



## SERIES: SMI6B | DESCRIPTION: AC-DC POWER SUPPLY

### FEATURES

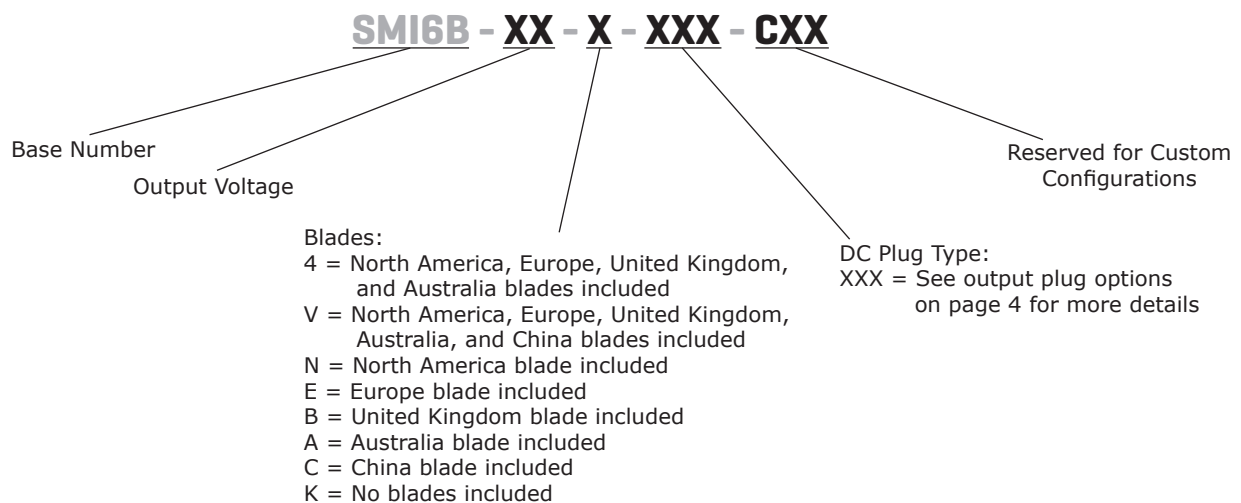
- DoE Level VI, CoC Tier 2 efficiency
- up to 6 W power
- compact design
- interchangeable AC blades
- universal input (90~264 Vac)
- single regulated output from 5~15 Vdc
- over voltage and short circuit protections
- UL/cUL, GS, RCM, CCC, PSE safety approvals
- certified to 62368-1
- custom designs 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> |
|----------|-------------------------|------------------------------|----------------------------|-------------------------------------------------|-------------------------------|
| SMI6B-5  | 5                       | 1.2                          | 6                          | 300                                             | VI                            |
| SMI6B-6  | 6                       | 1.0                          | 6                          | 300                                             | VI                            |
| SMI6B-9  | 9                       | 0.66                         | 5.94                       | 300                                             | VI                            |
| SMI6B-12 | 12                      | 0.5                          | 6                          | 300                                             | VI                            |
| SMI6B-15 | 15                      | 0.4                          | 6                          | 300                                             | VI                            |

Notes: 1. At full load, 100-240 Vac input, 20 MHz bandwidth oscilloscope, output terminated with 0.1  $\mu$ F and 10  $\mu$ F 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                   |                                   |     |     | 0.2   | A     |
| leakage current           | at nominal AC input and frequency |     |     | 0.25  | mA    |
| no load power consumption | at 115/ 230 Vac, 60/50 Hz         |     |     | 0.075 | W     |

## OUTPUT

| parameter       | conditions/description | min | typ | max | units |
|-----------------|------------------------|-----|-----|-----|-------|
| line regulation |                        |     | ±5  |     | %     |
| load regulation |                        |     | ±5  |     | %     |
| start-up time   | at 115 Vac input       |     |     | 3   | s     |
| rise time       | at 90~264 Vac input    |     |     | 100 | ms    |
| hold-up time    | at nominal input       | 5   |     |     | ms    |

## PROTECTIONS

| parameter                | conditions/description          | min | typ | max | units |
|--------------------------|---------------------------------|-----|-----|-----|-------|
| over current protection  | output shut down, auto recovery |     |     |     |       |
|                          | 5 Vdc output models             |     |     | 1.8 | A     |
|                          | 6 Vdc output models             |     |     | 1.6 | A     |
|                          | 9, 12 Vdc output models         |     |     | 1.0 | A     |
|                          | 15 Vdc output models            |     |     | 0.8 | A     |
| 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 |
| safety approvals  | UL/cUL, GS, RCM, CCC, PSE                                          |        |                |     |            |
| EMI/EMC           | FCC Part 15B Class B, CE                                           |        |                |     |            |
| MTBF              | as per Telcordia SR-332, Issue 2 at 115/230 Vac, full load, 0~40°C | 50,000 |                |     | hours      |
| RoHS              | yes                                                                |        |                |     |            |

## ENVIRONMENTAL

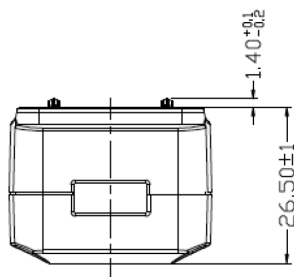
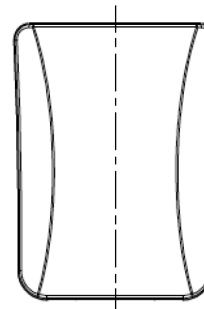
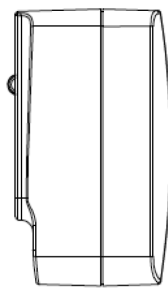
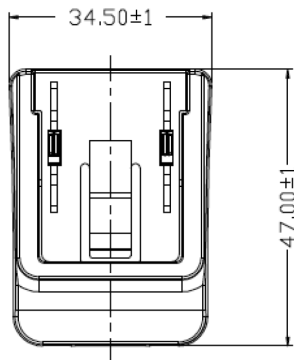
| parameter             | conditions/description | min | typ | max | units |
|-----------------------|------------------------|-----|-----|-----|-------|
| operating temperature |                        | 0   |     | 40  | °C    |
| storage temperature   |                        | -20 |     | 60  | °C    |
| operating humidity    | non-condensing         | 20  |     | 85  | %     |
| storage humidity      | non-condensing         | 5   |     | 95  | %     |

## MECHANICAL

| parameter  | conditions/description                                               | min | typ | max | units |
|------------|----------------------------------------------------------------------|-----|-----|-----|-------|
| dimensions | 47 x 34.5 x 26.5                                                     |     |     |     | mm    |
| inlet plug | interchangeable blades (North America, Europe, UK, Australia, China) |     |     |     |       |
| weight     | 5 Vdc output models (without interchangeable blades)                 |     | 54  |     | g     |
|            | all other models (without interchangeable blades)                    |     | 50  |     | g     |

## MECHANICAL DRAWING

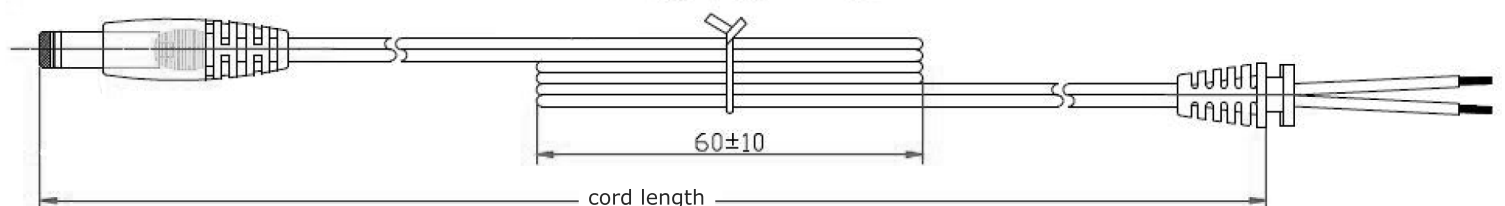
units: mm  
tolerance:  $\pm 1$  mm



| INTERCHANGEABLE BLADES |               |          |          |           |          |
|------------------------|---------------|----------|----------|-----------|----------|
| BLADE DESIGNATOR       | N             | E        | B        | A         | C        |
| REGION                 | North America | Europe   | UK       | Australia | China    |
| BLADE ACCESSORY        | SMI-US-3      | SMI-EU-3 | SMI-UK-3 | SMI-AU-3  | SMI-CN-3 |
| BLADE                  |               |          |          |           |          |

## DC CORD

units: mm



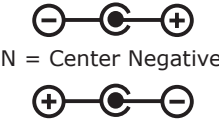
**Table 1**

| MODEL NO. | CABLE          | CORD LENGTH       |
|-----------|----------------|-------------------|
| SMI6B-5   | UL2468, 22 AWG | 1,530 mm $\pm 50$ |
| SMI6B-6   | UL2468, 22 AWG | 1,530 mm $\pm 50$ |
| SMI6B-9   | UL2468, 24 AWG | 1,530 mm $\pm 50$ |
| SMI6B-12  | UL2468, 24 AWG | 1,530 mm $\pm 50$ |
| SMI6B-15  | UL2468, 24 AWG | 1,530 mm $\pm 50$ |

## DC PLUG TYPE PART NUMBER KEY

**XXX**

**Plug Polarity:**  
P = Center Positive  
N = Center Negative



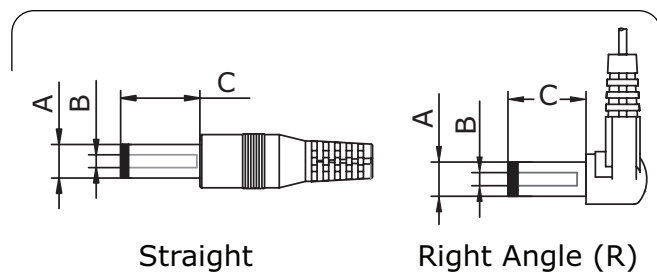
**Plug Code:**  
X = Choose a code from the options below

**Plug Angle:**  
"blank" = Straight  
R = Right Angle

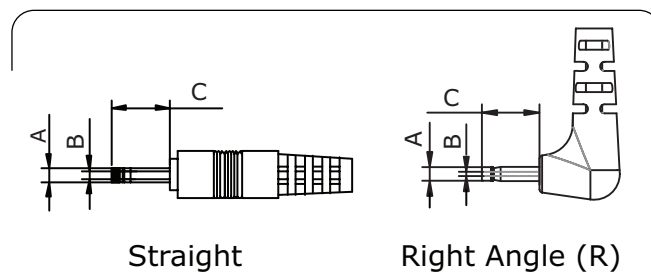
| Plug Polarity |             | Code   |          | Dimensions (mm)  |      |     | Plug Angle |       |
|---------------|-------------|--------|----------|------------------|------|-----|------------|-------|
| Center Pos.   | Center Neg. | Option | Type     | A                | B    | C   | Straight   | Right |
| •             | •           | 5      | Standard | 5.5              | 2.1  | 9.5 | •          | •     |
| •             | •           | 6      | Standard | 5.5              | 2.5  | 9.5 | •          | •     |
| •             | •           | 7      | Standard | 3.5              | 1.35 | 9.5 | •          | •     |
| •             | •           | 10     | Locking  | 5.5              | 2.1  | 9.5 | •          | N/A   |
| •             | •           | 11     | Locking  | 5.5              | 2.5  | 9.5 | •          | N/A   |
| •             | •           | 12     | EIAJ-1   | 2.35             | 0.7  | 9.5 | •          | •     |
| •             | •           | 13     | EIAJ-2   | 4.0              | 1.7  | 9.5 | •          | •     |
| •             | •           | 14     | EIAJ-3   | 4.75             | 1.7  | 9.5 | •          | •     |
| N/A           | N/A         | CUB    | USB      | USB Type C       |      |     | •          | N/A   |
| N/A           | N/A         | MUB    | USB      | Micro USB Type B |      |     | •          | N/A   |

Note: 1. Contact CUI for additional plug options

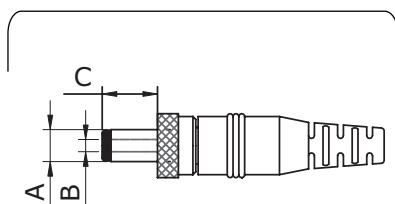
### Standard



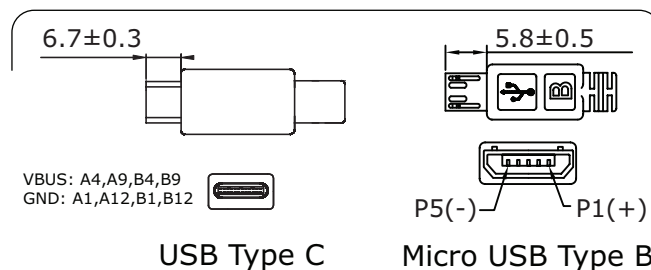
### EIAJ



### Locking



### USB



## REVISION HISTORY

| rev. | description     | date       |
|------|-----------------|------------|
| 1.0  | initial release | 06/04/2019 |

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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