

**SERIES:** SDM120-U | **DESCRIPTION:** EXTERNAL AC-DC POWER SUPPLY

**FEATURES**

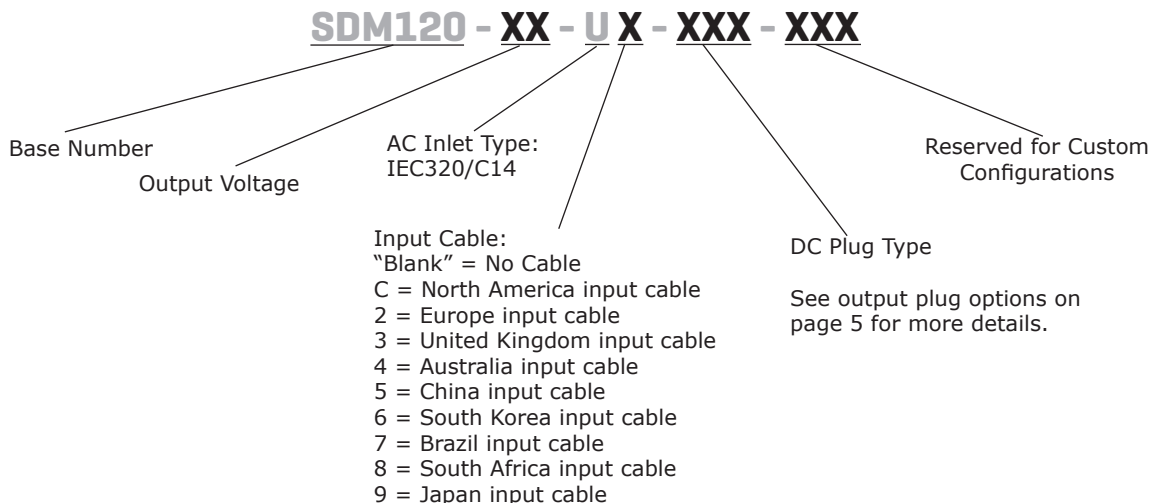
- up to 130W continuous power
- DoE Level VI compliant
- no-load power consumption  $\leq 0.21$  W
- universal input voltage range
- over voltage and short circuit protections
- UL/cUL & TUV safety approvals
- Medical 60601-1 edition 3.1 safety approvals
- LED indicator for power on



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

Notes: 1. At full load, nominal input, 20 MHz bandwidth oscilloscope, output terminated with 0.1  $\mu$ F multilayer ceramic and 10  $\mu$ 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 at 240 Vac, full load			2.0 1.0	A
inrush current	at 110 Vac, full load, cold start at 220 Vac, full load, cold start		60 120		A
leakage current	at 240 Vac / 50 Hz		100		uA
no load power consumption				0.21	W

## OUTPUT

parameter	conditions/description	min	typ	max	units
line regulation				±1	%
load regulation			±5		%
rise time	at 100~240 Vac, full load 10~90% of output voltage			50	ms
hold-up time	at full load	10			ms

## PROTECTIONS

parameter	conditions/description	min	typ	max	units
over voltage protection	output shut-down, latch			150	%
over current protection	12, 48 Vdc output, continuous, auto recovery 16, 19, 24 Vdc output, continuous, auto recovery	110 110		170 150	% %
short-circuit protection	continuous, auto recovery				

## SAFETY & COMPLIANCE

parameter	conditions/description	min	typ	max	units
isolation voltage	12 Vdc output, input to output at 10mA for 2 seconds		4,000		Vac
	16 Vdc output, input to output at 5mA for 2 seconds		1,800		Vac
	19 Vdc output, input to output at 5mA for 2 seconds		1,800		Vac
	24 Vdc output, input to output at 5mA for 2 seconds		1,800		Vac
	48 Vdc output, input to output at 10mA 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

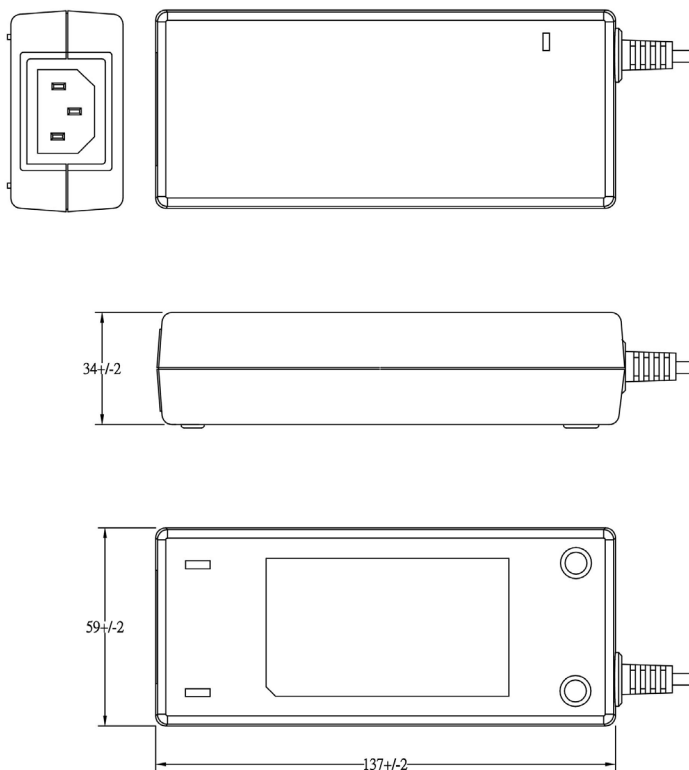
parameter	conditions/description	min	typ	max	units
operating temperature		0		40	°C
storage temperature		-20		85	°C
operating humidity		10		90	%
storage humidity		5		90	%

## MECHANICAL

parameter	conditions/description	min	typ	max	units
dimensions	137 (L) x 59 x (W) x 34 (H)				mm
inlet plug	IEC320/C14				
weight			450		g

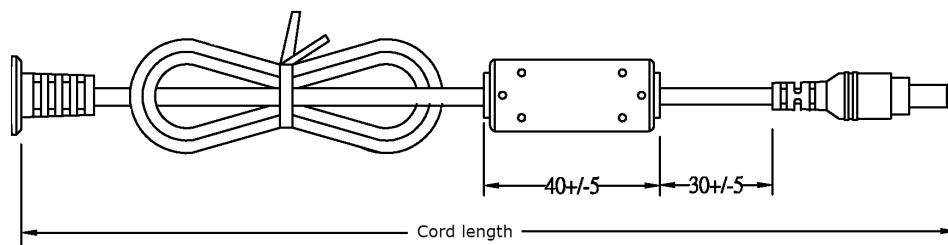
## MECHANICAL DRAWING

units: mm  
tolerance: ±2.0



## DC CORD

units: mm



**Table 2**

MODEL NO.	CABLE	CORD LENGTH
SDM120-12-U	UL 1866 AWG 14	1,200 mm ±30
SDM120-16-U	UL 1866 AWG 14	1,200 mm ±30
SDM120-19-U	UL 1185 AWG 16	1,200 mm ±30
SDM120-24-U	UL 1185 AWG 16	1,200 mm ±30
SDM120-48-U	UL 1185 AWG 18	1,200 mm ±30

## AC CORDS

units: mm

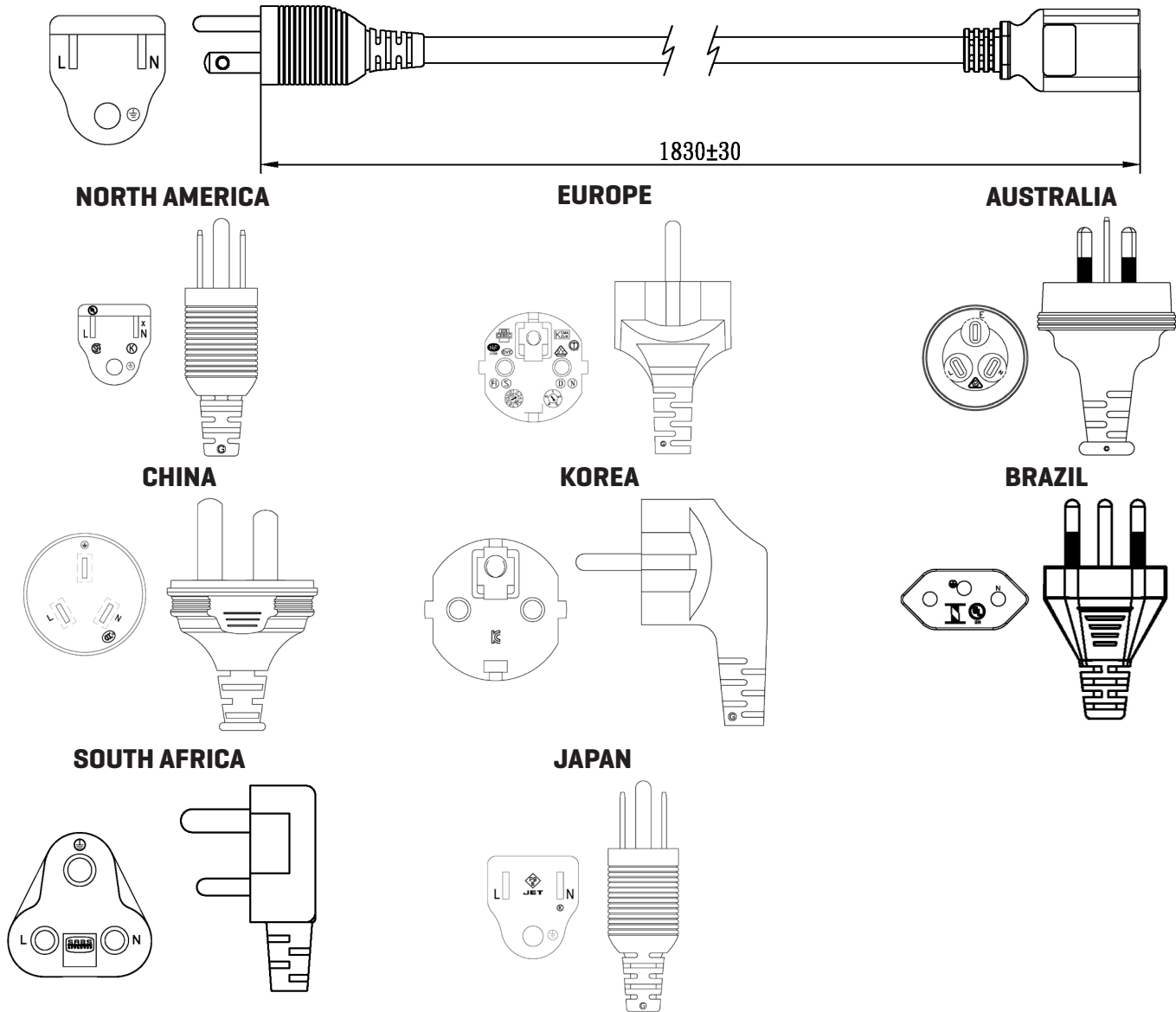
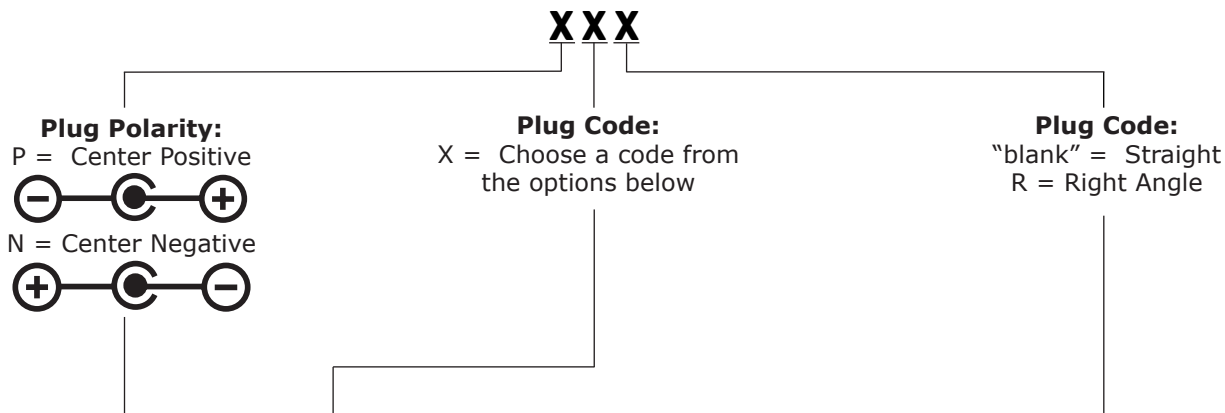


Table 2

AC Input	Cord Length
North America	1,830 mm $\pm$ 30
Europe	1,800 mm $\pm$ 50
Australia	1,830 mm $\pm$ 50
China	1,800 mm $\pm$ 50
South Korea	1,830 mm $\pm$ 50
Brazil	1,800 mm $\pm$ 50
South Africa	1,830 mm $\pm$ 50
Japan	1,830 mm $\pm$ 50

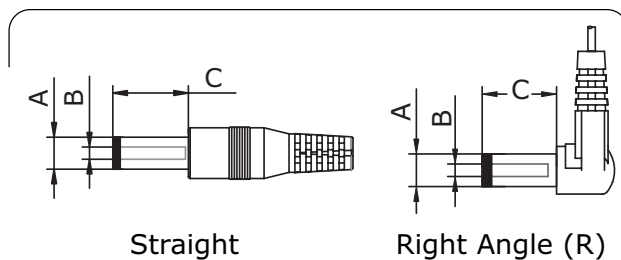
## DC PLUG TYPE PART NUMBER KEY



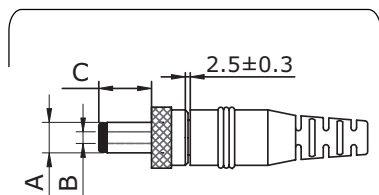
Plug Polarity		Code		Dimensions (mm)			Plug Angle	
Center Pos.	Center Neg.	Option	Type	A	B	C	Straight	Right
•	•	5	Standard	5.5	2.1	9.5	•	•
•	•	6	Standard	5.5	2.5	9.5	•	•
•	•	10	Locking <sup>2</sup>	5.5	2.1	9.5	•	N/A
•	•	11	Locking <sup>2</sup>	5.5	2.5	9.5	•	N/A
N/A	N/A	ST	Stripped & Tinned			N/A	N/A	

Note: 1. Contact CUI for additional plug options.  
 2. Maximum insertion depth is 10mm

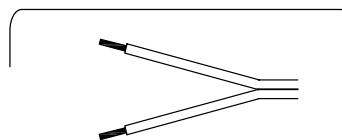
### Standard



### Locking



### Stripped & Tinned



## REVISION HISTORY

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rev.	description	date
1.0	initial release	08/10/2020
1.01	dc cord length updated, mechanical drawing updated	01/10/2022
1.02	dc plugs updated	05/23/2022

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



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