



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

### FEATURES

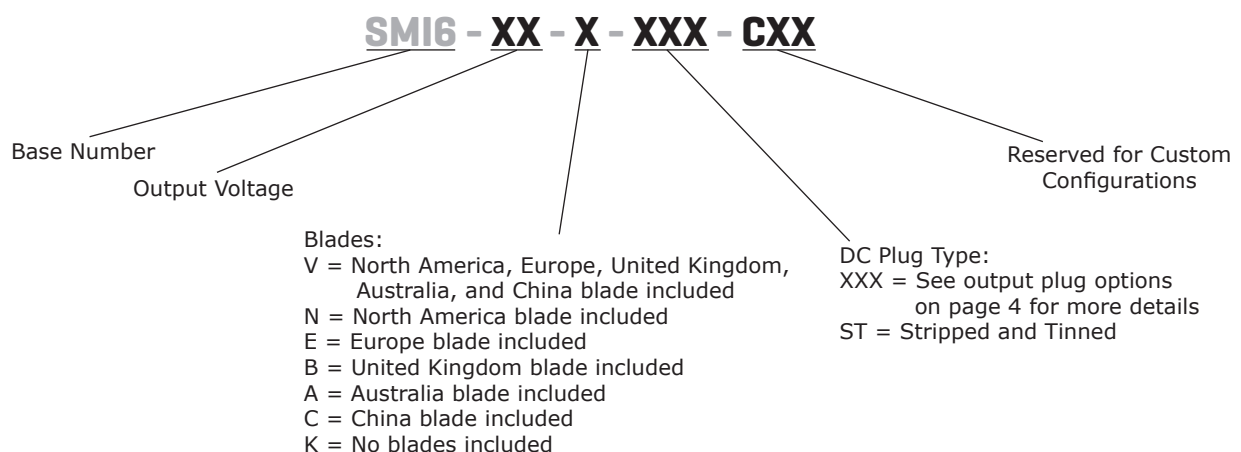
- DoE Level VI, CoC Tier 2 efficiency
- up to 6 W power
- interchangeable AC blades
- universal input (90~264 Vac)
- single regulated output from 5~15 Vdc
- over voltage and short circuit protections
- UL/cUL, GS, RCM, CCC, PSE safety approvals
- custom designs available



| 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

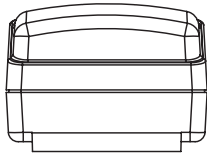
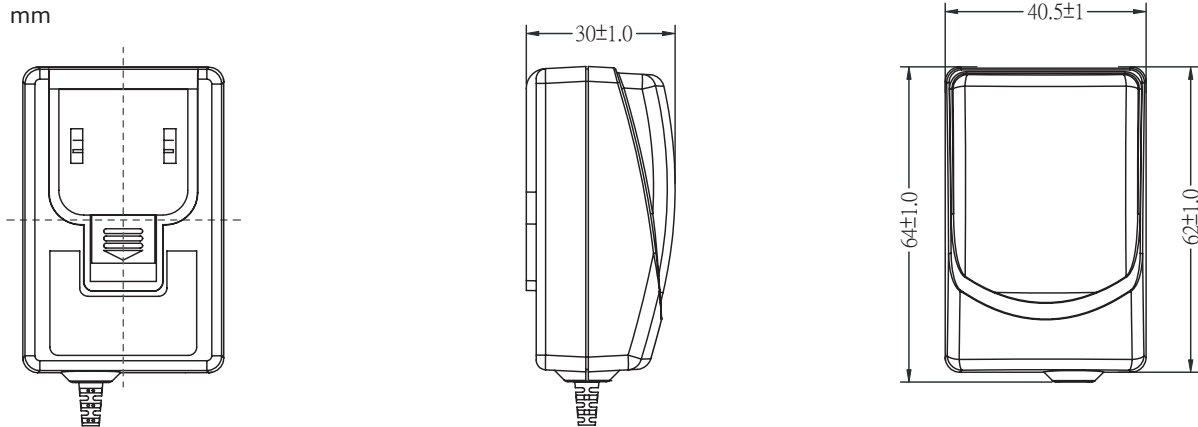
| parameter             | conditions/description | min | typ | max | units |
|-----------------------|------------------------|-----|-----|-----|-------|
| operating temperature |                        | 0   |     | 40  | °C    |
| storage temperature   |                        | -10 |     | 70  | °C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

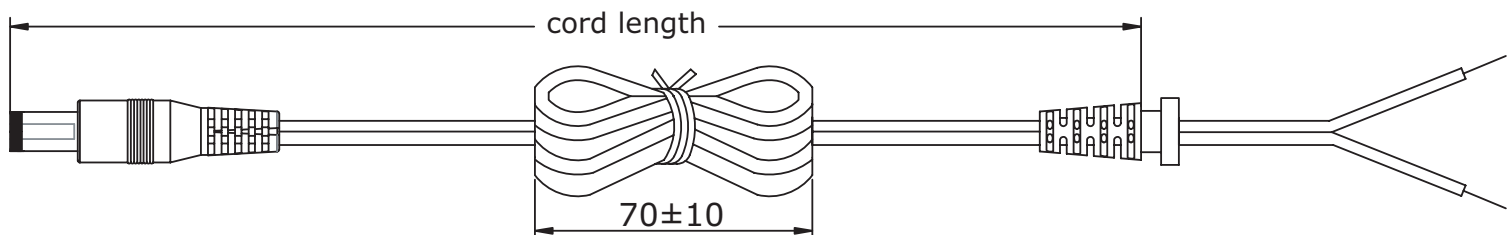
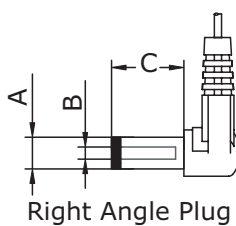
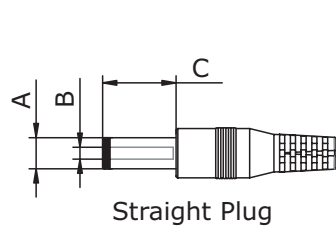


**Table 1**

| 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 $\pm 100$ |

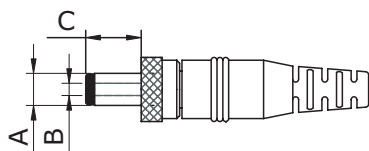
## OUTPUT PLUG OPTIONS

### Standard DC Plug



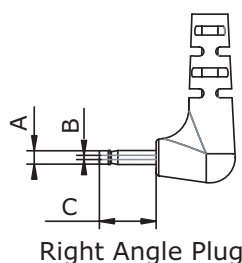
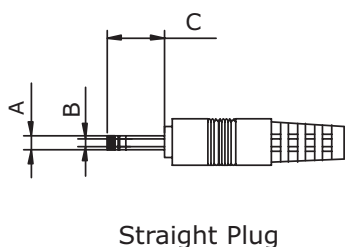
| Size | A   | B    | C   | Unit |
|------|-----|------|-----|------|
| 5    | 5.5 | 2.1  | 9.5 | mm   |
| 6    | 5.5 | 2.5  | 9.5 | mm   |
| 7    | 3.5 | 1.35 | 9.5 | mm   |
| 8    | 3.8 | 1.35 | 9.5 | mm   |
| 9    | 3.8 | 1.05 | 9.5 | mm   |

### Locking DC Plug



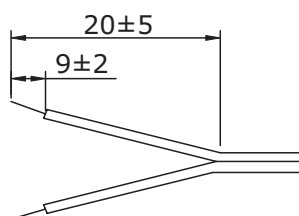
| Size | A   | B   | C   | Unit |
|------|-----|-----|-----|------|
| 10   | 5.5 | 2.1 | 9.5 | mm   |
| 11   | 5.5 | 2.5 | 9.5 | mm   |

### EIAJ DC Plug

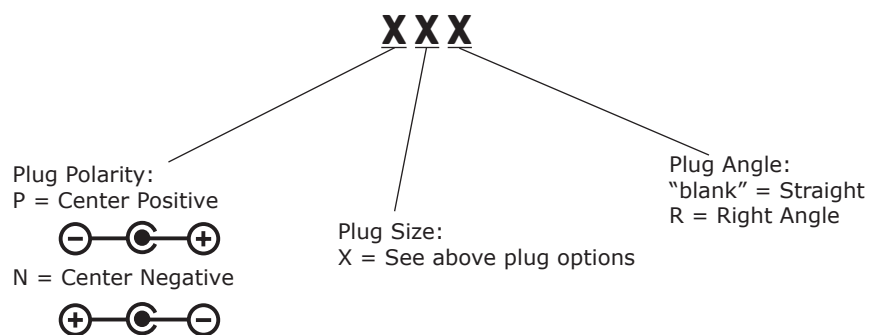


| Size | EIAJ   | A    | B   | C   | Unit |
|------|--------|------|-----|-----|------|
| 12   | EIAJ-1 | 2.35 | 0.7 | 9.5 | mm   |
| 13   | EIAJ-2 | 4.0  | 1.7 | 9.5 | mm   |
| 14   | EIAJ-3 | 4.75 | 1.7 | 9.5 | mm   |

### 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.

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