



## SERIES: SMI6 | DESCRIPTION: AC-DC POWER SUPPLY

### FEATURES

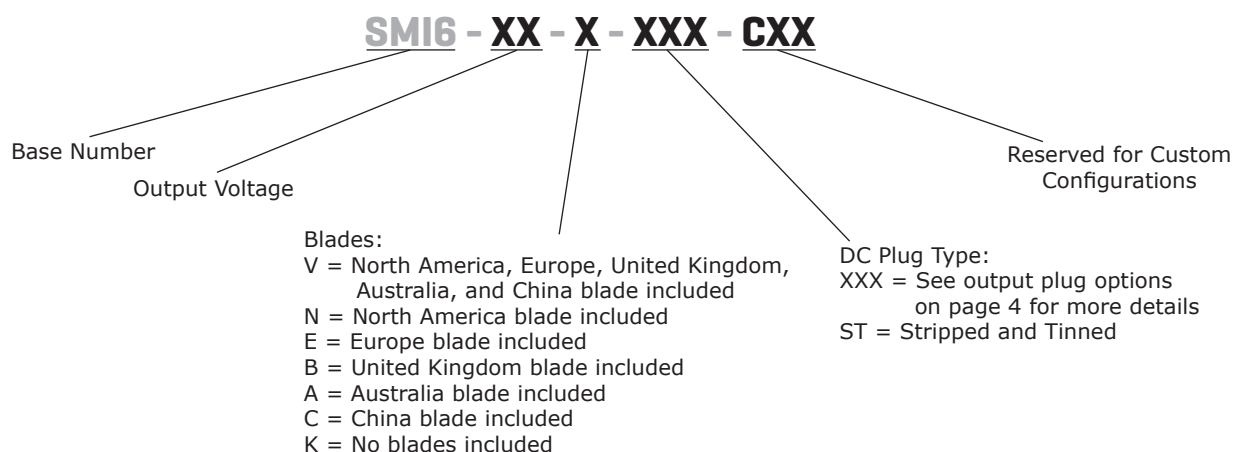
- DoE Level VI, CoC Tier 2 efficiency
- up to 6 W power
- interchangeable AC blades
- universal input (90~264 Vac)
- single regulated output from 5~15 Vdc
- over voltage and short circuit protections
- UL/cUL, GS, RCM, CCC, PSE safety approvals
- custom designs available



| MODEL     | output<br>voltage<br>(Vdc) | output<br>current<br>max<br>(A) | output<br>power<br>max<br>(W) | ripple<br>and noise <sup>1</sup><br>max<br>(mVp-p) | efficiency<br>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



## 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, GS, RCM, CCC, PSE             |     |                |     |            |
| EMI/EMC              | FCC Part 15B Class B, CE              |     |                |     |            |
| RoHS                 | yes                                   |     |                |     |            |

## ENVIRONMENTAL

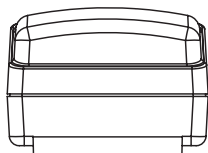
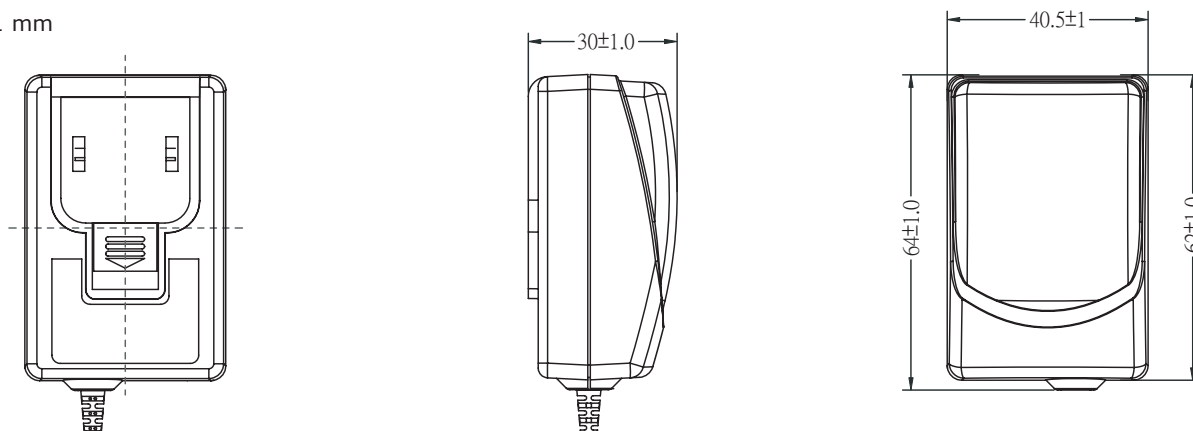
| parameter             | conditions/description | min | typ | max | units |
|-----------------------|------------------------|-----|-----|-----|-------|
| operating temperature |                        | 0   |     | 40  | °C    |
| storage temperature   |                        | -10 |     | 70  | °C    |
| 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

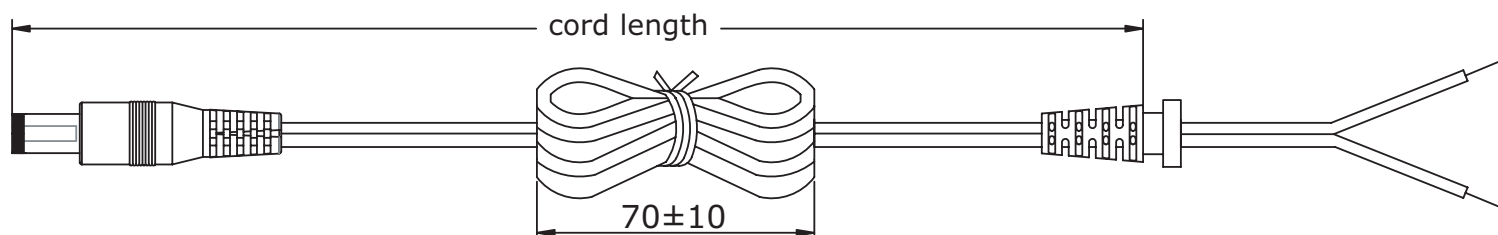
units: mm

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

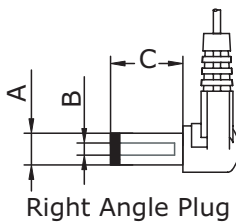
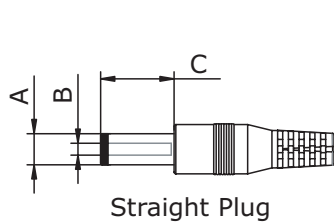
units: mm

**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 $\pm 100$ |

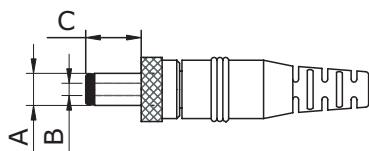
## OUTPUT PLUG OPTIONS

### Standard DC Plug



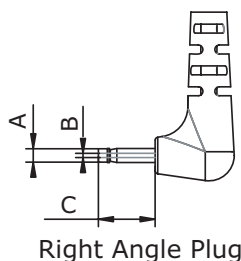
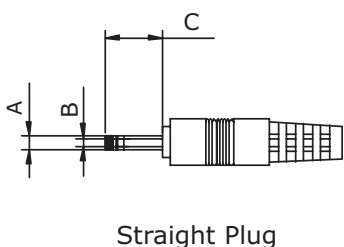
| Size | A   | B    | C   | Unit |
|------|-----|------|-----|------|
| 5    | 5.5 | 2.1  | 9.5 | mm   |
| 6    | 5.5 | 2.5  | 9.5 | mm   |
| 7    | 3.5 | 1.35 | 9.5 | mm   |
| 8    | 3.8 | 1.35 | 9.5 | mm   |
| 9    | 3.8 | 1.05 | 9.5 | mm   |

### Locking DC Plug



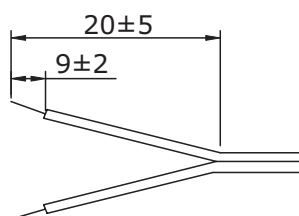
| Size | A   | B   | C   | Unit |
|------|-----|-----|-----|------|
| 10   | 5.5 | 2.1 | 9.5 | mm   |
| 11   | 5.5 | 2.5 | 9.5 | mm   |

### EIAJ DC Plug

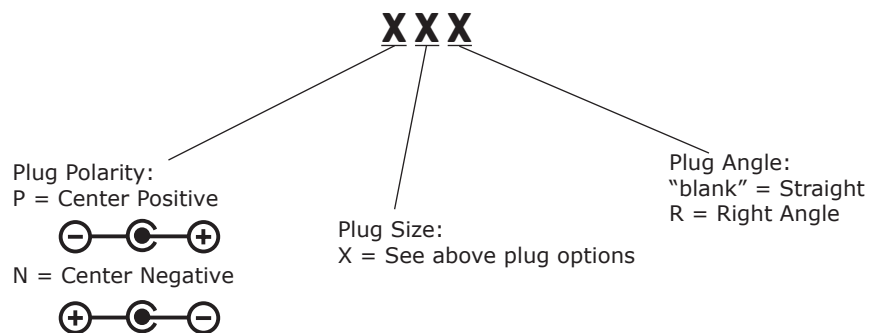


| Size | EIAJ   | A    | B   | C   | Unit |
|------|--------|------|-----|-----|------|
| 12   | EIAJ-1 | 2.35 | 0.7 | 9.5 | mm   |
| 13   | EIAJ-2 | 4.0  | 1.7 | 9.5 | mm   |
| 14   | EIAJ-3 | 4.75 | 1.7 | 9.5 | mm   |

### Stripped and Tinned



### DC Plug Type



\*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 |

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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