

SERIES: SDM120-UD | **DESCRIPTION:** AC-DC POWER SUPPLY

FEATURES

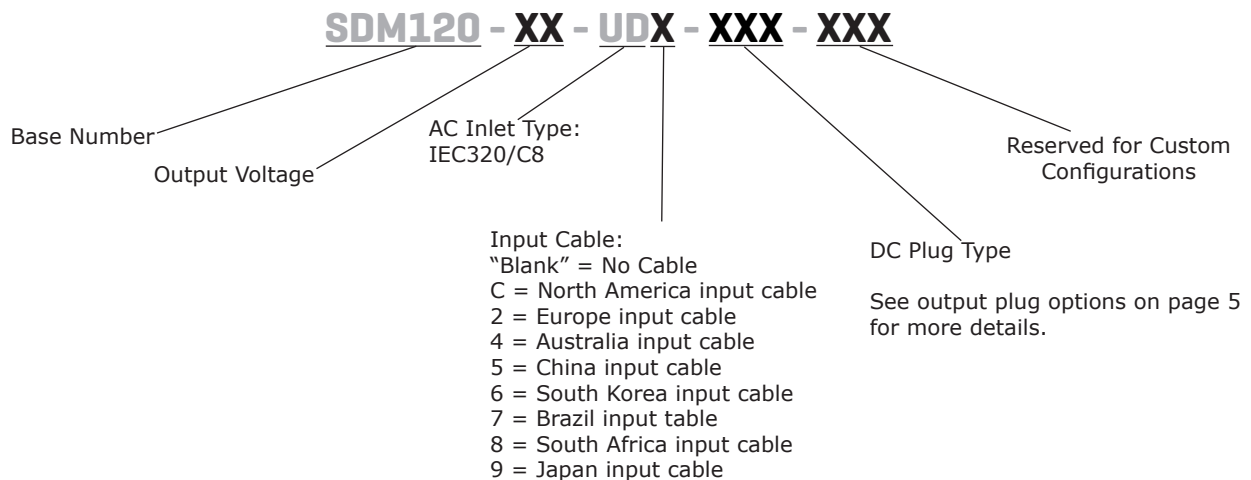
- up to 130 W continuous power
- DoE Level VI compliant
- no-load power consumption ≤ 0.21 W
- universal input voltage range
- over voltage and short circuit protections
- UL/cUL & TUV safety approvals
- Medical 60601-1 edition 3.1 safety approvals
- LED indicator for power on



| MODEL | output voltage | output current max | output power max | ripple and noise ¹ max | efficiency level |
|--------------|----------------|--------------------|------------------|-----------------------------------|------------------|
| | (Vdc) | (A) | (W) | (mVp-p) | |
| SDM120-12-UD | 12 | 9.16 | 110 | 240 | VI |
| SDM120-16-UD | 16 | 7.5 | 120 | 240 | VI |
| SDM120-19-UD | 19 | 6.31 | 120 | 285 | VI |
| SDM120-24-UD | 24 | 5.0 | 120 | 360 | VI |
| SDM120-48-UD | 48 | 2.7 | 130 | 720 | 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.

PART NUMBER KEY



INPUT

| parameter | conditions/description | min | typ | max | units |
|---------------------------|---|-----|-----|------|-------|
| voltage | | 90 | | 264 | Vac |
| frequency | | 47 | | 63 | Hz |
| current | at 100 Vac, full load | | | 2.0 | A |
| inrush current | at 220 Vac, full load, 25°C, cold start | | | 120 | A |
| leakage current | at 240 Vac | | | 100 | uA |
| no load power consumption | at 230 Vac | | | 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 shut down, latch | | | 150 | % |
| over current protection | 12 Vdc output, continuous, auto recovery | 110 | | 170 | % |
| | 16 Vdc output, continuous, auto recovery | 110 | | 170 | % |
| | 19 Vdc output, continuous, auto recovery | 110 | | 150 | % |
| | 24 Vdc output, continuous, auto recovery | 110 | | 150 | % |
| | 48 Vdc output, continuous, auto recovery | 110 | | 170 | % |
| short circuit protection | continuous, auto recovery | | | | |

SAFETY & COMPLIANCE

| parameter | conditions/description | min | typ | max | units |
|----------------------|--|---------|-------|-----|-------|
| isolation voltage | 12 Vdc output, input to output at 5 mA for 2 seconds | | 4,000 | | Vac |
| | 16 Vdc output, input to output at 10 mA for 2 seconds | | 4,000 | | Vac |
| | 19 Vdc output, input to output at 5 mA for 2 seconds | | 4,000 | | Vac |
| | 24 Vdc output, input to output at 10 mA for 2 seconds | | 4,000 | | Vac |
| | 48 Vdc output, input to output at 10 mA for 2 seconds | | 4,000 | | Vac |
| isolation resistance | input to output at 500 Vdc for 3 seconds | 50 | | | MΩ |
| safety approvals | TUV, UL/cUL, CE | | | | |
| EMI/EMC | FCC Part 15 Class B, EN 55011 Class B | | | | |
| ESD | IEC 61000-4-2 Contact: ± 8KV, Air: ± 15KV | | | | |
| radiated immunity | IEC 61000-4-3 Frequency: 80~2700MHz, Field Strength: 10V/M, 80% AM(1KHz) | | | | |
| EFT | IEC 61000-4-4 ± 2.0 KV on input AC power ports | | | | |
| surge | IEC 61000-4-5 Line to Line: ± 1KV (peak), Line to F.G : ± 2KV (peak) | | | | |
| MTBF | as per MIL-HDBK-217F at 25°C | 100,000 | | | hours |
| RoHS | yes | | | | |

ENVIRONMENTAL

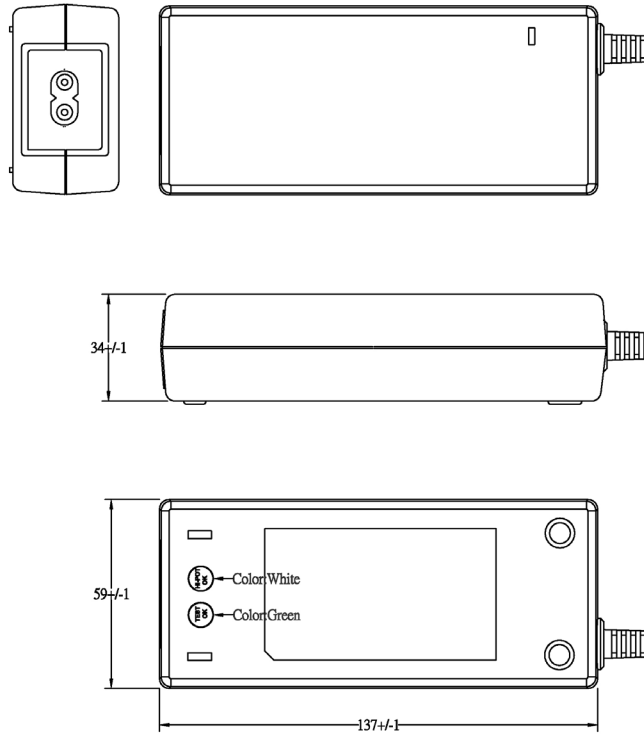
| parameter | conditions/description | min | typ | max | units |
|-----------------------|------------------------|-----|-----|-----|-------|
| operating temperature | | 0 | | 40 | °C |
| storage temperature | | -20 | | 85 | °C |
| operating humidity | non-condensing | 10 | | 90 | % |
| storage humidity | non-condensing | 5 | | 90 | % |

MECHANICAL

| parameter | conditions/description | min | typ | max | units |
|------------|------------------------|-----|-----|-----|-------|
| dimensions | 137 x 59 x 34 | | | | mm |
| inlet plug | IEC320/C8 | | | | |
| weight | | | 450 | | g |

MECHANICAL DRAWING

units: mm
tolerance: ±1.0 mm



DC CORD

units: mm

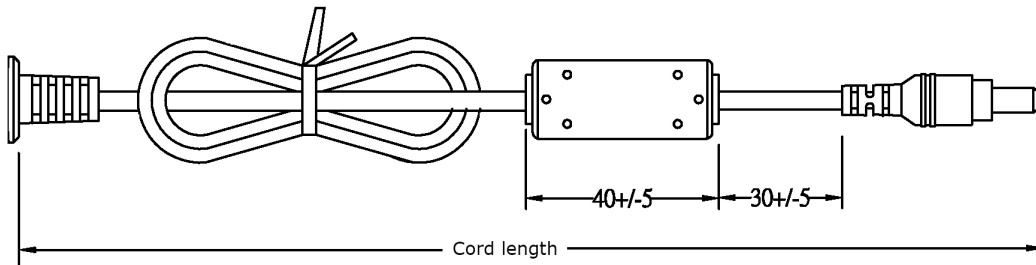
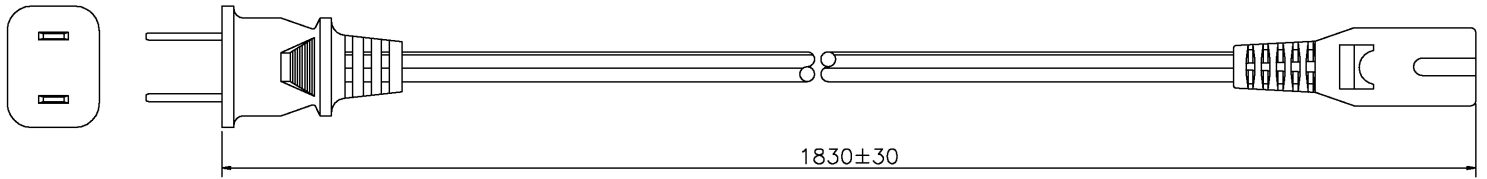


Table 1

| MODEL NO. | CABLE | CORD LENGTH |
|--------------|----------------|--------------|
| SDM120-12-UD | UL1866, 14 AWG | 1,200 mm ±30 |
| SDM120-16-UD | UL1866, 14 AWG | 1,200 mm ±30 |
| SDM120-19-UD | UL1865, 16 AWG | 1,200 mm ±30 |
| SDM120-24-UD | UL1865, 16 AWG | 1,200 mm ±30 |
| SDM120-48-UD | UL1865, 18 AWG | 1,200 mm ±30 |

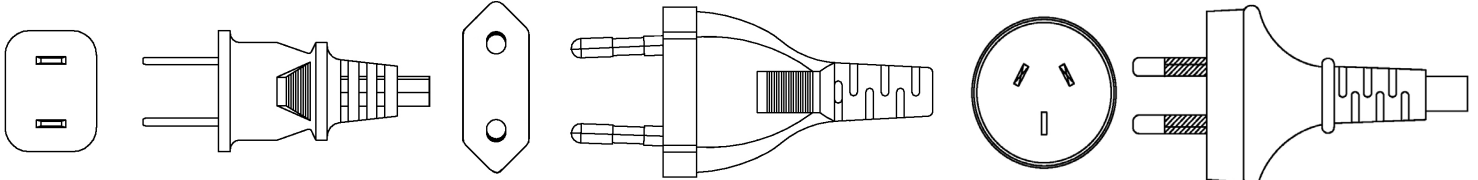
AC CORD



NORTH AMERICA

EUROPE

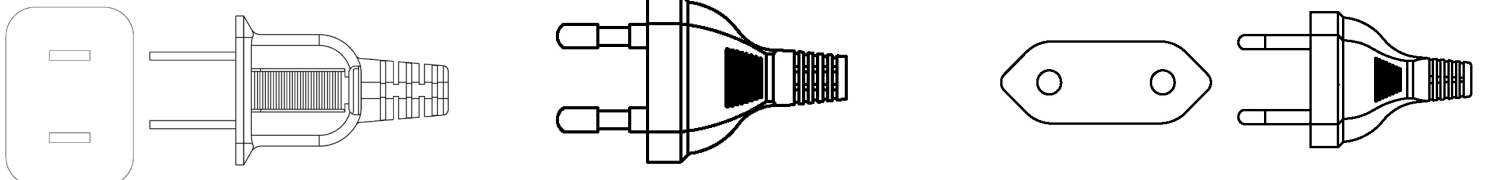
AUSTRALIA



CHINA

KOREA

BRAZIL



SOUTH AFRICA

JAPAN

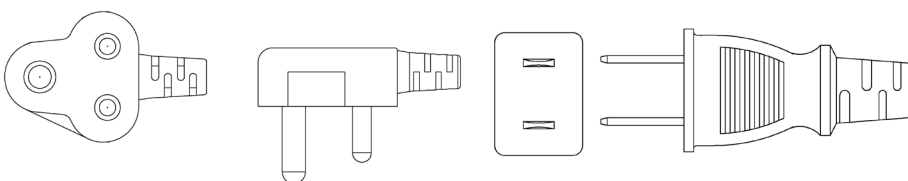
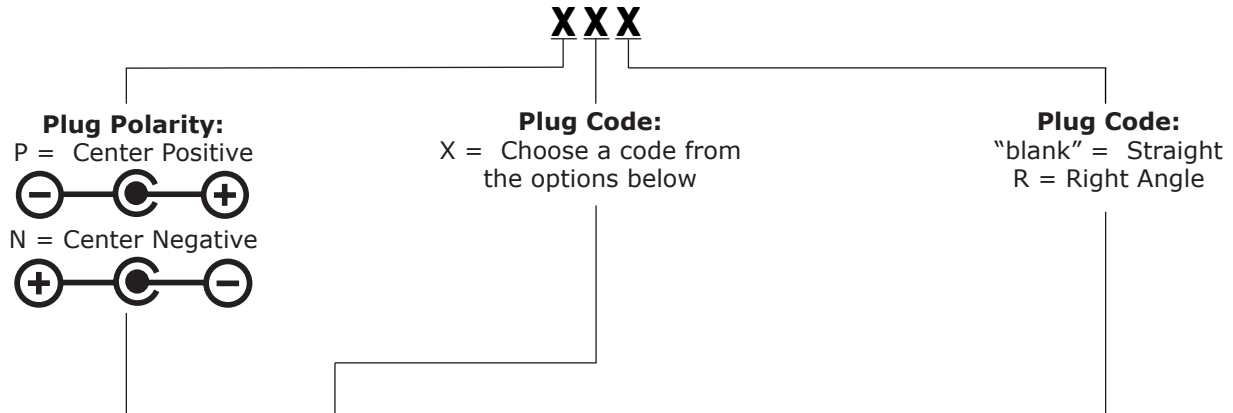


Table 2

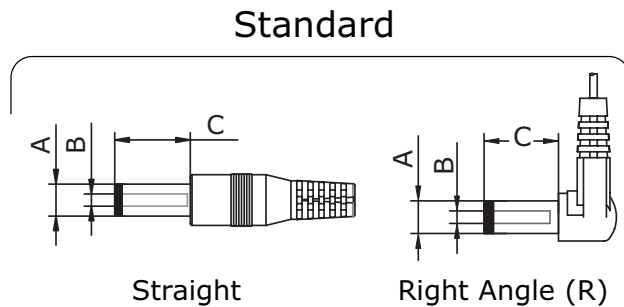
| AC Input | Cord Length |
|---------------|--------------|
| North America | 1,830 mm ±30 |
| Europe | 1,830 mm ±30 |
| Australia | 1,830 mm ±30 |
| China | 1,830 mm ±30 |
| South Korea | 1,830 mm ±30 |
| Brazil | 1,800 mm ±30 |
| South Africa | 1,800 mm ±30 |
| Japan | 1,800 mm ±30 |

DC PLUG TYPE PART NUMBER KEY



| 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 | • | • |
| • | • | 10 | Locking | 5.5 | 2.1 | 9.5 | • | N/A |
| • | • | 11 | Locking | 5.5 | 2.5 | 9.5 | • | N/A |
| N/A | N/A | ST | Stripped & Tinned | | | | N/A | N/A |

Note: 1. Contact CUI for additional plug options.



REVISION HISTORY

| rev. | description | date |
|------|-----------------|------------|
| 1.0 | initial release | 08/07/2020 |

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.