

SPECIFICATION & APPROVALS

CUSTOMER:

PowerConnections P/N: SCP3

DESCRIPTION: SHUKO CONVERTER PLUG 3 PIN

DATE: 25 Jun 2019

Revision: L

Submission Sample Quantity: 10 Pieces

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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

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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.
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Checked By

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Approved By


Paul M. Allen

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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>

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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	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.

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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

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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 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.

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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.

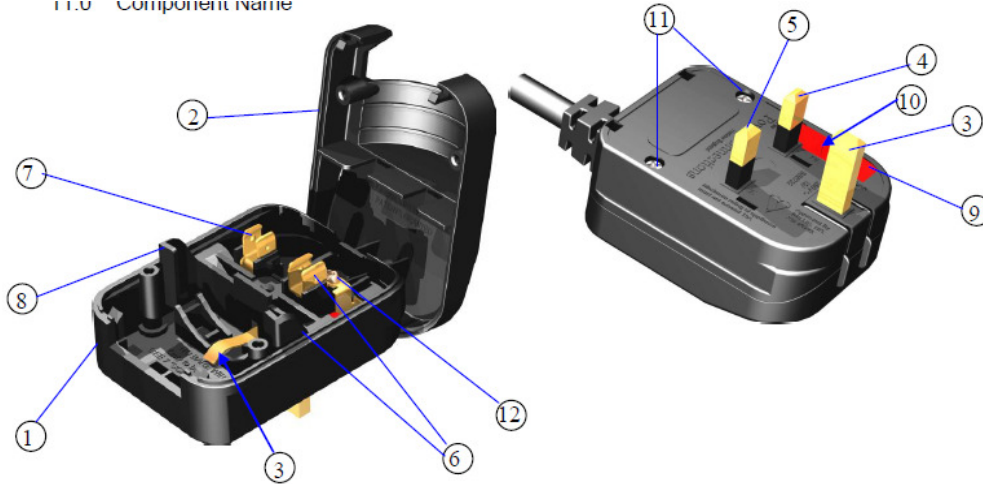
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11.0 Component Name

11.0 Component name



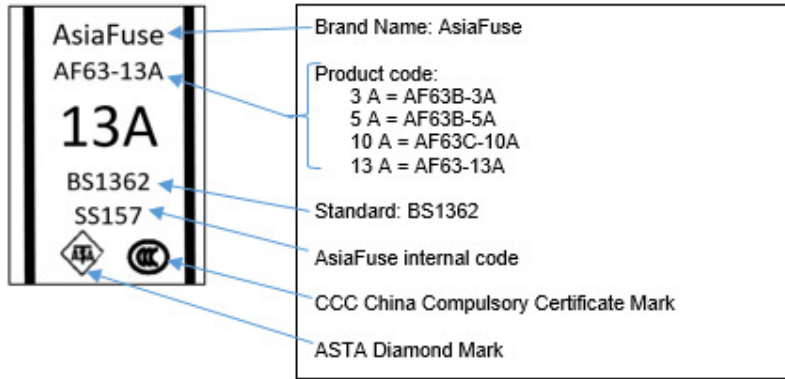
[insert images here]

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

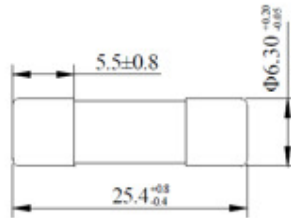
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12.0 Fuse Specification △

BETTER FUSE/ASIA FUSE



Dimensions (units: mm)



Operating Temperature:

-55°C to 125°C

Storage Conditions:

+10°C to +60°C

Relative humidity: ≤ 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

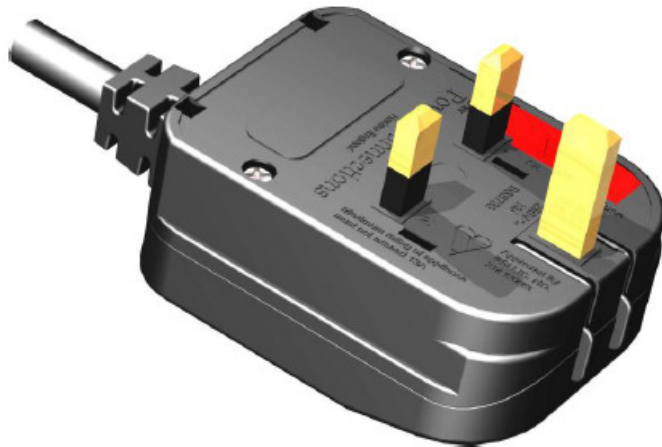
60-2000Hz at 10g acceleration

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	●	●	●

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13.0 Installation Procedure



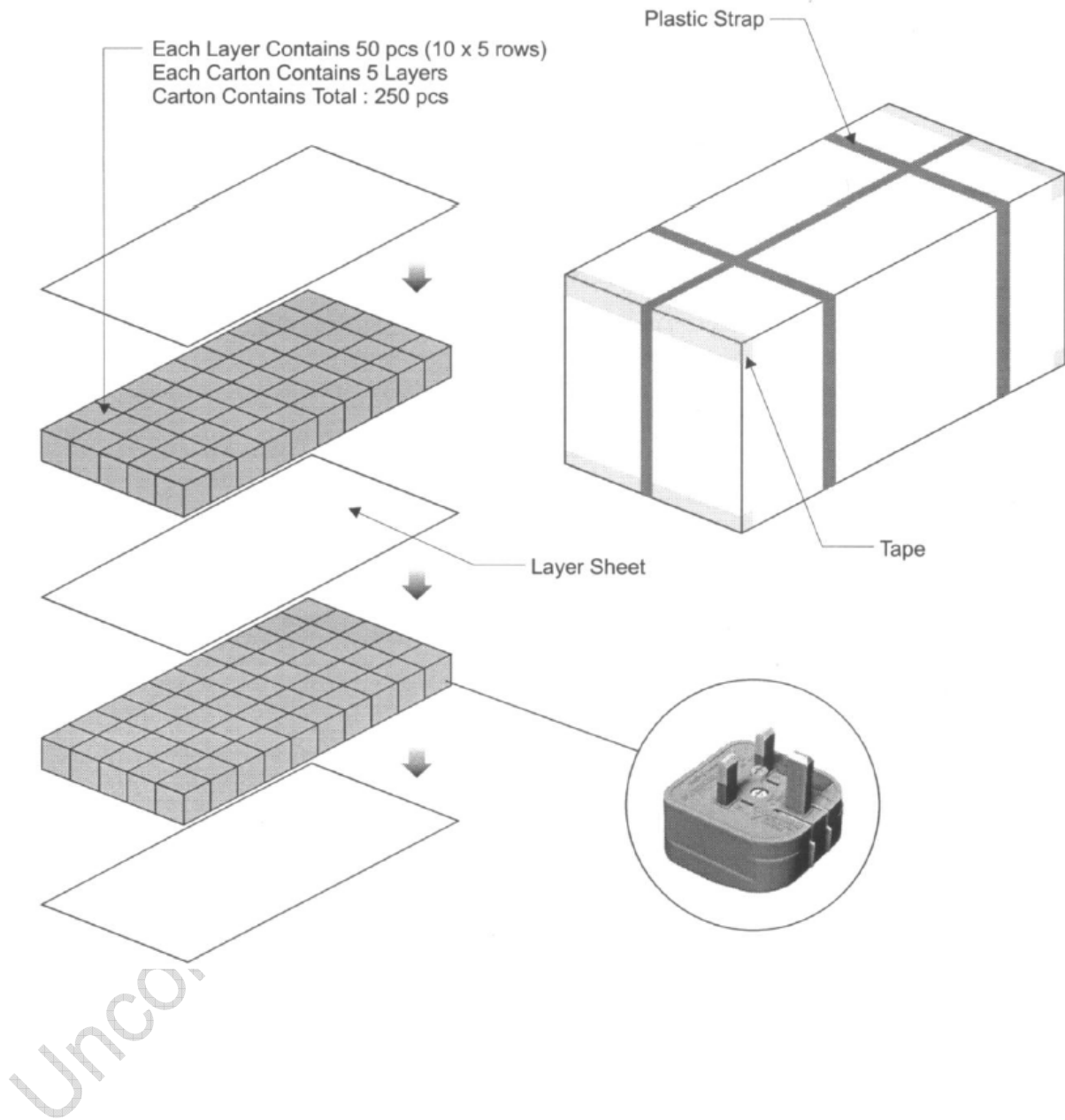
Insert the Schuko Plug as shown and tighten the 2 screws on the base to 0.4NM.
 Ensure lid is fully closed.
 Now ready for use.

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

Uncon

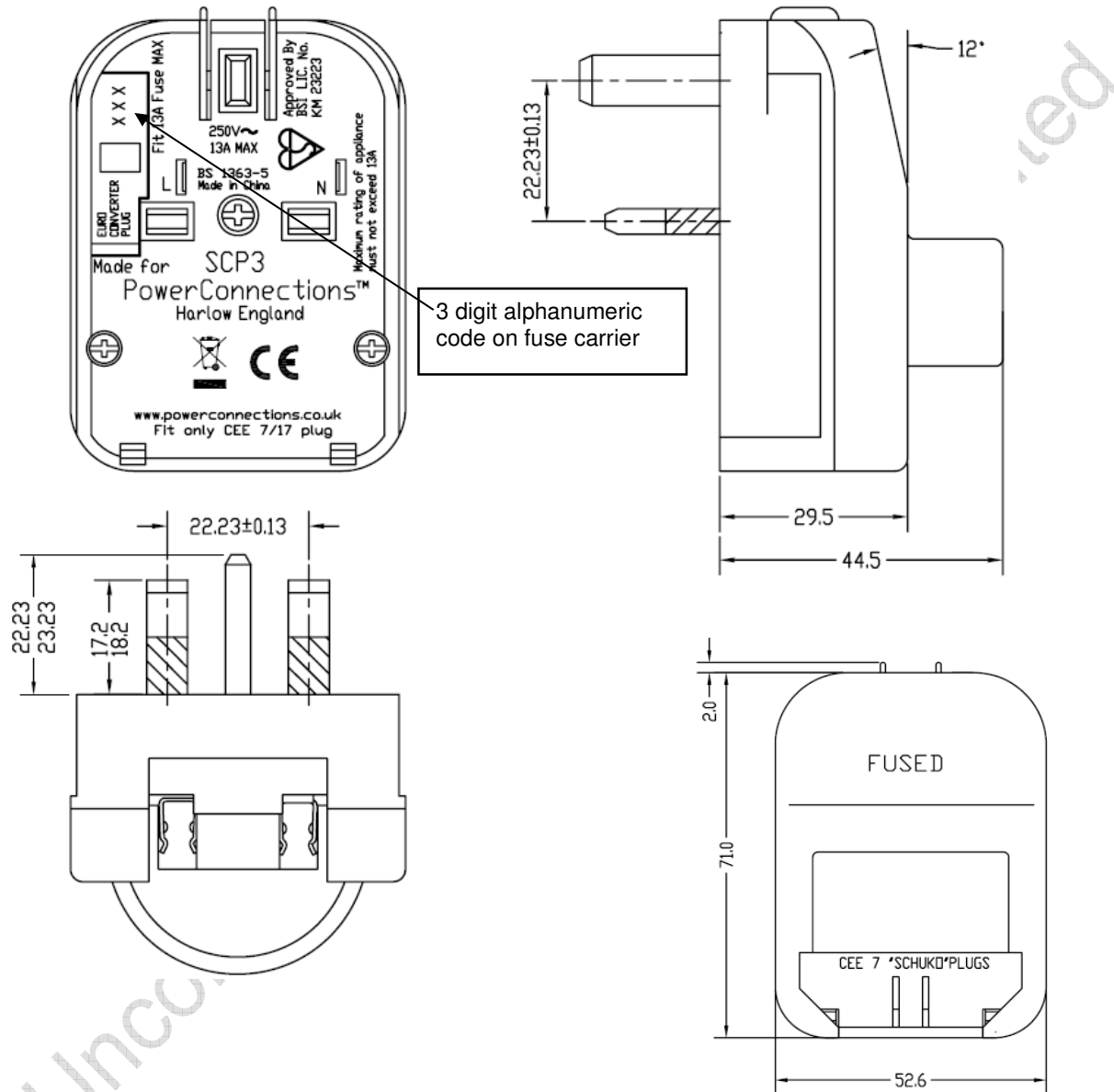
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14.0 Packing Method



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15.0 Dimensional Drawing and Markings Δ



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