SERIES: SDI18-U | **DESCRIPTION:** AC-DC POWER SUPPLY

FEATURES

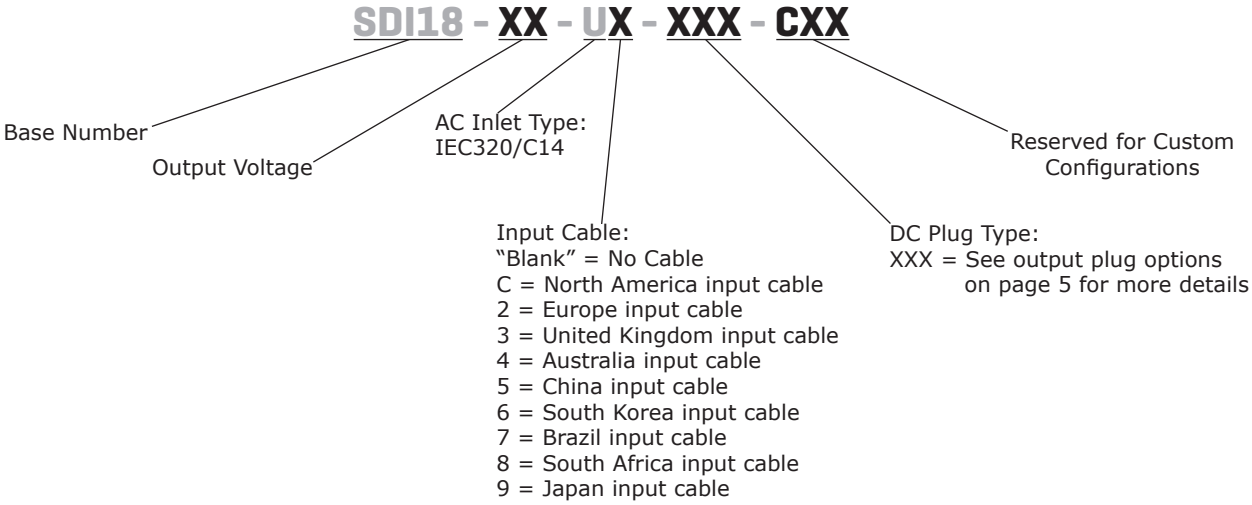
- up to 18 W continuous power
- DoE Level VI, CoC Tier 2 efficiency
- no load power consumption < 0.075 W
- compact size
- universal input voltage range
- over voltage, over current, and short circuit protections
- UL/cUL, CE, PSE safety approvals
- certified to 62368-1 standards

MODEL

MODEL	output voltage (Vdc)	output current max (A)	output power max (W)	ripple and noise[1] max (mVp-p)	efficiency level[2]
SDI18-5-U	5	3	15	100	VI
SDI18-5.9-U	5.9	3	17.7	100	VI
SDI18-9-U	9	2.2	19.8	100	VI
SDI18-12-U	12	1.6	19.2	120	VI
SDI18-15-U	15	1.3	19.5	150	VI
SDI18-24-U	24	0.8	19.2	240	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.
2. CoC Tier 2 compliant

PART NUMBER KEY



INPUT

parameter	conditions/description	min	typ	max	units
voltage		90		264	Vac
frequency		47		63	Hz
current	at full load			0.48	A
inrush current	at 100 Vac, full load, 25°C, cold start at 230 Vac, full load, 25°C, cold start			50 60	A A
leakage current				3.5	mA
no load power consumption	at 230 Vac			0.075	W

OUTPUT

parameter	conditions/description	min	typ	max	units
regulation	5 Vdc output model all other models		±6 ±5		% %
hold-up time	at full load	10			ms

PROTECTIONS

parameter	conditions/description	min	typ	max	units
over voltage protection	output shut down 5 Vdc output model 5.9 Vdc output model 9 Vdc output model 12 Vdc output model 15 Vdc output model 24 Vdc output model			 12 12 16 22 32 45	 Vdc Vdc Vdc Vdc Vdc Vdc
over current protection	output shut down, auto recovery 5 Vdc output model 5.9 Vdc output model 9 Vdc output model 12 Vdc output model 15 Vdc output model 24 Vdc output model			 7 6 5 5 4 2.5	 A A A A A A
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 (62368-1), PSE, UKCA				
EMI/EMC	FCC Part 15B Class B, CE				
MTBF	as per Telcordia SR-332, 25°C	300,000			hours
RoHS	yes				

ENVIRONMENTAL

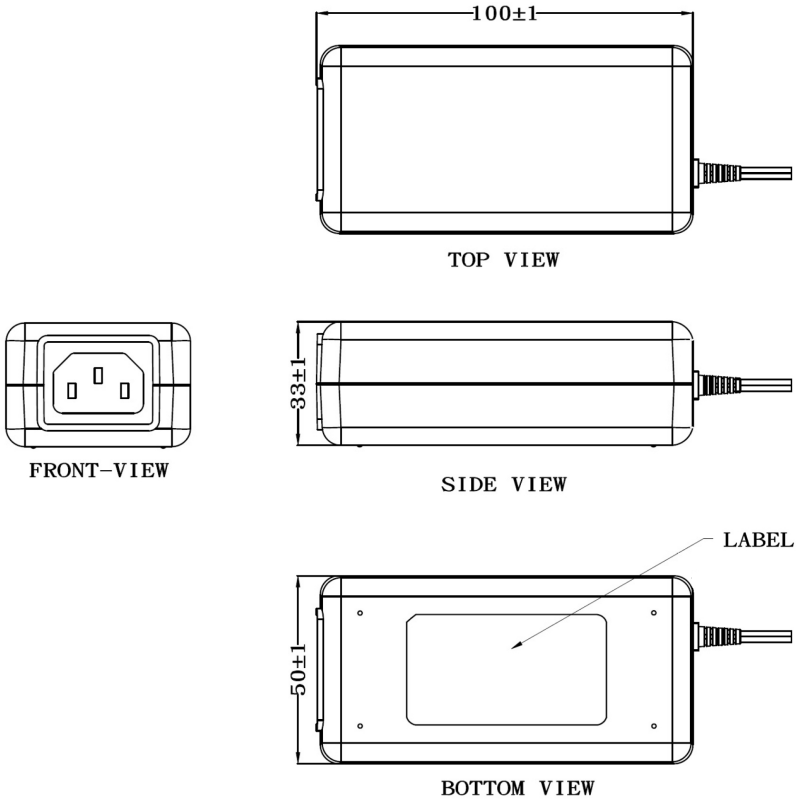
parameter	conditions/description	min	typ	max	units
operating temperature		0		40	°C
storage temperature		-20		80	°C
operating humidity	non-condensing	20		80	%
storage humidity	non-condensing	10		90	%

MECHANICAL

parameter	conditions/description	min	typ	max	units
dimensions	100 x 50 x 33				mm
inlet plug	IEC320/C14				
weight	without ac cord		170		g

MECHANICAL DRAWING

units: mm
tolerance: ±1.0 mm



DC CORD

units: mm

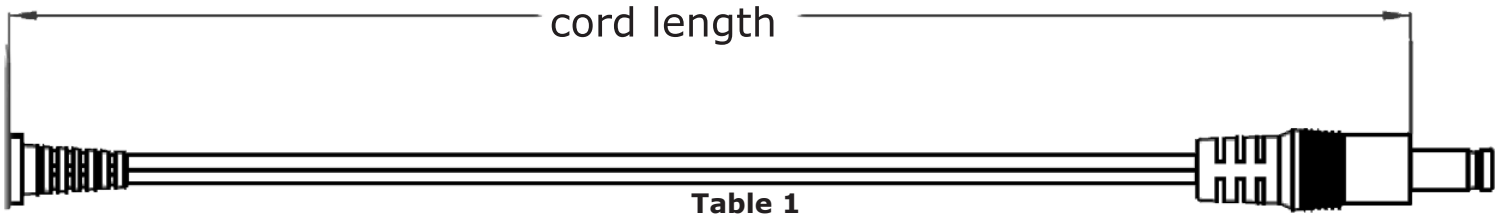
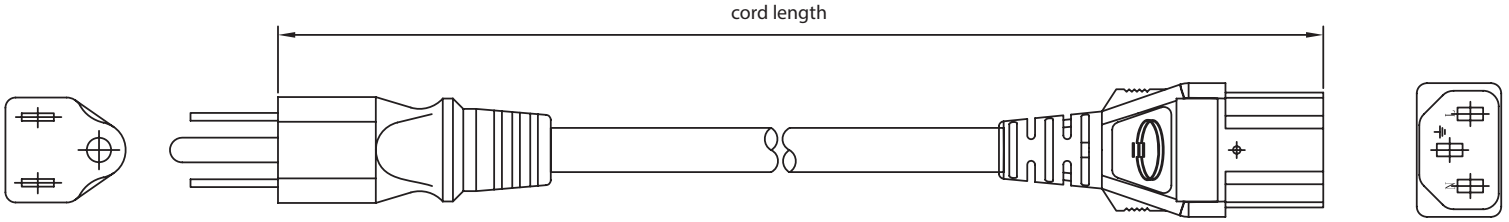


Table 1

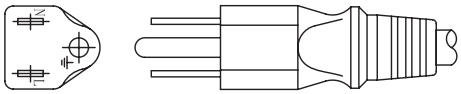
MODEL NO.	CABLE	CORD LENGTH
SDI18-5-U	UL2468, 16 AWG	1,500 mm ±30
SDI18-5.9-U	UL2468, 16 AWG	1,200 mm ±30
SDI18-9-U	UL2468, 18 AWG	1,500 mm ±30
SDI18-12-U	UL2468, 20 AWG	1,500 mm ±30
SDI18-15-U	UL2468, 22 AWG	1,500 mm ±30
SDI18-24-U	UL2468, 22 AWG	1,500 mm ±30

AC CORD

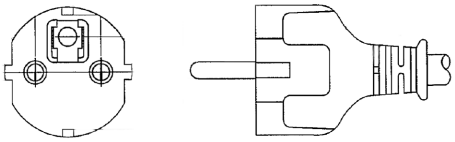
units: mm



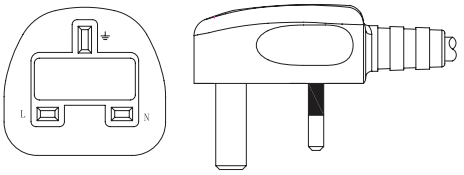
NORTH AMERICA



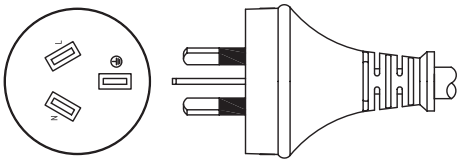
EUROPE



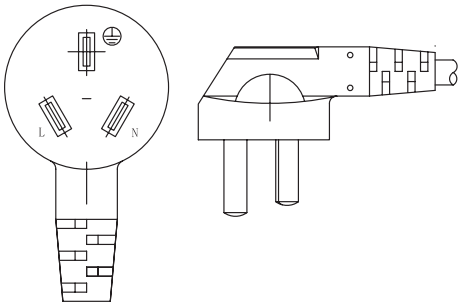
UNITED KINGDOM



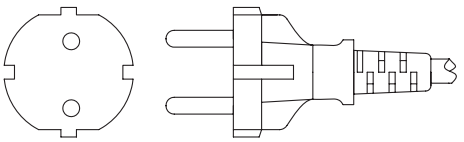
AUSTRALIA



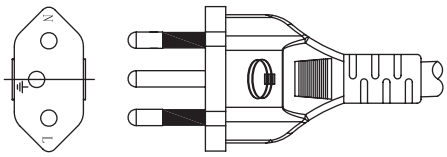
CHINA



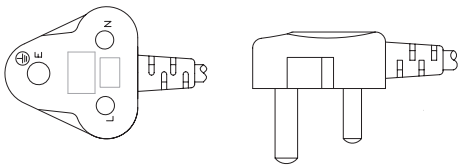
SOUTH KOREA



BRAZIL



SOUTH AFRICA



JAPAN

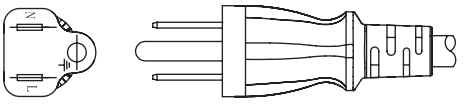


Table 2

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

DC PLUG TYPE PART NUMBER KEY

X X X

Plug Polarity:
P = Center Positive

N = Center Negative

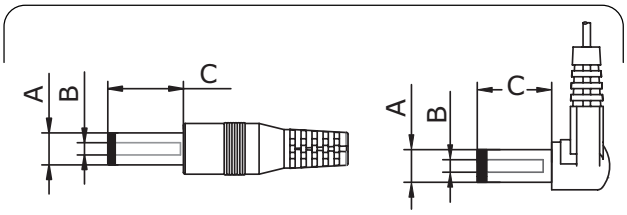
Plug Code:
X = Choose a code from the options below

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	•	•
•	•	10	Locking[2]	5.5	2.1	9.5	•	N/A
•	•	11	Locking[2]	5.5	2.5	9.5	•	N/A
•	•	12	EIAJ-1	2.35	0.7	9.5	•	•
•	•	13	EIAJ-2	4.0	1.7	9.5	•	•
•	•	14	EIAJ-3	4.75	1.7	9.5	•	•
N/A	N/A	ST	Stripped & Tinned				N/A	N/A

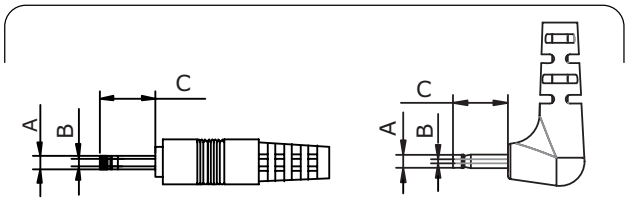
Note: 1. Contact CUI for additional plug options
2. Maximum insertion depth is 10mm

Standard



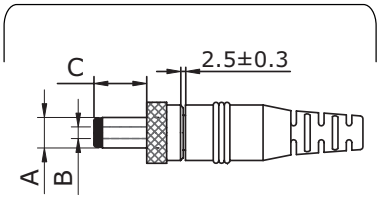
Straight Right Angle (R)

EIAJ

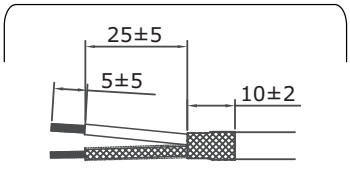


Straight Right Angle (R)

Locking



Stripped & Tinned



REVISION HISTORY

rev.	description	date
1.0	initial release	08/07/2015
1.01	updated datasheet	03/16/2016
1.02	changed wire gauge on 5 Vdc & 5.9 Vdc models, updated datasheet	09/15/2016
1.03	added 62368-1 standard	08/31/2018
1.04	company logo updated	06/24/2020
1.05	GS removed from safeties	12/09/2020
1.06	tolerance updated in mechanical drawing, UKCA added to specification	08/11/2021
1.07	plug polarity symbols updated	09/16/2021
1.08	LPS added to safety marks, safeties updated	02/18/2022
1.09	dc plugs updated	05/23/2022
1.10	safeties updated	04/24/2023

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

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