

Ref. Certif. No.

JPTUV-078677

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

CB TEST CERTIFICATE

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

TPV Electronics (Fujian) Co., Ltd. Rongqiao Economic and Technological Development Zone, Fuqing City, Fujian Province, P.R.

Rongqiao Economic and Technological Development Zone, Fuqing City, Fujian Province, P.R. China

CERTIFICAT D'ESSAI OC

Product Produit

Name and address of the applicant Nom et adresse du demandeur

Name and address of the manufacturer Nom et adresse du fabricant

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

Ratings and principal characteristics Valeurs nominales et charactéristiques principales

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

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

Model / Type Ref. Ref. de type

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

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

17059636 001

LCD Monitor

TPV Electronics (Fujian) Co., Ltd.

AC 100-240V; 50/60Hz; 1.5A; Class II

238LM000**, PDS241*******

IEC 60950-1:2005+A1+A2

(* = 0-9, A-Z, a-z, -, \, /, + or blank)

See Test Report for National Differences

For model differences, refer to the test report.

See additional page(s)

China

AOC

N/A

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



TÜV Rheinland Japan Ltd. Global Technology Assessment Center 4-25-2 Kita-Yamata, Tsuzuki-ku Yokohama 224-0021 Japan Phone + 81 45 914-3888 + 81 45 914-3354 Fax Mail: info@jpn_tuv.com Web. www.tuv.com

Signature:

Ma

27.02.2017

Ref. Certif. No.



JPTUV-078677

PAGE 2 OF 3 1. TPV Display Technology (Wuhan) Co., Ltd. Unique No. 11, Zhuankou Development District of Economic Technological Development Zone, Wuhan City 430056, P.R. China 2. TPV Electronics (Fujian) Co., Ltd. Shangzheng, Yuan Hong Road Fuqing City, Fujian Province P.R. China 3. Envision Industry of Electronic Products Ltd. Rodovia Anhanguera S/N-KM 49 Tijuco Preto-Jundiaí-SP-13.205-700, Brazil 4. L&T Display Technology (Fujian) Ltd. Optoelectronic Park, Rongqiao Economic and Technological **Development Zone** Fuqing, Fujian 350301, P.R. China 5. TPV Electronics (Fujian) Co., Ltd. Rongqiao Economic and Technological Development Zone Fuqing City, Fujian Province P.R. China 6. Trend Smart CE Mexico S de RL de CV Avenida Sor Juana Ines de la Cruz de 19602 Nueva Tijuana, 22435 Tijuana Baja California MEXICO 7. TPV Display Technology (Beihai) Co., Ltd. China Electronic Beihai Industry Park, Northeast of the Crossing Between Taiwan Road and Jilin Road, Beihai City, Guangxi, P.R. China 8. TPV Technology (Qingdao) Co., Ltd. No.99 Huoju Road, High-tech Industrial Development Zone Qingdao City, Shandong Province, P.R. China 9. TPV Display Technology (China) Co., Ltd. No. 106 Jinghai 3 Rd., BDA Beijing City 100176 P.R. China Additional information (if necessary) Report Ref. No.: 17059636 001 Information complémentaire (si nécessaire) Xuhua Lin Jul Date: Signature: 27.02.2017

Ref. Certif. No.



JPTUV-078677

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- Hefei Huntkey Display Technology Co., Ltd.
 South Jinxiu Road, East Qingtan Road Economic And Technological Development Zone, Hefei, Anhui 230601, P.R. China
- TPV Electronics (Fujian) Co., Ltd. Optoelectronic Park, Rongqiao Economic and Technological Development Zone, Fuqing City, Fujian Province 350301, P.R. China
- Envision Indústria de Produtos Eletrônicos Ltda. Av. Torquato Tapajós, 2236, Flores - CEP 69058-830 - Manaus/AM Brazil

Additional information (if necessary) Information complémentaire (si nécessaire)

Report Ref. No.: 17059636 001

Signature:

Xuhua Liu Xuhua

TÜV Rheinland (China) Ltd. Member of TÜV Rheinland Group



TPV Electronics (Fujian) Co., Ltd. Mr. Xinliang Wu RD-SE Rongqiao Economic and Technological Development Zone Fuqing City, Fujian Province P.R. China

Date : 28.02.2017 Our ref. : WangAn ZJ Your ref.: 1140032772

Ref : CB Certificate Japan

Type of Equipment : LCD Monitor Model Designation : See Certificate Certificate No. : JPTUV-078677 Report No. : 17059636 001

Dear Mr. Xinliang Wu,

Thank you very much for your interest in our services.

Please find enclosed your certification documents.

We appreciate your support and would like to offer our assistance in the approval of your future products through our extensive range of technical services.

Please feel free to contact us whatever your requirements may be.

With kind regards,

Certification Body

CC: TPV Electronics (Fujian) Co., Ltd.

Enclosure

证书的详细资料请登陆www.tuvdotcom.com查阅,或拨打我司客服热线800 999 3668 / 400 883 1300咨询

TÜV Rheinland (China) Ltd. 莱茵检测认证服务(中国)有限公司 Unit 707, AVIC Bldg., No. 10B, Central Road, East 3rd Ring Road, Chaoyang District, Beijing, 100022, P.R.China

北京市朝阳区东三环中路乙10号 艾维克大厦707室 邮编: 100022 Tel: (8610)6566 6660 Fax: (8610)6566 6667 e-mail: service-gc@tuv.com Internet: http://www.chn.tuv.com



Test Report issued under the responsibility of:



TEST REPORT

IEC 60950-1 Information technology equipment – Safety – Part 1: General requirements

Report Number:	17059636 001
Date of issue	Feb. 22. 2017
Total number of pages:	50
Applicant's name:	TPV Electronics (Fujian) Co., Ltd.
Address:	Rongqiao Economic and Technological Development Zone, Fuqing City, Fujian Province, P.R.China
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 publication may be reproduced in whole or copyright owner and source of the material. IEC from the reader's interpretation of the reproduce	EE takes no responsibility for and will not assume liability for damages resulting d material due to its placement and context.
This publication may be reproduced in whole or copyright owner and source of the material. IEC from the reader's interpretation of the reproduce If this Test Report Form is used by nor Scheme procedure shall be removed. This report is not valid as a CB Test I	EE takes no responsibility for and will not assume liability for damages resulting d material due to its placement and context.
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This publication may be reproduced in whole or copyright owner and source of the material. IEC from the reader's interpretation of the reproduce If this Test Report Form is used by nor Scheme procedure shall be removed. This report is not valid as a CB Test I and appended to a CB Test Certificat General disclaimer: The test results presented in this report This report shall not be reproduced, exc Laboratory. The authenticity of this Test responsible for this Test Report. Test item description	EE takes no responsibility for and will not assume liability for damages resulting d material due to its placement and context. h-IECEE members, the IECEE/IEC logo and the reference to the CB Report unless signed by an approved CB Testing Laboratory the issued by an NCB in accordance with IECEE 02. relate only to the object tested. tept in full, without the written approval of the Issuing CB Testing Report and its contents can be verified by contacting the NCB, LCD Monitor AOC TPV Electronics (Fujian) Co., Ltd. Rongqiao Economic and Technological Development Zone,

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Test	Testing procedure and testing location:			
	CB Testing Laboratory:	TÜV Rheinland (Shenzł	nen) Co., Ltd.	
Testi	ng location/ address :		ding 1, Cybio Technology No.2 Road, North Hi-tech enzhen Nanshan District	
	Associated CB Testing Laboratory:			
Testi	ng location/ address :			
Teste	ed by (name + signature):	Anderson Wang Senior Project Manager	And	
Appr	oved by (name + signature) :	Steven Lin Technical Reviewer	Sal.	
	Testing procedure: TMP/CTF Stage 1:			
Testi	ng location/ address			
	ed by (name + signature)			
	oved by (name + signature)	· ·		
1.19191				
	Testing procedure: WMT/CTF Stage 2:			
Testi	ng location/ address:			
Teste	ed by (name + signature):			
Witne	essed by (name + signature):			
Appr	oved by (name + signature)			
	Testing procedure: SMT/CTF Stage 3 or 4:			
Testi	ng location/ address:			
Teste	ed by (name + signature):			
Witne	essed by (name + signature):			
Appr	oved by (name + signature):			
Supe	rvised by (name + signature):			

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

- Photo documentation
- National Differences
- Appendix ZZ

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

Summary of testing:

Tests performed (name of test and test clause): Following tests performed during evaluation

name of test	test clause number
Input Current Test	1.6.2
Durability of Marking Test	1.7.11
Access to energized parts	2.1.1.1
Energy hazard in Operator Access Area	2.1.1.5
SELV limits for Normal Conditions	2.2.2
SELV limits for Abnormal Conditions	2.2.3
Limit Current Circuit	2.4.2
Limited power sources	2.5
Humidity Conditioning	2.9.2
Working Voltage over Insulation	2.10.2
Clearance and creepage distance measurements	2.10.3 & 2.10.4
Stability test	4.1
Steady force test, 10 N	4.2.2
Steady Force Test, 250N	4.2.4
Impact Test (Steel Ball)	4.2.5
Drop test	4.2.6
Stress Relief Test	4.2.7
Maximum Temperature Test	4.5.2
Touch Current and PE current	5.1.6
Electric Strength Test	5.2
Fault Condition Test	5.3
Note:	·

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, EU A-Deviations, AT, AU*, BE, CA, CH, CN, CZ, DE, DK, FI, FR, GB, GR, HU, IT, IL*, JP*, KR*, NL, NO, PL, SE, SI, SK, US

Explanation of used codes: AT=Austria, AU=Australia, BE=Belgium, CA=Canada, CH=Switzerland, CN=P.R.China, CZ=Czech Republic, DE=Germany, DK=Denmark, FI=Finland, FR=France, GB=United Kingdom, GR=Greece, HU=Hungary, IT=Italy, IL=Israel, JP=Japan, KR=Korea, NL=The Netherlands, NO=Norway, PL=Poland, SE=Sweden, SI=Slovenia, SK=Slovakia, US=United States of America

For National Differences see end of this test report.

* National differences to IEC 60950-1:2005 (Second Edition) + Am 1:2009 evaluated.

The product fulfils the requirements of EN 60950-1:2006 + A11: 2009 + A1: 2010 + A12: 2011 + A2: 2013

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.

Image: Non-State State St	not cause harmful interference,and (2)this device must accept any interference received,including interference that may cause undesired operation. CAN ICES-3(B)NMB-3(B)	HXXXXXXXXXXXLF Serial NO.:XXXXXXXXXXXXXXXXX
AOC International Europe B.V. Amstelgebouw, 6th floor Prins Bernhardplein 200 1097 JB Amsterdam The Netherlands		
Envision Peripherals, Inc. 47490 Seabridge Drive Fremont, CA 94538 USA		ock Hazard, Do Not Open. le électrocution, ne retirez pas le couvercle! com Made in China F40G238W61519A

Test item particulars:	
Equipment mobility:	[x] movable [] hand-held [] transportable [] stationary [] for building-in [] direct plug-in
Connection to the mains:	 [x] pluggable equipment [x] type A [] type B [] permanent connection [x] detachable power supply cord [] non-detachable power supply cord [] not directly connected to the mains
Operating condition:	[x] continuous [] rated operating / resting time:
Access location:	[x] operator accessible [] restricted access location
Over voltage category (OVC):	[] OVC I [x] OVC II [] OVC III [] OVC IV [] other:
Mains supply tolerance (%) or absolute mains	
supply values:	
Tested for IT power systems	[] Yes [x] No
IT testing, phase-phase voltage (V)	
Class of equipment:	[] Class I [x] Class II [] Class III [] Not classified
Considered current rating of protective device as part of the building installation (A)	N/A
Pollution degree (PD):	[] PD 1 [x] PD 2 [] PD 3
IP protection class	IPX0
Altitude during operation (m)	Up to 5000
Altitude of test laboratory (m)	Less than 2000
Mass of equipment (kg):	For monitor only: 3.15kg; for AC/DC adapter: 0.57 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:	Feb.07.2017
Date(s) of performance of tests:	Feb.07.2017-Feb.20.2017
General remarks:	
"(See Enclosure #)" refers to additional information ap "(See appended table)" refers to a table appended to th	

Throughout this report a \Box comma / \boxtimes 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	⊠ Yes		
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	Not applicable		
When differences exist; they shall be identified in	he General product information section.		
Name and address of factory (ies)	Unique No. 11, Zhuankou Development District of Economic Technological Development Zone, Wuhan City 430056,		
	 P.R. China TPV Electronics (Fujian) Co., Ltd. Shangzheng, Yuan Hong Road, Fuging City 		
	 Fujian Province, P.R. China Envision Industry of Electronic Products Ltd Rodovia Anhanguera S/N-KM 49 Tijuco Preto-Jundiaí-SP-13.205-700, Brazil 		
	4 L&T Display Technology (Fujian) Ltd. Optoelectronic Park, Rongqiao Economic and Technological, Development Zone,		
	 Fuqing, Fujian 350301, P.R. China TPV Electronics (Fujian) Co., Ltd. Rongqiao Economic and Technological Development Zone, Fuqing City, Fujian Province, P.R. China 		
	 6 Trend Smart CE Mexico S de RL de CV Avenida Sor Juana Ines de la Cruz de 1960 Nueva Tijuana, 22435 Tijuans Baja California, MEXICO 		
	7 TPV Display Technology (Beihai) Co., Ltd. China Electronic Beihai Industry Park, Northeast of the Crossing Between Taiwan Road and Jilin Road, Beihai City, Guangxi, P.R. China		
	 8 TPV Technology (Qingdao) Co., Ltd. 8 No.99 Huoju Road, High-tech Industrial Development Zone, Qingdao City, Shandon Province, P.R. China 		
	9 TPV Display Technology (China) Co., Ltd. No.106 Jinghai 3 Rd., BDA, Beijing City		
	 100176, P.R. China. Hefei Huntkey Display Technology Co.,Ltd. South Jinxiu Road, East Qingtan Road, Economic And Technological Development 		
	Zone, Hefei, Anhui 230601, P.R. China 11 TPV Electronics (Fujian) Co., Ltd. Optoelectronic Park, Rongqiao Economic and Technological Development Zone,		
	Fuqing City, Fujian Province, P.R. China12 Envision Indústria de Produtos Eletrônicos Ltda.		
	Av. Torquato Tapajós, 2236, Flores - CEP 69058-830 - Manaus/AM Brasil		

General product information:

The model mentioned on cover page is LCD monitor with LED backlight which is intended for general office use. The unit has the following features:

- 1. LCD Type: 23.8 inch TFT LCD with LED backlight (resolution: 1920 x 1080);
- 2. External AC/DC adapter, which has built-in power board 715G8741. AC/DC adapter has HDMI-in , AC-in and Mini HDMI ports, and Mini HDMI has transmission function of signal and power;
- 3. Main board 715G8407 with DC/DC converter circuit;
- The external bottom plastic enclosure is regarded as electrical enclosure, mechanical enclosure and fire enclosure, and others internal plastic enclosure is regarded as electrical enclosure and mechanical enclosure, made of min. V-0 material;
- 5. The external metal chassis is considered as electrical enclosure, mechanical enclosure and fire enclosure;
- 6. Maximum declared ambient: 40°C.

Other comments:

Declaration of the manufacturer: the sample(s) submitted for evaluation is (are) representative of the products from each factory.

Definition of variable(s):

Variable:	Range of varia	able:	Content:	
*	0-9, A-Z, a-z,	- , ∖ , / , + or blank	represent different enclosure colou marketing purpose	ir for
Abbreviatior	ns used in the re	port:		
- normal cond - functional ir - double insu	sulation	N.C. OP DI	 single fault conditions basic insulation supplementary insulation 	S.F.C BI SI
polarity		вор	- reinforced insulation	RI
ndicate use	d abbreviations	(if any)		

Report No. 17059636 001

IEC 60950-1

Clause	Requirement + Test	Result - Remark	Verdict

	GENERAL			
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1.5	Components		
1.5.1	General		
	Comply with IEC 60950-1 or relevant component standard	(see appended tables 1.5.1)	
1.5.2	Evaluation and testing of components	Components which are certified to IEC and/or national standards are used correctly within their ratings. Components not covered by IEC standards are tested under the conditions present in the equipment.	Ρ
1.5.3	Thermal controls	No thermal controls.	N/A
1.5.4	Transformers	Transformers used are suitable for their intended application and comply with the relevant requirements of the standard and particularly Annex C.	Ρ
1.5.5	Interconnecting cables	Interconnecting cable does not carry voltage higher than SELV and no higher energy level than 240VA.	Ρ
1.5.6	Capacitors bridging insulation	Between lines: no capacitors used.	Р
		Between primary and secondary: Y1 capacitors (C907 and C912) according to IEC 60384-14 used.	
1.5.7	Resistors bridging insulation	See below.	Р
1.5.7.1	Resistors bridging functional, basic or supplementary insulation	Only discharge resistors bridging insulation between L&N.	Ρ
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		N/A
1.5.9	Surge suppressors	No surge suppressors.	N/A
1.5.9.1	General		N/A
1.5.9.2	Protection of VDRs		N/A
1.5.9.3	Bridging of functional insulation by a VDR		N/A

TRF No. IEC60950_1F

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Clause	Requirement + Test	Result - Remark	Verdict
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		Р
1.6.1	AC power distribution systems	TN power system	Р
1.6.2	Input current	(see appended table 1.6.2)	Р
1.6.3	Voltage limit of hand-held equipment	This appliance is not hand- held equipment.	N/A
1.6.4	Neutral conductor	The neutral conductor insulated from earth and from the body throughout the equipment as if it were a line conductor	Ρ

1.7	Marking and instructions		Р
1.7.1	Power rating and identification markings	The power rating marking is provided and is readily visible in operator access area.	Ρ
1.7.1.1	Power rating marking		Р
	Multiple mains supply connections	Single power source	N/A
	Rated voltage(s) or voltage range(s) (V)	See copy of marking plate	Р
	Symbol for nature of supply, for d.c. only	AC source	Р
	Rated frequency or rated frequency range (Hz):	See copy of marking plate	Р
	Rated current (mA or A)	See copy of marking plate	Р
1.7.1.2	Identification markings		Р
	Manufacturer's name or trade-mark or identification mark	See copy of marking plate	Р
	Model identification or type reference	See copy of marking plate	Р
	Symbol for Class II equipment only	See copy of marking plate	Р
	Other markings and symbols	Additional symbol or marking does not give rise to misunderstanding.	Р
1.7.1.3	Use of graphical symbols		N/A
1.7.2	Safety instructions and marking	English safety instruction provided.	Р
1.7.2.1	General		Р
1.7.2.2	Disconnect devices	AC inlet serves as disconnect device.	Р

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	IEC 60950-1		
Clause	Requirement + Test	Result - Remark	Verdict
1.7.2.3	Overcurrent protective device	Not type B pluggable equipment or permanently connected equipment.	N/A
1.7.2.4	IT power distribution systems	TN power system.	N/A
1.7.2.5	Operator access with a tool	No such access required.	N/A
1.7.2.6	Ozone	Ozone not used or generated.	N/A
1.7.3	Short duty cycles	Equipment is designed for continuous operation.	N/A
1.7.4	Supply voltage adjustment	Single input voltage range without adjustment.	N.A
	Methods and means of adjustment; reference to installation instructions		N/A
1.7.5	Power outlets on the equipment	No power outlets provided.	N/A
1.7.6	Fuse identification (marking, special fusing characteristics, cross-reference)	Build-in fuse F901 (primary T2AL/250V marked on PCB).	Ρ
		CAUTION: FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE ONLY WITH SAME TYPE AND RATING OF FUSE.	
		Not located in operator access areas.	
1.7.7	Wiring terminals	See below.	Р
1.7.7.1	Protective earthing and bonding terminals:	Appliance inlets approved according to IEC 60320-1 are used.	Ρ
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	No such conductors.	N/A
1.7.8	Controls and indicators	See below.	Р
1.7.8.1	Identification, location and marking	No switches and controls.	N/A
1.7.8.2	Colours:		N/A
1.7.8.3	Symbols according to IEC 60417	No symbols used.	N/A
1.7.8.4	Markings using figures	No indicators for different positions.	N/A
1.7.9	Isolation of multiple power sources	Only one supply voltage range provided.	N/A
1.7.10	Thermostats and other regulating devices	No such components.	N/A

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IEC 60950-1

Clause	Requirement + Test	Result - Remark	Verdict
1.7.11	Durability	The label was subjected to the permanence of marking test. The label was rubbed with cloth soaked with water for 15 sec. and then again for 15 sec. with the cloth soaked with petroleum spirit.	Р
		After this test there was no damage to the label. The marking on the label did not fade. There was no curling or lifting of the label edge	
1.7.12	Removable parts	None.	N/A
1.7.13	Replaceable batteries	No batteries.	N/A
	Language(s)		
1.7.14	Equipment for restricted access locations:	Equipment not intended for installation in restricted access locations.	N/A

2	PROTECTION FROM HAZARDS		Р
2.1	Protection from electric shock and energy hazard	ds	Р
2.1.1	Protection in operator access areas	Only SELV signal interface accessible by operator	Р
2.1.1.1	Access to energized parts	See below	Р
	Test by inspection	Protection established by metal enclosure and bottom plastic enclosure.	Ρ
	Test with test finger (Figure 2A)	Protection established by metal enclosure and bottom plastic enclosure.	Р
	Test with test pin (Figure 2B)	No access to any energized parts.	Р
	Test with test probe (Figure 2C)		N/A
2.1.1.2	Battery compartments	No battery compartment.	N/A
2.1.1.3	Access to ELV wiring	No ELV wiring in operator accessible area.	N/A
	Working voltage (Vpeak or Vrms); minimum distance through insulation (mm)	(see appended tables 2.10.2 and 2.10.5)	—
2.1.1.4	Access to hazardous voltage circuit wiring	No hazardous voltage wiring in operator accessible area.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
2.1.1.5	Energy hazards	The energy does not exceed 240VA between any two points in accessible connector of secondary circuit. (see appended table 2.1.1.5.)	Ρ
2.1.1.6	Manual controls	No manual controls.	N/A
2.1.1.7	Discharge of capacitors in equipment	No X-capacitor. No risks of electric shock.	N/A
	Measured voltage (V); time-constant (s):		
2.1.1.8	Energy hazards – d.c. mains supply	a.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	No service access area.	N/A
2.1.3	Protection in restricted access locations	Equipment not intended for installation in restricted access locations.	N/A

2.2	SELV circuits		Р
2.2.1	General requirements	The secondary circuits were tested as SELV. See sub- clauses 2.2.1 to 2.2.4.	Р
2.2.2	Voltages under normal conditions (V)	42.4V peak or 60Vd.c. is not exceeded in SELV circuit under normal operation.	Р
2.2.3	Voltages under fault conditions (V)	Single fault did not cause excessive voltage in accessible SELV circuits. Limits of 71V peak and 120V d.c. were not exceeded within 0.2 sec. and limits 42.4V peak and 60V d.c. were not exceeded for longer than 0.2 sec., see appended tables 2.2.3 and 5.3.	Ρ
2.2.4	Connection of SELV circuits to other circuits:	See sub-clauses 2.2.2 and 2.2.3. No direct connection between SELV and any primary circuits.	Ρ

2.3	TNV circuits	N/A
2.3.1	Limits	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
		1	
	Type of TNV circuits		
2.3.2	Separation from other circuits and from accessible parts		N/A
2.3.2.1	General requirements		N/A
2.3.2.2	Protection by basic insulation		N/A
2.3.2.3	Protection by earthing		N/A
2.3.2.4	Protection by other constructions		N/A
2.3.3	Separation from hazardous voltages		N/A
	Insulation employed		—
2.3.4	Connection of TNV circuits to other circuits		N/A
	Insulation employed:		—
2.3.5	Test for operating voltages generated externally		N/A

2.4	Limited current circuits		Р
2.4.1	General requirements	Primary and secondary circuits bridged by Y1 type capacitors C907 and C912 on power board. The pin connected with secondary circuits was disconnected and the measuring instrument of Figure D.1 in Annex D was connected between secondary pin and earth during the test.	Ρ
2.4.2	Limit values	(see appended table 2.4.2)	Р
	Frequency (Hz)		
	Measured current (mA)		
	Measured voltage (V)		
	Measured circuit capacitance (nF or µF)		
2.4.3	Connection of limited current circuits to other circuits	Only intended to be connected with SELV circuits.	Р

2.5	Limited power sources		Р
	a) Inherently limited output		N/A
	b) Impedance limited output		N/A
	c) Regulating network or IC current limiter, limits output under normal operating and single fault condition	Regulating network limits the output of +19V in compliance with table 2B, both with and without a simulated single fault in the regulating network.	Ρ

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Clause	Requirement + Test	Result - Remark	Verdict
			1
	Use of integrated circuit (IC) current limiters		
	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	Class II equipment	N/A
2.6.1	Protective earthing	Class II equipment.	N/A
2.6.2	Functional earthing		N/A
	Use of symbol for functional earthing	See above.	N/A
2.6.3	Protective earthing and protective bonding conductors		N/A
2.6.3.1	General		N/A
2.6.3.2	Size of protective earthing conductors		N/A
	Rated current (A), cross-sectional area (mm ²), AWG	See above.	
2.6.3.3	Size of protective bonding conductors		N/A
	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)	See above.	N/A
2.6.3.5	Colour of insulation	See above.	N/A
2.6.4	Terminals		N/A
2.6.4.1	General		N/A
2.6.4.2	Protective earthing and bonding terminals		N/A
	Rated current (A), type, nominal thread diameter (mm)	See above.	
2.6.4.3	Separation of the protective earthing conductor from protective bonding conductors		N/A
2.6.5	Integrity of protective earthing		N/A
2.6.5.1	Interconnection of equipment		N/A
2.6.5.2	Components in protective earthing conductors and protective bonding conductors		N/A
2.6.5.3	Disconnection of protective earth		N/A
2.6.5.4	Parts that can be removed by an operator		N/A
2.6.5.5	Parts removed during servicing		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
2.6.5.6	Corrosion resistance		N/A
2.6.5.7	Screws for protective bonding		N/A
2.6.5.8	Reliance on telecommunication network or cable distribution system		N/A

2.7	.7 Overcurrent and earth fault protection in primary circuits		
2.7.1	Basic requirements	The equipment relies on fuse or circuit breaker of the wall outlet protection of the building installation in regard to L to N short-circuits. A build-in fuse provided as overcurrent protection device (see 5.3)	Ρ
	Instructions when protection relies on building installation	Pluggable equipment type A.	N/A
2.7.2	Faults not simulated in 5.3.7	The protection devices are well dimensioned and mounted.	Р
2.7.3	Short-circuit backup protection	Building installation is considered as providing short- circuit backup protection.	Р
2.7.4	Number and location of protective devices:	Overcurrent protection by one built-in fuse	Р
2.7.5	Protection by several devices	Protection by one fuse only.	N/A
2.7.6	Warning to service personnel:	No service work necessary.	N/A

2.8	Safety interlocks	N/A
2.8.1	General principles	N/A
2.8.2	Protection requirements	N/A
2.8.3	Inadvertent reactivation	N/A
2.8.4	Fail-safe operation	N/A
	Protection against extreme hazard	N/A
2.8.5	Moving parts	N/A
2.8.6	Overriding	N/A
2.8.7	Switches, relays and their related circuits	N/A
2.8.7.1	Separation distances for contact gaps and their related circuits (mm):	N/A
2.8.7.2	Overload test	N/A
2.8.7.3	Endurance test	N/A
2.8.7.4	Electric strength test	N/A
2.8.8	Mechanical actuators	N/A

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Clause Requirement + Test Result - Remark Verdict

2.9	Electrical insulation		Р
2.9.1	Properties of insulating materials	Natural rubber, asbestos or hygroscopic material not used.	Р
2.9.2	Humidity conditioning	Performed at 40 °C, 95% R.H. for 120 h by client's request.	Р
	Relative humidity (%), temperature (°C):	See above.	
2.9.3	Grade of insulation	See above.	Р
2.9.4	Separation from hazardous voltages	The adequate levels of safety insulation provided and maintained to comply with the requirements of this standard	Р
	Method(s) used:	SELV separated from primary by reinforced or double insulation.	

2.10	Clearances, creepage distances and distances through insulation		
2.10.1	General	See sub-clauses 2.10.3, 2.10.4 and 2.10.5.	Р
2.10.1.1	Frequency	Considered	Р
2.10.1.2	Pollution degrees	2	Р
2.10.1.3	Reduced values for functional insulation	Considered	Р
2.10.1.4	Intervening unconnected conductive parts	Considered	Р
2.10.1.5	Insulation with varying dimensions	Insulation kept homogenous	N/A
2.10.1.6	Special separation requirements	Not applied.	N/A
2.10.1.7	Insulation in circuits generating starting pulses	No such circuits.	N/A
2.10.2	Determination of working voltage		Р
2.10.2.1	General	The rms and the peak voltage were measured with unit connected to a 240V TN power system. The input neutral and secondary ground were connected during measurement.	Ρ
		Pollution Degree 2 and Overvoltage Category II considered.	
2.10.2.2	RMS working voltage	See table 2.10.2	Р
2.10.2.3	Peak working voltage	See table 2.10.2	Р
2.10.3	Clearances	See below and advantage of annex G is not considered.	Р
2.10.3.1	General	Considered.	Р

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Clause	Requirement + Test	Result - Remark	Verdict		
2.10.3.2	Mains transient voltages		Р		
	a) AC mains supply	240V a.c. and Overvoltage Category II	Р		
	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)	Р		
2.10.3.4	Clearances in secondary circuits	Sub-clause 5.3.4 considered.	Р		
2.10.3.5	Clearances in circuits having starting pulses		N/A		
2.10.3.6	Transients from a.c. mains supply	Normal transient voltage considered (overvoltage category II for primary circuit).	Р		
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		Р		
2.10.4.1	General		Р		
2.10.4.2	Material group and comparative tracking index		Р		
	CTI tests:	Material group IIIb is assumed to be used	—		
2.10.4.3	Minimum creepage distances	(see appended table 2.10.3 and 2.10.4)	Р		
2.10.5	Solid insulation		Р		
2.10.5.1	General		Р		
2.10.5.2	Distances through insulation	(see appended table 2.10.5)	Р		
2.10.5.3	Insulating compound as solid insulation	Only inside approved optocoupler.	N/A		
2.10.5.4	Semiconductor devices	Approved optocoupler complies to IEC 60747-5-2 and having dti ≧0.4mm.			
2.10.5.5.	Cemented joints	Not applied.	N/A		
2.10.5.6	Thin sheet material – General		Р		
2.10.5.7	Separable thin sheet material	Used in transformer.	Р		

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Clause	Requirement + Test	Result - Remark	Verdict
	Number of layers (pcs):	2 layers for reinforced insulation.	_
2.10.5.8	Non-separable thin sheet material	Not applied.	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		Р
	Electric strength test	(see appended table 5.2)	
2.10.5.11	Insulation in wound components	Approved triple insulated wire used for secondary windings of T901.	Р
2.10.5.12	Wire in wound components		Р
	Working voltage	>71Vpeak.	Р
	a) Basic insulation not under stress		N/A
	b) Basic, supplementary, reinforced insulation:		Р
	c) Compliance with Annex U:	Approved triple insulated wire used.	Р
	Two wires in contact inside wound component; angle between 45° and 90°	Physical separation provided by insulation tape to relieve mechanical stress at the crossover point.	Р
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	Not applied.	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		Р
2.10.6.1	Uncoated printed boards	(see appended table 2.10.3 and 2.10.4)	Р
2.10.6.2	Coated printed boards	Not applied.	N/A
2.10.6.3	Insulation between conductors on the same inner surface of a printed board	Not multi-layer printed board.	N/A
2.10.6.4	Insulation between conductors on different layers of a printed board	See above.	N/A
	Distance through insulation		N/A
	Number of insulation layers (pcs)		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
2.10.7	Component external terminations	Coatings not used over terminations to increase effective clearance and creepage distance.	N/A
2.10.8	Tests on coated printed boards and coated components		N/A
2.10.8.1	Sample preparation and preliminary inspection		N/A
2.10.8.2	Thermal conditioning		N/A
2.10.8.3	Electric strength test		N/A
2.10.8.4	Abrasion resistance test		N/A
2.10.9	Thermal cycling		N/A
2.10.10	Test for Pollution Degree 1 environment and insulating compound	Pollution Degree 2.	N/A
2.10.11	Tests for semiconductor devices and cemented joints	Photo couplers are approved components. No other components applied for.	N/A
2.10.12	Enclosed and sealed parts	No hermetically sealed component.	N/A

3	WIRING, CONNECTIONS AND SUPPLY		Р
3.1 3.1.1	General		Р
	Current rating and overcurrent protection	All internal wires are UL approved and PVC insulated. Rated VW-1, min 80°C, 300V. Internal wiring gauge is suitable for current intended to be carried. (See appended table 4.5.1)	Ρ
		No internal wire for primary power distribution.	
3.1.2	Protection against mechanical damage	Wires do not touch sharp edges which could damage the insulation and cause hazard.	Ρ
3.1.3	Securing of internal wiring	Wires are secured by soldering method and additionally fixed by glue or by connectors.	Ρ
3.1.4	Insulation of conductors	The insulation of the individual conductors suitable for the application and the working voltage. For the insulation material see 3.1.1.	Ρ
3.1.5	Beads and ceramic insulators	Not used.	N/A
3.1.6	Screws for electrical contact pressure		Р

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Clause	Requirement + Test	Result - Remark	Verdict		
3.1.7	Insulating materials in electrical connections	The integrity of protective bonding made by screw, PCB trace and spring washer.	Р		
3.1.8	Self-tapping and spaced thread screws	No self-tapping screws are used.	N/A		
3.1.9	Termination of conductors	All terminations of conductors are reliable secured by use of solder-pins and other mechanical fixing means.	Р		
	10 N pull test		Р		
3.1.10	Sleeving on wiring		N/A		

3.2	Connection to a mains supply		Р
3.2.1	Means of connection	See below.	Р
3.2.1.1	Connection to an a.c. mains supply	Appliance inlet used.	Р
3.2.1.2	Connection to a d.c. mains supply	Only a.c. mains supply.	N/A
3.2.2	Multiple supply connections	Only for one mains connection	N/A
3.2.3	Permanently connected equipment	Unit is not a permanently connected equipment.	N/A
	Number of conductors, diameter of cable and conduits (mm):		
3.2.4	Appliance inlets	Approved appliance inlet used.	Р
3.2.5	Power supply cords	See below.	N/A
3.2.5.1	AC power supply cords	Not provided.	N/A
	Туре:		
	Rated current (A), cross-sectional area (mm ²), AWG:		
3.2.5.2	DC power supply cords	Not provided.	N/A
3.2.6	Cord anchorages and strain relief	Appliance inlet used	N/A
	Mass of equipment (kg), pull (N):		
	Longitudinal displacement (mm):		
3.2.7	Protection against mechanical damage		N/A
3.2.8	Cord guards	No 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	Not permanent connection or non-detachable power cord type.	N/A

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Verdict

3.3	Wiring terminals for connection of external conductors		N/A
3.3.1	Wiring terminals	AC inlet used.	N/A
3.3.2	Connection of non-detachable power supply cords		N/A
3.3.3	Screw terminals		N/A
3.3.4	Conductor sizes to be connected		N/A
	Rated current (A), cord/cable type, cross-sectional area (mm 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		Р
3.4.1	General requirement	Disconnect device provided	Р
3.4.2	Disconnect devices	Appliance coupler used as disconnect device.	Р
3.4.3	Permanently connected equipment	Not permanently connected equipment	N/A
3.4.4	Parts which remain energized	When AC coupler is disconnected from inlet, there are no parts remaining with hazardous voltage or energy in the equipment.	Ρ
3.4.5	Switches in flexible cords	None.	N/A
3.4.6	Number of poles - single-phase and d.c. equipment	The appliance coupler disconnects both poles simultaneously.	Р
3.4.7	Number of poles - three-phase equipment	Single-phase equipment.	N/A
3.4.8	Switches as disconnect devices	No such switch.	N/A
3.4.9	Plugs as disconnect devices	Plug not used.	N/A
3.4.10	Interconnected equipment	Only interconnected with other unit through SELV interface.	Р
3.4.11	Multiple power sources	Single power source	N/A

3.5	Interconnection of equipment		Р
3.5.1	General requirements	This power supply is not considered for connection to TNV.	Р

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Clause	Requirement + Test	Result - Remark	Verdict	
3.5.2	Types of interconnection circuits:	Interconnection circuits of SELV through the connector. No ELV interconnection circuits.	Р	
3.5.3	ELV circuits as interconnection circuits	No ELV interconnection.	N/A	
3.5.4	Data ports for additional equipment	No data port.	N/A	

4	PHYSICAL REQUIREMENTS Stability		Р
4.1			N/A
	Angle of 10°	Mass less than 7.0kg.	N/A
	Test force (N)	Equipment is not a floor standing unit.	N/A

4.2	Mechanical strength		Р
4.2.1	General	See below. After tests, unit comply with 2.1.1, 2.6.1, 2.10 and 4.4.1.	Ρ
	Rack-mounted equipment.		N/A
4.2.2	Steady force test, 10 N	Applied on internal components	Ρ
		No components located such that distances according to 2.10 can be reduced.	
4.2.3	Steady force test, 30 N	No internal enclosure.	N/A
4.2.4	Steady force test, 250 N	250 N applied to outer enclosure of external adapter. No energy or other hazards. Test was performed for all sources of enclosure material.	Ρ
4.2.5	Impact test	500g steel ball falls freely from 1.3m on top, back and bottom of plastic enclosure, no access to hazardous parts	Ρ
-	Fall test	See above.	Р
	Swing test	See above.	Р
4.2.6	Drop test; height (mm) :	Test on of external adapter. For the all sources of plastic enclosure material listed in the appended table 1.5.1 are tested. After subjected 3 drops from 1m height on a hardwood surface, no damage to insulation, no energy hazards or damage to the enclosure integration.	Ρ

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Clause	Requirement + Test	Result - Remark	Verdict
4.2.7	Stress relief test	73.7°C, 7 hours, no deformation on all sources of plastic enclosure.	Р
4.2.8	Cathode ray tubes	No CRT	N/A
	Picture tube separately certified:		
4.2.9	High pressure lamps	No high pressure lamps provided.	N/A
4.2.10	Wall or ceiling mounted equipment; force (N):	No such function.	N/A

4.3	Design and construction		Р
4.3.1	Edges and corners	Edges and corners of the enclosure are rounded.	Р
4.3.2	Handles and manual controls; force (N):	No safety relevant handles or manual controls.	N/A
4.3.3	Adjustable controls	No such controls.	N/A
4.3.4	Securing of parts	All parts secured properly. Spring washer used for securing screws.	Ρ
4.3.5	Connection by plugs and sockets		N/A
4.3.6	Direct plug-in equipment	Not such equipment.	N/A
	Torque:		
	Compliance with the relevant mains plug standard		N/A
4.3.7	Heating elements in earthed equipment	None.	N/A
4.3.8	Batteries	No batteries.	N/A
	- Overcharging of a rechargeable battery		N/A
	- Unintentional charging of a non-rechargeable battery		N/A
	- Reverse charging of a rechargeable battery		N/A
	- Excessive discharging rate for any battery		N/A
4.3.9	Oil and grease	None	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	None	N/A
4.3.12	Flammable liquids:	None	N/A
	Quantity of liquid (I):		N/A
	Flash point (°C):		N/A
4.3.13	Radiation		Р
4.3.13.1	General	See below	Р

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Clause	Requirement + Test	Result - Remark	Verdict
	1		
4.3.13.2	Ionizing radiation	No ionizing radiation.	N/A
	Measured radiation (pA/kg):		
	Measured high-voltage (kV):		
	Measured focus voltage (kV):		
	CRT markings:		
4.3.13.3	Effect of ultraviolet (UV) radiation on materials	No ultraviolet radiation	N/A
	Part, property, retention after test, flammability classification		N/A
4.3.13.4	Human exposure to ultraviolet (UV) radiation:	No ultraviolet radiation	N/A
4.3.13.5	Lasers (including laser diodes) and LEDs	No LED.	N/A
4.3.13.5.1	Lasers (including laser diodes)	See above.	N/A
	Laser class		
4.3.13.5.2	Light emitting diodes (LEDs)		
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

4.5	Thermal requirements		Р
4.5.1	General		Р
4.5.2	Temperature tests		Р
	Normal load condition per Annex L		—
4.5.3	Temperature limits for materials	(see appended table 4.5)	Р

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Clause	Poquiromont + Toot	Result - Remark	Verdict
Clause	Requirement + Test	Result - Remark	verdict
	1	1	
4.5.4	Touch temperature limits	(see appended table 4.5)	Р
4.5.5	Resistance to abnormal heat:	Bobbin materials of all transformers T901 are Phenolic that is accepted without further tests.	Ρ

4.6	Openings in enclosures		Р
4.6.1	Top and side openings	No openings	Р
	Dimensions (mm)		
4.6.2	Bottoms of fire enclosures	No openings	Р
	Construction of the bottomm, dimensions (mm) :		
4.6.3	Doors or covers in fire enclosures	No doors or covers.	N/A
4.6.4	Openings in transportable equipment	No openings.	Р
4.6.4.1	Constructional design measures		N/A
	Dimensions (mm)		
4.6.4.2	Evaluation measures for larger openings		N/A
4.6.4.3	Use of metallized parts		N/A
4.6.5	Adhesives for constructional purposes		N/A
	Conditioning temperature (°C), time (weeks):		

4.7	Resistance to fire		Р
4.7.1	Reducing the risk of ignition and spread of flame	No excessive temperatures. No easily burning materials employed. Fire enclosure provided. Safety relevant components used within their specified temperature limits.	Ρ
	Method 1, selection and application of components wiring and materials	(see appended table 4.7)	Р
	Method 2, application of all of simulated fault condition tests		N/A
4.7.2	Conditions for a fire enclosure	With having the following parts	Р
		 Components in primary 	
		 Components in secondary (not supplied by LPS, and not applied all fault condition test) 	
		 Insulated wiring 	
		The fire enclosure is required.	
4.7.2.1	Parts requiring a fire enclosure	See above.	Р

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4.7.2.2	Parts not requiring a fire enclosure	For components in secondary circuits supplied by LPS.	Р
4.7.3	Materials	·	Р
4.7.3.1	General	PCB rated V-1 or better	Р
4.7.3.2	Materials for fire enclosures	(see appended table 1.5.1)	Р
4.7.3.3	Materials for components and other parts outside fire enclosures	No components outside fire enclosure.	N/A
4.7.3.4	Materials for components and other parts inside fire enclosures	Internal components except small parts are V-2, HF-2 or better.	Р
4.7.3.5	Materials for air filter assemblies	No air filter.	N/A
4.7.3.6	Materials used in high-voltage components	No such high voltage components in this meaning	N/A

5	5 ELECTRICAL REQUIREMENTS AND SIMULATED ABNORMAL CONDITION		Р
5.1 5.1.1	Touch current and protective conductor current		Р
	General	(see appended Table 5.1)	Р
5.1.2	Configuration of equipment under test (EUT)	See below.	Р
5.1.2.1	Single connection to an a.c. mains supply	EUT has only one mains connection.	Р
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	Using figure 5A.	Р
5.1.4	Application of measuring instrument	Using measuring instrument in annex D.	Р
5.1.5	Test procedure		Р
5.1.6	Test measurements	(see appended table 5.1.6)	Р
	Supply voltage (V)		—
	Measured touch current (mA)		
	Max. allowed touch current (mA)		
	Measured protective conductor current (mA):		
	Max. allowed protective conductor current (mA):		
5.1.7	Equipment with touch current exceeding 3,5 mA	Touch current does not exceed 3.5mA.	N/A
5.1.7.1	General		N/A
5.1.7.2	Simultaneous multiple connections to the supply		N/A

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5.1.8	Touch currents to telecommunication networks and cable distribution systems and from telecommunication networks	No TNV circuits.	N/A
5.1.8.1	Limitation of the touch current to a telecommunication network or to a cable distribution system		N/A
	Supply voltage (V)		_
	Measured touch current (mA)		
	Max. allowed touch current (mA)		
5.1.8.2	Summation of touch currents from telecommunication networks		N/A
	a) EUT with earthed telecommunication ports:		N/A
	b) EUT whose telecommunication ports have no reference to protective earth		N/A

5.2	5.2 Electric strength		Р
5.2.1	General	(see appended table 5.2)	Р
5.2.2	Test procedure	(see appended table 5.2)	Р

5.3	Abnormal operating and fault conditions		Р
5.3.1	Protection against overload and abnormal operation	(see appended table 5.3)	Р
5.3.2	Motors	Motors not used	N/A
5.3.3	Transformers	(see appended Annex C and table 5.3)	Р
5.3.4	Functional insulation:	By short-circuited, results see appended table 5.3.	Р
5.3.5	Electromechanical components	No electromechanical component.	N/A
5.3.6	Audio amplifiers in ITE:		N/A
5.3.7	Simulation of faults	(see appended table 5.3.)	Р
5.3.8	Unattended equipment	No such equipment.	N/A
5.3.9	Compliance criteria for abnormal operating and fault conditions		Р
5.3.9.1	During the tests	No fire or molten metal occurred and no deformation of enclosure during the tests.	Р
5.3.9.2	After the tests	No reduction of clearance and creepage distance. Electric strength test is made on basic, supplementary and reinforced insulation after test.	Р

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Clause Requirement + Test

Result - Remark

Verdict

6	CONNECTION TO TELECOMMUNICATION NETWORKS		N/A
6.1	Protection of telecommunication network service persons, and users of other equipment connected to the network, from hazards in the equipment		N/A
6.1.1	Protection from hazardous voltages		N/A
6.1.2	Separation of the telecommunication network from earth		N/A
6.1.2.1	Requirements	(see appended table 5.2)	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	6.3	Protection of the telecommunication wiring system from overheating	
		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

Α

ANNEX A, TESTS FOR RESISTANCE TO HEAT AND FIRE

N/A

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	IEC 00950-1		
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 mass not exceeding 18 kg, and for material and of 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

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Clause	Requirement + Test

Result - Remark

В	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	
	Туре	
	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)	

С	ANNEX C, TRANSFORMERS (see 1.5.4 and 5.3.3)		Р
	Position	T901 of power board.	
	Manufacturer	See appended table 1.5.1.	
	Туре	See appended table 1.5.1.	
	Rated values	See appended table 1.5.1.	
	Method of protection	By protection circuit.	

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Clause	Requirement + Test	Result - Remark	Verdict
			1
C.1	Overload test	(see appended table 5.3)	Р
C.2	Insulation	(see appended tables 5.2 and C2)	Р
	Protection from displacement of windings:	Fixed by insulation tape and tube.	Р

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

I	-		N/A
I	E	ANNEX E, TEMPERATURE RISE OF A WINDING (see 1.4.13)	IN/A

F	ANNEX F, MEASUREMENT OF CLEARANCES AND CREEPAGE DISTANCES	Р
	(see 2.10 and Annex G)	

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
	For a d.c. mains supply	N/A

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	- [1	
	b) Transients from a telecommunication network		N/A

	G.6	Determination of minimum clearances:		N/A
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H ANNEX H, IONIZING RADIATION (see 4.3.13) N/A

J	ANNEX J, TABLE OF ELECTROCHEMICAL POTE	NTIALS (see 2.6.5.6)	Р
	Metal(s) used:	Metals which the combination electrochemical potential is less than 0.6 V.	—

К	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)		Р
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 1.6.2.	Р

м	ANNEX M, CRITERIA FOR TELEPHONE RINGING SIGNALS (see 2.3.1)	N/A
M.1	Introduction	N/A
M.2	Method A	N/A
M.3	Method B	N/A
M.3.1	Ringing signal	N/A
M.3.1.1	Frequency (Hz)	
M.3.1.2	Voltage (V)	
M.3.1.3	Cadence; time (s), voltage (V)	

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		0	9	90	_

Clause	Requirement + Test	Result - Remark	Verdict
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 1.4 7.3.2, 7.4.3 and Clause G.5)	5.7.2, 1.5.7.3, 2.10.3.9, 6.2.2.1,	N/A
N.1	ITU-T impulse test generators		N/A
N.2	IEC 60065 impulse test generator		N/A

P ANNEX P, NORMATIVE REFERENCES

Q	ANNEX Q, Voltage dependent resistors (VDRs) (see 1.5.9.1)	N/A
	- Preferred climatic categories	N/A
	- Maximum continuous voltage	N/A
	- Combination pulse current	N/A
	Body of the VDR Test according to IEC60695-11-5	N/A
	Body of the VDR. Flammability class of material (min V-1)	N/A

R	ANNEX R, EXAMPLES OF REQUIREMENTS FOR QUALITY CONTROL PROGRAMMES	N/A
R.1	Minimum separation distances for unpopulated coated printed boards (see 2.10.6.2)	N/A
R.2	Reduced clearances (see 2.10.3)	N/A

S	ANNEX S, PROCEDURE FOR IMPULSE TESTING	(see 6.2.2.3)	N/A
S.1	Test equipment		N/A
S.2	Test procedure		N/A
S.3	Examples of waveforms during impulse testing		N/A

т	ANNEX T, GUIDANCE ON PROTECTION AGAINST (see 1.1.2)	T INGRESS OF WATER	N/A
		See separate test report	

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U	ANNEX U, INSULATED WINDING WIRES FOR US INSULATION (see 2.10.5.4)	E WITHOUT INTERLEAVED	Р
		Used with certified triple insulation wire.	—

V		ANNEX V, AC POWER DISTRIBUTION SYSTEMS	(see 1.6.1)	Р
V.1		Introduction		Р
V.2	2	TN power distribution systems		Р

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)
- 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		
CC.1	General		N/A
CC.2	Test program 1		N/A

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	-		
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		
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

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1.5.1	TABLE :list of crit	ical components			Р
Object/part no.	Manufacture/ trademark	Type/model	Technical data	standard	Mark(s) of conformity ¹⁾
LCD Panel	L&T	LM238***-**** (* can be 0-9, A-Z or blank for marketing purpose only)	23 inch TFT type, with LED back light, power consumption: 11.4W; LED Array Voltage: 50.0V	IEC 60950-1	Tested in equipment
Plastic enclosure for AC/DC adapter	LOTTE	VH-0810(+); VH-0819(+); NH-1017(p); VE-0812(+); NH-1000T(+); VE-1890K; TP-1100(+); NH-1017T; NH-1017(+); NH-1000T+; BF-0670F	V-0 or better, thickness 2.0mm	UL 94 IEC 60695-11-10	UL E115797 and tested with appliance
	Grand	D-1000A	V-0 or better, thickness 2.0mm	UL 94 IEC 60695-11-10	UL E88637 and tested with appliance
	TEIJIN	TN-7500(c); TN-7500F(#); MN-3600H(#); MN-3600V(#);	V-0 or better, thickness 2.0mm	UL 94 IEC 60695-11-10	UL E98529 and tested with appliance
	LG	AF312T1; GN-5001TF(#); LUPOY GN- 5001RF(T); LUPOY GN- 5008HF(#); AF-342T; GN-5001TF; GN-5001RF; GP-1000L	V-0 or better, thickness 2.0mm	UL 94 IEC 60695-11-10	UL E67171 and tested with appliance
	KingFa	HF-606; HF-626; FRABS-518; JH960 6(M); FRHIPS-960	V-0 or better, thickness 2.0mm	UL 94 IEC 60695-11-10	UL E171666 and tested with appliance
Plastic enclosure for LCD Monitor	interchangeable	interchangeable	HB or better, 2.0mm thickness min. 60°C	UL 94	UL
РСВ	Interchangeable	Interchangeable	V-1 or better, min. 105°C, thickness: 1.50mm	UL 94, UL 796	UL

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Clause

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Switching P	ower Supply, typ	e No. 715G8741 k	by TPV		
Appliance Inlet	HONGCHANG	DB-8-13, DB-8	2.5A, 250V, 70°C	IEC/ EN 60320-1 UL 498	VDE, UL
Fuse (F901 in primary)	Conquer	MET, MST, PTU	T2AL, 250Vac	IEC/ EN 60127-1, IEC/ EN 60127-3, UL 248	VDE, UL
	Littelfuse, Inc. Wickmann	392, 382-series	T2AL, 250Vac	IEC/ EN 60127-1, IEC/ EN 60127-3, UL 248	VDE, UL
	Cooper Bussmann	SR-5, SS-5	T2AL, 250Vac	IEC/ EN 60127-1, IEC/ EN 60127-3, UL 248	VDE, UL
	Ever Island Electric Co. Itd and Walter electric	2000, 2010 serie(s)	T2AL, 250Vac	IEC/ EN 60127-1, IEC/ EN 60127-3, UL 248	VDE, UL
Y- Capacitor (C907,	Walsin	АН	Max. 2200pF, 250Vac, 85°C	IEC 60384-14, UL 1414	VDE, UL
C912) Y1 type (optional)	Wansheng	CT7	Max. 2200pF, 250Vac, 85°C	IEC 60384-14, UL 1414	VDE, UL
	TDK	CD	Max. 2200pF, 250Vac, 85°C	IEC 60384-14, UL 1414	VDE, UL
	Murata	КХ	Max. 2200pF, 250Vac, 85°C	IEC 60384-14, UL 1414	VDE, UL
	Matsushita	NS-A	Max. 2200pF, 250Vac, 85°C	IEC 60384-14, UL 1414	VDE, UL
	JYA-NAY	JN	Max. 2200pF, 250Vac, 85°C	IEC 60384-14, UL 1414	VDE, UL
	Hongming	F	Max. 2200pF, 250Vac, 85°C	IEC 60384-14, UL 1414	VDE, UL
	Yinan Don's	CT81	Max. 2200pF, 250Vac, 85°C	IEC 60384-14, UL 1414	VDE, UL
	SUCCESS	SB, SE	Max. 2200pF, 250Vac, 85°C	IEC 60384-14, UL 1414	VDE, UL
Photo Coupler (U902)	Sharp	PC123	Di=0.7mm, int.cr= thermal cycling ³⁾ , ext.cr=8.0mm, min. 3000Vac, 100°C	DIN/EN 60747-5- 2, IEC/EN 60950- 1, UL 1577	VDE, UL, Semko, Fimko, Nemko
	Vishay Semiconductor	TCET1103	Di=0.7mm, int.cr= thermal cycling ³⁾ , ext.cr=8.0mm, min. 3000Vac, 100°C	DIN/EN 60747-5- 2, IEC/EN 60950- 1, UL 1577	VDE, UL, Semko, Fimko

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	Everlight Electronics Co., Ltd.	EL817, EL817M	Di=0.5mm, int.cr=6.0mm, ext.cr=7.7mm, min. 3000Vac, 100°C	DIN/EN 60747-5- 2, IEC/EN 60950- 1, UL 1577	VDE, UL, Semko, Fimko, Nemko
	Lite-on	LTV-817	Di=0.7mm, int.cr= thermal cycling ³⁾ , ext.cr=8.0mm, min. 3000Vac, 100°C	DIN/EN 60747-5- 2, IEC/EN 60950- 1, UL 1577	VDE, UL
	Renesas	PS2561-1, PS2561L-1, PS2561L1-1, PS2561L2-1, PS2561DL1-1	Di=0.4mm, int.cr=thermal cycling ³⁾ , ext.cr=8.0mm, min. 3000Vac, 100°C	DIN/EN 60747-5- 2, IEC/EN 60950- 1, UL 1577	VDE, UL, Semko, Fimko
	TOSHIBA	TLP781F, TLP781, TLP421F	Di=0.4mm, int.cr=thermal cycling ³⁾ , ext.cr=8.0mm, min. 3000Vac, 100°C	DIN/EN 60747-5- 2, IEC/EN 60950- 1, UL 1577	VDE, UL, Fimko, Nemko
Bridging Diode (BD901)	interchangeable	interchangeable	Min. 2A, Min 500V.		
Ripple Capacitor (C901, C902)	interchangeable	interchangeable	Min. 10μF, 450V, 105°C		
Transistor (Q901)	interchangeable	interchangeable	Min. 500V, min. 2.0A.		
Line Choke	Channelon	373G0174550H	105°C		
(L901) (Optional)	ASET	373G0174550X	105°C		
(optional)	LFDJ	373G0174550J	105°C		
Transformer (T901) Alt.)	Channelon	380GL19P552H	Class 130 material (B)	Applicable parts of IEC 60950-1 and according to IEC 60085	Accepted by TÜV Rheinland
Bobbin	Sumitomo	PM-9820	V-0, Phenolic, 150°C	UL 94	UL
Triple insulation wire	Cosmolink	TIW-M	Max.130°C	IEC/EN 60950-1, VDE0805 Teil1, UL 2353	UL, VDE
Teflon tube	GREAT HOLDING	TFL	200°C	UL 224	UL

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r	1		1	1	1
Transformer (T901) Alt.)	LFDJ	380GL19P552J	Class 130 material (B)	Applicable parts of IEC 60950-1 and according to IEC 60085	Accepted by TÜV Rheinland
Bobbin	Sumitomo	PM-9820 PM-8375	V-0, Phenolic, 150°C	UL 94	UL
Triple insulation wire	Cosmolink	TIW-M	Max.130°C	IEC/EN 60950-1, VDE0805 Teil1, UL 2353	UL, VDE
Teflon tube	GREAT HOLDING	TFL	200°C	UL 224	UL
Silicone glue	Shenzhen Anpin Silicone Material Co., Ltd.	AP-688, AP607	Min. V-1, 105°C	UL 94, UL746	UL E257078
	U-Bond Material Technology Co., Ltd.	UB-510	V-0, 105°C	UL 94, UL746	UL E250719

Note(s):

- 1. An asterisk indicates a mark that assures the agreed level of surveillance.
- 2. In the technical data column of optocoupler, where "Dti" means distance through insulation, "Int. cr" means internal creepage distance, and "Ext. cr" means external creepage distance.
- There is no any internal creepage distance. Test according to IEC60950-1:2001, cl. 2.10.8 (same as requirement in IEC60950-1:2005, cl. 2.10.9) has been carried out ten times for the components at 100°C / 25°C / 0°C / 25°C. Humidity treatment of 48 hours as well as electric strength tests at 3000V / 1 minute was carried out to the component after thermal cycling test.
- 4. All sources of photo coupler were certified according to DIN EN60747-5-2 which in compliance with the requirements and provisions of IEC 60747-5-5.
- 5. All sources of photo coupler were in compliance with CTL DSH 759 decision.
- 6. All sources of transformer were checked with same construction.

1.6.2	TABL	TABLE: electrical data (in normal conditions)					
U (V)	I (A)	Irated (A)	P (W)	Fuse #	Ifuse (A)	Condition/status	
90/50	0.37		19.7	F901	0.37	Maximum normal load	
90/60	0.36		19.9	F901	0.36	Maximum normal load	
100/50	0.34	1.5	19.9	F901	0.34	Maximum normal load	
100/60	0.33	1.5	19.8	F901	0.33	Maximum normal load	
240/50	0.22	1.5	19.7	F901	0.22	Maximum normal load	
240/60	0.23	1.5	19.9	F901	0.23	Maximum normal load	
264/50	0.23		20.2	F901	0.23	Maximum normal load	

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264/60	0.22		20.1	F901	0.22	Maximum normal load
Supplementary information:						

2.1.1.5	TABLE:	TABLE: max. V, A, VA test					
Voltage (rated)Current (rated)(V)(A)		Voltage (max.) (V)	Current (max.) (A)		(max.) √A)		
+19V output			18.9	1.93	3	6.5	
Note(s): Te	Note(s): Test voltage is 264Vac, 60Hz						

2.1.1.7	TABLE: 0	TABLE: discharge test				
Condition		τ calculated (s)	τ measured (s)	t u \rightarrow 0V (s)	Comments	
Note(s):						

2.2.2	TABLE: Hazardous voltage measure	BLE: Hazardous voltage measurement					
Transformer	Location	max. \	/oltage	Voltage Limitation			
		V peak	V d.c.	Component			
T901	Pin 6-9	54.8					
	After R929	54.1					
	After C909/D909		20.7				
	L8801 (on main board)		20.1				
	D8801 (on main board)		40.7				
Fault test per components	formed on voltage limiting	Voltage measured (V) in SELV circuits (V peak or V d.c.)					
C909 (s-c)		19.7V (for +19V output)					
D909 (s-c)		0V (for +19V output)					
L8801 (s-c)		0V (for +19V output)					
Note(s): 1) Input Volta	age is 240Vac, 60Hz, s-c=short circ	uit.					

2.4.2	TABLE: limited current circuit measurement						
Location		Voltage (V)	Current (mA)	Freq. (kHz)	Limit (mA)	Comments	
C912/C907			0.22		0.7		
Note(s): Me	Note(s): Measured by the measuring instrument of Figure D.2 in Annex D.						

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2.5	TABLE: Limite	TABLE: Limited power sources						
Circuit ou	itput tested: +20	V output of power b	oard			•		
Note: Mea	sured Uoc (V) wit	h all load circuits dis	connected:					
С	omponents	Uoc (V)	I _{sc}	(A)	V	'A		
			Meas.	Limit	Meas.	Limit		
Normal co	ndition	18.9	1.93	8	36.5	100		
R924 s-c		0*	0*	8	0*	100		
C908 s-c		18.9	1.81	8	33.9	100		
R925 s-c		18.9	1.42	8	25.9	100		
U903 A-K	S-C	0*	0*	8	0*	100		
U903 pin '	1 о-с	0*	0*	8	0*	100		
U902 pin '	1-2 s-c	0*	0*	8	0*	100		
R929 s-c		18.9	1.67	8	28.7	100		
R922 s-c		0*	0*	8	0*	100		

* Unit shut down.

2.6.3.4	TABLE: ground continu	ABLE: ground continue test				
Location		Resistance measured (m Ω)	Comments			
Note(s):						

2.10.2	Table: working voltage	voltage measurement				
Location		Peak voltage (V)	RMS voltage (V)	Comments		
T901: Pin 1	to pin 6	397	218			
T901: Pin 1	to pin 9	341	215			
T901: Pin 3	to pin 6	488	212			
T901: Pin 3	to pin 9	497	200	Max. Peak voltage		
T901: Pin 4	to pin 6	378	224			
T901: Pin 4	to pin 9	369	240	Max. RMS vol	tage	
T901: Pin 5	to pin 6	344	218			
T901: Pin 5	to pin 9	391	211			
U902 Pin 1-	-3	338	215			
U902 Pin 1-4		335	216			

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Clause	se Requirement + Test Result - Remark Ver					Verdict	
		0.40	0.17			·	

U902 Pin 2-3	342	217	
U902 Pin 2-4	331	218	
C912 Pin 1 - 2	344	219	
Supplementary information: Input \	/oltage is 240Vac, 6	60Hz	

2.10.3 and 2.10.4							Р
Clearance cl distance dcr	and creepage at/of:	U p (V)	U r.m.s. (V)	Required cl (mm)	cl (mm)	Required dcr (mm)	dcr (mm)
Functional:							
Under fuse (F	=901) ¹⁾	420	250	2.3	3.4	2.5	5.4
Before fuse (I	between L-N)	420	250	2.3	4.9	2.5	4.9
Reinforced:							
Primary trace enclosure ⁶⁾	e to outside of	420	250	6.0	7.2	6.0	7.2
Primary comp applied) to ou	ponent C903 (10N utside of enclosure	420	250	6.0	10.8	6.0	10.8
Primary comp outside of end	ponent U902 to closure ⁷⁾	420	250	6.0	8.6	6.0	8.6
	f Y1-cap C912 to mponent C910	420	250	6.0	10.7	6.0	10.7
	to secondary coupler U902	420	250	6.0	8.1	6.0	8.1
	e to secondary ap (C912, C907)	420	250	6.0	8.1	6.0	8.1
Primary trace trace under T	e to secondary 901 ¹⁾	497	250	6.6	7.2	6.6	7.2
Core of T901 component C applied)	to secondary c910 (10N	497	250	6.6	5)	6.6	5)

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Supplementary information:

1. There is a slot >1mm under component.

- 2. Core of main transformer T901 consider as primary part.
- 3. Two layers of insulation tape wrapped external of transformer T901. See table C.2 for pri. Pin to core as smallest distance.
- 4. 2 layers of insulation tape provided on secondary side of secondary heat sink HS2.
- 5. For clearance and creepage that did not describe above are far larger than limit above.
- 6. Min. 5.8mm of overlap dimension (shape of slot like "E") provided between top plastic enclosure and bottom plastic enclosure after fixing.
- 7. Altitude correction factor for clearances for an altitude of 5000m (based on IEC 60664-1:1992): 1.48.

2.10.5	TABLE: distance through insulation measurements				
Distance th	rough insulation di at/of:	U r.m.s. (V)	Test voltage (V)	Required di (mm)	di (mm)
Photo coup	er (reinforced insulation)	250	3000	0.4	1.
Plastic enclosure		250	3000	0.4	1.
Nets(s), d. For energy of comparent courses are encoded to be d. 5.4					

Note(s): 1. For approved component source see appended table 1.5.1.

4.5	4.5 TABLE: Thermal requirements					
	Supply voltage (V):	Test A: 90V	, 60Hz Labe	el down		_
		Test B: 90V	, 60Hz labe	l up		
		Test C: 264	V,60Hz labe	el down		
		Test D: 264	V,60Hz labe	el up		
	Ambient T _{min} (°C):					
	Ambient T _{max} (°C):					
Maximum measured temperature T of part/at::		T (°C)				Allowed T_{max} (°C)
Location		А	В	С	D	
AC Inlet	near L pin	37.3	37.9	34.3	33.1	50.5
U902 Bo	dy	43.5	43.0	42.9	41.1	80.5
PCB nea	r TH901	54.8	55.8	47.1	45.8	85.5
PCB nea	PCB near D909		50.0	50.9	49.5	85.5
C912 body		50.4	49.3	49.9	46.8	65.5
C907 body		46.3	45.4	45.1	43.1	65.5
C901		57.6	55.6	45.8	42.9	85.5
L901 body		60.6	57.0	48.8	44.5	110.5
PCB nea	r Q901	71.4	68.5	66.4	62.1	85.5

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			-	-	
T901 coil	68.1	65.6	66.8	63.1	90.5
T901 core	64.3	63.3	62.9	59.7	90.5
PCB near BD901	56.9	58.1	44.9	43.4	85.5
output wire	27.8	27.1	26.4	24.9	60.5
PCB near IC401 (main board)	48.1	46.1	44.3	42.7	85.5
PCB near U801 (main board)	41.2	39.6	37.7	35.9	85.5
Plastic enclosure inside near T901	44.2	40.6	40.5	37.2	
Plastic enclosure outside	31.1	32.6	30.6	32.1	75.5
Ambient(°C)	20.5	21.1	21.5	21.6	

Supplementary information:

Supplementary information:

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

2. With a specified ambient temperature of 40°C. Temperature limits are calculated as follows:

Winding components providing safety isolation:

1. Class $B \rightarrow Tmax = 120 - 10 - 40 + Tamb$

Components with maximum absolute temperature of others:

2. Tmax = Tmax of component - 40 + Tamb

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:

4.6.1, 4.6.2	Table: enclo	Fable: enclosure openings		
Location		Size (mm)	Comments	
Note(s):				

4.7	Table: resist	Table: resistance to fire				
Part		Manufacturer of material	Type of material	Thickness (mm)	Flammability class	
PCB					V-1	
Plastic enclosure		ic enclosure		2.0mm	V-0 or better	
Note(s): See	e table 1.5.1.					

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Clause	Requirement + Test	Result - Remark	Verdict

5.1.6	TAE	ABLE: touch current measurement				Р
Condition		$L \rightarrow terminal A$ (mA)	$N \rightarrow terminal A$ (mA)	Limit (mA)	Comments	
Unit on		0.1	0.1	0.25	Terminal A at pin of output of	onnector
Unit on		0.1	0.1	0.25	Terminal A at accessible plastic enclosure with metal foil.	
Note(s): Supplied with 264V/60Hz.						

* Test performed with functional earthing disconnected.

5.2	TABLE: Electric strength tests, impulse tests and voltage surge tests			Р
Test voltage	applied between:	Voltage shape (AC, DC, impulse, surge)	Test voltage (V)	Breakdown Yes / No
Reinforced	:			
Unit: primary	y and secondary	DC	4242	No
Unit: primary	and Plastic enclosure with metal foil	DC	4242	No
T901 ¹⁾ : Primary and core		AC	3000	No
T901 ¹⁾ : secondary and core		AC	3000	No
T901 ¹⁾ : primary and secondary		AC	3000	No
Each layer of transform	f insulation tape around metal heat sink and core ers T901	AC	3000	No
Supplemen	itary information:		·	

1. For all sources of T901.

The tests mentioned above were performed after humidity test.
 Core is considered as primary part.

5.3	TABLE: Fault	condition tests					Р
	Ambient temp	perature (°C)		:	See below		
		Power source for EUT: ManuFacturer, model/type, putput rating					
Component No.	Fault	Supply voltage (V)	Test time	Fuse #	Fuse current (A)	Obs	ervation
T901 pin 1 to pin 3	S-C	240	5 min	F901	0.06	Unit shut hazard	down, no
T901 pin 4 to pin 5	S-C	240	5 min	F901	0.06	Unit shut hazard	down, no
T901 pin 6 to 6	S-C	240	5 min	F901	0.05	Unit shut hazard	down, no
Output of +19V to GND	S-C	240	5 min	F901	0.04	Unit shut hazard	down, no

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Clause	Requirement + Test
0.0.000	

Result - Remark

BD901 pin 1-2	S-C	240	<1 sec	F901		Fuse F902 opened instantly, no hazard.
C901	S-C	240	<1 sec	F901		Fuse F902 opened instantly, no hazard.
U901 pin 1-5	S-C	240	< 1 sec	F901		U901 damaged. No hazard. This test was repeated twice (three tests total) with same result.
U901 pin 5-6	S-C	240	< 1 sec	F901		U901 damaged. No hazard. This test was repeated twice (three tests total) with same result.
U901 pin 2-5	S-C	240	< 1 sec	F901		U901 damaged. No hazard. This test was repeated twice (three tests total) with same result.
U901 pin 2-6	S-C	240	< 1 sec	F901	0.04	Unit shut down, no hazard
U903 Pin 1-2	S-C	240	10 min	F901	0.04	Unit shut down, no hazard
U903 Pin 3-4	S-C	240	10 min	F901	0.04	Unit shut down, no hazard
U903 Pin 1	0-C	240	10 min	F901	0.04	Unit shut down, no hazard
U903 Pin 3	0-C	240	10 min	F901	0.04	Unit shut down, no hazard
Q901(pin D-G)	S-C	240	<1 sec	F901		Q901 damaged. No hazard. This test was repeated twice (three tests total) with same result.
Q901(pin D-S)	S-C	240	<1 sec	F901	0.02	Unit shut down, no hazard.
Q901 (pin G-S)	S-C	240	5 min	F901	0.04	Unit shut down, no hazard.
D909	S-C	264	5 min	F901	0.04	Unit shut down, no hazard

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Clause	Requirem	nent + Test				Resu	llt - Remark		Verdict
Overload 19 L902	9V after	0-l	240	5.2hrs	F9	901	0.37	Max. meas temp in T901 coil= T901 core: U902 body ambient= 2 before shu winding is 1.0A. No d no hazards	105.9°C, = 96.3°C, =62.2°C, 22.1°C, tdown loaded to amage,

Notes:

1. The unit passed 3000V hi-pot test between primary and accessible output connector after single fault test above.

2. In fault column, where s-c=short-circuited, o-c=open-circuited, o-I = overload.

3. For fuse opened conditions were tested with each source of fuse.

4. Test repeated three times with same result.

5. Temp. limited of transformer (class B) according to table C.1 is 175°C -(40°C -Tamb).

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IEC	60	95	0-	1
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	IEC 60950-	-1		
Clause	Requirement + Test	Result - Remark		Verdict
C.2	Safety isolation transformer			Р
	Construction details:			
Transform	ner part name: T901			
Manufactu				
Туре:	See appended table 1.5.1			
	ions of all sources of T901 are identical each othe difference.	r, except for model designati	on, manufa	cturer and
For T901	used on power board			
Recurring	peak voltage	497V		
	clearance for reinforced insulation e 2H and 2J)	6.6mm		
Effective v	voltage rms	250V		
Required (from table	creepage distance for reinforced insulation e 2L)	6.6mm		
Measured	min. creepage distance			
Location		inside (mm)	outsic	de (mm)
prim-sec		Triple insulated wire used for secondary windings	22.0mm (primary a secondar pins)	nd
prim-core				
sec-core		Triple insulated wire used for secondary windings	9.2mm (b secondar core)	
Measured	min. clearances			
Location		inside (mm)	outsid	de (mm)
prim-sec		Triple insulated wire used for secondary windings	22.0mm (primary a secondar pins)	nd
prim-core				
sec-core		Triple insulated wire used for secondary windings	9.2mm (b secondar core)	

IEC 60950-1							
Clause	Requirement	+ Test		Re	sult - Remark		Verdict
	I						
Construction	1:						
Pri.		Sec.			-		
3 N1	•3						
2	30.	9		0000000 N5(21)	000000	25u*8	.5mm,3Ts TAPE
5		42 6		00000 N3(54)		⊐—25u*8	.5mm,1Ts TAPE
4 N3	!!!			[\\4(4**)		⊐—25u*8	Smm,2Ts TAPE
4 N4				000000 N2(96)		⊐—25u*8	5mm,1Ts TAPE
4	YER FOIL			N1(32)	88888		5 AT TARE
″●″, WIND	ING START: "	" TEFLON TU	IBE	BOBBIN		25u*8	.5mm,1Ts TAPE
	No.	COIL	TERMINAL	WIRE GAUGE	WIRE TYPE	TUNS	
	1	N1	32	Φ0.25 mm	UEW	56	
	2	N2	87	Φ0.40 mm×2	TIW-M	12	
	3	N3	54	Φ0.20 mm	UEW	12	
	4	N4 N5	4NC 21	Φ 0.20 mm Φ 0.25 mm	UEW UEW	16 31	
				10.20	02		
One layer of wire. Core is	insulation tape considered as	wrapped primary	l on the bobbin b part. Tubing on a	sulation tapes betw before winding. Sec all winding exit end near secondary si	ondary winding u are provided. Ad	ised triple	insulated
Insulation ta	pe:			Teflon tube:			
- See table 1	.5.1.			- See table 1.5.	1.		
<u>Triple insula</u> - See table 1							
Pin numbers	3 						
Prim.				1-2-:	3; 4-5 (Pin 2 cut c	off)	
Sec.				6-9			
Bobbin							
Material				See	table 1.5.1.		

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Clause	Requirement + Test	Result - Remark	Verdict
Thickness	3	min. 0.45mm	
Electric st	rength test		
With 3000) V a.c. after humidity treatment		
Result		Pass	

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	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				
Convright @ 2014 IEC System for Conformity Testing and Cartification of Electrical Equipment					

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EN 60950-1:2006/A11:2009/A1:2010/A12:2011/A2:2013 - CENELEC COMMON MODIFICATIONS

	IEC 00950-1, GRC		ENCES (CEN	ELEC Comm	non modifications EN)	1	
Clause	Requirement + Tes	st		Resu	ılt - Remark	Verdict	
	Clauses, subclaus IEC60950-1 and it				additional to those in	Р	
Contents	Add the following a	annexes:				Р	
	Annex ZA (normative)			Normative references to international publications with their corresponding European publications			
(A2:2013)	Annex ZB (normat Annex ZD (informa				ns e designations for		
General	Delete all the "country" notes in the reference document (IEC 60950-1:2005) according to the following list:					Р	
		2.2.4 2.3.4 2.10.3.2 3.2.4 4.7 5.1.7.1 6.1.2.1 6.2.2.1	Note 2 & 3 Note Note 2 Note 2 Note 2 Note 3. Note 4 Note 3 & 4 Note 2 Note 2 Note 2 Note 2	1.7.2.1 2.3.2 2.6.3.3 2.10.5.13 2.5.1 4.7.2.2 5.3.7 6.1.2.2	Note Note 4, 5 & 6 Note 2 & 3 Note 3 Note 2 Note Note 1 Note Note Note 1 & 2		
General (A1:2010)	Delete all the "country" notes in the reference document (IEC 60950- 1:2005/A1:2010) according to the following list:1.5.7.1Note6.1.2.1Note 26.2.2.1Note 2EE.3Note				Р		

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		IEC60950_1F - ATTACHM	ENT		
Clause	Requirement + Test		Result - Remark		Verdict

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

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IEC60950_1F - ATTACHMENT				
Clause	Requirement + Test		Result - Remark	Verdict

Clause	Requirement + Test	Result - Remark	Verdict
	Zx.1 General	Not personal music player	N/A
	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.		

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	analogue personal music players (personal music players without any kind of digital processing of the sound signal) that are brought to the market before the end of 2015.		
	NOTE 4 This exemption has been allowed because this technology is falling out of use and it is expected that within a few years it will no longer exist. This exemption will not be extended to other technologies.		
	For equipment which is clearly designed or intended for use by young children, the limits of EN 71-1 apply.		
	Zx.2 Equipment requirements	Not such equipment.	N/A
	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		

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	 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 LAeq,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 LAeq,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.			

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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	Not such equipment	N/A
	higher level.		
	Zx.4 Requirements for listening devices (headph		N/A
	 Zx.4.1 Wired listening devices with analogue input With 94 dBA sound pressure output LAeq,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. 	Not such equipment	N/A

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Clause	Requirement + Test		Result - Remark	Verdict

Clause	Requirement + Test	Result - Remark	Verdict
Clause	Requirement + TestZx.4.2 Wired listening devices with digital inputWith 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.).	Result - Remark Not such equipment	N/A
	NOTE An example of a wired listening device with digital input is a USB headphone. Zx.4.3 Wireless listening devices In wireless mode:	Not such equipment	N/A
	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 LAeq,T of the listening device shall be ≤ 100 dBA.		
	NOTE An example of a wireless listening device is a Bluetooth headphone.		
	Zx.5 Measurement methods	Not such equipment	N/A
	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.		

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Clause	Requirement + Test		Result - Remark	Verdict

Clause	Requirement + Test	Result - Remark	Verdict
<u>Clause</u> 2.7.1	Requirement + Test 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	Result - Remark Replaced.	P
	 devices in the building installation; 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. 	No such equipment	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.	Unit is not a permanently connected equipment.	N/A
3.2.5.1	Replace "60245 IEC 53" by "H05 RR-F"; "60227 IEC 52" by "H03 VV-F or H03 VVH2-F"; "60227 IEC 53" by "H05 VV-F or H05 VVH2-F2". In Table 3B, replace the first four lines by the following: Up to and including 6 0,75 ^{a)} Over 6 up to and including 10 (0,75) ^{b)} 1,0 Over 10 up to and including 16 (1,0) ^{c)} 1,5 In the conditions applicable to Table 3B delete the words "in some countries" in condition ^{a)} . In NOTE 1, applicable to Table 3B, delete the second sentence.	No power supply cord provided.	N/A
3.2.5.1	NOTE Z1 The harmonised code designations corresponding to the IEC cord types are given in Annex ZD		N/A

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Clause	Requirement + Test	Result - Remark	Verdict	
3.3.4	In Table 3D, delete the fourth line: conductor sizes for 10 to 13 A, and replace with the following: Over 10 up to and including 16 1,5 to 2,5 1,5 to 4 Delete the fifth line: conductor sizes for 13 to 16 A		N/A	
4.3.13.6 (A1:2010)	Replace the existing NOTE by the following: NOTE Z1 Attention is drawn to: 1999/519/EC: Council Recommendation on the limitation of exposure of the general public to electromagnetic fields 0 Hz to 300 GHz, and 2006/25/EC: Directive on the minimum health and safety requirements regarding the exposure of workers to risks arising from physical agents (artifical 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 μ Sv/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	
Bibliograph y	Additional EN standards.			

ZA	NORMATIVE REFERENCES TO INTERNATIONAL PUBLICATIONS WITH	
	THEIR CORRESPONDING EUROPEAN PUBLICATIONS	

	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.	No such resistors.	N/A	

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Clause	Requirement + Test	Result - Remark	Verdict		
1.5.8	In Norway , due to the IT power system used (see annex V, Figure V.7), capacitors are required to be rated for the applicable line-to-line voltage (230 V).		Р		
1.5.9.4	In Finland , Norway and Sweden , the third dashed sentence is applicable only to equipment as defined in 6.1.2.2 of this annex.		N/A		
1.7.2.1	In Finland , Norway and Sweden , CLASS I PLUGGABLE EQUIPMENT TYPE A intended for connection to other equipment or a network shall, if safety relies on connection to protective earth or if surge suppressors are connected between the network terminals and accessible parts, have a marking stating that the equipment must be connected to an earthed mains socket-outlet. The marking text in the applicable countries shall be as follows: In Finland : "Laite on liitettävä suojakoskettimilla varustettuun pistorasiaan" In Norway : "Apparatet må tilkoples jordet stikkontakt" In Sweden : "Apparaten skall anslutas till jordat uttag"	No such equipment.	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)."				

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	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 medfőra risk főr			
	brand. Főr att undvika detta skall vid anslutning av utrustningen till kabel-TV nät			
	galvanisk isolator finnas mellan utrustningen och kabel-TV nätet."			
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.	No such equipment.	N/A	
	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."			
1.7.5	In Denmark , socket-outlets for providing power to other equipment shall be in accordance with the Heavy Current Regulations, Section 107-2-D1, Standard Sheet DK 1-3a, DK 1-5a or DK 1-7a, when used on Class I equipment. For STATIONARY EQUIPMENT the socket-outlet shall be in accordance with Standard Sheet DK 1-1b or DK 1-5a.	No socket-outlet provided.	N/A	
1.7.5 (A11:2009)	For CLASS II EQUIPMENT the socket outlet shall be in accordance with Standard Sheet DKA 1-4a.			

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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.	No socket-outlet provided.	N/A
	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		
2.2.4	In Norway , for requirements see 1.7.2.1, 6.1.2.1 and 6.1.2.2 of this annex.	No TNV.	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.	No TNV.	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.	No TNV.	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.		Р
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2.2.4	In Norway , for requirements see 1.7.2.1, 6.1.2.1 and 6.1.2.2 of this annex.	No TNV.	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.	No TNV.	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.	No TNV.	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.		Ρ
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.	Not direct plug-in equipment	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
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	No supply cords provided.	N/A

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	SEV 6533-2.1991Plug Type 11L+N250 V, 10 ASEV 6534-2.1991Plug Type 12L+N+PE250 V, 10 AIn general, EN 60309 applies for plugs for currentsexceeding 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		
3.2.1.1	In Denmark , supply cords of single-phase equipment having a rated current not exceeding13 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.	No supply cords provided.	N/A
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 	No supply cords provided.	N/A

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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.	No supply cords provided.	N/A
	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.		
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 -	No supply cords provided.	N/A

	 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. 		
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.	No supply cords provided.	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 mm2 is allowed for equipment with a rated current over 10 A and up to and including 13 A.	No supply cords provided.	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.	No supply cords provided.	N/A

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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.	Not direct plug-in equipment.	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.	Not direct plug-in equipment.	N/A
5.1.7.1	 In Finland, Norway and Sweden TOUCH CURRENT measurement results exceeding 3,5 mA r.m.s. are permitted only for the following equipment: STATIONARY PLUGGABLE EQUIPMENT TYPE A that is intended to be used in a RESTRICTED ACCESS LOCATION where equipotential bonding has been applied, for example, in a telecommunication centre; and has provision for a permanently connected PROTECTIVE EARTHING CONDUCTOR; and is provided with instructions for the installation of that conductor by a SERVICE PERSON; STATIONARY PLUGGABLE EQUIPMENT TYPE B; STATIONARY PERMANENTLY CONNECTED EQUIPMENT. 	Measured touch current not exceeding 3,5 mA r.m.s.	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	No connection to telecommunication networks.	N/A

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	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.		
	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.	No connection to telecommunication networks.	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.	Not connected to 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.	Not connected to cable distribution system.	N/A

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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		

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Clause Requirement + Test

Result - Remark

Verdict

CANADA NATIONAL DIFFERENCES Information technology equipment – Safety – Part 1: General requirements

Differences according to CAN/CSA C22.2 No. 60950-1-07 + A1:2011 + A2: 2014

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

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Clause	Requirement + Test	Result - Remark	Verdict	
1.7.7	Wiring terminals intended to supply Class 2 outputs in accordance with CEC Part 1 or NEC are marked with the voltage rating and "Class 2" or equivalent.	No wiring terminals.	N/A	
	- Marking is located adjacent to the terminals		N/A	
	- Marking is 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 is 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 provided for all standard supply outlets and receptacles (such as supplied in power distribution units) if the supply branch circuit protection is not suitable.	No such components provided.	N/A	
	Power distribution transformers distributing power at 100 volts or more, and rated 10 kVA or more, provided with special transformer overcurrent protection.		N/A	
3.2	Wiring methods (terminals, leads, etc.) used for the connection of the equipment to the mains is in accordance with the NEC/CEC.		N/A	
3.2.1	Power supply cords are required to have attachment plugs rated not less than 125 percent of the rated current of the equipment.	No power supply cord provided.	N/A	
3.2.1.2	Equipment connected to a centralized d.c. power system, and having one pole of the DC mains input terminal connected to the main protective earthing terminal in the equipment comply with special earthing, wiring, marking and installation instruction requirements.	No connection to a centralized d.c. power system.	N/A	
3.2.3	Permanent connection of equipment to the mains supply by a power supply cord is not permitted, except for certain equipment, such as ATMs.		N/A	
3.2.5	Power supply cords are no longer than 4.5 m in length.	No power supply 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 have a suitable wiring compartment and wire bending space.		N/A	

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Clause	Requirement + Test	Result - Remark	Verdict
3.3	Wiring terminals and associated spacings for field wiring connections comply with CSA C22.2 No. 0.		N/A
3.3.3	Wire binding screws are not permitted to attach conductors larger than 10 AWG (5.3 mm ²).		N/A
3.3.4	Terminals for permanent wiring, including protective earthing terminals, are suitable for Canadian/US wire gauge sizes, are		N/A
	- rated 125 percent of the equipment rating, and		N/A
	- are 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 provided for cord-connected equipment with a motor if the equipment is rated more than 12 A,	Equipment is not such a device.	N/A
	- or if the motor has a nominal voltage rating greater than 120 V		N/A
	- or is rated more than 1/3 hp (locked rotor current over 43 A)		N/A
3.4.8	Vertically-mounted disconnect switches and circuit breakers have the "on" position indicated by the handle in the up position.	No such devices incorporated.	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.	Not such an application.	N/A
4.3.12	The maximum quantity of flammable liquid stored in equipment complies with NFPA 30.	No liquids.	N/A
4.3.13.5.1	Equipment with lasers meet the Canadian Radiation Emitting Devices Act, REDR C1370 and/or Code of Federal Regulations 21 CFR 1040, as applicable.	No lasers.	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.	Not such an application.	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.	Not such an application.	N/A
	For other applications, enclosures with the same dimensions require a flame spread rating of 200 or less.		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
Annex H	Equipment that produces ionizing radiation comply with the Canadian Radiation Emitting Devices Act, REDR C1370 and/or Code of Federal Regulations, 21 CFR 1020, as applicable.	device.	N/A
	Other National Differences		
1.5.1	Some components and materials associated with the risk of fire, electric shock, or personal injury have component or material ratings in accordance with the applicable national (Canadian and/or U.S.) component or material standard requirements. These components include: 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.	Complied. See table 1.5.1	P
1.6.1.2	A circuit for connection to the DC Mains Supply is classified as either a SELV Circuit, TNV-2 Circuit or Hazardous Voltage Circuit depending on the maximum operating voltage of the supply.	No connection to the DC Mains Supply.	N/A
	This maximum operating voltage includes consideration of the battery charging "float voltage" associated with the intended supply system, regardless of the marked power rating of the equipment.		N/A
2.3.1	For TNV-2 and TNV-3 circuits with other than ringing signals and with voltages exceeding 42.4 Vpeak 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 circuits.	N/A
2.3.2.1	In the event of a single fault between TNV and SELV circuits, the limits of 2.2.3 apply to SELV Circuits and accessible conductive parts.	No TNV circuits.	N/A
2.6.2	Equipment with functional earthing is required to be marked with the functional earthing symbol (IEC 60417-6092)		Р

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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.	No CRTs.	N/A
4.3.2	Equipment with handles complies with special loading tests.	No handles.	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 comply with a special touch current measurement tests.	No TNV	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.		N/A
	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		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.	No TNV.	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.	Equipment is not such a device.	N/A
M.2	Continuous ringing signals up to 16 mA only are permitted if the equipment is subjected to special installation and performance restrictions.	No TNV.	N/A
Annex NAD	Equipment connected to a telecommunication and cable distribution networks and supplied with an earphone intended to be held against, or in the ear comply with special acoustic pressure requirements.	No TNV.	N/A

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Clause Requirement + Test Result - Remark Verdi					

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		
General	See also Group Differences (EN 60950-1:2006/A1	1/A1)	
1.5.7.1	In Finland resistors bridging BASIC INSULATION in CLASS I PLUGGABLE EQUIPMENT TYPE A must comply with the requirements in 1.5.7.1. In addition when a single resistor is used, the resistor must withstand the resistor test in 1.5.7.2.		N/A
1.5.9.4	In Finland , the third dashed sentence is applicable only to equipment as defined in 6.1.2.2 of this annex.	No such construction.	N/A
1.7.2.1	In Finland , CLASS I PLUGGABLE EQUIPMENT TYPE A intended for connection to other equipment or a network shall, if safety relies on connection to protective earth or if surge suppressors are connected between the network terminals and accessible parts, have a marking stating that the equipment must be connected to an earthed mains socket-outlet. The marking text in in Finland shall be as follows: "Laite on liitettävä suojakoskettimilla varustettuun pistorasiaan"		N/A
2.3.2	In Finland , there are additional requirements for the insulation. See 6.1.2.1 and 6.1.2.2 of this annex.	No TNV.	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.	No TNV.	N/A

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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 	Not exceed 3.5mA.	N/A		
6.1.2.1 (A1:2010)	In Finland , add the following text between the first and second paragraph of the compliance clause: If this insulation is solid, including insulation forming part of a component, it shall at least consist of either - two layers of thin sheet material, each of which shall pass the electric strength test below, or - one layer having a distance through insulation of at least 0,4 mm, which shall pass the electric strength test below. Alternatively for components, there is no distance through insulation requirement for the insulation consisting of an insulating compound completely filling the casing, so that CLEARANCES and CREEPAGE DISTANCES do not exist, if the component passes the electric strength test in accordance with the compliance clause below and in addition - passes the tests and inspection criteria of 2.10.11 with an electric strength test of 1,5 kV multiplied by 1,6 (the electric strength test of 2.10.10 shall be performed using 1,5 kV), and - is subject to ROUTINE TESTING for electric strength during manufacturing, using a test voltage of 1,5 kV.		N/A		

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Clause Requirement + Test Result - Remark						
	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.					
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.	No TNV.	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.	Not connected to cable distribution system.	N/A			

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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,	According to GPSG, section 2, clause 4:	N/A
1.7.2.1	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.	

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Clause

Requirement + Test

Result - Remark

Verdict

ATTACHMENT TO TEST REPORT IEC 60950-1 ISRAEL NATIONAL DIFFERENCES

Information technology equipment - Safety -

Part 1: General requirements

Differences according to SI 60950 Part 1

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

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

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Clause F

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)	No power supply cord provided.	N/A
8	EMC		N/A
	The apparatus shall comply with the relevant CISPR standards.		

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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		
Attachment Form No:	US_ND_IEC60950_1F		
Attachment Originator:	UL		
Master Attachment:	Date 2014-07		
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	Special national conditions		
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), ANSI/NFPA 70, and unless marked or otherwise identified, the Standard for Electronic Computer/Data- Processing Equipment, ANSI/NFPA 75.	Ρ
	Also, unless marked or otherwise identified, installation is allowed per the Standard for the Protection of Electronic Computer/Data-Processing Equipment, ANSI/NFPA 75		Ρ
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.	Р
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	No external cable provided.	N/A
	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
1.7.1	Equipment for use on a.c. mains supply systems with a neutral and more than one phase conductor (e.g. 120/240 V, 3-wire) require a special marking format for electrical ratings	Single-phase equipment.	N/A
	A voltage rating that exceeds an attachment plug cap rating is only permitted if it does not exceed the extreme operating conditions in Table 2 of CAN/CSA C22.2 No. 235, and		N/A
	- if it is part of a range that extends into the Table 2 "Normal Operating Conditions"		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	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	No wiring terminals.	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 operator-accessible.	Р
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.	No such components provided.	N/A
	Power distribution transformers distributing power at 100 volts or more, and rated 10 kVA or more, provided with special transformer overcurrent protection		N/A
3.2	Wiring methods (terminals, leads, etc.) used for the connection of the equipment to the mains is in accordance with the NEC/CEC		N/A
3.2.1	Attachment plugs of power supply cords are rated not less than 125 percent of the rated current of the equipment		N/A
3.2.1.2	Equipment connected to a centralized d.c. power system, and having one pole of the DC mains input terminal connected to the main protective earthing terminal in the equipment comply with special earthing, wiring, marking and installation instruction requirements	No power supply cord provided.	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 connection to a centralized d.c. power system.	N/A
3.2.5	Power supply cords are no longer than 4.5 m in length	Pluggable equipment type A.	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

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	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	Pluggable equipment type A.	N/A
3.3	Wiring terminals and associated spacings for field wiring connections comply with CSA C22.2 No. 0	No wiring terminals.	N/A
3.3.3	Wire binding screws are not attached with conductors larger than 10 AWG (5.3 mm ²)	No wire binding screws.	N/A
3.3.4	Terminals for permanent wiring, including protective earthing terminals, are suitable for Canadian/US wire gauge sizes, are	Plugable equipment type A.	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"	Considered.	Р
3.4.2	Motor control devices are provided for cord-connected equipment with a motor if the equipment is rated more than 12 A,	Equipment is not such a device.	N/A
	- or if the motor has a nominal voltage rating greater than 120 V		N/A
	- or is rated more than 1/3 hp (locked rotor current over 43 A)		N/A
3.4.8	Vertically-mounted disconnect switches and circuit breakers have the "on" position indicated by the handle in the up position	No such devices incorporated.	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	Not such an application.	N/A
4.3.12	The maximum quantity of flammable liquid stored in equipment complies with NFPA 30	No liquids.	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 lasers.	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	Not such an application.	N/A
4.7.3.1	For computer room applications, enclosures with combustible material measuring greater than 0.9m ² (10 sq ft) or a single dimension greater than 1.8 m (6 ft) have a flame spread rating of 50 or less	Not such an application.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	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)	Equipment is not such a device.	N/A
	Other National Differences		
1.5.1	Some components and materials associated with the risk of fire, electric shock, or personal injury have component or material ratings in accordance with the applicable national (Canadian and/or U.S.) component or material standard requirements. These components include:	Complied. See table 1.5.1	P
	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		
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	No connection to the DC Mains Supply.	N/A
	This maximum operating voltage includes consideration of the battery charging "float voltage" associated with the intended supply system, regardless of the marked power rating of the equipment		N/A
2.3.1	For TNV-2 and TNV-3 circuits with other than ringing signals and with voltages exceeding 42.4 V _{peak} or 60 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 circuits.	N/A

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2.3.2.1	In the event of a single fault between TNV and SELV circuits, the limits of 2.2.3 apply to SELV Circuits and accessible conductive parts	No TNV circuits.	N/A
2.6.2	Equipment with functional earthing 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		P
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	No CRTs.	N/A
4.3.2	Equipment with handles complies with special loading tests	No handles.	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	No TNV.	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		N/A
	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	No TNV.	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	No document (paper) shredder.	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	No TNV.	N/A
Annex NAD	Equipment connected to a telecommunication and cable distribution networks and supplied with an earphone intended to be held against, or in the ear comply with special acoustic pressure requirements	No TNV.	N/A

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ATTACHMENT TO TEST REPORT IEC 60950-1 AUSTRALIA and NEW ZEALAND NATIONAL DIFFERENCES

Information technology equipment – Safety – Part 1: General requirements

Differences according to: AS/NZS 60950.1:2011 and Amendment No. 1 To AS/NZS 60950.1:2011

1.2	Insert the following between 'person, service' and 'range, rated frequency': POTENTIAL IGNITION SOURCE 1.2.12		N/A
1.2.12.201	Insert a new Clause 1.2.12.201 after Clause 1.2.12.15 as follows: 1.2.12.201 POTENTIAL IGNITION SOURCE		N/A
	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.		
	Such a faulty contact or interruption in an electrical connection includes those which may occur in CONDUCTIVE PATTERNS on PRINTED BOARDS.		
	NOTE 201 An electronic protection circuit may be used to prevent such a fault from becoming a POTENTIAL IGNITION SOURCE. NOTE 202 This definition is from AS/NZS 60065:2003.		
1.5.1	 Add the following to the end of the first paragraph: 'or the relevant Australian/New Zealand Standard.' In NOTE 1, add the following after the word 'standard': 'or an Australian/New Zealand Standard' 	Added.	Ρ
1.5.2	Add the following to the end of the first and third dash items: 'or the relevant Australian/New Zealand Standard'	Added.	Ρ

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Clause	Requirement + Test			Result - Remark	Verdict
3.2.5.1	Modify Table 3B as follows: 1. Delete the first four rows and replace with the following:		Replaced.	N/A	
	RATED CURRENT of equipment A	Minimum cor Nominal cross- sectional area mm ²	AWG or kcmil [cross- sectional area in mm ²] see Note 2		
	Over 0.2 up to and including 3 Over 3 up to and including 7.5 Over 7.5 up to and including	0,5 ° 0,75	18 [0,8] 16 [1,3]		
	10 Over 10 up to and including 16	(0,75) ^b 1,00 (1,0) ^c 1,5	16 [1,3] 14 [2]		
4.4.004	 2. Delete NOTE 1. 3. Delete Footnote ^a and following: ^a This nominal cross-sect allowed for Class II applia power supply cord, meas where the cord, or cord g appliance, and the entry texceed 2 m (0,5 mm² three cords are not permitted; seconds are not permitt	ional area is ances if the le ured betwee uard, enters to the plug do see AS/NZS	only ength of the n the point the bes not ly flexible 3191).		
4.1.201	Insert a new Clause 4.1.2 follows: 4.1.201 Display devices purposes Display devices which ma purposes, with a mass of comply with the requirem mechanical hazards, inclu- stability requirements for specified in AS/NZS 6006	used for tel ay be used for 7 kg or more ents for stabi uding the ado television rec	evision or television e, shall ility and ditional	No such device.	N/A
4.3.6	Delete the third paragraph following: Equipment with a plug po insertion into a 10 A 3-pir complying with AS/NZS 3 the requirements in AS/N with integral pins for inser	rtion, suitable flatpin sock 112 shall co ZS 3112 for	e for et-outlet mply with equipment		N/A
4.3.13.5.1	Add the following to the e paragraph: 'or AS/NZS 2211.1'	nd of the firs	t	Added.	N/A

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			Verdict	
4.7	Add the following new paragraph to the end of the clause:	Added.	Р	
	'For alternate tests refer to Clause 4.7.201.'			
4.7.201	Insert a new Clause 4.7.201 after Clause 4.7.3.6 as follows:	Added. Alternative tests not applied for	N/A	
	4.7.201 Resistance to fire – Alternative tests			
4.7.201.1	4.7.201.1 General		N/A	
	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 1mm in width regardless of length.			
	(b) The following parts which would contribute negligible fuel to a fire:			
	- small mechanical parts, the mass of which does not exceed 4g, 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. 			
	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.			
	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.			
	For the base material of printed boards, compliance shall be checked by the test of 4.7.201.5.			
	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.			

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	Result - Remark	Verdict

Clause	Requirement + Test		Result - Remark	Verdict
4.7.201.2	the glow-wire test of AS shall be carried out at 5 Parts for which the glow carried out, such as the material, shall meet the ISO 9772 for category I wire test shall be not ca	aterial shall be subject to S/NZS 60695.2.11 which 550 °C. w-wire test cannot be ose made of soft or foamy e requirements specified in FH-3 material. The glow- arried out on parts of ast FH-3 according to ISO sample tested was not		N/A
4.7.201.3	The test shall be also c insulating material which 3 mm of the connection NOTE Contacts in componer considered to be connections For parts which withstat produce a flame, other connection within the e cylinder having a diame of 50 mm shall be subjectest. However, parts sh	erial supporting SOURCES shall be test of AS/NZS be carried out at 750 °C. arried out on other parts of th are within a distance of h. hts such as switch contacts are s. nd the glow-wire test but parts above the nvelope of a vertical eter of 20 mm and a height ected to the needle-flame ielded by a barrier which te test shall not be tested. shall be made in ZS 60695.11.5 with the		N/A
	Clause of AS/NZS 60695.11.5 9 Test procedure 9.2 Application of needleflame	Change Replace the first paragraph with: 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 Replace the second paragraph with: The duration of application of the test flame shall be 30 s		

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Clause Requirement + Test

Result - Remark

Verdict

			L L	
		±1 s.		
	9.3 Number of test specimens 11 Evaluation of test results	\pm 1 s. Replace with: 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. Replace with: The duration of burning (t _b) shall not exceed 30 s. However, for		
	The needle-flame test s	printed circuit boards, it shall not exceed 15 s. hall not be carried out on		
	parts of material classifi	ed as V-0 or V-1 0695.11.10, provided that		
4.7.201.4	4.7.201.4 Testing in th extinguishing materia			N/A
	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 glowwire 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.			
	NOTE 1 If the enclosure does the equipment is considered t requirements of Clause 4.7.20 consequential testing.			
		e equipment is considered to ements of Clause 4.7.201		
		the envelope of a vertical mm and a height equal to the above the point of the material		
4.7.201.5	4.7.201.5 Testing of pr	inted boards		N/A

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Clause R	Requirement + Test	Result - Remark	Verdict
	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. 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. Compliance shall be determined using the smallest thickness of the material. 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 min when the circuit supplied is disconnected.		
6.2.2	For Australia only, delete the first paragraph and Note, and replace 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.	No TNV.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
6.2.2.1	For Australia only, delete the first paragraph including the Notes, and replace with the following: <i>In Australia only, the electrical separation is</i>	No TNV.	N/A
	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, Uc, is:		
	(<i>i</i>) for 6.2.1 a): 7.0 kV for hand-held telephones and for headsets and 2.5 kV for other equipment; and		
	(<i>ii</i>) for 6.2.1 b) and 6.2.1 c): 1.5 kV. NOTE 201 The 7 kV impulse simulates lightning surges on typical rural and semi-rural network lines.		
	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.		
6.2.2.2	For Australia only, delete the second paragraph including the Note, and replace with the following:	No TNV.	N/A
	In Australia only, the a.c. test voltage is:		
	(i) for 6.2.1 a): 3 kV; and		
	(<i>ii</i>) for 6.2.1 b) and 6.2.1 c): 1.5 kV. NOTE 201 Where there are capacitors across the insulation		
	under test, it is recommended that d.c. test voltages are used.		
	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.		
7.3	Add the following before the first paragraph:	Not connected to cable	N/A
	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.	distribution system.	
Annex P	Normative references (List of relevant Australia/New Zealand Standards that have been inserted in place of some of the International Standards)	Added.	Р

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Clause	Requirement + Test	Result - Remark	Verdic
(Deviation Special Na	(H27) TEST REPORT s from IEC 60950-1:2005+A1:2009) ational conditions, National deviation and other informati <i>unique deviations</i> in J60950-1(H27) (=JIS C 6950-1:20 ⁻¹		ance No. 85.
1.2.4.1	Replace the existing NOTE as NOTE 1, and add NOTE 2 as following: NOTE 2: Even if the equipment is designed as CLASS I EQUIPMENT, if a 2-pin plug adaptor with a protective earthing lead wire (adaptor which converts a plug for CLASS I EQUIPMENT to a 2- pin plug with no earing contact) or a cord set having a 2-pin plug with a protective earthing lead wire is packed as accessory together with the equipment or if use of those is recommended to the users, the equipment is considered as CLASS 0I EQUIPMENT.	Added.	P
1.2.4.3A	 Add 1.2.4.3A as following: 1.2.4.3A CLASS 0I EQUIPMENT Equipment having a mains plug without earthing contact, which protection against electric shock is achieved by: using BASIC INSULATION; and for the measures to connect conductive part(s) regarded as part at HAZARDIUS VOLTAGE in the event of fault of BASIC INSULATION to PROTECTIVE EARTHING CONDUCTOR, equipping any one of the following: a) mains plug with a protective earthing lead wire, this includeds the following cases: where a 2-pin plug adaptor with a protective earthing lead wire is packed as accessory together with the equipment; or where use of it is recommended. b) independent protective earthing terminal (see 2.6.5.8A) if the equipment uses a power supply cord of two conductors (exclude earthing conductor) NOTE - CLASS 0I EQUIPMENT may have a part constructed with DOUBLE INSULATION or REINFORCED INSULATION. 	Added.	P

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Clause	Requirement + Test	Result - Remark	Verdict			
1.3.2	Add the following NOTEs after first paragraph: NOTE 1 TRANSPORTABLE or similar equipment that are relocated frequently for intended usage it is recommended not to design as CLASS I or CLASS 0I EQUIPMENT unless it is intended to be installed by a SERVICE PERSON or installation personnel.	Added.	N/A			
	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 a SERVICE PERSON or installation personnel.					
1.5.1	Replace the first paragraph with the following: Where safety is involved, components shall comply either with the requirements of this standard, with the safety aspects of the relevant JIS component standards, or IEC component standards in case there is no applicable JIS component standard available. However, a component that falls within the scope of METI Ministerial ordinance No. 85 is properly used in accordance with its marked ratings, requirements of 1.5.4, 2.8.7 and 3.2.5 apply, and in addition, for connector of power cord set which is capable of insertion to one of appliance inlets specified in either IEC 60320-1 or JIS C 8283-1, the connector shall comply with the dimensions of the appropriate connector specified in IEC 60320-1 or JIS C 8283-1.	Replaced.	P			
	Replace NOTE 1 with the following: NOTE 1 A JIS or an IEC component standard is considered relevant only if the component in question clearly falls within its scope.					

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Clause	Requirement + Test	Result - Remark	Verdict		
1.5.2	 Replace first sentence in the first dashed paragraph with the following: a component that has been demonstrated to comply with a JIS component standard harmonized with the relevant IEC component standard, or where such JIS component that has been demonstrated to comply with the relevant IEC component standard is not available, a component that has been demonstrated to comply with the relevant IEC component standard shall be checked for correct application and use in accordance with its rating. Replace existing NOTE to NOTE 1 without modification of the sentence in the second dashed paragraph. 	Considered.	P		
	Replace "where no relevant IEC component standard exists" to "where neither the relevant IEC component standard nor JIS standard corresponding to the relevant IEC component standard exists" in the third dashed paragraph. Add NOTE 2 as follows: NOTE 2 If an appliance inlet with a rated current of 10A, which is of STANDARD SHEET C14				
	specified in JIS C 8283-1, is used for equipment with a rated voltage of 125V or less; and with a rated current of exceeding 10A, refer to 1.7.5A.				
1.5.9.1	General Replace the following at first dash of NOTE 2:	No gas discharge tube.	N/A		
	JIS C5381-21 [Part 21 of Low pressure surge protection device : Performance requirement and test method of surge protection device (SPD) which connected with communication channel and signal]				
1.5.9.4	Add the following at last paragraph: It is permitted to use a gas discharge tube (GDT) in series with a VDR that bridges BASIC INSULATION in accordance with the conditions in this subclause if the GDT complies with the requirements for FUNCTIONAL INSULATION.		N/A		

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Clause	Requirement + Test	Result - Remark	Verdict
1.7.1	 Replace the existing dashed items for manufacturer's name etc. and for model identification etc. with the following respectively: manufacturer's (or responsible business operator's) name or trade-mark or identification mark; manufacturer's (or responsible business operator's) model identification or type reference; 	Added.	P
	In the last paragraph, replace "ISO 7000 or IEC 60417" with "JIS S 0101, ISO 7000 or IEC 60417".		
1.7.2.1	Add the following: Instructions and the marking(s) on equipment, which related to safety, shall be made in Japanese.		N/A
1.7.5	Replace IEC 60083 with JIS C 8303 in the second paragraph.	No such outlets.	N/A
1.7.5A	Add the following new clause after 1.7.5 1.7.5.A Power supply cord set If an appliance inlet with a rated current of 10 A, which is of STANDARD SHEET C14 specified in JIS C 8283-1, is used for equipment with a rated voltage of 125 V or less and with a rated current of exceeding 10 A, the operating instructions shall provide the following or equivalent instruction: "この機器に同こん (梱) した指定の電源コードセットだけを使用する。" For equipment with an appliance inlet, if a power supply cord set is not provided by packing together with the equipment, the operating instructions shall provide information on the applicable power supply cord set. NOTE For the combination of CLASS 0I EQUIPMENT equipped with an appliance inlet with earthing contact and a power supply cord set of two conductors (exclude earthing conductor), to pack the power supply cord set together with the equipment and to provide a sentence calling attention of the following purport in the operating instructions are recommended, because such power supply cord set is a special kind of cord set: - this is usable only for this equipment; and - to use this for other equipment is not allowed.	No appliance coupler.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
1.7.14A	Add the following new clause after 1.7.14 1.7.14A Marking for protective earthing connection for CLASS 0I EQUIPMENT	Added.	Р
	CLASS 0I EQUIPMENT shall be provided with the following or equivalent instruction: - on the mains-plug or the easily visible section of equipment, the following instruction: 必ず接地接続を行って下さい。		
	 in the easily visible section of equipment or in the operating instructions, the following instruction: 		
	接地接続は必ず、電源プラグを電源につなぐ前に行って下さい。		
	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下さい。		
1.7.14B	Add the following new clause after 1.7.14 1.7.14B Protective earth wire used for CLASS 0I EQUIPMENT For CLASS 0I EQUIPMENT equipped with a	Added.	Р
	separate protective earthing terminal as main protective earthing terminal, if a protective earth wire is not provided by packing together with the equipment, the operating instructions shall provide information on the applicable protective earth wire. (See 2.6.3.2.)		
2.1.1.1	In b) of the fifth paragraph, replace "IEC 60083, IEC 60309, IEC 60320, IEC 60906-1 or IEC 60906-2" with "JIS C 8303, (the Ministerial Ordinance establishing Technical Requirements for Electrical Appliances and Materials, MEIT Ordinance No. 85, Clause 1 (METI Ordinance No. 34 of 2013), JIS C 8285, the IEC 60309 series of standards, the JIS C 8283 series of standards, the IEC 60320 series of standards".	Replaced.	Ρ
2.6.3.2	Add the following: If the conductor of protective earthing lead wire or the protective earth wire of CLASS 0I EQUIPMENT is of single-core, it shall be one of the following: - annealed copper wire of 1,6 mm in diameter, or metallic wire having the same or more strength and diameter and being not easily corrosive; or - single-core cord or single-core cabtyre cable (sheathed flexible cable), which have a	Added.	Ρ
	cross-sectional area of at least 1,25 mm ² .		
2.6.3.5	Add the following: However, this requirement does not apply to the inside conductor of power supply cord (or power supply cord set), which has been molded together with a plug and a connector and has been sheathed.	Added.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
2.6.4.2	Add the following: For CLASS 0I EQUIPMENT equipped with a separate protective earthing terminal, the protective earthing terminal may be used as the main protective earthing terminal.	Added.	Р
2.6.5.4	Replace 1st sentence with the following. "Protective earthing conductors" with "Protective earthing conductors of CLASS I EQUIPMENT".		Р
2.6.5.6	Replace "protective earthing terminals" with "protective earthing and protective bonding terminals".		Р
2.6.5.8A	Add the following new clause. after 2.6.5.8A 2.6.5.8A Earthing of CLASS 0I EQUIPMENT Plugs with a lead wire for earthing shall not be used for equipment having a rated voltage exceeding 150V. For plugs with a lead wire for earthing, the lead wire shall not be earthed by a clip. CLASS 0I EQUIPMENT shall be provided with an earthing terminal or lead wire for earthing in the external location where easily visible.	Added.	P
2.9.3 Table 2H	Deleted the following mark of Figure 2H: B13 e) and S2 d)		N/A
2.9.3 Figure 2H	Addition of marking for table 2H: B8, B9, B12, B13, S1		N/A
2.10.3.1	In the third paragraph, replace IEC 60664-1 with JIS C 60664-1. Replace the 8th paragraph with the following: The above minimum CLEARANCES for connectors do not apply to: - connectors that comply with JIS C 8285, the IEC 60309 series of standards, the JIS C 8283 series of standards, the IEC 60320 series of standards or JIS C 8303; and - connectors that comply with the Ministerial Ordinance establishing Technical Requirements for Electrical Appliances and Materials MEIT Ordinance No. 85, Clause 1 (METI Ordinance No. 34 of 2013), and comply with the dimensions specified in the JIS C 8283 series of standards, JIS C 8303 or IEC 60309-2; see also 1.5.2.	Replaced.	P
2.10.3.2	In the bottom column of Table 2J, add the following: In Japan, the MAINS TRANSIENT VOLTAGE value against the nominal AC MAINS SUPPLY voltage of 100 V is decided by applying the columns for the AC MAINS SUPPLY voltage of 150 V.	Added.	P

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2.10.3.3	In Table 2L, add the following into the column specifying the additional CLEARANCES and at the end: For intermediate voltage values between the PEAK WORKING VOLTAGE values given in this table, linear interpolation is permitted between the nearest two points, the calculated additional minimum CLEARANCE being rounded up to the next higher 0,1 mm increment.	Added.	Ρ
2.10.4.3	 Replace the 6th paragraph with the following: The above minimum CLEEPAGE DISTANCES for connectors do not apply to: connectors that comply with JIS C 8285, the IEC 60309 series of standards, the JIS C 8283 series of standards, the IEC 60320 series of standards or JIS C 8303; and connectors that comply with the Ministerial Ordinance establishing Technical Requirements for Electrical Appliances and Materials MEIT Ordinance No. 85, Clause 1 (METI Ordinance No. 34 of 2013), and comply with the dimensions specified in the JIS C 8283 series of standards, JIS C 8303 or IEC 60309-2; see also 1.5.2. 	Replaced.	Ρ
2.10.9	Replace clause which as test method of T^1 from 1.4.5 to 1.4.12.	Replaced.	Р
3.2.1.1	Add the following: When equipment with an appliance inlet connects to AC mains supply, see clause 1.7.5A for the relevant mark of power supply cord set.	Added.	N/A
3.2.3	Add the following after Table 3A: Table 3A applies when cables complying JIS C 3662 or JIS C 3663 are used. In case of other cables, cable entries shall be so designed that a conduit suitable for the cable used can be fitted.	Added.	N/A
3.2.4	Add the following: The equipment shall have a structure of which the soldered sections of the terminals of appliance inlet are not subjected to mechanical stress during the insertion or removal of the connector, except the case fixing the appliance inlet itself mechanically but not only by soldering.	Added.	N/A
3.2.5.1	At the end of the first dashed item, replace "; and" with ", or be a sheathed cord complying with Appendix 1 specified in the Interpretation for the Ministerial Ordinance establishing Technical Requirements for Electrical Appliances and Materials MEIT Ordinance No. 85, Clause 1 (METI Ordinance No. 34 of 2013) ; and".	Added.	N/A

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	In the second dashed item, replace "insulated:" with "insulated, be a cord of the following or be a sheathed cord complying with Appendix 1 specified in the Interpretation for the Ministerial Ordinance establishing Technical Requirements for Electrical Appliances and Materials MEIT Ordinance No. 85, Clause 1 (METI Ordinance No. 34 of 2013), :"	Replaced.	N/A
	In the third dashed item, add the following: However, the coating of the protective earth conductor inside covered with sheath (cord set) power cord integrally formed with the connector and the plug need not be a combination of green and yellow. In addition, the power cord of CLASS OI EQUIPMENT having a protective earth conductor separately, it is not necessary to provide a protective earth conductor.	Added.	N/A
	 Replace the existing fourth dashed item with the following: if those complying with JIS C 3662-5 or JIS C 3663-4, have conductors with cross-sectional areas not less than those specified in Table 3B, and if others, comply with the relevant wiring rules. In Table 3B, replace "IEC 60320" with "the JIS 	Replaced.	N/A
	C8283 series of standards or the IEC 60320 series of standards".		
3.3.4	Add the following note to Table 3D: For cables other than those complying with JIS C 3662 or JIS C 3663, terminals shall be suitable for the size of the intended cables.	Added.	N/A
3.3.7	Add the following after the first sentence: This requirement is not applicable to the external earting terminal of CLASS 0I EQUIPMENT.	Added.	N/A
4.3.4	Add the following after the first sentence: This requirement also applies to those connections in CLASS 0I EQUIPMENT, where CLEARANCE or CREEPAGE DISTANCES of BASIC INSULATION would be reduced to less than the values specified in 2.10.	Added.	Р
4.3.5	In the paragraph, replace "IEC 60083 or IEC 60320" with "the JIS C 8283 series of standards, JIS C 8303 or JIS C 8358".	Replaced.	Р

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4.5.3	In the item b in Table 4B, add the following: NOTE If no data of material is available, Appendix 4, 1(1), ^µ ,3 specified in the Interpretation for "the Ministerial Ordinance establishing Technical Requirements for Electrical Appliances and Materials MEIT Ordinance No. 85, Clause 1 (METI Ordinance No. 34 of 2013)" is applicable.		Rep	Replaced.		Ρ	
5.1.3	Add a note after the NOTE In Japan, thre systems of delta con	first paragraph as follows: ee-phase power distribution nection are typical, therefore, conducted using the test 90, figure 13.	Sing	Added. Single phase power distribution system used.		N/A	
5.1.6	Replace Table 5A as	follows	Rep	laced.		Р	
	Type of equipment	Terminal A of measuring instrument connected to:		Maximum TOUCH CURRENT mA r.m.s. ^a	Maximu PROTECT CONDUCT CURREN	IVE FOR	
	All equipment	Accessible parts and circuits not connected to protective earth ^b		0,25	_		
	HAND-HELD	Class I equipment main protective earthing terminal		0,75	-		
		Class 0I equipment main protective earthing terminal		0,5	_		
	MOVABLE (other than HAND-HELD, but	Class I equipment main protective earthing terminal		3,5	-		
	INCLUDING TRANSPORTABLE EQUIPMENT)	Class 0I equipment main protective earthing terminal		1,0	-		
	STATIONARY, PLUGGABLE TYPE A	Class I equipment main protective earthing terminal		3,5	-		
		Class 0I equipment main protective earthing terminal		1,0	-		
	All other STATIONARY EQUIPMENT – not subject to the conditions of 5.1.7	Class I equipment main protective earthing terminal		3,5 -	– 5 % of input o	current	
	- subject to the conditions of 5.1.7	Class 0I equipment main protective earthing terminal		1,0			
	table by 1,414.	CURRENT are measured, the maximum valu					
6	Add following in the For suitable addition	end of NOTE 1: al measures, see Annex JB.	No 1	ΓNV.		N/A	
6.1.2.1	Add the following: NOTE 3 For example	e, the highest nominal voltage nd 120 V in North America.	No 7	ΓNV.		N/A	

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Annex G.6	Replace the existing 8 th paragraph with the following: The above minimum CLEARANCES for connectors do not apply to:	Replaced. The alternative method was not considered.	N/A		
	 connectors that comply with JIS C 8285, the IEC 60309 series of standards, the JIS C 8283 series of standards, the IEC 60320 series of standards or JIS C 8303; and 				
	 connectors that with the Ministerial Ordiance establishing Technical Requirements for Electrical Appliances and Materials (MEIT Ordinance No. 34 of 2013) and comply with the dimensions specified in the JIS C 8283 series of standards, JIS C 8303 or IEC 60309-2; see also 1.5.2. 				
Annex M	In M.1, replace the existing paragraph with the following: One of the two methods specified in this annex	No telephone ringing signals.	N/A		
	shall be applied. NOTE Method A specified in the annex is typical of analogue telephone network in Europe and Method B of those in North America.				
Annex P	Replace the existing Annex P with the following:	Replaced.	Р		
	Annex P (normative) Normative references The following reference documents are indispensable for the application of this standard. If the date of the reference document is given, only that edition applies, and any newer edition and subsequent amendments do not apply. If the date of the reference document is not given, the latest edition including the amendments applies. Further information on the reference documents, including how to obtain copies, can be found on the following				
	internet sites: http://www.jisc.go.jp/				
	http://www.iec.ch				
	http://www.iso.org http://www.itu.int				
	JIS B 0205-2, ISO general purpose metric screw threads - Part2: General plan NOTE Corresponding IS: ISO 261, ISO general purpose metric screw threads—General plan (IDT)				
	JIS B 0205-3, ISO general purpose metric screw threads - Part3 : Selected sizes for screws, bolts and nuts NOTE Corresponding IS: ISO 262, ISO general purpose metric screw threads - Selected sizes for screws, bolts and nuts (IDT)				
	JIS C 0448, Coding of indicating devices and actuators by colours and supplementary means NOTE Corresponding IS: IEC 60073, Basic and safety principles for man-machine interface, marking and identification - Coding principles for indicator devices and actuators (IDT)				
	JIS C 2134, Method for the determination of the proof and the comparative tracking indices of solid insulating materials NOTE Corresponding IS: IEC 60112, Method for the determination of the proof and the comparative tracking indices of insulating materials (IDT)				
	JIS C 3215 (all parts), Specifications for particular types of winding wires NOTE Corresponding IS: IEC 60317 (all parts), Specifications for particular types of winding wires (IDT)				
	JIS C 3661-1:1998, Electrical test methods for electric cables - Part 1: Electrical tests for cables, cords and wires for voltages up to and including 450/750V NOTE Corresponding IS: IEC 60885-1:1987, Electrical test methods for electric cables. Part 1: Electrical tests for cables, cords and wires for voltages up to and including 450/750 V (IDT)				
	JIS C 3662 (all parts), Polyvinyl chloride insulated cables of rated General requirements		- Part 1 :		

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	NOTE Corresponding IS: IEC 60227 (all parts), Polyv including 450/750 V (MOD) JIS C 3663 (all parts), Rubber insulated cables - Rate NOTE Corresponding IS: IEC 60245 (all parts), Rubb 450/750 V (MOD)	d voltages up to and including 450 per insulated cables - Rated voltage	/750 V
	JIS C 4003, Electrical insulation-Thermal evaluation a NOTE Corresponding IS: IEC 60085:2004, Electrical	insulation - Thermal classification ((MOD)
	JIS C 4526-1:2005, Switches for appliances - Part 1: C NOTE Corresponding IS: IEC 61058-1:2000, Switches JIS C 5101-14:2009, Fixed capacitors for use in electro capacitors for electromagnetic interference suppression NOTE Corresponding IS: IEC 60384-14:2005, Fixed c specification: Fixed capacitors for electromagnetic inter	s for appliances - Part 1: General re onic equipment - Part 14: Sectiona n and connection to the supply ma capacitors for use in electronic equi	l specification: Fixed ins ipment - Part 14: Sectional
	JIS C 6065:2007 and Amendment 1:2009, Audio, video NOTE Corresponding IS: IEC 60065:2001, Audio, video Amendment 1:2005 (MOD)		
	JIS C 6802, Safety of laser products NOTE Corresponding IS: IEC 60825-1, Safety of laser (IDT)		ification and requirements
	JIS C 6803, Safety of laser products-Safety of optical f NOTE Corresponding IS: IEC 60825-2, Safety of laser (OFCS) (IDT)	,	fiber communication systems
	JIS C 6804, Safety of laser products-Safety of free spa information NOTE Corresponding IS: IEC 60825-12, Safety of lase	er products - Part 12: Safety of free	
	communication systems used for transmission of inform JIS C 8201-1:2007, Low-voltage switchgear and control NOTE Corresponding IS: IEC 60947-1:2004, Low-volt	olgear-Part 1: General rules	Part 1: General rules (MOD)
	JIS C 8283 (all parts), Appliance couplers for househo NOTE Corresponding IS: IEC 60320 (all parts), Applia (MOD) JIS C 8285, Plugs, socket-outlets and couplers for indu	ances couplers for household and s	similar general purposes
	NOTE Corresponding IS: IEC 60309-1, Plugs, socket- requirements (MOD) JIS C 8303, Plugs and receptacles for domestic and si	-outlets and couplers for industrial p	purposes - Part 1: General
	JIS C 8358:1994, Appliance couplers for domestic and si	-	
	JIS C 9730-1:2010, Automatic electrical controls for ho NOTE Corresponding IS: IEC 60730-1:1999, Automat General requirements and Amendment 1:2003 (MOD)	busehold and similar use - Part 1:G tic electrical controls for household	
	JIS C 60068-2-78, Environmental testing - Test Cab:D NOTE Corresponding IS: IEC 60068-2-78, Environme state (IDT)	ental testing - Part 2-78: Tests - Tes	
	JIS C 60364-1:2006, Low-voltage electrical installation characteristics, definitions NOTE Corresponding IS: IEC 60364-1:2001, Electrica assessment of general characteristics, definitions (IDT	al installations of buildings - Part 1:	Fundamental principles,
	JIS C 60664-1:2009, Insulation coordination for equipe 1:Principles, requirements and tests NOTE Corresponding IS: IEC 60664-1:1992, Insulatio 1: Principles, requirements and tests, Amendment 1:2	on coordination for equipment withi	n low-voltage systems - Part
	JIS C 60695-2-11, Fire hazard testing - Glow-wire flam NOTE Corresponding IS: IEC 60695-2-11, Fire hazar Glow-wire flammability test method for end-products (rd testing - Part 2-11: Glowing/hot-v IDT)	wire based test methods -
	JIS C 60695-2-20, Fire hazard testing—Part 2 : Glowir ignitability test on materials NOTE Corresponding IS: IEC/TS 60695-2-20, Fire haz Hot-wire coil ignitability - Apparatus test method and gr	zard testing - Part 2-20: Glowing/h	
	JIS C 60695-10-2, Fire hazard testing-Part 10-2: Abno NOTE Corresponding IS: IEC 60695-10-2, Fire hazar JIS C 60695-11-5:2007, Fire hazard testing-Part 11-5:	rd testing - Part 10-2: Abnormal hea	,
	confirmatory test arrangement and guidance NOTE Corresponding IS: IEC 60695-11-5 :2004, Fire method - Apparatus, confirmatory test arrangement ar		mes - Needle-flame test

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NOTE Co	95-11-10 , Fire hazard testing-Part 11-10:Test flames - rresponding IS: IEC 60695-11-10 , Fire hazard testing - me test methods (IDT)		
NOTE Co (IDT)	95-11-20, Fire hazard testing-Part 11-20: Test flames - prresponding IS: IEC 60695-11-20, Fire hazard testing -	- Part 11-20: Test flames - 500 W flame t	est methods
JIS C 606	0:2011, Safety for lighting of lamp and lamp system on 95-10-3:2005, Fire resistance test – Electrical . Electro on test of molded stress after released		nal –
	orresponding IS: IEC 60695-10-3:2002, Fire hazard tes rtion test (IDT)	sting – Part 10-3 : Abnormal heat – Mould	d stress
NOTE Co	0, Plastics - Determinaion of Izod impact strength presponding IS: ISO 180 , Plastics - Determination of Iz	1 0 ()	
NOTE Co	1 (all parts), Plastics-Determination of Charpy impact p presponding IS: ISO 179 (all parts), Plastics - Determin	nation of Charpy impact properties (MOD	
	 Plastics - Determination of tensile properties — Part 3 presponding IS: ISO 527-3, Plastics - Determination of s (IDT) 		ns for films
NOTE Co	0, Plastics – Determination of tensile-impact strength prresponding IS: ISO 8256, Plastics - Determination of the strength of the strength	· • • · · ·	
NOTE Co	1, Plastics—Determination of tensile properties—Part prresponding IS: ISO 527-1 , Plastics - Determination of	tensile properties - Part 1: General princ	,
NOTE Co	 Plastics - Determination of tensile properties - Part 2 presponding IS: ISO 527-2, Plastics - Determination of and extrusion plastics (IDT) 		
reinforced NOTE Co	4, Plastics - Determination of tensile properties - Test of plastic composites prresponding IS: ISO 527-4, Plastics - Determination of and orthotropic fibre-reinforced plastic composites (MOI	tensile properties - Part 4: Test conditior	
	5, Plastics-Determination of tensile properties-Part 5: T		forced
unidirectio	rresponding IS: ISO 527-5 , Plastics - Determination of nal fibre-reinforced plastic composites (MOD)	tensile properties - Part 5: Test condition	is for
NOTE Co	1, Plastics - Determination of flexural properties prresponding IS: ISO 178 , Plastics - Determination of fle	,	
small flam	 Cellular plastics-Determination of horizontal burning e brresponding IS: ISO 9772, Cellular plastics - Determination 		
specimen	s subjected to a small flame (IDT) 1, Plastics-Determination of burning behaviour of thin f	-	
flame igni NOTE Co	tion source prresponding IS: ISO 9773 , Plastics - Determination of I	·	
JIS K 735	with a small-flame ignition source (IDT) 0-1, Plastics - Methods of exposure to laboratory light sources presponding IS: ISO 4892-1, Plastics - Methods of exp (IDT)		General
JIS K 735	0-2 , Plastics - Methods of exposure to laboratory light stresponding IS: ISO 4892-2 , Plastics - Methods of exp		Xenon-arc
NOTE Co	0-4, Plastics - Methods of exposure to laboratory light s presponding IS: ISO 4892-4, Plastics - Methods of exp pon-arc lamps (MOD)		
	1:2000, Graphical warning symbols for consumers 95-11-3, Fire hazard testing - Part 11-3: Test flames - 5	500 W flames - Annaratus and confirmatio	onal test
methods NOTE Co	prresponding IS: IEC 60695-11-3, Fire hazard testing -		
TS C 606	mational test methods (IDT) 9 5-11-4 , Fire hazard testing - Part 11-4: Test flames - 5	50 W flames - Apparatus and confirmatior	nal test
	prresponding IS: IEC 60695-11-4 , Fire hazard testing - mational test methods (IDT)	Part 11-4: Test flames - 50 W flames - Ap	oparatus
	5-4-1, Electrical insulating materials - Thermal enduran	ce properties - Part 4-1: Ageing ovens - S	Single-

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	 IEC 60309 (all parts), Plugs, socket-outlets and couplers for indu IEC 60317 (all parts), Specifications for particular types of windin IEC 60317-43, Specifications for particular types of winding wires copper wire, class 240 IEC 60320 (all parts), Appliance couplers for household and simi IEC 60417-DB:2002, Graphical symbols for use on equipment (For DB, see the online database of the IEC.) IEC 60747-5-5, Semiconductor devices - Discrete devices - Part IEC/TR 60825-9, Safety of laser products - Part 9: Compilation o optical radiation IEC 60851-3:1996, Winding wires - Test methods - Part 3: Mech. IEC 60851-6:1996, Methods of test for winding wires - Part 6: Th IEC 60947-1:2004, Low-voltage switchgear and controlgear - Part IEC 60990:1999, Methods of measurement of touch current and IEC 61051-2, Varistors for use in electronic equipment - Part 2: S ISO 180, Plastics - Determination of Izod impact strength ISO 7000-DB:2004, Graphical symbols for use on equipment - Ir (For DB, see the online database of the IEC.) ISO 8256, Plastics - Determination of tensile-impact strength ITU-T Recommendation K.44, Resistibility tests for telecommunovercurrents - Basic Recommendation 	g wires s - Part 43: Aromatic polyimide tape wrap lar general purposes 5-5: Optoelectronic devices – Photocoup f maximum permissible exposure to inco anical properties and Amendment 1:1997 ical properties, Amendment 1:1997 and ermal properties rt 1: General rules protective conductor current Sectional specification for surge suppress s – Part 2: principles for product safety la purces - Part 1: General guidance idex and synopsis	blers herent 7 Amendment sion varistors
Annex U.2.4	Replace the existing NOTE as NOTE1, add NOTE 2 as follows: NOTE 2 by taking into account environmental impact, "(for example, 1.1.1-trichloroethance)" described in the corresponding IEC standard was deleted.		N/A
Annex V.1	Replace "In 3.1.2 of IEC 60364-1" with "312 of JIS C 60364-1".		N/A
Annex W.1	Replace second and third sentence in the first paragraph with the following: This distinction between earthed and unearthed (floating) circuit is not the same as between CLASS I EQUIMENT, CLASS 0I EQUIPMENT and CLASS II EQUIPMENT. Floating circuits can exist in CLASS I EQUIPMENT or CLASS 0I EQUIPMENT and earthed circuits in CLASS II EQUIPMENT.	Added.	P
Annex AA	Replace figure AA.3 which correct the position of insulating metal sheet.	Replaced.	N/A
Annex BB	(Reference) [Change point which from IEC 60950- 1 : 2001 (v1) to IEC 60950-1 : 2005 (v2)] (Deleted text body)		
Annex CC	Evaluation of integrated circuit (IC) current limiters	No circuit (IC) current limiters	N/A
CC.2	Test program 1		N/A

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	10 000 cycles of turning enable on and off with an iron-core inductor having (0.35 \pm 0.1) mH inductance at 1 kHz and less than 1 Ω DC resistance value connected in the output circuit;		N/A
	10 000 cycles of turning enable on and off with the input connected to a capacitor rated 425 μ F ± 10 μ F and shorting the output;		N/A
	10 000 cycles of turning the input pin on and off with an iron-core inductor having (0.35 ± 0.1) mH inductance at 1 kHz and less than 1 Ω DC resistance value connected to the input supply and return while keeping enable active and shorting the output;		N/A
CC.3	Test program 2		N/A
	Note: It's advisable to use that in conformity with IEC 60127-2 for quick-fusing type fuse.		N/A
Annex EE	Household and home/office document/media shredders		N/A
	Note: Delete requirements of this Annex which corresponding IS and replace this Annex by Annex JA.		N/A
	Foreword of Annex JA (Requirements for shredder) was replaced by following: It shall conformity with requirements of this Annex for that add to body with Household and home/office document /media shredders.		N/A
Annex JA	Add a new annex JA with the following contents.	Not document shredding machine.	N/A
	Annex JA (normative) Requirements for document shredding machines (see 1.7, 2.8.3, 3.4 and 4.4) Introduction This annex specifies the safety requirements for document shredding machines, except those of STATIONARY EQUIPMENT used by connecting directly to 3-phase AC MAINS SUPPLY of a voltage not the than 200V. Document shredding machines shall comply with the requirements of this annex in addition to other requirements specified in this standard, except those of STATIONARY EQUIPMENT used by connecting directly to three-phase AC MAINS		

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JA.1	 Markings and instructions In the easily visible part near to the slot for documents, by a method of clearly legible and permanent and by using easily understandable terms, document shredding machines shall have markings of the symbol A specified in 6.2.1 (general cautions) of JIS S 0101:2000, Graphical warning symbols for consumers, and also the following precautions for use: that use by an infants/children may cause a hazard of injury etc.; that a hand can be drawn into the mechanical section for shredding when touching the document-slot; that clothing can be drawn into the mechanical section for shredding when touching the document-slot; that hairs can be drawn into the mechanical section for shredding when touching the document-slot; 	Not document shredding machine.	N/A
JA.2	 in case of equipment incorporating a commutator motor, that equipment may catch fire or explode by spraying of flammable gas. Inadvertent reactivation Any safety interlock that can be operated by means of the test finger, Figure JA.1, is considered to be likely to cause inadvertent reactivation of the hazard. Compliance is checked by inspection and, where 	Not document shredding machine.	N/A
JA.3	 necessary, by a test with the test finger, Figure JA.1 Disconnect switch 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 	Not document shredding machine.	N/A
	sub-clause 1.7.8 and other positions shall be indicated with proper terms or symbols. Compliance is checked by inspection.		

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JA.4	Protection in operator access area	See above.	N/A
	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.		

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Dimensions in millimeters

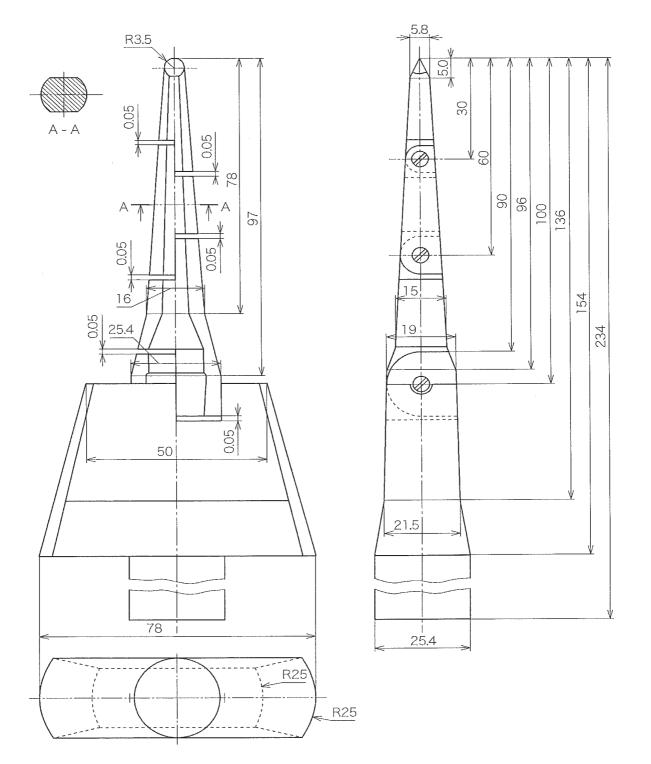
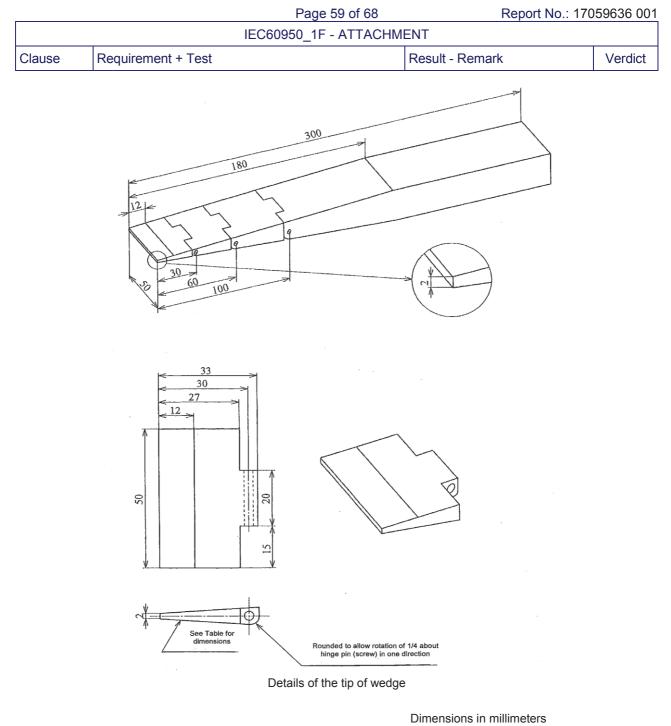


Figure JA.1 Test finger



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

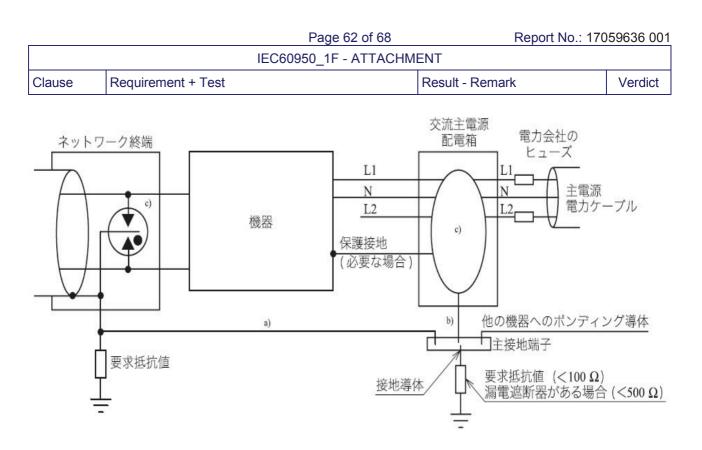
The thickness of the probe varies linearly, except changing the slope at the respective points shown in the table. The allowable dimensional tolerance of the probe shall be +/-0,127 mm.

Figure JA.2 Wedge-probe.

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Annex JB	Add Annex JB as follows:	Added.	N/A			
	Annex JB (informative) Current conditions Installation environment on overvoltages and overcurrents, and the measures (see NOTE 1 in Clause 6) Introduction This standard is based on "ITU-T Recommendation K.11:1993" to stipulate requirement for equipment on a premise to install in the environment where appropriate measures were taken for so that overvoltage more than peak 1.5kV does not hang to the apparatus. But in Japan due to environment is difficult to integrate with "ITU-T Recommendation K.11:1993", in here explain for desirable environment and show actions to be taken how to make a desirable setting environment.					

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Clause	Requirement + Test	Result - Remark	Verdic	
JB.1	A desirable setting environment When lead electric wires in building for any kind service of metal wire, for overvoltage restraint and overcurrent restraint, it is desirable that be close to each other including grounding conductor. It is important to make it close each other especially the lead in point of power line, communication line and grounding conductor. In that case, attention is necessary for electromagnetic induction where occurred between a communication line and the power line which are not covered. It is desirable that set up main grounding terminal which close to lead in point of power line and communication line in building as much as possible. Due to minimize the surge current in building for all shielding conductor of cable which lead in building, it shall connected directly with main grounding terminal in lead in point via surge protection device (SPD) e.g. arrester and so on. It shall be considered corrosion measures in joint if necessary. It is desirable that SPD which set on communication line is close to lead in point toward the building as much as possible. Furthermore set the SPD near the main power line, and it may make the distance from SPD to a grounding conductor as short as possible. It is effective if use a short grounding conductor with low impedance for that decrease surge voltage between electric power system protection conductor and the communication line. Desirable setting environment for TT electric		N/A	
	power system is as figure JB.1. Established SPD as that excessive potential difference does not occur between communication side and the electricity side, and recommend that ground wire of both are connected with a short conductor. Concerning the detail for recommend setting environment, see			



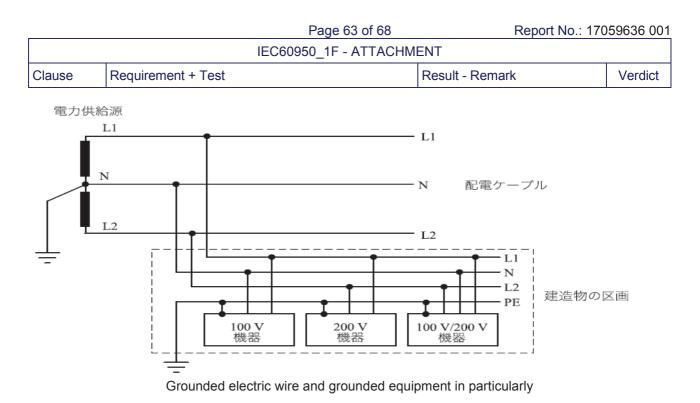
Note:

- a) All bonding line to a main grounding terminal makes it as short as possible (Less than 1.5m in the place that danger of direct lightning is high).
- b) The connected line which from SPD to main grounding terminal is as short as possible (less 1.5m).
- c) Setting for SPD (omitted the detail). All SPD connected line is short as possible (less 0.5m).

Figure JB.1 – Sample of desirable setting for TT electric power system of single phase three-wire type + neutral line

(From ITU-T Recommendation K.66:2004)

JB.2	Situation and countermeasure of setting environment for overvoltage and overcurrent	
	In Japan, TT type often adopted for electric power system. Typical example is as figure JB.2. For this TT type, on condition that it shall be an electric power system which does not wired with grounding conductor except neutral line, and it shall be connected with grounding terminal which have an electrically independent different from this grounding terminal of neutral line by user for equipment which need to connect with ground.	



But as thing are stand, there are a lot of	N/A
cases that an outlet is not prepared with	
the grounding terminal which is	
appropriate in the setting place of the	
equipment. On the other hand, grounding	
resistance value of SPD where set at	
lead-in point of communication line	
sometime is not enough low, it make that	
dielectric breakdown was occurred due to	
the voltage that a thunder surge current	
evoked for grounding resistance which	
flow into the communication line and drift	
to the ground through SPD. The same	
result is expected that grounding	
resistance value is not enough low too if	
set SPD on electric power system. This	
status is as figure JB.3.	
As figure JB.1, it can decrease effectively by	
connecting both with the conductor of the low	
resistance value when excessive potential	
difference occurred in internal equipment.	

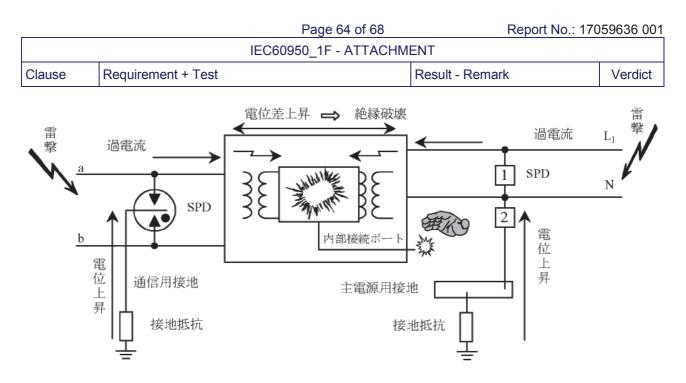


Figure JB.3 - Insufficient grounding and setting environment of bonding (From **ITU-T Recommendation K.66:2004**)

It is desirable that provide the information for set environment which appropriate measures were given based on ITU-T RecommendationK.11:1993 when perform design and sale network connected equipment.		N/A
--	--	-----

Clause

Appendix	Appendix 12, J3000(H25)		
Appendix	Special National conditions, National deviation and MITI Ordinance No. 85.	d other information according to	
1	General requirement When equipment provides with appliance inlet complying with JIS C 8283-1(2008), soldered parts of appliance inlet is not applied by force during insert or removal of connector. This is not applied when inlet body is fixed itself and not fixed by solder.	Inlet is fixed by adequate mechanical construction, not rely on soldering.	Ρ
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 indivisual requirements under open condition of one diode of parallel shall comply with the requirements.		N/A
2.2	Electric heater with glowing heating elements	Not electric stove.	N/A
	Surface treatment by paint or adhesive on protective frame or protective mesh shall not be used.		N/A
	Caution marking like below shall be on- easily visible place of the equipment or- Instruction manual「注意 当該機器から、使用初期段階で揮発性有機化合物及びカルボニル化合物が最も放散するおそれがあるため、その際には十分換気を行うこと。」		N/A
3	Components used in equipment	No relevant equipment or component.	N/A
3.1	 Motor capacitors used in ventilating fan, electric fan, air conditioner, electric washing machine, refrigerator or electric freezer shall be comply with capacitors with protective elements or protective mechanism complying with JIS C 4908(2007) P2 capacitor complying with IEC 60252-1(2001) 		N/A
	Capacitor complying with below is acceptable		
	Enclosed by metal or ceramic		N/A
	No non-metallic materials within 50 mm from capacitor surface		N/A

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	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		N/A
	 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. 		

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Clause	Requirement + Test		Result - Remark	Verdict

Appendix	J3000(H25)		
	Interpretation for METI Ordinance of Technical Requ Appendix 12	uirements (H26.04.14),	
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.	Inlet is fixed by adequate mechanical construction, not rely on soldering only.	Ρ
	This is not applied when inlet body is fixed itself and not fixed by solder.		
2	Requirement for equipment		
2.1	Heater Appliances When diode is used in parallel for adjustment of power, the equipment shall remain safe for operation under open condition of one diode.	Not electric stove.	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 9335-2-30(2006) under open condition of one diode 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 such equipment /components.	N/A
3.1	Motor capacitors used in ventilating fan, electric fan, air conditioner, electric washing machine, refrigerator or electric freezer shall be comply with - capacitors with protective elements or protective mechanism complying with JIS C		N/A
	4908(2007)		
	- P2 capacitor complying with IEC 60252-1(2001)		
	Capacitor complying with below is acceptable		NI / N
	Enclosed by metal or ceramic		N/A
	No non-metallic materials within 50 mm from capacitor surface		N/A
	Non-metallic material within 50 mm 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-		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	10(2006).		
3.2	Plug directly inserted to outlet used refrigerator or electric freezer.		N/A
	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. 		

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APPENDIX ZZ

VARIATIONS TO IEC 60950-1, ED. 2.2 (2013) FOR AUSTRALIA AND NEW ZEALAND

Differences according to AS/NZS 60950.1:2015

ZZ1 INTRODUCTION

This Appendix sets out variations and additional requirements to cover issues which have not been addressed by the International Standard. These variations indicate national variations for purposes of the IECEE CB System and will be published in the IECEE CB Bulletin.

ZZ2 VARIATIONS

The following variations apply to the source text.

	ig variations apply to the source text.		
1.2	After definition 'PERSON, SERVICE', insert the following new definition: POTENTIAL IGNITION SOURCE 1.2.12.201	Added.	Р
1.2.12.201	After Clause 1.2.12.15, insert the following new clause:	Added.	Р
	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.		
	Such a faulty contact or interruption in an electrical connection includes those which may occur in CONDUCTIVE PATTERNS on PRINTED BOARDS.		
	NOTE 1 An electronic protection circuit may be used to prevent such a fault from becoming a POTENTIAL IGNITION SOURCE.		
	NOTE 2 This definition is from AS/NZS 60065:2012, Clause 2.8.11.		
1.5.1	 First paragraph, insert the following text after the words 'IEC component standard': 'or the relevant Australian/New Zealand Standard.' 	Added.	Ρ
	 In the NOTE, insert the following text after the word 'standard': 'or an Australian/New Zealand Standard' 	Added.	
	3. Second paragraph, delete the words 'without further evaluation'.	Deleted.	

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			nal Differenc		10. 17059050 001
Clause	Requirement - Test	- Natio		Result - Remark	Verdict
Cladeo					Voluiot
1.5.2	 First paragraph, inser the word 'standard': 'or an Australian/New 		-	Added.	P
	 First paragraph, seco line, insert the followin 'standard': 'or an Australian/New 	ng text after t	the word		
	 First paragraph, seco Insert the following te 'standard': 'or an Australian/New 	xt after the w	vord		
1.7.1.3	Delete existing text and re following:	eplace with th	ne	Replaced.	Р
	Graphical symbols placed requirement of this standa accordance with IEC 604 7000, if available. In the a symbols, the manufacture graphical symbols.	ard, shall be 17 or ISO 38 Ibsence of su	in 64-2 or ISO uitable		
	Symbols as required by the equipment shall be eximanual.				
2.9.2	Second paragraph, delete	e the word 'd	esignated'.	Deleted.	N/A
3.2.5.1 Table 3B	Modify Table 3B as follows: 1. Delete the first four rows and replace with the following:		Modified.	N/A	
	RATED CURRENT of equipment A Over 0.2 up to and including 3 Over 3 up to and including 7.5 Over 7.5 up to and including 10 Over 10 up to and including 16 2. Delete NOTE 1 and ren as 'NOTE'. 3. Delete Footnote ^a and 1 following: ^a This nominal cross-sect allowed for Class II applia power supply cord, meas	replace with ional area is inces if the le	AWG or kcmil [cross- sectional area in mm ²] see Note 2 18 [0,8] 16 [1,3] 16 [1,3] 14 [2] ing NOTE 2 the only ength of the		
	where the cord, or cord g appliance, and the entry t exceed 2 m (0,5 mm ² three cords are not permitted; s	uard, enters o the plug do ee-core supp	the bes not ly flexible		

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	National Difference	ces	
Clause	Requirement - Test	Result - Remark	Verdict
		1	
4.1.201	After Clause 4.1, insert new Clause 4.1.201 as follows:	Inserted.	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.		
4.3.6	Delete the third paragraph and replace with the following:	Deleted and replaced. Not direct plug-in type.	N/A
	Equipment with a plug portion, suitable for insertion into a 10 A 3-pin flatpin 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.		
4.3.8	Eighth paragraph, insert the following new note after the first dash item:	No Batteries.	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.		
4.3.8.201	After Clause 4.3.8, add the following new clause as follows:	No such Batteries.	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.		
4.3.13.5.1	 Delete the first paragraph and replace 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. Third paragraph, first sentence, after 'IEC 60825-1', insert the following text: or AS/NZS 60825.1 	No Lasers.	N/A
	 AS/NZS 60825.2 and IEC 60825-12, as applicable. 2. Third paragraph, first sentence, after 'IEC 60825-1', insert the following text: 		

the following text: or AS/NZS 60825.1

4.7

At the end of Clause 4.7, insert the following text:

'For alternate tests refer to Clause 4.7.201.'

Added. The alternative method is

not considered.

N/A

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Requirement - Test

Clause

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Result - Remark Verdict	Result - Remark	Verdict
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	•		
	T	1	1
4.7.201	After Clause 4.7.3.6, add new Clauses as follows:	Added. The alternative method is	N/A
	4.7.201 Resistance to fire – Alternative tests	not considered.	
4.7.201.1	 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: 	Added. The alternative method is not considered.	N/A
	 (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 1mm in width regardless of length. (b) The following parts which would contribute negligible fuel to a fire: small mechanical parts, the mass of which does not exceed 4g, 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. 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. 		
	4.7.201.2, 4.7.201.3, 4.7.201.4 and 4.7.201.5. For the base material of printed boards, compliance shall be checked by the test of 4.7.201.5.		
	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.		

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Clause

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Requirement - Test	Result - Remark
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.	Added. The alternative method is not considered.
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.	
4 7 201 3 Testing of insulating materials	Added The alternative method is

4.7.201.2	4.7.201.2 Testing o	f non-metallic materials	Added. The alternative method is	N/A
	the glow-wire test of shall be carried out a		not considered.	
	carried out, such as material, shall meet ISO 9772 for catego wire test shall be not material classified at	glow-wire test cannot be those made of soft or foamy the requirements specified in ry FH-3 material. The glow- t carried out on parts of t least FH-3 according to ISO he sample tested was not vant part.		
4.7.201.3	4.7.201.3 Testing o	f insulating materials	Added. The alternative method is	N/A
	subject to the glow-w	ON SOURCES shall be	not considered.	
	insulating material w 3 mm of the connect			
	NOTE Contacts in compo considered to be connect	onents such as switch contacts are ions.		
		stand the glow-wire test but		
	produce a flame, oth connection within the	e envelope of a vertical		
	cylinder having a dia	ameter of 20 mm and a height		
		ubjected to the needle-flame		
		shielded by a barrier which me test shall not be tested.		
	The needle-flame test shall be made in accordance with AS/NZS 60695.11.5 with the following modifications:			
	Clause of AS/NZS 60695.11.5	Change		
	9 Test procedure			
	9.2 Application of needleflame	Replace the first paragraph with: 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 Replace the second paragraph with: The duration of application of the test flame shall be 30 s \pm 1 s.		
	9.3 Number of test specimens	Replace with: 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	Replace with: The duration of burning (t_b) shall not exceed 30 s. However, for printed circuit boards, it shall not exceed 15 s.		
	The needle-flame te	st shall not be carried out on		

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Clause	Requirement - Test	Result - Remark	Verdict
	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.		
4.7.201.4	 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 glowwire 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 needle-flame test need not be tested. 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. 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 be the requirements of Clause 4.7.201 without the need for consequential testing. 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. 	Added. The alternative method is not considered.	N/A

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Clause	Requirement - Test	Result - Remark	Verdict
4.7.201.5	4.7.201.5 Testing of printed boards	Added. The alternative method is	N/A
4. <i>1</i> .201.3	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.	not considered.	
	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 which fill the openings only for connecting wires which fill the ope		
	Compliance shall be determined using the smallest thickness of the material. 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 min when the circuit supplied is disconnected.		
6.2.2	For Australia only, delete the first paragraph and Note, and replace 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.	No TNV.	N/A

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Clause	Requirement - Test	Result - Remark	Verdict
		I	
6.2.2.1	For Australia only, delete the first paragraph including the Notes, and replace with the following:	No TNV.	N/A
	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, Uc, is:		
	(<i>i</i>) for 6.2.1 a): 7.0 kV for hand-held telephones and for headsets and 2.5 kV for other equipment; and		
	(<i>ii</i>) for 6.2.1 b) and 6.2.1 c): 1.5 kV. NOTE 201 The 7 kV impulse simulates lightning surges on typical rural and semi-rural network lines.		
	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.		
6.2.2.2	For Australia only, delete the second paragraph including the Note, and replace with the following:	No TNV.	N/A
	In Australia only, the a.c. test voltage is:		
	(i) for 6.2.1 a): 3 kV; and		
	(ii) for 6.2.1 b) and 6.2.1 c): 1.5 kV.		
	NOTE 201 Where there are capacitors across the insulation under test, it is recommended that d.c. test voltages are used.		
	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.		
7.3	Add the following before the first paragraph: 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.	No cable distribution systems.	N/A
Annex P	Add the following Normative References: AS/NZS 3191, Electric flexible cords	Added.	Р
	AS/NZS 3112, Approval and test specification— Plugs and socket-outlets		

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National Differences			
Clause	Requirement - Test	Result - Remark	Verdict
Index	 Insert the following between 'asbestos be used as insulation' and 'attitude see orientation': AS/NZS 3112 AS/NZS 3191 AS/NZS 60064 AS/NZS 60064 AS/NZS 60695.2.11 4.7.201.2, 4.7 AS/NZS 60695.11.10 4.7.201.1, 4.7 AS/NZS 60695.11.5 AS/NZS 60825.1 AS/NZS 60825.2 AS/NZS 60825.2 Insert the following between 'positive temperature coefficient (PTC) device's 'powder': Potential ignition source 1.2.201, 4.7.201.3, 4.7 	e 4.3.6 hble 3B) .1.201 7.201.3 7.201.5 7.201.3 .13.5.1 .13.5.1 and	N/A



Type Designation: 238I

238LM000**, PDS241******* (* can be 0-9, A-Z, a-z, – , \ , / , + or blank, represent different enclosure colour for marketing purpose) 17059636 001



Figure 1. Front view



Figure 2. Rear view





238LM000**, PDS241******* (* can be 0-9, A-Z, a-z, – , \ , / , + or blank, represent different enclosure colour for marketing purpose) 17059636 001

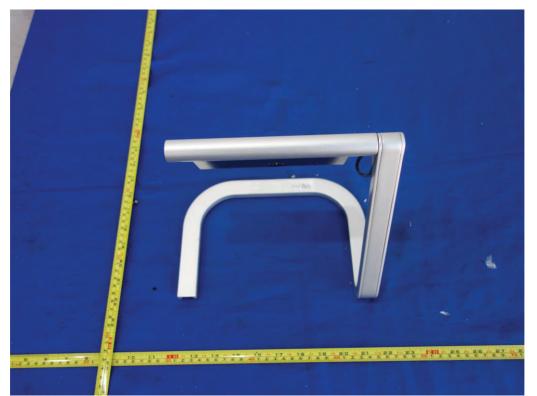


Figure 3. Base



Figure 4. AC/DC adapter



238LM000**, PDS241******* (* can be 0-9, A-Z, a-z, – , \ , / , + or blank, represent different enclosure colour for marketing purpose) 17059636 001

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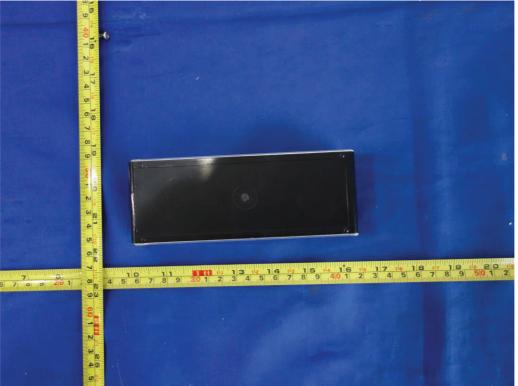


Figure 5. AC/DC adapter



Figure 6. AC/DC adapter





238LM000**, PDS241******* (* can be 0-9, A-Z, a-z, - , \ , / , + or blank, represent different enclosure colour for marketing purpose) 17059636 001



Figure 7. AC inlet and HDMI-in port of AC/DC adapter

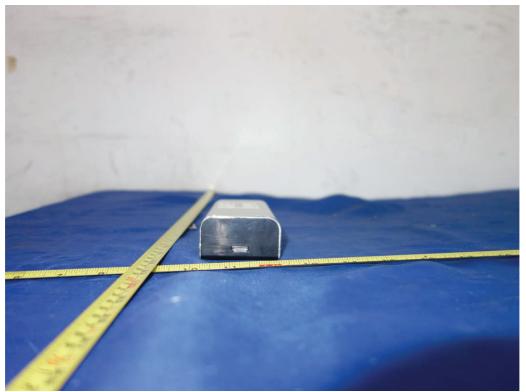


Figure 8. Mini HDMI-out port of AC/DC adapter



238LM000**, PDS241******* (* can be 0-9, A-Z, a-z, – , \ , / , + or blank, represent different enclosure colour for marketing purpose) 17059636 001

Report Number:

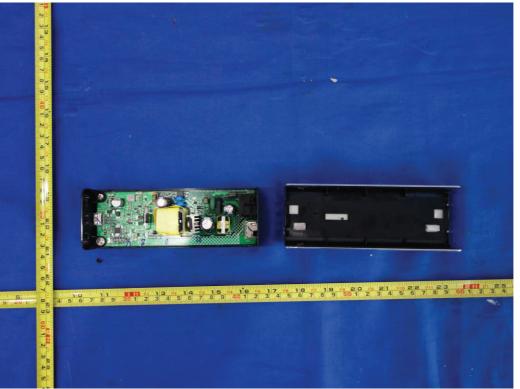


Figure 9. Interview of AC/DC adapter

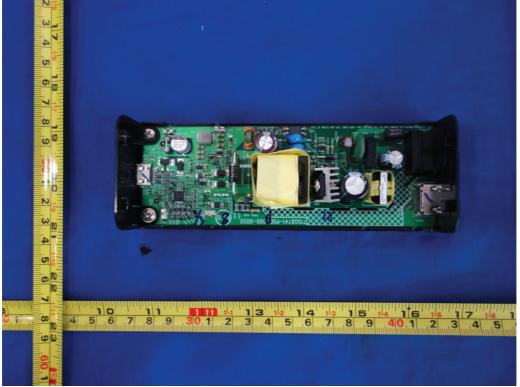


Figure 10. Interview of AC/DC adapter



238LM000**, PDS241******* (* can be 0-9, A-Z, a-z, – , \ , / , + or blank, represent different enclosure colour for marketing purpose) 17059636 001

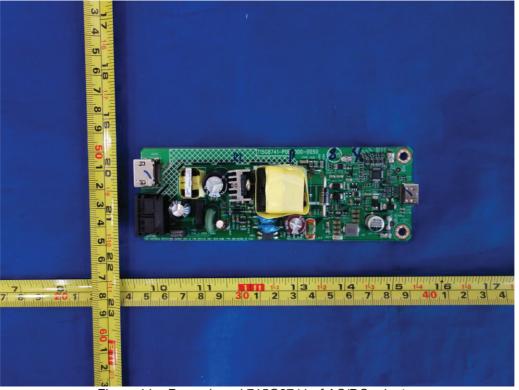


Figure 11. Power board 715G8741 of AC/DC adapter

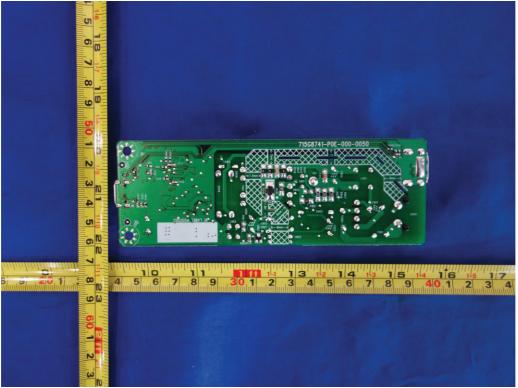


Figure 12. Power board 715G8741 of AC/DC adapter



238LM000**, PDS241******* (* can be 0-9, A-Z, a-z, – , \ , / , + or blank, represent different enclosure colour for marketing purpose) 17059636 001



Figure 13. Interview of LCD monitor



Figure 14. Interview of LCD monitor