

Your ref.: O/No. PO17927
Our ref.: NMI-181116-00006
Enquiries: Phewa SE
Date: 2019-04-18

Power Logics (Pty) Ltd
Attention: Mr Adrian Mazzullo
P.O. Box 84
Ottery
7808

Dear Sir

TESTING OF SOCKET-OUTLET (ZA Dedicated/Clean Socket)

With reference to your order No.PO17927, we have pleasure in enclosing our report No. NMI-181116-00006 A, B and C for the tests conducted on your sample.

Our invoice covering the fee charged for conducting the tests will be forwarded to you under a separate cover

Yours faithfully



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Client : Power Logics (Pty) Ltd, P.O. Box 84, **Ottery**, 7808
Manufacturer : Power Logic
Apparatus : Socket-outlet (ZA Dedicated/Clean Socket)
Designation : 1CBD

Ratings assigned by the Manufacturer:

Rated Voltage : 250 V~
Rated Current : 16 A

Tests have been carried out strictly in accordance with
SANS 60884-1:2013 as referred to in:

VC 8008 Ed.3 Compulsory specification for Plugs, socket-outlet and socket-outlet adaptors Published by Government Notice R.1075 (Government Gazette No.33763) of 19 November 2010


Date of Tests: 13 December 2018 to 10 April 2019

Conclusion

The sample has complied with the relevant requirements SANS 60884-1:2013 as referred to in: VC 8008 Ed.3 Compulsory specification for Plugs, socket-outlet and socket-outlet adaptors Published by Government Notice R.1075 (Government Gazette No.33763) of 19 November 2010

This report consists of:

Report form(s) : Pages 1-16
Appendices B : Page 17-22
Photograph(s) : Page 23



SE Phewa
Test Officer (Technical signatory)
Materials/Installations Laboratory: **SABS Commercial SOC Ltd**



SB Chonco
Manager
Materials/Installations Laboratory: **SABS Commercial SOC Ltd**

Olifantsfontein, 18 April 2019

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The test work relates to this report was performed by SABS Commercial SOC Ltd. The report and its test results relate only to the specific sample(s) identified herein. They do not imply SABS approval of the quality and/or performance of the item(s) in question and the test results do not apply to any similar item that has not been tested. This report may not be reproduced except in full. The authenticity of this report and its contents can be confirmed by contacting the person who signed it.



T0159

1 Description of Sample

The sample consisted of nine (09) socket-outlets with markings as indicated on page 23 of this report.

2 Test Method

SANS 60884-1:2013 Plugs and socket-outlets for household and similar purposes. Part 1: General requirements, as referred to in:

VC 8008 Ed.3 Compulsory specification for Plugs, socket-outlet and socket-outlet adaptors Published by Government Notice R.1075 (Government Gazette No.33763) of 19 November 2010

Breaking capacity and normal operation were conducted at Testing and conformity services laboratories (Pty) Ltd at 44 Sixth street, WYNBERG 2090.

3 Sampling Procedure

The sample was new when submitted for testing by Power Logics (Pty) Ltd on the 05 October 2018 and allocated NETFA samples No. NMI-150814-00006(C1-C9).

4 Measuring Equipment

Refer to appendix A in page 16 for a list of measuring equipment and tolerances. All measuring instruments used are calibrated and traceable through accredited laboratories, to National Standards, and the calibration certificates are available at NETFA for scrutiny

5 Results

For detailed results see pages 3 to 15 of this report.

SANS 60884-1: 2013			
Clause	Requirements-Test	Results-Remark	Verdict
6	Ratings		
6.1	Preferred: - Voltage rating and - Current rating	250 V ~ 16 A	Complied
6.2	In a cord extension set, the rated current of the portable socket-outlet shall not be higher and rated voltage shall not be less than that of the plug		N/A
7	Classification		
7.1	Accessories classification: - Protection against harmful ingress of foreign objects - Protection against harmful ingress of water - Provision for earthing - Method of connection - Type of terminals	IPX0 With earthing contact Rewirable accessories Screwless type	Complied
7.2	Socket-outlets classification	Flush type	Complied
7.3	Plug classification		N/A

SANS 60884-1: 2013			
Clause	Requirements-Test	Results-Remark	Verdict
8	Marking		
8.1	Accessories shall be marked as follows: <ul style="list-style-type: none"> • Rated current • Rated voltage • Symbol of nature of supply • Manufacturers or vendors name • Type reference 	16 A 250 V ~ Power Logics 1CBD	Complied
8.2	When symbols are used, they shall be as follows: <ul style="list-style-type: none"> - Amperes.....A - Volts.....V - Alternating current.....~ - Neutral.....N - Protective earth..... (earth symbol with a circle around it) 		Complied
8.3	Fixed socket-outlets		Complied
8.4	Marking shall be easily discernible when the accessory is wired and assembled.		Complied
8.5	Terminals: <ul style="list-style-type: none"> - intended exclusively for the neutral conductor shall be indicated by the letter N, and - for the connection of the protective conductor shall be indicated by the earth symbol with circle around it. 		Complied
8.6	Degree of protection shall be indicated either by marking or in a manufacturer's catalogue or instruction sheet.		N/A
8.7	Marking shall be durable and easily legible.		Complied
9	Checking of dimensions		
	Gauges	SANS 164-2-1	Complied
	Measurements		Complied

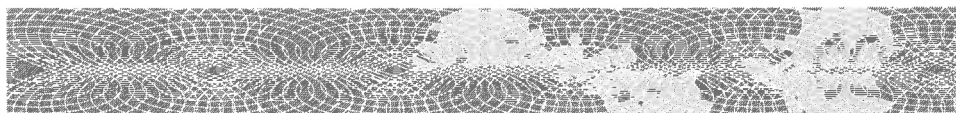
1ST SAMPLE		
Socket-outlet- Standard sheet 1-1 of SANS 164-2-1:2018		
Socket-outlets	9,2	10 ± 2
	22,0	20 min
	8,7	8,5 min
	5,1	5,0 + 0,2
	19,1	19 ± 0,2
	34,2	34,1 ± 0,5
	15,6	15,6 ± 0,1
	6,4	6,4 – 0,2

2nd SAMPLE		
Socket-outlet- Standard sheet 1-1 of SANS 164-2-1:2018		
Socket-outlets	9,1	10 ± 2
	22,1	20 min
	8,7	8,5 min
	5,1	5,0 + 0,2
	19,2	19 ± 0,2
	34,1	34,1 ± 0,5
	15,6	15,6 ± 0,1
	6,5	6,4 – 0,2

3rd SAMPLE		
Socket-outlet- Standard sheet 1-1 of SANS 164-2-1:2018		
Socket-outlets	9,3	10 ± 2
	22,0	20 min
	8,6	8,5 min
	5,1	5,0 + 0,2
	19,1	19 ± 0,2
	34,3	34,1 ± 0,5
	15,6	15,6 ± 0,1
	6,4	6,4 – 0,2

SANS 60884-1: 2013			
Clause	Requirements-Test	Results-Remark	Verdict
10	Protection against electric shock		
10.1	Socket-outlets: - Live parts are not accessible, even after removal of parts which can be removed without the use of a tool.	Live parts are not accessible	Complied
	Plugs: - Live parts of plug shall not be accessible when the plug is in partial or complete engagement with a socket-outlet of the same system		N/A
	Compression test for each specimen of plug or portable socket-outlet, - Force = 150 N - Time = 5 min		N/A
10.2	Parts which are accessible shall be made of insulating material		Complied
10.3	It shall not be possible to make connection between a pin of a plug and a live socket-outlet while any other is accessible. - Test temperature = $(35 \pm 2) ^\circ\text{C}$ - Force = 75 N	Not be possible to make connection between a pin of a plug and a live socket-outlet while any other is accessible	Complied
10.4	External parts of plugs, with the exception of assembly screws and the like, current-carrying and earthing pins, earthing straps and metal rings around pins, shall be of insulating material		N/A
10.5	Shuttered socket-outlets shall, in addition, be so constructed that live parts are not accessible without a plug in engagement.	Live parts are not accessible without a plug in engagement	Complied
10.6	Earthing contacts, if any shall be so designed that they cannot be deformed by the insertion of a plug	Not deformed by the insertion of a plug	Complied
10.7	Socket-outlets with increased protection shall be so constructed that, when mounted and wired as in normal use, live parts shall not be accessible.	Live parts shall not be accessible.	Complied

SANS 60884-1: 2013			
Clause	Requirements-Test	Results-Remark	Verdict
11	Provision for earthing		
11.1	Earth connection made before the current-carrying contacts become live	Earth connection made before the current-carrying contacts become live	Complied
	Current-carrying pins shall separate before the earth connection.	Current-carrying pins are separate before the earth connection	Complied
11.2	Earthing terminals of rewirable accessories shall comply with clause 12		N/A
11.3	Accessible metal parts of fixed socket-outlets shall be permanently and reliably connected to the earthing terminal		N/A
11.4	Socket-outlets, having an IP code higher than IPX0 shall be provided with an internal fixed earthing terminal		N/A
11.5	Connection between earthing terminal and accessible metal parts shall be of low resistance		N/A
11.6	Fixed socket-outlets according to item b) of 7.2.5: shall have the earthing socket contact and its terminal electrically separated from any metal mounting means		N/A
12	Terminals		
12.1	General:		Complied
	- Rewirable fixed socket-outlets shall be provided with screw-type terminals. - Non-rewirable accessories shall be provided with soldered, welded, crimped or equally effective permanent connections (termination).		
12.2	Terminals with screw clamping for external copper conductors		N/A
12.3	Screwless terminals for external copper conductors		N/A



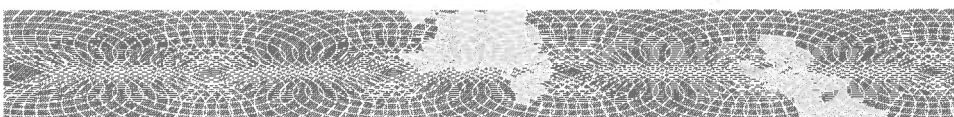
SANS 60884-1: 2013			
Clause	Requirements-Test	Results-Remark	Verdict
13	Construction of fixed socket-outlets		
13.1	Socket-contact assemblies shall have sufficient resilience to ensure adequate contact pressure on plug pins		Complied
13.2	Socket-contacts and pins of socket-outlets shall be resistant to corrosion and abrasion.		Complied
13.3	Insulating lining, barriers and the like shall have adequate mechanical strength		Complied
13.4	Socket-outlets shall be so constructed as to permit <ul style="list-style-type: none"> - easy introduction and connection of the conductors in the terminals; - easy fixing of the base to a wall or in a mounting box; - correct positioning of the conductors; - adequate space... 		Complied
13.5	Socket-outlets shall be so designed that full engagement of associated plugs is not prevented by any projection from their engagement face		Complied
13.6	If covers are provided...		N/A
13.7	Covers, cover-plates or parts of them...		Complied
13.8	A cover-plate		Complied
13.9	Surface-type socket-outlets shall be so constructed that, when they are fixed and wired, no free openings in their enclosures		N/A
13.10	Screws or other means for mounting...		N/A
13.11	Multiple socket-outlets		N/A
13.12	Multiple socket-outlets...		Complied
13.13	Mounting plate of surface-type socket-outlet...		N/A
13.14	Socket-outlets shall withstand the lateral strain		Complied
13.15	Socket-outlets shall not be an integral part of lampholders		Complied
13.16	Surface-type socket-outlets having an IP code higher than IP20		N/A
13.17	Earthing pins...		Complied
13.18	Earthing contacts and neutral contacts shall be locked against rotation and removable only with the aid of a tool		Complied
13.19	Metal strips of the earthing circuit		Complied
13.20	Socket-outlets to be installed in a box shall be so.....		Complied

SANS 60884-1: 2013			
Clause	Requirements-Test	Results-Remark	Verdict
13.21	Surface-type socket-outlets shall be so constructed that the conduit or sheath of the cable can enter atleast 1mm into the enclosure		N/A
13.22	Membranes...		N/A
13.23	Membranes in inlet openings		N/A
14	Construction of plugs and portable socket-outlets		N/A
15	Interlocked socket-outlet		N/A
16	Resistance to ageing, protection provided by enclosure and resistance to humidity		
16.1	Resistance to ageing: Accessories shall be resistance to ageing. - Temperature at (70±2) °C for seven days(168 h), - Relative humidity of between 45 % and 55 % for four days (96 h), After the test, the specimens shall show no damage.	Not damaged	Complied
16.2	Protection provided by enclosures - Enclosure shall provide protection against access to hazardous parts, harmful effects due to ingress of solid foreign objects and harmful effects...		N/A
16.3	Resistance to humidity: Accessories shall be proof against humidity which may occur in normal use. - Relative humidity of between 91 % and 95 % for two days (48 h)	Not damaged	Complied

SANS 60884-1: 2013			
Clause	Requirements-Test	Results-Remark	Verdict
17	Insulation resistance (I.R) and electric strength (H.V)		
	The insulation resistance and electric strength shall be adequate		Complied
17.1	<p>The insulation resistance test,</p> <ul style="list-style-type: none"> - Rated current (16 A) - Test voltage (500 V), - Duration (1 min). <p>The insulation resistance shall be not less than 5 MΩ, except for items g) and h) of clause 17.1.1, where the resistance shall not be less than 2 MΩ.</p>	The insulation resistance was not less than 5 MΩ	Complied
17.2	<p>The electric strength test,</p> <ul style="list-style-type: none"> - Rated voltage (250 V), - Test voltage (2 000 V). - Duration (1 min) <p>No flashover or breakdown shall occur during the test</p>	No flashover or breakdown shall occur during the test	Complied
18	Operatings of earthing contacts		
	Earthing contacts shall provide adequate contact pressure and shall not deteriorate in normal use.		Complied
19	Temperature rise		
	<p>Accessories shall be so constructed that the temperature rise shall not exceed 45K</p> <ul style="list-style-type: none"> - Rated current (16 A) - Test current (16 A) - Duration (1 h) - Nominal cross-sectional area of conductors (1,5 mm²) 	25,1 K	Complied
20	Breaking capacity		
	<p>Accessories shall have adequate breaking capacity.</p> <ul style="list-style-type: none"> - Test voltage (1,1Vn) - Test current (1,25In) - Power factor(0,6) and - Number of strokes <p>During the test, no sustained arcing shall occur and</p> <p>After the test, the specimens shall show no damage impairing their further use.</p>	See report number:TJ00648	Complied

SANS 60884-1: 2013			
Clause	Requirements-Test	Results-Remark	Verdict
21	Normal Operation		
	<p>Accessories shall withstand without excessive wear or other harmful effect, the mechanical, electrical and thermal stresses occurring in normal use.</p> <ul style="list-style-type: none"> - Test voltage(rated) - Test current(rated) - Power factor(0,8) and - Number of strokes <p>During the test, no sustained arcing shall occur and</p>	See report number:TJ00648	Complied
22	Force necessary to withdraw the plug		
22.1	<p>Verification of the maximum withdrawal force,</p> <ul style="list-style-type: none"> - Number of the poles of the accessory (3), - Multi-pin gauge maximum (54 N). 	The plug didn't remain in the socket-outlet	Complied
22.2	<p>Verification of the minimum withdrawal force,</p> <ul style="list-style-type: none"> - Number of the poles of the accessory (3), - Single-pin gauge minimum (2 N). 	The gauge didn't fall from the contact assembly within 30s	Complied
23	Flexible cable and their connection		N/A

SANS 60884-1: 2013			
Clause	Requirements-Test	Results-Remark	Verdict



24	Mechanical strength		
24.1	Impact test After the test, the specimen shall show no damage within the meaning of this standard.	Not damaged	Complied
24.2	Free fall test Non-rewirable accessories are tested as delivered - Number of falls (100) for mass of the specimen exceeds 200 g,		N/A
24.3	Surface type socket-outlets...		N/A
24.4	Impact test - After the test, the specimen shall show no damage within the meaning of this standard.	Not damaged	Complied
24.5	Compression test - Shall show no damage within the meaning of this standard.		N/A
24.6	Screwed glands - After the test, the glands and the enclosures of the specimen shall show no damage within the meaning of this standard.		N/A
24.7	Plug pins provided with insulating sleeves... - After the test, the pins shall show no damage which may affect safety or impair the further use of the plug.		N/A
24.8	Shuttered socket-outlets... - After the test, the specimen shall show no damage within the meaning of this standard.	Not damaged	Complied
24.9	Rewirable multiple portable socket-outlets - After the test, the specimen shall show no damage within the meaning of this standard.		N/A
24.10	The plug is placed on a rigid steel plate provided with holes suitable for the pins of the plug...		N/A
24.11	Barriers -The rod shall not pierce the barrier		N/A
24.12	Portable socket-outlet - Shall not break in a way which allows live parts to become accessible to the standard test finger.		N/A
24.13	Portable socket-outlets - Shall not break in a way which allows live parts to become accessible		N/A
24.14	Verification of retention of covers or cover-plates		N/A

SANS 60884-1: 2013

Clause	Requirements-Test	Results-Remark	Verdict
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24.15	Cover or cover plates		N/A
24.16	Cover or cover plates		N/A
24.17	Cover or cover plates		N/A
24.18	Force of 1 N shall not enter more than 1,0 mm from the upper part of any groove, hole or reverse taper		N/A
24.19	The shrouds of portable socket-outlets are subjected to a compression test at an ambient temperature of (25+5) °C in an apparatus similar to that shown in figure 38 of SANS 60884-1		N/A

25	Resistance to heat		
25.1	The specimens are kept for 1 h in a heating cabinet at a temperature of (100±2) °C	No deformation	Complied
25.2	Parts of insulating materials of fixed socket-outlets necessary to retain current-carrying parts and parts of the earthing circuit in position, as well as parts of the front surface zone of 2 mm wide surrounding the phase and neutral pin entry holes: Ball pressure test at (125±2) °C for 1 h - after the test: diameter of impression < 2 mm...	Diameter of impression < 2 mm...	Complied
25.3	For parts not necessary to retain current-carrying parts and parts of the earthing circuit in position, even though in contact with them: ball-pressure test (1 h) - after the test: diameter of impression , 2 mm	After the test: diameter of impression , 2 mm	Complied
25.4	Portable accessories: compression test (20 N) at (80±2) °C for 1 h - after the test: no damage		N/A

SANS 60884-1: 2013

Clause	Requirements-Test	Results-Remark	Verdict
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26	Screws, current-carrying parts and connections		
26.1	Connection, electrical or mechanical, shall withstand the mechanical stresses occurring in normal use.	Connection, electrical or mechanical withstood the mechanical stresses	Complied
26.2	Screws engaged in insulating material, operated when mounting the accessory during installation		N/A
26.3	Contact pressure shall not be transmitted through insulating material	Contact pressure not transmitted	Complied
26.4	Screws and rivets for electrical as well as mechanical connection shall be locked against loosening or turning		N/A
26.5	Current-carrying parts shall be of metal having, mechanical strength, electrical conductivity and resistance to corrosion adequate for their intended use.	Current-carrying parts made of metal	Complied
26.6	Contacts subjected to a sliding action in normal use shall be of metal resistance to corrosion.	Shall be used of metal resistant to corrosion	Complied
26.7	Thread-forming and thread-cutting screw shall not be used for the connection of current-carrying parts and may be used to provide earthing continuity if at least two screws are used for each connection		N/A

27	Creepage distances, clearances and distances through sealing compound		
27.1	Creepage distance, clearances and distances through sealing compound shall comply with table 23 of SANS 60884-1	Comply with table 20 of SANS 60884-1:2013	Complied
27.2	Insulating sealing compound shall not protrude above the edge of the cavity in which it is contained.	Not protrude above the edge of the cavity in which it is contained	Complied
27.3	Surface-type socket-outlets shall not have bare current-carrying strips at the back.		N/A

SANS 60884-1: 2013

Clause	Requirements-Test	Results-Remark	Verdict
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28	Resistance of insulating material to abnormal heat, to fire and to tracking		
28.1	Resistance to abnormal heat and to fire		Complied
28.1.1	<p>Glow-wire test: For parts of insulating materials, necessary to retain current-carrying parts.</p> <ul style="list-style-type: none"> - Test temperature= 850 °C - Time = 30 seconds <p>The specimen regarded as having passed the glow-wire test if</p> <ul style="list-style-type: none"> - there is no visible flame and no sustained glowing, or if - flames and glowing at the specimen extinguish within 30 s after removal of the glow-wire. <p>There shall be no ignition of the tissue paper or scorching of the board.</p>	Flames extinguished within 30s after the removal of the glow-wire tip	Complied
	<p>Glow-wire test: parts of insulating material needed to retain the earth terminals in position in a box</p> <ul style="list-style-type: none"> - Test temperature= 650 °C - Time = 30 seconds <p>The specimen regarded as having passed the glow-wire test if</p> <ul style="list-style-type: none"> - there is no visible flame and no sustained glowing, or if - flames and glowing at the specimen extinguish within 30 s after removal of the glow-wire. <p>There shall be no ignition of the tissue paper or scorching of the board</p>		N/A
	Heating test (pins with insulating sleeves)		N/A
28.2	<p>Resistance to tracking: - No flashover or breakdown between electrodes shall occur before a total of 50 drops has fallen</p>	No flashover or breakdown occurred	Complied

29	Resistance to rusting		
	<p>Ferrous parts shall be adequately protected against rusting</p> <ul style="list-style-type: none"> - The surface shall show no signs of rust. 	No flashover or breakdown occurred	Complied

30	Additional tests on pins provided with insulation sleeves		N/A
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N/A=Not Applicable		
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APPENDIX A

Measuring Equipment

The following equipment was used for the measurements:

Type of equipment	Manufacture and model	SABS No.	Measurement Uncertainty
Omega stop watch	Omega Timer	13299	± 50 ms
Clamp meter	TopTronic T8056	MBEB009824	± (1% 0.1 + 1 LSD)
Torque screwdriver	Quickset Minor	6FA020890	± 2,0 %
Megohmmeter	IM6	1311204 (PP&E0004996)	± 1.10 ⁻² .R
Oven	Gallenkamp CN-40	PP&E0004971	± 2,0 °C
Oven	Gallenkamp Rex-C100	PP&E0004234	± 2,0 °C
Oven	Prolab TTM-J4	PP&E0027146	± 2,0 °C
Foster Transformers	Foster	PP&E0004246 (SABS-8303)	± 1 %
Digital thermometer (Glow-wire)	Fluke 2175A	PP&E0007336	± 2,0 °C
Compression Machine	LCS & TDC	K752880 & 130 (PPE0027524)	± 0,2 %
Balance	Shimadzu	D449300757	0,02g
Temperature recorder	Yokogawa DX210-1-2	S5E407786 2005 (PP&E0005413)	± 0,5 °C
Thermo-hygrometer	Major tech MT662	33941546	± 1 °C and ± 3 % rh
True RMS multimeter	Fluke 87V	90850216	± 0,1 Ω
Tracking Tester	LDQ-JT	PPE0027143	± 0.5 %

Calibration of this equipment is traceable to national standards.

APPENDIX B



Report No. TJ00648

TEST REPORT	
SANS 60884-1: 2013 "Plugs, socket-outlets for household and similar purposes" Part 1: General requirements	
Report Reference No.	: TJ00648
Technical signatory	: F Nkosi 
Management signatory	: KP Motaung: Logistic Director 
Date of Issue	: 11 April 2019
Date of tests	: 09 April 2019 to 10 April 2019
Total number of pages	: 6
Test Laboratory Address	: Testing and Conformity Services Laboratories (Pty) Ltd 44 Sixth Street, WYNBERG, 2090
Client Name Address	: SABS Commercial (NETFA) 1 Dr Lategan Road, Groenkloof, Pretoria
Manufacturer Brand Name	: Marked with manufacturers identification mark Marked with manufacturers identification mark
Test Standard	: SANS 60884-1: 2013
Tests Conducted	: See the test results on page 3 to 4 of this report
Conclusion:	The sample complied with the requirements of SANS 60884-1: 2013 "Plugs, socket-outlets for household and similar purposes" Part 1: General requirements, for test conducted only

General disclaimer:

The test results presented in this report relate only to the sample tested. This report shall not be reproduced, except in full, without the written approval of the Issuing TACS Laboratories Pty Ltd. The authenticity of this Test Report and its contents can be verified by contacting the Technical Manager, responsible for this Test Report.





Report No. TJ00648

Sample Description	: Dedicated unswitched socket outlet consisting of a two-pole and earthing-contact socket- outlet to SANS 164-2-1
Sample Ratings	
Current rating.....	: 16 A
Voltage rating.....	: 250 V
Sample Marking	: 16 A 250 V~ 1CBD & manufacturers Identification mark
Sampling Procedure	
-2 Samples of red dedicate unswitched socket outlets were selected and supplied by the customer on the 11 th of March 2019	
-The samples were received in a condition suitable for testing.	
Test Conditions:	
Except for the tests that had to be conducted in high or low temperature enclosures, the test atmosphere was in accordance with ISO 554:1976(E) Standard atmosphere for conditioning and/or testing-Specifications. Designated 23/50. Tolerance ± 2 °C and ± 5 % RH.	
Possible test case verdicts:	
- test case does not apply to the test object: N/A	
- test object does meet the requirement.....: P (Pass)	
- test object does not meet the requirement.....: F (Fail)	
The test report includes the following:	
Appendix A: Photos	
Appendix B: List of Testing equipment's	





SANS 60884-1: 2013		Report No. TJ00648	
Clause	Test requirements	Results	Verdict
20	BREAKING CAPACITY		
	Accessories shall have adequate breaking capacity		
	Compliance checked by testing:		
	Rewirable accessories are fitted with conductor as specified for the test of clause 19	OK	P
	The socket-outlet is tested using a plug. The plug is tested using a fixed socket-outlet	OK	P
	Test with $\cos \phi$ 0,6 \pm 0,05 alternating current	0,6	P
	- test voltage (1,1 Vn) (V)	275 V	P
	- test current (1,25 In) (A)	20 A	P
	-the plug is inserted and withdrawn from a socket-outlet 50 time (100 strokes)	OK	P
	During the test: no sustained arcing shall occur	No arcing	P
	After the test:		
	- specimens show no damage impairing their further use;	No damage	P
	- entry holes for the pins not show any damage which may impair the safety	OK	P
21	NORMAL OPERATION		
	Accessories shall withstand without excessive wear or other harmful effect, the mechanical, electrical and thermal stresses occurring in normal use		
	Compliance checked by testing:		
	The socket-outlet is tested using a plug. The plug is tested using a fixed socket-outlet	OK	P
	Test with $\cos \phi$ 0,8 \pm 0,05 alternating current	OK	P
	- test voltage: rated voltage	250 V	P
	- test current: as specified in table 20	16 A	P
	-the plug is inserted and withdrawn from a socket-outlet 5 000 time (10 000 strokes)	OK	P
	During the test: no sustained arcing shall occur	OK	P
	After the test, the specimens shall not show		
	Wear impairing their further use	OK	P
Deterioration of enclosures, insulating lining or barriers	OK	P	
Damage to entry holes for the pins, that might impair proper working	OK	P	





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Clause	Test requirements	Results	Verdict
	Loosening of electrical or mechanical connections	OK	P
	Seepage of sealing compound	OK	P
	The specimens shall comply with requirements of clause 19	N/A	N/A
	They shall withstand an electric strength test to 17.2	N/A	N/A
	For shuttered socket-outlets:		
	A gauge according to figure 9 is applied to the entry holes corresponding to live contacts with a force of 20 N. The gauge shall not be rotated, and it shall be applied such that the force of 20 N is maintained	OK	P
	A gauge according to figure 10 is applied to the entry holes corresponding to live contacts with a force of 1 N	OK	P
	It shall not be possible to touch live parts with the gauges of figures 9 and 10 when they remain under relevant forces		

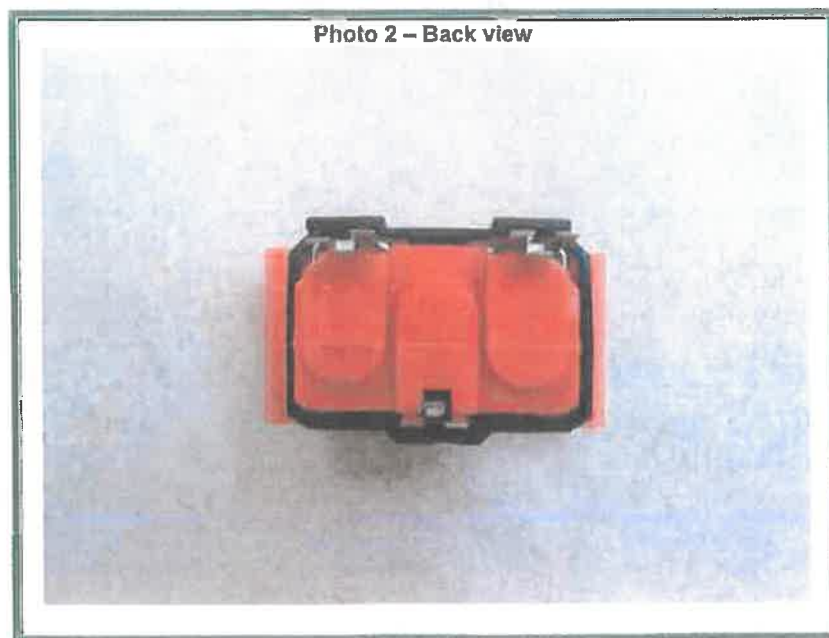
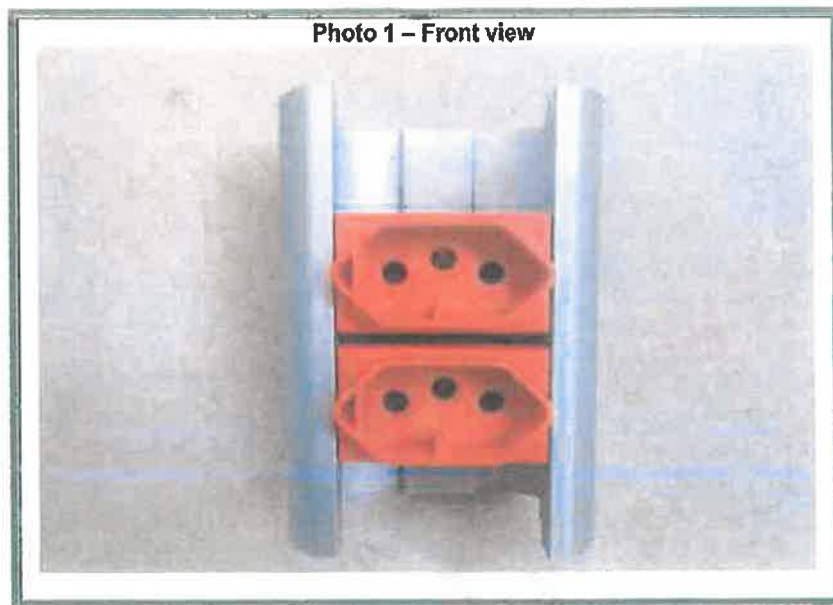




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Appendix A

Photos





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Appendix B**List of test equipment used for testing:**

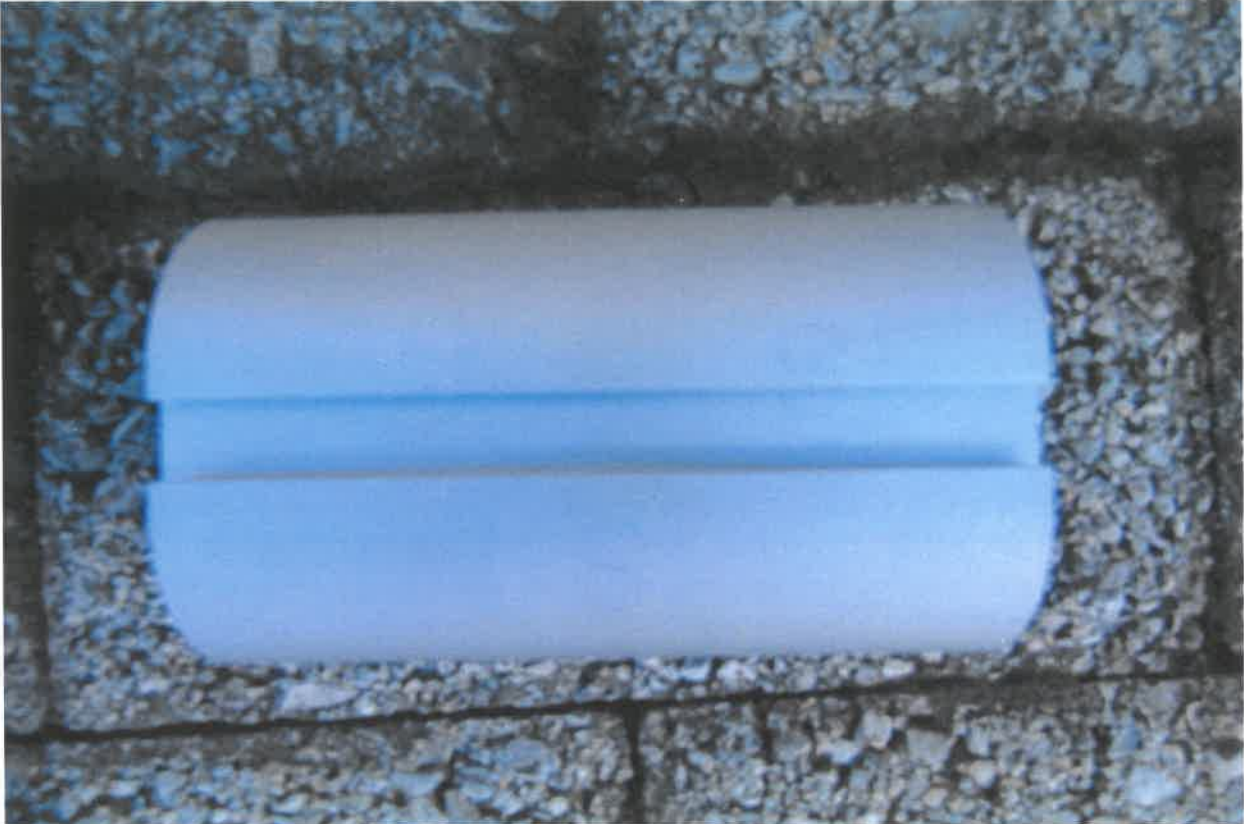
All measuring instruments used are calibrated and traceable through accredited laboratories, to National Standards, and the calibration certificates are available at TACS Lab for scrutiny.

Testing / measuring equipment	Brand name	Equipment number
Clamp meter	Fluke	31710319WS
Stop watch	RS	905346
Endurance tester	YHTEC	YH8816GQD





Photograph No. 1
View of t/he sample



Photograph No. 2
Other view of the sample