



date 04/19/2017

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## SERIES: SWI25-N | DESCRIPTION: AC-DC POWER SUPPLY

### FEATURES

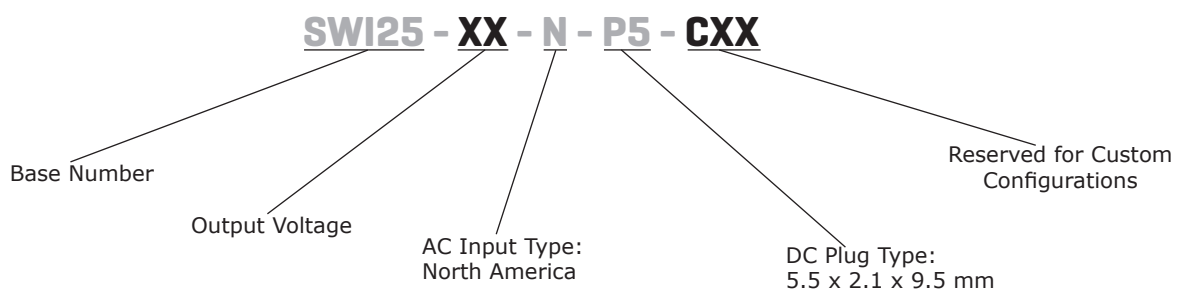
- compact design
- up to 25.2 W continuous power
- DoE Level VI compliant
- no load power consumption < 0.075 W
- universal input voltage range
- over voltage, over current, and short circuit protections
- UL/cUL and PSE safety approvals
- Class II construction



| MODEL      | output voltage<br>(Vdc) | output current<br>max<br>(A) | output power<br>max<br>(W) | ripple and noise <sup>1</sup><br>max<br>(mVp-p) | efficiency level |
|------------|-------------------------|------------------------------|----------------------------|-------------------------------------------------|------------------|
| SWI25-5-N  | 5                       | 4                            | 20                         | 50                                              | VI               |
| SWI25-12-N | 12                      | 2.1                          | 25.2                       | 120                                             | VI               |
| SWI25-15-N | 15                      | 1.67                         | 25.1                       | 150                                             | VI               |
| SWI25-18-N | 18                      | 1.4                          | 25.2                       | 180                                             | VI               |
| SWI25-24-N | 24                      | 1.05                         | 25.2                       | 240                                             | VI               |

Notes: 1. At full load, nominal input, 20 MHz bandwidth oscilloscope, output terminated with 0.1  $\mu$ F ceramic and 10  $\mu$ F electrolytic capacitors.  
2. All specifications are measured at Ta=25°C, nominal input voltage, and 75% rated output load unless otherwise specified.

### PART NUMBER KEY



## INPUT

| parameter                 | conditions/description       | min | typ | max   | units |
|---------------------------|------------------------------|-----|-----|-------|-------|
| voltage                   |                              | 90  |     | 264   | Vac   |
| frequency                 |                              | 47  |     | 63    | Hz    |
| current                   |                              |     |     | 0.7   | A     |
| inrush current            | at 240 Vac, 25°C, cold start |     |     | 60    | A     |
| leakage current           |                              |     |     | 0.25  | mA    |
| no load power consumption |                              |     |     | 0.075 | W     |

## OUTPUT

| parameter                  | conditions/description                     | min | typ | max | units |
|----------------------------|--------------------------------------------|-----|-----|-----|-------|
| voltage set point accuracy | at 60% load                                |     | ±2  |     | %     |
| line regulation            | measured from 100~240 Vac, full load       |     | ±1  |     | %     |
| load regulation            | measured from 60~100% load and 60~20% load |     |     |     |       |
|                            | 5 Vdc output model                         |     | ±6  |     | %     |
|                            | 12 Vdc output model                        |     | ±5  |     | %     |
|                            | 15 Vdc output model                        |     | ±3  |     | %     |
|                            | all other models                           |     | ±2  |     | %     |
| hold-up time               | at 115 Vac                                 |     | 10  |     | ms    |
| switching frequency        |                                            |     | 65  |     | kHz   |

## PROTECTIONS

| parameter                | conditions/description                 | min | typ | max  | units |
|--------------------------|----------------------------------------|-----|-----|------|-------|
| over voltage protection  | hiccup mode, auto recovery             |     |     |      |       |
|                          | 5 Vdc output model                     |     |     | 7.44 | Vdc   |
|                          | 12 Vdc output model                    |     |     | 16.2 | Vdc   |
|                          | 15 Vdc output model                    |     |     | 18.9 | Vdc   |
|                          | 18 Vdc output model                    |     |     | 23.5 | Vdc   |
|                          | 24 Vdc output model                    |     |     | 28.8 | Vdc   |
| over current protection  | hiccup mode, auto recovery             | 140 |     | 170  | %     |
| short circuit protection | continuous, hiccup mode, auto recovery |     |     |      |       |

## SAFETY & COMPLIANCE

| parameter            | conditions/description                           | min     | typ   | max | units |
|----------------------|--------------------------------------------------|---------|-------|-----|-------|
| isolation voltage    | input to output for 1 minute                     |         | 3,000 |     | Vac   |
|                      |                                                  |         | 4,242 |     | Vdc   |
| isolation resistance | input to output                                  | 100     |       |     | MΩ    |
| safety approvals     | UL/cUL 60950-1, PSE                              |         |       |     |       |
| safety class         | Class II                                         |         |       |     |       |
| EMI/EMC              | FCC Part 15 Class B                              |         |       |     |       |
| MTBF                 | as per MIL-HDBK-217F at 115 Vac, full load, 25°C | 300,000 |       |     | hours |
| RoHS                 | 2011/65/EU                                       |         |       |     |       |

## ENVIRONMENTAL

| parameter             | conditions/description | min | typ | max | units |
|-----------------------|------------------------|-----|-----|-----|-------|
| operating temperature |                        | -20 |     | 40  | °C    |
| storage temperature   |                        | -20 |     | 85  | °C    |

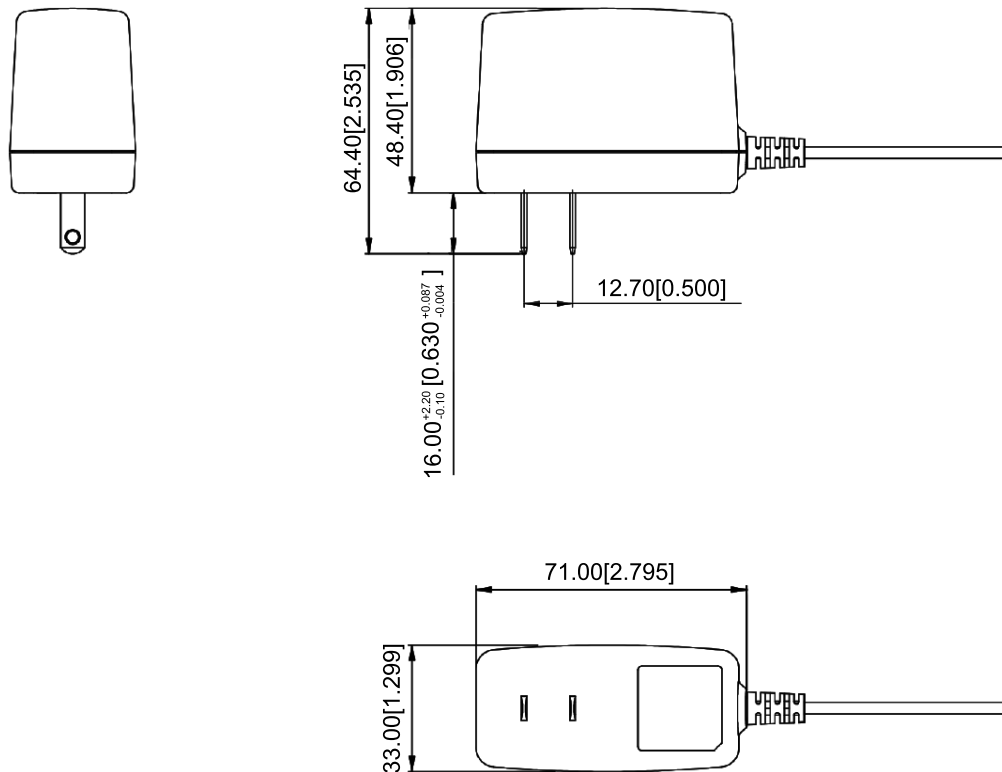
## MECHANICAL

| parameter  | conditions/description                               | min | typ | max | units |
|------------|------------------------------------------------------|-----|-----|-----|-------|
| dimensions | 71.00 x 33.00 x 48.40 (2.795 x 1.299 x 1.906 inches) |     |     |     | mm    |
| inlet plug | North America                                        |     |     |     |       |
| weight     |                                                      |     | 140 |     | g     |

## MECHANICAL DRAWING

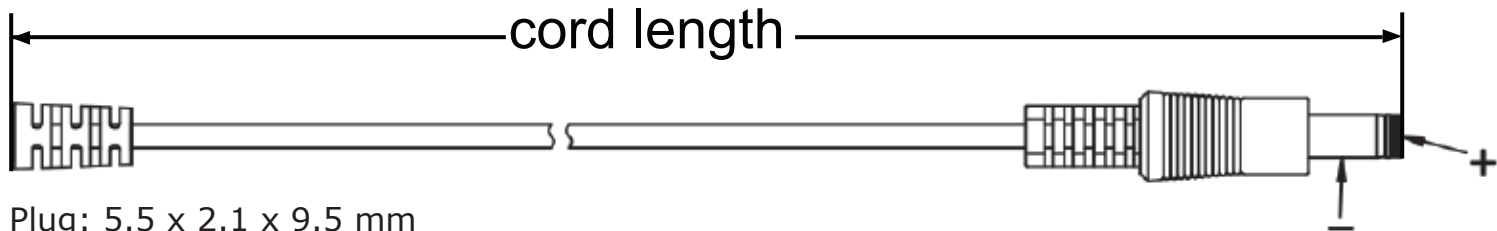
units: mm [inch]

tolerance: X.XX:  $\pm 0.50$  [ $\pm 0.020$ ]



## DC CORD

units: mm



**Table 1**

| MODEL NO.  | CABLE  | CORD LENGTH       |
|------------|--------|-------------------|
| SWI25-5-N  | 16 AWG | 1,220 mm $\pm 50$ |
| SWI25-12-N | 20 AWG | 1,800 mm $\pm 50$ |
| SWI25-15-N | 20 AWG | 1,800 mm $\pm 50$ |
| SWI25-18-N | 20 AWG | 1,800 mm $\pm 50$ |
| SWI25-24-N | 20 AWG | 1,800 mm $\pm 50$ |

## REVISION HISTORY

| rev. | description     | date       |
|------|-----------------|------------|
| 1.0  | initial release | 04/19/2017 |

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.

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