

**SERIES: SMI6 | DESCRIPTION: AC-DC POWER SUPPLY**
**FEATURES**

- DoE Level VI, CoC Tier 2 efficiency
- up to 6 W power
- interchangeable AC blades
- universal input (90~264 Vac)
- single regulated output from 5~15 Vdc
- over voltage and short circuit protections
- UL/cUL, RCM, CCC, PSE safety approvals
- custom designs available



| MODEL     | output voltage<br>(Vdc) | output current<br>max<br>(A) | output power<br>max<br>(W) | ripple and noise <sup>1</sup><br>max<br>(mVp-p) | efficiency level <sup>2</sup> |
|-----------|-------------------------|------------------------------|----------------------------|---|-------------------------------|
| SMI6-5    | 5                       | 1.2                          | 6                          | 150   | VI                            |
| SMI6-5.95 | 5.95                    | 1                            | 6                          | 150   | VI                            |
| SMI6-9    | 9                       | 0.67                         | 6                          | 150   | VI                            |
| SMI6-12   | 12                      | 0.5                          | 6                          | 200   | VI                            |
| SMI6-15   | 15                      | 0.4                          | 6                          | 200   | VI                            |

Notes: 1. At full load, 100-240 Vac input, 20 MHz bandwidth oscilloscope, output terminated with 0.1  $\mu$ F ceramic and 10  $\mu$ F electrolytic capacitors.  
 2. CoC Tier 2 compliant

**PART NUMBER KEY**
**SMI6 - XX - X - XXX - CXX**

Base Number

Output Voltage

Blades:

V = North America, Europe, United Kingdom, Australia, and China blade included

N = North America blade included

E = Europe blade included

B = United Kingdom blade included

A = Australia blade included

C = China blade included

K = No blades included

DC Plug Type:

XXX = See output plug options on page 4 for more details

ST = Stripped and Tinned

Reserved for Custom Configurations

## INPUT

| parameter                 | conditions/description | min | typ | max   | units |
|---------------------------|------------------------|-----|-----|-------|-------|
| voltage                   |                        | 90  |     | 264   | Vac   |
| frequency                 |                        | 47  |     | 63    | Hz    |
| current                   |                        |     |     | 0.3   | A     |
| leakage current           |                        |     |     | 0.25  | mA    |
| no load power consumption |                        |     |     | 0.075 | W     |

## OUTPUT

| parameter       | conditions/description                 | min | typ      | max | units  |
|-----------------|--|-----|----------|-----|--------|
| line regulation |  |     | ±1       |     | %      |
| load regulation | 5 Vdc output model<br>all other models |     | ±6<br>±5 |     | %<br>% |

## PROTECTIONS

| parameter                | conditions/description          | min | typ | max | units |
|--------------------------|---------------------------------|-----|-----|-----|-------|
| over voltage protection  | output shut down, auto recovery |     |     |     |       |
| short circuit protection | output shut down, auto recovery |     |     |     |       |

## SAFETY & COMPLIANCE

| parameter            | conditions/description                | min | typ            | max | units      |
|----------------------|---------------------------------------|-----|----------------|-----|------------|
| isolation voltage    | input to output at 10 mA for 1 minute |     | 3,000<br>4,242 |     | Vac<br>Vdc |
| isolation resistance | input to output at 500 Vdc            | 100 |                |     | MΩ         |
| safety approvals     | UL/cUL, RCM, CCC, PSE                 |     |                |     |            |
| EMI/EMC              | FCC Part 15B Class B                  |     |                |     |            |
| RoHS                 | yes                                   |     |                |     |            |

## ENVIRONMENTAL

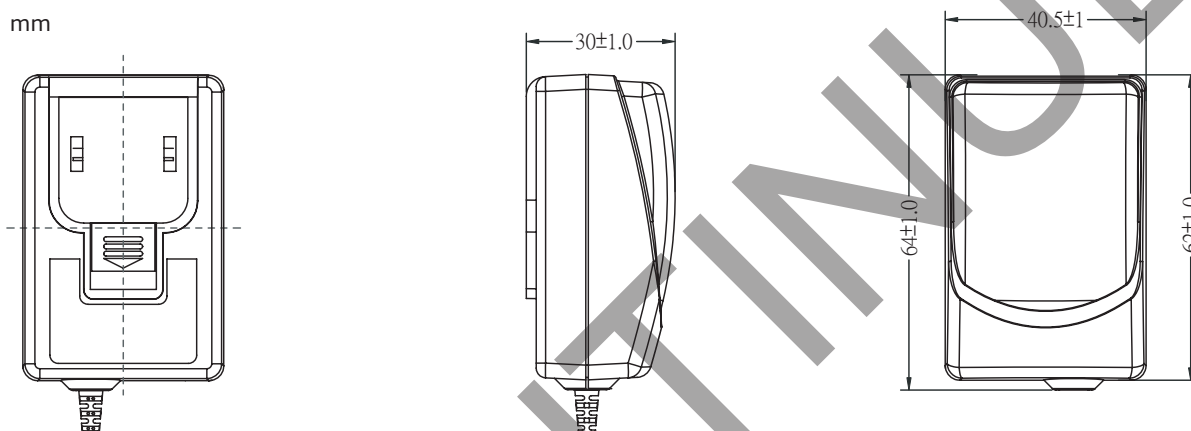
| parameter             | conditions/description | min | typ | max | units |
|-----------------------|------------------------|-----|-----|-----|-------|
| operating temperature |                        | 0   |     | 40  | °C    |
| storage temperature   |                        | -10 |     | 70  | °C    |
| operating humidity    | non-condensing         | 20  |     | 80  | %     |
| storage humidity      | non-condensing         | 10  |     | 90  | %     |

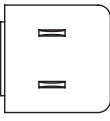
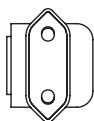
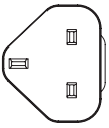
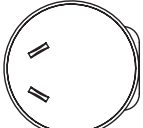
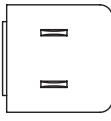
## MECHANICAL

| parameter  | conditions/description   | min | typ  | max | units |
|------------|--|-----|------|-----|-------|
| dimensions | 64 x 40.5 x 30   |     |      |     | mm    |
| inlet plug | interchangeable blades (North America, Europe, UK, Australia, China) |     |      |     |       |
| weight     | 5.95 Vdc model (without interchangeable blades)                      |     | 69   |     | g     |
|            | all other models (without interchangeable blades)                    |     | 68.5 |     | g     |

## MECHANICAL DRAWING

units: mm  
tolerance:  $\pm 1$  mm



| INTERCHANGEABLE BLADES |   |  |   |   |   |
|------------------------|---|--|---|---|---|
| BLADE DESIGNATOR       | N   | E  | B   | A   | C   |
| REGION                 | North America   | Europe   | UK  | Australia   | China   |
| BLADE ACCESSORY        | SMI-US-1  | SMI-EU-1   | SMI-UK-1  | SMI-AU-1  | SMI-CN-1  |
| BLADE                  |  |  |  |  |  |

## DC CORD

units: mm

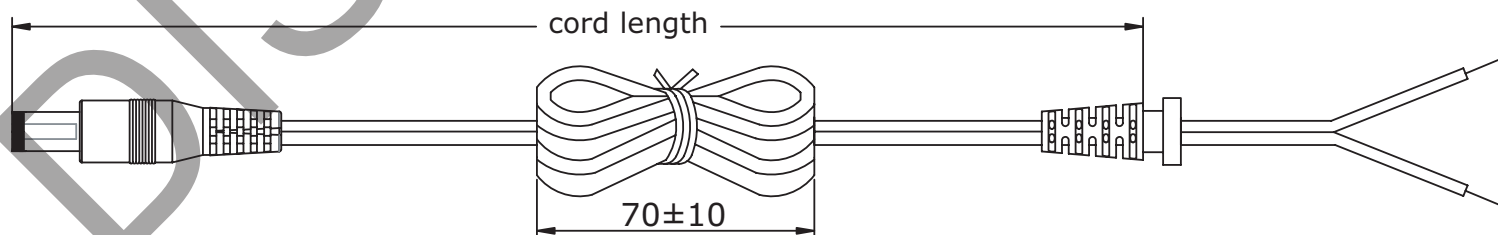
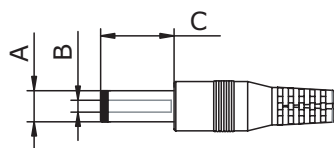


Table 1

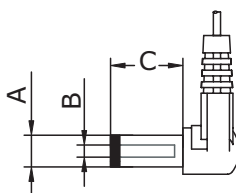
| MODEL NO. | CABLE          | CORD LENGTH        |
|-----------|----------------|--------------------|
| SMI6-5    | UL2468, 20 AWG | 1,530 mm $\pm 100$ |
| SMI6-5.95 | UL2468, 20 AWG | 1,530 mm $\pm 100$ |
| SMI6-9    | UL2468, 22 AWG | 1,530 mm $\pm 100$ |
| SMI6-12   | UL2468, 22 AWG | 1,530 mm $\pm 100$ |
| SMI6-15   | UL2468, 22 AWG | 1,530 mm $\pm 100$ |

## OUTPUT PLUG OPTIONS

### Standard DC Plug



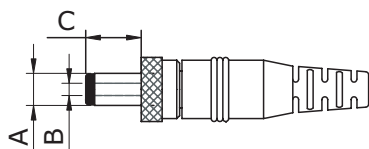
Straight Plug



Right Angle Plug

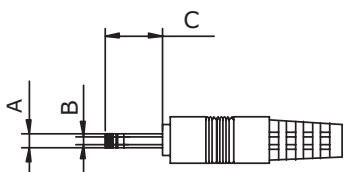
| Size | A   | B    | C   | Unit |
|------|-----|------|-----|------|
| 5    | 5.5 | 2.1  | 9.5 | mm   |
| 6    | 5.5 | 2.5  | 9.5 | mm   |
| 7    | 3.5 | 1.35 | 9.5 | mm   |
| 8    | 3.8 | 1.35 | 9.5 | mm   |
| 9    | 3.8 | 1.05 | 9.5 | mm   |

### Locking DC Plug

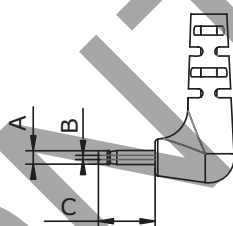


| Size | A   | B   | C   | Unit |
|------|-----|-----|-----|------|
| 10   | 5.5 | 2.1 | 9.5 | mm   |
| 11   | 5.5 | 2.5 | 9.5 | mm   |

### EIAJ DC Plug



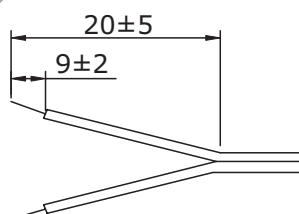
Straight Plug



Right Angle Plug

| Size | EIAJ   | A    | B   | C   | Unit |
|------|--------|------|-----|-----|------|
| 12   | EIAJ-1 | 2.35 | 0.7 | 9.5 | mm   |
| 13   | EIAJ-2 | 4.0  | 1.7 | 9.5 | mm   |
| 14   | EIAJ-3 | 4.75 | 1.7 | 9.5 | mm   |

### Stripped and Tinned



### DC Plug Type

Plug Polarity:

P = Center Positive

N = Center Negative



XXX

Plug Size:

X = See above plug options

Plug Angle:

"blank" = Straight  
R = Right Angle

\*Contact CUI for additional plug options

## REVISION HISTORY

| rev. | description   | date       |
|------|---|------------|
| 1.0  | initial release   | 07/01/2015 |
| 1.01 | updated datasheet   | 02/08/2016 |
| 1.02 | updated datasheet   | 09/14/2016 |
| 1.03 | Australia blade housing changed, and blade orientation rotated 90 degrees | 10/02/2018 |
| 1.04 | company logo updated  | 09/30/2020 |
| 1.05 | safeties updated  | 12/11/2020 |

The revision history provided is for informational purposes only and is believed to be accurate.



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This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

CUI offers a one (1) year limited warranty. Complete warranty information is listed on our website.

CUI reserves the right to make changes to the product at any time without notice. Information provided by CUI is believed to be accurate and reliable. However, no responsibility is assumed by CUI for its use, nor for any infringements of patents or other rights of third parties which may result from its use.

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