

**SERIES:** SDI300G-U | **DESCRIPTION:** AC-DC POWER SUPPLY

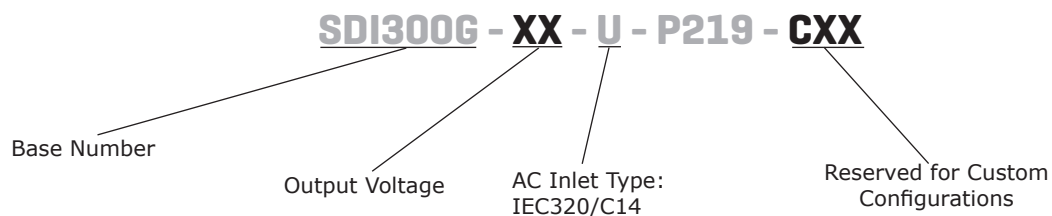
**FEATURES**

- GaN technology
- compact size
- 300 W power
- universal input (85~265 Vac)
- single regulated outputs
- over voltage, over current, over temperature and short circuit protections
- UL/cUL (62368-1)
- level VI efficiency
- power factor correction
- custom designs available



| MODEL             | output voltage | output current max | output power max | ripple and noise <sup>1</sup> max | efficiency level |
|-------------------|----------------|--------------------|------------------|-----------------------------------|------------------|
|                   | (Vdc)          | (A)                | (W)              | (mVp-p)                           |                  |
| SDI300G-12-U-P219 | 12             | 24.0               | 288.0            | 120                               | VI               |
| SDI300G-15-U-P219 | 15             | 20.0               | 300.0            | 150                               | VI               |
| SDI300G-19-U-P219 | 19             | 15.79              | 300.01           | 190                               | VI               |
| SDI300G-24-U-P219 | 24             | 12.5               | 300.0            | 240                               | VI               |
| SDI300G-48-U-P219 | 48             | 6.25               | 300.0            | 480                               | VI               |
| SDI300G-56-U-P219 | 56             | 5.36               | 300.16           | 560                               | VI               |

Notes: 1. At full load, nominal input, 20 MHz bandwidth oscilloscope, each output terminated with 0.1  $\mu$ F multilayer ceramic and 47  $\mu$ F low ESR electrolytic capacitors.

**PART NUMBER KEY**


## INPUT

| parameter                 | conditions/description                  | min | typ | max | units |
|---------------------------|-----------------------------------------|-----|-----|-----|-------|
| voltage                   | see derating curve                      | 85  |     | 264 | Vac   |
| frequency                 |                                         | 50  |     | 60  | Hz    |
| current                   |                                         |     |     | 3.5 | A     |
| inrush current            | at 240 Vac, full load, 25°C, cold start |     |     | 150 | A     |
| leakage current           |                                         |     |     | 3.5 | mA    |
| no load power consumption | at 115 & 230 Vac                        |     |     | 0.5 | W     |
| power factor              | at 115 & 230 Vac, full load             | 0.9 |     |     |       |

## OUTPUT

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

## PROTECTIONS

| parameter                   | conditions/description | min | typ | max | units |
|-----------------------------|------------------------|-----|-----|-----|-------|
| over voltage protection     | latch                  |     |     | 150 | %     |
| over current protection     | auto recovery          |     |     | 180 | %     |
| short circuit protection    | auto recovery          |     |     |     |       |
| over temperature protection | output shut down       |     |     |     |       |

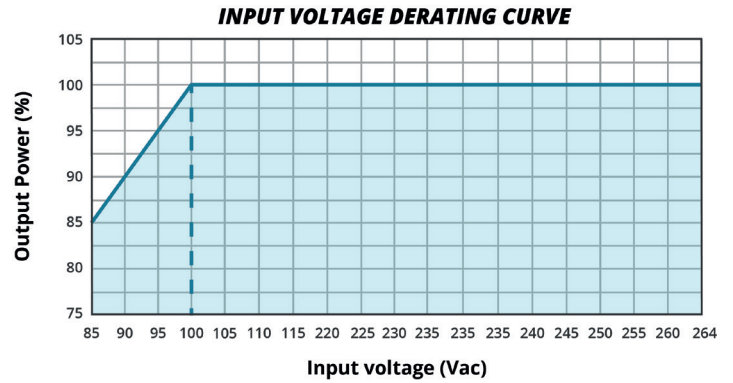
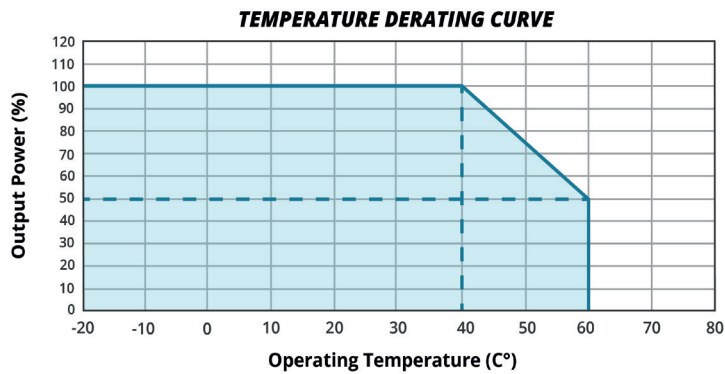
## SAFETY & COMPLIANCE

| parameter            | conditions/description                                                           | min      | typ            | max | units      |
|----------------------|----------------------------------------------------------------------------------|----------|----------------|-----|------------|
| isolation voltage    | input to output at 10 mA for 1 minute<br>input to ground at 10 mA for 1 minute   |          | 3,000<br>1,770 |     | Vac<br>Vac |
| isolation resistance | input to output at 500 Vdc<br>input to ground at 500 Vdc                         | 10<br>10 |                |     | MΩ<br>MΩ   |
| safety approvals     | 62368: UL/cUL<br>UKCA                                                            |          |                |     |            |
| EMI/EMC              | FCC Part 15 Class B, ICES-003, EN 55032,<br>EN 55036, EN 61000-3-2, EN 61000-3-3 |          |                |     |            |
| MTBF                 | as per Telcordia SR-332, 25°C                                                    | 300,000  |                |     | hours      |
| 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

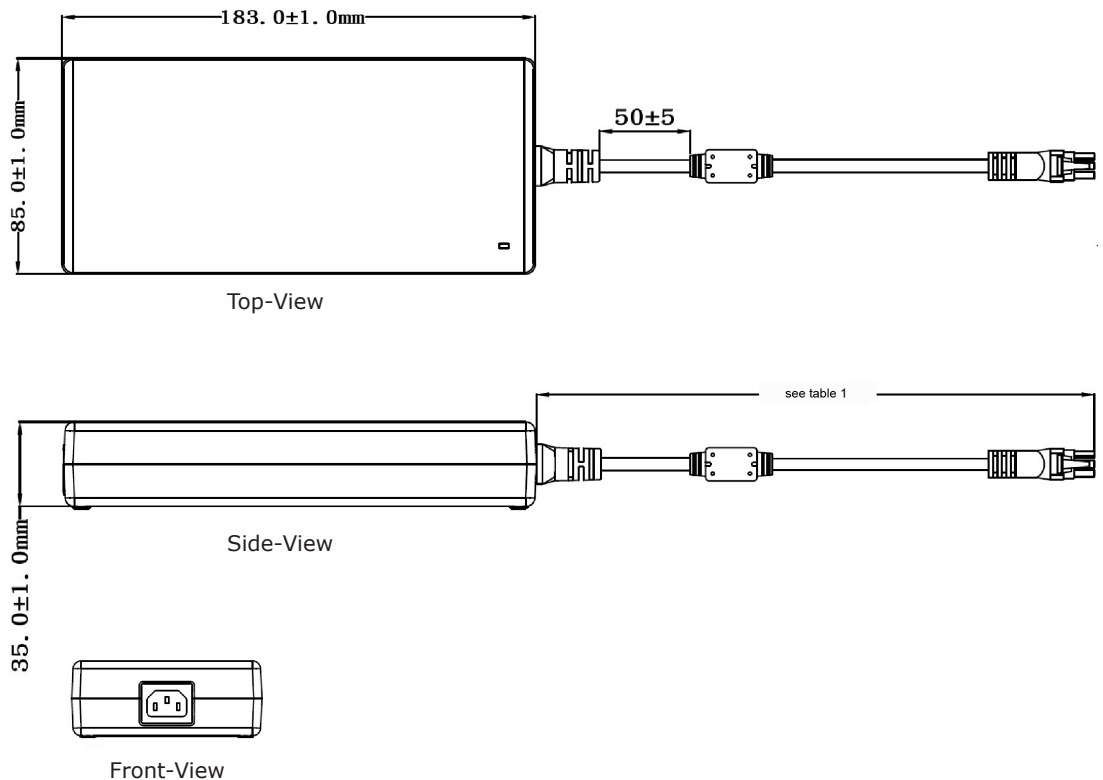


## MECHANICAL

| parameter  | conditions/description          | min | typ  | max | units |
|------------|---------------------------------|-----|------|-----|-------|
| dimensions | 183.0 (L) x 85.0 (W) x 35.0 (H) |     |      |     | mm    |
| inlet plug | 6 pin housing                   |     |      |     |       |
| weight     | 12, 15, 19 Vdc output models    |     | 1100 |     | g     |
|            | 24, 48, 56 Vdc output models    |     | 1000 |     | g     |

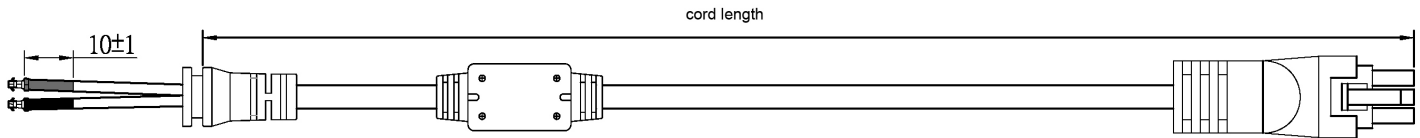
## MECHANICAL DRAWING

units: mm  
tolerance:  $\pm 1.0$  mm



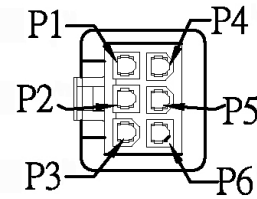
## DC CORD

units: mm



**Table 1**

| MODEL NO.    | CABLE                 | CORD LENGTH  |
|--------------|-----------------------|--------------|
| SDI300G-12-U | Black, UL2464, 16 AWG | 1,000 mm ±50 |
| SDI300G-15-U | Black, UL2464, 16 AWG | 1,000 mm ±50 |
| SDI300G-19-U | Black, UL2464, 16 AWG | 1,000 mm ±50 |
| SDI300G-24-U | Black, UL2464, 16 AWG | 1,200 mm ±50 |
| SDI300G-48-U | Black, UL2464, 18 AWG | 1,200 mm ±50 |
| SDI300G-56-U | Black, UL2464, 18 AWG | 1,200 mm ±50 |



Output cable plug pin assignment

**Table 2**

| PIN ASSIGNMENT |                |             |
|----------------|----------------|-------------|
| PIN            | OUTPUT VOLTAGE |             |
|                | 12V/15V/19V    | 24V/48V/56V |
| P1             | +Vout          | +Vout       |
| P2             | +Vout          | n.c.        |
| P3             | +Vout          | +Vout       |
| P4             | -Vout          | -Vout       |
| P5             | -Vout          | NC          |
| P6             | -Vout          | -Vout       |

## REVISION HISTORY

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| rev. | description     | date       |
|------|-----------------|------------|
| 1.0  | initial release | 07/23/2021 |

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



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

Fax 503.612.2383  
**cui.com**  
techsupport@cui.com

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