



**SERIES:** SDI90-U | **DESCRIPTION:** AC-DC POWER SUPPLY

**FEATURES**

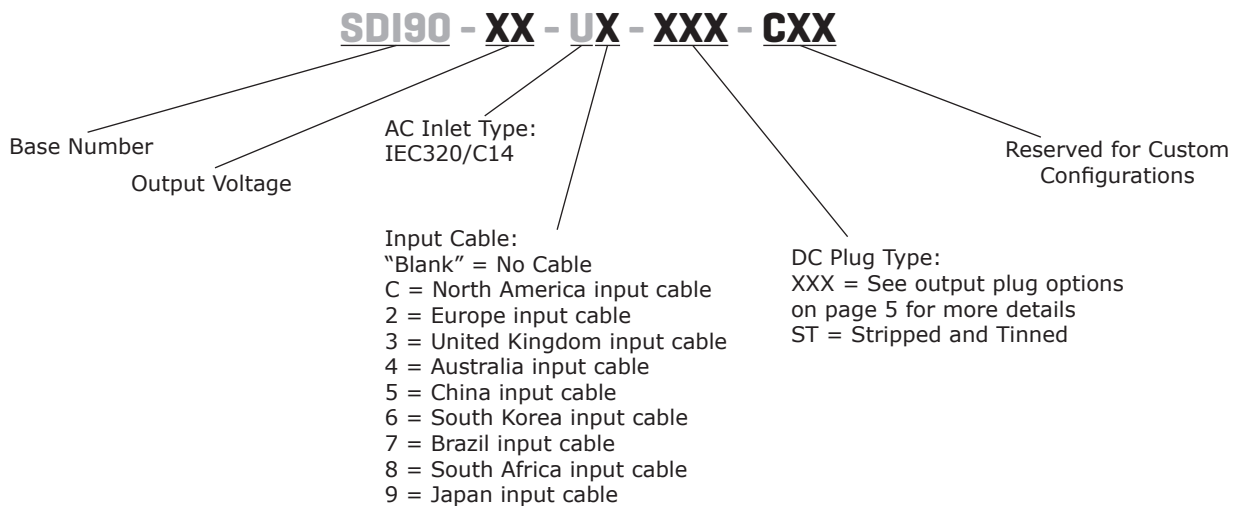
- level VI efficiency
- 90 W power
- universal input (90~264 Vac)
- single regulated outputs
- over voltage and short circuit protections
- UL/cUL, GS, PSE safety approvals
- power factor correction
- custom designs available



MODEL	output voltage	output current max	output power max	ripple and noise <sup>1</sup> max	efficiency level
	(Vdc)	(A)	(W)	(mVp-p)	
SDI90-12-U	12	7	84	150	VI
SDI90-15-U	15	6	90	150	VI
SDI90-18-U	18	5	90	180	VI
SDI90-19-U	19	4.74	90	190	VI
SDI90-24-U	24	3.75	90	240	VI
SDI90-48-U	48	1.88	90	480	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		264	Vac
frequency		47		63	Hz
current				1.2	A
inrush current	at 230 Vac, full load, 25°C, cold start			60	A
leakage current				3.5	mA
power factor correction	at full load	0.9			
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			150	%
over current protection	output shut down, auto recovery for 12, 24 Vdc models output shut down, auto recovery for all other models			130 150	% %
short circuit protection	output shut down, auto recovery				

## SAFETY & COMPLIANCE

parameter	conditions/description	min	typ	max	units
isolation voltage	input to output at 10 mA for 1 minute input to frame ground at 10 mA for 1 minute		3,000 1,500		Vac Vac
isolation resistance	input to output at 500 Vdc input to frame ground at 500 Vdc	10 10			MΩ MΩ
safety approvals	UL/cUL, GS, PSE <sup>1</sup> , LPS				
EMI/EMC	FCC Part 15B Class B, CE				
MTBF	as per Telcordia SR-332, 25°C	300,000			hrs
RoHS	2011/65/EU				

Notes: 1. PSE not available on 48 Vdc output model.

## ENVIRONMENTAL

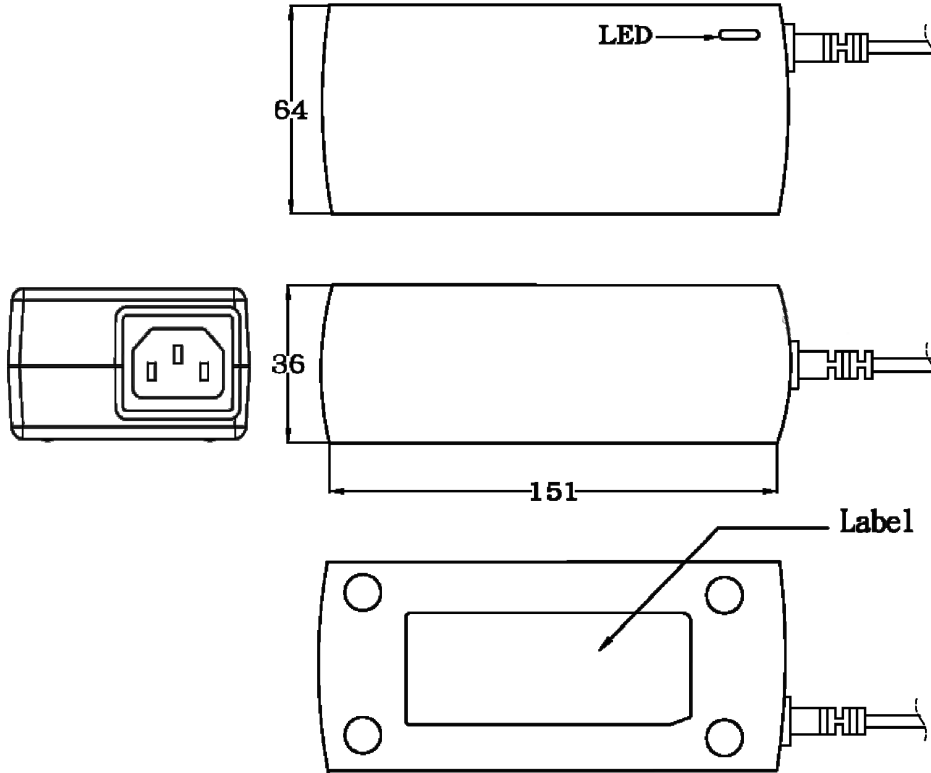
parameter	conditions/description	min	typ	max	units
operating temperature		0		40	°C
storage temperature		-20		80	°C
operating humidity	non-condensing	20		80	%
storage humidity	non-condensing	10		90	%

## MECHANICAL

parameter	conditions/description	min	typ	max	units
dimensions	151 x 64 x 36				mm
inlet plug	IEC320/C14				
weight	without ac cord		460		g

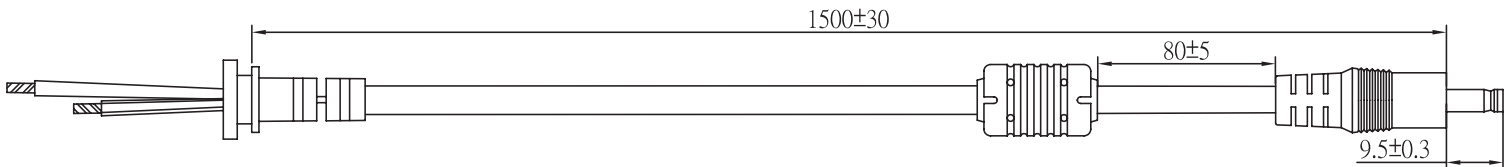
## MECHANICAL DRAWING

units: mm



## DC CORD

units: mm

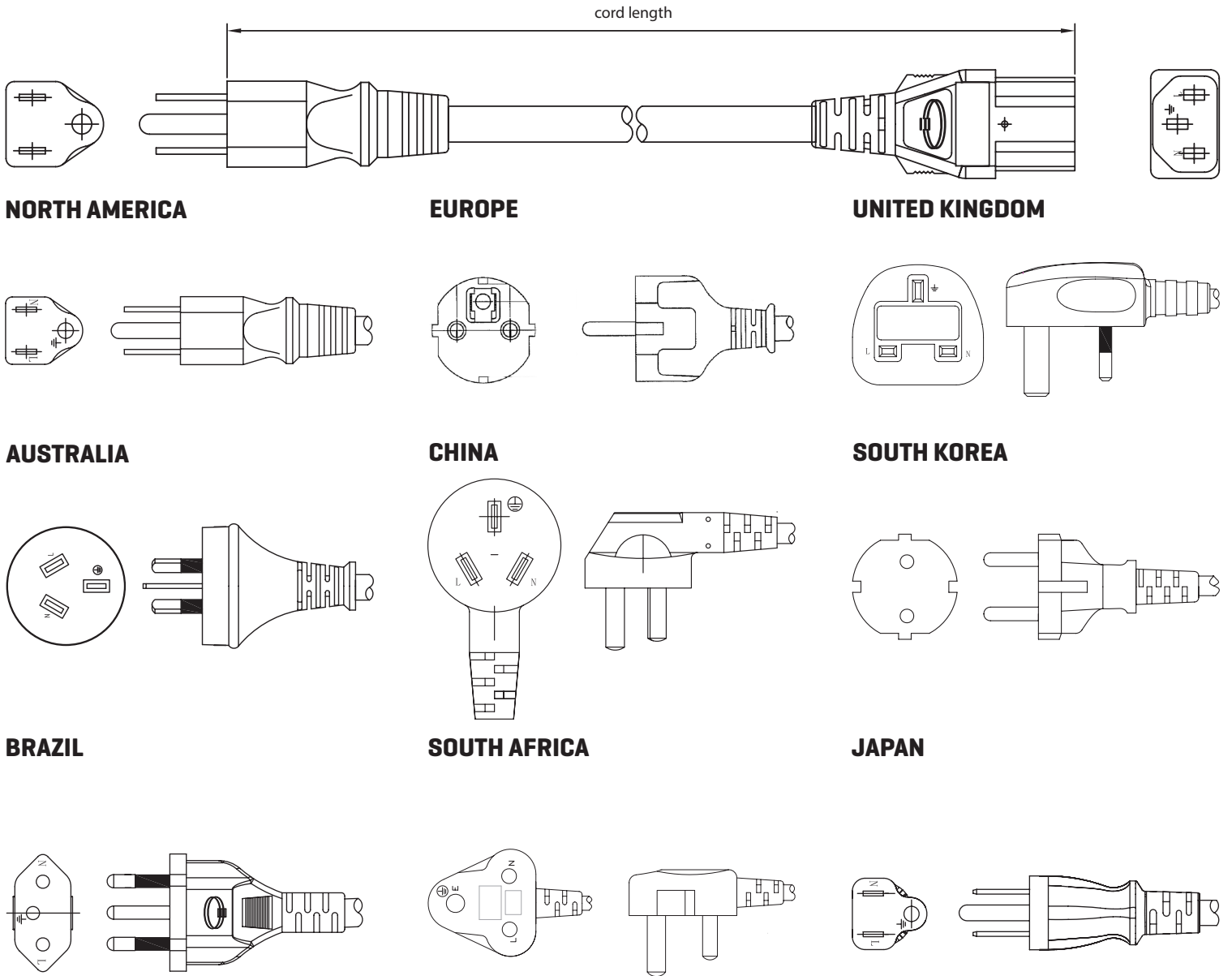


**Table 1**

MODEL NO.	CABLE	CORD LENGTH
SDI90-12-U	UL1185, 16 AWG	1,500 mm ±30
SDI90-15-U	UL1185, 16 AWG	1,500 mm ±30
SDI90-18-U	UL1185, 16 AWG	1,500 mm ±30
SDI90-19-U	UL1185, 18 AWG	1,500 mm ±30
SDI90-24-U	UL1185, 18 AWG	1,500 mm ±30
SDI90-48-U	UL1185, 20 AWG	1,500 mm ±30

## AC CORD

units: mm

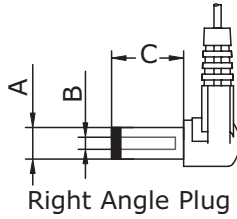
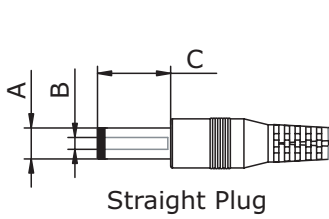


**Table 2**

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

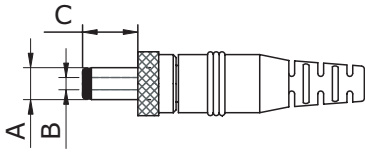
## OUTPUT PLUG OPTIONS

### Standard DC Plug



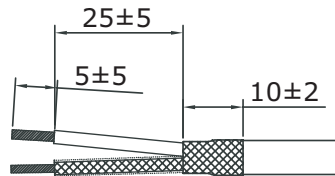
Size	A	B	C	Unit
5	5.5	2.1	9.5	mm
6	5.5	2.5	9.5	mm

### Locking DC Plug

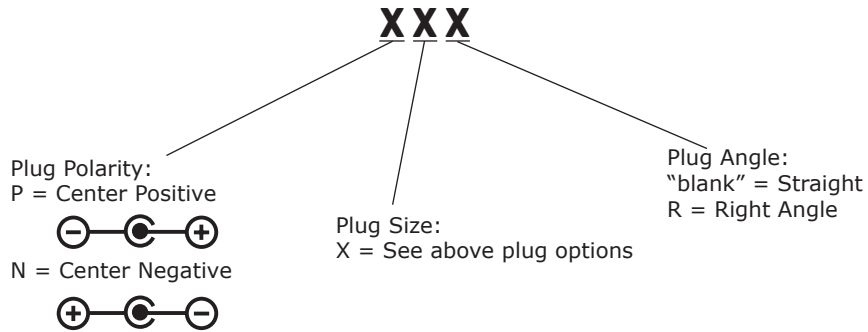


Size	A	B	C	Unit
10	5.5	2.1	9.5	mm
11	5.5	2.5	9.5	mm

### Stripped and Tinned



### DC Plug Type



\*Contact CUI for additional plug options

## REVISION HISTORY

rev.	description	date
1.0	initial release	03/18/2015
1.01	updated datasheet	04/15/2015

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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