

SERIES: SDI160-U | DESCRIPTION: AC-DC POWER SUPPLY

FEATURES

- meets Level VI and CoC Tier 2 efficiency
- up to 160 W power
- universal input (100~240 Vac)
- single regulated outputs
- over voltage and short circuit protections
- meets UL/cUL 62368 & EN 62368
- power factor correction
- custom designs available

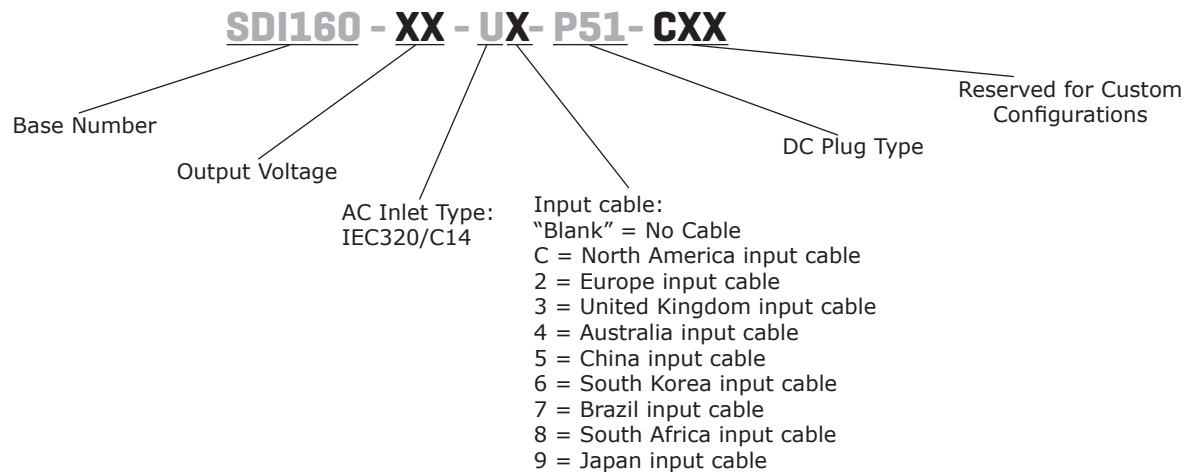


MODEL

| MODEL | output voltage (Vdc) | output current max (A) | output power max (W) | ripple and noise ¹ max (mVp-p) | efficiency level ² |
|-----------------|-------------------------|------------------------------|----------------------------|---|-------------------------------|
| SDI160-12-U-P51 | 12 | 12.5 | 150.0 | 120 | VI |
| SDI160-19-U-P51 | 19 | 8.4 | 159.6 | 190 | VI |
| SDI160-24-U-P51 | 24 | 6.6 | 158.4 | 240 | VI |
| SDI160-48-U-P51 | 48 | 3.3 | 158.4 | 480 | VI |
| SDI160-56-U-P51 | 56 | 2.86 | 160.1 | 560 | VI |

Notes: 1. At full load, nominal input, 20 MHz bandwidth oscilloscope, each output terminated with 0.1 μ F multilayer ceramic and 10 μ F low ESR electrolytic capacitors.
2. CoC Tier 2 compliant

PART NUMBER KEY



INPUT

| parameter | conditions/description | min | typ | max | units |
|---------------------------|---|-----|---------|------|-------|
| voltage | | 90 | 100~240 | 264 | Vac |
| frequency | | 47 | 50~60 | 63 | Hz |
| current | | | | 2.2 | A |
| inrush current | at 230 Vac, full load, 25°C, cold start | | | 100 | A |
| leakage current | | | | 3.5 | mA |
| power factor | full load | 0.9 | | | |
| no load power consumption | at 230 Vac | | | 0.15 | 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, latch | | | 150 | % |
| over current protection | output shut down, auto recovery | | | 150 | % |
| 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 |
| | input to frame ground at 10 mA for 1 minute | | 1,500 | | Vac |
| isolation resistance | input to output at 500 Vdc | 10 | | | MΩ |
| | input to frame ground at 500 Vdc | 10 | | | MΩ |
| safety marks | UL/cUL (North America), CE (Europe), FCC (USA) | | | | |
| safety approvals | 62368: UL/cUL, EN UKCA | | | | |
| EMI/EMC | FCC Part 15 Class B, EN 55032:2012 +AC:2013 Class B, AS/NZS CISPR 32:2015 Class B, EN55024:2010 | | | | |
| MTBF | as per Telcordia SR-332, 25°C | 300,000 | | | hours |
| RoHS | yes | | | | |

ENVIRONMENTAL

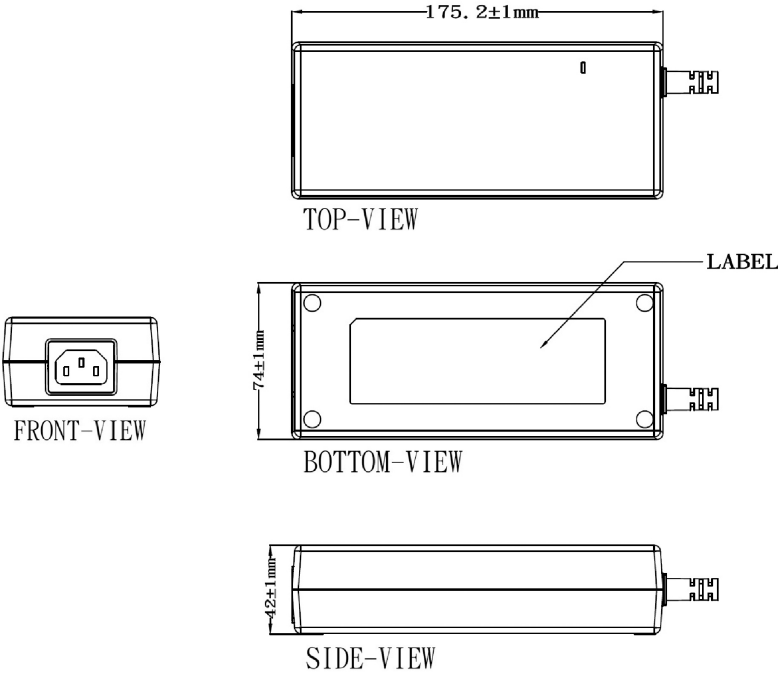
| parameter | conditions/description | min | typ | max | units |
|-----------------------|------------------------|-----|-----|-----|-------|
| operating temperature | | 0 | | 40 | °C |
| storage temperature | | -20 | | 80 | °C |
| operating humidity | non-condensing | 20 | | 80 | % |
| storage humidity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

MECHANICAL

| parameter | conditions/description | min | typ | max | units |
|------------|------------------------|-----|-----|-----|-------|
| dimensions | 175.2 x 74.0 x 42.0 | | | | mm |
| inlet plug | IEC320/C14 | | | | |
| weight | | | 700 | | g |

MECHANICAL DRAWING

units: mm
tolerance: ±1.0 mm



DC CORD

units: mm

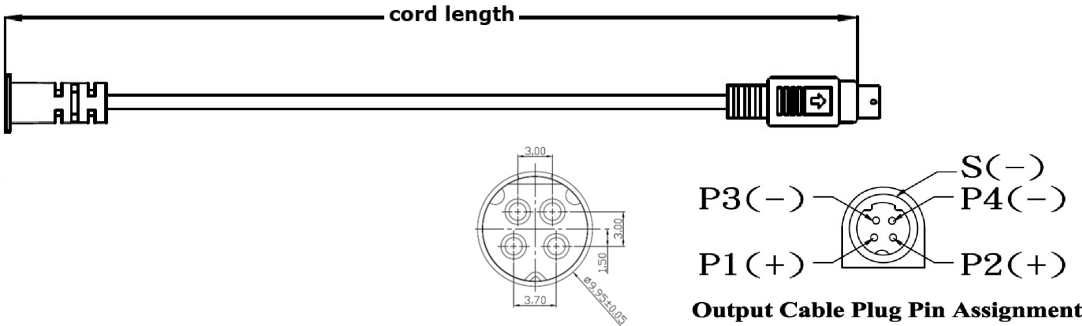


Table 1

| MODEL NO. | CABLE | CORD LENGTH |
|-----------------|----------------|--------------|
| SDI160-12-U-P51 | UL2464, 16 AWG | 1,200 mm ±50 |
| SDI160-19-U-P51 | UL2464, 16 AWG | 1,500 mm ±50 |
| SDI160-24-U-P51 | UL2464, 16 AWG | 1,500 mm ±50 |
| SDI160-48-U-P51 | UL2464, 18 AWG | 1,500 mm ±50 |
| SDI160-56-U-P51 | UL2464, 18 AWG | 1,500 mm ±50 |

AC CORD

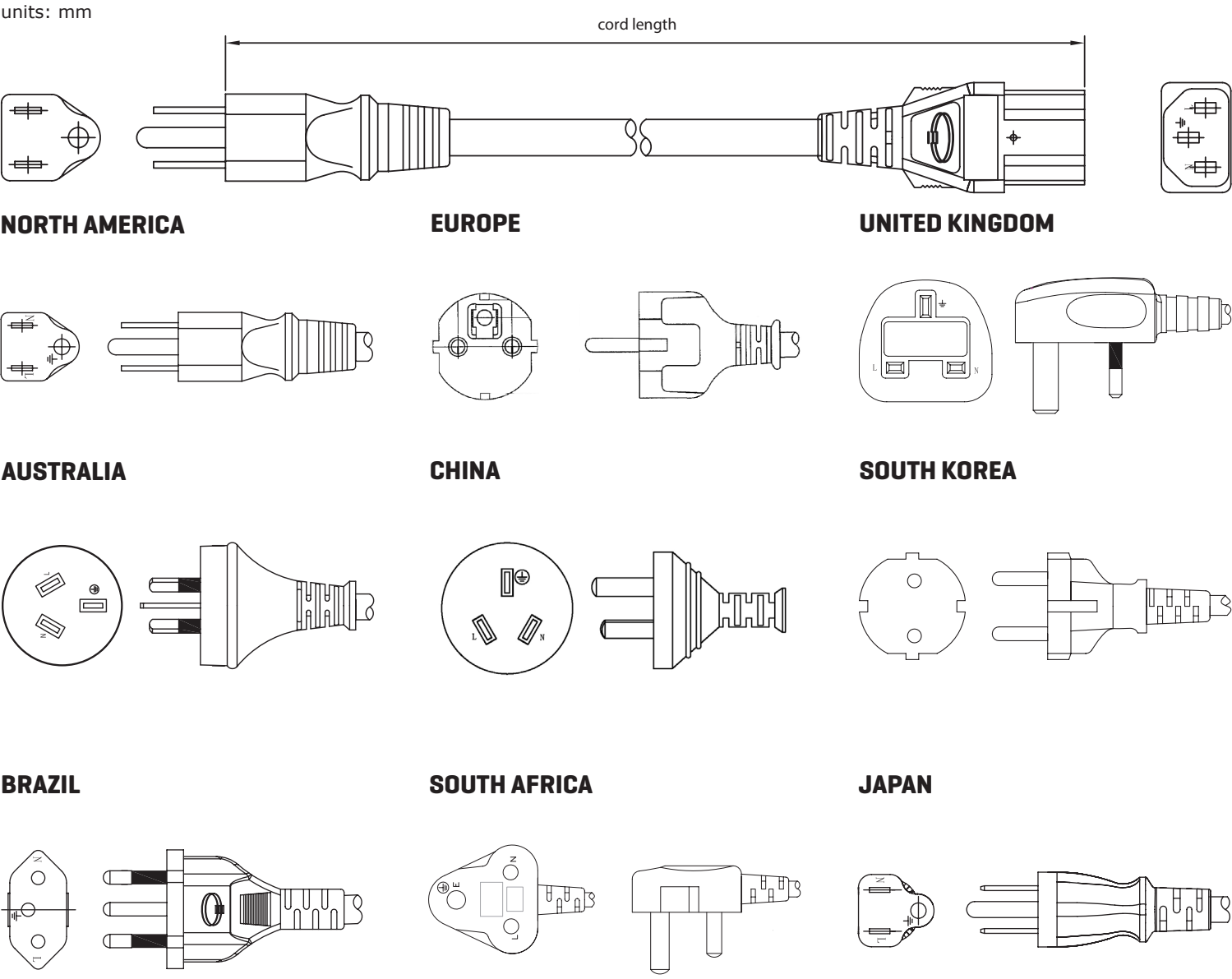


Table 2

| 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 |

REVISION HISTORY

| rev. | description | date |
|------|---|------------|
| 1.0 | initial release | 09/28/2020 |
| 1.01 | dc cord drawing update | 10/14/2020 |
| 1.02 | output plug polarity added | 01/12/2021 |
| 1.03 | UKCA added to specification | 08/11/2021 |
| 1.04 | dc cord tolerance updated for 48V model | 06/07/2022 |
| 1.05 | input voltage updated | 01/18/2023 |

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.