

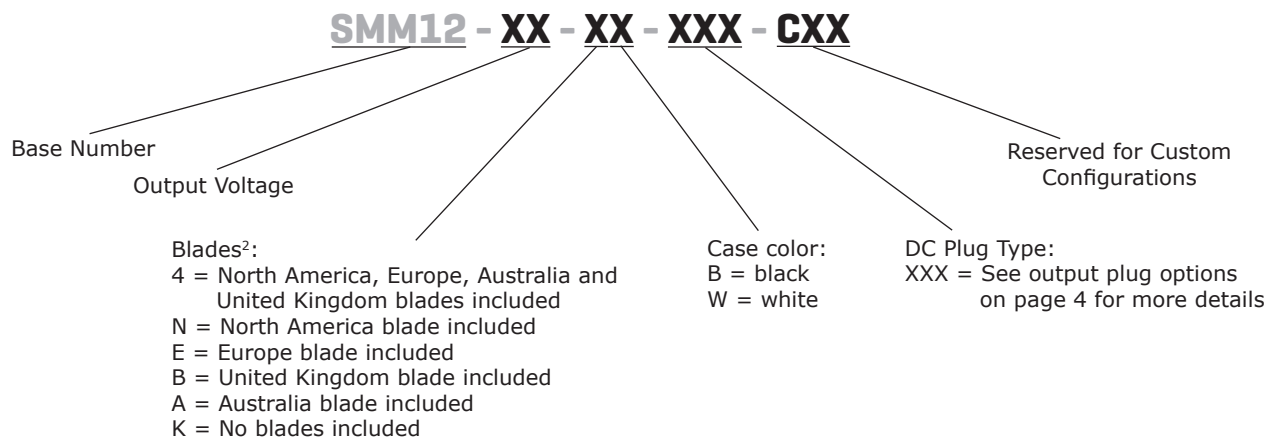
**SERIES: SMM12 | DESCRIPTION: AC-DC POWER SUPPLY**
**FEATURES**

- up to 12W continuous power
- universal input (90~264 Vac)
- interchangeable blades
- IEC 60601 certified
- MOPP
- black and white case options



| MODEL    | output voltage | output current max | output power max | ripple and noise <sup>1</sup> max | efficiency level |
|----------|----------------|--------------------|------------------|-----------------------------------|------------------|
|          | (Vdc)          | (A)                | (W)              | (mVp-p)                           |                  |
| SMM12-5  | 5              | 2.4                | 12               | 100                               | VI               |
| SMM12-9  | 9              | 1.33               | 12               | 135                               | VI               |
| SMM12-12 | 12             | 1.0                | 12               | 180                               | VI               |
| SMM12-15 | 15             | 0.8                | 12               | 225                               | VI               |
| SMM12-18 | 18             | 0.66               | 12               | 270                               | VI               |
| SMM12-24 | 24             | 0.5                | 12               | 240                               | VI               |

Notes: 1. At full load, 100~240 Vac input, 20 MHz bandwidth oscilloscope, output terminated with a 0.1  $\mu$ F ceramic and a 47  $\mu$ F electrolytic capacitor.

**PART NUMBER KEY**


Notes: 2. Australia blade (SMI-AU-5) has been discontinued (EOL-01162024).

## INPUT

| parameter                 | conditions/description            | min | typ | max | units |
|---------------------------|-----------------------------------|-----|-----|-----|-------|
| voltage                   |                                   | 90  |     | 264 | Vac   |
| frequency                 |                                   | 47  |     | 63  | Hz    |
| current                   | at 115 Vac, full load             |     |     | 1.0 | A     |
|                           | at 230 Vac, full load             |     |     | 0.5 | A     |
| inrush current            | at 115 Vac, cold start, full load |     |     | 30  | A     |
|                           | at 230 Vac, cold start, full load |     |     | 60  | A     |
| leakage current           | at 240 Vac, 50 Hz                 |     |     | 0.1 | mA    |
| no load power consumption | at 115/230 Vac, 60/50 Hz          |     |     | 0.1 | W     |

## OUTPUT

| parameter       | conditions/description                                             | min | typ | max | units |
|-----------------|--------------------------------------------------------------------|-----|-----|-----|-------|
| line regulation | at full load                                                       |     | ±1  |     | %     |
| load regulation |                                                                    |     | ±5  |     | %     |
| start-up time   | at 100 Vac, output voltage rise to 90% of rated output voltage     |     |     | 3   | s     |
| rise time       | at rated input, full load, from 10% to 90% of rated output voltage |     |     | 50  | ms    |
| hold-up time    | at nominal input, full load                                        | 8.3 |     |     | ms    |

## PROTECTIONS

| parameter                | conditions/description          | min | typ | max | units |
|--------------------------|---------------------------------|-----|-----|-----|-------|
| over voltage protection  | output clamped with zener diode |     |     | 150 | %     |
| over current protection  | auto recovery                   |     |     | 200 | %     |
| short circuit protection | continuous, auto recovery       |     |     |     |       |

## SAFETY & COMPLIANCE

| parameter             | conditions/description                                  | min     | typ   | max | units |
|-----------------------|---------------------------------------------------------|---------|-------|-----|-------|
| isolation voltage     | input to output at 5 mA for 2 seconds                   |         | 4,000 |     | Vac   |
| insulation resistance | input to output at 500 Vdc for 3 seconds                | 50      |       |     | MΩ    |
| safety approvals      | 60601: UL/cUL, TUV<br>60950: J                          |         |       |     |       |
| EMI/EMC               | FCC Part 15, Subpart B<br>ICES-003<br>EN 55011<br>J5502 |         |       |     |       |
| MTBF                  | as per MIL-HDBK-217F at 25°C                            | 100,000 |       |     | hours |
| RoHS                  | yes                                                     |         |       |     |       |

## ENVIRONMENTAL

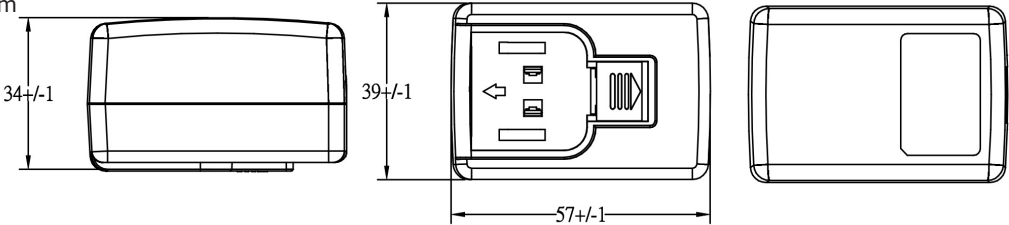
| parameter             | conditions/description | min | typ | max   | units |
|-----------------------|------------------------|-----|-----|-------|-------|
| operating temperature |                        | 0   |     | 40    | °C    |
| storage temperature   |                        | -20 |     | 85    | °C    |
| operating humidity    | non-condensing         | 10  |     | 90    | %     |
| storage humidity      | non-condensing         | 5   |     | 90    | %     |
| altitude              |                        |     |     | 5,000 | m     |

MECHANICAL

| parameter          | conditions/description                                        | min | typ | max | units |
|--------------------|---------------------------------------------------------------|-----|-----|-----|-------|
| dimensions         | 57 (L) x 39 (W) x 34 (H)                                      |     |     |     | mm    |
| inlet plug         | interchangeable blades (North America, Europe, UK, Australia) |     |     |     |       |
| ac blade clip type | sliding clip                                                  |     |     |     |       |
| weight             |                                                               |     | 70  |     | g     |

MECHANICAL DRAWING

units: mm  
tolerance: ±1 mm



| INTERCHANGEABLE BLADES        |               |           |           |           |
|-------------------------------|---------------|-----------|-----------|-----------|
| BLADE DESIGNATOR              | N             | E         | B         | A         |
| REGION                        | North America | Europe    | UK        | AU        |
| BLADE ACCESSORY<br>BLACK CASE | SMI-US-5      | SMI-EU-5  | SMI-UK-5  | SMI-AU-5B |
| BLADE ACCESSORY<br>WHITE CASE | SMI-US-5W     | SMI-EU-5W | SMI-UK-5W | -         |
| BLADE                         |               |           |           |           |

DC CORD

units: mm

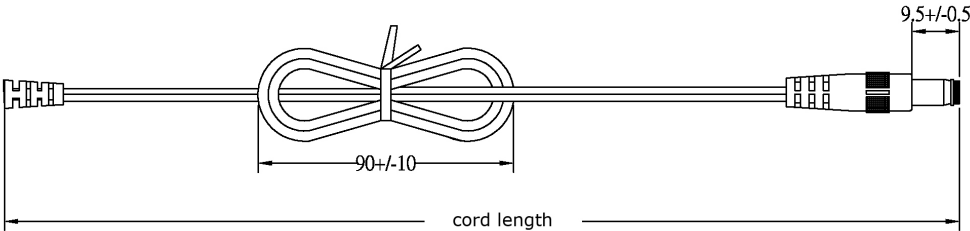
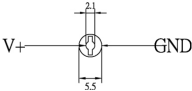


Table 1



| MODEL NO. | CABLE          | CORD LENGTH  |
|-----------|----------------|--------------|
| SMM12-5   | UL2468, 20 AWG | 1,500 mm ±50 |
| SMM12-9   | UL2468, 20 AWG | 1,500 mm ±50 |
| SMM12-12  | UL2468, 22 AWG | 1,500 mm ±50 |
| SMM12-15  | UL2468, 22 AWG | 1,500 mm ±50 |
| SMM12-18  | UL2468, 24 AWG | 1,500 mm ±50 |
| SMM12-24  | UL2468, 24 AWG | 1,500 mm ±50 |

## DC PLUG TYPE PART NUMBER KEY

**XXX**

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

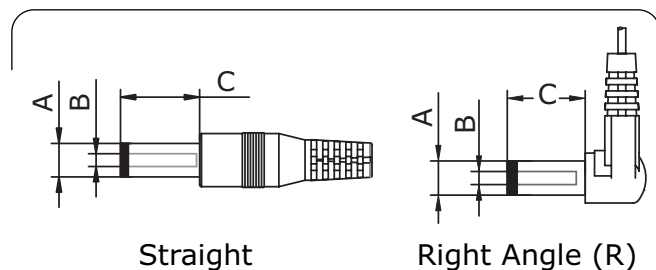

**Plug Code:**  
 X = Choose a code from the options below

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

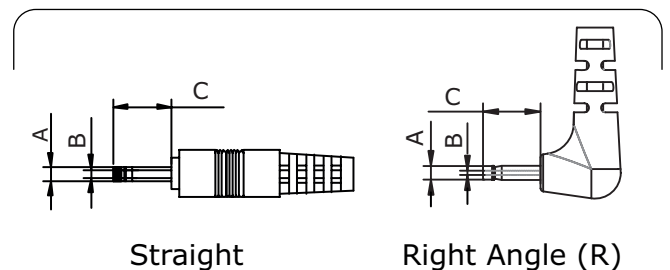
| Plug Polarity |             | Code   |                      | Dimensions (mm)  |      |     | Plug Angle |       |
|---------------|-------------|--------|----------------------|------------------|------|-----|------------|-------|
| Center Pos.   | Center Neg. | Option | Type                 | A                | 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 <sup>2</sup> | 5.5              | 2.1  | 9.5 | •          | N/A   |
| •             | •           | 11     | Locking <sup>2</sup> | 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  
2. Maximum insertion depth is 10mm

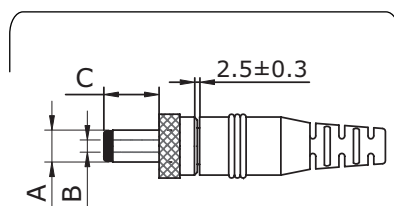
### Standard



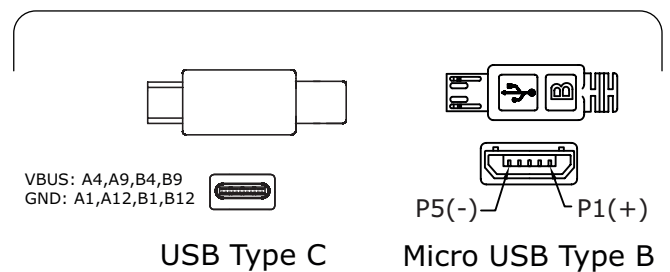
### EIAJ



### Locking



### USB



## REVISION HISTORY

| rev. | description                                       | date       |
|------|---------------------------------------------------|------------|
| 1.0  | initial release                                   | 01/21/2021 |
| 1.01 | dc plugs updated                                  | 04/28/2022 |
| 1.02 | ac blade clip type added                          | 06/23/2022 |
| 1.03 | medical icon added                                | 05/03/2023 |
| 1.04 | Australia blade removed                           | 03/14/2024 |
| 1.05 | Australia blade added, mechanical drawing updated | 03/27/2024 |

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.

CUI products are not authorized or warranted for use as critical components in equipment that requires an extremely high level of reliability. A critical component is any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.