

**SERIES:** SDI120G-U | **DESCRIPTION:** AC-DC POWER SUPPLY

**FEATURES**

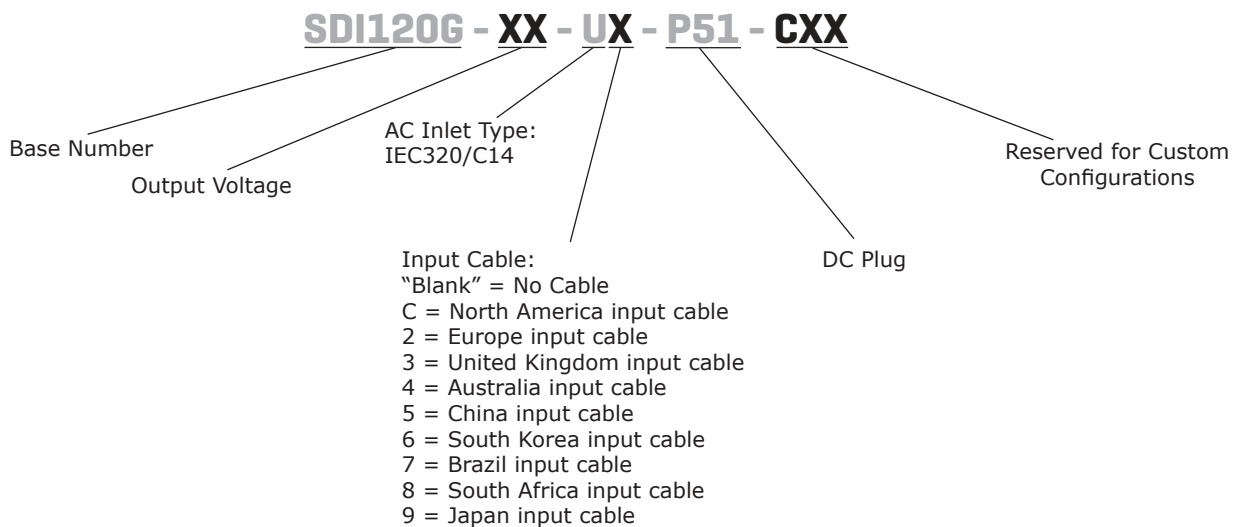
- up to 120 W continuous power
- gallium nitride (GaN) technology
- universal input
- over voltage, over current and short circuit protections
- IEC 62368-1 compliant
- compact design
- custom design available



| 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 |
|--------------|-------------------------|------------------------------|----------------------------|---|------------------|
| SDI120G-12-U | 12                      | 9.0                          | 108.0                      | 150   | VI               |
| SDI120G-19-U | 19                      | 6.3                          | 119.7                      | 190   | VI               |
| SDI120G-20-U | 20                      | 6.0                          | 120.0                      | 200   | VI               |
| SDI120G-24-U | 24                      | 5.0                          | 120.0                      | 240   | VI               |
| SDI120G-48-U | 48                      | 2.5                          | 120.0                      | 480   | VI               |
| SDI120G-56-U | 56                      | 2.14                         | 119.8                      | 560   | 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                   |   |     |         | 1.6  | A     |
| inrush current            | at 230 Vac, full load, 25°C, cold start |     |         | 80   | A     |
| leakage current           |   |     |         | 3.5  | mA    |
| power factor correction   | at 115 & 230 Vac, full load             | 0.9 |         |      |       |
| no load power consumption | at 115 & 230 Vac, no load               |     |         | 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 with latch     |     |     | 150 | %     |
| over current protection     | output shut down, auto recovery |     |     | 150 | %     |
| short circuit protection    | output shut down, auto recovery |     |     |     |       |
| over temperature protection | latch                           |     |     |     |       |

**SAFETY & COMPLIANCE**

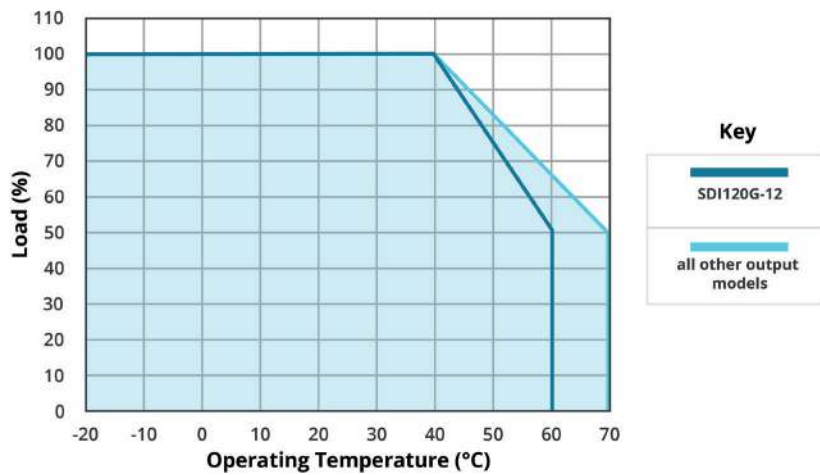
| parameter             | conditions/description                      | min     | typ   | max | units |
|-----------------------|---|---------|-------|-----|-------|
| isolation voltage     | input to output at 10 mA for 1 minute       |         | 3,000 |     | Vac   |
|                       | input to frame ground at 10 mA for 1 minute |         | 1,770 |     | Vac   |
| isolation resistance  | input to output at 500 Vdc                  | 10      |       |     | MΩ    |
|                       | input to frame ground at 500 Vdc            | 10      |       |     | MΩ    |
| safety approvals      | 62368: UL/cUL, UKCA                         |         |       |     |       |
| EMI/EMC               | FCC Part 15 subpart B, class B              |         |       |     |       |
|                       | ANSI C63.4-2014                             |         |       |     |       |
|                       | ICES-003 issue 6                            |         |       |     |       |
|                       | EN55032: 2015                               |         |       |     |       |
|                       | EN 55035: 2017                              |         |       |     |       |
|                       | EN 61000-3-2                                |         |       |     |       |
| AS/NZS CISPR 32: 2015 |   |         |       |     |       |
| MTBF                  | as per Telcordia SR-332, 25°C               | 300,000 |       |     | hrs   |
| RoHS                  | yes   |         |       |     |       |

**ENVIRONMENTAL**

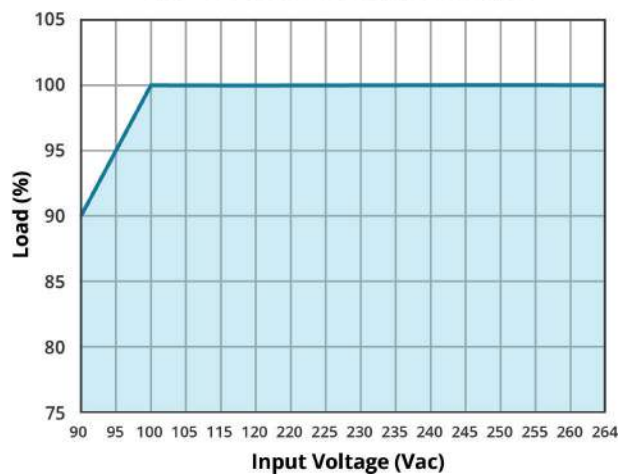
| parameter             | conditions/description | min | typ | max | units |
|-----------------------|------------------------|-----|-----|-----|-------|
| operating temperature | see derating curve     | -20 |     | 40  | °C    |
| storage temperature   |                        | -20 |     | 80  | °C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

## DERATING CURVES

**TEMPERATURE DERATING CURVE**



**INPUT VOLTAGE DERATING CURVE**

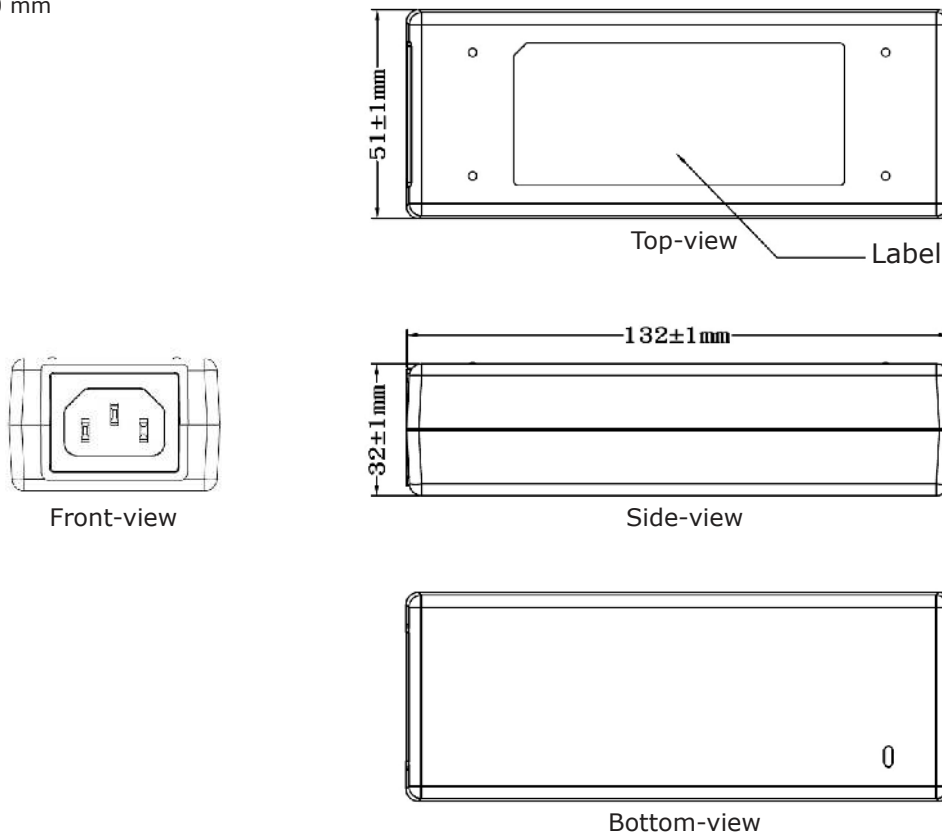


## MECHANICAL

| parameter  | conditions/description | min | typ | max | units |
|------------|------------------------|-----|-----|-----|-------|
| dimensions | 132 x 51 x 32          |     |     |     | mm    |
| inlet plug | IEC320/C14             |     |     |     |       |
| weight     |                        |     | 336 |     | g     |

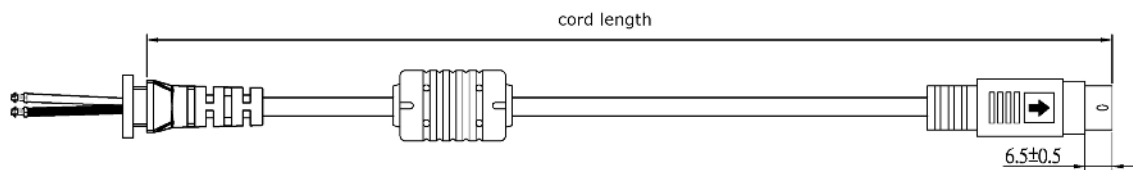
## MECHANICAL DRAWING

units: mm  
tolerance:  $\pm 1.0$  mm



## DC CORD

units: mm

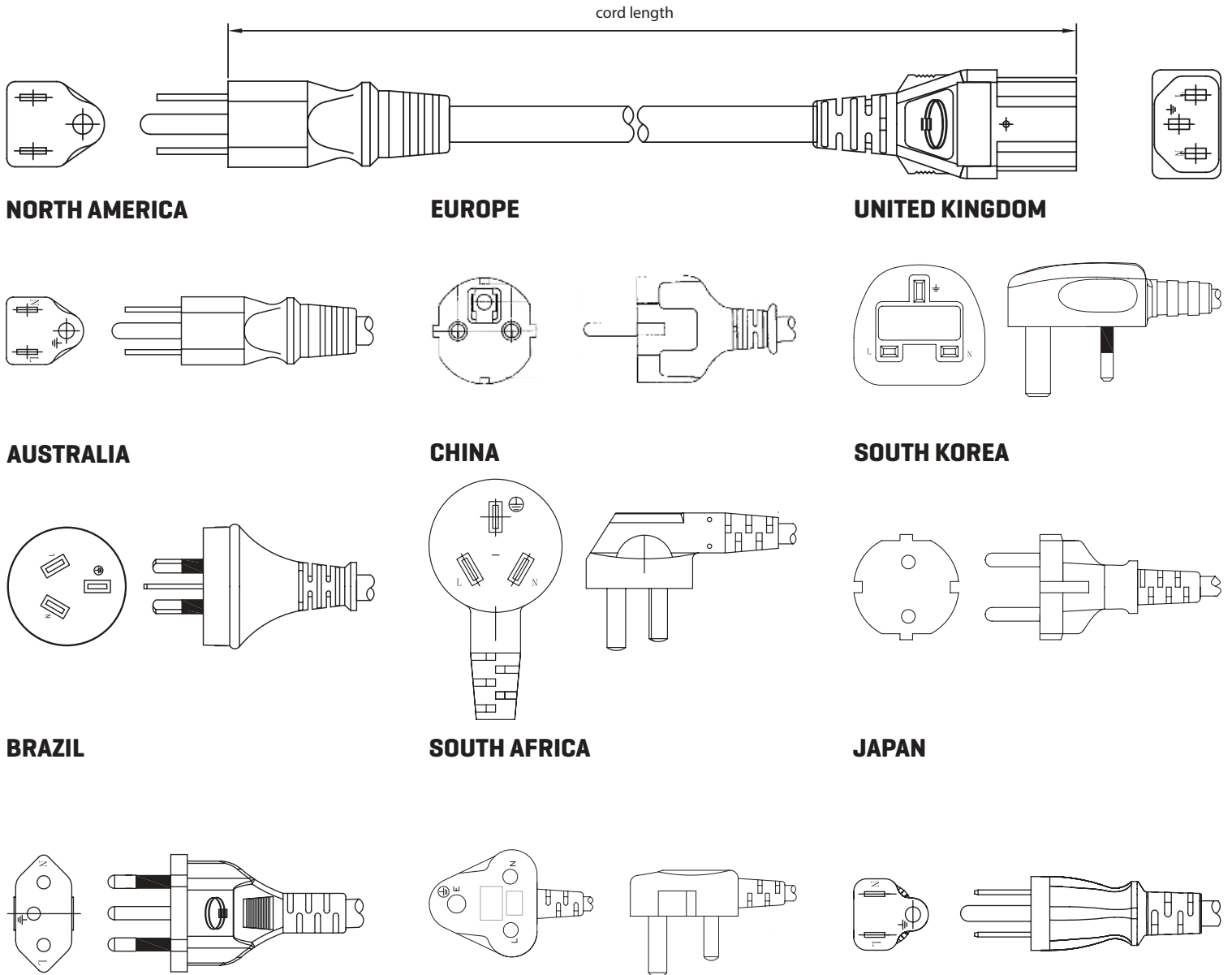


| MODEL NO.  | CABLE           | CORD LENGTH       |
|------------|-----------------|-------------------|
| SDI120G-12 | UL11352, 14 AWG | 1,200 mm $\pm 30$ |
| SDI120G-19 | UL11352, 16 AWG | 1,500 mm $\pm 30$ |
| SDI120G-20 | UL11352, 16 AWG | 1,500 mm $\pm 30$ |
| SDI120G-24 | UL11352, 16 AWG | 1,500 mm $\pm 30$ |
| SDI120G-48 | UL2464, 18 AWG  | 1,500 mm $\pm 30$ |
| SDI120G-56 | UL2464, 18 AWG  | 1,500 mm $\pm 30$ |



## 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       | 09/13/2021 |
| 1.01 | input voltage updated | 01/18/2023 |
| 1.02 | pn key updated        | 06/01/2023 |

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.