

SERIES: SDI24-UD | **DESCRIPTION:** AC-DC POWER SUPPLY

FEATURES

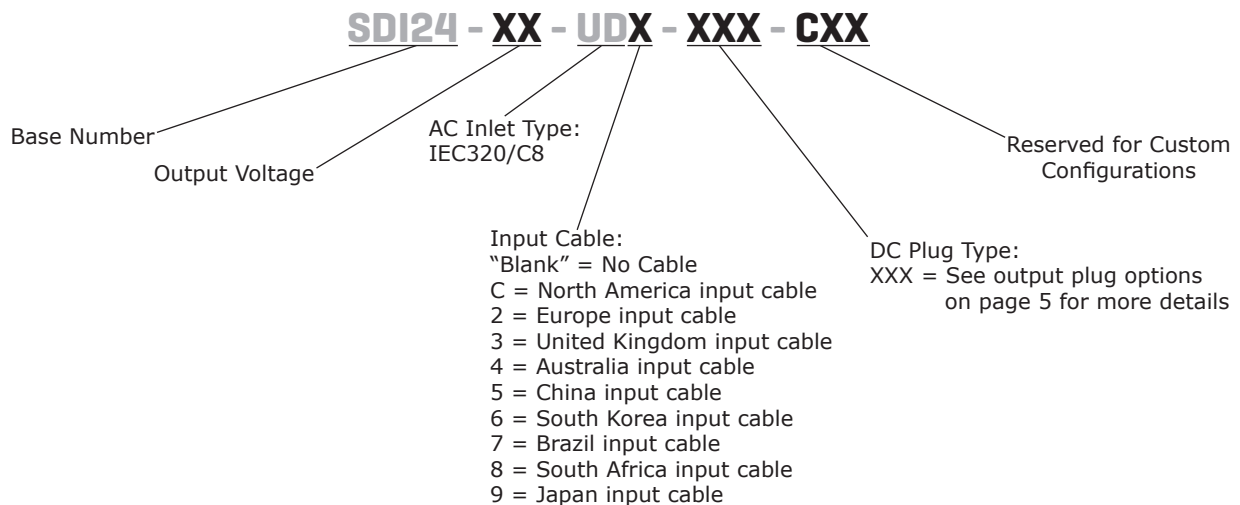
- up to 24 W continuous power
- DoE Level VI, CoC Tier 2 efficiency
- universal input voltage range
- compact size
- no load power consumption < 0.075 W
- over voltage and short circuit protections
- UL/cUL, and PSE safety approvals
- custom designs available
- certified to 62368-1 standards



| MODEL | output voltage | output current | output power | ripple and noise ¹ | efficiency level ² |
|-------------|----------------|----------------|--------------|-------------------------------|-------------------------------|
| | (Vdc) | max (A) | max (W) | max (mVp-p) | |
| SDI24-5-UD | 5 | 4.0 | 20 | 100 | VI |
| SDI24-9-UD | 9 | 2.5 | 22.5 | 100 | VI |
| SDI24-12-UD | 12 | 2.0 | 24 | 120 | VI |
| SDI24-15-UD | 15 | 1.6 | 24 | 150 | VI |
| SDI24-24-UD | 24 | 1.0 | 24 | 240 | VI |
| SDI24-48-UD | 48 | 0.5 | 24 | 480 | 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 | | | | 0.58 | 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 models | | ±6 | | % |
| | all other models | | ±5 | | % |

PROTECTIONS

| parameter | conditions/description | min | typ | max | units |
|--------------------------|---------------------------------|-----|-----|-----|-------|
| over voltage protection | output shut down | | | | |
| | 5 Vdc output models | | | 12 | Vdc |
| | 9 Vdc output models | | | 16 | Vdc |
| | 12 Vdc output models | | | 22 | Vdc |
| | 15 Vdc output models | | | 32 | Vdc |
| | 24 Vdc output models | | | 45 | Vdc |
| over current protection | 48 Vdc output models | | | 75 | Vdc |
| | output shut down, auto recovery | | | | |
| | 5 Vdc output models | | | 8 | A |
| | 9, 12 Vdc output models | | | 5 | A |
| | 15 Vdc output models | | | 4 | A |
| | 24 Vdc output models | | | 2.5 | A |
| short circuit protection | 48 Vdc output models | | | 1.2 | 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 (62368-1), PSE ³ , LPS, UKCA | | | | |
| EMI/EMC | FCC Part 15B Class B, CE | | | | |
| MTBF | as per Telcordia SR-332, 25°C | 300,000 | | | hours |
| RoHS | yes | | | | |

Notes: 3. PSE not present on 48 Vdc output models

ENVIRONMENTAL

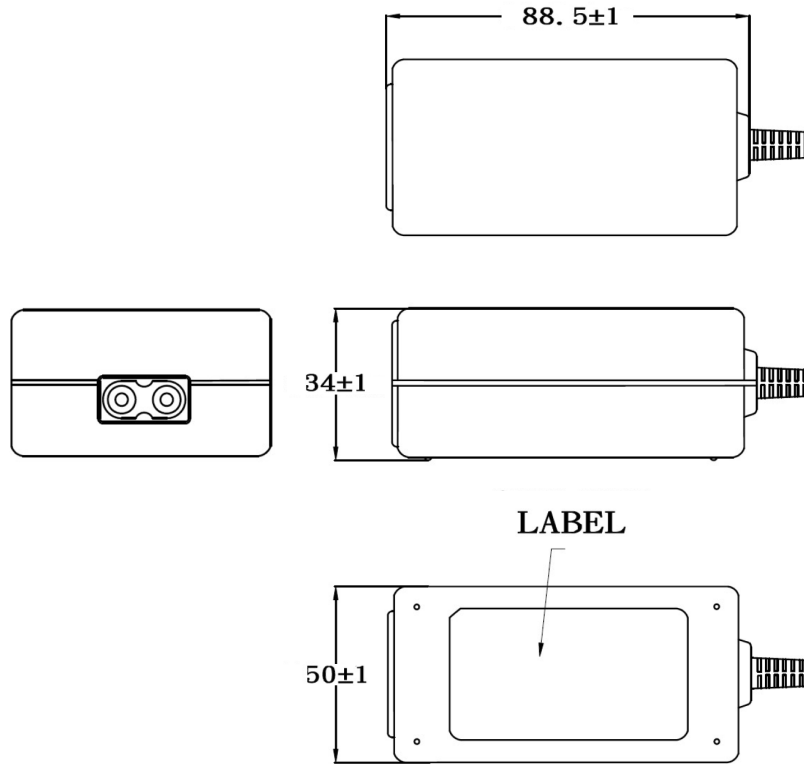
| parameter | conditions/description | min | typ | max | units |
|-----------------------|------------------------|-----|-----|-----|-------|
| operating temperature | | 0 | | 40 | °C |
| storage temperature | | -20 | | 80 | °C |
| operating humidity | non-condensing | 20 | | 80 | % |
| storage humidity | non-condensing | 10 | | 90 | % |

MECHANICAL

| parameter | conditions/description | min | typ | max | units |
|------------|------------------------|-----|-----|-----|-------|
| dimensions | 88.5 x 50 x 34 | | | | mm |
| inlet plug | IEC320/C8 | | | | |
| weight | without ac cord | | 170 | | g |

MECHANICAL DRAWING

units: mm
tolerance: ±1.0 mm



DC CORD

units: mm

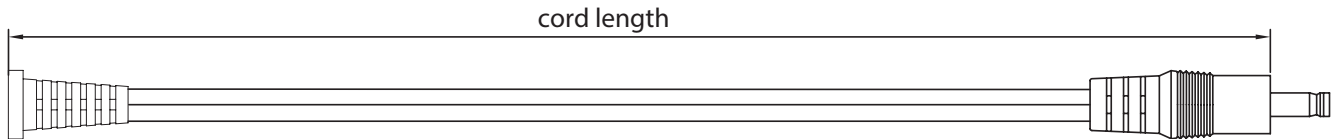
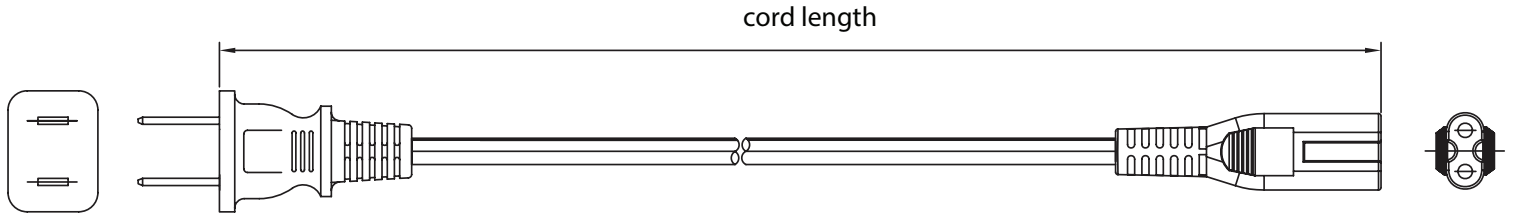


Table 1

| MODEL NO. | CABLE | CORD LENGTH |
|-------------|----------------|--------------|
| SDI24-5-UD | UL2468, 18 AWG | 1,000 mm ±30 |
| SDI24-9-UD | UL2468, 18 AWG | 1,500 mm ±30 |
| SDI24-12-UD | UL2468, 20 AWG | 1,500 mm ±30 |
| SDI24-15-UD | UL2468, 20 AWG | 1,500 mm ±30 |
| SDI24-24-UD | UL2468, 22 AWG | 1,500 mm ±30 |
| SDI24-48-UD | UL2468, 22 AWG | 1,500 mm ±30 |

AC CORD

units: mm



NORTH AMERICA



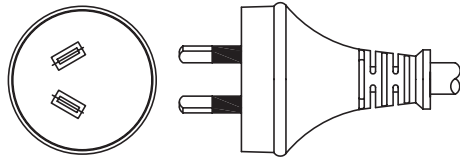
EUROPE



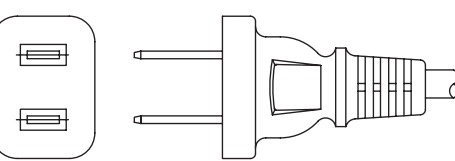
UNITED KINGDOM



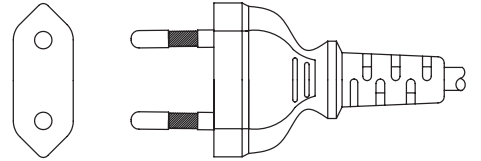
AUSTRALIA



CHINA



SOUTH KOREA



BRAZIL



SOUTH AFRICA



JAPAN



Table 2

| AC INPUT | CORD LENGTH |
|----------------|--------------|
| North America | 1,830 mm ±30 |
| Europe | 1,830 mm ±30 |
| United Kingdom | 1,830 mm ±30 |
| Australia | 1,830 mm ±30 |
| China | 1,830 mm ±30 |
| South Korea | 1,830 mm ±50 |
| Brazil | 1,830 mm ±30 |
| South Africa | 1,830 mm ±50 |
| Japan | 1,830 mm ±30 |

DC PLUG TYPE PART NUMBER KEY

XXX

Plug Polarity:
P = Center Positive

N = Center Negative

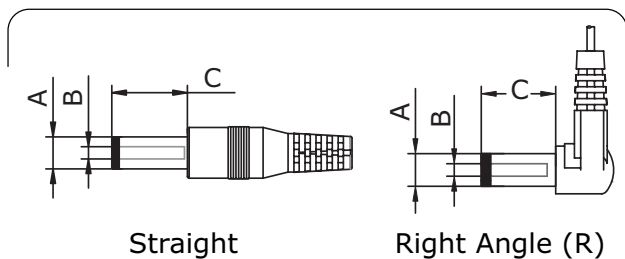
Plug Code:
X = Choose a code from the options below

Plug Angle:
"blank" = Straight
R = Right Angle

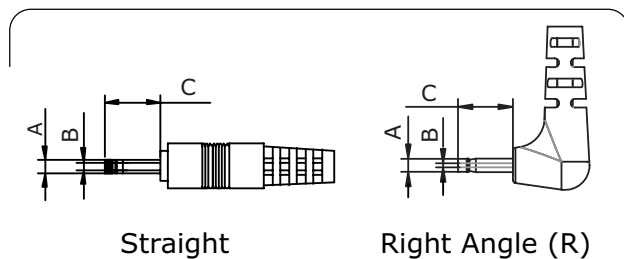
| Plug Polarity | | Code | | Dimensions (mm) | | | Plug Angle | |
|---------------|-------------|--------|----------------------|-----------------|------|-----|------------|-------|
| Center Pos. | Center Neg. | Option | Type | A | B | C | Straight | Right |
| • | • | 5 | Standard | 5.5 | 2.1 | 9.5 |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

Note: 1. Contact CUI for additional plug options
2. Maximum insertion depth is 10mm

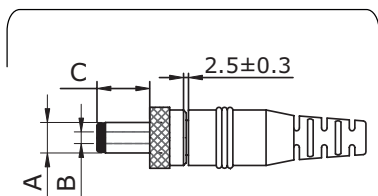
Standard



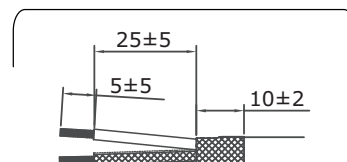
EIAJ



Locking



Stripped & Tinned



REVISION HISTORY

| rev. | description | date |
|------|-------------------------------|------------|
| 1.0 | initial release | 10/26/2018 |
| 1.01 | company logo update | 07/06/2020 |
| 1.02 | 60950 removed from safeties | 12/09/2020 |
| 1.03 | UKCA added to specification | 08/11/2021 |
| 1.04 | plug polarity symbols updated | 09/16/2021 |
| 1.05 | dc plugs updated | 05/23/2022 |

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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