



SERIES: SMI18 | **DESCRIPTION:** AC-DC POWER SUPPLY

FEATURES

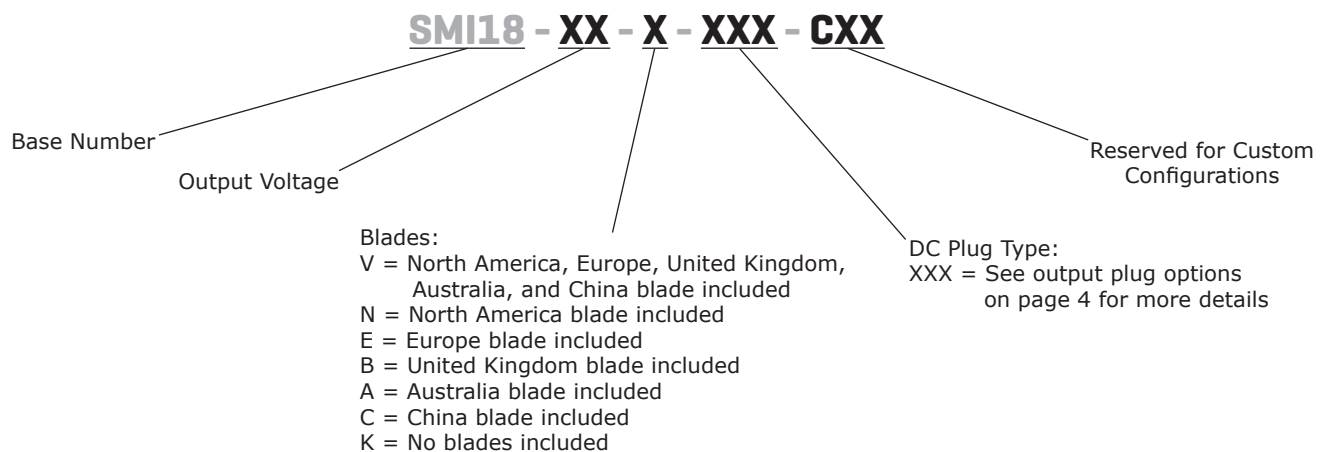
- up to 18 W continuous power
- DoE Level VI, CoC Tier 2 efficiency
- no load power consumption < 0.075 W
- universal input voltage range
- interchangeable Ac blades for global use
- over voltage, over current, and short circuit protections
- UL/cUL, RCM, CCC, and PSE safety approvals
- certified to 60950-1 and 62368-1 standards



| MODEL | output voltage | output current max | output power max | ripple and noise ¹ max | efficiency level ² |
|-----------|----------------|--------------------|------------------|-----------------------------------|-------------------------------|
| | (Vdc) | (A) | (W) | (mVp-p) | |
| SMI18-5 | 5 | 3 | 15 | 100 | VI |
| SMI18-5.9 | 5.9 | 3 | 17.7 | 100 | VI |
| SMI18-9 | 9 | 2.2 | 19.8 | 100 | VI |
| SMI18-12 | 12 | 1.6 | 19.2 | 120 | VI |
| SMI18-15 | 15 | 1.3 | 19.5 | 150 | VI |
| SMI18-18 | 18 | 1.1 | 19.8 | 180 | VI |
| SMI18-24 | 24 | 0.8 | 19.2 | 240 | VI |

Notes: 1. At full load, nominal input, 20 MHz bandwidth oscilloscope, each output terminated with 0.1 µF multilayer ceramic and 10 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 | | | | 0.48 | A |
| inrush current | at 100 Vac, full load, 25°C, cold start | | | 50 | A |
| | at 230 Vac, full load, 25°C, cold start | | | 60 | A |
| leakage current | | | | 0.25 | mA |
| no load power consumption | at 230 Vac | | | 0.075 | W |

OUTPUT

| parameter | conditions/description | min | typ | max | units |
|--------------|------------------------|-----|-----|-----|-------|
| regulation | 5 Vdc output model | | ±6 | | % |
| | all other models | | ±5 | | % |
| hold-up time | at full load | 10 | | | ms |

PROTECTIONS

| parameter | conditions/description | min | typ | max | units |
|--------------------------|---------------------------------|-----|-----|-----|-------|
| over voltage protection | output shut down | | | | |
| | 5 Vdc output model | | | 12 | Vdc |
| | 5.9 Vdc output model | | | 12 | Vdc |
| | 9 Vdc output model | | | 16 | Vdc |
| | 12 Vdc output model | | | 22 | Vdc |
| | 15 Vdc output model | | | 32 | Vdc |
| | 18 Vdc output model | | | 32 | Vdc |
| over current protection | 24 Vdc output model | | | 45 | Vdc |
| | output shut down, auto recovery | | | | |
| | 5 Vdc output model | | | 7 | A |
| | 5.9 Vdc output model | | | 6 | A |
| | 9 Vdc output model | | | 5 | A |
| | 12 Vdc output model | | | 5 | A |
| | 15 Vdc output model | | | 4 | A |
| short circuit protection | 18 Vdc output model | | | 4 | A |
| | 24 Vdc output model | | | 2.5 | A |
| | 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 | 75 x 35.8 x 65.6 | | | | mm |
| inlet plug | interchangeable blades (North America, Europe, UK, Australia, China) | | | | |
| weight | without blades | | 170 | | 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

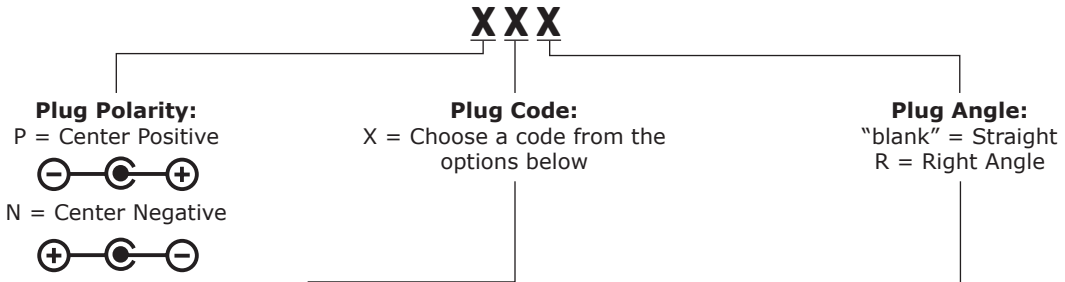
units: mm



Table 1

| MODEL NO. | CABLE | CORD LENGTH |
|-----------|----------------|--------------|
| SMI18-5 | UL2468, 16 AWG | 1,500 mm ±30 |
| SMI18-5.9 | UL2468, 16 AWG | 1,200 mm ±30 |
| SMI18-9 | UL2468, 18 AWG | 1,500 mm ±30 |
| SMI18-12 | UL2468, 20 AWG | 1,500 mm ±30 |
| SMI18-15 | UL2468, 22 AWG | 1,500 mm ±30 |
| SMI18-18 | UL2468, 22 AWG | 1,500 mm ±30 |
| SMI18-24 | UL2468, 22 AWG | 1,500 mm ±30 |

DC PLUG TYPE PART NUMBER KEY



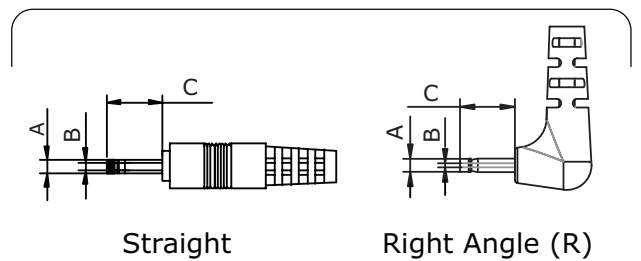
| Plug Polarity | | Code | | Dimensions (mm) | | | Plug Angle | |
|---------------|-------------|--------|-------------------|-----------------|------|-----|------------|-------|
| Center Pos. | Center Neg. | Option | Type | A | B | C | Straight | Right |
| • | | 5 | Standard | 5.5 | 2.1 | 9.5 | • | • |
| • | | 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

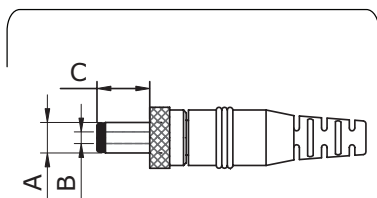
Standard



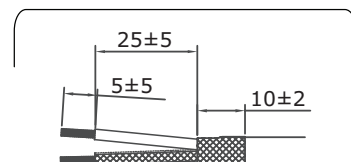
EIAJ



Locking



Stripped & Tinned



REVISION HISTORY

| rev. | description | date |
|------|---|------------|
| 1.0 | initial release | 08/07/2015 |
| 1.01 | added 5.9 Vdc output model | 09/01/2015 |
| 1.02 | updated datasheet | 11/04/2015 |
| 1.03 | housing width changed to 35.8 mm | 01/27/2016 |
| 1.04 | changed wire gauge on 5 Vdc & 5.9 Vdc models, updated datasheet | 09/15/2016 |
| 1.05 | added 62368-1 standard | 08/31/2018 |

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



CUI INC[®]

Headquarters
20050 SW 112th Ave.
Tualatin, OR 97062
800.275.4899

Fax 503.612.2383
cui.com
techsupport@cui.com

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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- Поставку компонентов в любых объемах, удовлетворяющих вашим потребностям.
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- Комплексную поставку.
- Работу по проектам и поставку образцов.
- Формирование склада под заказчика.
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- Тестирование поставляемой продукции.
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- Защиту от снятия компонента с производства.
- Оценку стоимости проекта по компонентам.
- Изготовление тестовой платы монтаж и пусконаладочные работы.



Тел: +7 (812) 336 43 04 (многоканальный)

Email: org@lifeelectronics.ru