SERIES: SDM50-UD | **DESCRIPTION:** AC-DC POWER SUPPLY

FEATURES

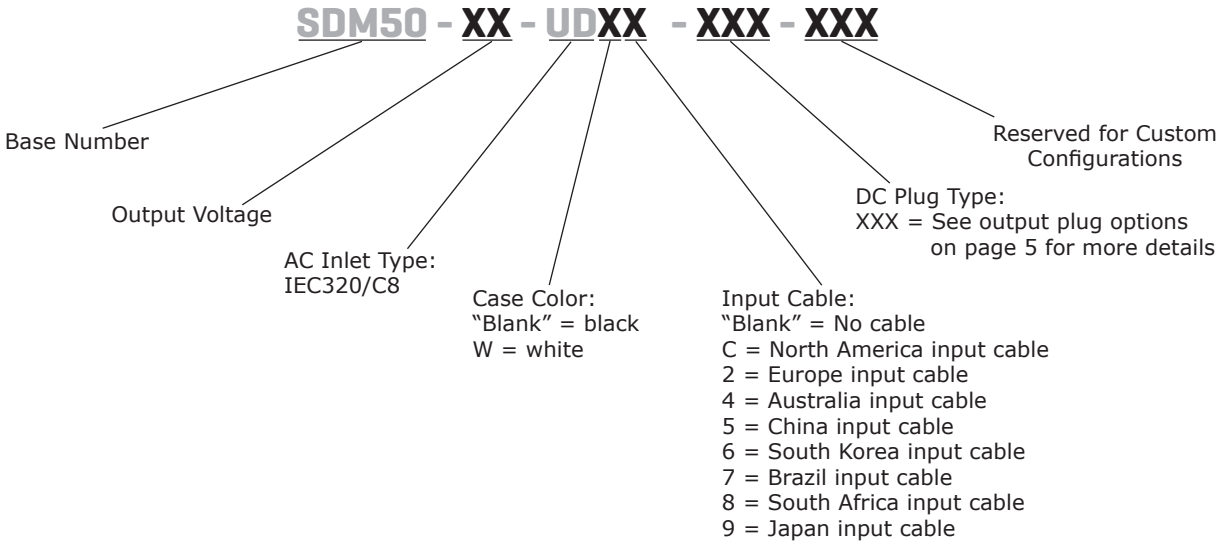
- up to 50 W continuous power
- meets DoE Level VI efficiency
- universal input voltage range
- compact size
- no load power consumption < 0.1 W
- over voltage and short circuit protections
- 2xMOPP compliance
- UL/cUL, TUV (60601-1) safety approvals
- LED indicator
- custom designs available



MODEL	output voltage (Vdc)	output current max (A)	output power max (W)	ripple and noise[1] max (mVp-p)	efficiency level
SDM50-5-UD	5	9.0	45	100	VI
SDM50-12-UD	12	4.16	50	240	VI
SDM50-15-UD	15	3.33	50	285	VI
SDM50-18-UD	18	3.15	57	270	VI
SDM50-24-UD	24	2.08	50	360	VI
SDM50-48-UD	48	1.04	50	720	VI

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

PART NUMBER KEY



Please read our datasheet & drawing disclaimer here.

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 230 Vac, full load, cold start			160	A
leakage current	at 240 Vac/50 Hz			0.1	mA
no load power consumption	at 115 Vac/60 Hz ~ 230 Vac/50 Hz 5 Vdc output model all other output models			 0.1 0.21	 W W

OUTPUT

parameter	conditions/description	min	typ	max	units
load regulation			±5		%
line regulation	at full load		±1		%
start-up time				3	s
rise time	at full load, 10~90% output voltage			50	ms
hold-up time	at full load	8.3			ms

PROTECTIONS

parameter	conditions/description	min	typ	max	units
over voltage protection	5 Vdc output model, output shut-down with latch 12 Vdc output model, output shut-down 15 Vdc output model, output shut-down with latch 18 Vdc output model, output shut-down 24 Vdc output model, output shut-down with latch 48 Vdc output model, output shut-down with latch			180 150 150 170 175 150	% % % % % %
over current protection	continuous, auto recovery	110		200	%
short circuit protection	continuous, auto recovery				

SAFETY & COMPLIANCE

parameter	conditions/description	min	typ	max	units
isolation voltage	15 Vdc output model input to output at 5 mA for 2 seconds all other output models input to output at 5 mA for 2 seconds		 1,800 4,000		 Vac Vac
safety approvals	60601: UL/cUL, TUV				
EMI/EMC	EN 55011 FCC Part 15 Class B				
MTBF	as per MIL-HDBK-217F, 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	%

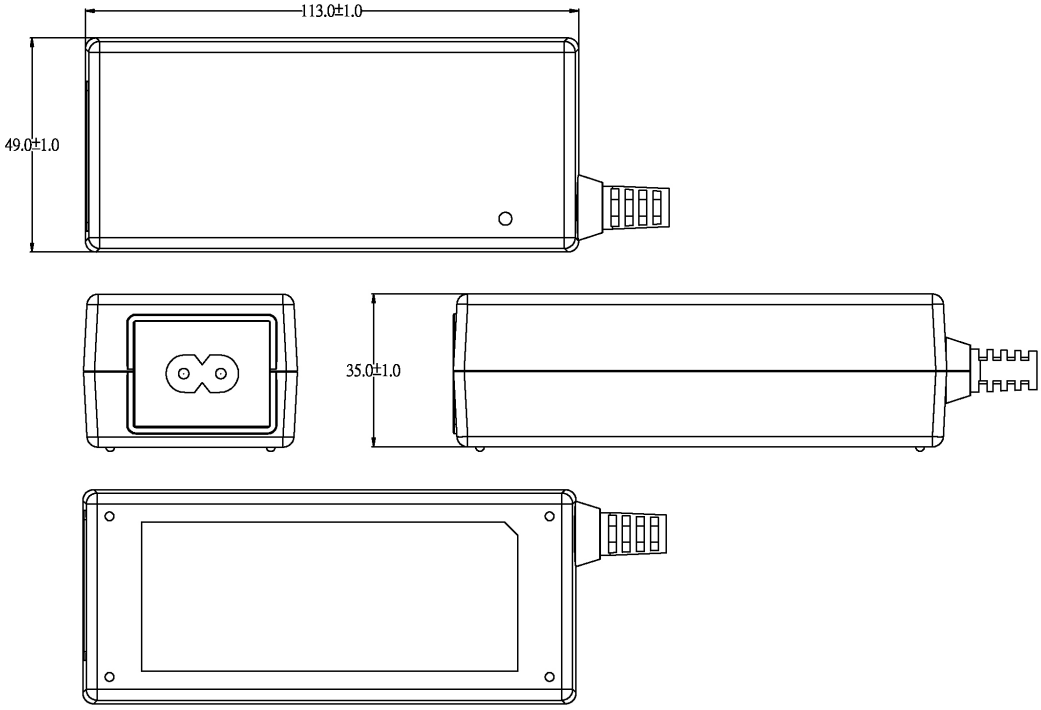
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MECHANICAL

parameter	conditions/description	min	typ	max	units
dimensions	113 (L) x 49 (W) x 35 (H)				mm
inlet plug	IEC320/C8				
weight	5, 12, 24, 48 Vdc output models 15 Vdc output model 18 Vdc output model		300 260 270		g g g

MECHANICAL DRAWING

units: mm
tolerance: ±1.0 mm



DC CORD

units: mm

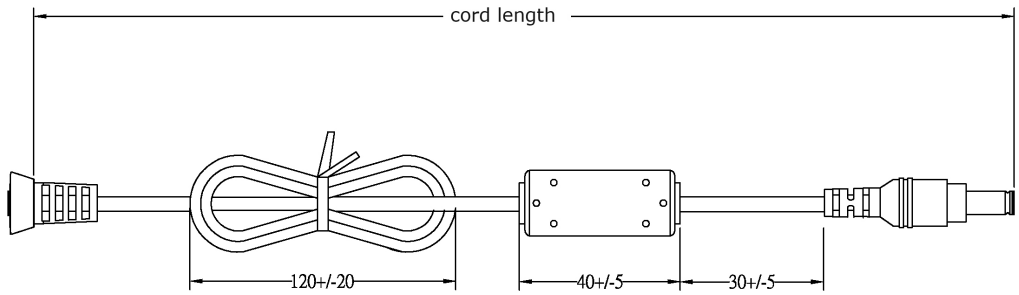


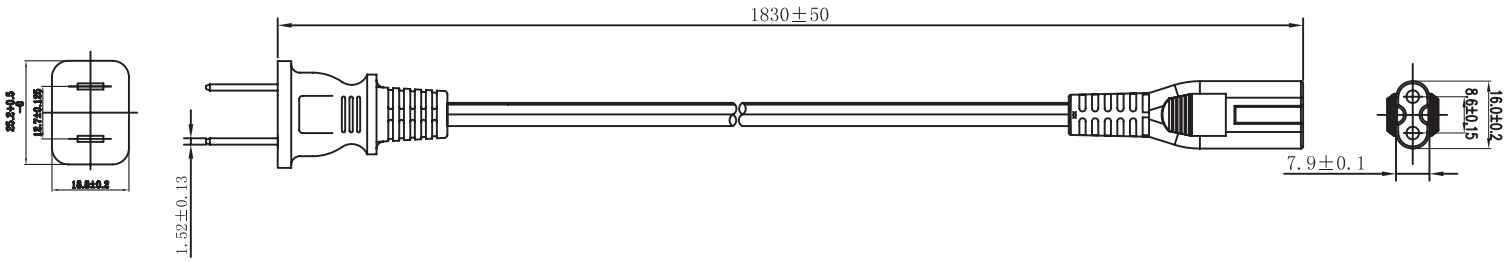
Table 1

MODEL NO.	CABLE	CORD LENGTH
SDM50-5-UD	UL1185, 14 AWG	1,200 mm ±30
SDM50-12-UD	UL1185, 16 AWG	1,200 mm ±30
SDM50-15-UD	UL1185, 16 AWG	1,200 mm ±30
SDM50-18-UD	UL1185, 18 AWG	1,200 mm ±30
SDM50-24-UD	UL1185, 18 AWG	1,200 mm ±30
SDM50-48-UD	UL1185, 18 AWG	1,200 mm ±30

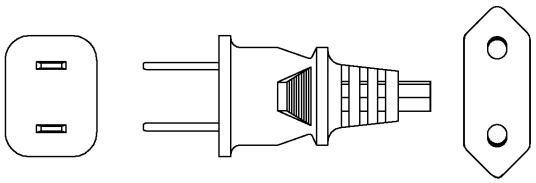
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AC CORDS

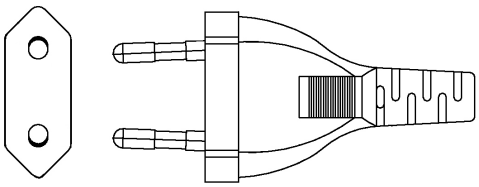
units: mm



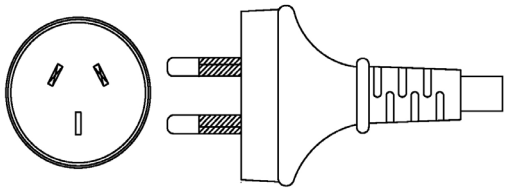
NORTH AMERICA



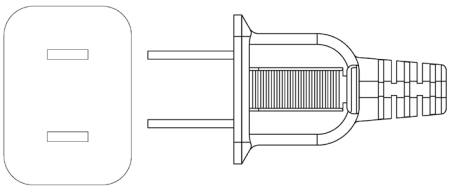
EUROPE



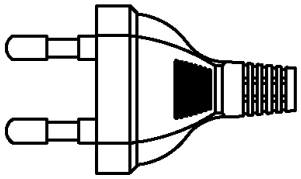
AUSTRALIA



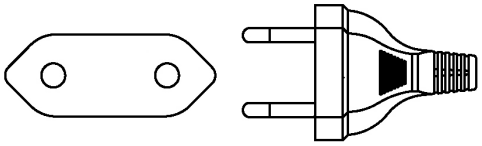
CHINA



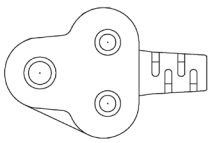
KOREA



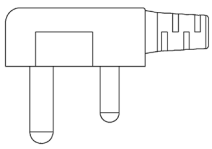
BRAZIL



SOUTH AFRICA



JAPAN



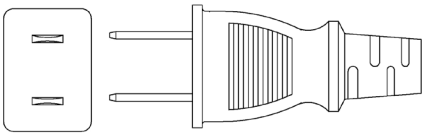


Table 2

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

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DC PLUG TYPE PART NUMBER KEY

X X X

Plug Polarity:
P = Center Positive



N = Center Negative



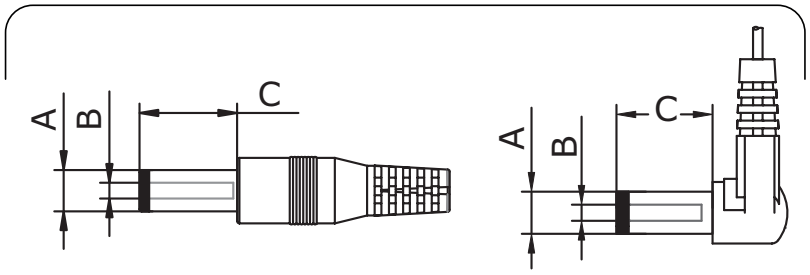
Plug Code:
X = Choose a code from the options below

Plug Angle:
"blank" = Straight
R = Right Angle

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	•	•
•	•	7	Standard	3.5	1.35	9.5	•	•
•	•	8	Standard	3.8	1.35	9.5	•	•
•	•	9	Standard	3.8	1.05	9.5	•	•
N/A	N/A	ST	Stripped & Tinned				N/A	N/A

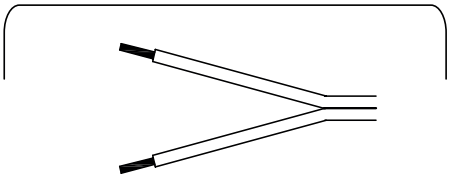
Note: 1. Contact CUI for additional plug options

Standard



Straight Right Angle (R)

Stripped & Tinned



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REVISION HISTORY

rev.	description	date
1.0	initial release	05/31/2021
1.01	PSE and UKCA removed from safeties	08/27/2021
1.02	medical icon added	05/03/2023

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.

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