

SPECIFICATION & APPROVALS

CUSTOMER:

PowerConnections P/N: SCP3

DESCRIPTION: SHUKO CONVERTER PLUG 3 PIN

DATE: 25 Jun 2019

Revision: L

Submission Sample Quantity: 10 Pieces

Uncontrolled when Copied or Printed

SPECIFICATION & APPROVALS
SUPPLIER SPECIFICATION SUBMISSION

| | | | |
|---------------------|----------------------------|------------------------|----------|
| Date of Application | 25 Jun 2019 | Specification No. | 700-0002 |
| Supplier's Name | PowerConnections | Supplier Code Part No. | SCP3 |
| Part Name | SHUKO CONVERTER PLUG 3 PIN | | |

Tick the relevant box "✓"

Reason for Submission

- 1. New application
- 2. New part(s) is added to accepted specification
- 3. Revision of accepted specification

(Revision requested by customer Or supplier)

Revision / Change

- 1. The specification attached to this sheet does not deviate from the customer specification
- 2. Revision(s) within the limits of customer specification is proposed. Revision proposal(s) listed below.
- 3. Revision(s) beyond the limits of customer specification is proposed. Revision proposal(s) listed below. However, all other items contained within the specification are identical to the customer specification.

Revision(s) shall be marked with a triangle "Δ" in the specification attached.

| Revision No. | Date | Revision Description | Reason for Revision |
|--------------|----------|-----------------------------------|-----------------------------------|
| A | 01-07-04 | First issue | |
| B | 09-07-04 | Revision of power rating | Correction of typing error |
| C | 14-12-04 | Revision of sketches, test report | New details available |
| D | 20-01-06 | New BSi Certificate & Test report | New Certificate |
| E | 10-07-06 | New BSi Licence | Revised Certificate |
| F | 25-07-06 | Marbo Fuse data added | Alternative fuse available |
| Fm | 15-05-07 | Revised picture of cover added | New cover and fuse carrier colour |
| H | 25-07-06 | SEM Fuse added, new BSi Licence | Alternative fuse available |
| I | 10-05-10 | Revised to BS 1363-5 | Change of applicable Standard |
| J | 31-08-10 | Revision of marking | Change of Co marking |
| K | 11-05-12 | Revision of marking/Material | Marking change, change to Brass |

Revision Table continues over page

SPECIFICATION & APPROVALS

| | | | |
|---|----------|---|---|
| L | 21-06-19 | Dimensional drawing added, revision to marking, change of fuse details to Asia Fuse, details of certification and links to validate added to safety specification | Regulatory changes, change of fuse supplier, dimension drawing etc missing from document. |
|---|----------|---|---|

Checked By

| | | | | |
|--|--|--|--|--|
| | | | | |
|--|--|--|--|--|

Approved By

Paul M. Allen

Uncontrolled when Copied or Printed

Table of Contents

| Section | Description | Page |
|---------|---|------|
| 1.0 | Application | 5 |
| 2.0 | Name/Part Number | 5 |
| 3.0 | Shape and Dimensions | 5 |
| 4.0 | Rating | 5 |
| 5.0 | Safety Specifications – Approvals | 5 |
| 6.0 | Electrical Strength Test | 6 |
| 7.0 | Mechanical Strength Tests | 7 |
| 8.0 | Construction Tests | 8 |
| 9.0 | Glow Wire Tests | 8 |
| 10.0 | Material Strength Tests | 9 |
| 11.0 | Component Name | 10 |
| 12.0 | Fuse Specification Δ | 11 |
| 13.0 | Installation Procedure | 12 |
| 14.0 | Packing Method | 13 |
| 15.0 | Dimensional Drawing and Markings Δ | 14 |

Uncontrolled when Copied or Printed

| | | | | |
|-------------------------|-------------------------------|--|------------|--------------------|
| PowerConnections | | THIS DOCUMENT CONTAINS INFORMATION WHICH IS PROPRIETRY TO POWERCONNECTIONS AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION | | |
| TITLE | SHUKO CONVERTER PLUG 3 PIN | DRAWN BY | CHECKED BY | APPROVED BY |
| Part No. SCP3 | SPECIFICATION NO. 700-0002 | | | <i>Paul M. ...</i> |
| | REVISION L | | | |

SPECIFICATION & APPROVALS

1.0 Application


This Specification defines the performance for the Schuko Converter Plug, which is designed for the Schuko Plug (European IEC 83:1975 Standard C 2b, C4, C5, and C6).

2.0 Name/Part Number

Name: Schuko Converter Plug 3 Pin

Part Number: SCP3

3.0 Shape and Dimensions

See Below (Section 15) 

4.0 Rating

Voltage: AC 240V / 50Hz

Current: 13A

Ambient Working Temperature: -5 +70 °C

Storage Temperature: -40 +80 °C 90%RH

5.0 Safety Specifications – Approvals

Plug: BSI Kitemark Licence No. KM 23223

Fuse: ASTA Diamond Mark Licence No.974



Standards

Plug: BS1363-5:2016

Fuse: BS1362:1973 + Amendment 1 & 2

For BSI Kite Mark Licence validation visit <https://www.bsigroup.com/en-GB/Product-Directory/>


For ASTA Diamond Mark Validation visit <http://www.astabeab.com/buyers-by-number.asp>

| | | | | |
|---|-------------------------------|--|------------|---|
|  | | THIS DOCUMENT CONTAINS INFORMATION WHICH IS PROPRIETRY TO POWERCONNECTIONS AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION | | |
| TITLE | SHUKO CONVERTER PLUG 3 PIN | DRAWN BY | CHECKED BY | APPROVED BY |
| Part No. SCP3 | SPECIFICATION NO. 700-0002 | | |  |
| | REVISION L | | | |

6.0 Electrical Strength Test

| No. | Test | Clause in Standard | Result | Description of test 6 pieces are subjected to this series of test |
|-----|--------------------------------|--------------------|--------|--|
| 6.1 | Provision for cables and Cords | 19.1 BS1363-5 | Pass | An IEC 83:1975 STANDARD C 1B Schuko Plug is fitted into an SCP3 and the European IEC 83:1975 Standard C 2b, C4, C5, and C6 cord is subjected to 25 pulls lasting is with a force of 30N, no more than 2mm of displacement is allowed. The cord is then subjected to the pulling force and at 3750v to ensure no breakdown in connection. |
| 6.2 | Resistance to ageing | 14.2 BS1363-5 | Pass | Samples to be kept in a cabinet for 7 days (168 hours) at 70°C±2°C, then tested for stickiness or greasiness by with dry rough cloth wrapped around a fore-finger, force 5N. |
| 6.3 | Insulation resistance | 15.1 BS1363-5 | Pass | 500V DC is applied and after 60s the insulation resistance is checked and must be not less than: a) 5MΩ between parts of opposite polarity, b) 5MΩ between parts of opposite polarity connected together and other insulated parts including the earth. |
| 6.4 | Electric Strength | 15.1 BS1363-5 | Pass | 2000V AC 50Hz is applied and after 60s the Voltage drop is checked and must be within 3% RMS of the applied Voltage: a) between live parts of opposite polarity b) between live parts of opposite polarity connected together and other insulated parts including the earth. |


Uncontrolled when

| | | | | |
|-------------------------|----------------------------|--|------------|---|
| PowerConnections | | THIS DOCUMENT CONTAINS INFORMATION WHICH IS PROPRIETRY TO POWERCONNECTIONS AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION | | |
| TITLE | SHUKO CONVERTER PLUG 3 PIN | DRAWN BY | CHECKED BY | APPROVED BY |
| Part No. | SPECIFICATION NO. | | |  |
| SCP3 | 700-0002 | | | |
| | REVISION L | | | |

SPECIFICATION & APPROVALS

7.0 Mechanical Strength Tests

| No. | Test | Clause in Standard | Result | Description of test 4 pieces are subjected to this series of tests |
|-------|---------------------------------------|--------------------|--------|---|
| 7.1 | Tumble Barrel test | 20.2 BS1363-5 | Pass | The product is subjected singly to 1000-drop test in the apparatus as shown in the (BS 1363-5) standard Figure 17. |
| 7.2 | Fuse insertion test | 20.3.1 BS1363-5 | Pass | A solid stainless steel fuse link is inserted 20 times, to test the strength of the clips. |
| 7.3 | Temperature rise test | 16 BS1363-5 | Pass | Current of 14.3 amps is passed for not less than 4 hours and not greater than 8 hours at 250 volts or until stable, the temperature rise is then measured |
| 7.3.1 | Box Ambient | For each sample | | 24.9°C, 25.0°C, 26.0°C |
| 7.3.2 | Line Pin Spacer temp rise | For each sample | | 33.3K, 34.7K, 32.3K max. temp rise permissible 52K |
| 7.3.3 | Neutral Pin Spacer temp rise | For each sample | | 22.3K, 24.2K, 23.0K max. temp rise permissible 52K |
| 7.3.4 | Accessible external surface temp rise | For each sample | | 11.7K, 11.6K, 11.8K max. temp rise permissible 52K |

| | | | | |
|-------------------------|-------------------------------|--|------------|---|
| PowerConnections | | THIS DOCUMENT CONTAINS INFORMATION WHICH IS PROPRIETRY TO POWERCONNECTIONS AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION | | |
| TITLE | SHUKO CONVERTER PLUG 3 PIN | DRAWN BY | CHECKED BY | APPROVED BY |
| Part No. SCP3 | SPECIFICATION NO. 700-0002 | | |  |
| | REVISION L | | | |


SPECIFICATION & APPROVALS

8.0 Construction Tests

| No. | Test | Clause in Standard | Result | Description of test 3 pieces are subjected to this series of tests |
|-----|-----------------------------|--------------------|--------|---|
| 8.1 | Accessibility to live parts | 9.1 BS1363-5 | Pass | With the unit assembled as in normal use a probe 12 to BS EN 61032:1998 is supplied with a force of 5N whilst a voltage of 45V is supplied to the live parts via an electrical indicator. No access permissible. |
| 8.2 | Lid to Base security | 12.5 BS1363-5 | Pass | With the parts at 70°C±5° C a force of 60N is applied to the cover fixing screw, no damage or impairment of function to have occurred. |
| 8.3 | Resistance to Heat | 22.2 BS1363-5 | Pass | With the parts at 70°C±5° C a force of 20N is applied to the plug in the jaws of the apparatus shown in Figure 23, no damage or impairment of function to have occurred, shown by re-testing insulation resistance and electric strength, and must fit the Figure 5 gauge |
| 8.4 | Resistance to Heat | 22.3 BS1363-5 | Pass | Ball pressure test using the apparatus shown in Figure 24, test temperature at 75°C±5° C, the force of 20N is applied for 60 mins after an initial period of 10 mins. The sample is then cooled by immersion in water at room temp and the indentation caused by the ball measured, this must be less than 2mm in diameter. |

9.0 Glow Wire Tests

| No. | Test | Clause in Standard | Result | Description of test 3 pieces are subjected to this series of tests |
|-----|-----------------------------|--------------------|--------|--|
| 9.1 | Resistance to Abnormal Heat | 23.2 BS1363-5 | Pass | A glow wire of 750°C is applied to all the insulating surfaces there must be no visible flames or glowing or these must extinguish within 30s of removal of the glow wire. |


| | | | | |
|-------------------------|-------------------------------|--|------------|---|
| PowerConnections | | THIS DOCUMENT CONTAINS INFORMATION WHICH IS PROPRIETRY TO POWERCONNECTIONS AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION | | |
| TITLE | SHUKO CONVERTER PLUG 3 PIN | DRAWN BY | CHECKED BY | APPROVED BY |
| Part No. SCP3 | SPECIFICATION NO. 700-0002 | | |  |
| | REVISION L | | | |

SPECIFICATION & APPROVALS

10.0 Material Strength Tests

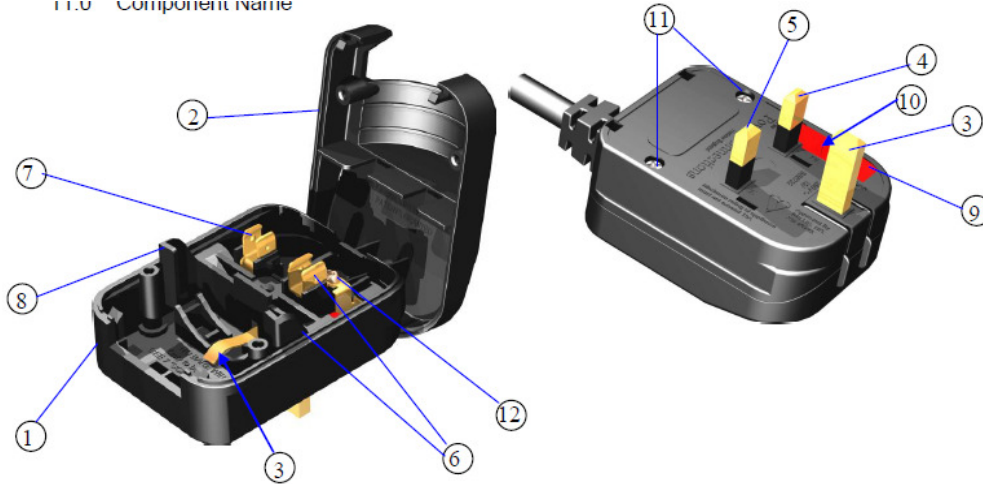
| No. | Test | Clause in Standard | Result | Description of test 3 pieces are subjected to this series of tests |
|------|----------------------|---------------------|--------|---|
| 10.1 | Construction of plug | 12.2 BS1363-5 | Pass | Critical dimensions of the plug must not exceed the dimensions given in Figure 4. Compliance checked using the gauge as shown in Figure 5. |
| 10.2 | Flexibility of pins | 12.8.11 BS1363-5 | Pass | Using the apparatus as shown in Figure 8 pins are tested with force of 4.2 to 4.4N applied 25mm from the engagement face, the pins must not deflect by more than 3°30'. The results on the pins were <1°. After this test the parts are again checked again checked using the Figure 5 gauge. |

Uncontrolled when Copied

| | | | | |
|-------------------------|-------------------------------|--|------------|---|
| PowerConnections | | THIS DOCUMENT CONTAINS INFORMATION WHICH IS PROPRIETRY TO POWERCONNECTIONS AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION | | |
| TITLE | SHUKO CONVERTER PLUG 3 PIN | DRAWN BY | CHECKED BY | APPROVED BY |
| Part No. SCP3 | SPECIFICATION NO. 700-0002 | | |  |
| | REVISION L | | | |

11.0 Component Name

11.0 Component name



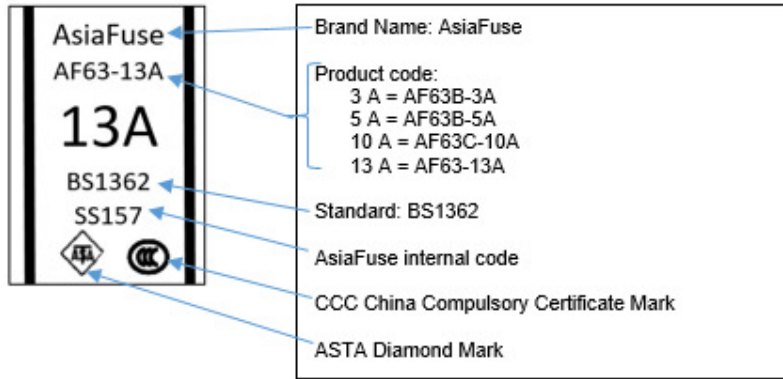
[insert images here]

| No. | Test | Material |
|-----|----------------------------|---|
| 1 | Base | Nylon 66 JGP Perrite Vitamide AF11BK |
| 2 | Cover | Nylon 66 JGP Perrite Vitamide AF11BK |
| 3 | Earth Pin, + Earth Contact | Brass (Universal) |
| 4 | Live Pin | Brass (Universal) with Nylon 66 Sleeve JGP Perrite Vitamide AF11BK |
| 5 | Neutral Pin | Brass (Universal) with Nylon 66 Sleeve JGP Perrite Vitamide AF11BK |
| 6 | Live Clip + Fuse Clip | Brass (Universal) |
| 7 | Neutral Clip | Brass (Universal) |
| 8 | Insert | Nylon 66 JGP Perrite Vitamide AF11BK |
| 9 | Fuse Holder | Nylon 66 JGP Perrite Vitamide AF11BK Now in Black (still shown in red for clarity) |
| 10 | Fuse | AsiaFuse/BetterFuse 3A, 5A, 10A, 13A (BS1362, ASTA) Δ |
| 11 | Screw x 2 | Steel Screw with Zinc and Clear Pacification – Gold Metal |
| 12 | Screw + washer | Steel Screw + washer with Zinc and Clear Pacification – Gold Metal |

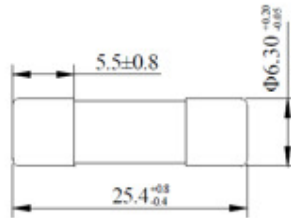
| | | | | |
|-------------------------|-------------------------------|--|------------|----------------------|
| PowerConnections | | THIS DOCUMENT CONTAINS INFORMATION WHICH IS PROPRIETRY TO POWERCONNECTIONS AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION | | |
| TITLE | SHUKO CONVERTER PLUG 3 PIN | DRAWN BY | CHECKED BY | APPROVED BY |
| Part No. SCP3 | SPECIFICATION NO. 700-0002 | | | <i>Paul M. Jones</i> |
| | REVISION L | | | |

12.0 Fuse Specification △

BETTER FUSE/ASIA FUSE



Dimensions (units: mm)



Operating Temperature:

-55°C to 125°C

Storage Conditions:

+10°C to +60°C

Relative humidity: $\leq 75\%$ yearly average without dew, maximum 30 days at 95%

Vibration Resistance:

24 cycles at 15 min. each (60068-6)

10-60Hz at 0.75mm amplitude

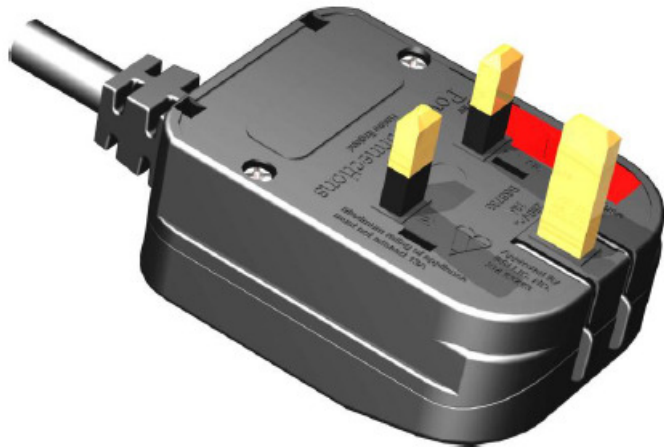
60-2000Hz at 10g acceleration

Electrical characteristics

| Electrical Characteristics | | | | | | | | | |
|----------------------------|---------------|--------------|--|--|------------------------|-------|-----------|-----|------|
| Amp Code | Rated Current | Max. Voltage | Breaking Capacity | Nominal Melting Pt(A ² sec) | Max. Power Dissipation | Color | Approvals | | |
| | | | | | | | CCC | PSB | ASTA |
| 1100 | 1A | 264V AC | 6kA@ 264V AC 50Hz P.f.0.3-0.4 | 1.44 | 1W | black | ● | ○ | ○ |
| 1200 | 2A | | | 8.73 | | black | ○ | ○ | ○ |
| 1300 | 3A | | | 29.16 | | red | ● | ● | ● |
| 1500 | 5A | | | 144 | | black | ● | ● | ● |
| 1700 | 7A | | | 146.4 | | black | ○ | ○ | ● |
| 2100 | 10A | | | 324 | | black | ● | ● | ● |
| 2130 | 13A | | | 961 | | brown | ● | ● | ● |

| | | | | |
|-------------------------|----------------------------|--|------------|----------------------|
| PowerConnections | | THIS DOCUMENT CONTAINS INFORMATION WHICH IS PROPRIETRY TO POWERCONNECTIONS AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION | | |
| TITLE | SHUKO CONVERTER PLUG 3 PIN | DRAWN BY | CHECKED BY | APPROVED BY |
| Part No. | SCP3 | SPECIFICATION NO. | 700-0002 | <i>Paul M. Jones</i> |
| | REVISION L | | | |

13.0 Installation Procedure



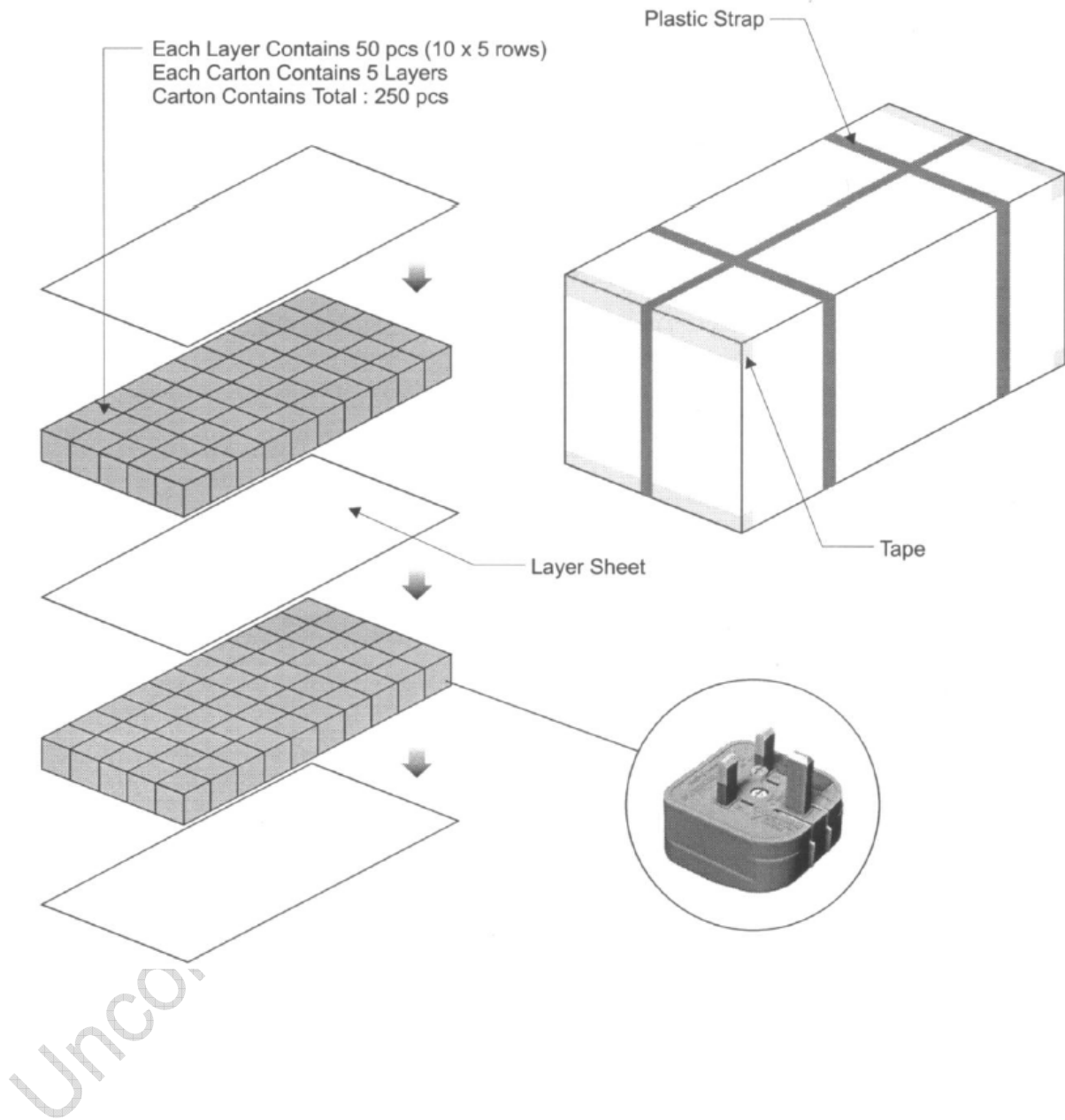
Insert the Schuko Plug as shown and tighten the 2 screws on the base to 0.4NM.
 Ensure lid is fully closed.
 Now ready for use.

Note: Fuse carrier is now in Black but still shown here in Red for Clarity

Uncon

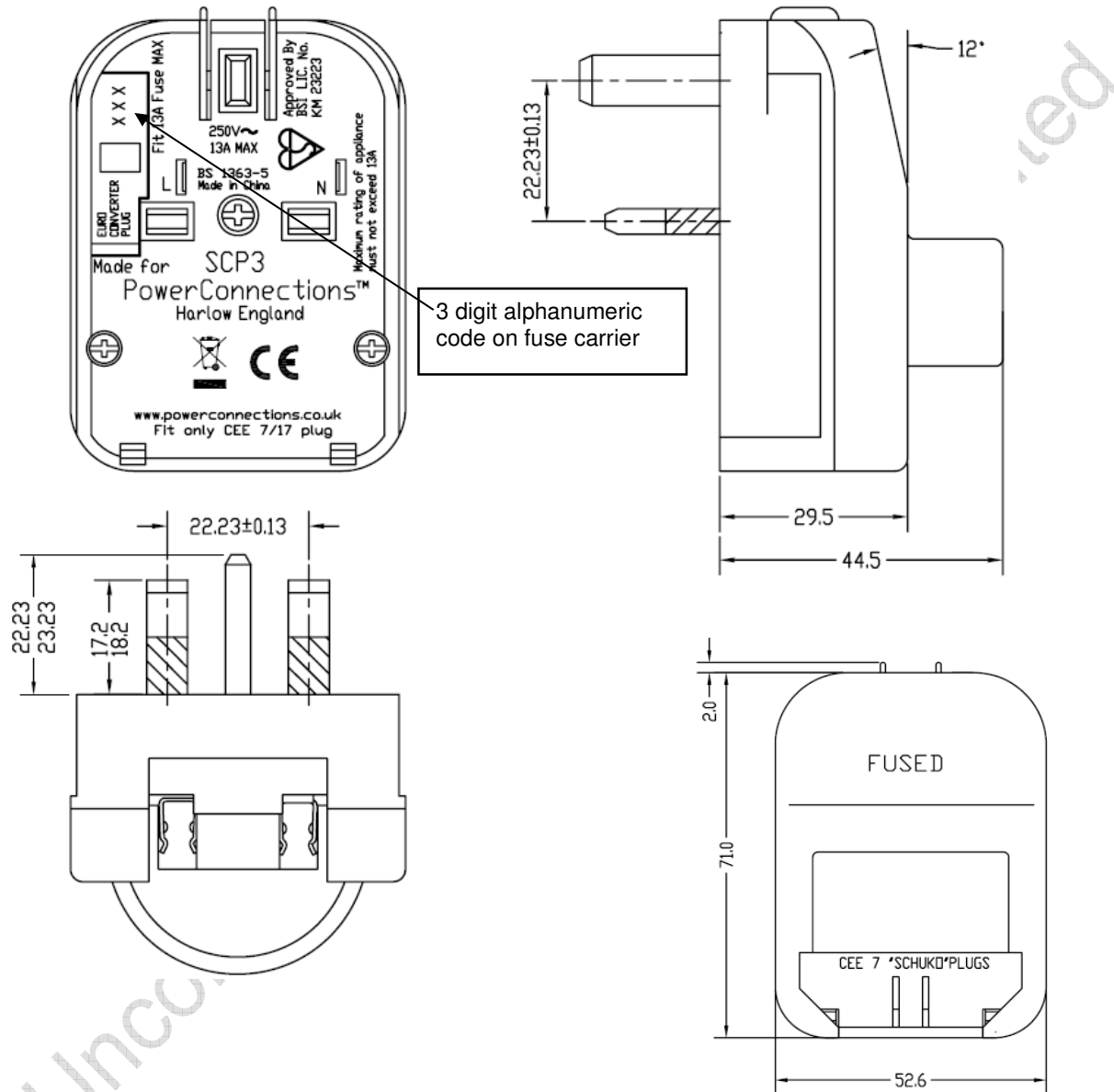
| | | | | |
|-------------------------|-------------------------------|--|------------|----------------------|
| PowerConnections | | THIS DOCUMENT CONTAINS INFORMATION WHICH IS PROPRIETRY TO POWERCONNECTIONS AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION | | |
| TITLE | SHUKO CONVERTER PLUG 3 PIN | DRAWN BY | CHECKED BY | APPROVED BY |
| Part No. SCP3 | SPECIFICATION NO. 700-0002 | | | <i>Paul M. Jones</i> |
| | REVISION L | | | |

14.0 Packing Method



| | | | | |
|-------------------------|-------------------------------|--|------------|--------------------|
| PowerConnections | | THIS DOCUMENT CONTAINS INFORMATION WHICH IS PROPRIETRY TO POWERCONNECTIONS AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION | | |
| TITLE | SHUKO CONVERTER PLUG 3 PIN | DRAWN BY | CHECKED BY | APPROVED BY |
| Part No. SCP3 | SPECIFICATION NO. 700-0002 | | | <i>Paul M. ...</i> |
| | REVISION L | | | |

15.0 Dimensional Drawing and Markings Δ



| | | | |
|--|-------------------------------|--|------------|
| PowerConnections | | DO NOT SCALE FROM DRAWING Unless otherwise stated dimensions are mm | |
| TITLE | SHUKO CONVERTER PLUG 3 PIN | 0 | ± 0.40 |
| Part No. SCP3 | SPECIFICATION NO. 700-0002 | 0.0 | ± 0.40 |
| | REVISION L | 0.00 | ± 0.10 |
| THIS DOCUMENT CONTAINS INFORMATION WHICH IS PROPRIETRY TO POWERCONNECTIONS AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION | | DRAWN BY | CHECKED BY |
| | | APPROVED BY <i>Paul M... ..</i> | |