



Ref. Certif. No.

JPTUV-059031

IEC SYSTEM FOR MUTUAL RECOGNITION OF TEST
CERTIFICATES FOR ELECTRICAL EQUIPMENT
(IECEE) CB SCHEME

SYSTEME CEI D'ACCEPTATION MUTUELLE DE
CERTIFICATS D'ESSAIS DES EQUIPEMENTS
ELECTRIQUES (IECEE) METHODE OC

CB TEST CERTIFICATE

CERTIFICAT D'ESSAI OC

Product
Produit

Projector

Name and address of the applicant
Nom et adresse du demandeur

NEC Display Solutions, Ltd.
686-1 Nishioi, Oi-machi
Ashigarakami-gun, Kanagawa, 258-8533 JAPAN

Name and address of the manufacturer
Nom et adresse du fabricant

NEC Display Solutions, Ltd.
686-1 Nishioi, Oi-machi
Ashigarakami-gun, Kanagawa, 258-8533 JAPAN

Name and address of the factory
Nom et adresse de l'usine

SUZHOU SHIN-EI SANGYO CO., LTD.
No. 158-106, 108,
Huashan Road, New District Suzhou, Jiangsu, China 215011, P.R. China

Ratings and principal characteristics
Valeurs nominales et caractéristiques principales

AC 100-240V; 50/60Hz; 1) 3.5-1.5A; 2) 3.9-1.7A; 3) 3.8-1.6A
AC 200-240V; 50/60Hz; 4) 1.7A; 5) 1.9A
Class I

Trademark (if any)
Marque de fabrique (si elle existe)

NEC

Type of Manufacturer's Testing Laboratories used
Type de programme du laboratoire d'essais constructeur

N/A

Model / Type Ref.
Ref. de type

1) NP-UM301X, NP-UM301W 2) NP-UM352W
3) NP-UM361X, NP-UM361XiK, NP-UM351W, NP-UM351WiK
4) NP-UM301X+, NP-UM301W+
5) NP-UM361X+, NP-UM351W+, NP-UM352W+
For model differences, refer to the test report.

Additional information (if necessary may also be
reported on page 2)
Les informations complémentaires (si nécessaire,
peuvent être indiqués sur la 2^{ème} page)

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

IEC 60950-1:2005+A1
National differences see test report

As shown in the Test Report Ref. No. which forms part
of this Certificate
Comme indiqué dans le Rapport d'essais numéro de
référence qui constitue partie de ce Certificat

11038456 001

This CB Test Certificate is issued by the National Certification Body
Ce Certificat d'essai OC est établi par l'Organisme National de Certification



TÜVRheinland®

TÜV Rheinland Japan Ltd.
Global Technology Assessment Center
4-25-2 Kita-Yamata, Tsuzuki-ku
Yokohama 224-0021 Japan
Phone + 81 45 914-3888
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Mail: info@jpn.tuv.com
Web: www.tuv.com

Date:

26.09.2014

Signature:

Dipl.-Ing. F. Stöelzel



Test Report issued under the responsibility of:



TEST REPORT IEC 60950-1 Information technology equipment – Safety – Part 1: General requirements	
Report Number	11038456 001
Date of issue	September 25, 2014
Total number of pages	89
CB Testing Laboratory	TÜV Rheinland Taiwan Ltd., Taichung Laboratory
Address	No. 9, Ln. 36, Sec. 3, Minsheng Rd., Daya District, Taichung City 428, Taiwan
Applicant's name	NEC Display Solutions Ltd.
Address	686-1 Nishioi, Oi-machi Ashigarakami-gun, Kanagawa, 258-8533 JAPAN
Manufacturer's name	Same as applicant
Address	Same as applicant
Test specification:	
Standard	IEC 60950-1:2005 (Second Edition) + Am 1:2009
Test procedure	CB Scheme
Non-standard test method	N/A
Test Report Form No.	IEC60950_1C
Test Report Form(s) Originator	SGS Fimko Ltd
Master TRF	Dated 2012-08
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If this Test Report Form is used by non-IECEE members, the IECEE/IEC logo and the reference to the CB Scheme procedure shall be removed.	
This report is not valid as a CB Test Report unless signed by an approved CB Testing Laboratory and appended to a CB Test Certificate issued by an NCB in accordance with IECEE 02.	
Test item description	Projector
Trade Mark	NEC
Manufacturer	See manufacturer above.
Model/Type reference	Refer to pages 6 and 7
Ratings	Refer to pages 6 and 7

Testing procedure and testing location:		
☒	CB Testing Laboratory:	TÜV Rheinland Taiwan Ltd., Taichung Laboratory
Testing location/ address..... :		No. 9, Ln. 36, Sec. 3, Minsheng Rd., Daya District, Taichung City 428, Taiwan.
☐	Associated CB Laboratory:	
Testing location/ address..... :		
Tested by (name + signature)..... :		<i>Stefan W.</i>
Approved by (name + signature)		<i>Jade Chen</i>
☐	Testing procedure: TMP	
Testing location/ address..... :		
Tested by (name + signature)..... :		
Approved by (name + signature)		
☐	Testing procedure: WMT	
Testing location/ address..... :		
Tested by (name + signature)..... :		
Witnessed by (name + signature)..... :		
Approved by (name + signature)		
☐	Testing procedure: SMT	
Testing location/ address..... :		
Tested by (name + signature)..... :		
Approved by (name + signature)		
Supervised by (name + signature)..... :		
☐	Testing procedure: RMT	
Testing location/ address..... :		
Tested by (name + signature)..... :		
Approved by (name + signature)		
Supervised by (name + signature)..... :		

List of Attachments (including a total number of pages in each attachment):

- Photo documentation
- National Differences
- Measurement Section

Total number of pages in each attachment is indicated in each individual attachment.

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

All applicable tests as described in Test Case and Measurement Sections were performed.

- The load conditions used during testing as below:
 - video signal provided
 - full raster
 - maximum brightness and contrast
 - continuous operation
 - maximum volume for speaker
 - Each USB 2.0 port with 2.5 W dummy load.
- As client's request, this equipment operating up to altitudes 5000 m was considered, the required clearance multiplied by altitude correction factor, 1.48 according to the Table A.2 of IEC 60664-1:1992 +A1:2000 +A2:2002 standard, see table 2.10.3 and 2.10.4.
- The equipment provided ceiling mounting function and complied with loading test according to sub-clause 4.2.10.
- Unless special specified, all tests were performed on model NP-UM352W+ to represent other similar models.

Testing location:

All tests as described in Test Case and Measurement Sections were performed at the laboratory described on page 2.

Summary of compliance with National Differences**List of countries addressed:**

EU Group Differences, EU Special National Conditions, CA, CN*, DE, FI, IL, KR, US.

Explanation of used codes: CA = Canada, CN = China, DE = Germany, FI = Finland, IL = Israel, KR = Republic of Korea, US = United States.

* National difference to IEC 60950-1:2005 evaluated.

☒ The product fulfils the requirements of EN 60950-1:2006/A11:2009/A1:2010/A12:2011

Copy of marking plate

The artwork below may be only a draft. The use of certification marks on a product must be authorized by the respective NCBs that own these marks.

(Additional requirements for markings. See 1.7 NOTE)

NEC MODEL No.NP-UM352W 100-240V~ 50/60Hz 3.9-1.7A

CAUTION	: TO PREVENT ELECTRIC SHOCK, DO NOT OPEN TOP COVER, NO USER-SERVICEABLE PARTS INSIDE.
ATTENTION	: AFIN DE PREVENIR UN CHOC ELECTRIQUE NE PAS ENLEVER LE COUVERCLE S'ADRESSER A UN REPARATEUR COMPETENT.
ВНИМАНИЕ	: ВО ИЗБЕЖАНИЕ УДАРА ЭЛЕКТРИЧЕСКИМ ТОКОМ НЕ ОТКРЫВАЙТЕ ВЕРХНЮЮ КРЫШКУ. ВНУТРИ НЕТ ДЕТАЛЕЙ, ОБСЛУЖИВАЕМЫХ ПОЛЬЗОВАТЕЛЕМ.
주의	: 전기충격 방지를 위해 캐비닛을 열지 마십시오. 내부에는 사용자를 위한 서비스가능 부품이 들어있지 않습니다.
WARNING	: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.
AVERTISSEMENT	: POUR EVITER UN FEU OU UN RISQUE D' ELECTROCUTION NE PAS EXPOSER CET ENSEMBLE A LA PLUIE OU A L'HUMIDITE.
ПРЕДУПРЕЖДЕНИЕ	: ДЛЯ СНИЖЕНИЯ РИСКА ВОЗГОРАНИЯ ИЛИ УДАРА ЭЛЕКТРИЧЕСКИМ ТОКОМ НЕ ПОДВЕРГАЙТЕ ДАННОЕ ИЗДЕЛИЕ ВОЗДЕЙСТВИЮ ДОЖДЯ ИЛИ ВЛАГИ.
경고	: 화재나 전기충격 위험을 줄이려면 비나 습기에 제품을 노출시키지 마십시오.
CAUTION	: SEE INSTRUCTION MANUAL FOR LAMP REPLACEMENT.
HINWEIS	: ZUM AUSWECHSELN DER LAMPE BEDIENUNGSANLEITUNG BEACHTEN.
ВНИМАНИЕ	: ПРИ ЗАМЕНЕ ЛАМПЫ СМОТРИТЕ ИНСТРУКЦИЮ ПО ЭКСПЛУАТАЦИИ.
주의	: 램프 교환 시 안내책자를 살펴 보십시오.

제품명: Projector
 모델명: NP-UM352W
 제조/국가: SUZHOU SHIN-EI SANGYO CO., LTD/CHINA
 입력전력: AC100-240V~, 50/60Hz, 3.9-1.7A
 생산일: 일련번호에 표기
 인증 서비스 센터 전화 번호: 080-022-1155 (호성 ITX주식회사)
 *본 라벨과 전화번호는 국내 규정 내에서 적절한 목적으로만 사용되어야 합니다.



XU100034-13012
 XXXXXXXXXXXXXXXX

T41K5661 G



Self Declaration - Conforming to
 IS 13252(Part 1): 2010, R-41005878

Tegangan dan Frekuensi: 100-240V~ 50/60Hz
 Produksi China

Contact address for EMEA
 NEC Display Solutions Europe GmbH
 Landshuter Allee 12-14
 80637 Munich, Germany

THIS CABINET IS CONSTRUCTED OF PLASTIC (PC).

NEC Display Solutions, Ltd.
 4-28, Mita 1-chome, Minato-ku, Tokyo, Japan

MADE IN CHINA

Note: 1) The model name of above representative label can be NP-UM361X, NP-UM351W, NP-UM361XiK and NP-UM351WiK with input current rating 3.8 – 1.6 A.

2) The model name of above representative label can be NP-UM301X and NP-UM301W with input current rating 3.5 – 1.5 A.

3) The model name of above representative labels can be NP-UM301X+ and NP-UM301W+ with input rating 200-240 Vac, 50/60 Hz, 1.7 A

4) The model name of above representative label can be NP-UM361X, NP-UM351W+ and NP-UM352W+ with input rating 200-240 Vac, 50/60 Hz, 1.9 A

Test item particulars:	
Equipment mobility.....:	☒ movable ☐ hand-held ☐ transportable ☒ stationary ☐ for building-in ☐ direct plug-in
Connection to the mains	☒ pluggable equipment ☒ type A ☐ type B ☐ permanent connection ☒ detachable power supply cord ☐ non-detachable power supply cord ☐ not directly connected to the mains
Operating condition.....:	☒ continuous ☐ rated operating / resting time:
Access location	☒ operator accessible ☐ restricted access location
Over voltage category (OVC)	☐ OVC I ☒ OVC II ☐ OVC III ☐ OVC IV ☐ other:
Mains supply tolerance (%) or absolute mains supply values	+10 and -10
Tested for IT power systems	☒ Yes ☐ No
IT testing, phase-phase voltage (V)	230 V
Class of equipment	☒ Class I ☐ Class II ☐ Class III ☐ Not classified
Considered current rating of protective device as part of the building installation (A)	20
Pollution degree (PD)	☐ PD 1 ☒ PD 2 ☐ PD 3
IP protection class	IPX0
Altitude during operation (m)	Up to 5000
Altitude of test laboratory (m)	Less than 2000
Mass of equipment (kg)	Approx. 6.0
Possible test case verdicts:	
- test case does not apply to the test object	N/A (or N)
- test object does meet the requirement.....	P (Pass)
- test object does not meet the requirement.....	F (Fail)
Testing:	
Date of receipt of test item	2014-08-12
Date(s) of performance of tests	2014-08-12 to 2014-09-22
General remarks:	
The test results presented in this report relate only to the object tested. This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory. "(see Enclosure #)" refers to additional information appended to the report. "(see appended table)" refers to a table appended to the report. Throughout this report a ☐ comma / ☒ point is used as the decimal separator.	
Manufacturer's Declaration per sub-clause 6.2.5 of IEC60950-1C:	

The application for obtaining a CB Test Certificate includes more than one factory location and a declaration from the Manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided.....: ☐ Yes ☒ Not applicable

When differences exist; they shall be identified in the General product information section.

Name and address of factory (ies) : SUZHOU SHIN-EI SANGYO CO., LTD.
No.158-106,108,Huashan Road, New District
Suzhou, Jiangsu,China 215011, P.R. China

General product information:

The equipment is a Class I Projector for use in scope of information technology equipment.

This equipment consists of the following critical components:

- Switching power supply board containing isolation circuits (between primary to secondary), primary high voltage circuit (to ballast). This SPS part was tested and evaluated incorporate with whole unit.
- H.V. wire sets for connecting between SPS to ballast and ballast to lamp, details refer to table 1.5.1.
- Ballast modules, CB-scheme tested component according to IEC 60950-1: 2005+A1 and containing primary high voltage for ignition lamp, sources refer to table 1.5.1.
- Lamp, rated max. 255 W, sources refer to table 1.5.1.
- Signal control board with input/output connectors.
- Optical engine.
- Iris Motor.
- DC Fan (total six provided), see table 1.5.1 for detail location.
- One speaker.
- Lens provided.
- One USB (PC) port with upstream type.
- Two USB ports with downstream type.

The equipment is full voltage-range design.

All models are similar to model NP-UM352W+ except for model designation, input rating, without MM board and details see below comparison list and photos as illustration.

Model NP-UM361XiK is similar to model NP-UM361X except for model designation and accompany with approval interactive white board kit type NP03Wi.

Model NP-UM351XiK is similar to model NP-UM351W except for model designation and accompany with approval interactive white board kit type NP03Wi.

Model name	Input Rating	Lamp Wattage	Ballast	Brightness	Resolution	PSU
NP-UM301X	100-240 Vac, 50/60 Hz, 3.5-1.5 A	235 W	PHG231A1 0WD	3000lm	XGA 1024 x 768	ZSNED06 I
NP-UM301X+	200-240 Vac, 50/60 Hz, 1.7 A					
NP-UM301W	100-240 Vac, 50/60 Hz, 3.5-1.5 A				WXGA 1280 x 800	
NP-UM301W+	200-240 Vac, 50/60 Hz, 1.7 A					

NP-UM361X, NP-UM361XiK	100-240 Vac, 50/60 Hz, 3.8-1.6 A	255 W	PHG251A1 XD	3600lm	XGA 1024 x 768	
NP-UM361X+	200-240 Vac, 50/60 Hz, 1.9 A					
NP-UM351W, NP-UM351WiK	100-240 Vac, 50/60 Hz, 3.8-1.6 A			3500lm	WXGA 1280 x 800	
NP-UM351W+	200-240 Vac, 50/60 Hz, 1.9 A					
NP-UM352W	100-240 Vac, 50/60 Hz, 3.9-1.7 A					
NP-UM352W+	200-240 Vac, 50/60 Hz, 1.9 A					

NP-UM361XiK: Combination of NP-UM361X and NP03Wi (Interactive white board kit).

NP-UM351WiK: Combination of NP-UM351W and NP03Wi (Interactive white board kit).

Engineering Considerations

- The product was submitted and tested for use at the maximum ambient temperature (Tma) permitted by the manufacturer's specification of: 40 °C
- The means of connection to the mains supply is Pluggable Type A.
- The product is intended for use on the following **power systems**: TN / IT.
- The equipment disconnect device is considered to be: Appliance Inlet.
- The following accessible locations are within a **limited current circuit** (see [subclause 2.4](#)): C130.
- The following circuit locations were investigated as a limited power source (see [subclause 2.5](#)): All output data ports.
- The following **transformers** are provided (See [subclause 1.5.4](#)):
 - Double/Reinforced insulation: T101.
 - Functional insulation: other than above mentioned.
- The following capacitors bridging insulation (See subclause 1.5.6):
 - Double/Reinforced insulation: C130.
 - Basic insulation: C006 and C007.
 - Supplementary insulation: None
 - Across mains conductors: C004 and C005.
 - Functional insulation: other than above mentioned.
- The following **VDRs** are bridging insulation (See [subclause 1.5.9](#)):
 - Functional insulation: X001.
- The following **solid insulation** are provided (See [subclause 2.10.5](#)):
 - Reinforced insulation: Optocouplers (PC101, PC103 and PC104), Bobbin of transformer (T101), Insulation sheet, Plastic case, Lead wire of L/N.
 - Basic insulation: N/A
 - Supplementary insulation: N/A.
 - Functional insulation: other than above mentioned.
- The following parts consist of the protective earthing (see [subclause 2.6](#)):
 - Protective earthing conductor: In power supply cord (not provided).
 - Protective bonding conductor: Metal conductive enclosure and yellow-green wires which secured by star-washer or spring-washer, connections of the copper track on PCB and the metal sheet.
- The following parts are **protective earthing terminals** (See [subclause 2.6.4](#)): Appliance inlet.
- The following parts are **protective bonding terminals** (See [subclause 2.6.4](#)): Screw terminal construction on the metal sheet.
- The following enclosures are provided:
 - Fire enclosure: the outer plastic enclosure.
 - Mechanical and Electrical enclosure: the outer plastic enclosure.

Additional Information

- The **power supply unit** used in the product is not a certified product. Hence, compliance has been evaluated in this report.
- The equipment is for use in **multimedia systems** and was investigated additionally to IEC GUIDE 112.
- The Label in Copy of marking plate is a draft of an artwork pending approval by National Certification Bodies and it shall not be affixed to products prior to such an approval.
- The test samples were pre-production sample without serial numbers.
- Special national conditions for J60950-1(H22):2010
Per client's request, supplement the special national conditions for J60950-1(H22):2010 and J3000 (H25):2013 to present test report. Described as following items:
a) Considered further Japanese technical requirements J60950-1 (H22)
- No hazards voltage, energy hazards and hazards moving part can be accessible when lamp replacement and internal enclosure subjected to relevant tests.
- The suitable power cord will be provided and evaluated when national approval/market.

Markings and Instructions

- Fuse Identification (See subclause 1.7.6): F001 T8AH/250VAC
-  (IEC 60417-5009) for the stand-by condition. (See subclause 1.7.8.3)
-  (IEC 60417-5019) for the wiring terminal of protective earthing conductor (See subclause 1.7.7.1)

Abbreviations used in the report:

- normal conditions	N.C.	- single fault conditions	S.F.C
- functional insulation	OP	- basic insulation	BI
- double insulation	DI	- supplementary insulation	SI
- between parts of opposite polarity	BOP	- reinforced insulation	RI

Indicate used abbreviations (if any)

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
1	GENERAL		P
1.5	Components		P
1.5.1	General	See below.	P
	Comply with IEC 60950-1 or relevant component standard	(see appended table 1.5.1)	P
1.5.2	Evaluation and testing of components	Components certified to IEC standards and/or their harmonized standards, are used within their ratings and are checked for correct application. Non-certified components are checked for correct application, used within their ratings, tested as part of the equipment and subjected to applicable tests of the component standard. Components, which no relevant IEC-Standard exists, are used within their ratings and are tested under the conditions occurring in the equipment.	P
1.5.3	Thermal controls	Approved component used.	P
1.5.4	Transformers	Transformers complied with the relevant requirements.	P
1.5.5	Interconnecting cables		N/A
1.5.6	Capacitors bridging insulation	Between lines: subclass X1 or X2 capacitors according to IEC 60384-14 with 21 days damp heat test. Between Line/Neutral and earth: subclass Y1 or Y2 capacitors according to IEC 60384-14. Between Line/Neutral and secondary: subclass Y1 capacitor according to IEC 60384-14.	P
1.5.7	Resistors bridging insulation	See below.	P
1.5.7.1	Resistors bridging functional, basic or supplementary insulation	Resistor bridging functional insulation only.	P

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
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
1.5.8	Components in equipment for IT power systems	(see appended table 1.5.1.)	P
1.5.9	Surge suppressors	Approved component used.	P
1.5.9.1	General	See table 1.5.1.	P
1.5.9.2	Protection of VDRs	By current fuse.	P
1.5.9.3	Bridging of functional insulation by a VDR		P
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	Considered.	P
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	Neutral is insulated from earth and body throughout the equipment and components rated accordingly. (see also 1.5.8).	P

1.7	Marking and instructions		P
1.7.1	Power rating and identification markings	The power rating marking is visible after the equipment has been installed as in normal use.	P
1.7.1.1	Power rating marking	See below	P
	Multiple mains supply connections.....:		N/A
	Rated voltage(s) or voltage range(s) (V)	See copy of marking plate.	P
	Symbol for nature of supply, for d.c. only		N/A
	Rated frequency or rated frequency range (Hz):	See copy of marking plate.	P
	Rated current (mA or A)	See copy of marking plate.	P
1.7.1.2	Identification markings	See below	P
	Manufacturer's name or trade-mark or identification mark	See copy of marking plate.	P
	Model identification or type reference	See copy of marking plate.	P

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
	Symbol for Class II equipment only	Class I equipment.	N/A
	Other markings and symbols	Other markings and symbols do not give rise to misunderstanding.	P
1.7.2	Safety instructions and marking	See below:	P
1.7.2.1	General	Instructions are available.	P
1.7.2.2	Disconnect devices	Appliance Inlet.	P
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
1.2.7.6	Ozone	<i>Remark: correct subclause reference is 1.7.2.6.</i>	N/A
1.7.3	Short duty cycles		N/A
1.7.4	Supply voltage adjustment		N/A
	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)	See General product information - Markings and Instructions F1001, F1002, F1003, F1004, F1005 and F1006 relevant information shown on servicing instructions.	P
1.7.7	Wiring terminals	See below.	P
1.7.7.1	Protective earthing and bonding terminals	Appliance inlet is provided.	P
1.7.7.2	Terminals for a.c. mains supply conductors	Appliance inlet is provided.	N/A
1.7.7.3	Terminals for d.c. mains supply conductors		N/A
1.7.8	Controls and indicators	See below.	P
1.7.8.1	Identification, location and marking	The function of indicators and controls is clearly identified.	P
1.7.8.2	Colours		N/A
1.7.8.3	Symbols according to IEC 60417	See General product information - Markings and Instructions	P
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

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
1.7.11	Durability	The marking plate has no curling and is not able to be removed easily. Laser marking method engraved markings on enclosure. Also, maybe use with Rating Label instead of laser marking method.	P
1.7.12	Removable parts	The required marking is not placed on removable parts.	P
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	See below.	P
2.1.1.1	Access to energized parts		P
	Test by inspection	See below.	P
	Test with test finger (Figure 2A)	No access with test finger to any parts with only basic insulation to hazardous voltage.	P
	Test with test pin (Figure 2B)	The test pin cannot touch hazardous voltage component though any seams within the appliance.	P
	Test with test probe (Figure 2C)	No TNV circuit.	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	No hazardous voltage circuit in operator access area.	N/A
2.1.1.5	Energy hazards	No energy hazards in operator access area.	P
2.1.1.6	Manual controls		N/A
2.1.1.7	Discharge of capacitors in equipment	Voltage decay measurement was conducted with an oscilloscope having an input impedance of 100 MΩ.	P
	Measured voltage (V); time-constant (s).....	See appended table 2.1.1.7.	—

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Clause	Requirement + Test	Result - Remark	Verdict
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	Complied with 2.1.1.1.	P
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	See below.	P
2.2.2	Voltages under normal conditions (V)	See appended table 2.2.	P
2.2.3	Voltages under fault conditions (V)	See appended table 2.2.	P
2.2.4	Connection of SELV circuits to other circuits	In compliance with 1.5.6. 2.2.2, 2.2.3 and 2.4.3.	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
2.4	Limited current circuits		P
2.4.1	General requirements	The limits of 2.4.2 were not exceeded under normal operating conditions. (for bridging capacitor only)	P
2.4.2	Limit values	See below.	P
	Frequency (Hz)	See appended table 2.4.2	—

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Clause	Requirement + Test	Result - Remark	Verdict
	Measured current (mA)..... :	See appended table 2.4.2	—
	Measured voltage (V)..... :	See appended table 2.4.2	—
	Measured circuit capacitance (nF or μ F) :	See table 1.5.1 for bridging capacitor.	—
2.4.3	Connection of limited current circuits to other circuits	Complied.	P
2.5	Limited power sources		P
	a) Inherently limited output	See appended table 2.5	P
	b) Impedance limited output		N/A
	c) Regulating network limited output under normal operating and single fault condition	See appended table 2.5	P
	d) Overcurrent protective device limited output	See appended table 2.5	P
	Max. output voltage (V), max. output current (A), max. apparent power (VA)..... :	See appended table 2.5	—
	Current rating of overcurrent protective device (A) .:	See appended table 1.5.1	—
	Use of integrated circuit (IC) current limiters	See appended table 1.5.1	P
2.6	Provisions for earthing and bonding		P
2.6.1	Protective earthing	The relevant parts connected to the main protective earthing terminal reliably. Complied with 2.6.3.	P
2.6.2	Functional earthing	Functional earthing circuit is separated from parts at hazardous voltages by double (or reinforced) insulation. Green-and-yellow color combination was not used for functional earthing conductors. The equipment was not marked with symbol of double square (IEC 60417-5172).	P
2.6.3	Protective earthing and protective bonding conductors	See below.	P
2.6.3.1	General	See below.	P
2.6.3.2	Size of protective earthing conductors	No power cord provided.	P
	Rated current (A), cross-sectional area (mm^2), AWG :		—
2.6.3.3	Size of protective bonding conductors	See 2.6.3.4	P

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Clause	Requirement + Test	Result - Remark	Verdict
	Rated current (A), cross-sectional area (mm ²), AWG :		—
	Protective current rating (A), cross-sectional area (mm ²), AWG :		—
2.6.3.4	Resistance of earthing conductors and their terminations; resistance (Ω), voltage drop (V), test current (A), duration (min)..... :	See appended table 2.6.3.4.	P
2.6.3.5	Colour of insulation :	The color combination green-and-yellow is used.	P
2.6.4	Terminals	See General product information.	P
2.6.4.1	General	See below.	P
2.6.4.2	Protective earthing and bonding terminals	The earthing terminal in the appliance inlet is regarded as the main protective earthing terminal.	P
	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	See below.	P
2.6.5.1	Interconnection of equipment	The equipment has its own earthing connection. Any other units connected to it via the output shall be provided SELV only.	P
2.6.5.2	Components in protective earthing conductors and protective bonding conductors	No switch or overcurrent protective device provided in earthing conductors and protective bonding conductors.	P
2.6.5.3	Disconnection of protective earth	Appliance inlet provided as disconnection device.	P
2.6.5.4	Parts that can be removed by an operator	The protective earthing connection is made earlier and broken later than the supply connection.	P
2.6.5.5	Parts removed during servicing	The relevant hazard is removed at the same time the protective earthing connections is removed for servicing.	P
2.6.5.6	Corrosion resistance	No combination above the line in annex J is used.	P

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Clause	Requirement + Test	Result - Remark	Verdict
2.6.5.7	Screws for protective bonding	Self-tapping and spaced thread screws are not used to provide protective bonding. At least two screws are used for each connection.	P
2.6.5.8	Reliance on telecommunication network or cable distribution system		N/A

2.7	Overcurrent and earth fault protection in primary circuits		P
2.7.1	Basic requirements	Protection against overcurrent and short-circuits is provided as an integral part of the equipment. Protection against earth faults is provided as part of the building installation.	P
	Instructions when protection relies on building installation		N/A
2.7.2	Faults not simulated in 5.3.7	Considered.	P
2.7.3	Short-circuit backup protection	The building installation is considered as providing short-circuit backup protection.	P
2.7.4	Number and location of protective devices :	The protective device is located adequately therefore able to interrupt the overcurrent flowing in any possible fault current path.	P
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
	Protection against extreme hazard		N/A
2.8.5	Moving parts		N/A
2.8.6	Overriding		N/A
2.8.7	Switches, relays and their related circuits		N/A
2.8.7.1	Separation distances for contact gaps and their related circuits (mm) :		N/A
2.8.7.2	Overload test		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
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		P
2.9.1	Properties of insulating materials	Natural rubber, asbestos or hygroscopic materials are not used. All sources of photo couplers (PC101, PC103 and PC104) and transformer (T101) were performed and passed the Humidity test (2.9.2) and Electronic strength test (5.2).	P
2.9.2	Humidity conditioning	Tested for 120 hrs.	P
	Relative humidity (%), temperature (°C) :	95%, 40 °C.	—
2.9.3	Grade of insulation	Basic, supplementary, double insulation, reinforced or functional insulation.	P
2.9.4	Separation from hazardous voltages	See below.	P
	Method(s) used :	Method 1.	—

2.10	Clearances, creepage distances and distances through insulation		P
2.10.1	General	See below.	P
2.10.1.1	Frequency :	Below 30kHz.	P
2.10.1.2	Pollution degrees :	2	P
2.10.1.3	Reduced values for functional insulation	See 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	See 2.10.3.5.	P
2.10.2	Determination of working voltage	See below.	P
2.10.2.1	General	Considered.	P
2.10.2.2	RMS working voltage	See appended table 2.10.2.	P
2.10.2.3	Peak working voltage	See appended table 2.10.2.	P
2.10.3	Clearances	See below.	P
2.10.3.1	General	Annex F considered.	P
2.10.3.2	Mains transient voltages	See below.	P

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Clause	Requirement + Test	Result - Remark	Verdict
	a) AC mains supply	2500Vpk considered.	P
	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	(see appended table 2.10.3 and 2.10.4)	P
2.10.3.4	Clearances in secondary circuits	See 5.3.4.	N/A
2.10.3.5	Clearances in circuits having starting pulses	For lamp, see appended table 2.10.3 and 2.10.4.	P
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	See below.	P
2.10.4.1	General	Considered.	P
2.10.4.2	Material group and comparative tracking index	Material group IIIb assumed.	P
	CTI tests	CTI rating for all materials of min. 100.	—
2.10.4.3	Minimum creepage distances	(see appended table 2.10.3 and 2.10.4)	P
2.10.5	Solid insulation	Complied with 2.10.5.2 to 2.10.5.14 and 5.2.	P
2.10.5.1	General	See below.	P
2.10.5.2	Distances through insulation	(see appended table 2.10.5)	P
2.10.5.3	Insulating compound as solid insulation	Approved sources of optocouplers provide min. 0.4 mm distance through insulation for reinforced insulation. See appended table 1.5.1 for internal distance.	P
2.10.5.4	Semiconductor devices	See above.	P
2.10.5.5	Cemented joints	Certified optocouplers provided.	N/A
2.10.5.6	Thin sheet material – General	Considered.	P

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Clause	Requirement + Test	Result - Remark	Verdict
2.10.5.7	Separable thin sheet material	Reinforced insulation.	P
	Number of layers (pcs) :	See appended table 5.2.	—
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	Electric strength test applied to each combination of two layers together or one layer only.	P
	Electric strength test	(see appended table 5.2)	—
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
	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	See below.	P
2.10.6.1	Uncoated printed boards	(see appended table 2.10.3 and 2.10.4)	P
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	(see appended table 2.10.3 and 2.10.4)	P

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Clause	Requirement + Test	Result - Remark	Verdict
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	Approved sources of opto-couplers used. For detail see table 1.5.1.	P
2.10.10	Test for Pollution Degree 1 environment and insulating compound	See above.	P
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	All internal wires are UL recognized wiring which is PVC insulated, rated VW-1, minimum 80 °C. Internal wiring gauge is suitable for current intended to be carried.	P
3.1.2	Protection against mechanical damage	The wireways (including holes) are smooth and free from sharp edges.	P
3.1.3	Securing of internal wiring	No excessive strain on wire and on terminal connections, loosening of terminal connections and damage of conductor insulation.	P
3.1.4	Insulation of conductors		N/A
3.1.5	Beads and ceramic insulators		N/A
3.1.6	Screws for electrical contact pressure	The screws are not made of insulating material. They engage at least two complete threads into the metal part.	P
3.1.7	Insulating materials in electrical connections	Sufficient resilience is provided.	P
3.1.8	Self-tapping and spaced thread screws		N/A
3.1.9	Termination of conductors	See below.	P

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Clause	Requirement + Test	Result - Remark	Verdict
	10 N pull test	The clearances and creepages are not reduced below required in 2.10.	P
3.1.10	Sleeving on wiring		P
3.2	Connection to a mains supply		P
3.2.1	Means of connection	See below.	P
3.2.1.1	Connection to an a.c. mains supply	An appliance inlet provided.	P
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	The appliance inlet complied with IEC 60320-1; the connector inserted without difficulty and not supporting the equipment on a flat surface.	P
3.2.5	Power supply cords	No power cord provided.	N/A
3.2.5.1	AC power supply cords		N/A
	Type		—
	Rated current (A), cross-sectional area (mm ²), 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	No sharp points or cutting edges within or on the surface of the equipment or at the inlet opening or inlet bushing.	P
3.2.8	Cord guards		N/A
	Diameter or minor dimension D (mm); test mass (g)		—
	Radius of curvature of cord (mm)		—
3.2.9	Supply wiring space		N/A
3.3	Wiring terminals for connection of external conductors		N/A
3.3.1	Wiring terminals		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
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 ²)		—
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		P
3.4.1	General requirement	Disconnect device provided.	P
3.4.2	Disconnect devices	The disconnect device is close to the incoming supply. See General product information.	P
3.4.3	Permanently connected equipment		N/A
3.4.4	Parts which remain energized		N/A
3.4.5	Switches in flexible cords	No isolating switches fitted in flexible cords.	P
3.4.6	Number of poles - single-phase and d.c. equipment	The disconnect device disconnects both poles simultaneously.	P
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	SELV circuit and Limited current circuit.	P
3.5.3	ELV circuits as interconnection circuits		N/A
3.5.4	Data ports for additional equipment	See appended table 2.5.	P

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Clause	Requirement + Test	Result - Remark	Verdict
4	PHYSICAL REQUIREMENTS		P
4.1	Stability		N/A
	Angle of 10°	The unit did not exceed 7 kg.	N/A
	Test force (N) :		N/A
4.2	Mechanical strength		P
4.2.1	General	After following tests, the sample continues to complied relevant requirements.	P
	Rack-mounted equipment.		N/A
4.2.2	Steady force test, 10 N	Applied to parts other than in 4.2.3 and 4.2.4.	P
4.2.3	Steady force test, 30 N	Applied to internal enclosure or barrier.	P
4.2.4	Steady force test, 250 N	Applied to all sources of plastic enclosure.	P
4.2.5	Impact test	Applied to all source of external surfaces of plastic enclosure except following parts: Lens.	P
	Fall test		P
	Swing test		P
4.2.6	Drop test; height (mm) :		N/A
4.2.7	Stress relief test	At 86 °C for 7 hr	P
4.2.8	Cathode ray tubes		N/A
	Picture tube separately certified :		N/A
4.2.9	High pressure lamps	The mechanical enclosure provides adequate strength.	P
4.2.10	Wall or ceiling mounted equipment; force (N) :	The unit was subjected to the load test. An additional force of 18.0 kg (3 times the mass of the unit) was applied to the unit plus the ceiling-mounting accessory and sustained for 1 min. The unit withstood the load test without damages or breaks.	P
4.3	Design and construction		P

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Clause	Requirement + Test	Result - Remark	Verdict
4.3.1	Edges and corners	All edges or corners accessible to operator 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	No loosen.	P
4.3.5	Connection by plugs and sockets	No misconnection likely to create a hazard.	P
4.3.6	Direct plug-in equipment		N/A
	Torque		—
	Compliance with the relevant mains plug standard		N/A
4.3.7	Heating elements in earthed equipment		N/A
4.3.8	Batteries		N/A
	- 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	See below.	P
4.3.13.1	General	See below.	P
4.3.13.2	Ionizing radiation		N/A
	Measured radiation (pA/kg)		—
	Measured high-voltage (kV)		—
	Measured focus voltage (kV)		—
	CRT markings		—

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Clause	Requirement + Test	Result - Remark	Verdict
4.3.13.3	Effect of ultraviolet (UV) radiation on materials	The spectrum is not having emission predominantly in the spectrum 180 nm to 400 nm, see below for the total UV's irradiance of lamp with/without UV-cut filter: USHIO INC. lamp p/n NSHA210NEB and NSHA210NEB/C with severe condition of w/o filter: 9.3 %. USHIO INC. lamp p/n NSHA270NEB and NSHA270NEB/C with severe condition of w/o filter: 9.3 %. These lamps are not UV lamp.	P
	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	Lasers (including laser diodes) and LEDs	See below.	N/A
4.3.13.5.1	Lasers (including laser diodes)		N/A
	Laser class		—
4.3.13.5.2	Light emitting diodes (LEDs)	The following parts are considered complied without tests: Indicating lights. Optocouplers	P
4.3.13.6	Other types	Checked.	P

4.4	Protection against hazardous moving parts		P
4.4.1	General	The rotating part of the build-in DC fans and Iris Motor are protected by the enclosure, which considered no accessible to the user.	P
4.4.2	Protection in operator access areas	See below.	P
	Household and home/office document/media shredders		N/A
4.4.3	Protection in restricted access locations	Not limited for restricted access locations.	N/A
4.4.4	Protection in service access areas		N/A
4.4.5	Protection against moving fan blades	See below.	P

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Clause	Requirement + Test	Result - Remark	Verdict
4.4.5.1	General	See below.	P
	Not considered to cause pain or injury. A).....:		N/A
	Is considered to cause pain, not injury. B)		N/A
	Considered to cause injury. C)		N/A
4.4.5.2	Protection for users	No shape blades of DC Fan located in an operator access area.	P
	Use of symbol or warning		N/A
4.4.5.3	Protection for service persons		N/A
	Use of symbol or warning		N/A

4.5	Thermal requirements		P
4.5.1	General	No exceeding temperature.	P
4.5.2	Temperature tests	(See appended table 4.5)	P
	Normal load condition per Annex L	(See Annex L)	—
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	Phenolic materials accepted without further testing. Others see appended table.	P

4.6	Openings in enclosures		P
4.6.1	Top and side openings	See below.	P
	Dimensions (mm)	(see appended table)	—
4.6.2	Bottoms of fire enclosures	See below.	P
	Construction of the bottom, dimensions (mm) ..	(see appended table)	—
4.6.3	Doors or covers in fire enclosures	The fire enclosure contains an operator removable cover which intended only for occasional use. Instructions for correct removal and reinstallation are provided in user's manual.	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

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Clause	Requirement + Test	Result - Remark	Verdict
	Conditioning temperature (°C), time (weeks)..... :		—
4.7	Resistance to fire		P
4.7.1	Reducing the risk of ignition and spread of flame	See below.	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 below.	P
4.7.2.1	Parts requiring a fire enclosure	Following parts require a fire enclosure: - Components in primary circuits - Components in secondary circuits supplied by power source that exceed the limits specified in 2.5. - Insulating wiring.	P
4.7.2.2	Parts not requiring a fire enclosure		N/A
4.7.3	Materials		P
4.7.3.1	General	Those components are mounted on V-1 material and separated from material of a class lower than V-1 by at solid barrier of V-1 material.	P
4.7.3.2	Materials for fire enclosures	5VB material used for plastic enclosure, details see appended table 1.5.1.	P
4.7.3.3	Materials for components and other parts outside fire enclosures	HB or better.	P
4.7.3.4	Materials for components and other parts inside fire enclosures	The material is made of V-2 (or HF-2) material.	P
4.7.3.5	Materials for air filter assemblies		P
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		P
5.1.1	General	(see appended table 5.1)	P
5.1.2	Configuration of equipment under test (EUT)	See below.	P
5.1.2.1	Single connection to an a.c. mains supply	The EUT has only one mains connection.	P

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Clause	Requirement + Test	Result - Remark	Verdict
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	Test circuit in Figure 5A used.	P
5.1.4	Application of measuring instrument	Measuring instruments as in annex D used.	P
5.1.5	Test procedure	Applied.	P
5.1.6	Test measurements	(see appended table 5.1)	P
	Supply voltage (V)	+10% of the rated voltage.	—
	Measured touch current (mA)	(see appended table 5.1)	—
	Max. allowed touch current (mA)	(see appended table 5.1)	—
	Measured protective conductor current (mA)		—
	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		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		P
5.2.1	General	(see appended table 5.2)	P
5.2.2	Test procedure	Table 5B used.	P

5.3	Abnormal operating and fault conditions		P
5.3.1	Protection against overload and abnormal operation	(see appended table 5.3)	P

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Clause	Requirement + Test	Result - Remark	Verdict
5.3.2	Motors	(see appended Annex B)	P
5.3.3	Transformers	(see appended Annex C)	P
5.3.4	Functional insulation..... :	Functional insulation complied with the requirements c).	P
5.3.5	Electromechanical components		N/A
5.3.6	Audio amplifiers in ITE :	(See appended table 5.3)	P
5.3.7	Simulation of faults	Complied.	P
5.3.8	Unattended equipment		N/A
5.3.9	Compliance criteria for abnormal operating and fault conditions	(see appended table)	P
5.3.9.1	During the tests	No fire propagated beyond the equipment, no molten metal emitted and no deformation of enclosure.	P
5.3.9.2	After the tests	Electric strength test made.	P
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 :		—

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Clause	Requirement + Test	Result - Remark	Verdict
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
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		—

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Clause	Requirement + Test	Result - Remark	Verdict
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
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)		P
B.1	General requirements	See below.	P
	Position	(see appended table 1.5.1)	—
	Manufacturer	(see appended table 1.5.1)	—
	Type	(see appended table 1.5.1)	—
	Rated values	(see appended table 1.5.1)	—
B.2	Test conditions	Considered, on the bench.	P
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		P
B.7.1	General	See below.	P

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Clause	Requirement + Test	Result - Remark	Verdict
B.7.2	Test procedure	B.7.3 alternative test procedure used.	N/A
B.7.3	Alternative test procedure	See appended table 5.3 for test result.	P
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)		P
	Position :	Refer to appended table 1.5.1	—
	Manufacturer :	Refer to appended table 1.5.1	—
	Type :	Refer to appended table 1.5.1	—
	Rated values :	Refer to appended table 1.5.1	—
	Method of protection :	Overcurrent protection by circuit design.	—
C.1	Overload test	(see appended table 5.3)	P
C.2	Insulation	(see appended tables 5.2 and C.2)	P
	Protection from displacement of windings :	(see appended table C.2)	P

D	ANNEX D, MEASURING INSTRUMENTS FOR TOUCH-CURRENT TESTS (see 5.1.4)		P
D.1	Measuring instrument	Used.	P
D.2	Alternative measuring instrument		N/A

E	ANNEX E, TEMPERATURE RISE OF A WINDING (see 1.4.13)		N/A
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F	ANNEX F, MEASUREMENT OF CLEARANCES AND CREEPAGE DISTANCES (see 2.10 and Annex G)		P
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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

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Clause	Requirement + Test	Result - Remark	Verdict
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
	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)		P
	Metal(s) used	Metals which the combination electrochemical potential is less than 0.6 V.	—
K	ANNEX K, THERMAL CONTROLS (see 1.5.3 and 5.3.8)		P
K.1	Making and breaking capacity	Approved component used, see table 1.5.1.	P
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	Approved component used, see table 1.5.1.	P
K.6	Stability of operation		P

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Clause	Requirement + Test	Result - Remark	Verdict
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	See Summary of testing.	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	Ringing signal		N/A
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)		P
	a) Preferred climatic categories	See table 1.5.1.	P
	b) Maximum continuous voltage	See table 1.5.1.	P
	c) Pulse current	See table 1.5.1.	P

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Clause	Requirement + Test	Result - Remark	Verdict
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
			—
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)		P
V.1	Introduction	Considered.	P
V.2	TN power distribution systems	Considered.	P
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

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Clause	Requirement + Test	Result - Remark	Verdict
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		—
CC	ANNEX CC, Evaluation of integrated circuit (IC) current limiters		P
CC.1	General	Approved component used, see table 1.5.1.	P
CC.2	Test program 1.....		N/A
CC.3	Test program 2.....		N/A
DD	ANNEX DD, Requirements for the mounting means of rack-mounted equipment		N/A
DD.1	General		N/A
DD.2	Mechanical strength test, variable N.....		N/A
DD.3	Mechanical strength test, 250N, including end stops.....		N/A
DD.4	Compliance.....		N/A
EE	ANNEX EE, Household and home/office document/media shredders		N/A
EE.1	General		N/A
EE.2	Markings and instructions		N/A
	Use of markings or symbols.....		N/A
	Information of user instructions, maintenance and/or servicing instructions.....		N/A
EE.3	Inadvertent reactivation test.....		N/A
EE.4	Disconnection of power to hazardous moving parts:		N/A
	Use of markings or symbols.....		N/A
EE.5	Protection against hazardous moving parts		N/A
	Test with test finger (Figure 2A)		N/A
	Test with wedge probe (Figure EE1 and EE2)		N/A

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

1.5.1	TABLE: List of critical components					P
Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity ¹⁾	
For projector						
Plastic Enclosure (Top cover, Bottom cover, Lamp cover, Panel(I/O))	TEIJIN LIMITED RESIN AND PLASTIC	MN-3606B(#)	5VB, 1.8 mm thickness min., 95 °C min.	UL 94	UL (E98529)	
Plastic Enclosure (Cover(IWB)) (For NP-UM352W and NP-UM352W+ used)	TEIJIN LIMITED RESIN AND PLASTIC	MN-3606B(#)	5VB, 1.5 mm thickness min., 95 °C min.	UL 94	UL (E98529)	
Plastic Enclosure (Air Filter Cover)	TEIJIN LIMITED RESIN AND PLASTIC	MN-3606B(#)	5VB, 1.5 mm thickness min., 95 °C min.	UL 94	UL (E98529)	
Air Filter Holder	TEIJIN LIMITED RESIN AND PLASTIC	TN-7500(c)	V-0, 1.5 mm thickness min.	UL 94	UL (E98529)	
Plastic Enclosure (Cable Cover)	TEIJIN LIMITED RESIN AND PLASTIC	MN-3606B(#)	HB min., 0.45 mm thickness min.	UL 94	UL (E98529)	
Plastic Enclosure (Lens Cover)	SABIC JAPAN L L C	CX7720	V-0 min., 1.2 mm thickness min.	UL 94	UL (E207780)	
Plastic Bottom Case (For Ballast Board)	SABIC JAPAN L L C	CX7720	V-0 min., 1.2 mm thickness min.	UL 94	UL (E207780)	
Plastic Cover (For Ballast Board)	SABIC JAPAN L L C	CX7720	V-0 min., 1.2 mm thickness min.	UL 94	UL (E207780)	
Plastic Cover (For Power Board)	SABIC JAPAN L L C	CX7720	V-0 min., 1.2 mm thickness min.	UL 94	UL (E207780)	
Insulation Sheet (Under Power Board)	SUN DELTA CORP	VS(f)	V-0 min., 0.4 mm thickness min.	UL 94	UL (E301813)	

IEC 60950-1					
Clause	Requirement + Test			Result - Remark	Verdict
Insulation Sheet (Between Power and Ballast Board)	SUN DELTA CORP	VS(f)	V-0 min., 0.4 mm thickness min.	UL 94	UL (E301813)
Appliance Inlet	SOLTEAM ELECTRONICS CO., LTD.	ST71	10 A, 250 V	IEC/EN 60320-1, UL 498	Fimko, ENEC 16, UL (E200241)
Lead Wires (Connecting between Appliance Inlet and power board)	LTK ELECTRIC WIRE (HUIZHOU) LTD	UL Style No. 1015	600 V, 105 °C, VW-1, 0.4 mm thickness min at any point	UL 758	UL (E148000)
	SHENZHEN LINOYA ELECTRONIC CO LTD	UL Style No. 1015	600 V, 105 °C, VW-1, 0.4 mm thickness min at any point	UL 758	UL (E315618)
Primary housing connector of AC inlet (Connecting to wafer connector CN001 of power board)	JAPAN SOLDERLESS TERMINAL MFG CO LTD	VH Series	7 A, 250 V, 85 °C	IEC/EN 61984, UL 1977	TÜV, UL (E60389)
Ballast Power Supply (For models NP-UM301X, NP-UM301X+, NP-UM301W and NP-UM301W+ used) (For Lamp: NSHA210NEB, NSHA210NEB/C)	MURATA MFG CO LTD POWER DEVICE PRODUCTS DIVISION	PHG231A10WD	I/P: 250-420 Vdc. O/P: 180 Vac max., 3.6 A max., 250 W max.	IEC 60950-1:2005+A1:2009, EN 60950-1:2006+A1:2010+A12:2011, UL 60950-1	CB (issued by UL, certificate no. JP-10151-UL), UL (E190503)

IEC 60950-1					
Clause	Requirement + Test		Result - Remark		Verdict
Ballast Power Supply (For models NP-UM361X, NP-UM361X+, NP-UM351W, NP-UM351W+, NP-UM352W, NP-UM352W+, NP-UM361XiK and NP-UM351WiK used) (For Lamp: NSHA270NEB/C, NSHA270NEB1/C)	MURATA MFG CO LTD POWER DEVICE PRODUCTS DIVISION	PHG251A1XD	I/P: 250-420 Vdc. O/P: 180 Vac max., 5.3 A max., 290 W max.	IEC 60950-1:2005+A1:2009, EN 60950-1:2006+A1:2010+A12:2011, UL 60950-1	CB (issued by UL, certificate no. JP-10188-UL), UL (E190503)
Lamp Compartment	DIC CORP	FZ-3600-L4	V-0 min., 1.5 mm thickness min., 200 °C min.	UL 94, UL 746C	UL (E53829)
Lamp Assembly (For models NP-UM301X, NP-UM301X+, NP-UM301W and NP-UM301W+ used)	--	NP32LP	--	--	--
- Lamp	USHIO INC.	NSHA210NEB, NSHA210NEB/C	235 W max.	--	--
- Lamp Cable	Interchangeable	Interchangeable	3 KV min., 20 AWG min., 200 °C min., Rated FEP, PTFE, PVC, TFE, neoprene, polyimide or marked VW-1	UL 758	UL
- Lamp Holder	POLYPLASTICS CO LTD	E130i	V-0 min., 0.75 mm thick min., 220 °C min.	UL 94, UL 746C	UL (E106764)
- Wafer Connector (Connecting to Housing Connector of Lamp)	POLYPLASTICS CO LTD	E130i	V-0 min., 0.75 mm thick min., 220 °C min.	UL 94, UL 746C	UL (E106764)

IEC 60950-1					
Clause	Requirement + Test			Result - Remark	Verdict
Lamp Assembly (For models NP-UM361X, NP-UM361X+, NP-UM351W, NP-UM351W+, NP-UM352W, NP-UM352W+, NP-UM361XiK and NP-UM351WiK used)	--	NP33LP	--	--	--
- Lamp	USHIO INC.	NSHA270NEB/C, NSHA270NEB1/C	255 W max.	--	--
- Lamp Cable	Interchangeable	Interchangeable	3 KV min., 20 AWG min., 200 °C min., Rated FEP, PTFE, PVC, TFE, neoprene, polyimide or marked VW-1	UL 758	UL
- Lamp Holder	POLYPLASTICS CO LTD	E130i	V-0 min., 0.75 mm thick min., 220 °C min.	UL 94, UL 746C	UL (E106764)
- Wafer Connector (Connecting to Housing Connector of Lamp)	POLYPLASTICS CO LTD	E130i	V-0 min., 0.75 mm thick min., 220 °C min.	UL 94, UL 746C	UL (E106764)
Housing Connector (Connecting to Wafer Connector CN3 of Ballast)	JAPAN SOLDERLESS TERMINAL MFG CO., LTD.	VH Series	7 A, 250 V, 85 °C	IEC/EN 61984 UL 1977	TÜV, UL(E60389)
Housing Connector (Connecting to Wafer Connector of Lamp)	POLYPLASTICS CO LTD	E130i	V-0 min., 0.75 mm thick min., 220 °C min.	UL 94, UL 746C	UL (E106764)

IEC 60950-1					
Clause	Requirement + Test			Result - Remark	Verdict
Temperature Sensing (For Lamp Sensing)	UCHIYA THERMOSTAT CO LTD	UP62G	125/250 Vac, 0.5 A or 1.6 A or 2.5 A, max. temp. is 150 °C (Operating Temp. 120 °C)	IEC/EN 60730-1, IEC/EN 60730-2-9, UL 873	VDE, UL (E50124)
DC Fan (LCD(RG)) (near Air Filter)	DELTA ELECTRONICS, INC.	BSB0812HN (marked BSB0812HN-CD07)	12 Vdc, 0.6 A, 0.378m ³ /min min. (13.37 CFM min.)	IEC 60950-1:2005+A1, EN 60950-1:2006+A11+A1+A12, UL 507	TUV/RH, UL (E132003)
DC Fan (LCD(B)) (near Air Filter)	DELTA ELECTRONICS, INC.	BSB0812HN (marked BSB0812HN-CD07)	12 Vdc, 0.6 A, 0.378m ³ /min min. (13.37 CFM min.)	IEC 60950-1:2005+A1, EN 60950-1:2006+A11+A1+A12, UL 507	TUV/RH, UL (E132003)
DC Fan (LAMP(L)) (near LAMP) (For models NP-UM301X, NP-UM301X+, NP-UM301W and NP-UM301W+ used)	TOSHIBA HOME TECHNOLOGY CORP.	C6-6023L-14	12 Vdc, 0.15 A max., 0.16m ³ /min min.	--	--
- Magnet Wire	Interchangeable	Interchangeable	105 °C min.	UL 1446	UL
- Enclosure	Interchangeable	Interchangeable	V-2 min.	UL 94	UL
- Fan Blades	Interchangeable	Interchangeable	V-2 min.	UL 94	UL
- Lead Wire	Interchangeable	Interchangeable	FEP, PTFE, PVC, TFE, neoprene, polyimide or marked VW-1; min. 30 V, 60 °C min.	UL 758	UL
- PCB	Interchangeable	Interchangeable	V-1 min., 105 °C min.	UL 796	UL

IEC 60950-1					
Clause	Requirement + Test		Result - Remark		Verdict
DC Fan (LAMP(H)) (near LAMP) (For models NP-UM361X, NP-UM361X+, NP-UM351W, NP-UM351W+, NP-UM352W, NP-UM352W+, NP-UM361XiK and NP-UM351WiK used)	TOSHIBA HOME TECHNOLOGY CORP.	C6-6023L-06	12 Vdc, 0.24 A max., 0.21m ³ /min min.	--	--
- Magnet Wire	Interchangeable	Interchangeable	105 °C min.	UL 1446	UL
- Enclosure	Interchangeable	Interchangeable	V-2 min.	UL 94	UL
- Fan Blades	Interchangeable	Interchangeable	V-2 min.	UL 94	UL
- Lead Wire	Interchangeable	Interchangeable	FEP, PTFE, PVC, TFE, neoprene, polyimide or marked VW-1; min. 30 V, 60 °C min.	UL 758	UL
- PCB	Interchangeable	Interchangeable	V-1 min., 105 °C min.	UL 796	UL
DC Fan (Ex(LAMP)) (near LAMP)	MINEBEA MOTOR MANUFACTURING CORPORATION	3110EL-04W-M49-F51 (marked 3110EL-04W-M49)	12 Vdc, 0.26 A max., 0.85m ³ /min min.	--	--
- Magnet Wire	Interchangeable	Interchangeable	105 °C min.	UL 1446	UL
- Enclosure	Interchangeable	Interchangeable	V-2 min.	UL 94	UL
- Fan Blades	Interchangeable	Interchangeable	V-2 min.	UL 94	UL
- Lead Wire	Interchangeable	Interchangeable	FEP, PTFE, PVC, TFE, neoprene, polyimide or marked VW-1; min. 30 V, 60 °C min.	UL 758	UL
- PCB	Interchangeable	Interchangeable	V-1 min., 105 °C min.	UL 796	UL

IEC 60950-1					
Clause	Requirement + Test			Result - Remark	Verdict
DC Fan (Ex(PS/BS)) (near Power and Ballast Board)	MINEBEA MOTOR MANUFACTURING CORPORATION	3110EL-04W- M49-F51 (marked 3110EL-04W- M49)	12 Vdc, 0.26 A max., 0.85m ³ /min min.	--	--
- Magnet Wire	Interchangeable	Interchangeable	105 °C min.	UL 1446	UL
- Enclosure	Interchangeable	Interchangeable	V-2 min.	UL 94	UL
- Fan Blades	Interchangeable	Interchangeable	V-2 min.	UL 94	UL
- Lead Wire	Interchangeable	Interchangeable	FEP, PTFE, PVC, TFE, neoprene, polyimide or marked VW-1; min. 30 V, 60 °C min.	UL 758	UL
- PCB	Interchangeable	Interchangeable	V-1 min., 105 °C min.	UL 796	UL
Iris Motor (Stepping Motor)	SHANGHAI TOKYO MICRO MOTOR CO.,LTD.	8S-303X75-G	5 Vdc, min. 105 °C	--	--
Secondary Fuses (On main board) (F1001, F1002 for +4.2 V) (F1003, F1004, F1006 for +15.0 V)	KAMAYA ELECTRIC CO LTD	FHC32502AD	32 Vdc, 5.0 A	UL 248-1, UL 248-14	UL (E176847)
	SKYGATE CO LTD	1206FT5A	32 Vdc, 5.0 A	UL 248-1, UL 248-14	UL (E195833)
Secondary Fuses (On main board) (F1005 for +17.5 V)	KAMAYA ELECTRIC CO LTD	FCC16252AD	32 Vdc, 2.5 A	UL 248-1, UL 248-14	UL (E176847)
	SKYGATE CO LTD	0603FT2.5A	50 Vdc, 2.5 A	UL 248-1, UL 248-14	UL (E195833)

IEC 60950-1					
Clause	Requirement + Test			Result - Remark	Verdict
USB Protector (IC3509 for USB Port: M3501; IC3510 for USB Port: M3502)	TEXAS INSTRUMENTS, INC.	TPS2553..... (The dots "....." noted in the model number represents any alphanumeric character identifying minor differences in non-safety affecting operation and configuration differences.)	1.5 A, 2.5 to 6.5 Vdc	IEC 60950-1:2005+A1:2009, UL Subject 2367	CB (issued by Nemko), UL
Air Filter Material	Interchangeable	Interchangeable	HF-2 or V-2 min.	UL 94	UL
Speaker (One provided)	--	--	4 ohm, 30 W max.	--	--
PCB	Interchangeable	Interchangeable	V-1 min., 105 °C min.	UL 796	UL
Battery for remote-controller used (Two provided) (Optional)	--	--	AAA type consumer grade, non-rechargeable, carbon-zinc or alkaline batteries	--	--
Ceiling Mount Kit	Interchangeable	Interchangeable	Steel	--	--
Wall Mount Kit	Interchangeable	Interchangeable	Steel	--	--
Interactive White Board Kit (For model NP-UM361XiK and NP-UM351WiK)	NEC DISPLAY SOLUTIONS LTD	NP03Wi	Sensor Unit: 5 Vdc, 145 mA, Stylus Pen: 5 Vdc	IEC 60950-1:2005+A1:2009	CB by UL (certificate no. JP-11765-UL)
For Power supply board, type: ZSNED06I					

IEC 60950-1					
Clause	Requirement + Test		Result - Remark		Verdict
Switching Power Supply	Interchangeable	ZSNED06I	I/P: 100-240 Vac, 50/60 Hz O/P: DC 4.2 V / 2.5 A (Secondary); DC 15.5 V / 3.2 A (Secondary); DC 17.5 V / 0.21 A (Secondary); 19.5 V / 0.08 A (Primary); 375 V / 311 W (Primary)	--	--
- Primary wafer connector (CN001)	JAPAN SOLDERLESS TERMINAL MFG CO LTD	VH Series	7 A, 250 V, 85 °C	IEC/EN 61984, UL 1977	TÜV, UL (E60389)
- Primary housing connector of power board (Connecting to wafer connector CN1 of ballast power supply)	JAPAN SOLDERLESS TERMINAL MFG CO LTD	VH Series	7 A, 250 V, 85 °C	IEC/EN 61984, UL 1977	TÜV, UL (E60389)
- Fuse (F001)	Suzhou Littelfuse OVS Ltd. (UL: Littelfuse Inc)	215 series	T8AH, 250 V	IEC/EN 60127-1, IEC/EN 60127-2, UL 248-1, UL 248-14	VDE, UL (E10480)
- Varistor (X001) (Optional)	EPCOS OHG (UL: EPCOS (ZHUHAI FTZ) CO LTD)	S(NF)14K385E2 K1	385 Vac, 505 Vdc	IEC/EN 61051-1, IEC/EN 61051-2, IEC/EN 61051-2-2, (For annex Q application of IEC 60950-1) UL 1449 3 rd , (For SPD Type 2 application)	VDE, UL (E321126)
- X-Caps. (C005, C004) (Optional)	OKAYA ELECTRIC INDUSTRIES CO., LTD.	LE(-*)	0.47 µF max., 250 V min., 100 °C min., X2 Type	IEC/EN 60384-14:2005, UL 60384-14 or UL1414	ENEC 14, UL (E47474)
	PILKOR ELECTRONICS LTD. (UL: PILKOR ELECTRONICS CO LTD)	PCX2 339	0.47 µF max., 305 V min., 100 °C min., X2 Type	IEC/EN 60384-14:2005, UL 60384-14 or UL1414	ENEC 14, UL (E165646)

IEC 60950-1					
Clause	Requirement + Test		Result - Remark		Verdict
- Y-Caps. (C006, C007) (Optional)	MURATA MFG. CO.,LTD.	KY	3300 pF max., 250 V min., 125 °C, Y2 Type	IEC/EN 60384- 14:2005, UL 60384-14 or UL1414	VDE, UL (E37921)
	TDK-EPC CORPORATION	CS	3300 pF max., 250 V min., 125 °C, Y2 Type	IEC/EN 60384- 14:2005, UL 60384-14 or UL1414	VDE, UL (E37861)
- Optocouplers (PC101, PC104, PC103)	LITE-ON TECHNOLOGY CORPORATION	LTV816	Dti=0.6 mm, Ext. dcr=8.0 mm, Thermal Cycling Test, max temp 115 °C, Isolation 5000V	IEC/EN 60747-5- 2, IEC/EN 60950-1, UL 1577	VDE, Semko, UL (E113898)
	TOSHIBA CORPORATION	TLP785 (TLP785 Option D4 for VDE)	Dti=0.6 mm, Ext. dcr=7.8 mm, Thermal Cycling Test, max temp 115 °C, Isolation 5000V	IEC/EN 60747-5- 2, IEC/EN 60950-1, UL 1577	VDE, Semko, UL (E67349)
- Bridge-Cap. (C130) (Optional)	MURATA MFG. CO.,LTD.	KX	1000 pF max., 250 V min., 125 °C, Y1 Type	IEC/EN 60384- 14:2005, UL 60384-14 or UL1414	VDE, UL (E37921)
	TDK-EPC CORPORATION	CD	1000 pF max., 250 V min., 125 °C, Y1 Type	IEC/EN 60384- 14:2005 UL 60384-14 or UL1414	VDE, UL(E37861)
- Line Chokes (L005, L004) (Optional)	UENO CO., LTD.	ADR18SH- 04032T	105 °C min. (Cover: MITSUBISHI ENGINEERING- PLASTICS CORP / 5010N6)	--	--
- PFC Choke (L103)	TOKYO PARTS INDUSTRIAL CO., LTD.	C-L00-456	105 °C min. (Bobbin: Sumitomo Bakelite Co., Ltd./ PM-9820)	--	--
- Transformer (T101)	GANZHOU CITY CHAO YUE PRECISION ELECTRONICS CO.,LTD	N-T02-032	Class 130 material (B)	Applicable part according to IEC 60950-1 and IEC 60085	Accepted by TÜV Rheinland

IEC 60950-1					
Clause	Requirement + Test			Result - Remark	Verdict
- Thermal Fuse (F101)	TAMURA THERMAL DEVICE CORPORATION	N3F	115 °C	IEC/EN 60691, UL 60691	VDE, UL (E73591)
- Bleeder resistor (R001)	Interchangeable	Interchangeable	1/2 W min., 1 M ohm max.	--	--
- Thermistor (TH001) (Optional)	Interchangeable	Interchangeable	8 ohm max. at 25 °C	--	--
- Bridge Diode (D001)	Interchangeable	Interchangeable	600 V min., 10 A min.	--	--
- Electrolytic Capacitors (C123, C124)	Interchangeable	Interchangeable	150 µF, 420 V min., 105 °C min.	--	--
- Transistor (Q102, Q103)	Interchangeable	Interchangeable	500 V min., 16 A min.	--	--
- Transistor (Q104)	Interchangeable	Interchangeable	900 V min., 7 A min.	--	--
- PCB	Interchangeable	Interchangeable	V-1 min., 105°C min.	UL 796	
Supplementary information: 1) Provided evidence ensures the agreed level of compliance. See OD-CB2039. 2) In the technical data column of optocoupler, where "Dti." Means distance through insulation, and "Ext. dcr" means external creepage distance.					

1.5.1	TABLE: Opto Electronic Devices	P
Manufacturer : See supplementary information Type..... : See supplementary information Separately tested : See supplementary information Bridging insulation : RI External creepage distance : See supplementary information Internal creepage distance : See supplementary information Distance through insulation : See supplementary information Tested under the following conditions : See supplementary information Input..... : See supplementary information		

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

Output..... : See supplementary information

supplementary information

1. See table 1.5.1 shown for source details.

1.6.2	TABLE: Electrical data (in normal conditions)						P
U (V/Hz)	I (A)	I _{rated} (A)	P (W)	Fuse #	I _{fuse} (A)	Condition/status	
For models NP-UM352W and NP-UM352W+							
COMPUTER IN with ECO OFF mode							
90/50	4.20	--	366.4	F001	4.20	Maximum normal load.	
90/60	4.21	--	366.5	F001	4.21	Maximum normal load.	
100/50	3.82	3.9	362.2	F001	3.82	Maximum normal load.	
100/60	3.81	3.9	361.2	F001	3.81	Maximum normal load.	
180/50	2.10	--	347.1	F001	2.10	Maximum normal load.	
180/60	2.10	--	345.8	F001	2.10	Maximum normal load.	
200/50	1.88	1.9	345.2	F001	1.88	Maximum normal load.	
200/60	1.86	1.9	345.7	F001	1.86	Maximum normal load.	
240/50	1.67	1.7 or 1.9	345.8	F001	1.67	Maximum normal load.	
240/60	1.55	1.7 or 1.9	344.6	F001	1.55	Maximum normal load.	
254.4/50	1.66	--	346.4	F001	1.66	Maximum normal load.	
254.4/60	1.46	--	343.0	F001	1.46	Maximum normal load.	
264/50	1.65	--	344.1	F001	1.65	Maximum normal load.	
264/60	1.41	--	344.7	F001	1.41	Maximum normal load.	
HDMI 1(M1701) IN with ECO OFF mode							
90/50	4.28	--	373.4	F001	4.28	Maximum normal load.	
90/60	4.30	--	375.0	F001	4.30	Maximum normal load.	
100/50	3.92	3.9	371.6	F001	3.92	Maximum normal load.	
100/60	3.90	3.9	371.1	F001	3.90	Maximum normal load.	
180/50	2.19	--	358.4	F001	2.19	Maximum normal load.	
180/60	2.07	--	358.2	F001	2.07	Maximum normal load.	
200/50	1.93	1.9	353.8	F001	1.93	Maximum normal load.	
200/60	1.90	1.9	351.3	F001	1.90	Maximum normal load.	
240/50	1.70	1.7 or 1.9	348.4	F001	1.70	Maximum normal load.	
240/60	1.55	1.7 or 1.9	345.1	F001	1.55	Maximum normal load.	
254.4/50	1.68	--	344.6	F001	1.68	Maximum normal load.	

IEC 60950-1						
Clause	Requirement + Test			Result - Remark		Verdict
254.4/60	1.45	--	344.4	F001	1.45	Maximum normal load.
264/50	1.71	--	345.1	F001	1.71	Maximum normal load.
264/60	1.40	--	341.4	F001	1.40	Maximum normal load.
HDMI 2(M1702) IN with ECO OFF mode						
90/50	4.12	--	357.6	F001	4.12	Maximum normal load.
90/60	4.13	--	357.9	F001	4.13	Maximum normal load.
100/50	3.73	3.9	353.9	F001	3.73	Maximum normal load.
100/60	3.74	3.9	353.9	F001	3.74	Maximum normal load.
180/50	2.05	--	339.6	F001	2.05	Maximum normal load.
180/60	2.05	--	340.8	F001	2.05	Maximum normal load.
200/50	1.83	1.9	337.5	F001	1.83	Maximum normal load.
200/60	1.82	1.9	337.1	F001	1.82	Maximum normal load.
240/50	1.61	1.7 or 1.9	335.2	F001	1.61	Maximum normal load.
240/60	1.51	1.7 or 1.9	334.2	F001	1.51	Maximum normal load.
254.4/50	1.65	--	345.1	F001	1.65	Maximum normal load.
254.4/60	1.46	--	341.9	F001	1.46	Maximum normal load.
264/50	1.66	--	343.7	F001	1.66	Maximum normal load.
264/60	1.41	--	343.6	F001	1.41	Maximum normal load.
VIDEO IN with ECO OFF mode						
90/50	4.17	--	362.6	F001	4.17	Maximum normal load.
90/60	4.16	--	363.4	F001	4.16	Maximum normal load.
100/50	3.73	3.9	356.9	F001	3.73	Maximum normal load.
100/60	3.75	3.9	356.4	F001	3.75	Maximum normal load.
180/50	2.04	--	343.6	F001	2.04	Maximum normal load.
180/60	2.04	--	341.7	F001	2.04	Maximum normal load.
200/50	1.85	1.9	344.6	F001	1.85	Maximum normal load.
200/60	1.86	1.9	348.4	F001	1.86	Maximum normal load.
240/50	1.66	1.7 or 1.9	339.8	F001	1.66	Maximum normal load.
240/60	1.51	1.7 or 1.9	350.4	F001	1.51	Maximum normal load.
254.4/50	1.66	--	340.4	F001	1.66	Maximum normal load.
254.4/60	1.45	--	338.7	F001	1.45	Maximum normal load.
264/50	1.69	--	345.0	F001	1.69	Maximum normal load.
264/60	1.38	--	345.4	F001	1.38	Maximum normal load.

IEC 60950-1						
Clause	Requirement + Test			Result - Remark		Verdict
For models NP-UM351W and NP-UM351W+						
COMPUTER IN with ECO OFF mode						
90/50	4.13	--	359.5	F001	4.13	Maximum normal load.
90/60	4.13	--	360.3	F001	4.13	Maximum normal load.
100/50	3.75	3.8	355.8	F001	3.75	Maximum normal load.
100/60	3.78	3.8	358.5	F001	3.78	Maximum normal load.
180/50	1.99	--	342.7	F001	1.99	Maximum normal load.
180/60	1.99	--	343.9	F001	1.99	Maximum normal load.
200/50	1.77	1.9	339.8	F001	1.77	Maximum normal load.
200/60	1.77	1.9	341.1	F001	1.77	Maximum normal load.
240/50	1.49	1.6 or 1.9	337.9	F001	1.49	Maximum normal load.
240/60	1.47	1.6 or 1.9	337.0	F001	1.47	Maximum normal load.
254.4/50	1.46	--	341.4	F001	1.46	Maximum normal load.
254.4/60	1.40	--	340.8	F001	1.40	Maximum normal load.
264/50	1.43	--	340.6	F001	1.43	Maximum normal load.
264/60	1.35	--	337.5	F001	1.35	Maximum normal load.
For models NP-UM351W and NP-UM351W+						
HDMI 1(M1701) IN with ECO OFF mode						
90/50	4.18	--	364.7	F001	4.18	Maximum normal load.
90/60	4.21	--	363.3	F001	4.21	Maximum normal load.
100/50	3.71	3.8	357.1	F001	3.71	Maximum normal load.
100/60	3.75	3.8	355.6	F001	3.75	Maximum normal load.
180/50	2.01	--	345.8	F001	2.01	Maximum normal load.
180/60	2.01	--	341.9	F001	2.01	Maximum normal load.
200/50	1.79	1.9	342.5	F001	1.79	Maximum normal load.
200/60	1.80	1.9	344.5	F001	1.80	Maximum normal load.
240/50	1.50	1.6 or 1.9	345.2	F001	1.50	Maximum normal load.
240/60	1.50	1.6 or 1.9	345.8	F001	1.50	Maximum normal load.
254.4/50	1.46	--	336.2	F001	1.46	Maximum normal load.
254.4/60	1.40	--	337.7	F001	1.40	Maximum normal load.
264/50	1.42	--	336.7	F001	1.42	Maximum normal load.
264/60	1.34	--	336.9	F001	1.34	Maximum normal load.
HDMI 2(M1702) IN with ECO OFF mode						

IEC 60950-1						
Clause	Requirement + Test				Result - Remark	Verdict
90/50	4.12	--	363.1	F001	4.12	Maximum normal load.
90/60	4.18	--	362.3	F001	4.18	Maximum normal load.
100/50	3.71	3.8	362.3	F001	3.71	Maximum normal load.
100/60	3.75	3.8	360.4	F001	3.75	Maximum normal load.
180/50	1.97	--	343.5	F001	1.97	Maximum normal load.
180/60	1.98	--	341.6	F001	1.98	Maximum normal load.
200/50	1.78	1.9	343.7	F001	1.78	Maximum normal load.
200/60	1.79	1.9	343.9	F001	1.79	Maximum normal load.
240/50	1.50	1.6 or 1.9	337.2	F001	1.50	Maximum normal load.
240/60	1.48	1.6 or 1.9	343.3	F001	1.48	Maximum normal load.
254.4/50	1.46	--	344.1	F001	1.46	Maximum normal load.
254.4/60	1.43	--	338.2	F001	1.43	Maximum normal load.
264/50	1.46	--	341.6	F001	1.46	Maximum normal load.
264/60	1.36	--	338.9	F001	1.36	Maximum normal load.
VIDEO IN with ECO OFF mode						
90/50	4.18	--	372.2	F001	4.18	Maximum normal load.
90/60	4.23	--	372.1	F001	4.23	Maximum normal load.
100/50	3.70	3.8	354.9	F001	3.70	Maximum normal load.
100/60	3.74	3.8	354.2	F001	3.74	Maximum normal load.
180/50	1.99	--	339.9	F001	1.99	Maximum normal load.
180/60	2.01	--	344.4	F001	2.01	Maximum normal load.
200/50	1.78	1.9	344.1	F001	1.78	Maximum normal load.
200/60	1.81	1.9	348.5	F001	1.81	Maximum normal load.
240/50	1.53	1.6 or 1.9	343.2	F001	1.53	Maximum normal load.
240/60	1.48	1.6 or 1.9	343.6	F001	1.48	Maximum normal load.
254.4/50	1.46	--	343.8	F001	1.46	Maximum normal load.
254.4/60	1.40	--	339.2	F001	1.40	Maximum normal load.
264/50	1.44	--	344.6	F001	1.44	Maximum normal load.
264/60	1.37	--	337.6	F001	1.37	Maximum normal load.
For models NP-UM301W and NP-UM301W+						
COMPUTER IN with ECO OFF mode						
90/50	3.85	--	335.2	F001	3.85	Maximum normal load.
90/60	3.85	--	335.4	F001	3.85	Maximum normal load.

IEC 60950-1						
Clause	Requirement + Test			Result - Remark		Verdict
100/50	3.40	3.5	325.1	F001	3.40	Maximum normal load.
100/60	3.41	3.5	326.0	F001	3.41	Maximum normal load.
180/50	1.88	--	316.8	F001	1.88	Maximum normal load.
180/60	1.85	--	316.2	F001	1.85	Maximum normal load.
200/50	1.68	1.7	314.2	F001	1.68	Maximum normal load.
200/60	1.68	1.7	314.3	F001	1.68	Maximum normal load.
240/50	1.51	1.5 or 1.7	315.4	F001	1.51	Maximum normal load.
240/60	1.39	1.5 or 1.7	314.4	F001	1.39	Maximum normal load.
254.4/50	1.56	--	315.9	F001	1.56	Maximum normal load.
254.4/60	1.33	--	314.6	F001	1.33	Maximum normal load.
264/50	1.86	--	317.3	F001	1.86	Maximum normal load.
264/60	1.29	--	315.2	F001	1.29	Maximum normal load.
HDMI 1(M1701) IN with ECO OFF mode						
90/50	3.81	--	325.8	F001	3.81	Maximum normal load.
90/60	3.83	--	326.5	F001	3.83	Maximum normal load.
100/50	3.42	3.5	321.2	F001	3.42	Maximum normal load.
100/60	3.43	3.5	321.4	F001	3.43	Maximum normal load.
180/50	1.89	--	317.5	F001	1.89	Maximum normal load.
180/60	1.85	--	314.4	F001	1.85	Maximum normal load.
200/50	1.71	1.7	315.7	F001	1.71	Maximum normal load.
200/60	1.71	1.7	315.7	F001	1.71	Maximum normal load.
240/50	1.49	1.5 or 1.7	313.8	F001	1.49	Maximum normal load.
240/60	1.40	1.5 or 1.7	314.1	F001	1.40	Maximum normal load.
254.4/50	1.55	--	321.4	F001	1.55	Maximum normal load.
254.4/60	1.32	--	313.5	F001	1.32	Maximum normal load.
264/50	1.88	--	320.1	F001	1.88	Maximum normal load.
264/60	1.29	--	319.6	F001	1.29	Maximum normal load.
HDMI 2(M1702) IN with ECO OFF mode						
90/50	3.81	--	326.1	F001	3.81	Maximum normal load.
90/60	3.82	--	326.3	F001	3.82	Maximum normal load.
100/50	3.42	3.5	322.8	F001	3.42	Maximum normal load.
100/60	3.43	3.5	323.4	F001	3.43	Maximum normal load.
180/50	1.91	--	320.4	F001	1.91	Maximum normal load.
180/60	1.86	--	319.9	F001	1.86	Maximum normal load.

IEC 60950-1						
Clause	Requirement + Test				Result - Remark	Verdict
200/50	1.70	1.7	315.8	F001	1.70	Maximum normal load.
200/60	1.68	1.7	319.8	F001	1.68	Maximum normal load.
240/50	1.50	1.5 or 1.7	312.5	F001	1.50	Maximum normal load.
240/60	1.37	1.5 or 1.7	311.4	F001	1.37	Maximum normal load.
254.4/50	1.50	--	312.8	F001	1.50	Maximum normal load.
254.4/60	1.32	--	311.1	F001	1.32	Maximum normal load.
264/50	1.80	--	313.5	F001	1.80	Maximum normal load.
264/60	1.26	--	310.6	F001	1.26	Maximum normal load.
VIDEO IN with ECO OFF mode						
90/50	3.83	--	334.6	F001	3.83	Maximum normal load.
90/60	3.82	--	334.7	F001	3.82	Maximum normal load.
100/50	3.41	3.5	329.5	F001	3.41	Maximum normal load.
100/60	3.42	3.5	329.8	F001	3.42	Maximum normal load.
180/50	1.90	--	321.5	F001	1.90	Maximum normal load.
180/60	1.92	--	320.7	F001	1.92	Maximum normal load.
200/50	1.72	1.7	315.6	F001	1.72	Maximum normal load.
200/60	1.74	1.7	318.6	F001	1.74	Maximum normal load.
240/50	1.52	1.5 or 1.7	311.9	F001	1.52	Maximum normal load.
240/60	1.40	1.5 or 1.7	312.5	F001	1.40	Maximum normal load.
254.4/50	1.53	--	313.1	F001	1.53	Maximum normal load.
254.4/60	1.35	--	312.6	F001	1.35	Maximum normal load.
264/50	1.79	--	313.2	F001	1.79	Maximum normal load.
264/60	1.28	--	312.8	F001	1.28	Maximum normal load.
Supplementary information:						
1. The measured input current at rated voltage shall be $\leq 110\%$ of rated current.						
2. See summary of testing in the test report for the detail max. normal condition.						

2.1.1.5 c) 1)	TABLE: max. V, A, VA test				P
Voltage (rated) (V)	Current (rated) (A)	Voltage (max.) (V)	Current (max.) (A)	VA (max.) (VA)	
+4.2 V	2.5	4.42	11.5	45.54	
+15.5 V	3.2	16.28	5.9	96.69	
+ 17.5 V	0.21	18.17	2.9	49.35	

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Clause	Requirement + Test	Result - Remark	Verdict

supplementary information:
Input voltage: 240 V, 60 Hz

2.1.1.5 c) 2)	TABLE: stored energy	N/A
Capacitance C (μF)	Voltage U (V)	Energy E (J)
supplementary information:		

2.2	TABLE: evaluation of voltage limiting components in SELV circuits			P
Component (measured between)		max. voltage (V) (normal operation)		Voltage Limiting Components
		V peak	V d.c.	
T101 pin 7 to pin 11, 12		94.0	--	--
After D211 to pin11, 12		--	23.2	D211
T101 pin 8 to pin 11, 12		84.0	--	--
After C219 to pin11, 12		--	18.8	C219
After D202 to pin11, 12		--	18.8	D202
T101 pin 9, 10 to pin 11, 12		24.0	--	--
Fault test performed on voltage limiting components		Voltage measured (V) in SELV circuits (V peak or V d.c.)		
D211 short		0 Vdc		
C219 short		0 Vdc		
D202 short		0 Vdc		
supplementary information:				
Input voltage: 240 V, 60 Hz				

2.5	TABLE: limited power sources					P
Circuit output tested:						
Note: Measured Uoc (V) with all load circuits disconnected:						
Components	Sample No.	Uoc (Vdc)	I _{sc} (A)		VA	
			Meas.	Limit	Meas.	Limit
For table 2B						
HDMI 1 IN / HDMI 2 IN port pins 1, 3, 4, 6, 8, 9 to GND						

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Clause	Requirement + Test			Result - Remark		Verdict
Normal condition	1.	3.3	Can't loading	8	Can't loading	100
HDMI 1 IN / HDMI 2 IN port pins 14, 15 to GND						
Normal condition	1.	3.35	Can't loading	8	Can't loading	100
HDMI 1 IN / HDMI 2 IN port pins 7, 10, 12, 13, 16, 18, 19, 2, 5, 8, 11, 17 to GND						
Normal condition	1.	0	0	8	0	100
USB port (M3501) pin 1 to GND						
Normal condition	1.	4.99	1.3	8	6.084	100
USB port (M3501) pins 2, 3, 4 to GND						
Normal condition	1.	0	0	8	0	100
USB port (M3502) pin 1 to GND						
Normal condition	1.	4.99	0.7	8	3.444	100
USB port (M3502) pins 2, 3, 4 to GND						
Normal condition	1.	0	0	8	0	100
USB port (M3503) pins 1, 4 to GND						
Normal condition	1.	0	0	8	0	100
USB port (M3503) pin 2 to GND						
Normal condition	1.	0.57	Can't loading	8	Can't loading	100
USB port (M3503) pin 3 to GND						
Normal condition	1.	3.23	Can't loading	8	Can't loading	100
LAN port (M4501) all pins to GND						
Normal condition	1.	0	0	8	0	100
COMPUTER IN (M8201) port pins 1, 2, 3, 9, 11, 4, 5, 6, 7, 8, 10 to GND						
Normal condition	1.	0	0	8	0	100
COMPUTER IN (M8201) port pin 12 to GND						
Normal condition	1.	4.09	Can't loading	8	Can't loading	100
COMPUTER IN (M8201) port pin 13 to GND						
Normal condition	1.	0.39	Can't loading	8	Can't loading	100
COMPUTER IN (M8201) port pin 14 to GND						
Normal condition	1.	0.36	Can't loading	8	Can't loading	100
COMPUTER IN (M8201) port pin 15 to GND						
Normal condition	1.	1.47	Can't loading	8	Can't loading	100
MONITOR OUT (M8202) port pins 9, 11, 12, 15, 4, 5, 6, 7, 8, 10 to GND						
Normal condition	1.	0	0	8	0	100
MONITOR OUT (M8202) port pins 1, 2 to GND						

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Clause	Requirement + Test			Result - Remark		Verdict
Normal condition	1.	0.19	Can't loading	8	Can't loading	100
MONITOR OUT (M8202) port pin 3 to GND						
Normal condition	1.	0.18	Can't loading	8	Can't loading	100
MONITOR OUT (M8202) port pin 13 to GND						
Normal condition	1.	0.39	Can't loading	8	Can't loading	100
MONITOR OUT (M8202) port pin 14 to GND						
Normal condition	1.	0.36	Can't loading	8	Can't loading	100
AUDIO IN (M8003) port pins 1, 2, 3 to GND						
Normal condition	1.	0	0	8	0	100
AUDIO OUT (M8004) port pins 1, 2, 3, 4, 5 to GND						
Normal condition	1.	0	0	8	0	100
MIC (M8001) port pins 1, 2, 4, 5 to GND						
Normal condition	1.	0	0	8	0	100
VIDEO IN (M8002) port pins 1, 2 to GND						
Normal condition	1.	0	0	8	0	100
AUDIO IN (M8002) L/MONO port pins 3, 4 to GND						
Normal condition	1.	0	0	8	0	100
AUDIO IN (M8002) R port pins 5, 6, 7 to GND						
Normal condition	1.	0	0	8	0	100
PC CONTROL (M8005) port pin 3 to GND						
Normal condition	1.	0.35	Can't loading	8	Can't loading	100
PC CONTROL(M8005) port pins 1, 2, 4, 5, 6, 7, 8, 9 pins to GND						
Normal condition	1.	0	0	8	0	100
For table 2C						
VCCS +4.2 V for main board port After F1001 to GND						
Normal condition	1.	4.42	11.5	86.95 (1000/11.5)	45.54	250

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Clause	Requirement + Test			Result - Remark		Verdict
Single fault condition with 1) Q102 (G to S) short; 2) Q103 (G to S) short; 3) PC103 (Pin 3 to 4) short; 4) PC104 (Pin 1 to 2) short; 5) PC104 (Pin 1) open; 6) PC104 (Pin 4) open; 7) IC102 (Pin 8 to 2) short; 8) IC102 (Pin 8 to 4) short	1.	4.42	11.5	86.95 (1000/11.5)	45.54	250
VCCS +4.2V for main board port After F1002 to GND						
Normal condition	1.	4.42	11.5	226.24 (1000/4.42)	45.54	250
Single fault condition with 1) Q102 (G to S) short; 2) Q103 (G to S) short; 3) PC103 (Pin 3 to 4) short; 4) PC104 (Pin 1 to 2) short; 5) PC104 (Pin 1) open; 6) PC104 (Pin 4) open; 7) IC102 (Pin 8 to 2) short; 8) IC102 (Pin 8 to 4) short	1.	4.42	11.5	226.24 (1000/4.42)	45.54	250
VCCS +15 V for main board port After F1003 to GND						
Normal condition	1.	16.28	5.9	61.42 (1000/16.28)	96.69	250

IEC 60950-1						
Clause	Requirement + Test			Result - Remark		Verdict
Single fault condition with 1) Q102 (G to S) short; 2) Q103 (G to S) short; 3) PC103 (Pin 3 to 4) short; 4) PC104 (Pin 1 to 2) short; 5) PC104 (Pin 1) open; 6) PC104 (Pin 4) open; 7) IC102 (Pin 8 to 2) short; 8) IC102 (Pin 8 to 4) short	1.	16.28	5.9	61.42 (1000/16.28)	96.69	250
VCCS +15V for main board port After F1004 to GND						
Normal condition	1.	16.28	5.9	61.42 (1000/16.28)	96.69	250
Single fault condition with 1) Q102 (G to S) short; 2) Q103 (G to S) short; 3) PC103 (Pin 3 to 4) short; 4) PC104 (Pin 1 to 2) short; 5) PC104 (Pin 1) open; 6) PC104 (Pin 4) open; 7) IC102 (Pin 8 to 2) short; 8) IC102 (Pin 8 to 4) short	1.	16.28	5.9	61.42 (1000/16.28)	96.69	250
VCCS +15 V for main board port After F1006 to GND						
Normal condition	1.	16.28	5.9	61.42 (1000/16.28)	96.69	250

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Clause	Requirement + Test			Result - Remark		Verdict
Single fault condition with 1) Q102 (G to S) short; 2) Q103 (G to S) short; 3) PC103 (Pin 3 to 4) short; 4) PC104 (Pin 1 to 2) short; 5) PC104 (Pin 1) open; 6) PC104 (Pin 4) open; 7) IC102 (Pin 8 to 2) short; 8) IC102 (Pin 8 to 4) short	1.	16.28	5.9	61.42 (1000/16.28)	96.69	250
VCCS +17.5 V for main board port After F1005 to GND						
Normal condition	1.	18.17	2.9	54.97 (1000/18.19)	49.35	250
Single fault condition with 1) Q102 (G to S) short; 2) Q103 (G to S) short; 3) PC103 (Pin 3 to 4) short; 4) PC104 (Pin 1 to 2) short; 5) PC104 (Pin 1) open; 6) PC104 (Pin 4) open; 7) IC102 (Pin 8 to 2) short; 8) IC102 (Pin 8 to 4) short	1.	18.17	2.9	54.97 (1000/18.19)	49.35	250
supplementary information:						
1) Input voltage: 240 V, 60 Hz 2) The fuses (F1001 to F1006) bypassed during the test. 3) All sources of fuses (F1001 to F1006) as overcurrent protective device that comply with table 2C request (break the circuit within 120 s with a current equal to 210 % of the current rating).						
2.10.2	Table: working voltage measurement					P
Location	RMS voltage (V)		Peak voltage (V)	Comments		

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Clause	Requirement + Test	Result - Remark	Verdict

Input voltage: 100 V/60 Hz:			
T101 pin 1-7	82	170	
T101 pin 1-8	78	166	
T101 pin 1-9,10	70	152	
T101 pin 1-11,12	70	146	
T101 pin 2-7	68	156	
T101 pin 2-8	68	168	
T101 pin 2-9,10	76	216	
T101 pin 2-11,12	80	236	
T101 pin 4-7	368	480	
T101 pin 4-8	368	488	
T101 pin 4-9,10	368	488	
T101 pin 4-11,12	368	488	Max. Vrms
T101 pin 5-7	336	432	
T101 pin 5-8	336	432	
T101 pin 5-9,10	344	440	
T101 pin 5-11,12	344	448	
T101 pin 6-7	336	480	
T101 pin 6-8	332	464	
T101 pin 6-9, 10	336	416	
T101 pin 6-11,12	336	400	
C130 primary to secondary	70	146	
PC101 pin 1-3	70	150	
PC101 pin 1-4	70	150	
PC101 pin 2-3	70	150	
PC101 pin 2-4	70	150	
PC104 pin 1-3	70	150	
PC104 pin 1-4	70	150	
PC104 pin 2-3	68	150	
PC104 pin 2-4	68	150	
PC103 pin 1-3	70	150	
PC103 pin 1-4	70	150	
PC103 pin 2-3	70	150	

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Clause	Requirement + Test	Result - Remark	Verdict
PC103 pin 2-4	70	150	
R172 trace to R214 trace	72	168	
R173 trace to T101 pin11,12	428	582	
Input voltage: 240 V/60 Hz:			
T101 pin 1-7	168	376	
T101 pin 1-8	168	368	
T101 pin 1-9,10	160	368	
T101 pin 1-11,12	160	360	
T101 pin 2-7	160	360	
T101 pin 2-8	160	368	
T101 pin 2-9,10	168	416	
T101 pin 2-11,12	168	432	
T101 pin 4-7	344	496	
T101 pin 4-8	344	496	
T101 pin 4-9,10	360	512	
T101 pin 4-11,12	360	512	Max. Vpeak
T101 pin 5-7	304	440	
T101 pin 5-8	304	440	
T101 pin 5-9,10	312	464	
T101 pin 5-11,12	312	464	
T101 pin 6-7	304	496	
T101 pin 6-8	304	480	
T101 pin 6-9,10	296	432	
T101 pin 6-11,12	296	416	
C130 primary to secondary	160	360	
PC101 pin 1-3	168	360	
PC101 pin 1-4	168	360	
PC101 pin 2-3	160	360	
PC101 pin 2-4	160	360	
PC104 pin 1-3	168	360	
PC104 pin 1-4	168	360	
PC104 pin 2-3	160	360	

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Clause	Requirement + Test		Verdict
PC104 pin 2-4	160	360	
PC103 pin 1-3	160	360	
PC103 pin 1-4	160	360	
PC103 pin 2-3	160	360	
PC103 pin 2-4	160	360	
R172 trace to R214 trace	160	348	
R173 trace to T101 pin11,12	448	586	Max. Vpeak and Vrms
CN3 of Ballast pin 1-2 (For starting pulses)	920	88	
supplementary information:			
1. For Ballast board the RMS voltage measured after lamp ignited and Peak voltage measured when lamp igniting.			
2. Only record maximum test result for ballast board.			

2.10.3 and 2.10.4	TABLE: Clearance and creepage distance measurements						P
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)	
Functional :							
Under fuse F001	420	250	2.3 ³ .	5.9	2.5	5.9	
L to N before fuse	420	250	2.3 ³ .	3.1	2.5	3.1	
Basic / supplementary:							
Primary components (with 10 N) to earth (or metal parts) or floating parts	420	250	3.0 ³ .	See below	3.0	See below	
Heatsink of transistors (D202, Q204, D203) to core of transformer (T101)				3.5		3.5	
C129 / C125 to core of transformer (T101)				4.4		4.4	
SPS primary components located trace side to earthed trace side	420	250	3.0 ³ .	See below	3.0	See below	
Under C006				5.0		5.0	
Under C007				5.0		5.0	
R104 to earthed screw trace				13.4		13.4	
Reinforced:							

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Clause	Requirement + Test			Result - Remark		Verdict
Primary components (with 10N) to secondary components (with 10N) on SPS board	420	250	6.0 ^{3.}	See below	6.0	See below
C130 primary pin to PC101 secondary pin				6.0		6.0
Primary traces to secondary trace	420	250	6.0 ^{3.}	See below	6.0	See below
Under PC103				6.8		6.8
Under PC104				6.4		6.4
Under PC101				6.6		6.6
Under C130				6.9		6.9
R172 to R214				9.4		9.4
R173 to T101 pin 11, 12	586	448	6.9 ^{3.}	14.1	9.2	14.1
For Ballast board						
Reinforced:						
Ballast output connector (lamp connector) to user accessible surface when lamp remove	920	250	8.0 ^{3.}	9.6	8.0	9.6
Supplementary information:						
- Internal wires to keep sufficient distance or tubing for reinforced insulation request. - Other functional insulation according to sub-clause 5.3.4 c). - The equipment has been evaluated according to the specified by the manufacturer maximum operating altitude of 5000 m (correction factor for clearances according to IEC 60664:1992+A1:2000+A2:2002 of 1.48 is considered). - Only minimum distance recored (same as clearance) and the actual distance is much larger. - For clearance and creepage did not describe above are far larger than limit above. - There is a plastic case (min. 0.4 mm thickness) provided to between complete cover the SPS board and ballast board.						

2.10.5	TABLE: Distance through insulation measurements				P
Distance through insulation (DTI) at/of:	U peak (V)	U rms (V)	Test voltage (V)	Required DTI (mm)	DTI (mm)
Optocouplers (reinforced insulation)	420	250	3000	0.4	1.
Plastic enclosure	420	250	3000	0.4	1.
Plastic Bottom Case (For Ballast Board)	420	250	3000	0.4	1.
Plastic Cover (For Ballast Board)	420	250	3000	0.4	1.
Plastic Cover (For Power Board)	420	250	3000	0.4	1.

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Clause	Requirement + Test	Result - Remark	Verdict

2.10.5	TABLE: Distance through insulation measurements					P
Distance through insulation (DTI) at/of:		U peak (V)	U rms (V)	Test voltage (V)	Required DTI (mm)	DTI (mm)
Lead Wires (Connecting between Appliance Inlet and power board)		420	250	3000	0.4	1.
Insulation sheet		420	250	3000	0.4	1.
Supplementary information:						
1. See table 1.5.1						

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:								Verdict	
- Chemical leaks									
- Explosion of the battery									
- Emission of flame or expulsion of molten metal									
- Electric strength tests of equipment after completion of tests									
Supplementary information:									

4.3.8	TABLE: Batteries										N/A
Battery category..... : (Lithium, NiMh, NiCad, Lithium Ion ...)											
Manufacturer											
Type / model.....											

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Clause	Requirement + Test			Result - Remark	Verdict
C004 body	45.2	42.6	44.8	47.0	100
C006 and C007 body	44.5	42.8	44.1	46.4	125
PCB near TH001	70.0	53.5	71.7	72.5	105
PCB near Q102 and Q103	66.3	50.0	66.8	68.4	105
L103 coil	75.0	47.9	74.2	76.2	105
Connector (CN101) of power board	45.3	42.2	45.5	47.0	85
C124 and C123 body	47.2	43.9	46.9	48.5	105
PCB near Q104 and D107	53.6	46.7	54.0	55.4	105
C130 body	57.3	48.9	57.3	59.4	125
PC101 body	58.4	50.0	58.2	60.5	100
PC104 body	55.5	47.3	55.3	57.6	100
PC103 body	51.9	45.4	51.5	53.8	100
T101 coil	69.9	59.3	69.5	71.2	110
T101 core	66.0	55.1	65.6	67.5	110
Housing connector of power board (Connecting to wafer connector CN1 of ballast)	48.0	46.3	47.7	49.7	85
Ballast board (PHG251A1XD)					
CN1 body	48.5	46.8	48.1	49.8	85
B2 coil	51.9	50.2	51.5	53.1	150
L2 coil	74.4	71.8	73.4	74.7	150
L5 coil	76.4	72.1	75.2	76.9	130
L6 coil	66.6	63.1	65.6	67.3	130
CN3 body	70.9	67.8	69.8	71.5	85
MM board					
PCB near IC9201	77.4	75.0	75.0	79.0	105
PCB near IC9003	79.6	77.2	76.2	83.2	105
Main board (PWC-4830)					
PCB near IC4504	67.1	64.9	65.3	70.4	105
PCB near IC4505	70.9	68.7	69.2	74.4	105
PCB near IC1702	58.5	56.1	57.7	60.6	105
PCB near IC3001	64.2	62.7	63.9	67	105
LCD PCB board (PWC-4813A)					
PCB near IC7401	63.9	62.9	62.6	64.5	105
PCB near IC7201	56.4	55.3	56.1	57.6	105
C7001 body	53.3	52.2	53.9	54.7	--
Other					

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Clause	Requirement + Test		Result - Remark		Verdict
Iris motor case	57.1	56.1	57.0	58.4	105
Housing connector (Connecting to wafer connector CN3 of ballast)	69.3	66.6	68.6	70.1	85
Housing connector of lamp compartment (Connecting to wafer connector of lamp)	78.9	77.6	71.9	73.8	220
Wafer connector of lamp holder (Connecting to housing connector of lamp)	78.6	77.2	72.9	74.1	220
Lamp holder	74.6	73.6	65.8	66.7	220
Lamp compartment	79.3	78.2	79.5	87	200
Top lamp cover inside near lamp	57.1	56.0	55.0	56.1	--
Top lamp cover outside near lamp	54.0	52.8	52.4	53.5	95
Bottom plastic enclosure inside near power board	59.3	56.7	58.4	60.7	--
Bottom plastic enclosure outside near power board	47.0	44.5	47.1	49.5	95
Front plastic enclosure inside near lamp	50.9	49.8	50.5	51.3	--
Front plastic enclosure outside near lamp	49.2	48.1	49.1	50.1	95
Left plastic enclosure inside near lamp	68.7	67.3	65.9	67.9	--
Left plastic enclosure outside near lamp	57.6	56.2	53.5	56.7	95
Right plastic enclosure inside near air filter	41.7	40.3	41.9	42.4	--
Right plastic enclosure outside near air filter	41.9	40.4	42.3	42.5	95
Rear plastic enclosure inside near I/O panel	53.4	50.9	53.1	55.6	--
Rear plastic enclosure outside near I/O panel	51.6	49.2	52.1	54.4	95
Metal enclosure outside (For COMPUTER IN)	51.1	48.9	52.1	53.7	70
Glass enclosure outside near Lens	52.8	52.0	54.4	54.2	80
Plastic enclosure inside near camera	45.9	44.4	45.4	48.1	--
Plastic enclosure outside near camera	45.0	43.7	44.9	47.5	95
Max. ambient temperature Tma (°C):	40.0	40.0	40.0	40.0	--
Tamb (°C):	23.5	24.8	23.7	22.3	--
Supply voltage (V)	E)	F)	--	--	--
Power board (ZSNED06I)					
AC inlet near line	52.5	46.7	--	--	70
Primary wire near line	55.5	52.1	--	--	105
Housing connector of AC inlet (Connecting to wafer connector CN001 of power board)	45.3	44.5	--	--	85
Wafer connector (CN001) of power board (Connecting to wafer connector of AC inlet)	46.7	44.6	--	--	85
PCB near X001	45.6	43.1	--	--	105

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Clause	Requirement + Test		Result - Remark		Verdict
C005 body	44.2	42.6	--	--	100
L005 coil	53.9	51.4	--	--	105
L004 coil	56.6	55.1	--	--	105
C004 body	46.5	44.7	--	--	100
C006 and C007 body	46.1	43.4	--	--	125
PCB near TH001	70.6	72.4	--	--	105
PCB near Q102 and Q103	67.7	67.3	--	--	105
L103 coil	75.9	69.9	--	--	105
Connector (CN101) of power board	46.4	44.7	--	--	85
C124 and C123 body	47.5	46.6	--	--	105
PCB near Q104 and D107	54.6	55.1	--	--	105
C130 body	58.8	59.0	--	--	125
PC101 body	60.0	60.5	--	--	100
PC104 body	57.3	56.8	--	--	100
PC103 body	53.5	52.6	--	--	100
T101 coil	70.5	71.6	--	--	110
T101 core	66.7	67.1	--	--	110
Housing connector of power board (Connecting to wafer connector CN1 of ballast)	48.3	50.0	--	--	85
Ballast board (PHG251A1XD)					
CN1 body	48.8	51.3	--	--	85
B2 coil	52.1	53.9	--	--	150
L2 coil	73.9	76.1	--	--	150
L5 coil	75.1	79.1	--	--	130
L6 coil	66.5	66.9	--	--	130
CN3 body	70.1	75.4	--	--	85
MM board					
PCB near IC9201	82.9	80.3	--	--	105
PCB near IC9003	82.2	84.2	--	--	105
Main board (PWC-4830)					
PCB near IC4504	69.4	70.3	--	--	105
PCB near IC4505	73.4	76.2	--	--	105
PCB near IC1702	59.6	59.9	--	--	105
PCB near IC3001	66.0	70.5	--	--	105
LCD PCB board (PWC-4813A)					
PCB near IC7401	63.5	75.1	--	--	105

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Clause	Requirement + Test		Result - Remark		Verdict
PCB near IC7201	56.6	64.5	--	--	105
C7001 body	53.7	59.2	--	--	--
Other					
Iris motor case	57.4	64.8	--	--	105
Housing connector (Connecting to wafer connector CN3 of ballast)	69.1	73.2	--	--	85
Housing connector of lamp compartment (Connecting to wafer connector of lamp)	72.8	86.5	--	--	220
Wafer connector of lamp holder (Connecting to housing connector of lamp)	73.1	85.9	--	--	220
Lamp holder	65.7	94.3	--	--	220
Lamp compartment	86.0	92.7	--	--	200
Top lamp cover inside near lamp	55.1	64.7	--	--	--
Top lamp cover outside near lamp	52.5	58.3	--	--	95
Bottom plastic enclosure inside near power board	59.7	62.1	--	--	--
Bottom plastic enclosure outside near power board	48.5	47.7	--	--	95
Front plastic enclosure inside near lamp	50.3	53.9	--	--	--
Front plastic enclosure outside near lamp	49.1	51.4	--	--	95
Left plastic enclosure inside near lamp	66.9	75.4	--	--	--
Left plastic enclosure outside near lamp	55.7	59.6	--	--	95
Right plastic enclosure inside near air filter	41.4	42.2	--	--	--
Right plastic enclosure outside near air filter	41.5	43.1	--	--	95
Rear plastic enclosure inside near I/O panel	54.6	49.5	--	--	--
Rear plastic enclosure outside near I/O panel	53.4	47.3	--	--	95
Metal enclosure outside (For COMPUTER IN)	52.7	46.9	--	--	70
Glass enclosure outside near Lens	53.2	48.1	--	--	80
Plastic enclosure inside near camera	47.2	43.1	--	--	--
Plastic enclosure outside near camera	46.6	42.9	--	--	95
Max. ambient temperature Tma (°C):	40.0	40.0	--	--	--
Tamb (°C):	23.3	25.3	--	--	--
Supply voltage (V)	G)	--	--	--	--
Power board (ZSNED06I)					
AC inlet near line	43.3	--	--	--	70
Primary wire near line	45.7	--	--	--	105
Housing connector of AC inlet (Connecting to wafer connector CN001 of power board)	42.5	--	--	--	85

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Clause	Requirement + Test		Result - Remark		Verdict
Wafer connector (CN001) of power board (Connecting to wafer connector of AC inlet)	42.9	--	--	--	85
PCB near X001	42.3	--	--	--	105
C005 body	42.6	--	--	--	100
L005 coil	47.7	--	--	--	105
L004 coil	52.3	--	--	--	105
C004 body	43.0	--	--	--	100
C006 and C007 body	42.2	--	--	--	125
PCB near TH001	53.6	--	--	--	105
PCB near Q102 and Q103	55.9	--	--	--	105
L103 coil	59.2	--	--	--	105
Connector (CN101) of power board	43.3	--	--	--	85
C124 and C123 body	44.2	--	--	--	105
PCB near Q104 and D107	50.6	--	--	--	105
C130 body	51.8	--	--	--	125
PC101 body	52.5	--	--	--	100
PC104 body	48.7	--	--	--	100
PC103 body	47.1	--	--	--	100
T101 coil	59.7	--	--	--	110
T101 core	55.9	--	--	--	110
Housing connector of power board (Connecting to wafer connector CN1 of ballast)	46.0	--	--	--	85
Ballast board (PHG231A10WD)					
CN1 body	50.7	--	--	--	85
B2 coil	44.5	--	--	--	150
L2 coil	66.1	--	--	--	150
L5 coil	62.1	--	--	--	130
CN3 body	57.3	--	--	--	85
Main board (PWC-4830)					
PCB near IC1702	51.0	--	--	--	105
PCB near IC3001	56.9	--	--	--	105
LCD PWB board (PWC-4813A)					
PCB near IC7401	54.6	--	--	--	105
PCB near IC7201	52.1	--	--	--	105
Other					
Iris motor case	54.4	--	--	--	105

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Clause	Requirement + Test	Result - Remark			Verdict
Housing connector (Connecting to wafer connector CN3 of ballast)	56.3	--	--	--	85
Housing connector of lamp compartment (Connecting to wafer connector of lamp)	64.5	--	--	--	220
Wafer connector of lamp holder (Connecting to housing connector of lamp)	61.3	--	--	--	220
Lamp holder	76.5	--	--	--	220
Lamp compartment	65.2	--	--	--	200
Top lamp cover inside near lamp	56.6	--	--	--	--
Top lamp cover outside near lamp	53.1	--	--	--	95
Bottom plastic enclosure inside near power board	50.9	--	--	--	--
Bottom plastic enclosure outside near power board	45.3	--	--	--	95
Front plastic enclosure inside near lamp	51.2	--	--	--	--
Front plastic enclosure outside near lamp	48.3	--	--	--	95
Left plastic enclosure inside near lamp	52.9	--	--	--	--
Left plastic enclosure outside near lamp	47.7	--	--	--	95
Right plastic enclosure inside near air filter	41.5	--	--	--	--
Right plastic enclosure outside near air filter	41.6	--	--	--	95
Rear plastic enclosure inside near I/O panel	43.8	--	--	--	--
Rear plastic enclosure outside near I/O panel	43.5	--	--	--	95
Metal enclosure outside (For COMPUTER IN)	43.4	--	--	--	70
Glass enclosure outside near Lens	69.8	--	--	--	80
Max. ambient temperature Tma (°C):	40.0	--	--	--	--
Tamb (°C):	23.5	--	--	--	--
For DC Fan type 3110EL-04W-M49 (Test voltage: 12 Vdc)					
Windings	58.5	--	--	--	105
PCB near IC1	46.8	--	--	--	105
Enclosure	43.1	--	--	--	95
Tma	40.0	--	--	--	--
Tamb	23.7	--	--	--	--
For DC Fan type C6-6023L-06 (Test voltage: 12 Vdc)					
Windings	47.3	--	--	--	105
PCB near IC	45.7	--	--	--	105
Enclosure	43.1	--	--	--	95
Tma	40.0	--	--	--	--
Tamb	23.3	--	--	--	--

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Clause	Requirement + Test	Result - Remark	Verdict

For DC Fan type C6-6023L-14 (Test voltage: 12 Vdc)					
Windings	45.4	--	--	--	105
PCB near IC	44.4	--	--	--	105
Enclosure	43.4	--	--	--	95
Tma	40.0	--	--	--	--
Tamb	23.3	--	--	--	--

Supplementary information:

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

2. Unit specified with maximum of 40 °C ambient temperature and above test data was calculated by original test result of 25 °C ambient temperature.

Winding components (providing safety isolation):

- Class 130 material (B) $T_{max} = 120\text{ °C} - 10\text{ °C} = 110\text{ °C}$

3. Thermocouple method used for measuring the temperatures.

4. Supply voltage information see below for details

- A) ECO OFF mode: 90 Vac for models NP-UM352W / NP-UM352W+ with ballast type PHG251A1XD, lamp type NSHA270NEB/C (Desktop)
- B) ECO OFF mode: 264Vac for models NP-UM352W / NP-UM352W+ with ballast type PHG251A1XD, lamp type NSHA270NEB/C (Desktop)
- C) ECO OFF mode: 90 Vac for models NP-UM352W / NP-UM352W+ with ballast type PHG251A1XD, lamp type NSHA270NEB/C (90 degree)
- D) ECO OFF mode: 90 Vac for models NP-UM352W / NP-UM352W+ with ballast type PHG251A1XD, lamp type NSHA270NEB/C (180 degree)
- E) ECO OFF mode: 90 Vac for models NP-UM352W / NP-UM352W+ with ballast type PHG251A1XD, lamp type NSHA270NEB/C (270 degree)
- F) ECO ON mode: 90 Vac for models NP-UM352W / NP-UM352W+ with ballast type PHG251A1XD, lamp type NSHA270NEB/C (180 degree)
- G) ECO OFF mode: 90 Vac for models NP-UM301W / NP-UM301W+ with ballast type PHG231A10WD, lamp type NSHA210NEB (180 degree)

5. PTC1 located on ballast was opened during tests.

Temperature T of winding:	t1 (°C)	R1 (Ω)	t2 (°C)	R2 (Ω)	T (°C)	Allowed Tmax (°C)	Insulation class

Supplementary information:

4.5.5	TABLE: Ball pressure test of thermoplastic parts		P
	Allowed impression diameter (mm)	≤ 2 mm	—
Part	Test temperature (°C)	Impression diameter (mm)	
Housing and Wafer Connector (For lamp connection) POLYPLASTICS CO LTD / E130i	125	1.2	

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Clause	Requirement + Test	Result - Remark	Verdict
Housing and Wafer Connector / JAPAN SOLDERLESS TERMINAL MFG CO LTD / VH Series		125	1.6
Cover of line choke L004 & L005 (MITSUBISHI ENGINEERING-PLASTICS CORP / 5010N6)		125	1.5
Bobbin of transformer T101 (SUMITOMO BAKELITE CO LTD / PM-9820)		125	0.5
Supplementary information:			

4.7	TABLE: Resistance to fire					P
Part	Manufacturer of material	Type of material	Thickness (mm)	Flammability class	Evidence	
Supplementary information:						
1. see table 1.5.1.						

5.1	TABLE: touch current measurement			P
Measured between:		Measured (mA)	Limit (mA)	Comments/conditions
Line to metal part (earth)		0.46	3.5	switch “e” open
Neutral to metal part (earth)		0.48	3.5	switch “e” open
Line to output connector		0.46	3.5	switch “e” open
Neutral to output connector		0.48	3.5	switch “e” open
Line to plastic enclosure with metal foil		0.01	0.25	switch “e” close
Neutral to plastic enclosure with metal foil		0.01	0.25	switch “e” close
Supplementary information:				
Test voltage: 264 V, 60 Hz.				
Overall capacity: see table 1.5.1.				

5.2	TABLE: Electric strength tests, impulse tests and voltage surge tests			P
Test voltage applied between:		Voltage shape (AC, DC, impulse, surge)	Test voltage (V)	Breakdown Yes / No
Basic / supplementary:				
Unit: Primary to earth		DC	2652	No
Transformer T101 Secondary winding to core		AC	1875	No
Transformer T101 Primary winding to core		AC	1875	No

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Clause	Requirement + Test	Result - Remark	Verdict
Reinforced:			
Unit: Primary to secondary	DC	4242	No
Unit: Primary to Plastic enclosure with metal foil	DC	4242	No
Transformer T101 Secondary winding to Primary winding	AC	3000	No
Ballast HV connector to Plastic enclosure with metal foil	DC	4242	No
Plastic bottom case for ballast board ²⁾	AC	3000	No
Plastic cover for ballast board ³⁾	AC	3000	No
Plastic cover for power board ⁴⁾	AC	3000	No
Insulation sheet under power board ⁵⁾	AC	3000	No
Insulation sheet between power and ballast board ⁶⁾	AC	3000	No
Lead wires connecting between appliance Inlet and power board ⁷⁾	AC	3000	No
One layer of insulation tape used on T101 ⁹⁾	AC	3000	No
Pins of housing connector of lamp compartment to housing connector of lamp compartment ¹⁰⁾	AC	4350	No
Supplementary information:			
1) Electric strength tests were also conducted before and after clause 2.9.2.			
2) Source of plastic bottom case for ballast board: SABIC JAPAN L L C / CX7720			
3) Source of plastic cover for ballast board: SABIC JAPAN L L C / CX7720			
4) Source of plastic cover for power board: SABIC JAPAN L L C / CX7720			
5) Source of insulation sheet under power board: SUN DELTA CORP / VS(f)			
6) Source of insulation sheet between power and ballast board: SUN DELTA CORP / VS(f)			
7) Lead wires connecting between appliance Inlet and power board:			
a. LTK ELECTRIC WIRE (HUIZHOU) LTD / UL Style No. 1015			
b. SHENZHEN LINOYA ELECTRONIC CO LTD / UL Style No. 1015			
8) Electric strength tests were also conducted before and after clause 2.9.2 for all factories of transformer (T101) as below:			
a. Shantou Special Economic Zone Tokyo Parts Co., Ltd.			
b. Shantou2 Factory Shantou S E Z Tokyo Parts Co., Ltd.			
c. Xichang Factory Shantou S E Z Tokyo Parts Co., Ltd.			
d. PT. Sanwa Parts Indonesia			
9) Electric strength tests were also conducted before and after clause 2.9.2.			
Sources of insulation tapes:			
a. JINGJIANG YAHUA PRESSURE SENSITIVE GLUE CO LTD / CT* Yellow, WF*			
10) 2900 Vpeak was evaluated on CB report of ballast during no load condition.			
920 Vpeak was measured in the end-product Projector with lamp.			

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Clause	Requirement + Test	Result - Remark	Verdict

Test was conducted in accordance with higher peak working voltage 2900 Vpeak.

5.3	TABLE: Fault condition tests					P
	Ambient temperature (°C)				25°C, if no else specified	—
	Power source for EUT: Manufacturer, model/type, output rating				See table 1.5.1.	—
Component No.	Fault	Supply voltage (V)	Test time	Fuse #	Fuse current (A)	Observation
D001 (~ to +)	Short	240 V	1 sec	F001	--	F001 opened, no hazards.
C123 (+ to -)	Short	240 V	1 sec	F001	--	F001 opened, no hazards.
Q102 (D to G)	Short	240 V	1 sec	F001	--	F001 opened, no hazards.
Q102 (D to S)	Short	240 V	1 sec	F001	--	F001 opened, no hazards.
Q102 (G to S)	Short	240 V	30 min.	F001	1.55	Unit operated normally, no hazards.
Q103 (D to G)	Short	240 V	1 sec	F001	--	F001 opened, no hazards.
Q103 (D to S)	Short	240 V	1 sec	F001	--	F001 opened, no hazards.
Q103 (G to S)	Short	240 V	30 min.	F001	1.55	Unit operated normally, no hazards.
Q104 (D to G)	Short	240 V	10 min.	F001	0.08	R151, Q104 damaged, no hazards.
Q104 (D to S)	Short	240 V	10 min.	F001	0.08	R151, Q104 damaged, no hazards.
Q104 (G to S)	Short	240 V	10 min.	F001	0.08	Unit shutdown, no hazards.
PC101 (Pin 1 to 2)	Short	240 V	10 min.	F001	0.08	Unit shutdown, no hazards.
PC101 (Pin 3 to 4)	Short	240 V	10 min.	F001	0.08	Unit shutdown, no hazards.
PC101 (Pin 1)	Open	240 V	10 min.	F001	0.08	Unit shutdown, no hazards.
PC101 (Pin 4)	Open	240 V	10 min.	F001	0.08	Unit shutdown, no hazards.
PC103 (Pin 1 to 2)	Short	240 V	10 min.	F001	0.08	Unit shutdown, no hazards.

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Clause	Requirement + Test			Result - Remark		Verdict
PC103 (Pin 3 to 4)	Short	240 V	30 min.	F001	1.55	Unit operated normally, no hazards.
PC103 (Pin 1)	Open	240 V	10 min.	F001	0.08	Unit shutdown, no hazards.
PC103 (Pin 4)	Open	240 V	10 min.	F001	0.08	Unit shutdown, no hazards.
PC104 (Pin 1 to 2)	Short	240 V	30 min.	F001	1.55	Unit operated normally, no hazards.
PC104 (Pin 3 to 4)	Short	240 V	10 min.	F001	0.08	Unit shutdown, no hazards.
PC104 (Pin 1)	Open	240 V	30 min.	F001	1.55	Unit operated normally, no hazards.
PC104 (Pin 4)	Open	240 V	30 min.	F001	1.55	Unit operated normally, no hazards.
IC102 (Pin 8 to 2)	Short	240 V	30 min.	F001	1.55	Unit operated normally, no hazards.
IC102 (Pin 8 to 1)	Short	240 V	10 min.	F001	0.08	Unit shutdown, no hazards.
IC102 (Pin 8 to 4)	Short	240 V	30 min.	F001	1.55	Unit operated normally, no hazards.
D4002	Short	240 V	30 min.	F001	1.55	Unit operated normally, no hazards.
All ventilation Openings	Blocked	240 V	4.5 hrs	F001	1.55 to 0.08	Unit shut down after 5 min. Max. temp. of T101 coil = 90.1 °C, T101 core = 86.2 °C, ambient = 26.9 °C. No damage, no hazards.
DC fan (LCD(RG)) (near Air Filter)	Stalled	240 V	2.0 hrs	F001	1.55 to 0.08	Unit shut down immediately. Max. temp. of T101 coil = 57.3 °C, T101 core = 54.1 °C, Tamb = 22.6 °C. No damage, no hazards.
DC fan (LCD(B)) (near Air Filter)	Stalled	240 V	2.5 hrs	F001	1.55 to 0.08	Unit shut down immediately. Max. temp. of T101 coil = 60.2 °C, T101 core = 57.2 °C, Tamb = 24.5 °C. No damage, no hazards.
DC fan (LAMP(H)) (near LAMP)	Stalled	240 V	2.5 hrs	F001	1.55 to 0.08	Unit shut down immediately. Max. temp. of T101 coil = 58.7 °C, T101 core = 55.6 °C, Tamb = 23.1 °C. No damage, no hazards.
DC fan (Ex(LAMP)) (near LAMP)	Stalled	240 V	2.5 hrs	F001	1.55 to 0.08	Unit shut down immediately. Max. temp. of T101 coil = 56.5 °C, T101 core = 53.3 °C, Tamb = 21.7 °C. No damage, no hazards.

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Clause	Requirement + Test				Result - Remark	Verdict
DC fan (Ex(PS/BS)) (near Power and Ballast Board)	Stalled	240 V	2.0 hrs	F001	1.55 to 0.08	Unit shut down immediately. Max. temp. of T101 coil = 58.1 °C, T101 core = 54.9 °C, Tamb = 23.2 °C. No damage, no hazards.
T101 (Pin 1 to 2)	Short	240 V	10 min.	F001	0.08	Unit shutdown, no hazards.
T101 (Pin 4 to 6)	Short	240 V	10 min.	F001	0.08	Unit shutdown, no hazards.
T101 (Pin 7 to 8)	Short	240 V	10 min.	F001	0.08	Unit shutdown, no hazards.
T101 (Pin 9,10 to 11,12)	Short	240 V	10 min.	F001	0.08	Unit shutdown, no hazards.
T101 (Pin 8 to 9, 10)	Short	240 V	10 min.	F001	0.08	Unit shutdown, no hazards.
T101 (Pin 7 to 11,12)	Short	240 V	10 min.	F001	0.08	Unit shutdown, no hazards.
T101 (Pin 8 to 11,12)	Short	240 V	10 min.	F001	0.08	Unit shutdown, no hazards.
T101 Pin 7 after D211 to GND	Overload	240 V	2.5 hrs	F001	1.55 to 0.08	Unit shut down at 0.1 A. Max. temp. of T101 coil = 44.5 °C, T101 core = 43.8 °C, Tamb = 22.9 °C. No damage, no hazards.
T101 Pin 8 after D202 to GND	Overload	240 V	6.5 hrs	F001	1.55 to 1.75 to 0.08	Unit shut down at 3.0 A. Temp. was stable at 2.7 A. Max. temp. of T101 coil = 60.4 °C, T101 core = 56.7 °C, Tamb = 26.6 °C. No damage, no hazards.
T101 Pin 9, 10 after D203 to GND	Overload	240 V	9 hrs	F001	1.55 to 1.82 to 0.08	Unit shut down at 12.0 A. Temp. was stable at 11.0 A. Max. temp. of T101 coil = 75.4 °C, T101 core = 70.1 °C, Tamb = 23.1 °C. No damage, no hazards.
4.2 V Output (+ to -)	Short	240 V	10 min.	F001	0.08	Unit shutdown, no hazards.
15.0 V Output (+ to -)	Short	240 V	10 min.	F001	0.08	Unit shutdown, no hazards.
17.5 V Output (+ to -)	Short	240 V	10 min.	F001	0.08	Unit shutdown, no hazards.

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Clause	Requirement + Test			Result - Remark		Verdict
4.2 V & 15.0 V Output (+ to +)	Short	240 V	10 min.	F001	0.08	Unit shutdown, no hazards.
4.2 V & 17.5 V Output (+ to +)	Short	240 V	10 min.	F001	0.08	Unit shutdown, no hazards.
15.0 V & 17.5 V Output (+ to +)	Open	240 V	30 min.	F001	1.55	Unit operated normally, no hazards.
DC Fan type 3110EL-04W-M49	Locked	12 Vdc	7 hrs	--	--	Max. temp. of windings = 29.9 °C, ambient = 22.9 °C. No damage, no hazards.
DC Fan type C6-6023L-06	Locked	12 Vdc	7 hrs	--	--	Max. temp. of windings = 37.7 °C, ambient = 23.8 °C. No damage, no hazards.
DC Fan type C6-6023L-14	Locked	12 Vdc	7 hrs	--	--	Max. temp. of windings = 37.6 °C, ambient = 23.8 °C. No damage, no hazards.
Speaker	Short	240 V	10 min	F001	--	Unit operated normally except no volume output, no damage, no hazards.
Lamp	Rupture	240 V	10 min.	F001	--	No glass particles other than dust were emitted from the apparatus.
For output connectors						
HDMI 1 IN (M1701) ; HDMI 2 IN (M1702) pins 1, 3, 4, 6, 8, 9 to GND	Overload	240	10 min.	F001	--	The open circuit voltage is 3.30 Vdc, maximum available current is 0 mA, no hazards.
HDMI 1 IN (M1701) ; HDMI 2 IN (M1702) pins 15, 16 to GND	Overload	240	10 min.	F001	--	The open circuit voltage is 3.35 Vdc, maximum available current is 0 mA, no hazards.

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Clause	Requirement + Test			Result - Remark		Verdict
HDMI 1 IN (M1701) ; HDMI 2 IN (M1702) pins 7, 10, 12, 13, 16, 18, 19, 2, 5, 8, 11, 17 to GND	Overload	240	10 min.	F001	--	No output voltage, no hazards.
USB (M3501) pin 1 to GND	Overload	240	1 hr	F001	--	The open circuit voltage is 4.99 Vdc, maximum available current is 1300 mA, no hazards.
USB (M3501) pins 2, 3, 4 to GND	Overload	240	10 min.	F001	--	No output voltage, no hazards.
USB (M3502) pin 1 to GND	Overload	240	1 hr	F001	--	The open circuit voltage is 4.99 Vdc, maximum available current is 700 mA, no hazards.
USB (M3502) pins 2, 3, 4 to GND	Overload	240	10 min.	F001	--	No output voltage, no hazards.
USB (M3503) pins 1, 4 to GND	Overload	240	10 min.	F001	--	No output voltage, no hazards.
USB (M3502) pin 2 to GND	Overload	240	10 min.	F001	--	The open circuit voltage is 0.57 Vdc, maximum available current is 0 mA, no hazards.
USB (M3502) pin 3 to GND	Overload	240	10 min.	F001	--	The open circuit voltage is 3.23 Vdc, maximum available current is 0 mA, no hazards.
LAN (M4501) pins 1, 2, 3, 4, 5, 6, 7, 8 to GND	Overload	240	10 min.	F001	--	No output voltage, no hazards.
COMPUTE R IN (M4501) pin 12 to GND	Overload	240	10 min.	F001	--	The open circuit voltage is 4.09 Vdc, maximum available current is 0 mA, no hazards.
COMPUTE R IN (M4501) pin 13 to GND	Overload	240	10 min.	F001	--	The open circuit voltage is 0.39 Vdc, maximum available current is 0 mA, no hazards.

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Clause	Requirement + Test				Result - Remark	Verdict
COMPUTE R IN (M4501) pin 14 to GND	Overload	240	10 min.	F001	--	The open circuit voltage is 0.36 Vdc, maximum available current is 0 mA, no hazards.
COMPUTE R IN (M4501) pin 15 to GND	Overload	240	10 min.	F001	--	The open circuit voltage is 1.47 Vdc, maximum available current is 0 mA, no hazards.
COMPUTE R IN (M8201) pins 1, 2, 3, 9, 11, 4, 5, 7, 8, 10 to GND	Overload	240	10 min.	F001	--	No output voltage, no hazards.
MONITOR OUT (M8202) pins 1, 2 to GND	Overload	240	10 min.	F001	--	The open circuit voltage is 0.19 Vdc, maximum available current is 0 mA, no hazards.
MONITOR OUT (M8202) pin 3 to GND	Overload	240	10 min.	F001	--	The open circuit voltage is 0.18 Vdc, maximum available current is 0 mA, no hazards.
MONITOR OUT (M8202) pin 13 to GND	Overload	240	10 min.	F001	--	The open circuit voltage is 0.39 Vdc, maximum available current is 0 mA, no hazards.
MONITOR OUT (M8202) pin 14 to GND	Overload	240	10 min.	F001	--	The open circuit voltage is 0.36 Vdc, maximum available current is 0 mA, no hazards.
MONITOR OUT (M8202) pins 9, 11, 12, 15, 4, 5, 6, 7, 8, 10 to GND	Overload	240	10 min.	F001	--	No output voltage, no hazards.
AUDIO IN (M8003) pins 1, 2, 3 to GND	Overload	240	10 min.	F001	--	No output voltage, no hazards.
AUDIO OUT (M8004) pins 1, 2, 3, 4, 5 to GND	Overload	240	10 min.	F001	--	No output voltage, no hazards.

IEC 60950-1						
Clause	Requirement + Test			Result - Remark		Verdict
MIC (M8001) pins 1, 2, 3, 4, 5 to GND	Overload	240	10 min.	F001	--	No output voltage, no hazards.
VIDEO IN (M8002) pins 1, 2 to GND	Overload	240	10 min.	F001	--	No output voltage, no hazards.
AUDIO IN (M8002) L/MONO pins 3, 4 to GND	Overload	240	10 min.	F001	--	No output voltage, no hazards.
AUDIO IN (M8002) R pins 5, 6, 7 to GND	Overload	240	10 min.	F001	--	No output voltage, no hazards.
PC CONTROL (M8005) pins 1, 2, 4, 5, 6, 7, 8, 9 to GND	Overload	240	10 min.	F001	--	No output voltage, no hazards.
PC CONTROL (M8005) pin 3 to GND	Overload	240	10 min.	F001	--	The open circuit voltage is 0.35 Vdc, maximum available current is 0 mA, no hazards.
Supplementary information: 1). For component damaged without fuse opened condition have been repeat 2 times with same result. 2). Temp. limited of transformer (class 130 material (B)) according to table C.1 is 175 °C -(40 °C -25 °C)=160 °C. 3). Lamp rupture test was conducted on lamp NSHA270NEB/C and NSHA270NEB1/C was identical to NSHA270NEB/C except for business strategy. 4). PTC1 located on ballast was opened during tests.						

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

C.2	TABLE: transformer (T101)						P
Loc.	Tested insulation	Working voltage peak / V (2.10.2)	Working voltage rms / V (2.10.2)	Required electric strength (5.2)	Required clearance / mm (2.10.3)	Required creepage distance / mm (2.10.4)	Required distance thr. insul. (2.10.5)
Primary /input winding and secondary/ output winding (internal)	DI	512	368	AC 3000	6.6	7.4	See below transforme construction
Primary/inp ut winding and core (internal)	BI	512	368	AC 1760	3.3	3.7	See below transforme construction
Secondary/ output winding and core (internal)	BI	512	368	AC 1760	3.3	3.7	See below transforme construction
Primary/inp ut part and secondary/ output part (external)	DI	512	368	AC 3000	6.6	7.4	See below transforme construction
Primary/inp ut part and core (external)	BI	512	368	AC 1760	3.3	3.7	See below transforme construction
Primary/inp ut part and secondary/ output winding (external)	DI	512	368	AC 3000	6.6	7.4	See below transforme construction
Secondary/ output part and core (external)	BI	512	368	AC 1760	3.3	3.7	See below transforme construction
Secondary/ output part and primary/inp ut winding (external)	DI	512	368	AC 3000	6.6	7.4	See below transforme construction

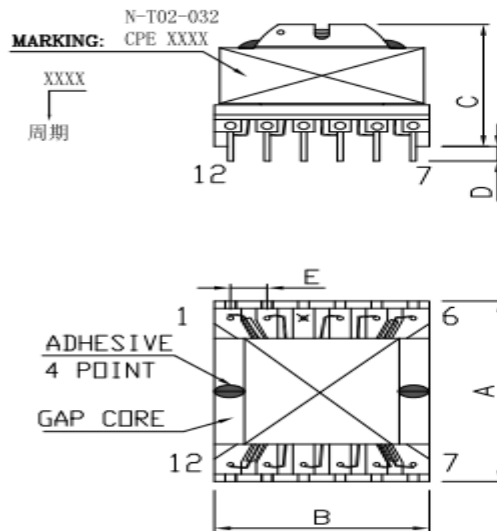
IEC 60950-1					
Clause	Requirement + Test		Result - Remark		Verdict
Loc.	Tested insulation	Test voltage/ V	Measured clearance / mm	Measured creepage dist./ mm	Measured distance thr. insul. / mm; number of layers
Primary /input winding and secondary/output winding (internal)	DI	AC 3000	15.0	15.0	See below transforme construction
Primary/inp ut winding and core (internal)	BI	AC 1875	7.5	7.5	See below transforme construction
Secondary/output winding and core (internal)	BI	AC 1875	7.5	7.5	See below transforme construction
Primary/inp ut part and secondary/output part (external)	DI	AC 3000	29.5	29.5	See below transforme construction
Primary/inp ut part and core (external)	BI	AC 1875	5.5	5.5	See below transforme construction
Primary/inp ut part and secondary/output winding (external)	DI	AC 3000	7.5	7.5	See below transforme construction
Secondary/output part and core (external)	BI	AC 1875	5.5	5.5	See below transforme construction
Secondary/output part and primary/inp ut winding (external)	DI	AC 3000	7.5	7.5	See below transforme construction

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
supplementary information:			
The required clearance multiplied by altitude correction factor 1.48 according to the Table A.2 of IEC 60664-1:1992 +A1:2000 +A2:2002 standard.			
C.2	TABLE: transformer (T101)		P

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

Concentric windings on bobbin (horizontal type core). Three layers of insulation tape around the outer winding and the outer winding is primary. Three layer of insulation tapes provided between primary winding and secondary winding. The core is considered as floating part. Distance tape of 7.5 mm min. on bottom side of bobbin. The details information see below.

1. MECHANICAL DIMENSIONS :



Outer yellow tape of core W=11mm 3Ts

UNIT: mm
 A=38.5 MAX
 B=31.5 MAX
 C=26.5 MAX
 D=3.5±0.5
 E=5.0±0.3
 F=30.0±0.5
 G=0.8±0.1

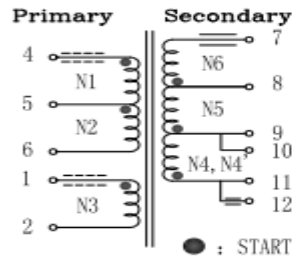
RoHS

1. PIN3 CUT OFF.

INSULATION CLASS: CLASS B

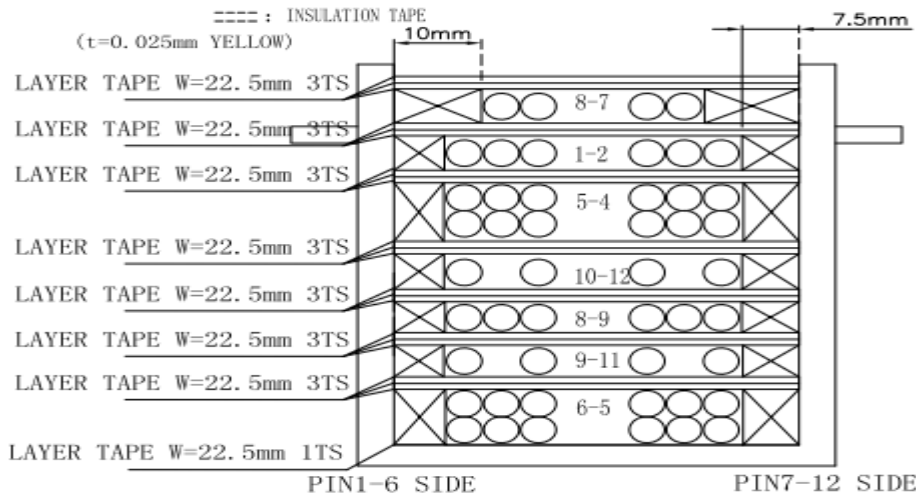
Primary and secondary insulation meet reinforced insulation

2. WINDING SPECIFICATIONS



WINDING ORDER:

L(6-5) : $\phi 0.3\text{mm}$ 1UEW 30TS
 L(9-11) : $\phi 0.3\text{mm} \times 4\text{P}$ 1UEW 3TS
 L(9-8) : $\phi 0.35\text{mm} \times 2\text{P}$ 1UEW 8TS
 L(10-12) : $\phi 0.3\text{mm} \times 4\text{P}$ 1UEW 3TS
 L(5-4) : $\phi 0.3\text{mm}$ 1UEW 30TS
 L(1-2) : $\phi 0.3\text{mm}$ 1UEW 13TS
 L(8-7) : $\phi 0.4\text{mm}$ 1UEW 2TS



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

1	CORE	Ferrite	HAINING LIANFENG MAGNET INDUSTRY CO.,LTD	NH2B ER28/34	N/A
2	BOBBIN	PHENOLIC RESIN	SUMITOMO BAKELITE CO.,LTD	150℃ 94V-0 PM-9820 (t≧0.16mm) Color/black	E41429
3	MAGNET WIRE	UEW	HENGYA ELECTRICLIMITED TAYA ELECTROIC WIRE FACTORY	130℃ ANSI Type MW-75 OR MW-28	E197768
4	TAPE	POLYESTER FILM TAPE T=25um	JINGJIANG YAHUA PRESSURE SENSITIVE GLUE CO.,LTD	130℃ NO.CT-280 YELLOW	E165111
	MARGING TAPE	POLYESTER FILM TAPE	JINGJIANG YAHUA PRESSURE SENSITIVE GLUE CO.,LTD	130℃ NO.WF	E165111
5	TERMINAL	SOLDER COATED COPPER FLY STEEL WIRE	WELL FORE SPECIAL WIRE CORP.	Φ0.80 Electrodeposit: 0.006mm	N/A
6	SOLDER	PB FREE SOLDER	ALPHAMETALS TAIWAN INC.	Sn99.7/Cu0.3	N/A
7	INK	RESIN	Markem-Image SAS	INK9155E Color/black	N/A
8	ADHESIVE	EPOXY	DONGGUAN EATTO ELECTRONIC MATERIAL CO LTD	E-500	E218090
9	SILICON TUBE	SILICON VARNISH GLASS TUBE	NIKKAN INDUSTRIES CO.,LTD	E-651U-1 (t≧0.4mm)	E88468
Description of design:					
Primary/input pins.....:			4 – 5 – 6 ; 1 – 2		
Secondary/output pins			11, 12 – 9, 10 – 8 – 7		
Bobbin Material (manufacturer, type, ratings)..... :			Type PM-9820 of Sumitomo Bakelite, phenolic, 150 °C, V-0		
Thickness (mm)			0.70		

IEC 60950-1/Am1			
Clause	Requirement + Test	Result - Remark	Verdict

List of test equipment used:

(Note: This is an example of the required attachment. Other forms with a different layout but containing similar information are also acceptable.)

Clause	Measurement / testing	Testing / measuring equipment / material used	Range used	Calibration date

Information:

No listing of test equipment used necessary for chosen test procedure.

Clause	Requirement + Test	Result - Remark	Verdict
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2.1.1.7	TABLE: Discharge test			P
Condition	τ calculated (s)	τ measured (s)	t u → 0V (s)	Comments
Fuse in (L-N)	0.94	0.84	3.36	$U_{OC} = 384$ Vpk, 37% of $U_{OC} = 142.08$ Vpk, $U_{t=1s} = 124$ Vpk
Supplementary information:				
1. Test condition: 264 V/60 Hz				
2. Overall capacitance: see table 1.5.1.				
3. Discharge resistor: see table 1.5.1.				

2.4.2	TABLE: Limited current circuit measurement				P
Location	Voltage (V)	Current (mA)	Freq. (kHz)	Limit (mA)	Comments
For bridging capacitor					
C130	--	0.4	--	0.7	Test by alternative measuring instrument in Annex D.1, C130 = 1000 pF.
Supplementary information:					

2.6.3.4	TABLE: Resistance of earthing measurement		P
Location	Resistance measured (mΩ)	Comments	
Earthing pin of appliance inlet to bonding terminal near C007 of power board	11	40 A/2 mins. (voltage drop = 0.44 V)	
Earthing pin of appliance inlet to bonding terminal near C007 of power board	9	32 A/2 mins. (voltage drop = 0.288 V)	
Earthing pin of appliance inlet to Metallic part of LCD board	9	40 A/2 mins. (voltage drop = 0.36 V)	
Earthing pin of appliance inlet to Metallic part of LCD board	9	32 A/2 mins. (voltage drop = 0.288 V)	
Supplementary information:			

4.6.1, 4.6.2	Table: Enclosure opening measurements			P
Location	Size (mm)		Comments	
Top also consider as bottom when EUT with ceiling mounted function	--		No any openings.	

Clause	Requirement + Test	Result - Remark	Verdict
Bottom also consider as Top when EUT with ceiling mounted function	1) 26.8 by 6.2 maximum ; 2) 32.2 by 4.7 maximum	1) Numerous rectangular openings provide. No any components within 5° projections. 2) Numerous rectangular openings provide. No any components within 5° projections.	
Right side	26.3 by 3.5 maximum	Numerous rectangular openings provide. There's no any hazardous voltage or energy hazards present within 5° projections.	
Left side	1) 23.2 by 4.2 maximum ; 2) Ø1.9	1) Numerous rectangular openings provide. 2) Numerous circle openings provide. There's no any hazardous voltage or energy hazards present within 5° projections.	
Front side also consider as bottom when EUT with ceiling mounted function	24.3 by 4.1 maximum	Numerous rectangular openings provide. There's no any hazardous voltage or energy hazards present within 5° projections when front side consider. All components which above these openings were supplied from LPS when bottom side consider.	
Rear side also consider as Top when EUT with ceiling mounted function	--	No any openings.	
Others	--	No any openings.	
Supplementary information:			

IEC60950_1C - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT IEC 60950-1 EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES Information technology equipment – Safety – Part 1: General requirements	
Differences according to.....:	EN 60950-1:2006/A11:2009/A1:2010/A12:2011
Attachment Form No.....:	EU_GD_IEC60950_1C_II
Attachment Originator	SGS Fimko Ltd
Master Attachment	Date 2011-08
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EN 60950-1:2006/A11:2009/A1:2010/A12:2011 – CENELEC COMMON MODIFICATIONS

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)					
Contents	Add the following annexes: Annex ZA (normative) Normative references to international publications with their corresponding European publications Annex ZB (normative) Special national conditions				P
General	Delete all the “country” notes in the reference document (IEC 60950-1:2005) 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
General (A1:2010)	Delete all the “country” notes in the reference document (IEC 60950-1:2005/A1:2010) according to the following list: 1.5.7.1 Note 6.1.2.1 Note 2 6.2.2.1 Note 2 EE.3 Note				P

IEC60950_1C - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
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.	Added.	N/A
(A12:2011)	In EN 60950-1:2006/A12:2011 Delete the addition of 1.3.Z1 / EN 60950-1:2006 Delete the definition 1.2.3.Z1 / EN 60950-1:2006 /A1:2010	Deleted.	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	Added.	P
1.7.2.1 (A1:2010)	In addition, for a PORTABLE SOUND SYSTEM, the instructions shall include a warning that excessive sound pressure from earphones and headphones can cause hearing loss.	Added.	N/A
1.7.2.1 (A12:2011)	In EN 60950-1:2006/A12:2011 Delete NOTE Z1 and the addition for Portable Sound System. Add the following clause and annex to the existing standard and amendments.		N/A
	Zx Protection against excessive sound pressure from personal music players		N/A

IEC60950_1C - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	Zx.1 General This sub-clause specifies requirements for protection against excessive sound pressure from personal music players that are closely coupled to the ear. It also specifies requirements for earphones and headphones intended for use with personal music players. A personal music player is a portable equipment for personal use, that: – is designed to allow the user to listen to recorded or broadcast sound or video; and – primarily uses headphones or earphones that can be worn in or on or around the ears; and – allows the user to walk around while in use. NOTE 1 Examples are hand-held or body-worn portable CD players, MP3 audio players, mobile phones with MP3 type features, PDA's or similar equipment. A personal music player and earphones or headphones intended to be used with personal music players shall comply with the requirements of this sub-clause. The requirements in this sub-clause are valid for music or video mode only. The requirements do not apply: – while the personal music player is connected to an external amplifier; or – while the headphones or earphones are not used. NOTE 2 An external amplifier is an amplifier which is not part of the personal music player or the listening device, but which is intended to play the music as a standalone music player. The requirements do not apply to: – hearing aid equipment and professional equipment; NOTE 3 Professional equipment is equipment sold through special sales channels. All products sold through normal electronics stores are considered not to be professional equipment.		N/A

IEC60950_1C - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	– analogue personal music players (personal music players without any kind of digital processing of the sound signal) that are brought to the market before the end of 2015. NOTE 4 This exemption has been allowed because this technology is falling out of use and it is expected that within a few years it will no longer exist. This exemption will not be extended to other technologies. For equipment which is clearly designed or intended for use by young children, the limits of EN 71-1 apply.		
	Zx.2 Equipment requirements No safety provision is required for equipment that complies with the following: – equipment provided as a package (personal music player with its listening device), where the acoustic output $L_{Aeq,T}$ is ≤ 85 dBA measured while playing the fixed “programme simulation noise” as described in EN 50332-1; and – a personal music player provided with an analogue electrical output socket for a listening device, where the electrical output is ≤ 27 mV measured as described in EN 50332-2, while playing the fixed “programme simulation noise” as described in EN 50332-1. NOTE 1 Wherever the term acoustic output is used in this clause, the 30 s A-weighted equivalent sound pressure level $L_{Aeq,T}$ is meant. See also Zx.5 and Annex Zx. All other equipment shall: - protect the user from unintentional acoustic outputs exceeding those mentioned above; and - have a standard acoustic output level not exceeding those mentioned above, and automatically return to an output level not exceeding those mentioned above when the power is switched off; and		N/A

IEC60950_1C - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	c) provide a means to actively inform the user of the increased sound pressure when the equipment is operated with an acoustic output exceeding those mentioned above. Any means used shall be acknowledged by the user before activating a mode of operation which allows for an acoustic output exceeding those mentioned above. The acknowledgement does not need to be repeated more than once every 20 h of cumulative listening time; and NOTE 2 Examples of means include visual or audible signals. Action from the user is always required. NOTE 3 The 20 h listening time is the accumulative listening time, independent how often and how long the personal music player has been switched off. d) have a warning as specified in Zx.3; and e) not exceed the following: 1) equipment provided as a package (player with its listening device), the acoustic output shall be ≤ 100 dBA measured while playing the fixed "programme simulation noise" described in EN 50332-1; and 2) a personal music player provided with an analogue electrical output socket for a listening device, the electrical output shall be ≤ 150 mV measured as described in EN 50332-2, while playing the fixed "programme simulation noise" described in EN 50332-1. For music where the average sound pressure (long term $L_{Aeq,T}$) measured over the duration of the song is lower than the average produced by the programme simulation noise, the warning does not need to be given as long as the average sound pressure of the song is below the basic limit of 85 dBA. In this case T becomes the duration of the song. NOTE 4 Classical music typically has an average sound pressure (long term $L_{Aeq,T}$) which is much lower than the average programme simulation noise. Therefore, if the player is capable to analyse the song and compare it with the programme simulation noise, the warning does not need to be given as long as the average sound pressure of the song is below the basic limit of 85 dBA. For example, if the player is set with the programme simulation noise to 85 dBA, but the average music level of the song is only 65 dBA, there is no need to give a warning or ask an acknowledgement as long as the average sound level of the song is not above the basic limit of 85 dBA.		N/A

IEC60950_1C - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	Zx.3 Warning The warning shall be placed on the equipment, or on the packaging, or in the instruction manual and shall consist of the following: – the symbol of Figure 1 with a minimum height of 5 mm; and – the following wording, or similar: “To prevent possible hearing damage, do not listen at high volume levels for long periods.”  Figure 1 – Warning label (IEC 60417-6044) Alternatively, the entire warning may be given through the equipment display during use, when the user is asked to acknowledge activation of the higher level.		N/A
	Zx.4 Requirements for listening devices (headphones and earphones)		N/A
	Zx.4.1 Wired listening devices with analogue input With 94 dBA sound pressure output $L_{Aeq,T}$, the input voltage of the fixed “programme simulation noise” described in EN 50332-2 shall be ≥ 75 mV. This requirement is applicable in any mode where the headphones can operate (active or passive), including any available setting (for example built-in volume level control). NOTE The values of 94 dBA – 75 mV correspond with 85dBA – 27 mV and 100 dBA – 150 mV.		N/A

IEC60950_1C - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	Zx.4.2 Wired listening devices with digital input With any playing device playing the fixed “programme simulation noise” described in EN 50332-1 (and respecting the digital interface standards, where a digital interface standard exists that specifies the equivalent acoustic level), the acoustic output $L_{Aeq,T}$ of the listening device shall be ≤ 100 dBA. This requirement is applicable in any mode where the headphones can operate, including any available setting (for example built-in volume level control, additional sound feature like equalization, etc.). NOTE An example of a wired listening device with digital input is a USB headphone.		N/A
	Zx.4.3 Wireless listening devices In wireless mode: – with any playing and transmitting device playing the fixed programme simulation noise described in EN 50332-1; and – respecting the wireless transmission standards, where an air interface standard exists that specifies the equivalent acoustic level; and – with volume and sound settings in the listening device (for example built-in volume level control, additional sound feature like equalization, etc.) set to the combination of positions that maximize the measured acoustic output for the abovementioned programme simulation noise, the acoustic output $L_{Aeq,T}$ of the listening device shall be ≤ 100 dBA. NOTE An example of a wireless listening device is a Bluetooth headphone.		N/A
	Zx.5 Measurement methods Measurements shall be made in accordance with EN 50332-1 or EN 50332-2 as applicable. Unless stated otherwise, the time interval T shall be 30 s. NOTE Test method for wireless equipment provided without listening device should be defined.		N/A

IEC60950_1C - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
2.7.1	Replace the subclause as follows: Basic requirements To protect against excessive current, short-circuits and earth faults in PRIMARY CIRCUITS, protective devices shall be included either as integral parts of the equipment or as parts of the building installation, subject to the following, a), b) and c): 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; 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;	Replaced.	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. 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
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	Replace "60245 IEC 53" by "H05 RR-F"; "60227 IEC 52" by "H03 VV-F or H03 VVH2-F"; "60227 IEC 53" by "H05 VV-F or H05 VVH2-F2". In Table 3B, replace the first four lines by the following: Up to and including 6 0,75 ^{a)} Over 6 up to and including 10 (0,75) ^{b)} 1,0 Over 10 up to and including 16 (1,0) ^{c)} 1,5 In the conditions applicable to Table 3B delete the words "in some countries" in condition ^{a)} . In NOTE 1, applicable to Table 3B, delete the second sentence.		N/A

IEC60950_1C - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
3.3.4	In Table 3D, delete the fourth line: conductor sizes for 10 to 13 A, and replace with the following: Over 10 up to and including 16 1,5 to 2,5 1,5 to 4 Delete the fifth line: conductor sizes for 13 to 16 A		N/A
4.3.13.6 (A1:2010)	Replace the existing NOTE by the following: 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, and 2006/25/EC: Directive on the minimum health and safety requirements regarding the exposure of workers to risks arising from physical agents (artificial optical radiation).		N/A
	Standards taking into account mentioned Recommendation and Directive which demonstrate compliance with the applicable EU Directive are indicated in the OJEC.		N/A
Annex H	Replace the last paragraph of this annex by: At any point 10 cm from the surface of the OPERATOR ACCESS AREA, the dose rate shall not exceed 1 µSv/h (0,1 mR/h) (see NOTE). Account is taken of the background level. Replace the notes as follows: NOTE These values appear in Directive 96/29/Euratom. Delete NOTE 2.		N/A
Bibliography	Additional EN standards.		—

ZA	NORMATIVE REFERENCES TO INTERNATIONAL PUBLICATIONS WITH THEIR CORRESPONDING EUROPEAN PUBLICATIONS	—
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ZB ANNEX (normative) SPECIAL NATIONAL CONDITIONS (EN)			
Clause	Requirement + Test	Result - Remark	Verdict
1.2.4.1	In Denmark , 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
1.2.13.14	In Norway and Sweden , for requirements see 1.7.2.1 and 7.3 of this annex.		N/A
1.5.7.1	In Finland , Norway and Sweden , 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 single resistor is used, the resistor must withstand the resistor test in 1.5.7.2.		N/A

IEC60950_1C - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
1.5.8	In Norway , 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).		P
1.5.9.4	In Finland, Norway and Sweden , 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	In Finland, Norway and Sweden, 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. The marking text in the applicable countries shall be as follows: In Finland: "Laite on liitettävä suojakoskettimilla varustettuun pistorasiaan" In Norway: "Apparatet må tilkoples jordet stikkontakt" In Sweden: "Apparaten skall anslutas till jordat uttag" In Norway and Sweden, 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)."		N/A

IEC60950_1C - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	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): “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.”		
1.7.5	In Denmark, 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. For CLASS II EQUIPMENT the socket outlet shall be in accordance with Standard Sheet DKA 1-4a.		N/A
2.2.4	In Norway , 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 Finland, Norway and Sweden 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 Norway , 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 United Kingdom , the current rating of the circuit shall be taken as 13 A, not 16 A.		P
2.7.1	In the United Kingdom , 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

IEC60950_1C - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
2.10.5.13	In Finland, Norway and Sweden , 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 Switzerland, 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, 16A SEV 5934-2.1998: Plug Type 23, L+N+PE 250 V,		N/A
3.2.1.1	In Denmark, 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

IEC60950_1C - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
3.2.1.1	In Spain, supply cords of single-phase equipment having a rated current not exceeding 10 A shall be provided with a plug according to UNE 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 United Kingdom, apparatus which is fitted with a flexible cable or cord and is designed to be connected to a mains socket conforming to BS 1363 by means of that flexible cable or cord and plug, shall be fitted with a 'standard plug' in accordance with Statutory Instrument 1768:1994 - The Plugs and Sockets etc. (Safety) Regulations 1994, unless exempted by those regulations. NOTE 'Standard plug' is defined in SI 1768:1994 and essentially means an approved plug conforming to BS 1363 or an approved conversion plug.		N/A
3.2.1.1	In Ireland, 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 Switzerland , for requirements see 3.2.1.1 of this annex.		N/A
3.2.5.1	In the United Kingdom , a power supply cord with conductor of 1,25 mm ² is allowed for equipment with a rated current over 10 A and up to and including 13 A.		N/A
3.3.4	In the United Kingdom, 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 mm² to 1,5 mm² nominal cross-sectional area.		N/A

IEC60950_1C - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
4.3.6	In the United Kingdom , 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 Ireland , 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 Finland, Norway and Sweden 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

IEC60950_1C - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
6.1.2.1 (A1:2010)	In Finland, Norway and Sweden, add the following text between the first and second paragraph of the compliance clause: If this insulation is solid, including insulation forming part of a component, it shall at least consist of either - two layers of thin sheet material, each of which shall pass the electric strength test below, or - one layer having a distance through insulation of at least 0,4 mm, which shall pass the electric strength test below. Alternatively for components, there is no distance through insulation requirements for the insulation consisting of an insulating compound completely filling the casing, so that CLEARANCES and CREEPAGE DISTANCES do not exist, if the component passes the electric strength test in accordance with the compliance clause below and in addition - passes the tests and inspection criteria of 2.10.11 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 - is subject to ROUTINE TESTING for electric strength during manufacturing, using a test voltage of 1,5 kV.		N/A
	It is permitted to bridge this insulation with an optocoupler complying with 2.10.5.4 b). It is permitted to bridge this insulation with a capacitor complying with EN 60384-14:2005, subclass Y2. A capacitor classified Y3 according to EN 60384-14:2005, may bridge this insulation under the following conditions: - the insulation requirements are satisfied by having a capacitor classified Y3 as defined by EN 60384-14, 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; - the additional testing shall be performed on all the test specimens as described in EN 60384-14; - the impulse test of 2,5 kV is to be performed before the endurance test in EN 60384-14, in the sequence of tests as described in EN 60384-14.		N/A

IEC60950_1C - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
6.1.2.2	In Finland, Norway and Sweden , 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.		N/A
7.2	In Finland, Norway and Sweden , for requirements see 6.1.2.1 and 6.1.2.2 of this annex. The term TELECOMMUNICATION NETWORK in 6.1.2 being replaced by the term CABLE DISTRIBUTION SYSTEM.		N/A
7.3	In Norway and Sweden , for requirements see 1.2.13.14 and 1.7.2.1 of this annex.		N/A
7.3	In Norway , for installation conditions see EN 60728-11:2005.		N/A

IEC60950_1C - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT IEC 60950-1 CANADA NATIONAL DIFFERENCES Information technology equipment – Safety – Part 1: General requirements			
Differences according to: CAN/CSA-C22.2 NO. 60950-1A-07			
Attachment Form No.: CA_ND_IEC60950_1C			
Attachment Originator: TÜV SÜD Product Service GmbH			
Master Attachment: Date (2012-08)			
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	Special national conditions		
1.1.1	All equipment is to be designed to allow installation in accordance with the National Electrical Code (NEC), ANSI/NFPA 70, the Canadian Electrical Code (CEC), Part I, CAN/CSA C22.1, and when applicable, the National Electrical Safety Code, IEEE C2.	In accordance with the National Electrical Code (NEC) and the Canadian Electrical Code (CEC) part 1 CAN/CSA C22.1, ANSI/NFPA 70, and unless marked or otherwise identified, the Standard for Electronic Computer/Data-Processing Equipment, ANSI/NFPA 75.	P
	Also, unless marked or otherwise identified, installation is allowed per the Standard for the Protection of Electronic Computer/Data-Processing Equipment, ANSI/NFPA 75.		P
1.4.14	For Pluggable Equipment Type A, the protection in the installation is assumed to be 20A.	Considered.	P
1.5.5	For lengths exceeding 3.05 m, external interconnecting flexible cord and cable assemblies are required to be a suitable cable type (e.g., DP, CL2) specified in the CEC/NEC.		N/A
	For lengths 3.05 m or less, external interconnecting flexible cord and cable assemblies that are not types specified in the CEC are required to have special construction features and identification markings.		N/A
1.7.1	Equipment for use on a.c. mains supply systems with a neutral and more than one phase conductor (e.g. 120/240 V, 3-wire) require a special marking format for electrical ratings.	Single-phase equipment.	N/A
	A voltage rating that exceeds an attachment plug cap rating is only permitted if it does not exceed the extreme operating conditions in Table 2 of CAN/CSA C22.2 No. 235, and		N/A
	- if it is part of a range that extends into the Table 2 "Normal Operating Conditions."		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	A voltage rating is not be lower than the specified "Normal Operating Conditions," unless it is part of a range that extends into the "Normal Operating Conditions."		N/A
1.7.7	Wiring terminals intended to supply Class 2 outputs in accordance with CEC Part 1 or NEC are marked with the voltage rating and "Class 2" or equivalent.	Not applied for.	N/A
	- Marking is located adjacent to the terminals		N/A
	- Marking is visible during wiring		N/A
2.5	Fuse providing Class 2, Limited Power Source, or TNV current limiting is not operator-accessible unless it is not interchangeable.	See appended table 1.5.1.	P
2.6.3.3	Modify first column on Table 2D to "Smaller of the RATED CURRENT of the equipment or the PROTECTIVE CURRENT RATING of the circuit under consideration."		P
2.7.1	Suitable NEC/CEC branch circuit protection rated at the maximum circuit rating is provided for all standard supply outlets and receptacles (such as supplied in power distribution units) if the supply branch circuit protection is not suitable.		N/A
	Power distribution transformers distributing power at 100 volts or more, and rated 10 kVA or more, provided with special transformer overcurrent protection.		N/A
3.2	Wiring methods (terminals, leads, etc.) used for the connection of the equipment to the mains is in accordance with the NEC/CEC.		N/A
3.2.1	Attachment plugs of power supply cords are rated not less than 125 percent of the rated current of the equipment.		N/A
3.2.1.2	Equipment connected to a centralized d.c. power system, and having one pole of the DC mains input terminal connected to the main protective earthing terminal in the equipment comply with special earthing, wiring, marking and installation instruction requirements.	Not applied for.	N/A
3.2.3	Permanent connection of equipment to the mains supply by a power supply cord is not permitted, except for certain equipment, such as ATMs.		N/A
3.2.5	Power supply cords are no longer than 4.5 m in length.		N/A
	Minimum cord length is 1.5 m, with certain constructions such as external power supplies allowed to consider both input and output cord lengths into the requirement.		N/A

IEC60950_1C - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	Flexible power supply cords are compatible with Article 400 of the NEC, and Tables 11 and 12 of the CEC.		N/A
3.2.9	Permanently connected equipment have a suitable wiring compartment and wire bending space.		N/A
3.3	Wiring terminals and associated spacings for field wiring connections comply with CSA C22.2 No. 0.		N/A
3.3.3	Wire binding screws are not permitted to attach conductors larger than 10 AWG (5.3 mm ²).	No wire binding screws.	N/A
3.3.4	Terminals for permanent wiring, including protective earthing terminals, are suitable for Canadian/US wire gauge sizes, are		N/A
	- rated 125 percent of the equipment rating, and		N/A
	- are specially marked when specified (1.7.7).		N/A
3.3.5	Revise first column of Table 3E to "Smaller of the RATED CURRENT of the equipment or the PROTECTIVE CURRENT RATING of the circuit under consideration."		N/A
3.4.2	Motor control devices are provided for cord-connected equipment with a motor if the equipment is rated more than 12 A,	No motor control devices.	N/A
	- or if the motor has a nominal voltage rating greater than 120 V		N/A
	- or is rated more than 1/3 hp (locked rotor current over 43 A)		N/A
3.4.8	Vertically-mounted disconnect switches and circuit breakers have the "on" position indicated by the handle in the up position.		N/A
3.4.11	For computer room applications, equipment with battery systems capable of supplying 750 VA for five minutes have a battery disconnect means that may be connected to the computer room remote power-off circuit.	No battery systems.	N/A
4.3.12	The maximum quantity of flammable liquid stored in equipment complies with NFPA 30.		N/A
4.3.13.5	Equipment with lasers meet the Canadian Radiation Emitting Devices Act, REDR C1370 and/or Code of Federal Regulations 21 CFR 1040, as applicable.		N/A
4.7	For computer room applications, automated information storage systems with combustible media greater than 0.76 m ³ (27 cu ft) have a provision for connection of either automatic sprinklers or a gaseous agent extinguishing system with an extended discharge.		N/A

IEC60950_1C - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
4.7.3.1	For computer room applications, enclosures with combustible material measuring greater than 0.9 m ² (10 sq ft) or a single dimension greater than 1.8 m (6 ft) have a flame spread rating of 50 or less.	No such enclosures.	N/A
	For other applications, enclosures with the same dimensions require a flame spread rating of 200 or less.		N/A
Annex H	Equipment that produces ionizing radiation comply with the Canadian Radiation Emitting Devices Act, REDR C1370 and/or Code of Federal Regulations, 21 CFR 1020, as applicable.	No ionizing radiation.	N/A
	Other National Differences		
1.5.1	Some components and materials associated with the risk of fire, electric shock, or personal injury have component or material ratings in accordance with the applicable national (Canadian and/or U.S.) component or material standard requirements.	Complied. Components are UL or CSA approved, see component list 1.5.1.	P
1.6.1.2	A circuit for connection to the DC Mains Supply is classified as either a SELV Circuit, TNV-2 Circuit or Hazardous Voltage Circuit depending on the maximum operating voltage of the supply.	No connection to DC mains supply.	N/A
	This maximum operating voltage includes consideration of the battery charging "float voltage" associated with the intended supply system, regardless of the marked power rating of the equipment.		N/A
2.3.1	For TNV-2 and TNV-3 circuits with other than ringing signals and with voltages exceeding 42.4 V _{peak} or 60 V _{d.c.} , the maximum acceptable current through a 2000 ohm resistor (or greater) connected across the voltage source with other loads disconnected is 7.1 mA peak or 30 mA d.c. under normal operating conditions.	No TNV circuits within the equipment.	N/A
2.3.2.1	In the event of a single fault between TNV and SELV circuits, the limits of 2.2.3 apply to SELV Circuits and accessible conductive parts.	No TNV circuits within the equipment.	N/A
2.6.3.4	Protective bonding conductors of non-standard protective bonding constructions (e.g., printed circuit traces) may be subjected to the additional limited short circuit test conditions specified.		N/A
4.2.8.1	Enclosures around CRTs with a face diameter of 160 mm or more reduce the risk of injury due to the implosion of the CRT.		N/A
4.3.2	Equipment with handles complies with special loading tests.		N/A
5.1.8.3	Equipment intended to receive telecommunication ringing signals comply with a special touch current measurement tests.		N/A

IEC60950_1C - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
5.3.7	Internal (e.g., card cage) SELV circuit connectors and printed wiring board connectors that are accessible to the operator and that deliver power are overloaded.	See IEC 60950-1 test report.	P
	During abnormal operating testing, if a circuit is interrupted by the opening of a component, the test shall be repeated twice (three tests total) using new components as necessary	See IEC 60950-1 test report.	P
6.4	Equipment intended for connection to telecommunication network outside plant cable is protected against overvoltage from power line crosses in accordance with 6.4 and Annex NAC.	No TNV circuits.	N/A
Annex EE	Articulated accessibility probe (Fig EE.3) is used for assessing accessibility to document/media shredders instead of the Figure 2A test finger.		N/A
M.2	Continuous ringing signals up to 16 mA only are permitted if the equipment is subjected to special installation and performance restrictions.	No TNV circuits.	N/A
Annex NAD	Equipment connected to a telecommunication and cable distribution networks and supplied with an earphone intended to be held against, or in the ear comply with special acoustic pressure requirements.	No TNV circuits.	N/A

IEC60950_1C - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT IEC 60950-1 FINLAND NATIONAL DIFFERENCES Information technology equipment – Safety – Part 1: General requirements			
Differences according to: EN 60950-1:2006/A11:2009/A1:2010			
Attachment Form No.: FI_ND_IEC60950_1C			
Attachment Originator: SGS Fimko Ltd			
Master Attachment: Date (2010-04)			
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	National Differences		P
General	See also Group Differences (EN 60950-1:2006/A11/A1)		P
1.5.7.1	In Finland 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 single resistor is used, the resistor must withstand the resistor test in 1.5.7.2.		N/A
1.5.9.4	In Finland , 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	In Finland , 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. The marking text in in Finland shall be as follows: "Laite on liitettävä suojakoskettimilla varustettuun pistorasiaan"		N/A
2.3.2	In Finland , there are additional requirements for the insulation. See 6.1.2.1 and 6.1.2.2 of this annex.		N/A
2.10.5.13	In Finland , there are additional requirements for the insulation, see 6.1.2.1 and 6.1.2.2 of this annex.		N/A

IEC60950_1C - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
5.1.7.1	In Finland, 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
6.1.2.1 (A1:2010)	In Finland, add the following text between the first and second paragraph of the compliance clause: If this insulation is solid, including insulation forming part of a component, it shall at least consist of either - two layers of thin sheet material, each of which shall pass the electric strength test below, or - one layer having a distance through insulation of at least 0,4 mm, which shall pass the electric strength test below. Alternatively for components, there is no distance through insulation requirement for the insulation consisting of an insulating compound completely filling the casing, so that CLEARANCES and CREEPAGE DISTANCES do not exist, if the component passes the electric strength test in accordance with the compliance clause below and in addition - passes the tests and inspection criteria of 2.10.11 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 - is subject to ROUTINE TESTING for electric strength during manufacturing, using a test voltage of 1,5 kV.		N/A

IEC60950_1C - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	It is permitted to bridge this insulation with an optocoupler complying with 2.10.5.4 b). It is permitted to bridge this insulation with a capacitor complying with EN 60384-14:2005, subclass Y2. A capacitor classified Y3 according to EN 60384-14:2005, may bridge this insulation under the following conditions: - the insulation requirements are satisfied by having a capacitor classified Y3 as defined by EN 60384-14:2005 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; - the additional testing shall be performed on all the test specimens as described in EN 60384-14:2005; - the impulse test of 2,5 kV is to be performed before the endurance test in EN 60384-14:2005, in the sequence of tests as described in EN 60384-14:2005.		N/A
6.1.2.2	In Finland, 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.		N/A
7.2	In Finland, for requirements see 6.1.2.1 and 6.1.2.2 of this annex. The term TELECOMMUNICATION NETWORK in 6.1.2 being replaced by the term CABLE DISTRIBUTION SYSTEM.		N/A

National Differences to IEC 60950-1:2005 + A1:2009			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT IEC 60950-1
GERMANY NATIONAL DIFFERENCES

Information technology equipment – Safety –

Part 1: General requirements

Differences according to.....: VDE 0805-1:2011-01

Annex ZC, 1.7.2.1	According to GPSG, section 2, clause 4: If certain rules on the use, supplementation or maintenance of an item of technical work equipment or ready-to-use commodity must be observed in order to guarantee safety and health, instructions for use in German must be supplied when it is brought into circulation.		P
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National Differences to IEC 60950-1:2005 + A1:2009			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT IEC 60950-1 ISRAEL NATIONAL DIFFERENCES

Information technology equipment – Safety –

Part 1: General requirements

Differences according to.....: SI 60950 Part 1

1.1.1	Replace the the text of Note 3 as follows: The requirements of Israel Standard SI 60065 may also be used to meet safety requirements for multimedia equipment. See IEC Guide 112, Guide on the safety of multimedia equipment.		P
1.6	The clause is applicable with the following addition:		P
1.6.1	Add following note: In Israel, this clause is applicable subject to the Electricity Law, 1954, its regulations and revisions.		P
1.7	The clause is applicable with the following additions: Subclause 1.7.201 shall be added at the beginning of the clause as follows:		N/A
1.7.201	Marking in the Hebrew language The marking in the Hebrew language shall be in accordance with the Consumer Protection Order (Marking of goods), 1983. In addition to the marking required by clause 1.7.1, the following details shall be marked in the Hebrew language. The details shall be marked on the apparatus or on its package, or on a label properly attached to the apparatus or on the package, by bonding or sewing, in a manner that the label cannot be easily removed. 1. Name of the apparatus and its commercial designation; 2. Manufacturer's name and address. If the apparatus is imported, the importer's name and address; 3. Manufacturer's registered trademark, if any; 4. Name of the model and serial number, if any; 5. Country of manufacture.		N/A
1.7.2.1	The following shall be added to the clause: All the instructions and warnings related to safety shall also be written in the Hebrew language.		N/A
2	The clause is applicable with the following additions:		P

National Differences to IEC 60950-1:2005 + A1:2009			
Clause	Requirement + Test	Result - Remark	Verdict
2.9.4	The following shall be added at the beginning of the clause: In Israel, according to the Electricity Law, 1954, and the Electricity Regulations (Earthing and means of protection against electricity of voltages up to 1,000V) 1991, seven means of protection against electrocution are permitted, as follows: 1) TN-S - Network system earthing; TN-C-S - Network system earthing; 2) TT - Network system earthing; 3) IT - Network Insulation Terre; 4) Isolated transformer; 5) Safety extra low voltage (SELV or ELV); 6) Residual current circuit breaker (30 mA = IΔ); 7) Reinforced insulation; Double insulation (class II)		P
2.201	Prevention of electromagnetic interference - Prior to carrying out the tests in accordance with the clauses of this Standard, the compliance of the apparatus with the relevant requirements specified in the appropriate part of the Standard series, SI 961, shall be checked. <u>The apparatus shall meet the requirements in the appropriate part of the Standard series, SI 961.</u> - If there are components in the apparatus for the prevention of electromagnetic interference, these components shall not reduce the safety level of the apparatus as required by this Standard.		N/A
3	The clause is applicable with the following additions:		N/A
3.2.1.1	Connection to an a.c. mains supply After the note, the following note shall be added: Note: In Israel, the feed plug shall comply with the requirements of Israel Standard SI 32 Part 1.1.		N/A
3.2.1.2	Connection to a d.c. mains supply At the end of the first paragraph, the following note shall be added: Note: At the time of issue of this Standard, there is no Israel Standard for connection accessories to d.c.		N/A
Annex P	Normative references (List of relevant Israel Standards that have been inserted in place of some of the International Standards)		P

National Differences to IEC 60950-1:2005 + A1:2009			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT IEC 60950-1
KOREA NATIONAL DIFFERENCES

Information technology equipment – Safety –
Part 1: General requirements

Differences according to.....: K 60950-1

1.5.101	Plugs for the connection of the apparatus to the supply mains shall comply with the Korean requirement (KSC 8305)		N/A
8	EMC The apparatus shall comply with the relevant CISPR standards.		N/A

IEC60950_1C - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT IEC 60950-1 U.S.A. NATIONAL DIFFERENCES Information technology equipment – Safety – Part 1: General requirements			
Differences according to.....: UL 60950-1-07			
Attachment Form No.: US_ND_IEC60950_1C			
Attachment Originator.....: TÜV SÜD Product Service GmbH			
Master Attachment.....: Date (2012-08)			
Copyright © 2012 IEC System for Conformity Testing and Certification of Electrical Equipment (IECEE), Geneva, Switzerland. All rights reserved.			

	Special national conditions		
1.1.1	All equipment is to be designed to allow installation in accordance with the National Electrical Code (NEC), ANSI/NFPA 70, the Canadian Electrical Code (CEC), Part I, CAN/CSA C22.1, and when applicable, the National Electrical Safety Code, IEEE C2.	In accordance with the National Electrical Code (NEC) and the Canadian Electrical Code (CEC) part 1 CAN/CSA C22.1, ANSI/NFPA 70, and unless marked or otherwise identified, the Standard for Electronic Computer/Data-Processing Equipment, ANSI/NFPA 75.	P
	Also, unless marked or otherwise identified, installation is allowed per the Standard for the Protection of Electronic Computer/Data-Processing Equipment, ANSI/NFPA 75.		P
1.4.14	For Pluggable Equipment Type A, the protection in the installation is assumed to be 20A.	Considered.	P
1.5.5	For lengths exceeding 3.05 m, external interconnecting flexible cord and cable assemblies are required to be a suitable cable type (e.g., DP, CL2) specified in the CEC/NEC.		N/A
	For lengths 3.05 m or less, external interconnecting flexible cord and cable assemblies that are not types specified in the CEC are required to have special construction features and identification markings.		N/A
1.7.1	Equipment for use on a.c. mains supply systems with a neutral and more than one phase conductor (e.g. 120/240 V, 3-wire) require a special marking format for electrical ratings.		N/A
	A voltage rating that exceeds an attachment plug cap rating is only permitted if it does not exceed the extreme operating conditions in Table 2 of CAN/CSA C22.2 No. 235, and		N/A

IEC60950_1C - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	- if it is part of a range that extends into the Table 2 "Normal Operating Conditions."		N/A
	A voltage rating is not to be lower than the specified "Normal Operating Conditions," unless it is part of a range that extends into the "Normal Operating Conditions."		N/A
1.7.7	Wiring terminals intended to supply Class 2 outputs in accordance with CEC Part 1 or NEC are marked with the voltage rating and "Class 2" or equivalent.		N/A
	- Marking is located adjacent to the terminals		N/A
	- Marking is visible during wiring		N/A
2.5	Fuse providing Class 2, Limited Power Source, or TNV current limiting is not operator-accessible unless it is not interchangeable.	See appended table 1.5.1	P
2.6.3.3	Modify first column on Table 2D to "Smaller of the RATED CURRENT of the equipment or the PROTECTIVE CURRENT RATING of the circuit under consideration."		P
2.7.1	Suitable NEC/CEC branch circuit protection rated at the maximum circuit rating is provided for all standard supply outlets and receptacles (such as supplied in power distribution units) if the supply branch circuit protection is not suitable.		N/A
	Power distribution transformers distributing power at 100 volts or more, and rated 10 kVA or more, provided with special transformer overcurrent protection.		N/A
3.2	Wiring methods (terminals, leads, etc.) used for the connection of the equipment to the mains is in accordance with the NEC/CEC.		N/A
3.2.1	Attachment plugs of power supply cords are rated not less than 125 per cent of the rated current of the equipment.		N/A
3.2.1.2	Equipment connected to a centralized d.c. power system, and having one pole of the DC mains input terminal connected to the main protective earthing terminal in the equipment comply with special earthing, wiring, marking and installation instruction requirements.		N/A
3.2.3	Permanent connection of equipment to the mains supply by a power supply cord is not permitted, except for certain equipment, such as ATMs.		N/A
3.2.5	Power supply cords are no longer than 4.5 m in length.		N/A

IEC60950_1C - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	Minimum cord length is 1.5 m, with certain constructions such as external power supplies allowed to consider both input and output cord lengths into the requirement.		N/A
	Flexible power supply cords are compatible with Article 400 of the NEC, and Tables 11 and 12 of the CEC.		N/A
3.2.9	Permanently connected equipment have a suitable wiring compartment and wire bending space.		N/A
3.3	Wiring terminals and associated spacings for field wiring connections comply with CSA C22.2 No. 0.		N/A
3.3.3	Wire binding screws are not permitted to attach conductors larger than 10 AWG (5.3 mm ²).		N/A
3.3.4	Terminals for permanent wiring, including protective earthing terminals, are suitable for Canadian/US wire gauge sizes, are		N/A
	- rated 125 per cent of the equipment rating, and		N/A
	- are specially marked when specified (1.7.7).		N/A
3.3.5	Revise first column of Table 3E to "Smaller of the RATED CURRENT of the equipment or the PROTECTIVE CURRENT RATING of the circuit under consideration."		N/A
3.4.2	Motor control devices are provided for cord-connected equipment with a motor if the equipment is rated more than 12 A,		N/A
	- or if the motor has a nominal voltage rating greater than 120 V		N/A
	- or is rated more than 1/3 hp (locked rotor current over 43 A)		N/A
3.4.8	Vertically-mounted disconnect switches and circuit breakers have the "on" position indicated by the handle in the up position.		N/A
3.4.11	For computer room applications, equipment with battery systems capable of supplying 750 VA for five minutes have a battery disconnect means that may be connected to the computer room remote power-off circuit.		N/A
4.3.12	The maximum quantity of flammable liquid stored in equipment complies with NFPA 30.		N/A
4.3.13.5	Equipment with lasers meet the Canadian Radiation Emitting Devices Act, REDR C1370 and/or Code of Federal Regulations 21 CFR 1040, as applicable.		N/A

IEC60950_1C - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
4.7	For computer room applications, automated information storage systems with combustible media greater than 0.76 m ³ (27 cu ft) have a provision for connection of either automatic sprinklers or a gaseous agent extinguishing system with an extended discharge.		N/A
4.7.3.1	For computer room applications, enclosures with combustible material measuring greater than 0.9 m ² (10 sq ft) or a single dimension greater than 1.8 m (6 ft) have a flame spread rating of 50 or less.		N/A
	For other applications, enclosures with the same dimensions require a flame spread rating of 200 or less.		N/A
Annex H	Equipment that produces ionizing radiation complies with U.S. Code of Federal Regulations, 21 CFR 1020 (and the Canadian Radiation Emitting Devices Act, REDR C1370).		N/A
	Other National Differences		
1.5.1	Some components and materials associated with the risk of fire, electric shock, or personal injury have component or material ratings in accordance with the applicable national (Canadian and/or U.S.) component or material standard requirements.	Complied. Components are UL or CSA approved, see component list 1.5.1.	P
1.6.1.2	A circuit for connection to the DC Mains Supply is classified as either a SELV Circuit, TNV-2 Circuit or Hazardous Voltage Circuit depending on the maximum operating voltage of the supply.		N/A
	This maximum operating voltage includes consideration of the battery charging "float voltage" associated with the intended supply system, regardless of the marked power rating of the equipment.		N/A
2.3.1	For TNV-2 and TNV-3 circuits with other than ringing signals and with voltages exceeding 42.4 V _{peak} or 60 V _{d.c.} , the maximum acceptable current through a 2000 ohm resistor (or greater) connected across the voltage source with other loads disconnected is 7.1 mA peak or 30 mA d.c. under normal operating conditions.		N/A
2.3.2.1	In the event of a single fault between TNV and SELV circuits, the limits of 2.2.3 apply to SELV Circuits and accessible conductive parts.		N/A
2.6.3.4	Protective bonding conductors of non-standard protective bonding constructions (e.g., printed circuit traces) may be subjected to the additional limited short circuit test conditions specified.		N/A

IEC60950_1C - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
4.2.8.1	Enclosures around CRTs with a face diameter of 160 mm or more reduce the risk of injury due to the implosion of the CRT.		N/A
4.3.2	Equipment with handles complies with special loading tests.		N/A
5.1.8.3	Equipment intended to receive telecommunication ringing signals comply with a special touch current measurement tests.		N/A
5.3.7	Internal (e.g., card cage) SELV circuit connectors and printed wiring board connectors that are accessible to the operator and that deliver power are overloaded.	See IEC 60950-1 test report.	P
	During abnormal operating testing, if a circuit is interrupted by the opening of a component, the test shall be repeated twice (three tests total) using new components as necessary	See IEC 60950-1 test report.	P
6.4	Equipment intended for connection to telecommunication network outside plant cable is protected against overvoltage from power line crosses in accordance with 6.4 and Annex NAC.		N/A
Annex EE	Articulated accessibility probe (Fig EE.3) is used for assessing accessibility to document/media shredders instead of the Figure 2A test finger.		N/A
Annex M.2	Continuous ringing signals up to 16 mA only are permitted if the equipment is subjected to special installation and performance restrictions.		N/A
Annex NAD	Equipment connected to a telecommunication and cable distribution networks and supplied with an earphone intended to be held against, or in the ear comply with special acoustic pressure requirements.		N/A

J60950-1(H22)			
Clause	Requirement + Test	Result - Remark	Verdict

J 60950-1 (H22) : 2010 TEST REPORT

(Deviations from IEC 60950-1:2001, first edition)

Special National conditions, National deviation and other information according to MITI Ordinance No. 85.

Japanese unique deviations in J60950-1(H22):2010(=JIS C 6950-1:2009)

1.2.4.1	Add the following new notes. Note: Even if the equipment is designed as Class I, the equipment is regarded as Class 0I equipment when 2-pin adaptor with earthing lead wire or cord set having 2-pin plug with earthing lead wire is provided or recommended.	Added.	N/A
1.2.4.3A	Add the following new clause. 1.2.4.3A CLASS 0I EQUIPMENT Equipment having attachment plug without earthing blade, where protection against electric shock is achieved by: - using BASIC INSULATION, and - providing externally an earth terminal or a lead wire for earthing in order to connect those conductive parts that might assume a HAZARDOUS VOLTAGES in the event of BASIC INSULATION fault to the PROTECTIVE EARTHING CONDUCTOR in the building wiring. NOTE – Class 0I equipment may have a part constructed with Double Insulation or Reinforced Insulation circuit.	Class I Equipment.	N/A
1.3.2	Add the following notes after first paragraph: Note 1 Transportable or similar equipment that are relocated frequently for intended usage should not be designed as Class I or Class 0I equipment unless it is intended to be installed by service personnel. Note 2 Considering wiring circumstance in Japan, equipment intended to be installed where the provision for earthing connection is unlikely should not be designed as Class I or Class 0I equipment unless it is intended to be installed by service personnel.	Added.	N/A

J60950-1(H22)			
Clause	Requirement + Test	Result - Remark	Verdict
1.5.1	Replace the first paragraph with the follows: Where safety is involved, components shall comply either with the requirements of this standard, with the safety aspects of the relevant JIS component standard, or IEC component standards in case there is no applicable JIS component standard is available. However, a component that falls within the scope of METI Ministerial ordinance No. 85 is properly used in accordance with its marked ratings, requirements of 1.5.4, 2.8.7 and 3.2.5 apply, and in addition, a cord connector of power supply cord set mating with appliance inlet complying with the standard sheet of IEC 60320-1, shall comply with relevant standard sheet of IEC 60320-1. Replace Note 1 with the following: Note 1 A JIS or an IEC component standard is considered relevant only if the component in question clearly falls within its scope.	Added.	P
1.5.2	Replace first sentence in the first dashed paragraph with the following: - a component that has been demonstrated to comply with a JIS component standard harmonized with the relevant IEC component standard, or where such JIS component standard is not available, a component that has been demonstrated to comply with the relevant IEC component standard shall be checked for correct application and use in accordance with its rating. Add a note after the first dashed paragraph as follows: Note 1 See 1.7.5A when Type C.14 appliance coupler rated 10 A per IEC 60320-1 is used with an equipment rated not more than 125 V and rated more than 10 A. Replace first sentence in the third dashed paragraph as follows: - where no relevant IEC component standard or JIS component standard harmonized with the relevant IEC component standard exists, or where components are used in circuits not in accordance with their specified rating, the components shall be tested under the conditions occurring in the equipment.	Added.	P
1.7.1	Replace fifth dashed paragraph with the following: - manufacturer's or responsible company's name or trade-mark or identification mark;	Added.	N/A

J60950-1(H22)			
Clause	Requirement + Test	Result - Remark	Verdict
1.7.5A	Add the following new clause. after 1.7.5 1.7.5A Appliance Coupler If appliance coupler according to IEC60320-1, C.14(rated current: 10A)is used in equipment whose rated voltage is less than 125V and rated current is over 10A, the following instruction or equivalent shall be described in the user instruction. “ Use only designated cord set attached in this equipment”	Added.	N/A
1.7.12	Replace first sentence with the following: Instructions and equipment marking related to safety shall be in Japanese.	Replaced.	N/A
1.7.17A	Add the following new clause. after 1.7.17 1.7.17A Marking for CLASS 0I EQUIPMENT For CLASS 0I EQUIPMENT, the following instruction shall be marked on the visible place of the mains plug or the main body: “Provide an earthing connection” Moreover, for CLASS 0I EQUIPMENT, the following or equivalent instruction shall be indicated on the visible place of the main body or written in the operating instructions: “Provide an earthing connection before the mains plug is connected to the mains. And, when disconnecting the earthing connection, be sure to disconnect after pulling out the mains plug from the mains.”	Class I equipment.	N/A
2.6.3.2	Add the following after 1st paragraph. This also applies to the conductor of lead wire for protective earthing of CLASS 0I EQUIPMENT.	Class I equipment.	N/A
2.6.4.2	Replace 1st paragraph with the following. Equipment required to have protective earthing shall have a main protective earthing terminal. For equipment with a DETACHABLE POWER SUPPLY CORD, the earthing terminal in the appliance nlet is regarded as the main protective earthing terminal except for CLASS 0I EQUIPMENT providing separate main protective earthing terminal other than appliance inlet.	Replaced.	N/A
2.6.5.4	Replace 1st sentence with the following. Protective earthing connections of CLASS I EQUIPMENT shall make earlier and break later than the supply connections in each of the following:	Replaced.	N/A

J60950-1(H22)			
Clause	Requirement + Test	Result - Remark	Verdict
2.6.5.8A	Add the following new clause. after 2.6.5.8A 2.6.5.8A Earthing of CLASS 0I EQUIPMENT Plugs with a lead wire for earthing shall not be used for equipment having a rated voltage exceeding 150V. For plugs with a lead wire for earthing, the lead wire shall not be earthed by a clip. CLASS 0I EQUIPMENT shall be provided with an earthing terminal or lead wire for earthing in the external location where easily visible.	Class I equipment.	N/A
3.2.3	Add the following after Table 3A: Table 3A applies when cables complying JIS C 3662 or JIS C 3663 are used. In case of other cables, cable entries shall be so designed that a conduit suitable for the cable used can be fitted.	Added.	N/A
3.2.5.1	Add the following to the last of first dashed paragraph. Or mains cords shall be of the sheathed type complying with Appendix 1 of Article 1 of the Ministerial Ordinance on stipulating technical requirements for the Electrical Appliance. Add the following to the last of second dashed paragraph. Or mains cords shall be of the sheathed type complying with Appendix 1 of Article 1 of the Ministerial Ordinance on stipulating technical requirements for the Electrical Appliance.. Delete 1) in Table 3B.	Added.	N/A
3.3.4	Add the following note to Table 3D: Note For cables other than those complying with JIS C 3662 or JIS C 3663, terminals shall be suitable for the size of the intended cables.	Added.	N/A
3.3.7	Add the following after the first sentence: This requirement is not applicable to the external earthing terminal of Class 0I equipment.	Added.	N/A
4.3.4	Add the following after the first sentence: This requirement also applies to those connections in Class 0I equipment, where CLEARANCE or CREEPAGE DISTANCES over BASIC INSULATION would be reduced to less than the values specified in 2.10.	Class I equipment.	N/A
5.1.3	Add a note after the first paragraph as follows: Note – Attention should be drawn to that majority of three-phase power system in Japan is of delta connection, and therefore, in that case, test is conducted using the test circuit from IEC 60990, figure 13.	Added. Single phase power distribution system used.	N/A
5.1.6	Replace Table 5A. as follows	Replaced.	N/A

J60950-1(H22)																																										
Clause	Requirement + Test	Result - Remark	Verdict																																							
	<table> <tr> <th>Type of equipment</th><th>Terminal A of measuring instrument connected to:</th><th>Maximum TOUCH CURRENT mA r.m.s. 1)</th><th>Maximum PROTECTIVE CONDUCTOR CURRENT</th></tr> <tr> <td>ALL equipment</td><td>ALL equipment Accessible parts and circuits not connected to protective earth</td><td>0,25</td><td>-</td></tr> <tr> <td>HAND-HELD</td><td rowspan="4">Equipment main protective earthing terminal (if any) CLASS I EQUIPMENT</td><td>0,75</td><td>-</td></tr> <tr> <td>MOVABLE (other than HAND_HELD, but including TRANSPORTABLE EQUIPMENT</td><td>3,5</td><td>-</td></tr> <tr> <td>STATIONARY, PLUGGABLE TYPE A</td><td>3,5</td><td>-</td></tr> <tr> <td>ALL other STATIONARY EQUIPMENT</td><td>3.5</td><td>-</td></tr> <tr> <td>- not subject to the conditions of 5.1.7</td><td rowspan="3">Equipment main protective earthing terminal (if any) CLASS 0I EQUIPMENT</td><td>-</td><td>5 % of input current</td></tr> <tr> <td>- subject to the conditions of 5.1.7</td><td></td><td></td></tr> <tr> <td>HAND-HELD</td><td>0,5</td><td>-</td></tr> <tr> <td>Others</td><td></td><td>1.0</td><td>-</td></tr> <tr> <td colspan="4">1) If peak values of TOUCH-CURRENT are measured, the maximum values obtained by multiplying the r.m.s. values by 1,414.</td></tr> </table>	Type of equipment	Terminal A of measuring instrument connected to:	Maximum TOUCH CURRENT mA r.m.s. 1)	Maximum PROTECTIVE CONDUCTOR CURRENT	ALL equipment	ALL equipment Accessible parts and circuits not connected to protective earth	0,25	-	HAND-HELD	Equipment main protective earthing terminal (if any) CLASS I EQUIPMENT	0,75	-	MOVABLE (other than HAND_HELD, but including TRANSPORTABLE EQUIPMENT	3,5	-	STATIONARY, PLUGGABLE TYPE A	3,5	-	ALL other STATIONARY EQUIPMENT	3.5	-	- not subject to the conditions of 5.1.7	Equipment main protective earthing terminal (if any) CLASS 0I EQUIPMENT	-	5 % of input current	- subject to the conditions of 5.1.7			HAND-HELD	0,5	-	Others		1.0	-	1) If peak values of TOUCH-CURRENT are measured, the maximum values obtained by multiplying the r.m.s. values by 1,414.					
Type of equipment	Terminal A of measuring instrument connected to:	Maximum TOUCH CURRENT mA r.m.s. 1)	Maximum PROTECTIVE CONDUCTOR CURRENT																																							
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HAND-HELD		0,5	-																																							
Others		1.0	-																																							
1) If peak values of TOUCH-CURRENT are measured, the maximum values obtained by multiplying the r.m.s. values by 1,414.																																										
7.2	Add the following after the paragraph: However, the separation requirements and tests of 6.2.1 a), b) and c) do not apply to a CABLE DISTRIBUTION SYSTEM if all of the following apply: – the circuit under consideration is a TNV-1 CIRCUIT; and – the common or earthed side of the circuit is connected to the screen of the coaxial cable and to all accessible parts and circuits (SELV, accessible metal parts and LIMITED CURRENT CIRCUITS, if any); and – the screen of the coaxial cable is intended to be connected to earth in the building installation	Added.	N/A																																							

J60950-1(H22)			
Clause	Requirement + Test	Result - Remark	Verdict
W.1	Replace second and third sentence in the first paragraph with the following: This distinction between earthed and unearthed (floating) circuit is not the same as between CLASS I EQUIPMENT, CLASS 0I EQUIPMENT and CLASS II EQUIPMENT. Floating circuits can exist in CLASS I EQUIPMENT or CLASS 0I EQUIPMENT and earthed circuits in CLASS II EQUIPMENT.	Added.	N/A

J60950-1(H22)			
Clause	Requirement + Test	Result - Remark	Verdict
Annex JA	Add a new annex JA with the following contents. Annex JA (normative) Document shredding machines Document shredding machines shall also comply with the requirements of this annex except those of STATIONARY EQUIPMENT used by connecting directly to an AC MAINS SUPPLY of three-phase 200V or more.	Added. Not Document shredding machines.	N/A
JA.1	Markings and instructions The symbol  (JIS S 0101:2000, 6.2.4) and the following precautions for use shall be marked on readily visible part adjacent to document feed opening. The marking shall be clearly legible, permanent, and easily discernible; - that use by an infants/children may cause a hazard of injury etc.; - that a hand can be drawn into the mechanical section for shredding when touching the document-slot; - that clothing can be drawn into the mechanical section for shredding when touching the document-slot; - that hairs can be drawn into the mechanical section for shredding when touching the document-slot; - in case of equipment incorporating a commutator motor, that equipment may catch fire or explode by spraying of flammable gas.	Added. Not Document shredding machines.	N/A
JA.2	Inadvertent reactivation Any safety interlock that can be operated by means of the test finger, Figure JA.1, is considered to be likely to cause inadvertent reactivation of the hazard. Compliance is checked by inspection and, where necessary, by a test with the test finger, Figure JA.1	Added. Not Document shredding machines.	N/A

J60950-1(H22)			
Clause	Requirement + Test	Result - Remark	Verdict
JA.3	Disconnection from the mains supply Document shredding machines shall incorporate an isolating switch complying with sub-clause 3.4.2 as the device disconnecting the power of hazardous moving parts. For this switch, two-position (single-use) switch or multi-position (multifunction) switch (e.g., slide switch) may be used. If two-position switch, the positions for "ON" and "OFF" shall be indicated in accordance with sub-clause 1.7.8. If multi-position switch, the position for "OFF" shall be indicated in accordance with sub-clause 1.7.8 and other positions shall be indicated with proper terms or symbols. Compliance is checked by inspection.	Added. Not Document shredding machines.	N/A
JA.4	Protection against hazardous moving parts Any warning shall not be used instead of the structure for preventing access to hazardous moving parts. Document shredding machines shall comply with the following requirements. Insert the test finger, Figure JA.1, into all openings in MECHANICAL ENCLOSURES without applying appreciable force. It shall not be possible to touch hazardous moving parts with the test finger. This consideration applies to all sides of MECHANICAL ENCLOSURES when the equipment is mounted as intended. Before testing with the test finger, remove the parts detachable without a tool. Insert the wedge-probe, Figure JA.2, into the document-slot. And, against all directions of openings, if straight-cutting type, a force of 45 N shall apply to the probe, and 90 N if cross-cutting type. In this case, the weight of the probe is to be factored into the overall applied force. Before testing with the wedge-probe, remove the parts detachable without a tool. It shall not be possible to touch any hazardous moving parts, including the shredding roller or the mechanical section for shedding, with the probe.	Added. Not Document shredding machines.	N/A

J60950-1(H22)			
Clause	Requirement + Test	Result - Remark	Verdict

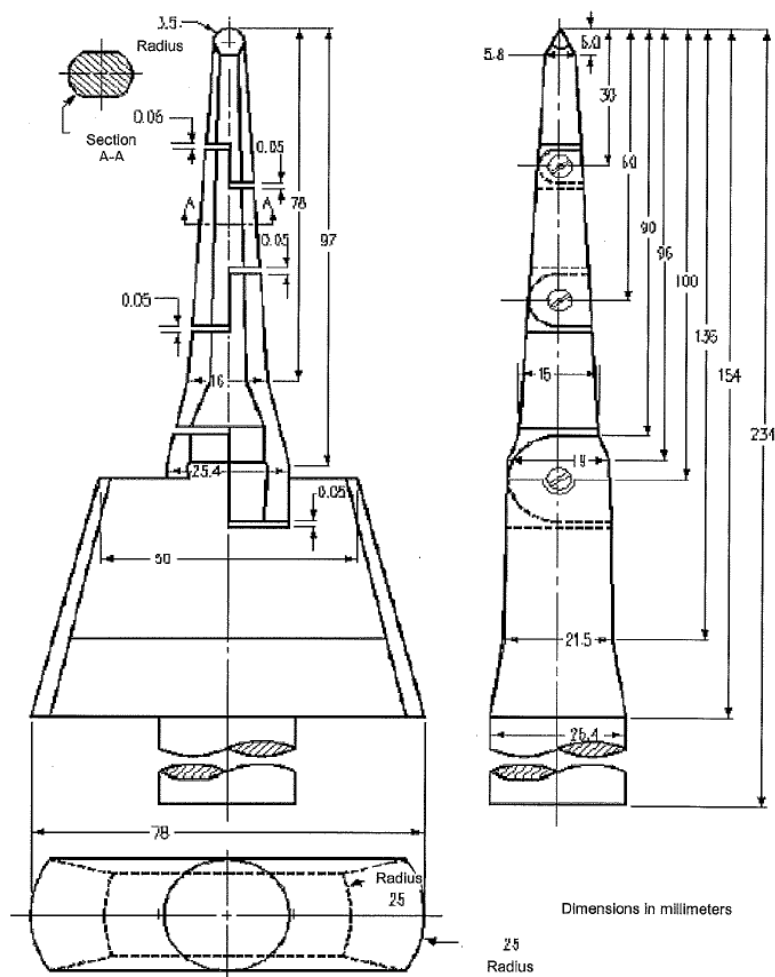
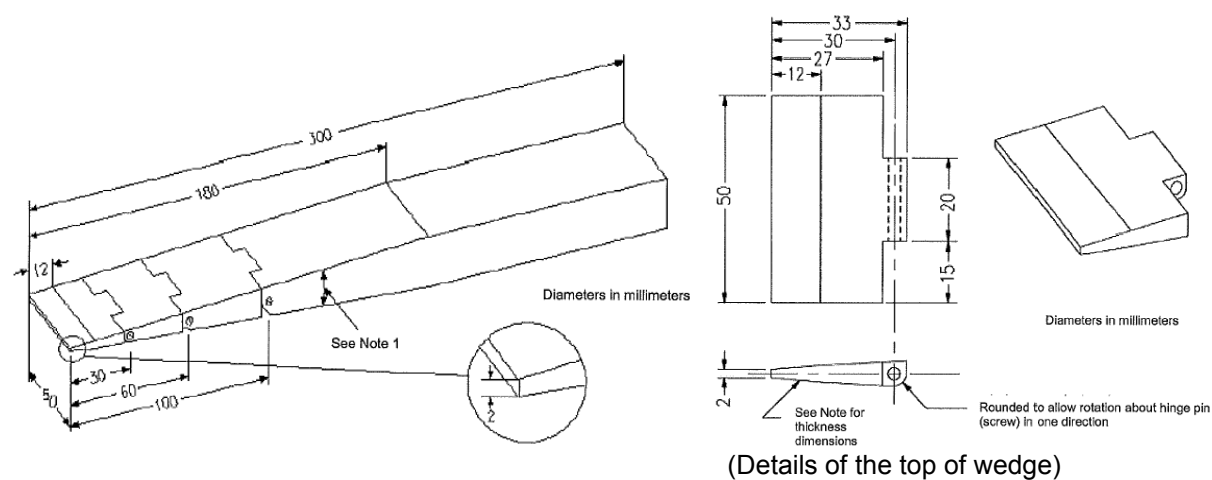


Figure JA.1 Test finger

J60950-1(H22)			
Clause	Requirement + Test	Result - Remark	Verdict



Distance from the top	Thickness of probe
0	2
12	4
180	24

points shown in the table.

Note 2 –The allowable dimensional tolerance of the probe is ± 0.127 mm.

Figure JA.2 Wedge-probe

Note 1 - The thickness of the probe varies linearly, with slope changes at the respective

J3000 (H25)			
Clause	Requirement + Test	Result - Remark	Verdict
Appendix	Appendix 12 J3000 (H25) Special National conditions, National deviation and other information according to MITI Ordinance No. 85.		—
1	General requirement When equipment provides with appliance inlet complying with JIS C 8283-1(2008), soldered parts of appliance inlet is not applied by force during insert or removal of connector. This is not applied when inlet body is fixed itself and not fixed by solder.	Inlet is fixed by adequate mechanical construction, not rely on soldering.	P
2	Requirement for equipment		—
2.1	Heater Appliances When diode is used in parallel at the power sources for adjustment of power consumption, the equipment shall remain safe for operation under open condition of one diode.		N/A
	The current rating of one diode shall be more than main current. The diodes connected in parallel are same type.		N/A
	The heating test specified by clause 11 of JIS C 9335-1(2003) and a specified in applicable individual requirements under open condition of one diode of parallel shall comply with the requirements.		N/A
2.2	Electric heater with glowing heating elements	Not electric stove.	N/A
	Surface treatment by paint or adhesive on protective frame or protective mesh shall not be used.		N/A
	Caution marking like below shall be on - easily visible place of the equipment or - Instruction manual 「注意 当該機器から、使用初期段階で揮発性有機化合物及びカルボニル化合物が最も放散するおそれがあるため、その際には十分換気を行うこと。」		N/A
3	Components used in equipment	No relevant equipment or component.	N/A
3.1	Motor capacitors used in ventilating fan, electric fan, air conditioner, electric washing machine, refrigerator or electric freezer shall be comply with - capacitors with protective elements or protective mechanism complying with JIS C 4908(2007) - P2 capacitor complying with IEC 60252-1(2001) Capacitor complying with below is acceptable		N/A
	Enclosed by metal or ceramic		N/A

J3000 (H25)			
Clause	Requirement + Test	Result - Remark	Verdict
	No non-metallic materials within 50 mm from capacitor surface		N/A
	Non-metallic material within 50mm from capacitor surface comply with needle frame test of JIS C 9335-1(2003), Annex E		N/A
	Non-metallic material within 50 mm from capacitor surface comply with V-1 test of JIS C 60965-11-10(2006).		N/A
3.2	Plug directly inserted to outlet used refrigerator or electric freezer. Shall comply with - Face contact with outlet shall have CTI with more than 400 according to JIS C 2134(2007) or - Supporting material of blades shall comply with glow wire test by temperature of 750°C according to JIS C 60695-2-11(2004) or JIS C 60695-2-12(2004). Materials having glow wire frame temperature of 775 °C are acceptable.		N/A

National Differences			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT IEC 60950-1
CHINA NATIONAL DIFFERENCES

Information technology equipment – Safety –

Part 1: General requirements

Differences according to.....: GB4943.1-2011

1.1.2	GB 4943.1-2011 applies to equipment for use at altitudes not exceeding 5000m above sea level, primarily in regions with moderate or tropical climates. Amend the third dashed paragraph of 1.1.2 as: — — equipment intended to be used in vehicles, on board ships or aircraft, at altitudes greater than 5000m;		P
1.4.5	After the third paragraph, add a paragraph: If the equipment is intended for direct connection to an AC mains supply, the tolerances on RATED VOLTAGE shall be taken as +10%,-10% unless a wider tolerance is declared by the manufacturer. The first dash paragraph "-the RATED VOLTAGE is 230V single -phase or 400V three-phase, in which case the tolerance shall be taken as +10% and -10%" of IEC 60950-1:2005 is deleted in GB 4943.1-2011		P
1.4.12.1	Tma in clause 1.4.12.1 amended as: Tma: is the maximum ambient temperature permitted by the manufacturer's specification, or 35 °C, whichever is greater. Add note 1: For equipment not to be operated at tropical climatic conditions, Tma: is the maximum ambient temperature permitted by the manufacturer's specification, or 25 °C, whichever is greater. Add note 2: For equipment is to be operated at 2000m-5000m above sea leave, its temperature test conditions and temperature limits are under consideration.		P
1.5. 2	Add a note behind the first break off section in Clause 1.5.2: A component used shall comply with related requirements corresponding altitude of 5000m.		P
1.7	Add one paragraph before the last paragraph: The required marking and instruction should be given in normative Chinese unless otherwise specified.		N/A

National Differences			
Clause	Requirement + Test	Result - Remark	Verdict
1.7.1	Based on the AC mains supply of China, the RATED VOLTAGE should be 220V (single phase) or 380V (three-phases) for single rated voltage, for RATED VOLTAGE RANGE, it should cover 220V or 380V (three-phases), for multiple RATED VOLTAGES, one of them should be 220V or 380V (three-phases) and set on 220V or 380V (three-phases) when manufactured. And the RATED FREQUENCY or RATED FREQUENCY RANGE should be 50Hz or include 50Hz.		P
1.7.2.1	Add requirements of warning for equipment intended to be used at altitudes not exceeding 2000m or at non-tropical climate regions: For equipment intended to be used at altitude not exceeding 2000m, a warning label containing the following or a similar appropriate wording, or a symbol as in annex DD shall fixed to the equipment at readily visible place. "Only used at altitude not exceeding 2000m."  For equipment intended to be used in not-tropical climate regions, a warning label containing the following or a similar appropriate wording, or a symbol as in annex DD shall fixed to the equipment at readily visible place. "Only used in not-tropical climate regions."  If only the symbol used, the explanation of the symbol shall be contained in the instruction manual. The above statements shall be given in a language acceptable to the regions where the apparatus is intended to be used.		N/A
2.7.1	Amended the first paragraph as: Protection in PRIMARY CIRCUITS against overcurrent short-circuits and earth faults shall be provided as an integral part of the equipment except special provisions. And the protective device shall meet the requirement of Clause 5.3. Delete note of Clause 2.7.1.		P

National Differences			
Clause	Requirement + Test	Result - Remark	Verdict
2.9.2	First section of Clause 2.9.2 amended as two sections: Where required by 2.9.1, 2.10.8.3, 2.10.10 or 2.10.11, humidity conditioning is conducted for 120 h in a cabinet or room containing air with ambient temperature $40\pm 2^{\circ}\text{C}$ and a relative humidity of $(93\pm 3)\%$. During this conditioning the component or subassembly is not energized. For equipment not to be operated at tropical climatic conditions, Where required by 2.9.1, 2.10.8.3, 2.10.10 or 2.10.11, humidity conditioning is conducted for 48 h in a cabinet or room containing air with a relative humidity of $(93\pm 3)\%$. The temperature of the air, at all places where samples can be located, is maintained within 2°C of any convenient value between 20°C and 30°C such that condensation does not occur. Due to pretreatment of equipment operated at high altitude area is humidity conditioning withstand hot shock, specific requirements are to be considered. Add note: For equipment to be operated at 2000 m - 5000m above sea level, assessment and requirement of humidity conditioning for Insulation material properties are considered.		P
2.10.3.1	Amend the third paragraph of Clause 2.10.3.1 to be: These requirements apply for equipment to be operated up to 2000 m above sea level. For equipment to be operated at more than 2000 m above sea level and up to 5000m above sea level, the minimum CLEARANCE shall be multiplied by the factor 1.48 corresponding altitude of 5000m given in Table A.2 of IEC 60664-1. For equipment to be operated at more than 5000 m above sea level, the minimum CLEARANCE shall be multiplied by the factor given in Table A.2 of IEC 60664-1. Linear interpolation is permitted between the nearest two points in Table A.2. The calculated minimum CLEARANCE using this multiplication factor shall be rounded up to the next higher 0,1 mm increment.		P
2.10.3.3& 2.10.3.4	Add "(applicable for altitude up to 2000m)" in header of Table 2K、2L and 2M.		P

National Differences			
Clause	Requirement + Test	Result - Remark	Verdict
2.10.3.4	Add a new section above Table 2K and in Clause 2.10.3.4: Minimum CLEARANCES determined by above rules apply for equipment to be operated up to 2000m above sea level. For equipment to be operated at 2000 m - 5000m above sea level, the minimum CLEARANCE shall be multiplied by the factor 1.48 corresponding altitude of 5000m given in Table A.2 of GB/T16935.1 (IEC 60664-1). For equipment to be operated at more than 5000 m above sea level, the minimum CLEARANCE shall be multiplied by the factor given in Table A.2 of GB/T16935.1.		P
3.2.1.1	Add a paragraph before the last paragraph: Plugs connected to AC mains supply shall comply with GB 1002 or GB 1003 or GB/T 11918 as applicable.		N/A
4.2.8	Clause 4.2.8 cathode ray tubes quoted Clause 18 of GB8898-2011. Delete note of Clause 4.2.8.		N/A
Annex E	Last section of Annex E amended as: For comparison of winding temperatures determined by the resistance method of this annex with the temperature limits of Table 4B, 35 °C shall be added to the calculated temperature rise. And add note: for equipment not to be operated at tropical climatic conditions, 25 °C shall be added to the calculated temperature rise to compare with the temperature of Table 4B.		N/A
Annex G.6	Change the second section of Clause G.6 to be: For equipment to be operated at 2000 m - 5000m above sea level, the minimum CLEARANCE shall be multiplied by the factor 1.48 corresponding altitude of 5000m given in Table A.2 of GB/T16935.1. For equipment to be operated at more than 5000 m above sea level, the minimum CLEARANCE shall be multiplied by the factor given in Table A.2 of IEC 60664-1. Linear interpolation is permitted between the nearest two points in Table A.2. The calculated minimum CLEARANCE using this multiplication factor shall be rounded up to the next higher 0,1 mm increment.		P
Annex BB (informative)	Amended as : The differences between Chinese national standards GB 4943.1-2011 and GB 4943-2001.		P

National Differences			
Clause	Requirement + Test	Result - Remark	Verdict
Annex DD (normative)	Added annex DD: Instructions for the new safety warning labels. DD.1 Altitude warning label  Meaning of the label: Evaluation for apparatus only based on altitude not exceeding 2000m, therefor it's the only operating condition applied for the equipment .There may be some potential safety hazard if the equipment is used at altitude above 2000m . DD.2 Climate warning label  Meaning of the label: Evaluation for apparatus only based on temperate climate condition, therefor it's the only operating condition applied for the equipment .There may be some potential safety hazard if the equipment is used in tropical climate region.		N/A
Annex EE (informative)	Added annex EE: Illustration relative to safety explanation in normative Chinese, Tibetan, Mongolian, Zhuang Language and Uighu.		N/A
Other amend-ments	In accordance with the relevant CTL decisions and the amendments of IEC 60950-1, the specific requirements or mistakes in IEC standard are corrected or editorially modified in this part, Including clause 1.7, 2.1.1.7, 2.9.2, Table 2H, Figure 2H, F.8, F.9, M.3 and Annex U.		P
Quoting standards and reference documents	The principles of quoting and referring to other standards in Annex P and reference documents of IEC 60950-1 are as follows: If the date of the reference document is given, only that edition applies, excluding any subsequent corrigenda and amendments. However, parties to agreements based on this part are encouraged to investigate the possibility of applying the most recent editions of the reference documents. For undated references, the latest edition of the referenced document applies, including any corrigenda and amendments. For the usage of international standards in		P

National Differences			
Clause	Requirement + Test	Result - Remark	Verdict
	Chinese national standards and industry standards is various, in the aim of achieving easy operation and based on the requirements of GB/T 1.1 and GB/T 20000.2, when quoting an entire international standard in the normative quoting files and reference documents of Annex P of this part, the principles of quotation are as follows: - If there is no national standard or industry standard corresponding to the international standard, then the international standard is quoted; - If there is national standard or industry standard corresponding to the international standard, then either the national or industry standard is quoted; - If the date of the national standard or industry standard is not given, the latest edition of the standard applies; - The national standard or industry standard number, corresponding international standard number and the consistency level code should be identified in parentheses behind the listed national standard or industry standard. When quoting several chapters or clauses of the international standard, the principles of quotation are as follows: - If there is no national standard or industry standard corresponding to the international standard, then the international standard is quoted; - If there is national standard or industry standard corresponding to the international standard, then either the national or industry standard is quoted. Meanwhile, in order to retain the relevant information on international standards, informative annex CC is increased, which gives the table about the comparison of the normative quoting files and reference documents in IEC 60950-1: 2005 and GB 4943.1-2011.		