

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

FEATURES

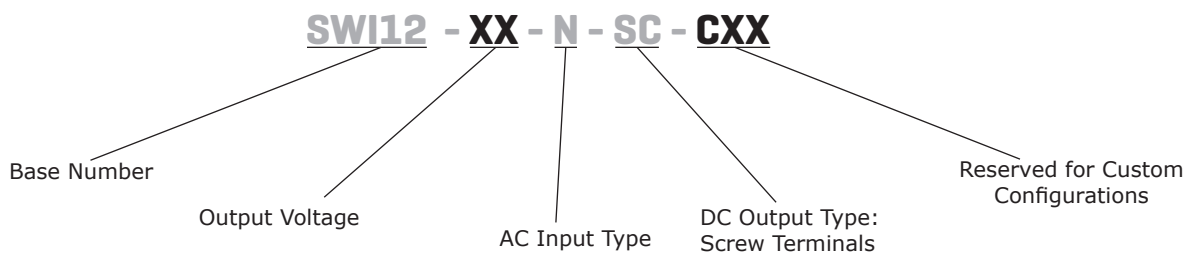
- 12 W power
- universal input (90~264 Vac)
- single regulated 12~24 Vdc output
- short circuit, over current, and over voltage protections
- UL 60950 & UL 1310 certified
- level VI efficiency



| MODEL | output voltage | output current max | output power max | ripple and noise ¹ max | efficiency level |
|---------------|----------------|--------------------|------------------|-----------------------------------|------------------|
| | (Vdc) | (A) | (W) | (mVp-p) | |
| SWI12-12-N-SC | 12 | 1 | 12 | 120 | VI |
| SWI12-15-N-SC | 15 | 0.8 | 12 | 150 | VI |
| SWI12-24-N-SC | 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 10 µF low ESR electrolytic capacitors.

PART NUMBER KEY



INPUT

| parameter | conditions/description | min | typ | max | units |
|---------------------------|---|-----|---------|------|-------|
| voltage | | 90 | 100~240 | 264 | Vac |
| frequency | | 47 | 50~60 | 63 | Hz |
| current | at full load | | | 0.4 | A |
| inrush current | at 115 Vac, full load, 25°C, cold start | | | 30 | A |
| leakage current | | | | 0.25 | mA |
| no load power consumption | at 230 Vac | | | 0.1 | W |

OUTPUT

| parameter | conditions/description | min | typ | max | units |
|---------------|----------------------------|-----|-----|-----|-------|
| regulation | | | ±5 | | % |
| start-up time | at 110 Vac/50 Hz, 80% load | | | 2 | s |
| hold-up time | at 110 Vac/50 Hz, 80% load | 10 | | | ms |

PROTECTIONS

| parameter | conditions/description | min | typ | max | units |
|--------------------------|---------------------------------|-----|-----|-----|-------|
| over voltage protection | output shutdown | | | 200 | % |
| over current protection | output shut down, auto recovery | | | 200 | % |
| 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 | certified to 60950: UL certified to 1310: UL LPS | | | | |
| EMI/EMC | FCC Part 15B Class B | | | | |
| MTBF | as per Telcordia SR-332, 25°C | 300,000 | | | hours |
| RoHS | yes | | | | |

ENVIRONMENTAL

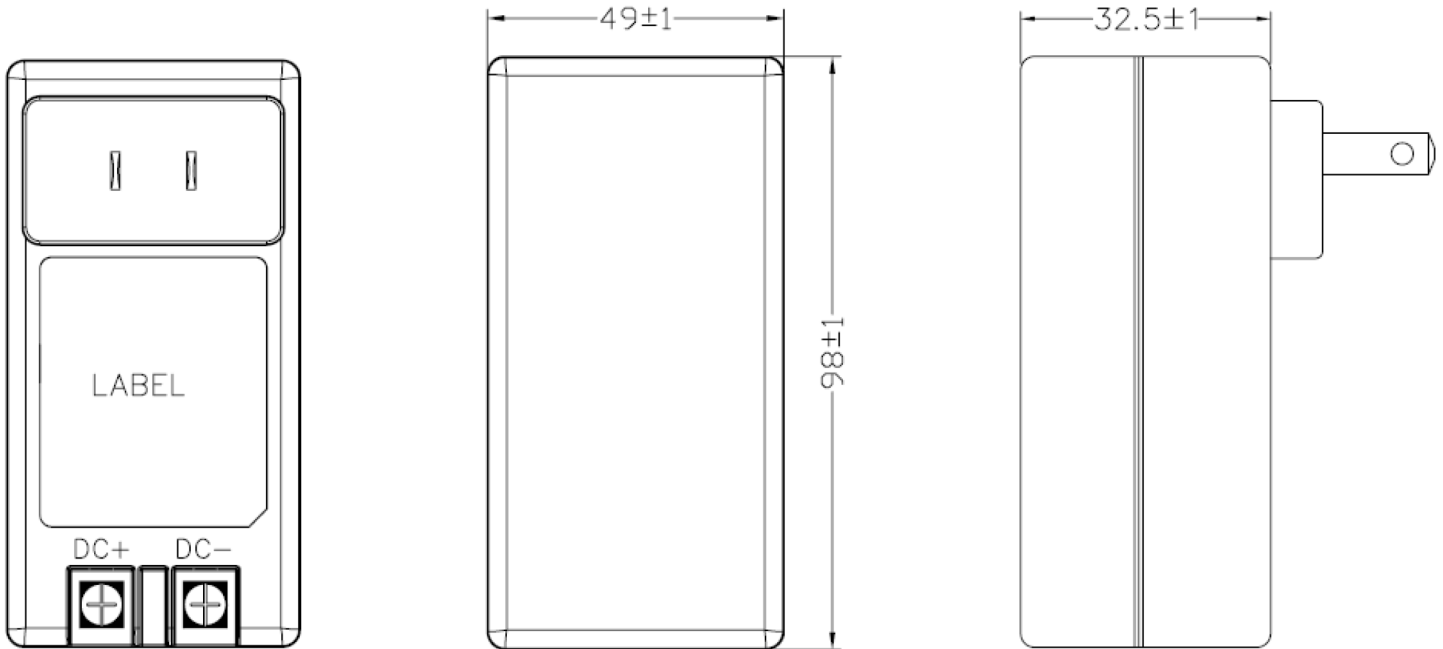
| parameter | conditions/description | min | typ | max | units |
|-----------------------|------------------------|-----|-----|-----|-------|
| operating temperature | | 0 | | 40 | °C |
| storage temperature | | -25 | | 85 | °C |
| operating humidity | non-condensing | 10 | | 95 | % |
| storage humidity | non-condensing | 10 | | 95 | % |

MECHANICAL

| parameter | conditions/description | min | typ | max | units |
|------------|------------------------|-----|-----|-----|-------|
| dimensions | 98 x 49 x 32.5 | | | | mm |
| input plug | US 2-pin | | | | |

MECHANICAL DRAWING

units: mm
tolerance: ±1 mm



| MAXIMUM RECOMMENDED CABLE LENGTH TO MAINTAIN ±5% OUTPUT VOLTAGE TOLERANCE | | |
|---|-------------|------------------|
| MODEL NO. | CABLE GAUGE | MAX CABLE LENGTH |
| SWI12-12-N-SC | 18 AWG | 7.5 m |
| SWI12-12-N-SC | 20 AWG | 5.0 m |
| SWI12-12-N-SC | 22 AWG | 3.0 m |
| SWI12-12-N-SC | 24 AWG | 2.0 m |
| SWI12-15-N-SC | 18 AWG | 8.5 m |
| SWI12-15-N-SC | 20 AWG | 6.0 m |
| SWI12-15-N-SC | 22 AWG | 5.0 m |
| SWI12-15-N-SC | 24 AWG | 2.5 m |
| SWI12-24-N-SC | 18 AWG | 15.5 m |
| SWI12-24-N-SC | 20 AWG | 12 m |
| SWI12-24-N-SC | 22 AWG | 9.5 m |
| SWI12-24-N-SC | 24 AWG | 6.5 m |

REVISION HISTORY

| rev. | description | date |
|------|------------------------------------|------------|
| 1.0 | initial release | 12/04/2014 |
| 1.01 | added max cable length information | 02/10/2015 |
| 1.02 | updated datasheet | 10/12/2015 |
| 1.03 | company logo updated | 09/18/2020 |
| 1.04 | safety marks updated | 04/26/2021 |
| 1.05 | datasheet updated | 12/09/2024 |

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.

Please read our datasheet & drawing disclaimer [here](#).