

SPECIFICATION & APPROVALS

CUSTOMER:

PowerConnections P/N: ACP3

DESCRIPTION: American Converter Plug

DATE: 12 Mar 2023

Revision: H

Submission Sample Quantity: 10 Pieces

SUPPLIER SPECIFICATION SUBMISSION

| | | | |
|---------------------|-------------------------|-------------------|----------|
| Date of Application | 10 Mar 2022 | Specification No. | 700-0001 |
| Supplier's Name | PowerConnections | Supplier Code | ACP3 |
| Part Name | American Converter Plug | Part No | |

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 | 20-01-06 | First issue | |
| B | 29-03-06 | Test Report Added | New Data available |
| C | 10-07-06 | New BSi Licence | New Data available |
| D | 25-07-06 | Marbo Fuse data added | Alternative fuse available |
| E | 10-05-10 | Revised to BS1363-5 | Change of applicable Standard |
| F | 31-08-10 | Revision to marking | Change of Co. Marking |
| G | 11-01-19 | Base marking changed and Asia Fuse data added | BS1363 and RoHS Directive updates and new fuse used |
| H | 04-01-19 | Base marking changed to include UKCA logo | Introduction of UKCA rating, replaces CE marking in the UK |



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| TITLE | Plugtop Converter Plug | DRAWN BY | CHECKED BY | APPROVED BY |
| Part No. ACP | SPECIFICATION NO. 700-0001 | | |  |
| REVISION I | | | | |

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1.0 Application

This Specification defines the performance for the American Converter Plug, which is designed for the Nema 5-15 plugs..

2.0 Name/Part Number

Name: American Converter Plug

Part Number: ACP3

3.0 Shape and Dimensions

See Below (Section 16)

4.0 Rating

Voltage: AC 250V ~ 50Hz

Current: 10A

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>

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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 | A Nema 5-15 Plug is fitted into an ACP and the 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 | 15.2 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. |

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7.0 Mechanical Strength Test

| No. | Test | Clause in Standard | Result | Description of test 4 pieces are subjected to this series of test |
|-------|---------------------------------------|--------------------|--------|---|
| 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 11 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 | | 22.3°C, 22.6°C, 22.4°C |
| 7.3.2 | Line Pin Spacer temp rise | For each sample | | 25.6K, 23.7K, 25K max. temp rise permissible 37K |
| 7.3.3 | Neutral Pin Spacer temp rise | For each sample | | 18.7K, 17.2K, 21.9K max. temp rise permissible 37K |
| 7.3.4 | Accessible external surface temp rise | For each sample | | 12.3K, 10.6K, 12.7K max. temp rise permissible 52K |


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8.0 Construction Tests

| No. | Test | Clause in Standard | Result | Description of test 3 pieces are subjected to this series of test |
|-----|-----------------------------|--------------------|--------|---|
| 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 | Resistant 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 | Resistant 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 test |
|-----|-----------------------------|--------------------|--------|--|
| 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. |

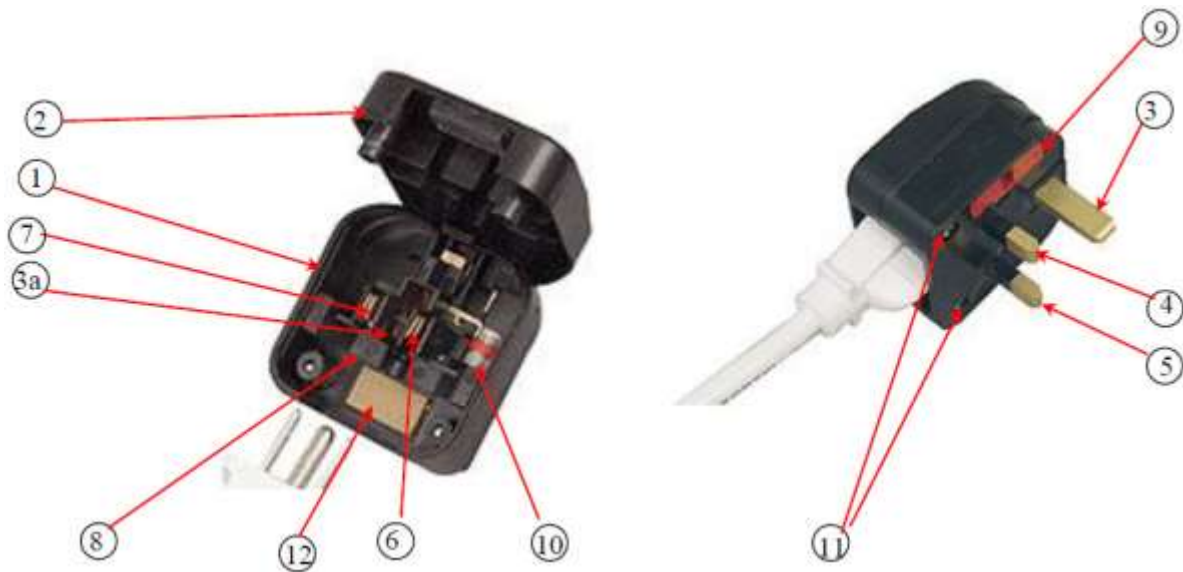
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10.0 Construction Tests

| No. | Test | Clause in Standard | Result | Description of test 3 pieces are subjected to this series of test |
|------|----------------------|---------------------|--------|---|
| 10.1 | Construction of plug | 12.2 BS1363-5 | Pass | Critical dimensions of the plug must not exceed the dimensions given in Figure 4a. Compliance check 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. |

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11.0 Component Name



| No. | Test | Material |
|-----|---------------|--|
| 1 | Base | Polycarbonate K&J Corporation KP-30 |
| 2 | Cover | Nylon 66 Sleeve JGP Perrite Vitamide AF11BK |
| 3 | Earth Pin | Brass (Universal) |
| 3a | 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 | Phosphor Bronze Taiwan VPN170-190 |
| 7 | Neutral Clip | Phosphor Bronze Taiwan VPN170-190 |
| 8 | Insert | Nylon 66 Sleeve JGP Perrite Vitamide AF11BK |
| 9 | Fuse Holder | Nylon 66, JGP Perrite Vitamide AF11BK |
| 10 | Fuse | AsiaFuse (Better Fuse) 3A, 5A (BS1362,ASTA) Bussmann 3A, 5A (BS1362, ASTA) Taller (Atlas) 3A, 5A (BS1362, ASTA, BSi) Marbo 3A, 5A (BS1362, ASTA,) |
| 11 | Screw | Plain or Tamperproof Steel Screw with Zinc and Clear Pacification – Golden Metal |
| 12 | Rubber Pad | Rubber – 3M |

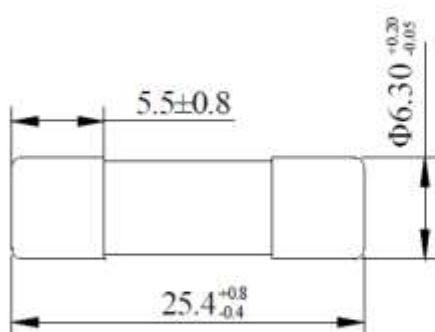
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12.0 Fuse Specification

BETTER FUSE/ASIA FUSE



Dimensions (units: mm)



| |
|--|
| <p>Operating Temperature:</p> <p>-55°C to 125°C</p> <p>Storage Conditions:</p> <p>+10°C to +60°C</p> <p>Relative humidity: ≤ 75% yearly average without dew, maximum 30 days at 95%</p> <p>Vibration Resistance:</p> <p>24 cycles at 15 min. each (60068-6)</p> <p>10-60Hz at 0.75mm amplitude</p> <p>60-2000Hz at 10g acceleration</p> |
|--|

Electrical characteristics

| Electrical Characteristics | | | | | | | | | |
|----------------------------|---------------|--------------|--|---------------------------|------------------------|-------|-----------|-----|------|
| Amp Code | Rated Current | Max. Voltage | Breaking Capacity | Nominal Melting It(A²sec) | 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 | ● | ● | ● |

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ASTA LICENCE

ASTA DIAMOND MARK

Licence No. 974

Organization: AsiaFuse (HK) Electronics Limited
Room 703 Kowloon Building
555 Nathan Road
Kowloon
Hong Kong

Product: General Purpose Fuse Links for Domestic & Similar Purposes

Designation: AF63B-3A, AF63B-5A, AF63B-7A, AF63C-10A, AF63-13A

Characteristics: 240 Volts a.c. 50 Hz
3, 5, 7, 10 & 13 Amperes
Breaking capacity 6kA rms
Rated power loss less than 1 watt

Approval Standard: BS 1362: 1973 +A3: 2021

Issue Number: 7

Review Date: 30 November 2027

Factory Reference: BETTCN.A1



R.W. Hayward

Name

Signature

1 February 2023

Date



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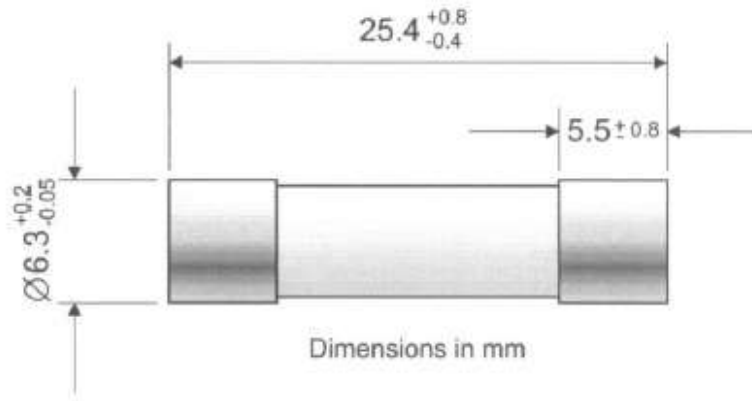
Intertek

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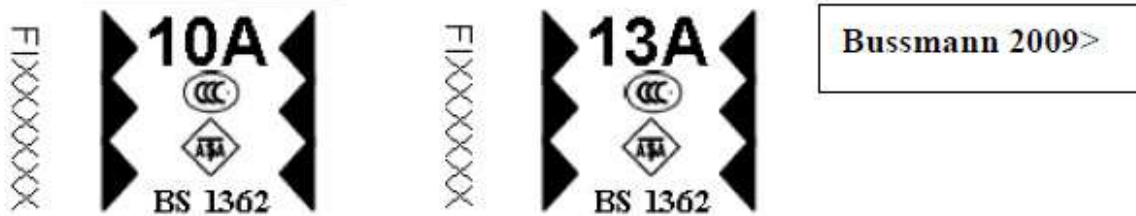
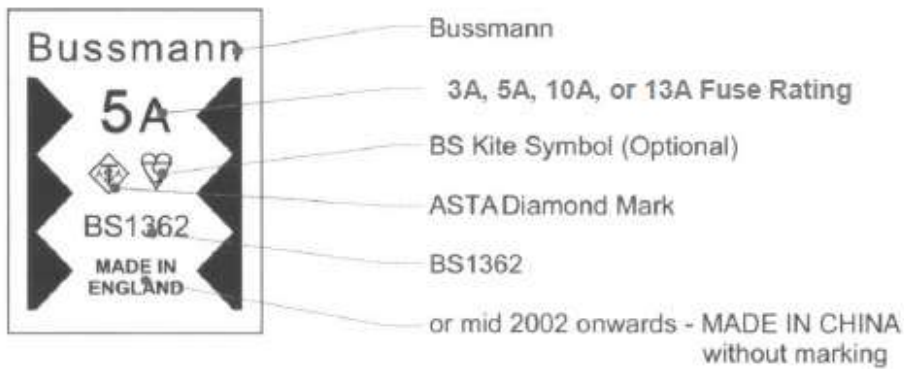
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SPECIFICATION & APPROVALS



Marking




| Print Block | | Print Colour |
|-----------------|--------|--------------|
| Computer number | Rating | |
| F1820227 | 2A | Black |
| F1820228 | 3A | Red |
| F1820229 | 5A | Black |
| F1820230 | 10A | Black |
| F1820231 | 13A | Brown |

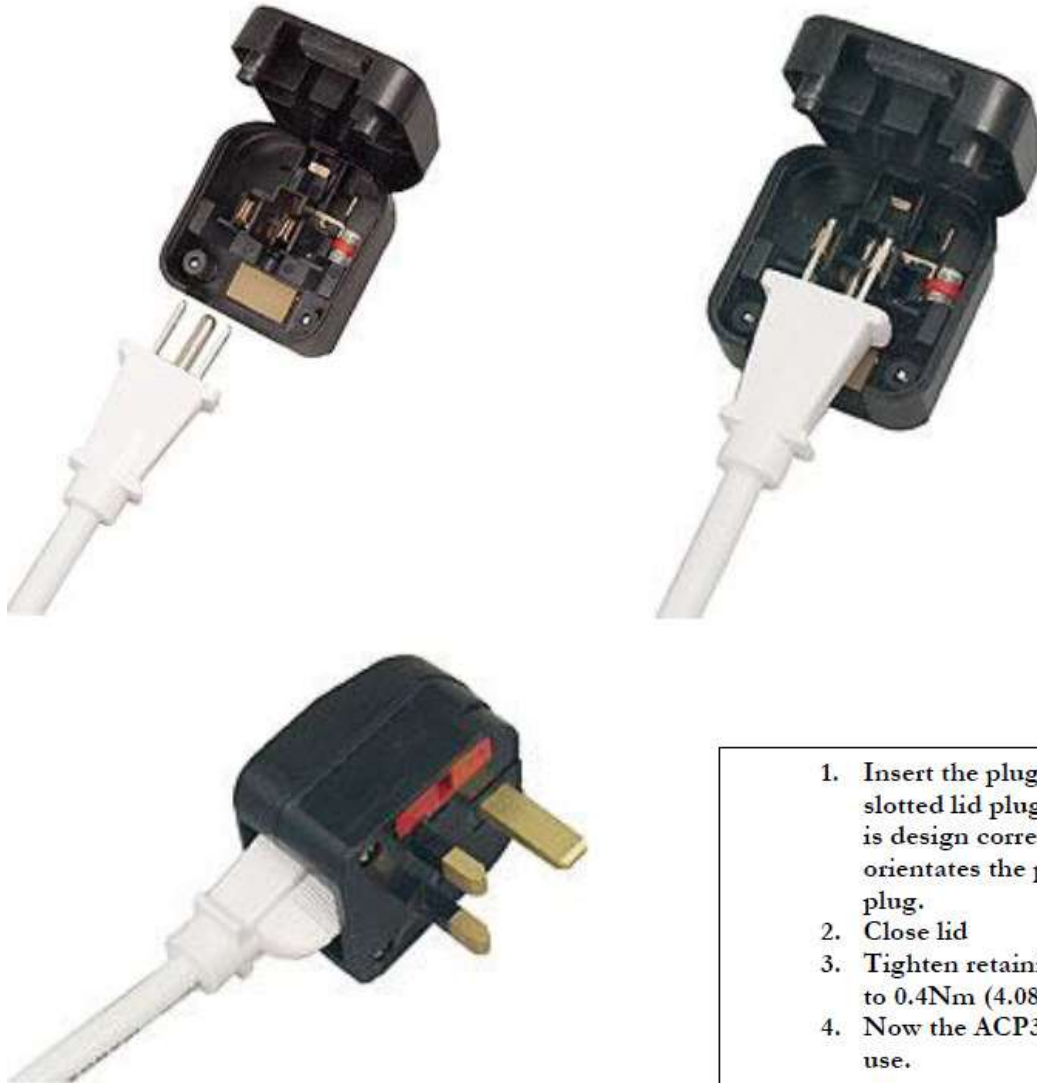
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Details as above page (Bussman)

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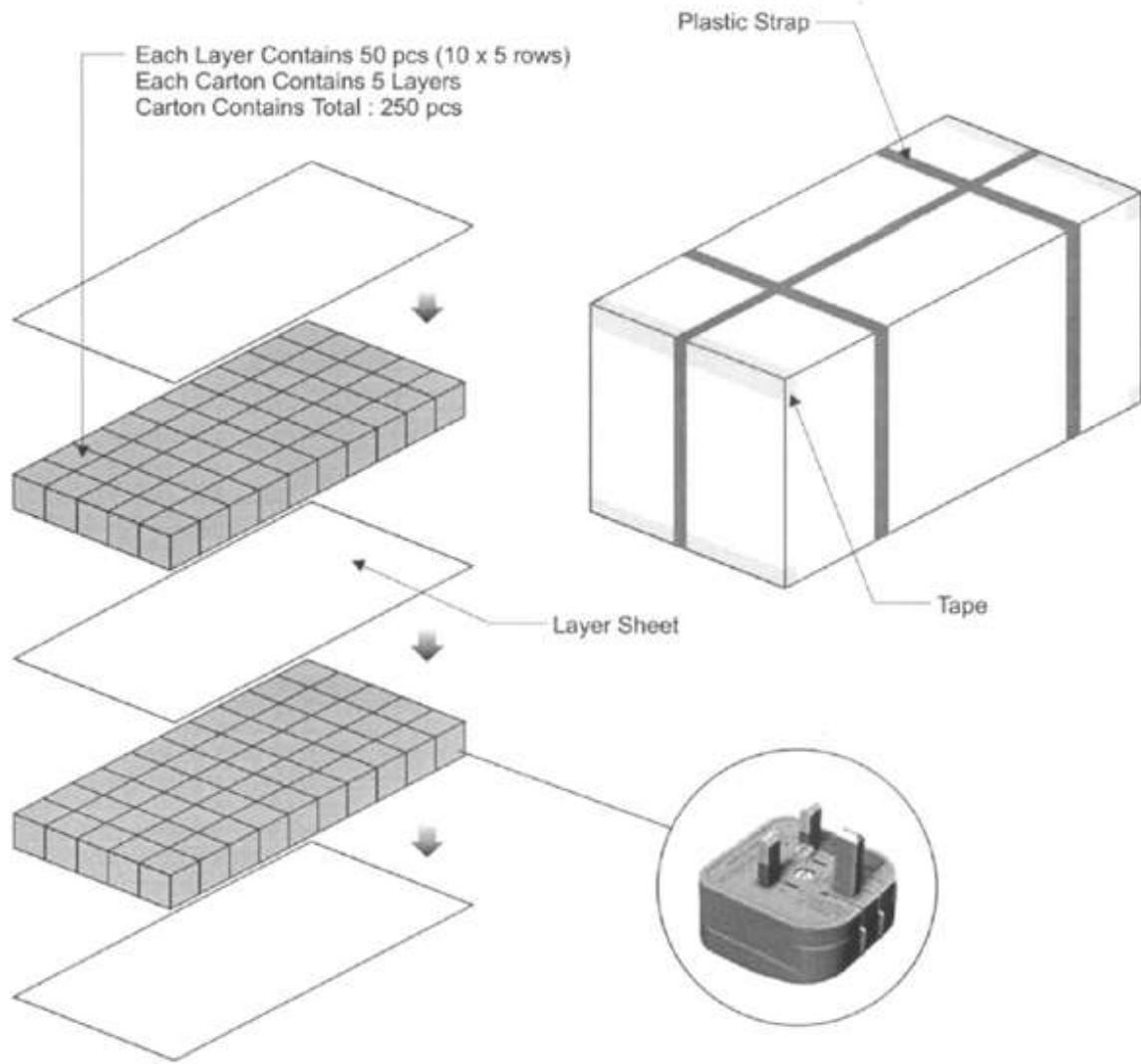
13.0 Installation Procedure




1. Insert the plug into the slotted lid plug plate, this is design correctly orientates the polarised plug.
2. Close lid
3. Tighten retaining screws to 0.4Nm (4.08Kgf.cm).
4. Now the ACP3 is ready for use.

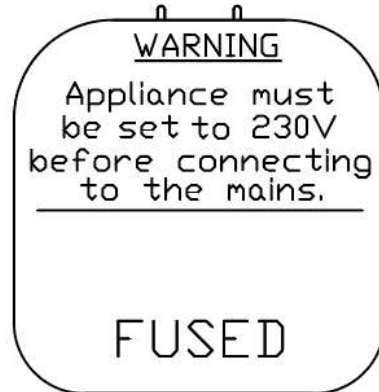
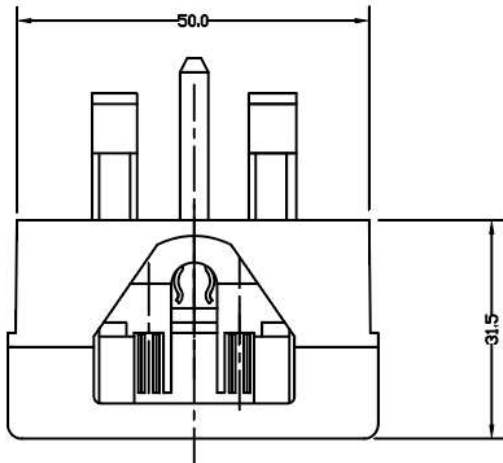
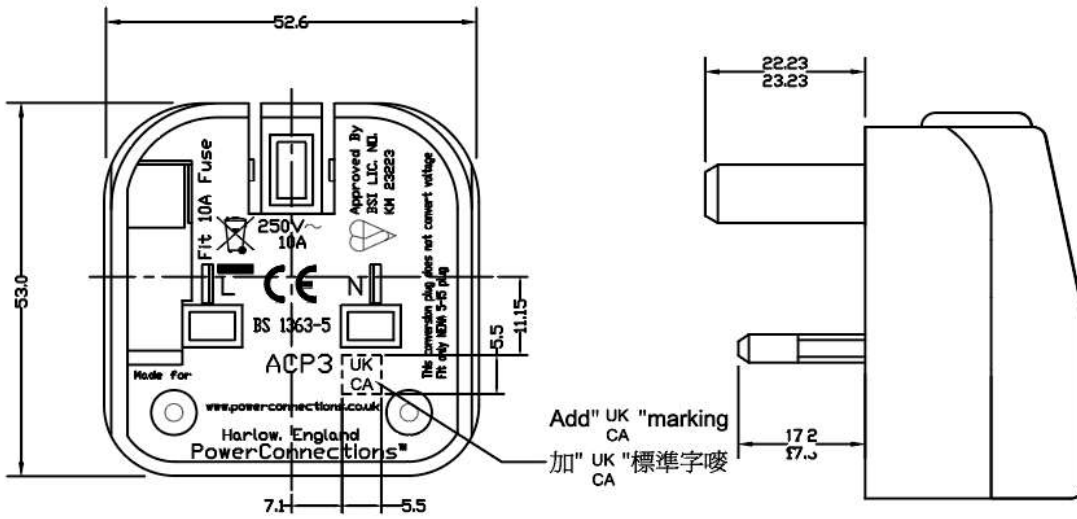
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14.0 Packing Method



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15.0 Dimensional Drawing and Markings



DO NOT SCALE FROM DRAWING
Unless otherwise stated, dimensions are mm

| | | | | |
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