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检测
TESTING
CNAS L3110

TEST REPORT

Reference No.	:	WTX23D10218937Z001
Applicant	:	GlobTek, Inc.
Address	:	186 Veterans Dr. Northvale, NJ 07647 USA
Manufacturer	:	GlobTek, Inc.
Address	:	186 Veterans Dr. Northvale, NJ 07647 USA
Product Name	:	Blades-R
Model No	:	R-NA-3
Total pages	:	42 Pages
Standards	:	☒ IEC 60320-1: 2021 Appliance couplers for household and similar general purposes – Part 1: General requirements
Date of Receipt sample	:	2023-10-18
Date of Test	:	2023-10-18 to 2023-11-15
Date of Issue	:	2023-11-30
Test Result	:	**Pass**

Remarks:
The results shown in this test report refer only to the sample(s) tested, this test report cannot be reproduced, except in full, without prior written permission of the company. The report would be invalid without specific stamp of test institute and the signatures of compiler and approver.

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Compiled by:

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Test item description.....:	Blades-R
Trade Mark(s).....:	GlobTek, Inc.
Model/Type reference.....:	R-NA-3
Ratings.....:	250V~, 50-60Hz,2.5A

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

The product with models R-NA-3 is Power supply with detachable US plug and connector
The maximum ambient temperature specified by manufacturer is 40°C.

Summary of testing:

From the result of our examination and tests in the submitted samples, conclude they comply with the requirements of the standard IEC 60320-1:2021

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.

Test item particulars	
Classification of installation and use.....:	
Supply Connection.....:	AC Mains
.....:	
Construction.....:	☐ Standard sheet according to IEC 60320-3 ☒ Non-standardized construction
Rated voltage.....:	☒ AC 250 V Others:
Rated current.....:	2.5 A
Maximum pin temperature.....:	☒ 70 °C Cold conditions ☐ 120 °C Hot conditions ☐ 155 °C Very hot conditions
Ambient temperature.....:	☒ max. +40 °C, but max. 35 °C over a period of 24 h ☐ Use in ambient temperatures above +35 °C up to and including +90 °C according to Annex E
Type of equipment to be connected.....:	☒ Class I equipment ☐ Class II equipment
Appliance inlets and appliance outlets	
Method of mounting.....:	☐ Flange mounting ☐ Snap-in mounting ☐ Inlay mounting ☒ Others:
Type of terminal.....:	☐ Screw ☐ Screwless ☐ Pillar ☒ Others:
Type of terminations.....:	☒ Solder termination ☐ PCB-termination with additional solder terminal for earthing contact ☐ PCB-termination ☐ Flat-quick tab-termination 2,8 x 0,8 mm ☐ Flat-quick tab-termination 4,8 x 0,8 mm ☐ Flat-quick tab-termination 6,3 x 0,8 mm ☐ Others:
Connectors and plug connectors	
Method of connecting the cord.....:	☒ Non-rewirable ☒ Crimped ☐ Others: ☐ rewirable ☐ Screw terminals ☐ Others:
Construction of cable entry.....:	☒ Straight ☐ Angled

Possible test case verdicts:	
- test case does not apply to the test object.....:	N/A
- test object does meet the requirement.....:	P (Pass)
- test object does not meet the requirement.....:	F (Fail)
Testing.....:	
Date of receipt of test item.....:	2023-10-18
Date (s) of performance of tests.....:	2023-10-18 to 2023-11-15
General remarks:	
"(See Enclosure #)" refers to additional information appended to the report. "(See appended table)" refers to a table appended to the report. **Throughout this report a ☒ comma / ☐ point is used as the decimal separator.**	
Manufacturer's Declaration per sub-clause 4.2.5 of IECEE 02:	
The application for obtaining a CB Test Certificate includes more than one factory location and a declaration from the Manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided.....:	☐ **Yes** ☒ **Not applicable**
When differences exist; they shall be identified in the General product information section.	
Name and address of factory (ies).....:	1.GlobTek, Inc. 186 Veterans Dr. Northvale, NJ 07647 USA 2. GlobTek (Suzhou) Co., Ltd Building 4, No. 76, Jin Ling East Rd., Suzhou Industrial Park, Suzhou,JiangSu 215021, China
General product information and other remarks: Products covered by this test report are Connector The product Rating(s):250V~,50-60Hz, 2.5A	

IEC 60320-1			
Clause	Requirement + Test	Result - Remark	Verdict

8	**MARKING**		P
8.1	**General**		P
	Appliance couplers are marked with:		P
	- name, trademark or identification mark of the manufacturer or responsible vendor..... :	GlobTek, Inc.	P
	- type reference.....:	R-NA-3	P
8.2	**Additional markings**		P
	Standardized connectors/plug connectors in accordance with IEC 60320-3 and all non-standardized appliance couplers are additionally marked with:		P
	- rated current (A) (except 0,2 A connectors).....:	2.5A	P
	- rated voltage (V).....:	250V	P
	- symbol for nature of supply.....:	~	P
	- marking to identify the type of conductors suitable for screwless terminal..... :		N/A
8.3	**Appliance couplers for class II equipment**		P
	Appliance couplers for class II: Not marked with the symbol for class II construction		P
8.4	**Symbol or alphanumeric notations**		P
	Correct symbols are used		P
	Marking for the nature of supply placed next to the marking for rated current and rated voltage		P
8.5	**Legibility of marking**		P
	Connectors/plug connectors: Marking according to 8.1, is still easily discernible		P
8.6	**Terminal markings and wiring instructions**		N/A
	Terminals, in rewirable non-reversible connectors/plug connectors, are indicated as follow:		N/A
	- earthing terminal: [earth symbol, earth symbol in circle or PE]..... :		N/A
	- neutral terminal: N.....:		N/A
	Conductor, in non-rewirable polarized connectors/plug connectors are connected as specified in 22.1		N/A
	Appliance inlets/appliance outlets, other than those integrated or incorporated in an appliance or equipment, have terminal markings to correspond with this subclause		N/A
	Rewirable connectors/plug connectors are supplied with the following instruction:		N/A
	- method of connection of the conductors..... :		N/A
	- method of the operation of the cord anchorage..... :		N/A

IEC 60320-1			
Clause	Requirement + Test	Result - Remark	Verdict
	- length of sleeving and insulation to be stripped back.....:		N/A
	- sizes and types of cable or cords suitable..... :		N/A
8.7	**Durability**		P
	Marking is easily legible and durable		P
	Marking are not placed on screw or other removable parts		P
8.8	**Test and inspection**		P
	Test: 15 s with water, 15 s with petroleum spirit		P
	Marking made by moulding, pressing or engraving		P
9	**DIMENSIONS AND COMPATIBILITY**		P
9.1	**General**		P
	Appliance couplers are designed that unintended or improper connection is prevented		P
9.2	**Single-pole connection**		P
	Single-pole connections between connectors/ appliance outlets and appliance inlets/plug connectors are not possible		P
9.3	**Compatibility**		P
	It shall not be possible to engage (using a force of 60 N for 60 s):		P
	- connectors for class II equipment in appliance inlets/plug connectors for class I equipment		P
	- plug connectors for devices of protection class I in connectors/appliance outlets for devices of protection class II		P
	- connectors for cold conditions in appliance inlets/plug connectors for hot or very hot conditions		P
	- plug connectors for cold conditions in appliance outlets for hot or very hot conditions		P
	- connectors for hot conditions in appliance inlets/plug connectors for very hot conditions		P
	- plug connectors for hot conditions in appliance outlets for very hot conditions		P
	- connectors in appliance inlets/plug connectors having a higher rated current than the connector		P
	- plug connectors in appliance outlets having a lower rated current than the plug connector		P
	Test: Engagement of a connector or plug connector with a force of 60 N for min. 60 s		P
	During the test: no contact of the pins		P
9.4	**Dimensions for standardized appliance couplers**		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Standardized appliance couplers shall comply with the relevant standard sheets according to IEC 60320-3..... :		N/A
9.5	**Dimensions for non-standardized appliance couplers**		P
	Non-standardized appliance couplers are acceptable if do not adversely affect the purpose and safety of standardized appliance couplers		P
	There are no small deviations from the dimensions as specified in the standard sheets which give the impression of a standardized coupler which could lead to it being mistaken for a standardized appliance coupler		P
	No changes which adversely affect the contact-making ability		P
	It is not possible to engage a part of a non-standardized appliance coupler with a complementary part of a standardized appliance coupler complying with the standard sheets in any part of IEC 60320		P
	It is not possible to engage a part of a non-standardized appliance coupler with a complementary part of a standardized appliance coupler for direct current		P
	It is not possible within a given system to make connections other than in the intended position or to make partial connections causing deformation which can impair the further use of the appliance for:		P
	- a connector and associated appliance inlet		P
	- an appliance outlet with the associated plug connector		P
10	**PROTECTION AGAINST ELECTRIC SHOCK**		P
10.1	**Accessibility of live parts**		P
	Live parts of appliance couplers are not accessible when in partial or complete engagement		P
	Live parts of connectors/appliance outlets are not accessible		P
	Connectors with enclosures or bodies of elastomeric or thermoplastic material: test made with the standard test probe B of IEC 61032 applied for min. 30 s with a force of 20 N		P
10.2	**Protection against single pole connection**		P
	Connection between a pin of an appliance inlet/plug connector and a contact of a connector/appliance outlet is not possible as long as any of the pins is accessible		P
10.3	**Protection against access to live parts**		P

IEC 60320-1			
Clause	Requirement + Test	Result - Remark	Verdict
	It is not possible to remove parts preventing access to live parts without the aid of a tool		P
	Bushes are adequately fixed, and it is not possible to remove them without dismantling the connector/appliance outlet		P
10.4	**External parts**		P
	Insulating material for external parts of connectors, appliance outlets and plug connectors		P
10.5	**Shrouds**		N/A
	Insulating material for shroud and base of appliance inlets without earthing contact and those of 2,5 A appliance inlets/appliance outlets with earthing contact		N/A
11	**PROVISION FOR EARTHING**		P
	Appliance couplers with protective earthing contact: constructed that the protective earthing contact is first make and last break relative to any other contact		P
12	**TERMINAL AND TERMINATIONS**		P
12.1	**General**		P
	Requirements in the appropriate IEC standard apply for the terminal and terminations		P
	Clamping means of terminals do not serve to fix any other components		P
12.2	**Rewirable appliance couplers**		N/A
	They are provided with screw-type clamping units or screwless clamping units according to IEC 60999-1		N/A
12.3	**Non-rewirable appliance couplers**		P
	They are provided with soldered, welded, crimped or equally effective screwless connections.....:		P
	The possibility to disconnect the conductor is not allowed		P
13	**CONSTRUCTION**		P
13.1	**Risk of accidental contact**		P
	There is no risk of accidental contact between earthing contact of appliance inlet/plug connector and current-carrying contacts of the connector/appliance outlet		P
13.2	**Contact positions**		P
	In non-reversible connectors/plug connectors the contact positions are established by looking at the engagement face as shown in the standard sheets of IEC 60320-3		N/A
	Position shall be set out as in Table 1:		N/A
	Connectors:		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	- earthing contact: in a symmetrical arrangement		N/A
	- line contact: lower right-hand position		N/A
	- neutral contact: lower left-hand position		N/A
	Plug connectors:		N/A
	- earthing contact: in a symmetrical arrangement		N/A
	- line contact: lower left-hand position		N/A
	- neutral contact: lower right-hand position		N/A
	In non-reversible appliance couplers not complying with the standard sheets of IEC 60320-3:		P
	- Verification of the correct polarization		P
13.3	**Parts covering live parts**		P
	Adequately locked against loosening		P
	Test: Inspection and tests of Clause 18, 20 and 23		P
13.4	**Pin construction**		P
13.4.1	**Prevention of rotation**		P
	Pins and contacts adequately locked against rotation		P
13.4.2	**Pin retention**		P
	Pins of appliance inlets/plug connectors:		P
	- are securely retained		P
	- have adequate mechanical strength		P
	- it is not possible to remove them without the aid of a tool		P
	- are surrounded by a shroud		P
	- are not protrude beyond the rim of the shroud		P
	Test for security of pin retention		P
	- heating of the sample 60 +5/0 min, test temperature (°C)	70℃;60min	—
	- each pin subjected to a force of 60 N ± 0,6 N for 60 s + 3/0 s	60N;60s	P
	- force applied in direction away from the base		P
	- force applied in direction towards the base		P
	During the test on any pin there is no movement exceeding 2,5 mm	0.3mm	P
	5 min. after removal of test force, pins remain within:		P
	- for standardized appliance couplers, the tolerances of the standard sheet		N/A
	- for non-standardized appliance couplers, as specified by the manufacturer		P

IEC 60320-1			
Clause	Requirement + Test	Result - Remark	Verdict
13.4.3	**Non-solid pins**		P
	Test for non-solid pins		P
	A force of 100 N applied for 60 s + 3/0 s by means of a steel rod having a diameter of 4,8 mm		P
	After the test: - no significant alteration in the shape of the pin		P
13.4.4	**Pins for appliance couplers for higher ambient temperatures up to +90 °C**		N/A
	Pins for plug connectors or appliance inlets made of solid material		N/A
13.5	**Contact pressure**		P
	Contacts of connectors/appliance outlets are self-adjusting so as to provide adequate contact pressure		P
	Self-adjustment of the contacts in connectors/ appliance outlets other than 0,2 A, does not depend upon the resiliency of insulating material		P
13.6	**Enclosure**		P
13.6.1	**General**		P
	Parts of the body of connectors/plug connectors are reliably fixed to one another		P
13.6.2	**Rewirable connectors and rewirable plug connectors**		N/A
	It is not possible to dismantle the connector/plug connector without the aid of a tool		N/A
	Terminals and the ends of cord - completely enclosed by the enclosure		N/A
	Construction is such that conductors can be properly connected and is unlikely that:		N/A
	- cores are not pressed against each other causing damage		N/A
	- cores of live conductor not pressed against accessible metal parts		N/A
	- core of earthing conductor not pressed against live parts		N/A
	It is not possible to assemble the rewirable connector in such a way that terminals are enclosed and contacts accessible		N/A
	Separate independent means for fixing and locating parts of the body with respect to each other are present in rewirable connectors/plugs connectors		N/A
	Thread-cutting screws are not used		N/A
	Resiliency of the contacts does not depend upon the assembly of the parts of the body		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Partial loosening of assembly screws does not allow the detachment of parts providing protection against electric shock		N/A
13.6.3	**Non-rewirable connectors and non-rewirable plug connectors**		P
	Accessories are such that:		P
	- flexible cable cannot be separated from the accessory without making it permanently useless		P
	- accessory cannot be opened by hand or by using a general purpose tool		P
13.7	**Earth connection**		P
	Earthing contact/earthing pin of connector/plug connector is fixed to the body		P
	Various parts of earthing contact/earthing pin and earthing terminal which are not in one piece are fixed together by riveting, welding or similar reliable manner		P
	Metal part of appliance coupler, designed that corrosion do not impair safety		P
	Connection between earthing contact/earthing pin and earthing terminal is of metal resistant to corrosion		P
13.8	**Location of terminals and terminations**		P
13.8.1	**General**		P
	Terminals of rewirable accessories and terminations of non-rewirable accessories are so located or shielded that loose wires will not present a risk of electric shock		N/A
	Non-rewirable moulded-on accessories are provided with means to prevent loose wires of a conductor from reducing the minimum isolation distance requirements		P
13.8.2	**Free wire test for rewirable accessories**		N/A
	Test with 6 mm free wire of in every possible direction		N/A
	Free wire of a conductor connected to a live terminal does not touch any accessible metal part or is not able to emerge from the enclosure		N/A
	Free wire of a conductor connected to an earthing terminal does not touch a live part		N/A
13.8.3	**Free wire test for non-rewirable non-moulded-on accessories**		N/A
	Test with a free wire of length equivalent to the maximum designed stripping length declared by the manufacturer plus 2 mm		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Free wire of a conductor connected to a live termination does not touch any accessible metal part or does not reduce creepage distance and clearance below 1,5 mm to the external surface		N/A
	Free wire of a conductor connected to an earth termination does not touch any live part		N/A
13.8.4	**Free wire verification for non-rewirable moulded-on accessories**		N/A
	Verification of means to prevent stray wires reducing the minimum distance through insulation to external accessible surface below 1,5 mm		N/A
13.9	**Connectors/plug connectors without earthing contact**		N/A
	Connectors/plug connectors without earthing contact and 2,5 A connectors/plug connectors with earthing contact are part of a cord set or an interconnection cord set		N/A
13.10	**Fuses, relays, thermostats, thermal cut-outs and switches**		N/A
	Fuses, relays, thermostats and thermal cut-outs are not incorporated in connectors and plug connectors complying with the standard sheets of IEC 60320-3		N/A
	Fuses, relays, thermostats and thermal cut-outs incorporated in appliance inlets and appliance outlet comply with the relevant IEC standards		N/A
	Switches comply with IEC 61058-1 (all parts)		N/A
	Energy regulators comply with IEC 60730-2-11		N/A
14	**MOISTURE RESISTANCE**		P
	Test samples kept in a humidity cabinet containing air with relative humidity maintained between 91 % and 95 % for:		P
	- 168 h (seven days) for appliance coupler with earthing contacts		P
	- 48 h (two days) in all other cases		N/A
	After this treatment the test sample show no damage		P
15	**INSULATING RESISTANCE AND ELECTRIC STRENGTH**		P
15.1	**General**		P
	Adequate insulation resistance and dielectric strength for appliance coupler		P
15.2	**Insulation resistance**		P
	The insulation resistance measured 60 s ± 5 s after application of 500 + 50 V d.c.	see appended Table 15.2	P
15.3	**Dielectric strength**		P
	Electric strength: a.c. test voltage applied for 60 s ± 5 s	see appended Table 15.3	P

IEC 60320-1			
Clause	Requirement + Test	Result - Remark	Verdict
16	**FORCES NECESSARY TO INSERT AND TO WITHDRAW THE CONNECTOR/APPLIANCE OUTLET**		P
16.1	**General**		P
	The construction of appliance couplers shall allow the easy insertion and withdrawal of the connector/appliance outlet and prevent from working itself out of the appliance inlet/plug connector in normal use		P
16.2	**Verification of the maximum withdrawal force**		P
	For standardized appliance couplers: gauge is used		—
	For non-standardized types: the counterpart as specified by the manufacturer is used		—
	The connector/appliance outlet shall disengage within 3 s from the appliance inlet/plug connector	see appended Table 16	P
16.3	**Verification of the minimum withdrawal force**		P
	For standardized types: test pin gauge is used		—
	For non-standardized types: test pin with minimum dimensions as specified by the manufacturer is used		—
	The test pin did not fall from the contact assembly within 3 s	see appended Table 16	P
17	**OPERATION OF CONTACTS**		P
	Contacts and pins of appliance couplers make connection with a sliding action		P
	Contacts of connectors/appliance outlets provide adequate contact pressure and do not deteriorate in normal use		P
	Effectiveness of pressure between contacts and pins and earthing contacts and earthing pins does not depend upon the resiliency of the insulating material		P
	Test: Inspection and tests of Clause 16, 19, 20 and 21		P
18	**RESISTANCE TO HEATING OF APPLIANCE COUPLERS FOR HOT CONDITIONS OR VERY HOT CONDITIONS**		N/A
18.1	**General**		N/A
	Appliance couplers as classified according to 7.1 shall withstand the heating to which they may be subjected		N/A
	Connectors/plug connectors so constructed that the insulation of the conductors is not subjected to excessive heating		N/A
	The spring contacts of appliance outlets and connectors shall not be negatively affected by thermal relaxation due to excessive heating		N/A
18.2	**Heating test for connectors/plug connectors**		N/A

IEC 60320-1			
Clause	Requirement + Test	Result - Remark	Verdict
	Connector/plug connector is inserted in a suitable appliance inlet/appliance outlet of an appropriate test apparatus for 96 h at a temperature of (°C).....		—
	After this test:		N/A
	- Plug connectors inserted and withdrawn from the appliance outlet 10 times		N/A
	- Connectors subjected to the test of Clause 16		N/A
	After this test the test sample show:		N/A
	- no damage		N/A
	- no loosening of electrical or mechanical connections		N/A
	- no cracks		N/A
18.3	**Heating test for appliance inlets/appliance outlets**		N/A
	Appliance inlets/appliance outlets kept in a heating cabinet for 96 h at a temperature of (°C).....:		—
	- Appliance outlets subjected to the test of Clause 16		N/A
	After this test the test sample show:		N/A
	- no damage		N/A
	- no loosening of electrical or mechanical connections		N/A
	- no cracks		N/A
19	**BREAKING CAPACITY**		P
	Appliance couplers shall have adequate breaking capacity		P
	Compliance checked by testing	see appended Table 19	P
	During the test: no flashover and any sustained arcing		P
	After the test, the test sample show no damage		P
20	**NORMAL OPERATION**		P
	Appliance couplers withstand without excessive wear or other harmful effect, the mechanical, electrical and thermal stresses occurring in normal use		P
	Compliance checked by testing	see appended Table 20	P
	After the test, the specimens withstand an electric strength test as specified in 15.3 with the test voltage reduced to 50 % of the value of Table 4	see appended Table 15.3 (Dielectric strength - Repetition after Clause 19 + 20)	P
	Test sample does not show any:		P
	- wear impairing its further use		P

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Clause	Requirement + Test	Result - Remark	Verdict
	- deterioration of enclosures or barriers		P
	- damage to the entry holes for the pins		P
	- loosening of electrical or mechanical connections		P
	- seepage of sealing compound		N/A
	The electrical safety is not impaired		P
21	**TEMPERATURE RISE**		P
	Contacts and other current-carrying parts shall be so designed as to prevent excessive temperature rise due to the passage of current		P
	Compliance checked for connectors/appliance outlets and plug connectors by testing	see appended Table 21	P
	After the test, the test samples withstand the test of clause 16		P
22	**CORDS AND THEIR CONNECTION**		P
22.1	**Cords for non-rewirable connector/plug connectors**		P
	Non-rewirable connectors/plug connectors are provided with cord complying with Table 9 or equivalent.....:		P
	Type of cord complying with standard indicated in Table 9).....:	see appended Table 22.1	P
	Cords have a nominal cross-sectional area not less than that specified in Table 9 (mm²).....:	see appended Table 22.1	P
	Non-rewirable connectors/plug connectors with earthing contact are provided with a three-core cord	see appended Table 22.1	P
	Connections to the contacts in non-rewirable, non-reversible connectors/plug connectors:		P
	- green/yellow core: to the earthing contact		P
	- brown core: to the line contact		P
	- light blue core: to the neutral contact		P
22.2	**Cord anchorage**		P
22.2.1	**General**		P
	Connectors/plug connectors are provided with a cord anchorage		P
	Cord anchorages of the "labyrinth" type: - withstand the relevant tests		N/A
22.2.2	**Additional requirements for rewirable connectors and rewirable plug connectors**		N/A
	Additional requirements are:		N/A
	- it is clear how to relief from strain and prevention of twisting is intended to be effected		N/A

IEC 60320-1			
Clause	Requirement + Test	Result - Remark	Verdict
	- it is integral with or fixed to the connector/plug connector		N/A
	- makeshift methods is not used		N/A
	- cord anchorage is suitable for the different types of cord and its effectiveness does not depend upon the assembly		N/A
	- cord anchorage is of insulating material or provided with insulating lining		N/A
	- it is not possible for the cord to touch the clamping screws, if accessible		N/A
	- its metal parts are insulated from earthing circuit		N/A
22.2.3	**Pull test for cable anchorage**		N/A
	Non rewirable connectors/plug connectors: - tested with the cord as delivered	see appended Table 22.2.3	N/A
	Rewirable connectors/plug connectors: - tested first with one and then with the other type of cord, as specified in Table 10	see appended Table 22.2.3	N/A
	During the tests: cord not damaged		N/A
	After the test:		N/A
	- cord not displaced by more than 2 mm		N/A
	- rewirable connectors/plug connectors: ends of conductors have not moved noticeably in the terminals		N/A
	- non-rewirable connectors/plug connectors there was no break in the electrical connections		N/A
22.3	**Flexing test**		N/A
	Guards are of insulating material and are fixed in reliable manner		N/A
	During the test: no interruption of the current and no short-circuit between conductors	see appended Table 22.3	N/A
	After the test:		N/A
	- test sample show no damage		N/A
	- guard, if any, not separated from the body		N/A
	- insulation of the cord show no sign of abrasion or wear		N/A
	- non-rewirable connectors/plug connectors: broken strands have not pierced the insulation as to become accessible		N/A
23	**MECHANICAL STRENGTH**		P
23.1	**General**		P
	Appliance couplers have adequate mechanical strength		P

IEC 60320-1			
Clause	Requirement + Test	Result - Remark	Verdict
23.2	**Free fall test**		P
	Free fall test procedure 2 of IEC 60068-2-31 for connectors and plug connectors		P
	Number of falls.....:	100	P
	After the test:		P
	- test sample show no damage		P
	- no part become detached or loosened		P
23.3	**Lateral pull test for contacts**		P
	Lateral pull test for connectors with rating exceeding 0,2 A and appliance outlets		P
	- rated current (A).....:	2.5A	—
	- pull (N).....:	6N	—
	After the test:		P
	- connector/plug connector show no damage		P
	- test sample comply with test of 16.3	only for connectors see appended Table 23.3	P
23.4	**Impact test**		**P**
	Impact test by means of vertical hammer or spring hammer according to IEC 60068-2-75 (12 blows at 0,5 J ± 0,05 J) are subjected to - all accessible surfaces covering live parts of appliance outlets - shrouds of appliance inlets for surface mounting - shrouds of plug connectors		P
	After the test, the test sample show no damage	see appended Table 23.4	P
23.5	**Deformation test**		N/A
	2,5 A connectors class II equipment, standard sheet C7: Deformation test with blades according to Figure 9 of IEC 60320-3 at 70 °C ± 2 °C for 2 h		N/A
	- blade A (10 N).....:		—
	- blade B (5 N).....:		—
	Difference between thickness values measured at the point of impression before and after the test is not more than 0,2 mm		N/A
23.6	**Pull test for connectors/plug connectors with a separate front part**		N/A
23.6.1	**General**		N/A
	External parts of connectors/plug connectors with a separate front part are reliably fixed to one another		N/A
23.6.2	**Straight pull test**		N/A
	Compliance checked by the following test:		N/A
	A pull force according to Table 13 is applied in direction of the axes of the pins/contacts for 60 s+5 /0 s		N/A
	- rated current (A).....:		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	- straight pull (N)..... :		N/A
23.6.3	**Lateral pull test**		N/A
	Compliance checked by the following test:		N/A
	A lateral pull force according to Table 13, in parallel with the engagement face, is applied to the cable of the connectors/plug connector in four directions in steps of 90° +/- 5°		N/A
	- rated current (A)..... :		N/A
	- lateral pull (N)..... :		N/A
	After the test:		N/A
	- the two parts are not detached		N/A
	- parts providing protection against electric shock not loosened		N/A
	- live parts not become accessible		N/A
24	**RESISTANCE TO HEAT AND AGEING**		P
24.1	**Resistance to heat**		P
	Ball pressure test according to IEC 60695-10-2		P
	After the test: diameter of impression ≤ 2 mm	see appended Table 24.1	P
24.2	**Resistance to ageing**		P
24.2.1	**General**		P
	Appliance couplers of elastomeric material or thermoplastic material shall be sufficient resistant to ageing		P
24.2.2	**Ageing test for elastomeric materials**		N/A
	Appliance couplers of elastomeric material are kept for 240 h (10 days) in a heating cabinet at 70 °C ± 2 °C		N/A
24.2.3	**Ageing test for thermoplastic materials**		P
	Appliance couplers of thermoplastic material are kept for 168 h (7 days) in a heating cabinet at 80 °C ± 2 °C		P
24.2.4	**Ageing test assessment**		P
	After the tests, samples show:		P
	- no crack visible		P
	- no sticky or greasy material		P
	- no trace of cloth (forefinger pressed with 5 N)		P
	- no damage		P
25	**SCREWS, CURRENT-CARRYING PARTS AND CONNECTIONS**		P
25.1	**General**		P
	Connections withstand mechanical stresses		P

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Clause	Requirement + Test	Result - Remark	Verdict
	Screws and nuts for connection of conductor: in engagement with a metal thread		N/A
	Screws for mounting parts of appliance coupler are not of the thread-cutting type		N/A
	Screws or nut for fixing the base of appliance inlet/appliance outlet on an appliance: any type is possible		N/A
	Screws of insulating material: not used if they could impair insulation		N/A
	Threaded parts tightened and loosened:		N/A
	- one of threaded parts non-metallic material: 10 times		N/A
	- both parts of metallic material: 5 times		N/A
	Threaded part torque test	see appended Table 25	N/A
	During the test:		N/A
	- not work loose		N/A
	- no damage		N/A
25.2	**Electrical connections**		P
	Contact pressure is not transmitted via the insulating material other than ceramic, or pure mica unless there is sufficient resiliency in the metallic parts		P
25.3	**Securement connections**		P
	Screws and rivets are locked against loosening or turning		N/A
	Connections between terminals and other parts do not work loose in normal use		P
25.4	**Metallic parts**		P
	Current-carrying parts and earthing contacts: metal having adequate mechanical strength and resistance to corrosion		P
	Parts subjected to mechanical wear are not made of steel with electroplated coating		P
	Under moist conditions, metals having a great difference of electro-chemical potential are not used in contact with each other		P
	Material used..... :		P
	- copper		N/A
	- alloy with at least 58 % copper for cold worked parts or at least 50 % copper for other parts		P
	- stainless steel with at least 13 % chromium and not more than 0,09 % carbon		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	- steel with electroplated coating of zinc (ISO 2081); coating thickness at least 5 µm (ISO Service Condition No. 1); thickness [µm]		N/A
	- steel with electroplated coating of nickel and chromium (ISO 1456); coating thickness at least 20 µm (ISO Service Condition No. 2); thickness [µm]		N/A
	- steel with electroplated coating of tin (ISO 2093); coating thickness at least 12 µm (ISO Service Condition No. 2); thickness [µm]		N/A
	Checked by inspection or by chemical analysis		P
26	**CLEARANCES, CREEPAGE DISTANCES AND SOLID INSULATION**		P
26.2	**Clearances**		P
26.2.1	**Dimensioning**		P
	Clearances: dimensioned to withstand the minimum rated impulse voltage of 2500 V	see appended Table 26	P
26.2.2	**Minimum values for clearances**		P
	Clearances for basic, supplementary and functional insulation: not less than the value specified in Table 16	see appended Table 26	P
	Clearance for reinforced insulation: not less the value specified for basic insulation, using the next higher step for rated impulse withstand voltage in Table 16	see appended Table 26	P
26.3	**Creepage distances**		P
26.3.1	**Dimensioning**		P
	Creepage distances: dimensioned for the voltage, taking into account pollution degree 2 and the material group	see appended Table 26	P
26.3.2	**Minimum creepage distances**		P
	Creepage distances for basic, supplementary and functional insulation: not less than the value specified in Table 17	see appended Table 26	P
	Creepage distances for reinforced insulation: not less than double than the values specified for basic insulation in Table 17	see appended Table 26	P
26.4	**Solid insulation**		P
	Solid insulation: capable of durably withstanding electrical and mechanical stresses		P
	Distance through accessible supplementary solid insulation: ≥ 0,8 mm.....:	see appended Table 26	P
	Distance through accessible reinforced solid insulation:		P
	- ≥ 0,8 mm for rated impulse voltage 1500 V		N/A
	- ≥ 1,5 mm for rated impulse voltage 2500 V		P

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Clause	Requirement + Test	Result - Remark	Verdict
27	**RESISTANCE OF INSULATING MATERIAL TO HEAT, FIRE AND TRACKING**		P
27.1	**Resistance to heat and fire**		P
27.1.1	**General**		P
	Parts made of insulating material of accessories with a rated current exceeding 0,2 A subjected to glow-wire test according to IEC 60695-2-11	see appended Table 27.1	P
27.2	**Resistance to tracking**		N/A
	Insulating parts supporting, or in contact with, live parts of appliance couplers for hot and very hot conditions, are of material resistant to tracking with a minimum PTI of 175 V (according to Annex A)	see appended Table 27.2	N/A
28	**RESISTANCE TO RUSTING**		P
	No sign of rust on ferrous parts after 10 min in 10 % solution of ammonium chloride, 10 min in box with air saturated with moisture and 10 min at 100 °C ± 2 °C		P
29	**ELECTROMAGNETIC COMPATIBILITY (EMC) REQUIREMENTS**		N/A
29.1	**Immunity - Accessories not incorporating electronic components**		N/A
	These accessories are not sensitive to normal electromagnetic disturbances and therefore no immunity tests are required		N/A
29.2	**Emission - Accessories not incorporating electronic components**		N/A
	These accessories do not generate electromagnetic disturbances; consequently, no emission tests are necessary		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

	ANNEX E		N/A
	Additional test and requirements for appliance couplers intended to be used in ambient temperatures above +35 °C up to and including+90 °C		N/A
E.1	**General**		N/A
	Appliance couplers according to this Annex E are suitable for ambient temperatures above +35 °C up to and including +90 °C		N/A
E.2	**General requirements on tests**		N/A
E.2.1	**General**		N/A
	Corresponding counterparts have.		N/A
	- identical ratings (as per Clause 6)		N/A
	- identical classification (as per Clause 7)		N/A
E.3	**Markings**		N/A
	Appliance couplers, except standardized appliance inlet, in compliance with this Annex E shall be marked with t_a value as defined in Clause E.4 if the value of t_a is +40 °C or higher [°C]	Marking: t_a ___ °C	N/A
E.4	**Determination of t_a and the rated and derated current in relation to the ambient temperature**		N/A
E.4.1	**Determination of the maximum ambient temperature (t_a) for operation of the accessory at the rated current**	Measured t_a ___ °C	N/A
E.4.2	**Determination of the derated operating currents for ambient temperatures**	see appended Table E.4.2	N/A
E.5	**Test to evaluate the long-term behaviour of the appliance couplers in ambient temperatures above 35 °C up to and including +90 °C**		N/A
E.5.1	**Resistance to heat**		N/A
	Appliance couplers shall be sufficient resistant to heat		N/A
	Ball pressure test according to IEC 60695-10-2 at 125 °C		N/A
	After the test: diameter of impression ≤ 2 mm	see appended Table E.5.1	N/A
E.5.2	**Resistance to ageing**		N/A
E.5.2.1	**General**		N/A
	Appliance couplers shall be sufficient resistant to ageing		N/A
E.5.2.2	**Ageing test for connectors/appliance outlets**		N/A
	Connectors/appliance outlets are kept for 336 h (14 days) in a heating cabinet at 100 °C ± 2 °C The connectors/appliance outlets are in engagement with a corresponding appliance inlet/plug connector		N/A
E.5.2.3	**Ageing test for appliance inlets/plug connectors**		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Appliance inlets/plug connectors are kept for 336 h (14 days) in a heating cabinet at 100 °C ± 2 °C		N/A
E.5.2.4	**Ageing test assessment**		N/A
	After the tests of E.5.2.2 and E.5.2.3 the specimens are taken out of the cabinet and kept at room temperature in a relative humidity between 45 % and 55 % for at least 96 h		N/A
	After the tests, samples show:		N/A
	- no crack visible		N/A
	- no sticky or greasy material		N/A
	- no trace of cloth (forefinger pressed with 5 N)		N/A
	- no damage		N/A
	Then an appliance inlet/plug connector with the same rated current as the connector/appliance outlet is fully inserted and withdrawn 3 times, any lid is opened and closed each time		N/A
	After the tests, samples show:		N/A
	- no damage		N/A
E.5.3	**Resistance to tracking**		N/A
	Insulating parts supporting, or in contact with, live parts of appliance couplers for use in ambient temperatures above +35 °C up to and including+90 °C, are of material resistant to tracking, with a minimum PTI of 175 V (according to Annex A)	see appended Table E.5.3	N/A
E.6	**Cords and their connection**		N/A
	For standardized appliance couplers:		N/A
	Type of cord:		N/A
	- according to the requirements of Table 9 and Table 10		N/A
	- but shall be of rubber or an equivalent elastomeric type		N/A
	- rated for a maximum conductor insulation temperature of +90 °C		N/A
	For non-standardized appliance couplers:		N/A
	Type of cord:		N/A
	- shall be of PVC, rubber or an equivalent elastomeric type		N/A
	- rated for a maximum conductor insulation temperature of +90 °C		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

15.2	TABLE: Insulation resistance			P
Insulation resistance tested		**Type of insulation**	**Required [MΩ]**	**Measured [MΩ]**
a)	for appliance inlets with a connector in engagement, between the current-carrying contacts connected together and the body	R	≥ 7	--
b)	for appliance inlets with a connector in engagement, between each pin in turn and the others connected together	F	≥ 2	--
c)	for appliance outlets with a plug connector in engagement, between the current-carrying contacts connected together and the body	R	≥ 7	--
d)	for appliance outlets without a plug connector in engagement, between the current carrying contacts connected together and the body	R	≥ 7	--
e)	for appliance outlets with a plug connector in engagement, between each pin in turn and the others connected together	F	≥ 2	--
f)	for connectors, between the current-carrying contacts connected together and the body	R	≥ 7	>100 MΩ
g)	for connectors, between each contact in turn and the others connected together	F	≥ 2	>100 MΩ
h)	for plug connectors, between the current-carrying contacts connected together and the body	R	≥ 7	--
i)	for plug connectors, between each contact in turn and the others connected together.	F	≥ 2	--
Additional test for rewirable connectors and plug connectors:				
j)	for rewirable connectors, between any metal part of the cord anchorage, including clamping screws, and the earthing contact or earthing terminal	B	≥ 2	--
k)	for rewirable connectors, between any metal part of the cord anchorage, excluding clamping screws, and a metal rod, of the maximum diameter of the cord as specified in Table 2, inserted in its place	B	≥ 2	--
l)	for rewirable plug connectors, between any metal part of the cord anchorage, including clamping screws, and the earthing contact or earthing terminal	B	≥ 2	--
m)	for rewirable plug connectors, between any metal part of the cord anchorage, excluding clamping screws, and a metal rod, of the maximum diameter of the cord as specified in Table 2, inserted in its place	B	≥ 2	--
Supplementary information: Type of insulation: **F** (Functional); **B** (Basic); **S** (Supplementary); **R** (Reinforced)				

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Clause	Requirement + Test	Result - Remark	Verdict

15.3	TABLE: Dielectric strength			P
Insulation or disconnection tested		**Type of insulation**	**Test voltage [V]**	**Flashover / breakdown (Yes/No)**
a)	for appliance inlets with a connector in engagement, between the current-carrying contacts connected together and the body	R	3000	--
b)	for appliance inlets with a connector in engagement, between each pin in turn and the others connected together	F	1500	--
c)	for appliance outlets with a plug connector in engagement, between the current-carrying contacts connected together and the body	R	3000	--
d)	for appliance outlets without a plug connector in engagement, between the current carrying contacts connected together and the body	R	3000	--
e)	for appliance outlets with a plug connector in engagement, between each pin in turn and the others connected together	F	1500	--
f)	for connectors, between the current-carrying contacts connected together and the body	R	3000	No
g)	for connectors, between each contact in turn and the others connected together	F	1500	No
h)	for plug connectors, between the current-carrying contacts connected together and the body	R	3000	--
i)	for plug connectors, between each contact in turn and the others connected together.	F	1500	--
Additional test for rewirable connectors and plug connectors:				
j)	for rewirable connectors, between any metal part of the cord anchorage, including clamping screws, and the earthing contact or earthing terminal	B	1500	--
k)	for rewirable connectors, between any metal part of the cord anchorage, excluding clamping screws, and a metal rod, of the maximum diameter of the cord as specified in Table 2, inserted in its place	B	1500	--
l)	for rewirable plug connectors, between any metal part of the cord anchorage, including clamping screws, and the earthing contact or earthing terminal	B	1500	--
m)	for rewirable plug connectors, between any metal part of the cord anchorage, excluding clamping screws, and a metal rod, of the maximum diameter of the cord as specified in Table 2, inserted in its place	B	1500	--
Supplementary information: Type of insulation: **F** (Functional); **B** (Basic); **S** (Supplementary); **R** (Reinforced)				

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Clause	Requirement + Test	Result - Remark	Verdict

16	**TABLE: Force necessary to withdraw the connector / appliance outlet**		**P**
	Type of connector / appliance outlet [A].....:	Non-rewirable connectors/plug	—
	Standard sheet.....:	Dimensions for non-standardized	—
16.2	**Verification of the maximum withdrawal force**		**P**
Sample N°	Maximum withdrawal force (multi-pin gauge) [N]	The connector / appliance outlet did not remain in the appliance inlet / plug connector (Y/N)	--
--	50	Y	**P**
--	50	Y	**P**
--	50	Y	**P**
16.3	**Verification of the minimum withdrawal force**		**P**
Sample N°	Minimum withdrawal force (single-pin gauge) [N]	The single pin gauge did not fall from the contact assembly within 3 s (Y/N)	--
--	1.5	Y	**P**
--	1.5	Y	**P**
--	1.5	Y	**P**
Supplementary information: ---			

19	**TABLE: Breaking capacity**				**P**
	Rated current [A].....:	2.5A			—
	Rated voltage [V].....:	250V			—
Sample N°	**Test voltage [V]**	**Test current [A]**	**Power factor [cos Φ]**	**Number of strokes**	
Test conditions for connectors and appliance outlets > 0,2 A					
--	275	3.125	0.6	100	**P**
--	275	3.125	0.6	100	**P**
--	275	3.125	0.6	100	**P**
Supplementary information: ---					

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Clause	Requirement + Test	Result - Remark	Verdict

20	**TABLE: Normal operation**				**P**
	Rated current [A].....:	2.5A			—
	Rated voltage [V].....:	250V			—
Sample N°	**Test voltage [V]**	**Test current [A]**	**Power factor [cos Φ]**	**Number of strokes**	
Test conditions for 0,2 A connectors					
--	---	---	---	4000	**--**
--	---	---	---	4000	**--**
--	---	---	---	4000	**--**
Test conditions for connectors and appliance outlets > 0,2 A					
--	250	2.5	0.6	2000	**P**
--	---	---	---	6000	**P**
--	250	2.5	0.6	2000	**P**
--	---	---	---	6000	**P**
--	250	2.5	0.6	2000	**P**
--	---	---	---	6000	**P**
Supplementary information: ---					

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Clause	Requirement + Test	Result - Remark	Verdict

15.3	**TABLE: Dielectric strength** **- Repetition after clause 19 + 20**			**P**
Insulation or disconnection tested		**Type of insulation**	**Test voltage [V]**	**Flashover / breakdown (Yes/No)**
c)	for appliance outlets with a plug connector in engagement, between the current-carrying contacts connected together and the body	R	1500	--
d)	for appliance outlets without a plug connector in engagement, between the current carrying contacts connected together and the body	R	1500	--
e)	for appliance outlets with a plug connector in engagement, between each pin in turn and the others connected together	F	750	--
f)	for connectors, between the current-carrying contacts connected together and the body	R	1500	No
g)	for connectors, between each contact in turn and the others connected together	F	750	No
Additional test for rewirable connectors and plug connectors:				
j)	for rewirable connectors, between any metal part of the cord anchorage, including clamping screws, and the earthing contact or earthing terminal	B	750	--
k)	for rewirable connectors, between any metal part of the cord anchorage, excluding clamping screws, and a metal rod, of the maximum diameter of the cord as specified in Table 2, inserted in its place	B	750	--
Supplementary information: Type of insulation: **F** (Functional); **B** (Basic); **S** (Supplementary); **R** (Reinforced)				

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Clause	Requirement + Test	Result - Remark	Verdict

21	**TABLE: Temperature rise**				**P**
	Non-rewirable connectors/plug connectors are fitted with cords as delivered			Non-rewirable	—
	Rewirable connectors/plug connectors are fitted with cords according to Table 9 and a cross sectional according to Table 8			--	—
	Appliance outlet are fitted with conductors according to Table 8			--	—
	Torque applied on clamping screws of cord anchorage (2/3 of Table 13) [N m].....:			**--**	—
Sample N°	**Test circuit (L-N)**	**Test current [A]**	**allowed dT [K]**	**measured dT [K]**	P
--	L-N	1.25*2.5	45	10.7	P
--	L-N	1.25*2.5	45	6.9	P
--	--	--	--	--	--
--	--	--	--	--	--
Sample N°	**Test circuit (L-PE)**	**Test current [A]**	**allowed dT [K]**	**measured dT [K]**	P
--	**L-PE**	1.25*2.5	45	10.5	--
--	**L-PE**	1.25*2.5	45	6.8	--
--	--	--	--	--	--
--	--	--	--	--	--
Supplementary information: ---					
16	**TABLE: Force necessary to withdraw the connector/appliance outlet - Repetition after clause 19 + 20**				**P**
	Type of connector / appliance outlet / rated current:			2.5A	—
	Standard sheet:			**--**	—
16.2	**Verification of the maximum withdrawal force**				**P**
Sample N°	**Maximum withdrawal force (multi-pin gauge) [N]**		**The connector / appliance outlet did not remain in the appliance inlet / plug connector (Y/N)**		
--	50		Y		**P**
--	50		Y		**P**
--	50		Y		**P**
16.3	**Verification of the minimum withdrawal force**				**P**
Sample N°	**Minimum withdrawal force (single-pin gauge) [N]**		**The single pin gauge did not fall from the contact assembly within 3 s (Y/N)**		
--	1.5		Y		**P**
--	1.5		Y		**P**
--	1.5		Y		**P**

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Clause	Requirement + Test	Result - Remark	Verdict
Supplementary information:			

22.1	TABLE: List of cords connected to non-rewirable connectors/plug connectors					N/A
	Type of cord	Nominal cross-sectional area [mm²]	Manufacturer / Marking on cord	Approval No.	Type of approval (HAR or others)	Date of issue
--	--	--	--	--	--	--
--	--	--	--	--	--	--
Supplementary information:						

22.2.3	TABLE: Pull test for cable anchorage					N/A
	Torque applied on clamping screws of cord anchorage (2/3 of Table 13) [N m] (only for rewirable constructions).....:					—
Sample N°	Type of cord	Nominal cross-sectional area [mm²]	Pull (100 times) [N]	Torque (1 min) [N m]	Displace-ment of cord [mm]	
--	--	--	--	--	--	--
--	--	--	--	--	--	--
Supplementary information:						

Connectors + Plug connectors:	≤ 2,5 A → 50 N > 2,5 A → 60 N	Cords:	≤ 0,5 mm² → 0,1 Nm 2x 0,75 mm → 0,15 Nm all others → 0,25 Nm	(other than flat tinsel cords)

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Clause	Requirement + Test	Result - Remark	Verdict

22.3	**TABLE: Flexing test**					**N/A**
	Before the test: Ageing for rewirable connectors/plug connectors according to 24.2.2 (70 °C ±2 °C / 240 h) or 24.2.3 (80 °C ± 2 °C / 168 h).....:			80℃/168h		—
Sample N°	**Type of cord**	**Nominal cross-sectional area [mm²]**	**Test current [A]**	**Force [N]**	**Number of flexings**	
--	--	--	--	--	--	--
--	--	--	--	--	--	--
Supplementary information:						

23.3	**TABLE: Lateral pull test**		**P**
	After the test: comply with 16.3		—
16.3	**Verification of the minimum withdrawal force**		**P**
Sample N°	**Minimum withdrawal force (single-pin gauge) [N]**	**The single pin gauge did not fall from the contact assembly within 3 s (Y/N)**	
--	1.5	Y	P
Supplementary information:			

23.4	**TABLE: Impact resistance**		**P**
Surface tested	**Impacts per surface**	**Impact energy [J]**	
Shroud (4 places)	3x	0,5	P
Supplementary information:			

24.1	**TABLE: Resistance to heat – Ball pressure test**					**P**
	Allowed impression diameter [mm].....:			max. 2 mm		—
Part under test	**Material designation**	**Colour**	**Test temperature [°C]**	**Impression diameter [mm]**		
Inlet live support part	SABIC JAPAN L L C	Biack	125	1.0		P
Connector live support part	SABIC JAPAN L L C	Black	125	1.1		P
--	--	--	--	--		--
Supplementary information:						

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Clause	Requirement + Test	Result - Remark	Verdict

25	TABLE: Screws, current-currying parts and connections - Threaded part torque test				N/A
Threaded part identification	Diameter of thread [mm]	Column number (I or II)	Applied torque [N m]	Number of operations (5 / 10)	
--	--	--	--	--	--
--	--	--	--	--	--
Supplementary information:					

26	TABLE: Clearance, creepage distance and solid insulation		P
	Requirements clearance, creepage distance met		
	Rated voltage [V]..... :	AC 250	—
	Overvoltage category..... :	II	—
	Rated impulse voltage [V]..... :	2500	—
	Pollution degree..... :	2	—
	Material group..... :		—

Table 26.2 + 26.3 Clearances and creepage distances

Type of insulation	26.2 Clearance Cl [mm]		26.3 Creepage distance Cd [mm]	
	Required	Measured	Required	Measured
Functional insulation Between L + N contacts	1.5	>5.0	2.5	>5.0
Basic insulation L-N- Contact Earthing contact	1.5	3.0	2.5	3.0
Supplementary insulation L-N-Contact – Accessible surface (unearthed)	1.5	--	1.8	--
Reinforced insulation L-N-Contact – Accessible surface (unearthed)	3.0	>5.0	5.0	>5.0
Supplementary information:				

Table 26.4 Solid insulation

	26.4 Solid reinforced insulation [mm]		
Type of insulation	Required	Measured	
L-N-Contact – Accessible surface (unearthed)	0.8	1.1	
Supplementary information:			

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Clause	Requirement + Test	Result - Remark	Verdict

27.1	TABLE: Resistance to heat and fire – Glow-wire test					P
Part under test	**Material designation**	**Test temperature [°C]**	**Visible flame and sustained glowing (Y/N)**	**Flame and glowing extinction time [s]**	**Ignition of the tissue paper (Y/N)**	
Inlet live support part	SABIC JAPAN L L C	750	N	0	N	P
Inlet Body	SABIC JAPAN L L C	650	N	0	N	P
Connector live part	SABIC JAPAN L L C	750	N	0	N	P
Connector Body	SABIC JAPAN L L C	650	N	0	N	P
Supplementary information:						

27.2	TABLE: Resistance to tracking				P
	Number of drops.....:	50 (5x)			
Part under test	**Material designation**	**Test voltage [V]**	**Flashover / breakdown (Yes/No)**	**Material group**	
Insert	--	175	No	--	--
Moulding material	--	175	No	--	--

Supplementary information:

Material group I	600 ≤ CTI
Material group II	400 ≤ CTI < 600
Material group IIIa	175 ≤ CTI < 400
Material group IIIb	100 ≤ CTI < 175

IEC 60320-1			
Clause	Requirement + Test	Result - Remark	Verdict

E.4.2	**TABLE: Determination of the derated operating currents for ambient temperatures above t_a**					N/A
	Rated current [A].....:	--				—
	Temperature at terminals [°C]	Temperature measured at heating cabinet at rated current t_a [°C]			Rated current [A]	
	90	--			--	
Temperature at terminals [°C]	Temperature of heating cabinet t_a + steps of 5 °C	Temperature measured at heating cabinet at rated current t_a [°C]			Measured current [A]	
--	--	Sample-No			--	
--	--	1	2	3	--	
90	t_a + 5°C	--	--	--	--	
90	t_a + 10°C	--	--	--	--	
90	t_a + 15°C	--	--	--	--	
90	t_a + 20°C	--	--	--	--	
90	t_a + 30°C	--	--	--	--	
90	t_a + 35°C	--	--	--	--	
90	t_a + 45°C	--	--	--	--	
90	t_a + 50°C	--	--	--	--	
90	t_a + 55°C	--	--	--	--	
90	t_a + 60°C	--	--	--	--	
Supplementary information:						

IEC 60320-1			
Clause	Requirement + Test	Result - Remark	Verdict

TABLE: list of critical components

object/part No.	manufacturer/ trademark	type/model	technical data	standard	Mark
Enclosure for Appliance inlet	SABIC JAPAN L L C	945(GG)	V-1,105°C, Min. thickness 2.0mm	UL94,UL746	Tested with appliance UL 207780
Plug lateral contacts	Dongguan Yuci Hardware Electron Co.,Ltd.	H65	Cu>85%	IEC 60320-1	Tested with appliance
alternative	FOSHANG GUANGLONG copper and metal manufacture CO.,Ltd	H65	Cu>85%	IEC 60320-1	Tested with appliance
alternative	Yuyao Yonghai Hardware product Co.,Ltd	H65	Cu>85%	IEC 60320-1	Tested with appliance
Enclosure for Connector	SABIC JAPAN L L C	945(GG)	V-1,105°C, Min. thickness 2.0mm	UL94,UL746	Tested with appliance UL 207780
Contact for Connector	FOSHANG GUANGLONG copper and metal manufacture CO.,Ltd	H65	Cu>85%	IEC 60320-1	Tested with appliance
alternative	Dongguan Yuci Hardware Electron Co.,Ltd.	H65	Cu>85%	IEC 60320-1	Tested with appliance
alternative	Yuyao Yonghai Hardware product Co.,Ltd	H65	Cu>85%	IEC 60320-1	Tested with appliance

Supplementary information:

AS/NZS 60320.1			
Clause	Requirement + Test	Result - Remark	Verdict
AS/NZS 60320.1:2012			
APPENDIX ZZ - VARIATIONS TO IEC 60320-1, Ed.2.1 (2007) FOR APPLICATION IN AUSTRALIA AND NEW ZEALAND			
16.1	In the first dash point, add the following to the first line after '16.2':		--
	or by the test of 16.201		
16.2.201	The following test is considered to be a suitable alternative to the test of Clause 16.2:		P
	By manual means, the connector shall be fully inserted into and withdrawn 10 times from an appliance inlet complying with the appropriate standard sheet of this Standard.		P
	Manually align the connector in the appliance inlet to minimize the effect of misalignment between mating components and any other friction increasing factors, so as to attain the best practical position for minimum resistance to withdrawal.		P
	The connector is then fully reinserted and a withdrawal force gradually applied by any suitable means until the connector is withdrawn. The withdrawal force during three consecutive disengagements shall be measured.	MAX 49N	P
	Connectors for hot conditions and those for very hot conditions are tested twice, once at ambient temperature and once after the temperature at the base of the pins of the appliance inlet has been raised to—		N/A
	(a) 120 ±2°C for connectors for hot conditions; and		N/A
	(b) 155 ±2°C for connectors for very hot conditions		N/A
17	Add the following sentence at the end of the third paragraph		--
	The 'Test of Earthing Connection' in AS/NZS 3100 may be applied as an alternative to the test of Clause 21.		N/A
19	Add the words 'or brass pins' after the words 'hardened steel pins' in second line of third paragraph.		--
	Delete last sentence of third paragraph.		--
	Insert the following new paragraph after the third paragraph:		--
	In the case of a connector failure using an appliance inlet with brass pins, the test may be repeated using an appliance inlet with hardened steel pins (and compliance with hardened steel pins shall override a failure when using an appliance inlet with brass pins).		P
21	Add the following sentence at the end of the fourth paragraph:		--
	Alternatively, the connector is inserted into an appliance inlet complying with this Standard.		N/A

AS/NZS 60320.1			
Clause	Requirement + Test	Result - Remark	Verdict
	Add the following text to the end of both the fifth and sixth paragraphs:		--
	until the temperature is stabilized.		P
22.4	Table 6 Add the following new Note:		--
	NOTE Cross linked elastomeric insulated braided cords, complying with AS/NZS 3191, may be used to test connectors for hot conditions and very hot conditions.		N/A
	Delete the words 'for non-rewirable connections' from the last paragraph.		--
23.2	Delete the last sentence from the fifth paragraph.		--
	Insert the following new paragraph before the Note:		--
	In particular, the following shall be checked by inspection:		P
	(a) Live parts shall not be exposed so as to impair compliance with Clause 10.		P
	(b) For each contact, compliance with Clause 21 is maintained and the resistance of the appliance coupler circuit is such that compliance with Clause 17 is maintained.		P
	(c) Any other function affecting safety shall not be impaired.		P
	(d) No part shall have become detached or loosened to the extent that a hazardous situation is created.		P
27.1	Delete the words 'with a rated current exceeding 0,2 A' from the second paragraph.		--
	In the first dash point add the following text after '..in position....':		--
	for accessories with a rated current exceeding 0.2 A;		P

AS/NZS 60320.1:2012			
APPENDIX ZA - ADDITIONAL REQUIREMENTS FOR GROUP 2 APPLIANCE COUPLERS			
ZA1	INTRODUCTION		P
	This Appendix sets out additional requirements for appliance couplers classified as Group 2. The clauses listed in paragraph ZA2 supplement or modify particular clauses contained in the body of the Standard including the variations of Appendix ZZ.		P
	Where there is no Clause reference in Paragraph ZA2, the clauses contained in the body of the Standard apply without change. Where Paragraph ZA2 states 'Addition' or 'Replacement' or the like, the particular clauses contained in the body of the Standard shall be adapted accordingly.		

AS/NZS 60320.1			
Clause	Requirement + Test	Result - Remark	Verdict
ZA2	ADDITIONAL REQUIREMENTS		P
Scope	Appendix ZA is applicable to appliance couplers classified as Group 2 with rated voltage not exceeding 250 V and for a current rating not exceeding 63 A.		P
3.202	Group 1 appliance coupler		N/A
	An appliance coupler that complies with the Standard Sheets C1 to C24 contained in the body of the Standard.		N/A
3.203	Group 2 appliance coupler		P
	An appliance coupler in which the shroud of the appliance inlet differs in dimensions, or the pins differ in number, shape, dimensions or spacing, from those of appliance inlets of Group 1		P
	NOTE Typical applications for a Group 2 appliance coupler is with frying pans where the connector has an in built thermal control.		N/A
6.201	Group 2—Couplers are rated at any value not exceeding 63 A This Clause applies with the following addition:		P
7.1.1	Add the following dash point		P
	The temperature class assigned by the manufacturer, with a minimum of 70°C for Group 2 appliance couplers.		P
8.1	Add the following dash point:		P
	The temperature class assigned by the manufacturer, for Group 2 connectors having a temperature classification above 70°C.		P
8.2	Add the following paragraph:		P
	Group 2 appliance inlets other than those integrated with or incorporated in an appliance or equipment shall be marked with the same marking required for connectors in Clause 8.1.		N/A
9.1	Delete existing text and replace with the following:		P
	A Group 2 appliance inlet shall be of such form or dimensions that a connector of Group 1 cannot be inserted in such a manner that the spring contacts of the connector will connect with any pins of the appliance inlet.		P
	This, however shall not apply if the live contacts and any earthing contacts of the connector and appliance inlet can make effective contact without impairing the effectiveness of any part of the connector or appliance inlet.		P

AS/NZS 60320.1			
Clause	Requirement + Test	Result - Remark	Verdict
	NOTE Particular attention is drawn to the possibility of damage through cracking of connector bodies and permanent distortion of spring contacts and earthing contacts.		P
	A Group 2 connector, if it is provided with an earthing contact or external metal casing, shall be of such form or dimensions that it cannot be inserted into an appliance inlet of Group 1 in such a manner that the spring contacts of the connector connect with the pins of the appliance inlet.		P
	The foregoing requirements do not apply where a connector and appliance inlet are of such form or dimensions that they are obviously not intended to be used with one another.		P
	A Group 2 connector and its associated appliance inlet shall be designed so that the connector cannot be inserted into the appliance inlet in such a manner that live and earth connections are transposed. In addition, there shall be no possibility of interconnection of connectors. Compliance is checked by inspection and measurement.		P
9.4	Add the following dash point		P
	Group 2 connectors with appliance inlets having a temperature class greater than that of the connector.		P
9.5	Add the following paragraph		P
	Group 2 appliance inlets shall be arranged so that the pin ends do not, under any circumstances, protrude beyond the limiting surface of the shroud.		P
9.6	Add the following paragraph:		N/A
	A Group 2 appliance inlet shall not be of dimensions such that it will fit a cord extension socket complying with AS/NZS 3120, Approval and test specifications — Cord extensions sockets NOTE This type of "appliance inlet" is an "inlet plug" with requirements as specified in AS/NZS 3120.		N/A
10.1	Add the following after the second paragraph:		N/A
	Group 2 connectors may have an accessible earthing facility provided that no earthed part is held during insertion or withdrawal.		N/A
10.4	Replace the first sentence with the following:		N/A
	External parts of connectors accessible to the standard test finger, except for earth facilities for Group 2 connectors as allowed by Clause 10.1, shall be insulated from live parts by either double insulation or reinforced insulation.		N/A

AS/NZS 60320.1			
Clause	Requirement + Test	Result - Remark	Verdict
13.12	Replace the first paragraph with the following		N/A
	Fuses shall not be incorporated in Group 2 connectors.		N/A
15.3	Add the following after the third paragraph:		N/A
	When a Group 2 connector has an automatic temperature control and the control has an 'off' position marked, the following test shall be applied.		N/A
	The switching device shall be turned to the 'off' position. The connector shall then be subjected to a temperature of 0°C for a period of 1 h. Immediately following this procedure, a high voltage test of 1000 V a.c. shall be applied across the open contacts and there shall be no failure or arcing over.		N/A
16.201	Group 2 connectors, having a temperature classification above 70°C, are tested twice;		N/A
	once at ambient temperature and once after the temperature at the base of the pins of the appliance inlet has been raised to its marked temperature classification ±2°C.		N/A
18.2	Add the following to the first paragraph:		N/A
	Group 2 rewirable connectors are fitted with the appropriate flexible cord specified by the manufacturer.		N/A
	The temperature class assigned by the manufacturer ±2°C for Group 2 connectors;		N/A
18.3	Add the following to the first paragraph:		N/A
	The temperature class assigned by the manufacturer ±2°C for Group 2 appliance inlets;		N/A
22.1	Add the following after Table 4:		P
	For Group 2 non-rewirable connectors, the flexible cord shall—		P
	(a) be not lighter than light-duty type for connectors rated at ≤7.5 A; (b) be not lighter t han ordinary type for connectors rated at >7.5 A; (c) have a nominal cross-sectional area appropriate for the rating and length of the cord; and (d) be of the appropriate temperature class.	<7.5A	P
22.3	Add the following after Table 5:		N/A
	Group 2 rewirable connectors are fitted with the appropriate flexible cord specified by the manufacturer, and complying with AS/NZS 3191, Electrical flexible cords.		N/A

AS/NZS 60320.1			
Clause	Requirement + Test	Result - Remark	Verdict
	Where two types of cords are specified, the connector shall be tested twice, firstly with one and secondly with the other type of specified cord.		N/A
	Where a range of flexible cords is specified, the connector shall be tested with the smallest and the largest flexible cord of the specified range.		N/A
22.4	Add the following after Table 6:		N/A
	Group 2 rewirable connectors are fitted with the lightest duty flexible cord recommended by the manufacturer.		N/A
	Group 2 rewirable connectors are fitted with the lightest duty flexible cord recommended by the manufacturer.		N/A
	For Group 2, the smallest and largest nominal cross-sectional area conductors, as recommended by the manufacturer, are used.		N/A
	This Clause applies with the following addition:		N/A
	However, for Group 2 connectors incorporating switches, relays, thermostats, thermal cut-outs or energy regulators, the creepage distance and clearance of 4 mm between parts of earthing circuit and live parts need not be complied with,		N/A
	providing the appropriate values given in the Table ‘Creepage Distances and Clearances’ stated in AS/NZS 3100, Approval and test specifications — General requirements for electrical equipment are satisfied.		N/A
27.1.2	Replace the last paragraph with:		N/A
	NOTE Decorative trims, wiring insulation, knobs and other small parts unlikely to be ignited or to propagate flames are not tested.		N/A

AS/NZS 60320.1			
Clause	Requirement + Test	Result - Remark	Verdict

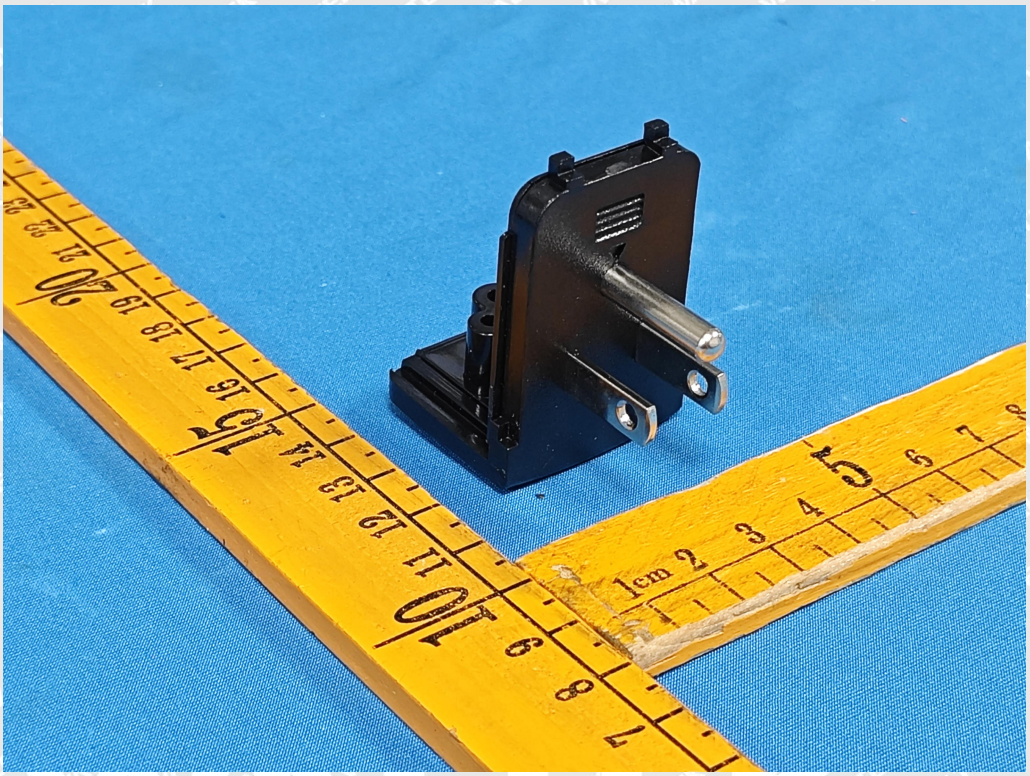

Photo 1 External View

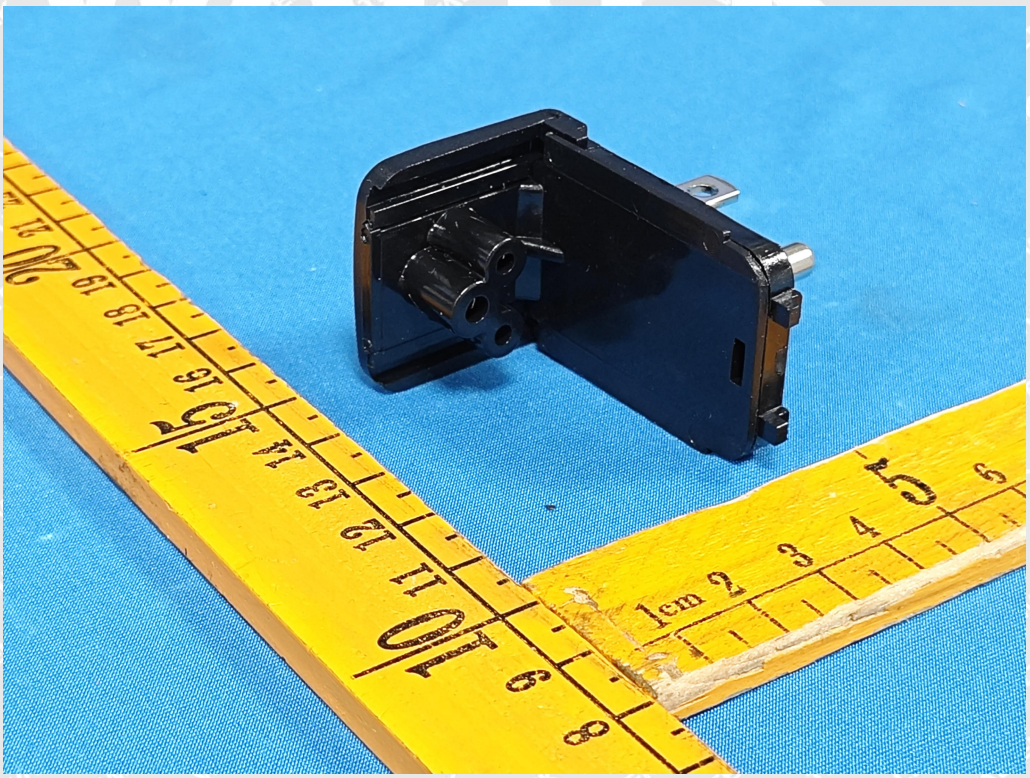

Photo 2 External View

======End of Report======