

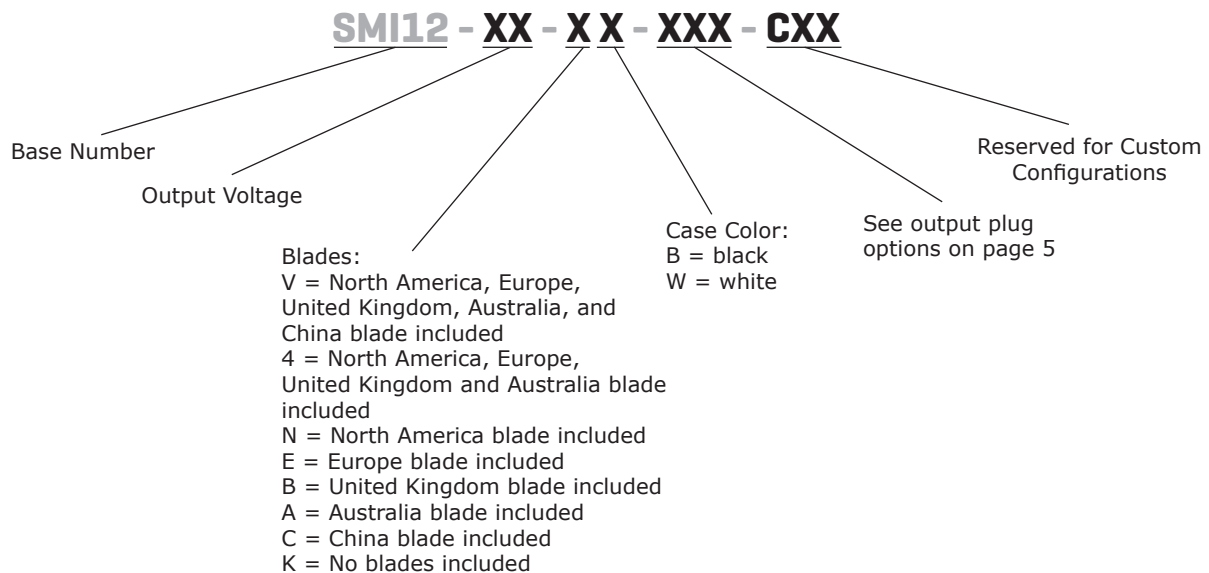
**SERIES:** SMI12 | **DESCRIPTION:** EXTERNAL AC-DC POWER SUPPLY

**FEATURES**

- up to 12 W continuous power
- DoE Level VI, CoC Tier 2 efficiency
- universal input voltage range
- interchangeable Ac blades for global use
- over voltage, over current, and short circuit protections
- UL/cUL, CE, PSE, RCM & FCC safety approvals
- IEC 62368 certified
- white and black case options



| MODEL    | output voltage<br>(Vdc) | output current<br>max<br>(A) | output power<br>max<br>(W) | ripple and noise<br>max<br>(mVp-p) | efficiency<br>level <sup>2</sup> |
|----------|-------------------------|------------------------------|----------------------------|------------------------------------|----------------------------------|
| SMI12-5  | 5                       | 2                            | 10                         | 200                                | VI                               |
| SMI12-9  | 9                       | 1.33                         | 11.97                      | 300                                | VI                               |
| SMI12-12 | 12                      | 1                            | 12                         | 300                                | VI                               |

**PART NUMBER KEY**


## INPUT

| parameter                 | conditions/description                    | min | typ | max   | units |
|---------------------------|-------------------------------------------|-----|-----|-------|-------|
| voltage                   |                                           | 90  |     | 264   | Vac   |
| frequency                 |                                           | 47  |     | 63    | Hz    |
| current                   |                                           |     |     | 0.5   | A     |
| leakage current           | at nominal ac input voltage and frequency |     |     | 0.25  | mA    |
| no load power consumption |                                           |     |     | 0.075 | W     |

## OUTPUT

| parameter       | conditions/description      | min | typ | max | units |
|-----------------|-----------------------------|-----|-----|-----|-------|
| load regulation |                             |     | 5   |     | %     |
| start-up time   | at nominal ac input voltage |     |     | 3   | s     |
| rise time       | at nominal input voltage    |     |     | 100 | ms    |
| hold-up time    | at nominal input voltage    | 5   |     |     | ms    |

## PROTECTIONS

| parameter                | conditions/description | min | typ | max | units |
|--------------------------|------------------------|-----|-----|-----|-------|
| short-circuit protection | auto recovery          |     |     |     |       |
| over-voltage protection  |                        |     |     | 12  | V     |
| over-current protection  | auto recovery          |     |     | 3   | A     |

## SAFETY & COMPLIANCE

| parameter         | conditions/description                                             | min    | typ | max | units |
|-------------------|--------------------------------------------------------------------|--------|-----|-----|-------|
| isolation voltage | 10mA for 1 minute                                                  | 3,000  |     |     | Vac   |
| safety approvals  | UL/cUL, CE, RCM & PSE, UKCA                                        |        |     |     |       |
| EMI/EMC           | EN 55032:2015, EN 55034:2010+A1:2015, FCC                          |        |     |     |       |
| MTBF              | as per Telcordia SR-332, Issue 2 at 115/230 Vac, full load, 0~40°C | 50,000 |     |     | hours |
| RoHS              | yes                                                                |        |     |     |       |

## ENVIRONMENTAL

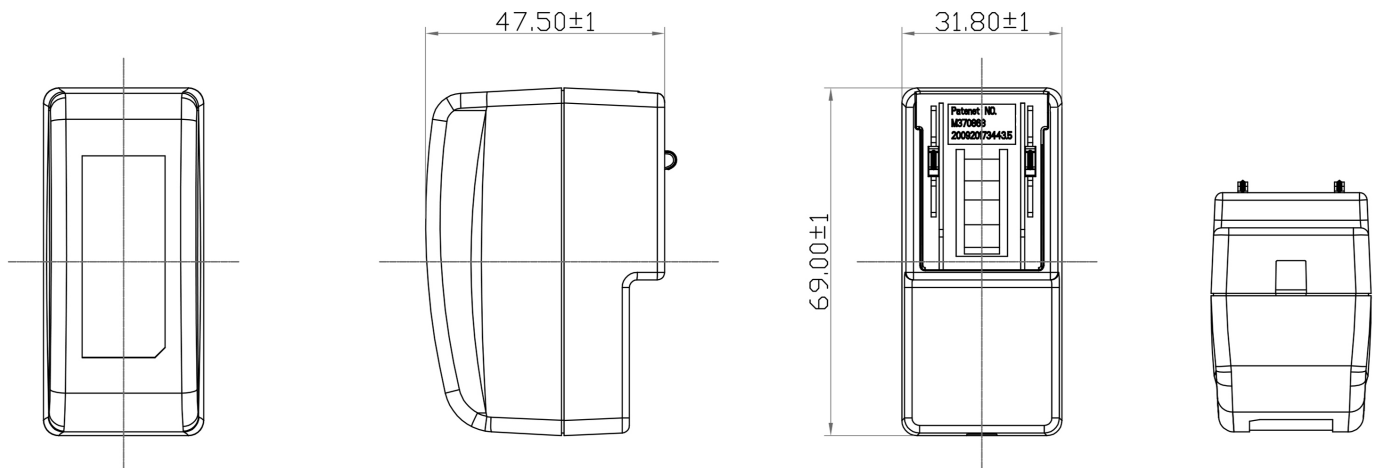
| parameter             | conditions/description | min | typ | max | units |
|-----------------------|------------------------|-----|-----|-----|-------|
| operating temperature |                        | 0   |     | 40  | °C    |
| storage temperature   |                        | -20 |     | 60  | °C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

## MECHANICAL

| parameter          | conditions/description | min | typ | max | units |
|--------------------|------------------------|-----|-----|-----|-------|
| dimensions         | 70 x 32.8 x 48.5       |     |     |     | mm    |
| inlet plug         | multi-blade wall mount |     |     |     |       |
| ac blade clip type | hidden clip            |     |     |     |       |
| weight             |                        |     | 89  |     | g     |

## MECHANICAL DRAWING

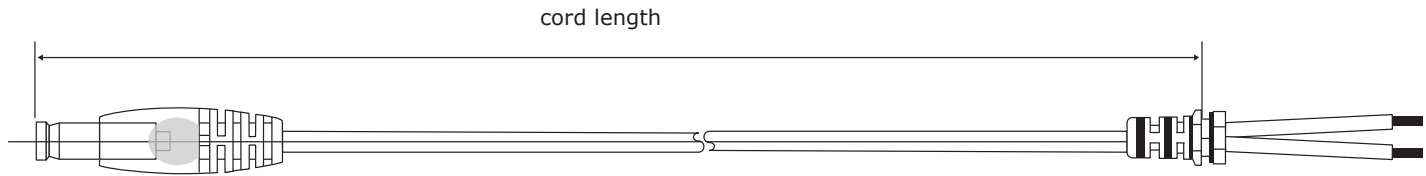
units: mm  
tolerance:  $\pm 1$



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

## DC CORD

units: mm



**Table 1**

| MODEL NO. | CABLE          | CORD LENGTH       |
|-----------|----------------|-------------------|
| SMI12-5   | 20 AWG/2C 2468 | 1,500 mm $\pm$ 50 |
| SMI12-9   | 22 AWG/2C 2468 | 1,500 mm $\pm$ 50 |
| SMI12-12  | 24 AWG/2C 2468 | 1,500 mm $\pm$ 50 |

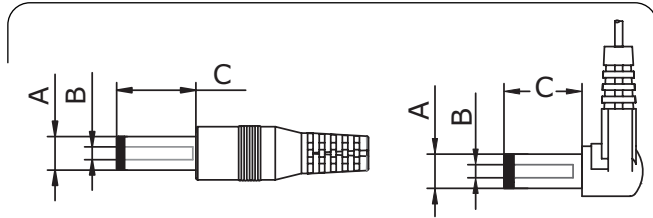
## DC PLUG TYPE PART NUMBER KEY

| XXX                 |             |                                          |                      |                  |                    |     |            |       |
|---------------------|-------------|------------------------------------------|----------------------|------------------|--------------------|-----|------------|-------|
| Plug Polarity:      |             | Plug Code:                               |                      |                  | Plug Angle:        |     |            |       |
| P = Center Positive |             | X = Choose a code from the options below |                      |                  | "blank" = Straight |     |            |       |
| N = Center Negative |             |                                          |                      |                  | 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

## DC PLUG TYPE

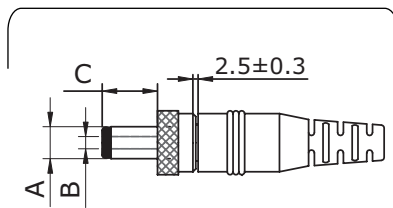
### Standard



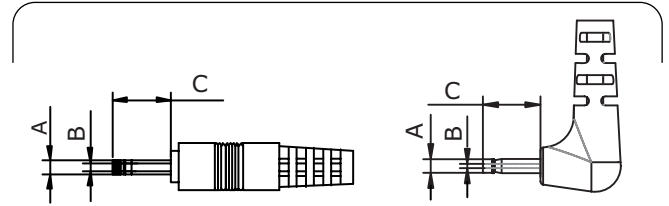
Straight

Right Angle (R)

### Locking



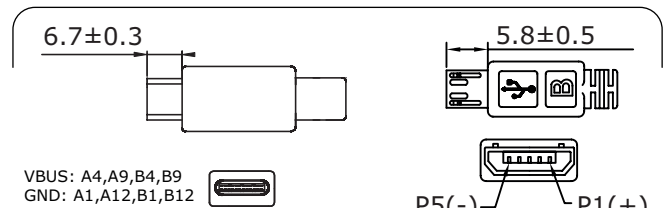
### EIAJ



Straight

Right Angle (R)

### USB



USB Type C

Micro USB Type B

## REVISION HISTORY

| rev. | description                               | date       |
|------|-------------------------------------------|------------|
| 1.0  | initial release                           | 07/09/2020 |
| 1.01 | tolerance updated                         | 01/12/2021 |
| 1.02 | ac blades updated                         | 08/10/2021 |
| 1.03 | UKCA added to specification               | 08/12/2021 |
| 1.04 | dc plugs updated                          | 04/25/2022 |
| 1.05 | operating and storage temperature updated | 06/06/2022 |
| 1.06 | ac blade clip type added                  | 06/23/2022 |

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



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