Test Report
IEC 60884-1
Plugs and socket-outlets for household and similar purposes
Part 1:General requirements
IEC 60884-3-1
Plugs and socket-outlets for household and similar purposes - Part 3-1: Particular requirements for socket-outlets incorporating USB power supply

Report Number.....:	WUX251231005S02
Date of issue.....:	January 27, 2026
Total number of pages.....:	50 pages
Name of Testing Laboratory preparing the Report.....:	Shenzhen Wuxiang Testing (Group) Co., Ltd Building B, Xinbaosheng, No.233, Xixiang Street, Bao'an District, Shenzhen, China
Applicant's name.....:	Wenzhou Yijie Electric Co., Ltd
Address.....:	4th Floor, No. 3808 Binhai 3rd Road, Tianhe Street, Longwan District, Wenzhou City, Zhejiang Province, China
Test specification:	
Standard..... :	IEC 60884-1: 2022 IEC 60884-3-1:2021
Test Result .....:	PASS
Procedure deviation ..... :	N/A.
Non-standard test method .....:	N/A.
Test item description.....:	Track Socket
Trade Mark.....:	ETTROIT
Manufacturer.....:	Wenzhou Yijie Electric Co., Ltd 4th Floor, No. 3808 Binhai 3rd Road, Tianhe Street, Longwan District, Wenzhou City, Zhejiang Province, China
Model/Type reference.....:	ETB4002 ETG4002, ETB4003, ETG4003, ETB4005, ETG4005
Ratings.....:	Input: 240 V~, 50/60 Hz, 25A

******Modified History******

Revision	Description	Issued Data	Remark
Revision 1.0	Initial Test Report Release	January 27, 2026	Candy Zheng

Responsible Testing Laboratory (as applicable), testing procedure and testing location(s):		
☒	**Testing Laboratory**:	Shenzhen Wuxiang Testing (Group) Co., Ltd.
Testing location/ address.....:		Building B, Xinbaosheng, No.233, Xixiang Street, Bao'an District, Shenzhen, China
Tested by (name + signature).....…:		Test Engineer Candy Zheng
Approved by (name + signature).....…:		Manager Tony Bi

Summary of testing:

Tests performed:	**Testing location**:
IEC 60884-1: 2022 IEC 60884-3-1:2021 The submitted samples were found to comply with the above specification.	Shenzhen Wuxiang Testing (Group) Co., Ltd Building B, Xinbaosheng, No.233, Xixiang Street, Bao'an District, Shenzhen, China

Summary of compliance with National Differences

N/A

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.

Track Socket

Model: ETB4002

ETG4002, ETB4003, ETG4003, ETB4005, ETG4005

Input: 240 V~, 50/ 60 Hz, 25A

Manufacturer: Wenzhou Yijie Electric Co., Ltd

Address: 4th Floor, No. 3808 Binhai 3rd Road, Tianhe Street, Longwan District, Wenzhou City, Zhejiang Province, China

Made in China

Remark on above marking:

1, The above markings are the minimum requirements required by the safety standard. For the final production samples, the additional markings which do not give rise to misunderstanding may be added.

Test item particulars:	
Operation condition …….. :	
Class of equipment …… :	Continuous
Protection against ingress of water …. :	Class I
Mass of equipment (Kg)……..:	IP20
Plugs:	
Class of equipment .....:	I
Possible test case verdicts:	
- test case does not apply to the test object..... :	N/A(Not Applicable)
- test object does meet the requirement..... :	P (Pass)
- test object does not meet the requirement..... :	F (Fail)
Testing:	
Date of receipt of test object..... :	January 04, 2026
Date (s) of performance of tests..... :	January 04, 2026 to January 20, 2026
General remarks:	
"(see remark #)" refers to a remark appended to the report. "(see appended table)" refers to a table appended to the report. Throughout this report a comma is used as the decimal separator. The test results presented in this report relate only to the object tested. This report shall not be reproduced except in full without the written approval of the testing laboratory.	Attached with: A.photo documentation Remark:

IEC 60884-3-1			
Clause	Requirement + Test	Result - Remark	Verdict
5	**General remarks on tests**		-
5.1	Tests shall be made to prove compliance with therequirements laid down in this standard.		P
5.2	Unless otherwise specified, the specimens aretested as delivered and under normal conditions of use.		P
5.3	Unless otherwise specified, the tests are carried Out in the order of the clauses, at a ambient temperature between 15 ℃ and 35 ℃.		N/A
5.4	Three specimens are subjected to all the relevant tests.		P
5.5	The specimens are submitted to all therelevantand the requirements are satisfied if all the tests are met.		P
5.6	Routine tests are specified in annnex A.		N/A
6	**Ratings**		
6.1	Accessories should preferably be of a type and Preferably have a voltage and a current ratings.	See the marking.	P
6.2	In a cord extension set, the rated current of the portable socket-outlet shall not be higher and the rated voltage shall not be less than that of the plug.		P
6.3	Accessories should preferably have a degree of protection IP20, IP40, IP44, IP54 or IP55.	IP20.	P
7	**Classification**		P
7.1	Accessories classification		P
7.1.1	- IP2X: accessories protected against access to hazardous parts with a finger and against harmful effects due to ingress of solid foreign objects of 12,5 mm diameter and greater		P
	- IP4X: accessories protected against access to hazardous parts with a wire and against harmful effects due to ingress of solid foreign objects of 1,0 mm diameter and greater		N/A
	- IP5X: accessories protected against access to hazardous parts with a wire and dust protected		N/A
7.1.2	- IPX0: accessories not protected against ingress of water		P
	- IPX4: accessories protected against splashing water		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	- IPX5: accessories protected against water jets		N/A
7.1.3	Classification according to the provision for earthing		P
	- Accessories without earthing contact		N/A
	-Accessories with earthing contact		P
7.1.4	Classification according to the method of connecting the cable		N/A
	- Rewirable accessories		N/A
	-Non-rewirable accessories		N/A
7.1.5	Classification according to the type of terminals		N/A
	- Accessories with screw-type terminals		N/A
	- Accessories with screwless terminals for rigid conductors only		N/A
	Accessories with screwless terminals for rigid and flexible conductors		N/A
7.2	Socket-outlets classification		P
7.2.1	Socket-outlets are classified according to the degree of protection against electric shock when mounted as for normal use:		P
	a) socket-outlets with normal protection (see 10.1), or		P
	b) socket-outlets with increased protection (see 10.7).		N/A
7.2.2	Classification according to the existence of shutters		P
	a) socket-outlets without shutters, or		P
	b) socket-outlets with shutters (see 10.5).		N/A
7.2.3	Classification according to the method of application/mounting of the socket-outlet:		P
	Socket-outlets are classified according to the method of application/mounting of the socket outlet,in a) surface type, b) flush type, c) semi flush type, d) panel type, e) architrave type, f) portable type, g) table type (single or multiple), h) floor recessed type, or i) appliance type socket-outlets.	f	P

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Clause	Requirement + Test	Result - Remark	Verdict
7.2.4	Classification according to the method of installation		P
	a) fixed socket-outlets where the cover or cover-plate can be removed without displacement of the conductors (design A), or		N/A
	b) fixed socket-outlets where the cover or cover-plate cannot be removed without displacement of the conductors (design B).		P
7.3	Plugs classification		P
	Plugs are classified according to the class of equipment to which they are intended to be connected in		P
	- plugs for equipment of class 0,		N/A
	– plugs for equipment of class 0, – plugs for equipment of class I, or – plugs for equipment of class II.	Class I.	P
8.	**Marking**		
8.1	Accessories shall be marked as follows:		P
	– rated current in amperes;	See the marking.	P
	– rated voltage in volts;	See the marking.	P
	– symbol for nature of supply;	～	P
	– manufacturer's or responsible vendor's name,	See the marking.	P
	– trade mark or identification mark;	-	P
	– type reference which may be a catalogue number	See the marking.	P
	– symbol for degree of protection (first digit);	IP20.	P
	– symbol for degree of protection (second digit)	IP20	P
	Socket-outlets with screwless terminals marked with:		N/A
	– 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		P
	Marking for the nature of supply placed next to the marking for rated current and rated voltage		P
8.3	For fixed socket-outlets the following marking shall be placed on the main part:		P
	- rated current, rated voltage and nature of supply		P

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Clause	Requirement + Test	Result - Remark	Verdict
	- identification mark of the manufacturer or of the responsible vendor		P
	- length of insulation to be removed, if any		N/A
	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
	Symbol for the degree of protection (second digit): marked on the outside of its associated enclosure so as to be easily discernible		N/A
8.4	For plugs and portable socket-outlets the marking specified in 8.1, other than the type reference, shall be easily discernible when the accessory is wired and assembled.		P
	Plugs and portable socket-outlets for equipment of class II not marked with the symbol for class II construction.		N/A
8.5	Terminals intended exclusively for the neutral conductor shall be indicated by the letter N.		P
	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:		N/A
	- clearly identified unless their purpose is self evident, or		N/A
	- indicated in a wiring diagram fixed to the accessory		N/A
	Identification of accessory terminals may be achieved by:		N/A
	- their marking with graphical symbols according to IEC 147 or colours and/or alphanumeric system, or		N/A
	- their physical dimension or relative location		N/A
8.6	For surface-type mounting boxes forming an integral part of socket-outlets having an IP		N/A
	code higher than IP20, the IP code shall be marked on the outside.		N/A
8.7	It shall be indicated either by marking or in a manufacturer's catalogue or instruction sheet in which position or with which special provisions (for example, box, type of mounting surface, plug, etc.) the declared degree of protection of flush-type and semi-flush-type fixed socket-outlets having an IP code higher than IPX0 is ensured.		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
8.8	Marking shall be durable and easily legible.		P
	Test: 15 s with water and 15 s with petroleum spirit		P
9.	**Checking of dimensions**		-
9.1	Accessories and surface-type mounting boxes shall comply with the appropriate standard sheets		P
	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		P
9.2	It shall not be possible to engage a plug with:		P
	- 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 (plug for class 0 equipment).		N/A
	Engagement of a plug for class 0 or class Iequipment with a socket-outlet designed to accept plugs for class II equipment, not possible		N/A
	Impossibility of insertion checked by applying agauge, for 1 min, with a force of:		P
	- 150 N (rated current ≤ 16A);		P
	- 250 N (rated current > 16A)		N/A
	Accessories with elastomeric or thermoplasticmaterial: test carried out at 35 ℃ ± 2 ℃		N/A
9.3	Deviations from standard sheets made only if theyprovide technical advantage and do not affect thepurpose and safety of accessories complying withstandard sheet		N/A
10.	**Protection against electric shock**		P
10.1	Socket-outlets: live parts not accessible		P
	Live parts of plugs: not accessible when the plug is in partial or complete engagement with a socket-outlet		P

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Clause	Requirement + Test	Result - Remark	Verdict
	Test with standard test finger shown in figure 2		P
	Accessories with elastomeric or thermo plastic material: additional test carried out at 35 ℃ ± 2 ℃ with a straight unjointed test finger (75 N for 1 min)		P
	During the test: accessories not deform and no live parts accessible		P
	Plugs and portable socket-outlets pressed with a force of 150 N for 5 min as shown in figure 22:specimens not show deformation		P
10.2	Accessible parts (with exception of small screws and the like for fixing bases and covers or cover plates): made of insulating material		N/A
	Cover or cover plates of fixed socket-outlets: made of metal if the requirements of 10.2.1 or 10.2.2 are fulfilled		N/A
10.2.1	Metal covers or cover plates 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	Metal covers or cover plates automatically connected, through a low-resistance connection, to the earth during fixing		N/A
10.3	Connection 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 9.1		P
	Accessories with elastomeric or thermoplastic material: test carried out at 35 ℃ ± 2 ℃		P
	Socket-outlets with enclosure or bodies of rubber or polyvinyl chloride: test carried out with a force of 75 N for 1 min		P

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Clause	Requirement + Test	Result - Remark	Verdict
	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		N/A
10.4	External parts of plugs and portable socket-outlets made of insulating material		P
	Overall dimensions of rings around pins not exceed 8 mm concentric with respect to the pin		P
10.5	Shuttered socket-outlets: live parts not accessible, without a plug in engagement, with the gauge shown in figure 4		N/A
	Live contacts automatically screened when the plug is withdrawn		N/A
	Means cannot easily be operated by anything other than a plug and not depend upon parts which are liable to be lost		N/A
	Gauge applied to the entry holes corresponding to live contacts with a force up to 1 N shall not touch live parts		N/A
	Accessories with elastomeric or thermoplastic material: test carried out at 35 ℃ ± 2 ℃		N/A
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.		-
	After this test: socket-outlet still comply with the requirements of clause 9		P
10.7	Socket-outlet with increased protection: live parts not accessible		N/A
	Gauge of figure 4 applied with a force of 1 N on all accessible surfaces shall not touch live parts		N/A
	Accessories with elastomeric or thermoplastic material: test carried out at 35 ℃ ± 2 ℃		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 shall separate before the earth connection is broken		P
11.2	Earthing terminals of rewirable accessories comply with clause 12		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Earthing terminals of the same size as the corresponding terminals for the supply conductors		N/A
	Any additional external earthing terminals of fixed socket-outlets of size suitable for conductors of at least 6 mm²		N/A
	Earthing terminals of rewirable accessories: internal		N/A
	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		N/A
	- 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		N/A
11.3	Accessible metal parts of fixed socket-outlets: permanently and reliably connected to the earthing terminal		N/A
11.4	Socket-outlets, other than ordinary, with enclosure of insulating material and more than one cable inlet, provided with an internal earthing terminal for the continuity of the earthing circuit, unless		N/A
	earthing terminals allows the connection of an incoming and an outgoing earthing conductor together		N/A
11.5	Connection between earthing terminal and accessible metal parts: of low resistance		N/A
	Test:		N/A
	Test current equal to 1,5 times the rated current or 25 A ..... :		N/A
	Resistance not exceed 0,05 Ω (Ω) ..... :		N/A
11.6	Fixed socket-outlets shall have the earthing socket contact and its terminal electrically separated from any metal mounting means or other exposed conductive parts.		P

12	**Terminals and terminations**		P

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Clause	Requirement + Test	Result - Remark	Verdict
	All the test on terminals, with the exception of the test of 12.3 11, made after the test of clause 16		P
12.1	General		-
12.1.1	Rewirable fixed socket-outlets provided with screw-type terminals or with screwless terminals. :		N/A
	Rewirable plugs and portable socket-outlets provided with terminals with screw clamping ..... :		N/A
	Pre-soldered flexible conductors used: pre-soldered area outside the squeezed area of screw-type terminals		N/A
	Clamping means of terminals: not serve to fix any other components		N/A
12.1.2	Non-rewirable accessories provided with soldered, welded, crimped or equally effective permanent connections ..... :		P
	Screwed or snap-on connections not used		P
	Connections made by crimping a pre-soldered flexible conductor not permitted		P
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		N/A
	Rated current (A); Type of accessories ..... :		-
	Type of conductor (rigid / flexible) ..... :		-
	Smallest / largest cross-sectional area (mm²).....:		-
	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

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Clause	Requirement + Test	Result - Remark	Verdict
	Screws not of soft metal such as zinc or aluminium		N/A
12.2.4	Terminals resistant to corrosion		N/A
12.2.5	Screw-type terminals clamp the conductor(s) without undue damage		N/A
	Test with apparatus shown in figure 32:		N/A
	- type of conductors ..... :		-
	- number of conductors ..... :		-
	- smallest cross-sectional area (mm²) (table 3); diameter of bushing hole (mm); height H (mm); mass (kg) ..... :		N/A
	- largest cross-sectional area (mm²) (table 3); diameter of bushing hole (mm); height H (mm); mass (kg) ..... :		N/A
	- nominal diameter of thread (mm); torque according to table 6 (Nm) ..... :		-
	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		N/A
	Pull test (1 min):		N/A
	- type of conductors ..... :		-
	- number of conductors ..... :		-
	- smallest cross-sectional area (mm²) (table 3); pull (N) ..... :		N/A
	- largest cross-sectional area (mm²) (table 3); pull (N) ..... :		N/A
	- torque (Nm) (2/3 table 6) ..... :		-
	During the test: conductor not move noticeably		N/A
12.2.7	Terminals designed or placed that the conductor cannot slip out while the clamping screws or nuts are tightened		N/A
	- largest cross-sectional area (mm²) (table 3) ..... :		-
	- number of wires and nominal diameter of wires (table 5):		-

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Clause	Requirement + Test	Result - Remark	Verdict
	fixed socket-outlets: rigid solid conductors / rigid stranded conductors ..... :		-
	plugs and portable socket-outlets: flexible conductors ..... :		-
	- terminals intended for looping-in 2 or 3 conductors: permissible number of conductors.... :		-
	- torque (Nm) (2/3 table 6) ..... :		-
	After the test: no wire of the conductor escaped outside the clamping unit		N/A
12.2.8	Terminals not work loose from their fixing to accessories		N/A
	Torque test:		N/A
	- rigid solid copper conductor of the largest cross-sectional area (mm²) (table 3) ..... :		-
	- torque (Nm) (table 6 or appropriate figures 34, 35, 36) ..... :		-
	Screws and nuts tightened and loosened 5 times. 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		P
	Body of brass or other metal no less resistant to corrosion		P
	If the body is a part of a frame or enclosure of aluminium alloy, precautions shall be taken to avoid the risk of corrosion		N/A
12.2.11	Pillar terminals: distance g no less than the value specified in figure 34: required (mm); measured (mm) ..... :		N/A
	Mantle terminals: distance g no less than the value specified in figure 37: required (mm); measured (mm) ..... :		N/A
12.3	Screwless terminals for external copper conductors		-
12.3.1	Screwless terminals of the type suitable for:		-

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Clause	Requirement + Test	Result - Remark	Verdict
	- for rigid copper conductors only, or		N/A
	- 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)		N/A
	Two conductors to be connected: each conductor introduced in a separate clamping unit		N/A
12.3.3	Screwless terminals allow the conductor to be connected without special preparation		N/A
12.3.4	Parts of screwless terminals intended for carrying current of materials as specified in 26.5		N/A
12.3.5	Screwless terminals clamp specified conductors with sufficient contact pressure without undue damage to the conductor		N/A
	Conductor clamped between metal surfaces		N/A
12.3.6	It shall be clear how the connection and disconnection of the conductors is to be made		N/A
	Disconnection of a conductor require an operation, other than a pull, so that can be made manually with or without a general-purpose tool		N/A
	It shall not be possible to confuse the opening for the use of a tool with the opening intended for the conductor		N/A
12.3.7	Screwless terminals intended for the interconnection of two or more conductors:		-
	- during insertion, operation of clamping means of one of the conductors is independent of operation of that for the other conductor(s);		N/A
	- during disconnection, conductors can be disconnected either at the same time or separately;		N/A
	- each conductor introduced in a separate clamping unit.		N/A
	It shall be possible clamp securely any number of conductors up to the maximum as designed. Number of conductors; Nominal cross-sectional area (mm²) ..... :		N/A
12.3.8	Screwless terminals of fixed socket-outlets: adequate insertion obvious and over-insertion prevented		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
12.3.9	Screwless terminals properly fixed to the socket-outlets		N/A
	Not work loose when conductors are connected or disconnected		N/A
	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		N/A
	Test:		—
	Connection / disconnection 5 times: rigid solid conductor 2,5 mm²		N/A
	Connection / disconnection 5 times: rigid solid conductor 1,5 mm²		N/A
	Conductor subjected to a pull of 30 N for 1 min after each connection. During application of the pull conductor not come out of the terminal		N/A
	Connection / disconnection 1 time: rigid stranded conductor 2,5 mm²		N/A
	Connection / disconnection 1 time: rigid stranded conductor 1,5 mm²		N/A
	Conductor subjected to a pull of 30 N for 1 min after connection. During application of the pull conductor not come out of the terminal		N/A
	Additional test on terminals intended for both rigid and flexible conductors:		—
	Connection / disconnection 5 times: flexible conductor 2,5 mm²		N/A
	Connection / disconnection 5 times: flexible conductor 1,5 mm²		N/A
	Conductor subjected to a pull of 30 N for 1 min after each connection. During application of the pull conductor not come out of the terminal		N/A
	Additional test with apparatus shown in figure 32:		—
	- type of conductors ..... :		—
	- number of conductors ..... :		—
	- 1,5 mm²; diameter of bushing hole 6,5 mm; height H 260 mm; mass 0,4 kg		N/A
	- 2,5 mm²; diameter of bushing hole 9,5 mm; height H 280 mm; mass 0,7 kg		N/A
	During the test: conductors not move noticeably in the clamping unit		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

	After these tests: neither terminals nor clamping means have worked loose and conductors show no deterioration						N/A
12.3.11	Screwless terminals withstand electrical and thermal stresses occurring in normal use						N/A
	Test a) carried out for 1 h connecting rigid solid conductors:						—
	- test current (A) (table 10) ..... :						-
	- screwless terminal number ..... :	1	2	3	4	5	-
	- voltage drop measured (mV) (requirement: ≤15 mV) .... :						N/A
	Test b) (temperature cycles test) carried out on terminals subjected to Test a):						-
	- test current (A) (table 10) ..... :						—
	- cross-sectional area (mm²) ..... :						—
	- screwless terminal number ..... :	1	2	3	4	5	—
	- voltage drop measured after the 24 cycle (requirement: ≤ 22,5 mV) ..... :						N/A
	- voltage drop measured (mV) after 48th cycle ... :						N/A
	- voltage drop measured (mV) after 72 th cycle .... :						N/A
	- voltage drop measured (mV) after 96th cycle ..... :						N/A
	- voltage drop measured (mV) after 120th cycle ... :						N/A
	- voltage drop measured (mV) after 144th cycle ... :						N/A
	- voltage drop measured (mV) after 168th cycle ... :						N/A
	- voltage drop measured (mV) after 192th cycle ....:						N/A
	- requirement: ≤ 22,5 mV or 2 times 24th cycle value (mV) ..... :						N/A
	After this test: inspection show no changes						N/A
	Mechanical strength test according 12.3.10:						-
	Connection / disconnection 5 times: rigid solidconductor 2,5 mm²						N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Connection / disconnection 5 times: rigid solidconductor 1,5 mm²		N/A
	Conductor subjected to a pull of 30 N for 1 minafter each connection. During application of thepull conductor not come out of the terminal		N/A
	Connection / disconnection 1 time: rigid strandedconductor 2,5 mm²		N/A
	Connection / disconnection 1 time: rigid strandedconductor 1,5 mm²		N/A
	Conductor subjected to a pull of 30 N for 1 minafter connection. During application of the pullconductor not come out of the terminal		N/A
	Additional test on terminals intended for both rigidand flexible conductors:		—
	Connection / disconnection 5 times: flexibleconductor 2,5 mm²		N/A
	Connection / disconnection 5 times: flexibleconductor 1,5 mm²		N/A
	Conductor subjected to a pull of 30 N for 1 minafter each connection. During application of thepull conductor not come out of the terminal		N/A
	Additional test with apparatus shown in figure 32:		—
	- type of conductors ..... :		—
	- number of conductors ..... :		—
	- 1,5 mm²; diameter of bushing hole 6,5 mm; height H 260 mm; mass 0,4 kg		N/A
	- 2,5 mm²; diameter of bushing hole 9,5 mm; height H 280 mm; mass 0,7 kg		N/A
	During the test: conductors not move noticeably in the clamping unit		N/A
	After these tests: neither terminals nor clampingmeans have worked loose and conductors show no deterioration		N/A
12.3.12	Screwless terminals: connected rigid solidconductor remains clamped, even when deflectedduring normal installation		N/A
	Deflection test (principle of test apparatus shownin figure 33 a)):		—
	- test current (A) (equal rated current) ..... :		—

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Clause	Requirement + Test	Result - Remark			Verdict
	Smallest cross-sectional area (mm²) (table 11) ... :				N/A
	Force (N) (table 12) ..... :				N/A
	- screwless terminal number ..... :	1	2	3	—
	- starting point (X = deflection original point) ..... :	X	X + 100	X + 200	—
	- voltage drop measured (mV) (1st deflection) ..... :				N/A
	- voltage drop measured (mV) (2nd deflection) ..... :				N/A
	- voltage drop measured (mV) (3rd deflection) ..... :				N/A
	- voltage drop measured (mV) (4th deflection) ..... :				N/A
	- voltage drop measured (mV) (5th deflection) ..... :				N/A
	- voltage drop measured (mV) (6th deflection) ..... :				N/A
	- voltage drop measured (mV) (7th deflection) ..... :				N/A
	- voltage drop measured (mV) (8th deflection) ..... :				N/A
	- voltage drop measured (mV) (9th deflection) ..... :				N/A
	- voltage drop measured (mV) (10th deflection) .... :				N/A
	- voltage drop measured (mV) (11th deflection) .... :				N/A
	- voltage drop measured (mV) (12th deflection) .... :				N/A
	- requirement: ≤ 25 mV				N/A
	Largest cross-sectional area (mm²) (table 11) ..... :				—
	Force (N) (table 12) ..... :				—
	- screwless terminal number ..... :				—

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Clause	Requirement + Test	Result - Remark	Verdict

	- starting point (X = deflection original point) ..... :				—
	- voltage drop measured (mV) (1st deflection) ..... :				N/A
	- voltage drop measured (mV) (2nd deflection) .... :				N/A
	- voltage drop measured (mV) (3rd deflection) ..... :				N/A
	- voltage drop measured (mV) (4th deflection) ..... :				N/A
	- voltage drop measured (mV) (5th deflection) ..... :				N/A
	- voltage drop measured (mV) (6th deflection) ..... :				N/A
	- voltage drop measured (mV) (7th deflection) ..... :				N/A
	- voltage drop measured (mV) (8th deflection) ..... :				N/A
	- voltage drop measured (mV) (9th deflection) ..... :				N/A
	- voltage drop measured (mV) (10th deflection) ... :				N/A
	- voltage drop measured (mV) (11th deflection) ... :				N/A
	- voltage drop measured (mV) (12th deflection) ... :				N/A
	- requirement: ≤ 25 mV				N/A

13	**Construction of fixed socket-outlets**		—
13.1	Socket-contact assembly: sufficient resiliency		N/A
13.2	Socket-contact and pins of socket-outlets: resistant to corrosion		N/A
13.3	Insulating linings, barriers and the like: adequate mechanical strength		N/A
13.4	Socket-outlets shall be so constructed as to permit		—
	- easy fixing of the base to a wall or in a mounting box		N/A
	- easy introduction and connection of the conductors in the terminals		N/A
	- easy fixing of the base to a wall or in a mounting box;		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	- correct positioning of the conductors		N/A
	- adequate space between the underside of the base and the surface on which the base is mounted – surface mounted		N/A
	- adequate space between the underside of the base and the sides of the base and the enclosure (cover or box) – flush mounted		N/A
	Socket-outlets classified as design A: permit easy positioning and removal of the cover or cover plate, without displacing the conductors		N/A
13.5	Socket-outlets shall be so designed that full engagement of associated plugs is not prevented by any projection from their engagement face.		N/A
	Gap between the engagement face of the socket-outlet and the plug: not exceed 1 mm		N/A
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, e.g. by a screw, provided that they are located by another means (e.g. by a shoulder)		N/A
	Fixings of covers or cover-plates of socket-outlets of design A serve to fix the base: there shall be 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
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

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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 and the removal)		N/A
	only to insulating parts, 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
	- socket-outlets comply with clause 22		N/A
13.7.3	Covers or cover-plates whose fixing is not dependent on screws removal is obtained by using a tool, in accordance with the manufacturer's information given in an instruction sheet or in a catalogue:		-
	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 insulating parts, 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 nonremoval 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	Ordinary surface-type socket-outlets: no free openings in the enclosure		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

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Clause	Requirement + Test	Result - Remark	Verdict
	Fixing of the links independent of the connection of the supply wires		N/A
13.12	Multiple socket-outlets, comprising separate bases: correct position of each base ensured		N/A
13.13	Fixing of each base independent of the fixing of the combination to the mounting surface		N/A
13.14	Multiple socket-outlets: consist of a combination of socket-outlets which are either all provided with or all without earthing contacts		N/A
13.15	Socket-outlets withstand the lateral strain imposed by equipment likely to be introduced into them		N/A
	Socket-outlets 16A 250V: test made 4 times with the socket-outlet turned through 90°, 5 N for 1 min (device shown in fig. 6)		N/A
	During the test: device not come out		N/A
	After the test:		—
	- no damage		N/A
	- socket-outlets comply with clause 22		N/A
13.16	Surface-type socket-outlets having an IP code higher than IP20 shall be according to their IP classification when fitted with conduits or with sheathed cables as for normal use and without a plug in engagement.		N/A
13.17	Earthing pins shall have adequate mechanical strength.		N/A
13.18	Earthing contacts and neutral contacts shall be locked against rotation and removable only with the aid of a tool, after dismantling the socket-outlet.		N/A
	Compliance is checked by inspection and by manual test.		N/A
13.19	Metal strips of the earthing circuit shall have no burrs which might damage the insulation of the supply conductors.		N/A
13.20	Socket-outlets to be installed in a box shall be so 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.		N/A
13.21	Inlet openings shall allow the introduction of the conduit or the sheath of the cable so as to afford complete mechanical protection.		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
13.22	Membranes (grommets) in inlet openings shall be reliably fixed and shall not be displaced by the mechanical and thermal stresses occurring in normal use.		N/A
	The accessories are then placed for 2 h in a heating cabinet as described in 16.1, the temperature being maintained at (40 ± 2) ℃.		N/A
	Immediately after this period, a force of 30 N is applied for 5 s to various parts of the membranes by means of the tip of a straight unjointed test finger (test probe 11 of IEC 61032).		N/A
	During this test, the membranes shall not become detached.		N/A
13.23	It is recommended that membranes in inlet openings be so designed and made of such material that the introduction of the cables into the accessory is permitted when the ambient temperature is low.		N/A
	The accessories are then kept for 2 h in a freezer at a temperature of (–15 ± 2) ℃.		N/A
	After the tests of 13.22 and 13.23 the membranes shall show no harmful deformation, cracks or similar damage		N/A
14	**Construction of plugs and portable socket-outlets**		-
14.1	Non-rewirable portable accessories shall be such that		—
	– the flexible cable cannot be separated from the accessory without making it permanently useless, and		P
	– the accessory cannot be opened by hand or by using a general purpose tool, for example, a screwdriver used as such.		P
14.2	Pins of portable accessories shall have adequate mechanical strength.		N/A
	Test for pins not solid (made after clause 21): force of 100 N exerted on the pin 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
	After removal of the rod: dimensions of the pin not changed by more than 0,06 mm		N/A
14.3	Pins of plugs shall be	Plug separately approved	P
	– locked against rotation,		P

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Clause	Requirement + Test	Result - Remark	Verdict
	– not removable without dismantling the plug,		P
	– adequately fixed in the body of the plug when the plug is wired and assembled as for normal use.		P
14.4	Earthing contacts and neutral contacts of portable socket-outlets:		—
	- locked against rotation		P
	- removable only with the aid of a tool, after dismantling the socket-outlet		P
14.5	Socket-contact assemblies: sufficient resiliency		P
14.6	Pins and socket-contacts: resistant to corrosion and abrasion		P
14.7	Enclosures of rewirable accessories: completely enclose terminals and ends of flexible cable.	Non-rewireable	N/A
	Construction of rewirable accessories:		N/A
	- conductors can be properly connected		N/A
	- cores not pressed against each other		N/A
	- cores of live conductor not in contact with accessible metal parts		N/A
	- core of earthing conductor not in contact with live parts		N/A
14.8	Rewirable 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	Non-rewireable	N/A
14.9	Rewirable accessories with earthing contact: ample space for slack of earthing (test)	Non-rewireable	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		P
14.10	Terminals of rewirable portable accessories and terminations of non-rewirable portable accessories shall be located or shielded		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

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Clause	Requirement + Test	Result - Remark	Verdict
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 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
14.11	For rewirable portable accessories:		N/A
	– it shall be clear how the relief from strain and the prevention of twisting is intended to be effected;		N/A
	– the cord anchorage, or at least part of it, shall be integral with or fixed to one of the component parts of the plug or portable socket-outlet;		N/A
	– makeshift methods, such as tying the flexible cable in a knot or tying the ends with string, shall not be used; – the cord anchorage shall be suitable for the different types of flexible cable which may be connected to it; – screws, if any, which have to be operated to clamp the flexible cable, shall not serve to fix any other component; – cord anchorages shall be of insulating material or be provided with an insulating lining fixed to the metal parts; – metal parts of cord anchorages, including clamping screws, shall be insulated from the earthing circuit.		N/A
14.12	For rewirable portable accessories and non-rewirable non-moulded on portable accessories it shall not be 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		P
14.14	Screws intended to allow access to the interior of the accessory shall be captive.		N/A
14.15	Engagement face of plugs: no projections		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
14.16	Engagement face of portable socket-outlets: no projection		P
14.17	Portable accessories of IP code higher than IP20 shall be enclosed according to their IP classification when they are fitted with cables.	IP20	N/A
	Plugs having an IP code higher than IP20, with the exception of the engagement face, shall be adequately enclosed		N/A
	Portable socket-outlets having an IP code higher than IP20 shall be adequately enclosed		N/A
	Lid springs, if any, shall be made of corrosion-resistant material		N/A
	Compliance is checked by inspection and by the tests of 16.2.		N/A
14.18	Portable socket-outlets: means for suspension from a wall or other mounting surfaces not allow access to live parts		P
	No free openings between space intended for suspension means fixed to the wall and live parts		P
14.19	Combinations of plugs and socket-outlets with circuit-breakers or other protective devices comply with relevant standards, if any .....:		N/A
14.20	Portable accessories shall not be an integral part of lampholders.		N/A
14.21	Plugs for equipment of class II:		—
	- non-rewirable		N/A
	- if incorporated in a cord set: provided with a connector for equipment of class II		N/A
	- if incorporated in 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		N/A
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):		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
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 to maintain the engagement face in the vertical plane not exceed 0,25 Nm (Nm) .....:		N/A
14.24	Plugs: can easily withdrawn by hand from the relevant socket-outlet	Plug separately approved	P
	Gripping surfaces: so designed that the plug can be withdrawn without pull on the flexible cable	Plug separately approved	P
14.25	Membranes in inlet openings: meet the requirements of 13.23 and 13.24		N/A
15	**Interlocked socket-outlets**		N/A
	Socket-outlet interlocked with a switch:		—
	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	Resistant to ageing		P
	Accessories shall be resistant to ageing		P
	Accessories subjected to a test in a heating cabinet at 70 ℃ ± 2 ℃ for seven days (168 h)		P
	After the tests, samples shall show:		P
	- 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
16.2	Protection provided by enclosures		P
	Enclosures shall provide protection against access to hazardous parts		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
16.2.1	Protection against access to hazardous parts and against harmful effects due to ingress of solid foreign objects	IP20	N/A
	Accessories and their enclosures shall provide a degree of protection against access to hazardous parts and against harmful effects due to ingress of solid foreign objects.		N/A
16.2.1.1	Protection against access to hazardous parts		-
	The appropriate test specified in IEC 60529 is performed (see also clause 10).		N/A
16.2.1.2	Protection against harmful effects due to ingress of solid foreign objects	IP20	N/A
16.2.2	Protection against harmful effects due to ingress of water	IP20	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 ordinary accessories	48 h	P
	- seven days (168 h) for accessories other than ordinary		N/A
	After this treatment the specimens show no damage		P

17	**Insulation resistance and electric strength**		P
17.1.1	For socket-outlets: insulation resistance (500 V d.c. for 1 min):		P
	a) between all poles connected together and the body, with a plug in engagement ≥ 5 MΩ ..... :	≥ 5 MΩ	P
	b) between each pole in turn and all others connected to the body, with a plug in engagement ≥ 5 MΩ ..... :	≥ 5 MΩ	P
	c) between any metal enclosures and metal foil in contact with the inner surface of its insulating linings, if any ≥ 5 MΩ ..... :		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	d) between any metal part of the cord anchorage, including clamping screws, and earthing terminal or earthing contact, if any, of portable socket-outlets ≥ 5 MΩ ..... :	≥ 5 MΩ	P
	e) between any metal part of the cord anchorage of portable socket-outlets and a metal rod of the maximum diameter of the flexible cable inserted in its place ≥5 MΩ..... :	≥ 5 MΩ	P
17.1.2	For plugs: insulation resistance (500 V d.c. for 1 min): Plug separately approved		N/A
	a) between all poles connected together and the body ≥ 5 MΩ ..... :	≥ 5 MΩ	P
	b) between each pole in turn and all others connected to the body ≥5MΩ ..... :	≥ 5 MΩ	P
	c) between any metal part of the cord anchorage, including clamping screws, and earthing terminal or earthing contact, if any ≥ 5MΩ ..... :	≥ 5 MΩ	P
	d) between any metal part of the cord anchorage and a metal rod of the maximum diameter of the flexible cable inserted in its place ≥ 5 MΩ..... :	≥ 5 MΩ	P
17.2	Socket-outlets: electric strength, test voltage (a.c., for 1 min):		P
	1 250 V for accessories having a rated voltage up to and including 130 V;		N/A
	2 000 V for accessories having a rated voltage exceeding 130 V.		P

18	**Operation of earthing contacts**		P
	Earthing contacts shall provide adequate contact pressure and shall not deteriorate in normal use.		P
	Compliance is checked by the tests of clauses 19 and 21.		P

19	**Temperature rise**		P
	Non-rewirable accessories tested as delivered:		—
	- type of flexible cable; number of conductors and nominal cross-sectional area (mm²)..... :		P

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Clause	Requirement + Test	Result - Remark	Verdict
	Rewirable accessories fitted with polyvinyl chloride insulated conductors having a nominal cross-sectional area as show in table 15:		—
	- rated current of accessory ..... :		—
	- nominal cross-sectional area (mm²) ..... :		—
	- type of conductors ..... :		—
	Terminal screws or nuts tightened with a torque equal to 2/3 of that specified in 12.2.8 (Nm) ..... :		—
	Socket-outlets tested using a test plug with brass pins having the minimum specified dimensions		P
	Plugs tested using a fixed socket-outlet complying with the standard and having as near to average characteristics, but with minimum size of the earthing pin, if any		N/A
	Test current as specified in table 20 passed for 1 h (A) ..... :	25 A	P
	Temperature rise of terminals not exceed 45 K (K) ..... :	See appended table	P
	Separate tests made passing the current through:		N/A
	- the neutral contact, if any, and the adjacent phase contact (K) ..... :		N/A
	- the earthing contact, if any, and the nearest phase contact (K) ..... :		N/A
	Temperature rise of external parts of insulating material not necessary to retain current-carrying parts and parts of the earthing circuit in position (K) ..... :		N/A

20	**Breaking capacity**		P
	Accessories shall have adequate breaking capacity		P
	Rewirable accessories are fitted with conductors as specified for the test of clause 19		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Socket-outlets are tested using a test plug with brass pins provided		P
	Plugs are tested using a fixed socket-outlet complying with this standard and having as near-to-average characteristics as can be selected.		P
	For accessories with a rated voltage lower than or		P
	equal to 250 V and a rated current lower than or equal to 16 A, the length of the stroke of test apparatus is between 50 mm and 60 mm.		P
	The plug is inserted and withdrawn from the socket-outlet 50 times (100 strokes) at a rate of		P
	- 30 strokes per minute for accessories having a rated current up to and including 16 A and a rated voltage up to and including 250 V;		N/A
	15 strokes per minute for other accessorie		P
	The test voltage shall be 1,1 times the rated voltage and the test current shall be 1,25 times the rated current.		P
21	**Normal operation**		P
	Accessories shall withstand without excessive wear or other harmful effect, the mechanical, electrical and thermal stresses occurring in normal use.		P
	Socket-outlets are tested using a test plug with brass pins provided		P
	The end of round pins are rounded		P
	Plugs are tested using a fixed socket-outlet complying with this standard and having as near to average characteristics as can be selected		P
	The specimens are tested with an alternating current as specified in table 20, at rated voltage in a circuit with cos = 0,8 ± 0,05		P
	The plug is inserted and withdrawn from the socket-outlet 5 000 times (10 000 strokes) at a rate of		P
	30 strokes per minute for accessories having a rated current up to and including 16 A and a rated voltage up to and including 250 V		N/A
	15 strokes per minute for other accessories		P

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Clause	Requirement + Test	Result - Remark	Verdict
	The gauge is applied to the shutters in the most unfavourable position, successively in three directions to the same place, for approximately 5 s in each of the three directions.		N/A
	The specimens shall then comply with the requirements of clause 19, the test current being equal to the test current required for the normal operation test of this clause 21 and the temperature rise, at any point, not exceeding 45 K, and they shall withstand an electric strength test made according to 17.2, the test voltage being reduced to 1 500 V for accessories having a rated voltage of 250 V and to 1 000 V for accessories having a rated voltage of 130 V	See appended table	P
22	**Force necessary to withdraw the plug**		P
	Construction of accessory shall allow the easy insertion and withdrawal of the plug, and prevent the plug from working out of the socket-outlet in normal use		P
	Rated current (A) ..... :	25A	P
	Number of poles ..... :	3 poles	P
22.1	Verification of the maximum withdrawal force (multi-pin gauge)		P
	- Maximum withdrawal force (N) ..... :	50N < 54N	P
	The plug not remain in the socket-outlet		P
22.2	Verification of the minimum withdrawal force (single-pin gauge)		P
	- Minimum withdrawal force (N) ..... :		—
	The plug not fall from each individual contact-assembly within 30 s		P
23	**Flexible cables and their connection**		-
23.1	Plugs and portable socket-outlets provided with a cord anchorage such that the conductors are relieved from strain and that their covering is protected from abrasion		N/A
	Sheath of flexible cable clamped within the cord anchorage		N/A
23.2	Pull and torque test		—
	Non-rewirable accessories:		N/A
	- rating of accessory ..... :		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	- type of flexible cable; number of conductors and nominal cross-sectional area (mm²) ..... :		N/A
	- pull (100 times) (N) ..... :		N/A
	- torque (1 min) as specified in table 18 (Nm) ..... :		N/A
	After the test:		—
	Displacement ≤ 2 mm ..... :		N/A
	No break in the electrical connections		N/A
	Rewirable accessories:		N/A
	- rating of accessory ..... :		N/A
	- clamping screws, if any, tightened with a torque equal to 2/3 of that specified in 12.2.8 (Nm) ..... :		N/A
	- type of flexible cable; number of conductors and smallest nominal cross-sectional area (mm²) as show in table 17..... :		N/A
	- pull (100 times) (N) ..... :		N/A
	- torque (1 min) as specified in table 18 (Nm) ..... :		N/A
	After the test:		N/A
	Displacement ≤ 2 mm ..... :		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:		N/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 (mm²)..... :		N/A
23.3	Non-rewirable plugs and non-rewirable portable socket-outlets: provided with a flexible cable complying with IEC 227 or IEC 245		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: identified by the colour combination green/yellow		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
23.4	Non-rewirable plugs and non-rewirable portable socket-outlets: designed that the flexible cable is protected against excessive bending		N/A
	Guards shall be of insulating material and fixed in reliable manner		N/A
	Flexing test (10.000 flexings):		N/A
	- type of flexible cable and nominal cross-sectional area (mm²) ..... :		N/A
	- test current (A) ..... :		N/A
	- mass (N) ..... :		N/A
	During the test: no interruption of the test current and no short-circuit between conductors		N/A
	Voltage drop test: test current (A); voltage drop (≤ 10mV) ..... :		N/A
	After the test: guard no separated from the body, insulation shows no sign of abrasion or wear, broken strands become no accessible		N/A
24	**Mechanical strength**		-
	Accessories, surface mounting boxes, screwed glands and shrouds shall have adequate mechanical strength so as to withstand the stresses imposed during installation and use.		N/A
24.1	The specimens are subjected to blows by means of an impact-test apparatus as shown in figures 22, 23, 24 and 25.		N/A
24.2	Rewirable portable accessories are fitted with the flexible cable specified in 23.2 having the smallest nominal cross-sectional area specified in table 3 and a free length of approximately 100 mm measured from the outer end of the guard.		N/A
24.3	The bases of surface type socket-outlets are first fixed to a cylinder of rigid steel sheet having a radius equal to 4,5 times the distance between fixing holes but, in any case, no less then 200 mm.		N/A
	During and after the tests, the bases of socket-outlets shall show no damage impairing their further use.		N/A
24.4	The specimens are subjected to an impact test by means of an apparatus as shown in figure 27.		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	The apparatus, positioned on a pad of sponge rubber 40 mm thick, is placed together with the specimens in a freezer at a temperature of (–15 ± 2) ℃, for at least 16 h.		N/A
	At the end of this period, each specimen, in turn, is placed in the normal position of use as shown in figure 27, and a weight is allowed to fall from a height of 100 mm. The mass of the falling weight is (1 000 ± 2) g.		N/A
	After the test, the specimen shall show no damage within the meaning of this standard.		N/A
24.5	The specimens are subjected to a compression test as shown in figure 8, the temperature of the pressure plate, of the base and of the specimens being (23 ± 2) ℃ and the force applied being 300 N.		N/A
24.6	Screwed glands are fitted with a cylindrical metal rod having a diameter, in millimetres, equal to the nearest whole number below the internal diameter, in millimetres, of the packing.		N/A
24.7	Plug pins provided with insulating sleeves are subjected to the following test by means of an apparatus as shown in figure 28.		N/A
24.8	Shuttered socket-outlets shall have the shutter so designed that it withstands the mechanical force		N/A
	One pin from a plug of the same system is applied for 1 min with a force of 40 N against the shutter of an entry hole in a direction perpendicular to the front surface of the socket-outlet.		N/A
	For shutters provided as the only means to prevent single pole insertion, the force shall be 75 N instead of 40 N.		N/A
	After the test, the specimens shall show no damage within the meaning of this standard.		N/A
24.9	Rewirable multiple portable socket-outlets are fitted with the lightest type of flexible cable of the smallest nominal cross-sectional area specified in table 3.		N/A
	The free end of the flexible cable is fixed to a wall at a height of 750 mm above the floor, as shown in figure 29.		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	The specimen is held so that the flexible cable is horizontal and then it is allowed to fall onto a concrete floor, eight times, the flexible cable being rotated through 45° at its fixing after each fall.		N/A
	After the test, the specimens shall show no damage within the meaning of this standard; in particular, no part shall have become detached or loosened.		N/A
24.10	This test is made on new specimens.		N/A
	The plug is placed on a rigid steel plate provided with holes suitable for the pins of the plug as shown as an example in figure 30.		N/A
	The pull is applied within a heating cabinet at a temperature of (70 ± 2) ℃, 1 h after the plug has been placed in the heating cabinet.		N/A
	After the test, the plug is allowed to cool down to ambient temperature and it shall be verified that no pin has been displaced in the body of the plug by more than 1 mm.		N/A
24.11	Barriers, between the space intended for the suspension means fixed to the mounting surface and the live parts likely to be subjected to mechanical strain when the portable socket-outlet is suspended on a mounting surface, are tested .		P
24.12	The portable socket-outlet, fitted with an appropriate flexible cable, is suspended on the mounting surface as in normal use		N/A
	A pull equal to the force prescribed in 23.2 for checking the flexible cable anchorage is applied, in the most unfavourable position, to the flexible cable for 10 s.		N/A
24.13	The portable socket-outlet is suspended on the mounting surface as in normal use, using a round head screw with shank diameter of 3 mm, and is subjected to a pull test with the maximum withdrawal force specified, for the corresponding plug, in table 16, applied without jerks.		N/A
24.14	When checking the forces necessary to retain or remove covers, cover-plates or parts of them, the accessories are mounted as for normal use.		N/A
	Flush-type socket-outlets are fixed in appropriate mounting boxes, which are installed as for normal use		N/A
	Plugs and portable socket-outlets are fixed in a suitable manner		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	If the covers or cover-plates, or parts of them, are provided with locking means which can be operated without the aid of a tool, these means are unlocked.		N/A
	For fixed socket-outlets, compliance is checked according to 24.14.1 and 24.14.2 (see 13.7.2).		N/A
	For plugs and portable socket-outlets compliance is checked according to 24.14.3.		N/A
24.14.1	Verification of the retention of covers or cover-plates		N/A
	Forces are gradually applied perpendicular to the mounting surface		N/A
	– 40 N, for covers, cover-plates or parts of them complying with the tests of 24.17 and 24.18, or		N/A
	– 80 N, for other covers, cover-plates or parts of them.		N/A
	The force is applied for 1 min. The covers or cover-plates shall not come off.		N/A
	After the test, the specimens shall show no damage within the meaning of this standard.		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 come off		N/A
	The test is then repeated on new specimens, the cover or cover-plate being fitted on the wall after a sheet of hard material, (1 ± 0,1) mm thick, has been fitted around the supporting frame, as shown in figure 31.		N/A
	After the test, the specimens shall show no damage within the meaning of this standard.		N/A
24.15	The test is made as described in 24.14, but applying, for 24.14.1, the following forces:		N/A
	– 10 N, for covers or cover-plates complying with the tests of 24.17 and 24.18; – 20 N, for other covers or cover-plates.		N/A
24.16	The test is made as described in 24.14, but applying, for 24.14.1, the force of 10 N for all covers or cover-plates.		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
24.17	The gauge shown in figure 32 is pushed toward each side of each cover or cover-plate which is fixed without screws on a mounting or supporting surface, as shown in figure 33.		N/A
24.18	A gauge according to figure 35, applied with a force of 1 N shall not enter more than 1,0 mm from the upper part of any groove, hole or reverse taper, or the like, when the gauge is applied parallel to the mounting/supporting surface and perpendicular to the part under test as shown in figure 36.		N/A
24.19	The shrouds of portable socket-outlets are subjected to a compression test at an ambient temperature of (25 ± 5) ℃ in an apparatus similar to that shown in Figure 38.		N/A
25	**Resistance to heat**		-
	Accessories and surface-type mounting boxes shall be resistant to heat.		P
	During the test: no change impairing their further use and sealing compound, if any, not flow		P
	After the test: markings still legible		P
25.1	The specimens are kept for 1 h in a heating cabinet at a temperature of (100 ± 2) ℃.		P
25.2	Parts of insulating material and earthing circuit in position, shall besubjected to a ball-pressure test		P
	ball-pressure test (1 h, 125 ℃)		P
	After the test: diameter of impression ≤ 2 mm ..... :	See appended table	P
25.3	For parts 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)		P
	Test temperature(℃) ..... :		N/A
	After the test: diameter of impression ≤2 mm ..... :		P
25.4	The specimens are subjected to a compression test by means of an apparatus as shown in figure 38, the test being made in a heating cabinet at a temperature of (80 ± 2) ℃.		P
	After the test: no damage	Plug separately approved	N/A
26	**Screws, current-carrying parts and connections**		P

IEC 60884-3-1			
Clause	Requirement + Test	Result - Remark	Verdict
26.1	Connections, electrical or mechanical, shall withstand the mechanical stresses occurring in normal use.		P
	Thread-cutting screws intended to be used during installation: captive		N/A
	Screws and nuts which transmit contact pressure: in engagement with a metal thread	Cord anchorage screw	N/A
	Test:		—
	- 10 times for screws in engagement with a thread of insulating material and for screws of insulating material		P
	- 5 times for all other cases		N/A
	- terminals: screw diameter (mm); torque (Nm); times ..... :		—
	- earthing terminals: screw diameter (mm); torque (Nm); times ..... :		—
	- assembly screws: screw diameter (mm); torque (Nm); times ..... :		—
	- cord anchorage: screw diameter (mm); torque (Nm); times ..... :		—
	- other screws or nuts: diameter (mm); torque (Nm); times ..... :		—
	During the test: no damage impairing the further use of the screwed connections		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 shall have mechanical strength, electrical conductivityand resistance to corrosion adequate for their intended use.		P
	- 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;	> 58%	P

IEC 60884-3-1			
Clause	Requirement + Test	Result - Remark	Verdict
	- stainless steel with at least 13 % chromium and not more than 0,09 % carbon		N/A
	- steel with electroplated coating of zinc (ISO 2081), with thickness of at least:		—
	5 µm, service condition ISO no. 1, for ordinary equipment		N/A
	12 µm, service condition ISO no. 2, for splash-proof equipment		N/A
	25 µm, service condition ISO no. 3, for jet-proof equipment		N/A
	- steel with electroplated coating of nickel and chromium (ISO 1456), with thickness of at least:		—
	20 µm, service condition ISO no. 2, for ordinary equipment		N/A
	30 µm, service condition ISO no. 3, for splash-proof equipment		N/A
	40 µm, service condition ISO no. 4, for jet-proof equipment		N/A
	- steel with electroplated coating of tin (ISO 2093), with thickness of at least:		—
	12 µm, service condition ISO no. 2, for ordinary equipment		N/A
	20 µm, service condition ISO no. 3, for splash-proof equipment		N/A
	30 µm, service condition ISO no. 4, for jet-proof equipment		N/A
	Current-carrying parts subjected to mechanical wear: not of steel with electroplated coating		N/A
	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: of metal resistant to corrosion.		P
26.7	Thread-forming screws and thread-cutting screws not used for the connection of current-carrying parts		N/A
	Thread-forming screws and thread-cutting screws used to provide earthing connection: not necessary to disturb the connection and at least two screws are used for each connection		N/A

27	**Creepage distances, clearances and distancesthrough sealing compound**	P

IEC 60884-3-1			
Clause	Requirement + Test	Result - Remark	Verdict
27.1	Creepage distances, clearances and distances through sealing compound shall be not less than the values shown in table 23.		P
	Creepage distances (cr):		P
	1) between live parts of different polarity ≥ 4(3) mm ..... :		P
	2) between live parts and:		N/A
	- accessible insulating and earthed metal parts ≥ 3 mm ..... :		N/A
	- parts of earthing circuit ≥3 mm ..... :		P
	- metal frames supporting the base of flush-type socket-outlets ≥ 3 mm ..... :		N/A
	- screws or devices for fixing bases, covers or cover-plates of fixed socket-outlets ≥ 3 mm ..... :		N/A
	- external assembly screws, other than screws which are on the engagement face of plugs and are isolated from the earthing circuit ≥ 3 mm ..... :		N/A
	3) between pins of plugs and metal parts connected to them, when fully engaged, and a socket-outlet of the same system having accessible unearthed metal parts ≥ 6(4,5)mm ..... :		N/A
	4) between the accessible unearthed metal parts of a socket-outlet and a fully engaged plug of the same system having pins and metal parts connected to them ≥ 6(4,5) mm ..... :		N/A
	5) between live parts of a socket-outlet (without a plug) and its accessible unearthed metal parts ≥6(4,5) mm ..... :		N/A
	Clearances (cl):		—
	6) between live parts of different polarity ≥3 mm .. :		P
	7) between live parts and:		—
	- accessible insulating and earthed metal parts not mentioned under 8 and 9 ≥ 3 mm..... :		P
	- parts of earthing circuit ≥ 3mm ..... :		P

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Clause	Requirement + Test	Result - Remark	Verdict
	- metal frames supporting the base of flush-type socket-outlets ≥ 3 mm ..... :		N/A
	- screws or devices for fixing bases, covers or cover-plates of fixed socket-outlets ≥ 3 mm ..... :		N/A
	- external assembly screws, other than screws which are on the engagement face of plugs and are isolated from the earthing circuit ≥ 3 mm ..... :		P
	8) between live parts and:		—
	- exclusively earthed metal boxes ≥ 3 mm ..... :		N/A
	- unearthed metal boxes, without insulating lining ≥ 4,5 mm ..... :		N/A
	9) between live parts and the surfaces on which the base of a socket-outlet for surface mounting is mounted ≥ 6 mm..... :		N/A
	10) between live parts and the bottom of any conductor recess, if any, in the base of a socket-outlet for surface mounting ≥ 3 mm ..... :		N/A
	11) between live parts of a socket outlet or a plug and accessible metal parts which are not connected to the earthing circuit ≥ 6 mm ..... :		P
	Distance through insulating sealing compound:		—
	12) between live parts covered with at least 2 mm of sealing compound and the surfaces on which the base of a socket-outlet for surface mounting is mounted ≥ 4(3) mm..... :		N/A
27.2	Insulating sealing compound: not protrude above the edge of the cavity in which it is contained		N/A
27.3	Ordinary surface-type socket-outlets: no 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		P
	For parts of fixed accessories necessary to retain current-carrying parts andparts of the earthing circuit in position: test temperature 850 ℃		N/A
	No visible flame and no sustained glowing		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Flame and glowing extinguish within 30 s ..... :		N/A
	No ignition of the tissue paper		N/A
	For parts of fixed accessories needed to retain the earth terminal in position in a box: test temperature 650 ℃		—
	No visible flame and no sustained glowing		N/A
	Flame and glowing extinguish within 30s ..... :		N/A
	No ignition of the tissue paper		N/A
	For parts of portable accessories necessary to retain current-carrying parts and parts of the earthing circuit in position: test temperature 750 ℃		—
	No visible flame and no sustained glowing	See appended table	P
	Flame and glowing extinguish within 30s ..... :	< 30 s	P
	No ignition of the tissue paper		P
	For parts not necessary to retain current-carrying parts and parts of the earthing circuit in position, even though in contact with them: test temperature 650 ℃		—
	No visible flame and no sustained glowing		N/A
	Flame and glowing extinguish within 30s ..... :		N/A
	No ignition of the tissue paper		N/A
28.1.2	The specimen of a plug with pins provided with insulating sleeves is tested by means of the test apparatus as shown in figure 40.		N/A
28.2	Resistance to tracking		-
	For accessories having an IP code higher than IPX0, parts of insulating material retaining live parts in position shall be of material resistant to tracking.	IP20	N/A
	Compliance is checked according to IEC 60112.		N/A
	Ceramic parts are not tested.		N/A
	No flashover or breakdown between electrodes shall occur before a total of 50 drops has fallen.		N/A

29	**Resistance to rusting**		N/A
	Ferrous parts, including covers and surface-mounting boxes, shall be adequately protected against rusting.	No ferrous parts	N/A

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Clause	Requirement + Test	Result - Remark	Verdict

30	**Additional tests on pins provided with insulating sleeves**		N/A
30.1	Pressure test at high temperature		N/A
	The apparatus, with the specimen in position, is maintained for 2 h in a heating cabinet at a temperature of (200 ± 5) ℃.		N/A
30.2	Static damp heat test		N/A
	A set of three specimens is submitted to two damp heat cycles in accordance with IEC 60068-2-30.		N/A
	After this treatment and after regaining ambient temperature, the specimens are submitted to the following tests:		N/A
	insulation resistance and electric strength test, in accordance with clause 17		N/A
	abrasion test, in accordance with 24.7		N/A
30.3	Test at low temperature		N/A
	A set of three specimens is maintained at (–15 ± 2) ℃ for 24 h.		N/A
	After regaining ambient temperature, the specimens are submitted to the following tests:		N/A
	insulation resistance and electric strength test, in accordance with clause 17		N/A
	abrasion test, in accordance with 24.7		N/A
30.4	Impact test at low temperature		N/A
	The specimens are subjected to an impact test by means of the apparatus as shown in figure 42. The mass of the falling weight is (100 ± 1) g		N/A
	After the test: no crack of the insulating sleeves		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

Table 21 : Normal operation			Result: Pass
Ambient temperature…… ……:			22.6℃
	rating of accessory (V/A) .....:	240Va.c.	
	type of accessory (non-rewirable/rewirable)……...:	Non-rewireable	
	type of flexible cable (non-rewirable accessories)……:	N/A	
	number of conductors and nominal cross-sectional area (mm²) (non-rewirable accessories) ..... :	N/A	
	nominal cross-sectional area per table 15 (mm²) (rewirable accessories) / type of conductor ..... :	—	
	type of conductors (rigid solid / rigid stranded / flexible) (rewirable accessories) ..... :	—	
	nominal diameter of thread (mm); torque 2/3 of that specified in 12.2.8 (Nm) (rewirable accessories)……. :	—	
	rate of operation (strokes per minute) ..... :	30 (with shutters)	

	TABLE: temperature rise test				
specimen	test current (table 20 for clause 21) for 1 h (A)	Test point	Measured dT (K)	allowed dT (K)	Verdict
ETB4002	25A	Right contact	35.2	45	P
		Left contact	29.3	45	P
		Shell/earthing	29.7	45	P

Table 25.2 : Ball pressure test of insulating materials			Result : Pass
	allowed impression diameter (mm):	≤ 2 mm	—
Part under test		test temperature (℃)	impression diameter (mm)
Enclosure material		125	<2
Remark:			

Table 28.1.1 : glow-wire test				Result : Pass
part under test	test temperature(℃)	Visible flame and sustained glowing (Y/N)	Flame and glowing extinction time	Ignition of the tissue paper (Y/N)
Enclosure material	750	N	—	N
Remark:				

ANNEX A:
PHOTO-DOCUMENTATION

EUT Photo 1

EUT Photo 2

EUT Photo 3

EUT Photo 4

EUT Photo 5

********END OF REPORT ********