



Ref. Certif. No.

JPTUV-088441

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

LCD Monitor

Name and address of the applicant
Nom et adresse du demandeur

Darwin Precisions Corporation
No. 45, Ln. 313
Sec. 3, Minsheng Road, Daya Dist., Taichung City 428 Taiwan

Name and address of the manufacturer
Nom et adresse du fabricant

NEC Display Solutions, Ltd.
4-28, Mita 1-chome, Minato-ku
Tokyo, 108-0073 Japan

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

DARWIN PRECISIONS (XIAMEN) CORP
3089 NORTH OF XIANG'AN RD
XIANG'AN BRANCH TORCH, HI-TECH INDUSTRIAL DEVELOPMENT,
ZONE XIAMEN FUJIAN 361102, P. R. China

Ratings and principal characteristics
Valeurs nominales et caractéristiques principales

1) AC 100-240V; 50/60Hz; 0.76A; Class I
2) AC 100V; 50/60Hz; 0.76A; 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

BT421

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 + A2
See Test Report for National Differences

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

50150193 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



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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: 05.06.2018

Signature:

Dipl.-Ing. F. Stoezel



Test Report issued under the responsibility of:



TEST REPORT

IEC 60950-1

Information technology equipment – Safety – Part 1: General requirements

Report Number.: 50150193 001

Date of issue: June 5, 2018

Total number of pages..... 74

Applicant's name.....: Darwin Precisions Corporation

Address: No. 45, Ln. 313, Sec. 3, Minsheng Road, Daya Dist., Taichung City
428 Taiwan

Test specification:

Standard: IEC 60950-1:2005 (Second Edition) + Am 1:2009 + Am 2:2013

Test procedure.....: CB Scheme

Non-standard test method.....: N/A

Test Report Form No.....: IEC60950_1F

Test Report Form(s) Originator.....: SGS Fimko Ltd

Master TRF.....: Dated 2014-02

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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.

General disclaimer:

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 CB Testing Laboratory. The authenticity of this Test Report and its contents can be verified by contacting the NCB, responsible for this Test Report.

Test item description :		LCD Monitor	
Trade Mark :		NEC	
Manufacturer		NEC Display Solutions, Ltd. 4-28, Mita 1-chome, Minato-ku, Tokyo, 108-0073 Japan	
Model/Type reference :		BT421	
Ratings :		1) AC 100-240 V, 50/60 Hz, 0.76 A 2) AC 100 V, 50/60 Hz, 0.76 A	
Testing procedure and testing location:			
☒	CB Testing Laboratory:	AUDIX TECHNOLOGY CORPORATION	
Testing location/ address		No. 53-11, Dingfu, Linkou Dist., New Taipei City, Taiwan, Chinese Taipei	
☐	Associated CB Testing Laboratory:		
Testing location/ address			
Tested by (name + signature)		Wison Huang Project handler	<i>Wison Huang</i>
Approved by (name + signature)		Ben Lu Reviewer	<i>Ben Lu</i>
☐	Testing procedure: TMP/CTF Stage 1:		
Testing location/ address			
Tested by (name + signature)			
Approved by (name + signature)			
☐	Testing procedure: WMT/CTF Stage 2:		
Testing location/ address			
Tested by (name + signature)			
Witnessed by (name + signature)			
Approved by (name + signature)			
☐	Testing procedure: SMT/CTF Stage 3 or 4:		
Testing location/ address			
Tested by (name + signature)			
Witnessed 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 manufacturer specified the maximum ambient temperature as +50 °C.
- Highest load condition for this equipment is to operate at maximum backlight, brightness and contrast of LED backlight, additional load of 5 V/0.5 A for USB 2.0 port * 1.
- Test samples are pre-production samples without serial numbers.
- The LCD Monitor could be operated in landscape (0°) and portrait mode (rotate at 90 °) with mainboard downside.
- The equipment has been evaluated according to the specified by the manufacturer maximum operating altitude of 3000 m (correction factor for clearances according to IEC 60664:1992+A1:2000+A2:2002 of 1.14 is considered).

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, AU, CA, JP, NZ, US.

Explanation of used codes: AU = Australia, CA = Canada, JP = Japan, NZ = New Zealand, US = United States of America.

☒ **The product fulfils the requirements of EN 60950-1: 2006 + A11: 2009 + A1: 2010 + A12: 2011 + A2: 2013, IEC 60950-1: 2005 + Am 1: 2009 + Am 2: 2013**

For IEC 60950-1:2005 + A1:2009 / EN60950-1:2006 + A11:2009 + A1:2010 + A12:2011 (per client request):

DE, FI, IL, KR, CN

Explanation of used codes: DE = Germany, FI = Finland, IL = Israel, KR = Republic of Korea.

Additional National differences according to IEC 60950-1:2005 (per client request)

CN

CN = China.

Additional National differences according to IEC 60950-1 1ed. (per client request)

Japan Differences

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.

NEC
LCD-BT421

LCD MONITOR
液晶ディスプレイ
(MODEL : BT421)

VOLTS 定格電圧 : 100V~
FREQUENCY 定格周波数 : 50/60Hz
AMPERES 定格電流 : 0.76A



NECディスプレイソリューションズ株式会社
NEC Display Solutions, Ltd.
4-28,Mita 1-chome, Minato-ku, Tokyo, Japan

MADE IN CHINA

CAUTION: TO PREVENT ELECTRIC SHOCK, DO NOT REMOVE THE ENCLOSURE.
NO USER-SERVICEABLE PARTS INSIDE.

ATTENTION: AFIN DE PREVENIR DE TOUT CHOC ELECTRIQUES, NE PAS OUVRIR
CE BOITIER. AUCUNE PIECE INTERNE NE PEUT-ETRE CHANGEE PAR L'UTILISATEUR.

ACHTUNG: ZUR TRENNUNG VOM NETZ IST DER NETZSTECKER AUS DER
STECKDOSE ZU ZIEHEN. GERÄT NICHT ÖFFNEN. ES SIND KEINE DURCH DEN
BENUTZER AUSWECHSELBAREN TEILE IM GERÄT VORHANDEN.

PRECAUCIÓN: PARA PREVENIR DESCARGA ELÉCTRICA, NO quite EL
RECINTO. NINGUNAS PIEZAS DEL USUARIO SERVICABLE ADENTRO.

この装置は、クラス A 機器です。この装置を住宅
環境で使用すると電波妨害を引き起こすことがありま
す。この場合には使用者が適切な対策を講ずるよう要
求されることがあります。 VCCI - A

警告 
高圧注意
サービスマン以外の方は分解しない
でください。内部には高電圧部分が
あり、万一さわると危険です。
感電注意
電源コードのアースリード線は必ず
接続ください。故障のときに感電の
原因になります。

NEC
LCD-BT421

LCD MONITOR
液晶ディスプレイ
(MODEL : BT421)

VOLTS 定格電圧 : 100-240V~
FREQUENCY 定格周波数 : 50/60Hz
AMPERES 定格電流 : 0.76A



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

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STECKDOSE ZU ZIEHEN. GERÄT NICHT ÖFFNEN. ES SIND KEINE DURCH DEN
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感電注意
電源コードのアースリード線は必ず
接続ください。故障のときに感電の
原因になります。

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: not directly connected to the mains
Mains supply tolerance (%) or absolute mains supply values	±10
Tested for IT power systems	☒ Yes ☐ No
IT testing, phase-phase voltage (V)	230 for Norway
Class of equipment	☒ Class I ☐ Class II ☐ Class III ☐ Not classified
Considered current rating of protective device as part of the building installation (A)	16 (20 for North America)
Pollution degree (PD)	☐ PD 1 ☒ PD 2 ☐ PD 3
IP protection class	IP20
Altitude during operation (m)	Up to 3000
Altitude of test laboratory (m)	Less than 2000
Mass of equipment (kg)	Approx. 8.99 kg
Possible test case verdicts:	
- test case does not apply to the test object	N/A
- test object does meet the requirement.....	P (Pass)
- test object does not meet the requirement	F (Fail)
Testing.....:	
Date of receipt of test item.....:	2018-03-21
Date(s) of performance of tests	2018-03-21 to 2018-05-17
General remarks:	
"(See Enclosure #)" refers to additional information appended to the report. "(See appended table)" refers to a table appended to the report. Throughout this report a ☐ comma / ☒ point is used as the decimal separator.	

Manufacturer's Declaration per sub-clause 4.2.5 of IECEE 02:

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) :

1. DARWIN PRECISIONS (XIAMEN) CORP
 3089 NORTH OF XIANG'AN RD XIANG'AN BRANCH TORCH, HI-TECH INDUSTRIAL
 DEVELOPMENT, ZONE XIAMEN FUJIAN 361102, P. R. China

General product information:

The equipment under test (EUT), models shown as page 2 are LCD Monitor for information technology equipment in the scope of this standard, electronic components were mounted on PWB, then housed within metal enclosure.

The equipment is incorporated with following critical parts:

- LCD panel (LED backlight type)
- LED Driver Board
- Building-in type non-approved switching power supply board
- Main board (USB 2.0 *1,DVI *3, RS232 *1, LAN *1)
- IR / control board

Additional Information

- The suitable power supply cord provided and evaluated during national approval.
- The **power supply unit** and used in the product is not a certified product. Hence, compliance has been evaluated in this report.
- 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 equipment contains with multimedia function ports, therefore the IEC Guide 112 for multimedia equipment has been considered.

Markings and Instructions

The product also marked with:

-  (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)
-  (IEC 60417-5007) and  (IEC 60417-5008) on power switch.
- Fuse Identification (See sub clause 1.7.6): F01 T5 A, 250 Vac.

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 tables 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		N/A
1.5.4	Transformers	Transformers complied with the relevant requirements.	P
1.5.5	Interconnecting cables	Interconnecting cables comply with the relevant requirements of this standard.	P
1.5.6	Capacitors bridging insulation	Between lines: sub class 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 Primary and Secondary: subclass Y1 capacitors 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	Resistors 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	See below.	P
1.5.9.1	General	The surge suppressor complies with Annex Q. See appended table 1.5.1 for details.	P
1.5.9.2	Protection of VDRs	The varistor is located after fuse and protected by fuse.	P
1.5.9.3	Bridging of functional insulation by a VDR	The varistor across mains for functional insulation.	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.	P

1.7	Marking and instructions		P
1.7.1	Power rating and identification markings	The power rating marking is provided and is readily visible in operator access area.	P
1.7.1.1	Power rating marking	See copy of marking plate	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		P
	Manufacturer's name or trade-mark or identification mark	See copy of marking plate.	P

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
	Model identification or type reference	See copy of marking plate.	P
	Symbol for Class II equipment only	The equipment is Class I equipment.	N/A
	Other markings and symbols	Other markings and symbols do not give rise to misunderstanding.	P
1.7.1.3	Use of graphical symbols	Graphical symbols are in accordance with IEC 60417 or ISO 3864-2 or ISO 7000.	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 provided as disconnect device.	P
1.7.2.3	Overcurrent protective device		N/A
1.7.2.4	IT power distribution systems	For Norway compliance has to be evaluated during the national approval.	N/A
1.7.2.5	Operator access with a tool		N/A
1.7.2.6	Ozone		N/A
1.7.3	Short duty cycles		N/A
1.7.4	Supply voltage adjustment	Full range voltage design, no necessary adjustment.	N/A
	Methods and means of adjustment; reference to installation instructions		N/A
1.7.5	Power outlets on the equipment	No such device.	N/A
1.7.6	Fuse identification (marking, special fusing characteristics, cross-reference)	See General product information - Markings and Instructions.	P
1.7.7	Wiring terminals	See below.	P
1.7.7.1	Protective earthing and bonding terminals	See General product information - Markings and Instructions.	P
1.7.7.2	Terminals for a.c. mains supply conductors	The equipment is provided with appliance inlet, which is for connection of a detachable type power supply cord.	N/A
1.7.7.3	Terminals for d.c. mains supply conductors		N/A
1.7.8	Controls and indicators		P
1.7.8.1	Identification, location and marking	No safety involved used.	N/A
1.7.8.2	Colours	No safety involved used.	N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
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
1.7.11	Durability	The marking plate has no curling and is not able to be removed easily.	P
1.7.12	Removable parts	No marking place in removable parts.	N/A
1.7.13	Replaceable batteries	Only Two AA or two AAA consumer type batteries provided for remote controller.	N/A
	Language(s)		—
1.7.14	Equipment for restricted access locations	The equipment is not intended to be used in 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	No access with test finger to any parts with only basic insulation to hazardous voltage. The test pin cannot touch hazardous voltage through any seams within the appliance.	P
	Test with test finger (Figure 2A)	See above.	P
	Test with test pin (Figure 2B)	See above.	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	See appended table 2.1.1.5.	P

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
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 in parallel with an input capacitance of 25 pF or less.	P
	Measured voltage (V); time-constant (s)	See appended table 2.1.1.7.	—
2.1.1.8	Energy hazards – d.c. mains supply		N/A
	a) Capacitor connected to the d.c. mains supply ...:		N/A
	b) Internal battery connected to the d.c. mains supply		N/A
2.1.1.9	Audio amplifiers		N/A
2.1.2	Protection in service access areas		N/A
2.1.3	Protection in restricted access locations		N/A

2.2	SELV circuits		P
2.2.1	General requirements	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	Complied with sub-clauses, 2.2.2, 2.2.3.	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

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
2.4	Limited current circuits		P
2.4.1	General requirements	The limits of 2.4.2 were not exceeded under normal operating conditions.	P
2.4.2	Limit values	See below.	P
	Frequency (Hz)	See appended table 2.4.2.	—
	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.	—
2.4.3	Connection of limited current circuits to other circuits	The limits of 2.4.2 were not exceeded.	P
2.5	Limited power sources		P
	a) Inherently limited output	(see appended table 2.5)	P
	b) Impedance limited output	(see appended table 2.5)	P
	c) Regulating network or IC current limiter, limits output under normal operating and single fault condition		N/A
	Use of integrated circuit (IC) current limiters		N/A
	d) Overcurrent protective device limited output		N/A
	Max. output voltage (V), max. output current (A), max. apparent power (VA).....	(see appended table 2.5)	—
	Current rating of overcurrent protective device (A):		—
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. See General product information - Markings and Instructions	P
2.6.2	Functional earthing	Secondary functional earthing is separated to primary by double or reinforced insulation or by basic insulation and protective earthing.	P
	Use of symbol for functional earthing		N/A
2.6.3	Protective earthing and protective bonding conductors	See below.	P

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
2.6.3.1	General	See below.	P
2.6.3.2	Size of protective earthing conductors	No power supply cord provided.	N/A
	Rated current (A), cross-sectional area (mm ²), AWG		—
2.6.3.3	Size of protective bonding conductors	Evaluation by test. See sub-clause 2.6.3.4.	P
	Rated current (A), cross-sectional area (mm ²), AWG	See above.	—
	Protective current rating (A), cross-sectional area (mm ²), AWG	See above.	—
2.6.3.4	Resistance of earthing conductors and their terminations; resistance (Ω), voltage drop (V), test current (A), duration (min)	(Refer to appended table 2.6.3.4)	P
2.6.3.5	Colour of insulation	After appliance inlet, the insulation of protective bonding conductor is green-and-yellow.	P
2.6.4	Terminals	See below.	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)	Evaluation by test.	—
2.6.4.3	Separation of the protective earthing conductor from protective bonding conductors	Only protective bonding conductor used in this equipment.	P
2.6.5	Integrity of protective earthing	See below.	P
2.6.5.1	Interconnection of equipment	This unit has its own earthing connection. Any other units connected 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 in bonding conductor.	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	Appliance inlet provided, the earth connection is made before and broken after the hazardous voltage. No other operator removable parts.	P

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Clause	Requirement + Test	Result - Remark	Verdict
2.6.5.5	Parts removed during servicing	It is not necessary to disconnect the earth connection except for the removing of the earthed part itself.	P
2.6.5.6	Corrosion resistance	All safety earthing connections in compliance with Annex J.	P
2.6.5.7	Screws for protective bonding	Self-tapping and spaced thread screws are not used to provide protective bonding. The protective bonding screw is threaded into the metal part at least twice the pitch of the screw thread.	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	Only one fuse provided.	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

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Clause	Requirement + Test	Result - Remark	Verdict
	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
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. After the humidity treatment of 2.9.2, the insulation is then subjected to the relevant electric strength test of 5.2.2.	P
2.9.2	Humidity conditioning	Tested for 120 hrs.	P
	Relative humidity (%), temperature (°C)	93 % R.H., 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		P
2.10.1.1	Frequency	Not exceed 30 kHz.	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	Complied.	P
2.10.1.5	Insulation with varying dimensions		N/A
2.10.1.6	Special separation requirements		N/A
2.10.1.7	Insulation in circuits generating starting pulses		N/A
2.10.2	Determination of working voltage	See below.	P
2.10.2.1	General	Considered.	P
2.10.2.2	RMS working voltage	See appended table 2.10.2	P

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Clause	Requirement + Test	Result - Remark	Verdict
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 is considered.	P
2.10.3.2	Mains transient voltages	See below.	P
	a) AC mains supply	2500 Vpk 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	Refer to sub-clause 5.3.4.	P
2.10.3.5	Clearances in circuits having starting pulses		N/A
2.10.3.6	Transients from a.c. mains supply		N/A
2.10.3.7	Transients from d.c. mains supply		N/A
2.10.3.8	Transients from telecommunication networks and cable distribution systems		N/A
2.10.3.9	Measurement of transient voltage levels		N/A
	a) Transients from a mains supply		N/A
	For an a.c. mains supply		N/A
	For a d.c. mains supply		N/A
	b) Transients from a telecommunication network :		N/A
2.10.4	Creepage distances	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	See above.	—
2.10.4.3	Minimum creepage distances	(see appened 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	Complied with 2.10.5.2 and 2.10.10.	P
2.10.5.4	Semiconductor devices	See 2.10.5.3.	P
2.10.5.5.	Cemented joints	See appended table 1.5.1 for optocoupler distances.	P
2.10.5.6	Thin sheet material – General	Considered.	P
2.10.5.7	Separable thin sheet material	Reinforced insulation.	P

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Clause	Requirement + Test	Result - Remark	Verdict
	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	See below.	P
	Electric strength test	(see appended table 5.2)	—
2.10.5.11	Insulation in wound components	See 2.10.5.14 and 2.10.5.12	P
2.10.5.12	Wire in wound components	See below	P
	Working voltage	See appended table 2.10.2.	P
	a) Basic insulation not under stress		N/A
	b) Basic, supplementary, reinforced insulation		N/A
	c) Compliance with Annex U	Complied with annex U.	P
	Two wires in contact inside wound component; angle between 45° and 90°	Insulation tape or tubing provided.	P
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		P
2.10.6.1	Uncoated printed boards		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
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

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Clause	Requirement + Test	Result - Remark	Verdict
2.10.8.3	Electric strength test		N/A
2.10.8.4	Abrasion resistance test		N/A
2.10.9	Thermal cycling		N/A
2.10.10	Test for Pollution Degree 1 environment and insulating compound		N/A
2.10.11	Tests for semiconductor devices and cemented joints		N/A
2.10.12	Enclosed and sealed parts		N/A

3	WIRING, CONNECTIONS AND SUPPLY		P
3.1	General		P
3.1.1	Current rating and overcurrent protection	All internal wires are UL recognized, PVC insulated, VW-1 and have gauge suitable for current intended to be carried. No internal wire for primary power distribution.	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	Internal wires are secured by soldering and quick connector or other mechanical fixing means so that a loosening of the terminal connection is unlikely.	P
3.1.4	Insulation of conductors	The insulation of the individual conductors is suitable for the application and the working voltage. For the insulation material see 3.1.1.	P
3.1.5	Beads and ceramic insulators		N/A
3.1.6	Screws for electrical contact pressure	Electrical connections screwed two or more complete threads into metal.	P
3.1.7	Insulating materials in electrical connections	All current carrying connections made by metal to metal.	P
3.1.8	Self-tapping and spaced thread screws		N/A
3.1.9	Termination of conductors	All conductors are reliably secured by solder-pin or glued or other mechanical fixing means.	P

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Clause	Requirement + Test	Result - Remark	Verdict
	10 N pull test	Complied.	P
3.1.10	Sleeving on wiring		N/A
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	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		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 parts under this unit likely to damage the power supply cords. Enclosure without sharp edges.	N/A
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	See below.	P
3.4.2	Disconnect devices	Appliance inlet is considered as disconnect device.	P
3.4.3	Permanently connected equipment		N/A
3.4.4	Parts which remain energized	When the power cord is removed from the inlet no remaining parts with hazardous voltage in the equipment.	P
3.4.5	Switches in flexible cords		N/A
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	Interconnection to other equipment via secondary output connectors at SELV.	N/A
3.4.11	Multiple power sources	Single mains supply provided.	N/A

3.5	Interconnection of equipment		P
3.5.1	General requirements	See below.	P
3.5.2	Types of interconnection circuits :	SELV and limited current circuits.	P
3.5.3	ELV circuits as interconnection circuits		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
3.5.4	Data ports for additional equipment	See appended table 2.5.	P
4	PHYSICAL REQUIREMENTS		P
4.1	Stability		N/A
	Angle of 10°		N/A
	Test force (N) :		N/A
4.2	Mechanical strength		P
4.2.1	General	See below. After the tests, the equipment complies with the requirements of sub-clauses 2.1.1, 2.6.1 and 2.10.	P
	Rack-mounted equipment.		N/A
4.2.2	Steady force test, 10 N	10 N applied to all components other than the parts serving as an enclosure.	P
4.2.3	Steady force test, 30 N		N/A
4.2.4	Steady force test, 250 N	After subjected 250 N, no damage to the enclosure.	P
4.2.5	Impact test	No damage to the top, bottom, side and rear enclosure from the steel ball impact test	P
	Fall test	See above.	P
	Swing test	See above.	P
4.2.6	Drop test; height (mm) :		N/A
4.2.7	Stress relief test		N/A
4.2.8	Cathode ray tubes		N/A
	Picture tube separately certified :		N/A
4.2.9	High pressure lamps		N/A
4.2.10	Wall or ceiling mounted equipment; force (N) :	For unit an additional force of 26.97 kg (3 times the mass of the unit and the mass is 8.99 kg). 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	The edges and corners are rounded and smoothed.	P
4.3.2	Handles and manual controls; force (N) :		N/A
4.3.3	Adjustable controls		N/A
4.3.4	Securing of parts	Electrical and mechanical connections can be expected to withstand usual mechanical stress. No loosening of clearance or creepage impairing distances likely to occur.	P
4.3.5	Connection by plugs and sockets	No mismatch of connectors, plugs or socket possible.	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	Test for super capacitor (C724)	P
	- Overcharging of a rechargeable battery	See appended table 5.3.	P
	- Unintentional charging of a non-rechargeable battery		N/A
	- Reverse charging of a rechargeable battery		N/A
	- Excessive discharging rate for any battery	See appended table 5.3.	P
4.3.9	Oil and grease	Insulation in intended use not considered to be exposed to oil or grease.	N/A
4.3.10	Dust, powders, liquids and gases	Equipment in intended use not considered to be exposed to these.	N/A
4.3.11	Containers for liquids or gases		N/A
4.3.12	Flammable liquids :	No flammable liquids provided.	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) :		—

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Clause	Requirement + Test	Result - Remark	Verdict
	Measured high-voltage (kV)		—
	Measured focus voltage (kV)		—
	CRT markings		—
4.3.13.3	Effect of ultraviolet (UV) radiation on materials		N/A
	Part, property, retention after test, flammability classification		N/A
4.3.13.4	Human exposure to ultraviolet (UV) radiation		N/A
4.3.13.5	Lasers (including laser diodes) and LEDs	See below.	P
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. - For LED backlight, the luminance is far less than 10000 cd/m ² . With reference to sub clause 4.1 of IEC 62471:2006 no further test is necessary. - Photo couplers.	P
4.3.13.6	Other types		N/A

4.4	Protection against hazardous moving parts		N/A
4.4.1	General		N/A
4.4.2	Protection in operator access areas		N/A
	Household and home/office document/media shredders		N/A
4.4.3	Protection in restricted access locations		N/A
4.4.4	Protection in service access areas		N/A
4.4.5	Protection against moving fan blades		N/A
4.4.5.1	General		N/A
	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		N/A
	Use of symbol or warning		N/A
4.4.5.3	Protection for service persons		N/A
	Use of symbol or warning		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
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 material used without further test.	N/A
4.6	Openings in enclosures		P
4.6.1	Top and side openings	No openings.	N/A
	Dimensions (mm) :		—
4.6.2	Bottoms of fire enclosures	No openings.	N/A
	Construction of the bottom, dimensions (mm) .. :		—
4.6.3	Doors or covers in fire enclosures		N/A
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	Openings baffled by mylar sheet, secured by adhesive material (glue) as barrier complies with the standard after applying tests of 4.2, see the following conditioning.	P

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Clause	Requirement + Test	Result - Remark	Verdict
	Conditioning temperature (°C), time (weeks) :	Day 1: 100 °C±2 °C for one week. Day 8: 1. Remove from oven and leave at 25 °C for 1 h. 2. Place in freezer at -40°C for 4h. 3. Remove from freezer and allow to come to 25 °C for 8 h. Day 9: 1. Place in a compartment at 95 % relative humidity for 72 h. 2. Remove and leave at 25 °C for 1 h. 3. Place in oven at 100 °C for 4 h. Remove and allow sample to reach 25 °C over 8 h.	—

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	Materials with the required flammability classes are used.	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 not supplied by limited power source Insulating wiring	P
4.7.2.2	Parts not requiring a fire enclosure	IR Lens.	P
4.7.3	Materials		P
4.7.3.1	General	The PCBs have material of flammability class V-1 or better.	P
4.7.3.2	Materials for fire enclosures	Earthed metal enclosure, keypad cover and mylar are considered as fire enclosure, which complies without test.	P
4.7.3.3	Materials for components and other parts outside fire enclosures	HB min.	P

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Clause	Requirement + Test	Result - Remark	Verdict
4.7.3.4	Materials for components and other parts inside fire enclosures	Internal components except small parts are flammability class V-2, HF-2 or better.	P
4.7.3.5	Materials for air filter assemblies		N/A
4.7.3.6	Materials used in high-voltage components		N/A

5	ELECTRICAL REQUIREMENTS AND SIMULATED ABNORMAL CONDITIONS		P
5.1	Touch current and protective conductor current		P
5.1.1	General	See appended table 5.1. See sub-clauses 5.1.2 to 5.1.6.	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
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	The touch current was measured from mains to metal enclosure, plastic enclosure with metal foil, and output connectors.	P
5.1.6	Test measurements	See appended table 5.1.	P
	Supply voltage (V)	See appended table 5.1.	—
	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	The touch current not exceeded 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

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Clause	Requirement + Test	Result - Remark	Verdict
	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
5.3.2	Motors		N/A
5.3.3	Transformers	With short-circuited and overloaded of the output of transformer, no high temperature of the transformer was recorded. The test results of short-circuited and overload. (see appended table 5.3 and 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		N/A
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	Neither fire burns the equipment nor molten metal.	P
5.3.9.2	After the tests	Electric strength test made.	P
6	CONNECTION TO TELECOMMUNICATION NETWORKS		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
6.1	Protection of telecommunication network service persons, and users of other equipment connected to the network, from hazards in the equipment		N/A
6.1.1	Protection from hazardous voltages		N/A
6.1.2	Separation of the telecommunication network from earth		N/A
6.1.2.1	Requirements		N/A
	Supply voltage (V)		—
	Current in the test circuit (mA)		—
6.1.2.2	Exclusions		N/A
6.2	Protection of equipment users from overvoltages on telecommunication networks		N/A
6.2.1	Separation requirements		N/A
6.2.2	Electric strength test procedure		N/A
6.2.2.1	Impulse test		N/A
6.2.2.2	Steady-state test		N/A
6.2.2.3	Compliance criteria		N/A
6.3	Protection of the telecommunication wiring system from overheating		N/A
	Max. output current (A)		—
	Current limiting method		—
7	CONNECTION TO CABLE DISTRIBUTION SYSTEMS		N/A
7.1	General		N/A
7.2	Protection of cable distribution system service persons, and users of other equipment connected to the system, from hazardous voltages in the equipment		N/A
7.3	Protection of equipment users from overvoltages on the cable distribution system		N/A
7.4	Insulation between primary circuits and cable distribution systems		N/A
7.4.1	General		N/A
7.4.2	Voltage surge test		N/A
7.4.3	Impulse test		N/A
A	ANNEX A, TESTS FOR RESISTANCE TO HEAT AND FIRE		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
A.1	Flammability test for fire enclosures of movable equipment having a total mass exceeding 18 kg, and of stationary equipment (see 4.7.3.2)		N/A
A.1.1	Samples.....:		—
	Wall thickness (mm).....:		—
A.1.2	Conditioning of samples; temperature (°C)		N/A
A.1.3	Mounting of samples		N/A
A.1.4	Test flame (see IEC 60695-11-3)		N/A
	Flame A, B, C or D		—
A.1.5	Test procedure		N/A
A.1.6	Compliance criteria		N/A
	Sample 1 burning time (s)		—
	Sample 2 burning time (s)		—
	Sample 3 burning time (s)		—
A.2	Flammability test for fire enclosures of movable equipment having a total mass not exceeding 18 kg, and for material and components located inside fire enclosures (see 4.7.3.2 and 4.7.3.4)		N/A
A.2.1	Samples, material.....:		—
	Wall thickness (mm).....:		—
A.2.2	Conditioning of samples; temperature (°C)		N/A
A.2.3	Mounting of samples		N/A
A.2.4	Test flame (see IEC 60695-11-4)		N/A
	Flame A, B or C		—
A.2.5	Test procedure		N/A
A.2.6	Compliance criteria		N/A
	Sample 1 burning time (s)		—
	Sample 2 burning time (s)		—
	Sample 3 burning time (s)		—
A.2.7	Alternative test acc. to IEC 60695-11-5, cl. 5 and 9		N/A
	Sample 1 burning time (s)		—
	Sample 2 burning time (s)		—
	Sample 3 burning time (s)		—
A.3	Hot flaming oil test (see 4.6.2)		N/A
A.3.1	Mounting of samples		N/A
A.3.2	Test procedure		N/A
A.3.3	Compliance criterion		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
B	ANNEX B, MOTOR TESTS UNDER ABNORMAL CONDITIONS (see 4.7.2.2 and 5.3.2)		N/A
B.1	General requirements		N/A
	Position		—
	Manufacturer		—
	Type		—
	Rated values		—
B.2	Test conditions		N/A
B.3	Maximum temperatures		N/A
B.4	Running overload test		N/A
B.5	Locked-rotor overload test		N/A
	Test duration (days)		—
	Electric strength test: test voltage (V)		—
B.6	Running overload test for d.c. motors in secondary circuits		N/A
B.6.1	General		N/A
B.6.2	Test procedure		N/A
B.6.3	Alternative test procedure		N/A
B.6.4	Electric strength test; test voltage (V)		N/A
B.7	Locked-rotor overload test for d.c. motors in secondary circuits		N/A
B.7.1	General		N/A
B.7.2	Test procedure		N/A
B.7.3	Alternative test procedure		N/A
B.7.4	Electric strength test; test voltage (V)		N/A
B.8	Test for motors with capacitors		N/A
B.9	Test for three-phase motors		N/A
B.10	Test for series motors		N/A
	Operating voltage (V)		—

C	ANNEX C, TRANSFORMERS (see 1.5.4 and 5.3.3)		P
	Position	Refer to appended table 1.5.1	—
	Manufacturer	See above.	—
	Type	See above.	—
	Rated values	See above.	—

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
	Method of protection	Overcurrent protection by circuit design.	—
C.1	Overload test	(see appended table 5.3)	P
C.2	Insulation	(see appended table 5.2)	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	Figure D.1 used	P
D.2	Alternative measuring instrument		N/A
E	ANNEX E, TEMPERATURE RISE OF A WINDING (see 1.4.13)		N/A
F	ANNEX F, MEASUREMENT OF CLEARANCES AND CREEPAGE DISTANCES (see 2.10 and Annex G)		P
G	ANNEX G, ALTERNATIVE METHOD FOR DETERMINING MINIMUM CLEARANCES		N/A
G.1	Clearances		N/A
G.1.1	General		N/A
G.1.2	Summary of the procedure for determining minimum clearances		N/A
G.2	Determination of mains transient voltage (V)		N/A
G.2.1	AC mains supply		N/A
G.2.2	Earthed d.c. mains supplies		N/A
G.2.3	Unearthed d.c. mains supplies		N/A
G.2.4	Battery operation		N/A
G.3	Determination of telecommunication network transient voltage (V)		N/A
G.4	Determination of required withstand voltage (V)		N/A
G.4.1	Mains transients and internal repetitive peaks		N/A
G.4.2	Transients from telecommunication networks		N/A
G.4.3	Combination of transients		N/A
G.4.4	Transients from cable distribution systems		N/A
G.5	Measurement of transient voltages (V)		N/A
	a) Transients from a mains supply		N/A
	For an a.c. mains supply		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
	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	Complied.	—
K	ANNEX K, THERMAL CONTROLS (see 1.5.3 and 5.3.8)		N/A
K.1	Making and breaking capacity		N/A
K.2	Thermostat reliability; operating voltage (V)		N/A
K.3	Thermostat endurance test; operating voltage (V)		N/A
K.4	Temperature limiter endurance; operating voltage (V)		N/A
K.5	Thermal cut-out reliability		N/A
K.6	Stability of operation		N/A
L	ANNEX L, NORMAL LOAD CONDITIONS FOR SOME TYPES OF ELECTRICAL BUSINESS EQUIPMENT (see 1.2.2.1 and 4.5.2)		P
L.1	Typewriters		N/A
L.2	Adding machines and cash registers		N/A
L.3	Erasers		N/A
L.4	Pencil sharpeners		N/A
L.5	Duplicators and copy machines		N/A
L.6	Motor-operated files		N/A
L.7	Other business equipment	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	Ringling signal		N/A
M.3.1.1	Frequency (Hz)		—
M.3.1.2	Voltage (V)		—

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
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
	- Preferred climatic categories	See appended table 1.5.1.	P
	- Maximum continuous voltage	See appended table 1.5.1.	P
	- Combination pulse current	See appended table 1.5.1.	P
	Body of the VDR Test according to IEC60695-11-5		N/A
	Body of the VDR. Flammability class of material (min V-1)	See appended table 1.5.1.	P
R	ANNEX R, EXAMPLES OF REQUIREMENTS FOR QUALITY CONTROL PROGRAMMES		N/A
R.1	Minimum separation distances for unpopulated coated printed boards (see 2.10.6.2)		N/A
R.2	Reduced clearances (see 2.10.3)		N/A
S	ANNEX S, PROCEDURE FOR IMPULSE TESTING (see 6.2.2.3)		N/A
S.1	Test equipment		N/A
S.2	Test procedure		N/A
S.3	Examples of waveforms during impulse testing		N/A
T	ANNEX T, GUIDANCE ON PROTECTION AGAINST INGRESS OF WATER (see 1.1.2)		N/A
			—

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
U	ANNEX U, INSULATED WINDING WIRES FOR USE WITHOUT INTERLEAVED INSULATION (see 2.10.5.4)		P
			—
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
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		N/A
CC.1	General		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
CC.2	Test program 1		N/A
CC.3	Test program 2		N/A
CC.4	Test program 3		N/A
CC.5	Compliance		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, 250 N, 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⁾	
LCD Panel (LED backlight type)	DARWIN	96.42S1A.xxx (x=0-9,A-Z)	42 inch TFT- LCD Module.	--	--	
Metal Enclosure	Interchangeable	Interchangeable	Metal , thickness 0.8 mm min.	--	--	
Remote Controller (option)	Interchangeable	Interchangeable	--	--	--	
Power Switch	RONG FENG INDUSTRIAL CO LTD	RF-1003	10 A, 250 Vac.	IEC/EN 61058- 1, ANSI/UL 1054	ENEC, UL	
AC Inlet	RONG FENG INDUSTRIAL CO LTD	SS-7B, SS-7B-1	UL: 250 Vac, 15 A, 105 °C. VDE: 250 Vac, 10 A, 70 °C.	IEC/EN 60320- 1, ANSI/UL498	UL, VDE	
Polyswitch (location no. F1) (For USB port)	THINKING ELECTRONIC INDUSTRIAL CO LTD	KMC3S150	8 Vdc, 1.5 A.	EN 60730-1, UL 1434	TUV, UL	
P.C.B	Interchangeable	Interchangeable	V-1 or better Min. 105 °C.	UL 796	UL	
IR Base	LG CHEM LTD	AF365(&)	V-1 or better, thickness 1.7 mm min.	UL 94	UL	
-IR Lens	SABIC JAPAN L L C	121RC(f2)	HB or better.	UL 94	UL	
Keypad Cover	LG CHEM LTD	AF365(&)	V-1 or better, thickness 1.7 mm min.	UL 94	UL	
Super Capacitor (C724)	ELNA	DXJ	5.5 Vdc , 0.33F	--	--	
Primary Connector (female connector)	ZHEJIANG AMA & HIEN TECHNOLOGY CO LTD	VH-3Y	7 A, 250 Vac.	IEC/EN 61984 , UL 1977	VDE ,UL	
Alt.	JOINT TECH ELECTRONIC INDUSTRIAL CO LTD	A3961H03P	7 A, 250 Vac.	IEC/EN 61984 , UL 1977	TUV ,UL	
Mylar	SICHUAN	DFR117 series	VTM-0, min.	UL 94	UL	

IEC 60950-1					
Clause	Requirement + Test		Result - Remark		Verdict
(on metal enclosure)	DONGFANG INSULATING MATERIAL CO LTD		0.05-0.23 mm.		
-Glue	JUSTAPE ADVANCED MATERIAL CO LTD	P\$\$	Max. 150°C	IEC 60950-1	Tested in the equipment
Alt.	JUSTAPE ADVANCED MATERIAL CO LTD	R\$\$	Max. 150°C	IEC 60950-1	Tested in the equipment
For Power Supply Board					
Primary Connector (location no. CON1)	Weli Sheng	MX-I39606R Series	7 A, 250 Vac.	IEC/EN 61984 , UL 1977	TUV, UL
Alt.	JOWLE	A3963WR2 Series	7 A, 250 Vac.	IEC/EN 61984 UL 1977	TUV, UL
Fuse (location no. F01)	Walter	2010	T5 A, 250 Vac.	IEC/EN 60127-1, IEC/EN 60127-3 UL 248-1 UL 248-14	VDE, UL
Alt.	Conquer	MST	T5 A, 250 Vac.	IEC/EN 60127-1, IEC/EN 60127-3 UL 248-1 UL 248-14	VDE, UL
Bleeder Resistors (location no. R05, R07, R08, R10)	Interchangeable	Interchangeable	Max. 910 kΩ, min. 1/4 W.	--	--
Bleeder Resistors (location no. R06, R09)	Interchangeable	Interchangeable	Max. 750 kΩ, min. 1/4 W.	--	--
Thermistor (location no. NTC)	Interchangeable	Interchangeable	Min. 7 A, Max. 1.5 Ω, at 25 °C.	--	--
Varistor (location no. V01) (optional)	THINKING ELECTRONIC INDUSTRIAL CO LTD	TVR10471-D, TVR10471-V, TVR14471	Rated 300 Vac, 385 Vdc, 40/85/56, 6 KV/3 KA, pluse test passed	IEC 61051-1, IEC 61051-2, IEC 61051-2-2, UL 1449 3rd	VDE, UL

IEC 60950-1					
Clause	Requirement + Test		Result - Remark		Verdict
			V-0 coating.		
Alt.	JOYIN CO LTD	14N471K	Rated 300 Vac, 385 Vdc, 40/85/56, 6 KV/3 KA, pluse test passed V-0 coating.	IEC 61051-1, IEC 61051-2, IEC 61051-2-2, UL 1449 3rd	VDE, UL
X-Capacitors (location no. CX01, CX02, CX03) (X1 or X2 type) (Optional)	Carli	MPX	Max. 0.22 μ F, min. 275 Vac, min. 85 °C.	IEC / EN / UL 60384-14	VDE, UL
Alt.	ULTRA TECH XIPHI ENTERPRISE CO LTD	HQX	Max. 0.22 μ F, min. 275 Vac, min. 85 °C.	IEC / EN / UL 60384-14	VDE, UL
Y-Capacitors (location no. CY02, CY03) (Y1 or Y2 type) (Optional)	MURATA MFG CO LTD	KX	Max. 680 pF, min. 250 Vac, min. 85 °C.	IEC / EN / UL 60384-14	VDE, UL
	TDK CORPORATION	CD	Max. 680 pF, min. 250 Vac, min. 85 °C.	IEC / EN / UL 60384-14	VDE, UL
	SUCCESS ELECTRONICS CO LTD	SB, SE	Max. 680 pF, min. 250 Vac, min. 85 °C.	IEC / EN / UL 60384-14	VDE, UL
	WALSIN TECHNOLOGY CORP	AH	Max. 680 pF, min. 250 Vac, min. 85 °C.	IEC / EN / UL 60384-14	VDE, UL
Bridge-Capacitors (location no. CY01) (Y1) (Optional)	MURATA MFG CO LTD	KX	Max. 2200 pF, min. 250 Vac, min. 85 °C.	IEC / EN / UL 60384-14	VDE, UL
	TDK CORPORATION	CD	Max. 2200 pF, min. 250 Vac, min. 85 °C.	IEC / EN / UL 60384-14	VDE, UL
	SUCCESS ELECTRONICS CO LTD	SB, SE	Max. 2200 pF, min. 250 Vac, min. 85 °C.	IEC / EN / UL 60384-14	VDE, UL
	WALSIN TECHNOLOGY CORP	AH	Max. 2200 pF, min. 250 Vac, min. 85 °C.	IEC / EN / UL 60384-14	VDE, UL
Line Choke (location no. LF01) (Optional)	Mao Hsin Electronic Co., Ltd.	MH-12014	Min. 105°C.	--	--

IEC 60950-1					
Clause	Requirement + Test		Result - Remark		Verdict
Line Choke (location no. LF02) (Optional)	Mao Hsin Electronic Co., Ltd.	MH-11469	Min. 105°C.	--	--
Line Choke (location no. LF03) (Optional)	Mao Hsin Electronic Co., Ltd.	MH-11996	Min. 105 °C.	--	--
PFC Choke (location no. T01) (Optional)	Mao Hsin Electronic Co., Ltd.	MH-11995	Min. 105 °C.	--	--
Bridge Diodes (location no. BD01)	Interchangeable	Interchangeable	Min. 10 A, min. 600 Vac.	--	--
Transistor (location no. Q01)	Interchangeable	Interchangeable	Min. 20 A, min. 500 V.	--	--
Transistor (location no. Q02, Q03)	Interchangeable	Interchangeable	Min. 10 A, min. 600 V.	--	--
Transistor (location no. Q04)	Interchangeable	Interchangeable	Min. 6 A, min. 600 V.	--	--
Ripple Capacitors (location no. C03, C04)	Interchangeable	Interchangeable	82 µF, min. 450 V, min .105 °C	--	--
Transformer (location no. T02)	Mao Hsin Electronic Co., Ltd.	MH-11994	Class 130 material (B)	Applicable part in IEC 60950-1 and evaluated according to IEC 60085	Tested in the equipment
-Bobbin	CHANG CHUN PLASTICS CO LTD	T375J	V-0, phenolic, 150 °C.	UL 94	UL
-Insulation tape	3M COMPANY ELECTRICAL MARKETS DIV (EMD)	1350F-1 (b)	130 °C.	UL 510	UL
Alt.	JINGJIANG YAHUA PRESSURE SENSITIVE GLUE CO LTD	CT* (c)(g)	130 °C.	UL 510	UL

IEC 60950-1					
Clause	Requirement + Test		Result - Remark		Verdict
Alt.	JINGJIANG JINGYI ADHESIVE PRODUCT CO LTD	JY25-A (b)	130 °C.	UL 510	UL
-Triple Insulation Wire	GREAT LEOFLO INDUSTRIAL CO LTD	TRW(B)*	130 °C.	IEC 60950-1, EN 60950-1, UL 2353	VDE, UL
-Insulation Margin Tape	3M COMPANY ELECTRICAL MARKETS DIV (EMD)	44 (a)	130 °C.	UL 510	UL
Alt.	JINGJIANG YAHUA PRESSURE SENSITIVE GLUE CO LTD	WF* (c)(h)	130 °C.	UL 510	UL
Alt.	JINGJIANG JINGYI ADHESIVE PRODUCT CO LTD	WF310 (a)	130 °C.	UL 510	UL
Transformer (location no. T03)	Mao Hsin Electronic Co., Ltd.	MH-11999	Class 130 material (B)	Applicable part in IEC 60950-1 and evaluated according to IEC 60085	Tested in the equipment
-Bobbin	CHANG CHUN PLASTICS CO LTD	T375J	V-0, phenolic, 150 °C.	UL 94	UL
-Insulation Tape	3M COMPANY ELECTRICAL MARKETS DIV (EMD)	1350F-1 (b)	130 °C.	UL 510	UL
Alt.	JINGJIANG YAHUA PRESSURE SENSITIVE GLUE CO LTD	CT* (c)(g)	130 °C.	UL 510	UL
Alt.	JINGJIANG JINGYI ADHESIVE PRODUCT CO LTD	JY25-A (b)	130 °C.	UL 510	UL
-Insulation Margin Tape	3M COMPANY ELECTRICAL MARKETS DIV	44 (a)	130 °C.	UL 510	UL

IEC 60950-1					
Clause	Requirement + Test			Result - Remark	Verdict
	(EMD)				
Alt.	JINGJIANG YAHUA PRESSURE SENSITIVE GLUE CO LTD	WF* (c)(h)	130 °C.	UL 510	UL
Alt.	JINGJIANG JINGYI ADHESIVE PRODUCT CO LTD	WF310 (a)	130 °C.	UL 510	UL
Photo Couplers (location no. U01, U02, U03)	LITE-ON	LTV-817	Di more than 0.6 mm, int.cr= thermal cycling test, ext. cr more than 8.0 mm, 100 °C.	DIN EN 60747- 5-2:2003 , IEC/EN 60950- 1, UL 1577	VDE, UL,
Alt.	Everlight	EL817	Di more than 0.5mm, int. cr= thermal cycling test, ext. cr more than 7.7 mm, 100 °C.	DIN EN 60747- 5-2:2003 IEC/EN 60950-1 UL 1577	VDE, UL,
Alt.	Cosmo	K1010	Di= 0.5 mm, int= 5.3 mm, ext.= 8 mm, 5000 Vac, 115 °C.	DIN EN 60747- 5-2:2003 IEC/EN 60950-1 UL 1577	VDE, UL,
Supplementary information: 1. Provided evidence ensures the agreed level of compliance. See OD-CB2039.					

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

1.5.1	TABLE: Opto Electronic Devices		P
Manufacturer : See supplementary information			
Type..... : See supplementary information			
Separately tested..... : See supplementary information			
Bridging insulation : Reinforced insulation			
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..... :			
Output..... :			
Supplementary information:			
1. See 1.5.1 TABLE: List of critical components for details of sources.			
2. All sources of optocoupler were certified according to DIN EN 60747-5-2 which complies with the requirements and provisions of IEC 60747-5-5.			
3. All sources of optocoupler comply with IEC 60747-5-5.			

1.6.2	TABLE: Electrical data (in normal conditions)					P
U(V)/f(Hz)	I (A)	I _{rated} (A)	P (W)	Fuse #	I _{fuse} (A)	Condition/status
DVI mode						
90/50	0.77	--	67.8	F01	0.77	Maximum normal load
90/60	0.77	--	67.8	F01	0.77	Maximum normal load
100/50	0.69	0.76	67.5	F01	0.69	Maximum normal load
100/60	0.69	0.76	67.5	F01	0.69	Maximum normal load
110/50	0.62	0.76	67.1	F01	0.62	Maximum normal load
110/60	0.62	0.76	67.1	F01	0.62	Maximum normal load
240/50	0.33	0.76	66.6	F01	0.33	Maximum normal load
240/60	0.33	0.76	66.6	F01	0.33	Maximum normal load
264/50	0.31	--	66.6	F01	0.31	Maximum normal load
264/60	0.31	--	66.6	F01	0.31	Maximum normal load
Supplementary information:						

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

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)	
+24V output	--	24.2	4.3	98.04	
+12V output	--	12.1	7.8	81.9	
+5V output	--	5.13	3.8	16.72	
supplementary information:					
Supply voltage: 240 Vac, 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.		

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
T02 pin 9 to Earth	32.0	--	--
T02 pin 10 to Earth	32.0	--	--
T02 pin 15 to Earth	15.0	--	--
T02 pin 16 to Earth	16.0	--	--
T03 pin 7, 8 to Earth	32.0	--	--
For LED driver			
After C508	18.1	--	--
Before D24	62.8	--	--
After D24	--	56.8	--
After C506	18.2	--	--
Before D22	62.7	--	--
After D22	--	56.7	--
After C504	18.5	--	--
Before D23	62.8	--	--
After D23	--	56.5	--
After C501	18.3	--	--
Before D21	62.8	--	--
After D21	--	56.4	--
Fault test performed on voltage limiting components	Voltage measured (V) in SELV circuits (V peak or V d.c.)		
For LED driver			
D24 to earth short	51.5 Vdc		
C508 to earth short	51.5 Vdc		
D22 to earth short	51.6 Vdc		
C506 to earth short	51.6 Vdc		
D23 to earth short	51.3 Vdc		
C504 to earth short	51.3 Vdc		
D21 to earth short	51.4 Vdc		
C501 to earth short	51.4 Vdc		
Supplementary information:			
Tested voltage 240 Vac, 60 Hz.			

2.5	TABLE: Limited power sources	P
Circuit output tested:		

IEC 60950-1						
Clause	Requirement + Test			Result - Remark		Verdict
Note: Measured Uoc (V) with all load circuits disconnected:						
Components	Sample No.	Uoc (V)	I _{sc} (A)		VA	
			Meas.	Limit	Meas.	Limit
For main board						
According to table 2B, for DVI IN2 (J53) Pin 1, 2, 9, 10, 17,18, 23, 24 to earth						
Normal	1	3.29	--	8	--	100
According to table 2B, for DVI IN2 (J53) Pin 6, 7 to earth						
Normal	1	3.51	--	8	--	100
According to table 2B, for DVI IN2 (J53) other pins to earth						
Normal	1	0	--	8	--	100
According to table 2B, for DVI IN1 (J57) Pin 1, 2, 9, 10, 17,18, 23, 24 to earth						
Normal	1	1.54	--	8	--	100
According to table 2B, for DVI IN1 (J57) Pin 6, 7 to earth						
Normal	1	3.42	--	8	--	100
According to table 2B, for DVI IN1 (J57) other pins to earth						
Normal	1	0	--	8	--	100
According to table 2B, for DVI OUT (J54) Pin 6 to earth						
Normal	1	8.77	--	8	--	100
According to table 2B, for DVI OUT (J54) Pin 7 to earth						
Normal	1	8.65	--	8	--	100
According to table 2B, for DVI OUT (J54) Pin 14 to earth						
Normal	1	5.11	--	8	--	100
According to table 2B, for DVI OUT (J54) Pin 16 to earth						
Normal	1	2.13	--	8	--	100
According to table 2B, for DVI OUT (J54) other pins to earth						
Normal	1	0	--	8	--	100
According to table 2B, for RS232 (J8) all pins to earth						
Normal	1	0	--	8	--	100
According to table 2B, for RJ45 (J17) all pins to earth						
Normal	1	0	--	8	--	100
According to table 2B, for USB2.0 (J1) Pin 1 to earth						
Normal	1	5.11	4.0	8	12.73	100
According to table 2B, for USB2.0 (J1) other pins to earth						
Normal	1	0	--	8	--	100

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Clause	Requirement + Test	Result - Remark	Verdict

Supplementary information:

Tested voltage 240 Vac, 60 Hz.

2.10.2	Table: working voltage measurement			P
Location		RMS voltage (V)	Peak voltage (V)	Comments
Input Voltage = 100 V				
T02 Pin 1-9		229	368	
T02 Pin 1-10		215	416	
T02 Pin 1-11,12,13,14		239	392	
T02 Pin 1-15		227	376	
T02 Pin 1-16		250	408	
T02 Pin 3-9		71.3	168	
T02 Pin 3-10		83.3	200	
T02 Pin 3-11,12,13,14		72.2	160	
T02 Pin 3-15		69.9	152	
T02 Pin 3-16		76.1	176	
T02 Pin 5-9		175	296	
T02 Pin 5-10		165	264	
T02 Pin 5-11,12,13,14		167	272	
T02 Pin 5-15		170	288	
T02 Pin 5-16		166	248	
T02 Pin 7-9		75.8	176	
T02 Pin 7-10		75.3	184	
T02 Pin 7-11,12,13,14		70.1	144	
T02 Pin 7-15		71.7	160	
T02 Pin 7-16		71.4	160	
T03 Pin 1-7,8		72.9	192	
T03 Pin 1-9,10		75.3	240	
T03 Pin 2-7,8		70.5	192	
T03 Pin 2-9,10		72.1	208	
T03 Pin 3-7,8		358	488	
T03 Pin 3-9,10		319	496	
T03 Pin 4-7,8		358	440	

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Clause	Requirement + Test	Result - Remark	Verdict
T03 Pin 4-9,10	358	408	
T03 Pin 5-7,8	69.9	152	
T03 Pin 5-9,10	69.9	144	
U01 Pin 1-3	86.1	152	
U01 Pin 1-4	86.0	151	
U01 Pin 2-3	87.3	154	
U01 Pin 2-4	87.1	153	
U02 Pin 1-3	85.2	151	
U02 Pin 1-4	84.1	150	
U02 Pin 2-3	85.3	152	
U02 Pin 2-4	83.1	151	
U03 Pin 1-3	58.9	120	
U03 Pin 1-4	58.0	120	
U03 Pin 2-3	59.3	122	
U03 Pin 2-4	58.3	121	
CY1 Primary-Secondary	69.8	144	
CY2 Primary-Secondary	3.06	8	
CY3 Primary-Secondary	102	152	
Input Voltage = 240 V			
T02 Pin 1-9	213	416	
T02 Pin 1-10	260	424	Highest Vrms and Vp of T02
T02 Pin 1-11,12,13,14	210	384	
T02 Pin 1-15	210	392	
T02 Pin 1-16	208	400	
T02 Pin 3-9	175	360	
T02 Pin 3-10	189	392	
T02 Pin 3-11,12,13,14	183	360	
T02 Pin 3-15	164	352	
T02 Pin 3-16	164	376	
T02 Pin 5-9	173	296	
T02 Pin 5-10	162	272	
T02 Pin 5-11,12,13,14	165	264	

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Clause	Requirement + Test	Result - Remark	Verdict
T02 Pin 5-15	169	280	
T02 Pin 5-16	163	248	
T02 Pin 7-9	198	384	
T02 Pin 7-10	178	384	
T02 Pin 7-11,12,13,14	175	344	
T02 Pin 7-15	176	360	
T02 Pin 7-16	176	360	
T03 Pin 1-7,8	175	400	
T03 Pin 1-9,10	175	352	
T03 Pin 2-7,8	175	360	
T03 Pin 2-9,10	177	392	
T03 Pin 3-7,8	317	488	
T03 Pin 3-9,10	359	496	Highest Vrms and Vp of T03
T03 Pin 4-7,8	310	440	
T03 Pin 4-9,10	309	408	
T03 Pin 5-7,8	175	344	
T03 Pin 5-9,10	176	352	
U01 Pin 1-3	189	352	
U01 Pin 1-4	187	350	
U01 Pin 2-3	189	351	
U01 Pin 2-4	186	349	
U02 Pin 1-3	179	352	
U02 Pin 1-4	180	355	
U02 Pin 2-3	178	350	
U02 Pin 2-4	179	353	
U03 Pin 1-3	164	320	
U03 Pin 1-4	165	321	
U03 Pin 2-3	163	318	
U03 Pin 2-4	163	320	
CY1 Primary-Secondary	178	352	
CY2 Primary-Secondary	3.05	8	
CY3 Primary-Secondary	244	352	

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Clause	Requirement + Test	Result - Remark	Verdict

Supplementary information:

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:							
Line trace to Neutral trace before fuse	420	250	1.8	3.3	2.5	3.3	
Under Fuse F01	420	250	1.8	4.5	2.5	4.5	
Basic/supplementary:							
Primary component (with 10N) or trace to earthed component (with 10N) or trace	420	250	2.3	See below	2.5	See below	
Under CY02	420	250	2.3	7.0	2.5	7.0	
Under CY03	420	250	2.3	7.0	2.5	7.0	
Power board to Metal chassis	420	250	2.3	7.0	2.5	7.0	
Between C12 to T03 core	420	250	2.3	5.2	2.5	5.2	
Between D02 to T03 core	420	250	2.3	5.2	2.5	5.2	
Reinforced:							
Primary trace to secondary component or trace	420	250	4.6	See below	5.0	See below	
Under CY01	420	250	4.6	7.2	5.0	7.2	
Under U01	420	250	4.6	6.3	5.0	6.3	
Under U02	420	250	4.6	6.7	5.0	6.7	
Under U03	420	250	4.6	6.7	5.0	6.7	
U01 secondary to T03 core	420	250	4.6	6.8	5.0	6.8	
U01 secondary to T03 core	420	250	4.6	6.8	5.0	6.8	
T02	424	260	4.6	44.4	5.2	44.4	
T03	496	359	4.9	14.0	7.2	14.0	

Supplementary information:

- Functional insulation shorted, see 5.3.4 c).
- Working voltages of primary circuits to secondary circuits/user accessible parts considered as 420 V pk and 250 V r.m.s. minimum (according to applicable rows of tables 2H and 2L).
- For clearance and creepage did not describe above are far larger than limit above.
- Glued component: CY01.

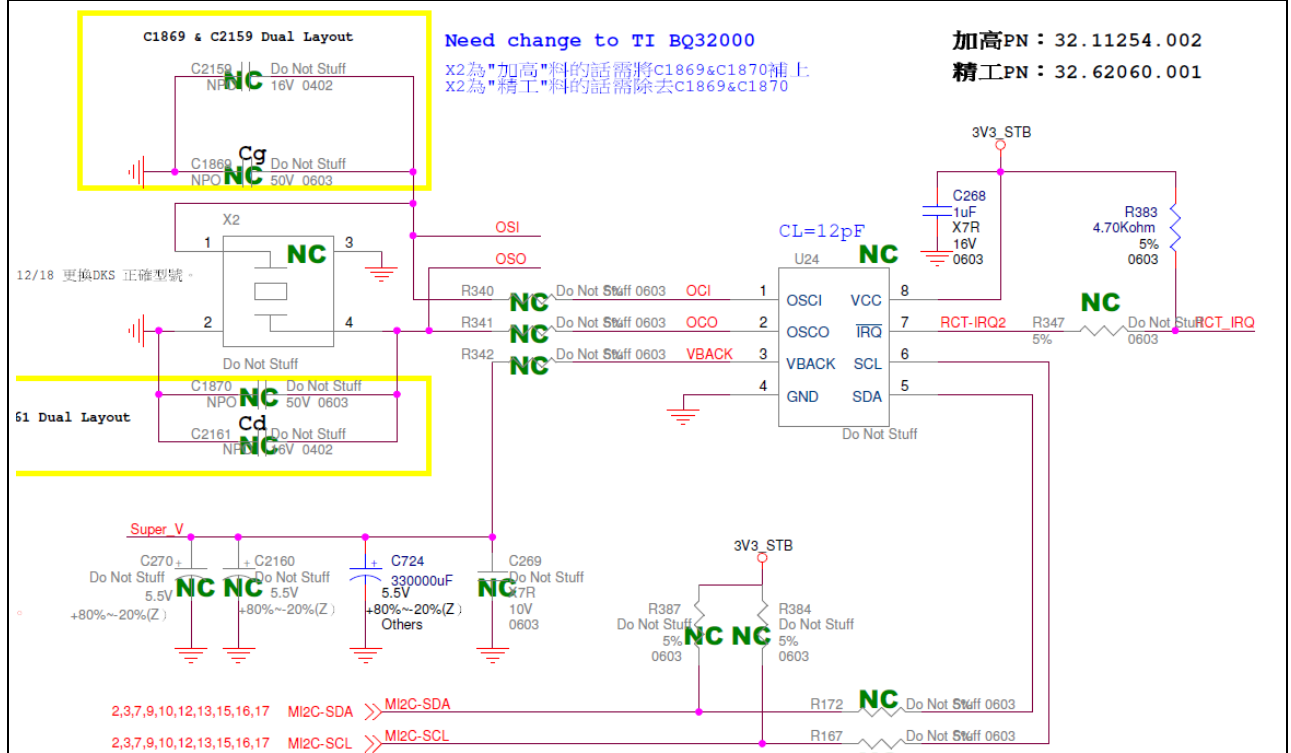
IEC 60950-1					
Clause	Requirement + Test			Result - Remark	Verdict
2.10.5	TABLE: Distance through insulation measurements				P
Distance through insulation (DTI) at/of:		U peak (V)	U rms (V)	Test voltage (V)	Required DTI (mm)
Optocouplers (Reinforced insulation)		420	250	AC 3000	0.4
Supplementary information: See appended table 1.5.1 for the source details.					

4.3.8	TABLE: Batteries								P
The tests of 4.3.8 are applicable only when appropriate battery data is not available					Appropriate battery data is available.				P
Is it possible to install the battery in a reverse polarity position?					No.				P
	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					There are no chemical leaks.				P
- Explosion of the battery					The battery did not explode resulting in injury to a user.				P
- Emission of flame or expulsion of molten metal					There was no emission of flame or expulsion of molten metal outside the battery operated product.				P
- Electric strength tests of equipment after completion of tests									N/A
Supplementary information:									
See appended table 5.3.									

4.3.8	TABLE: Batteries	P
Battery category..... : Super Capacitor		

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Clause	Requirement + Test	Result - Remark	Verdict

Manufacturer : See table 1.5.1
 Type / model..... : See table 1.5.1
 Voltage : See table 1.5.1
 Capacity..... : See table 1.5.1
 Tested and Certified by (incl. Ref. No.) : N/A
 Circuit protection diagram: See below



MARKINGS AND INSTRUCTIONS (1.7.13)

Location of replaceable battery	Not replaceable battery
Language(s)	See above
Close to the battery	See above
In the servicing instructions	See above
In the operating instructions	See above

4.5	TABLE: Thermal requirements				P
	Supply voltage (V)	90V/60Hz (Horizontal)			—
	Ambient T _{min} (°C)	--	--	--	—
	Ambient T _{max} (°C)	--	--	--	—

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

Maximum measured temperature T of part/at.....:	T (°C)			Allowed T _{max} (°C)
AC inlet	62.5	--	--	70
CN01 body	66.6	--	--	70
V01 body	70.0	--	--	85
CX01 body	69.9	--	--	85
CX03 body	68.5	--	--	85
LF01 coil	68.1	--	--	105
LF02 coil	72.6	--	--	105
PCB near BD01	73.6	--	--	105
LF03 coil	74.5	--	--	105
T01 coil	81.9	--	--	105
PCB near Q01	84.9	--	--	105
C03 body	75.4	--	--	105
PCB near Q02	69.8	--	--	105
T02 core	99.7	--	--	110
T02 coil	100.4	--	--	110
U01 body	91.7	--	--	100
T03 core	85.8	--	--	110
T03 coil	86.9	--	--	110
U02 body	83.4	--	--	100
CY01 body	79.2	--	--	85
PCB near D07	89.1	--	--	105
PCB near D03	88.7	--	--	105
PCB near D05	87.4	--	--	105
L4 coil	72.3	--	--	105
L1 coil	71.4	--	--	105
C724 body	64.7	--	--	85
PCB near U317	65.4	--	--	105
PCB near F1	61.8	--	--	105
Metal enclosure outside near USB	56.6	--	--	70
Metal enclosure outside near T02	62.9	--	--	70
Key pay cover	56.4	--	--	95
Switch body	57.1	--	--	70
Panel	63.1	--	--	95
Ambient (actual temp.)	50.0 (22.6)	--	--	--

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Clause	Requirement + Test	Result - Remark		Verdict
Supply voltage (V)	--	90V/60Hz (Vertical)	264V/60Hz (Vertical)	
AC inlet	--	64.1	63.4	70
CN01 body	--	67.4	64.9	70
V01 body	--	70.9	67.3	85
CX01 body	--	71.4	67.3	85
CX03 body	--	70.5	67.7	85
LF01 coil	--	70.1	66.2	105
LF02 coil	--	74.0	69.2	105
PCB near BD01	--	79.3	72.1	105
LF03 coil	--	81.4	74.0	105
T01 coil	--	88.6	81.1	105
PCB near Q01	--	93.3	90.8	105
C03 body	--	86.9	84.5	105
PCB near Q02	--	90.9	89.2	105
T02 core	--	102.2	100.4	110
T02 coil	--	105.4	103.1	110
U01 body	--	86.1	84.8	100
T03 coil	--	81.6	80.6	110
T03 core	--	81.4	80.2	110
U02 body	--	79.5	78.1	100
CY01 body	--	75.8	74.5	85
PCB near D07	--	79.7	78.7	105
PCB near D03	--	88.3	86.2	105
PCB near D05	--	82.4	81.0	105
L4 coil	--	72.1	71.3	105
L1 coil	--	69.6	69.1	105
C724 body	--	64.1	63.8	85
PCB near U317	--	65.9	65.7	105
PCB near F1	--	61.5	61.5	105
Metal enclosure outside near USB	--	56.9	56.5	70
Metal enclosure outside near T02	--	63.2	61.4	70
Key pay cover	--	58.3	58.0	95
Switch body	--	58.0	57.6	70
Panel	--	59.6	59.5	95
Ambient (actual temp.)	--	50.0 (22.5)	50.0 (22.8)	--

IEC 60950-1				
Clause	Requirement + Test	Result - Remark		Verdict
Supply voltage (V)	110V/60Hz (Vertical)	--	--	--
AC inlet	58.7	--	--	70
CN01 body	65.7	--	--	70
V01 body	68.4	--	--	85
CX01 body	68.0	--	--	85
CX03 body	68.0	--	--	85
LF01 coil	68.1	--	--	105
LF02 coil	72.4	--	--	105
PCB near BD01	78.0	--	--	105
LF03 coil	79.7	--	--	105
T01 coil	82.9	--	--	105
PCB near Q01	92.3	--	--	105
C03 body	85.5	--	--	105
PCB near Q02	89.0	--	--	105
T02 core	96.3	--	--	110
T02 coil	102.9	--	--	110
U01 body	84.8	--	--	100
T03 core	81.5	--	--	110
T03 coil	81.8	--	--	110
U02 body	78.3	--	--	100
CY01 body	73.3	--	--	85
PCB near D07	81.3	--	--	105
PCB near D03	85.5	--	--	105
PCB near D05	78.5	--	--	105
L4 coil	69.8	--	--	105
L1 coil	68.3	--	--	105
C724 body	62.3	--	--	85
PCB near U317	64.6	--	--	105
PCB near F1	59.6	--	--	105
Ambient (actual temp.)	50.0 (24.6)	--	--	--
Metal enclosure outside near USB	54.9	--	--	70
Metal enclosure outside near T2	60.0	--	--	70
Key pay cover	58.4	--	--	95
Switch body	57.9	--	--	70
Panel	61.1	--	--	95
Ambient (actual temp.)	50.0 (24.3)	--	--	--

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

Supplementary information:

- The temperatures were measured under worst case normal mode defined in 1.2.2.1 and as described in sub-clause 1.6.2 and at voltages as described above.
- The instruction installation manual defines the T_{ma} at 50 °C.

Winding components (providing safety isolation):

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

- All values for T (°C) are re-calculated from actual ambient.

Temperature T of winding:	t ₁ (°C)	R ₁ (Ω)	t ₂ (°C)	R ₂ (Ω)	T (°C)	Allowed T _{max} (°C)	Insulation class

Supplementary information:

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

Supplementary information:
Phenolic materials are accepted without test.

4.7	TABLE: Resistance to fire					P
Part	Manufacturer of material	Type of material	Thickness (mm)	Flammability class	Evidence	
Metal enclosure	--	--	1.	--	--	
PCB	--	--	--	1.	1.	
Mylar	1.	1.	1.	1.	1.	
Cover	1.	1.	1.	1.	1.	

Supplementary information:
1. See table 1.5.1 for details.

5.1	TABLE: touch current measurement			P
Measured between:	Measured (mA)	Limit (mA)	Comments/conditions	
Tested on 110 Vac, 60 Hz (For Japan)				
Line / Neutral to Accessible conductive parts (metal chassis)	0.07 / 0.07	3.5	Switch "e" opened, Power switch On	
Line / Neutral to Secondary port	0.01 / 0.01	0.25	Switch "e" closed, Power switch On	

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Clause	Requirement + Test	Result - Remark	Verdict
Line / Neutral to Plastic part with foil	0.01 / 0.01	0.25	Switch "e" closed, Power switch On
Line / Neutral to Accessible conductive parts (metal chassis)	0.01 / 0.01	3.5	Switch "e" opened, Power switch Off
Line / Neutral to Secondary port	0.01 / 0.01	0.25	Switch "e" closed, Power switch Off
Line / Neutral to Plastic part with foil	0.01 / 0.01	0.25	Switch "e" closed, Power switch Off
Tested on 264 Vac, 60 Hz			
Line / Neutral to Accessible conductive parts (metal chassis)	0.15 / 0.15	3.5	Switch "e" opened, Power switch On
Line / Neutral to Secondary port	0.01 / 0.01	0.25	Switch "e" closed, Power switch On
Line / Neutral to Plastic part with foil	0.01 / 0.01	0.25	Switch "e" closed, Power switch On
Line / Neutral to Accessible conductive parts (metal chassis)	0.01 / 0.01	3.5	Switch "e" opened, Power switch Off
Line / Neutral to Secondary port	0.01 / 0.01	0.25	Switch "e" closed, Power switch Off
Line / Neutral to Plastic part with foil	0.01 / 0.01	0.25	Switch "e" closed, Power switch Off
Supplementary information:			
Overall capacitance refer to 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
Transformer:			
T02 Primary to Secondary	AC	3000	No
T02 Primary to Core	AC	1612	No
T02 Secondary to Core	AC	1612	No
T03 Primary to Secondary	AC	3000	No
T03 Secondary to Core	AC	1733	No
T03 Primary to Core	AC	1733	No
Tape	AC	3000	No
Unit:			
Primary to Earth	DC	2451	No
Primary to Secondary	DC	4242	No
Primary to metal enclosure with foil	DC	4242	No

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

Supplementary information:

5.3	TABLE: Fault condition tests					P
	Ambient temperature (°C)				25 °C, if nothing else specified.	—
	Power source for EUT: Manufacturer, model/type, output rating				See appended table 1.5.1	—
Component No.	Fault	Supply voltage (V)	Test time	Fuse #	Fuse current (A)	Observation
T02 after D03, D04 (+24 V)	Overload	240	3.1 hrs	F01	0.74	CT at 4.0 A, increase 4.2 A Unit shutdown, NC, NB, NT, No hazards, no damaged. T02 coil= 91.6 °C, T02 core= 91.1 °C, T03 coil= 59.4 °C, T03 core= 59.0 °C, Ambient= 22.6 °C.
T02 after D05, D06 (+12 V)	Overload	240	3.9 hrs	F01	0.77	CT at 8.5A, increase 8.7 A Unit shutdown, NC, NB, NT, No hazards, no damaged. T02 coil= 105.8 °C, T02 core= 105.3 °C, T03 coil= 68.8 °C, T03 core= 68.2 °C, Ambient= 22.6 °C.
T02 after D07 (+5 VSB)	Overload	240	4.1 hrs	F01	0.41	CT at 3.0 A, increase 3.2 A Unit shutdown, NC, NB, NT, No hazards, no damaged. T02 coil=80.0 °C, T02 core=77.6 °C, T03 coil=80.3 °C, T03 core=77.6 °C, Ambient=23.1 °C.
BD01 Pin(+, -)	Short	240	1sec	F01	0	NB, NC, NT F01 opened, no hazards. ³⁾
C03	Short	240	1sec	F01	0	NB, NC, NT F01 opened, no hazards. ³⁾
D03	Short	240	10 min	F01	0.06	NB, NC, NT Unit shutdown, no damaged, no hazards.
D04	Short	240	10 min	F01	0.06	NB, NC, NT Unit shutdown, no damaged, no hazards.

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Clause	Requirement + Test				Result - Remark	Verdict
D05	Short	240	10 min	F01	0.06	NB, NC, NT Unit shutdown, no damaged, no hazards.
D06	Short	240	10 min	F01	0.06	NB, NC, NT Unit shutdown, no damaged, no hazards.
D07	Short	240	10 min	F01	0.06	Unit shutdown, no damage, no hazards.
T03 pin 7, 8-9, 10	Short	240	10 min	F01	0.33	NB, NC, NT Normal operated, no hazards.
T02 pin 9-15	Short	240	10 min	F01	0.33	NB, NC, NT Normal operated, no hazards.
T02 pin 15-11, 12, 13, 14	Short	240	10 min	F01	0.33	NB, NC, NT Normal operated, no hazards.
T02 pin 16-11, 12, 13, 14	Short	240	10 min	F01	0.33	NB, NC, NT Normal operated, no hazards.
T02 pin 10-16	Short	240	10 min	F01	0.33	NB, NC, NT Normal operated, no hazards.
T03 pin 1-2	Short	240	10 min	F01	0.33	NB, NC, NT Normal operated, no hazards.
T03 pin 2-5	Short	240	10 min	F01	0.33	NB, NC, NT Normal operated, no hazards.
T03 pin 3-4	Short	240	10 min	F01	0.06	NB, NC, NT Unit shutdown, no damaged, no hazards.
T02 pin 5-1	Short	240	10 min	F01	0.06	NB, NC, NT Unit shutdown, no damaged, no hazards.
T02 pin 3-7	Short	240	10 min	F01	0.06	NB, NC, NT Unit shutdown, no damaged, no hazards.
U01 pin 1-2	Short	240	10 min	F01	0.07	NB, NC, NT Unit shutdown, no damaged, no hazards.
U01 pin 3-4	Short	240	10 min	F01	0.07	NB, NC, NT Unit shutdown, no damaged, no hazards.
U01 pin 1	Open	240	10 min	F01	0.07	NB, NC, NT Unit shutdown, no damaged, no hazards.
U02 pin 1-2	Short	240	10 min	F01	0.07	NB, NC, NT Unit shutdown, no damaged, no hazards.

IEC 60950-1						
Clause	Requirement + Test				Result - Remark	Verdict
U02 pin 3-4	Short	240	10 min	F01	0.07	NB, NC, NT Unit shutdown, no damaged, no hazards.
U02 pin 1	Open	240	10 min	F01	0.07	NB, NC, NT Unit shutdown, no damaged, no hazards.
U03 pin 1-2	Short	240	10 min	F01	0.07	NB, NC, NT Unit shutdown, no damaged, no hazards.
U03 pin 3-4	Short	240	10 min	F01	0.07	NB, NC, NT Unit shutdown, no damaged, no hazards.
U03 pin 1	Open	240	10 min	F01	0.07	NB, NC, NT Unit shutdown, no damaged, no hazards.
IC03 pin 2-6	Short	240	10 min	F01	0.07	NB, NC, NT Unit shutdown, no damaged, no hazards.
IC02 pin 2-11	Short	240	10 min	F01	0.07	NB, NC, NT Unit shutdown, no damaged, no hazards.
Q03 pin G-S	Short	240	10 min	F01	0.06	NB, NC, NT Unit shutdown, no damaged, no hazards.
Q03 pin D-S	Short	240	10 min	F01	0.06	NB, NC, NT Unit shutdown, no damaged, no hazards.
Q03 pin D-G	Short	240	10 min	F01	0.06	NB, NC, NT Unit shutdown, no damaged, no hazards.
Q02 pin G-S	Short	240	10 min	F01	0.06	NB, NC, NT Unit shutdown, no damaged, no hazards.
Q02 pin D-S	Short	240	10 min	F01	0.06	NB, NC, NT Unit shutdown, no damaged, no hazards.
Q02 pin D-G	Short	240	10 min	F01	0.06	NB, NC, NT Unit shutdown, no damaged, no hazards.
Q04 pin G-S	Short	240	10 min	F01	0.06	NB, NC, NT Unit shutdown, no damaged, no hazards.
Q04 pin D-S	Short	240	10 min	F01	0	NB, NC, NT, CD (Q04) F01 opened, no hazards. ³⁾

IEC 60950-1						
Clause	Requirement + Test				Result - Remark	
Q04 pin D-G	Short	240	10 min	F01	0	NB, NC, NT, CD (Q04) F01 opened, no hazards. ³⁾
R02	Short	240	10 min	F01	0.33	NB, NC, NT Normal operated , no hazards.
+12V to metal part	Short	240	10 min	F01	0.06	NB, NC, NT Unit shutdown, no damaged, no hazards.
+12V to secondary connector	Short	240	10 min	F01	0.06	NB, NC, NT Unit shutdown, no damaged, no hazards.
+5SBV to metal part	Short	240	10 min	F01	0.06	NB, NC, NT Unit shutdown, no damaged, no hazards.
+5SBV to secondary connector	Short	240	10 min	F01	0.06	NB, NC, NT Unit shutdown, no damaged, no hazards.
+24V to metal part	Short	240	10 min	F01	0.06	NB, NC, NT Unit shutdown, no damaged, no hazards.
+24V to secondary connector	Short	240	10 min	F01	0.06	NB, NC, NT Unit shutdown, no damaged, no hazards.
BD01 Pin(+, -)	Short	100	1sec	F01	0	NB, NC, NT F01 opened, no hazards. ³⁾
C03	Short	100	1sec	F01	0	NB, NC, NT F01 opened, no hazards. ³⁾
D03	Short	100	10 min	F01	0.06	NB, NC, NT Unit shutdown, no damaged, no hazards.
D04	Short	100	10 min	F01	0.06	NB, NC, NT Unit shutdown, no damaged, no hazards.
D05	Short	100	10 min	F01	0.06	NB, NC, NT Unit shutdown, no damaged, no hazards.
D06	Short	100	10 min	F01	0.06	NB, NC, NT Unit shutdown, no damaged, no hazards.
D07	Short	100	10 min	F01	0.06	Unit shutdown, no damage, no hazards.
T03 pin 7, 8-9, 10	Short	100	10 min	F01	0.62	NB, NC, NT Normal operated , no hazards.

IEC 60950-1						
Clause	Requirement + Test				Result - Remark	
T02 pin 9-15	Short	100	10 min	F01	0.62	NB, NC, NT Normal operated , no hazards.
T02 pin 15-11, 12, 13, 14	Short	100	10 min	F01	0.62	NB, NC, NT Normal operated , no hazards.
T02 pin 16-11, 12, 13, 14	Short	100	10 min	F01	0.62	NB, NC, NT Normal operated , no hazards.
T02 pin 10-16	Short	100	10 min	F01	0.62	NB, NC, NT Normal operated , no hazards.
T03 pin 1-2	Short	100	10 min	F01	0.62	NB, NC, NT Normal operated , no hazards.
T03 pin 2-5	Short	100	10 min	F01	0.62	NB, NC, NT Normal operated , no hazards.
T03 pin 3-4	Short	100	10 min	F01	0.06	NB, NC, NT Unit shutdown, no damaged, no hazards.
T02 pin 5-1	Short	100	10 min	F01	0.06	NB, NC, NT Unit shutdown, no damaged, no hazards.
T02 pin 3-7	Short	100	10 min	F01	0.06	NB, NC, NT Unit shutdown, no damaged, no hazards.
U01 pin 1-2	Short	100	10 min	F01	0.07	NB, NC, NT Unit shutdown, no damaged, no hazards.
U01 pin 3-4	Short	100	10 min	F01	0.07	NB, NC, NT Unit shutdown, no damaged, no hazards.
U01 pin 1	Open	100	10 min	F01	0.07	NB, NC, NT Unit shutdown, no damaged, no hazards.
U02 pin 1-2	Short	100	10 min	F01	0.07	NB, NC, NT Unit shutdown, no damaged, no hazards.
U02 pin 3-4	Short	100	10 min	F01	0.07	NB, NC, NT Unit shutdown, no damaged, no hazards.
U02 pin 1	Open	100	10 min	F01	0.07	NB, NC, NT Unit shutdown, no damaged, no hazards.
U03 pin 1-2	Short	100	10 min	F01	0.07	NB, NC, NT Unit shutdown, no damaged, no hazards.

IEC 60950-1						
Clause	Requirement + Test				Result - Remark	Verdict
U03 pin 3-4	Short	100	10 min	F01	0.07	NB, NC, NT Unit shutdown, no damaged, no hazards.
U03 pin 1	Open	100	10 min	F01	0.07	NB, NC, NT Unit shutdown, no damaged, no hazards.
IC03 pin 2-6	Short	100	10 min	F01	0.07	NB, NC, NT Unit shutdown, no damaged, no hazards.
IC02 pin 2-11	Short	100	10 min	F01	0.07	NB, NC, NT Unit shutdown, no damaged, no hazards.
Q03 pin G-S	Short	100	10 min	F01	0.06	NB, NC, NT Unit shutdown, no damaged, no hazards.
Q03 pin D-S	Short	100	10 min	F01	0.06	NB, NC, NT Unit shutdown, no damaged, no hazards.
Q03 pin D-G	Short	100	10 min	F01	0.06	NB, NC, NT Unit shutdown, no damaged, no hazards.
Q02 pin G-S	Short	100	10 min	F01	0.06	NB, NC, NT Unit shutdown, no damaged, no hazards.
Q02 pin D-S	Short	100	10 min	F01	0.06	NB, NC, NT Unit shutdown, no damaged, no hazards.
Q02 pin D-G	Short	100	10 min	F01	0.06	NB, NC, NT Unit shutdown, no damaged, no hazards.
Q04 pin G-S	Short	100	10 min	F01	0.06	NB, NC, NT Unit shutdown, no damaged, no hazards.
Q04 pin D-S	Short	100	10 min	F01	0	NB, NC, NT, CD (Q04) F01 opened, no hazards. ³⁾
Q04 pin D-G	Short	100	10 min	F01	0	NB, NC, NT, CD (Q04) F01 opened, no hazards. ³⁾
R02	Short	100	10 min	F01	0.62	NB, NC, NT Normal operated , no hazards.
+12V to metal part	Short	100	10 min	F01	0.06	NB, NC, NT Unit shutdown, no damaged, no hazards.

IEC 60950-1						
Clause	Requirement + Test				Result - Remark	Verdict
+12V to secondary connector	Short	100	10 min	F01	0.06	NB, NC, NT Unit shutdown, no damaged, no hazards.
+5SBV to metal part	Short	100	10 min	F01	0.06	NB, NC, NT Unit shutdown, no damaged, no hazards.
+5SBV to secondary connector	Short	100	10 min	F01	0.06	NB, NC, NT Unit shutdown, no damaged, no hazards.
+24V to metal part	Short	100	10 min	F01	0.06	NB, NC, NT Unit shutdown, no damaged, no hazards.
+24V to secondary connector	Short	100	10 min	F01	0.06	NB, NC, NT Unit shutdown, no damaged, no hazards.
For Super capacitor (C724)						
C724	Short	240	10 min	F01	--	NB, NC, NT Normal operated , no hazards.
U25 pin 1-8 (overcharge)	Short	240	7 hrs	F01	--	NB, NC, NT Normal operated , no hazards. C724 body= 36.1 °C, Ambient= 23.0 °C.
U25 pin 1-8 (Excessive discharge)	Short	240	1.3 hrs	F01	--	NB, NC, NT Normal operated , no hazards. C724 body= 24.0 °C. Ambient= 22.6 °C.
D5 (overcharge)	Short	240	7 hrs	F01	--	NB, NC, NT Normal operated , no hazards. C724 body= 37.0 °C, Ambient= 23.7 °C.
D5 (Excessive discharge)	Short	240	1 hr	F01	--	NB, NC, NT Normal operated , no hazards. C724 body= 25.0 °C, Ambient= 23.0 °C.
For output overload 1)						
USB2.0 (J1) pin 1 to RTN	overload	240	1 hrs	F01	--	NB, NC, NT Unit normal operation. Max. available output current = 3900 mA, Uoc= 5.11 V.

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

Supplementary information:

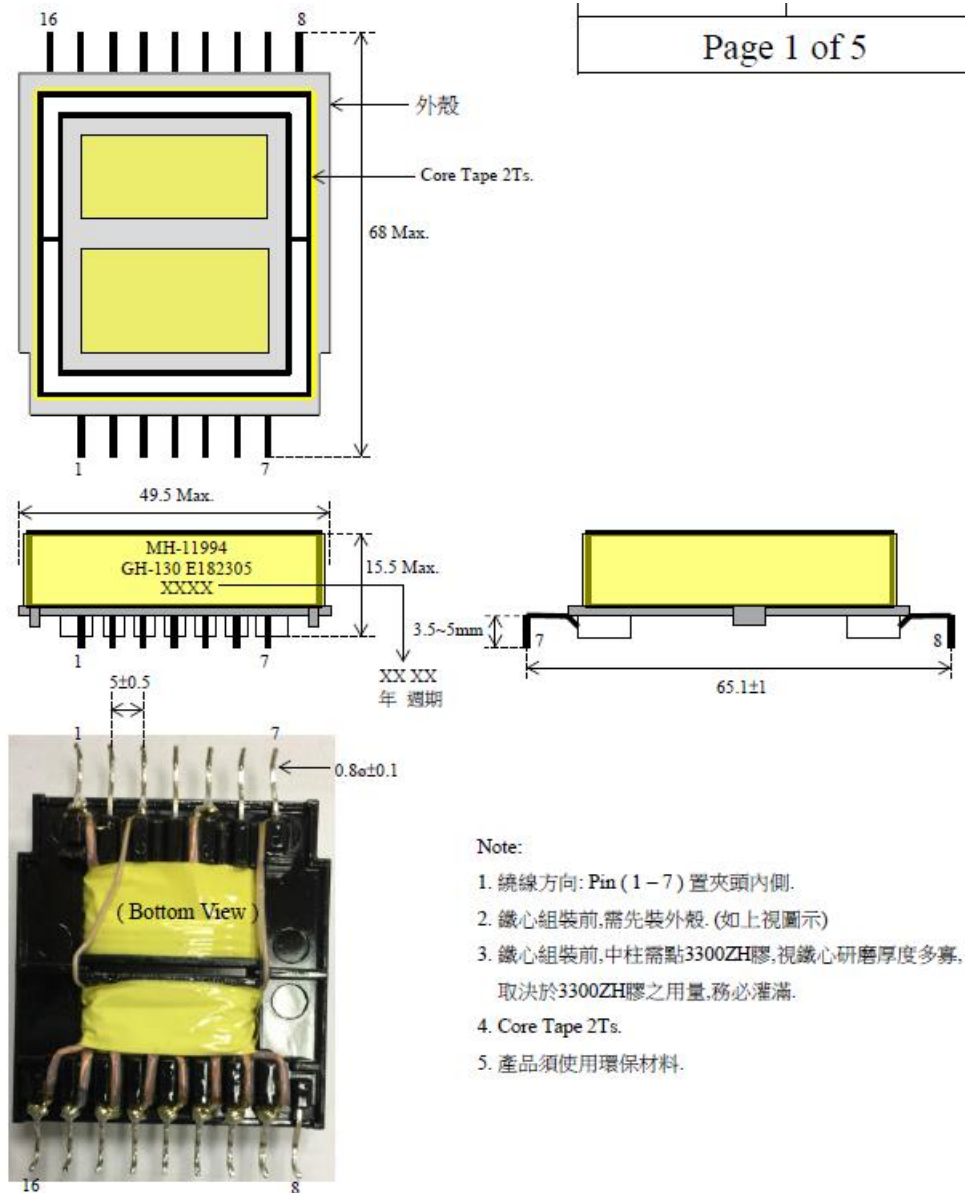
- 1) All other output connector which not mentioned above were all under condition of "could not be loaded".
- 2) Results Key:
 IP = Internal protection operated Component indicated)
 CT = Constant temperatures were obtained
 TW = Transformer winding opened
 CD = Components damaged (damaged components indicated)
 NB = No indication of dielectric breakdown
 YB = Dielectric breakdown (time and location indicated)
 NC = Cheesecloth remained intact
 YC = Cheesecloth charred or flamed
 NT = Tissue paper remained intact
 YT = Tissue paper charred or flamed
 TRSR = Test repeated as similar results, total three times
- 3) For fuse opened condition, same results were carried out for all sources fuses.

C.2	TABLE: transformers						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)
T02	Primary to Secondary	424	260	See table 5.2	4.6	5.2	2 layers or 3 layers insulation tape or 0.4mm thickness
T02	Primary to Core	424	260	See table 5.2	2.3	2.6	--
T02	Secondary to Core	424	260	See table 5.2	2.3	2.6	--
Loc.	Tested insulation			Test voltage / V	Measured clearance / mm	Measured creepage dist. / mm	Measured distance thr. insul. / mm; number of layers
T02	Primary pin to Secondary pin			See table 5.2	44.0	44.0	2 layers or 3 layers insulation tape or 0.4mm thickness

IEC 60950-1					
Clause	Requirement + Test	Result - Remark			Verdict
T02	Primary wire to Secondary wire	See table 5.2	6.5	6.5	2 layers or 3 layers insulation tape or 0.4mm thickness
T02	Primary pin to Core	See table 5.2	3.3	3.3	--
T02	Secondary pin to Core	See table 5.2	3.3	3.3	--
T02	Primary wire to Core	See table 5.2	3.0	3.0	--
T02	Secondary wire to Core	See table 5.2	3.0	3.0	--
supplementary information:					
1. Same construction for all sources.					
C.2	TABLE: transformers				P

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

Transformer T02



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

7. Material List :

Item	Name	Material	Supplier	Approval	
1.	Insulation System	Class 130(B) GH-130	Mao Hsin Electronic Co Ltd	E182305	V
2.	Core EFD-40A	Ferrite core NH9	Lianfeng Or Equiv		V
3.	Bobbin	LONGLITE T375J	Chang Chun Plastics Co Ltd.	E59481	V
4.	Cover	LONGLITE 4130 (100%Virgin) (a)(b)	Chang Chun Plastics Co Ltd.	E59481	V
5.	Wire	UEWS/U (MW75-C)	Pacific Electric Wire & Cable (Shenzhen) Co Ltd.	E201757	
		UEW-4@ (MW75-C)	Jung Shing Wire Co Ltd.	E174837	V
		TRW(B)* Serie(s)	Great Leoflon Industrial Co Ltd.	E211989	V
		TM-Litz-2-2 (MW28-C) (紋線)	Xin Mao Wire & Cable Plant	E220377	V
6.	Tape	1350F-1(b)	3M Company Electrical Markets DIV (EMD)	E17385	
		CT* (c)(g)	Jingjiang Yahua Pressure Sensitive Glue Co Ltd.	E165111	
		JY25-A (b)	Jingjiang Jingyi Adhesive Product Co. Ltd	E246950	V
7.	Margin Tape	44(a)	3M Company Electrical Markets DIV (EMD)	E17385	
		WF* (c)(h)	Jingjiang Yahua Pressure Sensitive Glue Co Ltd.	E165111	
		WF310 (a)	Jingjiang Jingyi Adhesive Product Co. Ltd	E246950	V
8.	Sleeving	TFL	Great Holding Industrial Co Ltd.	E156256	V
9.	Varnish	BC-359	John C Dolph Co.	E317427	V

Description of design:

(a) Bobbin

Primary/input pins	1-5, 3-7
Secondary/output pins	9-11, 12-10, 15-13, 14-16
Material (manufacturer, type, ratings)	See above
Thickness (mm)	Min. 0.5 mm

C.2	TABLE: transformers						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)

IEC 60950-1							
Clause	Requirement + Test			Result - Remark			Verdict
T03	Primary to Secondary	496	359	See table 5.2	4.9	7.2	Triple wire or 2 layers or 3 layers insulation tape or 0.4mm thickness
T03	Primary wire to Core	496	359	See table 5.2	2.5	3.6	--
T03	Secondary wire to Core	496	359	See table 5.2	2.5	3.6	--
T03	Primary pin to core	496	359	See table 5.2	2.5	3.6	--
T03	Secondary pin to core	496	359	See table 5.2	2.5	3.6	--
Loc.	Tested insulation			Test voltage/ V	Measured clearance / mm	Measured creepage dist./ mm	Measured distance thr. insul. / mm; number of layers
T03	Primary pin to Secondary pin			See table 5.2	29.6	29.6	Triple wire or 2 layers or 3 layers insulation tape or 0.4mm thickness
T03	Primary wire to Secondary wire			See table 5.2	10.0	10.0	Triple wire or 2 layers or 3 layers insulation tape or 0.4mm thickness
T03	Primary wire to core			See table 5.2	3.8	3.8	--
T03	Secondary wire to core			See table 5.2	3.8	3.8	--
T03	Primary pin to core			See table 5.2	5.3	5.3	--
T03	Secondary pin to core			See table 5.2	10.0	10.0	--
supplementary information:							
1. Same construction for all source.							

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

C.2	TABLE: transformers	P
Transformer T03		
106 6 35 Max. 1mm Min. 1 5 27 Max. MH-11999 GH-130 E182305 XXXX 15 Max. 3.5±0.5 XX XX 年 週期 1 5 1 5 Bottom View 30±0.5 10 6 5.0±0.5 Tape 2Ts 0.6ø±0.1 5 6 2L Tape (10mm Ref.) 3mm Min.		
Note: 1. Pin 6 Cut Off. 2. 繞線方向: Pin(1-5)置夾頭外側. 3. 鐵心組合前,Pin (1-5)側, Core 須背膠 2L Tape (10mm Ref). 4. Core Tape 2Ts. 5. 成品外圍線包處,包Tape 2Ts. 6. 產品須使用環保材料.		

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

Page 2 of 3

2. Winding: (剖面圖)

----- 代表 Pin 加 Teflon Tube.
 代表 Margin Tape (3.6mm)
 代表 Margin Tape (5.0mm)

3. Winding Table: (繞線結構)

Step	Symbol	Winding Detail				Margin Tape Pin (1~5) / Pin (6~10)	Mylar Tape	
		Start Pin	Finish Pin	Wire m/m	Turns			
1	N1	3	X	0.25øx2	31	密繞	3.6mm / 3.6mm	2
2	N2	7,8	9,10	0.4øx3	4	密繞	5.0mm / 5.0mm	2
3	E1	5	-	Copper Foil (0.025tx9w)	1.2	背膠	3.6mm / 3.6mm	2
4	N3	1	2	0.3ø	6	同層	3.6mm / 3.6mm	1
5	N4	2	5	0.3ø	11	密繞		2
6	N5	X	4	0.25øx2	29	密繞	3.6mm / 3.6mm	2
7	X 線 → 四條扭線, 焊錫, 加 Teflon Tube, 折回線包							2

Note:

- 繞線方向: Pin(1-5)置夾頭外側.
- Pin加 Teflon Tube.
- N1,N5→X進. 出線加套管, 由底部Pin(1-5)出線, 待所有繞組完成後, 四條扭線, 焊錫, 加套管, 折回線包.
- E1 使用背膠銅箔.
- N3,N4 同層密繞, 先繞N3 (靠一次側密繞), 再繞N4 (靠二次側密繞).

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

7. Material List :

Item	Name	Material	Supplier	Approval	
1.	Insulation System	Class 130(B) GH-130	Mao Hsin Electronic Co Ltd	E182305	
2.	Core EFD-25 Or Equiv	Ferrite core NH2C	Lianfeng (聯豐)		V
		Ferrite core SSP-44	Sunshine (尚朋)		V
3.	Bobbin 150°C	LONGLITE T375J	Chang Chun Plastics Co Ltd.	E59481	V
4.	Wire 135°C	UEWS/U (MW75-C)	Pacific Electric Wire & Cable (Shenzhen) Co Ltd.	E201757	
		UEW-4@ (MW75-C)	Jung Shing Wire Co Ltd.	E174837	V
5.	Tape 130°C	1350F-1(b)	3M Company Electrical Markets DIV (EMD)	E17385	
		CT* (c)(g)	Jingjiang Yahua Pressure Sensitive Glue Co Ltd.	E165111	
		JY25-A (b)	Jingjiang Jingyi Adhesive Product Co. Ltd	E246950	V
6.	Margin Tape 130°C	44(a)	3M Company Electrical Markets DIV (EMD)	E17385	
		WF* (c)(h)	Jingjiang Yahua Pressure Sensitive Glue Co Ltd.	E165111	
		WF310 (a)	Jingjiang Jingyi Adhesive Product Co. Ltd	E246950	V
7.	Sleeving 200°C	TFL	Great Holding Industrial Co Ltd.	E156256	V
8.	Varnish 130°C	BC-359	John C Dolph Co.	E317427	V
9.	Copper Foil	0.025t x 9w (背膠銅箔)	Dong Guan City Hao Fu Hardware & Electron produce Co.,Ltd		V

Description of design:

(a) Bobbin

Primary/input pins	: 3-X, X-4, 1-2, 2-5
Secondary/output pins	: 7, 8-9, 10
Material (manufacturer, type, ratings)	: See above
Thickness (mm)	: Min. 0.5 mm

List of test equipment used:

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

IEC60950_1F - 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/A2:2013			
Attachment Form No.: EU_GD_IEC60950_1F			
Attachment Originator: SGS Fimko Ltd			
Master Attachment: Date 2014-02			
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EN 60950-1:2006/A11:2009/A1:2010/A12:2011/A2:2013 – CENELEC COMMON MODIFICATIONS

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
	Clauses, subclauses, notes, tables and figures which are additional to those in IEC60950-1 and it's amendmets are prefixed "Z"		P
Contents (A2:2013)	Add the following annexes: Annex ZA (normative) Normative references to international publications with their corresponding European publications Annex ZB (normative) Special national conditions Annex ZD (informative) IEC and CENELEC code designations for flexible cords		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

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
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
General (A2:2013)	Delete all the "country" notes in the reference document (IEC 60950-1:2005/A2:2013) according to the following list: 2.7.1 Note * 2.10.3.1 Note 2 6.2.2. Note * Note of secretary: Text of Common Modification remains unchanged.		P
1.1.1 (A1:2010)	Replace the text of NOTE 3 by the following. NOTE 3 The requirements of EN 60065 may also be used to meet safety requirements for multimedia equipment. See IEC Guide 112, Guide on the safety of multimedia equipment. For television sets EN 60065 applies.		P
1.3.Z1	Add the following subclause: 1.3.Z1 Exposure to excessive sound pressure The apparatus shall be so designed and constructed as to present no danger when used for its intended purpose, either in normal operating conditions or under fault conditions, particularly providing protection against exposure to excessive sound pressures from headphones or earphones. NOTE Z1 A new method of measurement is described in EN 50332-1, Sound system equipment: Headphones and earphones associated with portable audio equipment - Maximum sound pressure level measurement methodology and limit considerations - Part 1: General method for "one package equipment", and in EN 50332-2, Sound system equipment: Headphones and earphones associated with portable audio equipment - Maximum sound pressure level measurement methodology and limit considerations - Part 2: Guidelines to associate sets with headphones coming from different manufacturers.		N/A
(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		N/A
1.5.1 (Added info*)	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. New Directive 2011/65/11 *	Added.	P

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
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.		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.	Not a personal music player.	N/A
	Zx Protection against excessive sound pressure from personal music players		N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
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_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
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.		N/A
	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: a) protect the user from unintentional acoustic outputs exceeding those mentioned above; and b) 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_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
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_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
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_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
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_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
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.		N/A
2.7.2	This subclause has been declared 'void'.		N/A
3.2.3	Delete the NOTE in Table 3A, and delete also in this table the conduit sizes in parentheses.		N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
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.	No power cord provided	N/A
3.2.5.1 (A2:2013)	NOTE Z1 The harmonised code designations corresponding to the IEC cord types are given in Annex ZD		N/A
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	No power cord provided	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

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
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)			
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 (A11:2009)	In Norway and Sweden , for requirements see 1.7.2.1 and 7.3 of this annex.		N/A
1.5.7.1 (A11:2009)	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
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).	Complied.	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

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
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: "Laitte on liitettävä suojakoskettimilla varustettuun pistorasiaan" In Norway: "Apparatet må tilkoples jordet stikkontakt" In Sweden: "Apparaten skall anslutas till jordat uttag"		N/A
1.7.2.1 (A11:2009)	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)."		

IEC60950_1F - 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.”		N/A
1.7.2.1 (A2:2013)	In Denmark, 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 Denmark shall be as follows: In Denmark: “Apparatets stikprop skal tilsluttes en stikkontakt med jord, som giver forbindelse til stikproppens jord.”		N/A
1.7.5 1.7.5 (A11:2009)	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

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
1.7.5 (A2:2013)	In Denmark, socket-outlets for providing power to other equipment shall be in accordance with the DS 60884-2-D1:2011. For class I equipment the following Standard Sheets are applicable: DK 1-3a, DK 1-1c, DK 1-1d, DK 1-5a or DK 1-7a, with the exception for STATIONARY EQUIPMENT where the socket-outlets shall be in accordance with Standard Sheet DK 1-1b, DK 1-1c, DK 1-1d or DK 1-5a. Socket outlets intended for providing power to Class II apparatus with a rated current of 2,5 A shall be in accordance with DS 60884-2-D1 standard sheet DKA 1-4a. Other current rating socket outlets shall be in compliance with by DS 60884-2-D1 Standard Sheet DKA 1-3a or DKA 1-3b. Justification the Heavy Current Regulations, 6c		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
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

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
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, 16 A		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_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
3.2.1.1 (A2:2013)	In Denmark, supply cords of single-phase equipment having a rated current not exceeding 13 A shall be provided with a plug according to DS 60884-2-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 a single-phase equipment having a RATED CURRENT exceeding 13 A or if a poly-phase equipment is provided with a supply cord with a plug, this plug shall be in accordance with the standard sheets DK 6-1a in DS 60884-2-D1 or EN 60309-2. Justification the Heavy Current Regulations, 6c		N/A
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

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
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 mm ² to 1,5 mm ² nominal cross-sectional area.		N/A
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

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
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
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

IEC60950_1F - 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, 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
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 (A11:2009)	In Norway and Sweden , for requirements see 1.2.13.14 and 1.7.2.1 of this annex.		N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

**Annex ZD
(informative)**

IEC and CENELEC code designations for flexible cords

Type of flexible cord	Code designations	
	IEC	CENELEC
PVC insulated cords		
Flat twin tinsel cord	60227 IEC 41	H03VH-Y
Light polyvinyl chloride sheathed flexible cord	60227 IEC 52	H03VV-F H03VVH2-F
Ordinary polyvinyl chloride sheathed flexible cord	60277 IEC 53	H05VV-F H05VVH2-F
Rubber insulated cords		
Braided cord	60245 IEC 51	H03RT-F
Ordinary tough rubber sheathed flexible cord	60245 IEC 53	H05RR-F
Ordinary polychloroprene sheathed flexible cord	60245 IEC 57	H05RN-F
Heavy polychloroprene sheathed flexible cord	60245 IEC 66	H07RN-F
Cords having high flexibility		
Rubber insulated and sheathed cord	60245 IEC 86	H03RR-H
Rubber insulated, crosslinked PVC sheathed cord	60245 IEC 87	H03RV4-H
Crosslinked PVC insulated and sheathed cord	60245 IEC 88	H03V4V4-H

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT IEC 60950-1 with A1: 2009 and A2:2013 U.S.A. NATIONAL DIFFERENCES Information technology equipment – Safety – Part 1: General requirements	
Differences according to	UL 60950-1-07(Second Edition) + A1: 2011 + A2: 2014
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Attachment Originator	UL
Master Attachment	Date 2014-07
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	<i>Special national conditions</i>		
1.1.1	All equipment is designed as to allow installation in accordance with the National Electrical Code (NEC), ANSI/NFPA 70, Canadian Electrical Code (CEC), Part I, CAN/CSA C22.1, and if 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	Considered.	P
1.1.2	Baby monitors are required to additionally comply with ASTM F2951, Consumer Safety Specification for Baby Monitors		N/A
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 /NEC		P
	For lengths 3.05 m or less, external interconnecting flexible cord and cable assemblies that are not types specified in the NEC are required to have special construction features and identification markings		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
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 used.	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
	Likewise, 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 NEC or 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	Not used	N/A
2.6	Equipment with isolated ground (earthing) receptacles is in compliance with NEC 250.146(D) and CEC 10-112 and 10-906(8)		N/A
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	No power cord provided.	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

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
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	No power cord provided.	N/A
3.2.5	Power supply cords are no longer than 4.5 m in length	No power cord provided.	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
	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 has a suitable wiring compartment and wire bending space	No power cord provided.	N/A
3.3	Wiring terminals and associated spacings for field wiring connections comply with CSA C22.2 No. 0	No wire binding screws.	N/A
3.3.3	Wire binding screws are not attached with 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

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
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
4.3.13.5.1	Equipment with lasers meets the U.S. Code of Federal Regulations 21 CFR 1040 (and the Canadian Radiation Emitting Devices Act, REDR C1370).	No Laser.	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
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
4.7.3.1	Non-metallic enclosures of equipment for use in spaces used for environmental air (plenums) are required to comply with UL 2043		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)	No ionizing radiation.	N/A
	Other National Differences		

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
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. These components include: attachment plugs, battery backup systems, battery packs, cathode ray tubes, circuit breakers, communication circuit accessories, connectors (used for current interruption of non-LPS circuits), cord sets and power supply cords, direct plug-in equipment, electrochemical capacitor modules (energy storage modules with ultracapacitors), enclosures (outdoor), flexible cords and cables, fuses (branch circuit), fuseholders, ground-fault current interrupters, industrial control equipment, insulating tape, interconnecting cables, lampholders, limit controls, printed wiring, protectors for communications circuits, receptacles, solid state controls, supplementary protectors, switches (including interlock switches), thermal cut-offs, thermostats, (multi-layer) transformer winding wire, surge protective devices, tubing, vehicle battery adapters, wire connectors, and wire and cables	Approved components provided, see appended table 1.5.1 of IEC 60950-1 test report.	P
1.6.1.2	A circuit for connection to the DC Mains Supply is classified as 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 Vd.c., the maximum acceptable current through a 2000 ohm resistor (or greater) connected across the voltage source with other loads disconnected is 7.1 mA peak or 30 mA d.c. under normal operating conditions	No TNV.	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
2.6.2	Equipment with functional earthing marked with the functional earthing symbol (IEC 60417-6092)		N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
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
4.3.8	Battery packs for both portable and stationary applications comply with special component requirements		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 is repeated twice (three tests total) using new components as necessary		N/A
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

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT IEC 60950-1 with A1:2009 and A2:2013 CANADA NATIONAL DIFFERENCES Information technology equipment – Safety – Part 1: General requirements			
Differences according to: CAN/CSA-C22.2 No. 60950-1-07, Amd 1:2011, Amd 2:2014			
Attachment Form No.: CA_ND_IEC60950_1F			
Attachment Originator: CSA			
Master Attachment: Date (2015-05)			
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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. Also, unless marked or otherwise identified, installation is allowed per the Standard for the Protection of Electronic Computer/Data-Processing Equipment, ANSI/NFPA 75.	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
1.1.2	Baby monitors are required to additionally comply with ASTM F2951, Consumer Safety Specification for Baby Monitors.		N/A
1.4.14	For Pluggable Equipment Type A, the protection in the installation is assumed to be 20A:		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. For lengths 3.05 m or less, external interconnecting flexible cord and cable assemblies that are not types specified in the CEC/NEC are required to have special construction features and identification markings.		P

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
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. A voltage rating that exceeds an attachment plug cap rating is only permitted if it does not exceed the extreme operating conditions in Table 2 of CAN/CSA C22.2 No. 235, and if it is part of a range that extends into the Table 2 "Normal Operating Conditions." Likewise, a voltage rating shall not be lower than the specified "Normal Operating Conditions," unless it is part of a range that extends into the "Normal Operating Conditions."		N/A
1.7.7	Wiring terminals intended to supply Class 2 outputs in accordance with CEC Part 1 or NEC shall be marked with the voltage rating and "Class 2" or equivalent. Marking shall be located adjacent to the terminals and shall be visible during wiring.		N/A
2.5	Where a fuse is used to provide Class 2, Limited Power Source, or TNV current limiting, it shall not be operator-accessible unless it is not interchangeable.		N/A
2.6	Equipment with isolated ground (earthing) receptacles are required to comply with NEC 250.146(D) and CEC 10-112 and 10-906(8).		N/A
2.7.1	Suitable NEC/CEC branch circuit protection rated at the maximum circuit rating is required for all standard supply outlets and receptacles (such as supplied in power distribution units) if the supply branch circuit protection is not suitable. Power distribution transformers distributing power at 100 volts or more, and rated 10 kVA or more, require special transformer overcurrent protection.		N/A
3.2	Wiring methods (terminals, leads, etc.) used for the connection of the equipment to the mains shall be in accordance with the NEC/CEC.		N/A
3.2.1	Power supply cords are required to have attachment plugs rated not less than 125 percent of the rated current of the equipment.		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		N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	earthing terminal in the equipment, is required to comply with special earthing, wiring, marking and installation instruction requirements.		
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 required to be no longer than 4.5 m in length. Minimum cord length is required to be 1.5 m, with certain constructions such as external power supplies allowed to consider both input and output cord lengths into the requirement. Flexible power supply cords are required to be compatible with Article 400 of the NEC, and Tables 11 and 12 of the CEC.		N/A
3.2.9	Permanently connected equipment is required to have a suitable wiring compartment and wire bending space.		N/A
3.3	Wiring terminals and associated spacings for field wiring connections shall comply with CSA C22.2 No. 0		N/A
3.3.3	Wire binding screws are not permitted to attach conductors larger than 10 AWG (5.3 mm ²).		N/A
3.3.4	Terminals for permanent wiring, including protective earthing terminals, are required to be suitable for US/Canadian wire gauge sizes, rated 125 percent of the equipment rating, and be specially marked when specified (1.7.7).		N/A
3.3.5	First column of Table 3E revised to require "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 required for cord-connected equipment with a motor if the equipment is rated more than 12 A, or if the motor has a nominal voltage rating greater than 120 V, or is rated more than 1/3 hp (locked rotor current over 43 A).		N/A
3.4.8	Vertically-mounted disconnect switches and circuit breakers are required to have the "on" position indicated by the handle in the up position.		N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
3.4.11	For computer room applications, equipment with battery systems capable of supplying 750 VA for five minutes are required to have a battery disconnect means that may be connected to the computer room remote power-off circuit.		N/A
4.3.12	The maximum quantity of flammable liquid stored in equipment is required to comply with NFPA 30.		N/A
4.3.13.5.1	Equipment with lasers is required to meet the U.S. Code of Federal Regulations 21 CFR 1040 (and the Canadian Radiation Emitting Devices Act, REDR C1370).		N/A
4.7	For computer room applications, automated information storage systems with combustible media greater than 0.76 m ³ (27 cu ft) are required to have a provision for connection of either automatic sprinklers or a gaseous agent extinguishing system with an extended discharge.		N/A
4.7.3.1	For computer room applications, enclosures with combustible material measuring greater than 0.9 m ² (10 sq ft) or a single dimension greater than 1.8 m (6 ft) are required to have a flame spread rating of 50 or less. For other applications, enclosures with the same dimensions require a flame spread rating of 200 or less.		N/A
	Non-metallic enclosures of equipment for use in spaces used for environmental air (plenums) are required to comply with UL 2043.		N/A
Annex H	Equipment that produces ionizing radiation is required to comply with the U.S. Code of Federal Regulations, 21 CFR 1020 (and the Canadian Radiation Emitting Devices Act, REDR C1370).		N/A
OTHER DIFFERENCES			
The following key national differences are based on requirements other than national regulatory requirements.			
1.5.1	Some components and materials associated with the risk of fire, electric shock, or personal injury are required to have component or material ratings in accordance with the applicable national (Canadian and/or U.S.) component or material standard requirements. These components include:	Approved components provided, see appended table 1.5.1 of IEC 60950-1 report.	P

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	attachment plugs, battery packs (rechargeable type, used with transportable equipment), cathode ray tubes, circuit breakers, communication circuit accessories, connectors (used for current interruption of non-LPS circuits), cord sets and power supply cords, direct plug-in equipment, enclosures (outdoor), flexible cords and cables, fuses (branch circuit), fuseholders, ground-fault current interrupters, industrial control equipment, insulating tape, interconnecting cables, lampholders, limit controls, printed wiring, protectors for communications circuits, receptacles, solid state controls, supplementary protectors, switches (including interlock switches), thermal cutoffs, thermostats, (multi-layer) transformer winding wire, transient voltage surge suppressors, tubing, wire connectors, and wire and cables.		
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. This maximum operating voltage shall include 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.	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
2.6.2	Equipment with functional earthing is required to be marked with the functional earthing symbol (IEC 60417-6092).		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 are required to reduce the risk of		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	injury due to the implosion of the CRT.		
4.3.2	Equipment with handles is required to comply with special loading tests.		N/A
4.3.8	Battery packs for both portable and stationary applications are required to comply with special component requirements.		N/A
5.1.8.3	Equipment intended to receive telecommunication ringing signals is required to 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 to be overloaded. 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 required to be protected against overvoltage from power line crosses in accordance with 6.4 and Annex NAC.		N/A
Annex EE	UL articulated accessibility probe (Fig EE.3) required 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.		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 is required to comply with special acoustic pressure requirements.		N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT IEC 60950-1 (AUSTRALIA/NEW ZEALAND) NATIONAL DIFFERENCES (Information technology equipment-safety)			
Differences according to.....: AS/NZS 60950.1:2015			
Attachment Form No.....: AU_NZ_ND_IEC60950_1F			
Attachment Originator.....: JAS-ANZ			
Master Attachment.....: 2017-06			
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	National Differences		
Appendix ZZ	Variations to IEC 60950-1, Ed 2.2 (2013) for Australia and New Zealand		P
1.2	DEFINITIONS		N/A
	After definition 'PERSON, SERVICE', insert the following new definition: POTENTIAL IGNITION SOURCE.....1.2.12.201		N/A
1.5	COMPONENTS		P
1.5.1	1..... First paragraph, insert the following text after the words 'IEC component standard: or the relevant Australian/New Zealand Standard 2..... In the Note, insert the following text after the word standard: or the relevant Australian/New Zealand Standard 3..... Second paragraph, delete the words 'without further evaluation'	Added.	P

IEC60950_1F - ATTACHMENT																
Clause	Requirement + Test		Result - Remark	Verdict												
1.5.2	1..... First paragraph, insert the following text after the word 'standard' or an Australian/New Zealand Standard 2..... First paragraph, second dash item, second line, insert the following text after the word 'standard' or an Australian/New Zealand Standard 3..... First paragraph, second dash item, last line, insert the following text after the word 'standard': or an Australian/New Zealand Standard		Added.	P												
1.7	MARKINGS AND INSTRUCTIONS			P												
1.7.1.3	Delete existing text and replace with the following: Graphical symbols placed on the equipment as a requirement of this standard, shall be in accordance with IEC 60417 or ISO 3864-2 or ISO 7000, if available. In the absence of suitable symbols, the manufacturer may design specific graphical symbols. Symbols as required by this standard placed on the equipment shall be explained in the user manual		Deleted and replaced.	P												
2.9	ELECTRICAL INSULATION			N/A												
2.9.2	Variation Second paragraph, delete the word 'designated'			N/A												
3.2.5	POWER SUPPLY CORDS			N/A												
Table 3B	Variation 1..... <i>Dele</i> te the first four rows and replace with the following: <table><tr><td>Over 0.2 up to and including 3</td><td>0.5^a</td><td>18 [0.8]</td></tr><tr><td>Over 3 up to and including 7.5</td><td>0.75</td><td>16 [1.3]</td></tr><tr><td>Over 7.5 up to including 10</td><td>(0.75)^b 1.00</td><td>16 [1.3]</td></tr><tr><td>Over 10 up to including 16</td><td>(1.0)^c 1.5</td><td>14 [2]</td></tr></table>		Over 0.2 up to and including 3	0.5 ^a	18 [0.8]	Over 3 up to and including 7.5	0.75	16 [1.3]	Over 7.5 up to including 10	(0.75) ^b 1.00	16 [1.3]	Over 10 up to including 16	(1.0) ^c 1.5	14 [2]	Modified.	N/A
Over 0.2 up to and including 3	0.5 ^a	18 [0.8]														
Over 3 up to and including 7.5	0.75	16 [1.3]														
Over 7.5 up to including 10	(0.75) ^b 1.00	16 [1.3]														
Over 10 up to including 16	(1.0) ^c 1.5	14 [2]														

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	2. <i>Delete</i> NOTE 1 and renumber existing NOTE 2 as 'NOTE'	Deleted.	N/A
	3. <i>Delete</i> Footnote ^a and replace with the following: ^a This nominal cross-sectional area is only allowed for Class II appliances if the length of the power supply cord, measured between the point where the cord, or cord guard, enters the appliance, and the to the plug does not exceed 2 m (0,5 mm ² three-core supply flexible cords are not permitted; see AS/NZS 3191)	Deleted.	N/A
4.3	DESIGN AND CONSTRUCTION		N/A
4.3.6	Variation <i>Delete</i> the third paragraph and <i>replace</i> with the following:	Deleted.	N/A
	<i>Equipment with a plug portion, suitable for insertion into a 10 A 3-pin flat-pin socket-outlet complying with AS/NZS 3112 shall comply with the requirements in AS/NZS 3112 for equipment with integral pins for insertion into socket-outlets</i>		N/A
4.3.8	Addition Eighth paragraph, <i>insert</i> the following new note after the first dash item:		N/A
	NOTE 6.201 In cases where the voltage source is provided by power from an unassociated power source, consideration should be given to the effects of possible single fault conditions in the unassociated equipment. If the power source is unknown then it should be assumed that the maximum limit of SELV may be applied to the source input under assumed single fault conditions in the source when assessing the charging circuit in the equipment under test.		N/A
4.3.13.5.1	Variation <i>Delete</i> the first paragraph and <i>replace</i> with the following: Except as permitted below, equipment shall be classified and labelled according to IEC 60825-1 or AS/NZS 60825.1, IEC 60825-2 or AS/NZS 60825.2 and IEC 60825-12, as applicable		N/A
	Third paragraph, first sentence, after 'IEC 60825-1', <i>insert</i> the following text: or AS/NZS 60825.1		N/A
	Fourth paragraph, after 'IEC 60825-1', <i>insert</i> the following text: or AS/NZS 60825.1		N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
4.7	RESISTANCE TO FIRE		N/A
4.7	Addition At the end of Clause 4.7, <i>insert</i> the following text: For alternate tests refer to Clause 4.7.201		N/A
6	CONNECTION TO TELECOMMUNICATIONS NETWORKS		N/A
6.2.2	Variation For Australia only, <i>delete</i> the first paragraph and Note, and <i>replace</i> with the following: In Australia only, compliance with 6.2.2 shall be checked by the tests of both 6.2.2.1 and 6.2.2.2		N/A
6.2.2.1	Variation For Australia only, <i>delete</i> the first paragraph including the Notes, and <i>replace</i> with the following: In Australia only, the electrical separation is subjected to 10 impulses of alternating polarity, using the impulse test generator Reference 1 of Table N.1. The interval between successive impulses is 60 s and the initial voltage, U_c , is: (i)..... for 6.2.1 a): 7.0 kV for hand-held telephones and for headsets and 2.5 kV for other equipment; and (ii)..... For 6.2.1 b) and 6.2.1 c): 1.5kV		N/A
	NOTE 201 The 7 kV impulse simulates lightning surges on typical rural and semi-rural network lines		N/A
	NOTE 202 The value of 2.5 kV for 6.2.1 a) was chosen to ensure the adequacy of the insulation concerned and does not necessarily simulate likely overvoltages		N/A
6.2.2.2	Variation For Australia only, <i>delete</i> the second paragraph including the Note, and <i>replace</i> with the following: In Australia only, the a.c. test voltage is (i)..... for 6.2.1 a): 3kV; and (ii)..... for 6.2.1b) and 6.2.1c): 1.5kV		N/A
	NOTE 201 Where there are capacitors across the insulation under test, it is recommended that d.c. test voltages are used.		N/A
	NOTE 202 The 3 kV and 1.5 kV values have been determined considering the low frequency induced voltages from the power supply distribution system.		N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
7	CONNECTION TO CABLE DISTRIBUTION NETWORK		N/A
7.3	Addition <i>Add the following before the first paragraph:</i> Equipment providing functions that fall only within the scope of AS/NZS 60065 and that incorporate a PSTN interface, are not required to comply with this Clause where the only ports provided on the equipment, in addition to a coaxial cable connection and a PSTN interface, are audio or video ports and analogue or data ports not intended to be used for telecommunications purposes		N/A
Annex P	Addition <i>Add the following Normative References:</i> AS/NZS 3191, Electric flexible cords AS/NZS 3112, Approval and test specification—Plugs and socket-outlets		N/A

	Special national conditions (if any)	
1.2.12	FLAMMABILITY	N/A
1.2.12.15	Addition After Clause 1.2.12.15, <i>insert</i> the following new clause:	N/A
1.2.12.201	POTENTIAL IGNITION SOURCE Possible fault which can start a fire if the open-circuit voltage measured across an interruption or faulty contact exceeds a value of 50 V (peak) a.c. or d.c. and the product of the peak value of this voltage and the measured r.m.s. current under normal operating conditions exceeds 15 VA	N/A
	Such a faulty contact or interruption in an electrical connection includes those which may occur in CONDUCTIVE PATTERNS on PRINTED BOARDS	N/A
	NOTE 1 An electronic protection circuit may be used to prevent such a fault from becoming a POTENTIAL IGNITION SOURCE	N/A
	NOTE 2 This definition is from AS/NZS 60065:2012, Clause 2.8.11.	N/A
4	PHYSICAL REQUIREMENTS	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
4.1	Addition After Clause 4.1, <i>insert</i> new Clause 4.1.201 as follows:		N/A
4.1.201	Display devices used for television purposes Display devices which may be used for television purposes, with a mass of 7 kg or more, shall comply with the requirements for stability and mechanical hazards, including the additional stability requirements for television receivers, specified in AS/NZS 60065		N/A
4.3	DESIGN AND CONSTRUCTION		N/A
4.3.8	Addition After Clause 4.3.8, <i>add</i> the following new clause as follows		N/A
4.3.8.201	Products containing coin/button cell batteries and batteries designated R1 The requirements of AS/NZS 60065:2012 Amendment 1:2015, Clause 14.10.201 apply for this Clause.		N/A
4.7	RESISTANCE TO FIRE		N/A
4.7.3.6	Addition After Clause 4.7.3.6, <i>add</i> new clauses as follows:	Added.	N/A
4.7.201	Resistance to fire—Alternative tests		N/A
4.7.201.1	General Parts of non-metallic material shall be resistant to ignition and spread of fire. This requirement does not apply to decorative trims, knobs and other parts unlikely to be ignited or to propagate flames from inside the apparatus, or the following: a) Components that are contained in an enclosure having a flammability category of V-0 according to AS/NZS 60695.11.10 and having openings only for the connecting wires filling the openings completely, and for ventilation not exceeding 1 mm in width regardless of length.		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	b) The following parts which would contribute negligible fuel to a fire: – small mechanical parts, the mass of which does not exceed 4 g, such as mounting parts, gears, cams, belts and bearings; – small electrical components, such as capacitors with a volume not exceeding 1,750 mm³, integrated circuits, transistors and optocoupler packages, if these components are mounted on material of flammability category V-1, or better, according to AS/NZS 60695.11.10		N/A
	NOTE In considering how to minimize propagation of fire and what 'small parts' are, account should be taken of the cumulative effect of small parts adjacent to each other for the possible effect of propagating the fire from one part to another		N/A
	<i>Compliance shall be checked by the tests of 4.7.201.2, 4.7.201.3, 4.7.201.4 and 4.7.201.5</i>		N/A
	<i>For the base material of printed boards, compliance shall be checked by the test of 4.7.201.5</i>		N/A
	The tests shall be carried out on parts of non-metallic material which have been removed from the apparatus. When the glow-wire test is carried out, the parts shall be placed in the same orientation as they would be in normal use. These tests are not carried out on internal wiring		N/A
4.7.201.2	Testing of non-metallic materials Parts of non-metallic material shall be subject to the glow-wire test of AS/NZS 60695.2.11 which shall be carried out at 550°C Parts for which the glow-wire test cannot be carried out, such as those made of soft or foamy material, shall meet the requirements specified in ISO 9772 for category FH-3 material. The glow-wire test shall be not carried out on parts of material classified at least FH-3 according to ISO 9772 provided that the sample tested was not thicker than the relevant part.		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
4.7.201.3	Testing of insulating materials Parts of insulating material supporting POTENTIAL IGNITION SOURCES shall be subject to the glow-wire test of AS/NZS 60695.2.11 which shall be carried out at 750°C. The test shall be also carried out on other parts of insulating material which are within a distance of 3 mm of the connection. NOTE Contacts in components such as switch contacts are considered to be connections. For parts which withstand the glow-wire test but produce a flame, other parts above the connection within the envelope of a vertical cylinder having a diameter of 20 mm and a height of 50 mm shall be subjected to the needle-flame test. However, parts shielded by a barrier which meets the needle-flame test shall not be tested. The needle-flame test shall be made in accordance with AS/NZS 60695.11.5 with the following modifications:		N/A

IEC60950_1F - ATTACHMENT				
Clause	Requirement + Test		Result - Remark	Verdict
	Clause of AS/NZS 60695.11.5			N/A
	9 Test procedure			
	9.2 Application of Needle-flame	<i>Delete</i> the first and second paragraphs and <i>replace</i> with the following: The specimen shall be arranged so that the flame can be applied to a vertical or horizontal edge as shown in the examples of Figure 1. If possible the flame shall be applied at least 10 mm from a corner. The duration of application of the test flame shall be 30 s ± 1 s		
	9.3 Number of test specimens	<i>Delete</i> existing text and <i>replace</i> with the following: The test shall be made on one specimen. If the specimen does not withstand the test, the test may be repeated on two further specimens, both of which shall withstand the test.		
	11 Evaluation of test results	<i>Delete</i> existing text and <i>replace</i> with the following: The duration of burning (tb) shall not exceed 30 s. However, for printed circuit boards, it shall not exceed 15s		

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	The needle-flame test shall not be carried out on parts of material classified as V-0 or V-1 according to AS/NZS 60695.11.10, provided that the sample tested was not thicker than the relevant part		N/A
4.7.201.4	Testing in the event of non-extinguishing material If parts, other than enclosures, do not withstand the glow wire tests of 4.7.201.3 by failure to extinguish within 30 s after the removal of the glow-wire tip, the needle-flame test detailed in 4.7.201.3 shall be made on all parts of non-metallic material which are within a distance of 50 mm or which are likely to be impinged upon by flame during the tests of 4.7.201.3. Parts shielded by a separate barrier which meets the needle-flame test need not be tested.		N/A
	NOTE 1 If the enclosure does not withstand the glow-wire test the equipment is considered to have failed to meet the requirements of Clause 4.7.201 without the need for consequential testing.		N/A
	NOTE 2 If other parts do not withstand the glow-wire test due to ignition of the tissue paper and if this indicates that burning or glowing particles can fall onto an external surface underneath the equipment, the equipment is considered to have failed to meet the requirements of Clause 4.7.201 without the need for consequential testing		N/A
	NOTE 3 Parts likely to be impinged upon by the flame are considered to be those within the envelope of a vertical cylinder having a radius of 10 mm and a height equal to the height of the flame, positioned above the point of the material supporting, in contact with, or in close proximity to, connections.		N/A
4.7.201.5	Testing of printed boards The base material of printed boards shall be subjected to the needle-flame test of Clause 4.7.201.3. The flame shall be applied to the edge of the board where the heat sink effect is lowest when the board is positioned as in normal use. The flame shall not be applied to an edge, consisting of broken perforations, unless the edge is less than 3 mm from a POTENTIAL IGNITION SOURCE.		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	The test is not carried out if the – Printed board does not carry any POTENTIAL IGNITION SOURCE; – Base material of printed boards, on which the available apparent power at a connection exceeds 15 VA operating at a voltage exceeding 50 V and equal or less than 400 V (peak) a.c. or d.c. under normal operating conditions, is of flammability category V-1 or better according to AS/NZS 60695.11.10, or the printed boards are protected by an enclosure meeting the flammability category V-0 according to AS/NZS 60695.11.10, or made of metal, having openings only for connecting wires which fill the openings completely; or – Base material of printed boards, on which the available apparatus power at a connection exceeds 15 VA operating at a voltage exceeding 400 V (peak) a.c. or d.c. under normal operating conditions, and base material of printed boards supporting spark gaps which provides protection against overvoltages, is of flammability category V-0 according to AS/NZS 60695.11.10 or the printed boards are contained in a metal enclosure, having openings only for connecting wires which fill the openings completely <i>Compliance shall be determined using the smallest thickness of the material.</i>		N/A
	NOTE Available apparent power is the maximum apparent power which can be drawn from the supplying circuit through a resistive load whose value is chosen to maximise the apparent power for more than 2 m when the circuit supplied is disconnected.		N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
ATTACHMENT TO TEST REPORT IEC 60950-1 with A1: 2009 and A2:2013 JAPAN NATIONAL DIFFERENCES Information technology equipment – Safety – Part 1: General requirements			
Differences according to.....: J60950-1 (H29) Attachment Form No......: JP_ND_IEC60950_1F Attachment Originator: JQA Master Attachment: 2017-11			
Copyright © 2017 IEC System for Conformity Testing and Certification of Electrical Equipment (IECEE), Geneva, Switzerland. All rights reserved.			
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 (see 1.2.4.3A) when 2-pin adaptor with earthing lead wire or cord set having 2-pin plug with earthing lead wire is provided or recommended.	Added.	P
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 either of the following a) or b) 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. a) Provision of 2-pin plug with earthing lead including the condition of that 2-pin adaptor with earthing lead wire is provided or recommended. b) Provision of an independent earthing terminal, when 2-core mains cord (without earthing conductor) is used. Note – CLASS 0I EQUIPMENT may have a part constructed with Double Insulation or Reinforced Insulation.	Added.	P
1.3.2	Add the following notes after the first paragraph: Note 1 Transportable or similar equipment that are relocated frequently for intended usage should not	Added.	P

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	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.		
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, or components shall have equivalent to or better properties than these. Replace Note 1 with the following: Note 1 Components complying with the interpretation of Ministerial Ordinance on stipulating technical requirements for the Electrical Appliance is regarded to have equivalent to or better performance. Note 2 JIS or an IEC component standard is considered relevant only if the component in question clearly falls within its scope. Add the following after the last paragraph: For an appliance connector that is able to fit with appliance inlet compatible with the standard sheet of IEC 60320-1 or JIS C 8283-1, the size of the connector shall comply with relevant standard sheet of IEC 60320-1 or JIS C 8283-1. A power supply cord set complying with JIS C 8286 is regarded to comply with this requirement. Note 3 A power supply cord set provided with appliance connector that is able to fit with appliance inlet compatible with the standard sheet of IEC 60320-1 or JIS C 8283-1 should comply with JIS C 8286.	Replaced.	P
1.5.2	Add the following Note 2 after the 4th dashed paragraph: Note 2 See 1.7.5A when Type C.14 appliance coupler rated 10 A per JIS C 8283-1 is used with an equipment rated not more than 125 V and rated more than 10 A.	Added.	N/A
1.5.5	Add the following Note after the last paragraph:	Added.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	NOTE An interconnection cord sets provided with interconnecting coupler for mains supply complying with JIS C 8283-2-2 should comply with JIS C 8286.		
1.5.9.1	Add the following in the last of NOTE 1. Gas discharge tube connected in series with VDR may be used.	Added.	N/A
1.7	Replace EE.2 and EE.4 with the following: JA.1 Shredder warning JA.3 Shredder power disconnection	Replaced.	N/A
1.7.1.2	Replace first and second dashed paragraphs with the followings: - manufacturer's or responsible company's name or trade-mark or identification mark; - manufacturer's or responsible company's model identification or type reference;	Replaced.	P
1.7.2.1	Add the following after the second paragraph. Instruction or equipment marking regarding safety shall be written in Japanese unless otherwise permitted in this standard.	Added.	N/A
1.7.2.5	Replace the last sentence with the following: An acceptable marking for an electric shock  hazard is (6.2.4 of JIS S 0101).	Replaced.	N/A
1.7.5	Replace the second paragraph with the following. Socket-outlets conforming to JISC8282-1 are examples of standard power supply outlets.	Replaced.	N/A
1.7.5A	Add the following new clause after 1.7.5. 1.7.5A Power supply cord set 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 operating instruction. " Use only designated cord set attached in this equipment" <i>Example in Japanese:</i> "この機器に同こん(欄)した指定の電源コードセットだけを使用して下さい。" If appliance coupler is used for connection to the	Added.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	mains and if the cord set is not provided within the package for the equipment, suitable information regarding to the cord set shall be described in the operating instruction Note Since the combination of appliance inlet with earthing pin and two-core cord set (without earthing conductor) is special, the cord set should be attached in the equipment and the operating instruction should provide the information that the cord set is exclusively used with the equipment and not allowed to use with other equipment.		
1.7.14A	Add the following new clause after 1.7.14. 1.7.14A Marking for CLASS 0I EQUIPMENT For CLASS 0I EQUIPMENT, the following or equivalent instructions shall be marked. - the following instruction shall be marked on the mains plug or on the visible place of the main body “Provide an earthing connection” <i>Example in Japanese:</i> “必ず接地接続を行ってください。” - the following instruction shall be marked 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.” <i>Example in Japanese:</i> 接地接続は必ず、電源プラグを電源につなぐ前に行ってください。 また、接地接続を外す場合は、必ず電源プラグを電源から切り離してから行ってください。	Added.	P
1.7.14B	Add the following new clause after 1.7.14A 1.7.14B Protective earthing conductor used for CLASS 0I EQUIPMENT For CLASS 0I EQUIPMENT provided with independent main protective earthing terminal, where the cord for the protective earthing connection is not provided within the package for the equipment, the suitable information for the protective earthing connection shall be provided in the operating instruction. (See 2.6.3.2)	Added.	P

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Clause	Requirement + Test	Result - Remark	Verdict
2.1.1.1	Replace item b) of 2.1.1.1 with the following. b) A test with the test finger, Figure 2A, which shall not contact parts described above when applied to openings in the ENCLOSURES after removal of parts that can be detached by an OPERATOR, including fuseholders, and with OPERATOR access doors and covers open. It is permitted to leave lamps in place for this test. Connectors that can be separated by an OPERATOR, other than those complying with JIS C 8303 or JIS C 8285 or IEC 60309 series or JIS C 8283 series or IEC 60320 series, shall also be tested during disconnection. But even if the connector does not comply with these standards, the one having equivalent to or better performance need not be tested during disconnection. Note 4 Connectors complying with Appendix 4 of the interpretation of Ministerial Ordinance on stipulating technical requirements for the Electrical Appliance is regarded to have equivalent to or better performance.	Replaced.	P
2.5	Replace "IEC 60730-1" with "JIS C 9730-1" (in item b)).	Replaced.	N/A
2.6.2	Delete the following line. • the symbol , IEC 60417-5018 (2011-07);	Deleted.	N/A
2.6.3.2	Add the following after the first paragraph. However where the single core conductor is used for protective earthing lead or earthing cord for CLASS 0I EQUIPMENT, either of the following condition shall be met. - Use of annealed copper wire with 1.6 mm diameter or corrosion-inhibiting metal wire having equivalent to or more strength and thickness. - Single core cord or single core cable with 1.25 mm² or more cross-sectional area	Added.	P
2.6.3.5	Add the following after the first paragraph. However this requirement does not apply to internal conductor of the cord set that is covered by the sheath of mains cord and is formed together with mains plug and appliance connector.	Added.	N/A
2.6.4.2	Replace the first paragraph with the following. Equipment required to have protective earthing	Replaced.	P

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	shall have a main protective earthing terminal. For equipment with a DETACHABLE POWER SUPPLY CORD, the earthing terminal in the appliance inlet is regarded as the main protective earthing terminal. However, for CLASS 0I EQUIPMENT provided with the separate main protective earthing terminal other than appliance inlet, the separate main protective earthing terminal may be treated as mains protective earthing terminal.		
2.6.5.4	Replace the first 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: Add the following after last paragraph: Note For CLASS 0I EQUIPMENT, 1.7.14A is applied instead of this requirement.	Replaced.	P
2.6.5.8A	Add the following new clause after 2.6.5.8 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.	Added.	P
2.7.6	Replace "ISO 3864, No. 5036" with "6.2.4 of JIS S 0101".	Replaced.	N/A
2.10.3.1	Replace the 8th paragraph with the following The above minimum CLEARANCE for connectors do not apply to connectors that comply with JIS C 8285, IEC60309 series of standards, JIS C 8283 series of standards, IEC60320 series of standards, JIS C 8303, or even if it does not comply with the above standards but the one having equivalent to or better performance and dimension which comply with JIS C 8283 series of standards, JIS C 8303 or IEC 60309-2. Note Connectors complying with Appendix 4 of the interpretation of Ministerial Ordinance on stipulating technical requirements for the Electrical Appliance is regarded to have equivalent to or	Replaced.	P

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Clause	Requirement + Test	Result - Remark	Verdict
	better performance.		
2.10.3.2 Table 2J	In Japan, the value of the main power supply transient voltage for the nominal ac main power supply voltage of 100 V is determined by applying the row of AC main power supply voltage 150 V.	Added.	P
2.10.4.3	Replace the 6th paragraph with the following The above minimum CREEPAGE DISTANCE for connectors do not apply to connectors that comply with JIS C 8285, IEC60309 series of standards, JIS C 8283 series of standards, IEC60320 series of standards, JIS C 8303, or even if it does not comply with the above standards but the one having equivalent to or better performance and dimension which comply with JIS C 8283 series of standards, JIS C 8303 or IEC 60309-2. Note Connectors complying with Appendix 4 of the interpretation of Ministerial Ordinance on stipulating technical requirements for the Electrical Appliance is regarded to have equivalent to or better performance.	Replaced.	P
2.10.9	Replace "1.4.5" in the third paragraph with "1.4.12".	Replaced.	P
3.2.3	Add the following after the third paragraph. Table 3A applies when cables complying JIS C 3662 series of standards or JIS C 3663 series of standards are used. In case of other cables, cable entries shall be so designed that the cable could be fitted in a conduit.	Added.	N/A
3.2.4	Add the following as 4th dashed paragraph. - be so constructed that mechanical stress shall not transmit to the soldering part of inlet terminal during insertion or removal of the connector except that the body of the inlet is secured and is secured not only soldering.	Added.	N/A
3.2.5.1	Add the following after Note 3: Note 4 In Japan, mains cords having equivalent to or better electro-mechanical and fire safety performance as above and complying with Appendix 1 of the interpretation of Ministerial Ordinance on stipulating technical requirements for the Electrical Appliance can be used. Replace the paragraph after Note 3 with the following. For equipment required to have protective	Added.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	earthing, a PROTECTIVE EARTHING CONDUCTOR shall be included in the MAINS SUPPLY cord except for CLASS 0I EQUIPMENT having separate protective earthing conductor from mains cord. Add the following after the second paragraph after Note 3: Note 5 For the cross-sectional area of mains cord described in Note 4, relevant Japanese wiring regulation can be applied.		
3.2.5A	Add the following new clause after 3.2.5 3.2.5A AC mains plug Mains plug for PLUGGABLE EQUIPMENT TYPE A shall comply with JIS C 8282-1 or equivalent to or better performance. Power supply cord set complying with JIS C 8286 is regarded to meet the requirements. Mains plug with fuse link for PLUGGABLE EQUIPMENT TYPE A shall comply with JIS C 8282-2-1 or equivalent to or better performance. Note Mains plug complying with Appendix 4 of the interpretation of Ministerial Ordinance on stipulating technical requirements for the Electrical Appliance is regarded to have equivalent to or better performance.	Added.	P
3.3.4 Table 3D	Add the following note to Table 3D: Note For cables other than those complying with JIS C 3662 series of standards or JIS C 3663 series of standards, the 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
4.2.8	Add the following after the first paragraph: Note Intrinsically protected picture tube is required to comply with JIS C 6965 in clause 18 of JIS C 6065. No intrinsically protected picture tube which is out of scope of JIS C 6965 is required to test according to sub-clause 18.2 of JIS C 6065.	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	Added.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict								
	values specified in 2.10.										
4.3.5	Replace the first dashed paragraph with the following. Within a manufacturer's unit or system, plugs and sockets likely to be used by the OPERATOR or by a SERVICE PERSON shall not be employed in a manner likely to create a hazard due to misconnection. In particular, connectors complying with IEC 60320/JIS C 8283 series of standards or JIS C 8303 or JIS C 8358 shall not be used for SELV CIRCUITS or TNV CIRCUITS. Keying, location or, in the case of connectors accessible only to a SERVICE PERSON, clear markings are permitted to meet the requirement.	Replaced.	P								
4.3.6	Replace the 1st paragraph with the following: DIRECT PLUG-IN EQUIPMENT shall not impose undue stress on the socket-outlet. The mains plug part shall comply with the standard for the relevant mains plug. (see 3.2.5A)	Replaced.	N/A								
4.4.2	Replace the paragraph with the following: HOUSEHOLD AND HOME/OFFICE DOCUMENT/MEDIA SHREDDERS shall also comply with Annex JA.	Replaced.	N/A								
4.5.3	Add the following note to footnote b) of Table 4B: NOTE In case no data for the material is available, Appendix 4, 1. (1). b. 3 of the Interpretation on the Ministerial Ordinance stipulating Technical Specifications for Electrical Appliances is regarded as maximum temperature limit of the material.	Added.	P								
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 <table border="1"> <tr> <th>Type of equipment</th><th>Terminal A of measuring instrument connected to:</th><th>Maximum TOUCH CURRENT mA r.m.s. ^a</th><th>Maximum PROTECTIVE CONDUCT OR CURRENT</th></tr> <tr> <td>ALL equipment</td><td>Accessible parts and circuits not connected to protective earth</td><td>0,25</td><td>-</td></tr> </table>	Type of equipment	Terminal A of measuring instrument connected to:	Maximum TOUCH CURRENT mA r.m.s. ^a	Maximum PROTECTIVE CONDUCT OR CURRENT	ALL equipment	Accessible parts and circuits not connected to protective earth	0,25	-	Replaced.	P
Type of equipment	Terminal A of measuring instrument connected to:	Maximum TOUCH CURRENT mA r.m.s. ^a	Maximum PROTECTIVE CONDUCT OR CURRENT								
ALL equipment	Accessible parts and circuits not connected to protective earth	0,25	-								

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Clause	Requirement + Test				Result - Remark	Verdict	
		b					
	HAND-HELD	Main protective earthing terminal of CLASS I EQUIPMENT	0,75	-			
		Main protective earthing terminal of CLASS 0 I EQUIPMENT	0,5	-			
	MOVABLE (other than HAND_HELD, but including TRANSPORTABLE EQUIPMENT)	Main protective earthing terminal of CLASS I EQUIPMENT	3,5	-			
		Main protective earthing terminal of CLASS 0 I EQUIPMENT	1.0	-			
	STATIONARY, PLUGGABLE TYPE A	Main protective earthing terminal of CLASS I EQUIPMENT	3,5	-			
		Main protective earthing terminal of CLASS 0 I EQUIPMENT	1,0	-			
	ALL other STATIONARY EQUIPMENT - not subject to the conditions of 5.1.7 - subject to the conditions of 5.1.7	Main protective earthing terminal of CLASS I EQUIPMENT	3.5 -	- 5 % of input current			
		Main protective earthing terminal of CLASS 0 I EQUIPMENT	1.0 -	- -			
	a If peak values of TOUCH CURRENT are measured, the maximum values are obtained by multiplying the r.m.s.values in the table by 1,414.						
	b Some unearthed accessible parts are covered in 1.5.6 and 1.5.7 and the requirements of 2.4 apply. These may be different from those in 5.1.6.						
Annex G	Replace the paragraph before Table G.2 with the following The above minimum CLEARANCE for connectors do not apply to connectors that comply with JIS C 8285, IEC60309 series of standards, JIS C 8283 series of standards, IEC60320 series of standards, JIS C 8303, and 1.5.1 of this standard in which dimension is comply with JIS C 8283 series, JIS C 8303 or IEC 60309-2.				Replaced.	N/A	
Annex V V.1	Replace “3.1.2” in the first line of V.1 with “312” in the first line.				Replaced.	P	
Annex W W.1	Replace the third sentence in the first paragraph with the following: Floating circuits can exist in CLASS I EQUIPMENT, CLASS 0I EQUIPMENT and earthed circuits can exist in CLASS II EQUIPMENT.				Replaced.	N/A	

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
Annex BB	This annex is not applicable.		N/A
Annex CC CC.2	Replace the third dashed paragraph with the following: <i>- 10 000 cycles of turning enable on and off with the input connected to a capacitor rated 425 uF ± 10 uF and shorting the output;</i>		N/A
CC.3	Add note at end of CC.3: Note: The fast blow fuse should be the one complying with JIS C 6575-2.		N/A
CC.4	Replace the 2nd dashed paragraph with the following: - 10 000 cycles of turning enable on and off with a 100 Ω ± 5 Ω resistor and a 425 uF ± 10 uF capacitor in parallel with the output; Replace the 4th dashed paragraph with the following: - 10 000 cycles of turning enable on and off with the input connected to a capacitor rated 425 uF ± 10 uF and shorting the output; Replace the 5th dashed paragraph with the following: -10 000 cycles of turning the input pin on and off with a capacitor rated 425 uF ± 10 uF connected to the input supply while keeping enable active and shorting the output; Replace the 6th dashed paragraph with the following: -10 000 cycles of turning the input pin on and off with an ferrite-core inductor having 350 mH ± 10 mH inductance at 1 kHz and less than 1 Ω d.c. resistance connected to the input supply and return while keeping enable active and shorting the output; Replace the 10th dashed paragraph with the following: -3 cycles of exposing the device (not energized) to 70 °C ± 2 °C for 24 h; followed by at least 1 h at room ambient; followed by at least 3 h at -30 °C ± 2 °C; followed by 3 h at room ambient; Replace the 11th dashed paragraph with the following:		N/A

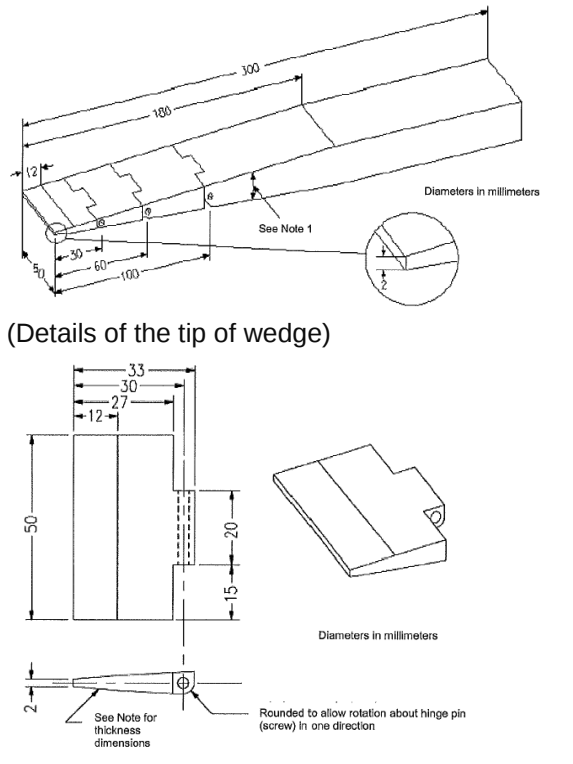


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Clause	Requirement + Test	Result - Remark	Verdict
	-10 cycles of exposing the device (while energized) to 50 °C ± 2 °C for 10 min; followed by 10 min at 0 °C ± 2 °C with a 5 min period of transition from one state to the other;		

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
Annex EE	Replace Annex EE with the following Annex JA. Annex JA (normative) Document shredding machines HOUSEHOLD AND HOME/OFFICE DOCUMENT/MEDIA SHREDDERS shall additionally comply with the requirements of this annex. JA.1 Markings and instructions  (JIS S 0101:2000, 6.2.1) 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; 子供が使用することによって、傷害などの危害が発生するおそれがある。 (that use by infants/children may cause a hazard of injury etc.) 文書投入口に手を触れることによって、細断機構に引き込まれるおそれがある。 (that a hand can be drawn into the mechanical section for shredding when touching the document-slot) 文書投入口に衣類が触れることによって、細断機構に引き込まれるおそれがある。 (that clothing can be drawn into the mechanical section for shredding when touching the document-slot) 文書投入口に髪の毛が触れることによって、細断機構に引き込まれるおそれがある。 (that hairs can be drawn into the mechanical section for shredding when touching the document-slot) - in case of equipment incorporating a commutator motor, 可燃性ガスを噴射することによって引火又は爆発するおそれがある。 (that equipment may catch fire or explode by spraying of flammable gas.) 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.		N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	Compliance is checked by inspection and, where necessary, by a test with the test finger, Figure JA.1. 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. 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.		

IEC60950_1F - ATTACHMENT											
Clause	Requirement + Test	Result - Remark	Verdict								
	 (Details of the tip of wedge) <table> <tr> <th>Distance from the tip (mm)</th> <th>Thickness of probe (mm)</th> </tr> <tr> <td>0</td> <td>2</td> </tr> <tr> <td>12</td> <td>4</td> </tr> <tr> <td>180</td> <td>24</td> </tr> </table> Note 1 - The thickness of the probe varies linearly, with slope changes at the respective points shown in the table. Note 2 –The allowable dimensional tolerance of the probe is; for ≤ 25 mm: ± 0.13 mm for > 25 mm: ± 0.3 mm. Figure JA.2 Wedge-probe	Distance from the tip (mm)	Thickness of probe (mm)	0	2	12	4	180	24		N/A
Distance from the tip (mm)	Thickness of probe (mm)										
0	2										
12	4										
180	24										

IEC60950_1F - ATTACHMENT			
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 cover 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

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
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
	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

IEC60950_1F - 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.	No such resistor.	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"	To be provided during national approval.	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_1F - 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.	No TNV.	N/A

IEC60950_1F - 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

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IEC60950_1F - ATTACHMENT			
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.		N/A
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IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT IEC 60950 - 1, ed2, amd1 ISRAEL NATIONAL DIFFERENCES (INFORMATION TECHNOLOGY EQUIPMENT – SAFETY: GENERAL REQUIREMENTS)	
Differences according to	National standard SI 60950 - 1, ed2, amd1.
Attachment Form No.	IL_ND_IEC60950_1C
Attachment Originator	Standards Institution of Israel
Master Attachment	Date 2015-12
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	National Differences	P
1.6	Power interface The clause is applicable with the following addition:	P
1.6.1	AC Power distribution systems	N/A
	- At the end of the clause, the following note shall be added: Note: In Israel, the clause is subject to the Electricity Law, 1954, its Regulations and updates.	N/A
1.7	Marking and instructions The clause is applicable with the following additions:	N/A
1.7.1	Power rating	N/A
	- Subclause 1.7.201 shall be added after the clause, as follows:	
1.7.201	Marking in the Hebrew language	Shall be evaluated during national approval
	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 items shall be marked in the Hebrew language: 1. Name of the apparatus and its commercial designation; 2. Manufacturer's name and his address; if the equipment is imported, the importer's name and his address;	N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	3. Manufacturer's registered trademark, if any; 4. Name of the model and serial number, if any; 5. Country of manufacture. The items shall be marked on the apparatus or on its packaging, or on a label well attached to the apparatus or its packaging, by bonding or sewing, such that the label cannot be easily removed.		
1.7.2	Safety instructions and marking	See below	N/A
1.7.2.1	General - The following shall be added at the end of the clause: All the instruction and all the warnings related to safety shall also be written in the Hebrew language.	Shall be evaluated during national approval	N/A
- At the end of clause 1, clause 1.201 shall be added as follows:			
1.201	Power consumption in standby mode The equipment shall comply with the requirements of the Energy Sources Regulations (Maximum electrical power in standby mode for domestic and office electrical appliances), 2011, with a permitted deviation of up to 10 %.	Shall be evaluated during national approval	N/A
2	Protection from hazards The clause is applicable with the following additions:		P
2.9.4	Separation from hazardous voltages The following shall be added at the beginning of the clause: According to the Electricity Law, 1954, and the Electricity Regulations (Earthing and protection means from electricity at voltages up to 1,000 V), 1991, in Israel, seven means of protection from electricity are permitted, as follows: 1) Network system earthing - (TN-C-S, TN-S); 2) Network system earthing - (TT); 3) Network Insulation Terre - (IT); 4) Isolated transformer; 5) Safety extra low voltage; 6) Residual current circuit breaker; 7) Reinforced insulation; Double insulation		P

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
- Clause 2.201 shall be added at the end of clause 2, as follows:			
2.201	Prevention of electromagnetic interference The device shall meet the requirements of the relevant part of the Israeli Standard series, SI 961. If the device contains components for prevention of electromagnetic interference, the devices shall not lower the safety level of the device, as required by this Standard.		N/A
3	Wiring, connections and supply The clause is applicable with the following additions:		N/A
3.2	Connection to a mains supply		N/A
3.2.1	Means of connection		N/A
3.2.1.1	Connection to an a.c. mains supply After the Note, the following note shall be added: Note: In Israel, the supply plug shall comply with the requirements in Israeli Standard, SI 32 Part 1.1.		N/A
3.2.1.2	Connection to a d.c. mains supply After the first paragraph, the following note shall be added: Note: As of the date of publication of this Standard, there is no Israeli Standard for connection accessories to d.c.		N/A
	Special national conditions (if any)		N/A
	ANNEX P Normative references		N/A
	The annex is applicable with the following modifications and additions: In place of some of the International Standards cited in the Standard and noted in this annex, the following Israeli Standards shall apply:		N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

The referenced International Standard	The substituted Israeli Standard	Comments
IEC 60317 (all parts) ^(b)	SI 1067 Part 1 – Enamelled ^(c) round copper wires with high mechanical properties	The Israeli Standard is identical to the International Electrotechnical Commission Standard, IEC 317-1: 1980-02.
	SI 1067 Part 2 – Self-fluxing enamelled ^(c) round copper wires	The Israeli Standard is identical to the International Electrotechnical Commission Standard, IEC 307-4: 1980-02.
	SI 1067 Part 3 – Enamelled ^(c) round copper wires with a temperature index of 180 °C	The Israeli Standard is identical to the International Electrotechnical Commission Standard, IEC 317-8: 1980-02.
IEC 60320 (all parts) ^(b)	SI 60320 Part 1 – Appliance couplers for household and similar general purposes: General requirements	The Israeli Standard, excluding national modifications and additions noted, is identical to the International Electrotechnical Commission Standard, IEC 60320-1: Second edition: 2001-06.
	SI 60320 Part 2.1 – Appliance couplers for household and similar general purposes: Sewing machine couplers	The Israeli Standard, excluding national modifications and additions noted, is identical to the International Electrotechnical Commission Standard, IEC 60320-2-1: Second edition: 2000-07.
	SI 60320 Part 2.2 – Appliance couplers for household and similar general purposes: Interconnection couplers for household and similar equipment	The Israeli Standard, excluding national modifications and additions noted, is identical to the International Electrotechnical Commission Standard, IEC 60320-2-2: Second edition: 1998-08.
	SI 60320 Part 2.3 – Appliance couplers for household and similar general purposes: appliance coupler with a degree of protection higher than IPXO	The Israeli Standard, excluding national modifications and additions noted, is identical to the International Electrotechnical Commission Standard, IEC 60320-2-3: First edition: 1998-09.
IEC 60364-1:	Electricity Law, 1954, with its Regulations	–

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
2001	and updates		
IEC 60730-1: 1999 Amendment 1 (2003)	SI 60730 Part 1 – Automatic electrical controls for household and similar use: General requirements	The Israeli Standard, excluding national modifications and additions noted, is identical to the International Electrotechnical Commission Standard, IEC 60730-1: Edition 3.2: 2007-03.	
IEC 60825-1	SI 60825 Part 1 – Safety of products: Equipment classification and requirements	The Israeli Standard, excluding national modifications and additions noted, is identical to the International Electrotechnical Commission Standard, IEC 60825-1: Second edition: 2007-03.	
IEC 60947-1: 2004	SI 60947 Part 1 – Low-voltage switchgear and controlgear: General rules	The Israeli Standard, excluding national modifications and additions noted, is identical to the International Electrotechnical Commission Standard, IEC 60947-1: Edition 5.0: 2007-06.	
IEC 61058-1: 2000	SI 61058 Part 1 – Switches for appliances: General requirements	The Israeli Standard, excluding national modifications and additions noted, is identical to the International Electrotechnical Commission Standard, IEC 61058-1: Edition 3.1: 2001.	
ISO 3864 (all parts)(b)	SI 3864 Part 1(a) – Graphic symbols -	The Israeli Standard, excluding national modifications and additions noted, is identical to the International Organization for Standardization Standard, ISO 3864-1: First edition: 2002-05-15.	
Notes: (a) The Standard is being revised. (b) In the International Standard series, there are parts not yet adopted as Israeli Standards. This table notes the relevant Israeli Standards, and in the Comments column, the corresponding parts of the International Standard series. (c) Not relevant to the translation.			

- The following shall be added to the annex:
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IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	Israeli Standards SI 961 (all parts) – Electromagnetic compatibility Israeli Laws, Regulations and documents Electricity Law, 1954, with its Regulations and updates Consumer Protection Order (Marking of goods), 1983, Kovetz HaTakanot 4465 dated 1983-02-24 Energy Sources Regulations (Maximum electrical power in standby mode for domestic and office electrical appliances), 2011		

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IEC60950_1F - ATTACHMENT			
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_1F - ATTACHMENT			
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	GB 4943.1-2011
Attachment Form No.	CN_ND_IEC60950_1A
Attachment Originator	CQC-TIRT
Master Attachment	Date 2012-11
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	China National Differences		
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;	The equipment is declared the operation altitude up to 3000 m and used in tropical climate regions.	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

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
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 dashed paragraph. Note: A component used shall comply with related requirements corresponding altitude of 5000m.		N/A
1.7	Add a paragraph before the last paragraph: The required marking and instruction should be given in normative Chinese unless otherwise specified.		N/A
1.7.1	Amend dashed paragraph at the fifth paragraph : 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

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
1.7.2.1	Add requirements of warning for equipment intended to be used at altitude 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.	The equipment is declared the operation altitude up to 3000 m and used in tropical climate regions.	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.		N/A

IEC60950_1F - ATTACHMENT			
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.	The equipment is declared the operation altitude up to 3000 m and used in tropical climate regions.	P

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Clause	Requirement + Test	Result - Remark	Verdict
2.10.3.3& 2.10.3.4	Add "(applicable for altitude up to 2000m)" in header of Table 2K、2L and 2M.		P
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 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.	The equipment is declared the operation altitude up to 3000 m and used in tropical climate regions.	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	Amend last section: 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. 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

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Clause	Requirement + Test	Result - Remark	Verdict
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.		N/A
Annex BB (informative)	Amended as : The differences between Chinese national standards GB 4943.1-2011 and GB 4943-2001.		N/A
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.	The equipment is declared the operation altitude up to 3000 m and used in tropical climate regions.	P
Annex EE (informative)	Added annex EE: Illustration relative to safety explanation in normative Chinese 、Tibetan 、Mongolian 、Zhuang Language and Uighur.		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
Other amendments	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.		N/A
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 Chinese national standards and industry		N/A

Clause	Requirement + Test	Result - Remark	Verdict
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2.1.1.7	TABLE: Discharge test			P
Condition	τ calculated (ms)	τ measured (ms)	t u→0V (s)	Comments
Supply voltage: 110 V, 60 Hz				
Line to Neutral	--	809	--	$V_O = 156.25$ V, 37 % of $V_O = 57.82$ voltage drop to 43.75 V after 1 s.
Supply voltage: 264 V, 60 Hz				
Line to Neutral	--	810.5	--	$V_O = 370.83$ V, 37 % of $V_O = 137.20$ V, voltage drop to 108.33 V after 1 s.
Supplementary information: CX01= CX02= CX03= 0.22 μ F, R05= R07= R08= R10= 910k ohm ,R06= R09= 750k ohm.				

2.4.2	TABLE: Limited current circuit measurement				P
Location	Voltage (V)	Current (mA)	Freq. (kHz)	Limit (mA)	Comments
CY01 sec. pin to earth	0.812	0.406	60Hz	0.7	A 2k Ω non-inductive resistor used.
CY02 to earth	0.07	0.035	60Hz	0.7	A 2k Ω non-inductive resistor used.
CY03 to earth	0.208	0.104	60Hz	0.7	A 2k Ω non-inductive resistor used.
Supplementary information: Supply voltage: 264 V, 60 Hz.					

2.6.3.4	TABLE: Resistance of earthing measurement		P
Location	Resistance measured (mΩ)	Comments	
AC inlet to metal part	19	Test current : 32 A, duration: 2 min. Vdrop= 0.61 V	
AC inlet to metal part	20	Test current : 40 A, duration: 2 min. Vdrop= 0.80 V	
Supplementary information:			

4.6.1, 4.6.2	Table: Enclosure opening measurements		N/A
Location	Size (mm)	Comments	
Supplementary information:			