

SERIES: SDI250-U | DESCRIPTION: AC-DC POWER SUPPLY

FEATURES

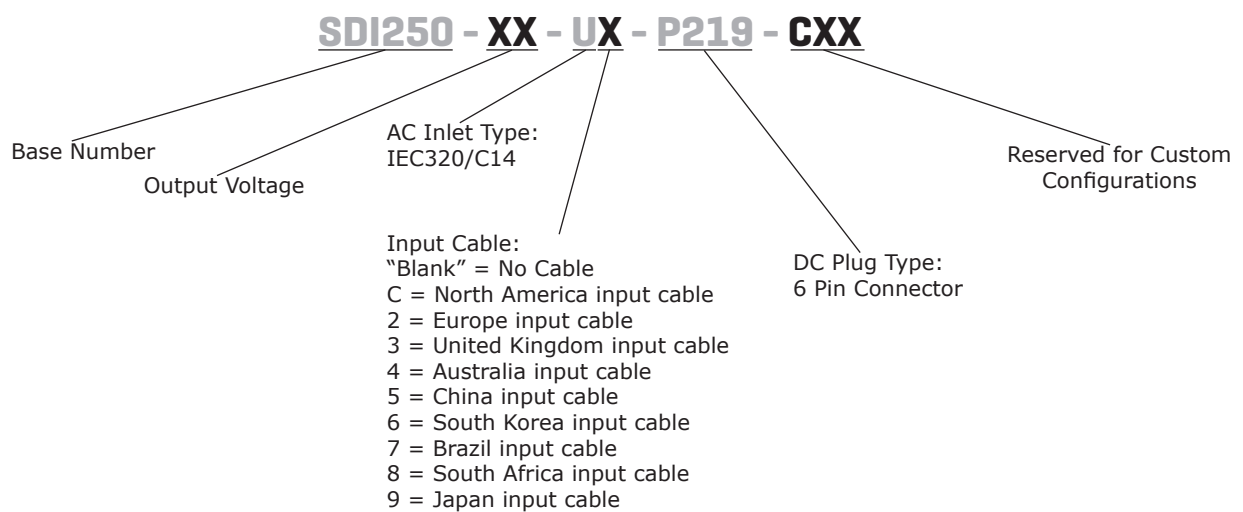
- level VI efficiency
- 250 W power
- universal input (90~264 Vac)
- single regulated outputs
- over voltage and short circuit protections
- UL/cUL (60950-1 & 62368-1), PSE safety approvals
- power factor correction
- custom designs available



| MODEL | output voltage (Vdc) | output current max (A) | output power max (W) | ripple and noise ¹ max (mVp-p) | efficiency level |
|-------------|-------------------------|------------------------------|----------------------------|---|------------------|
| SDI250-12-U | 12 | 20 | 240 | 120 | VI ² |
| SDI250-19-U | 19 | 13.2 | 250 | 190 | VI |
| SDI250-24-U | 24 | 10.4 | 250 | 240 | VI ² |
| SDI250-48-U | 48 | 5.2 | 250 | 480 | VI |
| SDI250-56-U | 56 | 4.48 | 250 | 560 | VI |

Notes: 1. At full load, nominal input, 20 MHz bandwidth oscilloscope, 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 | | 264 | Vac |
| frequency | | 47 | | 63 | Hz |
| current | | | | 3.3 | A |
| inrush current | at 230 Vac, full load, 25°C, cold start | | | 120 | A |
| leakage current | | | | 3.5 | mA |
| power factor correction | at full load | 0.9 | | | |
| no load power consumption | 12, 24 Vdc output models | | | 0.15 | W |
| | all other models | | | 0.21 | W |

OUTPUT

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

PROTECTIONS

| parameter | conditions/description | min | typ | max | units |
|-----------------------------|---------------------------------|-----|-----|-----|-------|
| over voltage protection | output latch | | | 150 | % |
| over current protection | output shut down, auto recovery | | | 150 | % |
| short circuit protection | output shut down | | | | |
| over temperature protection | output latch | | | | |

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 ground at 10 mA for 1 minute | | 1,500 | | Vac |
| isolation resistance | input to output at 500 Vdc | 10 | | | MΩ |
| | input to ground at 500 Vdc | 10 | | | MΩ |
| safety approvals | UL/cUL (60950-1, 62368-1), PSE, UKCA | | | | |
| EMI/EMC | FCC Part 15B Class B, CE | | | | |
| MTBF | as per Telcordia SR-332, 25°C | 300,000 | | | hours |
| RoHS | yes | | | | |

ENVIRONMENTAL

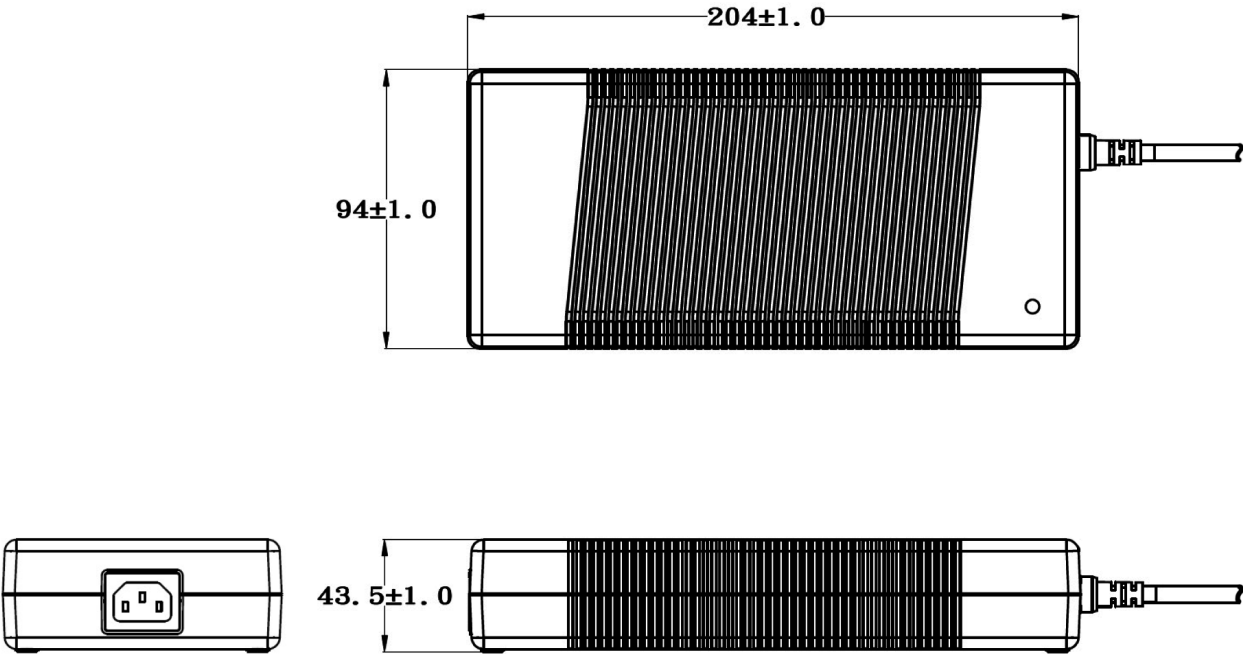
| parameter | conditions/description | min | typ | max | units |
|-----------------------|------------------------|-----|-----|-----|-------|
| operating temperature | | 0 | | 40 | °C |
| storage temperature | | -20 | | 80 | °C |
| operating humidity | non-condensing | 20 | | 80 | % |
| storage humidity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

MECHANICAL

| parameter | conditions/description | min | typ | max | units |
|------------|---|-----|-------|-----|-------|
| dimensions | 204.0 x 94.0 x 43.5 | | | | mm |
| inlet plug | IEC320/C14 | | | | |
| weight | without ac cord: 12 Vdc output model | | 1,110 | | g |
| | without ac cord: 19, 24 Vdc output models | | 1,040 | | g |
| | without ac cord: 48, 56 Vdc output models | | 1,020 | | g |

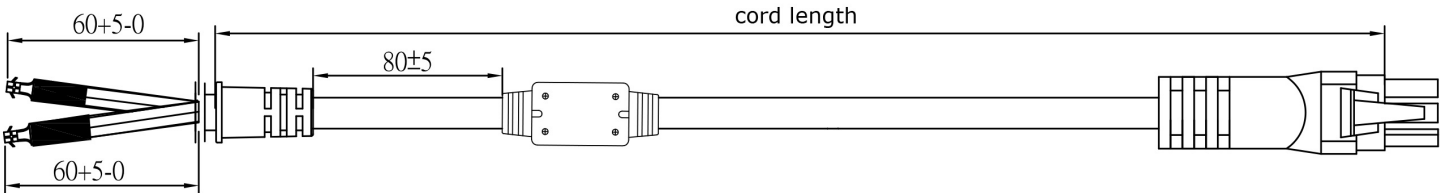
MECHANICAL DRAWING

units: mm
tolerance: ±1.0 mm



DC CORD

units: mm

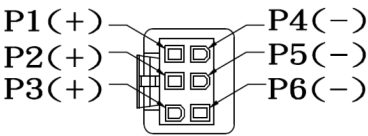


Plug: Molex 39-01-2065

Table 1

| MODEL NO. | CABLE | CORD LENGTH |
|--------------------------|--------------------|--------------|
| SDI250-12-U | UL2464, 16 AWG, 6C | 1,200 mm ±30 |
| SDI250-19-U ³ | UL2464, 16 AWG, 4C | 1,200 mm ±30 |
| SDI250-24-U ³ | UL2464, 16 AWG, 4C | 1,200 mm ±30 |
| SDI250-48-U ³ | UL2464, 18 AWG, 4C | 1,200 mm ±30 |
| SDI250-56-U ³ | UL2464, 18 AWG, 4C | 1,200 mm ±30 |

Note: 3. P2 and P5 are not connected on 19, 24, 48, and 56 Vdc output models.



AC CORD

units: mm

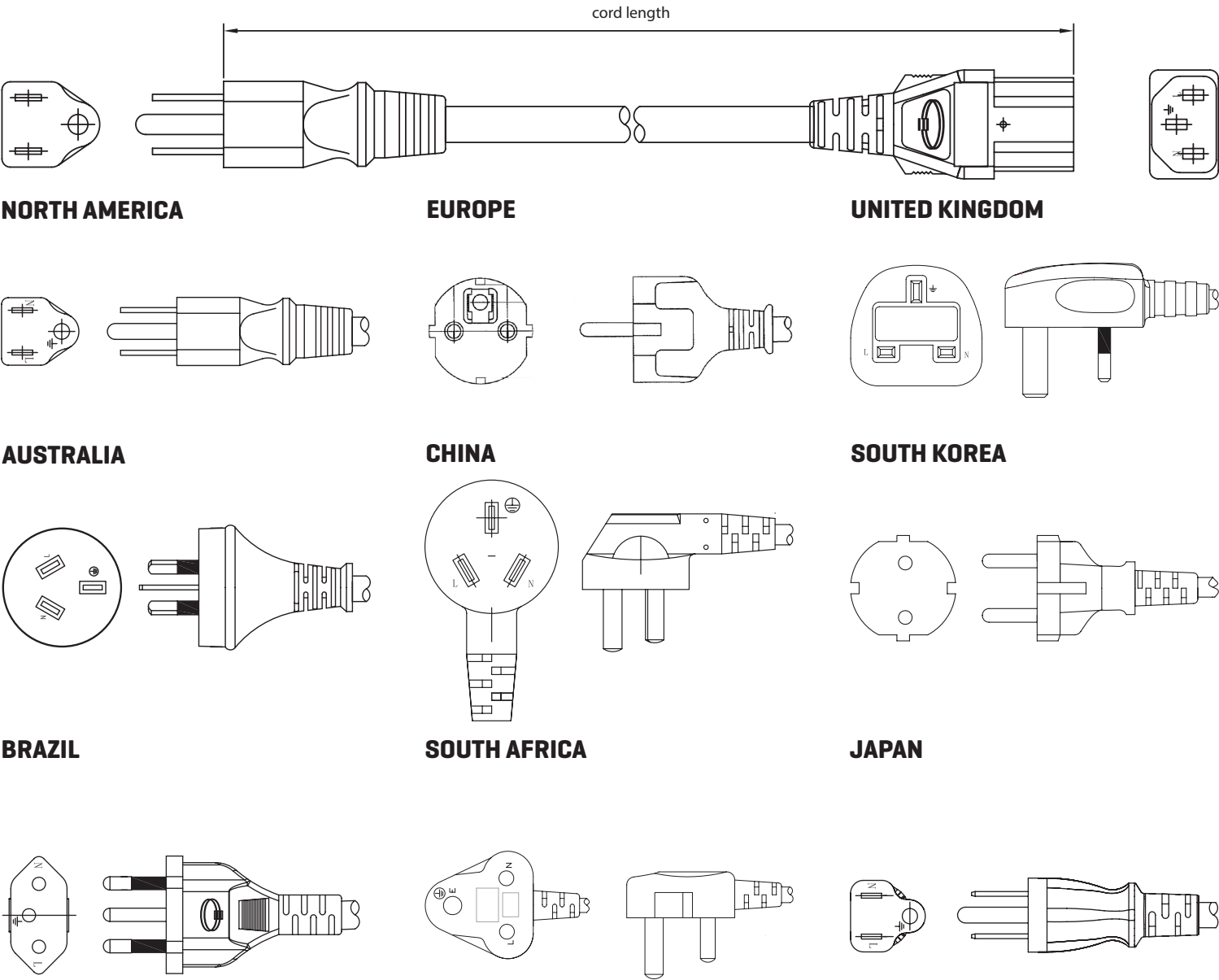


Table 2

| 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 | 08/28/2018 |
| 1.01 | company logo updated | 07/23/2020 |
| 1.02 | UKCA added to the specification | 05/25/2021 |
| 1.03 | dc cord updated | 04/20/2023 |

The revision history provided is for informational purposes only and is believed to be accurate.



CUI INC
a bel group

Headquarters
20050 SW 112th Ave.
Tualatin, OR 97062
800.275.4899

Fax 503.612.2383
cui.com
techsupport@cui.com

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.