SABS

Your ref.: O/No. SAM#02554
Our ref.: NMI-181116-00006AR
Enquiries: EM Phosa
Date: 2019-01-31

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

Dear Sir

REVISION OF NETFA REPORT NO. .: NMI-181116-00006A

We regret to inform you that certain errors have been discovered in the above mentioned report, dated 29 January 2019

Attached please find Test Report No.: NMI-181116-00006AR which replaces Test report No.: NMI-181116-00006A

Would you kindly acknowledge receipt of the revised report by signing the attached copy of this letter and returning it together with the original issues of the Test report No.: NMI-181116-00006A to NETFA in the enclosed self-addressed envelope at your earliest convenience.

We apologise for any inconvenience this may have caused

Yours faithfully

RI Ngobeni
Acting Manager
NETFA: **SABS Commercial SOC Ltd**
Tel: 011 238 2360
Fax: 011 238 2363

SABS

Your ref.: O/No. SAM#02554
Our ref.:: NMI-181116-00006AR
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Power Logics (Pty) Ltd
Attention: Mr Adrian Mazzullo
P.O. Box 84
Ottery
7808

Dear Sir

REVISION OF NETFA REPORT NO. .: NMI-181116-00006A

We regret to inform you that certain errors have been discovered in the above mentioned report, dated 29 January 2019

Attached please find Test Report No.: NMI-181116-00006AR which replaces Test report No.: NMI-181116-00006A

Would you kindly acknowledge receipt of the revised report by signing the attached copy of this letter and returning it together with the original issues of the Test report No.: NMI-181116-00006A to NETFA in the enclosed self-addressed envelope at your earliest convenience.

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Yours faithfully

RI Ngobeni
Acting Manager
NETFA: **SABS Commercial SOC Ltd**
Tel: 011 238 2360
Fax: 011 238 2363

We acknowledge receipt of SABS Test report No. .: NMI-180524-00006AR

Signature: _____

Capacity: _____ Date: _____

SABS

TEST REPORT

THIS REPLACED REPORT NO.NMI-181116-00006A DATED 29 JANUARY 2019.

Client	:	Power Logic (Pty) Ltd, P.O. Box 84, **Ottery,** 7808
Manufacturer	:	Power Logic
Apparatus	:	Non-rewirable partially dedicated plug (ZA Clean plug top)
Designation	:	PD-A

Ratings assigned by the Manufacturer:

Rated Voltage	:	250 V ~
Rated Current	:	16 A

Test have been carried out strictly in accordance with

SANS 60884-1 and SANS 164-2-1 as referred to in:

VC 8008 Compulsory specification for Plugs, Socket-outlets and Socket-outlet Adaptors.

Date of Tests: 04 December 2018 to 25 January 2019

Conclusion

The sample complied with the relevant requirements of SANS 60884-1 and SANS 164-2-1 as referred to in: VC 8008 Compulsory specification for Plugs, Socket-outlets and Socket-outlet Adaptors.

This report consists of:

Report form(s)	Pages 1-18
Photograph(s)	Page 19

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

RI Ngobeni
Acting Manager
Materials/Installations Laboratory: **SABS-Commercial SOC Ltd**

Olifantsfontein, 31 January 2019

43rd Street, Olifantsfontein, PO Box 144, Olifantsfontein, 1665. Tel +27 11 238 2300. Fax +27 11 238 2363

sanas Testing Laboratory T0159

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1 Description of Sample

The sample consisted of nine (9) non-rewirable partially dedicated plugs with markings as indicated on page 19 of this report, comprising a 1.46m flexible cord which was marked as follows:

3 G 1.5MM2 ABERDARE CABLES GOC 500V SABS 1574 H05VV-F

2 Test Method

SANS 60884-1 and SANS 164-2-1 as referred to in:

VC 8008 Compulsory specification for Plugs, Socket-outlets and Socket-outlet Adaptors.

3 Sampling Procedure

The sample was new when submitted for testing by Power logic and was allocated NETFA samples No. NMI-181116-00006R(A1-A9). The glow wire test was conducted at SABS Electronics Laboratory and was witnessed by Ms K Ngandi of SABS NETFA.

4 Test Conditions

The tests were conducted at the National Electrical Test Facility, NETFA, at an altitude of 1 540 m.

5 Measuring Equipment

Refer to appendix A 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.

6 Results

For detailed results see pages 3 to 17 of this report.

SANS 60884-1:2013			
Clause	**Requirements-Test**	**Results-Remark**	**Verdict**
6	**Ratings**		
6.1	- rated voltage (V)……:	250 V	Complied
	- rated current (A)……:	16 A	Complied
6.2	In a cord extension set...		N/A
6.3	Accessories should preferably have a degree of protection IP20, IP40, IP44 or IP55		N/A
7	**Classification**		
7.1	Accessories classification:		
	- degree of protection against access to hazardous parts and against harmful effects due to the ingress of solid foreign objects		N/A
	- degree of protection against harmful effects due to the ingress of water	IPX0	Complied
	- provision for earthing	With earthing contact	Complied
	- method of connecting the cable	Non-rewirable accessories	Complied
	- type of terminals	Screwless	Complied
7.2	Socket-outlets classification:		
	- degree of protection against electric shock		N/A
	- existence of shutters,		N/A
	- method of mounting,		N/A
	- method of installation,		N/A
7.3	Plug classification	I	Complied
8	**Marking**		
8.1	Accessories marked as follows:		
	- rated current (A)……:	16 A	Complied
	- rated voltage (V)……:	250 V	Complied
	- symbol for nature of supply……:	~	Complied
	- manufacturer's or responsible vendor's name:	Power Logic	Complied
	- type reference……:	PD-A	Complied

SANS 60884-1:2013			
Clause	**Requirements-Test**	**Results-Remark**	**Verdict**
8.2	When symbols are used, they shall be as follows:		
	- amperes.....A	A	Complied
	- volts.....V	V	Complied
	- alternating current.....~	~	Complied
	- neutral.....N	N	Complied
	- protective earth.....(earth symbol with a circle around it)	Earth symbol with a circle around it	Complied
8.3	Marking of fixed socket-outlets placed on the main part:		N/A
8.4	For plugs and portable socket-outlets the marking shall be easily discernible when the accessory is wired and assembled	Easily discernible	Complied
	Plugs and portable socket-outlets for equipment of class II shall not be marked with the symbol for class II construction		N/A
8.5	Neutral terminals shall be indicated by letter.....N	N	Complied
	Earthing terminals:.....(earth symbol with circle around it)	Earth symbol with a circle around it	Complied
8.6	Surface-type mounting boxes		N/A
8.7	Degree of protection		N/A
8.8	Marking shall be durable and easily legible.	Durable and easily legible	Complied
9	**Checking of dimensions**		
	Measurements		Complied
	Gauges	SANS 164-2-1	Complied

1ST SAMPLE		
Plug- Standard sheet 2-1 of SANS 164-2-1:2018		
Tests	**Results**	**Requirements**
Plug	32,61 0,8 13,1 10,5 19,3 4,50 4,50 16,6 18,7 25,8	32,4 + 0,7 1 max 13,5 10 + 1 19 + 0,7 4,50 ± 0,06 4,50 ± 0,06 17 ± 0,5 19 26 ± 0,5
Standard sheet 2-2 of SANS 164-2-1:2018		
Dedicated engagement index configurations	15,5 6,4	15,0 ± 0,1 6,2 + 0,2

2nd SAMPLE		
Plug- Standard sheet 2-1 of SANS 164-2-1:2018		
Tests	**Results**	**Requirements**
Plug	32,65 0,8 13,2 10,7 19,4 4,51 4,51 16,6 18,7 25,9	32,4 + 0,7 1 max 13,5 10 + 1 19 + 0,7 4,50 ± 0,06 4,50 ± 0,06 17 ± 0,5 19 26 ± 0,5
Standard sheet 2-2 of SANS 164-2-1:2018		
Dedicated engagement index configurations	15,5 6,3	15,0 ± 0,1 6,2 + 0,2

3rd SAMPLE		
Plug- Standard sheet 2-1 of SANS 164-2-1:2018		
Tests	**Results**	**Requirements**
Plug	32,63 0,8 13,2 10,6 19,3 4,50 4,50 16,6 18,7 25,9	32,4 + 0,7 1 max 13,5 10 + 1 19 + 0,7 4,50 ± 0,06 4,50 ± 0,06 17 ± 0,5 19 26 ± 0,5
Standard sheet 2-2 of SANS 164-2-1:2018		
Dedicated engagement index configurations	15,6 6,3	15,0 ± 0,1 6,2 + 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.		N/A
	Plugs: - Live parts shall not be accessible when the plug is in partial or complete engagement with a socket-outlet.	Not accessible	Complied
	- Plugs and portable socket-outlets pressed with a force of 150 N for 5 min, as shown in figure 8. The specimen is checked 15 min after removal from the test apparatus, and shall not show such deformation...	Not damaged	Complied
10.2	Parts which are accessible shall be made of insulating material	Made of insulating material	Complied
10.3	Shall not be possible to make contact between a pin of a plug and a live socket-contact of a socket-outlet while any other pin is accessible. - Test temperature = (35 ± 2) ^{0}C - Force = 75 N		N/A
10.4	External parts of plugs shall be of insulating material and the overall dimensions of rings, if any, shall not exceed 8mm.	Insulating material	Complied
10.5	Shuttered socket-outlets shall be so constructed that live parts are not accessible.		N/A
10.6	Earthing contacts of socket-outlet designed that they cannot be deformed by the insertion of a plug		N/A
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.		N/A
11	**Provision for earthing**		
11.1	Earth connection made before the current-carrying contacts become live Current-carrying pins shall separate before the earth connection.	Separate before the earth connection.	Complied
11.2	Earthing terminals of rewirable accessories shall comply with clause 12	Current-carrying pins were separate	Complied
	Earthing terminals of the same size as the corresponding terminals for the supply conductors		N/A
	Earthing terminals of rewirable accessories shall be internal		N/A
	Additional external earthing terminal of fixed socket-outlets of size suitable for conductors of at least 6 mm^2		N/A

SANS 60884-1:2013			
Clause	**Requirements-Test**	**Results-Remark**	**Verdict**
	Earthing terminals of fixed socket-outlets: fixed to the base or to a part reliably fixed to the base		N/A
	Earthing contacts of fixed socket-outlets:		
	- fixed to the base, or		N/A
	- fixed to the cover (reliably connected to the earthing terminals; contact pieces silver plated or with adequate protection)		N/A
	Parts of earthing circuit in one piece or reliably connected by riveting, welding, or the like		N/A
11.3	Accessible mental parts of fixed socket-outlets: 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		
	- an internal fixed earthing terminal, or		N/A
	- adequate space for a floating terminal (test connection using the type of terminal specified by manufacturer), unless		N/A
	- earthing terminal of socket-outlet itself allows the connection of an incoming		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: earthing socket-outlet contact and its terminal electrically separated from any metal mounting means or other exposed conductive earthing circuit of the installation		N/A
12	**Terminals and terminations**		
12.1	General: - Rewirable plugs and rewirable portable socket-outlets shall be provided with terminals with screw clamping, - Non-rewirable accessories shall be provide with soldered, welded, crimped or equally effective permanent connections (termination)	- Non-rewirable accessories - Crimped	Complied
12.2	Terminals with screw clamping for external copper conductors		N/A
12.3	Screwless terminals for external copper conductors	Are type suitable for flexible copper conductors	Complied

SANS 60884-1:2013			
Clause	**Requirements-Test**	**Results-Remark**	**Verdict**
13	**Construction of fixed socket-outlets**		N/A
14	**Construction of plugs and portable socket-outlet**		
14.1	Non-rewirable portable accessories shall be such that: - the flexible cable cannot be separated from the accessory without making it permanently useless, and - the accessory cannot be opened by hand or by using a general purpose tool.	Flexible cable cannot be separated from the accessory without making it permanently useless	Complied
14.2	Pins of portable accessories - Shall have adequate mechanical strength	Have adequate mechanical strength	Complied
14.3	Pins of plugs shall be: - locked against rotation, - not removable without dismantling the plug, - adequately fixed in the body of the plug...	Locked against rotation	Complied
14.4	Earthing contacts and neutral contacts of portable socket-outlets shall be locked against rotation and removable only with the aid of a tool, after dismantling the socket-outlet.		N/A
14.5	Socket-contact assemblies shall have sufficient resilience to ensure adequate contact on plug pins..		N/A
14.6	Pins and socket-contacts shall be resistant to corrosion and abrasion.	Resistant to corrosion and abrasion	Complied
14.7	The enclosures of rewirable portable accessories shall completely enclose the terminals and the ends of flexible cable.		N/A
14.8	Rewirable portable accessories shall be designed in such a way that terminal screws or nuts cannot become loose and fall out...		N/A
14.9	Rewirable portable accessories with earthing contact shall be designed with ample space for slack in the earthing conductor...		N/A
14.10	Terminals of rewirable portable accessories and terminations of non-rewirable accessories shall be located or shielded in such a way that loose wires from a conductor in the accessory will not present a risk of electric shock.	Located in such a way that loose wires from a conductor in the accessory will not present a risk of electric shock	Complied
14.11	For rewirable portable accessories		N/A
14.12	For rewirable portable socket-outlets accessories and non-rewirable Non-moulded on portable accessories. It shall not be possible to remove covers, cover-plates or parts of them intended to ensure protection against electric shock without the use of a tool.		N/A
14.13	If covers of portable socket-outlets...		N/A
14.14	Screws intended to allow access to the interior of the accessory shall be captive		N/A

SANS 60884-1:2013			
	Requirements-Test	**Results-Remark**	**Verdict**
14.15	The engagement face of plugs shall have no projections other than the pins, when the plug is wired and assembled as for normal use.	Have no projections other than the pins	Complied
14.16	Portable socket-outlets		N/A
14.17	Portable accessories of IP code higher than IP20		N/A
14.18	Portable socket-outlets having means for suspension		N/A
14.19	Combinations of portable accessories and switches, circuit-breakers or other devices		N/A
14.20	Portable accessories shall not be an integral part of lampholders	Not an integral part of lampholders	Complied
14.21	Plugs classified exclusively as plugs for equipment of class II may be rewirable or non-rewirable shall comply with SANS 60884-1:2006		N/A
14.22	Components, such as switches and fuses, incorporated in accessories		N/A
14.23	If a plug is an integral part of plug-in equipment		N/A
14.24	Plugs shall be shaped in such a way and/or made of such material that they can easily be withdrawn by hand from the relevant socket-outlet	Easily withdrawn by hand	Complied
14.25	Membranes in inlet openings of portable accessories shall meet the requirements of 13.22 and 13.23.		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 are resistant to ageing Accessories subjected to a test in a heating cabinet at (70± 2) ^{0}C for seven days (168 h)	Tested at 70 ^{0}C for seven days (168 h)	Complied
	After the tests, the specimens show:		
	- no crack visible with normal or corrected vision without additional magnification	No crack visible	Complied
	- no sticky or greasy material	No sticky or greasy material	Complied
	- no trace of cloth (forefinger pressed with 5 N)	No trace of cloth	Complied
	- no damage	Not damaged	Complied
16.2	Protection provided by enclosures:		
	Enclosures provide a degree of protection in accordance with the IP designation of the accessory		N/A

SANS 60884-1:2013		
Requirements-Test	**Results-Remark**	**Verdict**
16.3	Resistance to humidity:		
	Accessories proof against humidity which may occur in normal use Compliance checked by a humidity treatment carried out in a humidity cabinet containing air with relative humidity maintained between 91 % and 95 %	Not damaged after humidity treatment	Complied
	Specimens kept in cabinet for :		
	- two days (48 h) for accessories having IP code of IPX0	Two days (48 h)	Complied
	-seven days (168 h) for accessories having IP code higher than IPX0		N/A
	After this treatment the specimens show no damage	Not damaged	Complied
17	**Insulation resistance and electric strength**		
17.1	Insulation resistance		
17.1.1	For socket-outlets: insulation resistance (500 V d.c. for 1 min):		
	a) between all poles connected together and the body, with a plug in engagement ≥ 5 MΩ		N/A
	b) between each pole in turn and all others connected to the body, with a plug in engagement ≥ 5 MΩ		N/A
	c) between any metal enclosures and metal foil…		N/A
	d) between any metal part of the cord anchorage…		N/A
	e) between any metal part of the cord anchorage of portable socket-outlets and a metal rod…		N/A
17.1.2	For plugs: Insulation resistance (500 V d.c for 1 min):		
	a) between all poles connected together and the body ≥ 5 MΩ	> 5 MΩ	Complied
	b) between each pole in turn and all others connected to the body ≥ 5 MΩ	> 5 MΩ	Complied
	c) between any metal part of the cord anchorage including clamping screws…		N/A
	d) between any metal part of the cord anchorage and a metal rod…		N/A

SANS 60884-1:2013			
Clause	**Requirements-Test**	**Results-Remark**	**Verdict**
17.2	Socket-outlets: Electric strength, test voltage(a.c, for 1 min):		
	a) test voltage (V)…….:		N/A
	b) test voltage (V)…….:		N/A
	c) test voltage (V)…….:		N/A
	d) test voltage (V)…….:		N/A
	e) test voltage (V)…….:		N/A
	Plugs: electric strength, test voltage (a.c., for 1min)		
	a) test voltage (V)	2000 V	Complied
	b) test voltage (V)	2000 V	Complied
	c) test voltage (V)		N/A
	d) test voltage (V)		N/A
	During the test no flashover or breakdown	No flashover or breakdown	Complied
18	**Operating of earthing contacts**		N/A
19	**Temperature rise**		
	Non-rewirable accessories tested as delivered:	tested as delivered	Complied
	Rewirable accessories fitted with polyvinyl chloride insulated conductors having a nominal cross-sectional area as shown in table 15		
	- rated current of accessory……	16 A	Complied
	- nominal cross-sectional area……	1,5 mm²	Complied
	- type of conductors……	Flexible	Complied
	Terminal screws or nuts tightened with a torque equal to 2/3 of that specified in 12.2.8 (Nm)		
	Plugs tested using a fixed socket-outlet complying with the standard and having as near to average characteristics, but with minimum size of the earthing pin, if any	Tested using a fixed socket-outlet complying with the standard	Complied
	Test current as specified in table 20 passed for 1h(A)	16 A	Complied
	Temperature rise……:	16,4 K	Complied

SANS 60884-1:2013			
Clause	**Requirements-Test**	**Results-Remark**	**Verdict**
20	**Breaking capacity**		
	Accessories shall have adequate breaking capacity Complied is checked by testing socket-outlets and plugs with pins which are not solid		
	- test voltage (1,1Vn)……:		N/A
	- test current (1,25In) ……:		N/A
	- power factor……:		N/A
	- number of strokes……:		N/A
	During the test, no sustained arcing shall occur and After the test, the specimens shall show no damage impairing their further use.		N/A
21	**Normal Operation**		
	Accessories shall withstand without excessive wear or other harmful effect, the mechanical, electrical and thermal stresses occurring in normal use. Complied is checked by testing socket-outlets and plugs with pins which are not solid		
	- test voltage……:		N/A
	- test current……:		N/A
	- power factor……:		N/A
	- number of strokes……:		N/A
	During the test, no sustained arcing shall occur and After the test, the specimens shall show no damage impairing their further use.		N/A
22	**Force necessary to withdraw the plug**		N/A
23	**Flexible cable and their connection**		
23.1	Rewirable plugs and rewirable portable socket-outlets shall be provided with a cord anchorage.		N/A
	Non rewirable plugs and non rewirable portable socket-outlets shall be designed in such a way that the cable is maintained in position and the terminations are relieved from strain and twisting.	Designed in such a way that the cable is maintained in position	Complied
23.2	The effectiveness of the retention of the cable by the cord anchorage after the tests:		
	- number of the pull……:	100 times	Complied
	- rated current……:	16 A	Complied
	-force……:	60 N	Complied
	After the test flexible cable shall not been displaced by more than 2 mm	Not displaced by more than 2 mm	Complied

SANS 60884-1:2013			
Clause	**Requirements-Test**	**Results-Remark**	**Verdict**
23.3	Non-rewirable plugs and non-rewirable portable socket-outlets shall be provided with a flexible cable complying with IEC 60227 or IEC 60245	Complied with the requirements of IEC 60227 or IEC 60245	Mark no.9067/16393-ABERDARE
23.4	Non-rewirable plugs and non-rewirable portable socket-outlets shall be designed in such a way that the flexible cable is protected against excessive bending where it enters the accessory.	Not damaged	Complied
24	**Mechanical strength**		
24.1	Impact test After the test, the specimen shall show no damage within the meaning of this standard.		N/A
24.2	Free fall test Non-rewirable accessories are tested as delivered - Number of falls (1000) for mass not exceeding 100g,	Not damaged	Complied
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.	Not damaged	Complied
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.	Not damaged	Complied
24.8	Shuttered socket-outlets - After the test, the specimen shall show no damage within the meaning of this standard.		N/A
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 pins of the plug	Pins not displaced	Complied
24.11	Barries -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

SANS 60884-1:2013			
Clause	**Requirements-Test**	**Results-Remark**	**Verdict**
24.14	Verification of retention of covers or cover-plates		N/A
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 1N 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) ^{0}C	Not damaged	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) ^{0}C for 1h 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	Diameter of impression , 2 mm	Complied
25.4	Portable accessories: compression test (20 N) at (80±2) ^{0}C for 1 h by means of the apparatus shown in figure 38 - after the test: no damage	Not damaged	Complied
26	**Screws, current-carrying parts and connections**		
26.1	Connection, electrical or mechanical, shall withstand the mechanical stresses occurring in normal use.	Withstand 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	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.	Subjected to a sliding action	Complied

SANS 60884-1:2013			
Clause	**Requirements-Test**	**Results-Remark**	**Verdict**
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 23	Complied
27.2	Measurements made with and without plug fitted with and without conductors of largest c.s.a per table 3 fitted	Measurements made	Complied
27.3	Surface-type socket-outlets shall not have bare current-carrying strips at the back		N/A
28	**Resistance of insulating material to abnormal heat, to fire and to tracking**		
28.1	Resistance to abnormal heat and to fire:		
28.1.1	Glow-wire test		
	For parts of fixed accessories necessary to retain current-carrying parts and parts of the earthing circuit in position: test temperature 850 °C		
	- no visible flame and no sustained glowing		N/A
	- flame and glowing extinguish within 30 s		N/A
	- no ignition of the tissue paper		N/A
	For parts of fixed accessories needed to retain the earth terminal in position in a box: test temperature 650 °C		
	- no visible flame and no sustained glowing		N/A
	- flame and glowing extinguish within 30 s		N/A
	- no ignition of the tissue paper		N/A
	For parts of portable accessories necessary to retain current-carrying parts and parts of the earthing circuit in position: test temperature 750 °C		
	- no visible flame and no sustained glowing	No visible flame	Complied
	- flame and glowing extinguish within 30 s		N/A
	- no ignition of the tissue paper	No ignition	Complied
28.1.2	Plugs with pins provided with insulating sleeves		
	Test temperature maintained for 3 h by means of the apparatus shown in figure 40 at (120±5)^{0}C/ (180±5)^{0}C	Not damaged	Complied
	Impact test according to sub-clause 30.4 (mass 100 g, height 100 mm, 4 impacts): no cracks of the insulation sleeves	No cracks of the insulation sleeves	Complied

SANS 60884-1:2013			
Clause	**Requirements-Test**	**Results-Remark**	**Verdict**
28.2	Resistance to tracking		
	Parts of insulating material retaining live parts in position of accessories having IP>X0: test voltage 175 V, 50 drops, solution A of IEC 60112. No flashover or breakdown shall occur.	No flashover or breakdown	Complied
29	**Resistance to rusting**		
	Ferrous parts shall be adequately protected against rusting	Adequately protected against rusting	Complied
	Test made After having removed all grease using a suitable degreasing agent: 10 min 10 % solution of ammonium chloride, 10 min in a box with air saturated with moisture and 10 min at (100 +5) °C. No signs of rust	No signs of rust	Complied
30	**Additional tests on pins provided with insulation sleeves**		
30.1	Pressure test at high temperature:		
	- force applied through the blade (2,5 N), - temperature of heating cabinet (200±5) ^{0}C, - duration (2 hours) - Insulation remaining after the test shall not have been reduced by more than 50 % of its original value.	Diameter after the test is 3 %	Complied
30.2	Static damp heat test After this treatment and after regaining ambient temperature, the specimen are submitted to the following tests: - Insulation resistance - Abrasion test	Not damaged	Complied
30.3	Test at low temperature:		
	- temperature(-15±2) ^{0}C, - duration (24 h)	Not damaged	Complied
30.4	Impact test at low temperature:		
	- mass of the falling weight (100±5) g - temperature of a freezer (-15±2) ^{0}C	Not damaged	Complied

N/A=Not applicable

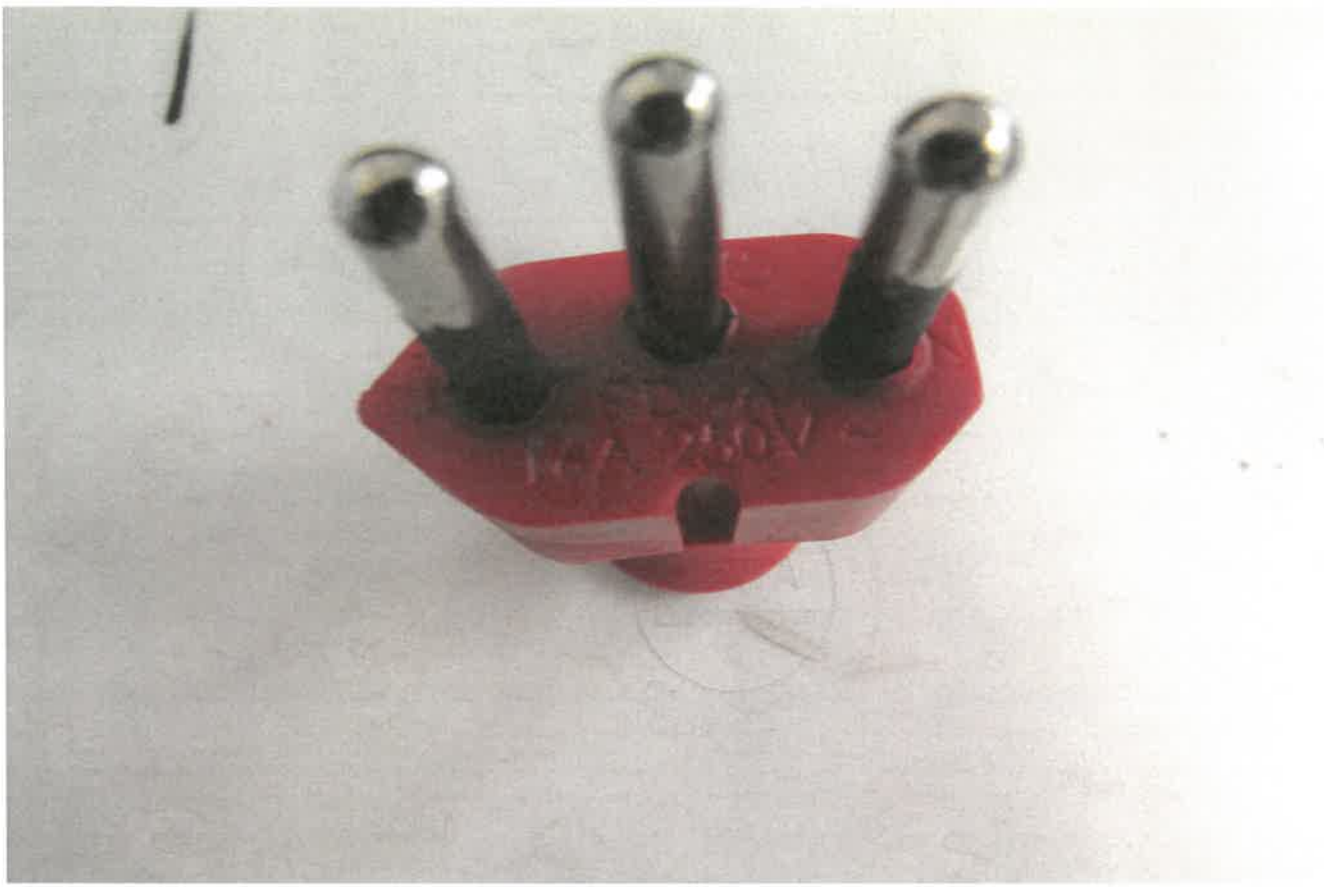
APPENDIX A

Measuring Equipment

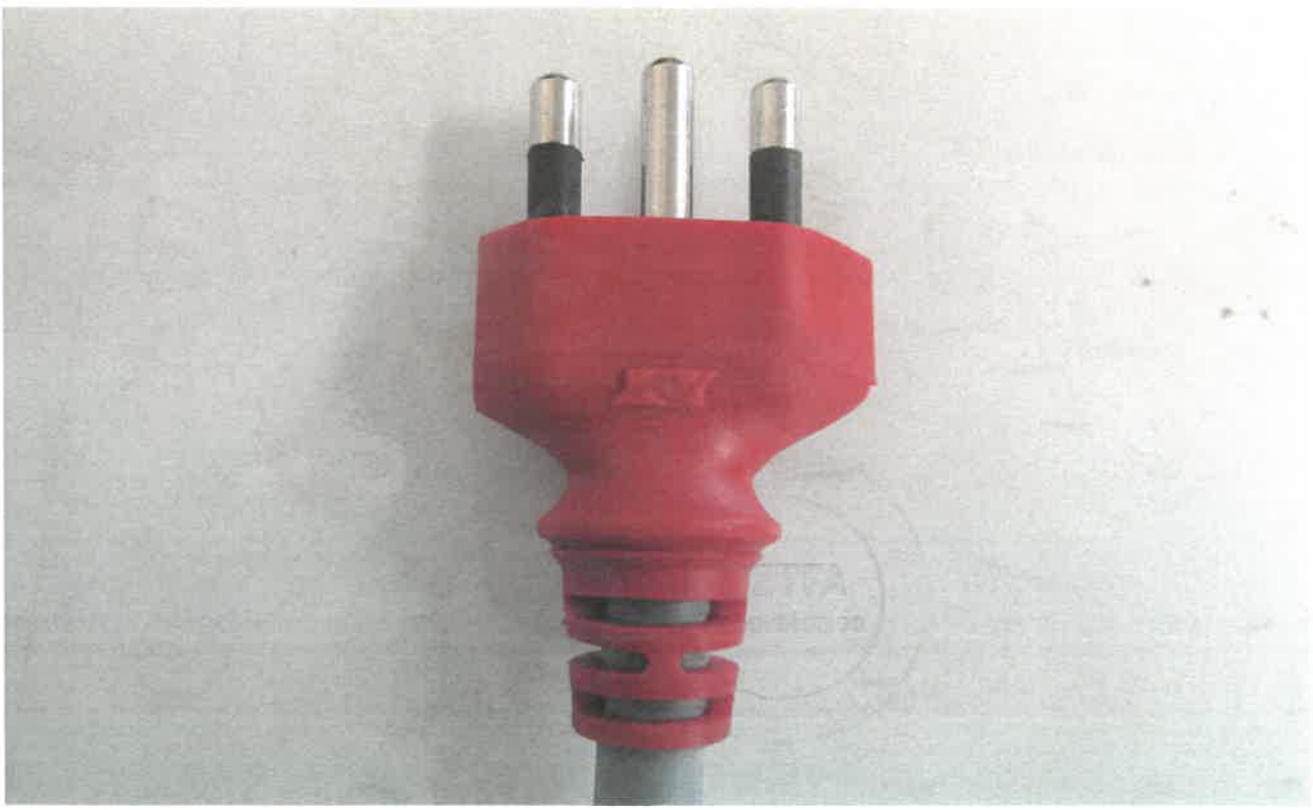
The following equipment was used for the measurements:

Type of equipment	Manufacture and model	SABS No.	Measurement Uncertainty
Vernier	Digital caliper	LIN 7580579	± 0,02 mm
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	PP&E0005219	$\pm 1.10^{-2}$ .R
Oven	Gallenkamp CN-40	PP&E0004971	± 2,0 °C
Oven	Prolab TTM-J4	PP&E0027146	± 2,0 °C
Oven	Optolab	PPE0027145	± 2,0 °C
Foster Transformers	Foster	8077	± 1 %
Digital thermometer (Glow-wire)	Fluke 2175A	PP&E0004231	± 2,0 °C
Compression Machine	LCS & TDC	PPE0027524	± 0,2 %
Balance	Adam	AE80117561	6 g
Thermo-hygrometer	Major tech MT662	33941546	± 1 °C and ± 3 % rh
True RMS multimeter	Fluke 87V	90850216	± 0,1 Ω

Calibration of this equipment is traceable to national standards



Photograph No. 1
Top view of the sample



Photograph No. 2
Bottom view of the sample

SABS

Your ref.: O/No. SAM#02554
Our ref.: NMI-181116-00006BR
Enquiries: K Ngandi
Date: 2019-01-31

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

Dear Sir

REVISION OF NETFA REPORT NO. .: NMI-181116-00006B

We regret to inform you that certain errors have been discovered in the above mentioned report, dated 29 January 2019

Attached please find Test Report No.: NMI-181116-00006BR which replaces Test report No.: NMI-181116-00006B

Would you kindly acknowledge receipt of the revised report by signing the attached copy of this letter and returning it together with the original issues of the Test report No.: NMI-181116-00006B to NETFA in the enclosed self-addressed envelope at your earliest convenience.

We apologise for any inconvenience this may have caused

Yours faithfully

RI Ngobeni
Acting Manager
NETFA: **SABS Commercial SOC Ltd**
Tel: 011 238 2360
Fax: 011 238 2363

SABS

Your ref.: O/No. SAM#02554
Our ref.:: NMI-181116-00006BR
Enquiries: K Ngandi
Date: 2019-01-31

Power Logics (Pty) Ltd
Attention: Mr Adrian Mazzullo
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We apologise for any inconvenience this may have caused

Yours faithfully

RI Ngobeni
Acting Manager
NETFA: **SABS Commercial SOC Ltd**
Tel: 011 238 2360
Fax: 011 238 2363

We acknowledge receipt of SABS Test report No. .: NMI-180524-00006BR

Signature: _____

Capacity: _____ Date: _____

SABS

TEST REPORT

THIS REPLACED REPORT NO.NMI-181116-00006B DATED 19 JANUARY 2019.

Client	:	Power Logics (Pty) Ltd, P.O. Box 84, **Ottery**, 7808
Manufacturer	:	POWER LOGIC
Apparatus	:	Non-rewirable plug (ZA Normal plug top)
Designation	:	1CBP

Ratings assigned by the Manufacturer:

Rated Voltage	:	250 V ~
Rated Current	:	16 A

Test have been carried out strictly in accordance with

SANS 60884-1 and SANS 164-2 as referred to in:

VC 8008 Compulsory specification for Plugs, Socket-outlets and Socket-outlet Adaptors.

Date of Tests: 03 December 2018 to 22 January 2019

Conclusion

The sample complied with the relevant requirements of SANS 60884-1 and SANS 164-2 as referred to in: VC 8008 Compulsory specification for Plugs, Socket-outlets and Socket-outlet Adaptors.

This report consists of:

Report form(s)	Pages 1-19
Photograph(s)	Page 20

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

RI Ngobeni
Acting Manager
Materials/Installations Laboratory: **SABS Commercial SOC Ltd**

Olifantsfontein, 31 January 2019

43rd Street, Olifantsfontein, PO Box 144, Olifantsfontein, 1665. Tel +27 11 238 2300. Fax +27 11 238 2363

sanas Testing Laboratory
ilac-MRA
T0159

1 Description of Sample

The sample consisted of nine (09) non-rewirable plugs with markings as indicated on page 20 of this report comprising of:
1.48m flexible Cord is marked as follows:

3 G 1,5mm2 ABEDARE CABLES GOC 500V SABS 1574 HO5VV-F

2 Test Method

SANS 60884-1 and SANS 164-2 as referred to in:

VC 8008 Compulsory specification for Plugs, Socket-outlets and Socket-outlet Adaptors.

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-181116-00006R(B1-B9). The glow wire test was conducted at SABS Electronics Laboratory and was witnessed by Ms K Ngandi of SABS NETFA.

4 Test Conditions

The tests were conducted at the National Electrical Test Facility, NETFA, at an altitude of 1 540 m.

5 Measuring Equipment

Refer to appendix A 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.

6 Results

For detailed results see pages 3 to 18 of this report.

SANS 60884-1:2013			
Clause	**Requirements-Test**	**Results-Remark**	**Verdict**
6	**Ratings**		
6.1	- rated voltage (V)……:	250 V	Complied
	- rated current (A)……:	16 A	Complied
6.2	In a cord extension set...		N/A
6.3	Accessories should preferably have a degree of protection IP20, IP40, IP44 or IP55		N/A
7	**Classification**		
7.1	Accessories classification:		
	- degree of protection against access to hazardous parts and against harmful effects due to the ingress of solid foreign objects		N/A
	- degree of protection against harmful effects due to the ingress of water	IPX0	Complied
	- provision for earthing	With earthing contact	Complied
	- method of connecting the cable	Non-rewirable accessories	Complied
	- type of terminals	Screwless	Complied
7.2	Socket-outlets classification:		
	- degree of protection against electric shock		N/A
	- existence of shutters,		N/A
	- method of mounting,		N/A
	- method of installation,		N/A
7.3	Plug classification	I	Complied
8	**Marking**		
8.1	Accessories marked as follows:		
	- rated current (A)……:	16 A	Complied
	- rated voltage (V)……:	250 V	Complied
	- symbol for nature of supply……:	~	Complied
	- manufacturer's or responsible vendor's name:	POWER LOGIC	Complied

SANS 60884-1:2013			
Clause	**Requirements-Test**	**Results-Remark**	**Verdict**
	- type reference.....:	1CBP	Complied
8.2	When symbols are used, they shall be as follows:		
	- amperes.....A	A	Complied
	- volts.....V	V	Complied
	- alternating current.....~	~	Complied
	- neutral..... .....N	N	Complied
	- protective earth.....(earth symbol with a circle around it)	Earth symbol with a circle around it	Complied
8.3	Marking of fixed socket-outlets placed on the main part:		N/A
8.4	For plugs and portable socket-outlets the marking shall be easily discernible when the accessory is wired and assembled	Easily discernible	Complied
	Plugs and portable socket-outlets for equipment of class II shall not be marked with the symbol for class II construction		N/A
8.5	Neutral terminals shall be indicated by letter.....N	N	Complied
	Earthing terminals:.....(earth symbol with circle around it)	Earth symbol with a circle around it	Complied
8.6	Surface-type mounting boxes		N/A
8.7	Degree of protection		N/A
8.8	Marking shall be durable and easily legible.	Durable and easily legible	Complied

9	**Checking of dimensions**		
	Measurements		Complied
	Gauges	SANS 164-2	Complied

1ST SAMPLE		
Plug- Standard sheet 1-2 of SANS 164-2:2018		
Tests	**Results**	**Requirements**
Plug	35,5 0,8 13,4 10,5 19,2 4,53 4,52 16,8 18,7 25,6	32.4 + 0,7 1max 13,5 10+1 19+0,7 4,50 ± 0,06 4,50 ± 0,06 17 ± 0,5 19 26±0,5

2nd SAMPLE		
Plug- Standard sheet 1-2 of SANS 164-2:2018		
Tests	**Results**	**Requirements**
Plug	35,5 0,8 13,4 10,6 19,3 4,53 4,52 16,9 18,7 25,6	32.4 + 0,7 1max 13,5 10+1 19+0,7 4,50 ± 0,06 4,50 ± 0,06 17 ± 0,5 19 26±0,5

3rd SAMPLE		
Plug- Standard sheet 1-2 of SANS 164-2:2018		
Tests	**Results**	**Requirements**
Plug	35,4 0,8 13,4 10,6 19,3 4,52 4,52 16,8 18,7 25,6	32.4 + 0,7 1max 13,5 10+1 19+0,7 4,50 ± 0,06 4,50 ± 0,06 17 ± 0,5 19 26±0,5

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

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.		N/A
	Plugs: - Live parts shall not be accessible when the plug is in partial or complete engagement with a socket-outlet.	Not accessible	Complied
	- Plugs and portable socket-outlets pressed with a force of 150 N for 5 min, as shown in figure 8. The specimen is checked 15 min after removal from the test apparatus, and shall not show such deformation...	Not damaged	Complied
10.2	Parts which are accessible shall be made of insulating material	Made of insulating material	Complied
10.3	Shall not be possible to make contact between a pin of a plug and a live socket-contact of a socket-outlet while any other pin is accessible. - Test temperature = (35 ± 2) ^{0}C - Force = 75 N		N/A
10.4	External parts of plugs shall be of insulating material and the overall dimensions of rings, if any, shall not exceed 8mm.	Insulating material	Complied
10.5	Shuttered socket-outlets shall be so constructed that live parts are not accessible.		N/A
10.6	Earthing contacts of socket-outlet designed that they cannot be deformed by the insertion of a plug		N/A
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.		N/A

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 When withdrawing the plug, the current-carrying pins shall separate before the earth is broken.	Separate before the earth is broken	Complied
11.2	Earthing terminals of rewirable accessories shall comply with clause 12		N/A
11.3	Accessible mental 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 and terminations**		
12.1	General: - Rewirable plugs and rewirable portable socket-outlets shall be provided with terminals with screw clamping, - Non-rewirable accessories shall be provide with soldered, welded, crimped or equally effective permanent connections (termination)	- Non-rewirable accessories - Crimped	Complied
12.2	Terminals with screw clamping for external copper conductors		N/A
12.3	Screwless terminals for external copper conductors	Are type suitable for flexible copper conductors	Complied
13	**Construction of fixed socket-outlets**		N/A

SANS 60884-1:2013		
Requirements-Test	**Results-Remark**	**Verdict**
14	**Construction of plugs and portable socket-outlet**	
14.1	Non-rewirable portable accessories shall be such that: - the flexible cable cannot be separated from the accessory without making it permanently useless, and - the accessory cannot be opened by hand or by using a general purpose tool.	Flexible cable cannot be separated from the accessory without making it permanently useless	Complied
14.2	Pins of portable accessories - Shall have adequate mechanical strength	Have adequate mechanical strength	Complied
14.3	Pins of plugs shall be: - locked against rotation, - not removable without dismantling the plug, - adequately fixed in the body of the plug...	Locked against rotation,	Complied
14.4	Earthing contacts and neutral contacts of portable socket-outlets shall be locked against rotation and removable only with the aid of a tool, after dismantling the socket-outlet.		N/A
14.5	Socket-contact assemblies shall have sufficient resilience to ensure adequate contact on plug pins..		N/A
14.6	Pins and socket-contacts shall be resistant to corrosion and abrasion.	Resistant to corrosion and abrasion.	Complied
14.7	The enclosures of rewirable portable accessories shall completely enclose the terminals and the ends of flexible cable.		N/A
14.8	Rewirable portable accessories shall be designed in such a way that terminal screws or nuts cannot become loose and fall out...		N/A
14.9	Rewirable portable accessories with earthing contact shall be designed with ample space for slack in the earthing conductor...		N/A
14.10	Terminals of rewirable portable accessories and terminations of non-rewirable accessories shall be located or shielded in such a way that loose wires from a conductor in the accessory will not present a risk of electric shock.	Located in such a way that loose wires from a conductor in the accessory will not present a risk of electric shock.	Complied
14.11	For rewirable portable accessories		N/A
14.12	For rewirable portable socket-outlets accessories and non-rewirable Non-moulded on portable accessories. It shall not be possible to remove covers, cover-plates or parts of them intended to ensure protection against electric shock without the use of a tool.		N/A

SANS 60884-1:2013			
Requirements-Test		**Results-Remark**	**Verdict**
14.13	If covers of portable socket-outlets...		N/A
14.14	Screws intended to allow access to the interior of the accessory shall be captive		N/A
14.15	The engagement face of plugs shall have no projections other than the pins, when the plug is wired and assembled as for normal use.	Have no projections other than the pins	Complied
14.16	Portable socket-outlets		N/A
14.17	Portable accessories of IP code higher than IP20		N/A
14.18	Portable socket-outlets having means for suspension		N/A
14.19	Combinations of portable accessories and switches, circuit-breakers or other devices		N/A
14.20	Portable accessories shall not be an integral part of lampholders	Not an integral part of lampholders	Complied
14.21	Plugs classified exclusively as plugs for equipment of class II may be rewirable or non-rewirable shall comply with SANS 60884-1:2006		N/A
14.22	Components, such as switches and fuses, incorporated in accessories		N/A
14.23	If a plug is an integral part of plug-in equipment		N/A
14.24	Plugs shall be shaped in such a way and/or made of such material that they can easily be withdrawn by hand from the relevant socket-outlet	Easily withdrawn by hand	Complied
14.25	Membranes in inlet openings of portable accessories shall meet the requirements of 13.22 and 13.23.		N/A
15	**Interlocked socket-outlet**		N/A

SANS 60884-1:2013			
Clause	**Requirements-Test**	**Results-Remark**	**Verdict**
16	**Resistance to ageing, protection provided by enclosure and resistance to humidity**		
16.1	Resistance to ageing:		
	Accessories are resistant to ageing Accessories subjected to a test in a heating cabinet at (70± 2) ^{0}C for seven days (168 h)	Tested at 70 ^{0}C for seven days (168 h)	Complied
	After the tests, the specimens show:		
	- no crack visible with normal or corrected vision without additional magnification	No crack visible	Complied
	- no sticky or greasy material	No sticky or greasy material	Complied
	- no trace of cloth (forefinger pressed with 5 N)	No trace of cloth	Complied
	- no damage	Not damaged	Complied
16.2	Protection provided by enclosures:		
	Enclosures provide a degree of protection in accordance with the IP designation of the accessory		N/A
16.3	Resistance to humidity:		
	Accessories proof against humidity which may occur in normal use Compliance checked by a humidity treatment carried out in a humidity cabinet containing air with relative humidity maintained between 91 % and 95 %	Not damaged after humidity treatment	Complied
	Specimens kept in cabinet for :		
	- two days (48 h) for accessories having IP code of IPX0	Two days (48 h)	Complied
	-seven days (168 h) for accessories having IP code higher than IPX0		N/A
	After this treatment the specimens show no damage	Not damaged	Complied

SANS 60884-1:2013			
Clause	**Requirements-Test**	**Results-Remark**	**Verdict**
17	**Insulation resistance and electric strength**		
17.1	Insulation resistance		
17.1.1	For socket-outlets: insulation resistance (500 V d.c. for 1 min):		
	a) between all poles connected together and the body, with a plug in engagement ≥ 5 MΩ		N/A
	b) between each pole in turn and all others connected to the body, with a plug in engagement ≥ 5 MΩ		N/A
	c) between any metal enclosures and metal foil...		N/A
	d) between any metal part of the cord anchorage...		N/A
	e) between any metal part of the cord anchorage of portable socket-outlets and a metal rod...		N/A
17.1.2	For plugs: Insulation resistance (500 V d.c for 1 min):		
	a) between all poles connected together and the body ≥ 5 MΩ	> 5 MΩ	Complied
	b) between each pole in turn and all others connected to the body ≥ 5 MΩ	> 5 MΩ	Complied
	c) between any metal part of the cord anchorage including clamping screws...		N/A
	d) between any metal part of the cord anchorage and a metal rod...		N/A
17.2	Socket-outlets: Electric strength, test voltage(a.c, for 1 min):		
	a) test voltage (V)……:		N/A
	b) test voltage (V)……:		N/A
	c) test voltage (V)……:		N/A
	d) test voltage (V)……:		N/A
	e) test voltage (V)……:		N/A
	Plugs: electric strength, test voltage (a.c., for 1min)		
	a) test voltage (V)	2000 V	Complied
	b) test voltage (V)	2000 V	Complied
	c) test voltage (V)		N/A
	d) test voltage (V)		N/A
	During the test no flashover or breakdown	No flashover or breakdown	Complied

SANS 60884-1:2013			
Clause	**Requirements-Test**	**Results-Remark**	**Verdict**
18	**Operating of earthing contacts**		
	Earthing contacts shall provide adequate contact pressure and shall not deteriorate in normal use.	Provide adequate contact pressure and not deteriorate in normal use	Complied
	Compliance checked by the tests of clauses 19 and 21	Not damaged	Complied
	Force exerted measured in side earthing contacts not less than 5 N	Not damaged	Complied
19	**Temperature rise**		
	Non-rewirable accessories tested as delivered:	tested as delivered	Complied
	Rewirable accessories fitted with polyvinyl chloride insulated conductors having a nominal cross-sectional area as shown in table 15		
	- rated current of accessory.....	16 A	Complied
	- nominal cross-sectional area.....	1,5 mm²	Complied
	- type of conductors.....	Flexible	Complied
	Terminal screws or nuts tightened with a torque equal to 2/3 of that specified in 12.2.8 (Nm)		
	Plugs tested using a fixed socket-outlet complying with the standard and having as near to average characteristics, but with minimum size of the earthing pin, if any	Tested using a fixed socket-outlet complying with the standard	Complied
	Test current as specified in table 20 passed for 1h(A)....:	16 A	Complied
	Temperature rise.....:	16,6 K	Complied
20	**Breaking capacity**		
	Accessories shall have adequate breaking capacity Complied is checked by testing socket-outlets and plugs with pins which are not solid		
	- test voltage (1,1Vn).....:		N/A
	- test current (1,25In) .....:		N/A
	- power factor.....:		N/A
	- number of strokes.....:		N/A
	During the test, no sustained arcing shall occur and After the test, the specimens shall show no damage impairing their further use.		N/A

SANS 60884-1:2013			
Clause	**Requirements-Test**	**Results-Remark**	**Verdict**
21	**Normal Operation**		
	Accessories shall withstand without excessive wear or other harmful effect, the mechanical, electrical and thermal stresses occurring in normal use. Complied is checked by testing socket-outlets and plugs with pins which are not solid		
	- test voltage.....:		N/A
	- test current.....:		N/A
	- power factor.....:		N/A
	- number of strokes.....:		N/A
	During the test, no sustained arcing shall occur and After the test, the specimens shall show no damage impairing their further use.		N/A
22	**Force necessary to withdraw the plug**		
22.1	Verification of the maximum withdrawal force,		N/A
22.2	Verification of the Minimum withdrawal force,		N/A
23	**Flexible cable and their connection**		
23.1	Rewirable plugs and rewirable portable socket-outlets shall be provided with a cord anchorage.		N/A
	Non rewirable plugs and non rewirable portable socket-outlets shall be designed in such a way that the cable is maintained in position and the terminations are relieved from strain and twisting.	Designed in such a way that the cable is maintained in position	Complied
23.2	The effectiveness of the retention of the cable by the cord anchorage after the tests:		
	- number of the pull.....:	100 times	Complied
	- rated current.....:	16 A	Complied
	-force.....:	60 N	Complied
	After the test flexible cable shall not been displaced by more than 2 mm	Not displaced by more than 2 mm	Complied
23.3	Non-rewirable plugs and non-rewirable portable socket-outlets shall be provided with a flexible cable complying with IEC 60227 or IEC 60245	Complied with IEC 60227 or IEC 60245	Mark no.9067/16393 Abedare
23.4	Non-rewirable plugs and non-rewirable portable socket-outlets shall be designed in such a way that the flexible cable is protected against excessive bending where it enters the accessory.	Not damaged	Complied

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.		N/A
24.2	Free fall test Non-rewirable accessories are tested as delivered - Number of falls (1000) for mass not exceeding 100g,	Not damaged	Complied
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.	Not damaged	Complied
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.		N/A
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 pins of the plug	Pins not displaced	Complied
24.11	Barries -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
24.15	Cover or cover plates		N/A
24.16	Cover or cover plates		N/A

SANS 60884-1:2013			
Clause	**Requirements-Test**	**Results-Remark**	**Verdict**
24.17	Cover or cover plates		N/A
24.18	Force of 1N 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) ºC 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) ^{0}C	Not damaged	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) ^{0}C for 1h 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	Diameter of impression , 2 mm	Complied
25.4	Portable accessories: compression test (20 N) at (80±2) ^{0}C for 1 h by means of the apparatus shown in figure 38 - after the test: no damage	Not damaged	Complied

SANS 60884-1:2013			
Clause	**Requirements-Test**	**Results-Remark**	**Verdict**
26	**Screws, current-carrying parts and connections**		
26.1	Connection, electrical or mechanical, shall withstand the mechanical stresses occurring in normal use.	Withstand 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	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.	Subjected to a sliding action	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 23	Complied
27.2	Measurements made with and without plug fitted with and without conductors of largest c.s.a per table 3 fitted	Measurements made	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**
28	**Resistance of insulating material to abnormal heat, to fire and to tracking**		
28.1	Resistance to abnormal heat and to fire:		
28.1.1	Glow-wire test		
	For parts of fixed accessories necessary to retain current-carrying parts and parts of the earthing circuit in position: test temperature 850 °C		
	- no visible flame and no sustained glowing		N/A
	- flame and glowing extinguish within 30 s		N/A
	- no ignition of the tissue paper		N/A
	For parts of fixed accessories needed to retain the earth terminal in position in a box: test temperature 650 °C		
	- no visible flame and no sustained glowing		N/A
	- flame and glowing extinguish within 30 s		N/A
	- no ignition of the tissue paper		N/A
	For parts of portable accessories necessary to retain current-carrying parts and parts of the earthing circuit in position: test temperature 750 °C		
	- no visible flame and no sustained glowing	OK	Complied
	- flame and glowing extinguish within 30 s		N/A
	- no ignition of the tissue paper	No ignition	Complied
28.1.2	Plugs with pins provided with insulating sleeves		
	Test temperature maintained for 3 h by means of the apparatus shown in figure 40 at (120±5) ^{0}C/ (180±5) ^{0}C		N/A
	Impact test according to sub-clause 30.4 (mass 100 g, height 100 mm, 4 impacts): no cracks of the insulation sleeves		N/A
28.2	Resistance to tracking		
	Parts of insulating material retaining live parts in position of accessories having IP>X0: test voltage 175 V, 50 drops, solution A of IEC 60112. No flashover or breakdown shall occur.	No flashover or breakdown	Complied

SANS 60884-1:2013			
Clause	**Requirements-Test**	**Results-Remark**	**Verdict**
29	**Resistance to rusting**		
	Ferrous parts shall be adequately protected against rusting	Adequately protected against rusting	Complied
	Test made After having removed all grease using a suitable degreasing agent: 10 min 10 % solution of ammonium chloride, 10 min in a box with air saturated with moisture and 10 min at (100 +5) °C. No signs of rust	No signs of rust	Complied
30	**Additional tests on pins provided with insulation sleeves**		
30.1	Pressure test at high temperature:		
	- Force applied through the blade (2,5 N), - Temperature of heating cabinet (200±5) ^{0}C, - Duration (2 hours) - Insulation remaining after the test shall not have been reduced by more than 50 % of its original value.	Diameter after the test is 0,2%	Complied
30.2	Static damp heat test	No damage	Complied
30.3	Test at low temperature:		
	- Temperature(-15±2) ^{0}C, - Duration (24 h)	No damage	Complied
30.4	Impact test at low temperature:		
	- Mass of the falling weight (100±5) g - Temperature of a freezer (-15±2) ^{0}C	No damage	Complied

N/A=Not applicable

APPENDIX A

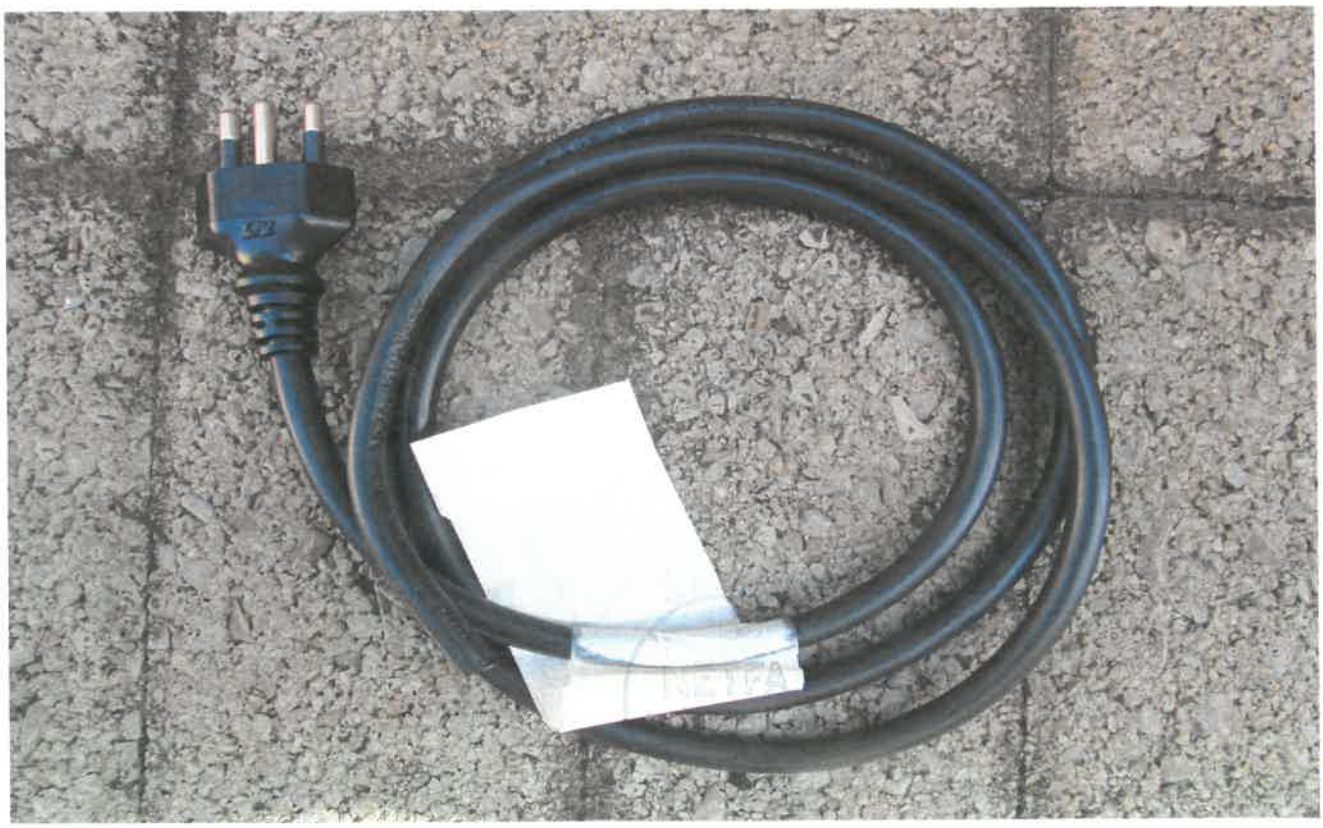
Measuring Equipment

The following equipment was used for the measurements:

Type of equipment	Manufacture and model	SABS No.	Measurement Uncertainty
Vernier	Digital caliper	LIN 7580579	± 0,02 mm
Micro meter	Not indicated	120893935	±0.003mm
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	PP&E0004996	$\pm 1.10^{-2}$ .R
Oven	Gallenkamp CN-40	PP&E0004971	± 2,0 °C
Oven	Prolab TTM-J4	PP&E0027146	± 2,0 °C
Foster Transformers	Foster	PP&E0004246	± 1 %
Digital thermometer (Glow-wire)	Fluke 2175A	PP&E0004231	± 2,0 °C
Compression Machine	LCS & TDC	PPE0027524	± 0,2 %
Balance	Adam	AE80117561	6 g
Temperature recorder	Yokogawa DX210-1-2	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

Calibration of this equipment is traceable to national standards

Photograph No. 1
Top view of the sample



Photograph No. 2
Bottom view of the sample