltage (V)..... : N.A.</p> <p>Class of equipment : Class III</p> <p>Mass of equipment (kg) : 5.07kg</p> <p>Protection against ingress of water : IPX0</p>	
<p>Test case verdicts</p> <p>Test case does not apply to the test object..... : N(A.)</p> <p>Test item does meet the requirement..... : P(ass)</p> <p>Test item does not meet the requirement : F(ail)</p> <p>..... :</p>	
<p>Testing</p> <p>Date of receipt of test item : Sep, 2002</p> <p>Date(s) of performance of test..... : Sep, 2002</p> <p>..... :</p>	
<p>General remarks</p> <p>This test report shall not be reproduced except in full without the written approval of the testing laboratory. The test results presented in this report relate only to the item tested.</p> <p>"(see remark #)" refers to a remark appended to the report.</p> <p>"(see appended table)" refers to a table appended to the report.</p> <p>Throughout this report a comma is used as the decimal separator.</p>	

Factory:

- 1) Proview Technology (ShenZhen) Co., Ltd
Building No. 21, North Shatakok Free Trade Zone, ShenZhen, Guandong, China
- 2) Proview Electronics (Taiwan) Co., Ltd.
13, Lane 195, Yong Fong Rd., Tou Cheng City, Taipei 236, Taiwan, R.O.C.
- 3) GPI (Dong Guan) Computer Co., Ltd.
1st Row Yin Shan Rd., Yin Hwu Ind. Area Qingxi Town, Dongguan City, Guangdong, China

Comments:

Brief description of the test sample:

The equipment model AL5XX is a LCD monitor for general office use. In model name, "XX" could be number 0 to 9 or letter A to Z for marketing purpose without safety relevant differences. Seven shapes (A, B, C, D, E, F G, H and I type) of enclosure and five main control PCB layouts were used in the equipment. The openings numbers of B type enclosure shape is less than C type. The G type enclosure shape is identical to E type except for front panel shape.

The external power adaptor is a CB Scheme tested (desk top type) which is evaluated according to EN60950:1992+A1+A2+A3+A4+A11 by TÜV Rheinland Japan Ltd. and Nemko AS, see appended table 1.5.1 for detail information.

Unless otherwise specified, all tests were performed on model AL5 to represent the other similar models. The test samples are pre-production without serial number.

Copy of the marking plate :

LCD Monitor

Model: AL5XX

Power; 12Vdc, 3A



LISTED L.T.E.
E134827

Test to Comply
With FCC Standards

FOR HOME OR OFFICE USE

This device complies with Part 15 of the FCC Rules.

Operation is subject to the following two conditions:

- (1) this device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

Acer Incorporated

8F, 88, Sec.1, Hsin Tai Wu Rd, Hsichih,

Taipei Hsien 221, Taiwan

IEC 950			
Clause	Requirement – Test	Result – Remark	Verdict

1	GENERAL		P
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1.5	Components		P
1.5.1	Comply with IEC 950 or relevant component standard	Components which were found to affect safety aspects comply with the requirements of this standard or within the safety aspects of the relevant IEC component standards. (see appended table)	P
1.5.2	Evaluation and testing 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.	P
	Dimensions (mm) of mains plug for direct plug-in	The equipment is not plug-in type.	N
	Torque and pull test of mains plug for direct plug-in; torque (Nm); pull (N)		N
1.5.3	Transformers	No transformer used except in approved power adaptor.	N
1.5.4	High voltage components (component; manufacturer; flammability)	No high voltage components used.	N
1.5.5	Interconnecting cables	Interconnection o/p cable to other device is carrying only SELV voltages on an energy level below 240VA. → Except the insulation material, there are no further requirements to the o/p interconnection cable.	P
1.5.6	Mains Capacitors	X-capacitor only used in approved power adaptor.	N

1.6	Power interface		N
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IEC 950			
Clause	Requirement – Test	Result – Remark	Verdict
1.6.1	Steady state input current	No connection to the mains supply. However the definition for highest load according to 1.2.2.1 for this equipment is the unit operated under full white pattern, max. brightness contrast, and max. sound output from speaker. Results see appended table.	N
	Current deviation during normal operating cycle	<+10% (for adaptor)	N
1.6.2	Voltage limit of hand-held equipment	This appliance is not a hand-held equipment.	N
1.6.3	Neutral conductor insulated from earth and body	No mains connection.	N
1.6.4	Components in equipment intended for IT power system	No mains connection.	N
1.6.5	Mains supply tolerance (V)	No mains connection.	N

1.7	Marking and instructions		P
1.7.1	Rated voltage (V)	DC 12V (no mains connection).	N
	Symbol of nature of supply for d.c.	DC symbol used (no mains connection).	N
	Rated frequency (Hz)	No mains connection.	N
	Rated current (A)	3A (no mains connection).	N
	Manufacturer	Acer Incorporated	P
	Trademark	Not shown	N
	Type/model	AL5XX (X=0-9, A-Z or blank)	P
	Symbol of Class II	Class III equipment.	N
	Certification marks	TÜV Rheinland GS mark, UL, CUL	N
1.7.2	Safety instructions	The users manual contains information for operation, installation, servicing, transport, storage and technical data.	P
1.7.3	Short duty cycles	Equipment is designed for continuous operation.	N

IEC 950			
Clause	Requirement – Test	Result – Remark	Verdict
1.7.4	Marking for voltage setting/frequency setting	No voltage/frequency setting.	N
1.7.5	Marking at power outlets	No outlet.	N
1.7.6	Marking at fuseholders	No fuse.	N
1.7.7.1	Protective earthing terminals	No mains connection.	N
1.7.7.2	Terminal for external primary power supply conductors	No mains connection.	N
1.7.8.1	Identification and location of switches and controls :	No switch used.	N
1.7.8.2	Colours of controls and indicators	The colours used for LED are indicating the following function: - green (On position) As green is reserved according to IEC 60073 for safe function or "On" conditions, these indicator does comply with this standard. In standby, suspend or OFF modes, the colour of LED changes to orange.	P
1.7.8.3	Symbols according to IEC 417	Marking for stand-by switch according IEC 60417, No. 5009-a (line half inside circle).	P
1.7.8.4	Figures used for marking	No indicators for different positions.	N
1.7.8.5	Location of markings and indications for switches and controls	The marking for the switch is located upon the switch knob.	P
1.7.9	Isolation of multiple power sources	No mains connection.	N
1.7.10	Instructions for installation to IT power system	No mains connection.	N
1.7.11	Instructions when protection relies on building installation	No mains connection.	N
1.7.12	Marking when leakage current exceeds 3,5 mA	No mains connection.	N
1.7.13	Indication at thermostats and regulating devices	No adjustable thermostats.	N
1.7.14	Language of safety markings/instructions	User manual and label is in English. Safety warning is in German. Version in other languages will be provided when national approval.	P
	Language	English	—

IEC 950			
Clause	Requirement – Test	Result – Remark	Verdict
1.7.15	Durability and legibility	The label was subjected to the permanence of marking test. The label was rubbed with cloth soaked with water for 15s and then again for 15s with the cloth soaked with petroleum spirit. After this test there was no damage to the label. The marking on the label did not fade. There was no curling nor lifting of the label edge.	P
1.7.16	Removable parts	No required markings placed on removable parts.	P
1.7.17	Warning text for replaceable lithium batteries	No lithium battery.	N
	Language		—
1.7.18	Operator access with a tool	Only SELV voltages and LCC inside.	N
1.7.19	Equipment for restricted access locations	No restricted access location.	N

2	PROTECTION FROM HAZARDS		P
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2.1	Protection against electric shock and energy hazards <i>The unit is supplied from an approved power supply adapter that provides SELV. Only SELV and limited current circuits inside the unit → no electrical shock or energy hazards.</i>		N
2.1.1	Access to energized parts		N
2.1.2	Protection in operator access areas		N
	Test by inspection		N
	Test with test finger		N
	Test with test pin		N
2.1.3.1	Insulation of internal wiring in an ELV circuit accessible to operator		N
	Working voltage (V); distance (mm) through insulation		N
2.1.3.2	Operator accessible insulation of internal wiring at hazardous voltage		N
2.1.4.1	Protection in service access areas		N

IEC 950			
Clause	Requirement – Test	Result – Remark	Verdict
2.1.4.2	Protection in restricted access locations		N
2.1.5	Energy hazard in operator access area		N
2.1.6	Clearances behind conductive enclosures		N
2.1.7	Shafts of manual controls		N
2.1.8	Isolation of manual controls		N
2.1.9	Conductive casings of capacitors		N
2.1.10	Risk of electric shock from stored charge on capacitors connected to mains circuit		N
	Time-constant (s); measured voltage (V)		—

2.2	Insulation <i>The unit is supplied from an approved power supply adapter that provides SELV. Only SELV and limited current circuits inside the unit → only operational insulation required (see also 5.4.4).</i>		N
2.2.1	Methods of insulation		N
2.2.2	Properties of insulating materials		N
2.2.3	Humidity treatment		N
	Humidity (%)		—
	Temperature (°C)		—
2.2.4	Requirements for insulation		N
2.2.5	Insulation parameters		N
2.2.6	Categories of insulation		N
2.2.7.1	General rules for working voltages		N
2.2.7.2	Clearances in primary circuits		N
2.2.7.3	Clearances in secondary circuits		N
2.2.7.4	Creepage distances		N
2.2.7.5	Electric strength tests		N
2.2.8.1	Bridging capacitors		N
2.2.8.2	Bridging resistors		N
2.2.8.3	Accessible parts		N

2.3	Safety extra-low voltage (SELV) circuits		P
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IEC 950			
Clause	Requirement – Test	Result – Remark	Verdict
2.3.1	Voltage (V) of SELV circuits under normal operating conditions and after a single fault	42.4V peak or 60Vdc are not exceeded in SELV circuit under normal operation or single fault condition.	—
2.3.2	Voltage (V) between any two conductors of SELV circuit(s) and for Class I equipment between any conductor of SELV circuit and equipment protective earthing terminal under normal operating conditions	Between any SELV circuits 42.4V peak or 60Vdc are not exceeded.	P
2.3.3	Voltage (V) of SELV in the event of a single failure of basic or supplementary insulation or of a component	Single fault did not cause excessive voltage in accessible SELV circuits. Limits of 71V peak and 120Vdc were not exceeded and SELV limits not for longer than 0.2 seconds.	—
	Method used for separation	Class III equipment.	N
2.3.4	Additional constructional requirements	IEC 60083 and IEC 60320 connectors are not used in SELV.	P
2.3.5	Connection of SELV circuits to other circuits	See 2.3.2 and 2.3.3. No direct connection between SELV and any primary circuits.	N
2.3.8	Construction of SELV circuits		N
2.3.9	SELV circuits connected to other circuits		N

2.4	Limited current circuits		P
2.4.2	Frequency (Hz)	The peak drop voltage was measured with a scope at a 2k Ω resistor. Results see appended table.	—
	Measured current (mA)	See above.	P
2.4.3	Measured voltage (V)	>450Vpeak	—
	Measured capacitance (µF)		N
2.4.4	Measured voltage (V)	<2360Vpeak	—
	Measured charge (µC)	<45µC	P
2.4.5	Measured voltage (V)		—
	Measured energy (mJ)		N

IEC 950			
Clause	Requirement – Test	Result – Remark	Verdict
2.4.6	Limited current circuit supplied from or connected to other circuits		P

2.5	Provisions for earthing	<i>Class III equipment.</i>	N
2.5.1	Class I equipment		N
	Warning label for service personnel		N
2.5.2	Protective earthing in Class II equipment		N
2.5.3	Switches/fuses in earthing conductors		N
2.5.4	Assured earthing connection for Class I equipment in systems comprising Class I and Class II equipment		N
2.5.5	Green/yellow insulation		N
2.5.6	Continuity of earth connections		N
2.5.7	Making and breaking of protective earthing connections		N
2.5.8	Disconnection protective earthing connections		N
2.5.9	Protective earthing terminals for fixed supply conductors or for non-detachable power supply cords		N
2.5.10	Corrosion resistance		N
2.5.11	Resistance (Ω) of protective earthing conductors $\leq 0,1 \Omega$		N
	Test current (A)		—

2.6	Disconnection from primary power		N
	<i>No supply from primary power.</i>		
2.6.1	General requirements		N
2.6.2	Type of disconnect device		N
2.6.3	Disconnect device in permanently connected equipment		N
2.6.4	Parts of disconnect device which remain energized		N
2.6.5	Switches in flexible cords		N
2.6.6	Disconnection of both poles simultaneously for single-phase equipment		N



IEC 950			
Clause	Requirement – Test	Result – Remark	Verdict
2.6.7	Disconnection of all phase conductors of supply in three-phase equipment		N
2.6.8	Marking of switch acting as disconnect device		N
2.6.9	Installation instructions if plug on power supply cord acts as disconnect device		N
	Language		—
2.6.11	Interconnected equipment		N
2.6.12	Multiple power sources		N

2.7	Overcurrent and earth fault protection in primary circuits <i>With SELV supply from approved power supply adapter, no primary circuits inside the LCD monitor → N/A</i>		N
2.7.1	Basic requirements		N
2.7.2	Protection against faults not covered in 5.4		N
2.7.3	Short-circuit backup protection		N
2.7.4	Number and location of protective devices		N
2.7.5	Protection by several devices		N
2.7.6	Warning to service personnel		N

2.8	Safety interlock <i>No operator accessible areas which presents hazards in the meaning of this standard.</i>		N
2.8.2	Design		N
2.8.3	Protection against inadvertent reactivation		N
2.8.4	Reliability		N
2.8.5	Overriding an interlock		N
2.8.6.1	Contact gap (m)		N
2.8.6.2	Switch performing 50 cycles		N
2.8.6.3	Electric strength test: test voltage (V)		N
2.8.7	Protection against overstress		N

IEC 950			
Clause	Requirement – Test	Result – Remark	Verdict
2.9	Clearances, creepage distances and distances through insulation <i>The unit is supplied from an approved AC adapter that provides SELV. Only SELV and limited current circuits inside the unit → only operational insulation required..</i>		N
	Nominal voltage (V)		—
	General		N
2.9.2	Clearances		N
2.9.2.1	Clearances in primary circuits		N
2.9.2.2	Clearances in secondary circuits		N
2.9.3	Creepage distances		N
	CTI tests		—
2.9.4.1	Minimum distances through insulation		N
2.9.4.2	Thin sheet material		N
	Number of layers (pcs)		N
	Electrical strength test: test voltage (V)		N
2.9.4.3	Printed boards		N
	Distance through insulation		N
	Electric strength test at voltage (V) for thin sheet insulating material		N
	Number of layers (pcs)		N
2.9.4.4	Wound components without interleaved insulation		N
	Number of layers (pcs)		N
	Two wires in contact inside component; angle between 45° and 90°		N
	Routine testing for finished component		N
2.9.5	Distances (mm) on coated printed boards		N
	Routine testing for electric strength		N
2.9.6	Enclosed and sealed parts		N
	Temperature T1 (°C)		N
	Humidity %		N
2.9.7	Spacings filled by insulating compound		N
	Temperature T1 (°C)		N
	Humidity %		N

IEC 950			
Clause	Requirement – Test	Result – Remark	Verdict
2.9.8	Component external terminations		N
2.9.9	Insulation with varying dimensions		N
2.10	Interconnection of equipment		P
2.10.1	General requirements	See below	N
2.10.2	Type of interconnection circuits	Interconnection circuits of SELV through sec o/p cable. No ELV interconnection circuits.	P
2.10.3	ELV circuits as interconnection circuits	No ELV interconnection.	N
2.11	Limited power source		P
	Use of limited power source	The adaptor of Li Shin and Linearity had been tested as limited power source by TÜV Rheinland Japan Ltd. and Nemko under CB Ref. Certif. No. JPTUV-001833 and No 8389 / A1 and . The adaptor of Delta is tested as limited power source. Results see appended table.	P
3	WIRING, CONNECTIONS AND SUPPLY		P
3.1	General		P
3.1.1	Cross-sectional area of internal wiring/interconnecting cables	All internal wires are UL recognized wiring that is PVC insulated, rated VW-1, min. 80°C, 300V. Internal wiring gauge is suitable for current intended to be carried.	P
	Protection of internal wiring and interconnecting cables	No internal wire for primary power distribution.	N
3.1.2	Wireways	Wires do not touch sharp edges and heatsinks.	P

IEC 950			
Clause	Requirement – Test	Result – Remark	Verdict
3.1.3	Fixing of internal wiring	Internal wires with only basic isolation are routed so that they are not close to any live bare components. The wires are secured by solder pins and quick connect terminals so that a loosening of the terminal connection is unlikely.	P
3.1.4	Fixing of uninsulated conductors	Securely held on PCB. No hazard.	P
3.1.5	Insulation of internal wiring	The insulation of the individual conductors are suitable for the application and the working voltage. For the insulation material see 3.1.1.	P
3.1.6	Wires coloured green/yellow only for protective earth connection	See 2.5.5.	N
3.1.7	Fixing of beads and similar ceramic insulators	Not used.	N
3.1.8	Required electrical contact pressure	Only operational insulation inside.	N
3.1.9	Reliable electrical connections	All current carrying connections are metal to metal.	P
3.1.10	End of stranded conductor	No risk of stranded conductors coming loose.	P
3.1.11	Use of spaced thread screws/thread-cutting screws	No self tapping screws are used.	P

3.2	Connection to primary power <i>No direct connection to primary power.</i>		N
3.2.1	Type of connection	Appliance inlet on approved adapter.	N
	Design of product with more than one supply connection		N
3.2.2	Provision for permanent connection		N
	Size (mm) of cables and conduits		N
3.2.3	Appliance inlet	On approved adapter.	N

IEC 950			
Clause	Requirement – Test	Result – Remark	Verdict
3.2.4	Type and cross-sectional area (mm ²) of power supply cord	No power cord provided for CB testing. An approved cord set will be provided when submitted for national approval.	N
3.2.5	Cord anchorage		N
	Test: 25 times; 1 s; pull (N)		—
	Longitudinal displacement ≤ 2 mm		N
3.2.6	Protection of power supply cord		N
3.2.7	Cord guard <i>see clause 3.2.1</i>		N
	D (mm)		—
	Test: mass (g)		—
	Radius of curvature of the cord ≤ 1,5 D		N
3.2.8	Supply wiring space		N
3.3	Wiring terminals for external power supply conductors <i>No connection to primary power.</i>		N
3.3.1	Terminals		N
3.3.2	Special non-detachable cord		N
	Type of connection		—
	Pull test at 5 N		N
3.3.3	Screws and nuts		N
3.3.4	Fixing of conductors		N
3.3.5	Connection of connectors		N
3.3.6	Size of terminals		N
	Nominal thread diameter (mm)		N
3.3.7	Protection against damage of conductors		N
3.3.8	Terminal location		N
3.3.9	Test with 8 mm stranded wire		N
4	PHYSICAL REQUIREMENTS		P
4.1	Stability and mechanical hazards		P
4.1.1	Stability tests		P

IEC 950			
Clause	Requirement – Test	Result – Remark	Verdict
	Angle of 10°	The appliance is of a stable mechanical construction and does not overbalance when tilted to an angle of 10° from its normal upright position.	P
	Test: force (N)	Not floor standing.	N
4.1.2	Protection against personal injury	No moving part.	P
4.1.3	Warning and means provided for stopping the moving part	No moving part.	N
4.1.4	Edges and corners	Edges and corners of the enclosure are rounded.	P
4.1.5	Enclosure of a high pressure lamp	No lamp with cold pressure of 0.2MPa or hot pressure of 0.4MPa.	N
4.2	Mechanical strength and stress relief <i>As there are no hazardous voltages present in the unit or other hazards foreseeable, the tests of these clauses were not performed but replaced by a construction review only.</i>		N
4.2.1	General		N
4.2.2	Internal enclosures 30 N ± 3 N; 5 s		N
4.2.3	External enclosures 250 N ± 10 N; 5 s		N
4.2.4	Steel ball tests		N
	Fall test		N
	Swing test		N
4.2.5	Drop test		N
4.2.6	Heat test for enclosures of moulded or formed thermoplastic materials: 7 h; T (°C)		N
4.2.7	Compliance criteria		N
4.2.8	Mechanical strength of cathode ray tubes		N
4.3	Construction details		P
4.3.1	Changing of setting for different power supply voltages		N
4.3.2	Adjustment of accessible control devices	None that would cause hazard.	P