



Ref. Certif. No.

JPTUV-057760

IEC SYSTEM FOR MUTUAL RECOGNITION OF TEST
CERTIFICATES FOR ELECTRICAL EQUIPMENT
(IECEE) CB SCHEMESYSTEME CEI D'ACCEPTATION MUTUELLE DE
CERTIFICATS D ESSAIS DES EQUIPEMENTS
ELECTRIQUES (IECEE) METHODE OC

CB TEST CERTIFICATE

CERTIFICAT D'ESSAI OC

Product
Produit

SWITCHING ADAPTOR

Name and address of the applicant
Nom et adresse du demandeurShenzhen Fujia Appliance Co., Ltd.
Bldg. B1#, Xujingchang Technology
Ind. Park, Haoye Road, Xinhe, Village, Fuyong Town Baoan District,
Shenzhen, Guangdong 518103, P.R. ChinaName and address of the manufacturer
Nom et adresse du fabricantShenzhen Fujia Appliance Co., Ltd.
Bldg. B1#, Xujingchang Technology
Ind. Park, Haoye Road, Xinhe, Village, Fuyong Town Baoan District,
Shenzhen, Guangdong 518103, P.R. ChinaName and address of the factory
Nom et adresse de l'usineShenzhen Fujia Appliance Co., Ltd.
Bldg. B1#, Xujingchang Technology
Ind. Park, Haoye Road, Xinhe, Village, Fuyong Town Baoan District,
Shenzhen, Guangdong 518103, P.R. ChinaRatings and principal characteristics
Valeurs nominales et caractéristiques principalesInput : AC 100-240V; 50/60Hz; 0.4A max; Class II
Output: refer to test reportTrademark (if any)
Marque de fabrique (si elle existe)Type of Manufacturer's Testing Laboratories used
Type de programme du laboratoire d'essais constructeur

N/A

Model / Type Ref.
Ref. de typeFJ-SWqxxxxxyyzn
(q, xxx, yyyy, z and n = refer to the test report)Additional information (if necessary may also be
reported on page 2)

For model differences, refer to the test report

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 laIEC 60065:2001 + A1 + A2
National differences see test reportAs shown in the Test Report Ref. No. which forms part
of this Certificate

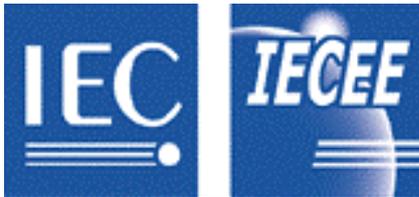
17038930 001

Comme indiqué dans le Rapport d'essais numéro de
référence qui constitue partie de ce CertificatThis CB Test Certificate is issued by the National Certification Body
Ce Certificat d'essai OC est établi par l'Organisme National de CertificationTÜV Rheinland Japan Ltd.
Global Technology Assessment Center
4-25-2 Kita-Yamata, Tsuzuki-ku
Yokohama 224-0021 Japan
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Web: www.tuv.com

Date: 05.08.2014

Signature:

Dipl.-Ing. (FH) C. Nasca



Test Report issued under the responsibility of:



TEST REPORT
IEC 60065
Audio, video and similar electronic apparatus - Safety requirements

Report Number: 17038930 001

Date of issue: Jul. 29, 2014

Total number of pages: 50

Applicant's name: **Shenzhen Fujia Appliance Co., Ltd.**

Address: Bldg. B1#, Xujingchang Technology Ind. Park, Haoye Road, Xinhe Village, Fuyong Town Baoan District, Shenzhen, Guangdong 518103, P.R. China

Test specification:

Standard: IEC 60065:2001 (Seventh Edition) + A1:2005 + A2:2010

Test procedure.....: CB Scheme

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

Test Report Form No.....: IEC60065K

Test Report Form(s) Originator.....: Intertek Semko AB

Master TRF: Dated 2010-10

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This report is not valid as a CB Test Report unless signed by an approved CB Testing Laboratory and appended to a CB Test Certificate issued by an NCB in accordance with IECEE 02.

Test item description: SWITCHING ADAPTOR

Trade Mark: Manufacturer's name shown on marking label

Manufacturer.....: Same as applicant

Model/Type reference: FJ-SWqxxxyyyyzn (q, xxx, yyyy, z and n are variables, for definition of variables see page 7 for details)

Ratings: I/P: 100-240V~, 50/60Hz, 0.4A max
O/P: see page 7 for details

Testing procedure and testing location:		
<input checked="" type="checkbox"/>	CB Testing Laboratory:	TÜV Rheinland (Shenzhen) Co., Ltd.
Testing location/ address		3&4 F, Cybio Technology Building No.1, Langshan No.2 Road South, 5th Industrial Area, High-Tech Industry Park North, Nanshan District, 518057 Shenzhen China
<input type="checkbox"/>	Associated CB Laboratory:	N/A
Testing location/ address		N/A
Tested by (name + signature).....:		Wayne Wang <i>Wayne Wang</i>
Approved by (name + signature) ..:		Michael Yang <i>Michael Yang</i>
<input type="checkbox"/>	Testing procedure: TMP	N/A
Testing location/ address		N/A
Tested by (name + signature).....:		
Approved by (name + signature) ..:		
<input type="checkbox"/>	Testing procedure: WMT	N/A
Testing location/ address		N/A
Tested by (name + signature).....:		
Witnessed by (name + signature) ..:		
Approved by (name + signature) ..:		
<input type="checkbox"/>	Testing procedure: SMT	N/A
Testing location/ address		N/A
Tested by (name + signature).....:		
Approved by (name + signature) ..:		
Supervised by (name + signature):		
<input type="checkbox"/>	Testing procedure: RMT	N/A
Testing location/ address		N/A
Tested by (name + signature).....:		
Approved by (name + signature) ..:		
Supervised by (name + signature):		

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

- Photo documentation (74 pages)
- Attachment 1: National Differences (60 pages)
- Attachment 2: Contact resistance test (1 page)
- Attachment 3: Non-detachable horizontal European plug test report (5 pages)
- Attachment 4: Detachable horizontal European plug test report (5 pages)
- Attachment 5: Non-detachable vertical European plug test report (5 pages)
- Attachment 6: Non-detachable horizontal UK plug test report (5 pages)
- Attachment 7: Detachable horizontal UK plug test report (5 pages)
- Attachment 8: Non-detachable vertical UK plug test report (5 pages)
- Attachment 9: Non-detachable horizontal Australian plug test report (10 pages)
- Attachment 10: Detachable horizontal Australian plug test report (10 pages)
- Attachment 11: Non-detachable vertical Australian plug test report (10 pages)
- Attachment 12: Japanese plug test report for all constructions (6 pages)
- Attachment 13: Non-detachable (for both horizontal and vertical) Argentine plug test report (2 pages)
- Attachment 14: Detachable Argentine plug test report (3 pages)

Summary of testing:

Tests performed (name of test and test clause):

Clause(s)	Test(s)
5	Durability of Marking Test
5.1	Input Current Test
7.1	Heating under Normal Operations
7.2	Soften Test
9.1.1.1	Touch current
9.1.7	Resistance to external Forces (50N)
10.1	Surge Test
10.2	Humidity Test
10.3	Insulation Resistance and Electric Strength
11.1	Touch current under Fault Conditions
11.2	Heating under Fault Conditions
12.1.2	Vibration test
12.1.5	Stress Relief Test
13.2	Working Voltages
13.3 & 13.4	Clearance and creepage distance
15.4.1	Torque Test
15.4.3	Device has adequate mechanical strength

Testing location:

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

If not otherwise specified, tests were performed on models FJ-SW1260502500DE, FJ-SW1260921300DE, FJ-SW1262400500DE, FJ-SW7260502500DE, FJ-SW7260921300DE and FJ-SW7262400500DE to represent other similar models.

Max. ambient temperature 45°C

Summary of compliance with National Differences

EU Group Differences, EU Special National Conditions, EU A-Deviations, AT, AU, BE, CA, CH, CZ, DE, DK, FI, FR, GB, GR, HU, IT, JP, KR, NL, NO, PL, SE, SI, SK, US.

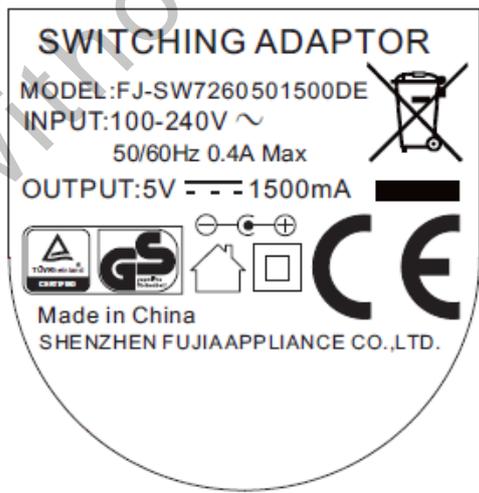
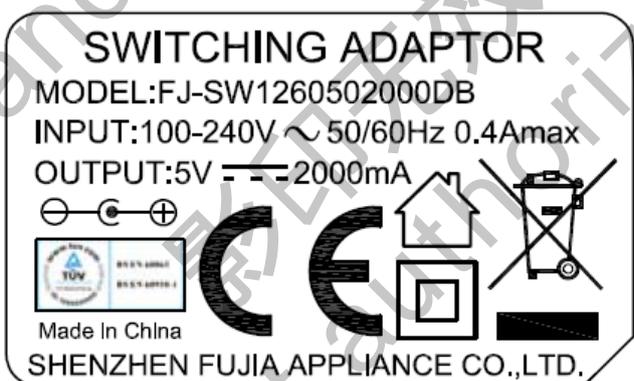
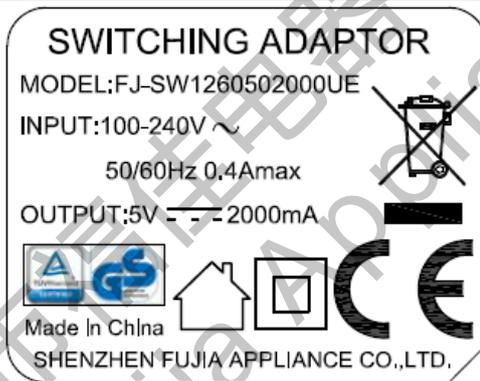
AT=Austria, AU=Australia, BE=Belgium, CA=Canadian, CH=Switzerland, CZ=Czech Republic, DE=Germany, DK=Denmark, FI=Finland, FR=France, GB=United Kingdom, GR=Greece, HU=Hungary, IT=Italy, JP=Japan, KR=Korea, NL=The Netherlands, NO=Norway, PL=Poland, SE=Sweden, SI=Slovenia, SK=Slovakia, US=United State of America.

Japanese national deviation evaluated according to IEC 60065:2001+A1:2005

The product fulfils the requirements of EN 60065:2002 + A1:2006 + A11:2008 + A2:2010+A12:2011.

Copy of marking plate

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



Notes: Since similar label used, only label for models above listed to represent other similar ones.

Test item particulars	:
Classification of installation and use	Class II
Supply Connection	AC plug (Direct plug in equipment)
.....	:
Possible test case verdicts:	
- test case does not apply to the test object	N/A (Not Applicable)
- test object does meet the requirement	P (Pass)
- test object does not meet the requirement	F (Fail)
Testing:	
Date of receipt of test item	Apr. 01, 2014
Date (s) of performance of tests	Apr. 2014
General remarks:	
The test results presented in this report relate only to the object tested. This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory. "(see Enclosure #)" refers to additional information appended to the report. "(see appended table)" refers to a table appended to the report.	
Throughout this report a <input type="checkbox"/> comma / <input checked="" type="checkbox"/> point is used as the decimal separator.	
Manufacturer's Declaration per sub-clause 6.2.5 of IEC 60065:	
The application for obtaining a CB Test Certificate includes more than one factory location and a declaration from the Manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> Not applicable
When differences exist; they shall be identified in the General product information section.	
Name and address of factory (ies)	Same as applicant.

General product information:

1. The products with model name FJ-SWqxxxxxyyyzn are series of direct plug-in switching adapter for use with audio/video equipment.
2. Top enclosure and bottom enclosure are fixed together by clamping method.
3. European plug (for both detachable plug and non-detachable plug) provided in the equipment has been tested according to EN 50075:1990 (See attachment 3 to attachment 5). UK plug (for both detachable plug and non-detachable plug) provided in the equipment has been tested according to BS 1363-1+A4 (See attachment 6 to attachment 8). Australian plug (for both detachable plug and non-detachable plug) provided in the equipment has been tested according to AS/NZS 3112+A1+A2 (See attachment 9 to attachment 11). Japanese plug (for both detachable plug and non-detachable plug) provided in the equipment has been tested according to JIS C8303 (See attachment 12). Argentine plug (for both detachable plug and non-detachable plug) provided in the equipment has been tested according to IRAM 2063 (See attachment 13 to attachment 14). The plugs for other countries shall be evaluated when submitted to national approval.
4. For models with non-detachable plug, the plug in part is fixed to the enclosure and the plug portions (incorporate pins) are moulded together with enclosure that effectively prevents any disintegration or conductive parts remaining in the socket. For models with detachable plug, the plugs are fixed with enclosure by mechanical method that effectively prevents any disintegration or conductive parts remaining in the socket
5. For models FJ-SW126xxxxxyyyzn, there are eight types plug provided: US plug, Australian plug, UK plug, Korean plug, European plug, Japanese plug, Chinese plug, and Argentine plug.
6. For models with detachable plug, the plugs are fixed with enclosure by mechanical method that effectively prevents any disintegration or conductive parts remaining in the socket. For model FJ-SW726xxxxxyyyzn, only fixed plug provided. Model FJ-SW126xxxxxyyyzn is identical to FJ-SW726xxxxxyyyzn in circuit diagram and components provided, but provided with different PCB layout drawing (PCB type A and PCB type B) and enclosure. The enclosure provide with FJ-SW126xxxxxyyyzn is 64.59mm*39mm*27.75mm, the enclosure provided with FJ-SW726xxxxxyyyzn is 68.0mm*29.8mm*36.3mm.
7. The specified maximum ambient temperature is +45°C.
8. There two type of output method, one is output with output cable, the other is output with USB connector which only used for models with 5Vdc ouput.
9. The primary filter could be provided with either common mode choke LF1 or line filter L2.
10. All models are identical to each other except for type designation, rating (see table B on page 7), enclosure with different plugs provided and some components (see table C on pages 7 and 8) used.
11. Reliability test of detachable plug also evaluated. After 200 cycles mechanical operation test, contact resistance is in compliance with the requirement of IEC 61984. See attachment 1 for details.
12. For model FJ-SWqxxxxxyyyzn (n=U, S, B, K, E, P, C, A) the power supply is used for the altitude up to 5000m, only clearance for functional insulation, basic insulation, reinforced or double insulation of the EUT are evaluated according to IEC 60664-1 table A.2, other aspects shall be evaluated during national approval. For model FJ-SW126xxxxxyyyzn, the power supply is used for the altitude up to 2000m
13. For optional components MOV1, R8, R21, CY1, L1, C7, ZD1 and LF1, if not otherwise specified, tests were performed with these components in position which is considered more strictly.

Other comments:

Table A : Definition of variables:

Variable:	Range of variable:	Content:
q	126 or 726	126 represent type A PCB and horizontal enclosure used. 726 represent type B PCB and vertical enclosure used. (only provided with fixed plug).
xxx	050 to 240	'xxx' are 3 digits indicating 10 times the output voltage value in V. For example, 050 represents the output voltage is 5.0Vdc, 240 represents the output voltage is 24.0Vdc;
yyyy	0100 to 2500	'yyyy' are 4 digits indicating 1000 times the output current value in A. For example, 0100 represents the output current is 0.1A, 2500 represents the output current is 2.5 A.
z	U, D	U indicating output with USB connector, D indicating output with output cable.
n	U, S, B, K, E, P, C, A, N	U means fixed US plug provided, S means fixed Australian plug provided, B means fixed UK plug provided, K means fixed Korean plug provided, E means fixed European plug provided, P means fixed Japanese plug provided, C means fixed Chinese plug provided. A means fixed Argentine plug provided. N means detachable plug provided.

Table B (Model list and output rating)

Model Number	Output Voltage (Vdc)	Output Current (mA)	Max. Output power (W)	Transformer T1
FJ-SWqxxxyyyyzn (xxx=050-085, yyyy=0100-2500)	5.0-8.5	100-2500	12.5	126-T1 (Secondary winding :Ø0.55mmx1x8Ts)
FJ-SWqxxxyyyyzn (xxx=090-155, yyyy=0100-1300)	9.0 -15.5	100-1300	12.0	126-T2 (Secondary winding :Ø0.30mmx2x13Ts)
FJ-SWqxxxyyyyzn (xxx=160-240, yyyy=0100-0750)	16.0-24.0	100-750	12.0	126-T3 (Secondary winding :Ø0.35mmx1x23Ts)
Remarks: The rated output current is rising in steps of 0.01A. The rated output voltage is rising in steps of 0.5V Output voltage multiplied with output current are only tested up to the max. output power.				

Table C: Model difference list:

(1)

model Components	From FJ-SWqxxxyyyyzn (xxx=050-085)	From FJ-SWqxxxyyyyzn (xxx=090-155)	From FJ-SWqxxxyyyyzn (xxx=160-240)
R5, R6	1.5Ω-10Ω	1.0Ω-7.5Ω	2.0Ω-15Ω
R15	3.9KΩ-24KΩ	4.7KΩ- 75KΩ	6.8KΩ-82KΩ
R16	2.4KΩ-10KΩ	3.0KΩ-10KΩ	3.3KΩ-10KΩ
C8	Min.330μF, 6.3V -16V	Min.220μF, 16V -25V	Min.100μF, 25V -35V
C9, C12	Min.220μF, 6.3V -16V	Min.100μF, 16V -25V	Min.47μF, 25V -35V
Diodes (D4)	2A -20A, 40V-100V	2A -10A, 60V-150V	1A -5A, 100V-200V

(2)

Model	For Model with output $\leq 6W$	For Model with output $> 6W$
Components		
C1	2.2 μ F- 10 μ F, Min.400V	3.3 μ F-10 μ F, Min.400V
C2	4.7 μ F-15 μ F, Min.400V	6.8 μ F-15 μ F, Min.400V

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 Fujia Appliance
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IEC 60065			
Clause	Requirement + Test	Result - Remark	Verdict
3	General requirements		P
	Safety class of the apparatus	Class II	P
4	General test conditions		P
4.1.4	Ventilation instructions require the use of the test box	Tested according with clause 4.1.4	P
5	Marking and instructions		P
	Comprehensible and easily discernible	The rating label is easily discernible	P
	Permanent durability against water and petroleum spirit	Compliance was checked by rubbing the marking by hand for 15s with cloth soaked with water and cloth soaked with petroleum spirit, it was not possible to remove marking plate and no curling observed after the test.	P
5.1	a) Identification, maker	See copy of marking plate.	P
	b) Model number or type reference	See copy of marking plate.	P
	c) Class II symbol if applicable	60417-1-IEC-5172 symbol marked. See copy of marking plate.	P
	d) Nature of supply	See copy of marking plate.	P
	e) Rated supply voltage	100-240V~	P
	f) Mains frequency if safety dependant	50/60Hz	P
	g) Rated current or power consumption for apparatus supplied by supply apparatus for general use		N/A
	Measured current or power consumption		N/A
	Deviation % (max 10%)		N/A
	h) Rated current or power consumption for apparatus intended for connection to an a.c. mains supply.:	0.4A Max	P
	Measured current or power consumption	See appended table 7.1.	P
	Measured current or power consumption for Television set		N/A
	Deviation % (max 10%)		P
5.2	a) Earth terminal	Class II apparatus	N/A

IEC 60065			
Clause	Requirement + Test	Result - Remark	Verdict
	b) Hazardous live terminals	No such terminals	N/A
	c) Markings on supply output terminals	Nominal output voltage and max. output current marked on the marking plate	P
5.3	a) Use of triangle with exclamation mark	Marked in circuit diagram	P
	b) marking on loudspeaker grille, IEC 60417-5036		N/A
5.4	Instructions for use	English and German (Version in other language will be provided when submitted for national approval)	P
5.4.1	a) Mains powered equipment not exposed to dripping or splashing. Warning concerning objects filled with liquid, etc.	Indoor use only and mentioned in instruction sheet	P
	b) Hazardous live terminals, instructions for wiring	No such terminals	N/A
	c) Instructions for replacing lithium battery	No batteries used	N/A
	d) Class I earth connection warning	Class II equipment	N/A
	e) Instructions for multimedia system connection	No such system	N/A
	f) Special stability warning for attachment of the apparatus to the floor/wall		N/A
	g) Warning: battery exposure to heat		N/A
	h) Warning: protective film on CRT face		N/A
5.4.2	a-b) Disconnect device: plug/coupler or all-pole mains switch location, accessibility and markings	AC plug used as disconnect device.	P
	c) Instructions for permanently connected equipment	Not permanently connected equipment.	N/A
	Marking, signal lamps or similar for completely disconnection from the mains	No such equipment	N/A

6	Hazardous radiation		P
6.1	Ionizing radiation < 36 pA/kg (0,5 mR/h)	No ionizing radiation	N/A
	Ionizing radiation under fault condition		N/A
6.2	Laser radiation, emission limits to IEC 60825-1:2007 :		N/A
	Emission limits under fault conditions :		N/A

IEC 60065			
Clause	Requirement + Test	Result - Remark	Verdict
7	Heating under normal operating conditions		P
7.1	Temperature rises not exceeding specified values; fuse links and other protective devices defeated	(see appended table 7.1)	P
7.1.1	Temperature rise of accessible parts	(see appended table 7.1)	P
7.1.2	Temperature rise of parts providing electrical insulation	(see appended table 7.1)	P
7.1.3	Temperature rise of parts acting as a support or as a mechanical barrier	(see appended table 7.1)	P
7.1.4	Temperature rise of windings	(see appended table 7.1)	P
7.1.5	Parts not subject to a limit under 7.1.1 to 7.1.4	(see appended table 7.1)	P
7.2	Softening temperature of insulating material supporting parts conductively connected to the mains carrying a current > 0,2 A at least 150 °C	Phenolic bobbin material used in T1 (except for Chang Chun: 4130(100%Virgin) (a)(b)) and LF1 which is acceptable without test. For other material see appended table 7.2	P

8	Constructional requirements with regard to the protection against electric shock		P
8.1	Conductive parts covered by lacquer, paper, untreated textile oxide films and beads etc. considered to be bare	Such parts are considered to be bare.	P
8.2	No shock hazard when changing voltage setting device, fuse-links or handling drawers etc.	Full voltage range design, no necessary adjustment, no replaceable fuse-link and no drawers.	N/A
8.3	Insulation of hazardous live parts not provided by hygroscopic material	No hygroscopic material used	P
8.4	No risk of electric shock from accessible parts or from parts rendered accessible following the removal of a cover which can be removed by hand	No cover removable by hand. See only 9.2 for test with detachable plug.	N/A
8.5	Class I equipment	Class II equipment.	N/A
	Basic insulation between hazardous live parts and earthed accessible parts		N/A
	Resistors bridging basic insulation complying with 14.1 a)		N/A
	Capacitors bridging basic insulation complying with 14.2.1 a)		N/A
	Protective earthing terminal		N/A
8.6	Class II equipment and Class II constructions within Class I equipment	Class II equipment.	P

IEC 60065			
Clause	Requirement + Test	Result - Remark	Verdict
	Double or reinforced insulation between hazardous live parts and accessible parts	Secondary circuit is separated from primary circuit by reinforced or double insulation.	P
	Components bridging double or reinforced insulation complying with 14.1 a) or 14.3	For transformer (T1), see clause 14.3	P
	Basic insulation bridged by components complying with 14.3.4.3.	No such components.	N/A
	Basic and supplementary insulation each being bridged by a capacitor complying with 14.1 a)	No such components.	N/A
	Double or reinforced insulation being bridged with 2 capacitors in series complying with 14.2.1 a)		N/A
	Double or reinforced insulation being bridged with a single capacitor complying with 14.2.1 b)	Between primary and SELV: Optional Y1 capacitor (CY1) according to IEC 60384-14 used bridging reinforced insulation.	P
8.7	This clause is void		—
8.8	Basic or supplementary insulation > 0,4 mm (mm) :		N/A
	Reinforced insulation > 0,4 mm (mm)	The opto-coupler and plastic enclosure & under part of detachable plug & plug body of unit provide distance through insulation of 0.4mm minimum and 1.5mm minimum respectively	P
	Thin sheet insulation (excluding non-separable thin sheet insulation. See 8.22)	2 layers of thin sheet materials of polyester tape used in and around transformer (T1).	P
	Basic or supplementary insulation, at least two layers, each meeting 10.3		N/A
	Basic or supplementary insulation, three layers any two of which meet 10.3		N/A
	Reinforced insulation, two layers each of which meet 10.3	AC 3000 V applied on each layer of insulation tape	P
	Reinforced insulation, three layers any two which meet 10.3		N/A
8.9	Adequate insulation between internal hazardous live conductors and accessible parts	All hazardous live parts are covered by plastic enclosure. All internal wires are UL recognized wiring which is PVC insulated, rated VW-1.	P

IEC 60065			
Clause	Requirement + Test	Result - Remark	Verdict
	Adequate insulation between internal hazardous live parts and conductors connected to accessible parts	Conductors connected to the mains are separated by double or reinforced insulation from accessible parts.	P
8.10	Double insulation between conductors connected to the mains and accessible parts.	Reinforced or double insulation provided.	P
	Double insulation between internal hazardous live parts and conductors connected to accessible parts.	Reinforced or double insulation provided.	P
8.11	Detaching of wires	No wire could become detached.	P
	No undue reduction of creepages or clearance distances if wires become detached	Conductors connected to PCB by soldering and glue.	P
	Vibration test carried out	See 12.1.2.	P
8.12	This clause is void		—
8.13	Adequate fastening of windows, lenses, lamp covers etc. (pull test 20 N for 10 s)	No such parts	N/A
8.14	Adequate fastening of covers (push/pull test 50 N for 10 s)	Enclosure only	P
8.15	No risk of damage to the insulation of internal wiring due to hot parts or sharp edges	The insulation of internal wiring is not exposed to hot parts or sharp edges.	P
8.16	Only special supply equipment can be used		N/A
8.17	Insulated winding wire without additional interleaved insulation	Certified triple insulated wire used as secondary winding in transformer (T1). Physical separation provided on primary and secondary lead-outs by insulation tube.	P
8.18	Endurance test as required by 8.17		N/A
8.19	Disconnection from the mains		P
8.19.1	Disconnect device	The plug is used as the disconnect device and see also subclause 5.4.2.	P
	All-pole switch or circuit breaker with >3mm contact separation	No switch used	N/A
8.19.2	Mains switch ON indication		N/A
8.20	Switch not fitted in the mains cord		N/A
8.21	Bridging components comply with clause 14	No such components	N/A
8.22	Non-separable thin sheet material	No such material	N/A

IEC 60065			
Clause	Requirement + Test	Result - Remark	Verdict
9	Electric shock hazard under normal operating conditions		P
9.1	Testing on the outside		P
9.1.1	For voltages >1000 V ac or >1500 V dc complies with clause 13.3.1 for basic insulation	No such high voltage	N/A
9.1.1.1	a) Open circuit voltages	The open-circuit output voltage of the apparatus does exceed 60 Vdc or 35 Vpeak and the touch current measurement was conducted with the test results in appended table 9.1.1.	P
	b) Touch current measured from terminal devices using the network in annex D	See appended table 9.1.1	P
	c) Discharge not exceeding 45 µC	Complied.	P
	d) Energy of discharge not exceeding 350 mJ	Open circuit voltage<15KV	N/A
9.1.1.2	Test with test finger and test probe	Considered.	P
9.1.2	No hazardous live shafts of knobs, handles or levers		N/A
9.1.3	Ventilation holes and other holes tested by means of 4 mm x 100 mm test pin	For models with detachable plug, the test pin can not become live part through holes under detachable plug	N/A
9.1.4	Terminal devices tested with 1 mm x 20 mm test pin (10 N); test probe D of IEC 61032		N/A
	Terminal devices tested with 1 mm x 100 mm straight wire (1 N); test probe D of IEC 61032		N/A
9.1.5	Pre-set controls tested with 2.5 mm x 100 mm test pin (10 N); test probe C of IEC 61032	No pre-set controls used	N/A
9.1.6	No shock hazard due to stored charge on withdrawal of the mains plug; voltage (V) after 2 s	See below	P
	If C is not greater than 0,1 µF no test needed	No capacitors before diode bridge	N/A
9.1.7	Resistance to external forces	See below.	P
	a) Test probe 11 of IEC 61032 for 10 s (50 N)	Complied.	P
	b) Test hook of fig. 4 for 10 s (20 N)	Complied.	P
	c) 30 mm diameter test tool for 5 s (100 or 250 N)		N/A
9.2	No hazard after removing a cover by hand	No hazard after removing detachable plug.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
10	Insulation requirements		P
10.1	Insulation resistance (MΩ) at least 2 MΩ min. after surge test for basic and 4 MΩ min. for reinforced insulation	Tested between primary and accessible parts, after tested, EUT complied with the requirements of 10.3	P
10.2	Humidity treatment 48 h or 120 h	95% RH, 40°C, 120h (as requested by manufacturer)	P
10.3	Insulation resistance and dielectric strength between mains terminals	Refer to appended table 10.3.	P
	Insulation Resistance and dielectric strength across BASIC or SUPPLEMENTARY insulation (Class I)	Class II equipment	N/A
	Insulation resistance and dielectric strength across REINFORCED insulation (Class II)	Refer to appended table 10.3.	P
11	Fault conditions		P
11.1	No shock hazard under fault condition	(see appended table 11.1)	P
11.2	Heating under fault condition		P
	Flames extinguish within 10 seconds	No flames occurred	P
	No hazard from softening solder	No solder softened during the test.	N/A
	Soldered terminations not used as protective mechanism		N/A
11.2.1	Measurement of temperature rises	(see appended table 11.2)	P
11.2.2	Temperature rise of accessible parts	(see appended table 11.2)	P
11.2.3	Temperature rise of parts, other than windings and printed boards, providing electrical insulation	(see appended table 11.2)	P
11.2.4	Temperature rise of parts acting as a support or mechanical barrier	(see appended table 11.2)	P
11.2.5	Temperature rise of windings	(see appended table 11.2)	P
11.2.6	Temperature rise of printed boards shall not exceed the limits of table 3 by max. 100 K for max. 5 min	The temperature rise of PCB does not exceed the limit of table 3.	P
	Printed circuit boards (PCB) classified as V-0 according to 60695-11-10 or Clause G.1 may exceed the limit in table 3 in case a) and b):		N/A
	a) Temperature rise of printed circuit boards exceeding the limits of table 3 by not more than 100 K for an area not greater than 2 cm ²		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	b) Temperature rise of printed circuit boards exceeding the limits of table 3 up to 300 K for an area not greater than 2 cm ² for a maximum of 5 min		N/A
	Meets all the special conditions if conductors on printed circuit boards are interrupted		N/A
	Class I protective earthing maintained	Class II equipment	N/A
11.2.7	Temperature rise of parts not subject to the limits of 11.2.1 to 11.2.6 shall not exceed the limits in table 3, item e), "Fault conditions".	Refer to appended table 11.2.	P

12	Mechanical strength		P
12.1.1	Bump test where mass >7 kg	Mass weight: <7kg	N/A
12.1.2	Vibration test	After test, no connection or part the loosening of which might impair safety shall have loosened.	P
12.1.3	Impact hammer test		N/A
	Steel ball test		N/A
12.1.4	Drop test for portable apparatus where mass ≤ 7 kg	See only test of clause 15.4.3 a)	N/A
12.1.5	Thermoplastic enclosures stress relief test	After the test at temperature of 105°C, no shrinkage, distortion or loosening of any enclosure part was noticeable on the apparatus for enclosure material. (tested for all sources of enclosure)	P
12.2	Fixing of knobs, push buttons, keys and levers		N/A
12.3	Remote controls with hazardous live parts	No remote controls used	N/A
12.4	Drawers (pull test 50 N, 10 s)	No drawers used	N/A
12.5	Antenna coaxial sockets providing isolation	No such sockets	N/A
12.6	Telescoping or rod antennas construction	No antennas used	N/A
12.6.1	Telescoping or rod antennas securement		N/A

IEC 60665			
Clause	Requirement + Test	Result - Remark	Verdict
13	Clearances and creepage distances		P
13.1	Clearances in accordance with 13.3		P
	Creepage distances in accordance with 13.4		P
13.2	Determination of working voltage	(See appended table of 13.2)	P
13.3	Clearances	(See appended table of 13.3&13.4)	P
13.3.1	General		P
13.3.2	Circuits conductively connected to the mains comply with table 8 and, where applicable, table 9.....:		P
13.3.3	Circuits not conductively connected to the mains comply with table 10	No hazard when short circuited according to clause 11.	P
13.3.4	Measurement of transient voltages		N/A
13.4	Creepage distances	(See appended table of 13.3&13.4)	P
	Creepage distances greater than table 11 minimum values		P
13.5	Printed boards		P
13.5.1	Clearances and creepage distances between conductors on printed circuit boards, one of which may be conductively connected to the mains, as in fig. 10		P
13.5.2	Type B coated printed circuit boards complying with IEC 60664-3 (basic insulation only)		N/A
13.6	Conductive parts along uncemented joints clearances and creepage distances comply with 13.3 and 13.4		N/A
	Conductive parts along reliably cemented joints comply with 8.8		N/A
	Temperature cycle test and dielectric strength test		N/A
	500V test for transformers, magnetic coupler and similar devices, if insulation is relied upon for safety		N/A
13.7	Enclosed, enveloped or hermetically sealed parts not conductively connected to the mains, clearances and creepage distances as in table 12	Not such construction.	N/A
13.8	Parts filled with insulating compound, meeting the requirements of 8.8	The Opto-coupler is approved component. See appended table 14 for the source details.	P

IEC 60065			
Clause	Requirement + Test	Result - Remark	Verdict
14	Components		P
14.1	Resistors	No such resistors.	N/A
	a) Resistors between hazardous live parts and accessible metal parts		N/A
	b) Resistors, other than between hazardous live parts and accessible parts		N/A
	Resistors separately approved		N/A
14.2	Capacitors and RC units		P
	Capacitors separately approved :		N/A
14.2.1	Y capacitors tested to IEC 60384-14, 2 nd edition	Y1 capacitor CY1 used between primary and SELV circuit	P
14.2.2	X capacitors tested to IEC 60384-14, 2 nd edition	No such capacitors	N/A
14.2.3	Capacitors operating at mains frequency but not connected to the mains: tests for X2	No such components used.	N/A
14.2.5	Capacitors with volume exceeding 1750 mm ³ , where short-circuit current exceeds 0,2 A: compliance with IEC 60384-1, 4.38 category B or better	The capacitors except metal-cased type provided with volume less than 1750 mm ³ .	N/A
	Capacitors with volume exceeding 1750 mm ³ , mounted closer to a potential ignition source than table 5 permits: compliance with IEC 60384-1, 4.38 category B or better		N/A
	Shielded by a barrier acc. to 20.1.4/ table 21 or metal	The electrolytic capacitor has a metal case as a barrier.	N/A
14.3	Inductors and windings	Complied with 14.3.2.	P
	Comply with IEC 61558-1, IEC 61558-2 (as relevant) and clause 20.1.4	None.	N/A
14.3.1	Transformers and inductors marked with manufacturer's name and type	Safety isolating transformers are marked accordingly.	P
	Transformers and inductors separately approved .:	The transformer and inductors have been tested during this approval.	N/A
14.3.2	General	Isolating transformer	P
	Insulation material complies with clause 20.1.4	See below	P
14.3.3	Constructional requirements	See below	P
14.3.3.1	Clearances and creepage distances comply with clause 13	Transformer complied with clause 13.	P
14.3.3.2	Transformers meet the constructional requirements	Same as above	P
14.3.4	Separation between windings		P

IEC 60065			
Clause	Requirement + Test	Result - Remark	Verdict
14.3.4.1	Class II transformers have adequate separation between hazardous live parts and accessible parts (double or reinforced insulation)..... :	Double or reinforced insulation used between hazardous live parts and accessible parts	P
	Coil formers and partition walls > 0,4 mm	Min. 0.51mm	P
14.3.4.2	Class I transformers, with basic insulation and protective screening only if all 7 conditions of 14.3.4.2 are met	Class II apparatus	N/A
14.3.4.3	Separating transformers with at least basic insulation		N/A
14.3.5	Insulation between HAZARDOUS LIVE parts and ACCESSIBLE parts		P
14.3.5.1	Class II transformers have adequate insulation between hazardous live parts and accessible parts (double or reinforced insulation)	(See clause 14.3.4.1)	P
	Coil formers and partition walls > 0,4 mm	Min. 0.51mm	P
14.3.5.2	Class I transformers have adequate insulation between hazardous live parts and accessible conductive parts or those conductive parts or protective screens connected to a protective earth terminal	Class II transformer	N/A
	Winding wires connected to protective earth have adequate current-carrying capacity		N/A
14.4	High voltage components	No such components	N/A
	High-voltage components and assemblies: U > 4 kV (peak) separately approved		N/A
	Component meets category V-1 of IEC 60707		N/A
14.4.1	High voltage transformers and multipliers tested as part of the submission		N/A
14.4.2	High voltage assemblies and other parts tested as part of the submission		N/A
14.5	Protective devices	Current fuse or fusible resistor used.	P
	Protective devices used within their ratings	See appended tables 14.	P
	External clearances and creepage distances meet requirement of clause 13 for the voltage across the device when opened	See appended table 13.3 and 13.4.	P
14.5.1.1	a) Thermal cut-outs separately approved		N/A
	b) Thermal cut-outs tested as part of the submission		N/A
14.5.1.2	a) Thermal links separately approved	No thermal links used	N/A
	b) Thermal links tested as part of the submission		N/A
14.5.1.3	Thermal devices re-settable by soldering	No such components	N/A

IEC 60065			
Clause	Requirement + Test	Result - Remark	Verdict
14.5.2.1	Fuse-links in the mains circuit according to IEC 60127	Fuse RF1 is approved component See appended table 14 for details.	P
14.5.2.2	Correct marking of fuse-links adjacent to holder ...:	Current fuse or fusible resistor used, marking on PCB: RF1 T2AL/250V, 2Ω/2W or 4.7Ω/2W.	P
14.5.2.3	Not possible to connect fuses in parallel		N/A
14.5.2.4	Not possible to touch hazardous live parts when replacing fuse-links without the use of a tool	No fuse holder. RF1 can't be replaced without damaging equipment.	N/A
14.5.3	PTC thermistors comply with IEC 60730-1:2007	No such components	N/A
	PTC devices (15 W) category V-1 or better		N/A
14.5.4	Circuit protectors have adequate breaking capacity and their position is correctly marked	Fuse or fusible resistor used. See appended table 11.2	P
14.6	Switches	No switches used	N/A
14.6.1 a)	Separate testing to IEC 61058-1 including: - 10 000 operations - Normal pollution suitability - Make and break speed independent of speed of actuation V-0 compliance with annex G, G.1.1		N/A
14.6.1 b)	Tested in the apparatus:		N/A
	Switch controlling > 0.2A with open contact voltage > 35 V (peak)/24 V dc complying with 14.6.3, 14.6.4 and V-0 in annex G, G.1.1		N/A
	Switch controlling > 0.2A with open contact voltage < 35 V (peak)/24 V dc complying with 14.6.3 and V-0 in annex G, G.1.1		N/A
	Switch controlling < 0.2A with open contact voltage > 35 V (peak)/24 V dc complying with 14.6.4 and V-0 in annex G, G.1.1		N/A
14.6.2	Switch tested to 14.6.1 b) constructed to IEC 61058-1 subclause 13.1 and has making/breaking action independent of speed of actuation		N/A
14.6.3	Switch tested to 14.6.1 b) compliant with IEC 61058-1 subclause 16.2.2 d) and m) not attaining excessive temperatures in use		N/A
14.6.4	Switch tested to 14.6.1 b) has adequate dielectric strength		N/A
14.6.5	Mains switch controlling mains socket outlets additional tests to IEC 61058-1		N/A
	Socket outlet current marking correct		N/A

IEC 60065			
Clause	Requirement + Test	Result - Remark	Verdict
14.7	Safety interlocks		N/A
	Safety interlocks to 2.8 of IEC 60950-1		N/A
14.8	Voltage setting devices and the like		N/A
	Voltage setting device not likely to be changed accidentally		N/A
14.9	Motors		N/A
14.9.1	Endurance test on motors		N/A
	Motor start test		N/A
	Dielectric strength test		N/A
14.9.2	Not adversely affected by oil or grease etc.		N/A
14.9.3	Protection against moving parts		N/A
14.9.4	Motors with phase-shifting capacitors, three-phase motors and series motors meet clause. B.8, B.9 and B.10 of IEC 60950-1, Annex B		N/A
14.10	Batteries		N/A
14.10.1	Batteries mounted with no risk of accumulation of flammable gases		N/A
14.10.2	No possibility of recharging non-rechargeable batteries		N/A
14.10.3	Recharging currents and times within manufacturers limits		N/A
	Lithium batteries discharge and reverse currents within the manufacturers limits		N/A
14.10.4	Battery mould stress relief		N/A
14.10.5	Battery drop test		N/A
14.11	Optocouplers	Approved opto-coupler used.	P
	a) Comply with 13.6 (jointed insulation) and N.2.1		N/A
	b) Comply with IEC 60747-5-5:2007		P
	Alternative to a) and b) optocoupler comply with 13.8		N/A
	a) Comply with 13.6 (jointed insulation) and N.2.1		N/A
14.12	Surge suppression varistors	Approved surge suppressor MOV1 used	P
	Comply with IEC 61051-2	Complied	P
	Not connected between mains and accessible parts except for earthed parts of permanently connected apparatus		P

IEC 60065			
Clause	Requirement + Test	Result - Remark	Verdict
	Complies with the current pulse, fire hazard and thermal stress requirements of 14.12	Complied	P

15	Terminals		P
15.1.1	Mains plug, appliance inlet, interconnection couplers and mains socket-outlet meet the appropriate standard	AC plug tested in equipment used. (see appended table 14)	P
	Overloading of plugs or appliance inlets prevented if the apparatus has mains socket outlets	No mains socket outlets	N/A
	Overloading of internal wiring prevented if the apparatus has mains socket outlets		N/A
15.1.2	Connectors for antenna, earth, audio, video or data		N/A
	No risk of insertion in mains socket-outlets		N/A
	No risk of insertion into audio- or video- outlets marked with the symbol of 5.2	No such outlets	N/A
15.1.3	Output terminals of a.c. adaptors or similar devices not compatible with household mains socket-outlets	Mismatching of connectors is not possible.	P
15.2	Provision for protective earthing		N/A
	Accessible conductive parts of Class I equipment reliably connected to earth terminal, within equipment	Class II equipment	N/A
	Protective earth conductors correctly coloured		N/A
	Equipment with non-detachable mains cord provided with separate protective earth terminal near mains input		N/A
	Protective earth terminal resistant to corrosion		N/A
	Earth resistance test: $< 0,1 \Omega$ at 25 A		N/A
15.3	Terminals for external flexible cords and for permanent connection to the mains supply	No such terminals	N/A
15.3.1	Adequate terminals for connection of permanent wiring		N/A
15.3.2	Reliable connection of non-detachable cords		N/A
	Not soldered to conductors of a printed circuit board		N/A
	Adequate clearances and creepage distances between connections should a wire break away		N/A
	Wire secured by additional means to the conductor		N/A

IEC 60065			
Clause	Requirement + Test	Result - Remark	Verdict
15.3.3	Screws and nuts clamping conductors have adequate threads: ISO 261, ISO 262 or similar	No such screws and nuts	N/A
15.3.4	Soldered conductors wrapped around terminal prior to soldering or held in place by additional means		N/A
	Clamping of conductor and insulation if not soldered or held by screws		N/A
15.3.5	Terminals allow connection of appropriate cross-sectional area of conductors, for the rated current of the equipment		N/A
15.3.6	Terminals to 15.3.3 have sizes required by table 16		N/A
15.3.7	Terminals clamp conductors between metal and have adequate pressure		N/A
	Terminals designed to avoid conductor slipping out when tightened or loosened		N/A
	Terminals adequately fixed to avoid loosening when the clamping is tightened or loosened and stress on internal wiring is avoided		N/A
15.3.8	Terminals carrying a current more than 0,2 A: contact pressure not transmitted by insulating material except ceramic		N/A
15.3.9	Termination of non-detachable cords: wires terminated near to each other		N/A
	Terminals located and shielded: test with 8 mm strand		N/A
15.4	Devices forming a part of the mains plug		P
15.4.1	No undue strain on mains socket-outlets	Max. 0.045Nm for all type of plugs.	P
15.4.2	Device complies with standard for dimensions of mains plugs	The dimension and construction of the injection part or detachable plug is in accordance with (1) For European plug: EN 50075 (2) For UK plug: BS 1363-1 (3) For Australian plug: AS/NZS 3112 (4) For Japanese plug: JIS C8303 (5) For Argentina plug: IRAM 2063 The plug for other countries shall be evaluated during national approval.	P
15.4.3	Device has adequate mechanical strength (tests a,b,c)	Complies for product with tested plugs as above	P

IEC 60065			
Clause	Requirement + Test	Result - Remark	Verdict
16	External flexible cords		P
16.1	Mains cords sheathed type, complying with IEC 60227 for PVC or IEC 60245 for synthetic rubber cords		N/A
	Non-detachable cords for Class I have green/yellow core for protective earth		N/A
16.2	Mains cords conductors have adequate cross-sectional area for rated current consumption of the equipment		N/A
16.3	a) Flexible cords not complying with 16.1, used for interconnections between separate units of equipment used in combination and carrying hazardous live voltages, have adequate dielectric strength		N/A
	b) Flexible cords not complying with 16.1, withstand bending and mechanical stress (3.2 of IEC 60227-2)		N/A
16.4	Flexible cords used for connection between equipment have adequate cross-sectional areas to avoid temperature rise under normal and fault conditions	Cross-section area of output cord suitable for the intended current.	P
16.5	Adequate strain relief on external flexible cords		N/A
	Not possible to push cord back into equipment		N/A
	Strain relief device unlikely to damage flexible cord		N/A
	For mains cords of Class I equipment, hazardous live conductors become taut before earth conductor	Class II equipment	N/A
16.6	Apertures for external flexible cord: no risk of damage to the cord during assembly or movement in use		N/A
16.7	Transportable musical instruments and amplifiers fitted with detachable cord set with appliance inlet to IEC 60320-1	No such equipment	N/A
	Transportable musical instruments and amplifiers fitted with detachable cord sets or with means of stowage to protect the cord		N/A

17	Electrical connections and mechanical fixings		P
17.1	Torque test to table 20		N/A
	- screws into metal: 5 times	No such screws	N/A
	- screws into non-metallic material: 10 times		N/A
17.2	Correct introduction into female threads in non-metallic material		N/A

IEC 60065			
Clause	Requirement + Test	Result - Remark	Verdict
17.3	Cover fixing screws: captive	No such screws used.	N/A
	Non-captive fixing screws: no hazard when replaced by a screw whose length is 10 times its diameter		N/A
17.4	No loosening of conductive parts carrying a current > 0,2 A		N/A
17.5	Contact pressure not transmitted through plastic other than ceramic for connections carrying a current > 0,2 A	Metal spring sheet provided for input connects for detachable plug models.	P
17.6	Stranded conductors of flexible supply cords carrying a current > 0,2 A with screw terminals not consolidated by solder		N/A
17.7	Cover fixing devices other than screws have adequate strength and their positioning is unambiguous		N/A
17.8	Fixing devices for detachable legs or stands provided		N/A
17.9	Internal pluggable connections, affecting safety, unlikely to become disconnected	No such connections	N/A
18	Mechanical strength of picture tubes and protection against the effects of implosion		N/A
18.1	Picture tube separately approved to IEC 61965:		N/A
	Picture tube separately approved to 18.2:		N/A
18.2	Non-intrinsically protected tubes tested to 18.2		N/A
19	Stability and mechanical hazards		P
	Mass of the equipment exceeding 7 kg:	Mass weight:<7kg	N/A
	Apparatus intended to be fastened in place – suitable instructions:		N/A
19.1	Test on a plane, inclined at 10° to the horizontal		N/A
19.2	100 N force applied vertically downwards		N/A
19.3	100 N force, or 13% of weight, applied horizontally to point of least stability		N/A
19.4	Edges or corners not hazardous	Edges and corners are smoothed.	P
19.5	Glass surfaces (exc.laminated) with an area exceeding 0,1 m² or maximum dimension > 450 mm, pass the test of 19.5.1		N/A
19.6	Wall or ceiling mountings adequate		N/A

IEC 60665			
Clause	Requirement + Test	Result - Remark	Verdict
20	Resistance to fire		P
20.1	Electrical components and mechanical parts		P
	a) Exemption for components contained in an enclosure of material V-0 to IEC 60695-11-10 with openings not exceeding 1 mm in width	Plastic enclosure with a flammability category of V-0 used without openings.	P
	b) Exemption for small components as defined in 20.1	Some small components mounted on UL approved PCB with flammability of V-0 or better.	P
20.1.1	Electrical components meet the requirements of Clause 14 or 20.1.4		P
20.1.2	Insulation of internal wiring working at voltages > 4 kV or leaving an internal fire enclosure, or located within the areas mentioned in Table 21, not contributing to the spread of fire	a) wiring working at voltage < 4 kV (peak) a.c or d.c; b) no internal fire enclosure; c) no such wiring except PVC used.	N/A
20.1.3	Material of printed circuit boards on which the available power exceeds 15 W at a voltage between 50 V and 400 V (peak) a.c. or d.c. meets V-1 or better to IEC 60707, unless used in a fire enclosure	PCB classified as V-0 as declared by client.	P
	Material of printed circuit boards on which the available power exceeds 15 W at a voltage >400 V (peak) a.c. or d.c. meets V-0 to IEC 60707	See above	P
20.1.4	Components and parts not covered by 20.1.1, 20.1.2 and 20.1.3 (other than fire enclosures) mounted nearer to a potential ignition source than the distances in Table 21 comply with the relevant flammability category in Table 21	See clause 20.1.a) Fire enclosure used.	N/A
	Components and parts as above but shielded from a potential ignition source, with the barrier area in accordance with Table 21 and fig. 13		N/A
	Apparatus with voltages >4kV under normal operating conditions and distances to the enclosure exceed those specified Table 21, flammability classification HB40 or better is required for the enclosure		N/A
20.2	Fire enclosure		N/A
20.2.1	Potential ignition sources with open circuit voltage > 4 kV (peak) a.c. or d.c. contained in a fire enclosure to V-1	Open circuit voltage not exceeding 4 kV (peak) a.c. or d.c.	N/A
20.2.2	Internal fire enclosures with openings not exceeding 1 mm in width and with openings for wires completely filled	No internal fire enclosure.	N/A
20.2.3	Requirements of 20.2.1 and 20.2.2 met by an internal fire enclosure		N/A

IEC 60065			
Clause	Requirement + Test	Result - Remark	Verdict
A	Annex A, Additional requirements for apparatus with protection against splashing water		N/A
A.5	Marking and instructions		N/A
A.5.1	j) Marked with IPX4 (IEC 60529), 5.4.1 a) does not apply		N/A
A.10	Insulation requirements		N/A
A.10.2	Splash and humidity treatment		N/A
A.10.2.1	Enclosure provides protection against splashing water		N/A
A.10.2.2	Humidity treatment carried out for 7 days		N/A
B	Annex B, Apparatus to be connected to the TELECOMMUNICATION NETWORKS		N/A
	Complies with IEC 62151 clause 1		N/A
	Complies with IEC 62151 clause 2		N/A
	Complies with IEC 62151 clause 3 but with 3.5.4 modified to 2.4.10 of this standard		N/A
	Complies with IEC 62151 clause 4 but with 4.1.2, 4.1.3 and 4.2.1.2 modified in accordance with annex B of this standard		N/A
	Complies with IEC 62151 clause 5 but with 5.3.1 modified in accordance with annex B of this standard		N/A
	Complies with IEC 62151 clause 6		N/A
	Complies with IEC 62151 clause 7		N/A
	Complies with IEC 62151 annex A, B and C		N/A
L	ANNEX L, Additional requirements for electronic flash apparatus for photographic purposes		N/A
L. 5	Marking and instructions		N/A
L. 5.4	Instructions for battery chargers and Supply apparatus indicating type or model number of flash apparatus with which it is to be used		N/A
	Instructions for flash apparatus indicating type or model number of battery chargers or Supply apparatus with which it is to be used		N/A
L. 7	Heating under normal operating conditions		N/A
L7.1.5 & L11.2.7	Lithium batteries meet permissible temp rise in Table 3, unless comply with 6.2.2.1 or 6.2.2.2 of IEC 60086-4		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
L. 9	Electric shock hazard under normal operating conditions		N/A
L. 9.1.1	Terminals to connection to synchroniser not HAZARDOUS LIVE		N/A
L.10	Insulation requirements		N/A
L. 10.3.2	High frequency puls ignition		N/A
L. 12	Mechanical strength		N/A
L. 12.1.3	Windows for flash tubes are excluded from steel ball impact test		N/A
L. 14	Components		N/A
L14.6.6	Mains switch characteristics appropriate to its function under normal conditions		N/A
L. 20	Resistance to fire		N/A
L. 20.1 c)	Trigger coil for discharge purpose is not considered to be a POTENTIAL IGNITION SOURCE		N/A

7.1						TABLE: temperature rise measurements:	P
						Power consumption in the OFF/Stand-by mode of the functional switch (W)	
Cond.	Un (V)	Hz	In (A)	Pn (W)	Uout (V)	Operating Condition / Status	
For Model: FJ-SW1260502500DE (Provided with L2)							
1	90	50	0.305	16.46	--	Loaded with 5.0Vdc, 2.5A	
2	90	60	0.302	16.43	--		
3	100	50	0.275	16.22	--		
4	100	60	0.274	16.17	--		
5	240	50	0.141	15.97	--		
6	240	60	0.137	15.86	--		
7	264	50	0.132	16.00	--		
8	264	60	0.126	15.92	--		
For model: FJ-SW1260921300DE (Provided with L2)							
1	90	50	0.271	14.83	--	Loaded with 9.2Vdc, 1.3A	
2	90	60	0.269	14.72	--		
3	100	50	0.248	14.62	--		
4	100	60	0.245	14.55	--		
5	240	50	0.130	14.70	--		
6	240	60	0.126	14.58	--		
7	264	50	0.116	14.83	--		
8	264	60	0.112	14.82	--		
For model: FJ-SW1262400500DE (Provided with L2)							
1	90	50	0.271	14.80	--	Loaded with 24.0Vdc, 0.5A	
2	90	60	0.268	14.76	--		
3	100	50	0.246	14.66	--		
4	100	60	0.243	14.64	--		
5	240	50	0.121	14.72	--		
6	240	60	0.118	14.71	--		
7	264	50	0.116	14.85	--		
8	264	60	0.108	14.84	--		
For Model: FJ-SW1260502500DE (provided with LF1)							
1	90	50	0.302	16.50	--	Loaded with 5.0Vdc, 2.5A	
2	90	60	0.300	16.47	--		
3	100	50	0.272	16.22	--		
4	100	60	0.273	16.22	--		
5	240	50	0.139	15.95	--		
6	240	60	0.131	15.93	--		

7	264	50	0.130	16.00	--	
8	264	60	0.123	16.02	--	

For model: FJ-SW1260921300DE (provided with LF1)

1	90	50	0.270	14.81	--	Loaded with 9.2Vdc, 1.3A
2	90	60	0.268	14.71	--	
3	100	50	0.246	14.63	--	
4	100	60	0.242	14.53	--	
5	240	50	0.128	14.71	--	
6	240	60	0.112	14.60	--	
7	264	50	0.114	14.84	--	
8	264	60	0.106	14.80	--	

For model: FJ-SW1262400500DE (provided with LF1)

1	90	50	0.270	14.72	--	Loaded with 24.0Vdc, 0.5A
2	90	60	0.265	14.68	--	
3	100	50	0.243	14.58	--	
4	100	60	0.239	14.55	--	
5	240	50	0.125	14.71	--	
6	240	60	0.113	14.64	--	
7	264	50	0.122	15.07	--	
8	264	60	0.107	14.94	--	

Note: Tested with RF1=4.7Ω. Maximum input current at rated input is 0.275A, rated current is 0.4A. Deviation less than +10% of rated current.

Loudspeaker impedance (Ω)	N/A	—
Several loudspeaker systems		N/A
Marking of loudspeaker terminals		N/A

Temperature Rise dT of Part	dT (K)				Limit max dT (K)
	A	B	C	D	
Test Condition No.					--

For Model: FJ-SW1260502500DE

1 Plug pin holder	6.7	7.2	8.5	7.0	115-45=70
2 MOV1 body	36.0	36.9	27.5	25.6	85-45=40
3 Electrolytic capacitor C1 body	45.7	47.1	33.2	31.2	105-45=60
4 Winding of L2	68.0	70.2	38.0	35.7	130-45=85
5 Electrolytic capacitor C2 body	51.5	52.8	43.3	40.8	105-45=60
6 PCB under BD1	45.7	46.9	29.7	28.1	130-45=85
7 PCB under Q1	53.1	54.1	39.7	37.9	130-45=85
8 Y-Capacitor CY1 body	57.8	58.0	54.0	53.1	125-45=80
9 Opto-coupler U2 body	44.5	45.4	40.0	39.9	100-45=55
10 T1 winding	58.5	60.3	60.3	59.9	120-10-45=65

11 T1 core	57.2	59.2	55.9	55.7	120-10-45=65
12 PCB under D3	63.9	66.4	63.6	63.8	130-45=85
13 Electrolytic capacitor C8 body	54.2	56.5	52.9	53.7	105-45=60
14 Output wire	29.5	30.4	31.1	31.5	80-45=35
15 Enclosure inside near T1	45.3	46.8	43.0	42.8	115-45=70
16 Enclosure outside near T1	33.0	33.9	30.6	30.5	50
17 Enclosure inside near D3	48.0	49.5	46.5	46.7	115-45=70
18 Enclosure outside near D3	31.7	33.1	29.9	30.6	50
19 Ambient	26.4	26.7	26.8	26.1	--

For model: FJ-SW1260921300DE

1 Plug pin holder	7.0	6.9	7.5	7.8	115-45=70
2 MOV1 body	36.9	36.4	28.2	29.1	85-45=40
3 Electrolytic capacitor C1 body	40.6	41.0	29.4	30.3	105-45=60
4 Winding of L2	57.9	57.9	35.8	36.4	130-45=85
5 Electrolytic capacitor C2 body	46.3	45.1	37.9	38.5	105-45=60
6 PCB under BD1	42.1	43.8	28.1	28.4	130-45=85
7 PCB under Q1	50.5	50.9	41.0	41.4	130-45=85
8 Y-Capacitor CY1 body	47.8	45.4	47.0	46.5	125-45=80
9 Opto-coupler U2 body	38.8	38.4	38.1	38.2	100-45=55
10 T1 winding	55.6	53.6	56.6	55.6	120-10-45=65
11 T1 core	54.9	53.4	56.0	55.5	120-10-45=65
12 PCB under D3	59.7	56.3	63.4	62.0	130-45=85
13 Electrolytic capacitor C8 body	49.5	46.2	51.9	50.5	105-45=60
14 Output wire	27.5	25.1	28.8	27.6	80-45=35
15 Enclosure inside near T1	40.9	38.4	40.3	39.4	115-45=70
16 Enclosure outside near T1	31.7	28.6	31.3	29.7	50
17 Enclosure inside near D3	44.7	42.4	47.1	46.1	115-45=70
18 Enclosure outside near D3	28.0	24.8	29.9	27.9	50
19 Ambient	27.7	28.2	27.2	28.6	--

For model: FJ-SW1262400500DE

1 Plug pin holder	7.1	8.1	6.0	8.0	115-45=70
2 MOV1 body	38.0	37.7	25.5	27.8	85-45=40
3 Electrolytic capacitor C1 body	41.5	42.8	29.6	32.1	105-45=60
4 Winding of L2	54.0	56.4	33.9	37.2	130-45=85
5 Electrolytic capacitor C2 body	41.2	42.2	35.4	38.4	105-45=60
6 PCB under BD1	43.6	45.2	30.4	32.5	130-45=85

7 PCB under Q1	54.4	55.0	52.2	54.7	130-45=85
8 Y-Capacitor CY1 body	43.7	44.1	45.7	48.2	125-45=80
9 Opto-coupler U2 body	37.7	37.1	40.3	41.8	100-45=55
10 T1 winding	51.7	50.9	58.1	59.5	120-10-45=65
11 T1 core	47.3	46.3	51.8	53.2	120-10-45=65
12 PCB under D3	47.0	46.2	55.1	56.1	130-45=85
13 Electrolytic capacitor C8 body	38.6	37.1	46.0	47.0	105-45=60
14 Output wire	26.5	25.5	30.8	32.1	80-45=35
15 Enclosure inside near T1	38.5	36.5	41.5	42.4	115-45=70
16 Enclosure outside near T1	26.6	23.2	28.5	27.8	50
17 Enclosure inside near D3	37.1	38.1	44.7	43.6	115-45=70
18 Enclosure outside near D3	24.3	22.5	28.3	28.7	50
19 Ambient	27.7	27.8	27.8	27.5	--
For Model: FJ-SW7260502500DE					
1 Plug pin holder	7.4	8.0	7.3	7.2	115-45=70
2 MOV1 body	37.5	35.4	26.1	27.0	85-45=40
3 Electrolytic capacitor C1 body	47.6	48.0	31.7	33.0	105-45=60
4 Winding of L2	70.1	68.7	39.6	38.0	130-45=85
5 Electrolytic capacitor C2 body	53.0	50.4	41.1	41.2	105-45=60
6 PCB under BD1	47.0	47.8	30.9	28.7	130-45=85
7 PCB under Q1	55.1	51.5	41.0	38.5	130-45=85
8 Y-Capacitor CY1 body	55.8	55.4	56.2	54.4	125-45=80
9 Opto-coupler U2 body	45.5	45.9	43.2	42.6	100-45=55
10 T1 winding	61.5	62.0	61.8	61.8	120-10-45=65
11 T1 core	59.2	59.9	57.1	56.3	120-10-45=65
12 PCB under D3	65.9	64.1	61.4	65.0	130-45=85
13 Electrolytic capacitor C8 body	55.0	54.9	51.1	54.1	105-45=60
14 Output wire	30.7	31.2	28.9	32.3	80-45=35
15 Enclosure inside near T1	46.9	48.3	44.2	44.4	115-45=70
16 Enclosure outside near T1	35.1	35.1	32.8	30.9	50
17 Enclosure inside near D3	49.0	47.6	48.9	48.6	115-45=70
18 Enclosure outside near D3	32.5	33.7	31.1	32.4	50
19 Ambient	26.7	26.8	26.8	26.5	--
For model: FJ-SW7260921300DE					
1 Plug pin holder	5.1	7.9	4.1	7.6	115-45=70
2 MOV1 body	36.6	37.1	24.4	28.5	85-45=40

3 Electrolytic capacitor C1 body	41.6	43.9	25.1	28.6	105-45=60
4 Winding of L2	56.3	57.1	30.1	32.5	130-45=85
5 Electrolytic capacitor C2 body	45.2	46.3	34.0	36.2	105-45=60
6 PCB under BD1	50.1	53.5	28.3	33.0	130-45=85
7 PCB under Q1	57.7	60.9	54.0	58.0	130-45=85
8 Y-Capacitor CY1 body	54.8	56.5	55.8	57.4	125-45=80
9 Opto-coupler U2 body	39.7	44.9	38.9	43.8	100-45=55
10 T1 winding	54.8	58.1	54.7	57.9	120-10-45=65
11 T1 core	53.4	55.9	54.0	56.3	120-10-45=65
12 PCB under D3	56.6	58.5	57.9	60.5	130-45=85
13 Electrolytic capacitor C8 body	54.0	54.1	54.7	55.4	105-45=60
14 Output wire	28.0	31.8	27.6	30.6	80-45=35
15 Enclosure inside near T1	32.0	37.8	31.4	37.8	115-45=70
16 Enclosure outside near T1	24.0	27.2	24.2	28.5	50
17 Enclosure inside near D3	44.0	47.6	45.1	49.5	115-45=70
18 Enclosure outside near D3	19.1	19.8	19.8	20.9	50
19 Ambient	27.9	26.5	27.8	27.4	--
For model: FJ-SW7262400500DE					
1 Plug pin holder	8.3	6.9	6.4	9.2	115-45=70
2 MOV1 body	36.4	37.3	22.9	29	85-45=40
3 Electrolytic capacitor C1 body	42.7	43.9	32	34.7	105-45=60
4 Winding of L2	56.3	58.8	36.1	38.7	130-45=85
5 Electrolytic capacitor C2 body	43.6	44.6	36.4	40.7	105-45=60
6 PCB under BD1	45.1	48.6	34.6	35.7	130-45=85
7 PCB under Q1	57.7	59.5	55	56.2	130-45=85
8 Y-Capacitor CY1 body	44.9	45.4	47.8	49.4	125-45=80
9 Opto-coupler U2 body	39.2	39.5	42.7	43.9	100-45=55
10 T1 winding	52.9	54.1	58.9	62.1	120-10-45=65
11 T1 core	48.5	48.4	53.8	54.4	120-10-45=65
12 PCB under D3	48.5	50.7	56.5	58.4	130-45=85
13 Electrolytic capacitor C8 body	39.9	39.2	47.8	48.2	105-45=60
14 Output wire	27.6	27.6	31.6	33.2	80-45=35
15 Enclosure inside near T1	41.9	39.0	43.3	44.6	115-45=70
16 Enclosure outside near T1	29.0	25.0	29.6	28.9	50
17 Enclosure inside near D3	39.6	40.3	45.8	45.7	115-45=70
18 Enclosure outside near D3	26.1	24.1	29.2	30.2	50

19 Ambient	27.7	27.8	28.2	27.5	--
For Model: FJ-SW1262400500DN					
1 Plug pin holder	--	6.2	--	--	115-45=70
2 Ambient	--	27.0	--	--	--
For test condition A: 90V, 60Hz, Unit Horizontal positioned For test condition B: 90V, 60Hz, Unit Vertical positioned For test condition C: 264V, 50Hz, Unit Horizontal positioned For test condition D: 264V, 50Hz, Unit Vertical positioned The temperatures for the switching Adapter were measured under the max. output rated load. For the max. temperature rise is calculated based upon maximum working ambient of 45°C					
Ambient temperature t1 (°C)	-	-	-	--	—
Ambient temperature t2 (°C)	-	-	-	-	—
Temperature rise dT of winding: $dT = \frac{R_2 - R_1}{R_1} \times (234.5 + t_1) - (t_2 - t_1)$	R ₁ (Ω)	R ₂ (Ω)	dT (K)	Limit max (K)	Insulation class
-	-	-	-	-	-

7.2	TABLE: softening temperature of thermoplastics			p
Temperature T of part	T - normal conditions (°C)	T - fault conditions (°C)	Min T softening (°C)	
Enclosure / detachable plug body and plug pin holder: Sabic: (940(f1))	94.5	86.6	167	
Enclosure / detachable plug body and plug pin holder: Bayer: (6485+(z)(f1))	94.5	86.6	159	
Bobbin material: 4130(100%Virgin) (a)(b)	107.1	117.1	173	
Note: See clause 7.2				

9.1.1	TABLE: Electric shock hazard under normal condition				P
Touch current measured between:	Condition	U1 (V)	U1 (Vpk) Limit	U2 (V)	U2 (Vpk) Limited
L/N to output terminal	Normal conditions	0.340	35	0.165	0.35
L/N to enclosure with metal foil**		0.068	35	0.058	0.35
Touch current measured between:	Condition	Neutral Switch (S1) open		Neutral Switch (S1) close	
		MIU	Limit MIU	MIU*	Limit MIU
L/N to output terminal	--	--	--	0.16	0.5
L/N to enclosure with metal foil**	--	--	--	0.005	0.5

Notes:

- The touch current is measured according to 9.1.1 b) with the test circuit of Annex D connected between the specified points.
- *: US national deviation considered, measured using instrument according to UL101 standard.
- ** Enclosure parts covered by foil include detachable plug body and openings on enclosure.
- EUT supplied with 264V/60Hz. Coupling capacitor
- Tested on model FJ-SW1262400500DE

9.1.6	TABLE: withdrawal of mains plug (discharge)		N/A
Condition	Max. Mains voltage (V)	Voltage after withdrawal of mains plug at 2s (V)	
Line-Neutral	--	--	

Note:

10.3	TABLE: insulation resistance measurements		P
Insulation resistance R between:		R (MΩ)	Required R (MΩ)
L/N to output		>5.2	4
L/N to enclosure (with metal foil)*		>5.2	4
Mains poles (primary fuse disconnected)		>2.6	2
Transformer primary to secondary		>5.2	4
Transformer core to secondary		>5.2	4
One layer of insulating tape used in and around T1		>5.2	4
Mylar sheet used between PCB and enclosure		>2.6	2

Note:

Above test performed immediately after the humidity test according to 10.2 and first two items after surge test of clause 10.1.

All material listed in table 1.5.1 has been considered.

* Enclosure parts covered by foil include detachable plug body and openings on enclosure.

10.3	TABLE: electric strength measurements		P
Test voltage applied between:		Test voltage (V)	Breakdown
L/N to output		3000Vac	No breakdown
L/N to enclosure (with metal foil)*		3000Vac	No breakdown
Mains poles (primary fuse disconnected)		1500Vac	No breakdown
Transformer primary to secondary		3000Vac	No breakdown
Transformer core to secondary		3000Vac	No breakdown
One layer of insulating tape used in and around T1		3000Vac	No breakdown
Mylar sheet used between PCB and enclosure		1500Vac	No breakdown

Note:

Above test performed immediately after the humidity test according to 10.2 and first two items after surge test of clause 10.1.

All material listed in table 1.5.1 has been considered.

* Enclosure parts covered by foil include detachable plug body and openings on enclosure.

11.1	TABLE: Electric shock hazard under abnormal condition					P
Touch current measured between:	Condition	U1 (V)	U1 (Vpk) Limited	U2 (V)	U2 (Vpk) Limit	
L/N to output terminal	RF1 open condition	0.340	70	0.232	1.4	
L/N to enclosure with metal foil**		0.068	70	0.058	1.4	

Note: the touch current is measured according to 9.1.1 b) with the test circuit of Annex D connected between the specified points. Input 264V, 60Hz

Tested on model FJ-SW1262400500DE

** Enclosure parts covered by foil include detachable plug body and openings on enclosure.

Touch current measured between:	Condition	Neutral Switch (S1) open		Neutral Switch (S1) close	
		MIU	Limit MIU	MIU*	Limit MIU
L/N to output terminal	RF1 open condition	--	--	0.26	1.0
L/N to enclosure with metal foil**		--	--	0.005	1.0

Note: *US national deviation considered, measured using instrument according to UL101 standard.

** Enclosure parts covered by foil include detachable plug body and openings on enclosure.

11.2	TABLE: summary of fault condition tests		P
	Voltage (V) 0,9 or 1,1 times rated voltage	264V	—
	Frequency (Hz).....	50Hz	—
	Ambient temperature (°C)	25°C, If no otherwise states.	—

No.	Component	Fault	dT (K) / Component	Other results (include description and test duration)
-----	-----------	-------	--------------------	---

For Model: FJ-SW1260502500DE

1	BD1	S-C	--	RF1 opened immediately, no hazard
2	C1	S-C	--	RF1 opened immediately, no hazard
3	MOV1	S-C	--	RF1 opened immediately, no hazard
4	Q1 pin G-S	S-C	--	Unit shut-down immediately, No hazard
5	Q1 pin G-D	S-C	--	RF1 opened immediately, no hazard
6	Q1 pin D-S	S-C	--	RF1 opened immediately, no hazard

7	R5	S-C	--	RF1 opened immediately, Q1 damaged, no hazard
8	T1 Pin 1-3	S-C	--	Unit shut-down immediately, recoverable, no hazard
9	T1 Pin 4-5	S-C	--	Unit shut-down immediately, recoverable, no hazard
10	T1 Pin 7-8	S-C	--	Unit shut-down immediately, recoverable, no hazard
11	D3	S-C	--	Unit shut-down immediately, recoverable, no hazard
12	C8	S-C	--	Unit shut-down immediately, recoverable, no hazard
13	U2 Pin 1-2	S-C	--	Unit shut-down immediately, recoverable, no hazard
14	U2 Pin 3-4	S-C	--	Unit shut-down immediately, recoverable, no hazard
15	U2 Pin 1	O-C	--	Unit shut-down immediately, recoverable, no hazard
16	U2 Pin 3	O-C	--	Unit shut-down immediately, recoverable, no hazard
17	U1 Pin 1-5	S-C	--	Unit shut-down immediately, recoverable, no hazard
18	U1 Pin 2-5	S-C	--	Unit shut-down immediately, recoverable, no hazard
19	Output	S-C	--	Unit shut-down immediately, recoverable, no hazard
20	Output	O-L	T1 winding: 70.0K; T1 core: 65.1K; Enclosure outside near T1: 40.8K Enclosure outside near D3: 37.6K Ambient: 26.1°C	Output overload to 2.8A, unit shut-down immediately, no hazards
For Model: FJ-SW7260502500DE				
20	Output	O-L	T1 winding:72.1K T1 core: 66.6K Enclosure outside near T1:41.6K Enclosure outside near D3:39.1K Ambient: 26.8°C	Output overload to 2.8A, unit shut-down immediately, no hazards
For model: FJ-SW1260921300DE				
1	BD1	S-C	--	RF1 opened immediately, no hazard
2	C1	S-C	--	RF1 opened immediately, no hazard
3	MOV1	S-C	--	RF1 opened immediately, no hazard
4	Q1 pin G-S	S-C	--	Unit shut-down immediately, No hazard
5	Q1 pin G-D	S-C	--	RF1 opened immediately, no hazard
6	Q1 pin D-S	S-C	--	RF1 opened immediately, no hazard
7	R5	S-C	--	RF1 opened immediately, Q1 damaged, no hazard

8	T1 Pin 1-3	S-C	--	Unit shut-down immediately, recoverable, no hazard
9	T1 Pin 4-5	S-C	--	Unit shut-down immediately, recoverable, no hazard
10	T1 Pin 7-8	S-C	--	Unit shut-down immediately, recoverable, no hazard
11	D3	S-C	--	Unit shut-down immediately, recoverable, no hazard
12	C8	S-C	--	Unit shut-down immediately, recoverable, no hazard
13	U2 Pin 1-2	S-C	--	Unit shut-down immediately, recoverable, no hazard
14	U2 Pin 3-4	S-C	--	Unit shut-down immediately, recoverable, no hazard
15	U2 Pin 1	O-C	--	Unit shut-down immediately, recoverable, no hazard
16	U2 Pin 3	O-C	--	Unit shut-down immediately, recoverable, no hazard
17	U1 Pin 1-5	S-C	--	Unit shut-down immediately, recoverable, no hazard
18	U1 Pin 2-5	S-C	--	Unit shut-down immediately, recoverable, no hazard
19	Output	S-C	--	Unit shut-down immediately, recoverable, no hazard
20	Output	O-L	T1 winding:61.5K T1 core:60.8K Enclosure outside near T1: 33.2K Enclosure outside near D3: 31.9K Ambient: 27.5°C	Output overload to 1.6A, unit shut-down immediately, no hazards
For model: FJ-SW7260921300DE				
1	Output	O-L	T1 winding:62.6K T1 core: 60.3K Enclosure outside near T1:32.3K Enclosure outside near D3:24.7K Ambient: 27.7°C	Output overload to 1.6A, unit shut-down immediately, no hazards
For model: FJ-SW1262400500DE				
1	BD1	S-C	--	RF1 opened immediately, no hazard
2	C1	S-C	--	RF1 opened immediately, no hazard
3	MOV1	S-C	--	RF1 opened immediately, no hazard
4	Q1 pin G-S	S-C	--	Unit shut-down immediately, No hazard
5	Q1 pin G-D	S-C	--	RF1 opened immediately, no hazard
6	Q1 pin D-S	S-C	--	RF1 opened immediately, no hazard
7	R5	S-C	--	RF1 opened immediately, Q1 damaged, no hazard
8	T1 Pin 1-3	S-C	--	Unit shut-down immediately, recoverable, no hazard

9	T1 Pin 4-5	S-C	--	Unit shut-down immediately, recoverable, no hazard
10	T1 Pin 7-8	S-C	--	Unit shut-down immediately, recoverable, no hazard
11	D3	S-C	--	Unit shut-down immediately, recoverable, no hazard
12	C8	S-C	--	Unit shut-down immediately, recoverable, no hazard
13	U2 Pin 1-2	S-C	--	Unit shut-down immediately, recoverable, no hazard
14	U2 Pin 3-4	S-C	--	Unit shut-down immediately, recoverable, no hazard
15	U2 Pin 1	O-C	--	Unit shut-down immediately, recoverable, no hazard
16	U2 Pin 3	O-C	--	Unit shut-down immediately, recoverable, no hazard
17	U1 Pin 1-5	S-C	--	Unit shut-down immediately, recoverable, no hazard
18	U1 Pin 2-5	S-C	--	Unit shut-down immediately, recoverable, no hazard
19	Output	S-C	--	Unit shut-down immediately, recoverable, no hazard
20	Output	O-L	T1 winding: 61.3K T1 core: 54.9K Enclosure outside near T1:29.8K Enclosure outside near D3:29.4K Ambient: 27.5°C	Output overload to 0.65A, unit shut-down immediately, no hazards
For model: FJ-SW7262400500DE				
1	Output	O-L	T1 winding:64.7K T1 core:56.5K Enclosure outside near T1:32.0K Enclosure outside near D3:32.8K Ambient: 27.5°C	Output overload to 0.65A, unit shut-down immediately, no hazards
<p>Note(s):</p> <ul style="list-style-type: none"> S-C means short circuit, O-C means open circuit, O-L means over load. Component faults and overload applied to parts of adaptor. 3000Va.c. hi-pot test between primary and unearthed accessible parts passed after above test. Each fault where fuse opened was repeated with each source of fuse and same result observed; each fault where fusible resistor opened was repeated with each source and rating of fusible resistor and same result observed. Maximum permitted temperature rises calculated as: <ul style="list-style-type: none"> Class B insulation = $(175-10-45)K = 120K$ Outside enclosure: $=65-(45-35)K=55K$ 				

13.2	TABLE: Determination of operating voltage			P
Location	RMS voltage (V)	Peak voltage (V)	Comments	
For Model: FJ-SW1260502500DE				
T1 pin 1 to 7	215	468		
T1 pin 2 to 7	212	348		
T1 pin 4 to 7	271	492	Max Vrms & Vpeak value	
T1 pin 5 to 7	222	364		
T1 pin 1 to 8	213	416		
T1 pin 2 to 8	213	352		
T1 pin 4 to 8	263	484		
T1 pin 5 to 8	223	400		
U2 pin 1 to 3	214	348		
U2 pin 1 to 4	212	348		
U2 pin 2 to 3	212	348		
U2 pin 2 to 4	214	348		
CY1 primary to secondary	222	364		
For model: FJ-SW1260921300DE				
T1 pin 1 to 7	214	444		
T1 pin 2 to 7	211	344		
T1 pin 4 to 7	275	472	Max Vpeak and Max Vrms	
T1 pin 5 to 7	222	356		
T1 pin 1 to 8	211	388		
T1 pin 2 to 8	211	352		
T1 pin 4 to 8	261	460		
T1 pin 5 to 8	222	400		
U2 pin 1 to 3	214	352		
U2 pin 1 to 4	214	352		
U2 pin 2 to 3	213	350		
U2 pin 2 to 4	214	350		
CY1 primary to secondary	222	356		
For model: FJ-SW1262400500DE				
T1 pin 1 to 7	214	456		
T1 pin 2 to 7	211	344		
T1 pin 4 to 7	283	516	Max Vpeak and Max Vrms	

T1 pin 5 to 7	222	356	
T1 pin 1 to 8	211	364	
T1 pin 2 to 8	214	372	
T1 pin 4 to 8	258	484	
T1 pin 5 to 8	226	460	
U2 pin 1 to 3	227	364	
U2 pin 1 to 4	226	364	
U2 pin 2 to 3	226	364	
U2 pin 2 to 4	227	364	
CY1 primary to secondary	222	356	
supplementary information:			
Input voltage is 240V/60Hz.			

13.3&13.4 TABLE: Clearance and creepage distance measurements							P
Clearance (cl) and creepage distance (cr) at/of/between:	U peak (V)	U r.m.s. (V)	Required cl (mm)	cl (mm)	Required cr (mm)	cr (mm)	
For models FJ-SW126xxxxyyyzn with fixed plug							
Trace of L before RF1 to trace of LF1 (B)*	420	250	3.0	3.5	3.0	3.5	
Trace between two polarities of RF1 (B)*	420	250	3.0	3.9	3.0	3.9	
RF1 to LF1 (B)*	420	250	3.0	2.9	3.0	2.9	
Trace under CY1 (R)*	420	250	3.0	6.7	3.0	6.7	
Trace under U2 (R)*	420	250	6.0	8.2	6.0	8.2	
Trace of D3 to trace of R3 (R)*	420	250	6.0	7.3	6.0	7.3	
Trace of D2 to trace of C11 (R)*	420	250	6.0	6.9	6.0	6.9	
Core of T1 to U2 secondary pin (R)*	516	283	6.6	8.0	6.3	8.0	
Core of T1 to C8 (R)*	516	283	6.6	6.8	6.3	7.5	
C2 to outside of enclosure (R)*	420	250	6.0	7.1	6.0	7.1	
For models FJ-SW126xxxxyyyzn with detachable plug							
Trace of L before RF1 to trace of LF1 (B)*	420	250	2.0	3.5	2.5	3.5	
Trace between two polarities of RF1 (B)*	420	250	2.0	3.9	2.5	3.9	
RF1 to LF1 (B)*	420	250	2.0	2.9	2.5	2.9	

Trace under CY1 (R)*	420	250	4.0	6.7	5.0	6.7
Trace under U2 (R)*	420	250	4.0	8.2	5.0	8.2
Trace of D3 to trace of R3 (R)*	420	250	4.0	7.3	5.0	7.3
Trace of D2 to trace of C11 (R)*	420	250	4.0	6.9	5.0	6.9
Core of T1 to U2 secondary pin (R)*	516	283	4.4	8.0	5.8	8.0
Core of T1 to C8 (R)*	516	283	4.4	6.8	5.8	7.5
C2 to outside of enclosure (R)*	420	250	4.2	7.1	5.8	7.1
Primary trace to outside of enclosure through opening under detachable plug(R)*	420	250	4.0	7.9	5.0	7.9
Live pin under detachable plug to accessible enclosure(R)*	420	250	4.0	7.0	5.0	7.0
Live part of plug pin to accessible part(R)*	420	250	4.0	5.3	5.0	5.3
For models FJ-SW726xxxxyyyzn (except for n=A)**						
Trace of L before RF1 to trace of HS1 (B)*	420	250	3.0	3.3	3.0	3.3
Trace between two polarities of RF1 (B)*	420	250	3.0	3.2	3.0	3.2
RF1 to C4 (B)*	420	250	3.0	3.8	3.0	3.8
RF1 to HS1 (B)*	420	250	3.0	3.6	3.0	3.6
Trace of different pins of CY1 (R)*	420	250	6.0	6.6	6.0	6.6
Trace under U2 (R)*	420	250	6.0	8.3	6.0	8.3
Core of T1 to U2 secondary pin (R)*	556	258	6.6	7.2	6.6	7.2
Core of T1 to CY1 secondary pin (R)*	556	258	6.6	8.2	6.6	8.2
N trace to outside of enclosure (R)*	420	250	6.0	8.3	6.0	8.3
For models FJ-SW726xxxxyyyzA**						
Trace of L before RF1 to trace of N (B)*	420	250	3.0	3.7	3.0	3.7
Trace between two polarities of RF1 (B)*	420	250	3.0	3.2	3.0	3.2
Notes: * B=Basic insulation, R=Reinforced insulation. 1) 2 layers insulation tape wrapped around transformer, triple insulated wire used for secondary winding of the transformer.						

Appendix 1	Safety isolation transformer	P	
Construction details:			
Transformer part name: T1			
Manufacturer: See table 14			
Type: See table 14			
Recurring peak voltage	516V peak		
Required clearance for reinforced insulation (from table 9 and table 10)	6.6 mm	Calculated clearance based on up to 5000m, factor of 1.48 applied according to IEC60664-1 table A.2.	
Effective voltage rms	283V rms		
Required creepage distance for reinforced insulation (from table 11)	6.6mm	Distance limit of clearance distance	
Measured min. creepage distance			
Location	inside (mm)	outside (mm)	
Primary-secondary	Triple insulated wire used.	7.5mm (between internal primary winding and secondary soldering pin)	
Primary-core	Core considered as primary	Core is considered as primary	
Secondary-core	Triple insulated wire used.	8.8mm (between soldering pin and core)	
Primary-primary	--	--	
Measured min. clearances			
Location	inside (mm)	outside (mm)	
Primary-secondary	Triple insulated wire used.	7.5mm (between internal primary winding and secondary soldering pin)	

Primary-core	Core considered as primary	Core is considered as primary
Secondary-core	Triple insulated wire used.	8.8mm (between soldering pin and core)
Primary-primary	--	--
Construction:		
<p>The diagram illustrates the transformer's construction. On the left, a schematic shows four primary windings (N1, N3, N4) and one secondary winding (N2) on a bobbin. The primary windings are connected to pins 1, 3, 2, 4, and 5, while the secondary winding is connected to pins 8 and 7. A copper shielding layer (E1) is positioned between the primary and secondary windings. On the right, a cross-section of the bobbin shows the layering: N3, E1, N2, N4, and N1 from top to bottom. The bobbin is mounted on an EB16 (5+4) horizontal frame. A 1.5mm gap is specified between the bobbin and the frame.</p>		
Concentric windings on bobbin. Triple insulated wires used as secondary winding. Insulation tube provided to separate primary windings and secondary triple insulated wires where they are crossing. The lead pins soldered to primary and secondary windings were directly moulded in bobbin.		
Pin numbers		
Prim.	1→3→2 (N1, N3), 4→5 (N4), copper shielding (E1)	
Sec.	8→7 (N2)	
Bobbin		
Material	See Table 14	
Thickness	See Table 14	
Electric strength test		
With AC 3000V after humidity treatment		
Result	Pass	
Note: All type of transformer are considered and have the same construction.		

National Deviation			
Clause	Requirement – Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT IEC 60065 EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES Audio, video and similar electronic apparatus – Safety requirements	
Differences according to	EN 60065:2002 + A1:2006 + A11:2008 + A2:2010 + A12:2011
Attachment Form No.	EU_GD_IEC60065K_II
Attachment Originator	Intertek Semko AB
Master Attachment	Date (2011-08)
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IEC 60065, GROUP DIFFERENCES (CENELEC common modifications (EN))			
Clause	Requirement + Test	Result - Remark	Verdict

Contents	Add the following annexes: Annex ZA (normative) Other international publications quoted in this standard with the references of the relevant European publications (See the CB Bulletin) Annex ZB (nominative) Special national conditions Annex ZC (informative) A-deviations		—
Definition 2.2.Z1 (A11:2008)	Add after the definition 2.2.12 the following new definition: PORTABLE SOUND SYSTEM small battery powered audio equipment: <ul style="list-style-type: none"> • whose prime purpose is to listen to recorded or broadcasted sound; and • that uses headphones or earphones that can be worn in or on or around the ears; and • that allows the user to walk around NOTE Examples are mini-disc or CD players, MP3 audio players or similar equipment.		—
2.2 (A12:2011)	In EN 60065:2002/A11:2008 Delete the definition 2.2.Z1		—

National Deviation			
Clause	Requirement – Test	Result - Remark	Verdict
3.1	<p>Add the following indent at the end of the list</p> <ul style="list-style-type: none"> - Exposure to excessive sound pressures from headphones or earphones <p>NOTE A new method of measurement is described in EN 50332-1, Sound system equipment: Headphones and earphones associated with portable audio equipment</p> <p>– 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.</p>		N/A
3.1 (A12:2011)	In EN 60065:2002 Delete the addition of indent regarding sound pressure excessive	Deleted	N/A
3.Z1 (A2:2010)	<p>After 3.2 add a new clause 3.Z1:</p> <p>To protect against excessive current, short-circuits and earth faults in MAINS, protective devices shall be included either as integral parts of the equipment or as parts of the building installation, subject to the following, a), b) and c):</p> <p>a) except as detailed in b) and c), protective devices necessary to comply with the requirements of 11 shall be included as parts of the equipment;</p> <p>b) for components in series or parallel with the mains input to the equipment such as the supply cord, appliance coupler, r.f.i. filter and switch, short-circuit and earth fault protection may be provided by protective devices in the building installation;</p> <p>c) it is permitted for equipment supplied via an industrial mains plug or for PERMANENTLY CONNECTED APPARATUS, to rely on dedicated over current and short-circuit protection in the building installation, provided that the means of protection, e.g. fuses or circuit breakers, is fully specified in the installation instructions.</p> <p>If reliance is placed on protection in the building installation, the installation instructions shall so state, except that for not via an industrial mains plug or for PERMANENTLY CONNECTED APPARATUS the building installation shall be regarded</p>	Added. One built-in fuse or fusible resistor used. Building installation relied on for parts as in b)	P
4.1.1	Replace the text of the note by: NOTE For ROUTINE TEST reference is made to EN 50514.	Replaced	P

National Deviation			
Clause	Requirement – Test	Result - Remark	Verdict
5.4.1 za) (A11:2008)	Modify indent za) as follows: za) For a PORTABLE SOUND SYSTEM, a warning that excessive sound pressure from earphones and headphones can cause hearing loss.		N/A
5.4.1 (A12:2011)	In EN 60065:2002/A1:2006 and EN 60065:2002/A11:2008 Delete the modification in indent za) Add the following clause and annex to the existing standard and amendments		N/A
	Zx Protection against excessive sound pressure from personal music players		N/A
	Zx.1 General This sub-clause specifies requirements for protection against excessive sound pressure from personal music players that are closely coupled to the ear. It also specifies requirements for earphones and headphones intended for use with personal music players. A personal music player is a portable equipment <input type="checkbox"/> 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	Not such product	N/A

National Deviation			
Clause	Requirement – Test	Result - Remark	Verdict
	<p>equipment;</p> <p>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.</p> <p>-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.</p> <p>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.</p> <p>For equipment which is clearly designed or intended for use by young children, the limits of EN 71-1 apply.</p>		
Cont.	<p>Zx.2 Equipment requirements</p> <p>No safety provision is required for equipment that complies with the following:</p> <p>-equipment provided as a package (personal music player with its listening device), where the acoustic output $L_{Aeq,T} \leq 85$ dBA measured while playing the fixed “programme simulation noise” as described in EN 50332-1; and</p> <p>-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.</p> <p>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.</p> <p>All other equipment shall:</p> <p>a) protect the user from unintentional acoustic outputs exceeding those mentioned above; and</p> <p>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</p> <p>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</p>		N/A

National Deviation			
Clause	Requirement – Test	Result - Remark	Verdict
Cont.	<p>above. The acknowledgement does not need to be repeated more than once every 20 h of cumulative listening time; and</p> <p>NOTE 2 Examples of means include visual or audible signals. Action from the user is always required.</p> <p>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.</p> <p>d) have a warning as specified in Zx.3; and</p> <p>e) not exceed the following:</p> <p>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</p> <p>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.</p>		
	<p>For music where the average sound pressure (long term $L_{Aeq,T}$) measured over the duration of the song is lower than the average produced by the programme simulation noise, the warning does not need to be given as long as the average sound pressure of the song is below the basic limit of 85 dBA. In this case T becomes the duration of the song.</p> <p>NOTE 4 Classical music typically has an average sound pressure (long term $L_{Aeq,T}$) which is much lower than the average programme simulation noise. Therefore, if the player is capable to analyse the song and compare it with the programme simulation noise, the warning does not need to be given as long as the average sound pressure of the song is below the basic limit of 85 dBA.</p> <p>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.</p>		N/A
	<p>Zx.3 Warning</p> <p>The warning shall be placed on the equipment, or on the packaging, or in the instruction manual and shall consist of the following:</p> <ul style="list-style-type: none"> -the symbol of Figure 1 with a minimum height of 5 mm; and -the following wording, or similar: 		N/A

National Deviation			
Clause	Requirement – Test	Result - Remark	Verdict
	<p>“To prevent possible hearing damage, do not listen at high volume levels for long periods.”</p>  <p>Figure 1 – Warning label (IEC 60417-6044)</p> <p>Alternatively, the entire warning may be given through the equipment display during use, when the user is asked to acknowledge activation of the higher level.</p>		
Cont.	Zx.4 Requirements for listening devices (headphones and earphones)		N/A
	<p>Zx.4.1 Wired listening devices with analogue input</p> <p>With 94 dBA sound pressure output $L_{Aeq,T}$, the input voltage of the fixed “programme simulation noise” described in EN 50332-2 shall be ≥ 75 mV.</p> <p>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).</p> <p>NOTE The values of 94 dBA – 75 mV correspond with 85dBA – 27 mV and 100 dBA – 150 mV.</p>		N/A
	<p>Zx.4.2 Wired listening devices with digital input</p> <p>With any playing device playing the fixed “programme simulation noise” described in EN 50332-1 (and respecting the digital interface standards, where a digital interface standard exists that specifies the equivalent acoustic level), the acoustic output $L_{Aeq,T}$ of the listening device shall be ≤ 100 dBA.</p> <p>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.).</p> <p>NOTE An example of a wired listening device with digital input</p>		N/A

National Deviation			
Clause	Requirement – Test	Result - Remark	Verdict
	<p>is a USB headphone.</p> <p>Zx.4.3 Wireless listening devices</p> <p>In wireless mode:</p> <ul style="list-style-type: none"> -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 above-mentioned programme simulation noise, the acoustic output LAeq,T of the listening device shall be ≤ 100 dBA. <p>NOTE An example of a wireless listening device is a Bluetooth headphone.</p>		N/A
	<p>Zx.5 Measurement methods</p> <p>Measurements shall be made in accordance with EN 50332-1 or EN 50332-2 as applicable.</p> <p>Unless stated otherwise, the time interval T shall be 30 s.</p> <p>NOTE Test method for wireless equipment provided without listening device should be defined.</p>		N/A

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National Deviation			
Clause	Requirement – Test	Result - Remark	Verdict
6.1 (A11:2008)	<p>Replace the entire subclause in EN 60065:2002 and EN 60065:2002/A1:2006 by:</p> <p>Ionizing radiation</p> <p>Apparatus including a potential source of ionizing radiation shall be so constructed that personal protection against ionizing radiation is provided under normal operating conditions and under fault conditions.</p> <p><i>Compliance is checked by measurement under the following conditions:</i></p> <p><i>In addition to the normal operating conditions, all controls adjustable from the outside BY HAND, by any object such as a tool or a coin, and those internal adjustments or pre-sets which are not locked in a reliable manner, are adjusted so as to give maximum radiation whilst maintaining an intelligible picture for 1 h, at the end of which the measurement is made.</i></p> <p>NOTE 1 Soldered joints and paint lockings are examples of adequate locking.</p> <p><i>The dose-rate is determined by means of a radiation monitor with an effective area of 10 cm², at any point 10 cm from the outer surface of the apparatus.</i></p> <p><i>Moreover, the measurement shall be made under fault conditions causing an increase of the high-voltage, provided an intelligible picture is maintained for 1 h, at the end of which the measurement is made.</i></p> <p><i>The dose-rate shall not exceed 1µSv/h (0,1 mR/h) taking account of the background level.</i></p> <p>NOTE 2 These values appear in Directive 96/29/Euratom of 13th May 1996.</p> <p><i>A picture is considered to be intelligible if the following conditions are met:</i></p> <ul style="list-style-type: none"> - a scanning amplitude of at least 70 % of the usable screen width; - a minimum luminance of 50 cd/m² with locked blank raster provided by a test generator; - a horizontal resolution corresponding to at least 1,5 MHz in the centre, with a similar vertical degradation; - not more than one flashover per 5 min. 	No radiation.	N/A

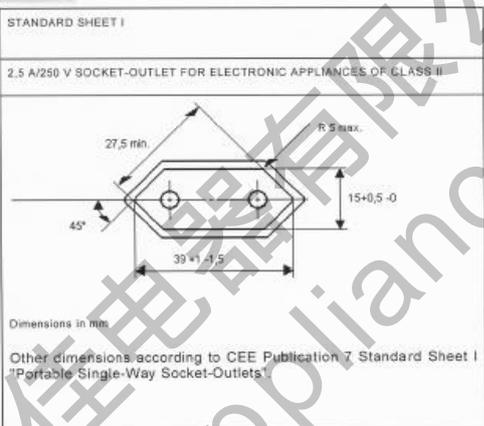
National Deviation			
Clause	Requirement – Test	Result - Remark	Verdict
Z1 (A11:2008)	<p>Add the following new clause after Clause 20:</p> <p>Z1 Resistance to candle flame ignition</p> <p>A television set shall be so designed that the likelihood of ignition and the spread of fire caused by a candle flame is reduced.</p> <p>NOTE 1 An apparatus with a viewing screen is not regarded to be a television set if it is declared not to be so by the manufacturer.</p> <p>This requirement does not apply to the display screen of rear projection TV's.</p> <p>NOTE 2 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.</p> <p>NOTE 3 The frame around the screen is not exempted from the requirements.</p> <p>Wood and WOOD-BASED MATERIAL with a thickness of at least 6 mm is considered to fulfil the V-1 requirement when applying CLC/TS 62441.</p> <p><i>Compliance is checked according to CLC/TS 62441.</i></p> <p>NOTE 4 The term vertical, as used in the first dash of clause 5.2 of CLC/TS 62441, does not mean a perfectly vertical position. It should be interpreted as any surface that can be touched by the flame of a candle of 150 mm height and 20mm diameter while the candle is still touching the supporting surface. A typical candle used in the home is assumed to be 20 mm diameter.</p> <p>NOTE 5 It is expected that CLC/TS 62441 will in the future be replaced by a standard, at which time that standard will become applicable, subject to a vote by National Committees at the time.</p>		N/A
General	<p>13.3.1 Delete note 4.</p> <p>14 Delete note 4 and note 5.</p> <p>15.1.1 Delete notes 1 and 2.</p> <p>15.2 Delete note 2.</p> <p>16.1 Delete note 1.</p> <p>16.2 Delete the note.</p> <p>20 Delete note 2.</p> <p>Annex B Replace note 1 by: In the CENELEC countries listed in IEC 62151, special national conditions apply.</p> <p>Annex G Delete the note.</p> <p>Annex J.2 Delete the notes of Table J.1.</p> <p>Annex N Add after the introduction: For ROUTINE TEST reference is made to EN 50333. (Replaced by EN 50514)</p>		P

National Deviation			
Clause	Requirement – Test	Result - Remark	Verdict
General (A2:2010)	In IEC 60065:2001/A2 Delete all the “country” notes according to the following list: 5.3 Note 5.4.1 Note 20 Note For special national conditions, see Annex ZB.		P
Bibliography	Additional EN standards.		P
ZA	Normative references to international publications with their corresponding European publications		P
ZB	ANNEX ZB TO EN 60065, SPECIAL NATIONAL CONDITIONS (EN)		P
2.6.1	DK: The following is added : Certain types of CLASS I apparatus, see 15.1.1, may be provided with a plug not establishing earthing continuity when inserted in Danish socket-outlets <i>Justification:</i> Heavy Current Regulations, Section 107.		N/A
3.Z1 (A2:2010)	Denmark Add to the end of the subclause Due to many existing installations where the socket-outlets can be protected with fuses with higher rating than the rating of the socket-outlets the protection for pluggable equipment type A shall be an integral part of the equipment. <i>Justification:</i> In Denmark an existing 13 A socket outlet can be protected by a 20 A fuse.	See group difference for this clause	P

National Deviation			
Clause	Requirement – Test	Result - Remark	Verdict
5.3 (A2:2010)	<p>Finland, Norway and Sweden</p> <p>To the end of the subclause the following is added:</p> <p>CLASS I apparatus which is intended for connection to the building installation wiring via a plug or an appliance coupler, or both and in addition is intended for connection to other apparatus 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 apparatus must be connected to an earthed MAINS socket-outlet.</p> <p>The marking text in the applicable countries shall be as follows:</p> <p>In Finland: "Laite on liitettävä suojakoskettimilla varustettuun pistorasiaan"</p> <p>In Norway: "Apparatet må tilkoples jordet stikkontakt"</p> <p>In Sweden: "Apparaten skall anslutas till jordat uttag"</p>		N/A
5.4 (A11:2008)	<p>Finland, Norway and Sweden</p> <p>To the end of 5.4 the following is added:</p> <p>CLASS I apparatus which is intended for connection to the building installation wiring via a plug or an appliance coupler, or both and in addition is intended for connection to other apparatus 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 apparatus must be connected to an MAINS socket-outlet with protective earth.</p> <p>The marking text in the applicable countries shall be as follows:</p> <p>In Finland: "Laite on liitettävä suojamaadoituskoskettimilla varustettuun pistorasiaan"</p> <p>In Norway: "Apparatet må tilkoples jordet stikkontakt"</p> <p>In Sweden: "Apparaten skall anslutas till jordat uttag"</p>		N/A

National Deviation			
Clause	Requirement – Test	Result - Remark	Verdict
5.4.1 (A11:2008)	<p>Norway and Sweden</p> <p>To the end of 5.4.1 (after the compliance statement) the following is added:</p> <p>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.</p> <p>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.</p> <p>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)”</p> <p>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.</p> <p>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.”</p> <p>Translation to Swedish: ”Utrustning som är kopplad till skyddsjord via jordat vägguttag och/eller via annan utrustning och samtidigt är kopplad till kabel-TV nät kan i vissa fall medföra risk för brand. För att undvika detta skall vid anslutning av utrustningen till kabel-TV nät galvanisk isolator finnas mellan utrustningen och kabel-TV nätet.”</p>		N/A

National Deviation			
Clause	Requirement – Test	Result - Remark	Verdict
13.3.1	<p>NO: To the second paragraph the following is added:</p> <p>In Norway, due to the IT power distribution system used, the a.c. MAINS supply voltage is considered to be equal to the line-to-line voltage, and will remain 230 V in case of a single earth fault.</p> <p><i>Justification:</i> Based on a use in Norway of an IT power distribution system where the neutral is not provided.</p>		N/A
15.1.1 (A11:2008)	<p>Denmark</p> <p>The text of the Danish SNC in EN 60065:2002 has been modified as follows:</p> <p>To the first paragraph the following is added:</p> <p>In Denmark, supply cords of single-phase appliances having a rated current not exceeding 13 A shall be provided with a plug according to the Heavy Current Regulations Section 107-2-D1. Appliances of CLASS I provided with socket-outlets with earth contact 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 the Heavy Current Regulations, Section 107-2-D1 standard sheet DK 2-1a.</p> <p>To the second paragraph the following is added:</p> <p>Socket outlets intended for providing power to CLASS II apparatus with a rated current of 2,5 A shall be in accordance with the Heavy Current Regulation, Section 107-2-D1 standard sheet DKA 1-4a.</p> <p>Other current ratings socket outlets shall be in compliance with the Heavy Current Regulation, Section 107-2-D1 standard sheet DKA 1-3a or DKA 1-3b.</p> <p>To the third paragraph the following is added:</p> <p>Mains socket-outlets with earthing contact shall be in compliance with the Heavy Current Regulation, Section 107-2-D1 standard sheet DK 1-3a, DK 1-5a or DK 1-7a.</p> <p><i>Justification:</i> Heavy Current Regulations, Section 107-2-D1</p>		N/A
15.1.1	<p>IE: Apparatus which is fitted with a flexible cable or cord shall be provided with a 13 A plug in accordance with Statutory Instrument 525:97, "13 A Plugs and Conversion Adapters for Domestic Use Regulations:1997.</p> <p><i>Justification:</i> SI 525: 1997</p>		N/A

National Deviation			
Clause	Requirement – Test	Result - Remark	Verdict
15.1.1	<p>NO: Mains socket-outlets mounted on CLASS II apparatus shall comply with the specifications given in CEE Publ. 7 as far as applicable, with the following amendments:</p> <p>§ 8 Dimensions</p> <p>a 2.5 A 250 V two-pole socket-outlets for electronic apparatus shall comply with the enclosed Standard Sheet I.</p> <p>Mains socket-outlets mounted on CLASS II apparatus shall comply with the specifications given in CEE PUBL. 7 as far as applicable, with the following amendments:</p> <p>§ 8 Dimensions</p> <p>a 2.5 A 250 V two-pole socket-outlets for electronic apparatus shall comply with the enclosed Standard Sheet I.</p>  <p>STANDARD SHEET I</p> <p>2.5 A/250 V SOCKET-OUTLET FOR ELECTRONIC APPLIANCES OF CLASS II</p> <p>Dimensions in mm</p> <p>Other dimensions according to CEE Publication 7 Standard Sheet I "Portable Single-Way Socket-Outlets".</p> <p>§ 24 Mechanical strength</p> <p>a 2.5 A, 250 V socket-outlets for CLASS II electronic apparatus are tested as specified in 12.1.3 of EN 60065. Also the protecting rim shall be tested.</p> <p>§ 24 Mechanical strength</p> <p>A 2.5 A 250 V socket-outlets for CLASS II electronic apparatus are tested as specified in 12.1.3 of EN 60065. Also the protecting rim shall be tested</p> <p><i>Justification:</i> Act of 24 May 1929 relating to supervision of electrical installation (TEA 1929/FEL 1998).</p>		N/A
15.1.1	<p>UK: Apparatus which is fitted with a flexible cable or cord and is designed to be connected to a mains socket conforming to BS 1363 by means of that flexible cable or cord and plug shall be fitted with a "standard plug" in accordance with Statutory Instrument 1768: 1994: The Plugs and Sockets etc. (Safety) Regulations 1994, unless exempted by those Regulations.</p> <p>NOTE "Standard plug" is defined in SI 1768:1994 and essentially means an approved plug conforming to BS 1363 or an approved conversion plug.</p> <p><i>Justification:</i> SI 1768: 1994</p>		N/A

National Deviation			
Clause	Requirement – Test	Result - Remark	Verdict
J.2	<p>NO: After Table J.1 the following is added: In Norway, due to the IT power distribution system used, the a.c. MAINS supply voltage is considered to be equal to the line-to-line voltage, and will remain 230 V in case of a single earth fault.</p> <p><i>Justification:</i> Based on a use in Norway of an IT power distribution system where the neutral is not provided.</p>		N/A
ZC	ANNEX ZC TO EN 60065, A-DEVIATIONS (EN)		N/A
5.1	IT: Additional markings on the outside of the TV receiver in Italian language	Not a TV.	N/A
	IT: User instructions in Italian language including a conformity declaration		N/A
	IT: Certification number on the back cover		N/A
6.1	<p>DE: The following requirement applies: For the operation of any cathode ray tube intended for the display of visual images operating at an acceleration voltage exceeding 40 kV, authorization is required, or application of type approval (Bauartzulassung) and marking.</p> <p><i>Justification:</i> German ministerial decree against ionizing radiation (Röntgenverordnung), in force since 2002-07-01, implementing the European Directive 96/29/EURATOM.</p> <p>NOTE Contact address: Physikalisch-Technische Bundesanstalt, Bundesallee 100, D-38116 Braunschweig, Tel.: Int+49-531-592-6320, Internet: http://www.ptb.de</p>		N/A
14	<p>SE: Switches containing mercury such as thermostats, relays and level controllers are not allowed.</p> <p><i>Justification:</i> Ordinance (1990:944) on Prohibition in Connection with handling. Importation and exportation of Chemical Products (Certain Cases)</p>		N/A

National Deviation			
Clause	Requirement – Test	Result - Remark	Verdict
APPENDIX	Canadian National Differences acc. to IEC 60065:2001+Amd 1:2005+Amd 2:2010		P
3.2A	[Add the following clause] A component power supply complying with CAN/CSA-C22.2 No. 60950 is considered to comply with this construction and fault conditions of this Standard after taking into account any relevant conditions of acceptability. Normal operating conditions		N/A
4.2.1	[Add the following after the fifth paragraph] For apparatus Intended for use at nominal 120V ac, the apparatus shall comply with this Standard at supply voltages between 108 and 125V. For apparatus intended for use at nominal 240V ac, the apparatus shall comply with this Standard at supply voltages between 216 and 250V.		P
4.2.10	[Add the following after the second paragraph] As an alternative, a supply apparatus for general use complying with CAN/CSA-C22.2 No. 223 or CAN/CSA-022.2 No. 60950 shall be acceptable.		N/A
5	Marking and Instructions [Add the following paragraph] Adhesive nameplates on commercial products shall comply with CSA C22.2 No. 0.15. 5.1	No such nameplate	P
5.1	Identification and supply ratings [Add the following item] hA) date of manufacture: a date or code identifying the period of manufacture shall be marked on the apparatus;	“YYWW” shown on the rating label. “YY” represents the year. “WW” represents the week.	P
5.3A	[Add the following clause] Where a loudspeaker grille, removable from the outside, is relied on as part of the enclosure (see Clause 9.2), the following marking or equivalent shall be visible on the enclosure after removal of the grille: "Caution-To prevent electric shock hazard, replace grille." Alternatively, the symbol in Clause 5.2 b) shall be visible after removal of the grille, and the caution wording above shall appear in the user instructions, accompanied by the symbol. Compliance is checked by inspection.		N/A
8.9	[Add the following title to this clause] Mains wiring [Add the following paragraph] Wiring in circuits with voltages higher than 42 V peak shall comply with CSA C22.2 No. 127 or CAN/CSA-C22.2 No. 210.2.		P

National Deviation			
Clause	Requirement – Test	Result - Remark	Verdict
9.1	Testing on the outside		P
9.1.1A	<p>Class I apparatus leakage [Add the following clause] For cord-connected Class I apparatus, the leakage current through the safety earthing conductor, expressed as voltages U and U, shall not exceed $U = 105V$ (peak) and $U = 1.05V$ (peak) (1.5 mA). 1212</p> <p>Apparatus having a leakage current between 0.75mA and 1.5mA shall be provided with a caution label on the mains cord with the following, or equivalent: "CAUTION -TO REDUCE THE RISK OF ELECTRIC SHOCK, GROUNDING OF THE CENTRE PIN OF THIS PLUG MUST BE MAINTAINED".</p>	Class II equipment.	N/A
9.1.1.2	<p>Determination of accessible parts [Add the following after the fourth paragraph] Moving parts of loudspeaker systems, such as dust caps, cones of drivers, or passive radiators, are not regarded as preventing accessibility. Note 1A: See also Clause 13.3.1.</p>		N/A
9.2	<p>Removal of protective covers [Add the following after the second paragraph] This requirement applies also to internal parts of loudspeaker systems that become accessible by removal of a loudspeaker grille from the outside either by hand or with the use of a tool, coin, or other object. In such cases, the apparatus shall be marked according to Clause 5.3A. (Replace the third paragraph with the following) Compliance is checked by inspections and by application of the tests of Clause 9.1.1, except that the measurements are made 2 after removal of the cover or grille.</p>		N/A
10.2A	<p>Enclosure type designation and use (Add the following clause) If equipment is installed in environments where the enclosure is required to prevent ingress of water or dust, the enclosure shall be classified as a type recognized by the Canadian Electrical Code, Part t, and shall comply with the requirements of CAN/CSA-C22.2 No. 94.</p>	Indoor used only	N/A
11.2	<p>Heating [Add the following paragraph] Flammable gases shall not be emitted from a component for more than 10 s.</p>		P

National Deviation			
Clause	Requirement – Test	Result - Remark	Verdict
12.3A.1	<p>[Add the following clause]</p> <p>For television sets and similar apparatus using a cathode ray tube larger than 160 mm diagonally, the top, sides, front, and rear of the enclosure, including the safety screen where provided, shall be capable of withstanding a single impact of 7 J in accordance with Clause 12.3A.2 without developing any opening larger than 130 mm in the enclosure of the cathode ray tube, unless the minor dimension of 2 any opening is not more than 7 mm. When applied to a safety screen, the impact shall not result in damage to its mounting to the extent that it is mechanically unsuitable for reuse, nor shall tempered glass, if used, be cracked.</p> <p>When applied to the face of a directly viewed cathode ray tube, the impact shall not cause any opening in the face of the tube.</p> <p>Scaling and cracking of the glass shall be permissible. A cathode ray tube that has been shown to comply with CAN/CSA-C22.2 No. 228 or CAN/CSA-E61965 shall be considered acceptable with no further tests.</p>	No such apparatus	N/A
12.3A.2	<p>[Add the following clause]</p> <p>The impact specified in Clause 12.3A.1 shall be caused by allowing a solid, smooth, steel sphere 51 mm in diameter and weighing approximately 0.5 kg to strike the enclosure with the specified impact in a direction perpendicular to the enclosure surface. If deemed necessary, the enclosure shall be tested with the proper cathode ray tube mounted.</p>		P
13.3.1	<p>General</p> <p>[Add the following after the third paragraph]</p> <p>Clearances between a loudspeaker voice coil and adjacent conductive parts shall be disregarded.</p>	No such distances apply.	N/A
14.2.1	<p>[Add the following paragraph]</p> <p>As an alternative, an isolating capacitor complying with the applicable requirements of CSA C22.2 No. 1 shall be acceptable for bridging basic or supplementary insulation</p>		N/A
14.2.2	<p>[Add the following paragraph]</p> <p>As an alternative, an across-line capacitor complying with the applicable requirements of CSA C22.2 No. 1 shall be acceptable.</p>	No such capacitor.	N/A
14.5.1.2	<p>[Add the following paragraph]</p> <p>As an alternative, a thermal link complying with CSA C22.2 No. 209 shall be acceptable. 14.5.2</p>		N/A

National Deviation			
Clause	Requirement – Test	Result - Remark	Verdict
14.5.2.1	[Add the following paragraph] As an alternative, a fuse-link complying with CSA C22.2 No. 248.14 shall be acceptable.	Considered for RF1 which provided with fuse.	P
14.5.2.4	[Add the following paragraph] As an alternative, a fuse holder assembly complying with CSA C22.2 No. 39 shall be acceptable.	Not used	N/A
14.6.1	[Add the following paragraph] As an alternative, a TV-rated switch complying with CSA C22.2 No. 1, Clause 9, shall be acceptable.		N/A
14.6.2	[Add the following paragraph] As an alternative, a TV-rated switch complying with CSA C22.2 No. 1, Clause 9, shall be acceptable.		N/A
14.6.3	[Add the following paragraph] As an alternative, a TV-rated switch complying with CSA C22.2 No. 1, Clause 9, shall be acceptable.		N/A
14.6.4	[Add the following paragraph] As an alternative, a TV-rated switch complying with CSA C22.2 No. 1, Clause 9, shall be acceptable.		N/A
14.6.5	[Add the following paragraph] As an alternative, a TV-rated switch complying with CSA C22.2 No. 1, Clause 9, shall be acceptable.		N/A
14.11	Optocouplers [Add the following paragraph] As an alternative, an optocoupler complying with CSA C22.2 No. 1 shall be acceptable.	See only table 14	P
14.12	[Add the following paragraph] As an alternative, a varistor complying with CSA C22.2 No. 1 shall be acceptable. 14.12A Gas discharge tubes	See only table 14	P

National Deviation			
Clause	Requirement – Test	Result - Remark	Verdict
14.12A	<p>[Add the following clause]</p> <p>Gas discharge tubes complying with the following tests may be connected to bridge basic or reinforced insulation. Ten samples of gas discharge tubes isolating the ac supply from exposed parts shall be subjected to the varistor pulse tests of Clause 14.12. Following the pulses, the device shall be allowed to return to room temperature. The dielectric breakdown voltage of the gas tube shall not decrease by more than 50%, and the gas discharge tube shall comply with the dielectric strength test of Clause 10.3, with the test voltage reduced to twice the mains voltage.</p>	Not used	N/A
15.1.1	<p>[Add the following paragraph]</p> <p>A receptacle provided for general purpose mains output shall comply with the requirements of CSA C22.2 No. 42 (dimensional requirements are also specified in IEC 60906-2). The attachment plug cap shall be of the polarized type when the apparatus is provided with a manually operated, mains-connected single-pole switch for apparatus on-off operation, a socket screwshell lampholder, or a 15 or 20 A socket-outlet.</p>	No such receptacle.	N/A
15.1.2	<p>[Add the following paragraph]</p> <p>Banana plugs shall be acceptable.</p>		N/A
15.1.3	<p>(Add the following title)</p> <p>Adapter output connectors</p> <p>[Replace the first paragraph with the following]</p> <p>Terminals and connectors used in output circuits of supply apparatus, whose output voltage is not a standard nominal mains voltage according to IEC 60038, Table 1, shall not be compatible with those specified for household and similar general purposes, for example those described in IEC 60083 [1], IEC 60320, IEC 60884, IEC 60906 (parts 1, 2, and 3), and CSA C22.2 No. 42.</p>		P
15.2	<p>Provisions for protective earthing</p> <p>[Replace the third paragraph with the following]</p> <p>Earthing connections shall comply with the test requirements of CSA C22.2 No. 0.4.</p>	Class II equipment.	N/A

National Deviation			
Clause	Requirement – Test	Result - Remark	Verdict
15.3.1A	<p>[Add the following clause]</p> <p>Equipment intended for permanent connection to the mains shall have provisions for connection to the wiring system in accordance with the Canadian Electrical Code, Part 1.</p> <p>The terminal parts and all other provisions for permanent connection to fixed wiring shall comply with CAN/CSA-C22.2 No. 0.</p>		N/A
15.4.2	<p>[Add the following paragraphs]</p> <p>Mains plugs of non-permanently installed equipment shall comply with</p> <p>a) CSA C22.2 No. 21 for moulded-on-type attachment plugs; and</p> <p>b) CSA C22.2 No. 42 for disassembly-type attachment plugs (dimensional requirements are also specified in IEC 60906-2). Class II equipment provided with a general purpose mains outlet, or a lampholder, shall be provided with a polarized-type plug. If the plug is a polarized type, single-pole switches or overcurrent protectors shall not be connected in the identified conductor.</p>	For relevant models, plug part shall be evaluated during national approval.	N/A
16.1	<p>[Replace this clause with the following]</p> <p>Flexible cord used for mains supply shall comply with the requirements of CSA C22.2 No. 49. The cord type shall be in accordance with Table 4 of CSA C22.2 No. 1.</p> <p>The attachment plug shall be rated not less than 125% of the apparatus rated current. Cord sets shall comply with the requirements of CSA C22.2 No. 21.</p> <p>Non-detachable flexible cables and cords of Class I apparatus shall be provided with a green/yellow core connected to the protective earthing terminal of the apparatus and, if a plug is provided, to the protective earthing contact of the plug. Compliance is checked by inspection.</p> <p>Note: The colour for cores of flexible mains cords is contained in /EC 60173 [4].</p>	No such flexible cord provided.	N/A

National Deviation			
Clause	Requirement – Test	Result - Remark	Verdict
17.9A.1	<p>Adhesive securement</p> <p>The following parts, the displacement of which may result in a fire or shock hazard, shall not be secured solely by adhesive, unless the adhesive system complies with the resistance to external forces test of Clause 9.1.7, the bump test of Clause 12.1.1, and the impact test of Clause 12.1.3, after conditioning in accordance with Clause 17.9A.2:</p> <p>a) internal metal parts/conductive coatings; b) barriers; and c) required enclosure parts.</p> <p>Note: Cathode ray tubes are excluded from this test.</p>		N/A
17.9A.2.1	<p>Where required by Clause 17.9A.1, one sample of the apparatus or enclosure section shall be conditioned in accordance with the requirements of Clause 17.9A.2.2. Equivalent aging test data supplied by the manufacturer may be considered in lieu of aging.</p>		N/A
17.9A.2.2	<p>Day 1: Place sample in oven at 100 ± 1EC for 1 week, or 82 ± 1EC for 8 weeks, at the manufacturer's option.</p> <p>Day 8 or day 57: 1. Remove from oven and leave at room temperature for 1 h. 2. Place in freezer at -35 EC for 2 h. 3. Remove from freezer and allow to reach room temperature overnight.</p> <p>Day 9 or day 58: 1. Place in a compartment at 96% relative humidity for 3 h. 2. Remove and leave at room temperature and humidity for 1 h. 3. Place in oven at a temperature selected in the first cycle for 3 h. 4. Remove and allow to come to room temperature overnight.</p> <p>Day 10 or day 59: 1. Place in freezer at -35 EC for 2 h. 2. Remove and leave at room temperature for 1 h. 3. Place in humidity chamber at 96% relative humidity for 3 h. 4. Remove and allow to come to room temperature overnight.</p> <p>Day 11 or day 60: 1. Place in oven at the temperature selected in the first cycle for 3 h. 2. Remove for 1 h. 3. Place in freezer at -35 EC for 2 h. 4. Remove and allow to come to room temperature overnight.</p> <p>Day 12 or day 61: 1. Place in humidity chamber at 96% relative humidity for 3 h. 2. Remove and perform mechanical tests as required by Clause 17.9A.1 as applicable.</p>		N/A

National Deviation			
Clause	Requirement – Test	Result - Remark	Verdict
18.1A	<p>Mechanical strength of picture tubes and protection against the effects of implosion</p> <p>18.1A</p> <p>[Add the following clause]</p> <p>A picture tube with a maximum face dimension exceeding 75 mm either shall be intrinsically protected with respect to effects of implosion and to mechanical impact, In accordance with CAN/CSA-C22.2 No. 228 or CAN/CSA-E61965, or the enclosure of the apparatus shall provide adequate protection against the effects of an implosion of the tube (see Clause 12).</p>		N/A
19	<p>[Add the following after the second paragraph] The test of Clause 19.3 is only required for a) apparatus with a mass of 25 kg or more;</p> <p>b) apparatus, excluding loudspeaker systems, with a height of 1 m or more; or</p> <p>c) Apparatus, including loudspeaker systems, in combination with a supplied or recommended cart or stand with a total height of 1 m or more.</p> <p>[Add the following paragraph]</p> <p>Apparatus not tested because it is intended to be fastened in place shall be provided with the following warning, marked on the apparatus or on a durable label attached to the mains cord: "WARNING: This apparatus must be securely attached to the floor/wall per installation instructions. Tipping, shaking, or rocking the machine may cause injury/death."</p>		N/A
20.2.1A	<p>[Add the following clause]</p> <p>Enclosures of apparatus containing high-voltage or projection lamps shall have a minimum flammability rating of category FV 1 according to IEC 60707 at the minimum thickness used.</p>		N/A
Annex B (normative)	<p>Apparatus to be connected to the telecommunication networks</p> <p>[Replace this annex with the following]</p> <p>Apparatus intended for direct connection to a telecommunication network shall comply with</p> <p>a) Clause 19 of CSA C22.2 No. 1; or</p> <p>b) CAN/CSA-C22.2 No. 60950.</p>		N/A

National Deviation			
Clause	Requirement – Test	Result - Remark	Verdict
APPENDIX	USA- National Differences to IEC 60065:2001, Seventh Edition including Am. 1 dated 2005-10 and Am. 2 dated 2010-07		P
1.1.1	Delete reference to Annex L: Electronic flash apparatus for photographic purposes and replace with reference to UL 122.		N/A
	Mains connected apparatus intended for field installation complies with the National Electrical Code, ANSI, NFPA 70.		N/A
1.1.3	Requirements of apparatus intended for outdoor use comply with applicable clause of Annex A		N/A
1.1.5	Some equipment covered by these requirements may also be required to comply with applicable requirements in other appropriate standards :	No such equipment	N/A
1.1.6	<u>Audio and video apparatus with non-metallic enclosures used in air-handling spaces comply to UL 2043</u> NOTE Apparatus such as dome cameras and public address system speakers having nonmetallic enclosures that extend inside the air-handling space after installation are subject to this requirement.		N/A
4.2.1	The rated supply voltage for single phase apparatus is assumed to be 120V or 120/240V		P
4.2.4	a) Minimum audio output is not less than 0.5 W per channel unless the maximum audio output is less than 0.5 W per channel		N/A
4.2.4.1	An apparatus with multiple modes of operation, multiple signal input sources, or both, is operated according to the manufacturer's instructions to produce the maximum power input	No such equipment	N/A
4.2.11	Table 2 - External supply sources are assumed to be capable of delivering 30 A, unless otherwise specified (UL 60065 no-load voltage and internal resistance values)		N/A
4.3.4	As an alternative, PTC thermistors may also comply with UL 1434.		N/A
5	Test for conductive labels secured in place by adhesive		N/A

National Deviation			
Clause	Requirement – Test	Result - Remark	Verdict
5.1	Component power supplies and adapters complying with UL 1310, UL 1950, or UL 60950 are considered to fulfill items "a" through "i" of this clause.		N/A
5.1f	Rated mains frequency marking on apparatus	On marking plate	P
5.1j	Date of Manufacture marking	"YYWW" shown on the rating label. "YY" represents the year. "WW" represents the week.	P
5.1k	Factory origin identification marking	One factory	N/A
5.1l	Combination of two graphical symbols and supplementary marking and/or single graphical symbol marking		N/A
5.1m	Equipment rack marking for audio/video systems	No such equipment	N/A
5.1n	Class I apparatus having touch current levels greater than 0.75 MIU and equal to or less than 3.5 MIU must be marked with a high touch current marking.	Class II equipment	N/A
5.1o	Marking on apparatus having grille/ventilation areas of the top surface that are permitted to have higher temperature rises according to Note b of Table 3		N/A
5.1p	<u>Audio and video apparatus intended for installation in air-handling spaces marked "Suitable for use in Other Environmental Air Spaces in accordance with Section 300.22(c) of the NEC"</u>		N/A
5.2c	Output terminals are marked with voltage, frequency and current or power; output terminals installed or interconnected in the field must be marked with the class of wiring	No such terminals	N/A
5.2d	Speaker terminals are marked "Class 1 Wiring", "Class 2 Wiring" or "Class 3 Wiring".	No such audio output	N/A
5.2d	Operation manual explains risks and proper connecting and insulating techniques when connecting a speaker		N/A

National Deviation			
Clause	Requirement – Test	Result - Remark	Verdict
5.3	An explanation and illustration of safety related graphical symbols used on the apparatus are included in the user instructions preceding any operating instructions	Relevant information included in the user's manual	P
5.4	Important safety instructions are packed with each apparatus		P
5.4.1	Outdoor use marking for apparatus having no protection against exposure to water	Indoor use only	N/A
5.4.1e	Deleted		N/A
5.4.1h	Reference to IEC 61695 is replaced by UL 61965		N/A
5.4.3	When user operation and installation instructions contains instructions for use by skilled persons, the instructions are separate in format and preceded by a precautionary warning statement	Instructions for service personnel not provided	N/A
6.1	Compliance is checked in accordance with the requirements in the U.S. Code of Federal Regulations, Title 21, Chapter 1, Subchapter J, Sections 1010.2, 1010.3, and 1020.10 by measuring the radiation produced by the apparatus employing a production chassis		N/A
6.2	References to IEC 60825-1 are deleted		N/A
	Apparatus is classified and labeled according to the Code of Federal Regulations, Title 21, Chapter 1, Subchapter J, Sections 1010.2, 1010.3, 1040.10 and 1040.11.	No laser	N/A
6.2.2	Deleted		N/A
7	Table 3: Delete reference to conditions h and i under Table item e for lithium batteries		N/A
	Table 3: Temperature limits for various classes of insulation systems according to UL 60065		P
	Table 3, Note a: Materials rated in accordance with UL 746B may be used within their rated temperature		P

National Deviation			
Clause	Requirement – Test	Result - Remark	Verdict
	Table 3, Note b: For grille/ventilation areas in the top surface directly above internal heatsinks, a temperature rise up to 65 K is allowed		N/A
7.2	Applies to thermoplastic materials only. A material temperature rating can be accepted in lieu of the softening temperature.		P
	The softening test need not be performed on materials used in UL Listed or Recognized components		N/A
8.1	Metal parts are corrosion resistant	No such metal parts	N/A
8.9.1	Sleeving, tape, tubing, and wire insulation comply with UL 224, UL 510, or UL 1441		P
8.10	Component power supplies and their internal insulation complying with UL 1310, UL 1950 Third Edition, or UL 60950 are considered to fulfill the clause		N/A
8.17	As an option, winding wire insulation complies with the requirements in UL Subject 2353		N/A
8.19.1	An all-pole switch or circuit breaker is not required to have contact separation of 3 mm		N/A
8.23	Printed wiring boards involved with the risk of electric shock comply with the requirements in UL 796.		N/A
9.1.1.1	For Class I constructions the r.m.s. touch current to earth is not more than 3.5 MIU	Class II equipment.	N/A
9.1.1.1a	For audio signals of professional and commercial apparatus, 120 V r.m.s.		N/A
	For audio signals other than professional and commercial apparatus, 71 V r.m.s.		N/A
9.1.1.1b	Touch current carried out in accordance with UL 101 with the measuring instrument described in Annex D does not exceed 0.5 MIU. Delete Note 2.	See table 9.1.1 for details	P
9.1.1.2	UL articulated finger (figure 14) used instead of the test probe B (IEC 61032)	Noted	P

National Deviation			
Clause	Requirement – Test	Result - Remark	Verdict
	Reference to test probes 18 and 19 of IEC 61032 are deleted		N/A
10	Table 5, Note 1: With respect to mains voltages in the range of 105-130 V (r.m.s.), the test voltages are considered to be 1414 V peak for basic and supplementary insulation and 2828 V peak for reinforced insulation		N/A
11	Component power supplies and their power transformers complying with UL 1310, UL 1950 3rd Ed., or UL 60950 are considered to fulfill the clause		P
11.1	The permissible touch current for terminal contacts increased to twice the value given in 9.1.1.1.	See table 11.1 for details	P
11.2.1	Additional fuse testing is not required if the temperature is limited by fuses	Considered.	P
12	Component power supply adaptors and their enclosures complying with UL 1310, UL 1950 3rd Ed., or UL 60950 are deemed to fulfill the clause		N/A
12.1.3	Impact test uses the 50 mm steel sphere only	Considered	P
	Table 6 - Impact test criteria detailing impact location, impact energy and additional pass/fail results applied according to UL 60065		P
12.1.4	As an alternative, any number from one to three samples are permitted to be used in any combination that results in a total of three drops		N/A
12.1.6	Handle strength test. When polymeric materials are involved, testing is to be conducted before and after the sub-clause 12.1.5 stress relief test.		N/A
12.8	Test for enclosures, barriers, components and leads that rely on adhesive	Enclosures, barriers, components and leads not relied on adhesive	N/A
13	Component power supplies and their power transformers complying with UL 1310, UL 1950 3rd Ed., or UL 60950 are deemed to fulfill the clause	No such component	N/A

National Deviation			
Clause	Requirement – Test	Result - Remark	Verdict
13.4	The material group is verified according to UL 746A	UL listed materials used	N/A
	Reference to the IEC 60112 PTI test is deleted		N/A
	Table 11: Inclusion of working voltages less than 50 V r.m.s. or d.c.		N/A
13.5.1	Reference to IEC 60249-2 is replaced by UL 796	No such printed wiring boards	N/A
13.5.2	Coated printed wiring boards comply with UL 746C	No such printed wiring boards	N/A
13.5.3	<u>Multilayer printed board constructions comply with 2.10.6.4 and Table 2R of UL 60950-1</u>		N/A
14	Annex Y and additional component requirements applied according to UL 60065		P
14.1	Component power supplies and their resistors complying with UL 1310, UL 1950 Third Edition, or UL 60950 are considered to fulfill the clause		N/A
14.2	Component power supplies and their capacitors complying with UL 1310, UL 1950 Third Edition, or UL 60950 are considered to fulfill the clause.		N/A
14.2.1	As an alternative, a component such as a capacitor, a combination capacitor and resistor, or a suppressor may comply with UL 1414.		N/A
14.2.2	As an alternative, a capacitor, a combination capacitor and resistor, or a varistor, or a suppressor may comply with UL 1414.		N/A
14.2.4	Components subjected to the requirements in 14.2.1 and 14.2.2 also comply with UL 1414 enclosure requirements		N/A
14.3	Component power supplies and their inductors and windings complying with UL 1310, UL 1950 3rd Ed., or UL 60950 are considered to fulfill the clause		N/A
14.3.2	<u>Planar transformers comply with 13.5.3</u>		N/A
14.4	High voltage materials are rated V-2 minimum	No high voltage components	N/A

National Deviation			
Clause	Requirement – Test	Result - Remark	Verdict
14.4.1	High voltage arcing test replaces the High voltage transformers and multipliers test		N/A
14.4.2	Deleted	Deleted	N/A
14.4.3	High voltage component part flame test		N/A
14.4.4	High voltage isolating component test		N/A
14.5.1.1	Thermal cut-outs comply with UL 873, UL 8730-2-9 or UL 60730-2-9	No thermal cut-outs used	N/A
14.5.1.2	Thermal links comply with UL 60691	No thermal links used	N/A
14.5.1.3	Deleted		N/A
14.5.2.1	Fuse links comply with UL 248-14	See table 14	P
14.5.2.2	Reference to IEC 60127 is deleted		P
	Pre-arcing time/current characteristic and breaking capacity marking requirements are deleted		N/A
14.5.4	Reference to fuse-links is deleted (<u>this subclause excludes devices in 14.5.3A</u>)	No PTC thermistor used	N/A
14.5.3A	<u>Other protective devices directly connected to the mains have adequate breaking capacity and comply with UL 873, UL 1416, UL 1417 or UL 2111</u>	See only 14.5.4 in main report	N/A
14.6.1	Switches and relays comply with UL 1054, UL 61058-1 or UL 508		N/A
	Mains switch or relay are rated for the total rated current consumption of the apparatus		N/A
	Rating of a mains switch or relay in audio apparatus intended for commercial use		N/A
14.6.2 - .4	Deleted		N/A
14.6.5	A switch or relay that controls a mains socket-outlet have a rating equal to the rated current consumption of the apparatus plus the current rating of the socket-outlet		N/A
14.6.6	Mains switches comply with (a), (b) or (c)		N/A
	Mains relay contacts comply with (a), (b) or (d)		N/A

National Deviation			
Clause	Requirement – Test	Result - Remark	Verdict
	A switch that controls a mains receptacle complies with (b) and a relay that controls a mains receptacle complies with (b) or (d)		N/A
14.6.6a	Switch or relay contacts have current rating equal to or greater than 1.414 times the inrush current of the apparatus		N/A
14.6.6a	<u>Switch or relay contacts have current rating equal to or greater than 10 times the inrush current of the apparatus - alternative for switches where :</u> - $I_{load} \leq 1/2 I_{switch}$ and - Switch is double pole or multi-pole with a minimum of two poles controlling mains current either in series or switching both mains lines		N/A
14.6.6b	Switch or relay is TV rated unless it is a keylock MAINS switch used in series with a MAINS on-off switch in a commercial apparatus.		N/A
14.6.6c	Switch is located on the back of apparatus and is not operable from a remote control		N/A
14.6.6d	Relay subjected to the Relay Endurance Test		N/A
14.6.6.1	Peak inrush current test		N/A
14.6.6.2	Relay endurance test		N/A
14.6.7	Double pole switch controlling a.c. and d.c. circuits		N/A
14.7	The jointed test finger (Fig 14) is used to determine accessibility and operation of the interlock	No safety interlocks used	N/A
14.10.1	Internal rechargeable and non-rechargeable batteries that are replaceable by the user or skilled persons additionally comply with 14.10.2 – 14.10.5.		N/A
	Test requirements from UL 2054 added for special battery packs that are removable by the user from the apparatus (Short circuit, Abnormal charging, Forced-discharge, and 250-N steady force tests may be carried separately from the apparatus)		N/A
	Note: Consumer grade, non-rechargeable carbon-zinc or alkaline batteries are not subjected to the tests specified in Clauses 14.10.2 – 14.10.5.		N/A

National Deviation			
Clause	Requirement – Test	Result - Remark	Verdict
14.10.5	Alternatively, one sample subjected to three drops		P
14.10.6	Location of overcurrent protective device :	No such device	N/A
	Alternatively, the overcurrent protective device in the apparatus battery-supply circuit is not required if the apparatus is to be connected to a vehicle power outlet via UL 2089 vehicle battery adapter		N/A
14.11	Component power supplies and their optocouplers complying with UL 1310, UL 1950 Third Edition, or UL 60950 are considered to fulfill the clause.		N/A
	Optocouplers comply with UL 1577	See table 14	P
	Optocouplers bridging reinforced insulation comply with requirements for double protection as specified in UL 1577		P
	External clearances and creepage distances of optocouplers comply with 13.1		P
14.12	Reference to IEC 61051-2 replaced by UL 1449	See table 14	P
	Reference to IEC 60707 replaced by UL 94		P
	All references to IEC 60151 are deleted		N/A
15.1.1	Attachment plug current rating (no less than 125% of the current drawn under normal operating conditions) and voltage rating :		N/A
	Configuration and electrical rating of an attachment plug for apparatus for use on more than one supply voltage by means of a voltage selector :		N/A
	Polarized attachment plug		N/A
	Wire gauge of conductors and internal wiring connecting mains socket-outlets		N/A
15.1.3.1	Means of output connections on an audio amplifier having an open-circuit audio output voltage not limited to 120 V that is permanently connected to the mains		N/A
	Quick Connect Terminals:		N/A
	a) Male tabs firmly mounted in place;		N/A

US National Differences

National Deviation			
Clause	Requirement – Test	Result - Remark	Verdict
	b) Mating female connectors provided with the apparatus;		N/A
	c) Strain Relief Test of Clause 16.5;		N/A
	d) Installation instructions provided for assembly of terminal to a conductor and strain relief		N/A
	e) Terminals are appropriate for use with the size and type of wire specified		N/A
15.1.3.2	Audio amplifiers having an audio output not limited to 120 V that are connected to the mains by a flexible cord		N/A
15.2	Cross-sectional area of the earthing conductor in a supply cord or in an interconnecting cable	Class II equipment.	N/A
	Earthing conductors may have green or green/yellow insulation	Class II equipment.	N/A
15.3.5	Protective earthing conductor termination construction –connection made so as not disturbed during servicing		N/A
	Cross-sectional area of the earthing conductor in a supply cord or in an interconnecting cable		N/A
	Earthing conductors may have green or green/yellow insulation		N/A
15.4	Component power supply adaptors complying with UL 1310, UL 1950 Third Edition, or UL 60950 fulfill the clause		N/A
15.4.2	<u>Dimensions of mains plug complies to UL498 & ANSI/NEMA WD6</u>	See below	P
15.4.2.1	<u>Construction of the plug blade assembly complies to construction and test requirements for input connections of direct plug-in units in UL1310</u>	Shall be evaluated during national approval.	P
15.4.2.1	<u>Direct plug-in units designed for use by travellers complies with the additional requirements of UL1310</u>		N/A
16.1	Reference in the first paragraph to “sheathed” flexible cords is deleted		N/A
	References to IEC 60227 and IEC 60245 deleted		N/A
	Ampacity and VW-1 marking of mains supply flexible cords :		N/A
	Table 17A - Cords for apparatus		N/A
	<u>Table 17A – Certain supply apparatus.. (added note e)</u>		N/A
16.2	Power supply cord earthing conductor size		N/A
	Reference to IEC 60950, Table 3B is replaced by Article 400 of the National Electrical Code		N/A

US National Differences

National Deviation			
Clause	Requirement – Test	Result - Remark	Verdict
	Table 18 - Upper current limit in column 1 increased from 16 to 30 A and "AWG" wire sizes		N/A
16.3	c) Flexible cords not complying with 16.1, used as connection between the apparatus and other apparatus and comprising Hazardous Live conductors are marked VW-1 or that exceed voltage limit 35V (peak) or current >0.2A are rated VW-1		N/A
16.5	When polymeric materials are involved, strain and twist testing is to be conducted before and after the sub-clause 12.1.5 stress relief test.		N/A
17.8	Expanded to include all cart/stand parts supplied by the manufacturer, such as casters and brackets. Suitable assembly instructions are required.		N/A
	Relevant fixing means are not required when installation is to be done by a skilled person		N/A
17.10	Termination of aluminum conductors used as internal wiring		N/A
17.11	An accessory was investigated to determine that: a). The accessory, and the combination of the accessory and the apparatus presents no hazard in the sense of this standard, and b). The accessory is provided with installation instructions.	No accessories	N/A
17.11.1	Installation of an accessory by a skilled person: a) The mechanical positioning is accomplished by means of tools normally available or by means of special tools provided as part of the installation kit,	See above	N/A
	b) The electrical connections are made by using existing terminals and connections in the apparatus or the building wiring		N/A
18	Non-intrinsically protected picture tubes comply with 18.1, 18.2.2 and 18.3. Intrinsically protected picture tubes with a maximum face dimension exceeding 7.5 cm comply with UL 61965.	No picture tube used	N/A
	A bulb of a picture tube having a face diameter of 7.5 cm or more are mounted in an enclosure		N/A
	Enclosure opening dimensions		N/A
18.1	All tubes are mounted such that the enclosure of the apparatus protects the tube against the effects of implosion.	See above	N/A
18.1	<u>Reference to IEC 61965 replaced by UL 61965</u>		N/A

National Deviation			
Clause	Requirement – Test	Result - Remark	Verdict
19	The tests in 19.1, 19.2 and 19.3 do not cause the apparatus to overturn.		N/A
	The test in 19.2.1 does not cause the apparatus to slide		N/A
	When polymeric materials are involved, testing is to be conducted before and after the sub-clause 12.1.5 stress relief test.		N/A
19.1	References to an apparatus in combination with a supplied cart or recommended stand are deleted		N/A
19.2	References to an apparatus in combination with a supplied cart or recommended stand are deleted		N/A
19.2.1	Slide test	No such device	N/A
19.3	Horizontal force stability test using Table 20A values from UL 60065	No such apparatus	N/A
19.5	Reference to the impact hammer in the first compliance paragraph is deleted		N/A
19.6	Equipment rack mounting test		N/A
20.1a	Deleted	This clause not considered for US requirement	P
20.1b	Exception for parts such as protection TV lenses, loudspeaker parts, external accessories, and fibrous materials	No such parts	P
	Reference to IEC 60695-11-10 replaced by UL 94		P
20.1.2	Sleeving, extruded tubing and insulation on wiring are rated VW-1: a) wiring located in a circuit that is considered a potential ignition source, or		P
	b) wiring not located in a circuit that is a potential ignition source but is in contact with wiring located in a circuit that is a potential ignition source		N/A
20.1.2	Tape in contact with parts of circuits that are potential ignition sources is flame retardant	UL listed material used (see appended table 14)	P
20.1.3	Printed wiring boards, on which the available power as the connection exceeds 15 W or the operating voltage exceeds 50 V a.c. or d.c under normal operating conditions, are of flammability category V-1 or better	UL listed material used (see appended table 14)	P
	Reference to IEC 60695-11-10 replaced by UL 94		P

US National Differences

National Deviation			
Clause	Requirement – Test	Result - Remark	Verdict
	Exception for printed boards housed in metal enclosures is deleted		N/A
	Option to use Clause G.1 of Annex G is deleted		N/A
20.1.4	Components and parts comply with the relevant flammability category according to UL 94 as specified in table 21	UL listed material used (see appended table 14)	P
	Component power supplies complying with UL1310, UL1950 3rd Ed., or UL60950 fulfill the clause		N/A
	Table 21 - Flammability categories for components and parts		P
20.2.1	Fire enclosure required: 1) circuits and components where the available power exceeds 15 W, 2) inductors and windings conductively connected to the mains, and 3) high-voltage products.	UL listed plastic enclosure with flammability of V-0 used (see appended table 14)	P
	The fire enclosure complies with the flammability requirements of Table 22 per UL 94 and 746C		P
	Reference to IEC 60695-11-10 or clause G.1 of annex G replaced by UL 94 or UL 746C		N/A
	Table 22 - Flammability categories for fire enclosures		N/A
20.2.2	Internal fire enclosures openings and material requirements		N/A
	Compliance is checked by inspection and measurement and using the articulated finger probe, figure 18.		N/A
20.2.3	Outer enclosures have a minimum flammability rating of HB when an internal fire enclosure is provided		N/A

A	Apparatus intended for outdoor use or for wet locations		N/A
	a) provided with a means to be transportable		N/A
	b) has a mass less than 35 kg		N/A
	c) can be battery operated, or		N/A
	d) associated literature states or implies such use		N/A

National Deviation			
Clause	Requirement – Test	Result - Remark	Verdict
	An apparatus as described in a), b), or c) above that is marked as specified in 5.4.1 a) is not intended for outdoor use or wet location use		N/A
	Apparatus permanently installed outdoors is considered to be for permanent outdoor use		N/A
A.5	Clauses A.5, A.5.1 and A.5.4.1 are deleted		N/A
A.9.1.1	Touch current test after the water spray test described in A.11.1.1		N/A
A.10	Clauses A.10, A.10.2 and A.10.2.1-2 are deleted		N/A
A.11.1.1	Apparatus subjected to the water spray test specified in UL 1598		N/A
A.16.1	Flexible cords are suitable for outdoor use		N/A
A.20.2.1	Enclosures for an apparatus intended for permanent outdoor location comply with requirements for Type 3 enclosures in UL 50		N/A
B	IEC 62151 Clause 4 applies except for 4.1.2, 4.1.3, 4.2.1.1 and 4.2.1.2		N/A
	The requirements of 4.2.1.1 are replaced by the requirements or 2.3.1 of UL 60950, Third Edition or <u>UL 60950-1</u>		N/A
	Voltages on the TNV-0 circuits, TNV-1 circuits and accessible conductive parts in the event of a single insulation fault		N/A
	Apparatus intended to be connected to telecommunication networks and having ringing voltages applied to the apparatus is subjected to touch current limits in accordance with clause 5.1.8.1.1 of UL 60950 or 5.1.8.3 of <u>UL 60950-1</u>		N/A
	Telecommunication network that uses outside cable complies with the requirements for protection against overvoltage from power line crosses per 6.4 of UL 60950, Third Edition or <u>UL 60950-1</u>		N/A
	UL 60950, <u>Third Edition</u> or <u>UL 60950-1</u> Acoustic tests for apparatus containing an earphone held against the ear		N/A
	Apparatus provided with appropriate markings and instructions as described in Annex NAA of UL 60950, <u>Third Edition</u> or <u>UL 60950-1</u>		N/A
D	Reference to IEC 60990 replaced by UL 101		P

National Deviation			
Clause	Requirement – Test	Result - Remark	Verdict
	Add touch current value in MIU where $MIU = U_2 \times 2$ (r.m.s. value)	$(U_{2peak} \times \sqrt{2} = MIU)$	P
G	Annex G deleted		N/A
I	Safety requirements for coin/button cell batteries (Annex I provided below)		N/A
L	Annex L deleted		N/A
Q	Safety requirements for video apparatus for use in health care facilities		N/A
R	Safety requirements for undercabinet apparatus		N/A
S	Safety requirements for in-wall mounted apparatus		N/A
T	Safety requirements for apparatus with projection lamps		N/A
U	Safety requirements for permanently connected apparatus		N/A
V	Safety requirements for carts, stands, and similar apparatus for use with specific apparatus covered by this standard		N/A
W	Construction details for a 0.02-ohm shunt for use in the peak inrush-current measurement		N/A
X	Manufacturing and production-line tests and verification		N/A
Y	Standards for components		P

National Deviation			
Clause	Requirement – Test	Result - Remark	Verdict

Annex I Safety requirements for coin/button cell batteries			N/A
<p>The requirements of this standard, supplemented or replaced by those contained in this annex, apply to apparatus with USER accessible battery access covers, including REMOTE CONTROLS, which contain lithium COIN / BUTTON CELL BATTERIES with a diameter of 32 mm or less.</p> <p>The requirements of this annex do not apply to:</p> <ul style="list-style-type: none"> - PROFESSIONAL APPARATUS - COMMERCIAL APPARATUS - Apparatus containing COIN / BUTTON CELL BATTERIES which are soldered in place. 			--
1.2.7.15	<p>COIN / BUTTON CELL BATTERY a small, single cell battery having a diameter greater than its height</p>		N/A
5.4.1	<p>Added clause: i) If an apparatus contains a user-replaceable COIN / BUTTON CELL BATTERY, either of the following symbols shall be placed on the apparatus close to the battery compartment:</p> <div style="text-align: center;">  or  <small>EN1226</small> </div>		N/A
	<p>In addition, there shall be a warning in the accompanying documentation. The warning shall contain the symbol placed on the apparatus and the following text or equivalent.</p> <div style="text-align: center;">  WARNING DO NOT INGEST BATTERY, CHEMICAL BURN HAZARD or  WARNING DO NOT INGEST BATTERY, CHEMICAL BURN HAZARD </div> <p>followed by:</p> <p>“The remote control supplied with] This product contains a coin/button cell battery. If the coin/button cell/battery is swallowed, it can cause severe internal burns in just 2 hours and can lead to death.”</p>		N/A

National Deviation			
Clause	Requirement – Test	Result - Remark	Verdict
	<p>“Keep new and used batteries away from children. If the battery compartment does not close securely, stop using the product and keep it away from children.</p> <p>If you think batteries might have been swallowed or placed inside any part of the body, seek immediate medical attention.”</p>		N/A
I.21	<p>COIN / BUTTON CELL BATTERIES</p> <p>Apparatus shall be designed to prevent children from removing the battery by one of the following methods:</p> <p>a) A tool, such as a screwdriver or coin, is required to open the battery compartment; or</p> <p>b) The battery compartment door / cover requires the application of a minimum of two independent and simultaneous movements to open BY HAND.</p> <p>If screws or similar fasteners are used to secure the door/cover providing access to the battery compartment, the fasteners shall be captive to ensure that they remain with the door/cover. This does not apply to side panel doors on larger devices which are necessary for the functioning of the equipment and which are not likely to be discarded or left off the equipment.</p>		N/A
I.21.2	<p>Pre-conditioning tests</p> <p>One test sample shall be subjected to the following pre-conditioning prior to test. The pre-conditioning test in I.21.2.1 shall be performed first.</p>		N/A
I.21.2.1	<p>Stress relief test</p> <p>If the battery compartment door / cover or opening mechanism utilizes molded or formed thermoplastic materials, the sample consisting of the complete apparatus, or of the complete enclosure together with any supporting framework, is subjected in a circulating air oven to a temperature 10 K higher than the maximum temperature observed on the enclosure during the test of 7.1.3, but not less than 70 °C, for a period of 7 h, then permitted to cool to room temperature.</p>		N/A

National Deviation			
Clause	Requirement – Test	Result - Remark	Verdict
I.21.2.2	<p>Battery replacement test</p> <p>The battery compartment shall be opened and closed and the battery removed and replaced ten times to simulate normal replacement according to the manufacturer's instructions. If the battery compartment is secured with a screw, the screws are loosened and then tightened by means of a suitable test screwdriver, spanner or key, applying a continuous, linear torque according to table 20.</p>		N/A
I.21.3	<p>Abuse tests</p> <p>All tests included in this sub-clause shall be performed on one pre-conditioned sample of the apparatus.</p>		N/A
I.21.3.1	<p>Drop test</p> <p>PORTABLE APPARATUS having a mass of 7 kg or less are subjected to three drops from a height of 1,0m onto a horizontal surface in positions likely to produce the maximum force on the battery compartment.</p> <p>If the apparatus is a REMOTE CONTROL, it shall be subjected to ten drops.</p> <p>The horizontal surface consists of hardwood at least 13 mm thick, mounted on two layers of plywood each 19 mm to 20 mm thick, all supported on a concrete or equivalent non-resilient floor.</p>		N/A
I.21.3.2	<p>Impact test</p> <p>The battery compartment door / cover shall be subject to three 2-Joule impacts.</p> <p>The impact shall be caused by allowing a solid, smooth, steel ball of 50 ± 1 mm in diameter and with a mass of approximately 500 g to fall freely from rest through a vertical distance, as illustrated in figure 8, and strike the battery compartment door / cover with the specified impact in a direction perpendicular to the enclosure surface.</p>		N/A

National Deviation			
Clause	Requirement – Test	Result - Remark	Verdict
I.21.3.3	<p>Crush test</p> <p>REMOTE CONTROL devices held in hand are to be supported by a fixed rigid supporting surface, in positions likely to produce the most adverse results as long as the position can be self supported. A crushing force of 330 ± 5 N is applied for a period of 10 s to the exposed surfaces of the REMOTE CONTROL. The force is to be applied by a flat surface measuring approximately 100 by 250 mm.</p>		N/A
I.21.4	<p>Compliance</p> <p><i>Compliance is checked by applying a force of 45 ± 1 N for 10 s to the battery compartment door/cover by a rigid test finger according to test probe 11 of IEC 61032 at the most unfavorable place and in the most unfavorable direction. The force shall be applied in only one direction at a time. The battery compartment door/cover shall not open and shall remain functional. The battery shall not become ACCESSIBLE.</i></p>		N/A

National Deviation			
Clause	Requirement – Test	Result - Remark	Verdict

J60065(H23) : 2011 TEST REPORT			
(Deviations from IEC 60065:2001+A1:2005)			
Special National conditions, National deviation and other information according to MITI Ordinance No. 85. <u>Japanese unique deviations</u> in J60065(H23):2011(=JIS C 6065:2007+A1(2009))			
Clause	Requirement + Test	Result - Remark	Verdict
1.1.3	Addition: Add the following as a NOTE after the first sentence. NOTE 1 In Japan, the requirements for regions with moderate apply.	Added	N/A
2.4.9	Replacement: In NOTE 1, replace “see 4.2.2 of IEC 62151” by “see 4.2.2 of IEC 62151 [27]”.	Replaced	N/A
2.6.2A	Addition: Add this sub clause. CLASS 0I EQUIPMENT: Equipment which has, as for protection against electric shock, - at least using BASIC INSULATION, and - providing a means of connecting to the protective earthing conductor in the building wiring those conductive parts that are otherwise capable of assuming HAZARDOUS VOLTAGES if the BASIC INSULATION fails, and - using a supply cord without earthing conductor or a plug without earthing pin. Apparatus provided with a cord set having a two-pin type plug with a lead wire for earthing or having three pin - tow pin adaptor is also regarded as Class 0I. NOTE Class 0I equipment may have a part constructed with Double Insulation or Reinforced Insulation.		
3.2	Addition: Add the “Class 0I equipment” in the first sentence of this sub-clause.	Added	N/A
3.2	Addition: Add the following after the first sentence of this sub-clause. NOTE Equipment often transported and used should not be Class I equipment nor Class 0I equipment.	Added	N/A
4.2.8	Deletion: Delete this clause.	Deleted	N/A
4.3.4, b)	Replacement: Replace IEC 60730-1 by JIS C 9730-1	Replaced	N/A

National Deviation			
Clause	Requirement – Test	Result - Remark	Verdict
	(corresponding to IEC 60730-1).		
4.3.12	Deletion: Delete this clause.	Deleted	N/A
4.3.13	Replacement: Replace “250 V a.c.” by “the maximum of the variable range”.	Replaced	N/A
5.4.2A	Addition: For CLASS 0I EQUIPMENT, the following instruction shall be indicated where readily visible on the mains plug or the product: “WARNING: Provide an earthing connection” <i>Example in Japanese:</i> 警告 必ず接地接続を行ってください。 Moreover, for CLASS 0I EQUIPMENT, the following instruction shall be indicated where readily visible on the product or written in the operating instructions: “WARNING: Provide an earthing connection before the mains plug is connected to the mains. And, when disconnecting the earthing connection, be sure to disconnect after pulling out the mains plug from the mains.” <i>Example in Japanese:</i> 警告 接地接続は必ず、主電源プラグを主電源につながり前に行ってください。また、接地接続を外す場合は、必ず主電源プラグを主電源から切り離してから行って下さい。	Added	N/A
6.2	Replacement: In NOTE 1, replace IEC 61040 [10] by JIS C 6181:1995 [10].	Replaced	N/A
7.1.5	Addition: Add the words, “without dimensions restrictions” after the figure, “65 K” in the first sentence of Condition “b” in Table 3 as follows. For parts not likely to be touched during intended use, temperature rises up to 65 K <u>without dimensions restrictions</u> are allowed under normal operating conditions.	Added	P
	Addition:	Added	N/A

National Deviation			
Clause	Requirement – Test	Result - Remark	Verdict
	<p>Add the following paragraph as 2nd paragraph of Condition “d” in Table 3.</p> <p>For materials which are not listed in Table 3, temperature rises in the normal operating conditions are considered satisfactory if these materials comply with item 3 of detailed regulations, 1.(1),b, Appendix 4 in the Ministerial Ordinance on stipulating technical requirements for the Electrical Appliance and Material. Permissible temperature rise of “Supply cords and wiring insulation” is applicable only to the materials used in supply cords complying with JIS C 3662 (corresponding to IEC 60227) or JIS C 3663 (corresponding to IEC 60245). Materials used in other wiring shall comply with item 3 of detailed regulations, 1.(1),b, Appendix 4 in the Ministerial Ordinance on stipulating technical requirements for the Electrical Appliance and Material.</p>		
	<p>Addition: In the first paragraph of Condition “f” of Table 3, add “JIS K 7206:1999 or” before the reference, ISO 306.</p>	Added	N/A
	<p>Addition: In Condition “f,” 1) of Table 3, add “JIS K 7206:1999 or” before the reference, ISO 306.</p>	Added	N/A
7.2	<p>Addition: In NOTE 2, add “or JIS standard (identical to or modified IEC)” after the word, IEC standard.</p>	Added	P
8.5	<p>Addition: In the first paragraph, add “and Class 0I Equipment” after the words, Class I Equipment.</p>	Added	N/A
8.5	<p>Addition: In the six paragraph (before NOTE 3), add the following to the end of the first sentence. CLASS 0I EQUIPMENT shall be provided with a protective earthing terminal at any point outside the apparatus where easily visible or a protective external earth wire from mains plug.</p>	Added	N/A
8.11	<p>Addition: In NOTE 2, c), add “or JIS C 2107, JIS C 2336, JIS C 2338” after the reference, IEC 60454.</p>	Added	N/A
9.1.1.1	<p>Addition: In the last paragraph, add the following sentence after the first sentence.</p>	Added	P

National Deviation											
Clause	Requirement – Test	Result - Remark	Verdict								
	For CLASS 0I EQUIPMENT, the r.m.s. TOUCH-CURRENT to earth shall not be more than 1.0 mA.										
10	Replacement: In NOTE, replace “IEC 60664-1 and IEC 60664-4 [9]” by “JIS C 0664:2003 and IEC/TR3 60664-4 [8]”	Replaced	P								
10.1	Addition: Add “CLASS 0I EQUIPMENT and” to the head of the first paragraph.	Added	N/A								
10.3.2	Addition: In Table 5, add the following values to the sub-table of NOTE. <table border="1" data-bbox="432 907 1010 1095"> <thead> <tr> <th rowspan="2">Operating Voltage <i>U</i> (peak)</th> <th colspan="2">Test voltage (peak)</th> </tr> <tr> <th>Curve A</th> <th>Curve B</th> </tr> </thead> <tbody> <tr> <td>142 V</td> <td>1 414 V</td> <td>2 828 V</td> </tr> </tbody> </table>	Operating Voltage <i>U</i> (peak)	Test voltage (peak)		Curve A	Curve B	142 V	1 414 V	2 828 V	Added	N/A
Operating Voltage <i>U</i> (peak)	Test voltage (peak)										
	Curve A	Curve B									
142 V	1 414 V	2 828 V									
11.2.1	Addition: Add the following after the original NOTE. NOTE 2 Fuses except for the ones according to IEC 60127 shall be tested in consideration of the characteristic.	Added	N/A								
11.2.3	Addition: Add “and CLASS 0I” after the words, CLASS I.	Added	N/A								
13.4	Replacement: In NOTE 2 of Table 11, replace “IEC 60664-1” by “JIS C 0664:2003” (corresponding to IEC 60664-1).	Replaced	P								
14.3.3.2	Addition: In the second sentence of the first paragraph, add “or JIS C 2107, JIS C 2336 and JIS C 2338” after the reference, IEC 60454.	Added	N/A								
14.5.1.1	Addition: In item a), add “JIS C 9730 series or” before the reference, IEC 60730 series.	Added	N/A								
14.5.1.2	Replacement: In the first sentence of item a), replace “IEC 60691” by “IEC 60691, JIS C 6691:2003 or Appendix 3 of the Ministerial Ordinance on stipulating technical requirements for the Electrical Appliance and Material”.	Replaced	N/A								
	Replacement:	Replaced	N/A								

National Deviation			
Clause	Requirement – Test	Result - Remark	Verdict
	After the second sentence of item a), replace “IEC 60691” by “JIS C 6691:2003 or IEC 60691”.		
14.5.2.1	<p>Replacement:</p> <p>Replace the first and the second sentence as follows:</p> <p>Fuse-links, DIRECTLY CONNECTED TO THE MAINS, used in order to prevent the apparatus from becoming unsafe within the sense of this standard shall comply with</p> <ul style="list-style-type: none"> - the relevant part of IEC 60127 or JIS C 6575, unless they have a rated current outside the range specified in that standard. In the latter case, they shall comply with the relevant part of IEC 60127 or JIS C 6575 as far as applicable, or - Appendix 3 of the Ministerial Ordinance on stipulating technical requirements for the Electrical Appliance and Material (limited to Fuses with the rated current of 1 A or more). 	Replaced	P
14.5.2.2	<p>Addition:</p> <p>Add the following sentence before the last paragraph.</p> <p>For fuses according to Appendix 3 of the Ministerial Ordinance on stipulating technical requirements for the Electrical Appliance and Material, all that needs to be marked is the rated current.</p>	Added	P
14.5.3	<p>Replacement:</p> <p>Replace “IEC 60730-1” by “JIS C 9730-1” (corresponding to IEC 60730-1).</p>	Replaced	N/A
14.5.4	<p>Replacement:</p> <p>Replace “IEC 60127” by “IEC 60127 or JIS C 6575”.</p>	Replaced	P
14.6.1	<p>Addition:</p> <p>Add the following paragraph after NOTE.</p> <p>The following manually operated mechanical switches shall meet the requirements specified in item a) or b) below.</p> <ul style="list-style-type: none"> - the controlling current exceeds 0.2 A r.m.s a.c. or d.c. - the voltage across the open switch contacts exceeds 35 V_{peak ac} or 24 V_{dc}. 	Added	N/A
14.6.1	<p>Replacement:</p> <p>In item a), replace “IEC 61058-1” by “IEC 61058-1 or JIS C 4526-1:1999”.</p>	Replaced	N/A
14.6.2	<p>Replacement:</p>	Replaced	N/A

National Deviation			
Clause	Requirement – Test	Result - Remark	Verdict
	Replace “IEC 61058-1” by “IEC 61058-1 or JIS C 4526-1:1999”.		
14.6.3	Replacement: Replace “IEC 61058-1” by “ IEC 61058-1 or JIS C 4526-1:1999”.	Replaced	N/A
14.6.5	Replacement: Replace “IEC 61058-1” by “ IEC 61058-1 or JIS C 4526-1:1999”.	Replaced	N/A
14.7	Replacement: Replace “IEC 60950” by “JIS C 6950:2006”.	Replaced	N/A
15.1.1	Replacement: Replace the first and second paragraph by the following. Plugs and appliance couplers for the connection of the apparatus to the MAINS and socket-outlets and interconnection couplers for providing MAINS power to other apparatus shall comply with the relevant JIS standards for plugs, socket-outlets, appliance couplers or interconnection couplers. If there is no appropriate JIS standard, they shall comply with the relevant IEC standards. Appliance connectors, interconnection outlets and interconnection plug-connectors compiled with Appendix 3 of the Ministerial Ordinance on stipulating technical requirements for the Electrical Appliance and Material are accepted. In that case, if due to the shape the contact parts are connectable to those specified in standard sheets of IEC 60320-1, they shall comply with dimensions and ratings specified in the relevant standard sheets of IEC 60320-1. Examples of relevant specifications and standards: - Plugs / Socket-outlets: Appendix 4 of Article 1 of the Ministerial Ordinance on stipulating technical requirements for the Electrical Appliance. Article 2 (corresponding to IEC 60884) of the Ordinance. - Appliance couplers: Appendix 4 of Article 1 of the Ministerial Ordinance on stipulating technical requirements for the Electrical Appliance. Article 2 (corresponding to IEC 60320-1) of the Ordinance. - Appliance inlets: IEC 60320-1 - Interconnection outlets: Appendix 4 of Article 1 of the Ministerial Ordinance on stipulating technical requirements for the Electrical	Replaced. See only 15.4	P

National Deviation			
Clause	Requirement – Test	Result - Remark	Verdict
	Appliance. IEC 60320-2-2. - Interconnection couplers: Appendix 4 of Article 1 of the Ministerial Ordinance on stipulating technical requirements for the Electrical Appliance. Delete NOTE 1 and NOTE 2.		
15.1.1	Replacement: Replace the paragraph after NOTE 2 by the following. MAINS socket-outlets and interconnection couplers mounted on CLASS 0I and CLASS II apparatus shall not permit connection of CLASS I apparatus.	Replaced	N/A
15.1.1	Replacement: Replace the paragraph before NOTE 3 by the following. MAINS socket-outlets and interconnection couplers mounted on CLASS I apparatus shall be provided with protective earthing contacts which are reliably connected to the PROTECTIVE EARTHING TERMINAL or contact of the apparatus. If not, it shall not permit connection of CLASS I apparatus.	Replaced	N/A
	Replacement: Replace NOTE 4 by the following. NOTE 4 Socket-outlets <u>not allowing the connection of CLASS I apparatus</u> can be designed, for instance, similar to IEC 60906-1, standard sheets 3-1 or 3-2, or according to IEC 60320-2-2, standard sheets D or H.	Replaced	N/A
15.1.2	Deletion: Delete the following sentence in NOTE. An example of a connector not meeting the requirements of this sub clause is the so-called "banana" plug.	Deleted	N/A
15.1.3	Replacement: Replace the references, "IEC 60083 [1], IEC 60320, IEC 60884, IEC 60906" by "JIS C 8282 (corresponding to IEC 60884), JIS C 8303, IEC 60320 and IEC 60906".	Replaced	N/A
15.2	Addition: Add "and CLASS 0I EQUIPMENT" after the words, "CLASS I EQUIPMENT"	Added	N/A
15.2	Addition: Add the following paragraphs after the first	Added	N/A

National Deviation											
Clause	Requirement – Test	Result - Remark	Verdict								
	<p>paragraph.</p> <p>The external earth wire of plug with an external earth wire shall not be earthed by a clip.</p> <p>Rated voltage of plug with an protective external earth wire shall be less 150 Vac.</p>										
	<p>Deletion:</p> <p>Delete the following paragraph.</p> <p>In SUPPLY APPARATUS of CLASS I with non-HAZARDOUS LIVE output voltage, output circuits shall not be connected to the protective earthing conductor.</p>	Deleted	N/A								
15.3.1	<p>Replacement:</p> <p>In the first paragraph, replace “IEC 60998-2-2” by “IEC 60998-2-2 or JIS C 2814-2-2:2001”.</p>	Replaced	N/A								
	<p>Replacement:</p> <p>In the first paragraph, replace “IEC 60999” by “IEC 60999-1”.</p>	Replaced	N/A								
	<p>Replacement:</p> <p>In the third paragraph, replace “IEC 60335-1” by “JIS C 9335-1:2003 (corresponding to IEC 60335-1)”.</p>	Replaced	N/A								
15.3.3	<p>Replacement:</p> <p>Replace “ISO 261 or ISO 262” by “JIS B 0205-2:2001 or JIS B 0205-3:2001”.</p>	Replaced	N/A								
15.3.5	<p>Replacement:</p> <p>In the second paragraph, replace “IEC 60950” by “JIS C 6950:2006”.</p>	Replaced	N/A								
15.3.5	<p>Replacement:</p> <p>Replace Table 15 by the following.</p> <table border="1" data-bbox="432 1529 1010 1908"> <thead> <tr> <th>RATED CURRENT CONSUMPTION of the apparatus^a A</th> <th>Nominal cross-sectional area mm²</th> </tr> </thead> <tbody> <tr> <td>Up to and including 6</td> <td>0.75 to 1</td> </tr> <tr> <td>Over 6 up to and including 10</td> <td>1 to 1.5</td> </tr> <tr> <td>Over 10 up to and including 16</td> <td>1.5 to 2.5</td> </tr> </tbody> </table>	RATED CURRENT CONSUMPTION of the apparatus ^a A	Nominal cross-sectional area mm ²	Up to and including 6	0.75 to 1	Over 6 up to and including 10	1 to 1.5	Over 10 up to and including 16	1.5 to 2.5	Replaced	N/A
RATED CURRENT CONSUMPTION of the apparatus ^a A	Nominal cross-sectional area mm ²										
Up to and including 6	0.75 to 1										
Over 6 up to and including 10	1 to 1.5										
Over 10 up to and including 16	1.5 to 2.5										

National Deviation			
Clause	Requirement – Test	Result - Remark	Verdict
	^a The RATED CURRENT CONSUMPTION includes currents which can be drawn from socket-outlets providing MAINS power for other apparatus.		
15.3.9	Addition: Add the following to the last of the first paragraph. This does not apply to CLASS 0I EQUIPMENT with a protective earthing terminal separately.	Added	N/A
15.4.1	Replacement: In NOTE 1, replace “IEC 60884-1” by “JIS C 8282 (corresponding to IEC 60884-1)”.	Replaced	P
	Replacement: In NOTE 2, replace “IEC 60083 [1]” by “JIS C 8303”.	Replaced	P
15.4.2	Replacement: In NOTE, replace “IEC 60083 [1]” by “JIS C 8303:1993 [1]”.	Replaced	P
15.4.3	Addition: Add the following NOTE to Table 17. NOTE If mains plug is parallel blade, a pull force as given in “Over 10 A up to and including 16 A, 130/250 V” of Table 17 is applied.	Added	N/A
16.1	Addition: Add the following to the last of first paragraph. Or mains cords shall be of the sheathed type complying with Appendix 1 of Article 1 of the Ministerial Ordinance on stipulating technical requirements for the Electrical Appliance.. Replacement: Replace the second paragraph by the following. Compliance is checked by testing MAINS supply flexible cords in accordance with JIS C 3662 (corresponding to IEC60227) or JIS C 3663 (corresponding to IEC 60245), or Appendix 1 of Article 1 of the Ministerial Ordinance on stipulating technical requirements for the Electrical Appliance.		N/A
	Replacement: In this sub-clause, replace “IEC 60227” by “JIS C 3662 (corresponding to IEC 60227)”. In this sub-clause, replace “IEC 60245” by “JIS C 3663 (corresponding to IEC 60245)”.		N/A
	Addition: Add the following paragraph after the third		N/A

National Deviation													
Clause	Requirement – Test	Result - Remark	Verdict										
	<p>paragraph.</p> <p>An external earth wire of Class 0I equipment shall be green/yellow, and the length of external earth wire of plug with an external earth wire shall be equal or more than 10 cm from the plug.</p>												
16.2	<p>Replacement:</p> <p>Replace the first paragraph by the following.</p> <p>Power supply cord conductors complied with JIS C 3662 (corresponding to IEC 60227) or JIS C 3663 (corresponding to IEC 60245) shall have a nominal cross-sectional area not less than those shown in table 18. If power supply cord conductors comply with other standards, it shall comply with relevant wiring requirements.</p>		N/A										
16.2	<p>Replacement:</p> <p>Replace Table 18 by the following.</p> <table border="1" data-bbox="432 996 1010 1480"> <thead> <tr> <th>RATED CURRENT CONSUMPTION of the apparatus^a</th> <th>Nominal cross-sectional area</th> </tr> <tr> <th>A</th> <th>mm²</th> </tr> </thead> <tbody> <tr> <td>up to and including 6</td> <td>0,75</td> </tr> <tr> <td>Over 6 up to and including 10</td> <td>1</td> </tr> <tr> <td>Over 10 up to and including 16</td> <td>1,5</td> </tr> </tbody> </table> <p>^a The RATED CURRENT CONSUMPTION includes currents which can be drawn from the socket-outlets providing MAINS power for other apparatus.</p>	RATED CURRENT CONSUMPTION of the apparatus ^a	Nominal cross-sectional area	A	mm ²	up to and including 6	0,75	Over 6 up to and including 10	1	Over 10 up to and including 16	1,5	Replaced	N/A
RATED CURRENT CONSUMPTION of the apparatus ^a	Nominal cross-sectional area												
A	mm ²												
up to and including 6	0,75												
Over 6 up to and including 10	1												
Over 10 up to and including 16	1,5												
16.3	<p>Replacement:</p> <p>In item a), replace “IEC 60885-1” by “JIS C 3661-1:1998”.</p>	Replaced	N/A										
	<p>Replacement:</p> <p>In item b), replace “IEC 60227-2” by “JIS C 3662-2 (corresponding to IEC 60227-2)”.</p>	Replaced	N/A										
16.5	<p>Addition:</p> <p>Add “or CLASS 0I EQUIPMENT used a plug with an external earth wire” after the words, CLASS I EQUIPMENT.</p>	Replaced	N/A										
20.1	<p>Replacement:</p> <p>In Note 3, replace each IEC 60065 and IEC 60707 by “JIS C 6065” and “JIS C 0066:2001 (IEC 60707).”</p>	Replaced	N/A										

National Deviation			
Clause	Requirement – Test	Result - Remark	Verdict
Annex B	Replacement: Replace normative by Informative.	Replaced	N/A
Annex G	Replacement: Replace IEC 60707 by JIS C 0066:2001 Replace IEC 60695-2-2 by JIS C 60695-2-2:2000. Replace IEC 60695-11-10 by JIS Z 2391:1999.	Replaced	N/A
Annex N	Addition: Add “- protective earthing lead wire, protective earthing contact of appliance inlet or external protective earthing terminal in case of Class 0I apparatus.” after the second dash of N.1.3.	Added	N/A
	Replacement: Replace the first sentence and two dashes of N.2.2, as follows: The continuity of the protective earthing connection between - the ACCESSIBLE conductive parts, including TERMINALS regarded as ACCESSIBLE (see 8.4), which should be connected to the PROTECTIVE EARTHING TERMINAL, and - the protective earthing contact of socket-outlets respectively, if provided to deliver power to other apparatus should be checked between - the protective earthing contact of the MAINS plug or appliance inlet, or the PROTECTIVE EARTHING TERMINAL in case of a PERMANENTLY CONNECTED APPARATUS, for CLASS I apparatus, and - the protective earthing lead wire, the protective earthing contact of appliance inlet, or external protective earthing terminal, for CLASS 0I apparatus.	Replaced	N/A

National Deviation			
Clause	Requirement – Test	Result - Remark	Verdict
APPENDIX X	Variations to IEC 60065:2001 +A1:2005 +A2:2010 for application in Australia and New Zealand (AS/NZS 60065:2012)		P
EXPLANATION FOR ABBREVIATIONS P=Pass, F=Fail, N/A=Not applicable. Placed in the column to the right.			
ZZ	This Appendix provides variations between this Standard and IEC 60065, Ed.7.2 (2011).		P
Table 3	<p>In Table 3 under item c) add an 201) in both columns against 'thermoplastic materials' and add the following new footnote:</p> <p>201) As an alternative to the method described in footnote f) the following variation may be used where there is any doubt about the suitability of the material:</p> <p style="padding-left: 40px;">The ball-pressure test described in AS/NZS 60695.10.2 may be carried out.</p> <p style="padding-left: 40px;">To assess compliance under normal operating conditions, the test shall be made in a heating cabinet at a temperature of 40°C ±2°C plus the maximum temperature rise determined under normal operating conditions but, it shall be at least:</p> <ul style="list-style-type: none"> - for external parts 75°C ±2°C - for materials supporting parts conductively connected to the mains 125°C ±2°C 		P
7.2	After the second paragraph, add the following: The alternative method described in footnote 201) of Table 3 may be used.		N/A
15.1.1	After the second paragraph, add the following: Plugs for the connection of apparatus to mains-powered socket-outlets shall comply with AS/NZS 3112 or AS/NZS 3123. Apparatus with a plug portion, suitable for insertion into a 10 A 3-pin flat-pin socket-outlet complying with AS/NZS 3112, shall comply with the requirements of AS/NZS 3112 for equipment with integral pins for insertion into socket-outlets.	See only 15.4, attachment 7 and attachment 8 for details	P
15.3.5	Table 15: In the second and third rows of the first column replace '6' with '7.5'.		N/A
16.2	Table 18: In the second and third rows of the first column replace '6' with '7.5'.		N/A
16.3	In item (b), add the following: A flexible cord complying with AS/NZS 3191 need not undergo this test.		N/A

National Deviation			
Clause	Requirement – Test	Result - Remark	Verdict
19	Add the following new Clauses after 19.6		N/A
19.201	Mass of the television exceeding 7 kg		N/A
	Apparatus intended to be fastened in place – suitable instructions		N/A
19.201.1	Warning provided both in instruction and as a label on the apparatus <div style="border: 1px solid black; padding: 5px; margin: 5px 0;"> <p style="text-align: center;">IMPORTANT INFORMATION</p> <p>If a television is not positioned in a sufficiently stable location, it can be potentially hazardous due to falling. Many injuries, particularly to children, can be avoided by taking simple precautions such as:</p> <ul style="list-style-type: none"> • Using cabinets or stands recommended by the manufacturer of the television. • Only using furniture that can safely support the television. • Ensuring the television is not overhanging the edge of the supporting furniture. • Not placing the television on tall furniture (for example, cupboards or bookcases) without anchoring both the furniture and the television to a suitable support. • Not standing the television on cloth or other materials placed between the television and supporting furniture. • Educating children about the dangers of climbing on furniture to reach the television or its controls. </div>		N/A
19.201.2.1	Television receivers should be provided with a restraining device such as a fixing point to facilitate restraining the television from toppling forward.		N/A
19.201.2.2	Information of restraining device provided both in the instruction and as a label on the apparatus.		N/A
19.201.3	Television receivers, with a mass 18 kg or more, tested on a glass, inclined at 10° to the horizontal. (Effective on 31 Jan 2013)		N/A
20	Add the following after the last paragraph: Alternatively the requirements are considered to be fulfilled if the apparatus complies with the requirements of Clause 20.201.	Added	P
Table 21	Table 21: In the third and fourth columns change both 'HB75' and 'No requirement' to 'V-1'.		P
20.2.3	After this Clause, add the following variation:	Not applied for	N/A
20.201	Resistance to fire — Alternative tests		N/A
20.201.1	General Parts of non-metallic material shall be resistant to ignition and the spread of fire		N/A
	This requirement does not apply to decorative trims, knobs and other parts unlikely to be ignited or to propagate flames originating from inside the apparatus, or the following:		N/A

National Deviation			
Clause	Requirement – Test	Result - Remark	Verdict
	a) Components that are contained in an enclosure having a flammability category of V-0 according to AS/NZS 60695.11.10 and having openings only for the connecting wires filling the openings completely, and for ventilation not exceeding 1 mm in width regardless of length.		N/A
	b) The following parts which would contribute negligible fuel to a fire: - small mechanical parts, the mass of which does not exceed 4 g, such as mounting parts, gears, cams, belts and bearings; - small electrical components, such as capacitors with a volume not exceeding 1 750 mm ³ , integrated circuits, transistors and optocoupler packages, if these components are mounted on material of flammability category V-1 or better according to AS/NZS 60695.11.10.		N/A
	NOTE – In considering how to minimize propagation of fire and what 'small parts' are, account should be taken of the cumulative effect of small parts adjacent to each other for the possible effect of propagating fire from one part to another.		N/A
	Compliance shall be checked by the tests of 20.201.2.1, 20.201.2.2. and 20.201.2.3		N/A
	For the base material of printed boards, compliance shall be checked by the test of 20.201.2.4.		N/A
	The tests shall be carried out on parts of non-metallic material which have been removed from the apparatus.		N/A
	When the glow-wire test is carried out, they are placed in the same orientation as they would be in normal use.		N/A
	These tests are not carried out on internal wiring.		N/A
20.201.2	Tests		N/A
20.201.2.1	Testing of non-metallic parts Part 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.		N/A

National Deviation			
Clause	Requirement – Test	Result - Remark	Verdict

	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 not be carried out on parts of material classified at least FH-3 according to ISO 9772 provided that the sample tested was not thicker than the relevant part.		N/A												
20.201.2.2	Testing of insulated parts Part of insulating material supporting potential ignition sources shall be subject to the glow-wire test of AS/NZS 60695.2.11 which shall be carried out at 750°C. The test shall be also carried out on other parts of insulating material which are within a distance of 3 mm of the connection		N/A												
	NOTE – Contacts in components such as switch contacts are considered to be connections.		N/A												
	For parts which withstand the glow-wire test but produce a flame, other parts above the connection within the envelope of a vertical cylinder having a diameter of 20 mm and a height of 50 mm shall be subjected to the needle-flame test.		N/A												
	However, parts shielded by a barrier which meets the needle-flame test need not be tested.		N/A												
	The needle-flame test shall be made in accordance with AS/NZS 60695.11.5 with the following modifications:		N/A												
	<table border="1"> <tbody> <tr> <td>Clause of AS/NZS 60695.11.5</td> <td>Change</td> </tr> <tr> <td>9 Test Procedure</td> <td></td> </tr> <tr> <td>9.2 Application of needle-flame</td> <td> <p>Replace the second sentence of the first paragraph with:</p> <p>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.</p> <p>Add to the end of the first paragraph:</p> <p>If possible, the flame shall be applied at least 10 mm from a corner.</p> <p>Replace the second paragraph with:</p> <p>The duration of application of the test flame shall be 30 ±1 s.</p> </td> </tr> <tr> <td>Clause of AS/NZS 60695.11.5</td> <td>Change</td> </tr> <tr> <td>9.3 Number of specimens</td> <td> <p>Replace with:</p> <p>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 then withstand the test</p> </td> </tr> <tr> <td>11 Evaluation of test results</td> <td> <p>Replace with:</p> <p>The duration of burning (t_b) shall not exceed 30 s. However, for printed circuit boards, it shall not exceed 15 s.</p> </td> </tr> </tbody> </table>	Clause of AS/NZS 60695.11.5	Change	9 Test Procedure		9.2 Application of needle-flame	<p>Replace the second sentence of the first paragraph with:</p> <p>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.</p> <p>Add to the end of the first paragraph:</p> <p>If possible, the flame shall be applied at least 10 mm from a corner.</p> <p>Replace the second paragraph with:</p> <p>The duration of application of the test flame shall be 30 ±1 s.</p>	Clause of AS/NZS 60695.11.5	Change	9.3 Number of specimens	<p>Replace with:</p> <p>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 then withstand the test</p>	11 Evaluation of test results	<p>Replace with:</p> <p>The duration of burning (t_b) shall not exceed 30 s. However, for printed circuit boards, it shall not exceed 15 s.</p>		
Clause of AS/NZS 60695.11.5	Change														
9 Test Procedure															
9.2 Application of needle-flame	<p>Replace the second sentence of the first paragraph with:</p> <p>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.</p> <p>Add to the end of the first paragraph:</p> <p>If possible, the flame shall be applied at least 10 mm from a corner.</p> <p>Replace the second paragraph with:</p> <p>The duration of application of the test flame shall be 30 ±1 s.</p>														
Clause of AS/NZS 60695.11.5	Change														
9.3 Number of specimens	<p>Replace with:</p> <p>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 then withstand the test</p>														
11 Evaluation of test results	<p>Replace with:</p> <p>The duration of burning (t_b) shall not exceed 30 s. However, for printed circuit boards, it shall not exceed 15 s.</p>														

National Deviation			
Clause	Requirement – Test	Result - Remark	Verdict
	The needle-flame test shall not be carried out on parts of material classified as V-0 or V-1 according to AS/NZS 60695.11.10 provided that the sample tested was not thicker than the relevant part.		N/A
20.201.2.3	<p>Testing by needle-flame test</p> <p>If parts, other than enclosures, do not withstand the glow wire tests of 20.201.2.2, by failure to extinguish within 30 s after the removal of the glow-wire tip, the needle-flame test detailed in 20.201.2.2 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 20.201.2.2.</p>		N/A
	Parts shielded by a separate barrier which meets the needle-flame test shall not be tested.		N/A
	<p>NOTE 1 – If the enclosure does not withstand the glow-wire test the appliance is considered to have failed to meet the requirements of Clause 21.201 without the need for consequential testing.</p> <p>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 apparatus, the apparatus is considered to have failed to meet the requirements of Clause 21.201 without the need for consequential testing</p> <p>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.</p>		N/A
20.201.2.4	<p>Testing of printed boards</p> <p>The base material of printed boards shall be subject to the needle-flame test of Clause 21.201.2.3.</p>		N/A
	The flame shall be applied to the edge of the board where the heatsink effect is lowest when the board is positioned as in normal use. The flame shall not be applied to an edge consisting of broken perforations, unless the edge is less than 3 mm from a potential ignition source.		N/A
	The test is not carried out if:		N/A
	The printed board does not carry any potential ignition source		N/A

National Deviation			
Clause	Requirement – Test	Result - Remark	Verdict
	base material of printed boards, on which the available 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		N/A
	base material of printed boards, on which the available 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		N/A
	the printed boards are contained in a metal enclosure, having openings only for connecting wires which fill the openings completely		N/A
21.201.3	For open circuit voltages greater than 4 kV potential ignition sources with open circuit voltages exceeding 4 kV (peak) a.c. or d.c. under normal operating conditions shall be contained in a fire enclosure which shall comply with flammability category V-1 or better according to AS/NZS 60695.11.10.		N/A
Annex B	After the Annex title add the following: For Australia only, this Annex is replaced by the requirements of the Telecommunications Labelling Notice issued under the Telecommunications Act 1997. NOTE – The Telecommunications Act 1997 is administered by the Australian Communications and Media Authority.		N/A

National Deviation			
Clause	Requirement – Test	Result - Remark	Verdict

**ATTACHMENT TO TEST REPORT IEC 60065:2001+A1
KOREA NATIONAL DIFFERENCES**

Information technology equipment – Safety –

Part 1: General requirements

Differences according to.....: K 60065

5.101	Other Marking: Wording 고압주의 or an information regulated in IEC Publication 417 giving high voltage warning to layman shall be marked, if an apparatus contains a part more than 600 volts.	Evaluated during national approval	N/A
15.1.1	Plugs for the connection of the apparatus to the supply mains and socket outlets for providing mains power to other apparatus shall comply with the Korean requirement (KSC8300 and 8305)	Evaluated during national approval	N/A
31	Radio frequency interference The apparatus shall comply with the relevant CISPR requirements (EMC=EMI+EMS)	Evaluated during national approval	N/A

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Additional test	TABLE: Contact resistance test		P
Condition		Comments	
Contact resistance before mechanical operation	Contact resistance after mechanical operation	--	
32.0mΩ	33.3mΩ		
Note: 1. Tested according to IEC 61984 Table11, test phase B4. 2. After 200 times mechanical operation (one times operation means detach and install the plug) the change of contact resistance shall be no more than 50% of the reference value or no more than 5mΩ. The higher value is permissible. 3. Tested on European plug to represent other countries plug due to same construction of connection.			

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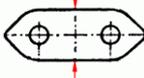
EN 50075 (partially)

Clause	Requirement – Test	Result – Remark	Verdict
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6	Marking		P
	Appliances shall be marked as follows:		—
	Rated current in amperes (A)	Refer to marking label of final appliance.	N/A
	Rated Voltage in volts (V)	As above	N/A
	Symbol for nature of supply (~)	As above	N/A
	Name, trade mark or identification mark of manufacturer or responsible vendor	EU plug of Adapter model: FJ-SW116xxxxxyyyzE	P
	Type reference	Incorporated plug portion of adaptor	P

7	Dimensions			P
	Plugs shall comply with Standard Sheet 1	(see attached drawing)		—
	Between two pins (pin base)	18.0 - 19.2 mm	18.28 mm	P
	Between two pins (pin top)	17.0 - 18.0 mm	17.13 mm	P
	Diameter of pin (metallic part)	(4 ±0.06) mm	3.98 mm	P
	Diameter of pin (pin base)	≤ 4.0 mm	3.90 mm	P
	Diameter of pin (middle part)	≤ 3.8 mm	3.38 mm	P
	Pin length	(19 ±0.5) mm	19.18 mm	P
	Length of pin except metal part	(10 +1/-0) mm	10.32 mm	P
	Shape of pin top		Round shape	P
	Length of plug base	(35.3 ±0.7) mm	34.8 mm	P
	Width of plug base	(13.7 ±0.7) mm	13.65 mm	P
	Diagonal dimension of plug base	(26.1 ±0.5) mm	26.3 mm	P
	within a distance of 18mm	≥ 18 mm	18.10 mm	P
	Angle	45°	45 °	P
	Radius	R 5 -0, +1 mm	5.85 mm	P

8.	Protection against electric shock			P
8.1	Live parts of the plug not accessible (standard test finger)		Protected by enclosure of the equipment	P
8.2	No connection between one plug-pin and socket outlet		Checked by gauge of Fig.4	P
8.3	External parts of insulating material		External parts except pins are insulating material.	P

EN 50075 (partially)			
Clause	Requirement – Test	Result – Remark	Verdict
9	Construction		P
9.1	Plugs not replaceable	Not replaceable	P
9.2	Switches, fuses, lampholders not incorporated	Not incorporated	P
9.3	Solid pins	See clause 13	P
	Adequate mechanical strength	As above	P
9.4	Pins locked against rotation	See clause 13.1 and 13.4	P
	Adequate fixed into the body	Each pin shaft is designed with ridges to lock into the pin holder	P
9.5	Kind of connection	Metal soldering to metal	P
9.6	Easily to be withdrawn from socket-outlet	The equipment provides sufficient gripping surface	P
10	Resistance to humidity		P
	-Humidity treatment for 48 hours	Tested with the equipment for 48h at 40°C and 95%RH	P
11	Insulation resistance and electric strength		P
11.1	Insulation resistance (500 V, 1 min, 5 MΩ)	Pins against body: 200MΩ Each pin against body: 200MΩ Required: 7MΩ Pin against Pin: 200MΩ Required: 2MΩ	P
11.2	Electric strength (2,000 V)	Pins against body: 2000V Each pin against body: 2000V Pin against Pin: 2000V	P
13	Mechanical strength		P
13.1	Pressed with 150 N for 5 min	No deformation or deviation from the dimensions Apply only to plug portion 	P

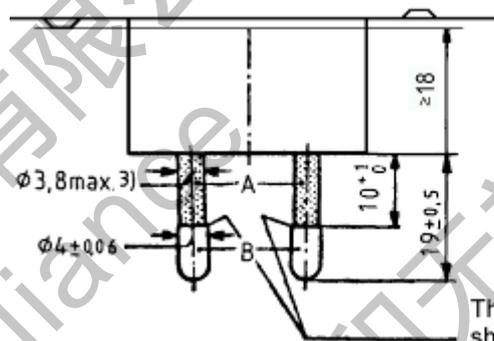
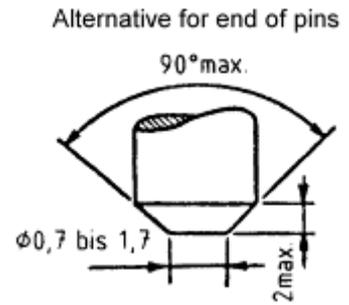
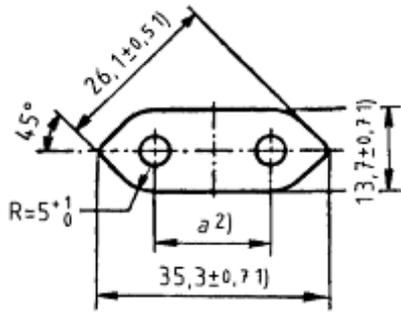
EN 50075 (partially)			
Clause	Requirement – Test	Result – Remark	Verdict
13.2	Tumbling barrel according to Figure 8	Test was performed and evaluated according to standard EN 50075, DIN VDE 0620-2-1:2013, sub-clause 24.2, DIN VDE, 0620-101:1992 clause 7, figure 2. Weight of product with output cable cut to 100mm: 67g Number of falls: 1000 times	P
	No damages after the test		P
	Requirements of clause 7 and 8.2 still fulfilled	Deformations allowed according to the equipment standard	P
13.3	Rubbing test of plug-pins: 20,000 cycles, 0.4 N	See test below	P
	No damage of the pins	No visible damage	P
13.4	Pull test at 70°C with 40 N	See test below	P
	Pins not more than 1 mm displaced	Displacement: 0.1mm max for all material 	P
14	Resistance to heat and to ageing		P
14.1	Sufficient resistant to heat	See test below	P
14.1.1	After 1 h in heating cabinet at 100°C no damage shown	No visible damage	P
14.1.2	After 1h in heating cabinet at 80°C and a force of 20 N through the jaws no damage shown	Performed a 125°C ball pressure test at all materials of plug portion which maintains live part in position. Measured after 1 hour: Sabic: 940(f1): 1.0mm Bayer: 6485+(z)(f1): 1.1mm	P
14.2	Aging test	See test below	P
	- at 70°C for 168h	70°C for 168h applied.	P
	- at room temperature for 96h		P
	No traces of cloth at a force of 5N	Material does not soften	P
	No damage leads to non-compliance	No visible damage	P

EN 50075 (partially)			
Clause	Requirement – Test	Result – Remark	Verdict
15	Current-carrying parts and connections resistance to heat and to ageing		P
15.1	Connections withstand the mechanical stresses occurring in normal use	See below	P
15.2	Contact pressure not through isolating material	Complied	P
15.3	Current carrying parts of copper	Copper content 58.0-61.0% No rolled sheet used	P
	No electroplated coating when part is subjected to mechanical wear	No electroplated coating	P
	Other metals having a mechanical strength, an electrical conductivity and a resistance to corrosion	No such materials used.	N/A
16	Creepage distances , clearances and distances through insulation		P
	Live parts of different polarity: 3 mm	>3.0 mm	P
	Through insulation between live parts and accessible surfaces: 1.5 mm	>1.5 mm	P
17	Resistance of insulating material to abnormal heat and fire		P
	Insulating material not unduly affected by abnormal heat and by fire	Glow wire test performed on plug pin holder with: 750°C.	P
	Insulating material not unduly affected by abnormal heat and by fire	Glow wire test performed on plug portion with: 650°C.	P

EN 50075 (partially)

Clause	Requirement – Test	Result – Remark	Verdict
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7	Dimensions		P
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The edges of the metal parts shall be either chamfered or rounded off

A = Insulating collar
B = metal pin

- 1) These dimensions shall not be exceeded within a distance of 18mm from the engagement face of the plug.
- 2) Dimension a is:
18mm to 19.2mm in the plane of the engagement face
17mm to 18mm at the ends of the pins
- 3) This dimension may be increased to 4mm within a distance of 4mm from the engagement face of the plug.

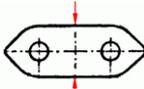
EN 50075 (partially)

Clause	Requirement – Test	Result – Remark	Verdict
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6	Marking		P
	Appliances shall be marked as follows:		—
	Rated current in amperes (A)	Refer to marking label of final appliance.	N/A
	Rated Voltage in volts (V)	As above	N/A
	Symbol for nature of supply (~)	As above	N/A
	Name, trade mark or identification mark of manufacturer or responsible vendor	EU plug of Adapter model: FJ-SW116xxxxxyyyzN	P
	Type reference	Incorporated plug portion of adaptor	P

7	Dimensions		P	
	Plugs shall comply with Standard Sheet 1	(see attached drawing)	—	
	Between two pins (pin base)	18.0 - 19.2 mm	18.23 mm	P
	Between two pins (pin top)	17.0 - 18.0 mm	17.22 mm	P
	Diameter of pin (metallic part)	(4 ±0.06) mm	3.97 mm	P
	Diameter of pin (pin base)	≤ 4.0 mm	3.83 mm	P
	Diameter of pin (middle part)	≤ 3.8 mm	3.71 mm	P
	Pin length	(19 ±0.5) mm	19.35 mm	P
	Length of pin except metal part	(10 +1/-0) mm	10.45 mm	P
	Shape of pin top		Round shape	P
	Length of plug base	(35.3 ±0.7) mm	35.49 mm	P
	Width of plug base	(13.7 ±0.7) mm	13.86 mm	P
	Diagonal dimension of plug base	(26.1 ±0.5) mm	25.71 mm	P
	within a distance of 18mm	≥ 18 mm	18.12 mm	P
	Angle	45°	45 °	P
	Radius	R 5 -0, +1 mm	5.88 mm	P

8.	Protection against electric shock		P
8.1	Live parts of the plug not accessible (standard test finger)	Protected by enclosure of the equipment	P
8.2	No connection between one plug-pin and socket outlet	Checked by gauge of Fig.4	P
8.3	External parts of insulating material	External parts except pins are insulating material.	P

EN 50075 (partially)			
Clause	Requirement – Test	Result – Remark	Verdict
9	Construction		P
9.1	Plugs not replaceable	Not replaceable	P
9.2	Switches, fuses, lampholders not incorporated	Not incorporated	P
9.3	Solid pins	See clause 13	P
	Adequate mechanical strength	As above	P
9.4	Pins locked against rotation	See clause 13.1 and 13.4	P
	Adequate fixed into the body	Each pin shaft is designed with ridges to lock into the pin holder	P
9.5	Kind of connection	Connected to metal which fixed to PCB	P
9.6	Easily to be withdrawn from socket-outlet	The equipment provides sufficient gripping surface	P
10	Resistance to humidity		P
	-Humidity treatment for 48 hours	Tested with the equipment for 48h at 40°C and 95%RH. All material has been considered.	P
11	Insulation resistance and electric strength		P
11.1	Insulation resistance (500 V, 1 min, 5 MΩ)	Pins against body: 200MΩ Each pin against body: 200MΩ Required: 7MΩ Pin against Pin: 200MΩ Required: 2MΩ	P
11.2	Electric strength (2,000 V)	Pins against body: 2000V Each pin against body: 2000V Pin against Pin: 2000V	P
13	Mechanical strength		P
13.1	Pressed with 150 N for 5 min	No deformation or deviation from the dimensions Apply only to plug portion 	P

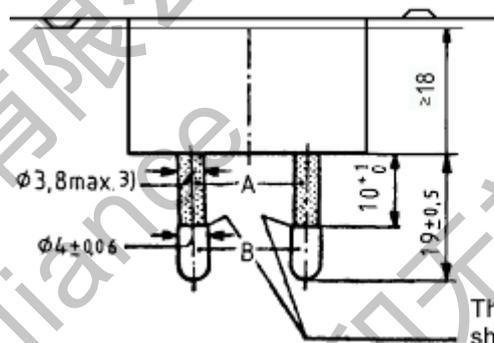
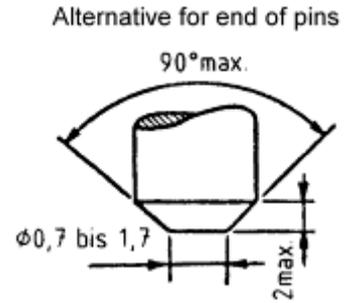
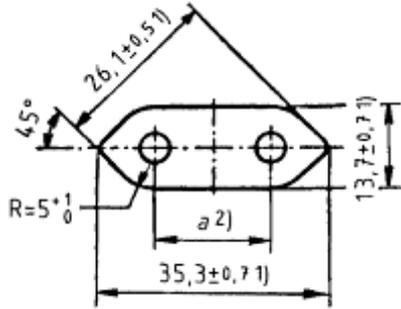
EN 50075 (partially)			
Clause	Requirement – Test	Result – Remark	Verdict
13.2	Tumbling barrel according to Figure 8	Test was performed and evaluated according to standard EN 50075, DIN VDE 0620-2-1:2013, sub-clause 24.2, DIN VDE, 0620-101:1992 clause 7, figure 2. Weight of product with output cable cut to 100mm: 71g Number of falls: 1000 times	P
	No damages after the test		P
	Requirements of clause 7 and 8.2 still fulfilled	Deformations allowed according to the equipment standard	P
13.3	Rubbing test of plug-pins: 20,000 cycles, 0.4 N	See test below	P
	No damage of the pins	No visible damage	P
13.4	Pull test at 70°C with 40 N	See test below	P
	Pins not more than 1 mm displaced	Displacement: 0.1mm max for all material 	P
14	Resistance to heat and to ageing		P
14.1	Sufficient resistant to heat	See test below	P
14.1.1	After 1 h in heating cabinet at 100°C no damage shown	No visible damage	P
14.1.2	After 1h in heating cabinet at 80°C and a force of 20 N through the jaws no damage shown	Performed a 125°C ball pressure test at all materials of plug portion which maintains live part in position. Measured after 1 hour: Sabic: 940(f1): 1.0mm Bayer: 6485+(z)(f1): 1.1mm	P
14.2	Aging test	See test below. All material has been considered.	P
	- at 70°C for 168h	70°C for 168h applied.	P
	- at room temperature for 96h		P
	No traces of cloth at a force of 5N	Material does not soften	P
	No damage leads to non-compliance	No visible damage	P

EN 50075 (partially)			
Clause	Requirement – Test	Result – Remark	Verdict
15	Current-carrying parts and connections resistance to heat and to ageing		P
15.1	Connections withstand the mechanical stresses occurring in normal use	See below	P
15.2	Contact pressure not through isolating material	Complied	P
15.3	Current carrying parts of copper	Copper content 58.0-61.0% No rolled sheet used	P
	No electroplated coating when part is subjected to mechanical wear	No electroplated coating	P
	Other metals having a mechanical strength, an electrical conductivity and a resistance to corrosion	No such materials used.	N/A
16	Creepage distances , clearances and distances through insulation		P
	Live parts of different polarity: 3 mm	>3.0 mm	P
	Through insulation between live parts and accessible surfaces: 1.5 mm	>1.5 mm	P
17	Resistance of insulating material to abnormal heat and fire		P
	Insulating material not unduly affected by abnormal heat and by fire	Glow wire test performed on plug pin holder with: 750°C. All material has been considered.	P
	Insulating material not unduly affected by abnormal heat and by fire	Glow wire test performed on plug portion with: 650°C. All material has been considered.	P

EN 50075 (partially)

Clause	Requirement – Test	Result – Remark	Verdict
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7	Dimensions		P
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The edges of the metal parts shall be either chamfered or rounded off

A = Insulating collar

B = metal pin

- 1) These dimensions shall not be exceeded within a distance of 18mm from the engagement face of the plug.
- 2) Dimension a is:
18mm to 19.2mm in the plane of the engagement face
17mm to 18mm at the ends of the pins
- 3) This dimension may be increased to 4mm within a distance of 4mm from the engagement face of the plug.

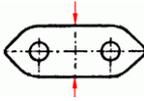
EN 50075 (partially)

Clause	Requirement – Test	Result – Remark	Verdict
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6	Marking		P
	Appliances shall be marked as follows:		—
	Rated current in amperes (A)	Refer to marking label of final appliance.	N/A
	Rated Voltage in volts (V)	As above	N/A
	Symbol for nature of supply (~)	As above	N/A
	Name, trade mark or identification mark of manufacturer or responsible vendor	EU plug of Adapter model: FJ-SW728xxxxxyyyzE	P
	Type reference	Incorporated plug portion of adaptor	P

7	Dimensions			P
	Plugs shall comply with Standard Sheet 1	(see attached drawing)		—
	Between two pins (pin base)	18.0 - 19.2 mm	18.24 mm	P
	Between two pins (pin top)	17.0 - 18.0 mm	17.66 mm	P
	Diameter of pin (metallic part)	(4 ±0.06) mm	3.97 mm	P
	Diameter of pin (pin base)	≤ 4.0 mm	3.83 mm	P
	Diameter of pin (middle part)	≤ 3.8 mm	3.40 mm	P
	Pin length	(19 ±0.5) mm	18.95 mm	P
	Length of pin except metal part	(10 +1/-0) mm	10.45 mm	P
	Shape of pin top		Round shape	P
	Length of plug base	(35.3 ±0.7) mm	35.25 mm	P
	Width of plug base	(13.7 ±0.7) mm	13.61 mm	P
	Diagonal dimension of plug base	(26.1 ±0.5) mm	25.96 mm	P
	within a distance of 18mm	≥ 18 mm	18.05 mm	P
	Angle	45°	45 °	P
	Radius	R 5 -0, +1 mm	5.74 mm	P

8.	Protection against electric shock			P
8.1	Live parts of the plug not accessible (standard test finger)		Protected by enclosure of the equipment	P
8.2	No connection between one plug-pin and socket outlet		Checked by gauge of Fig.4	P
8.3	External parts of insulating material		External parts except pins are insulating material.	P

EN 50075 (partially)			
Clause	Requirement – Test	Result – Remark	Verdict
9	Construction		P
9.1	Plugs not replaceable	Not replaceable	P
9.2	Switches, fuses, lampholders not incorporated	Not incorporated	P
9.3	Solid pins	See clause 13	P
	Adequate mechanical strength	As above	P
9.4	Pins locked against rotation	See clause 13.1 and 13.4	P
	Adequate fixed into the body	Each pin shaft is designed with ridges to lock into the pin holder	P
9.5	Kind of connection	Connected to metal which fixed to PCB	P
9.6	Easily to be withdrawn from socket-outlet	The equipment provides sufficient gripping surface	P
10	Resistance to humidity		P
	-Humidity treatment for 48 hours	Tested with the equipment for 48h at 40°C and 95%RH. All material has been considered.	P
11	Insulation resistance and electric strength		P
11.1	Insulation resistance (500 V, 1 min, 5 MΩ)	Pins against body: 200MΩ Each pin against body: 200MΩ Required: 7MΩ Pin against Pin: 200MΩ Required: 2MΩ	P
11.2	Electric strength (2,000 V)	Pins against body: 2000V Each pin against body: 2000V Pin against Pin: 2000V	P
13	Mechanical strength		P
13.1	Pressed with 150 N for 5 min	No deformation or deviation from the dimensions Apply only to plug portion 	P

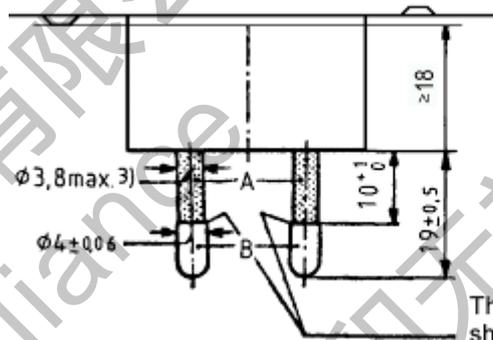
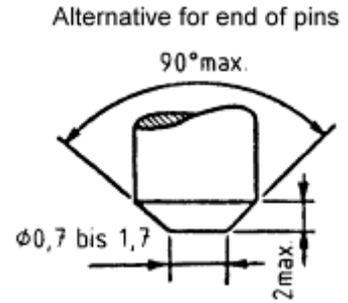
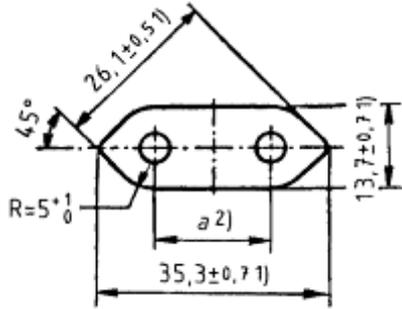
EN 50075 (partially)			
Clause	Requirement – Test	Result – Remark	Verdict
13.2	Tumbling barrel according to Figure 8	Test was performed and evaluated according to standard EN 50075, DIN VDE 0620-2-1:2013, sub-clause 24.2, DIN VDE, 0620-101:1992 clause 7, figure 2. Weight of product with output cable cut to 100mm: 61g Number of falls: 1000 times	P
	No damages after the test		P
	Requirements of clause 7 and 8.2 still fulfilled	Deformations allowed according to the equipment standard	P
13.3	Rubbing test of plug-pins: 20,000 cycles, 0.4 N	See test below	P
	No damage of the pins	No visible damage	P
13.4	Pull test at 70°C with 40 N	See test below	P
	Pins not more than 1 mm displaced	Displacement: 0.1mm max for all material 	P
14	Resistance to heat and to ageing		P
14.1	Sufficient resistant to heat	See test below	P
14.1.1	After 1 h in heating cabinet at 100°C no damage shown	No visible damage	P
14.1.2	After 1h in heating cabinet at 80°C and a force of 20 N through the jaws no damage shown	Performed a 125°C ball pressure test at all materials of plug portion which maintains live part in position. Measured after 1 hour: Sabic: 940(f1): 1.0mm Bayer: 6485+(z)(f1): 1.1mm	P
14.2	Aging test	See test below. All material has been considered.	P
	- at 70°C for 168h	70°C for 168h applied.	P
	- at room temperature for 96h		P
	No traces of cloth at a force of 5N	Material does not soften	P
	No damage leads to non-compliance	No visible damage	P

EN 50075 (partially)			
Clause	Requirement – Test	Result – Remark	Verdict
15	Current-carrying parts and connections resistance to heat and to ageing		P
15.1	Connections withstand the mechanical stresses occurring in normal use	See below	P
15.2	Contact pressure not through isolating material	Complied	P
15.3	Current carrying parts of copper	Copper content 58.0-61.0% No rolled sheet used	P
	No electroplated coating when part is subjected to mechanical wear	No electroplated coating	P
	Other metals having a mechanical strength, an electrical conductivity and a resistance to corrosion	No such materials used.	N/A
16	Creepage distances , clearances and distances through insulation		P
	Live parts of different polarity: 3 mm	>3.0 mm	P
	Through insulation between live parts and accessible surfaces: 1.5 mm	>1.5 mm	P
17	Resistance of insulating material to abnormal heat and fire		P
	Insulating material not unduly affected by abnormal heat and by fire	Glow wire test performed on plug pin holder with: 750°C. All material has been considered.	P
	Insulating material not unduly affected by abnormal heat and by fire	Glow wire test performed on plug portion with: 650°C. All material has been considered.	P

EN 50075 (partially)

Clause	Requirement – Test	Result – Remark	Verdict
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7	Dimensions		P
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The edges of the metal parts shall be either chamfered or rounded off

A = Insulating collar

B = metal pin

- 1) These dimensions shall not be exceeded within a distance of 18mm from the engagement face of the plug.
- 2) Dimension a is:
18mm to 19.2mm in the plane of the engagement face
17mm to 18mm at the ends of the pins
- 3) This dimension may be increased to 4mm within a distance of 4mm from the engagement face of the plug.

Clause 12 of BS 1363-1: part 1: 1995 + A4: 2012			
Clause	Requirement – Test	Result – Remark	Verdict
12	Construction of Plugs	UK plug of FJ-SW116xxxxyyyzB	P
12.1	The disposition of the pins shall be shown as figure 4.	The dispositions of the pins were shown as specified.	P
12.2	Pin and sleeve dimensions, body outline were checked according to figure 4 of BS1363: part 1.	The outline of the plug did not exceed the specified dimensions at a distance of 8.31mm from the engagement surface. (limit: >6.35mm) The measured dimensions of item shown in fig. 4 were found within the specified limits.	P
	The plug portion should enter the gauge fully with a force less than 10N was applied to the centre of the sample at right angle.	Sample was entered into the gauge completely.	P
12.3	No part of a line or neutral pin shall be less than 9,5mm from the periphery of the plug measured along the engagement surface.	9.8mm	P
12.9	Plug pins were constructed of brass	Complied.	P
12.9.1	Exposed surface of plug pins were smooth and free from burrs or sharp edges and other irregularities, which could cause damage or excessive wear to sockets or shutters.	Complied.	P
12.9.4	The adaptor plug pins were tested as specified in the standard.	Complied. After being subjected to a forced of 1100N for L, N pin, 400N for ISOD pin of the pin portion could fit the relevant gauge.	P
12.9.6	Each pin of the adaptor was subjected to a torque of 1Nm for 60s as specified in the standard.	Complied. After the test, the pin portion could fit the relevant gauge.	P
12.11	The adaptors were tested as specified in the standard. After being placed in an oven at 70°C for 1 hour, each pin of the samples was subjected for 60 sec. to a pull of 100N in the oven.	Complied. After the above test, no plug pin was detached and the plug pins could fit the relevant gauge.	P
12.12	The degree of flexibility of mounting of the plug pins was checked according to 12.12.1	Measured value: Max. 30' (test on each sources of enclosure, max. value measured), (limit: Max. 3° 30').	P
12.16	Line and neutral plug pin shall be fitted with insulating sleeves. The dimensions of the pin and sleeve shall fall within the specific limit.	Complied. Both line and neutral pins were fitted with insulating sleeves.	P
12.17.1	Plug pin sleeve shall be compliance with 12.17.2 to 12.17.4	Complied.	P
12.17.2	Electric strength test applied between the metal part of plug pin and the sleeve (1250±30V)	Complied. No breakdown or flashover occurs.	P

Clause 12 of BS 1363-1: part 1: 1995 + A4: 2012			
Clause	Requirement – Test	Result – Remark	Verdict
12.17.3	Abrasion test for plug pin sleeve The plug pin sleeves were subjected to 20000 movements of abrasion as specified in the standard.	Complied. After the test, the sleeves showed no damage that impaired further use and could satisfy the electric strength test in 12.17. 2	P
12.17.4	The plug pins with sleeves were placed in a heating cabinet at 200°C and tested according to the standard for 120min. Arrange the test as Figure 10 of BS 1363-1.	After the test, the thickness of sleeves of plug pins (Line and neutral pins) remaining at the impression point reduced by max. 21.8% for all material, less than 50%.	P

ADDITIONAL REQUIREMENT FOR THE SOLID INSULATED SHUTTER OPENING DEVICE (ISOD) ACCORDING TO BS1363-1/A2: 2003			
12.2	Plug fitted with an ISOD shall comply with all the dimensions specified in Fig. 4a with exception of the width of the ISOD, which should be 4,05mm max. and 3,90mm min. and its height which should be 8,05mm max. and 7,75mm min.	See measured dimensions in Table 3	P
12.9.4.3	Solid insulated opening device were tested as specified in the standard.	After being subjected to a forced of 400N, the pin could fit the relevant gauge.	P
12.9.5.2	Plugs with ISOD shall not cause excessive wear to socket contacts or shutters of sockets-outlets The test use a separate sample of plug with ISOD for each type of socket-outlet, with each sample being inserted into and withdrawn from the socket-outlet at a rate of 6 insertions and 6 withdrawals per minute, the speed of travel of the plug being approximately 150mm/s	After 5000 insertions and withdrawals completed, socket outlets show no damage that would impair further use. Plugs show no damage and suit for the dimensional requirements according to clause 12.2. The shutters of the socket-outlets operate satisfactorily and socket contacts safety shielded.	P
22.2	Resistance to heat		P
	After 1h in heating cabinet at 80°C and a force of 20 N through the jaws no damage shown	Test performed on plug portion (including ISOD), measured after 1 hour: 940(f1): 0.9mm 6485+(z)(f1): 1.0mm Limit: 2mm	P
23	Resistance of insulating material to abnormal heat and fire		P
	Insulating material not unduly affected by abnormal heat and by fire	Glow wire test performed on enclosure with: 650°C. All enclosure material have been considered.	P

Clause 12 of BS 1363-1: part 1: 1995 + A4: 2012

Clause	Requirement – Test	Result – Remark	Verdict
	Insulating material not unduly affected by abnormal heat and by fire	Glow wire test performed on plug portion (including ISOD) with: 750°C. All enclosure material have been considered.	P

PLUG PORTION DIMENSIONS

Linear Dimensions (mm)		Measurement		Limit	
*A		24.41		25.370 max.	
*B		34.4		34.6 max.	
*C		Tested by gauge		15 min.	
D		9.8		9.5 min.	
*E	L -> E	11.10		11.05 - 11.18	
	N -> E	11.10			
*F	L -> E	22.15		22.10 - 22.36	
	N -> E	22.15			
G1		6.25		6.22 - 6.48	
G2		6.25		6.22 - 6.48	
H		3.99		3.90 - 4.05	
*I		22.75		22.23 - 23.23	
J		1.80		1.35 - 1.85	
K		7.92		7.80 - 8.05	7.75 - 8.05 For ISOD
L	line	9.10		9.5 max.	
	neutral	9.10			
M	line	8.75		9.2 max.	
	neutral	8.75			
N (sleeve)	line	3.98		3.90 - 4.05	
	neutral	3.98			
O	line	17.85		17.20 - 18.20	
	neutral	17.85			
P	Line	1.62		1.35 - 1.85	
	neutral	1.62			
	earth	1.80			
Q (metal)	line	3.98		3.90 - 4.05	
	neutral	3.98			
	earth	4.01			
R	Line	1.60		1.2 - 2.0	
	neutral	1.60			
	earth	1.33			
S	line	1.62		1.35 - 1.85	
	neutral	1.62			

Clause 12 of BS 1363-1: part 1: 1995 + A4: 2012

Clause	Requirement – Test	Result – Remark	Verdict
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*Remark: all these dimensions were checked by the relevant gauge (based on BS1363: Part 1:1995 Figure 5)

Angular Dimensions (°)		Measurement		Limits
θ1		61°		58° - 62°
θ2	line	76°		60° - 80°
	neutral	76°		
	earth	68°		
θ3	line	60°		58° - 62°
	neutral	60°		

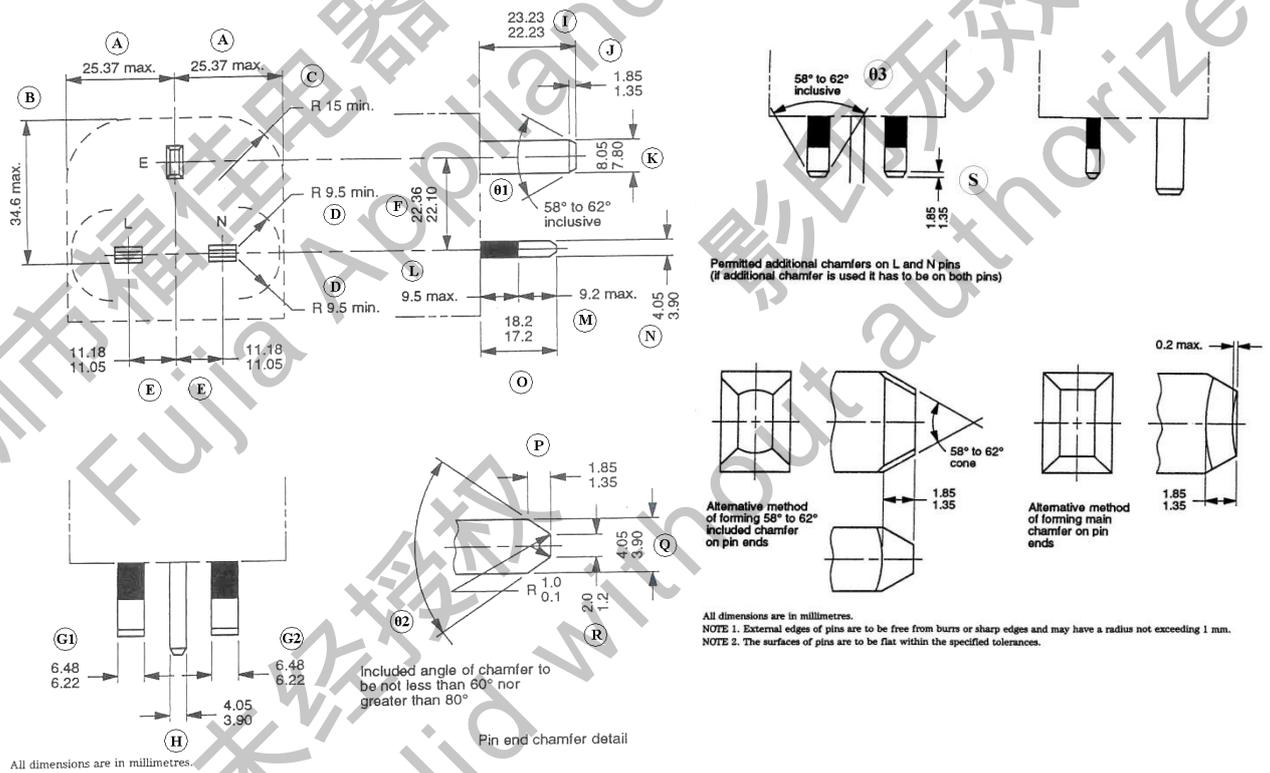


Figure 4a of BS 1363: Part 1

* Remark: all these dimensions were checked by the relevant gauge (based on BS1363: Part 1:1995 Figure 5)

Clause 12 of BS 1363-1: part 1: 1995 + A4: 2012			
Clause	Requirement – Test	Result – Remark	Verdict

Plug Portion Dimensions (Solid insulated shutter opening device ISOD)

Linear Dimensions (mm)		Sample A	Limit
T		7.98	7.75 - 8.05
U		4.01	3.90 - 4.05
V	0.11	0.12	0.15 max
	0.11	0.12	0.15 max
W	0.11	0.11	0.15 max
	0.11	0.11	0.15 max

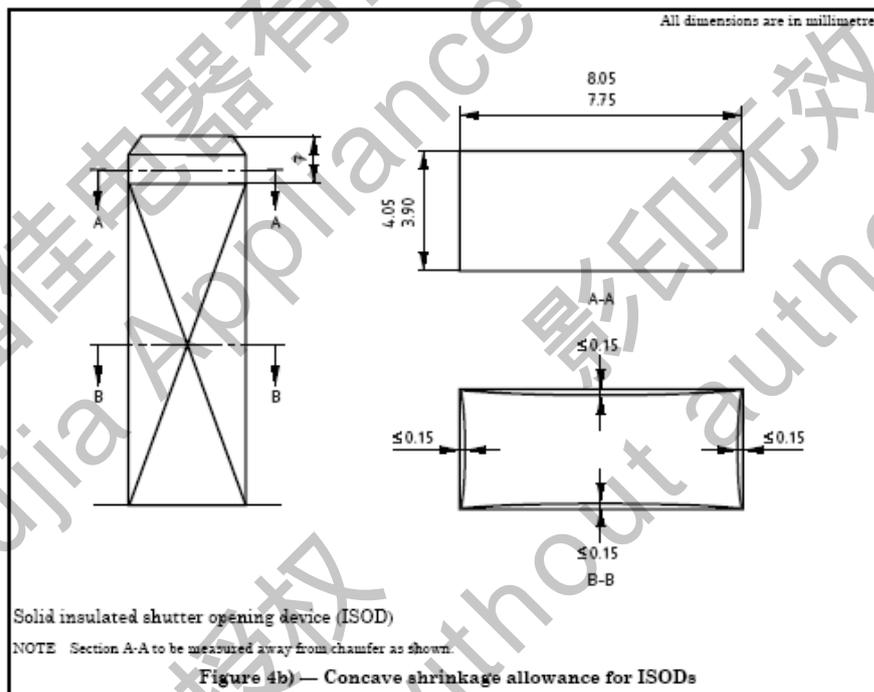


Figure 4b of BS 1363: Part 1

Clause 12 of BS 1363-1: part 1: 1995 + A4: 2012			
Clause	Requirement – Test	Result – Remark	Verdict
12	Construction of Plugs	UK plug of FJ-SW116xxxxyyyZ	P
12.1	The disposition of the pins shall be shown as figure 4.	The dispositions of the pins were shown as specified.	P
12.2	Pin and sleeve dimensions, body outline were checked according to figure 4 of BS1363: part 1.	The outline of the plug did not exceed the specified dimensions at a distance of 10.03mm from the engagement surface. (limit: >6.35mm) The measured dimensions of item shown in fig. 4 were found within the specified limits.	P
	The plug portion should enter the gauge fully with a force less than 10N was applied to the centre of the sample at right angle.	Sample was entered into the gauge completely.	P
12.3	No part of a line or neutral pin shall be less than 9,5mm from the periphery of the plug measured along the engagement surface.	9.8mm	P
12.9	Plug pins were constructed of brass	Complied.	P
12.9.1	Exposed surface of plug pins were smooth and free from burrs or sharp edges and other irregularities, which could cause damage or excessive wear to sockets or shutters.	Complied.	P
12.9.4	The adaptor plug pins were tested as specified in the standard.	Complied. After being subjected to a forced of 1100N for L, N pin, 400N for ISOD pin of the pin portion could fit the relevant gauge.	P
12.9.6	Each pin of the adaptor was subjected to a torque of 1Nm for 60s as specified in the standard.	Complied. After the test, the pin portion could fit the relevant gauge.	P
12.11	The adaptors were tested as specified in the standard. After being placed in an oven at 70°C for 1 hour, each pin of the samples was subjected for 60 sec. to a pull of 100N in the oven.	Complied. After the above test, no plug pin was detached and the plug pins could fit the relevant gauge.	P
12.12	The degree of flexibility of mounting of the plug pins was checked according to 12.12.1	Measured value: Max. 30' (test on each sources of enclosure, max. value measured), (limit: Max. 3° 30').	P
12.16	Line and neutral plug pin shall be fitted with insulating sleeves. The dimensions of the pin and sleeve shall fall within the specific limit.	Complied. Both line and neutral pins were fitted with insulating sleeves.	P
12.17.1	Plug pin sleeve shall be compliance with 12.17.2 to 12.17.4	Complied.	P
12.17.2	Electric strength test applied between the metal part of plug pin and the sleeve (1250±30V)	Complied. No breakdown or flashover occurs.	P

Clause 12 of BS 1363-1: part 1: 1995 + A4: 2012			
Clause	Requirement – Test	Result – Remark	Verdict
12.17.3	Abrasion test for plug pin sleeve The plug pin sleeves were subjected to 20000 movements of abrasion as specified in the standard.	Complied. After the test, the sleeves showed no damage that impaired further use and could satisfy the electric strength test in 12.17. 2	P
12.17.4	The plug pins with sleeves were placed in a heating cabinet at 200°C and tested according to the standard for 120min. Arrange the test as Figure 10 of BS 1363-1.	After the test, the thickness of sleeves of plug pins (Line and neutral pins) remaining at the impression point reduced by max. 21.8% for all material, less than 50%.	P

ADDITIONAL REQUIREMENT FOR THE SOLID INSULATED SHUTTER OPENING DEVICE (ISOD) ACCORDING TO BS1363-1/A2: 2003			
12.2	Plug fitted with an ISOD shall comply with all the dimensions specified in Fig. 4a with exception of the width of the ISOD, which should be 4,05mm max. and 3,90mm min. and its height which should be 8,05mm max. and 7,75mm min.	See measured dimensions in Table 3	P
12.9.4.3	Solid insulated opening device were tested as specified in the standard.	After being subjected to a forced of 400N, the pin could fit the relevant gauge.	P
12.9.5.2	Plugs with ISOD shall not cause excessive wear to socket contacts or shutters of sockets-outlets The test use a separate sample of plug with ISOD for each type of socket-outlet, with each sample being inserted into and withdrawn from the socket-outlet at a rate of 6 insertions and 6 withdrawals per minute, the speed of travel of the plug being approximately 150mm/s	After 5000 insertions and withdrawals completed, socket outlets show no damage that would impair further use. Plugs show no damage and suit for the dimensional requirements according to clause 12.2. The shutters of the socket-outlets operate satisfactorily and socket contacts safety shielded.	P
22.2	Resistance to heat		P
	After 1h in heating cabinet at 80°C and a force of 20 N through the jaws no damage shown	Test performed on plug portion (including ISOD), measured after 1 hour: 940(f1): 0.9mm 6485+(z)(f1): 1.0mm Limit: 2mm	P
23	Resistance of insulating material to abnormal heat and fire		P
	Insulating material not unduly affected by abnormal heat and by fire	Glow wire test performed on enclosure with: 650°C. All enclosure material have been considered.	P

Clause 12 of BS 1363-1: part 1: 1995 + A4: 2012

Clause	Requirement – Test	Result – Remark	Verdict
	Insulating material not unduly affected by abnormal heat and by fire	Glow wire test performed on plug portion (including ISOD) with: 750°C. All enclosure material have been considered.	P

PLUG PORTION DIMENSIONS

Linear Dimensions (mm)		Measurement		Limit	
*A		24.61		25.370 max.	
*B		34.14		34.6 max.	
*C		Tested by gauge		15 min.	
D		9.8		9.5 min.	
*E	L -> E	11.14		11.05 - 11.18	
	N -> E	11.14			
*F	L -> E	22.16		22.10 - 22.36	
	N -> E	22.16			
G1		6.28		6.22 - 6.48	
G2		6.28		6.22 - 6.48	
H		4.01		3.90 - 4.05	
*I		22.73		22.23 - 23.23	
J		1.74		1.35 - 1.85	
K		7.98		7.80 - 8.05	7.75 - 8.05 For ISOD
L	line	9.36		9.5 max.	
	neutral	9.36			
M	line	8.33		9.2 max.	
	neutral	8.33			
N (sleeve)	line	3.91		3.90 - 4.05	
	neutral	3.91			
O	line	17.69		17.20 - 18.20	
	neutral	17.69			
P	Line	1.81		1.35 - 1.85	
	neutral	1.81			
	earth	1.80			
Q (metal)	line	3.96		3.90 - 4.05	
	neutral	3.96			
	earth	3.91			
R	Line	1.94		1.2 - 2.0	
	neutral	1.94			
	earth	1.95			
S	line	1.81		1.35 - 1.85	
	neutral	1.81			

Clause 12 of BS 1363-1: part 1: 1995 + A4: 2012

Clause	Requirement – Test	Result – Remark	Verdict
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*Remark: all these dimensions were checked by the relevant gauge (based on BS1363: Part 1:1995 Figure 5)

Angular Dimensions (°)		Measurement		Limits	
θ1		59°		58° - 62°	
θ2	line	71°		60° - 80°	
	neutral	71°			
	earth	69°			
θ3	line	60°		58° - 62°	
	neutral	60°			

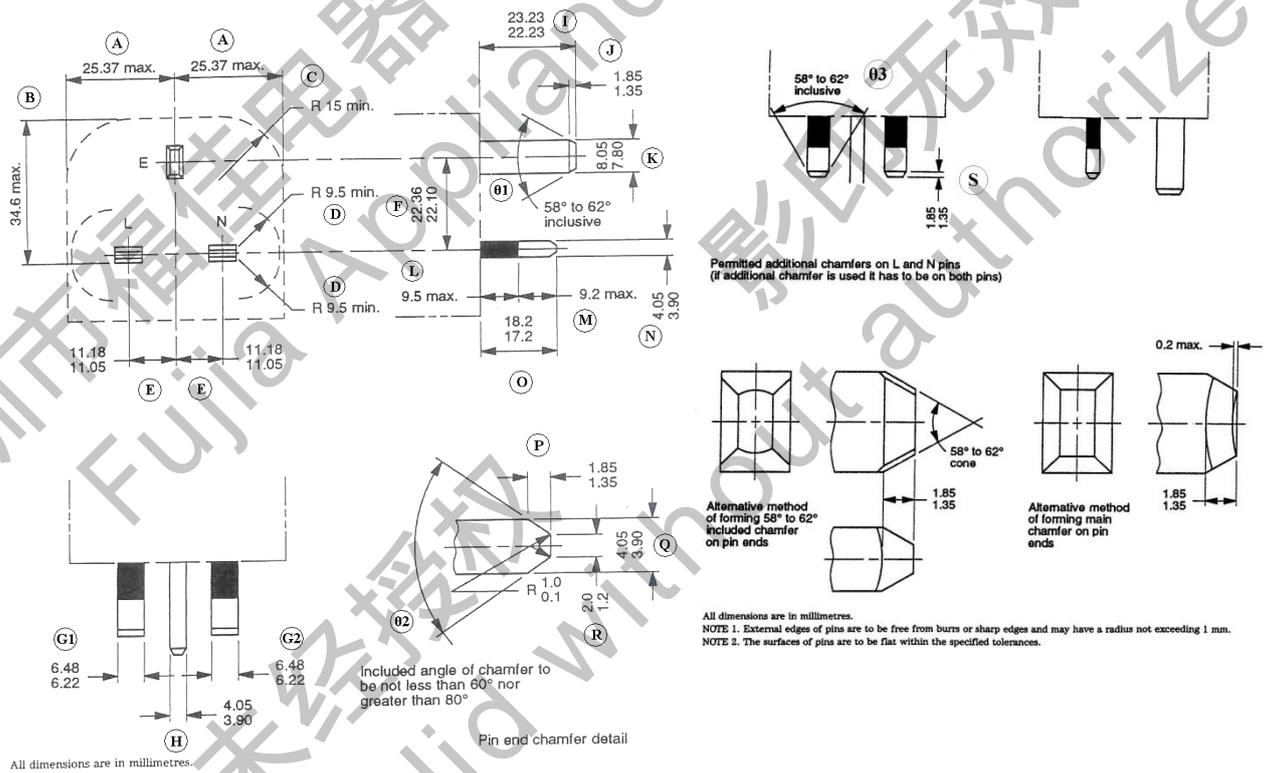


Figure 4a of BS 1363: Part 1

* Remark: all these dimensions were checked by the relevant gauge (based on BS1363: Part 1:1995 Figure 5)

Clause 12 of BS 1363-1: part 1: 1995 + A4: 2012			
Clause	Requirement – Test	Result – Remark	Verdict

Plug Portion Dimensions (Solid insulated shutter opening device ISOD)

Linear Dimensions (mm)		Sample A	Limit
T		7.98	7.75 - 8.05
U		4.01	3.90 - 4.05
V	0.11	0.12	0.15 max
	0.11	0.12	0.15 max
W	0.11	0.11	0.15 max
	0.11	0.11	0.15 max

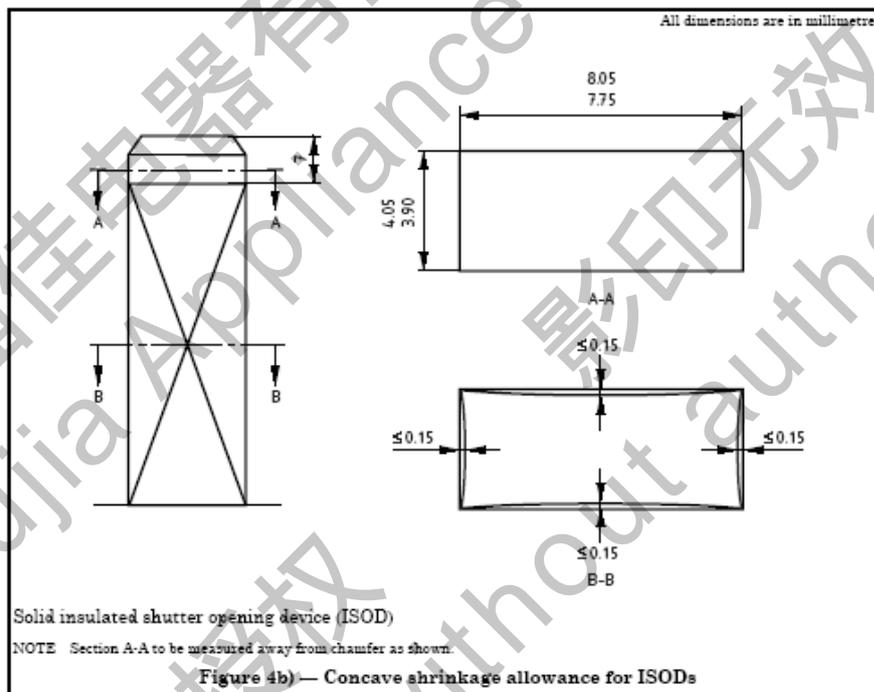


Figure 4b of BS 1363: Part 1

Clause 12 of BS 1363-1: part 1: 1995 + A4: 2012			
Clause	Requirement – Test	Result – Remark	Verdict
12	Construction of Plugs	UK plug of FJ-SW728xxxxyyyzB	P
12.1	The disposition of the pins shall be shown as figure 4.	The dispositions of the pins were shown as specified.	P
12.2	Pin and sleeve dimensions, body outline were checked according to figure 4 of BS1363: part 1.	The outline of the plug did not exceed the specified dimensions at a distance of 8.34mm from the engagement surface. (limit: >6.35mm) The measured dimensions of item shown in fig. 4 were found within the specified limits.	P
	The plug portion should enter the gauge fully with a force less than 10N was applied to the centre of the sample at right angle.	Sample was entered into the gauge completely.	P
12.3	No part of a line or neutral pin shall be less than 9,5mm from the periphery of the plug measured along the engagement surface.	9.7mm	P
12.9	Plug pins were constructed of brass	Complied.	P
12.9.1	Exposed surface of plug pins were smooth and free from burrs or sharp edges and other irregularities, which could cause damage or excessive wear to sockets or shutters.	Complied.	P
12.9.4	The adaptor plug pins were tested as specified in the standard.	Complied. After being subjected to a forced of 1100N for L, N pin, 400N for ISOD pin of the pin portion could fit the relevant gauge.	P
12.9.6	Each pin of the adaptor was subjected to a torque of 1Nm for 60s as specified in the standard.	Complied. After the test, the pin portion could fit the relevant gauge.	P
12.11	The adaptors were tested as specified in the standard. After being placed in an oven at 70°C for 1 hour, each pin of the samples was subjected for 60 sec. to a pull of 100N in the oven.	Complied. After the above test, no plug pin was detached and the plug pins could fit the relevant gauge.	P
12.12	The degree of flexibility of mounting of the plug pins was checked according to 12.12.1	Measured value: Max. 30' (test on each sources of enclosure, max. value measured), (limit: Max. 3° 30').	P
12.16	Line and neutral plug pin shall be fitted with insulating sleeves. The dimensions of the pin and sleeve shall fall within the specific limit.	Complied. Both line and neutral pins were fitted with insulating sleeves.	P
12.17.1	Plug pin sleeve shall be compliance with 12.17.2 to 12.17.4	Complied.	P
12.17.2	Electric strength test applied between the metal part of plug pin and the sleeve (1250±30V)	Complied. No breakdown or flashover occurs.	P

Clause 12 of BS 1363-1: part 1: 1995 + A4: 2012			
Clause	Requirement – Test	Result – Remark	Verdict
12.17.3	Abrasion test for plug pin sleeve The plug pin sleeves were subjected to 20000 movements of abrasion as specified in the standard.	Complied. After the test, the sleeves showed no damage that impaired further use and could satisfy the electric strength test in 12.17. 2	P
12.17.4	The plug pins with sleeves were placed in a heating cabinet at 200°C and tested according to the standard for 120min. Arrange the test as Figure 10 of BS 1363-1.	After the test, the thickness of sleeves of plug pins (Line and neutral pins) remaining at the impression point reduced by max. 21.8% for all material, less than 50%.	P

ADDITIONAL REQUIREMENT FOR THE SOLID INSULATED SHUTTER OPENING DEVICE (ISOD) ACCORDING TO BS1363-1/A2: 2003			
12.2	Plug fitted with an ISOD shall comply with all the dimensions specified in Fig. 4a with exception of the width of the ISOD, which should be 4,05mm max. and 3,90mm min. and its height which should be 8,05mm max. and 7,75mm min.	See measured dimensions in Table 3	P
12.9.4.3	Solid insulated opening device were tested as specified in the standard.	After being subjected to a forced of 400N, the pin could fit the relevant gauge.	P
12.9.5.2	Plugs with ISOD shall not cause excessive wear to socket contacts or shutters of sockets-outlets The test use a separate sample of plug with ISOD for each type of socket-outlet, with each sample being inserted into and withdrawn from the socket-outlet at a rate of 6 insertions and 6 withdrawals per minute, the speed of travel of the plug being approximately 150mm/s	After 5000 insertions and withdrawals completed, socket outlets show no damage that would impair further use. Plugs show no damage and suit for the dimensional requirements according to clause 12.2. The shutters of the socket-outlets operate satisfactorily and socket contacts safety shielded.	P
22.2	Resistance to heat		P
	After 1h in heating cabinet at 80°C and a force of 20 N through the jaws no damage shown	Test performed on plug portion (including ISOD), measured after 1 hour: 940(f1): 0.9mm 6485+(z)(f1): 1.0mm Limit: 2mm	P
23	Resistance of insulating material to abnormal heat and fire		P
	Insulating material not unduly affected by abnormal heat and by fire	Glow wire test performed on enclosure with: 650°C. All enclosure material have been considered.	P

Clause 12 of BS 1363-1: part 1: 1995 + A4: 2012

Clause	Requirement – Test	Result – Remark	Verdict
	Insulating material not unduly affected by abnormal heat and by fire	Glow wire test performed on plug portion (including ISOD) with: 750°C. All enclosure material have been considered.	P

PLUG PORTION DIMENSIONS

Linear Dimensions (mm)		Measurement		Limit	
*A		24.25		25.370 max.	
*B		33.53		34.6 max.	
*C		Tested by gauge		15 min.	
D		9.7		9.5 min.	
*E	L -> E	11.11		11.05 - 11.18	
	N -> E	11.11			
*F	L -> E	22.21		22.10 - 22.36	
	N -> E	22.21			
G1		6.25		6.22 - 6.48	
G2		6.25		6.22 - 6.48	
H		3.98		3.90 - 4.05	
*I		22.73		22.23 - 23.23	
J		1.65		1.35 - 1.85	
K		7.95		7.80 - 8.05	7.75 - 8.05 For ISOD
L	line	9.33		9.5 max.	
	neutral	9.33			
M	line	8.53		9.2 max.	
	neutral	8.53			
N (sleeve)	line	3.98		3.90 - 4.05	
	neutral	3.98			
O	line	17.86		17.20 - 18.20	
	neutral	17.86			
P	Line	1.49		1.35 - 1.85	
	neutral	1.49			
	earth	1.83			
Q (metal)	line	3.96		3.90 - 4.05	
	neutral	3.96			
	earth	3.98			
R	Line	1.81		1.2 - 2.0	
	neutral	1.81			
	earth	1.67			
S	line	1.49		1.35 - 1.85	
	neutral	1.49			

Clause 12 of BS 1363-1: part 1: 1995 + A4: 2012

Clause	Requirement – Test	Result – Remark	Verdict
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*Remark: all these dimensions were checked by the relevant gauge (based on BS1363: Part 1:1995 Figure 5)

Angular Dimensions (°)		Measurement		Limits	
θ1		59°		58° - 62°	
θ2	line	70°		60° - 80°	
	neutral	70°			
	earth	69°			
θ3	line	60°		58° - 62°	
	neutral	60°			

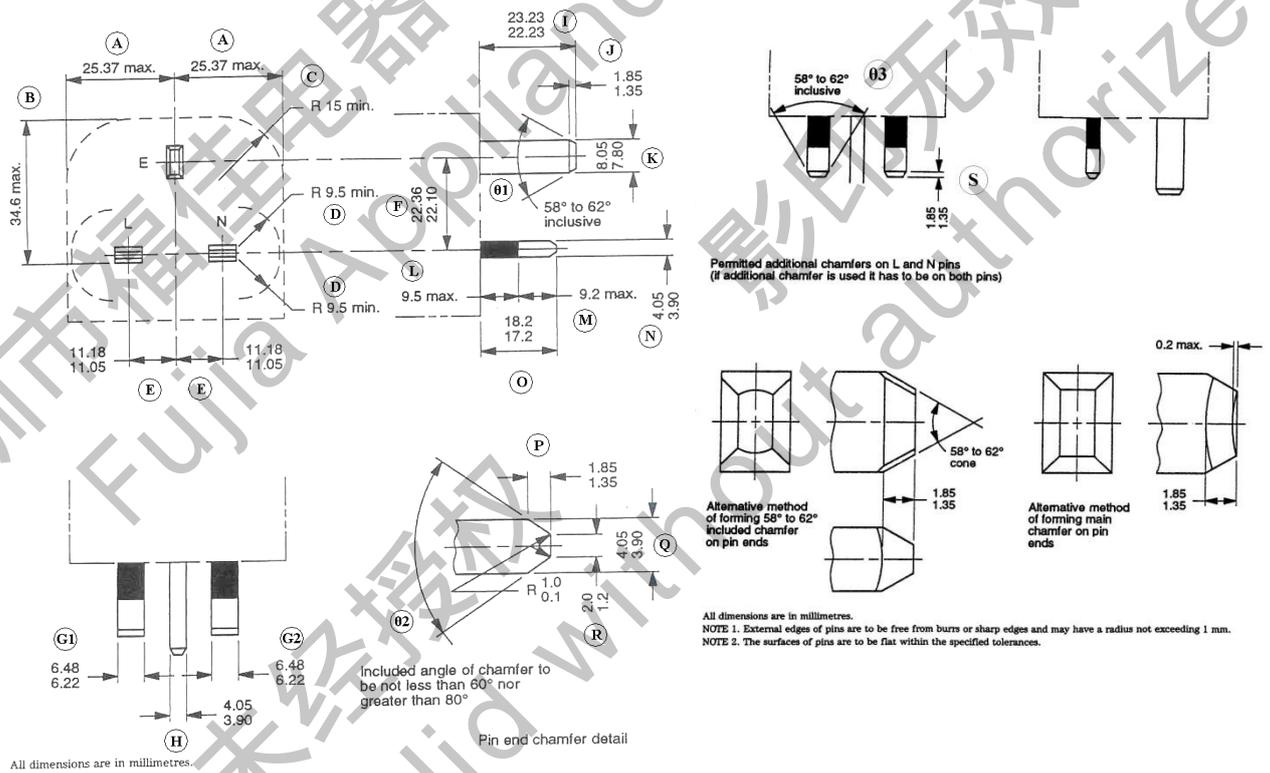


Figure 4a of BS 1363: Part 1

* Remark: all these dimensions were checked by the relevant gauge (based on BS1363: Part 1:1995 Figure 5)

Clause 12 of BS 1363-1: part 1: 1995 + A4: 2012			
Clause	Requirement – Test	Result – Remark	Verdict

Plug Portion Dimensions (Solid insulated shutter opening device ISOD)

Linear Dimensions (mm)		Sample A	Limit
T		8.01	7.75 - 8.05
U		4.03	3.90 - 4.05
V	0.11	0.12	0.15 max
	0.11	0.12	0.15 max
W	0.11	0.11	0.15 max
	0.11	0.11	0.15 max

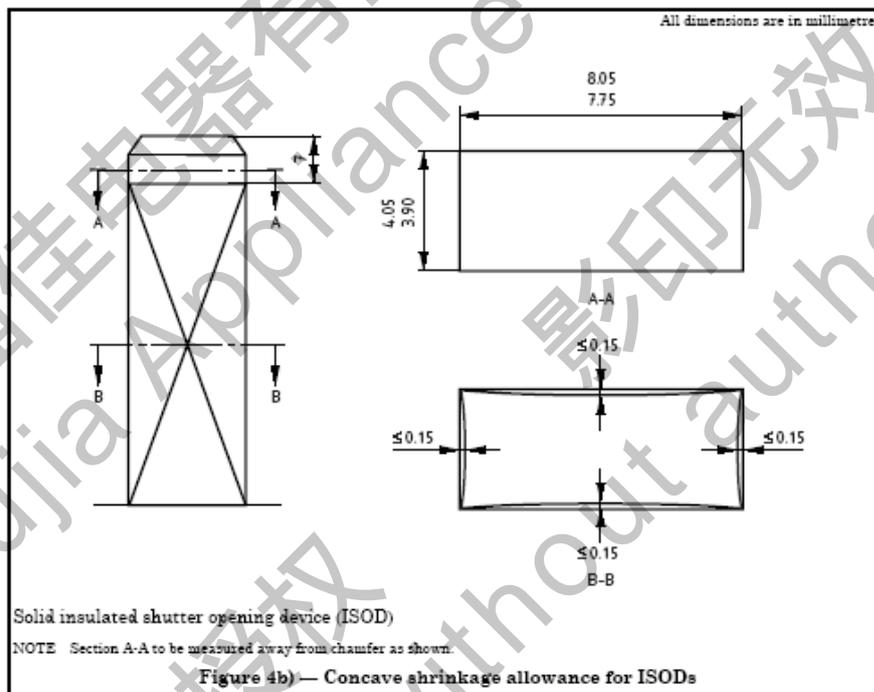


Figure 4b of BS 1363: Part 1

Appendix J of AS/NZS 3112: 2011 +A1: 2012 +A2: 2013

Clause	Requirement – Test	Result – Remark	Verdict
J1	Scope	For Australian plug portion of FJ-SW116xxxxxyyyzS	P
J2	Requirements for plug portion		P
J2.1	Plug portion		P
J2.2	Requirements	Complied	P
J2.2.1	General		P
J2.2.2	Plug pins of plug portions	Complied	P
	Material for pins	Copper content : 58-61%	P
	Assembly of pins	Complied	P
	Form of pin	Complied	P
	Insulation of plug pin	Complied	P
J2.2.3	Ratings and dimensions for low voltage plug portions		P
	General(2.8.1) The distance between a live pin of any plug and the edge of the moulding of the plug, shall be not less than 9 mm.	10.48mm	P
	Compliance with dimensional requirements of Figure 2.1(2.8.4)	See dimension tables on page 9,10 and 12	P
J2.2.4	Internal connections for plug portions		N/A
J2.2.5	Arrangement of earthing connections for plug portions	No earth connection.	N/A
J2.2.6	Configuration of plug portions	Complied	P
J2.2.7	Tests		P
J2.2.7.1	General	Complied	P
J2.2.7.2	High voltage test (2.13.3)		P
	The plug shall withstand without failure an a. c. voltage of the value indicated in Table 2.3, applied between the parts set out in Items (a) and (c) of Clause 2.13.2 for 1 min in each case.	1000V applied. No Breakdown.	P
	The plug shall further withstand, without failure, a voltage of 3500 V a. c. applied between the parts set out in Items (b) and (d) of Clause 2.13.2 for 1 min in each case. (Amendment 1:2006)	3500V applied. No Breakdown.	P
	The insulation of insulated pin plugs shall withstand a voltage of 1 250V a. c. for 1 min applied in accordance with Clause 2.13.2(e).	1250V applied. No Breakdown.	P
J2.2.7.3	Mechanical strength of pin tests		P
J2.2.7.3.1	Tumbling barrel test (2.13.7.1)		P
	The tumbling barrel test is applied to determine the mechanical strength of the plug pins.	See test below.	P

Appendix J of AS/NZS 3112: 2011 +A1: 2012 +A2: 2013			
Clause	Requirement – Test	Result – Remark	Verdict
	Three samples which have not been subjected to any previous test are tested to the requirements of Clause 2.13.7 however, the test is modified for plug portions of equipment with integral pins as follows:	Complied	P
	A sample of equipment with integral pins is dropped –	Complied	P
	a) 500 times if the mass of the specimen does not exceed 250 g. The pins being straightened after each 100 drops and at the completion of the test to pass through the appropriate gauge of Figure A1, B1 or F1; and	Weight: 64g 500 times drop. After test, no broken and cracking was found (All enclosure material have been considered)	P
	b) 250 times if the mass of the specimen exceeds 250 g. The pins being straightened after 25 drops and at the completion of the test to pass through the appropriate gauge of Figure A1, B1 or F1		N/A
J2.2.7.3.2	Pin bending test	Complied	P
	The pins of the plug portion of three samples not subjected to any previous tests shall be tested for compliance with the pin bending test of clause 2.13.7.2.	Three samples tested.	P
	All flat-pins of plugs rated up to and including 15 A shall be subjected to a pin bending test.	Tested on all flat-pins of plug.	P
	Three sample plugs not subjected to any previous tests shall be tested After the tests the pins shall be inspected with normal or corrected to normal vision.	Inspected with normal vision.	P
	Active and neutral pins shall be forced towards the centroid of the plug and then back to the starting point. On the first sample plug, any earth pin shall be forced but in one direction only and then back to the starting point. On the second sample plug, any earth pin shall be forced in the opposite direction to that used for testing the first sample plug. On the third sample plug, any earth pin shall be forced in the direction that gave the least favorable result during testing of the first two sample plugs.(Amendment 1:2006)	Complied	P
	The pin shall not be broken off. If in doubt pins shall be disassembled from the plug and any insulation removed	The pin did not break off.	P
J2.2.7.4	Temperature rise test (2.13.8)	This requirement shall tested with the relevant product standards.	P
	The terminal screws or nuts are tightened with a torque equal to two-thirds of that specified in test No.5.	No screws or nuts used.	N/A

Appendix J of AS/NZS 3112: 2011 +A1: 2012 +A2: 2013			
Clause	Requirement – Test	Result – Remark	Verdict
	The test socket shall consist of a fixed socket outlet of a type complying with this Standard.	Direct plug-in equipment.	P
	The plug is inserted into the socket outlet and an alternating current of 1.1 times rated current is passed for 1 h.		P
	The temperature of the flexible cord terminal is determined by means of melting particles, colour changing indicators or thermocouples, so chosen and positioned that they have negligible effect on the temperature being determined.		P
	The temperature rise of the terminals shall not exceed 45 K.	Temperature rise: 16.7K (plug pins). Ambient: 26.5 °C	P
J2.2.7.5	Securement of pins of the plug portion (2.13.9)		P
	Movement of pins (2.13.9.1)	See test below	P
	Plugs shall be tested for pin movement by clamping the pin or pins not under test in a rigid holding block positioned 5 ± 0.5 mm from the plug face and applying a force of 18 ± 1 N to the pin under test. The design of the block shall be such that the pin under test shall not come into contact with the block during the test.	Complied	P
	Except for non-rewireable plugs, the test shall be carried out without a cord attached to the plug, and with the terminal screws loosened sufficiently to allow a 1mm^2 conductor to be connected.		N/A
	The plug and test equipment shall be preconditioned at a temperature of 40 ± 1 °C for 1 h, without the test force applied. Throughout the test, all parts of the plug and test equipment shall be maintained at this temperature.	40°C for 1 h applied.	P
	For all plugs, the point of application of the force of the plug along the pins, and the direction of the force shall be- a) in both directions along the line perpendicular to the plane of the pin, and passing through the centre of the pin; and b) in that plane in both directions along a line at right angles to that specified in Item(a).	Complied	P
	Over a period of 10s, the force shall be gradually applied to each of the pins in the manner prescribed in Item (a) and (b), maintained at its maximum value for 10s, and then released. The deflection of the pins shall be measured along the line of the face relative to the face of the rigid holding block during the period when the force is applied. The maximum deflection shall not exceed 2.0mm	Max. deflection of L Pin: 0.8mm Max. deflection of N Pin: 0.8mm (Test on each sources of material, the max. value measured)	P

Appendix J of AS/NZS 3112: 2011 +A1: 2012 +A2: 2013			
Clause	Requirement – Test	Result – Remark	Verdict
	Following the test on all pin of a conforming to Figure 2.1, any distortion 5 min after the completion of the test on the last pin shall be such that it will not prevent the plug from being inserted in the appropriate standard gauges shown in Appendix A, Appendix B and Appendix F without the application of undue force	Plug portion is able to be inserted into the appropriate standard gauge without the application of undue force.	P
	For other types of plugs, any distortion after 5 min shall be such as will not prevent the plug being inserted into an appropriate socket-outlet without the application of undue force		N/A
	Fixing of pins (2.13.9.2)	See test below	P
	A separate sample of a plug shall be heated to a temperature of 50±2°C for 1 h and maintained at that temperature during the whole of tests, including the 5 min period after removal of the test load.	50°C for 1 h applied.	P
	The plug shall be held firmly in such a manner that there will be no undue squeezing or distortion of the body, and the means of holding shall not assist in maintaining the pins in their original position,	Complied	P
	Each pin, in turn, shall have applied to it a force which, over a period of 10 s, shall be increased steadily to 60±0.6N and held at this value for 10 min.	60N applied.	P
	Two tests on each pin shall be conducted, one with the direction of force along the length of the pin towards the body of the plug, and the other with the direction of force along the length of the pin away from the body.	Complied	P
	The attachment of pins shall be considered inadequate if any pin is displaced relative to the adjacent material of the body by more than 2.4 mm at any time during these tests, or if any pin fails to return to within 0.8 mm of its nominal length specified in Figure 2.1 within 5 min of the removal of the test force.	During test: Max. displacement of L Pin: 1.1mm Max. displacement of N Pin: 1.0mm After test: Displacement of L Pin: 0.5mm Displacement of N Pin: 0.5mm (Test on each sources of material, the max. value measured.)	P
J2.2.7.6	Tests on the insulation material of insulated pin-plug portions (2.13.13)		P
	2.13.13.1 General		P

Appendix J of AS/NZS 3112: 2011 +A1: 2012 +A2: 2013			
Clause	Requirement – Test	Result – Remark	Verdict
	The material of the pin-insulation shall be resistant to the stresses to which it may be subjected at the high temperature likely to occur in conditions approaching the bad connection conditions and at low temperatures in particular conditions of service.	Complied	P
	Compliance shall be checked by the tests of Clause 2.13.13.2 to 2.13.13.6	See test below	P
	Pressure test at high temperature (2.13.13.2)	See test below	P
	A specimen of one insulated pin only shall be subjected to the following test by means of the apparatus shown in Figure 2.5. This apparatus shall have a blade having a round shape with a diameter of 6 mm and a thickness of 0.7 mm.	Complied	P
	The specimen shall be placed in position as shown in the Figure 2.5 and a force of 2.5 N shall be applied through the blade to specimen.	2.5N applied.	P
	The apparatus, with the specimen in position, shall be maintained for 2 h in a heating cabinet at a temperature of 160±5°C. The specimen shall then be removed from the apparatus and within 10 s, cooled by immersion in cold water.	160°C for 2h applied.	P
	The thickness of the insulation shall be measured immediately at the point of impression.	Complied	P
	The thickness of the insulation remaining at the point of impression shall be measured and shall not have been reduced by more than 50%	Thickness before test: 0.47mm Thickness after test: 0.38mm Length of insulation after test reduced by 19.1% (all material have been tested and max result recorded)	P
	Visual inspection shall be made and no cracks on the insulation material shall be visible with normal, or corrected to normal, vision without additional magnification, and the dimension of the insulating material shall not have changed below the minimum size shown in Figure 2.4.	No cracks are found on the insulating material. The dimension of insulating material did not changed.	P
	Static damp heat test (2.13.13.3)	See test below.	P
	An insulated pin plug shall be subjected to two damp heat cycles in accordance with IEC 60068-2-30. Db (12+12 h cycle), 95% relative humidity, lower temperature 25±3°C and upper temperature 40°C.	Complied	P

Appendix J of AS/NZS 3112: 2011 +A1: 2012 +A2: 2013			
Clause	Requirement – Test	Result – Remark	Verdict
	After this treatment and after recovery to room temperature, the specimen shall be subjected to- <ul style="list-style-type: none"> a) the insulation resistance test in accordance with CLAUSE 2.13.2(E); b) high voltage test in accordance with Clause 2.13.3 and; c) abrasion test in accordance with Clause 2.13.13.6. 	During high voltage test no breakdown occurred between live poles and insulation of the pins. For abrasion test, see Abrasion test (2.13.13.6) below.	P
	Low temperature test (2.13.13.4)	See test below.	P
	An insulated pin plug shall be maintained at $-15\pm 2^{\circ}\text{C}$ for at least 24 h and returned to room temperature.	-15°C for 24h applied.	P
	The specimen shall be subjected to – <ul style="list-style-type: none"> a) the insulation resistance test in accordance with Clause 2.13.2(e); b) high voltage test in accordance with Clause 2.13.3 and; c) abrasion test in accordance with Clause 2.13.13.6. 	During high voltage test no breakdown occurred between live poles and insulation of the pins. For abrasion test, see Abrasion test (2.13.13.6) below.	P
	Impact test at low temperature (2.13.13.5)	See test below.	P
	A specimen of one insulated pin only shall be subjected to an impact test by means of the apparatus shown in Figure 2.6. The mass of the falling weight shall be 100 ± 1 g.	Complied	P
	The apparatus, on a sponge rubber pad 40 mm thick, together with the specimen, shall be maintained at $-15\pm 2^{\circ}\text{C}$ for at least 24 h.	-15°C for 24h applied.	P
	At the end of this period, the specimen shall be placed in position, as shown in Figure 2.6, and the falling weight shall be allowed to fall from a height of 100mm. Four impacts shall be applied successively to the same specimen, rotating it through 90° between impacts.	Complied	P
	After the test the specimen shall be allowed to return to room temperature and then examined, No cracks of the insulating material shall be visible with normal, or corrected to normal, vision without additional magnification.	No cracks were found on the insulating material.	P
	Abrasion test (2.13.13.6)	Use the same sample which passed the Static damp heat test (2.13.13.3) and Low temperature test (2.13.13.4) for abrasion test.	P
	An insulated pin of an insulated pin plug shall be subjected to the following test by means of an apparatus as shown in Figure 2.7.	Complied	P

Appendix J of AS/NZS 3112: 2011 +A1: 2012 +A2: 2013

Clause	Requirement – Test	Result – Remark	Verdict
	The test apparatus comprises a horizontally disposed beam, which shall be pivoted about its centre point. A short length of steel wire, 1 mm in diameter and bent into a U-shape, the base of the U being straight, shall be rigidly attached, at both ends, to one end of the beam, so that the straight part projects below the beam and shall be parallel to the axis of the beam pivot.	Complied	P
	The plug shall be held in a suitable clamp in such a position that the straight part of the steel wire rests on the major axis face of the plug pin, at right angles to it. The pin shall slope downwards at an angle of 10° to the horizontal.	Complied	P
	The beam shall be loaded so that the wire exerts a force of 4 N on the pin.	4N applied.	P
	The plug shall be moved backwards and forwards in horizontal direction in the plane of the axis of the beam, so that the wire rubs along the pin. The length of the pin thus abraded shall be approximately 9 mm, of which approximately 7 mm shall be over the insulation.	Complied	P
	The number of movements shall be 20 000 (10 000 in each direction) and the rate of operation shall be 30 movements per min.	Complied	P
	After the test, the pins shall show no damage which may affect safety or impair the further use of the plug, in particular, the insulating sleeve shall not have punctured or rucked up.	The pins show no damage and the insulating sleeve was not punctured or rucked up.	P
J2.2.7.7	Equipment with integral pins intended to be supported by the contacts of a socket-outlet	Torque: 0.033Nm Limit: ≤0.25Nm	P
J2.3	Detachable plug portions		N/A
	Where a plug portion is detachable, compliance shall be established by assessment with the plug portion fully assembled with the equipment. Access to live parts shall be assessed for incorrect assembly of the plug portion. It shall not be possible to assemble the plug portion to the equipment resulting in a dangerous situation allowing access to live parts. The plug portion shall not expose live parts prior to assembly.	Fixed plug portion.	N/A

Appendix J of AS/NZS 3112: 2011 +A1: 2012 +A2: 2013			
Clause	Requirement – Test	Result – Remark	Verdict

Compliance with dimensional requirement of Fig 2.1/2.4

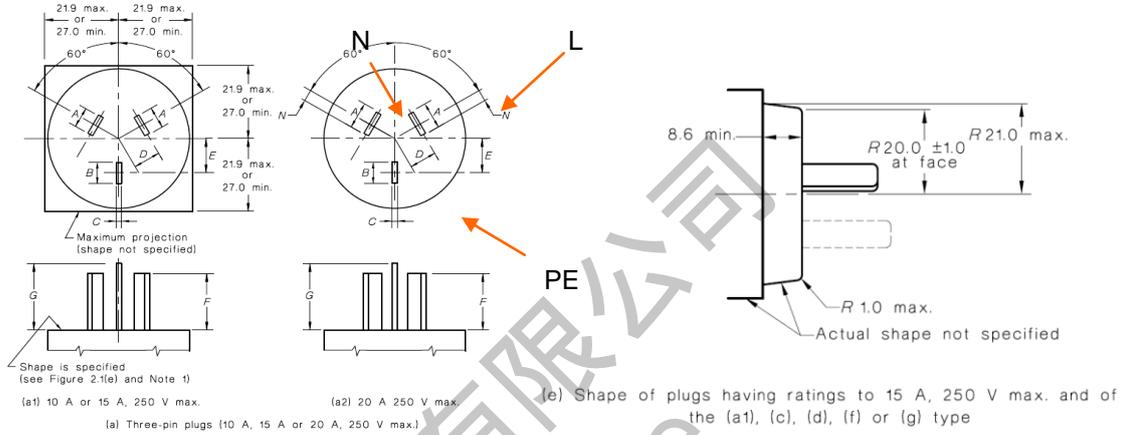


FIGURE 2.1 (in part) DIMENSIONS OF PLUGS

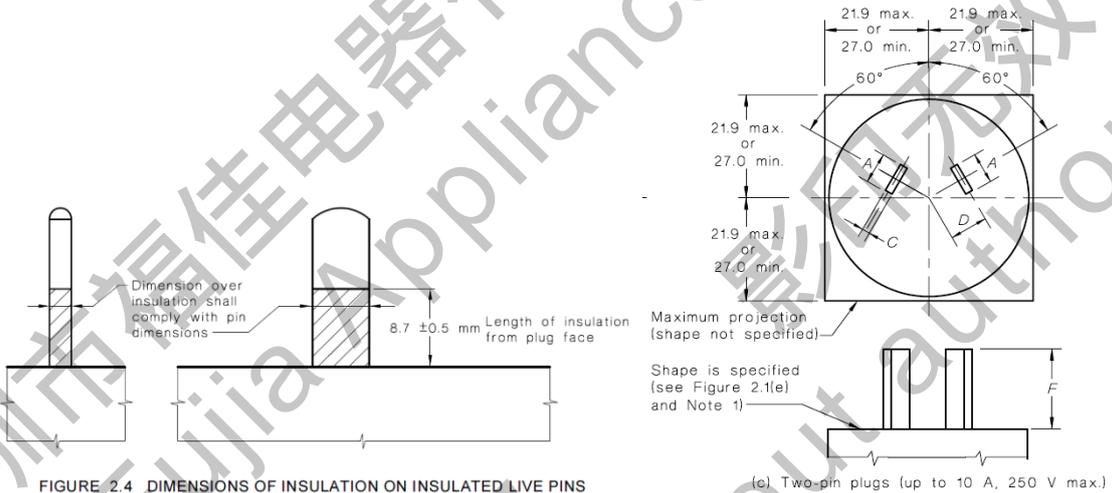
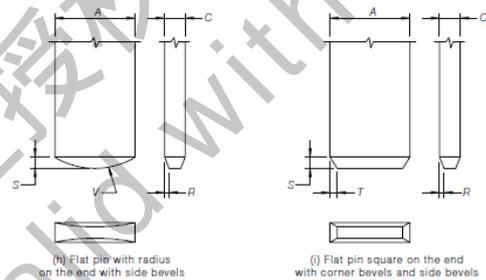


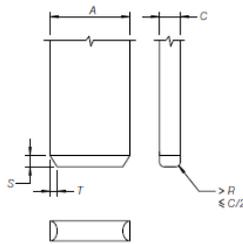
FIGURE 2.4 DIMENSIONS OF INSULATION ON INSULATED LIVE PINS

FIGURE 2.1 (in part) DIMENSIONS OF PLUGS



(h) Flat pin with radius on the end with side bevels

(i) Flat pin square on the end with corner bevels and side bevels



(j) The flat pin square on the end with corner bevels and radius on the sides

FIGURE 2.1 (IN PART) DIMENSIONS OF PLUGS

Appendix J of AS/NZS 3112: 2011 +A1: 2012 +A2: 2013

Clause	Requirement – Test	Result – Remark	Verdict
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Dimensions of plugs acc. to figure 2.1 (a)/(c)

Location	Requirement (mm)	Measured (mm)	Verdict
Width of left Pin (A)	6.35 ± 0.15	6.29	P
Width of right Pin (A)	6.35 ± 0.15	6.33	P
Width of PE pin (B)	6.35 ± 0.15	No PE pin	N/A
Thickness of left Pin (C)	1.63 + 0.15	1.63	P
Thickness of right Pin (C)	1.63 + 0.15	1.61	P
Thickness of PE Pin (C)	1.63 + 0.15	No PE pin	P
Length of left Pin (F)	17.06 ± 0.4	16.98	P
Length of right Pin (F)	17.06 ± 0.4	16.92	P
Length of PE Pin (G)	19.94 ± 0.8	No PE pin	N/A
Centre of left and right pins to centre Of pin base (D)	7.92 *	Fit the testing gauge	P
Distance between PE pin centre and centre of pin base (E)	10.31 *	No PE pin	N/A
Width of enclosure left side	≥ 27.0 or ≤ 21.9	19.83	P
Width of enclosure right side	≥ 27.0 or ≤ 21.9	19.83	P
Length of enclosure top side	≥ 27.0 or ≤ 21.9	20.81	P
Length of enclosure bottom side	≥ 27.0 or ≤ 21.9	46.64	P

Dimensions of plugs acc. to figure 2.1 (e)

Location	Requirement (mm)	Measured (mm)	Verdict
Pin face radius on enclosure	≤21.0	19.83	P
Pin face radius on pins level	20 ± 1.0	19.83	P
Radius of pin base	≤1.0	0.78	P
Distance between pin base and enclosure	≥8.6	10.83	P

* Dimensions without tolerance are nominal. Samples are to be checked with the gauge specified in Appendix A, Appendix B or Appendix F, as appropriate.

Note: 1: (a) If of the non-insulated pin type, it should comply with all dimensions including Figure 2.1(e).
 (b) If of the insulated pin type, complying with Figure 2.4, and also complying with all other requirements of this Standard (e.g. Clause 2.8, 9 mm from live pins to the edge of plug mouldings), then other plug shapes are acceptable (e.g. oval 2-pin, triangular 3-pin). The R20 ±1.0 mm dimension of Figure 2.1(e) is not applicable, but the other dimensions of Figure 2.1(e) are still applicable to ensure they fit in the recess of Figure 3.5.

Appendix J of AS/NZS 3112: 2011 +A1: 2012 +A2: 2013

Clause	Requirement – Test	Result – Remark	Verdict
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Dimensions of insulation on insulated live pins acc. to figure 2.4

Location	Requirement (mm)	Measured (mm)	Verdict
Length of insulation from plug face (left pin)	8.7 ± 0.5	8.59	P
Length of insulation from plug face (right pin)	8.7 ± 0.5	8.60	P
Dimension over insulation of left insulated live pin	1.63 +0.15 / -0.05	1.63	P
Dimension over insulation of right insulated live pin	1.63 +0.15 / -0.05	1.61	P

*With measurement uncertainty +/-0.05mm

Dimensions of plugs

Type of pin shape	Acc. to figure 2.1 (i)		Verdict
Location	Requirement (mm)	Measured (mm)	Verdict
Long side indent of left pin side 1 (R)	0.35 ± 0.05	0.34	P
Long side indent of left pin side 2 (R)	0.35 ± 0.05	0.34	P
Long side indent of right pin side 1 (R)	0.35 ± 0.05	0.36	P
Long side indent of right pin side 2 (R)	0.35 ± 0.05	0.36	P
Long side indent of PE pin side 1 (R)	0.35 ± 0.05	No PE pin	N/A
Long side indent of PE pin side 2 (R)	0.35 ± 0.05	No PE pin	N/A
Short side indent of left pin side 1 (T)	≥ 0.60	1.05	P
Short side indent of left pin side 2 (T)	≥ 0.60	1.05	P
Short side indent of right pin side 1 (T)	≥ 0.60	1.06	P
Short side indent of right pin side 2 (T)	≥ 0.60	1.06	P
Short side indent of PE pin side 1 (T)	≥ 0.60	No PE pin	N/A
Short side indent of PE pin side 2 (T)	≥ 0.60	N/A	N/A
Length of chamfer left pin (S)	0.90 ± 0.10	0.85	P
Length of chamfer right pin (S)	0.90 ± 0.10	0.85	P
Length of chamfer PE pin (S)	0.90 ± 0.10	No PE pin	N/A
Radius of left pin (V)	6*	Fit the testing gauge	P
Radius of right pin (V)	6*	Fit the testing gauge	P
Radius of PE pin (V)	6*	No PE pin	N/A

* Dimensions without tolerance are nominal. Samples are to be checked with the gauge specified in Appendix A, Appendix B or Appendix F, as appropriate.

End of Report

Appendix J of AS/NZS 3112: 2011 +A1: 2012 +A2: 2013			
Clause	Requirement – Test	Result – Remark	Verdict
J1	Scope	For Australian plug portion of FJ-SW116xxxxxyyyzN	P
J2	Requirements for plug portion		P
J2.1	Plug portion		P
J2.2	Requirements	Complied	P
J2.2.1	General		P
J2.2.2	Plug pins of plug portions	Complied	P
	Material for pins	Copper content : 58-61%	P
	Assembly of pins	Complied	P
	Form of pin	Complied	P
	Insulation of plug pin	Complied	P
J2.2.3	Ratings and dimensions for low voltage plug portions		P
	General(2.8.1) The distance between a live pin of any plug and the edge of the moulding of the plug, shall be not less than 9 mm.	10.63mm	P
	Compliance with dimensional requirements of Figure 2.1(2.8.4)	See dimension tables on page 9,10 and 12	P
J2.2.4	Internal connections for plug portions		N/A
J2.2.5	Arrangement of earthing connections for plug portions	No earth connection.	N/A
J2.2.6	Configuration of plug portions	Complied	P
J2.2.7	Tests		P
J2.2.7.1	General	Complied	P
J2.2.7.2	High voltage test (2.13.3)		P
	The plug shall withstand without failure an a. c. voltage of the value indicated in Table 2.3, applied between the parts set out in Items (a) and (c) of Clause 2.13.2 for 1 min in each case.	1000V applied. No Breakdown.	P
	The plug shall further withstand, without failure, a voltage of 3500 V a. c. applied between the parts set out in Items (b) and (d) of Clause 2.13.2 for 1 min in each case. (Amendment 1:2006)	3500V applied. No Breakdown.	P
	The insulation of insulated pin plugs shall withstand a voltage of 1 250V a. c. for 1 min applied in accordance with Clause 2.13.2(e).	1250V applied. No Breakdown.	P
J2.2.7.3	Mechanical strength of pin tests		P
J2.2.7.3.1	Tumbling barrel test (2.13.7.1)		P
	The tumbling barrel test is applied to determine the mechanical strength of the plug pins.	See test below.	P

Appendix J of AS/NZS 3112: 2011 +A1: 2012 +A2: 2013			
Clause	Requirement – Test	Result – Remark	Verdict
	Three samples which have not been subjected to any previous test are tested to the requirements of Clause 2.13.7 however, the test is modified for plug portions of equipment with integral pins as follows:	Complied	P
	A sample of equipment with integral pins is dropped –	Complied	P
	a) 500 times if the mass of the specimen does not exceed 250 g. The pins being straightened after each 100 drops and at the completion of the test to pass through the appropriate gauge of Figure A1, B1 or F1; and	Weight: 65g 500 times drop. After test, no broken and cracking was found (All enclosure material have been considered)	P
	b) 250 times if the mass of the specimen exceeds 250 g. The pins being straightened after 25 drops and at the completion of the test to pass through the appropriate gauge of Figure A1, B1 or F1		N/A
J2.2.7.3.2	Pin bending test	Complied	P
	The pins of the plug portion of three samples not subjected to any previous tests shall be tested for compliance with the pin bending test of clause 2.13.7.2.	Three samples tested.	P
	All flat-pins of plugs rated up to and including 15 A shall be subjected to a pin bending test.	Tested on all flat-pins of plug.	P
	Three sample plugs not subjected to any previous tests shall be tested After the tests the pins shall be inspected with normal or corrected to normal vision.	Inspected with normal vision.	P
	Active and neutral pins shall be forced towards the centroid of the plug and then back to the starting point. On the first sample plug, any earth pin shall be forced but in one direction only and then back to the starting point. On the second sample plug, any earth pin shall be forced in the opposite direction to that used for testing the first sample plug. On the third sample plug, any earth pin shall be forced in the direction that gave the least favorable result during testing of the first two sample plugs.(Amendment 1:2006)	Complied	P
	The pin shall not be broken off. If in doubt pins shall be disassembled from the plug and any insulation removed	The pin did not break off.	P
J2.2.7.4	Temperature rise test (2.13.8)	This requirement shall tested with the relevant product standards.	P
	The terminal screws or nuts are tightened with a torque equal to two-thirds of that specified in test No.5.	No screws or nuts used.	N/A

Appendix J of AS/NZS 3112: 2011 +A1: 2012 +A2: 2013			
Clause	Requirement – Test	Result – Remark	Verdict
	The test socket shall consist of a fixed socket outlet of a type complying with this Standard.	Direct plug-in equipment.	P
	The plug is inserted into the socket outlet and an alternating current of 1.1 times rated current is passed for 1 h.		P
	The temperature of the flexible cord terminal is determined by means of melting particles, colour changing indicators or thermocouples, so chosen and positioned that they have negligible effect on the temperature being determined.		P
	The temperature rise of the terminals shall not exceed 45 K.	Temperature rise: 16.7K (plug pins). Ambient: 26.4 °C	P
J2.2.7.5	Securement of pins of the plug portion (2.13.9)		P
	Movement of pins (2.13.9.1)	See test below	P
	Plugs shall be tested for pin movement by clamping the pin or pins not under test in a rigid holding block positioned 5 ± 0.5 mm from the plug face and applying a force of 18 ± 1 N to the pin under test. The design of the block shall be such that the pin under test shall not come into contact with the block during the test.	Complied	P
	Except for non-rewireable plugs, the test shall be carried out without a cord attached to the plug, and with the terminal screws loosened sufficiently to allow a 1mm^2 conductor to be connected.		N/A
	The plug and test equipment shall be preconditioned at a temperature of $40 \pm 1^\circ\text{C}$ for 1 h, without the test force applied. Throughout the test, all parts of the plug and test equipment shall be maintained at this temperature.	40°C for 1 h applied.	P
	For all plugs, the point of application of the force of the plug along the pins, and the direction of the force shall be- a) in both directions along the line perpendicular to the plane of the pin, and passing through the centre of the pin; and b) in that plane in both directions along a line at right angles to that specified in Item(a).	Complied	P
	Over a period of 10s, the force shall be gradually applied to each of the pins in the manner prescribed in Item (a) and (b), maintained at its maximum value for 10s, and then released. The deflection of the pins shall be measured along the line of the face relative to the face of the rigid holding block during the period when the force is applied. The maximum deflection shall not exceed 2.0mm	Max. deflection of L Pin: 0.9mm Max. deflection of N Pin: 0.9mm (Test on each sources of material, the max. value measured)	P

Appendix J of AS/NZS 3112: 2011 +A1: 2012 +A2: 2013			
Clause	Requirement – Test	Result – Remark	Verdict
	Following the test on all pin of a conforming to Figure 2.1, any distortion 5 min after the completion of the test on the last pin shall be such that it will not prevent the plug from being inserted in the appropriate standard gauges shown in Appendix A, Appendix B and Appendix F without the application of undue force	Plug portion is able to be inserted into the appropriate standard gauge without the application of undue force.	P
	For other types of plugs, any distortion after 5 min shall be such as will not prevent the plug being inserted into an appropriate socket-outlet without the application of undue force		N/A
	Fixing of pins (2.13.9.2)	See test below	P
	A separate sample of a plug shall be heated to a temperature of $50\pm 2^{\circ}\text{C}$ for 1 h and maintained at that temperature during the whole of tests, including the 5 min period after removal of the test load.	50°C for 1 h applied.	P
	The plug shall be held firmly in such a manner that there will be no undue squeezing or distortion of the body, and the means of holding shall not assist in maintaining the pins in their original position,	Complied	P
	Each pin, in turn, shall have applied to it a force which, over a period of 10 s, shall be increased steadily to $60\pm 0.6\text{N}$ and held at this value for 10 min.	60N applied.	P
	Two tests on each pin shall be conducted, one with the direction of force along the length of the pin towards the body of the plug, and the other with the direction of force along the length of the pin away from the body.	Complied	P
	The attachment of pins shall be considered inadequate if any pin is displaced relative to the adjacent material of the body by more than 2.4 mm at any time during these tests, or if any pin fails to return to within 0.8 mm of its nominal length specified in Figure 2.1 within 5 min of the removal of the test force.	During test: Max. displacement of L Pin: 1.0mm Max. displacement of N Pin: 1.0mm After test: Displacement of L Pin: 0.5mm Displacement of N Pin: 0.5mm (Test on each sources of material, the max. value measured.)	P
J2.2.7.6	Tests on the insulation material of insulated pin-plug portions (2.13.13)		P
	2.13.13.1 General		P

Appendix J of AS/NZS 3112: 2011 +A1: 2012 +A2: 2013			
Clause	Requirement – Test	Result – Remark	Verdict
	The material of the pin-insulation shall be resistant to the stresses to which it may be subjected at the high temperature likely to occur in conditions approaching the bad connection conditions and at low temperatures in particular conditions of service.	Complied	P
	Compliance shall be checked by the tests of Clause 2.13.13.2 to 2.13.13.6	See test below	P
	Pressure test at high temperature (2.13.13.2)	See test below	P
	A specimen of one insulated pin only shall be subjected to the following test by means of the apparatus shown in Figure 2.5. This apparatus shall have a blade having a round shape with a diameter of 6 mm and a thickness of 0.7 mm.	Complied	P
	The specimen shall be placed in position as shown in the Figure 2.5 and a force of 2.5 N shall be applied through the blade to specimen.	2.5N applied.	P
	The apparatus, with the specimen in position, shall be maintained for 2 h in a heating cabinet at a temperature of 160±5°C. The specimen shall then be removed from the apparatus and within 10 s, cooled by immersion in cold water.	160°C for 2h applied.	P
	The thickness of the insulation shall be measured immediately at the point of impression.	Complied	P
	The thickness of the insulation remaining at the point of impression shall be measured and shall not have been reduced by more than 50%	Thickness before test: 0.46mm Thickness after test: 0.38mm Length of insulation after test reduced by 17.4% (all material have been tested and max result recorded)	P
	Visual inspection shall be made and no cracks on the insulation material shall be visible with normal, or corrected to normal, vision without additional magnification, and the dimension of the insulating material shall not have changed below the minimum size shown in Figure 2.4.	No cracks are found on the insulating material. The dimension of insulating material did not changed.	P
	Static damp heat test (2.13.13.3)	See test below.	P
	An insulated pin plug shall be subjected to two damp heat cycles in accordance with IEC 60068-2-30. Db (12+12 h cycle), 95% relative humidity, lower temperature 25±3°C and upper temperature 40°C.	Complied	P

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Clause	Requirement – Test	Result – Remark	Verdict
	After this treatment and after recovery to room temperature, the specimen shall be subjected to- d) the insulation resistance test in accordance with CLAUSE 2.13.2(E); e) high voltage test in accordance with Clause 2.13.3 and; f) abrasion test in accordance with Clause 2.13.13.6.	During high voltage test no breakdown occurred between live poles and insulation of the pins. For abrasion test, see Abrasion test (2.13.13.6) below.	P
	Low temperature test (2.13.13.4)	See test below.	P
	An insulated pin plug shall be maintained at $-15\pm 2^{\circ}\text{C}$ for at least 24 h and returned to room temperature.	-15°C for 24h applied.	P
	The specimen shall be subjected to – d) the insulation resistance test in accordance with Clause 2.13.2(e); e) high voltage test in accordance with Clause 2.13.3 and; f) abrasion test in accordance with Clause 2.13.13.6.	During high voltage test no breakdown occurred between live poles and insulation of the pins. For abrasion test, see Abrasion test (2.13.13.6) below.	P
	Impact test at low temperature (2.13.13.5)	See test below.	P
	A specimen of one insulated pin only shall be subjected to an impact test by means of the apparatus shown in Figure 2.6. The mass of the falling weight shall be 100 ± 1 g.	Complied	P
	The apparatus, on a sponge rubber pad 40 mm thick, together with the specimen, shall be maintained at $-15\pm 2^{\circ}\text{C}$ for at least 24 h.	-15°C for 24h applied.	P
	At the end of this period, the specimen shall be placed in position, as shown in Figure 2.6, and the falling weight shall be allowed to fall from a height of 100mm. Four impacts shall be applied successively to the same specimen, rotating it through 90° between impacts.	Complied	P
	After the test the specimen shall be allowed to return to room temperature and then examined, No cracks of the insulating material shall be visible with normal, or corrected to normal, vision without additional magnification.	No cracks were found on the insulating material.	P
	Abrasion test (2.13.13.6)	Use the same sample which passed the Static damp heat test (2.13.13.3) and Low temperature test (2.13.13.4) for abrasion test.	P
	An insulated pin of an insulated pin plug shall be subjected to the following test by means of an apparatus as shown in Figure 2.7.	Complied	P

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Clause	Requirement – Test	Result – Remark	Verdict
	The test apparatus comprises a horizontally disposed beam, which shall be pivoted about its centre point. A short length of steel wire, 1 mm in diameter and bent into a U-shape, the base of the U being straight, shall be rigidly attached, at both ends, to one end of the beam, so that the straight part projects below the beam and shall be parallel to the axis of the beam pivot.	Complied	P
	The plug shall be held in a suitable clamp in such a position that the straight part of the steel wire rests on the major axis face of the plug pin, at right angles to it. The pin shall slope downwards at an angle of 10° to the horizontal.	Complied	P
	The beam shall be loaded so that the wire exerts a force of 4 N on the pin.	4N applied.	P
	The plug shall be moved backwards and forwards in horizontal direction in the plane of the axis of the beam, so that the wire rubs along the pin. The length of the pin thus abraded shall be approximately 9 mm, of which approximately 7 mm shall be over the insulation.	Complied	P
	The number of movements shall be 20 000 (10 000 in each direction) and the rate of operation shall be 30 movements per min.	Complied	P
	After the test, the pins shall show no damage which may affect safety or impair the further use of the plug, in particular, the insulating sleeve shall not have punctured or rucked up.	The pins show no damage and the insulating sleeve was not punctured or rucked up.	P
J2.2.7.7	Equipment with integral pins intended to be supported by the contacts of a socket-outlet	Torque: 0.035Nm Limit: ≤0.25Nm	P
J2.3	Detachable plug portions		P
	Where a plug portion is detachable, compliance shall be established by assessment with the plug portion fully assembled with the equipment. Access to live parts shall be assessed for incorrect assembly of the plug portion. It shall not be possible to assemble the plug portion to the equipment resulting in a dangerous situation allowing access to live parts. The plug portion shall not expose live parts prior to assembly.	Complied.	P

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Clause	Requirement – Test	Result – Remark	Verdict

Compliance with dimensional requirement of Fig 2.1/2.4

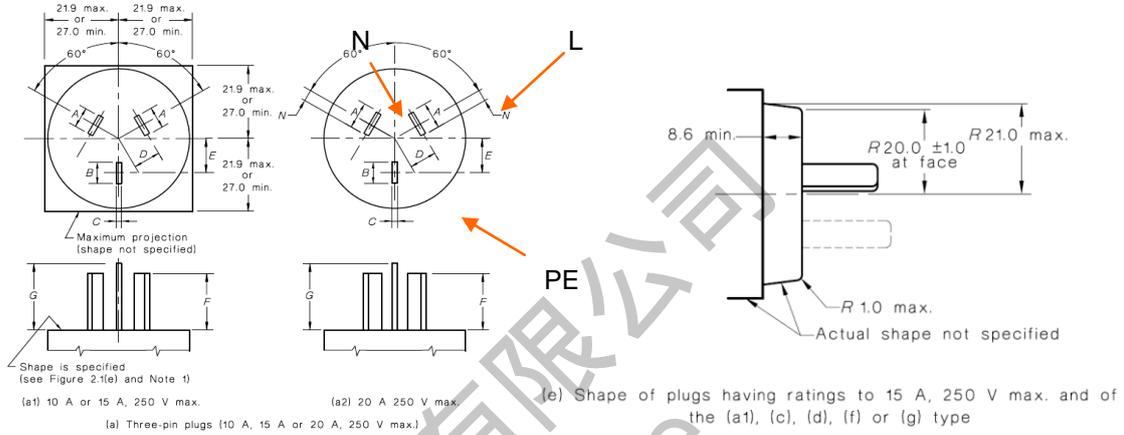


FIGURE 2.1 (in part) DIMENSIONS OF PLUGS

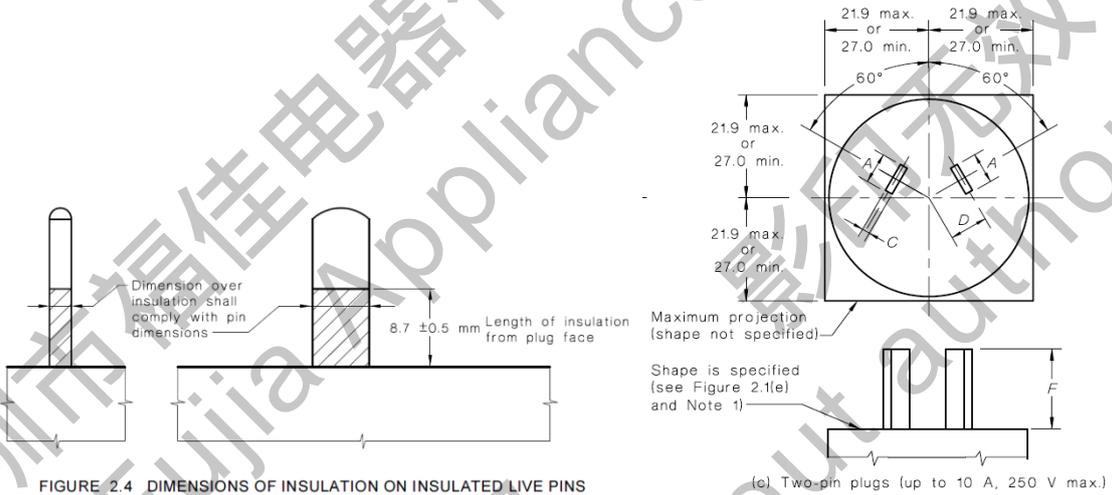


FIGURE 2.4 DIMENSIONS OF INSULATION ON INSULATED LIVE PINS

FIGURE 2.1 (in part) DIMENSIONS OF PLUGS

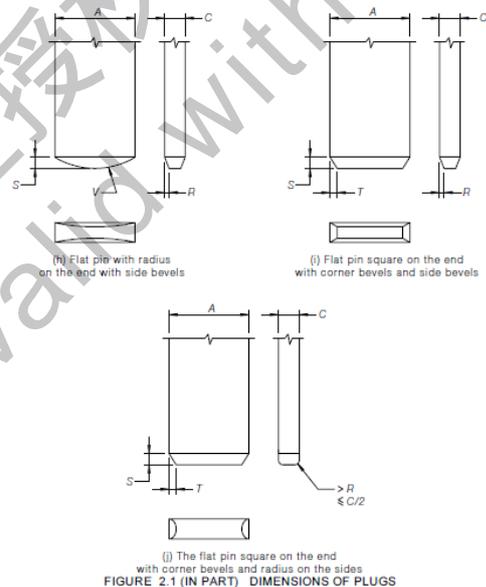


FIGURE 2.1 (IN PART) DIMENSIONS OF PLUGS

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Clause	Requirement – Test	Result – Remark	Verdict
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Dimensions of plugs acc. to figure 2.1 (a)/(c)

Location	Requirement (mm)	Measured (mm)	Verdict
Width of left Pin (A)	6.35 ± 0.15	6.33	P
Width of right Pin (A)	6.35 ± 0.15	6.33	P
Width of PE pin (B)	6.35 ± 0.15	No PE pin	N/A
Thickness of left Pin (C)	1.63 + 0.15	1.66	P
Thickness of right Pin (C)	1.63 + 0.15	1.66	P
Thickness of PE Pin (C)	1.63 + 0.15	No PE pin	P
Length of left Pin (F)	17.06 ± 0.4	17.07	P
Length of right Pin (F)	17.06 ± 0.4	17.07	P
Length of PE Pin (G)	19.94 ± 0.8	No PE pin	N/A
Centre of left and right pins to centre Of pin base (D)	7.92 *	Fit the testing gauge	P
Distance between PE pin centre and centre of pin base (E)	10.31 *	No PE pin	N/A
Width of enclosure left side	≥ 27.0 or ≤ 21.9	19.73	P
Width of enclosure right side	≥ 27.0 or ≤ 21.9	19.73	P
Length of enclosure top side	≥ 27.0 or ≤ 21.9	20.81	P
Length of enclosure bottom side	≥ 27.0 or ≤ 21.9	43.80	P

Dimensions of plugs acc. to figure 2.1 (e)

Location	Requirement (mm)	Measured (mm)	Verdict
Pin face radius on enclosure	≤21.0	19.74	P
Pin face radius on pins level	20 ± 1.0	19.70	P
Radius of pin base	≤1.0	0.75	P
Distance between pin base and enclosure	≥8.6	10.37	P

* Dimensions without tolerance are nominal. Samples are to be checked with the gauge specified in Appendix A, Appendix B or Appendix F, as appropriate.

Note: 1: (a) If of the non-insulated pin type, it should comply with all dimensions including Figure 2.1(e).
 (b) If of the insulated pin type, complying with Figure 2.4, and also complying with all other requirements of this Standard (e.g. Clause 2.8, 9 mm from live pins to the edge of plug mouldings), then other plug shapes are acceptable (e.g. oval 2-pin, triangular 3-pin). The R20 ±1.0 mm dimension of Figure 2.1(e) is not applicable, but the other dimensions of Figure 2.1(e) are still applicable to ensure they fit in the recess of Figure 3.5.

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Clause	Requirement – Test	Result – Remark	Verdict
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Dimensions of insulation on insulated live pins acc. to figure 2.4

Location	Requirement (mm)	Measured (mm)	Verdict
Length of insulation from plug face (left pin)	8.7 ± 0.5	9.15	P
Length of insulation from plug face (right pin)	8.7 ± 0.5	9.15	P
Dimension over insulation of left insulated live pin	1.63 +0.15 / -0.05	1.71	P
Dimension over insulation of right insulated live pin	1.63 +0.15 / -0.05	1.71	P

*With measurement uncertainty +/-0.05mm

Dimensions of plugs

Type of pin shape	Acc. to figure 2.1 (i)		Verdict
Location	Requirement (mm)	Measured (mm)	
Long side indent of left pin side 1 (R)	0.35 ± 0.05	0.37	P
Long side indent of left pin side 2 (R)	0.35 ± 0.05	0.37	P
Long side indent of right pin side 1 (R)	0.35 ± 0.05	0.36	P
Long side indent of right pin side 2 (R)	0.35 ± 0.05	0.36	P
Long side indent of PE pin side 1 (R)	0.35 ± 0.05	No PE pin	N/A
Long side indent of PE pin side 2 (R)	0.35 ± 0.05	No PE pin	N/A
Short side indent of left pin side 1 (T)	≥ 0.60	1.08	P
Short side indent of left pin side 2 (T)	≥ 0.60	1.08	P
Short side indent of right pin side 1 (T)	≥ 0.60	1.07	P
Short side indent of right pin side 2 (T)	≥ 0.60	1.07	P
Short side indent of PE pin side 1 (T)	≥ 0.60	No PE pin	N/A
Short side indent of PE pin side 2 (T)	≥ 0.60	N/A	N/A
Length of chamfer left pin (S)	0.90 ± 0.10	0.92	P
Length of chamfer right pin (S)	0.90 ± 0.10	0.92	P
Length of chamfer PE pin (S)	0.90 ± 0.10	No PE pin	N/A
Radius of left pin (V)	6*	Fit the testing gauge	P
Radius of right pin (V)	6*	Fit the testing gauge	P
Radius of PE pin (V)	6*	No PE pin	N/A

* Dimensions without tolerance are nominal. Samples are to be checked with the gauge specified in Appendix A, Appendix B or Appendix F, as appropriate.

End of Report

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Clause	Requirement – Test	Result – Remark	Verdict
J1	Scope	For Australian plug portion of FJ-SW728xxxxxyyyzS	P
J2	Requirements for plug portion		P
J2.1	Plug portion		P
J2.2	Requirements	Complied	P
J2.2.1	General		P
J2.2.2	Plug pins of plug portions	Complied	P
	Material for pins	Copper content : 58-61%	P
	Assembly of pins	Complied	P
	Form of pin	Complied	P
	Insulation of plug pin	Complied	P
J2.2.3	Ratings and dimensions for low voltage plug portions		P
	General(2.8.1) The distance between a live pin of any plug and the edge of the moulding of the plug, shall be not less than 9 mm.	10.98mm	P
	Compliance with dimensional requirements of Figure 2.1(2.8.4)	See dimension tables on page 9,10 and 12	P
J2.2.4	Internal connections for plug portions		N/A
J2.2.5	Arrangement of earthing connections for plug portions	No earth connection.	N/A
J2.2.6	Configuration of plug portions	Complied	P
J2.2.7	Tests		P
J2.2.7.1	General	Complied	P
J2.2.7.2	High voltage test (2.13.3)		P
	The plug shall withstand without failure an a. c. voltage of the value indicated in Table 2.3, applied between the parts set out in Items (a) and (c) of Clause 2.13.2 for 1 min in each case.	1000V applied. No Breakdown.	P
	The plug shall further withstand, without failure, a voltage of 3500 V a. c. applied between the parts set out in Items (b) and (d) of Clause 2.13.2 for 1 min in each case. (Amendment 1:2006)	3500V applied. No Breakdown.	P
	The insulation of insulated pin plugs shall withstand a voltage of 1 250V a. c. for 1 min applied in accordance with Clause 2.13.2(e).	1250V applied. No Breakdown.	P
J2.2.7.3	Mechanical strength of pin tests		P
J2.2.7.3.1	Tumbling barrel test (2.13.7.1)		P
	The tumbling barrel test is applied to determine the mechanical strength of the plug pins.	See test below.	P

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Clause	Requirement – Test	Result – Remark	Verdict
	Three samples which have not been subjected to any previous test are tested to the requirements of Clause 2.13.7 however, the test is modified for plug portions of equipment with integral pins as follows:	Complied	P
	A sample of equipment with integral pins is dropped –	Complied	P
	a) 500 times if the mass of the specimen does not exceed 250 g. The pins being straightened after each 100 drops and at the completion of the test to pass through the appropriate gauge of Figure A1, B1 or F1; and	Weight: 58g 500 times drop. After test, no broken and cracking was found (All enclosure material have been considered)	P
	b) 250 times if the mass of the specimen exceeds 250 g. The pins being straightened after 25 drops and at the completion of the test to pass through the appropriate gauge of Figure A1, B1 or F1		N/A
J2.2.7.3.2	Pin bending test	Complied	P
	The pins of the plug portion of three samples not subjected to any previous tests shall be tested for compliance with the pin bending test of clause 2.13.7.2.	Three samples tested.	P
	All flat-pins of plugs rated up to and including 15 A shall be subjected to a pin bending test.	Tested on all flat-pins of plug.	P
	Three sample plugs not subjected to any previous tests shall be tested After the tests the pins shall be inspected with normal or corrected to normal vision.	Inspected with normal vision.	P
	Active and neutral pins shall be forced towards the centroid of the plug and then back to the starting point. On the first sample plug, any earth pin shall be forced but in one direction only and then back to the starting point. On the second sample plug, any earth pin shall be forced in the opposite direction to that used for testing the first sample plug. On the third sample plug, any earth pin shall be forced in the direction that gave the least favorable result during testing of the first two sample plugs.(Amendment 1:2006)	Complied	P
	The pin shall not be broken off. If in doubt pins shall be disassembled from the plug and any insulation removed	The pin did not break off.	P
J2.2.7.4	Temperature rise test (2.13.8)	This requirement shall tested with the relevant product standards.	P
	The terminal screws or nuts are tightened with a torque equal to two-thirds of that specified in test No.5.	No screws or nuts used.	N/A

Appendix J of AS/NZS 3112: 2011 +A1: 2012 +A2: 2013			
Clause	Requirement – Test	Result – Remark	Verdict
	The test socket shall consist of a fixed socket outlet of a type complying with this Standard.	Direct plug-in equipment.	P
	The plug is inserted into the socket outlet and an alternating current of 1.1 times rated current is passed for 1 h.		P
	The temperature of the flexible cord terminal is determined by means of melting particles, colour changing indicators or thermocouples, so chosen and positioned that they have negligible effect on the temperature being determined.		P
	The temperature rise of the terminals shall not exceed 45 K.	Temperature rise: 17.6K (plug pins). Ambient: 26.7 °C	P
J2.2.7.5	Securement of pins of the plug portion (2.13.9)		P
	Movement of pins (2.13.9.1)	See test below	P
	Plugs shall be tested for pin movement by clamping the pin or pins not under test in a rigid holding block positioned 5 ± 0.5 mm from the plug face and applying a force of 18 ± 1 N to the pin under test. The design of the block shall be such that the pin under test shall not come into contact with the block during the test.	Complied	P
	Except for non-rewireable plugs, the test shall be carried out without a cord attached to the plug, and with the terminal screws loosened sufficiently to allow a 1mm^2 conductor to be connected.		N/A
	The plug and test equipment shall be preconditioned at a temperature of $40 \pm 1^\circ\text{C}$ for 1 h, without the test force applied. Throughout the test, all parts of the plug and test equipment shall be maintained at this temperature.	40°C for 1 h applied.	P
	For all plugs, the point of application of the force of the plug along the pins, and the direction of the force shall be- a) in both directions along the line perpendicular to the plane of the pin, and passing through the centre of the pin; and b) in that plane in both directions along a line at right angles to that specified in Item(a).	Complied	P
	Over a period of 10s, the force shall be gradually applied to each of the pins in the manner prescribed in Item (a) and (b), maintained at its maximum value for 10s, and then released. The deflection of the pins shall be measured along the line of the face relative to the face of the rigid holding block during the period when the force is applied. The maximum deflection shall not exceed 2.0mm	Max. deflection of L Pin: 1.0mm Max. deflection of N Pin: 1.0mm (Test on each sources of material, the max. value measured)	P

Appendix J of AS/NZS 3112: 2011 +A1: 2012 +A2: 2013			
Clause	Requirement – Test	Result – Remark	Verdict
	Following the test on all pin of a conforming to Figure 2.1, any distortion 5 min after the completion of the test on the last pin shall be such that it will not prevent the plug from being inserted in the appropriate standard gauges shown in Appendix A, Appendix B and Appendix F without the application of undue force	Plug portion is able to be inserted into the appropriate standard gauge without the application of undue force.	P
	For other types of plugs, any distortion after 5 min shall be such as will not prevent the plug being inserted into an appropriate socket-outlet without the application of undue force		N/A
	Fixing of pins (2.13.9.2)	See test below	P
	A separate sample of a plug shall be heated to a temperature of $50\pm 2^{\circ}\text{C}$ for 1 h and maintained at that temperature during the whole of tests, including the 5 min period after removal of the test load.	50°C for 1 h applied.	P
	The plug shall be held firmly in such a manner that there will be no undue squeezing or distortion of the body, and the means of holding shall not assist in maintaining the pins in their original position,	Complied	P
	Each pin, in turn, shall have applied to it a force which, over a period of 10 s, shall be increased steadily to $60\pm 0.6\text{N}$ and held at this value for 10 min.	60N applied.	P
	Two tests on each pin shall be conducted, one with the direction of force along the length of the pin towards the body of the plug, and the other with the direction of force along the length of the pin away from the body.	Complied	P
	The attachment of pins shall be considered inadequate if any pin is displaced relative to the adjacent material of the body by more than 2.4 mm at any time during these tests, or if any pin fails to return to within 0.8 mm of its nominal length specified in Figure 2.1 within 5 min of the removal of the test force.	During test: Max. displacement of L Pin: 1.2mm Max. displacement of N Pin: 1.2mm After test: Displacement of L Pin: 0.6mm Displacement of N Pin: 0.6mm (Test on each sources of material, the max. value measured.)	P
J2.2.7.6	Tests on the insulation material of insulated pin-plug portions (2.13.13)		P
	2.13.13.1 General		P

Appendix J of AS/NZS 3112: 2011 +A1: 2012 +A2: 2013			
Clause	Requirement – Test	Result – Remark	Verdict
	The material of the pin-insulation shall be resistant to the stresses to which it may be subjected at the high temperature likely to occur in conditions approaching the bad connection conditions and at low temperatures in particular conditions of service.	Complied	P
	Compliance shall be checked by the tests of Clause 2.13.13.2 to 2.13.13.6	See test below	P
	Pressure test at high temperature (2.13.13.2)	See test below	P
	A specimen of one insulated pin only shall be subjected to the following test by means of the apparatus shown in Figure 2.5. This apparatus shall have a blade having a round shape with a diameter of 6 mm and a thickness of 0.7 mm.	Complied	P
	The specimen shall be placed in position as shown in the Figure 2.5 and a force of 2.5 N shall be applied through the blade to specimen.	2.5N applied.	P
	The apparatus, with the specimen in position, shall be maintained for 2 h in a heating cabinet at a temperature of 160±5°C. The specimen shall then be removed from the apparatus and within 10 s, cooled by immersion in cold water.	160°C for 2h applied.	P
	The thickness of the insulation shall be measured immediately at the point of impression.	Complied	P
	The thickness of the insulation remaining at the point of impression shall be measured and shall not have been reduced by more than 50%	Thickness before test: 0.47mm Thickness after test: 0.38mm Length of insulation after test reduced by 19.1% (all material have been tested and max result recorded)	P
	Visual inspection shall be made and no cracks on the insulation material shall be visible with normal, or corrected to normal, vision without additional magnification, and the dimension of the insulating material shall not have changed below the minimum size shown in Figure 2.4.	No cracks are found on the insulating material. The dimension of insulating material did not changed.	P
	Static damp heat test (2.13.13.3)	See test below.	P
	An insulated pin plug shall be subjected to two damp heat cycles in accordance with IEC 60068-2-30. Db (12+12 h cycle), 95% relative humidity, lower temperature 25±3°C and upper temperature 40°C.	Complied	P

Appendix J of AS/NZS 3112: 2011 +A1: 2012 +A2: 2013

Clause	Requirement – Test	Result – Remark	Verdict
	After this treatment and after recovery to room temperature, the specimen shall be subjected to- g) the insulation resistance test in accordance with CLAUSE 2.13.2(E); h) high voltage test in accordance with Clause 2.13.3 and; i) abrasion test in accordance with Clause 2.13.13.6.	During high voltage test no breakdown occurred between live poles and insulation of the pins. For abrasion test, see Abrasion test (2.13.13.6) below.	P
	Low temperature test (2.13.13.4)	See test below.	P
	An insulated pin plug shall be maintained at $-15\pm 2^{\circ}\text{C}$ for at least 24 h and returned to room temperature.	-15°C for 24h applied.	P
	The specimen shall be subjected to – g) the insulation resistance test in accordance with Clause 2.13.2(e); h) high voltage test in accordance with Clause 2.13.3 and; i) abrasion test in accordance with Clause 2.13.13.6.	During high voltage test no breakdown occurred between live poles and insulation of the pins. For abrasion test, see Abrasion test (2.13.13.6) below.	P
	Impact test at low temperature (2.13.13.5)	See test below.	P
	A specimen of one insulated pin only shall be subjected to an impact test by means of the apparatus shown in Figure 2.6. The mass of the falling weight shall be 100 ± 1 g.	Complied	P
	The apparatus, on a sponge rubber pad 40 mm thick, together with the specimen, shall be maintained at $-15\pm 2^{\circ}\text{C}$ for at least 24 h.	-15°C for 24h applied.	P
	At the end of this period, the specimen shall be placed in position, as shown in Figure 2.6, and the falling weight shall be allowed to fall from a height of 100mm. Four impacts shall be applied successively to the same specimen, rotating it through 90° between impacts.	Complied	P
	After the test the specimen shall be allowed to return to room temperature and then examined, No cracks of the insulating material shall be visible with normal, or corrected to normal, vision without additional magnification.	No cracks were found on the insulating material.	P
	Abrasion test (2.13.13.6)	Use the same sample which passed the Static damp heat test (2.13.13.3) and Low temperature test (2.13.13.4) for abrasion test.	P
	An insulated pin of an insulated pin plug shall be subjected to the following test by means of an apparatus as shown in Figure 2.7.	Complied	P

Appendix J of AS/NZS 3112: 2011 +A1: 2012 +A2: 2013			
Clause	Requirement – Test	Result – Remark	Verdict
	The test apparatus comprises a horizontally disposed beam, which shall be pivoted about its centre point. A short length of steel wire, 1 mm in diameter and bent into a U-shape, the base of the U being straight, shall be rigidly attached, at both ends, to one end of the beam, so that the straight part projects below the beam and shall be parallel to the axis of the beam pivot.	Complied	P
	The plug shall be held in a suitable clamp in such a position that the straight part of the steel wire rests on the major axis face of the plug pin, at right angles to it. The pin shall slope downwards at an angle of 10° to the horizontal.	Complied	P
	The beam shall be loaded so that the wire exerts a force of 4 N on the pin.	4N applied.	P
	The plug shall be moved backwards and forwards in horizontal direction in the plane of the axis of the beam, so that the wire rubs along the pin. The length of the pin thus abraded shall be approximately 9 mm, of which approximately 7 mm shall be over the insulation.	Complied	P
	The number of movements shall be 20 000 (10 000 in each direction) and the rate of operation shall be 30 movements per min.	Complied	P
	After the test, the pins shall show no damage which may affect safety or impair the further use of the plug, in particular, the insulating sleeve shall not have punctured or rucked up.	The pins show no damage and the insulating sleeve was not punctured or rucked up.	P
J2.2.7.7	Equipment with integral pins intended to be supported by the contacts of a socket-outlet	Torque: 0.028Nm Limit: ≤0.25Nm	P
J2.3	Detachable plug portions		N/A
	Where a plug portion is detachable, compliance shall be established by assessment with the plug portion fully assembled with the equipment. Access to live parts shall be assessed for incorrect assembly of the plug portion. It shall not be possible to assemble the plug portion to the equipment resulting in a dangerous situation allowing access to live parts. The plug portion shall not expose live parts prior to assembly.	Fixed plug portion.	N/A

Appendix J of AS/NZS 3112: 2011 +A1: 2012 +A2: 2013			
Clause	Requirement – Test	Result – Remark	Verdict

Compliance with dimensional requirement of Fig 2.1/2.4

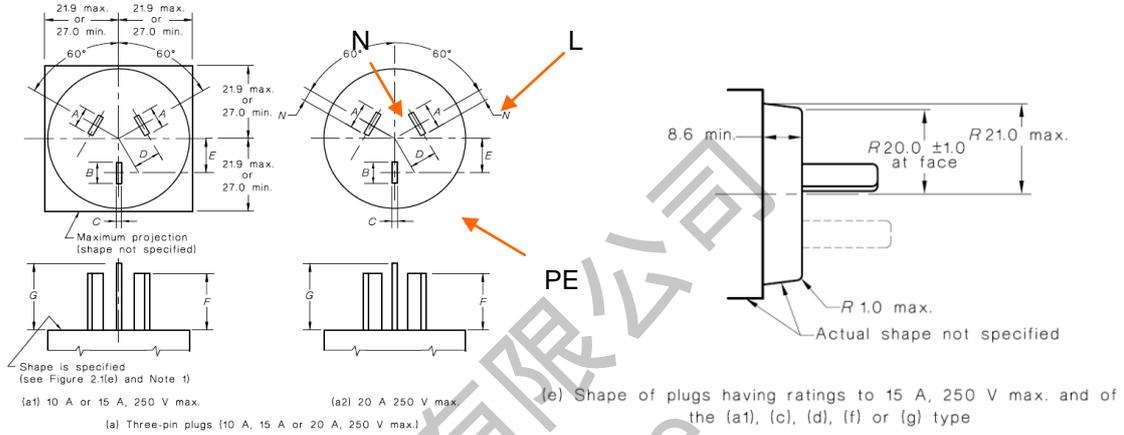


FIGURE 2.1 (in part) DIMENSIONS OF PLUGS

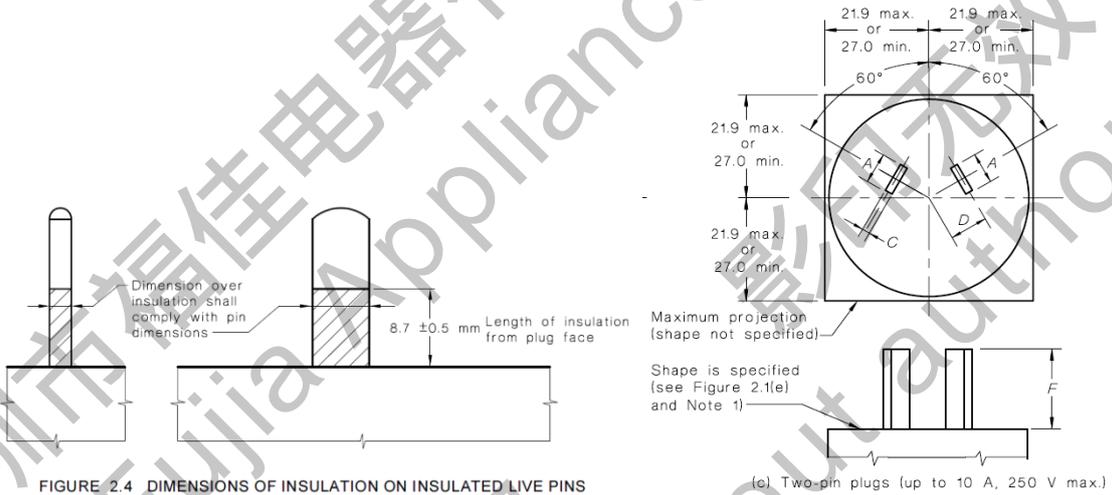


FIGURE 2.4 DIMENSIONS OF INSULATION ON INSULATED LIVE PINS

FIGURE 2.1 (in part) DIMENSIONS OF PLUGS

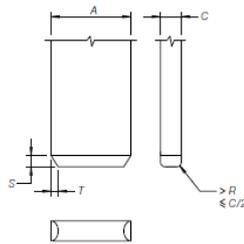
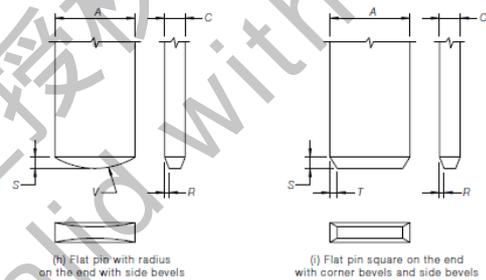


FIGURE 2.1 (IN PART) DIMENSIONS OF PLUGS

Appendix J of AS/NZS 3112: 2011 +A1: 2012 +A2: 2013

Clause	Requirement – Test	Result – Remark	Verdict
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Dimensions of plugs acc. to figure 2.1 (a)/(c)

Location	Requirement (mm)	Measured (mm)	Verdict
Width of left Pin (A)	6.35 ± 0.15	6.35	P
Width of right Pin (A)	6.35 ± 0.15	6.35	P
Width of PE pin (B)	6.35 ± 0.15	No PE pin	N/A
Thickness of left Pin (C)	1.63 + 0.15	1.61	P
Thickness of right Pin (C)	1.63 + 0.15	1.61	P
Thickness of PE Pin (C)	1.63 + 0.15	No PE pin	P
Length of left Pin (F)	17.06 ± 0.4	16.98	P
Length of right Pin (F)	17.06 ± 0.4	16.98	P
Length of PE Pin (G)	19.94 ± 0.8	No PE pin	N/A
Centre of left and right pins to centre Of pin base (D)	7.92 *	Fit the testing gauge	P
Distance between PE pin centre and centre of pin base (E)	10.31 *	No PE pin	N/A
Width of enclosure left side	≥ 27.0 or ≤ 21.9	20.63	P
Width of enclosure right side	≥ 27.0 or ≤ 21.9	46.26	P
Length of enclosure top side	≥ 27.0 or ≤ 21.9	19.85	P
Length of enclosure bottom side	≥ 27.0 or ≤ 21.9	19.85	P

Dimensions of plugs acc. to figure 2.1 (e)

Location	Requirement (mm)	Measured (mm)	Verdict
Pin face radius on enclosure	≤21.0	18.49	P
Pin face radius on pins level	20 ± 1.0	19.24	P
Radius of pin base	≤1.0	0.81	P
Distance between pin base and enclosure	≥8.6	8.87	P

* Dimensions without tolerance are nominal. Samples are to be checked with the gauge specified in Appendix A, Appendix B or Appendix F, as appropriate.

Note: 1: (a) If of the non-insulated pin type, it should comply with all dimensions including Figure 2.1(e).
 (b) If of the insulated pin type, complying with Figure 2.4, and also complying with all other requirements of this Standard (e.g. Clause 2.8, 9 mm from live pins to the edge of plug mouldings), then other plug shapes are acceptable (e.g. oval 2-pin, triangular 3-pin). The R20 ±1.0 mm dimension of Figure 2.1(e) is not applicable, but the other dimensions of Figure 2.1(e) are still applicable to ensure they fit in the recess of Figure 3.5.

Appendix J of AS/NZS 3112: 2011 +A1: 2012 +A2: 2013

Clause	Requirement – Test	Result – Remark	Verdict
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Dimensions of insulation on insulated live pins acc. to figure 2.4			
Location	Requirement (mm)	Measured (mm)	Verdict
Length of insulation from plug face (left pin)	8.7 ± 0.5	9.03	P
Length of insulation from plug face (right pin)	8.7 ± 0.5	9.03	P
Dimension over insulation of left insulated live pin	1.63 +0.15 / -0.05	1.65	P
Dimension over insulation of right insulated live pin	1.63 +0.15 / -0.05	1.65	P

*With measurement uncertainty +/-0.05mm

Dimensions of plugs			
Type of pin shape	Acc. to figure 2.1 (i)		
Location	Requirement (mm)	Measured (mm)	Verdict
Long side indent of left pin side 1 (R)	0.35 ± 0.05	0.36	P
Long side indent of left pin side 2 (R)	0.35 ± 0.05	0.36	P
Long side indent of right pin side 1 (R)	0.35 ± 0.05	0.36	P
Long side indent of right pin side 2 (R)	0.35 ± 0.05	0.36	P
Long side indent of PE pin side 1 (R)	0.35 ± 0.05	No PE pin	N/A
Long side indent of PE pin side 2 (R)	0.35 ± 0.05	No PE pin	N/A
Short side indent of left pin side 1 (T)	≥ 0.60	1.08	P
Short side indent of left pin side 2 (T)	≥ 0.60	1.08	P
Short side indent of right pin side 1 (T)	≥ 0.60	1.06	P
Short side indent of right pin side 2 (T)	≥ 0.60	1.06	P
Short side indent of PE pin side 1 (T)	≥ 0.60	No PE pin	N/A
Short side indent of PE pin side 2 (T)	≥ 0.60	N/A	N/A
Length of chamfer left pin (S)	0.90 ± 0.10	0.89	P
Length of chamfer right pin (S)	0.90 ± 0.10	0.89	P
Length of chamfer PE pin (S)	0.90 ± 0.10	No PE pin	N/A
Radius of left pin (V)	6*	Fit the testing gauge	P
Radius of right pin (V)	6*	Fit the testing gauge	P
Radius of PE pin (V)	6*	No PE pin	N/A

* Dimensions without tolerance are nominal. Samples are to be checked with the gauge specified in Appendix A, Appendix B or Appendix F, as appropriate.

End of Report

JIS C8303			
Clause	Requirement – Test	Result – Remark	Verdict
4	Performance		P
4.1	Retaining force		N/A
4.2	Temperature Rise	Test for power supply only.	P
4.3	Contact resistance	Not required for plug and socket without earth pole	N/A
4.4	Make and Break	See clause 6.5	N/A
4.5	Insulation resistance	L to N pin: >1000MΩ L/N to plug enclosure: >1000MΩ 5M Ohm required after make and break test.	P
4.6	Dielectric withstand voltage	1480V, 10mA, 1 min. required.	P
4.7	Resistance to heat	No resin moldings or rubber moldings	N/A
4.8	Strength of screw terminal and lead-wire joint		N/A
4.9	Strength of blade fixing part	Tested according to 6.10(3)	P
4.10	Rotating property of movable plug type	Fixed plug with pin molded on enclosure	N/A
4.11	Strength of enclosure	Tested according to 6.11	P
4.12	Strength of Cord anchorage		N/A
4.13	Strength of Cord outlet		N/A
4.14	Performance of screwless terminals		N/A
4.15	Endurance to ammonia gas		N/A
4.16	Tensile load		N/A
4.17	Waterproof		N/A
4.18	Flame retardance	No supply wire connected	N/A
5	Construction, dimensions and material		P
5.1	Construction in general		P
5.2	Terminals		N/A
5.3	Insulation	Enclosure material see table 14 in IEC 60065 report	P
5.4	Materials of conductive metal parts	Copper: 59.0% – 63.0%	P
5.5	Material of non-conductive metal parts	No such part	N/A
5.6	Shapes and dimensions of blades and blade receiving holes	See measured dimension	P
5.7	Dimensions of mounting parts of recessed socket-outlets		N/A
5.8	Dimensions of cable entry		N/A

JIS C8303			
Clause	Requirement – Test	Result – Remark	Verdict
5.9	Insulation distance	L/N to enclosure: 8.5mm Distance between L & N: >10.0mm	P
5.10	Symbol of poles	No earth pole or a pole of earth side.	N/A
5.11	Locking type, slip-check connectors		N/A
5.12	Waterproof connectors		N/A
6	Testing methods		P
6.1	Construction test	Considered.	P
6.2	Retaining force test		P
6.3	Temperature rise test		P
6.4	Contact resistance test		N/A
6.5	Make and break test	No such blade receiver or connector.	N/A
6.6	Insulation resistance test	Considered according to JIS C 8306:1996. see cl. 4.5	P
6.7	Dielectric withstand voltage test	Considered according to JIS C 8306:1996, see cl. 4.6	P
6.8	Heat resistance test		N/A
6.9	Strength test of screw terminal and lead-wire joint		N/A
6.10	Strength of blade fixing part	For mold on plug pins on thermoplastic material, (2) and (3) considered.	P
	(2): pull test from blade holes, 100N downward for 2 mins		P
	(3): Molded-on connectors		P
	(b) Specimen keep in temperature 20±2°C for 1 hr. in figure 2. blade move right and left 15° for 30 times, 10 times per minute.		P
	(c) Blade fixed as figure 3 move right and left 30° for 5 times.		P
6.11	Enclosure Strength tests		P
	(1) Enclosure compressing test	600N applied on the wider side of specimen between 5mm thick of 60 rubber sheet on top of 15mm or more thick hardwood board for 1 minute.	P
6.12	Strength test of Cord anchorage		N/A
6.13	Strength test of Cord outlet		N/A
6.14	Tensile strength test of screwless terminals		N/A
6.15	Bending test for screwless terminal		N/A
6.16	Cyclic heating test for screwless terminal		N/A

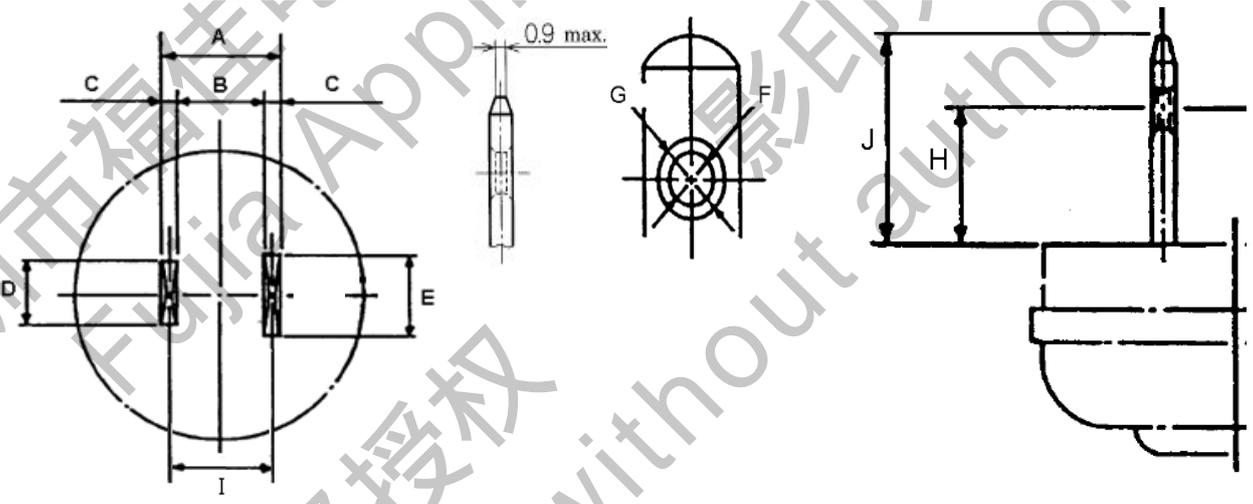
JIS C8303			
Clause	Requirement – Test	Result – Remark	Verdict
6.17	Withstand overcurrent test for screwless terminal		N/A
6.18	Ammonia gas durability test		N/A
6.19	Rotating test of movable plug-blade type		N/A
6.20	Tensile load test		N/A
6.21	Waterproof test		N/A
6.22	Flame retardance test		N/A
7	Inspection		P
7.2	Type inspection	Testing method clause 6 considered. See clause 4, 5 and 9 requirement	P
9	Marking	Plug portion is an integral part on appliance enclosure, refer to appliance ratings	P

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JIS C8303			
Clause	Requirement – Test	Result – Remark	Verdict

For model FJ-SW116xxxxyyzP

Measured dimensions of the plug portion (per JIS C 8303 or IEC 60 083)				P
Location	Measured dimensions (mm)			Limit of dimensions (mm)
	Sample 1	Sample 2	Sample 3	
A	14.07	14.07	14.09	Under 14,6
B	11.11	11.13	11.14	Over 10,8
C	1.48	1.47	1.47	1,5 ± 0,1
D	6.29	6.29	6.3	6,3 ± 0,3
E	6.29	6.30	6.30	6,3 ± 0,3
F	2.92	2.88	2.92	∅ 3 + 0,3 / - 0,2
G	3.63	3.61	3.6	Over ∅ 3,5
H	11.42	11.41	11.42	11,7 ± 0,4
I	12.7	12.7	12.7	12.7 ¹⁾
J	17.02	17.01	17.0	17 ± 1,3

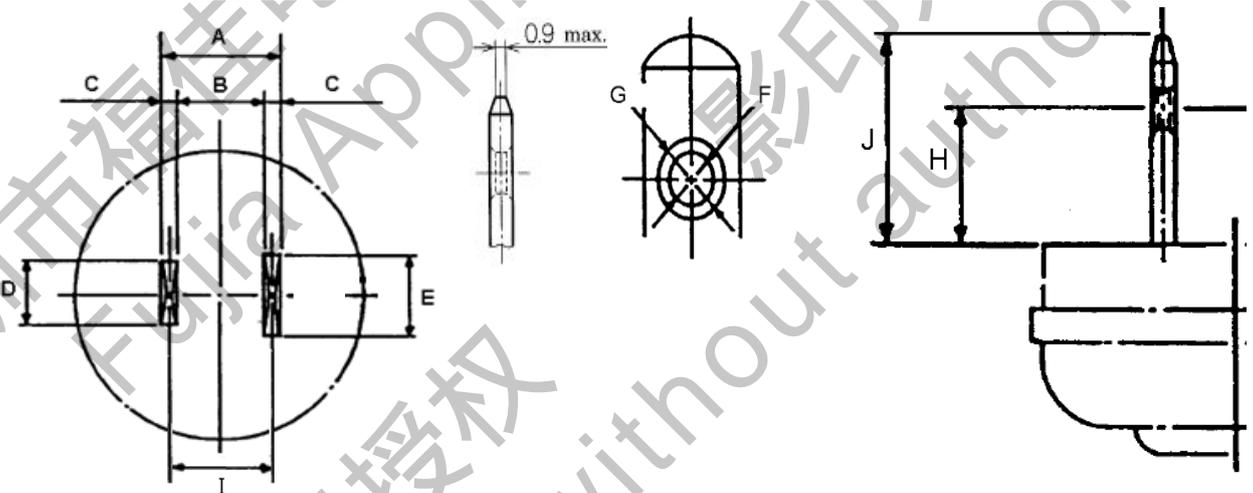


Note: 1) Nominal value without tolerance

JIS C8303			
Clause	Requirement – Test	Result – Remark	Verdict

For Japanese plug portion of model FJ-SW116xxxxyyzN

Measured dimensions of the plug portion (per JIS C 8303 or IEC 60 083)				P
Location	Measured dimensions (mm)			Limit of dimensions (mm)
	Sample 1	Sample 2	Sample 3	
A	14.08	14.09	14.07	Under 14,6
B	11.13	11.12	11.13	Over 10,8
C	1.47	1.48	1.47	1,5 ± 0,1
D	6.31	6.32	6.31	6,3 ± 0,3
E	6.28	6.29	6.30	6,3 ± 0,3
F	2.92	2.91	2.90	∅ 3 + 0,3 / - 0,2
G	3.61	3.61	3.59	Over ∅ 3,5
H	11.43	11.42	11.41	11,7 ± 0,4
I	12.7	12.7	12.7	12.7 ¹⁾
J	17.12	17.05	17.07	17 ± 1,3

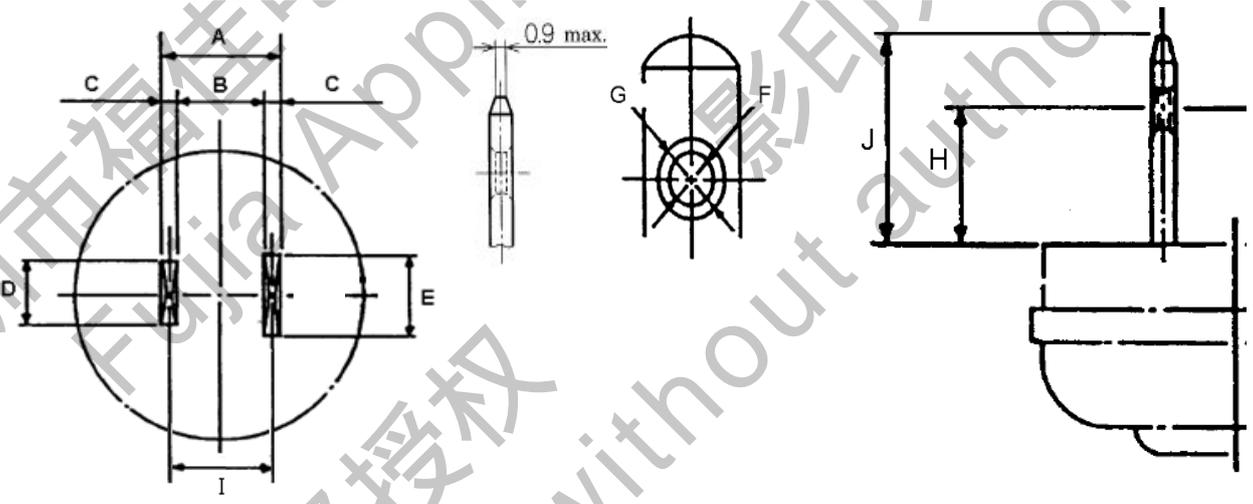


Note: 1) Nominal value without tolerance

JIS C8303			
Clause	Requirement – Test	Result – Remark	Verdict

For model FJ-SW728xxxxyyzP

Measured dimensions of the plug portion (per JIS C 8303 or IEC 60 083)				P
Location	Measured dimensions (mm)			Limit of dimensions (mm)
	Sample 1	Sample 2	Sample 3	
A	14.07	14.07	14.07	Under 14,6
B	11.13	11.11	11.13	Over 10,8
C	1.47	1.48	1.47	1,5 ± 0,1
D	6.32	6.29	6.28	6,3 ± 0,3
E	6.29	6.29	6.31	6,3 ± 0,3
F	2.93	2.89	2.89	∅ 3 + 0,3 / - 0,2
G	3.61	3.60	3.62	Over ∅ 3,5
H	11.39	11.40	11.41	11,7 ± 0,4
I	12.7	12.7	12.7	12.7 ¹⁾
J	17.05	17.08	17.05	17 ± 1,3



Note: 1) Nominal value without tolerance

IRAM 2063			
Clause	Requirement – Test	Result – Remark	Verdict

1. Dimension measurement according to IRAM2063: 2009

Plug dimensions (IRAM 2063:2009) (for plug portion of FJ-SW116xxxxyyyZA)

Location	Requirement		Measured		Verdict
Marking of neutral with N	Fig. 3		marked		P
A: Distance from edge to L and N pins	min. 8	mm	11.15	mm	P
Distance between pin center	13.72±0.1	mm	13.72	mm	P
g: Pin length	18.2±0.2	mm	18.26	mm	P
a: Pin width	6.25±0.1	mm	6.26	mm	P
e: Pin thickness	1.55±0.07	mm	1.57	mm	P
b: Pin center to plug center	7.92±0.1	mm	7.91	mm	P
One half distance of pin center to pin center	6.86±0.1	mm	6.89	mm	P
Pin angle	120°±5'		120°		P
Ending of the contact pins be rounded	Fig. 2a or 2b		2a		P

Plug dimensions (IRAM 2063:2009) (for plug portion of FJ-SW728xxxxyyyZA)

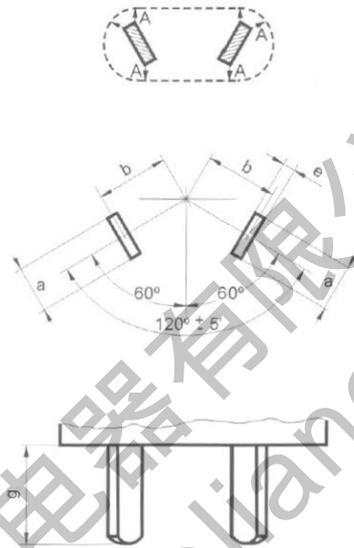
Location	Requirement		Measured		Verdict
Marking of neutral with N	Fig. 3		marked		P
A: Distance from edge to L and N pins	min. 8	mm	11.21	mm	P
Distance between pin center	13.72±0.1	mm	13.75	mm	P
g: Pin length	18.2±0.2	mm	18.29	mm	P
a: Pin width	6.25±0.1	mm	6.29	mm	P
e: Pin thickness	1.55±0.07	mm	1.56	mm	P
b: Pin center to plug center	7.92±0.1	mm	7.93	mm	P
One half distance of pin center to pin center	6.86±0.1	mm	6.87	mm	P
Pin angle	120°±5'		120°		P
Ending of the contact pins be rounded	Fig. 2a or 2b		2a		P

Pin dimension and marking requirements:

IRAM 2063			
Clause	Requirement – Test	Result – Remark	Verdict

Table 1: Plug dimensions

Ficha	a	b	e	g
10 A	6,25	7,92	1,55 ± 0,07	18,2 ± 0,2



References:

Dimension in mm.

A: 8 mm (min)

The dashed line only shows the minimum value

Figure 1: Plug dimensions

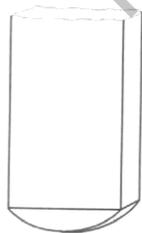


Figure 2a



Figure 2b



Figure 3

IRAM 2063			
Clause	Requirement – Test	Result – Remark	Verdict

1. Dimension measurement according to IRAM2063: 2009

Plug dimensions (IRAM 2063:2009) (for Argentine plug portion of FJ-SW116xxxxyyyzzN)

Location	Requirement	Measured	Verdict
Marking of neutral with N	Fig. 3	marked	P
A: Distance from edge to L and N pins	min. 8 mm	11.30 mm	P
Distance between pin center	13.72±0.1 mm	13.75 mm	P
g: Pin length	18.2±0.2 mm	18.27 mm	P
a: Pin width	6.25±0.1 mm	6.27 mm	P
e: Pin thickness	1.55±0.07 mm	1.59 mm	P
b: Pin center to plug center	7.92±0.1 mm	7.96 mm	P
One half distance of pin center to pin center	6.86±0.1 mm	6.88 mm	P
Pin angle	120°±5'	120°	P
Ending of the contact pins be rounded	Fig. 2a or 2b	2a	P

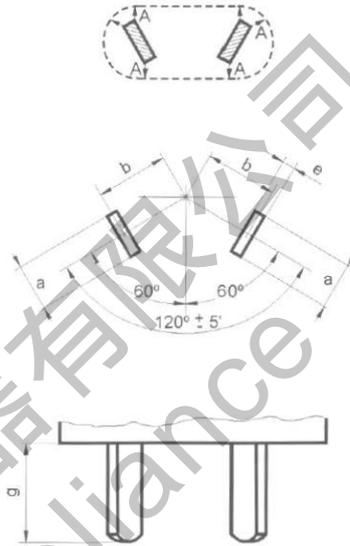
Pin dimension and marking requirements:

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IRAM 2063			
Clause	Requirement – Test	Result – Remark	Verdict

Table 1: Plug dimensions

Ficha	a	b	e	g
10 A	6,25	7,92	1,55 ± 0,07	18,2 ± 0,2



References:

Dimension in mm.

A: 8 mm (min)

The dashed line only shows the minimum value

Figure 1: Plug dimensions

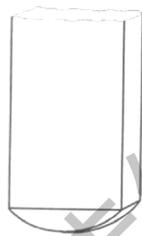


Figure 2a



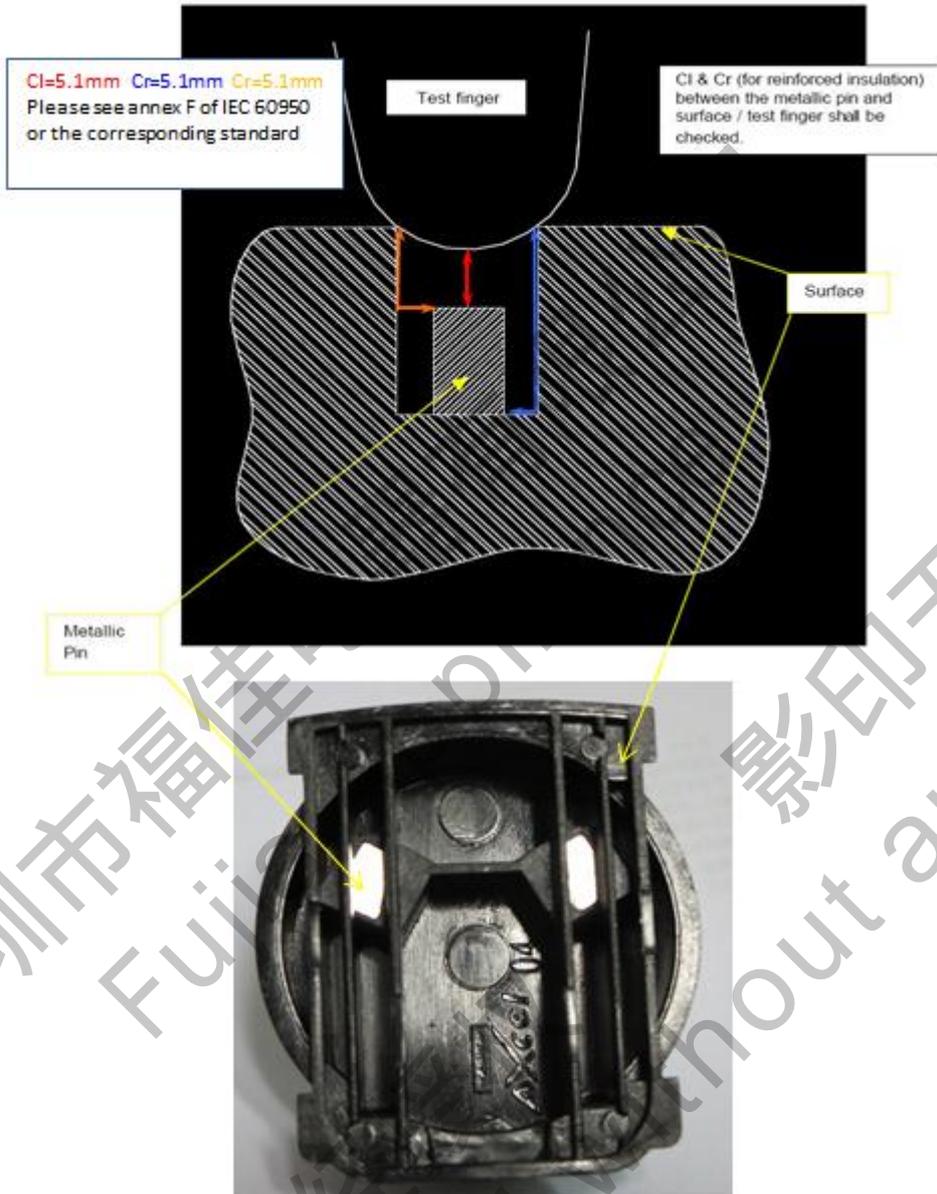
Figure 2b



Figure 3

IRAM 2063			
Clause	Requirement – Test	Result – Remark	Verdict

Dimension measurement for detachable plug:



End of report