Test Report issued under the responsibility of:

TEST REPORT
IEC 60884-1
Plugs and socket-outlets for household and similar purposes
Part 1: General requirements

Report Number. .....:	**T211-0999/22**
Date of issue .....:	**2022-12-05**
Total number of pages.....:	94
Name of Testing Laboratory preparing the Report.....:	**SIQ Ljubljana** SIQ Ljubljana is accredited by Slovenian Accreditation with accreditation number LP-009 in the field of testing (SIST EN ISO/IEC 17025) **Mašera-Spasićeva ulica 10, SI-1000 Ljubljana, Slovenia**
Applicant's name.....:	ALING - CONEL d.o.o.
Address .....:	Železnička 10, 21432 Gajdobra, Serbia
Test specification:	
Standard .....:	IEC 60884-1:2002, AMD1:2006, AMD2:2013
Test procedure .....:	CB Scheme
Non-standard test method.....:	N/A
Test Report Form No.....:	IEC60884_1G
Test Report Form(s) Originator ....:	IMQ S.p.A.
Master TRF.....:	Dated 2019-05-07

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General disclaimer:

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Test item description ..... :	Socket-outlet for mounting into parapet duct
Trade Mark ..... :	ALING - CONEL
Manufacturer ..... :	ALING - CONEL d.o.o., Železnička 10, 21432 Gajdobra, Serbia
Model/Type reference ..... :	art.2311.x; art.2321.x; art.2331.x; art.2341.x
Ratings ..... :	16 A; 250 V~

Responsible Testing Laboratory (as applicable), testing procedure and testing location(s):

☒	**CB Testing Laboratory:**	SIQ Ljubljana SIQ Ljubljana is accredited by Slovenian Accreditation with accreditation number LP-009 in the field of testing (SIST EN ISO/IEC 17025)	
Testing location/ address.....:		Mašera-Spasićeva ulica 10, SI-1000 Ljubljana, Slovenia	
Tested by (name, function, signature).....:		Nejc Krajnik (Service provider)	
Approved by (name, function, signature)...:		Tibor Kokelj (Approved signatory)	

☐	**Testing procedure: CTF Stage 1:**		
Testing location/ address.....:			
Tested by (name, function, signature).....:			
Approved by (name, function, signature)...:			

☐	**Testing procedure: CTF Stage 2:**		
Testing location/ address.....:			
Tested by (name + signature) .....:			
Witnessed by (name, function, signature) .:			
Approved by (name, function, signature)...:			

☐	**Testing procedure: CTF Stage 3:**		
☐	**Testing procedure: CTF Stage 4:**		
Testing location/ address.....:			
Tested by (name, function, signature).....:			
Witnessed by (name, function, signature) .:			
Approved by (name, function, signature)...:			
Supervised by (name, function, signature) :			

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

1. Dimensions – Attachment No.1 (2 pages)
2. National deviations – Attachment No.2 (21 pages)
3. Technical documentation – Attachment No.3 (13 pages),
4. Photos – Attachment No.4 (4 pages).

Summary of testing:

Tests performed (name of test and test clause):	**Testing location:**
All applicable tests were performed. See test report for list of applied tests.	SIQ Ljubljana Mašera-Spasićeva ulica 10 SI-1000 Ljubljana Slovenia

Summary of compliance with National Differences (List of countries addressed):

/

☒ **The product fulfils the requirements of IEC 60884-1:2002 + A1:2006 + A2:2013**

Copy of marking plate:

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

Test item particulars ..... :	Socket-outlet for mounting into parapet duct
Standard Sheet ..... :	CEE 7 (S.S. III)
Rated current (A) / Rated voltage (V) ..... :	16 A; 250 V ~
Degree of protection against access to hazardous parts and against harmful ingress of solid foreign objects ..... :	IP2X / IP4X / IP5X
Degree of protection against harmful ingress of water ..... :	IPX0 / IPX4 / IPX5 / IPX6
Provision for earthing ..... :	without earthing contact / with earthing contact
Method of connecting the cable ..... :	rewirable / non-rewirable
Type of cable ..... :	/
Nominal cross-sectional areas (mm^2) ..... :	/
Type of terminals ..... :	screw-type / screwless (rigid) / screwless (rigid and flexible)
Type of connections ..... :	soldered / welded / crimped / other
Socket-outlets:	
Degree of protection against electric shock :	normal protection / increased protection
Existence of shutters .....:	without shutters (art.2311.x; art.2331.x) / with shutters (art.2321.x; art.2341.x)
Method of application / mounting of the socket-outlet ..... :	surface-type / flush-type / semi-flush-type / panel type / architrave-type / portable type / table-type (single/multiple) / floor recessed type / appliance type
Method of installation ..... :	design A / design B
Intended for circuits where ..... :	a single earthing circuit provides protective earthing / electrical noise immunity is desired for the earthing circuit
Plugs:	
Class of equipment ..... :	0 / I / II
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.....:	2022-05-30; 2022-10-20
Date (s) of performance of tests .....:	(2022-06-01) – (2022-12-01)

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)..... :	ALING - CONEL d.o.o., Železnička 10, 21432 Gajdobra, Serbia

General product information and other remarks:

List of all products:
Art.2311.x – Two pole socket-outlet
Art.2321.x – Two pole socket-outlet with shutters
Art.2331.x – Two pole socket outlet; angled position
Art.2341.x – Two pole socket outlet with shutters; angled position

Where x represents the colour code of front plate (1 – white; E – black; S – silver; N – orange; 4 – red; 12 - green)

IEC 60884-1			
Clause	Requirement + Test	Result - Remark	Verdict
8	**MARKING**		P
8.1	Accessories marked as follows:		P
	- rated current (A) .....:	16 A	P
	- rated voltage (V) .....:	250 V	P
	- symbol for nature of supply .....:	~	P
	- manufacturer's or responsible vendor's name .....:	Aling-Conel logo	P
	- type reference .....:	Example: art.2321	P
	- degree of protection (first characteristic numeral) if higher than 2.....:		N/A
	- degree of protection (second characteristic numeral) if higher than 0.....:		N/A
	- degree of protection (first characteristic numeral) higher than 4 for fixed socket outlet in which case the second characteristic numeral shall also be marked ..... :		N/A
	- degree of protection (second characteristic numeral) higher than 2 for fixed socket outlet in which case the first characteristic numeral shall also be marked..... :		N/A
	Socket-outlets with screwless terminals marked with the following:		-
	- the length of insulation to be removed .....:	11 mm	P
	- an indication of the suitability to accept rigid conductors only (if any) .....:	r	P
8.2	Symbols used: as required in the standard		P
	Marking for the nature of supply placed next to the marking for rated current and rated voltage		P
8.3	Marking of fixed socket-outlets placed on the main part:		-
	- rated current, rated voltage and nature of supply	16/250~	P
	- identification mark of the manufacturer or of the responsible vendor		P
	- length of insulation to be removed, if any		P
	- indication of the suitability to accept rigid conductors only for screwless terminals for those socket-outlets having this restriction	r	P
	- type reference		P
	Cover plates necessary for safety purposes and intended to be sold separately: marked with the manufacturer's or responsible vendor's name and type reference	Intended for mounting into parapet duct	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	IP code, if applicable: marked so as to be easily discernible		N/A
	Fixed socket-outlets classified according to item b) of 7.2.5: identified by a triangle visible after installation unless they have an interface configuration different from that used in normal circuits .....:		N/A
8.4	Plugs and portable socket-outlets: marking specified in 8.1, other than the type reference, easily discernible		N/A
	Plugs and portable socket-outlets for equipment of class II not marked with the symbol for class II construction		N/A
8.5	Neutral terminals: N .....:		N/A
	Earthing terminals: [earth symbol] .....:		P
	Markings not placed on screws or other easily removable parts		P
	Terminals for conductors not forming part of the main function of the socket-outlet:		-
	- clearly identified unless their purpose is self-evident, or		N/A
	- indicated in a wiring diagram fixed to the accessory		N/A
	Identification of such terminals may be achieved by:		-
	- their being marked with graphical symbols according to IEC 60417-2 or colours and/or alphanumeric system, or		N/A
	- their being marked with their physical dimensions or relative location		N/A
8.6	Surface-type mounting boxes forming an integral part of socket-outlets having an IP code higher than IP4X, or higher than IPX2, the IP code marked on the outside of its associated enclosure so as to be easily discernible		N/A
8.7	Indication of which position or with which special provision the declared IP of flush-type and semi-flush-type fixed socket-outlets having IP>X0 is ensured		N/A
8.8	Marking durable and clearly legible with normal or corrected vision, without additional magnification. Test: 15 s with water and 15 s with petroleum spirit		P
9	**CHECKING OF DIMENSIONS**		P
9.1	Accessories and surface-type mounting boxes comply with the appropriate standard sheets and corresponding gauges, if any	See Attachment No.1	P

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Clause	Requirement + Test	Result - Remark	Verdict
	Insertion of plugs into fixed or portable socket-outlets ensured by their compliance with the relevant standard sheets		P
	Compliance checked by measurement and by means of gauges with manufacturing tolerances as shown in table 2	See Attachment No.1	P
9.2	It is not possible to engage a plug with:		-
	- a socket-outlet having a higher voltage rating or a lower current rating;		P
	- a socket-outlet with a different number of live poles (exception admitted provided that no dangerous situation can arise);		P
	- a socket-outlet with earthing contact, if the existing plug of the present national system is a plug for class 0 equipment;		P
	Engagement of an existing plugs on the present national system for equipment of class 0 or of class I with a socket-outlet exclusively designed to accept plugs for class II equipment		P
	Impossibility of insertion checked by applying a gauge, for 1 min, with a force of:		-
	- 150 N (rated current $\leq$ 16A);		P
	- 250 N (rated current $>$ 16A)		N/A
	Accessories with elastomeric or thermoplastic material: test carried out at (35 $\pm$ 2) °C		P
9.3	Deviations from standard sheets made only if they provide technical advantage and do not affect the purpose and safety of accessories complying with standard sheet		N/A
10	**PROTECTION AGAINST ELECTRIC SHOCK**		P
10.1	Live parts not accessible, even after removal of parts which can be removed without the use of a tool for:		-
	Fixed socket-outlets		P
	Plugs when the plug is in partial or complete engagement with a socket-outlet		N/A
	Test with test probe B of IEC 61032		P
	Accessories with elastomeric or thermoplastic material: additional test carried out at (35 $\pm$ 2) °C with test probe 11 of IEC 61032 (75 N for 1 min)		P
	During the test: accessories not deform and no live parts accessible		P

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Clause	Requirement + Test	Result - Remark	Verdict
	Plugs and portable socket-outlets pressed with a force of 150 N for 5 min as shown in figure 8: specimens not show deformation		N/A
10.2	Accessible parts (with exception of small screws and the like for fixing main parts and covers or cover plates): made of insulating material		P
	Cover or cover plates of fixed socket-outlets and accessible parts of portable socket-outlets: made of metal if the requirements of 10.2.1 or 10.2.2 are fulfilled		P
10.2.1	Accessible metal parts or accessible metal parts protected by supplementary insulation made by insulating linings or insulating barriers		N/A
	Insulating linings or insulating barriers cannot be removed without being permanently damaged		N/A
	Insulating linings or insulating barriers cannot be replaced in an incorrect position and, if they are omitted, accessories are rendered inoperable or manifestly incomplete		N/A
	There is no risk of accidental contact between live parts and metal covers or cover plates		N/A
10.2.2	Accessible metal parts are reliably connected, through a low-resistance connection, to the earth during fixing		P
10.3	Contact between a pin of a plug and a live socket-contact of a socket-outlet not possible while any other pin is accessible		P
	Compliance checked by manual test and by means of gauges with tolerances as specified in table 2		P
	Accessories with elastomeric or thermoplastic material: test carried out at (35 ± 2) °C		P
	Socket-outlets with enclosure or bodies of rubber or polyvinyl chloride: test carried out with a force of 75 N for 1 min		N/A
	Fixed socket-outlets provided with metal covers or cover plates: clearance of at least 2 mm required between a pin and a socket-contact when another pin(s) is(are) in contact with the metal covers or cover plates (mm) .....:		N/A
10.4	External parts of plugs made of insulating material		N/A
	Overall dimensions of rings around pins not exceed 8 mm concentric with respect to the pin		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
10.5	Shuttered socket-outlets: live parts not accessible, without a plug in engagement, with the gauges shown in figure 9 and 10		P
	Live contacts automatically screened when the plug is withdrawn		P
	Shutters so designed that a plug is inserted with the same movement in a socket outlet with shutters as in a socket-outlet without shutters		P
	Means cannot easily be operated by anything other than a plug and not depend upon parts which are liable to be lost		P
	Gauge of figure 9, applied to the entry holes corresponding to live contacts with a force of 20 N, for approximately 5 s, successively in three directions, does not touch live parts		P
	Steel gauge of figure 10, applied to the entry holes corresponding to live contacts with a force of 1 N for approximately 5 s, in three directions, does not touch live parts		P
	Accessories with elastomeric or thermoplastic material: test carried out at (35 ± 2) °C		P
10.6	Earthing contacts of a socket-outlet designed that they cannot be deformed by the insertion of a plug		P
	Test plug inserted into the socket-outlet with a force of 150 N for 1 min		P
10.6	Earthing contacts of a socket-outlet designed that they cannot be deformed by the insertion of a plug		P
	After this test: socket-outlet still comply with the requirements of clause 9		P
10.7	Socket-outlet with or without lid with increased protection: live parts not accessible		N/A
	Test wire of 1 mm diameter (figure 10) applied with a force of 1 N on all accessible surfaces does not touch live parts		N/A
	Accessories with elastomeric or thermoplastic material: test carried out at (35 ± 2) °C		N/A
	Socket-outlet tested without a plug inserted with the lid, if any, open		N/A
11	**PROVISION FOR EARTHING**		P
11.1	Earth connection made before the current-carrying contacts of the plug become live		P
	Current-carrying pins are separated before the earth connection is broken		P

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Clause	Requirement + Test	Result - Remark	Verdict
11.2	Earthing terminals of rewirable accessories comply with clause 12		P
	Earthing terminals of the same size as the corresponding terminals for the supply conductors		P
	Earthing terminals of rewirable accessories: internal		P
	Earthing terminals of fixed socket-outlets: fixed to the base or to a part reliably fixed to the base		P
	Earthing contacts of fixed socket-outlets:		-
	- fixed to the base, or		P
	- fixed to the cover (reliably connected to the earthing terminals; contact pieces silver plated or with adequate protection)		N/A
	Parts of earthing circuit in one piece or reliably connected by riveting, welding, or the like		P
11.3	Accessible metal parts of fixed socket-outlets: permanently and reliably connected to the earthing terminal	Side earthing contacts	P
11.4	Socket-outlets, having an IP>X0, with enclosure of insulating material and more than one cable inlet, provided with:		-
	- an internal fixed earthing terminal, or		N/A
	- adequate space for a floating terminal (test connection using the type of terminal specified by the manufacturer), unless		N/A
	- earthing terminal of socket-outlet itself allows the connection of an incoming and an outgoing earthing conductor		N/A
11.5	Connection between earthing terminal and accessible metal parts: of low resistance		P
	Test current equal to 1,5 times the rated current or 25 A (A) .....:	25 A	—
	Resistance not exceed 0,05 Ω (Ω) .....:	0,04 Ω	P
11.6	Fixed socket-outlets according to item b) of 7.2.5: earthing socket contact and its terminal electrically separated from any metal mounting means or other exposed conductive parts which may be connected to the protective earthing circuit of the installation		N/A
12	**TERMINALS AND TERMINATIONS**		P
	All the test on terminals, with the exception of the tests of 12.3 11 and 12.3.12, made after the test of clause 16		P
12.1	**General**		**P**

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Clause	Requirement + Test	Result - Remark	Verdict
12.1.1	Rewirable fixed socket-outlets provided with screw-type terminals or with screwless terminals ..... :	Screwless	P
	Rewirable plugs and portable socket-outlets provided with terminals with screw clamping ..... :		N/A
	Pre-soldered flexible conductors used: pre-soldered area outside the clamp area of screw-type terminals		N/A
	Clamping means of terminals: not serve to fix any other components		P
12.1.2	Non-rewirable accessories provided with soldered, welded, crimped or equally effective permanent connections (termination) ..... :		N/A
	Screwed or Snap-On connections not used		N/A
	Connections made by crimping a pre-soldered flexible conductor not permitted		N/A
12.2	**Terminals with screw clamping for external copper conductors**		N/A
12.2.1	Accessories provided with terminals which allows the proper connection of copper conductors as shows in table 3	Screwless terminals	N/A
	Rated current (A); Type of accessories ..... :		—
	Type of conductor (rigid / flexible) ..... :		—
	Smallest / largest cross-sectional area (mm^2) ..... :		—
	Diameter of the largest conductor (mm) ..... :		—
	Figure of terminal ..... :		—
	Minimum diameter D (minimum dimensions) of conductor space: required (mm); measured (mm) :		N/A
12.2.2	Terminals allow the conductor to be connected without special preparation		N/A
12.2.3	Terminals have adequate mechanical strength		N/A
	Screws and nut for clamping the conductors have metric ISO thread or a comparable thread		N/A
	Screws not of soft metal such as zinc or aluminium		N/A
12.2.4	Terminals resistant to corrosion		N/A
12.2.5	Terminals clamp the conductor(s) without undue damage	See appended table 12.2.5	N/A
	During the test: conductor not slip out, no break near clamping unit and no damage		N/A
12.2.6	Terminals clamp the conductor reliably between metal surfaces	See appended table 12.2.6	N/A
	During the test: conductor not move noticeably		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
12.2.7	Terminals designed or placed that the conductor cannot slip out while the clamping screws or nuts are tightened	See appended table 12.2.7	N/A
	After the test: no wire of the conductor escaped from the clamping unit		N/A
12.2.8	Terminals not work loose from their fixing to accessories		N/A
	Torque test (screws and nuts tightened and loosened 5 times):		N/A
	- rated current (A) .....:		—
	- copper conductor of the largest cross-sectional area (mm²) (table 3) .....:		—
	- type of conductor (solid or stranded) .....:		—
	- torque (Nm) (table 6 or appropriate figures 2, 3 or 4) .....:		—
	During the test: terminals not work loose and show no damage		N/A
12.2.9	Clamping screws or nuts of earthing terminals: adequately locked against accidental loosening, not possible to loosen them without the aid of a tool		N/A
12.2.10	Earthing terminals: no risk of corrosion		N/A
	Body of brass or other metal no less resistant to corrosion		N/A
	The body is a part of a frame or enclosure of aluminium alloy: precautions are taken to avoid the risk of corrosion		N/A
12.2.11	Pillar terminals: distance *g* no less than the value specified in figure 2: required (mm); measured (mm) .....:		N/A
	Mantle terminals: distance *g* no less than the value specified in figure 5: required (mm); measured (mm) .....:		N/A
12.3	**Screwless terminals for external copper conductors**		**P**
12.3.1	Screwless terminals of the type suitable for:		-
	- for rigid copper conductors only, or		P
	- for both rigid and flexible copper conductors (tests carried out with rigid and then repeated with flexible conductors)		N/A
12.3.2	Screwless terminals provided with two clamping units each allowing the proper connection of rigid or of rigid and flexible conductors having nominal cross-sectional areas from 1,5 up to 2,5 mm^2 (table 7)		P

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Clause	Requirement + Test	Result - Remark	Verdict
	Two conductors to be connected: each conductor introduced in a separate clamping unit		P
12.3.3	Screwless terminals allow the conductor to be connected without special preparation		P
12.3.4	Parts of screwless terminals intended for carrying current of materials as specified in 26.5		P
12.3.5	Screwless terminals clamp specified conductors with sufficient contact pressure without undue damage to the conductor		P
	Conductor clamped between metal surfaces		P
12.3.6	It is clear how the connection and disconnection of the conductors is to be made		P
	Disconnection of a conductor require an operation, other than a pull, so that can be made manually with or without a general-purpose tool		P
	It is not possible to confuse the opening intended for the use of a tool with the opening intended for the conductor		P
12.3.7	Screwless terminals intended for the interconnection of two or more conductors:		P
	- the clamping of one of the conductors is independent of the clamping of the other conductor(s)		P
	- during the connection or disconnection the conductors can be connected or disconnected either at the same time or separately		P
	- each conductor introduced in a separate clamping unit.		P
	- it is possible to clamp securely any number of conductors up to the maximum as designed. Number of conductors; Nominal cross-sectional area (mm^2) ..... :	2; 1,5 mm^2 – 2,5 mm^2	P
12.3.8	Screwless terminals of fixed socket-outlets: adequate insertion obvious and over-insertion prevented		P
12.3.9	Screwless terminals properly fixed to the socket-outlets		P
	Not work loose when conductors are connected or disconnected		P
	Self-hardening resins used to fix terminals not subject to mechanical stress		N/A
12.3.10	Screwless terminals withstand mechanical stresses occurring in normal use	See appended table 12.3.10	P

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Clause	Requirement + Test	Result - Remark	Verdict
	During application of the pull conductor not come out of the terminal		P
	Additional test with apparatus shown in figure 11	See appended table 12.3.10	P
	During the test: conductors not moved noticeably in the clamping unit		P
	After these tests: neither terminals nor clamping means have worked loose and conductors show no deterioration		P
12.3.11	Screwless terminals withstand electrical and thermal stresses occurring in normal use	See appended table 12.3.11	P
	After the test: inspection show no changes		P
	Repetition of mechanical strength test according to 12.3.10	See appended table 12.3.11	P
	During application of the pull conductor not come out of the terminal		P
	Additional test with apparatus shown in figure 11	See appended table 12.3.11	P
	During the test: conductors not moved noticeably in the clamping unit		P
	After these tests: neither terminals nor clamping means have worked loose and conductors show no deterioration		P
12.3.12	Screwless terminals: connected rigid solid conductor remains clamped, even when deflected during normal installation	See appended table 12.3.12	P
13	**CONSTRUCTION OF FIXED SOCKET-OUTLETS**		P
13.1	Socket-contact assembly have sufficient resilience to ensure adequate contact pressure on plug pins		P
	Part of socket-contact assembly ensure metallic opposing contacts at least on two sides of each pins		P
13.2	Socket-contact and pin(s) of socket-outlet which are made of copper or copper alloy, as specified in 26.5, are considered as complying with this requirement		P
	The pin(s) of socket-outlets so constructed in such a way that the mechanical strength of the pin(s) does not depend on the plastic material		N/A
	Compliance is checked by inspection and in case of doubt by the tests of 14.2 and Clause 21 on a new set of specimens without plastic		P
13.3	Insulating linings, barriers and the like: adequate mechanical strength		P
13.4	Socket-outlets constructed as to permit		-

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Clause	Requirement + Test	Result - Remark	Verdict
	- easy introduction into the terminal and reliable connection of the conductors in the terminals, except for lead wires of pilot lights		P
	- easy fixing of the main part to a wall or in a mounting box	Intended for mounting into paraptet duct	P
	- correct positioning of the conductors		P
	- adequate space between the underside of the main part and the surface on which the main part is mounted;		P
	- adequate space between the sides of the main part and the enclosure (cover or box);		P
	Socket-outlets having screwless terminals, constructed that the connecting and/or disconnecting means of the screwless terminals cannot be activated by the conductors during and after installation		P
	Compliance is checked by inspection and in case of doubt by the following test		P
	The test is carried out with a solid copper conductor having the smallest cross-sectional area, as specified in 12.3.2. (mm^2)……:		N/A
	If it is not possible to exert a force onto the connecting/disconnecting device, the product is deemed to comply with the requirements without further tests.		N/A
	During the application of the pull, the conductor do not come out of the screwless terminal		N/A
	In addition socket-outlets classified as design A: permit easy positioning and removal of the cover or cover plate, without displacing the conductors or activating the connecting and/or disconnecting means of screwless terminals.		N/A
	Compliance is checked by inspection and by an installation test with conductors of the largest nominal cross-sectional area specified in Table 3 (mm^2)…..:		N/AP
13.5	Socket-outlets designed that full engagement of associated plugs is not prevented by any projection from their engagement face	No projections	P
	Gap between the engagement face of the socket-outlet and the plug: not exceed 1 mm		P

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Clause	Requirement + Test	Result - Remark	Verdict
13.6	Covers provided with bushings for the entry holes for the pins: not possible to remove them from the outside or for them to become detached inadvertently from the inside when the cover is removed		N/A
13.7	Covers, cover-plates or parts of them intended to ensure protection against electric shock:		-
	- held in place at two or more points by effective fixings	4 snap fits	P
	- fixed by means of a single fixing, for example, by a screw, provided that they are located by another means (for example, by a shoulder)		N/A
	Fixings of covers or cover-plates of socket-outlets of design A serve to fix the main parts: there are means to maintain the base in position, even after removal of the covers or cover-plates		P
13.7.1	Covers or cover-plates whose fixings are of the screw-type:		N/A
	Compliance checked by inspection only		N/A
13.7.2	Covers or cover-plates whose fixing is not dependent on screws and whose removal is obtained by applying a force in a direction approximately perpendicular to the mounting/supporting surface:		N/A
	Compliance checked, when their removal may give access, with the standard test finger:		N/A
	to live parts: by the test of 24.14 (verification of the non-removal and the removal)		N/A
	to non-earthed metal parts separated from live parts in such a way that creepage distances and clearances have the values shown in table 23: by the test of 24.15 (verification of the non-removal and the removal)		N/A
	only to parts of insulating material, or earthed metal parts, or metal parts separated from live parts in such a way that creepage distances and clearances have twice the values shown in table 23, or live parts of SEL V circuits not greater than 25 V a.c.: by the test of 24.16 (verification of the non-removal and the removal)		N/A
13.7.3	Covers or cover-plates the fixing of which is not dependent on screws and whose removal is obtained by using a tool, in accordance with the manufacturer's instructions given in an instruction sheet or in other documentation:		P
	Compliance checked, when their removal may give access, with the standard test finger:		-
	to live parts: by the test of 24.14 (verification of the non-removal only)	See 24.14	P

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Clause	Requirement + Test	Result - Remark	Verdict
	to non-earthed metal parts separated from live parts in such a way that creepage distances and clearances have the values shown in table 23: by the test of 24.15 (verification of the non-removal only)		N/A
	only to parts of insulating material, or earthed metal parts, or metal parts separated from live parts in such a way that creepage distances and clearances have twice the values shown in table 23, or live parts of SEL V circuits not greater than 25 V a.c.: by the test of 24.16 (verification of the non-removal only)		N/A
13.8	Cover-plate intended for a socket-outlet with earthing contact: not interchangeable with a cover-plate intended for a socket-outlet without earthing contact		P
13.9	Surface-type socket-outlets: no free openings in their enclosures		N/A
13.10	Screws or other means for mounting the socket-outlet on a surface in a box or enclosure: easily accessible from the front		N/A
	Fixing means not serve any other fixing purpose		N/A
13.11	Multiple socket-outlets with a common base: provided with fixed links for the interconnection of the contacts in parallel		N/A
	Fixing of the links independent from the connection of the supply wires		N/A
13.12	Multiple socket-outlets, comprising separate bases: correct position of each base ensured		N/A
	Fixing of each base independent of the fixing of the combination to the mounting surface		N/A
13.13	Mounting plate of surface-type socket-outlets: adequate mechanical strength		N/A
13.14	Socket-outlets withstand the lateral strain imposed by equipment likely to be introduced into them		P
	Socket-outlets 16A 250V: test made 4 times with the socket-outlet turned through 90°, 5 N for 1 min (device shown in fig. 13)		P
	During the test: device not become disengaged from the socket-outlet		P
	After the test:		-
	- no damage		P
	- socket-outlets comply with clause 22		P

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Clause	Requirement + Test	Result - Remark	Verdict
13.15	Socket-outlets are not an integral part of lampholders		P
13.16	Surface-type socket-outlets having IP>20 are according to their IP classification when fitted with conduits or with sheathed cables and without a plug in engagement		N/A
	Surface-type socket-outlets having IPX4 and IPX6 have provision for opening a drain hole		N/A
	Socket-outlets with a drain hole: drain hole is not less than 5 mm in diameter, or 20 mm^2 in area with a width and a length of not less than 3 mm .....:		N/A
	Drain hole: effective		N/A
	Lid springs (if any): of corrosion-resistant material (bronze or stainless steel) .....:		N/A
13.17	Earthing pins: adequate mechanical strength		P
	Not solid pins: compliance checked by inspection and by the test of 14.2 made after the tests of clause 21		P
13.18	Earthing contacts, phase contacts and neutral contacts :		-
	- locked against rotation;		P
	- when the product is ready for the wiring do not possible to be removed without the use of a tool		P
13.19	Metal strips of the earthing circuit: no burrs which might damage the insulation of the supply conductors		P
13.20	Socket-outlets to be installed in a box: designed that the conductor ends can be prepared after the box is mounted in position, but before the socket-outlet is fitted in the box		P
13.21	lnlet openings: allow the introduction of the conduit or the sheath of the cable		N/A
	Surface-type socket-outlets:		-
	the conduit or sheath of the cable can enter at least I mm into the enclosure		N/A
	inlet opening for conduit entries, or at least two of them if there are more than one, capable of accepting conduit sizes of 16, 20, 25 or 32 according to IEC 60423 or a combination of at least two of any of these sizes		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	inlet opening for cable entries capable of accepting cables having the dimensions specified in table 14 or be as specified by the manufacturer: rated current (A); Limits of external dimensions of cable min/max (mm) .....:		N/A
13.22	Membranes (grommets) in inlet openings: reliably fixed and not displaced by the mechanical and thermal stresses occurring in normal use		N/A
	Test on membranes subjected to the ageing treatment specified in 16.1 and assembled in the accessories		-
	Accessories placed at (40 ± 2) °C for 2 h. Force of 30 N applied for 5 s by test probe 11 of IEC 61032. During the test: no deformation		N/A
	Membranes likely to be subjected to an axial pull: axial pull of 30 N applied for 5 s. During the test: membranes not become detached		N/A
	After the test: no harmful deformation, cracks or similar damage		N/A
	Test repeated with membranes not subjected to any treatment		N/A
13.23	Membranes in inlet openings: introduction of the cables into the accessory permitted when the ambient temperature is low		N/A
	Test on membranes not subjected to the ageing treatment specified in 16.1 and assembled in the accessories		-
	Accessories kept at (-15 ± 2) °C for 2 h: possibility to introduce cables of the largest diameter through membranes		N/A
	After the test: no harmful deformation, cracks or similar damage		N/A
14	**CONSTRUCTION OF PLUGS AND PORTABLE SOCKET-OUTLETS**		N/A
14.1	Non-rewirable portable accessories:		-
	flexible cable cannot be separated from the accessory without making it permanently useless		N/A
	Accessory cannot be opened by hand or by using a general purpose tool, for example a screwdriver used as such		N/A
14.2	Pins of portable accessories: adequate mechanical strength		N/A
	Test for pins not solid (made after clause 21): force of 100 N exerted on the pin, according to figure 14, for 1 min by means of a steel rod Ø 4,8 mm		-
	During the application of the force: reduction of the dimension of the pin not exceed 0,15 mm		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	After removal of the rod: dimensions of the pin not changed by more than 0,06 mm		N/A
14.3	Pin(s) and contacts of portable accessories :		-
	- locked against rotation;		N/A
	- not removable without dismantling the plug;		N/A
	- adequately fixed in the body of the plug		N/A
	Earthing or neutral pins or contacts of plugs: not possible to arrange in an incorrect position		N/A
	The pin(s) of portable accessories constructed in such a way that the mechanical strength of the pin(s) does not depend on the plastic material		N/A
	Compliance is checked by inspection and in case of doubt by the tests of 14.2 and Clause 21 on a new set of specimens without plastic		N/A
	Surfaces of plug pin(s) smooth and free from burrs or sharp edges and other irregularities which could cause damage or excessive wear to corresponding socket contacts or shutters		N/A
14.4	Earthing contacts, phase contacts and neutral contacts of portable socket-outlets :		-
	- locked against rotation		N/A
	- removable only with the aid of a tool, after dismantling the socket-outlet		N/A
	In addition, for single portable socket-outlets compliance is checked by the test of 24.2		N/A
14.5	Socket-contact assemblies: sufficient resilience		N/A
	Parts of socket-contact assemblies:		-
	- are not of insulating material except ceramic, or other material with no less suitable characteristics		N/A
	- ensure metallic contacts at least on two opposing sides of each pin		N/A
	Contact pressure of the contact tube does not depend on soldered connection only		N/A
14.6	Pins and socket-contacts: resistant to corrosion and abrasion		N/A
	Socket contacts and pin(s) of socket-outlets, which are made of copper or copper alloy, as specified in 26.5, are considered as complying with this requirement.		N/A
14.7	Enclosures of rewirable portable accessories: completely enclose terminals and ends of flexible cable		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Construction is unlikely that:		-
	- cores 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
14.8	Rewirable portable accessories: terminal screws or nuts cannot become loose and fall out of position and establish an electrical connection between live parts and earthing terminal or metal parts		N/A
14.9	Rewirable portable accessories with earthing contact: ample space for slack of earthing (test)		N/A
	Non-rewirable non-moulded-on accessories with earthing contact: current-carrying conductors stressed before the earthing conductor if the flexible cable slips in its anchorage		N/A
14.10	Terminals of rewirable portable accessories and terminations of non-rewirable portable accessories: located and shielded that loose wires not present a risk of electric shock		N/A
	Non-rewirable moulded-on portable accessories: provided with means to prevent loose wires of a conductor from reducing the minimum isolation distance requirements		N/A
14.10.1	Rewirable accessories: test with 6 mm free wire		-
	free wire of a conductor connected to a live terminal not touch any accessible metal part or able to emerge from the enclosure		N/A
	free wire of a conductor connected to an earthing terminal not touch a live part		N/A
14.10.2	Non-rewirable, non-moulded-on accessories: test with a free wire of length equivalent to the maximum designed stripping length declared by the manufacturer plus 2 mm		-
	free wire of a conductor connected to a live termination not touch any accessible metal part or 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 not touch any live part		N/A
14.10.3	Non-rewirable, moulded-on accessories:		-
	Verification of means to prevent stray wires reducing the minimum distance through insulation to external accessible surface below 1,5 mm		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
14.11	Rewirable portable accessories:		-
	- clear how relief from strain and prevention of twisting is intended to be effected		N/A
	- cord anchorage, or at least part of it, integral with or securely fixed to one of the component parts of the plug or portable socket-outlet		N/A
	- makeshift methods not used		N/A
	- cord anchorage suitable for the different types of flexible cable which may be connected to it; screws, if any: not serve to fix any other component		N/A
	- cord anchorages: of insulating material or provided with an insulating lining fixed to the metal parts		N/A
	- metal parts of cord anchorages, including clamping screws: insulated from the earthing circuit		N/A
14.12	Rewirable portable accessories and non-rewirable non-moulded on portable accessories: it is not possible to remove covers, cover-plates or parts of them intended to ensure protection against electric shock without the use of a tool		N/A
14.13	Covers of portable socket-outlets: bushings for entry holes for the pins not removable from the outside or detachable inadvertently from the inside		N/A
14.14	Screws intended to allow access to interior of the accessory: captive		N/A
14.15	Engagement face of plugs: no projections		N/A
14.16	Engagement face of portable socket-outlets: no projection		N/A
14.17	Portable accessories of IP>20: enclosed according to their IP classification		N/A
	Plugs having IP>20: adequately enclosed with the exception of the engagement face		N/A
	Portable socket-outlets having IP>20: adequately enclosed without a plug in engagement		N/A
	Lid springs (if any): of corrosion-resistant material (bronze or stainless steel) .....:		N/A
14.18	Portable socket-outlets: means for suspension from a wall or other mounting surfaces not allow access to live parts		N/A
	No free openings between space intended for suspension means by which the socket-outlet is fixed to the wall, or other mounting surface and live parts		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
14.19	Combinations of portable accessories and switches, circuit-breakers or other devices comply with relevant individual IEC standards, if relevant combined product standard does not exist .....:		N/A
14.20	Portable accessories: not integral part of lampholders		N/A
14.21	Plugs for equipment of class II:		-
	- rewirable or non-rewirable		N/A
	- if part of a cord set: provided with a connector for equipment of class II		N/A
	- if part of a cord extension set: provided with a portable socket-outlet for equipment of class II		N/A
14.22	Components (switches and fuses) incorporated in accessories: comply with the relevant IEC standard as far as it applies		-
	Components incorporated in portable accessories so rated, or so protected, that overloading of either the component or the plug or the socket-outlet portion cannot occur in normal use		N/A
	Requirements for switches incorporated in portable accessories are detailed in Annex D	See appended table 14.22	N/A
	For portable socket-outlets and rewirable plugs the incorporated overcurrent protective device in the accessory shall have a rated current equal to or less than the rated current of the accessory		N/A
	Any other component(s), such as switches or control devices, have a rated current not less than (rated current referred to resistive load):		-
	- the rated current of the accessory or		N/A
	- the rated current of the incorporated overcurrent protective device, if any		N/A
	For non-rewirable plugs, any other incorporated component(s), such as switches or control devices, have a rated current not less than:		-
	- the test current for the combination of the accessory and the cable as indicated in Table 20, for Clause 21, or		N/A
	- the rated current of the incorporated overcurrent protective device, if any		N/A
	Any incorporated component(s) have a rated voltage not less than the rated voltage of the accessory		N/A
	Compliance is checked by inspection and, if necessary, by testing the component according to the relevant IEC standard		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
14.23	Plug-in equipment: not cause overheating of the pins or impose undue strain		N/A
	Plugs with rating above 16 A and 250 V: not integral part of other equipment		N/A
	Tests for two-pole plugs, with or without earthing contact, with rating up to and including 16 A and 250 V (plug of equipment inserted into a fixed socket-outlet complying with this standard):		-
14.23.1	Socket-outlet connected to a supply voltage equal to 1,1 times the highest rated voltage of the equipment (V) .....:		—
	Temperature rise of the pins after 1 h not exceed 45 K (K) .....:		N/A
14.23.2	Additional torque applied to the socket-outlet in order to maintain the engagement face in the vertical plane not exceed 0,25 Nm (Nm) .....:		N/A
14.24	Plugs can easily be withdrawn by hand from the relevant socket-outlets		N/A
	Gripping surfaces are so designed that the plug can be withdrawn without having to pull the flexible cable		N/A
14.25	Membranes in inlet openings of portable accessories: meet the requirements of 13.22 and 13.23		N/A
14.26	Rewirable portable socket-outlets which can be assembled and wired for normal use after their rear part has been fixed onto a surface comply both with the requirements for portable socket-outlets and with the following additional requirements for surface fixed socket-outlets:		-
	- provision for earthing: 11.2, 11.3, 11.6;		N/A
	- terminals and terminations: 12.2.1;		N/A
	- construction of fixed socket-outlets: Clause 13;		N/A
	- resistance to ageing, protection provided by enclosures, and resistance to humidity: 16.2.1, 16.2.2;		N/A
	- temperature rise: Clause 19;		N/A
	- mechanical strength: Clause 24;		N/A
	- resistance to heat: Clause 25;		N/A
	- creepage distances, clearances and distances through sealing compound: Clause 27;		N/A
	- resistance of insulating material to abnormal heat, to fire and to tracking: 28.1.1, glow-wire test		N/A
15	**INTERLOCKED SOCKET-OUTLETS**		N/A
	Socket-outlet interlocked with a switch:		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	plug cannot be inserted into or completely withdrawn from the socket-outlet while the socket-contacts are live		N/A
	socket-contacts cannot be made live until a plug is almost completely in engagement		N/A
16	**RESISTANCE TO AGEING, PROTECTION PROVIDED BY ENCLOSURES, AND RESISTANCE TO HUMIDITY**		P
16.1	**Resistance to ageing**		**-**
	Accessories are resistant to ageing		P
	For accessories having a lid, the lid is closed during the test		N/A
	Portable socket-outlets: the plug of the same system having the same rated current as the socket-outlet inserted into the socket-outlet during the test		N/A
	Accessories subjected to a test in a heating cabinet at (70 ± 2) °C for seven days (168 h)		P
	After the tests, the specimens show:		-
	- no crack visible with normal or corrected vision without additional magnification		P
	- no sticky or greasy material		P
	- no trace of cloth (forefinger pressed with 5 N)		P
	- no damage		P
	Portable socket-outlets: contact pressure of the contact assembly checked as specified in subclause 22.2 with the single-pin gauge		N/A
16.2	**Protection provided by enclosures**		**P**
	Enclosures provide a degree of protection in accordance with the IP designation of the accessory	IP20	P
16.2.1	**Protection against access to hazardous parts and against harmful effects due to ingress of solid foreign objects**		**P**
	Accessories and their enclosures provide a degree of protection against access to hazardous parts and against harmful effects due to ingress of solid foreign objects		P
	Fixed socket-outlets: mounted as in normal use on a vertical surface		P
	Flush-type and semi-flush type socket-outlets: mounted in an appropriate box according to the manufacturer's instructions		P

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Clause	Requirement + Test	Result - Remark	Verdict
	Accessories with screwed glands or membranes fitted with flexible cables within the range specified in table 3:		N/A
	- largest cross-sectional area (mm^2); type of cable (table 17) .....:		—
	- smallest cross-sectional area (mm^2); type of cable (table 17) .....:		—
	Glands tightened with a torque equal to 2/3 of the torque applied during the test of 24.6 (Nm) .....:		—
	Screws of the enclosure tightened with a torque equal to 2/3 of the torque given in table 6 (Nm) ...:		—
16.2.1.1	**Protection against access to hazardous parts**		**P**
	Appropriate test performed as specified in IEC 60529 (see also clause 10)	IP20	P
16.2.1.2	**Protection against harmful effects due to ingress of solid foreign objects**		N/A
	Appropriate test performed as specified in IEC 60529		N/A
	Test on accessories with IP5X (considered to be of category 2): dust not penetrated in a quantity to interfere with satisfactory operation or to impair safety		N/A
	Test on accessories with IP6X (considered to be of category 1): dust do not penetrate		N/A
16.2.2	**Protection against harmful effects due to ingress of water**		N/A
	Accessories and their enclosures provide a degree of protection against harmful effects due to ingress of water in accordance with their IP classification		N/A
	Appropriate test performed as specified in IEC 60529 under the following conditions:		N/A
	Flush-type and semi-flush type socket-outlets: fixed in a vertical test wall using an appropriate box according to the manufacturer's instructions		N/A
	Accessory suitable to be installed on a rough wall: test wall according to figure 15 is used		N/A
	Surface-type socket-outlets mounted as for normal use in a vertical position and fitted with cables (having conductors of the largest and smallest nominal cross-sectional area given in table 3) or conduits or both in accordance with the manufacturer's instructions:		N/A
	- largest cross-sectional area (mm^2); type of cable (table 17) .....:		—
	- smallest cross-sectional area (mm^2); type of cable (table 17) .....:		—

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Clause	Requirement + Test	Result - Remark	Verdict
	Portable socket-outlets tested on a plain, horizontal surface in a position as in normal use and fitted with flexible cables (having conductors of the largest and smallest nominal cross-sectional area given in table 3) according to table 17:		N/A
	- largest cross-sectional area (mm^2); type of cable (table 17) .....:		—
	- smallest cross-sectional area (mm^2); type of cable (table 17) .....:		—
	Screws of enclosure tightened with a torque equal to 2/3 of the torque given in table 6 (Nm) .....:		—
	Glands tightened with a torque equal to 2/3 of the torque applied during the test of 24.6 (Nm) .....:		—
	Accessory with drain holes opened during the test: any accumulation of water proved by inspection		N/A
	Socket-outlets tested without a plug in engagement		N/A
	Plugs tested when in full engagement with:		-
	- a fixed socket-outlets		N/A
	- a portable socket-outlets		N/A
	of the same system and with the same degree of protection against harmful effects due to ingress of water		—
	Specimens withstand an electric strength test specified in 17.2 which is started within 5 min of completion of the IP test		N/A
16.3	**Resistance to humidity**		**P**
	Accessories proof against humidity which may occur in normal use		P
	Compliance checked by a humidity treatment carried out in a humidity cabinet containing air with relative humidity maintained between 91 % and 95 %		P
	Specimens kept in the cabinet for:		-
	- two days (48 h) for accessories having IPX0	IP20	P
	- seven days (168 h) for accessories having IP>X0		N/A
	After this treatment the specimens show no damage		P
17	**INSULATION RESISTANCE AND ELECTRIC STRENGTH**		P
17.1	Insulation resistance measured 1 min after application of 500 V d.c.	See appended table 17.1	P
17.2	Electric strength: a.c. test voltage applied for 1 min	See appended table 17.2	P
18	**OPERATION OF EARTHING CONTACTS**		P

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Clause	Requirement + Test	Result - Remark	Verdict
	Earthing contacts provide adequate contact pressure and not deteriorate in normal use		P
	Compliance checked by the tests of clauses 19 and 21		P
19	**TEMPERATURE RISE**		P
	Accessories constructed that they comply with the following temperature rise test		-
	Non-rewirable accessories are tested as delivered		N/A
	In the case of multiple socket-outlets, the test is carried out on one socket-outlet of each type and current rating with the test current as specified in Table 20 passed through that one socket-outlet	See appended tables	N/A
	The temperature rise of the terminals, terminations and clamping units according to Figure 44 determined by means of thermocouples do not exceed 45 K	See appended tables	P
19.1	Socket-outlets and plugs are tested as follows:		-
	Socket-outlets tested using a test plug with brass pins having the minimum specified dimensions	See appended table 19.1	P
	For this test the temperature rise is measured on the terminals and terminations.		P
	Plugs tested with clamping units having dimensions specified in Figure 44 fitted on each live pin and earthing pin, if any	See appended table 19.1	N/A
	Plugs having lateral earthing contacts and resilient earthing contacts tested using a fixed socket-outlet complying with the standard and having as near to-average characteristics as can be selected, but with minimum size of the earthing pin, if any	See appended table 19.1	N/A
19.2	Fixed socket-outlets of a socket-outlet and fused plug system are tested as follows:		-
	a) For a single socket-outlet the plug is inserted into the socket-outlet and 70 % of the test current is passed through the plug	See appended table 19.2	N/A
	The balance of the total test current is passed, simultaneously through a looped connection, connected to the socket-outlet terminals		N/A
	The total nominal load on the supply cable is passed for 60 min	See appended table 19.2	N/A
	b) For a multiple socket-outlet a plug is inserted into one socket-outlet and 70 % of the test current is passed	See appended table 19.2	N/A
	A second plug is inserted into another socket-outlet and the balance of the total test current is passed simultaneously through this plug……:	See appended table 19.2	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	The total nominal load on the supply cable is passed for 60 min.	See appended table 19.2	N/A
19.3	Portable socket-outlets and rewirable plugs with incorporated components are tested by the following two tests:		-
	– with a current which is equal to the test current as indicated in Table 20, for Clause 19	See appended table 19.3	N/A
	– with a current which is equal to the rated current of the portable accessory or the rated current of the component(s), whichever is the lower	See appended table 19.3	N/A
	Non-rewirable plugs with incorporated components are tested by the following two tests:		-
	– with a current which is equal to the test current for the combination of the plug and the cable as indicated in Table 20, for Clause 19	See appended table 19.3	N/A
	– with a current which is equal to the test current for the combination of the plug and the cable as indicated in Table 20, for Clause 21, or the rated current of the component(s), whichever is the lower	See appended table 19.3	N/A
20	**BREAKING CAPACITY**		P
	Accessories have adequate breaking capacity		P
	Compliance checked by testing:		-
	- socket-outlets;	See appended table 20	P
	- plugs with pins which are not solid	See appended table 20	N/A
	Multiple socket-outlets: test carried out on one socket-outlet of each type and current rating		N/A
	During the test: no sustained arcing occur		P
	After the test:		-
	- specimens show no damage impairing their further use;		P
	- entry holes for the pins not show any damage which may impair the safety		P
21	**NORMAL OPERATION**		P
	Accessories withstand without excessive wear or other harmful effect, the mechanical, electrical and thermal stresses occurring in normal use		P
	Compliance checked by testing:		-
	- socket-outlets;	See appended table 21	P
	- plugs with resilient earthing socket-contacts;	See appended table 21	N/A
	- plugs with pins which are not solid	See appended table 21	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Test performed according to the procedure specified in Figure 43; point of Figure 43 at which the test program has begun (1, 2, 3) .....:	1	—
	Test current passed:		-
	- during each insertion and withdrawal of the plug (In ≤ 16A)		P
	- during alternate insertion and withdrawal, the other insertion and withdrawal being made without current flowing (In > 16A)		N/A
	Multiple socket-outlets: test carried out on one socket-outlet of each type and current rating		N/A
	During the test: no sustained arcing occur		P
	After the test the specimens do not show:		-
	- wear impairing their further use;		P
	- deterioration of enclosures, insulating lining or barriers;		P
	- damage to the entry holes for the pins, that might impair proper working;		P
	- loosening of electrical or mechanical connections;		P
	- seepage of sealing compound		P
	Shuttered socket-outlets: gauges of figure 9 and 10 applied to the entry holes corresponding to live contacts do not touch live parts when they remain under the relevant forces	See appended table 21	P
	Temperature-rise test (requirements of clause 19)	See appended table 21	P
	Electric strength (sub-clause 17.2)	See appended table 21	P
	Pins which are not solid: test according to 14.2		N/A
22	**FORCE NECESSARY TO WITHDRAW THE PLUG**		P
	Construction of accessory does allow the easy insertion and withdrawal of the plug, and prevent the plug from working out of the socket-outlet in normal use		P
22.1	**Verification of the maximum withdrawal force**	See appended table 22	P
22.2	**Verification of the minimum withdrawal force**	See appended table 22	P
23	**FLEXIBLE CABLES AND THEIR CONNECTIONS**		N/A
23.1	Rewirable plugs and rewirable portable socket-outlets are provided with a cord anchorage		N/A
	Sheath of flexible cable is clamped within the cord anchorage		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	In non-rewirable plugs and non-rewirable portable socket-outlets the cable is maintained in position and the terminations are relieved from strain and twisting		N/A
	Sheath of flexible cable is maintained inside the accessory		N/A
23.2	Pull and torque test		N/A
	Non-rewirable accessories:		-
	After the test: displacement ≤ 2 mm	See appended table 23.2	N/A
	No break in the electrical connections		N/A
	Rewirable accessories:		-
	After the test: displacement ≤ 2 mm	See appended table 23.2	N/A
	End of conductors not have moved noticeably in the terminals		N/A
	Rewirable accessories having rated current up to and including 16 A:		-
	Suitable for fitting with the appropriate cable as shown in table 19		N/A
	Type of flexible cable; number of conductors and nominal cross-sectional area (mm^2)..... :		—
23.3	Non-rewirable plugs and non-rewirable portable socket-outlets are provided with a flexible cable complying with IEC 60227 or IEC 60245		N/A
	Flexible cables have the same number of conductors as there are poles in the plug or socket-outlet		N/A
	Conductor connected to the earthing contact is identified by the colour combination green/yellow		N/A
23.4	Non-rewirable plugs and non-rewirable portable socket-outlets: designed that the flexible cable is protected against excessive bending		N/A
	Guards of insulating material and fixed in reliable manner		N/A
	Flexing test (10.000 flexings)		-
	During the test: no interruption of the test current and no short-circuit between conductors	See appended table 23.4	N/A
	After the test: guard no separated from the body, insulation shows no sign of abrasion or wear, broken strands become no accessible	See appended table 23.4	N/A
24	**MECHANICAL STRENGTH**		P

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Clause	Requirement + Test	Result - Remark	Verdict
	Accessories, surface mounting boxes, screwed glands and shrouds have adequate mechanical strength		P
24.1	Fixed socket-outlets, portable multiple socket-outlets and surface-type mounting boxes: hammer test described in IEC 60068-2-75 (test EHA), equivalent mass of 250 g	See appended table 24.1	P
	After the test: no damage, live parts no become accessible		P
24.2	Portable single socket-outlets and plugs: subjected to test Ec: Rough handling shocks, primarily for equipment-type specimens, procedure 2 of IEC 60068-2-31 (tumbling barrel); number of falls……..:		N/A
	After the test:		-
	- no part become detached or loosened;		N/A
	- pins no become so deformed that the plug cannot be introduced into a socket-outlet and also fails to comply with the requirements of 9.1 and 10.3;		N/A
	- pins no turn when a torque of 0,4 Nm is applied for 1 min in each direction		N/A
	The shutters of socket-outlets tested again according to Clause 21, from paragraph 19 up to paragraph 24 (only the tests of shutters)		N/A
24.3	Main parts of surface-type socket-outlets: first fixed to a cylinder of rigid steel sheet and then fixed to a flat steel sheet		-
	During and after the tests: no damage		N/A
24.4	Portable single socket-outlets, multiple socket-outlets and plugs (elastomeric or thermoplastic material): impact test, weight (1000 ± 2) g, height 100 mm (apparatus shown in fig. 27)		N/A
	Specimens placed in a freezer at (-15 °C ± 2) °C for at least 16 h. After the test: no damage		N/A
24.5	Portable single socket-outlets and plugs (elastomeric or thermoplastic material): compression test, 300 N for 1 min, position a) and b) (apparatus shown in fig. 8)		N/A
	After the test: no damage		N/A
24.6	Screwed glands of accessories having IP>20: torque test (1 min)		N/A
	- diameter of test rod (mm) .....:		—
	- type of material (metal / moulded) .....:		—
	- torque (Nm) .....:		—
	After the test: no damage of glands and enclosures of the specimens		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
24.7	Plug pins provided with insulating sleeves: 20000 movements, 4 N (apparatus shown in fig. 28)		N/A
	After the test: no damage of pins, insulating sleeve not have punctured or rucked up		N/A
24.8	Shuttered socket-outlets: mechanical test carried out on specimens submitted to the normal operation test according to clause 21		P
	Force (40 N / 75 N) applied for 1 min against the shutter of an entry hole by means of one pin (N) :	75 N	—
	Pin did not come in contact with live parts		P
	After the test: no damage		P
24.9	Mechanical test for multiple portable socket-outlet: 8 falls on concrete floor with the specimens arranged as shown in figure 29		N/A
	Rewirable multiple socket-outlets: flexible cable of the smallest cross-sectional area specified in table 3 .....:		—
	After the test: no damage, no part have become detached or loosened		N/A
	Accessories having IP>X0 submitted again to the tests as specified in 16.2		N/A
	The shutters of multiple socket-outlets tested again according to Clause 21, from paragraph 19 up to paragraph 24 (only the tests of shutters)		N/A
24.10	Plugs: pull test to verify the fixation of pins in the body of the plug (new specimens)		N/A
	Maximum withdrawal force (table 16) applied for 1 min on each pin in turn, after the specimen has been placed at (70 ± 2) °C for 1 h (N) ..... :		—
	After the test: displacement of pins in the body of the plug ≤ 1 mm (mm) ..... :		N/A
24.11	Barriers of portable socket-outlets having means for suspension on a mounting surface:		N/A
	Force applied for 10 s against the barrier by means of a cylindrical steel rod (1,5 times the maximum plug withdrawal force in 22.1, table 16) (N) ..... :		—
	Rod did not pierce the barrier		N/A
24.12	Portable socket-outlets having means for suspension on a mounting surface (pull test):		N/A
	Pull applied to the supply flexible cable for 10 s (force prescribed in 23.2 for checking the flexible cable anchorage) (N) ..... :		—
	During the test: no break of the means for suspension on a mounting surface		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
24.13	Portable socket-outlets having means for suspension on a mounting surface (pull test):		N/A
	Pull applied to the engagement face of the socket-outlet for 10 s (maximum withdrawal force specified, for the corresponding plug, in table 16) (N) .....:		—
	During the test: no break of the means for suspension on a mounting surface		N/A
24.14	Forces necessary to retain or remove covers, cover-plates or parts of them (accessibility with the test finger to live parts)		P
24.14.1	Verification of the retention of covers or cover-plates (fixed socket-outlets)		P
	Force (40 N / 80 N) applied for 1 min perpendicular to the mounting surface (N) .....:	80 N	—
	Covers or cover-plates did not come off		P
	Test repeated on new specimens with a sheet of hard material, (1 ± 0,1) mm thick, fitted around the supporting frame (fig. 31): covers or cover-plates did not come off		P
	After the test: no damage		P
24.14.2	Verification of the removal of covers or cover-plates (fixed socket-outlets)		N/A
	Force not exceeding 120 N applied 10 times perpendicular to the mounting / supporting surface: covers or cover-plates came off		N/A
	Test repeated on new specimens with a sheet of hard material, (1 ± 0,1) mm thick, fitted around the supporting frame (fig. 31): covers or cover-plates came off		N/A
	After the test: no damage		N/A
24.14.3	Verification of the retention of covers or cover-plates (plugs and portable socket-outlets)		N/A
	Force 80 N applied for 1 min perpendicular to the mounting surface: covers, cover-plates or parts of them did not come off		N/A
	Test repeated with a force of 120 N:		N/A
	Rewirable plugs and rewirable portable socket-outlets: covers, cover-plates or parts of them came off but the specimen showed no damage		N/A
	Non-rewirable, non-moulded-on accessories: covers, cover-plates or parts of them came off but the accessories were permanently useless according to 14.1		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
24.15	Force necessary for covers or cover-plates to come off or not to come off (accessibility with the test finger to non-earthed metal parts separated from live parts by creepage distances and clearances according to table 23)		N/A
24.14.1	Verification of the non-removal of covers or cover-plates		N/A
	Force (10 N / 20 N) applied for 1 min in direction perpendicular to the mounting surface (N) ..... :		—
	Covers or cover-plates did not come off		N/A
	Test repeated on new specimens with a sheet of hard material, 1 mm ± 0,1 mm thick, fitted around the supporting frame (fig. 31): covers or cover-plates did not come off		N/A
	After the test: no damage		N/A
24.14.2	Verification of the removal of covers or cover-plates		N/A
	Force not exceeding 120 N applied 10 times in direction perpendicular to the mounting / supporting surface: covers or cover-plates came off		N/A
	Test repeated on new specimens with a sheet of hard material, 1 mm ± 0,1 mm thick, fitted around the supporting frame (fig. 31): covers or cover-plates came off		N/A
	After the test: no damage		N/A
24.16	Force necessary for covers or cover-plates to come off or not to come off (accessibility to insulating parts, earthed metal parts, live parts of SELV ≤ 25 V a.c. or metal parts separated from live parts by creepage distances twice those according to table 23)		N/A
24.14.1	Verification of the non-removal of covers or cover-plates		N/A
	Force 10 N applied for 1 min in direction perpendicular to the mounting surface: covers or cover-plates did not come off		N/A
	Test repeated on new specimens with a sheet of hard material, 1 mm ± 0,1 mm thick, fitted around the supporting frame (fig. 31): covers or cover-plates did not come off		N/A
	After the test: no damage		N/A
24.14.2	Verification of the removal of covers or cover-plates		N/A
	Force not exceeding 120 N applied 10 times in direction perpendicular to the mounting / supporting surface: covers or cover-plates came off		N/A
	Test repeated on new specimens with a sheet of hard material, 1 mm ± 0,1 mm thick, fitted around the supporting frame (fig. 31): covers or cover-plates came off		N/A
	After the test: no damage		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
24.17	Test with gauge of figure 7 applied according to figure 9 for verification of the outline of covers or cover-plates: distances between face C of gauge and outline of side under test, not decrease .....:	complying / not complying	—
24.18	Test with gauge according to figure 5 applied as shown in figure 11 (1 N): gauge not enter more than 1mm .....:	complying / not complying	—
24.19	Shroud of portable socket-outlets: compression test (20 ± 2) N at (25 ± 5) °C by means of the apparatus shown in figure 38		N/A
	After 1 min and while the shrouds are still under pressure the dimensions did comply with the appropriate standard sheet		N/A
	Test repeated with the specimen rotated 90 °		N/A
25	**RESISTANCE TO HEAT**		P
25.1	Specimens kept for 1 h in a heating cabinet at (100 ± 2) °C for 1 h		P
	During the test: no change impairing their further use and sealing compound, if any, not flow		P
	After the test:		-
	- no access to live parts with probe B of IEC 61032 applied with a force not exceeding 5 N		P
	- markings still legible		P
25.2	Parts of insulating material necessary to retain current-carrying parts and parts of the earthing circuit in position, as well as parts of the front surface zone, 2 mm wide, surrounding the phase and neutral pin entry holes: ball-pressure test at (125 ± 2)°C for 1 h	See appended table 25.2	P
25.3	Parts of insulating material not necessary to retain current-carrying parts and parts of the earthing circuit in position, even though in contact with them: ball-pressure test (1 h)	See appended table 25.3	P
25.4	Portable accessories: compression test (20 N) at (80 ± 2)°C for 1 h by means of the apparatus shown in figure 38		N/A
	After the test: no damage		N/A
26	**SCREWS, CURRENT-CARRYING PARTS AND CONNECTIONS**		P
26.1	Connections withstand mechanical stresses		P
	Thread-forming or thread-cutting screws used only if supplied together with the piece in which they are intended to be inserted		N/A
	Thread-cutting screws intended to be used during installation: captive		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Screws or nuts which transmit contact pressure made of metal and in engagement with a metal thread		N/A
	Threaded part torque test	See appended table 26.1	N/A
26.2	Screws in engagement with a thread of insulating material: correct introduction into the screw hole or nut ensured		N/A
26.3	Contact pressure: not transmitted through insulating material other than ceramic, pure mica or other material no less suitable unless there is sufficient resiliency in metallic parts		P
	Connections made by insulation piercing of tinsel cord reliable		N/A
26.4	Screws and rivets locked against loosening and/or turning		P
26.5	Current-carrying parts (including earthing terminals) have mechanical strength, electrical conductivity and resistance to corrosion adequate:		P
	- copper;		-
	- alloy with at least 58 % copper for parts made from cold-rolled sheet or with at least 50 % copper for other parts;		P
	- stainless steel with at least 13 % chromium and not more than 0,09 % carbon		N/A
	- steel with electroplated coating of zinc (ISO 2081): service condition ISO no. (1/2/3); IP (X0/X4/X5); thickness (µm) ..... :		N/A
	- steel with electroplated coating of nickel and chromium (ISO 1456): service condition ISO no. (2/3/4); IP (X0/X4/X5); thickness (µm) ..... :		N/A
	- steel with electroplated coating of tin (ISO 2093): service condition ISO no. (2/3/4); IP (X0/X4/X5); thickness (µm) ..... :		N/A
	Current-carrying parts subjected to mechanical wear: not of steel with electroplated coating		P
	Metals having a great difference of electrochemical potential: not used in contact with each other		P
26.6	Contacts subjected to a sliding action are of metal resistant to corrosion		P
26.7	Thread-forming screws and thread-cutting screws are not used for the connection of current-carrying parts		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Thread-forming screws and thread-cutting screws used to provide earthing connection: it is not necessary to disturb the connection and at least two screws are used for each connection		N/A
27	**CREEPAGE DISTANCES, CLEARANCES AND DISTANCES THROUGH SEALING COMPOUND**		P
27.1	Creepage distances, clearances and distances through sealing compound are not less than the values shown in table 23	See appended table 27.1	P
27.2	Insulating sealing compound does not protrude above the edge of the cavity in which it is contained		N/A
27.3	Surface-type socket-outlets do not have bare current-carrying strips at the back		N/A
28	**RESISTANCE OF INSULATING MATERIAL TO ABNORMAL HEAT, TO FIRE AND TO TRACKING**		P
28.1	**Resistance to abnormal heat and to fire**		**P**
28.1.1	**Glow-wire test according to IEC 60695-2-10 and IEC 60695-2-11**	See appended table 28.1.1	P
28.1.2	Plugs with pins provided with insulating sleeves:		-
	Test temperature maintained for 3 h by means of the apparatus shown in figure 40 at (120 ± 5) °C / (180 ± 5) °C .....:		—
	Impact test according to sub-clause 30.4 (mass 100 g, height 100 mm, 4 impacts): no cracks of the insulating sleeves		N/A
28.2	**Resistance to tracking**		N/A
	Parts of insulating material retaining live parts in position of accessories having IP>X0: of material resistant to tracking		N/A
	Tracking test at 175 V with solution A of IEC 60112	See appended table 28.2	N/A
29	**RESISTANCE TO RUSTING**		N/A
	Ferrous parts protected against rusting		N/A
	Test made after having removed all grease using a suitable degreasing agent: 10 min 10 % solution of ammonium chloride, 10 min in a box with air saturated with moisture and 10 min at (100 ± 5) °C:		P
	No signs of rust		P
30	**ADDITIONAL TESTS ON PINS PROVIDED WITH INSULATING SLEEVES**		N/A
30.1	**Pressure test at high temperature**		N/A
	Apparatus shown in figure 41, with the test specimen in position, maintained for 2 h at (200 ± 5) °C. Force applied through the blade: 2,5 N		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Thickness of the insulation measured: before the test (mm); after the test (mm) .....:		—
	Thickness remaining at the point of impression is not reduced by more than 50 % of its original value measured at the start of the test: percentage value (%) .....:		N/A
30.2	**Static damp heat test**		N/A
	Set of 3 specimens submitted to two damp heat cycles in accordance with IEC 60068-2-30 (variant 2 with a temperature of 40 °C).		N/A
	After the test:		N/A
	- insulation resistance and electric strength test (clause 17)		N/A
	- abrasion test (sub-clause 24.7)		N/A
30.3	**Test at low temperature**		N/A
	Set of 3 specimens maintained at (-15 °C ± 2) °C for 24 h		N/A
	After the test:		N/A
	- insulation resistance and electric strength test (clause 17)		N/A
	- abrasion test (sub-clause 24.7)		N/A
30.4	**Impact test at low temperature**		N/A
	Specimens maintained at (-15 °C ± 2) °C for 24 h subjected to 4 impacts (mass 100 g, height 100 mm) by means of the apparatus shown in figure 42 rotating the specimen through 90 ° between impacts		N/A
	After the test: no crack of the insulating sleeves		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

12.2.5	**TABLE: test with apparatus shown in figure 11 (screw-type terminals)**		N/A
	rated current (A) ..... :		—
	type of conductors ..... :	**rigid solid / rigid stranded / flexible**	—
	smallest/largest cross-sectional area per table 3 (mm^2) ..... :		—
	number of conductors ..... :		—
	nominal diameter of thread (mm); torque per table 6 (Nm) ..... :		—

Cross-sectional area (mm^2)	Diameter of bushing hole per table 9 (mm)	Height H per table 9 (mm)	Mass (kg)	Remarks

supplementary information:

12.2.6	**TABLE: pull test (screw-type terminals)**		N/A
	rated current (A) ..... :		—
	smallest/largest cross-sectional area per table 3 (mm^2) ..... :		—
	nominal diameter of thread (mm); torque 2/3 per table 6 (Nm) ..... :		—

Cross-sectional area (mm^2)	Number of conductors	Type of conductors (rigid solid / rigid stranded / flexible)	Pull per table 4 applied for 1 min (N)	Remarks

supplementary information:

12.2.7	**TABLE: tightening test (screw-type terminals)**		N/A
	rated current (A) ..... :		—
	nominal diameter of thread (mm); torque 2/3 per table 6 (Nm) ..... :		—

Largest cross-sectional area per table 3 (mm^2)	Permissible number of conductors (1)	Type of conductors (rigid solid / rigid stranded / flexible)	Number of wires and nominal diameter of wires per table 5	Remarks

supplementary information:
(1) terminals intended for looping-in 2 or 3 conductors

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Clause	Requirement + Test	Result - Remark	Verdict

12.3.10	**TABLE: mechanical strength test (screwless-type terminals)**		P
	rated current (A) .....:	16 A	—
	largest/smallest cross-sectional area per table 7 (mm^2) .....:	1,5 mm^2 / 2,5 mm^2	—

Number of connection (after that conductor subjected to a pull of 30 N for 1 min) / disconnection	**Type of conductor (solid / rigid stranded / flexible**	**Cross-sectional area (mm^2)**	**Remarks**
5	Solid	1,5 mm^2	P
5	Solid	2,5 mm^2	P
1	Rigid stranded	1,5 mm^2	P
1	Rigid stranded	2,5 mm^2	P

	TABLE: test with apparatus shown in figure 11	P

Cross-sectional area (mm^2)	**Type of conductor (solid / rigid stranded / flexible**	**Diameter of bushing hole per table 9 (mm)**	**Height H per table 9 (mm)**	**Mass (kg)**	**Remarks**
1,5 mm^2	Solid	6,5	260	0,4	P
2,5 mm^2	Solid	9,5	280	0,7	P
1,5 mm^2	Rigid stranded	6,5	260	0,4	P
2,5 mm^2	Rigid stranded	9,5	280	0,7	P

supplementary information:

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Clause	Requirement + Test	Result - Remark	Verdict

12.3.11	**TABLE: electrical and thermal strength test (screwless-type terminals)**		P
Test a)	**Test carried out for 1 h connecting rigid solid conductors:**		
	test current per table 10 (A) ..... :	22 A	—
	nominal cross-sectional area (mm^2) ..... :	2,5 mm^2	—

Screwless terminal number	Voltage drop (mV)	Required voltage drop (mV)
1	7,1 mV	≤ 15
2	6,4 mV	≤ 15
3	9,8 mV	≤ 15
4	5,5 mV	≤ 15
5	5,1 mV	≤ 15

Test b)	**Temperature cycles test carried out on terminals subjected to Test a):**		**P**
	test current per table 10 (A) ..... :	22 A	—
	nominal cross-sectional area (mm^2) ..... :	2,5 mm^2	—
	allowed voltage drop (mV) ..... :	≤ 22,5 mV or 2 times 24th cycle value (mV)	—

Screwless terminal number	**1**	**2**	**3**	**4**	**5**	**Remarks**
voltage drop after 24th cycle	7,4	11,2	7,9	9,3	6,3	**P**
voltage drop after 48th cycle	7,8	12,4	8,8	9,9	6,6	**P**
voltage drop after 72nd cycle	7,8	11,9	8,7	9,9	6,6	**P**
voltage drop after 96th cycle	7,9	11,7	8,8	9,7	6,8	**P**
voltage drop after 120th cycle	6,5	9,6	6,4	9,4	6,8	**P**
voltage drop after 144th cycle	6,9	10,7	8,2	12,2	6,9	**P**
voltage drop after 168th cycle	7,2	10,8	8,0	12,3	6,8	**P**
voltage drop after 192nd cycle	7,0	10,7	9,0	12,4	7,1	**P**

12.3.10	**TABLE: mechanical strength test (screwless-type terminals)**		**P**
	rated current (A) ..... :	16 A	—
	largest/smallest cross-sectional area per table 7 (mm^2) ..... :	1,5 mm^2 / 2,5 mm^2	—

Number of connection (after that conductor subjected to a pull of 30 N for 1 min) / disconnection	**Type of conductor (solid / rigid stranded / flexible**	**Cross-sectional area (mm^2)**	**Remarks**
5	Solid	1,5 mm^2	P
5	Solid	2,5 mm^2	P
1	Rigid stranded	1,5 mm^2	P

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Clause	Requirement + Test	Result - Remark	Verdict

1	Rigid stranded	2,5 mm²	P

TABLE: test with apparatus shown in figure 11 — **P**

Cross-sectional area (mm²)	Type of conductor (solid / rigid stranded / flexible	Diameter of bushing hole per table 9 (mm)	Height H per table 9 (mm)	Mass (kg)	Remarks
1,5 mm²	Solid	6,5	260	0,4	P
2,5 mm²	Solid	9,5	280	0,7	P
1,5 mm²	Rigid stranded	6,5	260	0,4	P
2,5 mm²	Rigid stranded	9,5	280	0,7	P

supplementary information:

12.3.12	**TABLE: deflection test (principle of test apparatus shown in figure 12a)**		**P**
	Test carried out connecting rigid solid copper conductors:		
	test current (A) (equal rated current) .....:	**16 A**	—
	required voltage drop (mV) .....:	**≤ 25 mV**	—

Type of conductor	Smallest			Largest			Remarks
cross-sectional area per table 11 (mm²)	1,5 mm²			2,5 mm²			
force per table 12 (N)	0,5 N			1,0 N			
screwless terminal number	1	2	3	1	2	3	
starting point (X = deflection original point)	X	X+10°	X+20°	X	X+10°	X+20°	
voltage drop 1st deflection (mV)	10,4	9,8	6,2	11,1	7,0	5,0	P
voltage drop 2nd deflection (mV)	10,1	9,1	6,2	10,5	5,4	4,6	P
voltage drop 3rd deflection (mV)	7,2	10,6	7,0	7,8	6,9	5,8	P
voltage drop 4th deflection (mV)	6,6	14,3	8,4	6,9	5,0	5,5	P
voltage drop 5th deflection (mV)	6,1	15,4	8,7	6,6	5,1	4,8	P
voltage drop 6th deflection (mV)	7,3	10,5	9,0	7,8	5,9	6,2	P
voltage drop 7th deflection (mV)	4,8	10,0	6,4	8,9	7,8	8,0	P
voltage drop 8th deflection (mV)	5,8	10,1	6,0	10,5	7,0	7,0	P
voltage drop 9th deflection (mV)	5,7	7,4	6,3	13,2	8,1	7,8	P
voltage drop 10th deflection (mV)	6,2	8,2	5,8	12,0	5,8	6,1	P
voltage drop 11th deflection (mV)	6,9	9,1	5,9	12,2	9,3	8,3	P
voltage drop 12th deflection (mV)	9,7	8,9	6,0	10,7	10,6	8,4	P

supplementary information:

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Clause	Requirement + Test	Result - Remark	Verdict

14.22	**TABLE: Components**				P
Object / part No.	**Manufacturer/ trademark**	**Type / model**	**Technical data**	**Standard**	**Mark(s) of conformity[1)]**
Plastic material of base	Makrolon 2407	PC	-	IEC 60884-1	Tested with the unit
Plastic material of cover plate	Makrolon 2407	PC	-	IEC 60884-1	Tested with the unit
Plastic material of shutters	Tarolox 10 G4 DSX03	PBT GF20	-	IEC 60884-1	Tested with the unit
Plastic material of shutter box	Makrolon 2407	PC	-	IEC 60884-1	Tested with the unit
Contacts	-	-	CuZn37	IEC 60884-1	Tested with the unit
Earthing contacts	-	-	CuZn37	IEC 60884-1	Tested with the unit
Supplementary information: [1)] Provided evidence ensures the agreed level of compliance. See OD-CB2039.					

17.1	**TABLE: insulation resistance**		P
Item per 17.1	test voltage applied between:	measured (MΩ)	required (MΩ)
a)	All poles together – body	> 100	> 5
b)	Each pole – all others	> 100	> 5
supplementary information:			

17.2	**TABLE: electric strength**		P
	rated voltage (V) .....:	250 V	—
item per 17.1	test voltage applied between:	test voltage (V)	flashover / breakdown (Yes/No)
a)	All poles together – body	2000 V	No
b)	Each pole – all others	2000 V	No
supplementary information:			

IEC 60884-1			
Clause	Requirement + Test	Result - Remark	Verdict

19.1	**TABLE: temperature rise test for socket-outlets and plugs**		P
	rated current of accessory (A) .....:	16 A	—
	type of accessory (non-rewirable / rewirable) ....:	Rewirable	—
	nominal cross-sectional area per table 15 (mm^2) :	2,5 mm^2	—
	type of conductors (rigid solid / rigid stranded / flexible) .....:	Rigid solid	—
	nominal diameter of thread (mm); torque 2/3 of that specified in 12.2.8 (Nm .....:	/	—

specimen	**type of flexible cable (1)**	**number of conductors and nominal cross-sectional area (mm^2) (1)**	**test circuit (L-L/L-N/L-E)**	**test current (table 20) for 1 h (A)**	**measured ΔT (K)**	**allowed ΔT (K)**	**ΔT of external parts of insulating material (25.3) (K)**
A,B,C	/	2,5 mm^2	L-N	22 A	41	45	6
A,B,C	/	2,5 mm^2	L-E	22 A	45	45	9

supplementary information: Only worst case stated

(1) Non-rewirable accessories

IEC 60884-1			
Clause	Requirement + Test	Result - Remark	Verdict

19.2	**TABLE: temperature rise test for fixed socket-outlets of a socket-outlet and fused plug system**		N/A
	rated current of accessory (A) ..... :		—
	type of accessory (non-rewirable / rewirable) .... :		—
	nominal cross-sectional area per table 15 (mm^2) :		—
	type of conductors (rigid solid / rigid stranded / flexible)..... :		—
	nominal diameter of thread (mm); torque 2/3 of that specified in 12.2.8 (Nm ..... :		—
	Test a) single socket-outlet		

specimen	type of flexible cable (1)	number of conductors and nominal cross-sectional area (mm^2) (1)	test circuit (L-L/L-N/L-E)	70% of test current (table 20) for 1 h (socket-outlet) (A)	30% of test current (table 20) for 1 h (looped) (A)	test current (table 20) for 1 h (supply cable) (A)	measured ΔT (K)	allowed ΔT (K)	ΔT of external parts of insulating material (25.3)(K)

supplementary information:
(1) Non-rewirable accessories

	Test b) multiple socket-outlet

specimen	type of flexible cable (1)	number of conductors and nominal cross-sectional area (mm^2) (1)	test circuit (L-L/L-N/L-E)	70% of test current (table 20) for 1 h (1st socket-outlet) (A)	30% of test current (table 20) for 1 h (2nd socket) (A)	test current (table 20) for 1 h (supply cable) (A)	measured ΔT (K)	allowed ΔT (K)	ΔT of external parts of insulating material (25.3)(K)

supplementary information:
(1) Non-rewirable accessories

IEC 60884-1			
Clause	Requirement + Test	Result - Remark	Verdict

19.3	**TABLE: temperature rise test for plugs and portable socket-outlets with incorporated components**		N/A
	rated current of accessory (A) .....:		—
	type of accessory (non-rewirable / rewirable) ....:		—
	nominal cross-sectional area per table 15 (mm^2) :		—
	type of conductors (rigid solid / rigid stranded / flexible) .....:		—
	nominal diameter of thread (mm); torque 2/3 of that specified in 12.2.8 (Nm .....:		—
	Test for Portable socket-outlets and rewirable plugs with incorporated components		

specimen	type of flexible cable (1)	number of conductors and nominal cross-sectional area (mm^2) (1)	test circuit (L-L/L-N/L-E)	Test current (table 20), Clause 19 for 1 h (components short circuited) (A)	Test current is rated current of the portable accessory or the rated current of the component (s), whichever is the lower (A)	measured ΔT (K)	allowed ΔT (K)	ΔT of external parts (25.3)(K) (2)

supplementary information:
(1) Non-rewirable accessories ; (2) Metal parts 30 K ; non-metallic parts 40 K

Test for non-rewirable plugs with incorporated components

specimen	type of flexible cable (1)	number of conductors and nominal cross-sectional area (mm2) (1)	test circuit (L-L/L-N/L-E)	Test current is equal to the test current for the combination of the plug and the cable as indicated in Table 20, for Clause 19. (components short circuited) (A)	Test current is equal to the test current for the combination of the plug and the cable as indicated in Table 20, for Clause 21 or the rated current of the component (s), whichever is the lower (A)	measured ΔT (K)	allowed ΔT (K)	ΔT of external parts (25.3)(K) (2)

supplementary information:
(1) Non-rewirable accessories; (2) Metal parts 30 K ; non-metallic parts 40 K

IEC 60884-1			
Clause	Requirement + Test	Result - Remark	Verdict

20	**TABLE: breaking capacity**		P
	rating of accessory (A/V) .....:	16 A / 250 V	—
	type of accessory (non-rewirable / rewirable) ... :	Rewirable	—
	type of flexible cable (non-rewirable accessories) ..... :	/	—
	number of conductors and nominal cross-sectional area (mm^2) (non-rewirable accessories) ..... :	/	—
	nominal cross-sectional area per table 15 (mm^2) :	2,5 mm^2	—
	type of conductors (rigid solid / rigid stranded / flexible)..... :	Rigid solid	—
	nominal diameter of thread (mm); torque 2/3 of that specified in 12.2.8 (Nm)..... :	/	—
	rate of operation (strokes per minute) ..... :	30	—

specimen	**test plug (for each type and current rating of socket-outlet)**		**test voltage (1,1 Vn) (V)**	**test current (1,25 In) cos φ 0,6 (A)**	**number of strokes (plugs only)**	**number of strokes, with shutters – with current (1)**	**number of strokes, without shutters – with current (2)**	**remarks**	
	pin dimensions (mm)	**pin spacing (mm)**							
A,B,C	4,86	19,0	275 V	200 A	/	100	/	/	P

supplementary information:
(1) starting point 1 or 3 of Figure 43
(2) starting point 2 of Figure 43

21	**TABLE: normal operation**		P
	rating of accessory (A/V) .....:	16 A / 250 V	—
	type of accessory (non-rewirable / rewirable) ... :	Rewirable	—
	type of flexible cable (non-rewirable accessories) ..... :	/	—
	number of conductors and nominal cross-sectional area (mm^2) (non-rewirable accessories) ..... :	/	—
	nominal cross-sectional area per table 15 (mm^2) :	2,5 mm^2	—
	type of conductors (rigid solid / rigid stranded / flexible)..... :	Rigid solid	—
	nominal diameter of thread (mm); torque 2/3 of that specified in 12.2.8 (Nm)..... :	/	—

IEC 60884-1			
Clause	Requirement + Test	Result - Remark	Verdict

	rate of operation (strokes per minute) .....:				30				—
specimen	**test plug (for each type and current rating of socket-outlet)**		**test voltage (Vn) (V)**	**test current (table 20), cos φ 0,8 (A)**	**number of strokes (plugs only)**	**number of strokes, with shutters – with current (1)**	**number of strokes, without shutters – with current (2)**	**number of strokes, with shutters – without current (3)**	
	pin dimensions (mm)	**pin spacing (mm)**							
A, B, C	4,86	19,0	250 V	16 A	/	10000	/	/	P
	TABLE: test for shuttered socket-outlets								
specimen	**Gauge of figure 9, applied with a force of 20 N, for approximately 5 s, successively in three directions**				**Steel gauge of figure 10, applied with a force of 1 N for approximately 5 s, in three directions**				
A, B, C	P				P				P
19	**TABLE: temperature rise test**								
specimen	**test circuit (L-L/L-N/L-E)**		**test current (table 20 for clause 21) for 1 h (A)**		**measured dT (K)**		**allowed dT (K)**		
A, B, C	L-N		16 A		23 K		45 K		P
A, B, C	L-E		16 A		28 K		45 K		P
17.2	**TABLE: electric strength**								P
specimen	**item per 17.1**	**test voltage applied between:**			**test voltage (V)**		**flashover / breakdown (Yes/No)**		
A, B, C	a)	All poles together – body			1500 V		No		
A, B, C	b)	Each pole – all others			1500 V		No		

Supplementary information: Only max. measurements stated at temperature rise test

(1) starting point 1 or 3 of Figure 43

(2) starting point 2 of Figure 43

(3) starting point 1 or 2 of Figure 43

IEC 60884-1			
Clause	Requirement + Test	Result - Remark	Verdict

22	**TABLE: force necessary to withdraw the plug**				P
	Rated current (A) .....:	16 A			—
	Number of poles ..... :	3			—
22.1	**Verification of the maximum withdrawal force**				**P**
specimen	**socket-outlets (multi-pin gauge)**		**plugs with resilient earthing contact assemblies (single-pin gauge)**		
	maximum withdrawal force (N)	**the test plug did not remain in the socket-outlet (Y/N)**	**maximum withdrawal force (N)**	**the test pin gauge did not remain in the contact assembly**	
A, B, C	54 N	N	/	/	P
22.2	**Verification of the minimum withdrawal force**				P
specimen	**socket-outlets (single-pin gauge)**		**plugs with resilient earthing contact assemblies (single-pin gauge)**		
	minimum withdrawal force (N)	**the test pin gauge did not fall from each individual contact-assembly within 30 s (Y/N)**	**minimum withdrawal force (N)**	**the test pin gauge did not fall from each individual earthing contact-assembly within 30 s (Y/N)**	
A, B, C	2,0 N	N	/	/	P
supplementary information:					

23.2	**TABLE: pull and torque test**					N/A
	rating of accessory (A) ..... :					—
	type of accessory (non-rewirable / rewirable) ... :					—
	smallest/largest cross-sectional area per table 17 (mm^2) (rewirable accessories) ..... :					—
	nominal diameter of thread (mm); torque 2/3 per table 6 (Nm) (rewirable accessories) ..... :					—
specimen	**type of flexible cable**	**number of conductors and nominal cross-sectional area (mm^2)**	**pull (100 times) (N)**	**torque (1 min) as specified in table 18 (Nm)**	**displacement (mm)**	
supplementary information:						

IEC 60884-1			
Clause	Requirement + Test	Result - Remark	Verdict

23.4	**TABLE: flexing test**		N/A
	rated current (A) .....:		—

specimen	type of flexible cable	number of conductors and nominal cross-sectional area (mm^2)	test current (A)	mass (N)	

supplementary information:

24.1	**TABLE: impact test**		P

part of enclosure tested per table 21 (A, B, C, D)	blows per part	height of fall (mm)	comments
A	5	80	No damage

supplementary information:

25.2	**TABLE: ball pressure test of insulating materials**		P
	allowed impression diameter (mm) .....:	≤ 2 mm	—

part under test	test temperature (°C)	impression diameter (mm)
Base (Makrolon 2407)	125°C	< 1,0 mm

supplementary information:

25.3	**TABLE: ball pressure test of insulating materials**		P
	allowed impression diameter (mm) .....:	≤ 2 mm	—

part under test	test temperature (°C) (1)	impression diameter (mm)
Front cover plate (Makrolon 2407)	70°C	< 1,0 mm
Shutter box (Makrolon 2407)	70°C	< 1,0 mm
Shutters (Tarolox 10 G4 DSX03)	70°C	< 1,0 mm

supplementary information:
(1) (70 ± 2) °C / (40 ± 2) °C + highest temperature rise determined during the test of clause 19

IEC 60884-1			
Clause	Requirement + Test	Result - Remark	Verdict

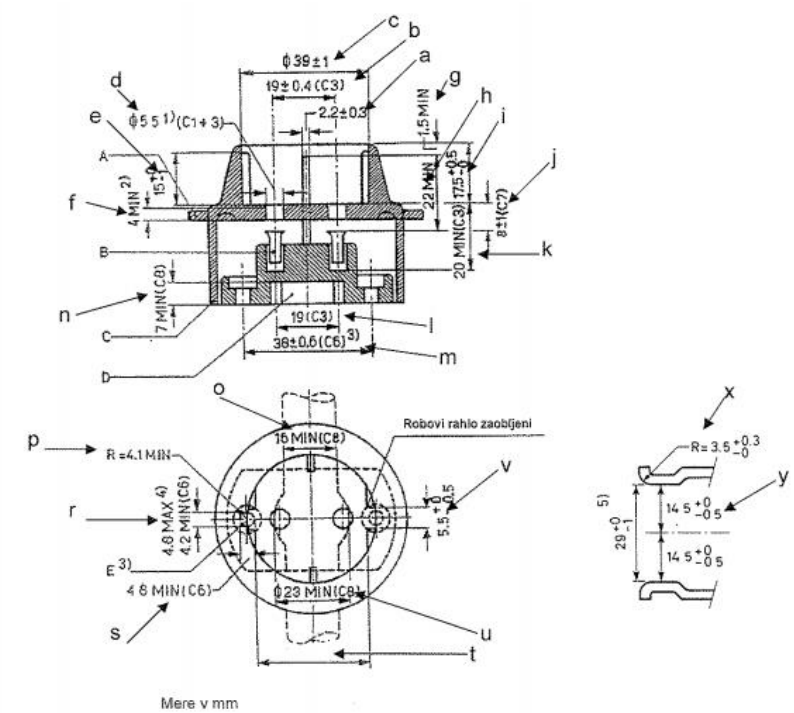
26.1	**TABLE: threaded part torque test**					N/A
threaded part identification		**diameter of thread (mm)**	**column number (1, 2 or 3)**	**applied torque (Nm)**	**times (5/10)**	**no damage**
supplementary information:						

27.1	**TABLE: creepage distances, clearances and distances through sealing compound**						P
	rated voltage (V) ..... :	250 V					—
item per table 23	**creepage distance dcr, clearance cl and distance through sealing compound dtsc at/of:**	**required cl (mm)**	**cl (mm)**	**required dcr (mm)**	**dcr (mm)**	**required dtsc (mm)**	**dtsc (mm)**
1, 6	Live parts of different polarity	≥ 3	5,3	≥ 3	5,3	≥	/
2, 7	Live parts and accessible surface parts of insulating material	≥ 3	8,4	≥ 3	8,4	≥	/
2, 7	Live parts and earthed metal parts	≥ 3	3,2	≥ 3	3,2	≥	/
supplementary information:							

28.1.1	**TABLE: glow-wire test**				P
part under test	**material designation**	**test temperature (°C)**	**visible flame and sustained glowing (Y/N)**	**flame and glowing extinction time**	**ignition of the tissue paper (Y/N)**
Base	Makrolon 2407	850°C	Y	1/5*	N
Front cover plate	Makrolon 2407	650°C	N	/	N
Shutter box	Makrolon 2407	650°C	N	/	N
Shutters	Tarolox 10 G4 DSX03	650°C	N	/	N
Supplementary information: *Started burning immediately. Stopped 5 s after GW application.					

28.2	**TABLE: resistance to tracking**			N/A
	number of drops .....:	**50**		—
part under test	**material designation**	**test voltage (V)**	**flashover / breakdown (Yes/No)**	
		175		
supplementary information:				

Attachment No. 1
(Dimensions)



REFERENCE	MEASURED (mm)	REQUIRED (mm)	VERDICT
a	2,4	1.9 – 2.5	P
b	19,2	18.6 – 19.4	P
c	38,3	Ø 38 - 40	P
d	5,6	Ø 5.5 – 5.8	P
e	14,8	14 - 15	P
f	6,8	4 min.	P
g	2,7	1.5 min.	P
h	26,1	22 min.	P
i	17,8	17.5 - 18	P
j	8,3	7 - 9	P
k	20,7	20 min.	P
l	N/A	19	N/A
m	N/A	37.4 – 38.6	N/A
n	N/A	7 min.	N/A
o	N/A	16 min.	N/A
p	N/A	R=4.1 min	N/A
r	N/A	4.2 – 4.8	N/A
s	N/A	4.8 min	N/A
t	33,4	33 – 33.5	P
u	N/A	23 min.	N/A
v	5,3	5 – 5.5	P
x	3,6	R= 3.5 – 3.8	P
y	28,5	28 - 29	P

Attachment No. 2
(National deviations)

ATTACHMENT TO TEST REPORT IEC 60884-1
GERMAN NATIONAL DIFFERENCES
PLUGS AND SOCKET-OUTLETS FOR HOUSEHOLD AND SIMILAR PURPOSES
Part 1: General requirements

Differences according to	DIN VDE 0620-1 VDE 0620 Part 1:2010-02
Attachment Form No.	de.nd-iec60884-1(ed.3),amd 1

NATIONAL DIFFERENCES: de.nd-iec60884-1(ed.3),amd 1

Clause	Requirement + Test	Result - Remark	Verdict
1	**Add after the first paragraph:** NOTE 1 Requirements for cord sets can be found in DIN EN 60799 (VDE 0626). Requirements for cable reels for household and similar purposes can be found in DIN EN 61242 (VDE 0620-3). Requirements for flat non-rewirable two-pole 2,5 A 250 V plugs with cable for the connection of class II appliances for household and similar purposes can be found in DIN VDE 0620-101(VDE 0620-101). **Add after the fourth paragraph:** NOTE 3 Special requirements for plugs and fixed or portable socket-outlets for SELV are under preparation. **Replace the fifth paragraph by:** This standard does not apply to - plugs, socket-outlets and couplers for industrial purposes; - appliance couplers; NOTE 4 Appliance couplers are dealt with in the standards series DIN EN 60320 (VDE 0625). - plugs, fixed and portable socket-outlets for ELV; NOTE 5 ELV values are specified in IEC/TR3 61201. - fixed socket-outlets combined with fuses, automatic switches etc.; NOTE 6 Socket-outlets with pilot lamps are allowed provided that pilot lamps comply with the relevant standard, if any. - Cord sets; NOTE 7 Cord sets are dealt with in DIN EN 60799 (VDE 0626). - Cable reels; NOTE 8 Cable reels are dealt with DIN EN 61242 (VDE 0620-300). - flat non-rewirable two-pole 2,5 A 250 V plugs. NOTE 9 Flat non-rewirable two-pole plugs are dealt with in DIN EN 50075 (VDE 0620-101).		P

3.4	**Additional note:** NOTE Socket-outlets on portable equipment shall also comply with the requirements for portable socket-outlets, if applicable. This applies e.g. for garden socket outlets (Gartenspieße).		N/A
3.26	**Additional clause:** Adaptors		N/A
3.26.1	**Additional clause:** Adaptors with interconnected additional functions Equipment consisting of a plug and a moulded-on socket-outlet complying with DIN 49440-1 and enabling the interconnection of additional functions such as switches, regulators, actuators, timers between plug and socket-outlet. This additional function can form a structural unit with the adaptor or be connected with it by means of a cable.		N/A
3.26.2	**Additional clause:** Adaptors without any interconnected additional function Equipment consisting of a plug and a moulded-on socket-outlet without additional function between plug and socket-outlet NOTE Examples of adaptors without any interconnected additional function are adaptors complying with DIN 49437.		N/A
4	**Add at the end:** For safety reasons, socket-outlets shall always consist of a base and a cover-plate having plug outlines when they are placed on the market. Additional functions such as dimmers, fuses, switches, energy regulators, etc., integrated in the plug and socket outlet shall comply with the relevant VDE specifications.		P
5.4	**The last but one paragraph shall be amended to read:** Three new specimens are required for each of the tests according to 10.6.1, 10.6.2 and 24.10. Add after the last paragraph: For the testing of crimped connections (see 12.4 and Annex D) three new specimens are required.		N/A
5.7	**Tests for crimped connections see Annex D.**		N/A
6.1	**Replace Table 1 including the text below**		P
	Type	**Rated vo V**	

	2P (non-rewirable plugs only) 250 2P + PE 250 2P + PE 3P + PE 3P + N + PE 400/44 Socket-outlets with a rated current lower than the nominal current as specified in the standard sheet shall be protected with an integrated fuse laid out in accordance with the rated current of the socket-outlet.		
6.2	**Replace the first paragraph by the following:** In a cord extension set, the rated current and the rated voltage of the portable socket-outlet and of the plug shall be the same.		N/A
6.3	**Clause 6.3 shall be replaced by:** 6.3 Accessories should preferably have a degree of protection IP20 or IP44 as specified in DIN EN 60529(VDE 0470-1). The degree of protection of plugs of cord sets shall at least be equal to the degree of protection of the equipment, unless otherwise specified in the product standard of the equipment. NOTE Exceptions are possible for IPX7 and IPX8.		P
7.2.4	**Add the following:** Design B is not used.		P
7.2.5	**Delete this clause**		P
7.3	**Delete the first dashed text and the note.**		P
8	**Add the following sentence after the title:** The legal requirements for the marking of products shall be considered (GPSG).		P
8.1	**Add after the fourth dashed item:** NOTE See GPSG, clause 5 for the type and scope of the information.		P
8.6	**Additional paragraph at the end:** For surface-type mounting boxes with the degree of protection IPX4 it shall be clearly marked that the condensate hole shall be opened in the lowest mounting position.		N/A
8.8	**Amend the first paragraph to read:** Marking shall be durable. It should not be	Easily legible	P

	smaller than 3 mm and shall be easily legible with normal or corrected vision without additional magnification.		
8.9	**Additional clause:** Warning The following warnings shall be provided for portable multiple socket-outlets and adaptors in the package leaflet or on the product by means of text or pictogram: a) for portable multiple socket-outlets: - do not connect in series; - do not operate when covered; b) for portable multiple socket-outlets with function switch, in addition: - dead only when unplugged; c) for adaptors: - do not connect in series. d) For cord extension sets and multiple socket-outlets provided with cable or cord, information shall be given about the environment in which the products may be operated.		N/A
8.10	**Additional clause:** For equipment intended for installation, the information contained in Annex E shall appear on the smallest closed sales unit.		P
9.1	**Replace the first paragraph by the following:** Plugs and socket-outlets shall comply with the following standards: DIN 49075, DIN 49406, DIN 49437, DIN 49440, DIN 49441, DIN 49442, DIN 49443, DIN 49445, DIN 49446, DIN 49447, DIN 49448, DIN 49464. **Add the following before table 2:** Gauges 1 up to 9 complying with DIN VDE 0620-1:2002-01 shall be used.		P
9.2	**Replace the fourth paragraph by the following:** In case of doubt, the impossibility of insertion is checked by applying the gauge L11 complying with DIN VDE 0620-1:2002-01 for 1 min with a force of 150 N for accessories with a rated current not exceeding 16 A, or 250 N for other accessories.		P
9.3	**Replace the clause by:** Plugs or socket-outlets forming an integral part of a product (e. g. timer, lawn mower detachable plug, plug mains part etc.) shall comply with the		P

	dimensions specified in the standards sheets and with the requirements of this standard. Additional components are not allowed if they adversely affect the dimensions specified in the standards sheets (e.g. platelets).		
10.3	**Replace the first paragraph of the test requirements by the following:** Compliance is checked by manual test and by means of gauges 10 and 12 complying with DIN VDE 0620-1:2010-02		P
10.5	**Add at the end:** Shutters shall not inadmissibly impede the insertion of the plug. The force necessary to open the shutter shall not exceed 30 N. The test is carried out using the gauges 19a or 19b. The gauge shall be arranged movable.		P
10.6	**Replace the clause by:** Socket-contacts, if any, of a socket-outlet shall be so designed that they cannot be deformed by the insertion of a plug, to such an extent that safety is impaired. Compliance is checked by the following test:		P
10.6.1	**Additional clause:** The socket-outlet is placed in such a position that the socket-contacts are in a vertical position. Gauge 14 is inserted into the socket-outlet with a force of $150\ ^{0}_{-5}$ N 1 min. After this test, the socket-outlet shall still comply with the requirements of clause 9.		P
10.6.2	**Additional clause:** A torque of $100\ ^{0}_{-5}$ Ncm 1 min is applied successively on the two lateral earthing contacts according to Figure 43. After this test, gauge 4 shall still be able to be inserted. These tests are carried out on new specimens.		P

<table>
<tr><td>11.6</td><td>To be deleted</td><td></td><td>P</td></tr>
<tr><td>12.2.1</td><td>Replace table 3 by the following:
<table>
<tr><td rowspan="2">Current and type of the accessory</td><td colspan="2">Rigid (solid or stranded) cop conductors</td></tr>
<tr><td>Nominal cross-sectional area a)
mm²</td><td>Diameter largest con b)
mm</td></tr>
<tr><td>16 A
2P and
2P + PE (fixed accessory)</td><td>From 1,5 to 2 x 2,5</td><td>2,2</td></tr>
<tr><td>16 A
2P and
2P + PE (portable accessory)</td><td>--</td><td></td></tr>
<tr><td>16 A
2P + PE (plugs)</td><td>--</td><td></td></tr>
<tr><td>16 A
2P (plugs)</td><td>--</td><td></td></tr>
<tr><td>16 A
3P + N + PE</td><td>From 1,5 to 4</td><td></td></tr>
<tr><td>25 A
3P + N + PE</td><td>From 2,5 to 6</td><td></td></tr>
<tr><td colspan="3">a) Diameter of the largest conductor according DIN E
b) This dimensions are only for information.</td></tr>
</table></td><td></td><td>P</td></tr>
<tr><td>12.3.12</td><td>Replace table 11 by the following:
<table>
<tr><td>Rated current of the socket-outlet
A</td><td>Nominal

First test se</td></tr>
<tr><td>16</td><td>1,5</td></tr>
</table></td><td></td><td>P</td></tr>
<tr><td>12.4</td><td>Additional clause:

Crimped connections
Crimped connections of non-rewirable plugs and portable socket-outlets shall have adequate electrical and mechanical properties. A photographic documentation shall be prepared for a total of three contact points seen from three sides, i.e. side view, front view and perspective view. The values for crimp height, stripping force or voltage drop (lower and higher limiting value) are to be determined and documented by the manufacturer and constitute the basis for ongoing production control.</td><td></td><td>N/A</td></tr>
<tr><td>13.1</td><td>Add the following:

Parts of socket-contact assemblies, which will be in contact with the portion of the pin intended to make electrical contact when the plug is fully inserted in the socket-outlet:
- shall not be of insulating material, except ceramic, or other material with no less suitable characteristics,</td><td></td><td>P</td></tr>
</table>

	and - shall ensure metallic opposing contacts at least on two sides of each pin.		
13.7	**Add after the second paragraph:** The fixing devices of caps or cover plates shall be non-detachable. **Replace Note 1 by:** The use of close-fitting washers made of cardboard or the like is regarded as an appropriate means to secure screws which are intended to be non-detachable.		P
13.8	**Delete this sub-clause.**		P
13.14	**Amend the second paragraph to read:** Testing: For socket-outlets with rated currents of up to and including 16 A and rated voltages up to 250 V the device shown in Figure 11 is used. **Amend the third paragraph to read:** Each specimen is mounted on a vertical plane with the plane through the socket-outlet contacts being horizontal. The device is then completely released and a weight is attached so that the exerted force is 15 N.		P
13.21	**Replace table 14 by the following:** Nominal cross-sectional areas of conductors mm²: Number of c 1,5 to 2,5: 2 3 4 5 1,5 to 4: 2 3 4 5 2,5 to 6: 2 3 4 5 4 to 10: 2 3 4 5		P
13.24	**Add clause:** Socket-outlets with cover intended to maintain a degree of protection IPX4 or higher shall be so		N/A

	designed that the proper functioning of the cover is secured in normal use. Compliance is checked by visual inspection and by the tests of 24.20.		
14.5	**Add the following paragraph after the second dashed item:** This requirement also applies to socket-outlets where the contact pressure is achieved by means of insulated parts which are designed in a way that safe and permanent contact is secured in normal use. This applies especially with respect to shrinking, ageing and wear.		N/A
14.18	**Add the following after the first paragraph:** Portable socket-outlets, provided with means for permanent fixing, shall be tested in respect of sub-clause 24.1 and sub-clause 28.1.1 such as fixed socket-outlets.		N/A
14.21	**Add the following after the first paragraph:** Cord extension sets without earthing-contacts are not permitted.		N/A
14.24	**Replace the second and third paragraph by the following and the note:** Compliance is checked by inspection and by measurement as to whether the plug has either: - *a usable length for gripping of at least 55 mm in axial direction, or* - *such indent(s) that a ball with a diameter of (12 ± 0,1) mm can penetrate radially into the body at least 2 mm from two opposite directions or at least 4 mm from one direction.*		N/A
14.26	**Add clause:** Accessories on adaptors shall comply with DIN 49440 and DIN 49441. Adaptors shall be so designed and their internal connections and the terminations of external cables so constructed that the efficiency of protection measures applied remains guaranteed. One plug and one socket-outlet shall form a structural unit. The length of cables connected to adaptors shall be at least 1,40 m. NOTE The length is measured between the points of entry to the appliance, or, where applicable, between the points of entry to the cable entrance.		N/A

	Adaptors shall not put excessive mechanical strain on the socket-outlets. The test is carried out as follows: The adaptor is inserted into a fixed socket-outlet complying with DIN 49440. The socket-outlet is pivoted about a horizontal axis through the axis of the live socket-contacts, 8 mm behind the engagement face of the socket-outlet. The additional torque which shall be applied to the socket-outlet in order to maintain the engagement face in the vertical plane shall not exceed 0,25 Nm. Care shall be taken that a length of 1m of the flexible cable, if any, hangs freely during the test.		
14.27	**Add the following sub-clause:** The length of cables connected to table-type socket-outlets shall be at least 1,40 m. This length is applied outside of possible existing guards. For helically formed cables this length is the straight length determined by means of the cable's own weight (suspended in a vertical plane).		N/A
14.28	**Add clause:** Portable socket-outlets with cover intended to maintain a degree of protection IPX4 or higher shall be so designed that the proper functioning of the cover is secured in normal use. In the case of cover-plates, the cover-plate shall be adequately fixed to the portable socket-outlet. Testing for portable socket-outlets with cover: Visual inspection and test according to 24.20. Testing for portable socket-outlets with cover-plate: Visual inspection and test according to 24.21.		N/A
16.2	**Add the following sentence:** Fixed socket-outlets are tested with inserted plugs of the same degree of protection and without plugs with the cover being closed.		N/A
18	**Replace the text of this clause by the following sub-clauses 18.1 and 18.2:**		P
18.1	**Additional sub-clause:** Earthing-contacts shall provide adequate contact pressure and shall not deteriorate in normal use. For two-pole 16 A 250 V socket-outlets with side earthing-contacts, compliance is checked by measuring the force exerted by the earthing contacts by means of the device shown in figure 14 of DIN VDE 0620-1:2002-01. The device has two pivoted levers L, the lower ends of which bear against the earthing contact. The upper ends are provided with hooks H, by means of which a force can be applied. Marker lines a and b are provided at the upper ends; they are so placed that the line on the lever and the	S1: 14,4 N; 14,8 N S2: 13,8 N; 13,9 N S3: 14,2 N; 13,7 N	P

	lines on the fixed part are in line when the distance between the tip F of the lever and the centre line of the device is 16 mm. The device is inserted into the recess of the socket-outlet, where it is locked in position by tightening the locking screw C, which forces the three pins B against the side of the recess; these pins are equally spaced around the body of the device. If the tips F of the levers do not bear against that part of the earthing contacts which makes contact with the earthing contacts of a normal plug, the device is positioned by means of spacing pieces as shown in the figure. A force is then applied to each of the hooks in turn and the value of the force is noted when the marker lines are in line. The test is then repeated, the device is being turned through 180°C in the recess. The average value of the forces necessary to move each contact to the indicated position, shall not be less than 5 N. For other accessories, compliance is checked by the tests of clauses 19 and 21.		
18.2	**Additional sub-clause:** Plugs shall be so constructed that the contact pressure of the lateral earthing contacts does not deteriorate in normal use. Compliance is checked by visual inspection and by the following test. Both the specimen and the test equipment have reached the required temperature before the test begins. The lateral earthing contacts with the exception of non-rewirable completed overmoulded designs are subjected for 168 h to a force of 50 N with a test equipment according to Figure 15 at an ambient temperature of (35 ± 2) °C. The point of application of the equipment shall be the point where the lateral earthing contacts are contacted with the plugs fully inserted. The earthing contact is measured 30 s after the force has been withdrawn. The total change of the lateral earthing contacts shall not differ by more than 1 mm from the actual dimension according to Clause 9.		N/A
19	**Replace Clause 19 including all sub-clauses:** **Temperature rise** Accessories shall be so constructed that they comply with the following temperature rise test. The test shall be carried out in a draught-free environment. For accessories having three poles or more, the current during the test shall be passed through the		P

	phase contacts, where applicable. In addition, separate tests shall be made passing the current through the neutral contact, if any, and the adjacent phase contact and through the earthing contact, if any, and the nearest phase contact. For the purpose of this test, earthing contacts, irrespective of their number, are considered as one pole. The temperature is determined by means of thermo couples selected and attached in a way that their influence on the temperature to be measured is negligible. The temperature rise of accessible metal parts shall not exceed 40 K and of accessible non-metal parts not exceed 60 K. NOTE For the purpose of the test of 25.3, the temperature rise of external parts of insulating material not necessary to retain current-carrying parts and parts of the earthing circuit in position, even though they are in contact with them, is also determined. Table 15 applies for the assignment of nominal cross-sectional areas of copper conductors for the following tests. Rated current of accessory A: **Nominal cross-se**; Flexible conducto accesso 16: 1,5 over 16: 4 The terminal screws or nuts are being tightened with 12.2.8. NOTE To ensure normal cooling of the terminals, the length of at least 1 m		
19.1	Fixed socket-outlets Socket-outlets with cables are tested as delivered. Rewirable socket-outlets without cables are fitted with polyvinyl chloride insulated conductors having a nominal cross-sectional area as shown in table 15. Flush-mounted socket-outlets are mounted in flush-mounted boxes. The box is placed in a block of pinewood filled around the box with plaster, so that the front edge of the box does not protrude and is not more than 5 mm below the front surface of the pinewood block. NOTE 1 The test assembly should be allowed to dry for at least seven days when first made. The size of the pinewood block, which may be fabricated from more than one piece, shall be such that there is at least 25 mm of wood surrounding the plaster, the plaster having a thickness between 10 mm and 15 mm around the maximum dimensions of the sides and rear of the box. NOTE 2 The sides of the cavity in the pinewood block may have a cylindrical shape. The cable(s)		P

	connected to the socket-outlet shall enter through the top of the box, the point(s) of entry being sealed to prevent the circulation of air. The length of each conductor within the box shall be (80 ± 10) mm. Surface-type socket-outlets shall be mounted centrally on the surface of a wooden block, which shall be at least 20 mm thick, 500 mm wide and 500 mm high. Other types of socket-outlets shall be mounted according to the manufacturer's instruction or, in the absence of such an instruction, in the position of normal use considered to give the most onerous conditions. Socket-outlets are tested using a test plug complying with figure 16 . In the case of multiple socket-outlets, the test is carried out on one socket-outlet of each type and current rating. The plug is inserted into the socket-outlet, and an alternating current as specified in table 20 is passed for 1 h. The test plug is being inserted in the socket-outlet expected to show the highest temperature rise. In case of doubt, the test with a test plug is to be repeated on another socket-outlet.		
19.1.1	Fixed socket-outlets without any additional function An alternating current as specified in table 20 is passed socket-outlets for 1 h. The temperature rise of terminals and internal connections shall not exceed 45 K.		P
19.1.2	Fixed socket-outlets with additional functions The socket-outlets are tested as follows: The socket-outlets are first loaded with the rated current for the accessory for 1 h or until the integrated protective device, if any, releases. The temperature rise of clamping units and joints of the additional functions specified in the relevant regulations shall not exceed the permissible values. All other clamping units and joints and socket contacts and connecting points for external conductors shall not exceed 45 K. The socket-outlets are then loaded with a test current according to table 20 for 1 h or until integrated protective device, if any, releases. If an integrated protective device releases the test shall be repeated with 0,95 times the release current of the protective device. In the case of fuses complying with EN 60127-2 the socket-outlet is loaded with 1,5 times the fuse rating for 1 h for fuse ratings up to 6,3 A or for 30 min for fuse ratings over 6,3 A. The temperature rise of clamping units and joints shall not exceed 70 K. The temperature rise of socket contacts shall not exceed 45 K.		N/A
19.2	Portable socket-outlets Socket-outlets with cables are tested as delivered. Rewirable socket-outlets without cables are fitted with polyvinyl chloride insulated conductors having a		N/A

	nominal cross-sectional area as shown in table 15. Portable socket-outlets are tested using a test plug complying with figure 16. Non-rewirable plugs of cord extension sets and multiple portable socket-outlets (table type) are tested using a test current according to table 20 for non-rewirable portable socket-outlets or rewirable portable accessories.		
19.2.1	Portable socket-outlets without any additional function An alternating current as specified in table 20 is passed through the accessories for 1 h. The temperature rise of clamping units and internal connections shall not exceed 45 K.		N/A
19.2.2	Portable socket-outlets with additional functions The socket-outlets are tested as follows: The socket-outlets are first loaded with the rated current for the accessory for 1 h or until the integrated protective device, if any, releases. The temperature rise of clamping units and joints of the additional functions specified in the relevant regulations shall not exceed the permissible values. All other clamping units and joints and socket contacts and connecting points for external conductors shall not exceed 45 K. The socket-outlets are then loaded with a test current according to table 20 for 1 h or until integrated protective device, if any, releases. If an integrated protective device releases the test shall be repeated with 0,95 times the release current of the protective device. In the case of fuses complying with EN 60127-2 the socket-outlet is loaded with 1,5 times the fuse rating for 1 h for fuse ratings up to 6,3 A or for 30 min for fuse ratings over 6,3 A. The temperature rise of clamping units and joints shall not exceed 70 K. The temperature rise of socket contacts shall not exceed 45 K.		N/A
19.3	Plugs Plugs with cables are tested as delivered. Rewirable plugs without cables are fitted with polyvinyl chloride insulated conductors having a nominal cross-sectional area as shown in table 15. The plugs are tested as follows: A suitable test apparatus is mounted on each live pin or protective contact of the plug together with a thermo couple in the lower part. NOTE A commercially available socket-outlet can be used as a suitable test apparatus.		N/A
19.3.1	Plugs without any additional function An alternating current as specified in table 20 is passed through the plugs for 1 h. The temperature rise of clamping units and internal connections shall not exceed 45 K.		N/A

19.3.2	Plugs with additional functions The plugs are tested as follows: Rewirable plugs are first loaded with the rated current for the accessory for 1 h or until the integrated protective device, if any, releases. Non-rewirable plugs are first loaded with the test current as specified in table 20 for 1 h or until the integrated protective device, if any, releases. The temperature rise of clamping units and joints of the additional functions specified in the relevant regulations shall not exceed the permissible values. All other clamping units and joints and socket contacts and connecting points for external conductors shall not exceed 45 K. The plugs are then loaded with a test current according to table 20 for 1 h or until integrated protective device, if any, releases. If an integrated protective device releases the test shall be repeated with 0,95 times the release current of the protective device. In the case of fuses complying with EN 60127-2 the plug is loaded with 1,5 times the fuse rating for 1 h for fuse ratings up to 6,3 A or for 30 min for fuse ratings over 6,3 A. The temperature rise of clamping units and joints shall not exceed 70 K. The temperature rise of socket contacts shall not exceed 45 K.		N/A
19.4	Adaptors Socket-outlets are tested using a test plug complying with figure 16. The plugs are tested as follows: A suitable test apparatus is mounted on each live pin or protective contact of the plug together with a thermo couple in the lower part. NOTE A commercially available socket-outlet can be used as a suitable test apparatus.		N/A
19.4.1	Adaptors without any interconnected additional function (adaptors complying with DIN 49437) An alternating current as specified in table 20 is passed through the adaptors for 1 h. The temperature rise of clamping units and internal connections shall not exceed 45 K.		N/A
19.4.2	Adaptors with interconnected additional functions Adaptors with cables are tested as delivered. Rewirable adaptors without cables are fitted with polyvinyl chloride insulated conductors having a nominal cross-sectional area as shown in table 15. The adaptors are tested as follows: The adaptors are first loaded with the rated current for the accessory for 1 h or until the integrated protective device, if any, releases. The temperature rise of clamping units and joints of the additional functions specified in the relevant regulations shall not exceed the permissible values. All other clamping units and joints and socket contacts and connecting points for external		N/A

	conductors shall not exceed 45 K. The adaptors are then loaded with a test current according to table 20 for 1 h or until integrated protective device, if any, releases. If an integrated protective device releases the test shall be repeated with 0,95 times the release current of the protective device. In the case of fuses complying with EN 60127-2 the adaptor is loaded with 1,5 times the fuse rating for 1 h for fuse ratings up to 6,3 A or for 30 min for fuse ratings over 6,3 A. The temperature rise of clamping units and joints shall not exceed 70 K. The temperature rise of socket contacts shall not exceed 45 K.		
19.5	Plug-in equipment Plug-in equipment shall be tested in accordance with the relevant product standard. For the testing of integrated plugs: see 14.23.		N/A
21	**Add at the end:** The force necessary to open the shutter after the usage test shall not exceed 50 N. The test is carried using the gauges 19a or 19b. The specimens shall withstand the electric strength test of 17.2, with the test voltage being reduced to 1 500 V for accessories with a rated voltage of 250 V and 1 000 V for accessories with a rated voltage of 130 V. NOTE 4 The humidity treatment of 16.3 is not repeated before the electric strength test of this clause. For accessories with lateral earthing contacts these are pressed as far as possible but not more than 35 mm apart after the test and held in this position for 48 h. After this treatment the socket-outlet is tested in compliance with clause 18. The average value of forces necessary to bring each contact in the required position shall at least be 60 % of the originally measured value. The mean value of forces necessary to bring each contact in the required position shall at least be 5 N. The tests of 13.2 and 14.2 are carried out in compliance with the tests of this clause.	Tested with earthing pressed 33 mm apart S1: 12,5 N; 10,8 N S2: 11,4 N; 10,8 N S3: 10,8 N; 9,8 N	P
23.	**Replace the first paragraph by:** The plug and socket outlet shall be stored in a climatic chamber at 45 °C for 1 h; immediately afterwards the cord anchorage is pulled with 50 N for 30 s, with the cord retention still being effective. A dislocation of the flexible cable by less than 2 mm is not regarded as a fault. After cooling down to ambient temperature the effectiveness of the supporting device is checked with the following test by means of an		N/A

apparatus as shown in figure 20.

The aforementioned test shall not be carried out on moulded-on accessories.

23.2 **Replace table 19 by the following:** N/A

Rating of accessory	Number of poles[1)]	Types of flexib reference
6 A up to and including 10 A up to and including 250 V[2)]	2	H03RT-
6 A up to and including 10 A	2	H05RN-F/H0
up to and including 250 V	3	H05RN-F/H0
Above 10 A up to and including 16 A	2	H05RR-
Up to and including 250 V	3	H05RR-
16 A	3	H05RR-
Above 250 V	4	H05RR-
	5	H05RR-

23.3 **Add before table 20:** N/A

A cable fitted with a rewirable plug or a rewirable portable socket outlet shall comply with the same requirements.

Cord extension sets and multiple portable socket-outlets (table type) without an integrated fuse and their components shall have a rated current of 16 A.

A reduced cross-sectional area which is between 1,5 mm and including 1,0 mm smaller than the cable is permitted only if a fuse is integrated which is aligned with the rated current of the cable/wire.

23.3 **Replace table 20 by the following:** N/A

Rating of accessory	Rewirable fixed accessories		Rewirable portable accessories		
	Test current A		Test current A		C s
	Clause 19	Clause 21	Clause 19	Clause 21	
2,5 A 250 V	--	--	--	--	

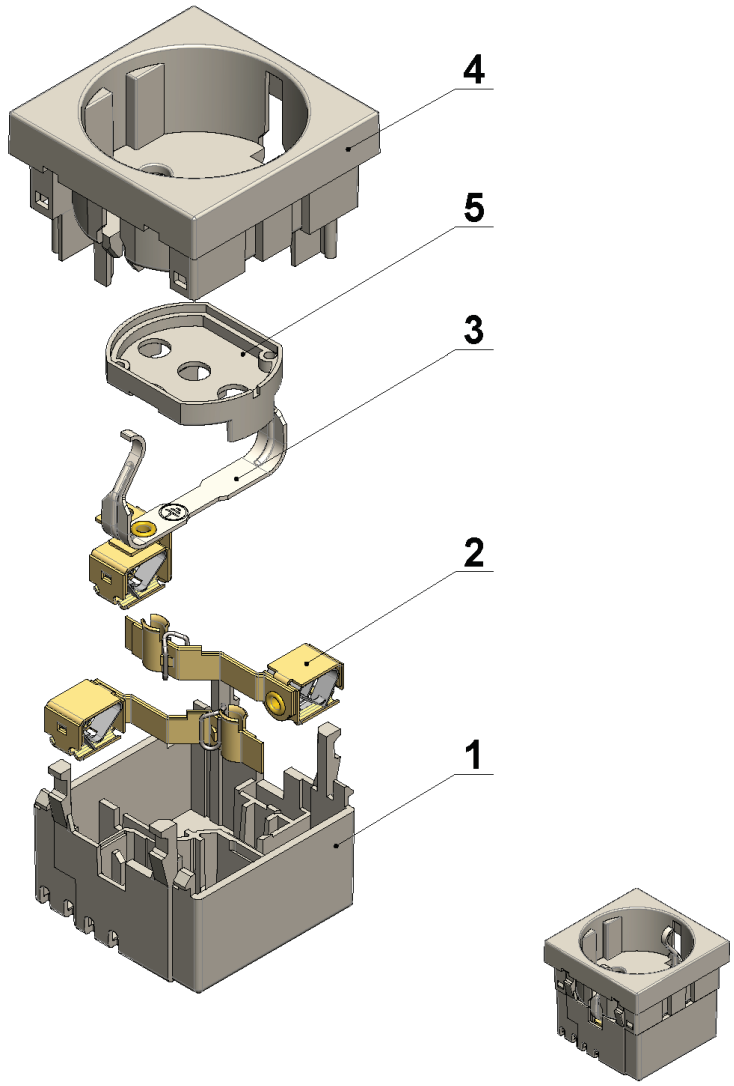
	16 A 250 V	22	16	20	16	1		
	16 A 25A 400/440 V	22 32	16 25	20 32	16 25	1 --		
	c) Flexible cables having a cross-sectional area of 1 mm² are only allowed up to a length of 2 m for cord sets for appliances.							
23.4	**The first paragraph is replaced by:** Plugs and portable socket-outlets with connected cable shall be designed in such a way that the flexible cable is protected against excessive bending where it enters the accessory.							N/A
24	**Add at the end:** - for socket-outlets with cover 24.20 - for socket-outlets with cover-plates 24.21							P
24.2	**Addition before Note 1:** Shuttered accessories shall once again be subjected to the shutter test of clause 21 without repeating the usage test.							P
24.9	**The last but one paragraph is replaced by:** Accessories with an IP Code higher than IPX0 shall once again be subjected to the relevant test of 16.2. Shuttered accessories shall once again be subjected to the shutter test of clause 21 without repeating the usage test.							N/A
24.20	**Add clause:** For socket-outlets with cover designed to maintain a degree of protection equal or higher than IP44 the cover shall be submitted to a mobility test. After mounting the cover as for the intended use the cover is opened 5 000 times at least up to 5° before the anchorage point. Springs, if any, or other equipment to close the cover shall not get lost or become useless.							N/A
24.21	**Add clause:**							N/A

	Socket-outlets with cover-plates intended to be non-detachable are subjected to a pull test of 50 N in the most unfavourable direction without jerks for 30 s. The cover-plate shall not come off and/or tear off.		
25	**Replace table 24 by the following:** Specimens A – For surface-mounting boxes, separable cover-plates and separable frames or covers B – For portable accessories, with the exception of the parts, if any, covered by A C – For portable accessories, made from natural or synthetic rubber or a mixture of both, or PVC and similar material D – For fixed socket-outlets, with the exception of parts, if any, covered by A E – For fixed socket-outlets made from natural or synthetic rubber or a mixture of both, with the exception of the parts, if any, covered by A a) applies only to material made of PVC or similar ma		P
26.8	**Add clause:** If other than screw-type or screwless terminals are used for internal connections in fixed or portable accessories, these connections shall be soldered, welded, crimped or equally effective permanent connections. Screwless terminations, similar like insulating piercing terminations, shall only be used for uninsulated rigid conductors. *Compliance is checked by the tests according to 12.3 as far as applicable.* Screw-type terminals shall not be used for internal connections in non-rewirable portable accessories. *Compliance is checked by inspection.*		N/A
27	**Replace table 23 by the following:** **Table 23 – Creepage distances, clearances and distances through insulating sealing compound** **Description** *Creepage distance:* 1 between live parts of different polarity 2 between live parts and – accessible surface of parts of insulating material and earthed – parts of earthing circuit – metal frames supporting the base of flush-type socket-outlets – screws or devices for fixing bases, covers or cover-plates of f – external assembly screws, other than screws which are on th isolated from the earthing circuit 3 between pins of plugs and metal parts connected to them, whe		P

	same system having accessible unearthed metal parts[b] made construction 4 between the accessible unearthed metal parts[b] of a socket-out system having pins and metal parts connected to them made a construction[c] 5 between live parts of a socket-outlet (without a plug) or of a plu parts[b]		
	Clearance: 6 between live parts of different polarity 7 between live parts and – accessible surface of parts of insulating material – earthed metal parts not mentioned under items 8 and 9 and e – parts of earthing circuit – metal frames supporting the base of flush-type socket-outlets – screws or devices for fixing bases, covers or cover-plates of f – external assembly screws, other than screws which are on th are isolated from the earthing circuit 8 between live parts and – exclusively earthed metal boxes[e], with the socket-outlet in th – unearthed metal boxes, without insulating lining with the sock – accessible unearthed or functional earthed metal parts[b] of so 9 between live parts and the surfaces on which the base of a soc 10 between live parts and the bottom of any conductor recess, if a mounting 11 between live parts of a socket-outlet (without a plug) or of a plu parts[b]		
	Distance through insulating sealing compound: 12 between live parts covered with at least 2 mm of sealing compo socket-outlet for surface mounting is mounted 13 between live parts covered with at least 2 mm of sealing compo recess, if any, in the base of a socket-outlet for surface mountin		
	Distance through insulation: 14 between accessible surfaces and live parts of non-rewirable mo		
	a This value is reduced to 3 mm for accessories having a rated v b With exception of screws and the like. c The most unfavourable construction may be checked by means to the system concerned. d This value is reduced to 4,5 mm for accessories having a rated e Exclusively earthed metal boxes are those suitable only for use f Creepage distances and clearances between live parts of differ the supply cable in the base of a glow lamp with external resist		
28.1.1	**Add at the end:** NOTE 5 In order to test the supporting part of the moulded-on plug the moulded-on material shall be completely removed.		P

31	**Add clause:** Electromagnetic compatibility		P
31.1	**Add clause:** Immunity Plugs and socket-outlets complying with the requirements of this standard, are not sensitive to electromagnetic disturbances. This is why electromagnetic disturbance tests are not necessary.		P
31.2	**Add clause:** Plugs and socket-outlets complying with the requirements of this standard do not give rise to intolerable electromagnetic emissions. This is why emission tests are not necessary. NOTE Plugs and socket-outlets containing electronic circuits shall comply with the relevant requirements for electromagnetic compatibility. Glow lamps with or without a series resistance are not considered to be electronic components in this content.		P
	Delete Annex C (alternative gripping tests)		P
	Add Annex E (in German): ***Hinweis!*** ***Installation nur durch Personen mit einschlägigen elektrotechnischen Kenntnissen und Erfahrungen!***[*)] *Durch eine unsachgemäße Installation gefährden **Sie**:* – *Ihr eigenes Leben;* – *das Leben der Nutzer der elektrischen Anlage.* *Mit einer unsachgemäßen Installation riskieren **Sie** schwere Sachschäden, z. B. durch Brand.* *Es droht für **Sie** die persönliche Haftung bei Personen- und Sachschäden.* ***Wenden Sie sich an einen Elektroinstallateur!*** [*)] ***Erforderliche Fachkenntnisse für die Installation*** *Für die Installation sind Insbesondere folgende Fachkenntnisse erforderlich:* – *die anzuwendenden „5 Sicherheitsregeln": Freischalten; gegen Wiedereinschalten sichern; Spannungsfreiheit – feststellen; Erden und Kurzschließen; benachbarte, unter Spannung stehende Teile abdecken oder abschranken;* – *Auswahl des geeigneten Werkzeuges, der Messgeräte und ggf. der persönlichen Schutzausrüstung;* – *Auswertung der Messergebnisse;* – *Auswahl des Elektro-Installationsmaterials zur Sicherstellung der Abschaltbedingungen;* – *IP-Schutzarten;* – *Einbau des Elektroinstallationsmaterials;* – *Art des Versorgungsnetzes (TN-System, IT-System, TT-System) und die daraus folgenden Anschlussbedingungen (klassische Nullung, Schutzerdung, erforderliche Zusatzmaßnahmen etc.).*		P

Attachment No. 3
(Technical documentation)

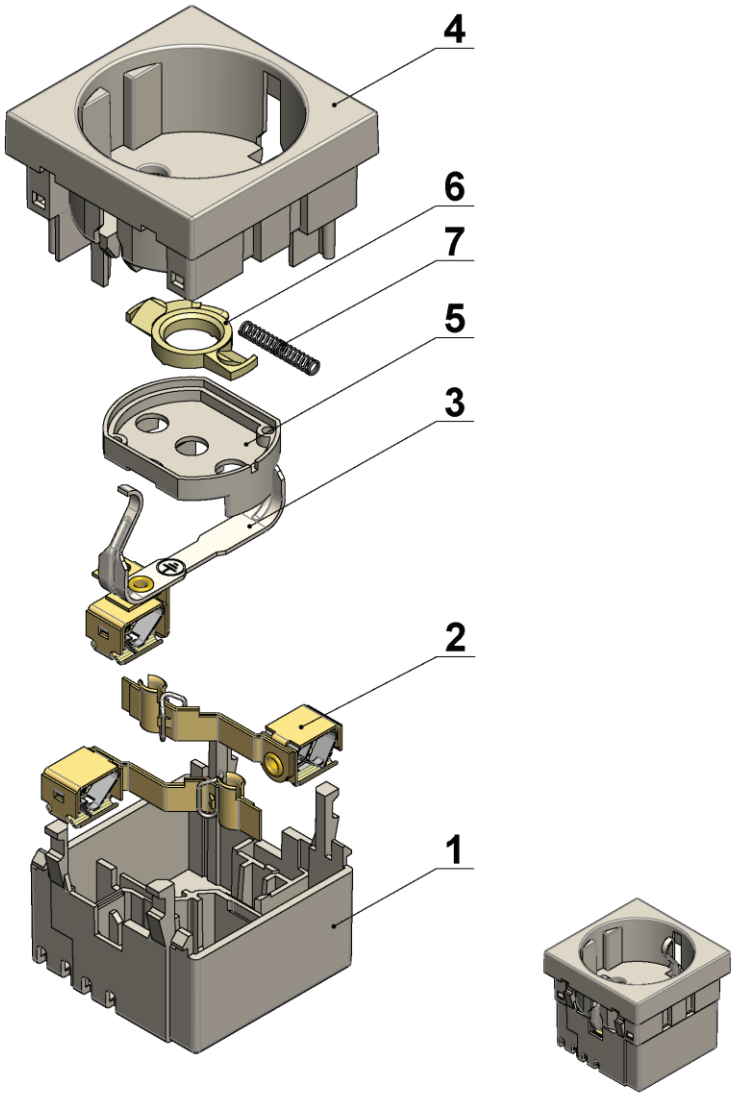


Poz.	Naziv	Oznaka	Kom.	Materijal	Dim./ Šifra za nabavku	Napomena
5	Poklopac zaštite kontakata MODUL 45	art.2311.11	1	PC		
4	Blok ravne priključnice MODUL 45	art.2311.02	1	PC		
3	Uzemljenje ravne MODUL 45 sklop	PSK.2311.3	1			
2	Kontaktna čaura ravne MODUL 45 sklop	PSK.2311.2	2			
1	Telo priključnice MODUL 45	art.2311.01	1	PC		

		Materijal	Površinska zaštita	Termička obrada	
		Dim./Šifra za nabavku	ID Broj	Masa	Razmera
Sklop	Kom.		032626	36.611	1:1

Pripadnost			Naziv
2300-Ugradne prikljucnice_45			PRIKLJUČNICA RAVNA MODUL 45 BEZ ZAŠTITE
		Tolerancije slobodnih mera	
	Datum	Ime	
Konstruisao	6.10.2020	Milan Samardzic	ALING-CONEL GAJDOBRA
Crtao	6.10.2020	Milan Samardzic	
Pregledao	13.10.22	Miljan Matrak	
Odobrio	13.10.22	Miljan Matrak	

Oznaka	Revizija
art.2311	03



Poz.	Naziv	Oznaka	Kom.	Materijal	Dim./ Šifra za nabavku	Napomena
7	Opruga osigurača	art.501.06	1	1.1200 DIN 2076-C	1000426	brunirano
6	Osigurač	art.501.04	1	PBT GF20		
5	Poklopac zaštite kontakata MODUL 45	art.2311.11	1	PC		
4	Blok ravne priključnice MODUL 45	art.2311.02	1	PC		
3	Uzemljenje ravne MODUL 45 sklop	PSK.2311.3	1			
2	Kontaktna čaura ravne MODUL 45 sklop	PSK.2311.2	2			
1	Telo priključnice MODUL 45	art.2311.01	1	PC		

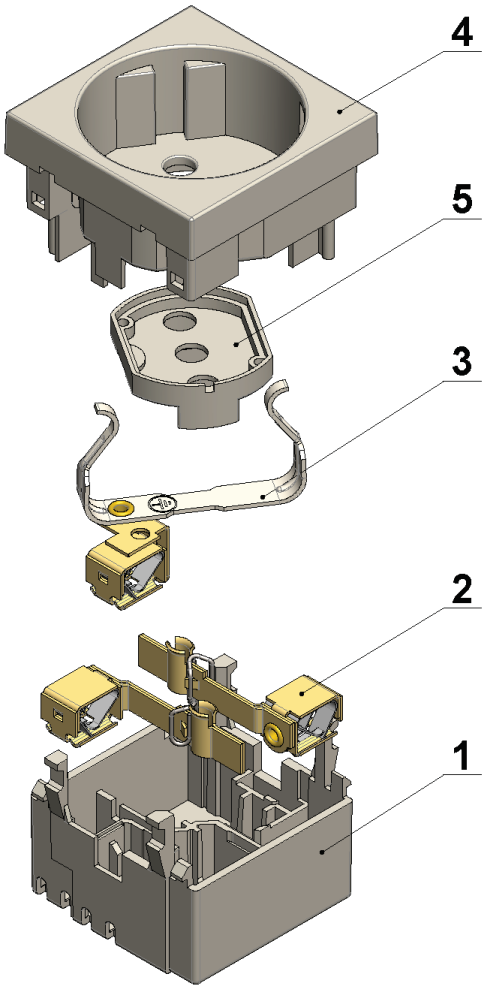
		Materijal	Površinska zaštita	Termička obrada	
		Dim./Šifra za nabavku	ID Broj 032627	Masa 37.308	Razmera 1:1
Sklop	Kom.				

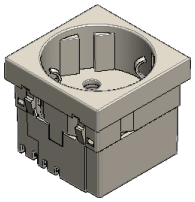
Pripadnost	2300-Ugradne prikljucnice_45	Naziv	PRIKLJUČNICA RAVNA MODUL 45 SA ZAŠTITOM
	Tolerancije slobodnih mera		

	Datum	Ime
Konstruisao	6.10.2020	Milan Samardzic
Crtao	6.10.2020	Milan Samardzic
Pregledao	18.11.22	Jovica Ristić
Odobrio	18.11.22	Jovica Ristić

ALING-CONEL GAJDOBRA

Oznaka	Revizija
art.2321	04





Poz.	Naziv	Oznaka	Kom.	Materijal	Dim./ Šifra za nabavku	Napomena
5	Poklopac zaštite kontakata MODUL 45	art.2311.11	1	PC		
4	Blok kose priključnice MODUL 45	art.2331.02	1	PC		
3	Uzemljenje kose MODUL 45 sklop	PSK.2331.3	1			
2	Kontaktna čaura kose MODUL 45 sklop	PSK.2331.2	2			
1	Telo priključnice MODUL 45	art.2311.01	1	PC		

Sklop	Kom.	Materijal	Površinska zaštita	Termička obrada	
		Dim./Šifra za nabavku	ID Broj 032648	Masa 36.419	Razmera 1:1

Pripadnost: 2300-Ugradne prikljucnice_45

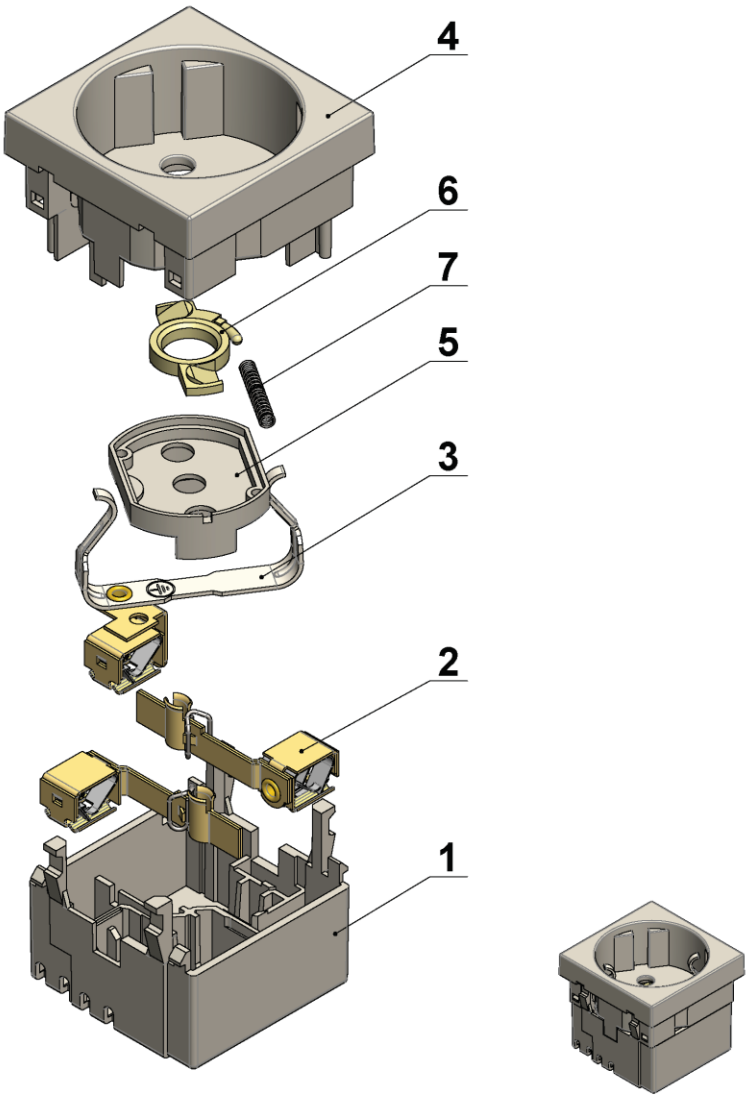
Tolerancije slobodnih mera

	Datum	Ime
Konstruisao	6.10.2020	Milan Samardzic
Crtao	6.10.2020	Milan Samardzic
Pregledao	13.10.22	Miljan Matrak
Odobrio	13.10.22	Miljan Matrak

ALING-CONEL GAJDOBRA

Naziv: **PRIKLJUČNICA KOSA MODUL 45 BEZ ZAŠTITE**

Oznaka: **art.2331** Revizija: **04**

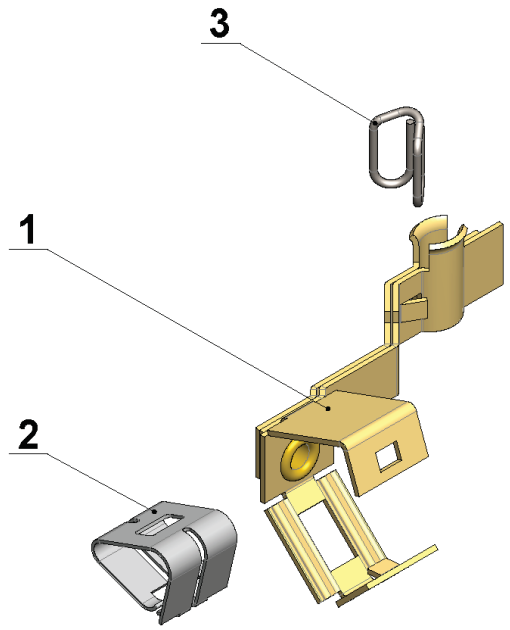


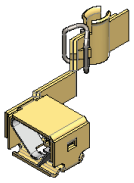
Poz.	Naziv	Oznaka	Kom.	Materijal	Dim./ Šifra za nabavku	Napomena
7	Opruga osigurača	art.501.06	1	1.1200 DIN 2076-C	1000426	brunirano
6	Osigurač	art.501.04	1	PBT GF20		
5	Poklopac zaštite kontakata MODUL 45	art.2311.11	1	PC		
4	Blok kose priključnice MODUL 45	art.2331.02	1	PC		
3	Uzemljenje kose MODUL 45 sklop	PSK.2331.3	1			
2	Kontaktna čaura kose MODUL 45 sklop	PSK.2331.2	2			
1	Telo priključnice MODUL 45	art.2311.01	1	PC		

		Materijal	Površinska zaštita	Termička obrada	
		Dim./Šifra za nabavku	ID Broj	Masa	Razmera
Sklop	Kom.		032647	37.115	1:1

Pripadnost			Naziv
2300-Ugradne prikljucnice_45			PRIKLJUČNICA KOSA MODUL 45 SA ZAŠTITOM
		Tolerancije slobodnih mera	
	Datum	Ime	
Konstruisao	6.10.2020	Milan Samardzic	ALING-CONEL GAJDOBRA
Crtao	6.10.2020	Milan Samardzic	
Pregledao	18.11.22	Jovica Ristić	
Odobrio	18.11.22	Jovica Ristić	

Oznaka	Revizija
art.2341	05



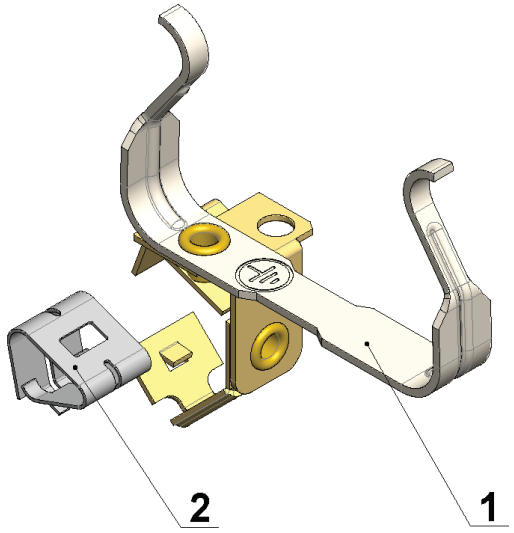


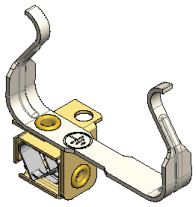
Poz.	Naziv	Oznaka	Kom.	Materijal	Dim./ Šifra za nabavku	Napomena
3	Opruga kontaktne čaure MODUL 45	art.2311.24	1	1.1200 DIN 2076-C	1000496	brunirano
2	Kontaktna opruga bezvijčane priključnice	art.631.32	1	1.4310 +C1500	0,3 x 7,8	
1	Nosač opruge sa kontaktnom čaurom ravne priključnice MODUL 45	PSK.2311.4	1			

Sklop	Kom.	Materijal	Površinska zaštita	Termička obrada	
		Dim./Šifra za nabavku	ID Broj	Masa	Razmera
			032606	3.609	2:1

Pripadnost			Naziv
2300-Ugradne prikljucnice_45			KONTAKTNA ČAURA RAVNE MODUL 45 SKLOP
		Tolerancije slobodnih mera	
	Datum	Ime	
Konstruisao	5.10.2020	Milan Samardzic	ALING-CONEL GAJDOBRA
Crtao	5.10.2020	Milan Samardzic	
Pregledao	13.10.22	Miljan Matrak	
Odobrio	13.10.22	Miljan Matrak	

Oznaka	Revizija
PSK.2311.2	03





Poz.	Naziv	Oznaka	Kom.	Materijal	Dim./ Šifra za nabavku	Napomena
2	Kontaktna opruga bezvijčane priključnice	art.631.32	1	1.4310 +C1500	0,3 x 7,8	
1	Nosač opruge sa uzemljenjem MODUL 45	PSK.2311.5	1			

		Materijal	Površinska zaštita	Termička obrada	
		Dim./Šifra za nabavku	ID Broj	Masa	Razmera
Sklop	Kom.		032625	5.234	2:1

Pripadnost: 2300-Ugradne prikljucnice_45

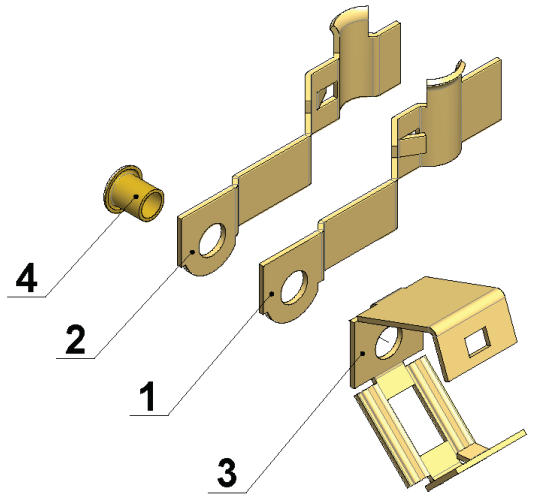
Tolerancije slobodnih mera

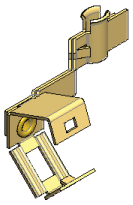
	Datum	Ime
Konstruisao	19.05.22	Jovica Ristić
Crtao	19.05.22	Jovica Ristić
Pregledao	13.10.22	Miljan Matrak
Odobrio	13.10.22	Miljan Matrak

ALING-CONEL GAJDOBRA

Naziv: **UZEMLJENJE RAVNE MODUL 45 SKLOP**

Oznaka: **PSK.2311.3** Revizija: **04**

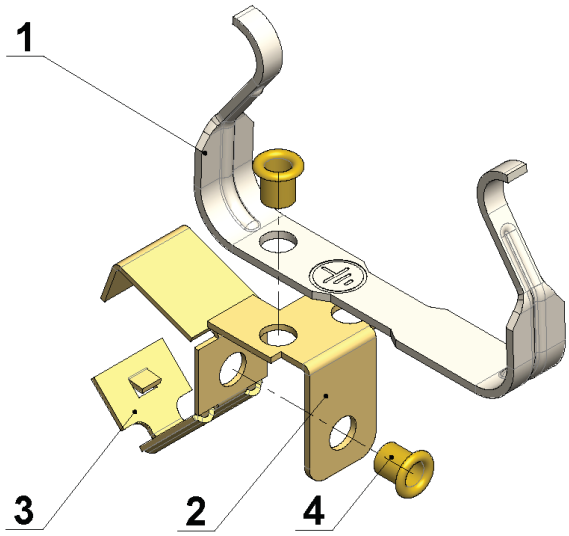


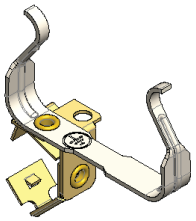


Poz.	Naziv	Oznaka	Kom.	Materijal	Dim./ Šifra za nabavku	Napomena
4	Šuplja zakovica DIN 7340 B 3x0,3x3,3 mesing		1	CuZn33	1000159	
3	Nosač opruge MODUL 45	art.2311.23	1	CuZn37 R410		
2	Kontaktna čaura leva ravne priključnice MODUL 45	art.2311.22	1	CuZn37 R550	0.5 x 83	
1	Kontaktna čaura desna ravne priključnice MODUL 45	art.2311.21	1	CuZn37 R550	0.5 x 83	

Sklop	Kom.	Materijal	Površinska zaštita	Termička obrada		
		Dim./Šifra za nabavku	ID Broj	Masa	Razmera	
			032604	3.097	2:1	

Pripadnost			Naziv	
2300-Ugradne prikljucnice_45			NOSAČ OPRUGE SA KONTAKTNOM ČAUROM RAVNE PRIKLJUČNICE MODUL 45	
		Tolerancije slobodnih mera		
	Datum	Ime		
Konstruisao	5.10.2020	Milan Samardzic	ALING-CONEL GAJDOBRA	
Crtao	5.10.2020	Milan Samardzic	Oznaka	Revizija
Pregledao	13.10.22	Miljan Matrak	PSK.2311.4	05
Odobrio	13.10.22	Miljan Matrak		





Poz.	Naziv	Oznaka	Kom.	Materijal	Dim./ Šifra za nabavku	Napomena
4	Šuplja zakovica DIN 7340 B 3x0,3x3,3 mesing		2	CuZn33	1000159	
3	Nosač opruge MODUL 45	art.2311.23	1	CuZn37 R410		
2	Vezni lim uzemljenja MODUL 45	art.2311.32	1	CuZn37 R350	0.6 x 30	
1	Uzemljenje MODUL 45	art.2311.31	1	CuZn37 R550	0,8 x 88	gal Ni 5

		Materijal	Površinska zaštita	Termička obrada	
		Dim./Šifra za nabavku	ID Broj	Masa	Razmera
Sklop	Kom.		032063	4.821	2:1

Pripadnost: 2300-Ugradne prikljucnice_45

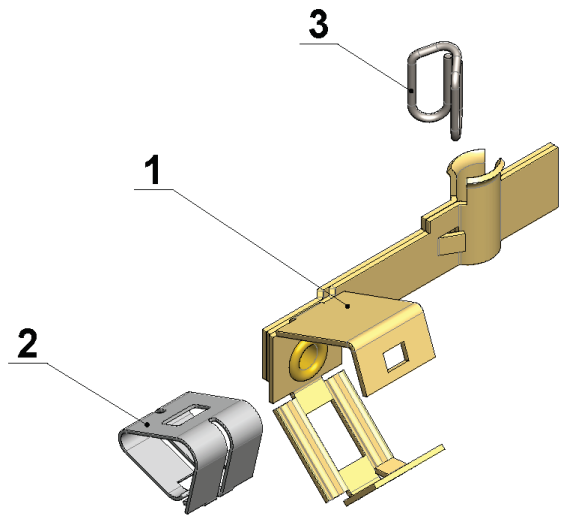
Tolerancije slobodnih mera

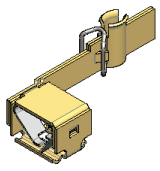
	Datum	Ime
Konstruisao	23.9.2020	Milan Samardzic
Crtao	23.9.2020	Milan Samardzic
Pregledao	13.10.22	Miljan Matrak
Odobrio	13.10.22	Miljan Matrak

ALING-CONEL GAJDOBRA

Naziv: **NOSAČ OPRUGE SA UZEMLJENJEM MODUL 45**

Oznaka: **PSK.2311.5** Revizija: **05**





Poz.	Naziv	Oznaka	Kom.	Materijal	Dim./ Šifra za nabavku	Napomena
3	Opruga kontaktne čaure MODUL 45	art.2311.24	1	1.1200 DIN 2076-C	1000496	brunirano
2	Kontaktna opruga bezvijčane priključnice	art.631.32	1	1.4310 +C1500	0,3 x 7,8	
1	Nosač opruge sa kontaktnom čaurom kose priključnice MODUL 45	PSK.2331.4	1			

Sklop	Kom.	Materijal	Površinska zaštita	Termička obrada	
		Dim./Šifra za nabavku	ID Broj 032644	Masa 3.605	Razmera 2:1

Pripadnost: 2300-Ugradne prikljucnice_45

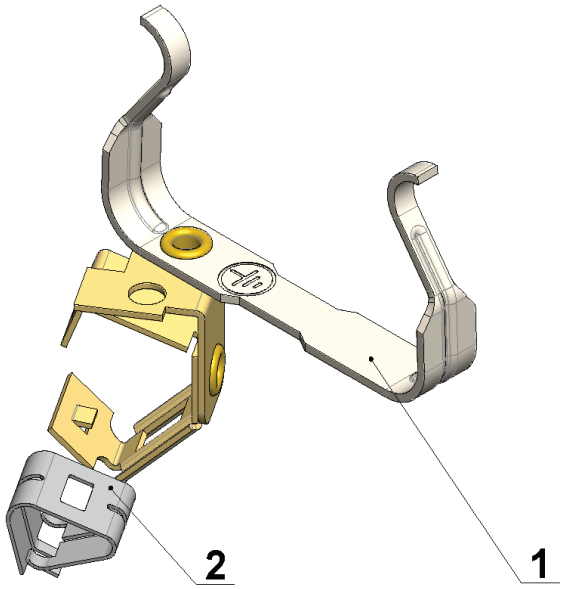
Tolerancije slobodnih mera

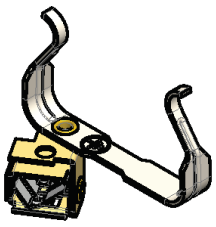
	Datum	Ime
Konstruisao	6.10.2020	Milan Samardzic
Crtao	6.10.2020	Milan Samardzic
Pregledao	13.10.22	Miljan Matrak
Odobrio	13.10.22	Miljan Matrak

ALING-CONEL GAJDOBRA

Naziv: **KONTAKTNA ČAURA KOSE MODUL 45 SKLOP**

Oznaka: **PSK.2331.2** Revizija: **04**





Poz.	Naziv	Oznaka	Kom.	Materijal	Dim./ Šifra za nabavku	Napomena
2	Kontaktna opruga bezvijčane priključnice	art.631.32	1	1.4310 +C1500	0,3 x 7,8	
1	Nosač opruge sa uzemljenjem kosi MODUL 45	PSK.2331.5	1			

		Materijal	Površinska zaštita	Termička obrada	
		Dim./Šifra za nabavku	ID Broj	Masa	Razmera
Sklop	Kom.		032646	5.201	2:1

Pripadnost: 2300-Ugradne prikljucnice_45

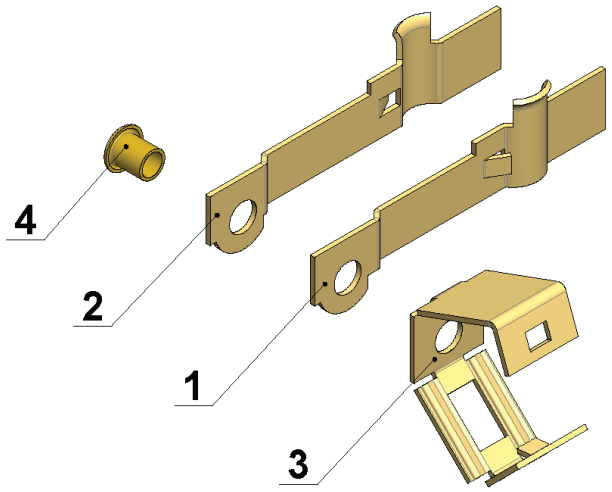
Tolerancije slobodnih mera

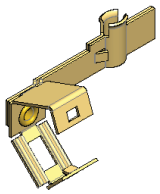
	Datum	Ime
Konstruisao	20.05.22	Jovica Ristić
Crtao	20.05.22	Jovica Ristić
Pregledao	13.10.22	Miljan Matrak
Odobrio	13.10.22	Miljan Matrak

ALING-CONEL GAJDOBRA

Naziv: **UZEMLJENJE KOSE MODUL 45 SKLOP**

Oznaka: **PSK.2331.3** Revizija: **03**





Poz.	Naziv	Oznaka	Kom.	Materijal	Dim./ Šifra za nabavku	Napomena
4	Šuplja zakovica DIN 7340 B 3x0,3x3,3 mesing		1	CuZn33	1000159	
3	Nosač opruge MODUL 45	art.2311.23	1	CuZn37 R410		
2	Kontaktna čaura leva kose priključnice MODUL 45	art.2331.22	1	CuZn37 R550	0.5 x 79	
1	Kontaktna čaura desna kose priključnice MODUL 45	art.2331.21	1	CuZn37 R550	0.5 x 79	

Sklop	Kom.	Materijal	Površinska zaštita	Termička obrada	
		Dim./Šifra za nabavku	ID Broj	Masa	Razmera
			032643	3.093	2:1

Pripadnost: 2300-Ugradne prikljucnice_45

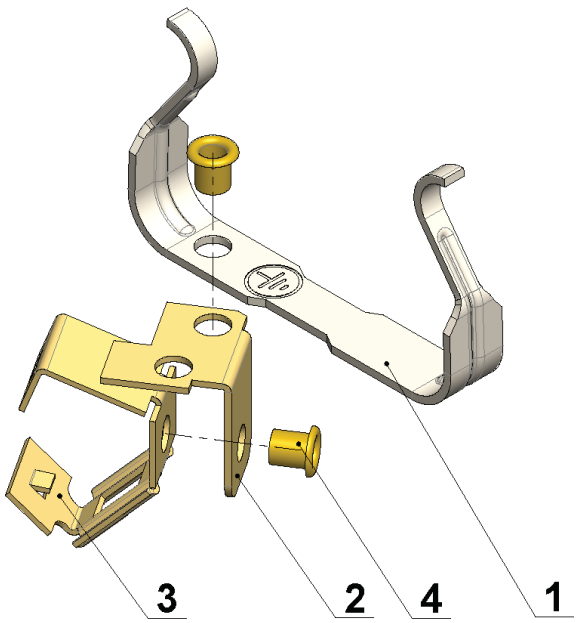
Tolerancije slobodnih mera

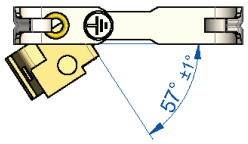
	Datum	Ime
Konstruisao	6.10.2020	Milan Samardzic
Crtao	6.10.2020	Milan Samardzic
Pregledao	13.10.22	Miljan Matrak
Odobrio	13.10.22	Miljan Matrak

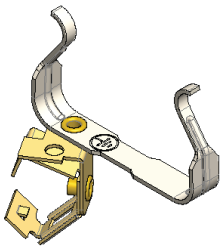
ALING-CONEL GAJDOBRA

Naziv: **NOSAČ OPRUGE SA KONTAKTNOM ČAUROM KOSE PRIKLJUČNICE MODUL 45**

Oznaka: **PSK.2331.4** Revizija: **05**







Poz.	Naziv	Oznaka	Kom.	Materijal	Dim./ Šifra za nabavku	Napomena
4	Šuplja zakovica DIN 7340 B 3x0,3x3,3 mesing		2	CuZn33	1000159	
3	Nosač opruge MODUL 45	art.2311.23	1	CuZn37 R410		
2	Vezni lim uzemljenja MODUL 45	art.2311.32	1	CuZn37 R350	0.6 x 30	
1	Uzemljenje MODUL 45	art.2311.31	1	CuZn37 R550	0,8 x 88	gal Ni 5

		Materijal	Površinska zaštita	Termička obrada	
		Dim./Šifra za nabavku	ID Broj	Masa	Razmera
Sklop	Kom.		032629	4.821	2:1

Pripadnost: 2300-Ugradne prikljucnice_45

Tolerancije slobodnih mera

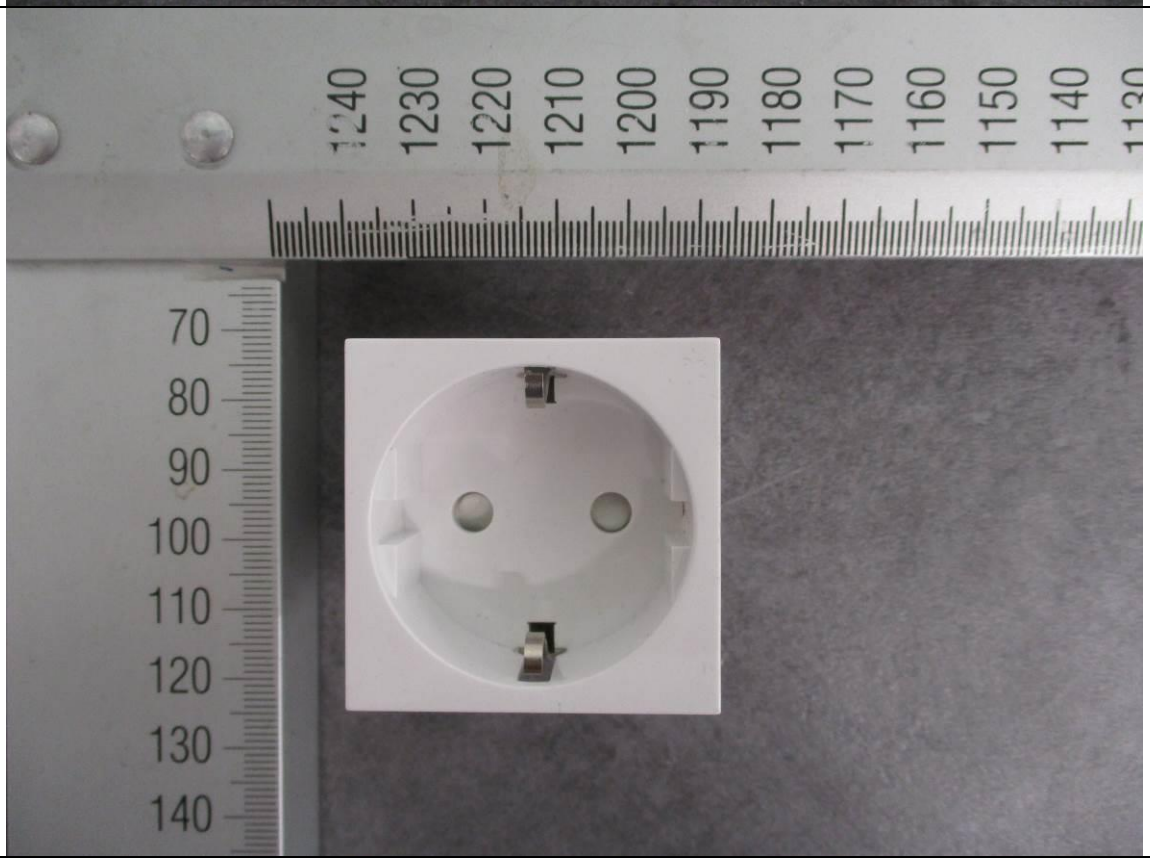
	Datum	Ime
Konstruisao	6.10.2020	Milan Samardzic
Crtao	6.10.2020	Milan Samardzic
Pregledao	13.10.22	Miljan Matrak
Odobrio	13.10.22	Miljan Matrak

ALING-CONEL GAJDOBRA

Naziv: **NOSAČ OPRUGE SA UZEMLJENJEM KOSI MODUL 45**

Oznaka: **PSK.2331.5** Revizija: **04**

Attachment No. 4
(Photos)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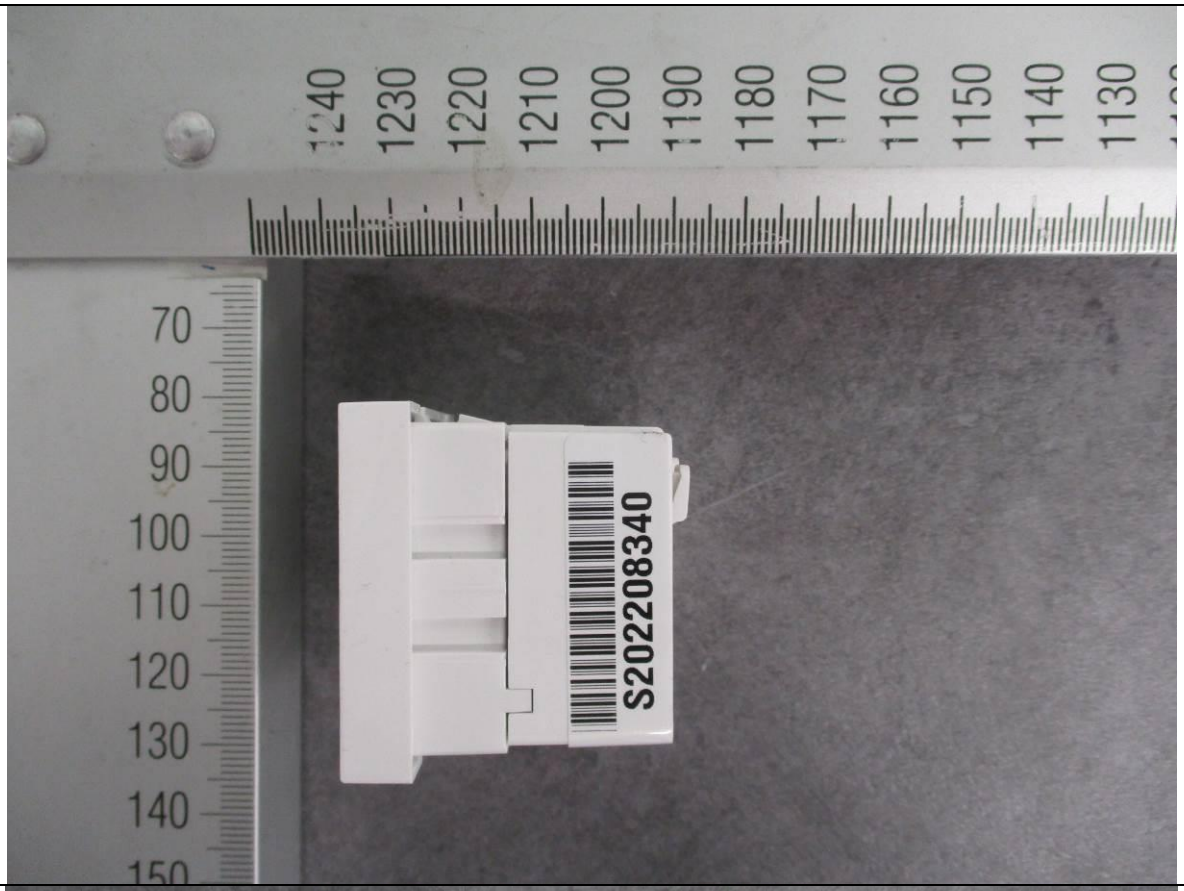
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