SPECIFICATION & APPROVALS

CUSTOMER:

PowerConnections P/N: ACP
DESCRIPTION: American Converter Plug

DATE: 12 Mar 2022
Revision: I

Submission Sample Quantity: 10 Pieces

SUPPLIER SPECIFICATION SUBMISSION

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

Reason for Submission

Tick the relevant box " □"

- ☐ **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	11-01-05	Licence and test report update	New Data available
D	05-12-05	Licence and test report update	New Data available
E	10-07-06	Marbo Fuse data added	Alternative fuse available
F	25-07-06	Revised to BS1363-5	Change of applicable Standard
G	10-05-10	Revision to marking	Change of Co. Marking
H	25-07-16	Base Marking change and Asia Fuse data added	BS1363 and RoHS Directive updates, and new fuse available
I	04-01-19	Base marking changed to include UKCA logo	Introduction of UKCA rating, replaces CE marking in the UK

PowerConnections			THIS DOCUMENT CONTAINS INFORMATION WHICH IS PROPRIETRY TO POWERCONNECTIONS AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION		
TITLE	Plugtop Converter Plug		DRAWN BY	CHECKED BY	APPROVED BY
Part No. ACP		SPECIFICATION NO. 700-0001			
		REVISION I			

Table of Contents

PowerConnections			THIS DOCUMENT CONTAINS INFORMATION WHICH IS PROPRIETRY TO POWERCONNECTIONS AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION		
TITLE	Plugtop Converter Plug		DRAWN BY	CHECKED BY	APPROVED BY
Part No. ACP		SPECIFICATION NO. 700-0001			
		REVISION I			

1.0 Application

This Specification defines the performance for the American Converter Plug, which is designed for the Nema 1-15 plugs..

2.0 Name/Part Number

Name: American Converter Plug

Part Number: ACP

3.0 Shape and Dimensions

See Below (Section 15)

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

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 1-15 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.

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		22.0°C, 21.8°C, 22.2°C
7.3.2	Line Pin Spacer temp rise	For each sample		25.8K, 23.3K, 23.2K max. temp rise permissible 37K
7.3.3	Neutral Pin Spacer temp rise	For each sample		18.4K, 17.2K, 16.4K max. temp rise permissible 37K
7.3.4	Accessible external surface temp rise	For each sample		12.9K, 10.6K, 9.2K max. temp rise permissible 52K

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.

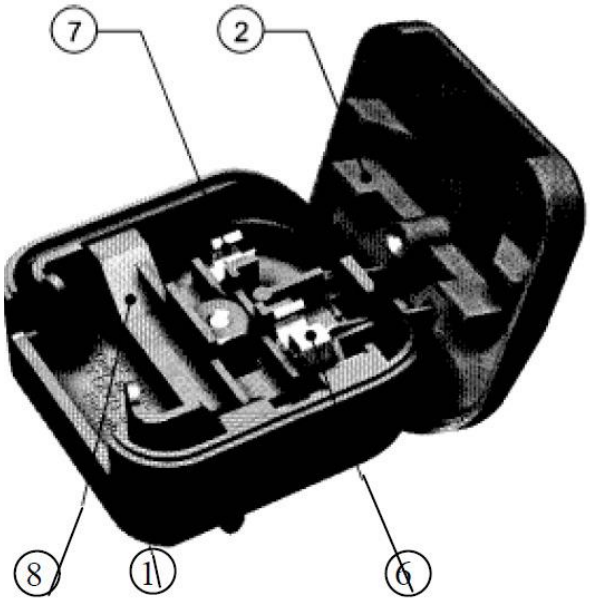
9.0 Glow Wire Tests

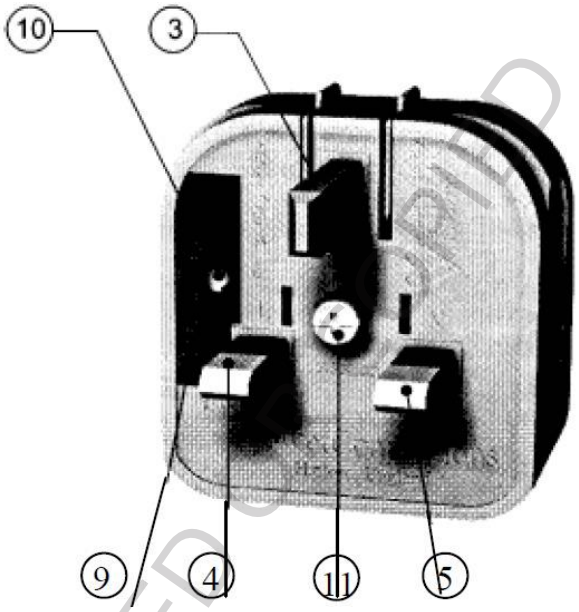
No.	Test	Clause in Standard	Result	Description of test 3 pieces are subjected to this series of test
9.1	Resistance to Abnormal Heat	23.2 BS1363-5	Pass	A glow wire of 750°C is applied to all the insulating surfaces there must be no visible flames or glowing or these must extinguish within 30s of removal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

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.

11.0 Component Name





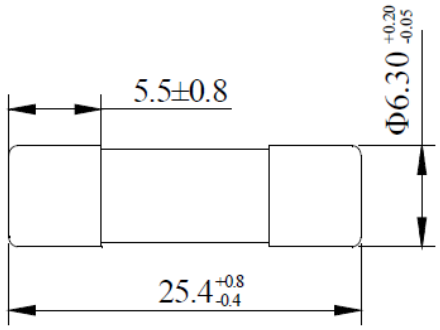
No.	Test	Material
1	Base	Polypropylene Cheng Yu Plastic PP222
2	Cover	Polypropylene Cheng Yu Plastic PP222
3	Earth Pin	Nylon 66 30% Glass Filled Toray CM3004G30
4	Live Pin	Brass (Universal) with Nylon 66 Sleeve JGP Perrite Vitamide AF11BK
5	Neutral Pin	Brass (Universal) with Nylon 66 Sleeve JGP Perrite 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

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

12.0 Fuse Specification

BETTER FUSE/ASIA FUSE

Dimensions (units: mm)



Operating Temperature:

-55°C to 125°C

Storage Conditions:

+10℃ to +60℃

Relative humidity: ≤ 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 I²t(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	●	●	●

PowerConnections			THIS DOCUMENT CONTAINS INFORMATION WHICH IS PROPRIETRY TO POWERCONNECTIONS AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION		
TITLE	Plugtop Converter Plug		DRAWN BY	CHECKED BY	APPROVED BY
Part No. ACP		SPECIFICATION NO. 700-0001			
		REVISION I			

intertek
Total Quality. Assured.

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

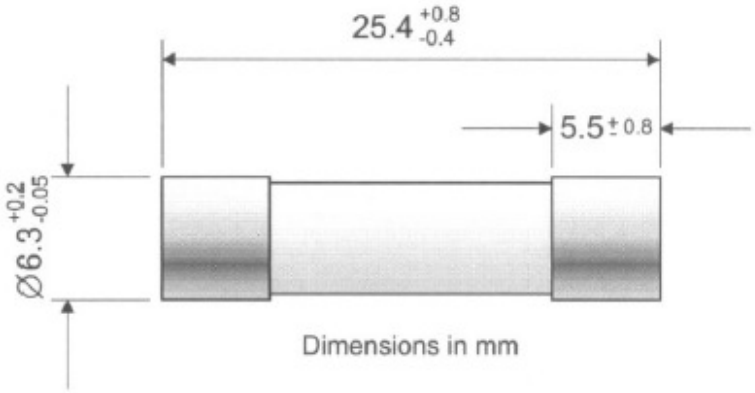
Factory Reference: BETTCN.A1

R.W. Hayward — **Name**

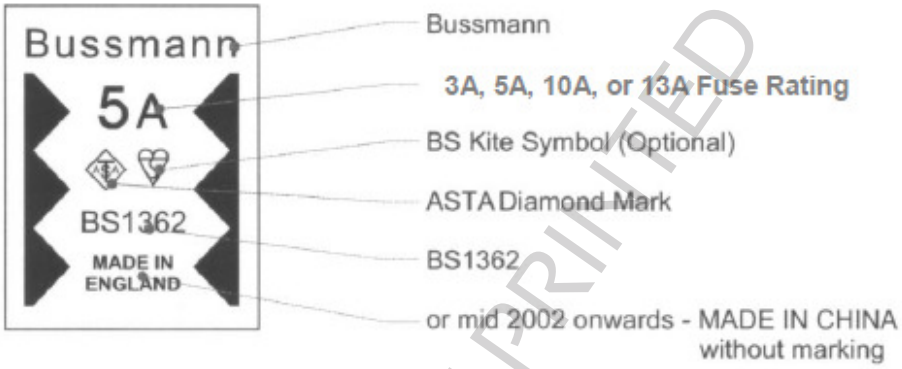
Signature

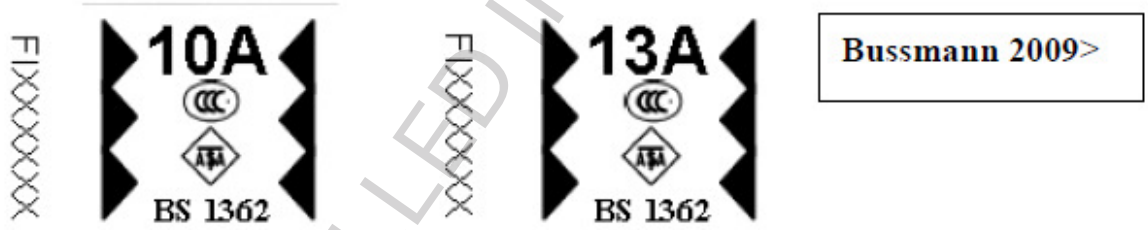
1 February 2023 — **Date**

PowerConnections			THIS DOCUMENT CONTAINS INFORMATION WHICH IS PROPRIETRY TO POWERCONNECTIONS AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION		
TITLE	Plugtop Converter Plug		DRAWN BY	CHECKED BY	APPROVED BY
Part No. ACP		SPECIFICATION NO. 700-0001			
		REVISION I			



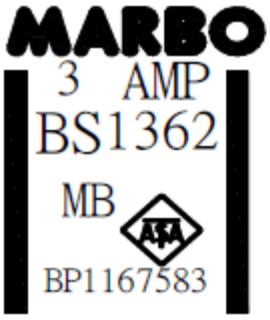
Marking

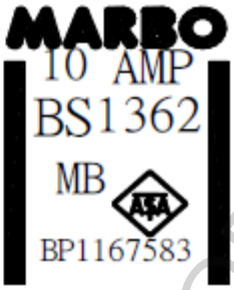


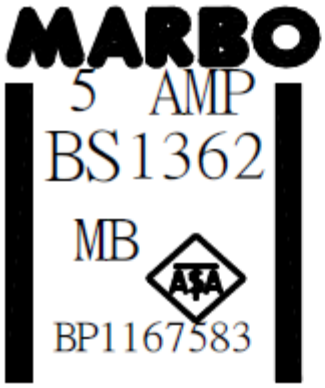


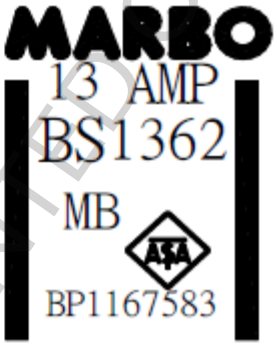
Print Block		Print
Computer number	Rating	Colour
FI820227	2A	Black
FI820228	3A	Red
FI820229	5A	Black
FI820230	10A	Black
FI820231	13A	Brown

PowerConnections			THIS DOCUMENT CONTAINS INFORMATION WHICH IS PROPRIETRY TO POWERCONNECTIONS AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION		
TITLE	Plugtop Converter Plug		DRAWN BY	CHECKED BY	APPROVED BY
Part No. ACP		SPECIFICATION NO. 700-0001			
		REVISION I			









Details as above page (Bussman)

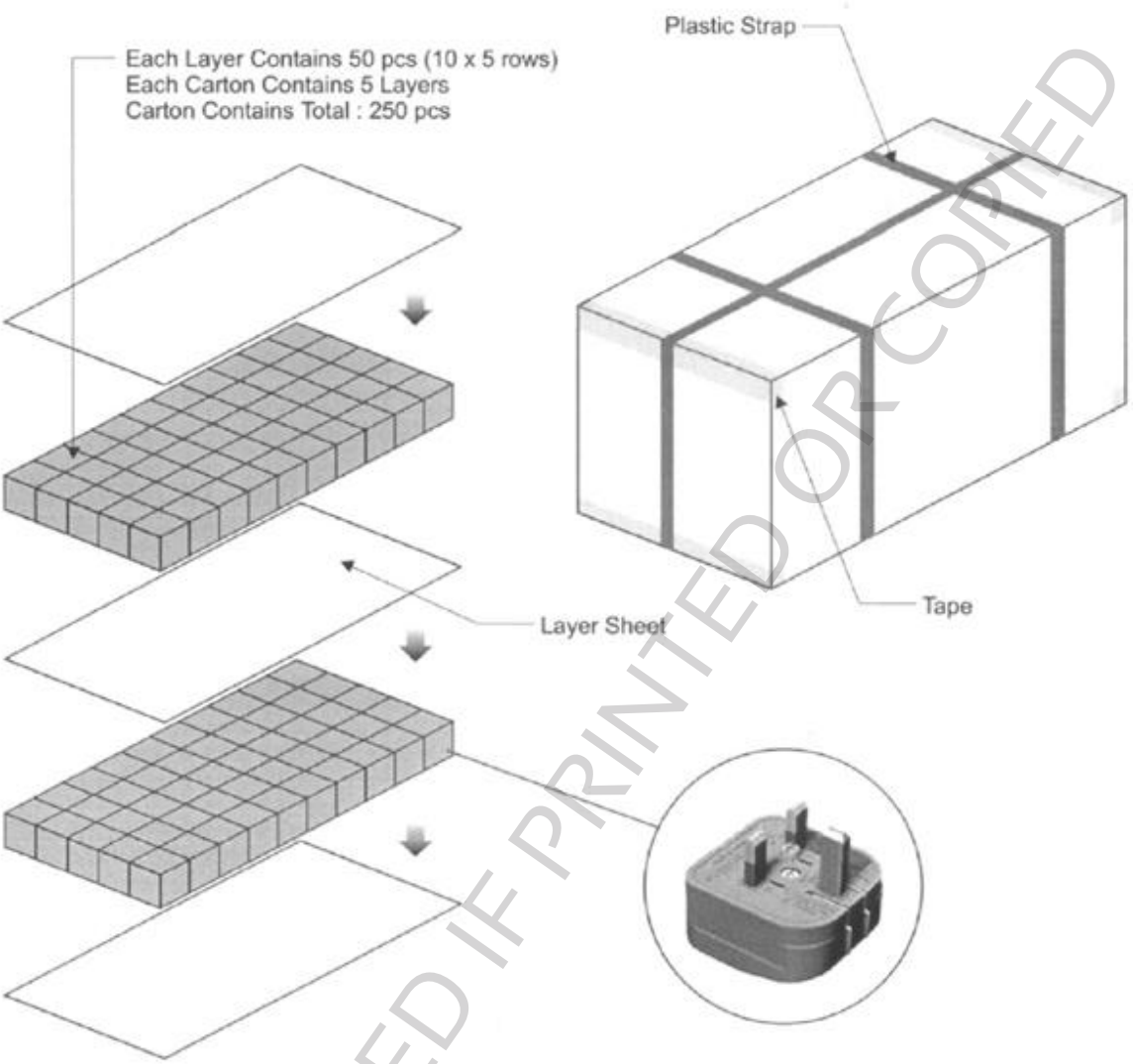
PowerConnections			THIS DOCUMENT CONTAINS INFORMATION WHICH IS PROPRIETRY TO POWERCONNECTIONS AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION		
TITLE	Plugtop Converter Plug		DRAWN BY	CHECKED BY	APPROVED BY
Part No. ACP		SPECIFICATION NO. 700-0001			
		REVISION I			

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 screw to 0.6Nm (6.12Kgf.cm).
4. Now the ACP is ready for use.

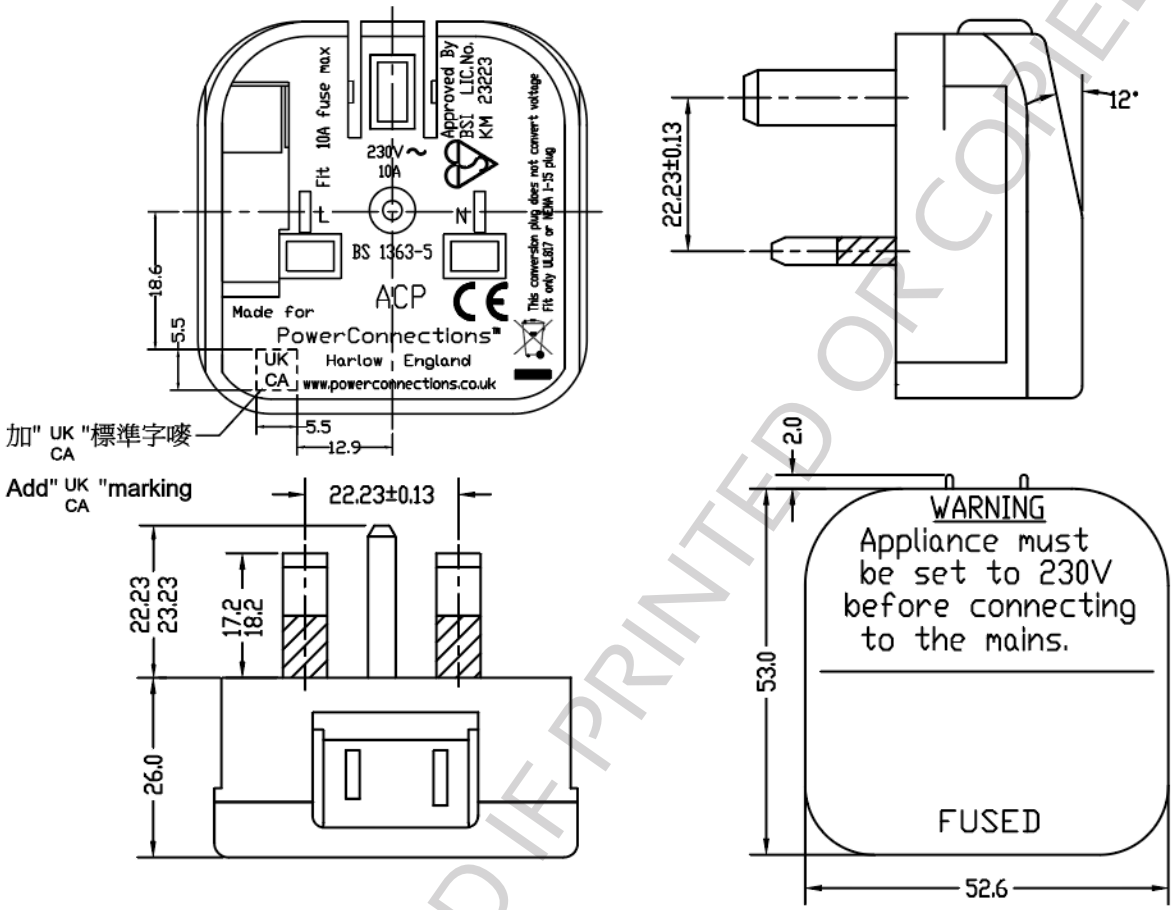
PowerConnections			THIS DOCUMENT CONTAINS INFORMATION WHICH IS PROPRIETRY TO POWERCONNECTIONS AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION		
TITLE	Plugtop Converter Plug		DRAWN BY	CHECKED BY	APPROVED BY
Part No. ACP		SPECIFICATION NO. 700-0001			
		REVISION I			

14.0 Packing Method



PowerConnections			THIS DOCUMENT CONTAINS INFORMATION WHICH IS PROPRIETRY TO POWERCONNECTIONS AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION		
TITLE	Plugtop Converter Plug		DRAWN BY	CHECKED BY	APPROVED BY
Part No. ACP		SPECIFICATION NO. 700-0001			
		REVISION I			

15.0 Dimensional Drawing and Markings



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

PowerConnections			THIS DOCUMENT CONTAINS INFORMATION WHICH IS PROPRIETRY TO POWERCONNECTIONS AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION		
TITLE	Plugtop Converter Plug		DRAWN BY	CHECKED BY	APPROVED BY
Part No. ACP		SPECIFICATION NO. 700-0001			
		REVISION I			