

SERIES: SWI12-N | **DESCRIPTION:** AC-DC POWER SUPPLY

FEATURES

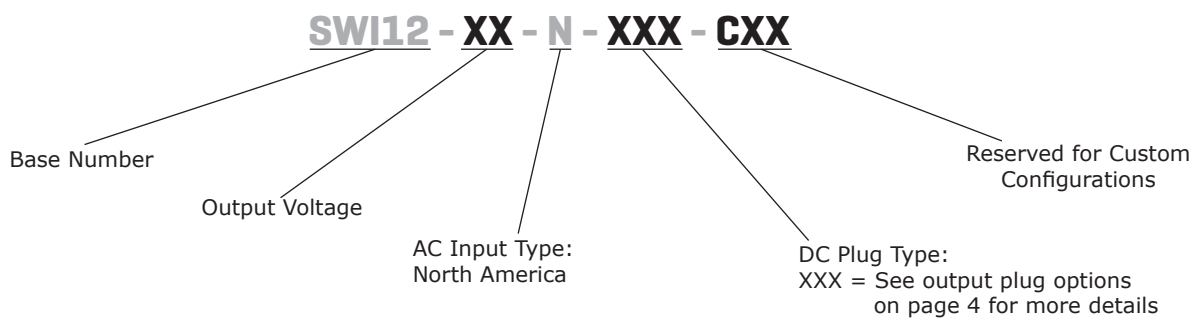
- DoE Level VI efficiency
- up to 12 W power
- universal input (90~264 Vac)
- single regulated output from 5~24 Vdc
- over voltage, over current, and short circuit protections
- UL/cUL, PSE safety approvals
- custom designs available
- certified to 60950-1 and 62368-1 standards



| MODEL | output voltage | output current | output power | ripple and noise ¹ | efficiency level |
|-------------|----------------|----------------|--------------|-------------------------------|------------------|
| | (Vdc) | max (A) | max (W) | max (mVp-p) | |
| SWI12-5-N | 5 | 2.5 | 12.5 | 100 | VI |
| SWI12-5.9-N | 5.9 | 2.0 | 11.8 | 100 | VI |
| SWI12-9-N | 9 | 1.2 | 10.8 | 100 | VI |
| SWI12-12-N | 12 | 1.0 | 12 | 120 | VI |
| SWI12-24-N | 24 | 0.5 | 12 | 240 | VI |

Notes: 1. At full load, nominal input, 20 MHz bandwidth oscilloscope, each output terminated with 0.1 µF multilayer ceramic and 47 µF low ESR electrolytic capacitors.

PART NUMBER KEY



INPUT

| parameter | conditions/description | min | typ | max | units |
|---------------------------|---|-----|-----|------|-------|
| voltage | | 90 | | 264 | Vac |
| frequency | | 47 | | 63 | Hz |
| current | | | | 0.31 | A |
| inrush current | at 240 Vac, full load, 25°C, cold start | | | 60 | A |
| leakage current | | | | 0.25 | mA |
| no load power consumption | at 115/230 Vac | | | 0.1 | W |

OUTPUT

| parameter | conditions/description | min | typ | max | units |
|------------|------------------------|-----|-----|-----|-------|
| regulation | | | ±5 | | % |

PROTECTIONS

| parameter | conditions/description | min | typ | max | units |
|--------------------------|---------------------------------|-----|-----|-----|-------|
| over voltage protection | output shut down | | | 180 | % |
| over current protection | output shut down, auto recovery | | | | |
| | 5 Vdc model | | | 5.0 | A |
| | 5.9 Vdc model | | | 4.5 | A |
| | 9 Vdc model | | | 3.0 | A |
| | 12 Vdc model | | | 3.0 | A |
| short circuit protection | 24 Vdc model | | | 1.5 | 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), LPS, PSE | | | | |
| EMI/EMC | FCC Part 15B Class B | | | | |
| MTBF | as per Telcordia SR-332, at 25°C | 300,000 | | | hours |
| RoHS | yes | | | | |

ENVIRONMENTAL

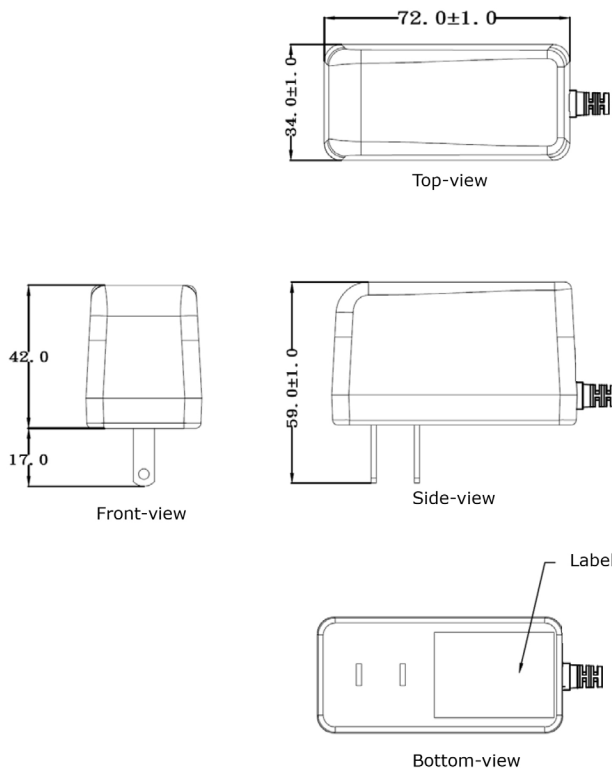
| parameter | conditions/description | min | typ | max | units |
|-----------------------|------------------------|-----|-----|-----|-------|
| operating temperature | | -20 | | 40 | °C |
| storage temperature | | -20 | | 80 | °C |
| operating humidity | non-condensing | 20 | | 80 | % |
| storage humidity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

MECHANICAL

| parameter | conditions/description | min | typ | max | units |
|------------|------------------------|-----|-----|-----|-------|
| dimensions | 72 x 34 x 59 | | | | mm |
| inlet plug | North America, 2-pin | | | | |
| weight | 5 Vdc model | | 132 | | g |
| | 5.9, 9 Vdc models | | 120 | | g |
| | 12 Vdc model | | 112 | | g |
| | 24 Vdc model | | 104 | | g |

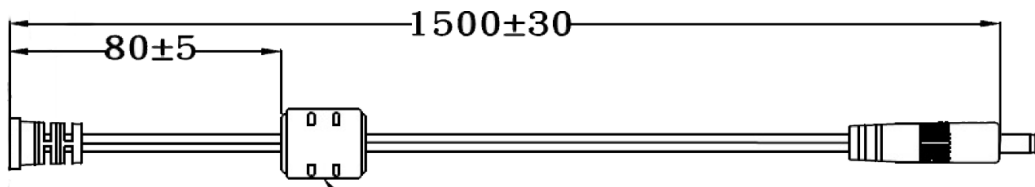
MECHANICAL DRAWING

units: mm
tolerance: ±1.0 mm



DC CORD

units: mm

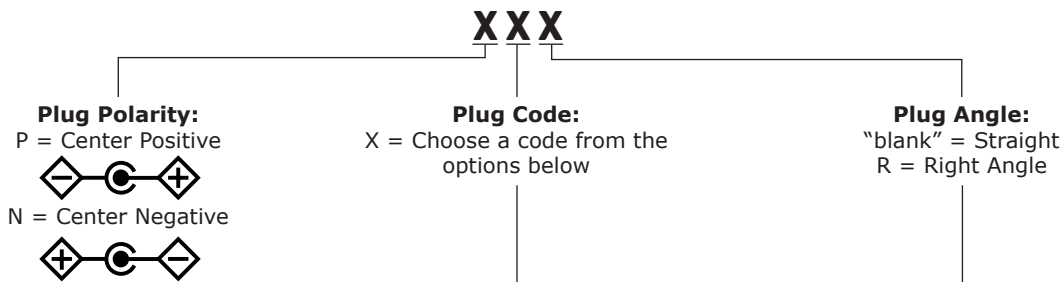


DC cord circled one time to core

Table 1

| MODEL NO. | CABLE | CORD LENGTH |
|-------------|----------------|--------------|
| SWI12-5-N | UL2468, 18 AWG | 1,500 mm ±30 |
| SWI12-5.9-N | UL2468, 20 AWG | 1,500 mm ±30 |
| SWI12-9-N | UL2468, 20 AWG | 1,500 mm ±30 |
| SWI12-12-N | UL2468, 22 AWG | 1,500 mm ±30 |
| SWI12-24-N | UL2468, 22 AWG | 1,500 mm ±30 |

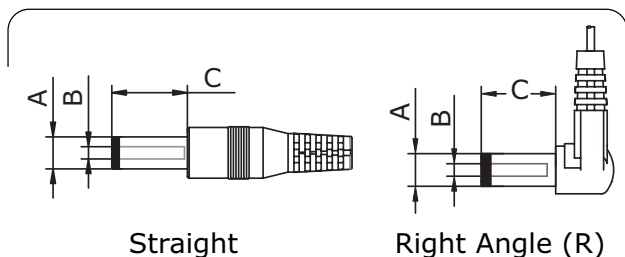
DC PLUG TYPE PART NUMBER KEY



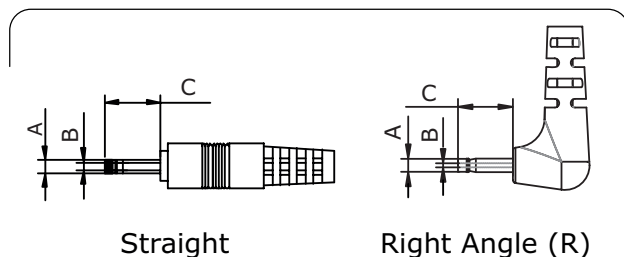
| Plug Polarity | | Code | | Dimensions (mm) | | | Plug Angle | |
|---------------|-------------|--------|----------------------|-----------------|------|-----|------------|-------|
| Center Pos. | Center Neg. | Option | Type | A | B | C | Straight | Right |
| • | • | 5 | Standard | 5.5 | 2.1 | 9.5 | • | • |
| • | • | 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 ² | 5.5 | 2.1 | 9.5 | • | N/A |
| • | • | 11 | Locking ² | 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
 2. Maximum insertion depth is 10mm

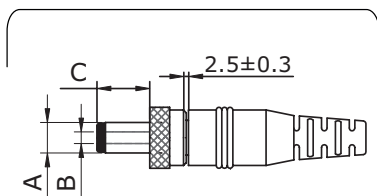
Standard



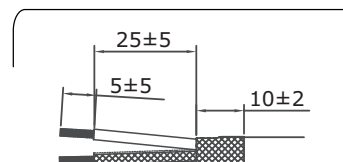
EIAJ



Locking



Stripped & Tinned



REVISION HISTORY

| rev. | description | date |
|------|-------------------------------|------------|
| 1.0 | initial release | 04/30/2015 |
| 1.01 | updated datasheet | 06/12/2015 |
| 1.02 | updated weight detail | 06/08/2017 |
| 1.03 | added 62368-1 standard | 08/31/2018 |
| 1.04 | company logo updated | 09/18/2020 |
| 1.05 | safety marks updated | 04/26/2021 |
| 1.06 | mechanical drawing updated | 08/09/2021 |
| 1.07 | plug polarity symbols updated | 09/16/2021 |
| 1.08 | dc plugs updated | 04/28/2022 |
| 1.09 | operating temperature updated | 01/08/2024 |

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.