CUI INC
a bel group



# **SERIES:** SWI5-E | **DESCRIPTION:** AC-DC POWER SUPPLY

## FEATURES

- up to 6 W continuous power
- CoC Tier 2 compliant
- universal input voltage range
- ultra-compact case
- no load power consumption < 0.075 W
- over current, over voltage, and short circuit protections
- CE safety approvals
- Class II construction
- IEC 62368
- black and white case options

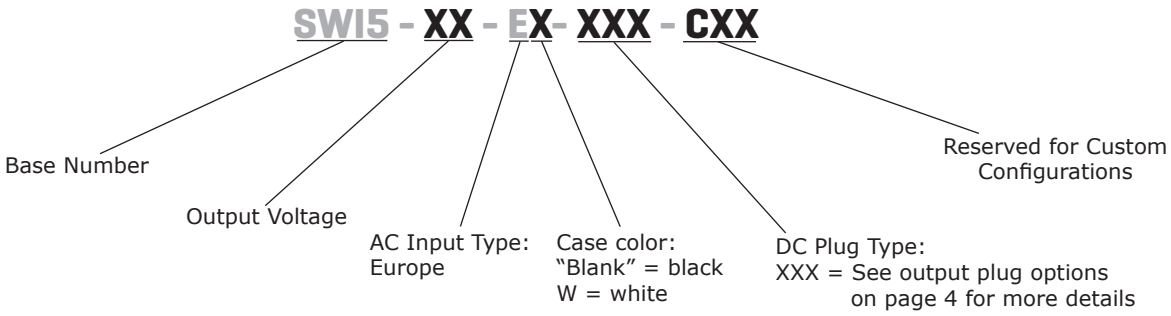
RoHS CE

## MODEL

| MODEL | input voltage range (Vac) | input frequency range (Hz) | output voltage nom (Vdc) | output current max (A) | output power max (W) | ripple and noise[1] max (mVp-p) | efficiency level[2] average[3] (%) | efficiency level[2] 10% (%) | no load power consumption typ (W) |
|---|---|---|---|---|---|---|---|---|---|
| SWI5-5-E | 90 ~ 264 | 47 ~ 63 | 5 | 0.05~1.0 | 5.0 | 300 | 74.9 | 66.2 | 0.05 |
| SWI5-5B-E | 90 ~ 264 | 47 ~ 63 | 5 | 0~1.2 | 6.0 | 300 | 75.18 | 72.0 | 0.06 |
| SWI5-9-E | 90 ~ 264 | 47 ~ 63 | 9 | 0~0.6 | 5.4 | 300 | 78.35 | 72.2 | 0.05 |
| SWI5-12-E | 90 ~ 264 | 47 ~ 63 | 12 | 0.05~0.5 | 6.0 | 300 | 80.9 | 72.9 | 0.06 |

Notes:
1. At full load, nominal AC input voltage, 25°C, 20 MHz bandwidth oscilloscope, output terminated with 0.1 µF and 10 µF capacitors to ground.
2. CoC Tier 2 compliant.
3. Average efficiency is measured at 25%, 50%, 75%, and 100% load.

## PART NUMBER KEY



## INPUT

| parameter | conditions/description | min | typ | max | units |
|---|---|---|---|---|---|
| voltage | | 90 | | 264 | Vac |
| frequency | | 47 | | 63 | Hz |
| current | at nominal input voltage | | | 0.2 | A |
| leakage current | at nominal input voltage & 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 | | | | 3 | s |
| hold-up time | at nominal input voltage & full load | 5 | | | ms |

## PROTECTIONS

| parameter | conditions/description | min | typ | max | units |
|---|---|---|---|---|---|
| over voltage protection | 5 Vdc output model<br>5 Vdc output B model<br>9 Vdc output model<br>12 Vdc output model | | | 6.5<br>8.0<br>18.0<br>15.6 | Vdc<br>Vdc<br>Vdc<br>Vdc |
| over current protection | output shut down, auto recovery<br>5 Vdc output model<br>5 Vdc output B model<br>9 Vdc output model<br>12 Vdc output model | | | <br>1.8<br>2.4<br>1.2<br>0.9 | <br>A<br>A<br>A<br>A |
| short circuit protection | | | | | |

## 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 | EN 62368 | | | | |
| EMI/EMC | CE | | | | |
| MTBF | as per Telcordia SR-332 (Issue 2), at 115/230 Vac, full load, 0°C~40°C | 50,000 | | | hours |
| RoHS | 2011/65/EU | | | | |

## ENVIRONMENTAL

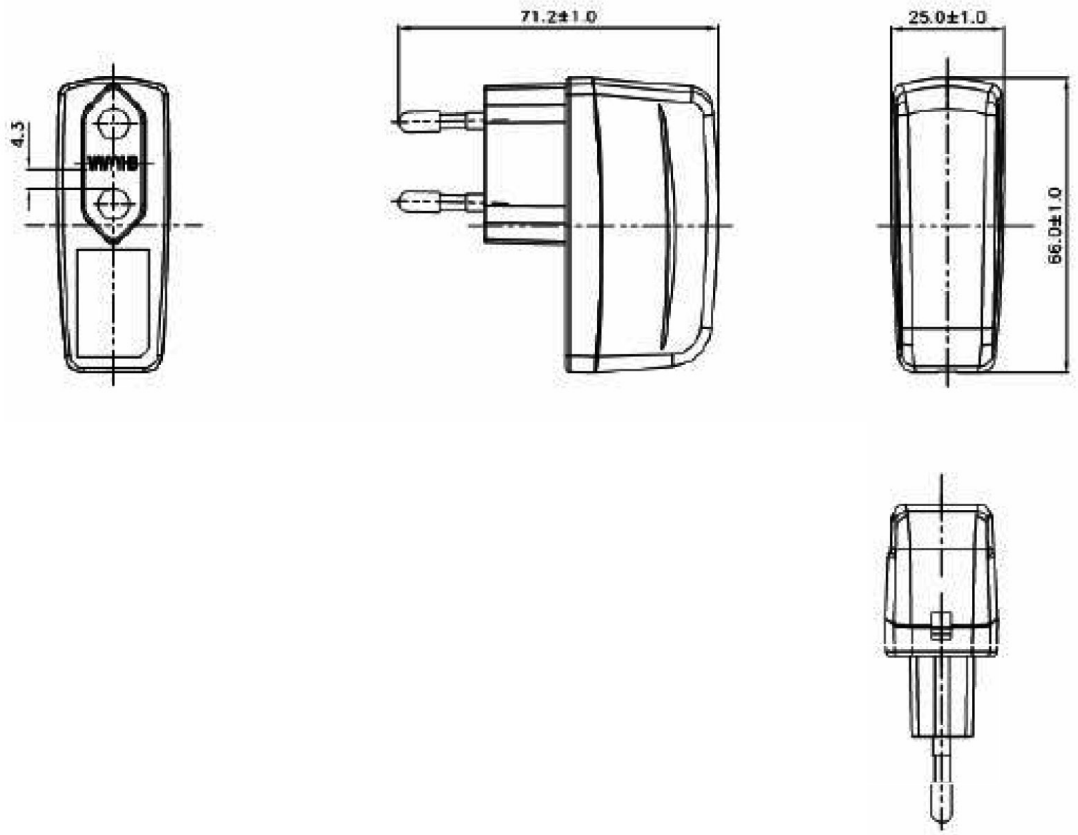
| parameter | conditions/description | min | typ | max | units |
|---|---|---|---|---|---|
| operating temperature | | 0 | | 40 | °C |
| storage temperature | | -20 | | 60 | °C |
| operating humidity | non-condensing | 20 | | 85 | % |
| storage humidity | non-condensing | 5 | | 95 | % |

## MECHANICAL

| parameter | conditions/description | min | typ | max | units |
|---|---|---|---|---|---|
| dimensions | 66 x 25 x 71.2 | | | | mm |
| inlet plug | Europe | | | | |
| weight | | | 67 | | g |

## MECHANICAL DRAWING

units: mm




## DC CORD

units: mm

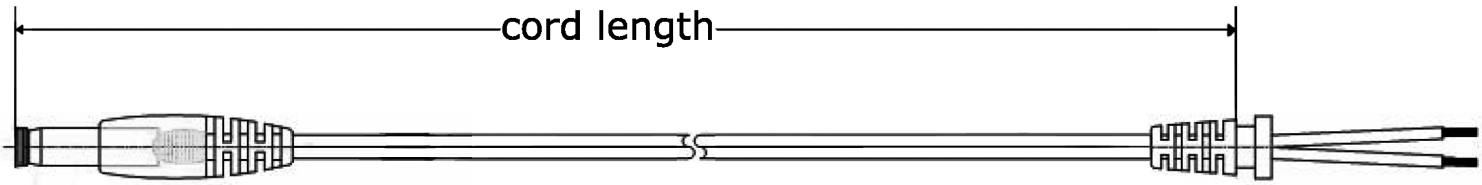



**Table 1**

| MODEL NO. | CABLE | CORD LENGTH |
|---|---|---|
| SWI5-5-E | UL2468, 24 AWG | 1,500 mm ±50 |
| SWI5-5B-E | UL2468, 24 AWG | 1,500 mm ±50 |
| SWI5-9-E | UL2468, 24 AWG | 1,500 mm ±50 |
| SWI5-12-E | UL2468, 24 AWG | 1,500 mm ±50 |

## DC PLUG TYPE PART NUMBER KEY

**X X X**

**Plug Polarity:**
P = Center Positive

N = Center Negative

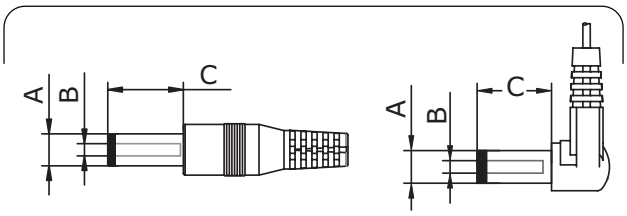
**Plug Code:**
X = Choose a code from the options below

**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 | • | • |
| • | • | 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 |
| N/A | N/A | MUB | USB | Micro USB Type B | | | • | N/A |

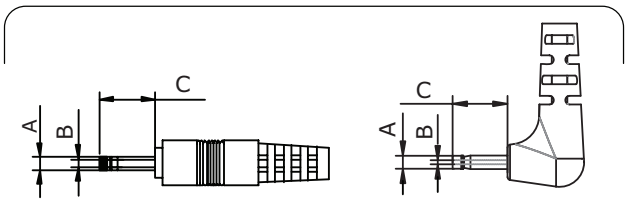
Note: 1. Contact CUI for additional plug options

### Standard



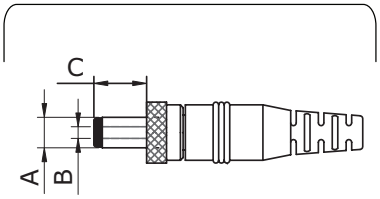

Straight Right Angle (R)

### EIAJ

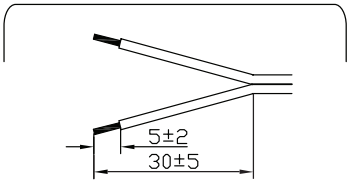



Straight Right Angle (R)

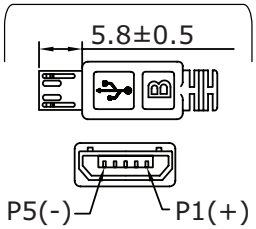
### Locking




### Stripped & Tinned




### USB



## REVISION HISTORY

| rev. | description | date |
|---|---|---|
| 1.0 | initial release | 11/23/2016 |
| 1.01 | features update, logo update | 06/22/2020 |
| 1.02 | model table updated | 11/27/2020 |
| 1.03 | safeties updated | 12/11/2020 |
| 1.04 | updated datasheet | 08/09/2021 |
| 1.05 | product image updated | 08/20/2021 |

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.