



**SERIES:** SMI36 | **DESCRIPTION:** AC-DC POWER SUPPLY

**FEATURES**

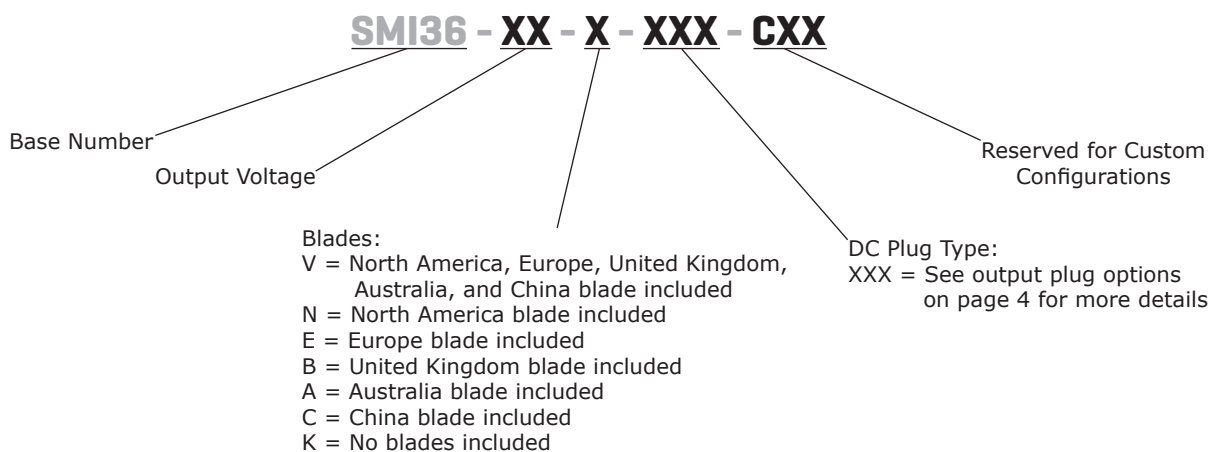
- up to 36 W continuous power
- DoE Level VI, CoC Tier 2 efficiency
- no load power consumption < 0.075 W
- universal input voltage range
- interchangeable Ac blades for global use
- over voltage, over current, and short circuit protections
- UL/cUL, RCM, CCC, and PSE safety approvals
- certified to 60950-1 and 62368-1 standards



| MODEL    | output voltage | output current max | output power max | ripple and noise <sup>1</sup> max | efficiency level <sup>2</sup> |
|----------|----------------|--------------------|------------------|-----------------------------------|-------------------------------|
|          | (Vdc)          | (A)                | (W)              | (mVp-p)                           |                               |
| SMI36-5  | 5              | 5                  | 25               | 80                                | VI                            |
| SMI36-9  | 9              | 3.34               | 30               | 90                                | VI                            |
| SMI36-12 | 12             | 3                  | 36               | 120                               | VI                            |
| SMI36-15 | 15             | 2.4                | 36               | 150                               | VI                            |
| SMI36-24 | 24             | 1.5                | 36               | 240                               | VI                            |
| SMI36-48 | 48             | 0.75               | 36               | 480                               | VI                            |

Notes: 1. At full load, nominal input, 20 MHz bandwidth oscilloscope, each output terminated with 0.1 µF multilayer and 47 µF low ESR 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                   |   |     |     | 1     | A     |
| inrush current            | at 230 Vac, full load, 25°C, cold start |     |     | 70    | A     |
| leakage current           |   |     |     | 0.25  | mA    |
| no load power consumption | at 115/230 Vac                          |     |     | 0.075 | W     |

## OUTPUT

| parameter    | conditions/description | min | typ | max | units |
|--------------|------------------------|-----|-----|-----|-------|
| regulation   |                        |     | ±5  |     | %     |
| hold-up time | at full load           | 10  |     |     | ms    |

## PROTECTIONS

| parameter                | conditions/description          | min | typ | max | units |
|--------------------------|---------------------------------|-----|-----|-----|-------|
| over voltage protection  | output shut down                |     |     | 180 | %     |
| over current protection  | output shut down, auto recovery |     |     | 170 | %     |
| 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 |     | Vac   |
| isolation resistance | input to output at 500 Vdc               | 10      |       |     | MΩ    |
| safety approvals     | UL/cUL (60950-1, 62368-1), RCM, CCC, PSE |         |       |     |       |
| EMI/EMC              | FCC Part 15B Class B, CE                 |         |       |     |       |
| MTBF                 | as per Telcordia SR-332, 25°C            | 300,000 |       |     | hours |
| RoHS                 | yes                                      |         |       |     |       |

## ENVIRONMENTAL

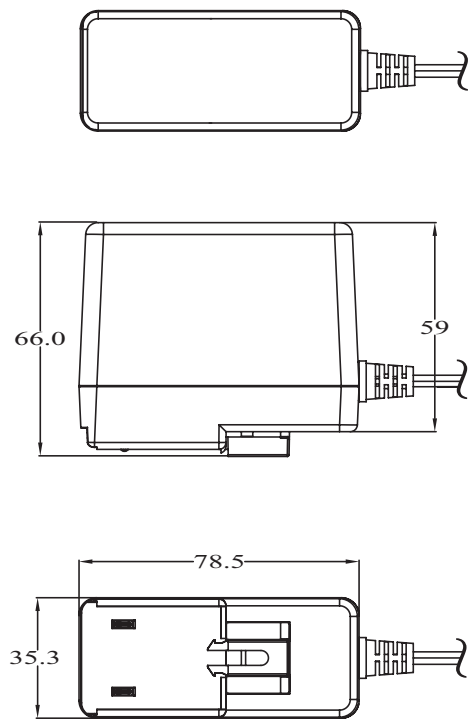
| parameter             | conditions/description | min | typ | max | units |
|-----------------------|------------------------|-----|-----|-----|-------|
| operating temperature |                        | 0   |     | 40  | °C    |
| storage temperature   |                        | -20 |     | 80  | °C    |
| operating humidity    | non-condensing         | 20  |     | 80  | %     |
| storage humidity      | non-condensing         | 10  |     | 90  | %     |

## MECHANICAL

| parameter  | conditions/description   | min | typ | max | units |
|------------|--|-----|-----|-----|-------|
| dimensions | 78.5 x 35.3 x 66   |     |     |     | mm    |
| inlet plug | interchangeable blades (North America, Europe, UK, Australia, China) |     |     |     |       |
| weight     | without blades   |     | 160 |     | g     |

## MECHANICAL DRAWING

units: mm  
tolerance: ±1.0 mm



| INTERCHANGEABLE BLADES |               |          |          |           |          |
|------------------------|---------------|----------|----------|-----------|----------|
| BLADE DESIGNATOR       | N             | E        | B        | A         | C        |
| REGION                 | North America | Europe   | UK       | Australia | China    |
| BLADE ACCESSORY        | SMI-US-2      | SMI-EU-2 | SMI-UK-2 | SMI-AU-2  | SMI-CN-2 |
| BLADE                  |               |          |          |           |          |

## DC CORD

units: mm



**Table 1**

| MODEL NO. | CABLE          | CORD LENGTH  |
|-----------|----------------|--------------|
| SMI36-5   | UL2468, 16 AWG | 1,000 mm ±30 |
| SMI36-9   | UL2468, 18 AWG | 1,500 mm ±30 |
| SMI36-12  | UL2468, 16 AWG | 1,500 mm ±30 |
| SMI36-15  | UL2468, 18 AWG | 1,500 mm ±30 |
| SMI36-24  | UL2468, 20 AWG | 1,500 mm ±30 |
| SMI36-48  | UL2468, 22 AWG | 1,500 mm ±30 |

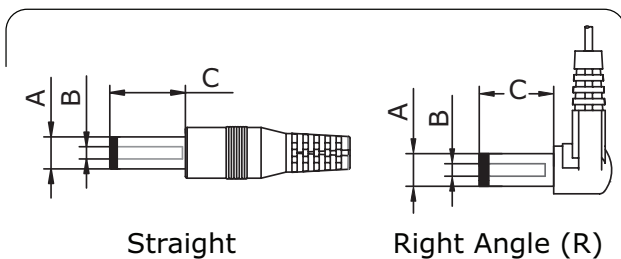
## DC PLUG TYPE PART NUMBER KEY



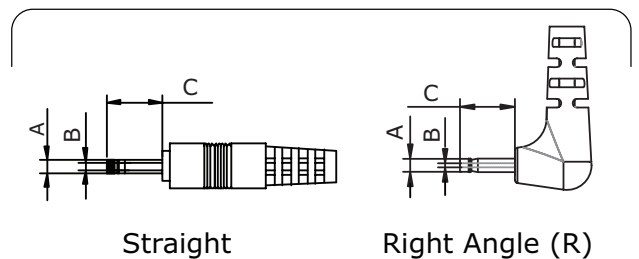
| Plug Polarity |             | Code   |                   | Dimensions (mm) |      |     | Plug Angle |       |
|---------------|-------------|--------|-------------------|-----------------|------|-----|------------|-------|
| Center Pos.   | Center Neg. | Option | Type              | A               | 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 | •          | •     |
| •             | •           | 8      | Standard          | 3.8             | 1.35 | 9.5 | •          | •     |
| •             | •           | 9      | Standard          | 3.8             | 1.05 | 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         | ST     | Stripped & Tinned |                 |      | N/A | N/A        |       |

Note: 1. Contact CUI for additional plug options

### Standard



### EIAJ



### Locking



### Stripped & Tinned



## REVISION HISTORY

| rev. | description  | date       |
|------|--|------------|
| 1.0  | initial release  | 08/07/2015 |
| 1.01 | updated datasheet                                      | 11/04/2015 |
| 1.02 | housing width changed to 35.3 mm                       | 01/27/2016 |
| 1.03 | changed wire gauge on 12 Vdc models, updated datasheet | 09/15/2016 |
| 1.04 | added 62368-1 standard                                 | 08/31/2018 |
| 1.05 | cable drawing update                                   | 12/05/2019 |

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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- Техническую поддержку проекта.
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- Оценку стоимости проекта по компонентам.
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