






Test Report issued under the responsibility of:



<b>TEST REPORT</b> <b>IEC 60884-2-3</b> <b>Plugs and socket-outlets for household and similar purposes</b> <b>Part 2-3: Particular requirements for switched socket-outlets without interlock for fixed installations</b>	
<b>Report Reference No.</b> .....	CVC2019-1259
<b>Date of issue</b> .....	November 21, 2019
<b>Total number of pages</b> .....	78 pages
<b>Name of Testing Laboratory preparing the Report</b> .....	Vkan Certification & Testing Co., Ltd.
<b>Applicant's name</b> .....	Zhongshan Kasem Alkhaled Trading Co., Ltd.
<b>Address</b> .....	No. 4, North 3rd Lane, Hua'an East Road, Cao San Pioneer Park, Guzhen Town, Zhongshan City, Guangdong Province, 528421, P. R. China
<b>Test specification:</b>	
<b>Standard</b> .....	IEC 60884-2-3:2006 with IEC 60884-1:2002, AMD1:2006, AMD2:2013
<b>Test procedure</b> .....	CB Scheme
<b>Non-standard test method</b> .....	N/A
<b>Test Report Form No.</b> .....	IEC60884_2_3C
<b>Test Report Form(s) Originator</b> ....	IMQ S.p.A.
<b>Master TRF</b> .....	Dated 2017-10-31
<b>Copyright © 2017 Worldwide System for Conformity Testing and Certification of Electrotechnical Equipment and Components (IECEE), Geneva, Switzerland. All rights reserved.</b>	
This publication may be reproduced in whole or in part for non-commercial purposes as long as the IECEE is acknowledged as copyright owner and source of the material. IECEE takes no responsibility for and will not assume liability for damages resulting from the reader's interpretation of the reproduced material due to its placement and context.	
If this Test Report Form is used by non-IECEE members, the IECEE/IEC logo and the reference to the CB Scheme procedure shall be removed.	
<b>This report is not valid as a CB Test Report unless signed by an approved CB Testing Laboratory and appended to a CB Test Certificate issued by an NCB in accordance with IECEE 02.</b>	
<b>General disclaimer:</b>	
The test results presented in this report relate only to the object tested. This report shall not be reproduced, except in full, without the written approval of the Issuing CB Testing Laboratory. The authenticity of this Test Report and its contents can be verified by contacting the NCB, responsible for this Test Report.	

<b>Test item description</b> ..... :	Single-phase Flush-type Two-pole Switched Socket-outlet with Earthing-contact and Shutter	
<b>Trade Mark</b> ..... :		
<b>Manufacturer</b> .....	Zhongshan Kasem Alkhaled Trading Co., Ltd.	
<b>Model/Type reference</b> .....	S-356, S-357, S-556, S-356G, S-357G, S-556G, T-356, T-357, T-556, T-356G, T-357G, T-556G	
<b>Ratings</b> .....	13A 250V~	
<b>Responsible Testing Laboratory (as applicable), testing procedure and testing location(s):</b>		
<input type="checkbox"/> <b>CB Testing Laboratory:</b>	Vkan Certification & Testing Co., Ltd.	
<b>Testing location/ address</b> ..... :	No. 3 Tiantaiyi Road, Kaitai Avenue, Science City, Guangzhou, 510663, P. R. China	
<b>Tested by (name, function, signature)</b> ..... :	Lü Guowei, Engineer	
<b>Approved by (name, function, signature)</b> ...	Liu Bo, Manager	
<b>Testing procedure: CTF Stage 1:</b>		
<b>Testing location/ address</b> ..... :		
<b>Tested by (name, function, signature)</b> ..... :		
<b>Approved by (name, function, signature)</b> ...		
<b>Testing procedure: CTF Stage 2:</b>		
<b>Testing location/ address</b> ..... :		
<b>Tested by (name + signature)</b> .....		
<b>Witnessed by (name, function, signature) . :</b>		
<b>Approved by (name, function, signature)</b> ...		
<b>Testing procedure: CTF Stage 3:</b>		
<b>Testing procedure: CTF Stage 4:</b>		
<b>Testing location/ address</b> ..... :		
<b>Tested by (name, function, signature)</b> ..... :		
<b>Witnessed by (name, function, signature) . :</b>		
<b>Approved by (name, function, signature)</b> ...		
<b>Supervised by (name, function, signature) :</b>		

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

Annex 1: Test results based on SASO 2203:2018 (page 44 to page 62)

Annex 2: Dimensions (page 63)

Annex 3: List of test equipment used (page 64 to page 65)

Annex 4: Photographs (page 66 to page 78)

**Summary of testing:****Tests performed (name of test and test clause):****IEC 60884-2-3:**

1. Full safety items on S-356 13A 250V~.
2. Tests of Clause 8, Clause 13, Clause 24, Clause 27, Clause 28 on S-556G 13A 250V~.
3. Test of Clause 8 is carried out on other models.

**SASO 2203:**

1. Full safety items on S-356 13A 250V~.
2. Tests of Clause 4.4, 4.5, 5.0, 5.1, 5.11, 7 are carried out on S-556G 13A 250V~.
3. Clause 7 on the other models.

**Testing location:**

No. 3, Tiantaiyi Road, Kaitai Avenue, Science City, Guangzhou, 510663, P. R. China.

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

National Differences see Annex 1.

☒ **The product fulfils the requirements of SASO 2203: 2018.****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.



<b>Test item particulars</b> .....	
<b>Classification of installation and use</b> .....	Fixed socket-outlet
<b>Supply Connection</b> .....	Rewirable
<b>Standard Sheet</b> .....	13.9 of BS 1363-2:2016 + A1:2018
<b>Rated current (A) / Rated voltage (V)</b> .....	13A 250V~
<b>Degree of protection against access to hazardous parts and against harmful ingress of solid foreign objects</b> .....	IP2X
<b>Degree of protection against harmful ingress of water</b> .....	IPX0
<b>Provision for earthing</b> .....	With earthing contact
<b>Method of connecting the cable</b> .....	N/A
<b>Type of cable</b> .....	N/A
<b>Nominal cross-sectional areas (mm<sup>2</sup>)</b> .....	N/A
<b>Type of terminals</b> .....	Pillar-type
<b>Type of connections</b> .....	N/A
<b>Socket-outlets:</b>	
<b>Degree of protection against electric shock</b> .....	Normal protection
<b>Existence of shutters</b> .....	With shutters
<b>Method of application / mounting of the socket-outlet</b> .....	Flush-type
<b>Method of installation</b> .....	Design A
<b>Intended for circuits where</b> .....	A single earthing circuit provides protective earthing
<b>Switched socket-outlets without interlock:</b>	
<b>According to the method of actuating the switch</b> :	Rocker
<b>According to the switching of the neutral</b> .....	Switched neutral
<b>Possible test case verdicts:</b>	
- 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)
<b>Testing</b> .....	
<b>Date of receipt of test item</b> .....	2019-09-30
<b>Date (s) of performance of tests</b> .....	From 2019-10-08 to 2019-11-21
<b>General remarks:</b>	
<p>"(see Enclosure #)" refers to additional information appended to the report.          "(see appended table)" refers to a table appended to the report.</p> <p>Throughout this report a <input checked="" type="checkbox"/> comma / <input type="checkbox"/> point is used as the decimal separator.</p>	


<b>Manufacturer's Declaration per sub-clause 4.2.5 of IECEE 02:</b>	
The application for obtaining a CB Test Certificate includes more than one factory location and a declaration from the Manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided .....	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> Not applicable
<b>When differences exist; they shall be identified in the General product information section.</b>	
<b>Name and address of factory (ies) .....</b> Wenzhou Zijin Electrical Appliances Co., Ltd. No. 589-2, Binhai 15 Road, Binhai Park, Wenzhou Economic and Technological Development Zone, 325025, P. R. China	
<b>General product information and other remarks:</b>	
1. Information about the manufacturer and factory: Manufacturer: Zhongshan Kasem Alkhaled Trading Co., Ltd. Manufacturer's address: No. 4, North 3rd Lane, Hua'an East Road, Cao San Pioneer Park, Guzhen Town, Zhongshan City, Guangdong Province, 528421, P. R. China. Factory: Wenzhou Zijin Electrical Appliances Co., Ltd. Factory's address: No. 589-2, Binhai 15 Road, Binhai Park, Wenzhou Economic and Technological Development Zone, 325025, P. R. China.	
2. This report is applicable to Single-phase Flush-type Two-pole Switched Socket-outlet with Earthing-contact and Shutter S-356, S-357, S-556, S-356G, S-357G, S-556G, T-356, T-357, T-556, T-356G, T-357G, T-556G 13A 250V~.	
3. Sample identification: Group A (A1# ~ A27#): Single-phase Flush-type Two-pole Switched Socket-outlet with Earthing-contact and Shutter S-356 13A 250V~. Group B (B1# ~ B6#): Single-phase Flush-type Two-pole Switched Socket-outlet with Earthing-contact and Shutter S-556G 13A 250V~. Group C (C1# ~ C30#): 3 pcs per model): All other types of Socket-outlets.	
4. All the submitted samples are similar in structures of functional modules except for the set numbers, size of socket-outlets and colour of panels and rockers. The details are as follows: 1) Set number: Single socket-outlet: S-356, T-356, S-356G, S-357, T-357, S-357G, T-356G, T-357G,; Multiple socket-outlet: S-556, T-556, S-556G, T-556G; 2) Appearance: The panel and outer rocker are gold: S-356G, S-357G, S-556G; The panel and outer rocker are white: S-356, S-357, S-556; The panel and outer rocker are white and fitted with a silver decorative border: T-356, T-357, T-556; The panel and outer rocker are gold and fitted with a silver decorative border: T-356G, T-357G, T-556G.	


(continued)

**General product information and other remarks:**

## 5. Components list:

Object/ part no.	Manufacturer/trademark	Material	Type/ model	Technical data
Base	Wenzhou Juxing Plastic Co., Ltd.	PA66	—	—
Inner panel	Wenzhou Juxing Plastic Co., Ltd.	PA66	—	—
Aperture panel	Wenzhou Taixin Plastic Industry Co., Ltd.	PC	—	—
Cover plate	Wenzhou Taixin Plastic Industry Co., Ltd.	PC	—	—
Frame	Wenzhou Longwan Tianhe Rongjiang Electrical Switch Factory	Steel	Q235	—
Contact	Wenzhou Longwan Tianhe Rongjiang Electrical Switch Factory	Phosphor copper	QSn6.5-0.1	Thickness: 0.6mm±0.1 mm
Shutter	Wenzhou Taixin Plastic Industry Co., Ltd.	POM	—	—
Spring	Wenzhou Economic and Technological Development Zone Tianhe Jiali Hardware Fittings Factory	Spring Steel	65Mn	—
Terminal	Wenzhou Longwan Yongzhong Yiyuan Instrument Factory	Brass	H62	—
Screw	Wenzhou Tietong Electrical Alloy Industry Co., Ltd.	Steel	Q235	—
Inner rocker	Wenzhou Juxing Plastic Co., Ltd.	PA66	—	—
Outer rocker	Wenzhou Taixin Plastic Industry Co., Ltd.	PC	—	—
Contact spot	Wenzhou Tietong Electrical Alloy Industry Co., Ltd.	Copper- based silver cadmium oxide	AgCdO12/Cu	—
Moving Contact	Wenzhou Qianglong Copper Co., Ltd.	Phosphor copper	QSn6.5-0.1	Thickness: 0,8mm ± 0,1mm
Fixed Contact	Wenzhou Longwan Tianhe Rongjiang Electrical Switch Factory	Brass	H62	—

IEC 60884-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
<b>8</b>	<b>MARKING</b>		
<b>8.1</b>	<b>Accessories marked as follows:</b>		<b>P</b>
	- rated current (A) .....	13	P
	- rated voltage (V) .....	250	P
	- symbol for nature of supply .....	~	P
	- manufacturer's or responsible vendor's name .....		P
	- type reference .....	S-356, S-357, S-556, S-356G, S-357G, S-556G, T-356, T-357, T-556, T-356G, T-357G, T-556G	P
	- symbol for degree of protection (first digit) if higher than 2 .....		N/A
	- symbol for degree of protection (second digit) if higher than 0 .....		N/A
	Socket-outlets with screwless terminals marked with the following:		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
	Switched socket-outlets without interlock:		N/A
	Symbol of mini-gap construction		N/A
	Symbol OFF position		N/A
	Symbol ON position		N/A
<b>8.2</b>	<b>Symbols used: as required in the standard</b>		<b>P</b>
	Marking for the nature of supply placed next to the marking for rated current and rated voltage		P
	Mini-gap construction (m) .....		N/A
	open position (off) .....		N/A
	Closed position (on) .....		N/A
<b>8.3</b>	<b>Marking of fixed socket-outlets placed on the main part:</b>		<b>P</b>
	- rated current, rated voltage and nature of supply		P
	- identification mark of the manufacturer or of the responsible vendor		P
	- length of insulation to be removed, if any		N/A
	- type reference		P
	Cover plates necessary for safety purposes and intended to be sold separately: marked with the manufacturer's or responsible vendor's name and type reference		P

IEC 60884-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
	IP code, if applicable: marked so as to be easily discernible		N/A
	Fixed socket-outlets classified according to item b) of 7.2.5: identified by a triangle visible after installation unless they have an interface configuration different from that used in normal circuits .....		N/A
8.5	<b>Neutral terminals: N .....</b>	N	<b>P</b>
	Earthing terminals: [earth symbol] .....	E 	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 such terminals may be achieved by:		N/A
	- 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	<b>Surface-type mounting boxes forming an integral part of socket-outlets having IP&gt;20: IP code marked on the outside of its associated enclosure so as to be easily discernible</b>		<b>N/A</b>
8.7	<b>Indication of which position or with which special provision the declared IP of flush-type and semi-flush-type fixed socket-outlets having IP&gt;X0 is ensured</b>		<b>N/A</b>
8.8	<b>Marking durable and easily legible. Test: 15 s with water and 15 s with petroleum spirit</b>		<b>P</b>
8.101	<b>Terminals for phase conductors (supply conductors): identified unless method of connection is of no importance, self-evident or indicated on a wiring diagram</b>		<b>P</b>
	Such identification may take the form of a letter L or for more than one pole L1, L2, L3, etc., which may be accompanied by arrow or arrows pointing to the relevant terminal or terminals.		N/A
	Indications not placed on screws or other easily removable parts		P



IEC 60884-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
8.102	<b>Two, three, and four pole switches and switches having a rated voltage exceeding 250 V or a rated current exceeding 16 A shall be so marked that the direction of movement of the actuating member to its different positions or the actual switch position, is clearly indicated.</b>		<b>P</b>
	Marking clearly visible on the front of the switch		P
	Not possible to fix cover, cover plate, or removable actuating members in an incorrect position		P
	For the indication of the direction of movement of the operating means, symbols may be used		N/A
	Closed position (on) shall be clearly indicated		P
<b>9</b>	<b>CHECKING OF DIMENSIONS</b>		<b>P</b>
9.1	<b>Accessories and surface-type mounting boxes comply with the appropriate standard sheets and corresponding gauges, if any</b>	See ANNEX 2	<b>P</b>
	Insertion of plugs into fixed or portable socket-outlets ensured by their compliance with the relevant standard sheets		P
	Compliance checked by measurement and by means of gauges with manufacturing tolerances as shown in table 2	See ANNEX 2	P
9.2	<b>It is not possible to engage a plug with:</b>		<b>P</b>
	- 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).		P
	Engagement of a plug for class 0 or class I equipment with a socket-outlet designed to accept plugs for class II equipment, not possible		N/A
	Impossibility of insertion checked by applying a gauge, for 1 min, with a force of:		P
	- 150 N (rated current ≤ 16A);		P
	- 250 N (rated current > 16A)		N/A
	Accessories with electrometric or thermoplastic material: test carried out at (35 ± 2) °C		P
9.3	<b>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</b>		<b>N/A</b>

IEC 60884-2-3			
Clause	Requirement + Test	Result - Remark	Verdict

<b>10</b>	<b>PROTECTION AGAINST ELECTRIC SHOCK</b>		<b>P</b>
<b>10.1</b>	<b>Socket-outlets: live parts not accessible</b>		<b>P</b>
	Test with test probe B of IEC 61032		P
	Accessories with electrometric or thermoplastic material: additional test carried out at $(35 \pm 2) ^\circ\text{C}$ with test probe 11 of IEC 61032 (75 N for 1 min)		P
	During the test: accessories not deform and no live parts accessible		P
<b>10.2</b>	<b>Accessible parts (with exception of small screws and the like for fixing bases and covers or cover plates): made of insulating material</b>		<b>P</b>
	Cover or cover plates of fixed socket-outlets and accessible parts of plugs and 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
<b>10.3</b>	<b>Contact between a pin of a plug and a live socket-contact of a socket-outlet not possible while any other pin is accessible</b>		<b>P</b>
	Compliance checked by manual test and by means of gauges with tolerances as specified in table 2		P
	Accessories with electrometric or thermoplastic material: test carried out at $(35 \pm 2) ^\circ\text{C}$		P
	Socket-outlets with enclosure or bodies of rubber or polyvinyl chloride: test carried out with a force of 75 N for 1 min		N/A

IEC 60884-2-3			
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 (mm) .....:		N/A
<b>10.4</b>	<b>External parts of plugs made of insulating material</b>		<b>N/A</b>
	Overall dimensions of rings around pins not exceed 8 mm concentric with respect to the pin		N/A
<b>10.5</b>	<b>Shuttered socket-outlets: live parts not accessible, without a plug in engagement, with the gauges shown in figure 9 and 10</b>		<b>P</b>
	Live contacts automatically screened when the plug is withdrawn		P
	Shutters so designed that a plug is inserted with the same movement in a socket outlet with shutters as in a socket-outlet without shutters		P
	Means cannot easily be operated by anything other than a plug and not depend upon parts which are liable to be lost		P
	Gauge of figure 9, applied to the entry holes corresponding to live contacts with a force of 20 N, for approximately 5 s, successively in three directions, does not touch live parts		P
	Steel gauge of figure 10, applied to the entry holes corresponding to live contacts with a force of 1 N for approximately 5 s, in three directions, does not touch live parts		P
	Accessories with electrometric or thermoplastic material: test carried out at $(35 \pm 2) ^\circ\text{C}$		P
<b>10.6</b>	<b>Earthing contacts of a socket-outlet designed that they cannot be deformed by the insertion of a plug</b>		<b>P</b>
	Test plug inserted into the socket-outlet with a force of 150 N for 1 min		P
	Earthing contacts of a socket-outlet designed that they cannot be deformed by the insertion of a plug		P
	After this test: socket-outlet still comply with the requirements of clause 9		P
<b>10.7</b>	<b>Socket-outlet with or without lid with increased protection: live parts not accessible</b>		<b>N/A</b>
	Test wire of 1 mm diameter (figure 10) applied with a force of 1 N on all accessible surfaces does not touch live parts		N/A

IEC 60884-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
	Accessories with electrometric or thermoplastic material: test carried out at $(35 \pm 2) ^\circ\text{C}$		N/A
	Socket-outlet tested without a plug inserted with the lid, if any, open		N/A
10.101	<b>Knobs, operating levers, push buttons, rockers and the like: of insulating material, unless:</b>		<b>P</b>
	- accessible metal parts separated from metal parts of mechanism by double or reinforced insulation, or		N/A
	- reliably connected to earth		N/A
10.102	<b>Metal parts of the switch mechanism, which are not insulated from live parts, shall not protrude from the enclosure.</b>		<b>P</b>
10.103	<b>Metal parts of the switch mechanism, shall not be accessible when the switched socket-outlet with interlock is mounted as for normal use.</b>		<b>P</b>
	In addition, these metal parts shall be insulated from accessible metal parts.		N/A
	This additional requirement does not apply if the metal parts of the mechanism are separated from live parts or		N/A
	If they are reliably connected to earth.		N/A

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

IEC 60884-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
11.3	<b>Accessible metal parts of fixed socket-outlets: permanently and reliably connected to the earthing terminal</b>		N/A
11.4	<b>Socket-outlets, having an IP&gt; X0, with enclosure of insulating material and more than one cable inlet, provided with:</b>		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	<b>Connection between earthing terminal and accessible metal parts: of low resistance</b>		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	<b>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</b>		N/A

12	<b>TERMINALS AND TERMINATIONS</b>		P
	All the test on terminals, with the exception of the tests of 12.3.11 and 12.3.12, made after the test of clause 16		P
12.1	<b>General</b>		P
12.1.1	Rewirable fixed socket-outlets provided with screw-type terminals or with screwless terminals .....	Pillar-type	P
	Pre-soldered flexible conductors used: pre-soldered area outside the clamp area of screw-type terminals		N/A
	Clamping means of terminals: not serve to fix any other components		P
12.1.2	Non-rewirable accessories provided with soldered, welded, crimped or equally effective permanent connections (termination) .....		N/A
	Screwed or snap-on connections not used		N/A
	Connections made by crimping a pre-soldered flexible conductor not permitted		N/A

IEC 60884-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
<b>12.2</b>	<b>Terminals with screw clamping for external copper conductors</b>		<b>P</b>
12.2.1	Accessories provided with terminals which allows the proper connection of copper conductors as shows in table 3		P
	Rated current (A); Type of accessories .....	13, fixed accessory	—
	Type of conductor (rigid / flexible) .....	Rigid; flexible	—
	Smallest / largest cross-sectional area (mm <sup>2</sup> ) ...	1 / 2,5	—
	Diameter of the largest conductor (mm) .....	2,13 (rigid); 2,21 (flexible)	—
	Figure of terminal .....	Figure 2	—
	Minimum diameter D (minimum dimensions) of conductor space: required (mm); measured (mm) .....	3,0; 4,20	P
12.2.2	Terminals allow the conductor to be connected without special preparation		P
12.2.3	Terminals have adequate mechanical strength		P
	Screws and nut for clamping the conductors have metric ISO thread or a comparable thread		P
	Screws not of soft metal such as zinc or aluminium		P
12.2.4	Terminals resistant to corrosion		P
12.2.5	Terminals clamp the conductor(s) without undue damage	See appended table 12.2.5	P
	During the test: conductor not slip out, no break near clamping unit and no damage		P
12.2.6	Terminals clamp the conductor reliably between metal surfaces	See appended table 12.2.6	P
	During the test: conductor not move noticeably		P
12.2.7	Terminals designed or placed that the conductor cannot slip out while the clamping screws or nuts are tightened	See appended table 12.2.7	P
	After the test: no wire of the conductor escaped from the clamping unit		P
12.2.8	Terminals not work loose from their fixing to accessories		P
	Torque test (screws and nuts tightened and loosened 5 times):		P
	- rated current (A) .....	13	—
	- copper conductor of the largest cross-sectional area (mm <sup>2</sup> ) (table 3) .....	2,5	—
	- type of conductor (solid or stranded) .....	solid	—

IEC 60884-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
	- torque (Nm) (table 6 or appropriate figures 2, 3 or 4) .....	1,2	—
	During the test: terminals not work loose and show no damage		P
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		P
12.2.10	Earthing terminals: no risk of corrosion		P
	Body of brass or other metal no less resistant to corrosion		P
	The body is a part of a frame or enclosure of aluminium alloy: precautions are taken to avoid the risk of corrosion		N/A
12.2.11	Pillar terminals: distance $g$ no less than the value specified in figure 2: required (mm); measured (mm) .....	1,5; 2,38	P
	Mantle terminals: distance $g$ no less than the value specified in figure 5: required (mm); measured (mm) .....		N/A
<b>12.3</b>	<b>Screwless terminals for external copper conductors</b>		N/A
12.3.1	Screwless terminals of the type suitable for:		N/A
	- 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 <sup>2</sup> (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

IEC 60884-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
12.3.6	It is 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 is not possible to confuse the opening intended 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:		N/A
	- 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 the connection or disconnection the conductors can be connected or disconnected either at the same time or separately		N/A
	- each conductor introduced in a separate clamping unit.		N/A
	- it is possible to clamp securely any number of conductors up to the maximum as designed. Number of conductors; Nominal cross-sectional area (mm <sup>2</sup> ) .....		N/A
12.3.8	Screwless terminals of fixed socket-outlets: adequate insertion obvious and over-insertion prevented		N/A
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	See appended table 12.3.10	N/A
	During application of the pull conductor not come out of the terminal		N/A
	Additional test with apparatus shown in figure 11	See appended table 12.3.10	N/A
	During the test: conductors not moved noticeably in the clamping unit		N/A
	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	See appended table 12.3.11	N/A



IEC 60884-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
	After the test: inspection show no changes		N/A
	Repetition of mechanical strength test according to 12.3.10	See appended table 12.3.11	N/A
	During application of the pull conductor not come out of the terminal		N/A
	Additional test with apparatus shown in figure 11	See appended table 12.3.11	N/A
	During the test: conductors not moved noticeably in the clamping unit		N/A
	After these tests: neither terminals nor clamping means have worked loose and conductors show no deterioration		N/A
12.3.12	Screwless terminals: connected rigid solid conductor remains clamped, even when deflected during normal installation	See appended table 12.3.12	N/A

<b>13</b>	<b>CONSTRUCTION OF FIXED SOCKET-OUTLETS</b>		<b>P</b>
<b>13.1</b>	<b>Socket-contact assembly have sufficient resilience to ensure adequate contact pressure on plug pins</b>		<b>P</b>
	Part of socket-contact assembly ensure metallic opposing contacts at least on two sides of each pins		P
<b>13.2</b>	<b>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</b>		<b>P</b>
	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		P
	Compliance is checked by inspection and in case of doubt by the tests of 14.2 and Clause 21 on a new set of specimens without plastic		P
<b>13.3</b>	<b>Insulating linings, barriers and the like: adequate mechanical strength</b>		<b>P</b>
<b>13.4</b>	<b>Socket-outlets constructed as to permit</b>		<b>P</b>
	- easy introduction into the terminal and reliable connection of the conductors in the terminals, except for lead wires of pilot lights		P
	- easy fixing of the main part to a wall or in a mounting box		P
	- correct positioning of the conductors		P

IEC 60884-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
	- adequate space between the underside of the main part and the surface on which the main part is mounted;		P
	- adequate space between the sides of the main part and the enclosure (cover or box);		P
	Socket-outlets having screwless terminals, constructed that the connecting and/or disconnecting means of the screwless terminals cannot be activated by the conductors during and after installation		N/A
	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.		P
	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> ).....:	2,5	P
13.5	<b>Socket-outlets designed that full engagement of associated plugs is not prevented by any projection from their engagement face</b>		P
	Gap between the engagement face of the socket-outlet and the plug: not exceed 1 mm		P
13.6	<b>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</b>		N/A
13.7	<b>Covers, cover-plates or parts of them intended to ensure protection against electric shock:</b>		P
	- held in place at two or more points by effective fixings		P
	- fixed by means of a single fixing, for example, by a screw, provided that they are located by another means (for example, by a shoulder)		N/A

IEC 60884-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
	Fixings of covers or cover-plates of socket-outlets of design A serve to fix the main parts: there are means to maintain the base in position, even after removal of the covers or cover-plates		P
13.7.1	Covers or cover-plates whose fixings are of the screw-type:		N/A
	Compliance checked by inspection only		N/A
13.7.2	Covers or cover-plates whose fixing is not dependent on screws and whose removal is obtained by applying a force in a direction approximately perpendicular to the mounting/supporting surface:		P
	Compliance checked, when their removal may give access, with the standard test finger:		P
	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)		P
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:		N/A
	Compliance checked, when their removal may give access, with the standard test finger:		N/A
	to live parts: by the test of 24.14 (verification of the non-removal 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

IEC 60884-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
13.8	<b>Cover-plate intended for a socket-outlet with earthing contact: not interchangeable with a cover-plate intended for a socket-outlet without earthing contact</b>		<b>N/A</b>
13.9	<b>Surface-type socket-outlets: no free openings in their enclosures</b>		<b>N/A</b>
	Drain holes, small gaps between enclosures or boxes and conduits, cables, or earthing contacts, if any, or between enclosures or boxes and grommets or membranes and knockouts are neglected provided they do not compromise the declared IP rating.		N/A
13.10	<b>Screws or other means for mounting the socket-outlet on a surface in a box or enclosure: easily accessible from the front</b>		<b>P</b>
	Fixing means not serve any other fixing purpose		P
13.11	<b>Multiple socket-outlets with a common base: provided with fixed links for the interconnection of the contacts in parallel</b>		<b>N/A</b>
	Fixing of the links independent from the connection of the supply wires		N/A
13.12	<b>Multiple socket-outlets, comprising separate bases: correct position of each base ensured</b>		<b>P</b>
	Fixing of each base independent of the fixing of the combination to the mounting surface		P
13.13	<b>Mounting plate of surface-type socket-outlets: adequate mechanical strength</b>		<b>N/A</b>
13.14	<b>Socket-outlets withstand the lateral strain imposed by equipment likely to be introduced into them</b>		<b>P</b>
	Socket-outlets 16A 250V: test made 4 times with the socket-outlet turned through 90°, 5 N for 1 min (device shown in fig. 13)		P
	During the test: device not become disengaged from the socket-outlet		P
	After the test:		P
	- no damage		P
	- socket-outlets comply with clause 22		P
13.15	<b>Socket-outlets are not an integral part of lampholders</b>		<b>P</b>
13.16	<b>Surface-type socket-outlets having IP &gt; 20 are according to their IP classification when fitted with conduits or with sheathed cables and without a plug in engagement</b>		<b>N/A</b>

IEC 60884-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
	Surface-type socket-outlets having a degree of protection from IPX4 to IPX6 shall 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
<b>13.17</b>	<b>Earthing pins: adequate mechanical strength</b>		<b>N/A</b>
	Not solid pins: compliance checked by inspection and by the test of 14.2 made after the tests of clause 21		N/A
<b>13.18</b>	<b>Earthing contacts, phase contacts and neutral contacts :</b>		<b>P</b>
	- locked against rotation;		P
	- when the product is ready for the wiring do not possible to be removed without the use of a tool		P
<b>13.19</b>	<b>Metal strips of the earthing circuit: no burrs which might damage the insulation of the supply conductors</b>		<b>P</b>
<b>13.20</b>	<b>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</b>		<b>P</b>
<b>13.21</b>	<b>Inlet openings: allow the introduction of the conduit or the sheath of the cable</b>		<b>N/A</b>
	Surface-type socket-outlets:		N/A
	the conduit or sheath of the cable can enter at least 1 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
<b>13.22</b>	<b>Membranes (grommets) in inlet openings: reliably fixed and not displaced by the mechanical and thermal stresses occurring in normal use</b>		<b>N/A</b>

IEC 60884-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
	Test on membranes subjected to the ageing treatment specified in 16.1 and assembled in the accessories		N/A
	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
<b>13.23</b>	<b>Membranes in inlet openings: introduction of the cables into the accessory permitted when the ambient temperature is low</b>		<b>N/A</b>
	Test on membranes not subjected to the ageing treatment specified in 16.1 and assembled in the accessories		N/A
	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
<b>13.101</b>	<b>Switches shall be constructed to match the number of poles of the socket-outlet, except that the neutral pole is not switched in unswitched neutral socket-outlets.</b>		<b>P</b>
	The earthing contact is not considered as a pole and the earth circuit shall not be switched		<b>P</b>
	The position of the switch operating member shall be such that it does not prevent, nor shall its correct operation be prevented by, the proper insertion of the corresponding plug or plugs.		<b>P</b>
<b>13.102</b>	<b>Knobs of rotary switches shall be securely coupled to the shaft or the part operating the mechanism.</b>		<b>N/A</b>
	The knob is subjected for 1 min to an axial pull of 100 N.		N/A
	After, knob having only one direction of operation are turned 100 times in the reverse direction.		N/A
	Knob shall not become detached		N/A

IEC 60884-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
13.103	<b>The actuating member of a switch, when released, shall automatically take up the position corresponding</b>		<b>P</b>
	Single push-button the actuating member may take up a single rest position.		N/A
13.104	<b>Switches shall be so constructed that the moving contacts can come to rest only in the "ON" or "OFF" position</b>		<b>P</b>
	Intermediate position permissible if:		N/A
	- it corresponds to the intermediate position of the actuating member, and		N/A
	- the insulation between fixed and moving contacts is adequate. Electric strength test as specified in 17.2: test voltage a.c. for 1 min (V) .....:	500 V / 750 V / 1250 V / 2000 V	N/A
13.105	<b>Switches shall be constructed so that undue arcing cannot occur when the switch is operated slowly.</b>		<b>P</b>
	Compliance is checked by:		P
	After the test of clause 21, to break the circuit a further ten times		P
	During the test, no sustained arcing shall occur.		P
13.106	<b>Switched socket-outlets with switches operating more than one pole shall make and break all poles simultaneously.</b>		<b>P</b>
	Switched neutral, the neutral shall not make after or break before other poles.		P
13.107	<b>The action of the mechanism, if the cover or cover plates are removable for installation purposes, shall be independent of the presence of the covers or cover plates.</b>		<b>P</b>
14	<b>CONSTRUCTION OF PLUGS AND PORTABLE SOCKET-OTLETS</b>		N/A
15	<b>INTERLOCKED SOCKET-OUTLETS</b>		N/A
16	<b>RESISTANCE TO AGEING, PROTECTION PROVIDED BY ENCLOSURES, AND RESISTANCE TO HUMIDITY</b>		P
16.1	<b>Resistance to ageing</b>		<b>P</b>
	Accessories are resistant to ageing		P
	For accessories having a lid, the lid is closed during the test		N/A

IEC 60884-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
	Accessories subjected to a test in a heating cabinet at $(70 \pm 2) ^\circ\text{C}$ for seven days (168 h)		P
	After the tests, the specimens 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
<b>16.2</b>	<b>Protection provided by enclosures</b>		<b>P</b>
	Enclosures provide a degree of protection in accordance with the IP designation of the accessory		P
16.2.1	Protection against access to hazardous parts and against harmful effects due to ingress of solid foreign objects		P
	Accessories and their enclosures provide a degree of protection against access to hazardous parts and against harmful effects due to ingress of solid foreign objects		P
	Fixed socket-outlets: mounted as in normal use on a vertical surface		P
	Flush-type and semi-flush type socket-outlets: mounted in an appropriate box according to the manufacturer's instructions		P
	Accessories with screwed glands or membranes fitted with flexible cables within the range specified in table 3:		N/A
	- largest cross-sectional area ( $\text{mm}^2$ ); type of cable (table 17) .....		—
	- smallest cross-sectional area ( $\text{mm}^2$ ); type of cable (table 17) .....		—
	Glands tightened with a torque equal to 2/3 of the torque applied during the test of 24.6 (Nm) .....		—
	Screws of the enclosure tightened with a torque equal to 2/3 of the torque given in table 6 (Nm) ...:		—
16.2.1.1	Protection against access to hazardous parts		P
	Appropriate test performed as specified in IEC 60529 (see also clause 10)		P
16.2.1.2	Protection against harmful effects due to ingress of solid foreign objects		P
	Appropriate test performed as specified in IEC 60529		P
	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



IEC 60884-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
	Test on accessories with IP6X (considered to be of category 1): dust do not penetrate		N/A
16.2.2	Protection against harmful effects due to ingress of water		N/A
	Accessories and their enclosures provide a degree of protection against harmful effects due to ingress of water in accordance with their IP classification		N/A
	Appropriate test performed as specified in IEC 60529 under the following conditions:		N/A
	Flush-type and semi-flush type socket-outlets: fixed in a vertical test wall using an appropriate box according to the manufacturer's instructions		N/A
	Accessory suitable to be installed on a rough wall: test wall according to figure 15 is used		N/A
	Surface-type socket-outlets mounted as for normal use in a vertical position and fitted with cables (having conductors of the largest and smallest nominal cross-sectional area given in table 3) or conduits or both in accordance with the manufacturer's instructions:		N/A
	- largest cross-sectional area (mm <sup>2</sup> ); type of cable (table 17) .....		—
	- smallest cross-sectional area (mm <sup>2</sup> ); type of cable (table 17) .....		—
	Screws of enclosure tightened with a torque equal to 2/3 of the torque given in table 6 (Nm) .....		—
	Glands tightened with a torque equal to 2/3 of the torque applied during the test of 24.6 (Nm) .....		—
	Accessory with drain holes opened during the test: any accumulation of water proved by inspection		N/A
	Socket-outlets tested without a plug in engagement		N/A
	of the same system and with the same degree of protection against harmful effects due to ingress of water		—
	Specimens withstand an electric strength test specified in 17.2 which is started within 5 min of completion of the IP test		N/A
<b>16.3</b>	<b>Resistance to humidity</b>		<b>P</b>
	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:		P
	- two days (48 h) for accessories having IPX0		P
	- seven days (168 h) for accessories having IP>X0		N/A

IEC 60884-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
	After this treatment the specimens show no damage		P
<b>17</b>	<b>INSULATION RESISTANCE AND ELECTRIC STRENGTH</b>		<b>P</b>
<b>17.1</b>	<b>Insulation resistance measured 1 min after application of 500 V d.c.</b>	See appended table 17.1	<b>P</b>
<b>17.2</b>	<b>Electric strength: a.c. test voltage applied for 1 min</b>	See appended table 17.2	<b>P</b>
<b>18</b>	<b>OPERATION OF EARTHING CONTACTS</b>		<b>P</b>
	Earthing contacts provide adequate contact pressure and not deteriorate in normal use		P
	Compliance checked by the tests of clauses 19 and 21		P
<b>19</b>	<b>TEMPERATURE RISE</b>		<b>P</b>
	Accessories constructed that they comply with the following temperature rise test		P
	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	P
	The temperature rise of the terminals, terminations and clamping units according to Figure 44 determined by means of thermocouples do not exceed 45 K	See appended tables	P
<b>19.1</b>	<b>Socket-outlets are tested as follows:</b>		<b>N/A</b>
	Socket-outlets tested using a test plug with brass pins having the minimum specified dimensions	See appended table 19.1	N/A
	For this test the temperature rise is measured on the terminals and terminations.		N/A
<b>19.2</b>	<b>Fixed socket-outlets of a socket-outlet and fused plug system are tested as follows:</b>		<b>P</b>
	a) For a single socket-outlet the plug is inserted into the socket-outlet and 70 % of the test current is passed through the plug	See appended table 19.2	P
	The balance of the total test current is passed, simultaneously through a looped connection, connected to the socket-outlet terminals		P
	The total nominal load on the supply cable is passed for 60 min	See appended table 19.2	P
	b) For a multiple socket-outlet a plug is inserted into one socket-outlet and 70 % of the test current is passed	See appended table 19.2	P

IEC 60884-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
	A second plug is inserted into another socket-outlet and the balance of the total test current is passed simultaneously through this plug.....:	See appended table 19.2	P
	The total nominal load on the supply cable is passed for 60 min.	See appended table 19.2	P

<b>20</b>	<b>BREAKING CAPACITY</b>		P
	Accessories have adequate breaking capacity		P
	Compliance checked by testing:		P
	- socket-outlets;	See appended table 20	P
	Multiple socket-outlets: test carried out on one socket-outlet of each type and current rating		N/A
	During the test: no sustained arcing occur		P
	After the test:		P
	- specimens show no damage impairing their further use;		P
	- entry holes for the pins not show any damage which may impair the safety		P
Addition:	Switches incorporated in switched socket-outlets shall have adequate making and breaking capacity		P
	- nominal cross-sectional area as for the test of clause 17 (mm <sup>2</sup> ) .....:	2,5	P
	Test with cos $\phi$ 0,6 alternating current		P
	- test voltage (1,1 V <sub>n</sub> ) (V) .....:	275	P
	- test current (1,25 I <sub>n</sub> ) (A) .....:	16,25	P
	- 200 operations; rate (operations per minute) ..:	15 operations per minute	P
	Rotary switches intended to be operated in either direction, the actuating member is turned in one direction for half the total number of operations, and in the reverse direction for the remainder		N/A
	During the test: no sustained arcing nor welding of the contacts		P
	After the test: specimens show no damage		P

<b>21</b>	<b>NORMAL OPERATION</b>		P
	Accessories withstand without excessive wear or other harmful effect, the mechanical, electrical and thermal stresses occurring in normal use		P
	Compliance checked by testing:		P
	- socket-outlets;	See appended table 21	P

IEC 60884-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
	Test performed according to the procedure specified in Figure 43; point of Figure 43 at which the test program has begun (1, 2, 3) .....	1	—
	Test current passed:		P
	- during each insertion and withdrawal of the plug ( $I_n \leq 16A$ )		P
	- during alternate insertion and withdrawal, the other insertion and withdrawal being made without current flowing ( $I_n > 16A$ )		N/A
	Multiple socket-outlets: test carried out on one socket-outlet of each type and current rating		N/A
	During the test: no sustained arcing occur		P
	After the test the specimens do not show:		P
	- wear impairing their further use;		P
	- deterioration of enclosures, insulating lining or barriers;		P
	- damage to the entry holes for the pins, that might impair proper working;		P
	- loosening of electrical or mechanical connections;		P
	- seepage of sealing compound		N/A
	Shuttered socket-outlets: gauges of figure 9 and 10 applied to the entry holes corresponding to live contacts do not touch live parts when they remain under the relevant forces	See appended table 21	P
	Temperature-rise test (requirements of clause 19)	See appended table 21	P
	Electric strength (sub-clause 17.2)	See appended table 21	P
Addition:	Switches incorporated in switched socket-outlets shall withstand, without excessive wear or other harmful effect, the mechanical, electrical and thermal stresses occurring in normal use		P
	- nominal cross-sectional area as for the test $o(mm^2)$ :	1,5	P
	Test with $\cos \phi$ 0,8 alternating current		P
	- test voltage ( $V_n$ ) (V) .....	250	P
	- test current ( $I_n$ ) (A) .....	13	P
	- number of operations per table 101 :	40000	P
	Rotary switches intended to be operated in either direction, the actuating member is turned in one direction for half the total number of operations, and in the reverse direction for the remainder		N/A
	During the test the specimens shall function correctly		P

IEC 60884-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
	Reduced electric strength per clause 17 without humidity treatment	See appended table 21 bis	P
	Temperature rise test per clause 19 after normal operation	See appended table 21 bis	P
	After the tests the specimens not show:		P
	- wear impairing their further use;		P
	- discrepancy between the position of the actuating member (if indicated) and that of the moving contacts		P
	- deterioration of enclosures, insulating lining or barriers;		P
	- seepage of sealing compound		N/A
	- loosening of electrical or mechanical connections;		P
	- displacement of moving contacts of switches		P
<b>22</b>	<b>FORCE NECESSARY TO WITHDRAW THE PLUG</b>		<b>P</b>
	Construction of accessory does allow the easy insertion and withdrawal of the plug, and prevent the plug from working out of the socket-outlet in normal use		P
<b>22.1</b>	<b>Verification of the maximum withdrawal force</b>		<b>P</b>
<b>22.2</b>	<b>Verification of the minimum withdrawal force</b>		<b>P</b>
<b>23</b>	<b>FLEXIBLE CABLES AND THEIR CONNECTIONS</b>		<b>N/A</b>
<b>24</b>	<b>MECHANICAL STRENGTH</b>		<b>P</b>
	Accessories, surface mounting boxes, screwed glands and shrouds have adequate mechanical strength		P
<b>24.1</b>	<b>Fixed socket-outlets, and surface-type mounting boxes: hammer test described in IEC 60068-2-75 (test EHA), equivalent mass of 250 g</b>	See appended table 24.1	<b>P</b>
	After the test: no damage, live parts no become accessible		P
<b>24.3</b>	<b>Main parts of surface-type socket-outlets: first fixed to a cylinder of rigid steel sheet and then fixed to a flat steel sheet</b>		<b>N/A</b>
	During and after the tests: no damage		N/A
<b>24.6</b>	<b>Screwed glands of accessories having IP&gt;20: torque test (1 min)</b>		<b>N/A</b>
	- diameter of test rod (mm) .....		—
	- type of material (metal / moulded) .....		—
	- torque (Nm) .....		—

IEC 60884-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
	After the test: no damage of glands and enclosures of the specimens		N/A
<b>24.8</b>	<b>Shuttered socket-outlets: mechanical test carried out on specimens submitted to the normal operation test according to clause 21</b>		<b>P</b>
	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		P
	After the test: no damage		P
<b>24.14</b>	<b>Forces necessary to retain or remove covers, cover-plates or parts of them (accessibility with the test finger to live parts)</b>		<b>N/A</b>
24.14.1	Verification of the retention of covers or cover-plates (fixed socket-outlets)		N/A
	Force (40 N / 80 N) applied for 1 min perpendicular to the mounting surface (N) ..... :		—
	Covers or cover-plates did not come off		N/A
	Test repeated on new specimens with a sheet of hard material, (1 ± 0,1) mm thick, fitted around the supporting frame (fig. 31): covers or cover-plates did not come off		N/A
	After the test: no damage		N/A
24.14.2	Verification of the removal of covers or cover-plates (fixed socket-outlets)		N/A
	Force not exceeding 120 N applied 10 times perpendicular to the mounting / supporting surface: covers or cover-plates came off		N/A
	Test repeated on new specimens with a sheet of hard material, (1 ± 0,1) mm thick, fitted around the supporting frame (fig. 31): covers or cover-plates came off		N/A
	After the test: no damage		N/A
24.14.3	Verification of the retention of covers or cover-plates (plugs and portable socket-outlets)		N/A
	Force 80 N applied for 1 min perpendicular to the mounting surface: covers, cover-plates or parts of them did not come off		N/A
	Test repeated with a force of 120 N:		N/A
	Rewirable plugs and rewirable portable socket-outlets: covers, cover-plates or parts of them came off but the specimen showed no damage		N/A
	Non-rewirable, non-moulded-on accessories: covers, cover-plates or parts of them came off but the accessories were permanently useless according to 14.1		N/A
<b>24.15</b>	<b>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)</b>		<b>N/A</b>

IEC 60884-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
24.14.1	Verification of the non-removal of covers or cover-plates		N/A
	Force (10 N / 20 N) applied for 1 min in direction perpendicular to the mounting surface (N) ..... :		—
	Covers or cover-plates did not come off		N/A
	Test repeated on new specimens with a sheet of hard material, 1 mm ± 0,1 mm thick, fitted around the supporting frame (fig. 31): covers or cover-plates did not come off		N/A
	After the test: no damage		N/A
24.14.2	Verification of the removal of covers or cover-plates		N/A
	Force not exceeding 120 N applied 10 times in direction perpendicular to the mounting / supporting surface: covers or cover-plates came off		N/A
	Test repeated on new specimens with a sheet of hard material, 1 mm ± 0,1 mm thick, fitted around the supporting frame (fig. 31): covers or cover-plates came off		N/A
	After the test: no damage		N/A
24.16	<b>Force necessary for covers or cover-plates to come off or not to come off (accessibility to insulating parts, earthed metal parts, live parts of SELV ≤ 25 V a.c. or metal parts separated from live parts by creepage distances twice those according to table 23)</b>		<b>P</b>
24.14.1	Verification of the non-removal of covers or cover-plates		P
	Force 10 N applied for 1 min in direction perpendicular to the mounting surface: covers or cover-plates did not come off		P
	Test repeated on new specimens with a sheet of hard material, 1 mm ± 0,1 mm thick, fitted around the supporting frame (fig. 31): covers or cover-plates did not come off		P
	After the test: no damage		P
24.14.2	Verification of the removal of covers or cover-plates		P
	Force not exceeding 120 N applied 10 times in direction perpendicular to the mounting / supporting surface: covers or cover-plates came off		P
	Test repeated on new specimens with a sheet of hard material, 1 mm ± 0,1 mm thick, fitted around the supporting frame (fig. 31): covers or cover-plates came off		P
	After the test: no damage		P
24.17	<b>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 ..... :</b>	complying	—

IEC 60884-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
24.18	Test with gauge according to figure 5 applied as shown in figure 11 (1 N): gauge not enter more than 1mm .....	Not complying	—
24.19	Shroud of portable socket-outlets: compression test (20 ± 2) N at (25 ± 5) °C by means of the apparatus shown in figure 38		N/A
	After 1 min and while the shrouds are still under pressure the dimensions did comply with the appropriate standard sheet		N/A
	Test repeated with the specimen rotated 90 °		N/A
25	RESISTANCE TO HEAT		P
25.1	Specimens kept for 1 h in a heating cabinet at (100 ± 2) °C for 1 h		P
	During the test: no change impairing their further use and sealing compound, if any, not flow		P
	After the test:		P
	- no access to live parts with probe B of IEC 61032 applied with a force not exceeding 5 N		P
	- markings still legible		P
25.2	Parts of insulating material necessary to retain current-carrying parts and parts of the earthing circuit in position, as well as parts of the front surface zone, 2 mm wide, surrounding the phase and neutral pin entry holes: ball-pressure test at (125 ± 2)°C for 1 h	See appended table 25.2	P
25.3	Parts of insulating material not necessary to retain current-carrying parts and parts of the earthing circuit in position, even though in contact with them: ball-pressure test (1 h)	See appended table 25.3	P
26	SCREWS, CURRENT-CARRYING PARTS AND CONNECTIONS		P
26.1	Connections withstand mechanical stresses		P
	Thread-forming or thread-cutting screws used only if supplied together with the piece in which they are intended to be inserted		N/A
	Thread-cutting screws intended to be used during installation: captive		N/A
	Screws and nuts which transmit contact pressure: in engagement with a metal thread		P
	Threaded part torque test	See appended table 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



IEC 60884-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
<b>26.3</b>	<b>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</b>		<b>P</b>
	Connections made by insulation piercing of tinsel cord reliable		N/A
<b>26.4</b>	<b>Screws and rivets locked against loosening and/or turning</b>		<b>P</b>
<b>26.5</b>	<b>Current-carrying parts (including earthing terminals) have mechanical strength, electrical conductivity and resistance to corrosion adequate:</b>		<b>P</b>
	- 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;		P
	- stainless steel with at least 13 % chromium and not more than 0,09 % carbon		N/A
	- steel with electroplated coating of zinc (ISO 2081): service condition ISO no. (1/2/3); IP (X0/X4/X5); thickness (µm) .....		N/A
	- steel with electroplated coating of nickel and chromium (ISO 1456): service condition ISO no. (2/3/4); IP (X0/X4/X5); thickness (µm) .....		N/A
	- steel with electroplated coating of tin (ISO 2093): service condition ISO no. (2/3/4); IP (X0/X4/X5); thickness (µm) .....		N/A
	Current-carrying parts subjected to mechanical wear: not of steel with electroplated coating		N/A
	Metals having a great difference of electrochemical potential: not used in contact with each other		N/A
<b>26.6</b>	<b>Contacts subjected to a sliding action are of metal resistant to corrosion</b>		<b>P</b>
<b>26.7</b>	<b>Thread-forming screws and thread-cutting screws are not used for the connection of current-carrying parts</b>		<b>N/A</b>
	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
<b>27</b>	<b>CREEPAGE DISTANCES, CLEARANCES AND DISTANCES THROUGH SEALING COMPOUND</b>		<b>P</b>
<b>27.1</b>	<b>Creepage distances, clearances and distances through sealing compound are not less than the values shown in table 23</b>	See appended table 27.1	<b>P</b>

IEC 60884-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
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
27.101	For switches incorporated in switched socket-outlets, creepage distances, clearances and distances through sealing compound shall be not less than the values shown in table 102		P
28	<b>RESISTANCE OF INSULATING MATERIAL TO ABNORMAL HEAT, TO FIRE AND TO TRACKING</b>		P
28.1	<b>Resistance to abnormal heat and to fire</b>		P
28.1.1	Glow-wire test according to IEC 60695-2-10 and IEC 60695-2-11	See appended table 28.1.1	P
28.2	<b>Resistance to tracking</b>		N/A
	Parts of insulating material retaining live parts in position of accessories having IP>X0: of material resistant to tracking		N/A
	Tracking test at 175 V with solution A of IEC 60112	See appended table 28.2	N/A
29	<b>RESISTANCE TO RUSTING</b>		P
	Ferrous parts protected against rusting		P
	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 $(100 \pm 5) ^\circ\text{C}$ :		N/A
	No signs of rust		N/A
30	<b>ADDITIONAL TESTS ON PINS PROVIDED WITH INSULATING SLEEVES</b>		N/A

IEC 60884-2-3				
Clause	Requirement + Test		Result - Remark	Verdict
12.2.5	TABLE: test with apparatus shown in figure 11 (screw-type terminals)			P
	rated current (A) .....	13		—
	type of conductors .....	rigid solid		—
	smallest/largest cross-sectional area per table 3 (mm <sup>2</sup> ) .....	1 / 2,5		—
	number of conductors.....	1		—
	nominal diameter of thread (mm); torque per table 6 (Nm) .....	3,94; 1,2		—
Cross-sectional area (mm <sup>2</sup> )	Diameter of bushing hole per table 9 (mm)	Height H per table 9 (mm)	Mass (kg)	Remarks
1	6,5	260	0,4	—
2,5	9,5	280	0,7	—
supplementary information:				

12.2.6	TABLE: pull test (screw-type terminals)			P
	rated current (A) .....	13		—
	smallest/largest cross-sectional area per table 3 (mm <sup>2</sup> ) .....	1 / 2,5		—
	nominal diameter of thread (mm); torque 2/3 per table 6 (Nm) .....	3,94; 0,8		—
Cross-sectional area (mm <sup>2</sup> )	Number of conductors	Type of conductors (rigid solid / rigid stranded / flexible)	Pull per table 4 applied for 1 min (N)	Remarks
1	1	rigid solid	35	—
2,5	1	rigid solid	50	—
supplementary information:				

12.2.7	TABLE: tightening test (screw-type terminals)			P
	rated current (A) .....	13		—
	nominal diameter of thread (mm); torque 2/3 per table 6 (Nm) .....	3,94; 0,8		—
Largest cross-sectional area per table 3 (mm <sup>2</sup> )	Permissible number of conductors <sup>(1)</sup>	Type of conductors (rigid solid / rigid stranded / flexible)	Number of wires and nominal diameter of wires per table 5	Remarks
2,5	1	rigid solid	1 x 1,78	—
2,5	1	rigid stranded	7 x 0,67	—
supplementary information: <sup>(1)</sup> terminals intended for looping-in 2 or 3 conductors				

IEC 60884-2-3			
Clause	Requirement + Test	Result - Remark	Verdict

17.1	TABLE: insulation resistance		P
Test voltage applied between: Item per 17.1		measured (MΩ)	required (MΩ)
a)	between all poles connected together and the body, with a plug in engagement	500 MΩ	≥ 5 MΩ
b)	between each pole in turn and all others connected to the body, with a plug in engagement	500 MΩ	≥ 5 MΩ
c)	between any metal enclosures and metal foil in contact with the inner surface of its insulating linings, if any	—	≥ 5 MΩ
d)	between any metal part of the cord anchorage, including clamping screws, and earthing terminal(s) or earthing contact(s), if any, of portable socket-outlets	—	≥ 5 MΩ
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
f)	between all poles connected together and the body, with the switch in the “on” position:	500 MΩ	≥ 5 MΩ
g)	between each pole in turn and all other poles connected to the body, with the switch in the “on” position	—	≥ 2 MΩ
h)	between the terminals which are electrically connected together when the switch is in the “on” position, the switch being in the “off” position for normal/mini-gap construction	500 MΩ	≥ 2 MΩ
supplementary information:			

17.2	TABLE: electric strength		P
	rated voltage (V) .....	250	—
Test voltage applied between: item per 17.1		test voltage (V)	flashover / breakdown (Yes/No)
a)	between all poles connected together and the body, with a plug in engagement	2000	No
b)	between each pole in turn and all others connected to the body, with a plug in engagement	2000	No
c)	c) between any metal enclosures and metal foil in contact with the inner surface of its insulating linings, if any	—	—
d)	between any metal part of the cord anchorage, including clamping screws, and earthing terminal(s) or earthing contact(s), if any, of portable socket-outlets	—	—
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	—	—
f)	between all poles connected together and the body, with the switch in the “on” position:	2000	No
g)	between each pole in turn and all other poles connected to the body, with the switch in the “on” position	—	—

IEC 60884-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
h)	between the terminals which are electrically connected together when the switch is in the "on" position, the switch being in the "off" position for normal/mini-gap construction	2000	No
supplementary information:			

19.2	TABLE: temperature rise test for fixed socket-outlets of a socket-outlet and fused plug system								P
	rated current of accessory (A) .....		13						—
	type of accessory (non-rewirable / rewirable) ....:		rewirable						—
	nominal cross-sectional area per table 15 (mm <sup>2</sup> ) :		1,5						—
	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.....:		3,94; 0,8						—
	Test a) single socket-outlet								P
specimen	type of flexible cable (1)	number of conductors and nominal cross-sectional area (mm <sup>2</sup> ) (1)	test circuit (L-L/L-N/L-E)	70% of test current (table 20) for 1 h (socket-outlet) (A)	30% of test current (table 20) for 1 h (looped) (A)	test current (table 20) for 1 h (supply cable) (A)	measured ΔT (K)	allowed ΔT (K)	ΔT of external parts of insulating material (25.3)(K)
A1#	—	—	L-N/L-E	14	6	20	MAX 26,5	45	MAX 9,2
A2#	—	—	L-N/L-E	14	6	20	MAX 27,8	45	MAX 9,7
A3#	—	—	L-N/L-E	14	6	20	MAX 26,7	45	MAX 8,5
supplementary information:									
(1) Non-rewirable accessories									
	Test b) multiple socket-outlet								N/A
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)	70% of test current (table 20) for 1 h (1 <sup>st</sup> socket-outlet) (A)	30% of test current (table 20) for 1 h (2 <sup>nd</sup> socket) (A)	test current (table 20) for 1 h (supply cable) (A)	measured ΔT (K)	allowed ΔT (K)	ΔT of external parts of insulating material (25.3)(K)
—	—	—	—	—	—	—	—	—	—
supplementary information:									
(1) Non-rewirable accessories									

20	TABLE: breaking capacity	P
----	--------------------------	---

IEC 60884-2-3									
Clause	Requirement + Test				Result - Remark			Verdict	
	rating of accessory (A/V) .....				13/ 250			—	
	type of accessory .....				rewirable			—	
	nominal cross-sectional area per table 15 (mm <sup>2</sup> ) / type of conductor .....				1,5			—	
	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) (rewirable accessories) .....				3,94; 0,8			—	
	rate of operation (strokes per minute) .....				30			—	
specimen	test plug (for each type and current rating of socket-outlet)		test voltage (1,1 Vn) (V)	test current (1,25 In) cos φ 0,6 (A)	number of strokes (plugs only)	number of strokes, with shutters – with current <sup>(1)</sup>	number of strokes, without shutters – with current <sup>(2)</sup>	remarks	
	pin dimensions (mm)	pin spacing (mm)							
A1#	3,98×6,35	22,20	275	16,25	—	100	—	—	P
A2#	3,98×6,35	22,20	275	16,25	—	100	—	—	P
A3#	3,98×6,35	22,20	275	16,25	—	100	—	—	P
supplementary information:									
<sup>(1)</sup> starting point 1 or 3 of Figure 43									
<sup>(2)</sup> starting point 2 of Figure 43									

21	TABLE: normal operation								P
	rating of accessory (A/V) .....				13/ 250			—	
	type of accessory .....				rewirable			—	
	nominal cross-sectional area per table 15 (mm <sup>2</sup> ) / type of conductor .....				1,5			—	
	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) .....				3,94; 0,8			—	
	rate of operation (strokes per minute) .....				30			—	
specimen	test plug (for each type and current rating of socket-outlet)		test voltage (Vn)	test current (table 20),	number of strokes	number of strokes, with	number of strokes,	number of strokes,	
	pin dimensions (mm)	pin spacing (mm)							

IEC 60884-2-3									
Clause	Requirement + Test					Result - Remark			Verdict
	pin dimensions (mm)	pin spacing (mm)	(V)	cos φ 0,8 (A)	(plugs only)	shutters – with current <sup>(1)</sup>	without shutters – with current <sup>(2)</sup>	with shutters – without current <sup>(3)</sup>	
A1#	3,98×6,35	22,20	250	13	—	10000	—	—	P
A2#	3,98×6,35	22,20	250	13	—	10000	—	—	P
A3#	3,98×6,35	22,20	250	13	—	10000	—	—	P
	TABLE: test for shuttered socket-outlets								P
specimen	Gauge of figure 9, applied with a force of 20 N, for approximately 5 s, successively in three directions				Steel gauge of figure 10, applied with a force of 1 N for approximately 5 s, in three directions				
A1#	Did not touch live parts				Did not touch live parts				P
A2#	Did not touch live parts				Did not touch live parts				P
A3#	Did not touch live parts				Did not touch live parts				P
19	TABLE: temperature rise test								P
specimen	test circuit (L-L/L-N/L-E)	test current (table 20 for clause 21) for 1 h (A)			measured dT (K)		allowed dT (K)		
A1#	L-N/L-E	13			MAX 25,1		45		—
A2#	L-N/L-E	13			MAX 26,2		45		—
A3#	L-N/L-E	13			MAX 24,2		45		—
17.2	TABLE: electric strength								P
specimen	item per 17.1	test voltage applied between:			test voltage (V)		flashover / breakdown (Yes/No)		
	a)	between all poles connected together and the body, with a plug in engagement			1500		No		
	b)	between each pole in turn and all others connected to the body, with a plug in engagement			1500		No		
	c)	c) between any metal enclosures and metal foil in contact with the inner surface of its insulating linings, if any			—		—		
	d)	between any metal part of the cord anchorage, including clamping screws, and earthing terminal(s) or earthing contact(s), if any, of portable socket-outlets			—		—		

IEC 60884-2-3			
Clause	Requirement + Test		Verdict
	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	—
supplementary information: <sup>(1)</sup> starting point 1 or 3 of Figure 43 ; <sup>(2)</sup> starting point 2 of Figure 43; <sup>(3)</sup> starting point 1 or 2 of Figure 43			

21 (bis)	TABLE: reduced electric strength after normal operation (for switches)			P
item per 17.1	test voltage applied between:	test voltage (V)	flashover / breakdown (Yes/No)	
	between all poles connected together and the body, with the switch in the “on” position:	2000	No	
	between each pole in turn and all other poles connected to the body, with the switch in the “on” position	—	—	
	between the terminals which are electrically connected together when the switch is in the “on” position, the switch being in the “off” position for normal/mini-gap construction	2000	No	
	TABLE: temperature rise measurements at terminals after normal operation (for switches)			P
	test current (In) passed for 1 h (A) .....	13	—	
thermocouple locations		max. measured temperature rise (K)	allowed temperature rise (K)	
Terminals		29,5	45	
supplementary information:				

22	TABLE: force necessary to withdraw the plug			P
	Rated current (A) .....	13		—
	Number of poles .....	3		—
22.1	Verification of the maximum withdrawal force			P
specimen	socket-outlets (multi-pin gauge)			
	maximum withdrawal force (N)	the test plug did not remain in the socket-outlet (Y/N)		
A1#	50	Y		P
A2#	50	Y		P
A3#	50	Y		P
22.2	Verification of the minimum withdrawal force			P



IEC 60884-2-3			
Clause	Requirement + Test	Result - Remark	Verdict

specimen	socket-outlets (single-pin gauge)		
	minimum withdrawal force (N)	the test pin gauge did not fall from each individual contact-assembly within 30 s (Y/N)	
A1#	1,5	Y	P
A2#	1,5	Y	P
A3#	1,5	Y	P
supplementary information:			

24.1	TABLE: impact test			P
part of enclosure tested per table 21 (A, B, C, D)	blows per part	height of fall (mm)	comments	
A	5 blows	80	—	
B	4 blows	80	—	
supplementary information:				

25.2	TABLE: ball pressure test of insulating materials			P
	allowed impression diameter (mm) .....	≤ 2 mm		—
part under test	test temperature (°C)	impression diameter (mm)		
Base	125	1,6		
Inner panel	125	1,6		
Aperture panel	125	1,5		
supplementary information:				

25.3	TABLE: ball pressure test of insulating materials			P
	allowed impression diameter (mm) .....	≤ 2 mm		—
part under test	test temperature (°C) <sup>(1)</sup>	impression diameter (mm)		
Shutter	70	1,0		
Inner rocker	70	1,0		
Outer rocker, Cover plate	70	1,1		
supplementary information: <sup>(1)</sup> (70 ± 2) °C / (40 ± 2) °C + highest temperature rise determined during the test of clause 19				

26.1	TABLE: threaded part torque test			P
------	----------------------------------	--	--	---

IEC 60884-2-3			
Clause	Requirement + Test	Result - Remark	Verdict

threaded part identification	diameter of thread (mm)	column number (1, 2 or 3)	applied torque (Nm)	times (5/10)	no damage
terminals screws	3,94	2	1,2	5	Y
earthing terminals screws	3,94	2	1,2	5	Y
supplementary information:					

27.1	<b>TABLE: creepage distances, clearances and distances through sealing compound</b>						<b>P</b>
	rated voltage (V) ..... : 250						—
item per table 23	creepage distance dcr, clearance cl and distance through sealing compound dtsc at/of:	required cl (mm)	cl (mm)	required dcr (mm)	dcr (mm)	required dtsc (mm)	dtsc (mm)
Creepage distance:	between live parts of different polarity	—	—	≥ 3	>3,9	—	—
	between live parts and						
	–accessible surface of parts of insulating material	—	—	≥ 3	>3,9	—	—
	–earthed metal parts including parts of earthing circuit	—	—	≥ 3	>3,9	—	—
	– metal frames supporting the main part of flush - type socket - outlets	—	—	≥ 3	>3,9	—	—
	– screws or devices for fixing main parts, covers or cover - plates of fixed socket- outlets	—	—	≥ 3	—	—	—
	– external assembly screws, other than screws which are on the engagement face of plugs and are isolated from the earthing circuit	—	—	≥ 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, made according to the most unfavourable construction	—	—	≥4,5	—	—	—
	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 made according to the most unfavourable construction	—	—	≥4,5	—	—	—
	between live parts of a socket- outlet (without a plug) or of a plug and their accessible unearthed or functional earthed metal parts	—	—	≥4,5	—	—	—

IEC 60884-2-3							
Clause	Requirement + Test	Result - Remark				Verdict	
Clearance :	between live parts of different polarity	$\geq 3$	>3,9	—	—	—	—
	between live parts and						
	– accessible surface of parts of insulating material	$\geq 3$	>3,9	—	—	—	—
	– earthed metal parts not mentioned under items 8 and 9 including parts of earthing circuit,	$\geq 3$	>3,9	—	—	—	—
	– metal frames supporting the main part of flush - type socket - outlets	$\geq 3$	>3,9	—	—	—	—
	– screws or devices for fixing main parts, covers or cover - plates of fixed socket- outlets	$\geq 3$	—	—	—	—	—
	– external assembly screws, other than screws which are on the engagement face of plugs and are isolated from the earthing circuit	$\geq 3$	—	—	—	—	—
	between live parts and						
	– exclusively earthed metal boxes with the socket- outlet in the most unfavourable position	$\geq 3$	—	—	—	—	—
	– unearthed metal boxes, without insulating lining with the socket - outlet in the most unfavourable position	$\geq 3$	—	—	—	—	—
	– accessible unearthed or functional earthed metal parts of socket- outlets and plugs	$\geq 6$	—	—	—	—	—
	between live parts and the surfaces on which the main part of a socket-outlet for surface mounting is mounted	$\geq 3$	—	—	—	—	—
	between live parts and the bottom of any conductor recess, if any, in the main part of a socket-outlet for surface mounting	$\geq 3$	—	—	—	—	—
Distance through insulating sealing compound :	between live parts covered with at least 2 mm of sealing compound and the surface on which the main part of a socket- outlet for surface mounting is mounted	—	—	—	—	—	—
	between live parts covered with at least 2 mm of sealing compound and the bottom of any conductor recess, if any, in the main part of a socket- outlet for surface mounting	—	—	—	—	—	—
item per table 102	creepage distance dcr, clearance cl and distance through sealing compound dtsc at/of:	required cl (mm)	cl (mm)	required dcr (mm)	dcr (mm)	required dtsc (mm)	dtsc (mm)

IEC 60884-2-3							
Clause	Requirement + Test			Result - Remark			Verdict
	Between live parts which are separated when the contacts are open	≥ 3	> 3,9	≥ 3	> 3,9	—	—
supplementary information:							

28.1.1	TABLE: glow-wire test					P
part under test	material designation	test temperature (°C)	visible flame and sustained glowing (Y/N)	flame and glowing extinction time	ignition of the tissue paper (Y/N)	
Base	/	850	Y	5	N	
Inner panel	/	850	Y	2	N	
Inner rocker	/	650	N	0	N	
Shutter	/	650	N	0	N	
S-356: Aperture panel, Outer rocker, Cover plate	/	650	N	0	N	
S-556G: Aperture panel, Outer rocker, Cover plate	/	650	N	0	N	
supplementary information:						

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

SASO 2203			
	Requirement – Test	Result	Verdict

## ANNEX 1

<b>4.0</b>	<b>MATERIALS, DESIGN AND CONSTRUCTION</b>		P
<b>4.1</b>	<b>Materials and construction</b>		P
4.1.1	The materials used in the component parts shall be in accordance with Table-1		P
	Non resilient base and cover of a plug, socket outlet plate (non-metallic) shall be Moulded, tough, non ignitable insulating material.		P
	Resilient base or resilient covers of a plug shall be Rubber or other insulating materials free from blisters, cracks, embedded impurities and defects likely to affect insulating and mechanical protecting properties.		N/A
	Socket outlet plates (metallic) shall be Sheet metal, cast metal or die-cast metal.	See the component list and the heat test	P
	And Provision shall be made for the effective earthing of all metal parts that may become live in the event of failure of insulation of the socket outlet and are being touched during normal operation.		P
	Socket-outlet base shall be An insulating material with rigid mechanical characteristics and no flame propagating characteristics like suitable grade of Polly Carbonates (PC), Urea and/or suitable equivalent material.	See the component list and the heat test	P
	Current carrying parts shall be Brass, phosphor-bronze, and/or suitable equivalent material.	See the component list and the relevant test	P
	Shutter shall be Moulded, tough, non-ignitable insulating material.	See the component list and the heat test	P
4.1.2	Moulded insulating material and the vitrified ceramic material shall be nonhygroscopic and shall be resistant to the formation of carbonized paths		N/A
4.1.3	Parts made of ferrous material shall be treated to resist rusting.		N/A
4.1.4	Compliance shall be checked by inspection and/or relevant tests in this standard and the supplementary standards.		P
<b>4.2</b>	<b>Terminals</b>		P
4.2.1	Rewirable accessories shall be provided with the terminals and shall permit the proper connection of conductors without special preparation	Pillar terminals	P
4.2.2	The means for clamping the conductors in the terminals shall not serve to fix any other component although they may hold the terminals in position or prevent them from turning.		P
4.2.3	Terminals in the plug shall be provided with screws of sufficient size for effective clamping of the conductors of the flexible cord or cable.		N/A
	The end of the screw shall be slightly rounded so as to minimize damage to the conductors		N/A

SASO 2203			
	Requirement – Test	Result	Verdict
	Screwless terminals shall not be used		N/A
4.2.4	Compliance shall be checked by inspection and/or relevant tests in this standard and the supplementary standards.		P
<b>4.3</b>	<b>Plugs</b>		N/A
4.3.1	Plugs shall comply with the relevant dimensional standard figures in the reference standard BS 1363-1:2016.		N/A
4.3.2	Conformity shall be checked by inspection, measurement, by the use of the gauges and/or relevant tests as described in this standard and the reference standard BS 1363-1:2016.		N/A
<b>4.3.3</b>	<b>Fuses</b>		N/A
	The plug shall be provided with a fuse inside it. This fuse shall fulfill the following:		N/A
4.3.3.1	Fuses shall have rating not exceeding 13A.		N/A
4.3.3.2	Conformity shall be checked by inspection and/or relevant tests in this standard and the reference standard BS 1362:1973.		N/A
<b>4.4</b>	<b>Socket-outlets</b>		P
4.4.1	Socket-outlets shall comply with the relevant dimensional standard figures in the reference standard BS 1363-2:2016.	See ANNEX 2	P
4.4.2	The socket-outlet shall be either of the following.		P
	a) Single or double	Single (S-356) Double (S-556G)	—
	b) With or without a switch	With	—
	c) With or without a pilot indication lamp	Without	—
	d) Flush or surface mounted	Flush-type	—
	e) With or without USB outlet	Without	—
	f) IP rated or not, and for IP rated socket-outlets there are two categories: • Socket-outlets having an IP rating with the plug inserted. • Socket-outlets having an IP rating only when no plug is inserted. • Socket-outlets having a declared IP rating shall be tested as a complete assembly (socket-outlet and enclosure).		N/A

SASO 2203			
	Requirement – Test	Result	Verdict
4.4.3	Conformity shall be checked by inspection, measurement, by the use of the gauges and/or relevant tests as described in this standard and the reference standard BS 1363-2:2016.		P
<b>4.4.4</b>	<b>Switches</b>		P
4.4.7.1	If the socket outlet is provided with a switch, the switch shall be a double pole		P
4.4.7.2	Conformity shall be checked by inspection, measurement, by relevant tests as described in this standard and the reference standard BS 1363-2:2016.		P
<b>4.4.5</b>	<b>USB Outlet</b>		N/A
<b>4.4.5.1</b>	<b>If the socket-outlet is provided with a USB outlet, the outlet shall be of the characteristics of the USB outlet specified in Annex I from BS 1363-2:2016.</b>		N/A
<b>4.4.5.2</b>	<b>Conformity shall be checked by inspection, measurement, by relevant tests as described in this standard and Annex I from BS 1363-2:2016.</b>		N/A
<b>4.4.6</b>	<b>Shutters</b>		P
4.4.6.1	Socket outlets shall be provided with shutters		P
4.4.6.2	Conformity shall be checked by inspection, measurement, by the use of the gauges and/or relevant tests as described in this standard and the reference standard BS 1363-2:2016.		P
<b>4.4.7</b>	<b>Boxes</b>		N/A
	4.4.7.1 Socket-outlets shall be put in use by fixing them on suitable surfaces using suitable boxes, these boxes shall comply with SASO IEC 60670-1.		N/A
	NOTE: Box sizes allowed in Saudi Arabia are 72x72 mm (Width x Height) (external dimension) for one gang, and 132x72 mm for Duplex type (two gangs) socket-outlets		N/A
4.4.7.2	Conformity shall be checked by inspection, measurement, or relevant tests as described in this standard and the reference standard SASO IEC 60670-1.		N/A
<b>4.5</b>	<b>Clearance and creepage distances</b>		P
	Clearance and creepage distances shall comply with the relevant clause/sub clauses in the reference standards.		P
4.5.1	Conformity shall be checked by inspection, measurement, and/or relevant tests as described in this standard and clause 8 in the two reference standards BS 1363-1:2016 and BS 1363-2:2016.	See Table1 - BS 1363-2 Creepage distances and clearances	P
<b>5.0</b>	<b>RATING AND CHARACTERISTICS</b>		P
<b>5.1</b>	<b>Rating, shape and dimensions</b>		P

SASO 2203			
	Requirement – Test	Result	Verdict
	The rating, shape and dimensions of plugs and socket outlets shall be as follows:		P
5.1.1	13A maximum two-pin plug with earthing pin.		N/A
5.1.2	13A two pin shuttered socket-outlet with earthing contact.	See ANNEX 2	P
5.1.3	Conformity shall be checked by inspection, measurement by the use of the gauges and/or relevant tests as described in this standard and clause 6 of the two reference standards BS 1363-1:2016 and BS 1363-2:2016.		P
<b>5.2</b>	<b>Protection against electric shock</b>		P
5.2.1	Conformity shall be checked by inspection, measurement, by the use of the gauges and/or relevant tests as described in this standard and the two reference standards BS 1363-1:2016 and BS 1363-2:2016.		P
<b>5.3</b>	<b>Insulation resistance</b>		P
5.3.1	The insulation resistance for the plugs and socket-outlets shall be not less than the relevant values specified in BS 1363-1:2016 and BS 1363-2:2016.	See Table 2 - BS 1363-2 Sub-clause 15.1.2 Insulation resistance test	P
5.3.2	Conformity shall be checked by relevant tests as described in this standard and clause 15 of the two reference standards BS 1363-1:2016 and BS 1363-2:2016.		P
<b>5.4</b>	<b>Electrical strength</b>		P
5.4.1	Plugs and socket-outlets shall withstand a high voltage test and pass a momentary high voltage without any flash over or breakdown of insulation.		P
	Conformity shall be checked by relevant tests as described in this standard and clause 15 of the two reference standards BS 1363-1:2016 and BS 1363-2:2016.	See Table 3 - BS 1363-2 Sub-clause 15.1.3 Electric strength test	P
<b>5.5</b>	<b>Temperature rise</b>		P
5.5.1	The temperature rise measured for any part shall not exceed the relevant values specified in BS 1363-1:2016 for plugs and BS 1363-2:2016 for sockets.		P
5.5.2	Conformity shall be checked by relevant tests as described in this standard and clause 16 of the two reference standards BS 1363-1:2016 and BS 1363-2:2016.	See Table 4 - BS 1363-2 Clause 16 Temperature rise	P
<b>5.6</b>	<b>Contact resistance</b>		P
5.6.1	The resistance between the earthing terminal or termination of plug or socket-outlet and any other nominated metal part shall not exceed the relevant values specified in BS 1363-1:2016 and BS 1363-2:2016.	0.021	P



SASO 2203			
	Requirement – Test	Result	Verdict
5.6.2	Conformity shall be checked by relevant tests as described in this standard and the two reference standards BS 1363-1:2016 and BS 1363-2: 2016.		P
<b>5.7</b>	<b>Current breaking capacity of socket contacts</b>		P
5.7.1	The breaking capacity of socket contacts and switches incorporated in socket-outlets shall be adequate.		P
5.7.2	Conformity shall be checked by the tests described in the clause 17 of the reference standard BS 1363-2:2016 as applicable.		P
<b>Clause 17 of the supplementary standard BS 1363-2.</b>			P
<b>17</b>	<b>Breaking capacity of socket-outlets</b>		P
17.1	The breaking capacity of socket contacts, switches and fuse contacts incorporated in socket-outs, shall be adequate.		P
	Compliance checked by testing:		P
17.1.2	The socket contacts:		P
	Test conditions:		—
	- 10 times.....:	10	—
	- test voltage (Vn).....:	250	—
	- test current (1.25 In).....:	16,25	—
	After the test, the socket-outlet shall be capable of satisfying the subsequent tests detailed in table 1 for the appropriate test sample	Sub-clause 13.11.1 and clause 16 only	P
17.1.3	The switch:		P
	Test conditions:		—
	- 10 times.....:	10	—
	- test voltage (1.1Vn).....:	275	—
	- test current (1.25 In).....:	16,25	—
	After the test, the socket-outlet shall be capable of satisfying the subsequent tests detailed in table 1 for the appropriate test sample.		P
17.1.4	The fuse contacts:		N/A
	Test conditions:		—
	- 10 times.....:		—
	- test voltage (1.1Vn).....:		—
	- test current (1.25 In for single socket-outlet).....:		—
	- test current (1.6 In for multiple socket-outlets).....:		—
	After the test, the socket-outlet shall be capable of satisfying the subsequent tests detailed in table 1 for the appropriate test sample		N/A
13.11	<b>Switch shall be so constructed that undue arcing cannot occur when the switch is operated slowly.</b>		P

SASO 2203			
	Requirement – Test	Result	Verdict
	The switch in any switched socket-outlet shall disconnect at least the supply to the line socket contact		P
	Double pole switches shall make or break each pole with one movement of the actuator		P
13.11.1	Compliance shall be checked by inspection and by the following test:		P
	The circuit is broken a further 10 times, each time moving the actuating member by hand over a period of approximately 2 s in a manner such as to attempt to stop the moving contact in an intermediate position causing arcing. The actuating member shall be released after approximately 2 s and any arcing shall cease		P
<b>5.8</b>	<b>Normal operation of socket-outlets</b>		P
5.8.1	Plugs and socket-outlets shall withstand, without excessive wear or other harmful effects, the electrical and mechanical stresses occurring in use.		P
5.8.2	Conformity shall be checked by the tests described in the clause 18 of the reference standards BS 1363-1:2016 and BS 1363-2:2016 .		P
<b>Clause 18 of the supplementary standard BS 1363-2.</b>			P
<b>18</b>	<b>Normal operation of socket-outlets</b>		P
18.1	Socket-outlets shall withstand without excessive wear or other harmful effects, the electrical and mechanical stresses occurring in use		P
	Compliance checked by testing:		P
18.1.2	Test conditions:		P
	- 15000 times; rate of operation.....:	15000; 6 cycles per minute	—
	- Test current (A).....:	13	—
	- Test voltage (V).....:	250	—
	After the test:		P
	- the shutter shall be operating satisfactorily		P
	- the socket contacts safely shielded		P
	- and the socket-outlet shall be in accordance with Clause 9.1, Clause 16 and Clause 13.19, Clause 15, Clause 13.4.1a), Clause 10.2, Clause 13.6, Clause 13.7 and Clause 13.8	See Table 5 - BS 1363-2 Clause 16 Temperature rise after normal operation for Clause 16	P
18.1.3	In switched socket-outlets the voltage drop across each switched pole, measured at points immediately adjacent to the switch, shall not exceed to 60 mV at rated current		P
	Test current (A).....:	13	—
	Voltage drop(mV) .....	14,58	P
	Test conditions:		P
	- test current (A).....:	13	—





SASO 2203			
	Requirement – Test	Result	Verdict
	- test voltage (V).....:	250	—
	- number of operations.....:	15000	—
	- rate of operation .....	6	—
	The switch shall be capable of making and breaking the rated current of 13 A±0.4V at 250V±10V and the voltage drop across each switched pole, measured as above, shall not exceed 75mV		P
	Test current (A).....:	13	—
	Test voltage (V).....:	250	—
	Voltage drop(mV) .....	25,54	P
	The switch shall also be in accordance with clause 15, the test voltages of 15.1.3 being reduced by 25%		P
	c) each switched pole terminal of a switched socket and corresponding socket-outlet contact, with the switch contact open.....:		P
	During the test, no flashover or breakdown shall occur		P
<b>5.9</b>	<b>Resistance to heat</b>		P
5.9.1	Plugs and socket-outlets shall be resistant to heat.		P
5.9.2	Conformity shall be checked by the tests described in the clause 22 of the reference standards BS 1363-1:2016 and BS 1361-2:2016.		P
<b>Clause 22 of the supplementary standard GSO BS 1363-2.</b>			P
<b>22</b>	<b>Resistance to heat</b>		P
22.1	Socket-outlets shall be resistant to heat		P
22.1.1	Parts made from rubber or ceramics in fixed socket-outlets shall not be subjected to these tests		N/A
22.1.2	For complete socket-outlets and for separate ancillary components specimens are kept for 60 <sup>+5</sup> min in a heating cabinet maintained at the following temperature:		P
a)	70° C ±5° C for portable socket-outlets, mounting boxes, separate covers and separate cover plates		N/A
b)	100° C ± 5° C for all other socket-outlets		P
	After the test the socket-outlet shall still comply with 9.2 and 15.1.3, and it shall not be possible to touch live parts with test probe 11 of BS 3042:1992 applied with test probe 11 of BS 3042: 1992 applied with a force of 30 <sub>0</sub> <sup>0</sup> N		P
22.1.3	Portable socket-outlets compression test (20 N, 1 h, 70 °C) by means of the apparatus shown in figure 23		N/A
	After the test: no damage		N/A

SASO 2203			
	Requirement – Test	Result	Verdict
22.2	Parts of insulating material shall be sufficiently resistant to heat having particular regard to their location and function in the complete socket-outlet		P
22.2.1	Compliance shall be checked as follows: ball-pressure test (1 h)		P
1)	For fixed socket-outlets: 125°C ± 5°C		P
	After the test: diameter of impression ≤2 mm .....	See Table 6 - BS 1363-2 Sub-clause 22.2 ball pressure test results	P
2)	For portable socket-outlets: 75°C ± 5°C		N/A
	After the test: diameter of impression ≤2 mm .....		N/A
	For parts of insulating material not necessary to retain current-carrying parts in position, even though they may be in contact with them, the test temperature shall be 75°C ± 5°C for fixed and portable socket-outlets		P
	After the test: diameter of impression ≤2 mm .....	See Table 6 - BS 1363-2 Sub-clause 22.2 ball pressure test results	P
<b>5.10</b>	<b>Mechanical strength</b>		P
5.10.1	Plugs and socket-outlet shall have adequate mechanical strength and be so constructed as to withstand such handling as may be expected in normal use.		P
5.10.2	Conformity shall be checked by the tests described in the clause 20 of the reference standard BS 1363-1:2016 and BS 1363-2:2016.		P
<b>Clause 20 of the supplementary standard.</b>			P
<b>20</b>	<b>Mechanical strength</b>		P
20.1	Socket-outlets shall have adequate mechanical strength and be so constructed as to withstand such handling as may be expected in normal use		P
20.1.1	Any decorative cover, cover plates or parts thereof, not providing protection against electric shock, shall be removed prior to testing		N/A
20.1.2	A solid link of stainless steel as shown in figure 19 is inserted and withdrawn from the fuse clips of a fused socket-outlet 20 times in succession in a normal manner, not in misuse conditions, at a rate not exceeding 10 per minute. A standard fuse link complying with BS 1362:1973 is then fitted and the appropriate mechanical strength test completed		N/A
20.1.3	Fixed socket-outlets are tested with the impact test apparatus shown in figure 21a):		P
	- height of fall: 150 mm		P

SASO 2203			
	Requirement – Test	Result	Verdict
	After the test the socket-outlet shall still be in accordance with clauses 8, 9 and 15		P
<b>5.11</b>	<b>Resistance to abnormal heat and fire</b>		P
5.11.1	Plugs and socket-outlets shall be proof against abnormal heat, fire and tracking.		P
5.11.2	Conformity shall be checked by the glow wire test described in the clause 23 of the reference standard BS 1363-1:2016 and BS 1363-2:2016.	See Table7 - BS 1363-2 Sub-clause 23.2 Glow-wire test	P
<b>Clause 23.2 of the supplementary standard BS 1363-2.</b>			P
23.2	Glow-wire test		P
	<b>Annex C</b>	See Table 8 - BS 1363-2 Annex C PTI test	P
	Relation between rated impulse withstand voltage, rated voltage and Overvoltage Category		P
	Overvoltage Category.....:	III	P
	Rated impulse withstand voltage (KV).....:	4kV	P
<b>5.12</b>	<b>Resistance to ageing and humidity</b>		P
5.12.1	Resistance to ageing		P
5.12.1.1	Plugs and socket-outlets shall be resistance to aging.		P
5.12.1.2	Conformity shall be checked by the test described in the clause 14 of the reference standard BS 1363-1:2016 and BS 1363-2:2016.		P
<b>Clause 14.1 of the supplementary standard BS 1363-2.</b>			P
14.1	Resistance to ageing		P
	Socket-outlets shall be resistant to ageing		P
	— Socket-outlets subjected to a test in a heating cabinet at temperature 70 °C ± 2 °C for 7 days.....:	70	—
	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
5.12.2	Resistance to humidity		P
5.12.2.1	Plugs and socket-outlets shall be proof against humid conditions which may occur in normal use.		P
5.12.2.2	Conformity shall be checked by the test described in the clause 14 of the reference standard BS 1363-1:2016 and BS 1363-2:2016.		P

SASO 2203			
	Requirement – Test	Result	Verdict
<b>Clause 14.2 of the supplementary standard BS 1363-2.</b>			P
14.2	Resistance to humidity		P
	Socket-outlets shall be proof against humid conditions 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 85 % and 95 %		P
	Specimens kept in the cabinet for two days (48 h)		P
	After the test, no damage to the sample which would impair its use or safety within the requirements of this Part of BS 1363		P
<b>5.13</b>	<b>Resistance to excessive residual stresses and to rusting</b>		P
5.13.1	Press-formed or similar current-carrying parts of copper alloy containing less than 80% of copper shall be resistant to failure in use due to stress corrosion.		P
5.13.2	Ferrous parts, the rusting of which might cause the unit to become unsafe, shall be adequately protected against rusting.		N/A
5.13.3	Conformity shall be checked by the tests described in the clause 24 of the reference standard BS 1363-1:2016 and BS 1363-2:2016.		P
<b>Clause 24 of the supplementary standard BS 1363-2.</b>			P
24	<b>Resistance to excessive residual stresses and to rusting</b>		P
24.1	Press-formed or similar current-carrying parts of copper alloy containing less than 80% of copper shall be resistant to failure in use due to stress corrosion	Neutral, line and earthing contacts	P
24.2	Ferrous parts, the rusting of which might cause the socket-outlet to become unsafe, shall be adequately protected against rusting.		P

<b>6.0</b>	<b>TESTS</b>		P
6.1	For all types of plugs and socket-outlets which are newly produced or delivered for the first time, a sample shall be selected at random for type approval.		P
6.2	Type tests shall be carried out on the samples selected in accordance with clause 5 of the two reference standards BS 1363-1:2016 and BS 1363-2:2016.		P
	6.3 Conformity shall be checked by the tests described in "Table 1 - schedule of tests" for plugs and socket-outlets from the reference standard BS 1363-1:2016 and BS 1363-2:2016.		P
<b>7.0</b>	<b>MARKING</b>		P
7.1	Each plug or socket-outlet shall have the following information clearly and durably marked on it, in Arabic or English.	In English	P

SASO 2203			
	Requirement – Test	Result	Verdict
	a. Country of origin.	MADE IN CHINA	P
	b. Manufacturer's name or purchaser's name or trade-mark or both.		P
	c. Rated current in amperes: (plug, socket outlet and USB).	13A	P
	d. Rated voltage in volts: (plug, socket outlet and USB).	250V	P
	e. Identification of each of the live, the neutral and the earthed pole.	L, N, E 	P
	f. For fused plugs, the word "Fuse" or "Fused" or symbol.		N/A
	g. If symbols are used they shall be as follows: <ul style="list-style-type: none"> <li>- Amperes : A</li> <li>- Volts : V</li> <li>- Fuse : </li> <li>- Neutral or live : N or L</li> <li>- Earth : G or E or </li> <li>- Fused live : L</li> </ul>		P

**Table1 - BS 1363-2 Creepage distances and clearances**

	Between parts:	Clearance/Creepage (mm)	Impulse withstand voltage test (kV)
Basic insulation	Between live parts and Earth parts include the cover fixing screws.	Cr: >3.9 mm Cl: >3.9 mm	N/A
	Between live parts and un-accessible metal part.	Cr: >3.9 mm Cl: >3.9 mm	
Functional insulation	Between live parts of opposite polarity.	Cr: >3.9 mm Cl: >3.9 mm	N/A
Supplementary insulation	N/A	N/A	N/A
Reinforced insulation	Between live parts and the accessible external surface.	Cr: >9.5 mm Cl: >9.5 mm	N/A

**Table 2 - BS 1363-2 Sub-clause 15.1.2 Insulation resistance test after 14.2****Application**

(a) Between Line and Neutral.

(b) Line and Neutral connected together and:

i) metal foil in contact with the entire accessible external surface

ii) the earthing terminal

iii) any metal part of the cord anchorage

(c) Each switched pole terminal of a switched socket-outlet and corresponding socket contact, with the switch contacts open.

1) 5 MΩ between parts of opposite polarity;

2) 5 MΩ between parts of opposite polarity connected together, and other parts, including earthed metal, intended to be insulated from them;

3) 2 MΩ across switch contacts with the switch open.

Application	Sample No: A10# ( MΩ)	Sample No: A11# ( MΩ)	Sample No: A12# ( MΩ)
(a)	500	500	500
(b) i)	500	500	500
ii)	500	500	500
iii)	N/A	N/A	N/A
(c)	500	500	500



## Table 3 - BS 1363-2 Sub-clause 15.1.3 Electric strength test

### Application

(a) Between Line and Neutral.

(b) Line and Neutral connected together and:

i) metal foil in contact with the entire accessible external surface

ii) the earthing terminal

iii) any metal part of the cord anchorage

(c) Each switched pole terminal of a switched socket-outlet and corresponding socket contact, with the switch contacts open.

Test voltage 2000V. No flashover or breakdown shall occur.

Application	Sample No: A10#	Sample No: A11#	Sample No: A12#
(a)	No flashover or breakdown.	No flashover or breakdown.	No flashover or breakdown.
(b) i)	No flashover or breakdown.	No flashover or breakdown.	No flashover or breakdown.
ii)	No flashover or breakdown.	No flashover or breakdown.	No flashover or breakdown.
iii)	N/A	N/A	N/A
(c)	No flashover or breakdown.	No flashover or breakdown.	No flashover or breakdown.

Table 4 - BS 1363-2 Clause 16 Temperature rise

Thermocouple Location	Temperature (°C)	Temperature rise (K)	Maximum rise allowable (K)	Result
<b>Sample number: A7#</b>				
Ambient	23,8			
Line terminal	52,3	27,5	52	PASS
Neutral terminal	50,2	26,4	52	PASS
Accessible surface	34,5	10,7	52	PASS
<b>Sample number: A8#</b>				
Ambient	23,7			
Line terminal	52,3	28,6	52	PASS
Neutral terminal	50,9	27,2	52	PASS
Accessible surface	34,9	11,2	52	PASS
<b>Sample number: A9#</b>				
Ambient	24,2			
Line terminal	51,9	27,7	52	PASS
Neutral terminal	50,1	25,9	52	PASS
Accessible surface	34,7	10,5	52	PASS

**Equipment and test conditions:-**

<b>Total load</b>	20 A	<b>No. of test plugs</b>	1
<b>Supply load</b>	14 A	<b>Test current</b>	20 A
<b>Balance load</b>	6 A	<b>Test duration</b>	4 Hrs

**Table 5 - BS 1363-2 Clause 16 Temperature rise after normal operation**

Thermocouple Location	Temperature (°C)	Temperature rise (K)	Maximum rise allowable (K)	Result
<b>Sample number: A10#</b>				
Ambient	23,5			
Line terminal	53,8	30,3	52	PASS
Neutral terminal	52,0	28,5	52	PASS
Accessible surface	38,3	14,8	52	PASS
<b>Sample number: A11#</b>				
Ambient	24,1			
Line terminal	53,8	29,7	52	PASS
Neutral terminal	52,7	28,6	52	PASS
Accessible surface	36,6	12,5	52	PASS
<b>Sample number: A12#</b>				
Ambient	24,2			
Line terminal	53,5	29,3	52	PASS
Neutral terminal	50,8	26,6	52	PASS
Accessible surface	37,0	12,8	52	PASS

**Equipment and test conditions:-**

<b>Total load</b>	20 A	<b>No. of test plugs</b>	1
<b>Supply load</b>	14 A	<b>Test current</b>	20 A
<b>Balance load</b>	6 A	<b>Test duration</b>	4 Hrs

# Table 6 - BS 1363-2 Sub-clause 22.2 ball pressure test results

	Impression diameters
Part under test: Base Temp In: 125 °C Temp Out: 125 °C	S/No. A16#: 1,6 mm S/No. A17#: 1,6 mm S/No. A18#: 1,6 mm
Part under test: Inner panel Temp In: 125 °C Temp Out: 125 °C	S/No. A16#: 1,6 mm S/No. A17#: 1,6 mm S/No. A18#: 1,6 mm
Part under test: Aperture panel Temp In: 125 °C Temp Out: 125 °C	S/No. A16#: 1,5 mm S/No. A17#: 1,5 mm S/No. A18#: 1,5 mm
Part under test: Shutter Temp In: 75 °C Temp Out: 75 °C	S/No. A16#: 1,0 mm S/No. A17#: 1,0 mm S/No. A18#: 1,0 mm
Part under test: Inner rocker Temp In: 75 °C Temp Out: 75 °C	S/No. A16#: 1,0 mm S/No. A17#: 1,0 mm S/No. A18#: 1,0 mm
Part under test: Outer rocker Temp In: 75 °C Temp Out: 75 °C	S/No. A16#: 1,1 mm S/No. A17#: 1,1 mm S/No. A18#: 1,1 mm

Table 7 - BS 1363-2 Sub-clause 23.2 Glow-wire test

<b>Part under test:</b>	Base
Glow-wire calibration temperature:	960 ± 2 °C
Required test temperature:	850 °C
Actual test temperature:	850 °C
Duration from tip application to point of ignition:	T <sub>i</sub> = 1 seconds
Duration from tip application to flame extinguishing :	T <sub>e</sub> = 35 seconds
Maximum height of flame produced:	30 mm
Duration of flame after removal of tip:	1 seconds
Molten droplets present:	There is no molten droplets
Ignition of tissue paper:	NI
Condition of pine board after test:	NI

<b>Part under test:</b>	Inner panel
Glow-wire calibration temperature:	960 ± 2 °C
Required test temperature:	850 °C
Actual test temperature:	850 °C
Duration from tip application to point of ignition:	T <sub>i</sub> = 1 seconds
Duration from tip application to flame extinguishing :	T <sub>e</sub> = 32 seconds
Maximum height of flame produced:	28 mm
Duration of flame after removal of tip:	1 seconds
Molten droplets present:	There is no molten droplets
Ignition of tissue paper:	NI
Condition of pine board after test:	NI

<b>Part under test:</b>	Inner rocker
Glow-wire calibration temperature:	960 ± 2 °C
Required test temperature:	650 °C
Actual test temperature:	650 °C
Duration from tip application to point of ignition:	T <sub>i</sub> = / seconds
Duration from tip application to flame extinguishing :	T <sub>e</sub> = / seconds
Maximum height of flame produced:	/ mm
Duration of flame after removal of tip:	/ seconds
Molten droplets present:	There is no molten droplets
Ignition of tissue paper:	NI
Condition of pine board after test:	NI

# Table 7 - BS 1363-2 Sub-clause 23.2 Glow-wire test (continued)

<b>Part under test:</b>	Shutter
Glow-wire calibration temperature:	960 ± 2 °C
Required test temperature:	650 °C
Actual test temperature:	650 °C
Duration from tip application to point of ignition:	T <sub>i</sub> = / seconds
Duration from tip application to flame extinguishing :	T <sub>e</sub> = / seconds
Maximum height of flame produced:	/ mm
Duration of flame after removal of tip:	/ seconds
Molten droplets present:	There is no molten droplets
Ignition of tissue paper:	NI
Condition of pine board after test:	NI

<b>Part under test:</b>	Aperture panel, Outer rocker, Cover plate (S-356)
Glow-wire calibration temperature:	960 ± 2 °C
Required test temperature:	650 °C
Actual test temperature:	650 °C
Duration from tip application to point of ignition:	T <sub>i</sub> = / seconds
Duration from tip application to flame extinguishing :	T <sub>e</sub> = / seconds
Maximum height of flame produced:	/ mm
Duration of flame after removal of tip:	/ seconds
Molten droplets present:	There is no molten droplets
Ignition of tissue paper:	NI
Condition of pine board after test:	NI

<b>Part under test:</b>	Aperture panel, Outer rocker, Cover plate (S-556G)
Glow-wire calibration temperature:	960 ± 2 °C
Required test temperature:	650 °C
Actual test temperature:	650 °C
Duration from tip application to point of ignition:	T <sub>i</sub> = / seconds
Duration from tip application to flame extinguishing :	T <sub>e</sub> = / seconds
Maximum height of flame produced:	/ mm
Duration of flame after removal of tip:	/ seconds
Molten droplets present:	There is no molten droplets
Ignition of tissue paper:	NI
Condition of pine board after test:	NI

Table 8 - BS 1363-2 Annex C PTI test

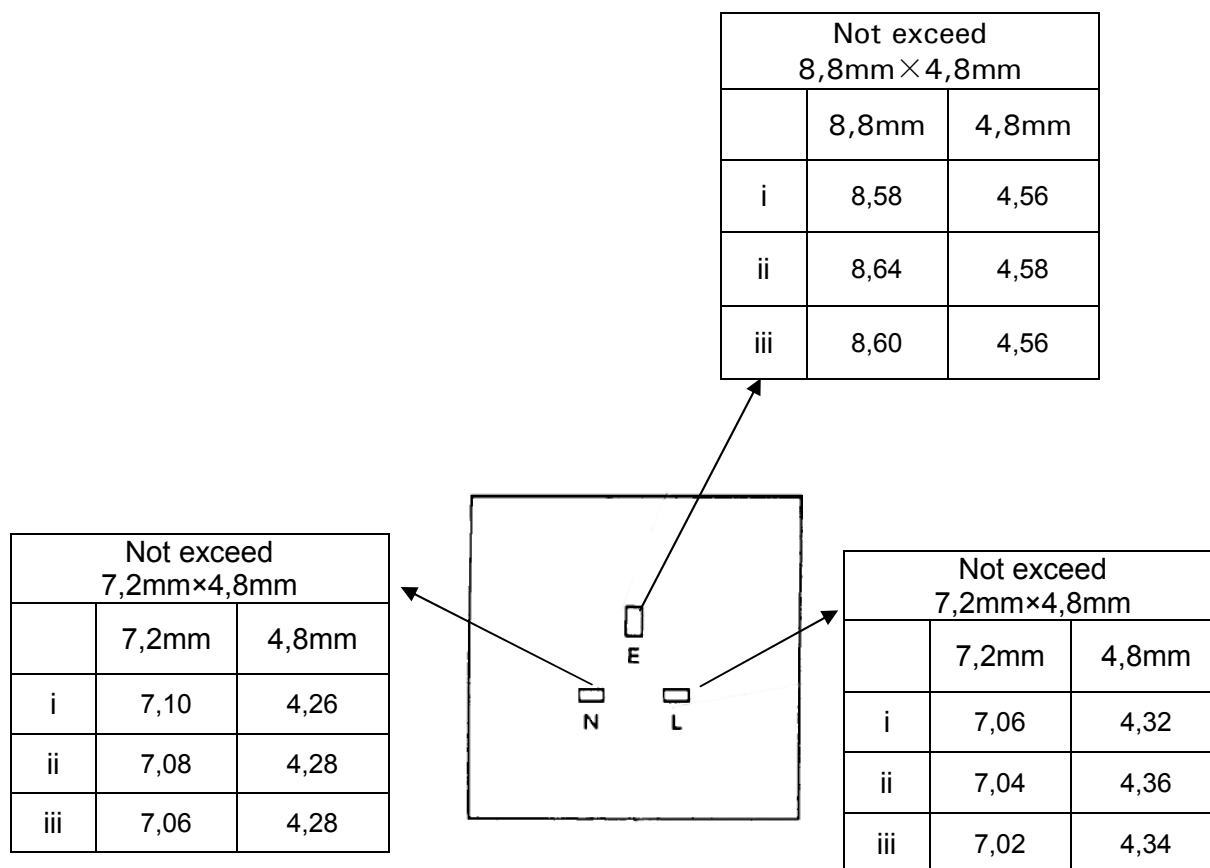
<b>Part under test:</b>	Base
Number of drops:	50
Test voltage:	175 V
Test remarks:	OK

<b>Part under test:</b>	Inner panel
Number of drops:	50
Test voltage:	175 V
Test remarks:	OK

## ANNEX 2

### Dimensions



### Sample details

i) Sample number	A1#
ii) Sample number	A2#
iii) Sample number	A3#



## ANNEX 3

## List of test equipment used:

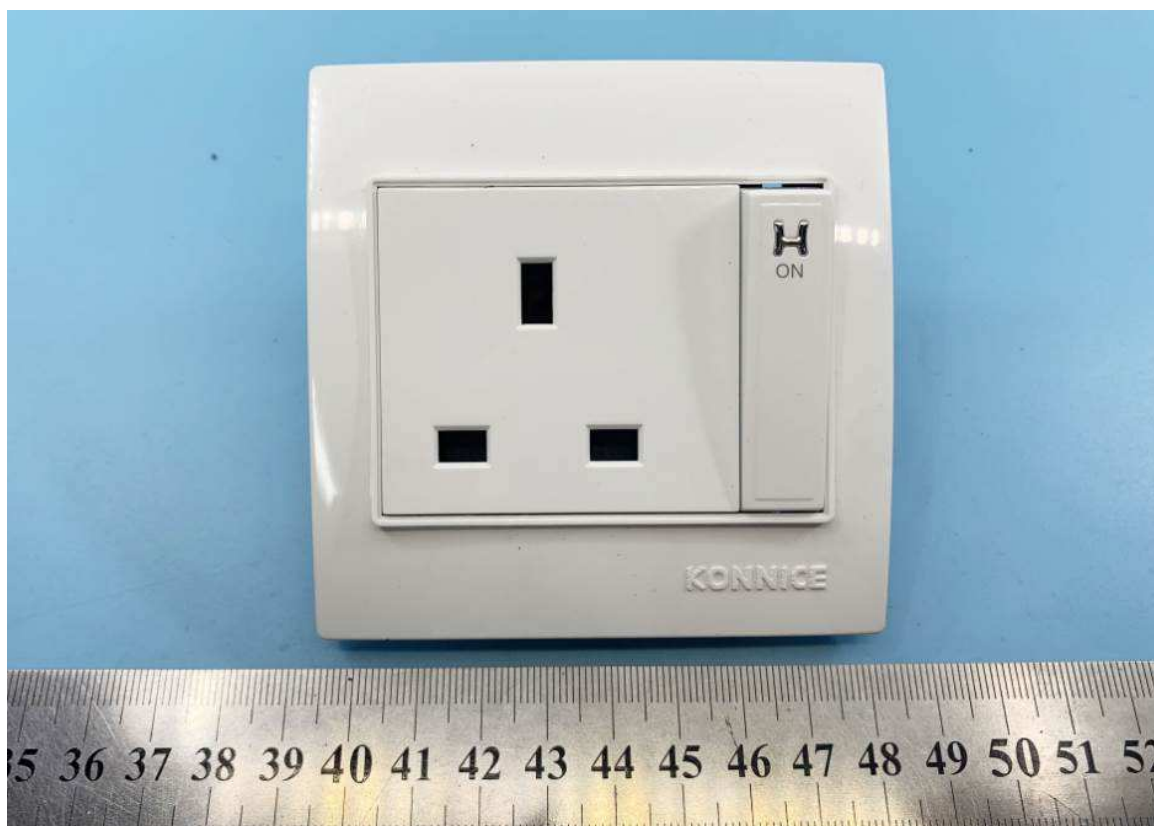
Clause	Measurement / testing	Testing / measuring equipment / material used, (Equipment ID)	Range used	Last Calibration date	Calibration due date
9	Checking of dimensions	Caliper	0-150mm	2019.08.15	2020.08.14
		Gauges	—	2019.10.31	2020.10.30
10	Protection against electrical shock	Jointed test finger	—	2019.09.19	2020.09.18
		unjointed testfinger	0-100N	2019.03.14	2020.03.13
		electrical indicator	—	2019.05.16	2020.05.15
		Figure 4: Gauge	1N	2019.01.13	2020.01.12
11	Provision for earthing	Measuring instruments (Earth Bond Tester)	10A, 25A	2019.06.05	2020.06.04
12	Terminals	Screw driver	20~120Ncm	2019.09.19	2020.09.18
		spanner with torque meter	0~1,5N.m	2018.12.15	2019.12.14
		Figure 32: Arrangement for checking damage to conductors	(10±2) r/min	2019.07.05	2020. 07.04
14	Construction of plugs and portable	Device for testing of non-solid pins	—	2019.07.28	2020.07.27
		Apparatus for the torque test	—	2019.06.16	2020.06.15
		Voltmeter	0-500V	2019.05.16	2020.05.15
		Ammeter	0-20A	2019.02.27	2020.02.26
		Hybrid recorder	-20-200°C	2019.03.16	2020.03.15
16	Resistance to ageing, to harmful ingress of water and to humidity	Heating cabinet	0-200°C	2019.01.20	2020.01.19
		humidity chamber	20-60°C, (RH)93%	2019.01.10	2020.01.09
17	Insulation resistance and electric strength	Insulation test equipment (Megameter)	DC 500V	2019.01.10	2020.01.09
		High voltage test equipment	0-5000V	2019.11.06	2020.11.05
19	Temperature rise	Voltmeter	0-500V	2019.05.16	2020.05.15
		Ammeter	0-20A	2019.02.27	2020.02.26
		Hybrid recorder	-20-200°C	2019.03.16	2020.03.15
20	Breaking capacity	Apparatus for normal operation	—	2019.07.05	2020.07.04

## ANNEX 3

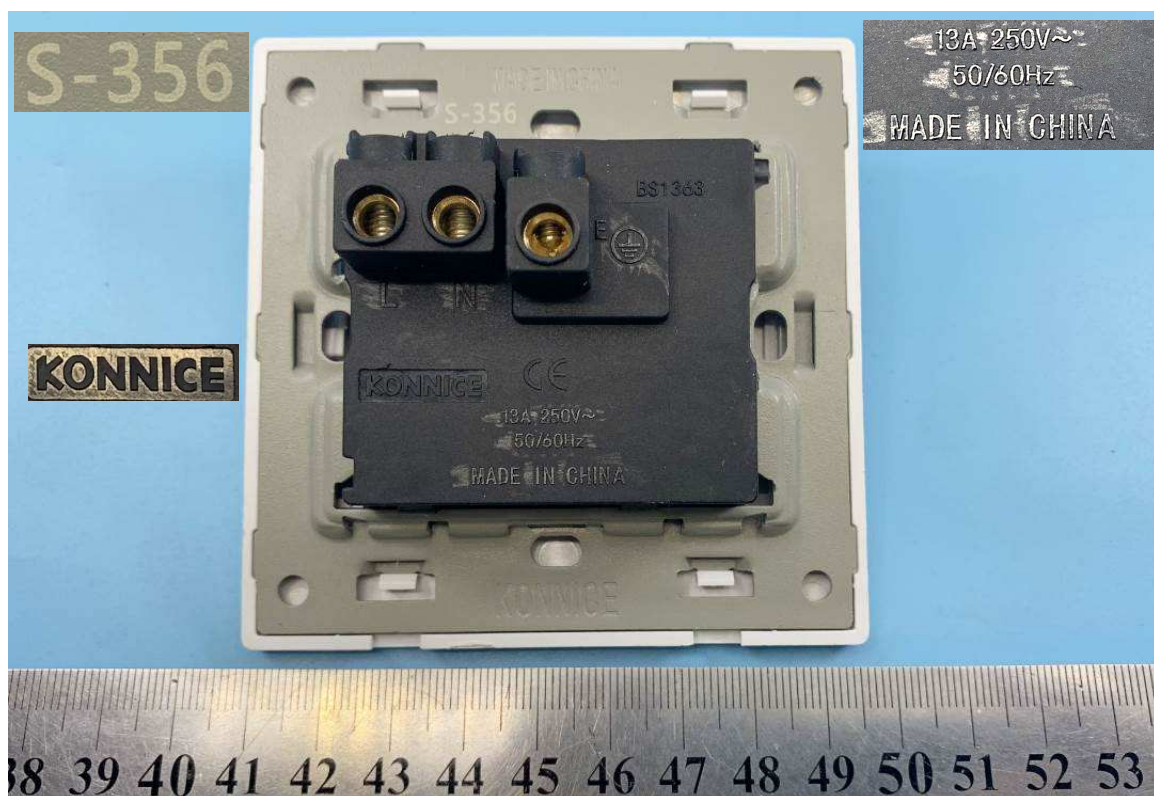
## List of test equipment used:

Clause	Measurement / testing	Testing / measuring equipment / material used, (Equipment ID)	Range used	Last Calibration date	Calibration due date
21	Normal operation	test			
23	Flexible cables and their connection	Apparatus for testing the cord retention	100	2019.07.22	2020.07.21
		Apparatus for applying the torque on the cable	Diameter: 102±0,5 mm; Force: 6,7±5% N	2019.10.14	2020.10.13
24	Mechanical strength	Tumbling barrel	—	2019.07.07	2020.07.06
		Heating cabinet	0-200°C	2019.07.08	2020.07.07
		Apparatus for compression test for the verification of resistance to heat	0-300N	2019.02.13	2020.02.12
25	Resistance to heat	Heating cabinet	0-200°C	2019.11.06	2020.11.05
		Apparatus for ball pressure test	R=2,5±0,05 mm 20±0,4N	2019.07.12	2020.07.11
		Apparatus for pressure test	20N±0,5N	2019.02.13	2020.02.12
26	Screws, current carrying parts and connections	Screw-driver	20~120Ncm	2019.09.05	2020.09.04
		spanner with torque meter	0,1~6Nm	2019.06.22	2020.06.21
27	Creepage distances, clearances	Caliper	0-150mm	2019.08.15	2020.08.14
28	Resistance of insulating material to abnormal heat, to fire and to tracking	Glow Wire Tester	—	2019.04.04	2020.04.03

ANNEX 4  
PHOTOGRAPHS  
S-356 13A 250V~

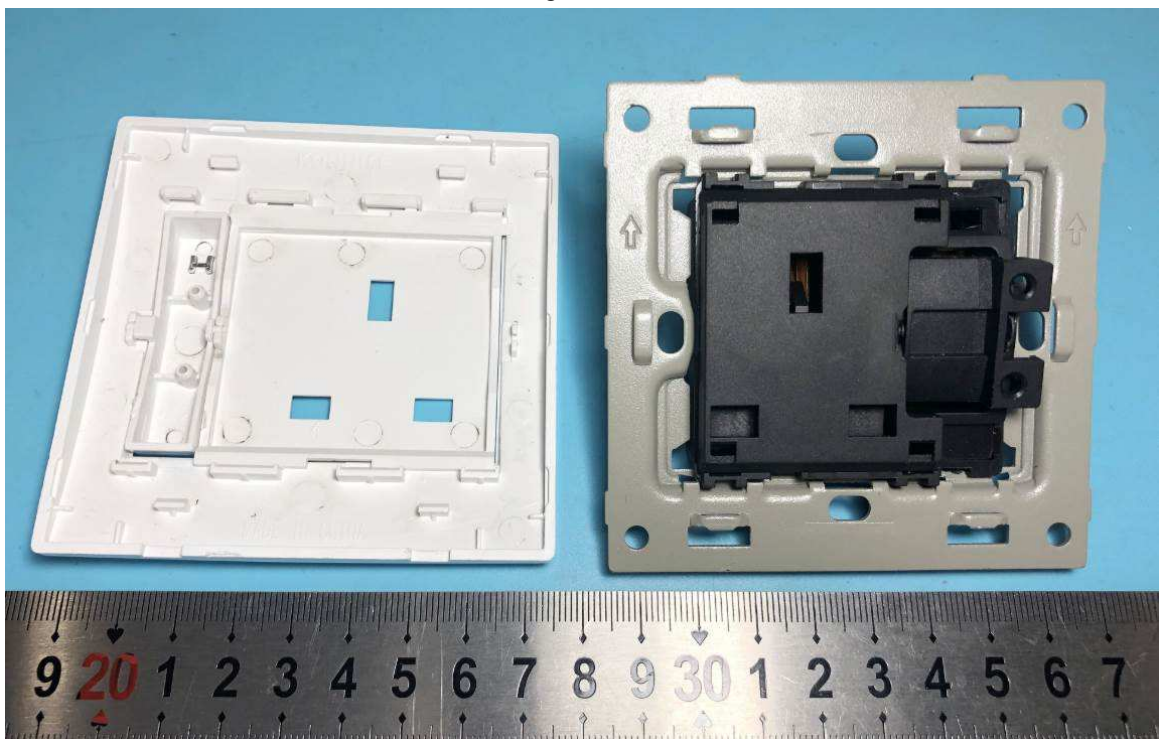


S-356 13A 250V~

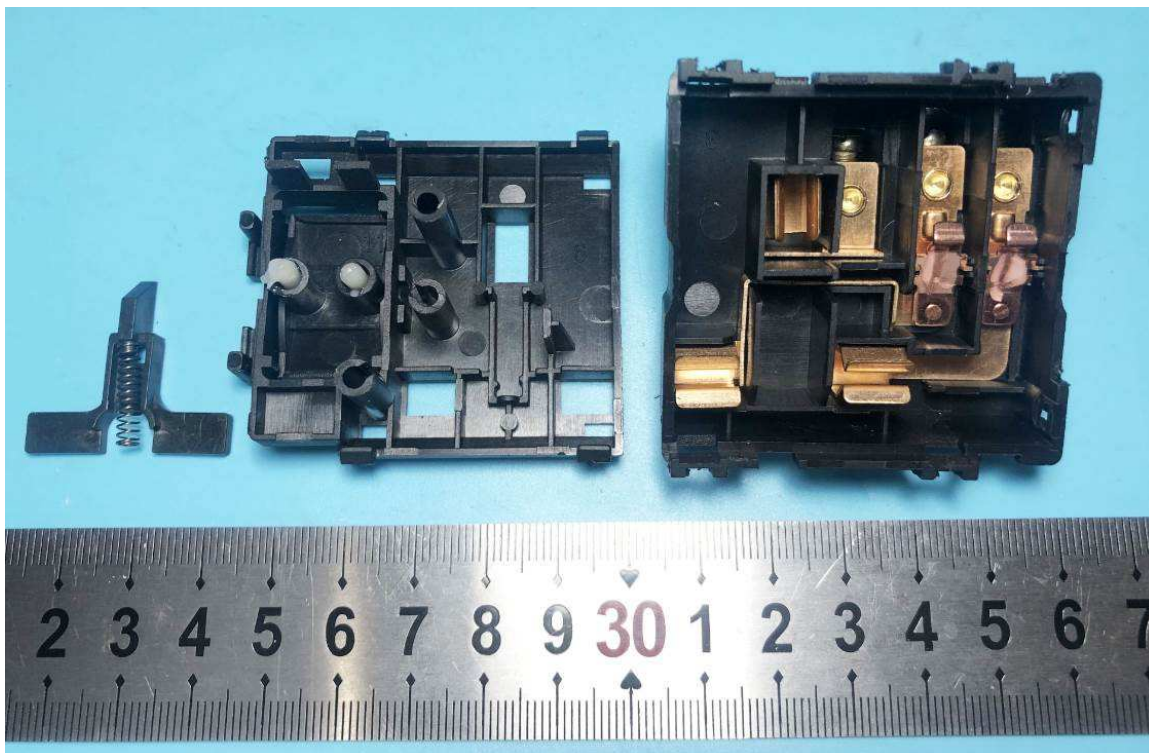




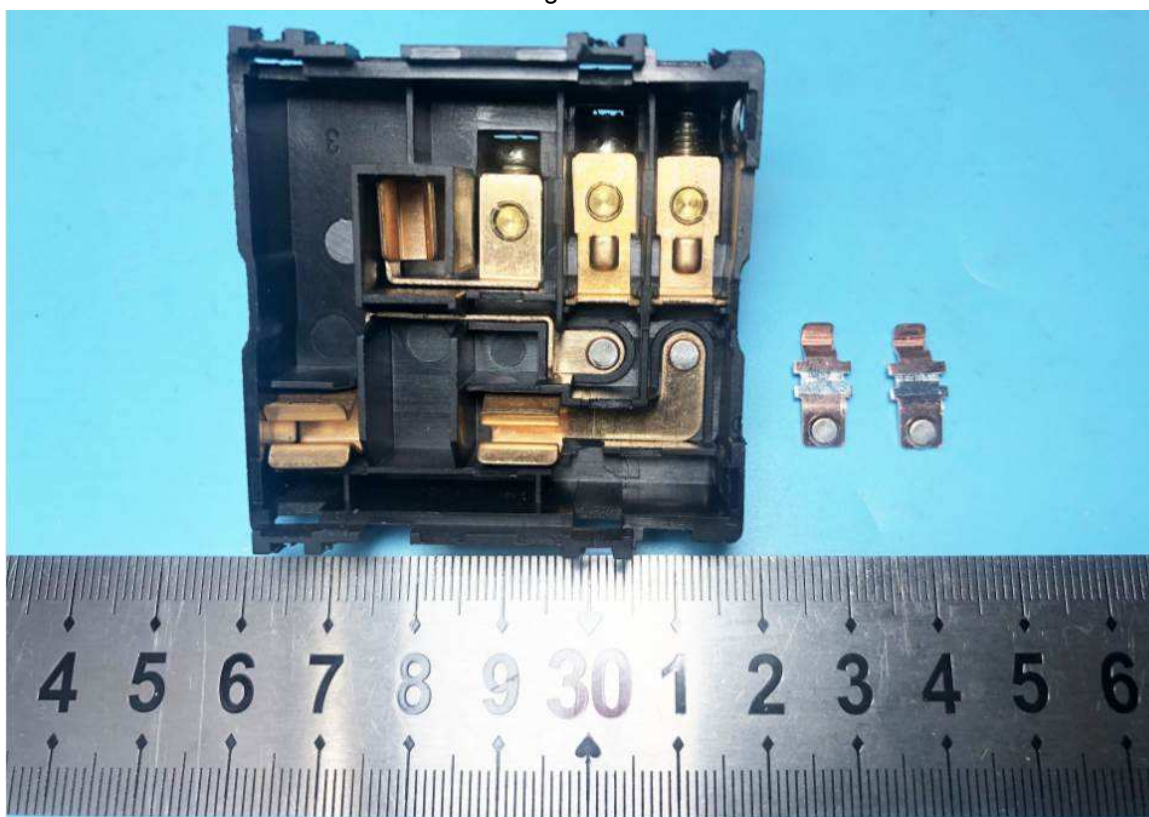
Inner Configuration of S-356





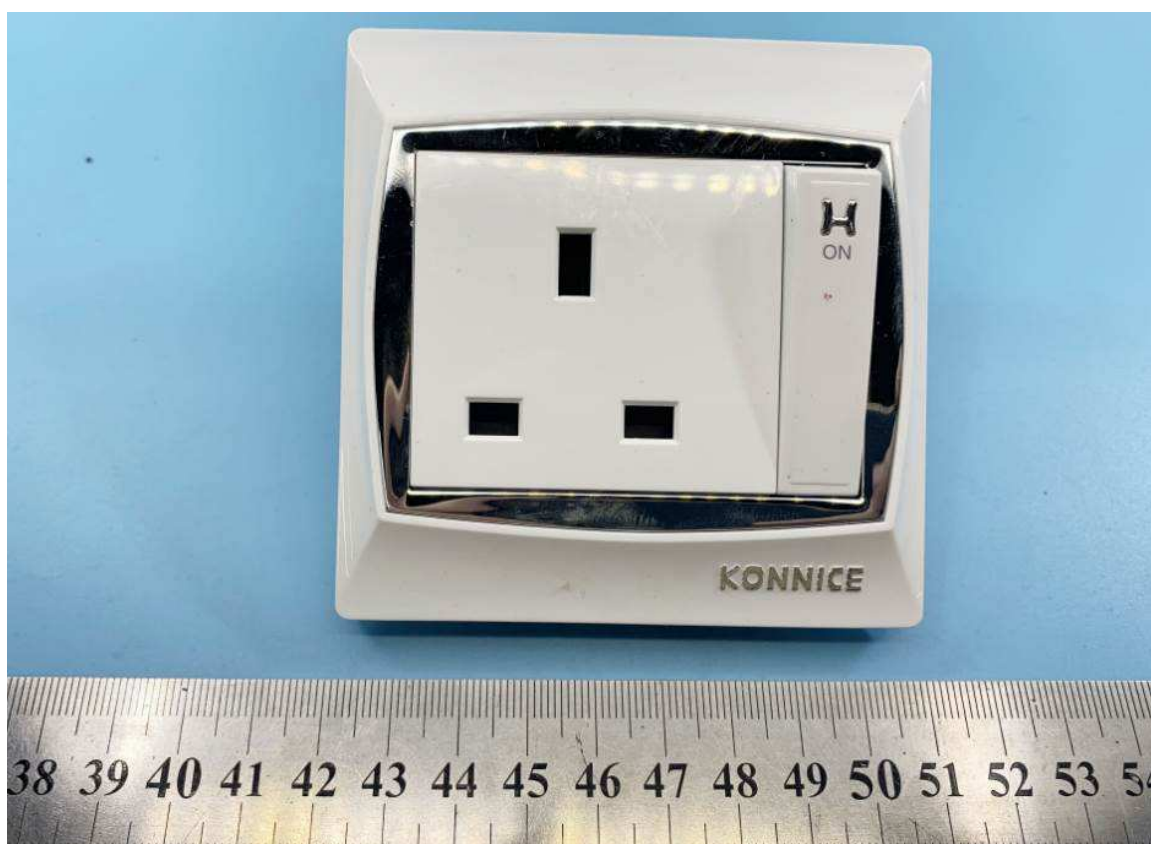


Inner Configuration of S-356





T-356 13A 250V~

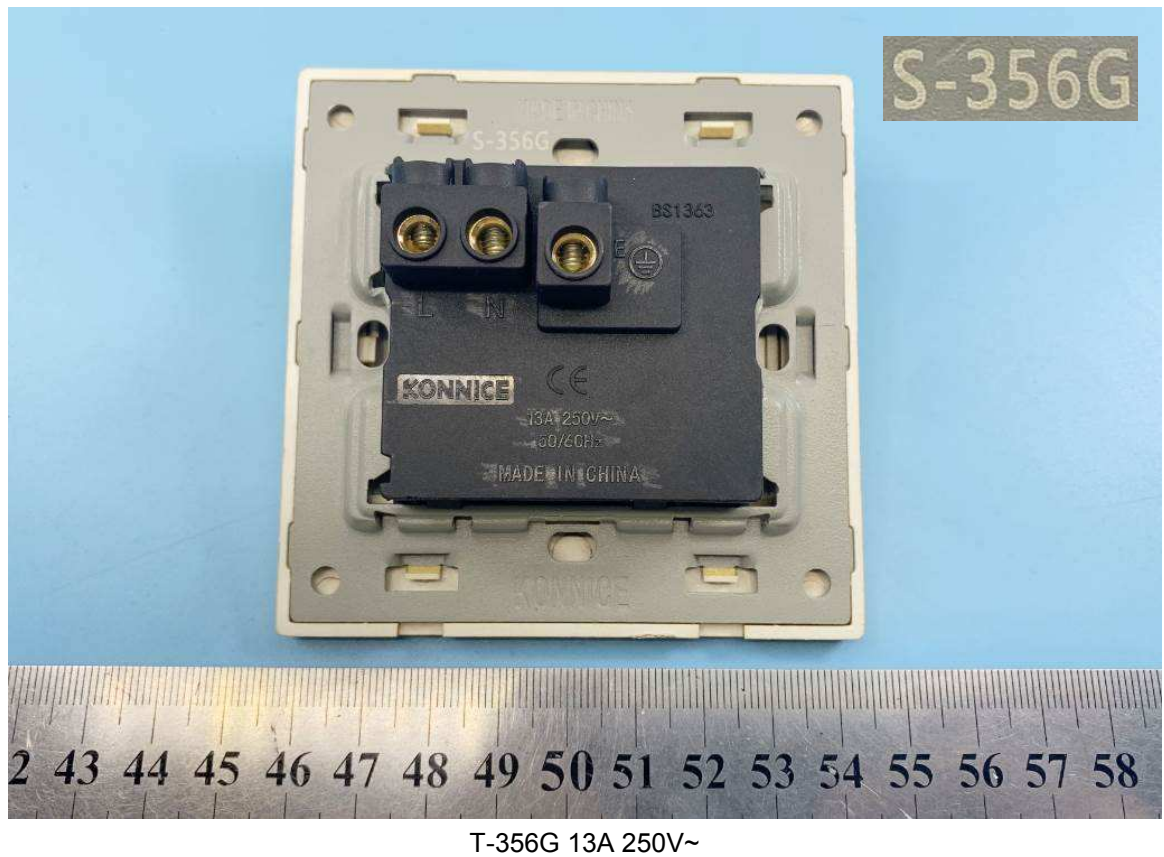




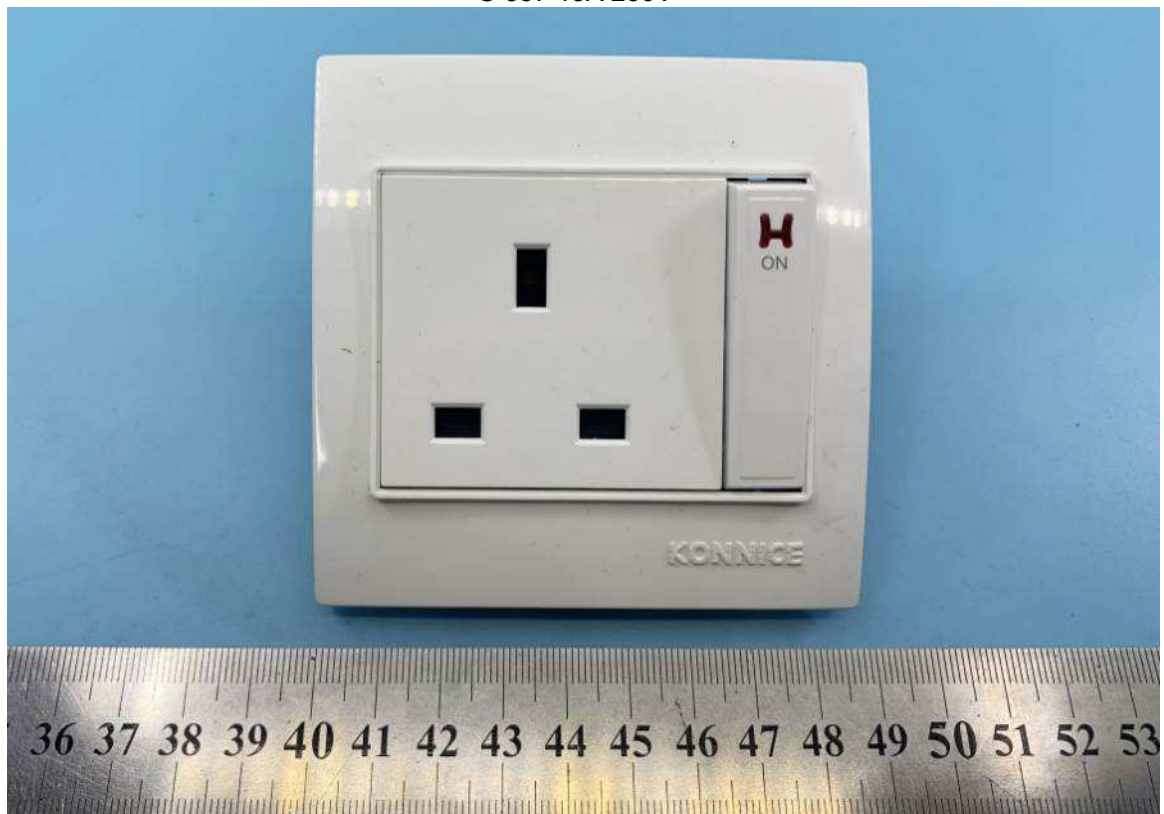


S-356G 13A 250V~









S-357 13A 250V~

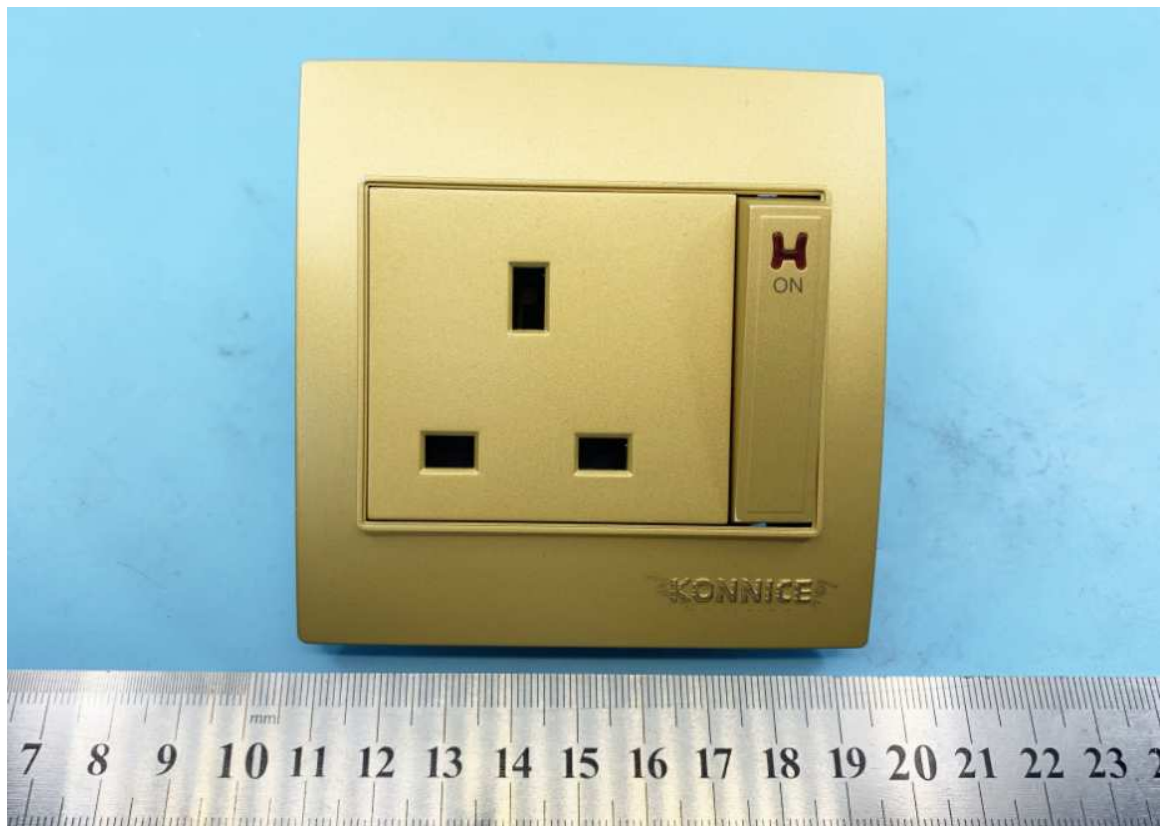




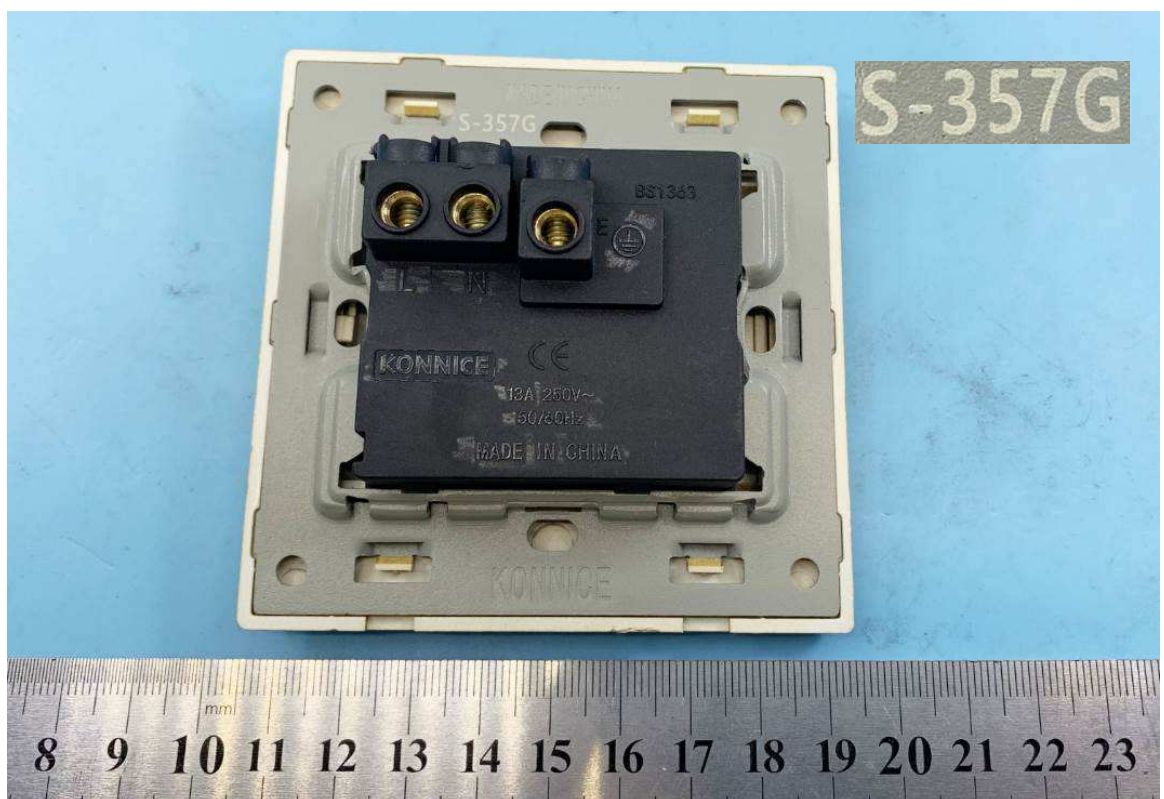


T-357 13A 250V~





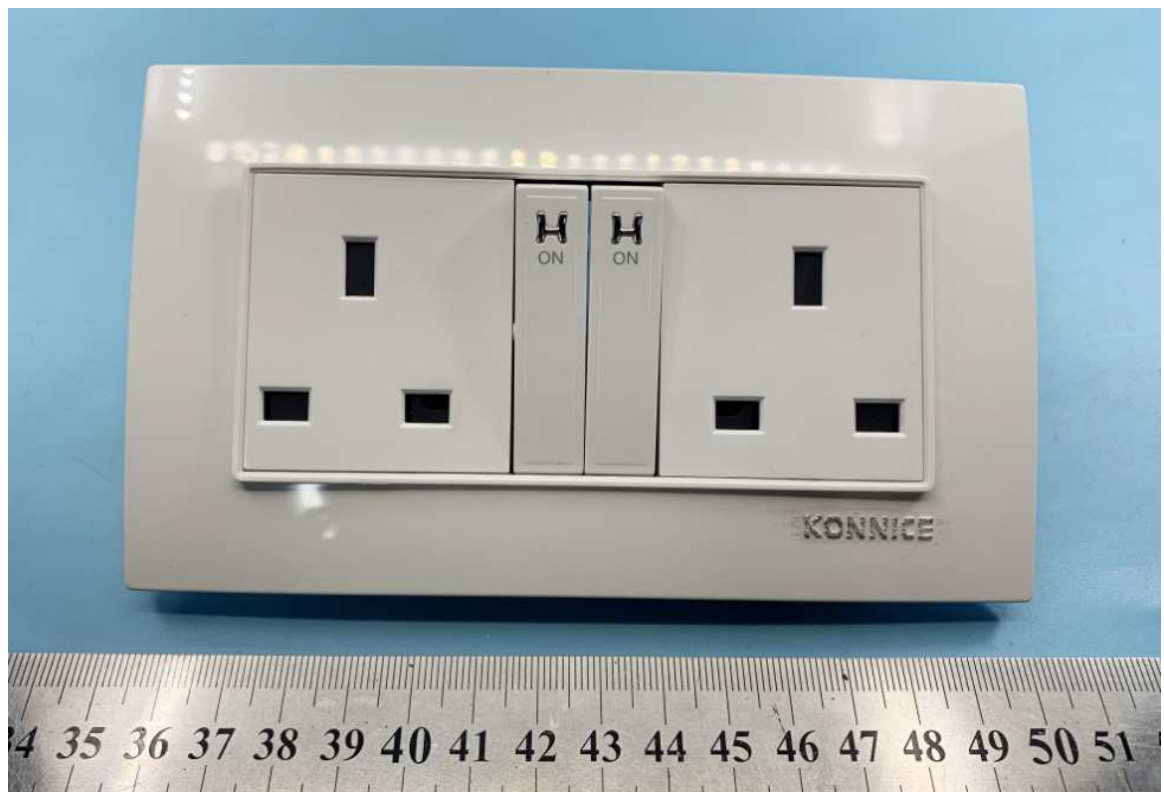
S-357G 13A 250V~

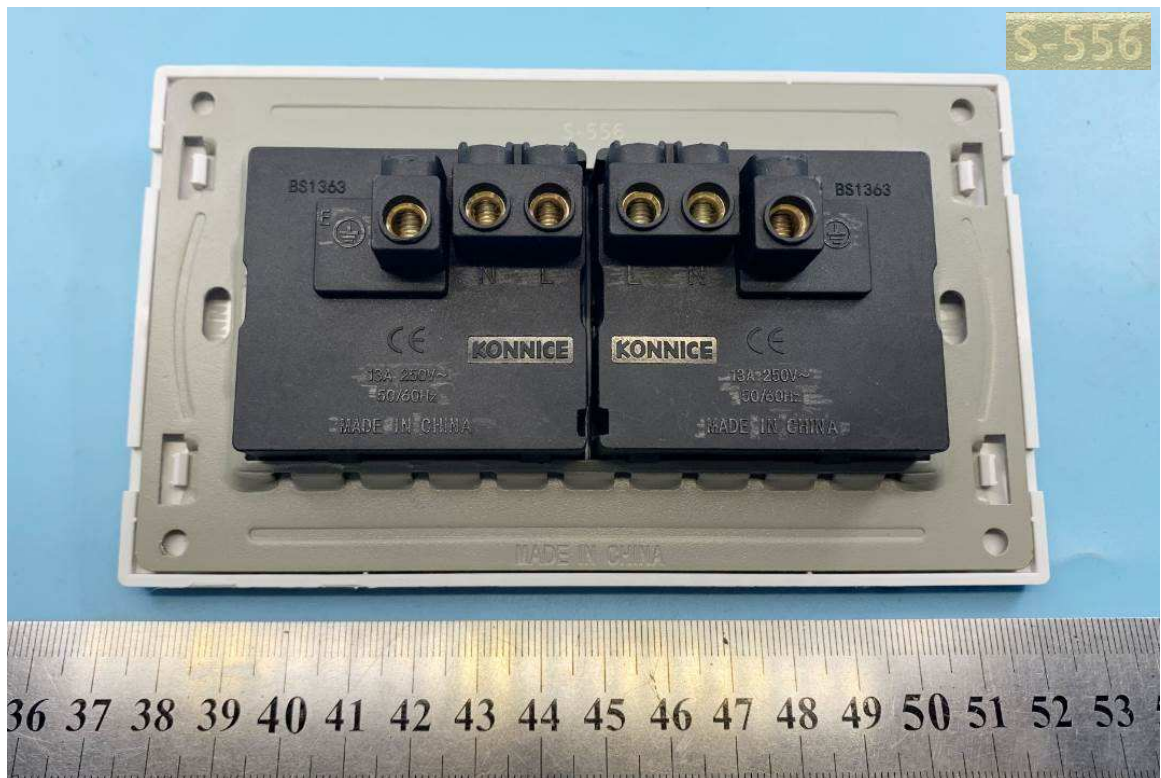




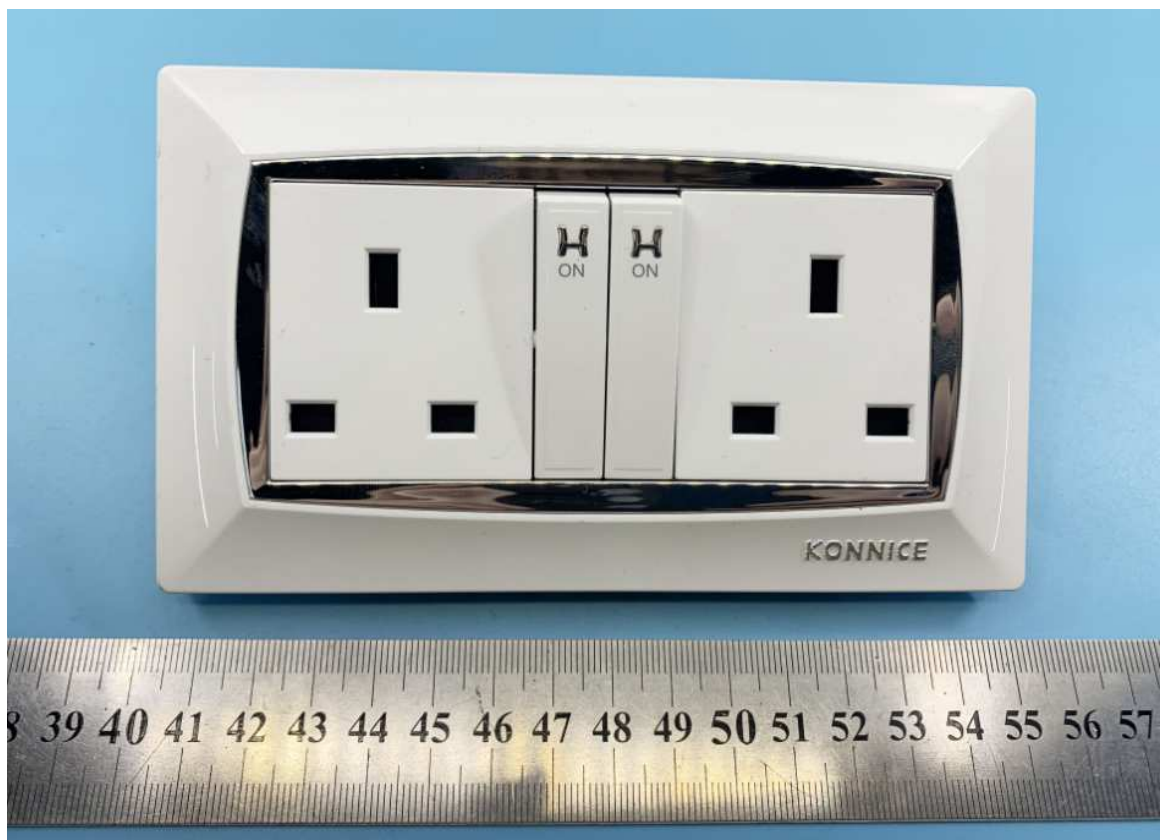


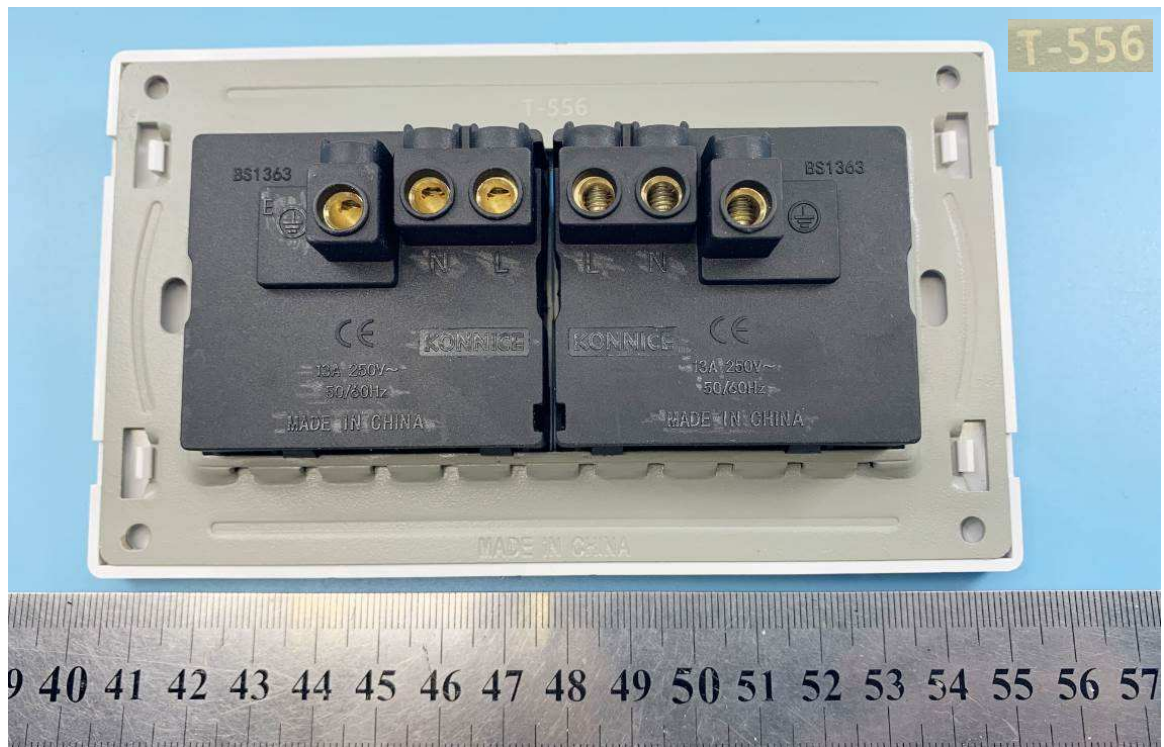
S-556 13A 250V~



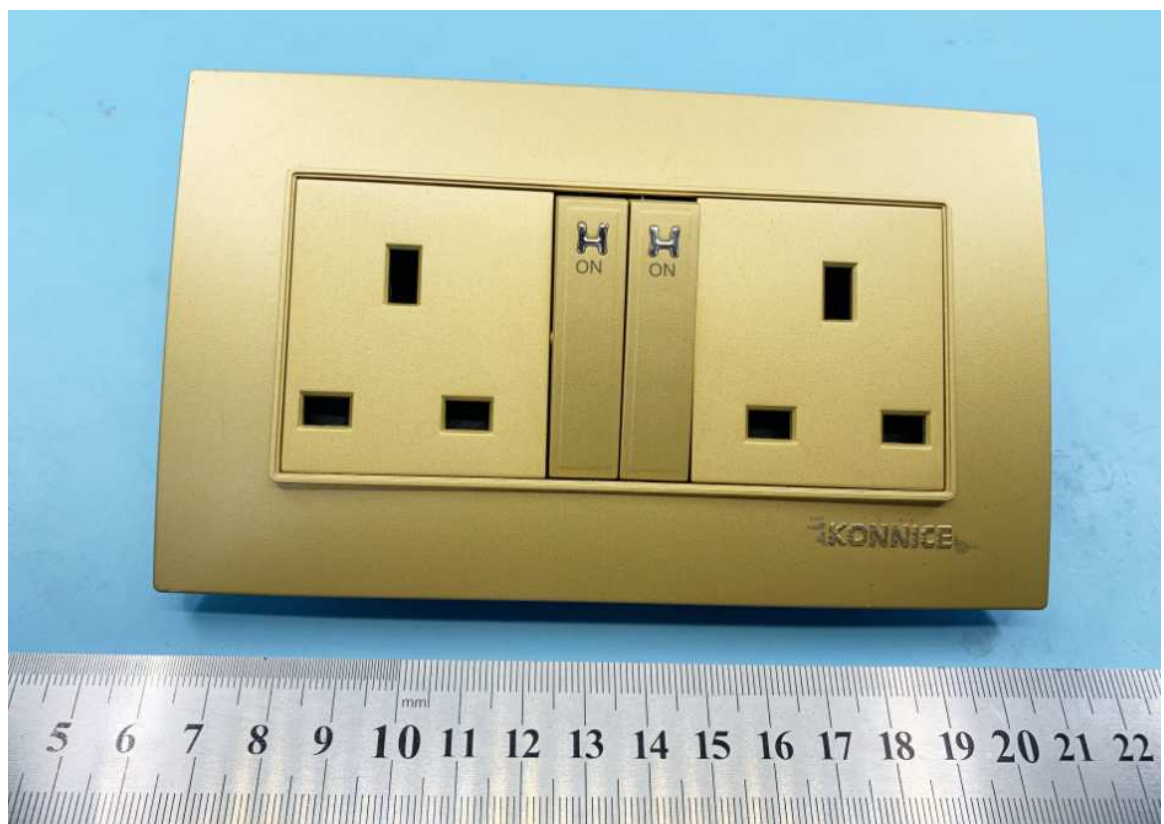


T-556 13A 250V~

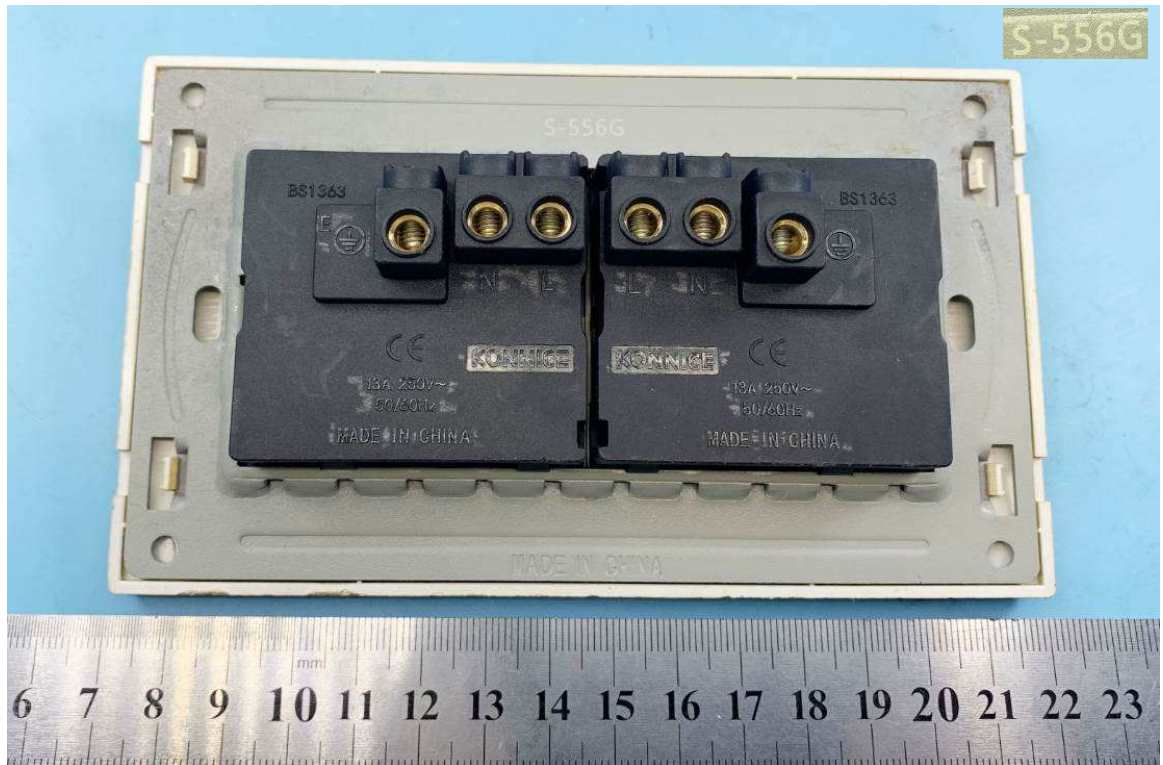




S-556G 13A 250V~







T-556G 13A 250V~

