

#### 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:	MI17-0018572-01
Date of issue:	18/01/2018
Total number of pages	34 (test report) + 11 (Attachment) + 15 (Annex 1)
Name of Testing Laboratory	IMQ S.p.A.
preparing the Report:	I - 20138 Milano - via Quintiliano, 43
Applicant's name:	4BOX SRL
Address:	I - 20148 Milano - piazzale Segesta 15
Test specification:	
Standard:	IEC 60884-1:2002 (Third Edition) + A1:2006 + A2:2013
Test procedure:	CB Scheme
Non-standard test method::	N/A
Test Report Form No	IEC60884_1D
Test Report Form(s) Originator :	IMQ S.p.A.
Master TRF:	Dated 2016-04

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Test item description: fixed S	Socket-outlets
Trade Mark: 4b	BOX (logo)
Manufacturer: 4BOX	SRL
Model/Type reference: see de	escription on page 5
Ratings: 16 A 2	50 V ~ - 1 S.S. III CEE 7 + 2 P17/11
Responsible Testing Laboratory (as applical	ole), testing procedure and testing location(s):
CB Testing Laboratory:	IMQ S.p.A.
Testing location/ address:	I - 20138 Milano - via Quintiliano, 43
Associated CB Testing Laboratory:	
Testing location/ address:	
Tested by (name, function, signature):	Mascheroni V.
Approved by (name, function, signature):	Primicerio A.
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):			
This test report consists of:			
- Test Report IEC 60884-1:2002 (Third Edition) + A1:2006 + IT_ND IEC 60884-1C: 34 pages;			
- Attachment to test Report IEC 60884-1 "Italian Na			
- Annex 1: Photographic documentation:	15 pages.		
Summary of testing:			
Tests performed (name of test and test clause):	Testing location:		
This test report refers to partial tests concerning the following clauses and sub-clauses: 8; 10; 11; 12; 13; 16.3; 17; 18; 19; 20; 21; 22; 24; 25; 26; 27 and 28.	IMQ S.p.A. I - 20138 Milano - via Quintiliano, 43		
The clauses 12.3, 16.2.2, 19.2, 19.3, 23, 24.14, 24.15, 24.16, 30 have been deleted because they are not applicable			
Summary of compliance with National Difference	es		
<b>List of countries addressed:</b> Attachment IT_ND_IEC60884_1C_II to test report IEC 60884-1 Italian national differences, based on Standards CEI 23-50:2007 + V1:2008 + V2:2011 + V3:2015.			
Copy of marking plate (for example)			
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.			
16 /250 ~			
SIDE 4B.SP.AN			
4b O×			

Test item particulars:	Fixed socket-outlets
Standard Sheet:	Non-standardized 1x S.S. III CEE 7 / 2xP17/11 CEI 23-50
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:	<b>IP2X</b> / 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 <sup>2</sup> ):	
Type of terminals:	<b>screw-type</b> / 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 / with shutters
Method of application / mounting of the socket- outlet:	surface-type / <b>flush-type</b> / semi-flush-type / <b>panel</b> <b>type</b> / 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:	BEIM 88620
Date (s) of performance of tests:	From 10/11/2017 up to 18/01/2018

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General remarks:		
The test results presented in this report relate only to This report shall not be reproduced, except in full, wit laboratory. "(See Enclosure #)" refers to additional information a	hout the written a	approval of the Issuing testing
"(See appended table)" refers to a table appended to		
Throughout this report a 🗌 comma / 🗌 point is	used as the de	cimal separator.
Throughout this report, the symbol "(*)" in the "I column refers to a requirement replaced or modi V2:2011+V3:2015.(see Attachment).		
Throughout this report the indication "N/C" is us object but it has not been carried out.	ed to indicate t	that the test case applies to the test
Unless otherwise stated the uncertainties for th according to IMQ Operational Instruction IO-LA The uncertainties evaluation has been carried of "Application of Uncertainty of measurement's to Electrotechnical Sector" and IECEE OD-5014. I requirements for traceability of calibrations, of a calibration intervals are met. The ability of relial function in a particular application has not been warnings, installation instructor and/or user man checked in Italian or English version only.	B-001 and IO-I out in accordan Conformity As Internal Procect all test equipme bility of this pro investigated.	LAB-004. ce with IEC Guide 115 ssessment Activity in the lure PG-037 ensures that the ent requiring calibration, and duct to perform its intended Unless otherwise specified,
Manufacturer's Declaration per sub-clause 4.2.5 c	of IECEE 02:	
The application for obtaining a CB Test Certificate	Ves	
includes more than one factory location and a declaration from the Manufacturer stating that the	🛛 Not applic	able
sample(s) submitted for evaluation is (are)		
representative of the products from each factory has been provided	.:	
When differences exist; they shall be identified in	the General pro	oduct information section.
Name and address of factory (ies)		oad, Jiangbei, Ningbo -

#### General product information:

Fixed socket out-let, 2 modules with shutters. Non-standardized construction: 1x S.S. III CEE 7 / 2xP17/11 CEI 23-50.

#### Description of fixed sockets compatible with supporting frames of various brands:

Type reference	Rated value	Colour
4B.G10.H21	16A 250 V	White
4B.G14.H21	16A 250 V	Titanium
4B.N.H21	16A 250 V	White
4B.L.H21	16A 250 V	Anthracite
4B.NT.H21	16A 250 V	Тес
4B.LR.H21	16A 250 V	Red
4B.V14.H21	16A 250 V	White
4B.V14R.H21	16A 250 V	Red
4B.V14SL.H21	16A 250 V	Silver
4B.V20B.H21	16A 250 V	White
4B.V20.H21	16A 250 V	Grey
4B.V20N.H21	16A 250 V	Next
4B.V20R.H21	16A 250 V	Red
4B.V19V.H21	16A 250 V	White
4B.V19.H21	16A 250 V	Grey
4B.V19R.H21	16A 250 V	Red
4B.SP.AN (*)	16A 250 V	Anthracite
4B.SP.BN (*)	16A 250 V	White

(\*) panel mounting / screw fixing

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Clause	Requirement + Test	Result - Remark
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Verdict

8	MARKING		
8.1	Accessories marked as follows:		
	- rated current (A):	16 A	Р
	- rated voltage (V):	250 V	Р
	- symbol for nature of supply	~	Р
	- manufacturer's or responsible vendor's name:	45 0X	Р
	- type reference	4B.SP.AN	Р
	- 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		N/A
	- an indication of the suitability to accept rigid conductors only (if any):		N/A
8.2	Symbols used: as required in the standard		
	Marking for the nature of supply placed next to the marking for rated current and rated voltage		Р
8.3	Marking of fixed socket-outlets placed on the main pa	art:	*
	- rated current, rated voltage and nature of supply		Р
	- identification mark of the manufacturer or of the responsible vendor		Р
	- length of insulation to be removed, if any		N/A
	<ul> <li>- indication of the suitability to accept rigid conductors only for screwless terminals for those socket-outlets having this restriction</li> </ul>	r	N/A
	- type reference		Р
	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		N/A
	IP code, if applicable: marked so as to be easily discernible		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
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	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]		Р
	Markings not placed on screws or other easily removable parts		Р
	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		Р

9	CHECKING OF DIMENSIONS	
9.1	Accessories and surface-type mounting boxes comply with the appropriate standard sheets and corresponding gauges, if any	N/C
	Insertion of plugs into fixed or portable socket-outlets ensured by their compliance with the relevant standard sheets	N/C

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Clause	Requirement + Test	Result - Remark	Verdict
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	Compliance checked by measurement and by means of gauges with manufacturing tolerances as shown in table 2	N/C
9.2	It is not possible to engage a plug with:	
	- a socket-outlet having a higher voltage rating or a lower current rating;	N/C
	- a socket-outlet with a different number of live poles (exception admitted provided that no dangerous situation can arise);	N/C
	- a socket-outlet with earthing contact, if the existing plug of the present national system is a plug for class 0 equipment;	N/C
	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	N/C
	Impossibility of insertion checked by applying a gauge, for 1 min, with a force of:	
	- 150 N (rated current $\leq$ 16A);	N/C
	- 250 N (rated current > 16A)	N/C
	Accessories with elastomeric or thermoplastic material: test carried out at $(35 \pm 2)$ °C	N/C
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/C

10	PROTECTION AGAINST ELECTRIC SHOCK	*
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	Р
	Plugs when the plug is in partial or complete engagement with a socket-outlet	Р
	Test with test probe B of IEC 61032	Р
	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)	Р
	During the test: accessories not deform and no live parts accessible	Р
	Plugs and portable socket-outlets pressed with a force of 150 N for 5 min as shown in figure 8: specimens not show deformation	Р
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	Р

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Clause	Requirement + Test	Result - Remark	Verdict
	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		N/A
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		N/A
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		Р
	Compliance checked by manual test and by means of gauges with tolerances as specified in table 2		Р
	Accessories with elastomeric or thermoplastic material: test carried out at $(35 \pm 2)$ °C		Р
	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
10.5	Shuttered socket-outlets: live parts not accessible, without a plug in engagement, with the gauges shown in figure 9 and 10		Р
	Live contacts automatically screened when the plug is withdrawn		Р
	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		Р
	Means cannot easily be operated by anything other than a plug and not depend upon parts which are liable to be lost		Р

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Clause	Requirement + Test	Result - Remark	Verdict
	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		Р
	Accessories with elastomeric or thermoplastic material: test carried out at (35 $\pm$ 2) $^{\circ}\text{C}$		Р
10.6	Earthing contacts of a socket-outlet designed that they cannot be deformed by the insertion of a plug		Р
	Test plug inserted into the socket-outlet with a force o	f 150 N for 1 min	Р
10.6	Earthing contacts of a socket-outlet designed that they cannot be deformed by the insertion of a plug		Р
	After this test: socket-outlet still comply with the requirements of clause 9		Р
10.7	Socket-outlet with or without lid with increased protection: live parts not accessible		Р
	Test wire of 1 mm diameter (figure 10) applied with a force of 1 N on all accessible surfaces does not touch live parts		Р
	Accessories with elastomeric or thermoplastic material: test carried out at (35 $\pm$ 2) $^{\circ}\text{C}$		Р
	Socket-outlet tested without a plug inserted with the lid, if any, open		N/A

11	PROVISION FOR EARTHING	*
11.1	Earth connection made before the current-carrying contacts of the plug become live	Р
	Current-carrying pins are separated before the earth connection is broken	Р
11.2	Earthing terminals of rewirable accessories comply with clause 12	Р
	Earthing terminals of the same size as the corresponding terminals for the supply conductors	Р
	Earthing terminals of rewirable accessories: internal	Р
	Earthing terminals of fixed socket-outlets: fixed to the base or to a part reliably fixed to the base	N/A
	Earthing contacts of fixed socket-outlets:	
	- fixed to the base, or	Р
	- fixed to the cover (reliably connected to the earthing terminals; contact pieces silver plated or with adequate protection)	N/A

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Requirement + Test	Result - Remark	

	Parts of earthing circuit in one piece or reliably connected by riveting, welding, or the likeriveting	Р
11.3	Accessible metal parts of fixed socket-outlets: permanently and reliably connected to the earthing terminal	N/A
11.4	Socket-outlets, having an IP>X0, with enclosure of insulating material and more than one cable inlet, provided with:	N/A
	- 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	N/A
	Test current equal to 1,5 times the rated current or 25 A (A):	
	Resistance not exceed 0,05 $\Omega$ ( $\Omega$ )	N/A
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		*
	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		Р
12.1	General		
12.1.1	Rewirable fixed socket-outlets provided with screw- type terminals or with screwless terminals	screw terminals	Р
	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		Р
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

Clause

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Requirement + Test	Result - Remark

Verdict

Terminale with consumption for outernal conner or	aduatoro.	1
	nductors	
Accessories provided with terminals which allows the proper connection of copper conductors as shows in table 3		Р
Rated current (A); Type of accessories:	16 A; fixed socket-outlet	
Type of conductor (rigid / flexible):	rigid conductor	
Smallest / largest cross-sectional area (mm <sup>2</sup> ) :	1,5 mm <sup>2</sup> / 2,5 mm <sup>2</sup>	
Diameter of the largest conductor (mm):	2,13 mm	
Figure of terminal:	figure 3	
Minimum diameter D (minimum dimensions) of conductor space: required (mm); measured (mm) :	2,0 mm; 2,3 mm	Р
Terminals allow the conductor to be connected without special preparation		Р
Terminals have adequate mechanical strength		Р
Screws and nut for clamping the conductors have metric ISO thread or a comparable thread		Р
Screws not of soft metal such as zinc or aluminium		Р
Terminals resistant to corrosion		Р
Terminals clamp the conductor(s) without undue damage	See appended table 12.2.5	Р
During the test: conductor not slip out, no break near clamping unit and no damage		Р
Terminals clamp the conductor reliably between metal surfaces	See appended table 12.2.6	Р
During the test: conductor not move noticeably		Р
Terminals designed or placed that the conductor cannot slip out while the clamping screws or nuts are tightened	See appended table 12.2.7	
After the test: no wire of the conductor escaped from the clamping unit		Р
Terminals not work loose from their fixing to accessories		Р
Torque test (screws and nuts tightened and loosened	5 times):	
- rated current (A):	16 A	
- copper conductor of the largest cross-sectional area (mm <sup>2</sup> ) (table 3):	2,5 mm <sup>2</sup>	—
- type of conductor (solid or stranded):	rigid solid	
- torque (Nm) (table 6 or appropriate figures 2, 3 or 4)	0,8 Nm(table 6 and figure 3)	
During the test: terminals not work loose and show		Р
	Accessories provided with terminals which allows the proper connection of copper conductors as shows in table 3         Rated current (A); Type of accessories	the proper connection of copper conductors as shows in table 3Rated current (A); Type of accessories16 A; fixed socket-outletType of conductor (rigid / flexible)rigid conductorSmallest / largest cross-sectional area (mm²)1,5 mm² / 2,5 mm²Diameter of the largest conductor (mm)2,13 mmFigure of terminalfigure 3Minimum diameter D (minimum dimensions) of conductor space: required (mm); measured (mm):2,0 mm; 2,3 mmTerminals allow the conductor to be connected without special preparation2,0 mm; 2,3 mmTerminals have adequate mechanical strengthScrews and nut for clamping the conductors have metric ISO thread or a comparable threadScrews not of soft metal such as zinc or aluminiumEee appended table 12.2.5During the test: conductor not slip out, no break near clamping unit and no damageSee appended table 12.2.6During the test: conductor not move noticeablySee appended table 12.2.6During the test: nowire of the conductor cannot slip out while the clamping screws or nuts are tightenedSee appended table 12.2.7After the test: no wire of the conductor escaped from the clamping unit16 ATerminals not work loose from their fixing to accessories16 ATorque test (screws and nuts tightened and loosened 5 times): rated current (A):16 A- copper conductor (solid or stranded):rigid solid- torque (Nm) (table 6 or appropriate figures 2, 3 or:

Clause

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Clause	Requirement + Test	Result - Remark	Verdict
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		Р
12.2.10	Earthing terminals: no risk of corrosion		Р
	Body of brass or other metal no less resistant to corrosion		Р
	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 <i>g</i> no less than the value specified in figure 2: required (mm); measured (mm)		N/A
	Mantle terminals: distance <i>g</i> no less than the value specified in figure 5: required (mm); measured (mm)		N/A
12.3	Screwless terminals for external copper conductors		N/A

13	CONSTRUCTION OF FIXED SOCKET-OUTLETS	
13.1	Socket-contact assembly have sufficient resilience to ensure adequate contact pressure on plug pins	Р
	Part of socket-contact assembly ensure metallic opposing contacts at least on two sides of each pins	Р
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	Р
	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	N/A
13.3	Insulating linings, barriers and the like: adequate mechanical strength	Р
13.4	Socket-outlets constructed as to permit	
	- easy introduction into the terminal and reliable connection of the conductors in the terminals, except for lead wires of pilot lights	Р
	- easy fixing of the main part to a wall or in a mounting box	Р
	- correct positioning of the conductors	Р
	- adequate space between the underside of the main part and the surface on which the main part is mounted;	Р
	- adequate space between the sides of the main part and the enclosure (cover or box);	Р

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Clause Requirement + Test Result - Remark 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	Verdict N/A
constructed that the connecting and/or disconnecting means of the screwless terminals cannot be activated by the conductors during and after	N/A
installation	
Compliance is checked by inspection and in case of doubt by the following test	N/A
The test is carried out with a solid copper conductor having the smallest cross-sectional area, as specified in 12.3.2. (mm <sup>2</sup> )	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 <sup>2</sup> ):	N/A
13.5 Socket-outlets designed that full engagement of associated plugs is not prevented by any projection from their engagement face	Р
Gap between the engagement face of the socket- outlet and the plug: not exceed 1 mm	Р
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	N/A
- 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	N/A
13.7.1 Covers or cover-plates whose fixings are of the screw-type:	
Compliance checked by inspection only	N/A

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Clause	Requirement + Test	Result - Remark	Verdict

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:	
	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 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:	
	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)	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 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	N/A
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	Р
	Fixing means not serve any other fixing purpose	Р

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13.11	Multiple socket-outlets with a common base: provided with fixed links for the interconnection of the contacts in parallel	Р
	Fixing of the links independent from the connection of the supply wires	Р
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	Р
	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)	Р
	During the test: device not become disengaged from the socket-outlet	Р
	After the test:	Р
	- no damage	Р
	- socket-outlets comply with clause 22	Р
13.15	Socket-outlets are not an integral part of lampholders	Р
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 <sup>2</sup> 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	N/A
	Not solid pins: compliance checked by inspection and by the test of 14.2 made after the tests of clause 21	N/A
13.18	Earthing contacts, phase contacts and neutral conta	cts :
	- locked against rotation;	Р
	- when the product is ready for the wiring do not possible to be removed without the use of a tool	P

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13.19	Metal strips of the earthing circuit: no burrs which might damage the insulation of the supply conductors		N/A
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		Р
13.21	Inlet 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
	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 treatme assembled in the accessories	nt specified in 16.1 and	
	Accessories placed at $(40 \pm 2)$ °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 trea assembled in the accessories	tment specified in 16.1 and	
	Accessories kept at (-15 $\pm$ 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

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## 14 CONSTRUCTION OF PLUGS AND PORTABLE SOCKET-OUTLETS

N/A

N/A

# 15 INTERLOCKED SOCKET-OUTLETS

16	RESISTANCE TO AGEING, PROTECTION PROVIDED BY ENCLOSURES, AND RESISTANCE TO HUMIDITY	*	
16.1	Resistance to ageing		
	Accessories are resistant to ageing	Р	
	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 $\pm$ 2) °C for seven days (168 h)	Ρ	
	After the tests, the specimens show:		
	- no crack visible with normal or corrected vision without additional magnification	Р	
	- no sticky or greasy material	Р	
	- no trace of cloth (forefinger pressed with 5 N)	Р	
	- no damage	Р	
	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		
	Enclosures provide a degree of protection in accordance with the IP designation of the accessory IP20	Р	
16.2.1	Protection against access to hazardous parts and against harmful effects due to ingress of solid foreign objects		
	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	Ρ	
	Fixed socket-outlets: mounted as in normal use on a vertical surface	Р	
	Flush-type and semi-flush type socket-outlets: mounted in an appropriate box according to the manufacturer's instructions	Ρ	
	Accessories with screwed glands or membranes fitted with flexible cables within the range specified in table 3:		

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	- largest cross-sectional area (mm <sup>2</sup> ); type of cable (table 17)	-	—
	- smallest cross-sectional area (mm <sup>2</sup> ); 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		
	Appropriate test performed as specified in IEC 60529 (see also clause 10)	IP20	Р
16.2.1.2	Protection against harmful effects due to ingress of solid foreign objects		
	Appropriate test performed as specified in IEC 60529	IP20	Р
	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
16.3	Resistance to humidity		
	Accessories proof against humidity which may occur in normal use		Р
	Compliance checked by a humidity treatment carried out in a humidity cabinet containing air with		Р

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	Р
- seven days (168 h) for accessories having IP>X0	N/A
After this treatment the specimens show no damage	Р

17	INSULATION RESISTANCE AND ELECTRIC STRENGTH			
17.1	Insulation resistance measured 1 min after application of 500 V d.c. See appended table 17.1		Р	
17.2	Electric strength: a.c. test voltage applied for 1 min See appended table 17.2			

18	OPERATION OF EARTHING CONTACTS	*
	Earthing contacts provide adequate contact pressure and not deteriorate in normal use	Р

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Clause	Requirement + Test	Result - Remark	Verdict		

Compliance checked by the tests of clauses 19 and 21		Р
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19	TEMPERATURE RISE	(S.S. III CEE7)	
	Accessories constructed that they comply with the fo	llowing 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	N/A
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	Р
	For this test the temperature rise is measured on the terminals and terminations.		Р
	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 plu	g system are tested as follows:	N/A
19.3	Portable socket-outlets and rewirable plugs with inco tested by the following two tests:	prporated components are	N/A

20	BREAKING CAPACITY	(S.S. III CEE7)	
	Accessories have adequate breaking capacity		Р
	Compliance checked by testing:		
	- socket-outlets;	See appended table 20	Р
	- 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		Р
	After the test:		
	<ul> <li>specimens show no damage impairing their further use;</li> </ul>		Р
	- entry holes for the pins not show any damage which may impair the safety		Р

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21	NORMAL OPERATION	(S.S. III CEE7)	
	Accessories withstand without excessive wear or other harmful effect, the mechanical, electrical and thermal stresses occurring in normal use		Р
	Compliance checked by testing:		
	- socket-outlets;	See appended table 21	Р
	- 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
	Test performed according to the procedure specified in Figure 43; point of Figure 43 at which the test program has begun (1, 2, 3)		
	Test current passed:		
	- during each insertion and withdrawal of the plug (In $\leq$ 16A)		Р
	- 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		Р
	After the test the specimens do not show:		
	- wear impairing their further use;		Р
	- deterioration of enclosures, insulating lining or barriers;		Р
	- damage to the entry holes for the pins, that might impair proper working;		Р
	- loosening of electrical or mechanical connections;		Р
	- seepage of sealing compound		Р
	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	Р
	Temperature-rise test (requirements of clause 19)	See appended table 21	Р
	Electric strength (sub-clause 17.2)	See appended table 21	Р
	Pins which are not solid: test according to 14.2		N/A

22	FORCE NECESSARY TO WITHDRAW THE PLUG	(S.S. III CEE 7)	
	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		Ρ

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	Clause	Requirement + Test	Result - Remark	Verdict
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22.1	Verification of the maximum withdrawal force	See appended table 22	Р
22.2	Verification of the minimum withdrawal force	See appended table 22	Р

### 23 FLEXIBLE CABLES AND THEIR CONNECTIONS

N/A

24	MECHANICAL STRENGTH	*
	Accessories, surface mounting boxes, screwed glands and shrouds have adequate mechanical strength	Р
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 gSee appended table 24.1	Ρ
	After the test: no damage, live parts no become accessible	Р
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 $\pm$ 2) g, height 100 mm (apparatus shown in fig. 27)	
	Specimens placed in a freezer at (-15 $^{\circ}$ C ± 2) $^{\circ}$ 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)	
	After the test: no damage	N/A
24.6	Screwed glands of accessories having IP>20: torque test (1 min)	
	- diameter of test rod (mm):	
	- type of material (metal / moulded):	

Verdict

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Clause	Requirement + Test	Result - Remark
	- torque (Nm):	
	After the test: no damage of glands and enclosures	

	After the test: no damage of glands and enclosures of the specimens	N/A
24.7	Plug pins provided with insulating sleeves: 20000 movements, 4 N (apparatus shown in fig. 28)	
	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	
	Force (40 N / 75 N) applied for 1 min against the shutter of an entry hole by means of one pin (N) :40 N	
	Pin did not come in contact with live parts	Р
	After the test: no damage	Р
24.9	Mechanical test for multiple portable socket-outlet: 8 falls on concrete floor with the specimens arranged as shown in figure 29	
	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)	
	Maximum withdrawal force (table 16) applied for 1 min on each pin in turn, after the specimen has been placed at (70 $\pm$ 2) °C for 1 h (N)	—
	After the test: displacement of pins in the body of the plug $\leq$ 1 mm (mm)	N/A
24.11	Barriers of portable socket-outlets having means for suspension on a mounting surface:	
	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):	
	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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24.13	Portable socket-outlets having means for suspension on a mounting surface (pull test):		
	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)		
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)		
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 $\leq$ 25 V a.c. or metal parts separated from live parts by creepage distances twice those according to table 23)		
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 1mmcomplying / not complying		
24.19	Shroud of portable socket-outlets: compression test (20 $\pm$ 2) N at (25 $\pm$ 5) °C by means of the apparatus shown in figure 38		
	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		
25.1	Specimens kept for 1 h in a heating cabinet at (100 $\pm$	2) °C for 1 h	
	During the test: no change impairing their further use and sealing compound, if any, not flow		Р
	After the test:		
	- no access to live parts with probe B of IEC 61032 applied with a force not exceeding 5 N		Р
	- markings still legible		Р
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 $(125 \pm 2)^{\circ}$ C for 1 h	See appended table 25.2	Ρ

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25.3	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		N/A
25.4	Portable accessories: compression test (20 N) at (80 $\pm$ 2)°C for 1 h by means of the apparatus shown in figure 38		
	After the test: no damage		N/A

26	SCREWS, CURRENT-CARRYING PARTS AND CONNECTIONS	
26.1	Connections withstand mechanical stresses	Р
	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
	Screws or nuts which transmit contact pressure made of metal and in engagement with a metal thread	Р
	Threaded part torque test See appended tab	ole 26.1 P
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	N/A
26.5	Current-carrying parts (including earthing terminals) have mechanical stree electrical conductivity and resistance to corrosion adequate:	ength,
	- copper;	N/A
	- alloy with at least 58 % copper for parts made from cold-rolled sheet or with at least 50 % copper for other parts;	Р
	- 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

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	- 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	Ρ
	Metals having a great difference of electrochemical potential: not used in contact with each other	N/A
26.6	Contacts subjected to a sliding action are of metal resistant to corrosion	Р
26.7	Thread-forming screws and thread-cutting screws are not used for the connection of current-carrying parts	N/A
	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 DIS SEALING COMPOUND	STANCES THROUGH	*
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	Р
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			
28.1	Resistance to abnormal heat and to fire			
28.1.1	Glow-wire test according to IEC 60695-2-10 and IEC 60695-2-11	See appended table 28.1.1	Р	
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 $\pm$ 5) °C / (180 $\pm$ 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			
	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	

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29	RESISTANCE TO RUSTING	
	Ferrous parts protected against rusting	
	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 $(100 \pm 5)$ °C:	
	No signs of rust	Р

30	ADDITIONAL TESTS ON PINS PROVIDED WITH INSULATING SLEEVES	N/A
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Clause Requirement + Test

Result - Remark

12.2.5 TABLE: test with apparatus shown in figure 11 (screw-type terminals) rated current (A) ..... 16 A type of conductors ..... rigid conductors smallest/largest cross-sectional area per table 3 1,5 mm<sup>2</sup> / 2,5 mm<sup>2</sup> (mm<sup>2</sup>) .....: number of conductors .....: 2 nominal diameter of thread (mm); torque per table 6 (Nm) .....: 3,4 mm; 0,8 Nm Diameter of **Cross-sectional** Height H per table 9 Remarks bushing hole per Mass (kg) area (mm<sup>2</sup>) (mm) table 9 (mm) 1,5 6,5 260 0,4 Ρ Р 2.5 9,5 280 0,7

supplementary information:

12.2.6	TABLE	TABLE: pull test (screw-type terminals)				
	rated c	urrent (A)	:	16 A		
		st/largest cross-section	onal area per table 3	1,5 mm² / 2,5 mm²		
			(mm); torque 2/3 per	3,4 mm; 0,53 Nm		
Cross-seo area (m		Number of conductors	Type of conductors (rigid solid / rigid stranded / flexible)	Pull per table 4 applied for 1 min (N)	Rem	arks
1,5		2	rigid conductors	40	F	C
2,5		2	rigid conductors	50	F	c

supplementary information:

12.2.7	TABLE	TABLE: tightening test (screw-type terminals)					
	rated c	urrent (A)	:	16 A			
	nominal diameter of thread (mm); torque 2/3 per table 6 (Nm)			3,4 mm; 0,53 Nm			
sectional ar	Largest cross- sectional area per table 3 (mm²)Permissible number of 		(rigid solid / rigid	Number of wires and nominal diameter of wires per table 5	Rem	narks	
2,5		2	Rigid conductors	1x1,78	Р		
supplementa		mation: d for looping-in 2 or 3	conductors				

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Clause	Requirement + Test	Result - Remark	Verdict
Oldube		Result Remain	Verdiet

17.1	7.1 <b>TABLE: insulation resistance</b>						
Item per 17.1	test voltage applied between:	measured (MΩ)	required (M $\Omega$ )				
а	Between all poles connected together and the body	> 5	> 5				
b	Between each pole in turn and all others connected to the body	> 5	> 5				
supplement	upplementary information:						

17.2	TABLE: electric strength				
	rated voltage (V)	250 V	250 V		
item per 17.1	test voltage applied between:	test voltage (V)	break	over / down s/No)	
а	Between all poles connected together and the body	2000	Ν	lo	
b	Between each pole in turn and all others connected to the body	2000	Ν	lo	
supplement	ary information:				

19.1	TABLE: te	emperature rise to	est for socket-o	outlets ar	nd p	lugs (S.S.	III CEE 7)		
	rated curre	ent of accessory (A	:	16 A					
	type of acc	cessory (non-rewi	able / rewirable)	):	rew	virable			
	nominal cr	oss-sectional area	ı per table 15 (m	m <sup>2</sup> ):	2,5	mm²			
		type of conductors (rigid solid / rigid stranded / flexible)							—
	nominal diameter of thread (mm); torque 2/3 of that specified in 12.2.8 (Nm:				3,4	mm; 0,53 N	١m		
specimen	type of flexible cable <sup>(1)</sup>	number of conductors and nominal cross- sectional area (mm <sup>2</sup> ) <sup>(1)</sup>	test circuit (L-L/L-N/L-E)	test curre (table 20 for 1 h (A	))	measured ΔT (K)	allowed ΔT (K)		Γ of external parts of insulating material (25.3)(K)
М	-	-	L-L / L-E	22		25,7	45		8,8
N	-	-	L-L / L-E	22		37,1	45		8,6
0	-	L-L/L-E 22				34,8	45		8,3
	tary informat irable acces								

20	TABLE: breaking capacity	(S.S. III CEE 7)	
	rating of accessory (A/V):	16 A / 250 V~	
	type of accessory (non-rewirable / rewirable)::	rewirable	
	type of flexible cable (non-rewirable accessories):	-	

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Clause	Requirement + Test	Result - Remark	Verdict

	number of co area (mm <sup>2</sup> )					-			
	nominal cros	s-sectional	area per t	able 15 (mn	n <sup>2</sup> ):	2,5 mm²			_
	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) 3,4 mm; 0,53 Nm			3 Nm					
	rate of opera	ation (stroke	es per min	ute)	:	30			
specimen	test plug (for and curren socket-	t rating of outlet)	test voltage (1,1 Vn)	test current (1,25 In)	of strokes	strokes, with	strokes, without	remarks	
	pin dimensions (mm)	pin spacing (mm)	(V)	cos φ 0,6 (A)	testnumbercurrentof(1,25 In)strokescos φ 0,6(plugswithshutters –withwithwith				
М	4,8	19	275	20	-	-	100	Р	Р
Ν	4,8	19	275	20	-	-	100	Р	Р
0	4,8	19	275	20	-	-	100	Р	Р
supplementa	ary information	n:							

<sup>(1)</sup> starting point 1 or 3 of Figure 43 <sup>(2)</sup> starting point 2 of Figure 43

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rating of acc		tion			(3.3.	III CEE	7)	
rating of acc	essory (A/V	′)		:	16 A / 250 V	~		
type of acce	ssory (non-	rewirable	rewirable)	:	rewirable			
type of flexib	le cable (n	on-rewirab	le accessor	ries):	-			
number of conductors and nominal cross-sectional area (mm <sup>2</sup> ) (non-rewirable accessories): -				-			—	
nominal cros	s-sectional	area per t	able 15 (mr	n <sup>2</sup> ):	2,5 mm²			
type of conductors (rigid solid / rigid stranded / flexible): r				rigid solid		_		
					3,4 mm ; 0,5	3 Nm		_
rate of opera	ation (stroke	es per min	ute)	:	30			
and curren socket- pin dimensions	t rating of outlet) pin spacing	test voltage (Vn) (V)		of strokes	strokes, with shutters – with	strokes, without shutters – with current	shutters – without	
	type of flexib number of co area (mm <sup>2</sup> ) of nominal cross type of condu flexible) nominal dian specified in rate of operat test plug (for and curren socket-	type of flexible cable (no number of conductors a area (mm <sup>2</sup> ) (non-rewiral nominal cross-sectional type of conductors (rigid flexible) nominal diameter of three specified in 12.2.8 (Nm rate of operation (stroke test plug (for each type and current rating of socket-outlet) pin pin dimensions pin	type of flexible cable (non-rewirable number of conductors and nomina area (mm <sup>2</sup> ) (non-rewirable access nominal cross-sectional area per t type of conductors (rigid solid / rigi flexible) nominal diameter of thread (mm); specified in 12.2.8 (Nm) rate of operation (strokes per min test plug (for each type and current rating of socket-outlet) test voltage (Vn) dimensions spacing (V)	type of flexible cable (non-rewirable accessor number of conductors and nominal cross-sec area (mm <sup>2</sup> ) (non-rewirable accessories) nominal cross-sectional area per table 15 (mr type of conductors (rigid solid / rigid stranded flexible) nominal diameter of thread (mm); torque 2/3 of specified in 12.2.8 (Nm) rate of operation (strokes per minute) test plug (for each type and current rating of socket-outlet) test voltage (Vn) dimensions spacing (V) test (A)	type of flexible cable (non-rewirable accessories): number of conductors and nominal cross-sectional area (mm <sup>2</sup> ) (non-rewirable accessories): nominal cross-sectional area per table 15 (mm <sup>2</sup> ): type of conductors (rigid solid / rigid stranded / flexible): nominal diameter of thread (mm); torque 2/3 of that specified in 12.2.8 (Nm): rate of operation (strokes per minute): test plug (for each type and current rating of socket-outlet) test voltage (Vn) dimensions spacing (V) (V)	type of flexible cable (non-rewirable accessories):-number of conductors and nominal cross-sectional area (mm²) (non-rewirable accessories):-nominal cross-sectional area per table 15 (mm²):2,5 mm²type of conductors (rigid solid / rigid stranded / flexible)rigid solid / rigid stranded /nominal diameter of thread (mm); torque 2/3 of that specified in 12.2.8 (Nm)3,4 mm; 0,5rate of operation (strokes per minute)30test plug (for each type and current rating of socket-outlet)test voltage (Vn) (V)number of strokes (plugs only)	type of flexible cable (non-rewirable accessories):number of conductors and nominal cross-sectional area (mm²) (non-rewirable accessories):-nominal cross-sectional area per table 15 (mm²):2,5 mm²type of conductors (rigid solid / rigid stranded / flexible)rigid solidnominal diameter of thread (mm); torque 2/3 of that specified in 12.2.8 (Nm)rigid solidrate of operation (strokes per minute)30test plug (for each type and current rating of socket-outlet)test voltage (Vn) (V)number of strokes (A)number of strokes (plugs only)	type of flexible cable (non-rewirable accessories): number of conductors and nominal cross-sectional area (mm <sup>2</sup> ) (non-rewirable accessories): nominal cross-sectional area per table 15 (mm <sup>2</sup> ): 2,5 mm <sup>2</sup> 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)

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М	4,8	1,9	250	16	_	-	10000	-	Р
Ν	4,8	1,9	250	16	-	-	10000	-	Р
0	4,8	1,9	250	16	-	-	10000	-	Р
А	4,8	1,9	-	-	-	-	-	10000	Р
В	4,8	1,9	-	-	-	-	-	10000	Р
С	4,8	1,9	-	-	-	-	-	10000	Р
	TABLE: te	st for shutter	ed socket-o	outlets		•			
specimen		of figure 9, ap approximate three dir	ly 5 s, succ			gauge of fig e of 1 N for a three of			
А		Р	2			Р			Р
В		Р	Р			Р			Р
С		Р	Р				Р		
19	TABLE: te	mperature ris	se test						
specimen		circuit -N/L-E)		ent (table 20 e 21) for 1 h (A)		measured (K)	dT allo	owed dT (K)	
М	L-L	/ L-E		16		19,1		45	Р
Ν	L-L	/ L-E		16		31,8		45	Р
0	L-L	/ L-E		16		22,3		45	Р
17.2	TABLE: el	ectric strengt	h						
specimen	item per 17.1	test voltage	applied be	etween:		test vol	tage (V)	flasho break (Yes	
A B	а	Between all and the bod		nected toget	ther	15	00	N	0
С						0			
(2) starting p	oint 1 or 3 o oint 2 of Fig	of Figure 43							

22	TABLE: force necessary to withdraw the p	olug	(S.S. III CEE 7)	
	Rated current (A):		16 A	
	Number of poles	:	3	
22.1	Verification of the maximum withdrawal force			
specimen	socket-outlets (multi-pin gauge)	with resilient earthing contact semblies (single-pin gauge)		

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Clause Requirement + Test Result - Remark

Verdict

	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	
М	54	Y	-	-	Р
N	54	Y	-	-	Р
0	54	Y	-	-	Р
22.2	Verification of t	he minimum withdrawal force			
	socket-outlets (single-pin gauge)		plugs with re assemblie		
specimen	minimum withdrawal force (N)	hdrawal contact-assembly within 30		the test pin gauge did not fall from each individual earthing contact-assembly within 30 s (Y/N)	
М	2	Y	-	-	Р
N	2	Y	-	-	Р
0	2	Y	-	-	Р
supplementa	ary information:				

24.1	TABLE: impac	TABLE: impact test				
part of enclosure tested per table 21 (A, B, C, D)		blows per part	height of fall (mm)	comments		
А		5	100	Р		
supplementary information:						

supplementary information:

25.2	5.2 TABLE: ball pressure test of insulating materials			
	allowed impression diameter (mm):	≤ 2 mm		
part under	test	test temperature (°C)		ression eter (mm)
Base (trans	parent black colour for all articles)	125		< 2
Frontal Par	t (white colour for 4B.G10.H21 – 4B.N.H21 – 4B.SP.BN)	125		< 2
Frontal Par	t (Titanium colour for 4B.G14.H21)	125		< 2
Frontal Par	t (Anthracite colour for 4B.L.H21 – 4B.SP.AN)	125		< 2
Frontal Par	t (Tec colour for 4B.NT.H21)	125		< 2
Frontal Par	t (Red colour for 4B.LR.H21 – 4B.V14R.H21)	125		< 2
Frontal Part (Silver colour for 4B.V14SL.H21)		125		< 2
support shutter (black colour)		125		< 2
supplemen	tary information:	-	•	
26.1	TABLE: threaded part torque test			

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threaded part identification	diameter of thread (mm)	column number (1, 2 or 3)	applied torque (Nm)	times (5/10)	no damage
terminals	3,4	Ш	0,8	5	Р
supplementary information:					

27.1	TABLE: creepage distances, clearances and distances through sealing compound						
	rated voltage (V)		:				
item per table 23	creepage distance dcr, clearance cl and distance through sealing compound dtsc at/of:	require d cl (mm)	cl (mm)	require d dcr (mm)	dcr (mm)	require d dtsc (mm)	dtsc (mm)
1/6	Between live parts of different polarity	≥ <b>3</b>	>3	≥ 3	>3	-	-
2/7	Between live parts and accessible surface of parts of insulating material	≥ 3	>3	≥ 3	>3	-	-
supplemer	ntary information:	•	•	•		•	

28.1.1	TABLE: glow-wire test					
part under t	est	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 (transp	arent black colour)	-	850	Y	10 sec	Ν
Shutter supp	oort (black colour)	-	850	Y	5 sec	Ν
Frontal Part	(white colour)	-	650	Y	0 sec	Ν
Frontal Part	(Titanium colour)	-	650	Y	25 sec	Ν
Frontal Part	(Anthracite colour)	-	650	Y	0 sec	Ν
Frontal Part	(Tec colour)	-	650	Y	0 sec	Ν
Frontal Part	(Red colour for)	-	650	Y	0 sec	Ν
Frontal Part	(Silver colour)	-	650	Y	0 sec	Ν
Shutters (black colour)		-	650	Y	0 sec	Ν
supplement	supplementary information:					

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ATTACHMENT TO TEST REPORT IEC 60884-1 ITALIAN NATIONAL DIFFERENCES Plugs and socket-outlets for household and similar purposes Part 1: General requirements				
Differences according to:	CEI 23-50:2007 + V1:2008 + V2:2011 + V3:2015			
Attachment Form No.:	IT_ND_IEC60884_1D			
Attachment Originator:	IMQ			
Master Attachment:	Date 2015-09			
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NATIONAL DIFFERENCES

7	CLASSIFICATION		
7.2.1	Replace:		
	Socket-outlets: have increased protection		Р
7.2.2	Replace:		
	Socket-outlets: provided with shutters		Р
7.2.101	Add:		
	Type of possible receptivity: single /	multiple	Р
7.3	Add:		
	Class of appliance (class 0 not admitted): I / II		N/A

8	MARKING	
8.3	Replace:	
	Cover plates necessary for safety purposes and intended to be sold separately: marked with the manufacturer's or responsible vendor's name; the type reference may be put on the smallest package unit	N/A

9	CHECKING OF DIMENSIONS	
9.1	Replace the first paragraph:	
	Accessories comply with the appropriate standard sheets	N/C
	Plugs:	
	S10 (2P 10A 250V~)	N/A

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Requirement + Test	Result - Remark	Verdict
S11 (2P+T 10A 250V~)		N/A
S16 (2P 16A 250V~)		N/A
S17 (2P+T 16A 250V~)		N/A

	S11 (2P+T 10A 250V~)		N/A
	S16 (2P 16A 250V~)		N/A
	S17 (2P+T 16A 250V~)		N/A
	S30 (2P+T 16A 250V~)		N/A
	S31 (2P+T+T 16A 250V~)		N/A
	S32 (2P 16A 250V~, maximum outline)		N/A
	S32 (2P 16A 250V~, minimum outline)		N/A
	SPA11 (2P+T 10A 250V~)		N/A
	SPB11 (2P+T 10A 250V~)		N/A
	SPA17 (2P+T 16A 250V~)		N/A
	SPB17 (2P+T 16A 250V~)		N/A
	Socket-outlets:		
	P10 (2P 10A 250V~, portable type or for appliances)		N/A
	P11 (2P+T 10A 250V~)		N/C
	P17 (2P+T 16A 250V~)		N/A
	P17/11 (2P+T multiple receptivity 16A 250V~)		N/C
	P30 (2P+T+T multiple receptivity 16A 250V~)	(S.S. III CEE 7)	N/A
	Add after the fourth paragraph:		
	Plugs according to standard sheets S30, S31, S32: coupling with socket outlet P30 checked by:		
	- gauge C7 (ex CEI UNEL 09321-64 B)		N/A
	- gauge C8 (ex CEI UNEL 09323-64 B)		N/A
	- gauge C10 (ex CEI UNEL 09336-64)		N/A
	Add after the last paragraph:		N/C
	Socket-outlets according to standard sheets P10, P11, P17/11, P30: easy insertion and withdrawal of plugs complying with Standard CEI EN 50075		N/C
	Socket-outlets according to standard sheets P11, P17, P17/11 with rim or recess and socket-outlets according to standard sheet P30: simultaneous contact on live socket-contact by plug complying with standard sheet SPA11, SPB11, SPA17, SPB17 not possible; checked by:		
	- gauge A (standard sheet C2)		N/C
	- gauge B (standard sheet C2)		N/C
9.2	Amendment:		
	Plugs for class 0 appliances: not admitted		N/A
		1	

Clause

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Clause	Requirement + Test	Result - Remark	Verdict
	Add:		
	Adu.		
9.2.101	Multiple receptivity socket-outlets according to standard sheets P17/11: plugs complying to standard sheets S30, S31 and S32 do not make contact with live socket-contact; checked by:		
	Gauge according to standard sheets C12 applied to the pins entry holes with force of 150 N for 1 min; depth not greater than 3 mm (mm):	- mm	N/A

9.3	Add:	
	Accessories with variable configuration of part relevant to connection (for example distance and diameter of pins): not admitted	N/A

10	PROTECTION AGAINST ELECTRIC SHOCK	
10.3	Replace:	
	Contact between a pin of a plug and a live socket- contact of a socket-outlet while any other pin is accessible: not possible	Р
	A gauge having the dimensions given in subclause 22.1, is applied with a force of 75 N for 1 min, maintaining it perpendicular to the front surface of the socket-outlet:	
	- one live pins of the gauge is positioned against one entry hole of live socket-contacts of socket- outlet under test: it is not possible to make an electrical contact between the live socket-contacts of the socket-outlet and the pins of the gauge	Ρ
	<ul> <li>one live pins and the earthing pin of the gauge is positioned against two entry holes of socket- contacts such as the live pin is positioned on the hole of earthing socket-contact and the earthing pin is positioned on the hole of live socket-contact: it is not possible to make an electrical contact between the live socket-contacts of the socket- outlet and the pins of the gauge</li> </ul>	Ρ
10.101	Add:	
	Plugs: 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 of plugs inserted in the relevant socket-outlets does not touch live parts	N/A
	Accessories with electrometric or thermoplastic material: test carried out at $(35 \pm 2)$ °C	N/A

11	PROVISION FOR EARTHING	
11.2	Delete modification introduced by CEI 23-50 V1:2008.	Р

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12	TERMINALS AND TERMINATIONS	
12.1.1	Add:	
	Note: socket-outlets for appliances may be provided with male tabs of flat-quick connect terminations (under consideration)	N/A
12.1.2	Replace the last sentence of the first paragraph:	
	Screw-type terminals, screwless terminals, flat- quick connect terminations, insulation-piercing clamping units or similar connections: not admitted in non-rewirable accessories	N/A
12.1.2	Delete modification introduced by CEI 23-50 V1:2008.	
12.2	Looping-in of three conductors of 2.5 mm <sup>2</sup> or two conductors of 4 mm <sup>2</sup> is not required for 16 A, 2P and 2P+E fixed socket-outlets (Table 3)	N/A
12.3	Add:	
	Screwless terminals: used in fixed socket-outlets only	N/A

13	CONSTRUCTION OF FIXED SOCKET-OUTLETS	;	
13.4	Replace the note with the following requirements:		
	The last requirement is considered to be fulfilled if live parts do not protrude from an imaginary plane surface obtained moving a straight rigid wire laid with continuity on all surfaces of the base		Ρ

14	CONSTRUCTION OF PLUGS AND PORTABLE S	CONSTRUCTION OF PLUGS AND PORTABLE SOCKET-OUTLETS	
14.21	.21 Delete Note 1 and Note 2:		
	Rewirable plugs for class II equipment and cord extension sets for equipment of class II are allowed		N/A
14.23.2	Add:		
	after the words "is pivoted about a horizontal axis" the words "or vertical"		N/A

16	RESISTANCE TO AGEING, PROTECTION PROVIDED BY ENCLOSURES, AND RESISTANCE TO HUMIDITY	
	Add after the fifth paragraph:	
16.1	Portable socket-outlets:	

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- test plug complying to this Standard inserted into the socket-outlets	N/A
- test plug complying with appropriate standard sheet found on the market inserted into the socket-outlets	N/A
Portable socket-outlet provided with covers: when test plug inserted into the socket-outlets the cover is closed	N/A
After the test:	
Verification of the minimum withdrawal force (single-pin gauge)	
- Minimum withdrawal force (N):	
The plug not fall from each individual contact- assembly within 30 s	N/A

18	OPERATION OF EARTHING CONTACTS	
	Add (type P30 socket-outlets):	
	Checked by measuring the force exerted by the side earthing contacts by means of the device shown in Figure 101:	
	The average value of the forces necessary to move each contact to the indicated position is $\ge 5$ N (N)	N/A

19	TEMPERATURE RISE	
	Amendment (plug):	
	Plugs tested with clamping units having dimensions specified in Figure 44 (modified) fitted on each live pin and earthing pin, if any	N/A
	Add (multiple receptivity socket-outlets):	
	Set of three samples (MNO) without shutters, submitted to the test expected for 10 A socket-outlets ( <b>P11</b> )	
	Test current as specified in table 20 passed for 1 h (A): 16 A	
	Temperature rise of terminals not exceed 45 K: max -20,6 K	Р
	Separate tests made passing the current through:	
	- the neutral contact, if any, and the adjacent phase contact (K) max –K	N/A
	- the earthing contact, if any, and the nearest phase contact (K) max – 20,1 K	Р

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Clause	Requirement + Test	Result - Remark	Verdict
	Temperature rise of external parts of insulating material not necessary to retain current-carrying parts and parts of the earthing circuit in position (K)	max - 5 K	Р
	Set of three samples (PQR) without shutters, subm 16 A socket-outlets (P17)	nitted to the test expected for	
	Test current as specified in table 20 passed for 1 h (A):	22 A	
	Temperature rise of terminals not exceed 45 K:	max –39,5 K	Р
	Separate tests made passing the current through:		
	- the neutral contact, if any, and the adjacent phase contact (K):	max - K	N/A
	- the earthing contact, if any, and the nearest phase contact (K):	max - 38,5 K	Р
	Temperature rise of external parts of insulating material not necessary to retain current-carrying parts and parts of the earthing circuit in position (K)	max -7 K	Р

20	BREAKING CAPACITY		
	Add (multiple receptivity socket-outlets):		
	Set of three samples (MNO) without shutters, so 10 A socket-outlets	ubmitted to the test expected for	
	100 strokes; 30 strokes per minute; 275 V; 12,5 A; $\cos \phi$ 0,6		Р
	Set of three samples (PQR) without shutters, su 16 A socket-outlets	ubmitted to the test expected for	
	100 strokes; 30 strokes per minute; 275 V; 20 A; $\cos \varphi$ 0,6		Р
	Set of three samples (STU) without shutters, su and 16 A socket-outlets	bmitted to the test expected for 10	
	50 strokes; 30 strokes per minute; 275 V; 12,5 A; $\cos \phi$ 0,6	P11	Р
	50 strokes; 30 strokes per minute; 275 V; 20 A; cos φ 0,6	P17	Р
	During the test: no sustained arcing occur		Р
	After the test:	·	
	- specimens show no damage impairing their further use;		Р

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	- entry holes for the pins not show any damage which may impair the safety		Р

21	NORMAL OPERATION	
	Add (multiple receptivity socket-outlets):	
	Set of three samples (ABC) with shutters, submitted to the test expected for 10 A socket-outlets (P11)	
	10000 strokes without current carried out with 10 A test plug	Ρ
	After the test the following gauges applied to the entry holes corresponding to live contacts do not touch live parts when they remain under the relevant forces:	
	- Gauge of figure 9, applied with a force of 20 N, for approximately 5 s, successively in three directions	Р
	- Steel gauge of figure 10, applied with a force of 1 N for approximately 5 s, in three directions	Ρ
	Set of three samples (JKL) with shutters, submitted to the test expected for 16 A socket-outlets (P17)	
	10000 strokes without current carried out with 16 A test plug	Ρ
	After the test the following gauges applied to the entry holes corresponding to live contacts do not touch live parts when they remain under the relevant forces:	
	- Gauge of figure 9, applied with a force of 20 N, for approximately 5 s, successively in three directions	Ρ
	- Steel gauge of figure 10, applied with a force of 1 N for approximately 5 s, in three directions	Ρ
	Set of three samples (MNO) without shutters, submitted to the test expected for 10 A socket-outlets	
	10000 strokes; 30 strokes per minute; 250 V; 10 A; $\cos \varphi$ 0,8	Ρ
	During the test: no sustained arcing occur	Р
	After the tests: no damage	Р
	Temperature-rise test (requirements of clause 19, test current: 10 A):	
	Temperature rise of terminals not exceed 45 K: max – 19,2 K	Р
	Separate tests made passing the current through:	
	the neutral contact, if any, and the adjacent phase contact (K): max - K	N/A

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	IEC 60884-1 ATTACHM	1ENT	
Clause	Requirement + Test	Result - Remark	Verdict
	the earthing contact, if any, and the nearest phase contact (K):	max – 12,7 K	Ρ
	Electric strength (sub-clause 17.2), test voltage (a.c	., for 1 min):	
	a) test voltage (V):	1000 V / <b>1500 V</b>	Р
	b) test voltage (V):	1000 V / <b>1500 V</b>	Р
	c) test voltage (V):		N/A
	d) test voltage (V):	1000 V / 1500 V	N/A
	e) test voltage (V):		N/A
	During the test: no flashover or breakdown		N/A
	Set of three samples (PQR) without shutters, subn 16 A socket-outlets	nitted to the test expected for	
	10000 strokes; 30 strokes per minute; 250 V; 16 A; $\cos \phi$ 0,8		Р
	During the test: no sustained arcing occur		Р
	After the tests: no damage		Р
	Temperature-rise test (requirements of clause 19,	test current: 16 A):	
	Temperature rise of terminals not exceed 45 K:	max – 26,4 K	Р
	Separate tests made passing the current through:		
	the neutral contact, if any, and the adjacent phase contact (K):	max - K	N/A
	the earthing contact, if any, and the nearest phase contact (K):	max -25,1 K	Р
	Electric strength (sub-clause 17.2), test voltage (a.c	., for 1 min):	
	a) test voltage (V):	1000 V / <b>1500 V</b>	Р
	b) test voltage (V):	1000 V / <b>1500 V</b>	Р
	c) test voltage (V):	1000 V / 1500 V	N/A
	d) test voltage (V):	1000 V / 1500 V	N/A
	e) test voltage (V):		N/A
	During the test: no flashover or breakdown		N/A
	Set of three samples (STU) without shutters, submand 16 A socket-outlets (P17/11)	nitted to the test expected for 10	
	4000 strokes; 30 strokes per minute; 250 V; 10 A; $\cos \phi$ 0,8		Ρ
	6000 strokes; 30 stroke per minute; 250 V; 16 A; $\cos \phi$ 0,8		Р

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	IEC 60884-1 ATTACHN	1ENT	
Clause	Requirement + Test	Result - Remark	Verdict
	During the test: no sustained arcing occur		Р
	After the tests: no damage		Р
	Temperature-rise test (requirements of clause 19,	test current: 10 A):	
	Temperature rise of terminals not exceed 45 K:	max – 9,9 K	Р
	Separate tests made passing the current through:	·	
	the neutral contact, if any, and the adjacent phase contact (K):	max - K	N/A
	the earthing contact, if any, and the nearest phase contact (K):	max – 11,4 K	Р
	Temperature-rise test (requirements of clause 19,	test current: 16 A):	
	Temperature rise of terminals not exceed 45 K:	max – 32,1 K	Р
	Separate tests made passing the current through:		
	the neutral contact, if any, and the adjacent phase contact (K):	max - K	N/A
	the earthing contact, if any, and the nearest phase contact (K):	max – 30,0 K	Р
	Electric strength (sub-clause 17.2), test voltage (a.c	., for 1 min):	
	a) test voltage (V):	1000 V / <b>1500 V</b>	Р
	b) test voltage (V):	1000 V / <b>1500 V</b>	Р
	c) test voltage (V):	1000 V / 1500 V	N/A
	d) test voltage (V):		N/A
	e) test voltage (V):	1000 V / 1500 V	N/A
	During the test: no flashover or breakdown		Р

22	FORCE NECESSARY TO WITHDRAW THE PLUG	
	Add (multiple receptivity socket-outlets):	
	Set of three samples (MNO) without shutters, submitted to the test conditions expected for 10 A socket-outlets	
22.1	Verification of the maximum withdrawal force (multi-pin gauge)	
	- Maximum withdrawal force (N) / pins diameter (mm): - 50 N / -4,06 mm	—
	The plug not remain in the socket-outlet	Р
22.2	Verification of the minimum withdrawal force (single-pin gauge)	
	- Minimum withdrawal force (N) / pin diameter (mm): - 1,5 N / - 3,94 mm	

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	IEC 60884-1 ATTACH	MENT	
Clause	Requirement + Test	Result - Remark	Verdict
	The plug not fall from each individual contact- assembly within 30 s		Р
	Set of three samples (PQR) without shutters, sub expected for 16 A socket-outlets	mitted to the test conditions	
22.1	Verification of the maximum withdrawal force (mu	ulti-pin gauge)	
	- Maximum withdrawal force (N) / pins diameter (mm)	.: - 54 N / - 5,0 mm	
	The plug not remain in the socket-outlet		Р
22.2	Verification of the minimum withdrawal force (sing	gle-pin gauge)	
	- Minimum withdrawal force (N) / pin diameter (mm)	.: - 2 N / - 4,9 mm	
	The plug not fall from each individual contact- assembly within 30 s		Р
	Set of three samples (STU) without shutters, sub expected for 10 and 16 A socket-outlets <b>(P17/11</b>		
	Test conditions expected for 10 A socket-outlets		
22.1	Verification of the maximum withdrawal force (mu	ulti-pin gauge)	
	- Maximum withdrawal force (N) / pins diameter (mm)	.: - 50 N / - 4,06 mm	—
	The plug not remain in the socket-outlet		Р
22.2	Verification of the minimum withdrawal force (sing	gle-pin gauge)	
	- Minimum withdrawal force (N) / pin diameter (mm)	.: - 1,5 N / - 3,94 mm	
	The plug not fall from each individual contact- assembly within 30 s		Р
	Test conditions expected for 16 A socket-outlets		
22.1	Verification of the maximum withdrawal force (mu	ulti-pin gauge)	
	- Maximum withdrawal force (N) / pins diameter (mm)	: - 54 N / - 5,00 mm	—
	The plug not remain in the socket-outlet		
22.2	Verification of the minimum withdrawal force (sing	gle-pin gauge)	
	- Minimum withdrawal force (N) / pin diameter (mm)	.: - 2 N / - 4,90 mm	
	The plug not fall from each individual contact- assembly within 30 s		Р

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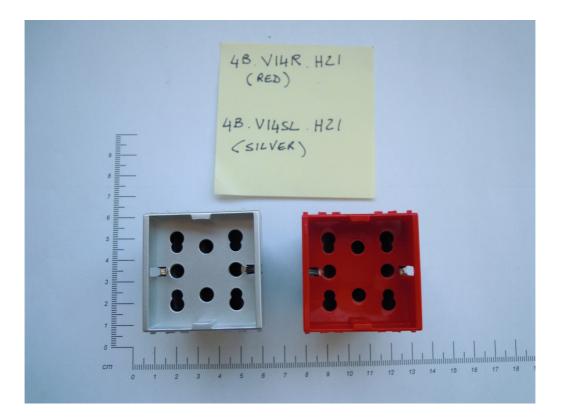
IEC 60884-1 ATTACHMENT

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

24	MECHANICAL STRENGTH	
24.1	Replace the first 6 fifth paragraphs with the following:	
	The specimens are subjected to blows by means of an impact-test apparatus as shown in IEC 60068-2-75 (Eha test), with equivalent mass of 250 g.	Р
24.2	Replace the fourth paragraph with the following:	
	Specimens are subjected individually to the test Ec procedure 2 of IEC 60068-2-31, height of fall 500 mm	N/A
24.2	Add:	
	After the test: admitted a further tolerance of -0,2 mm on pins spacing, with exception of those corresponding to standard sheets S30, S31 and S32	N/A

25	RESISTANCE TO HEAT	
25.2	Parts of insulating material of portable accessories necessary to retain current- carrying parts and parts of the earthing circuit in position, as well as parts of the front surface zone of 2 mm wide surrounding the phase and neutral pin entry holes: ball-pressure test at $(125 \pm 2)^{\circ}$ C for 1 h	
	After the test: diameter of impression $\leq 2 \text{ mm} \dots$ : Max $\emptyset = 1,6 \text{ mm}$	Р

26	SCREWS, CURRENT-CARRYING PARTS AND CONNECTIONS		
26.1	Add:		
	Test for screws for fixing covers or cover plates also intended for decorative purposes:		
	- 10 times for screws in engagement with a thread of insulating material and for screws of insulating material		N/A
	- 5 times for all other cases		Р
	- screw diameter (mm); torque (Nm):	3,4 mm; 0,8Nm	
	During the test: no damage impairing the further use of the screwed connections		Р





















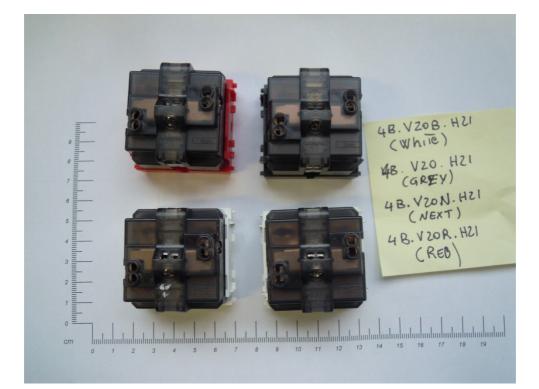












### Annex 1: Photographic documentation

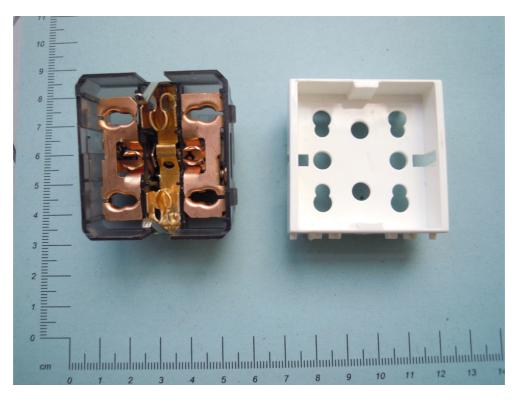




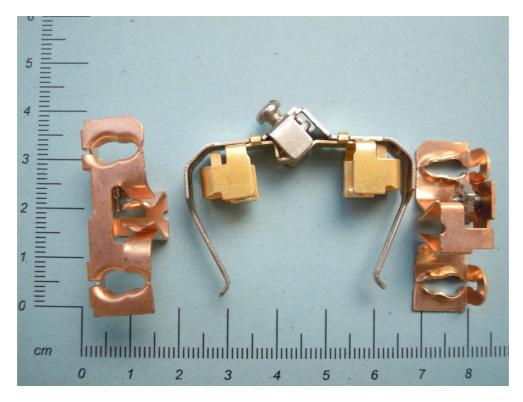
### Annex 1: Photographic documentation



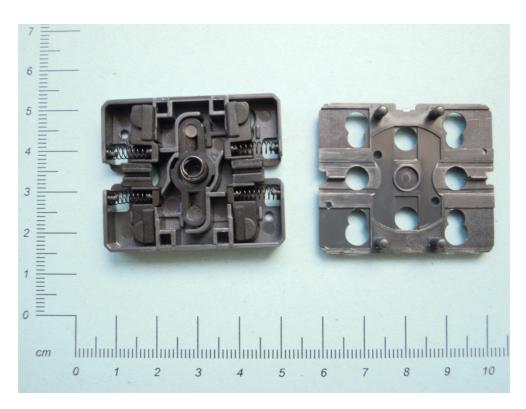




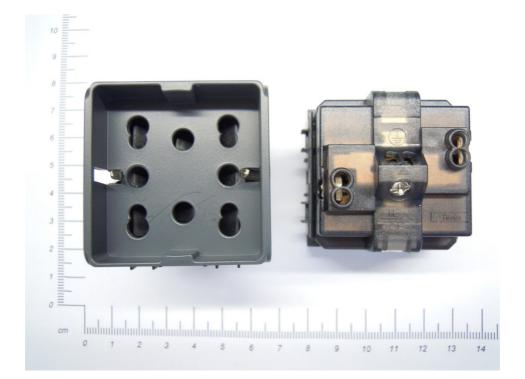
## internal view



internal view



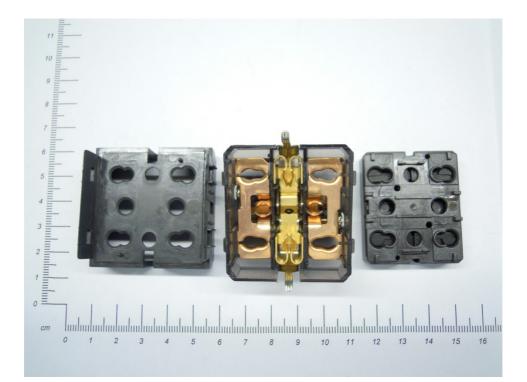
internal view



Article 4B.G12.H21



Article 4B.G12.H21



Article 4B.G12.H21



4B.SP.BN



4B.SP.AN

