CUI INC
a bel group

SERIES: SDI50-UD | DESCRIPTION: AC-DC POWER SUPPLY

FEATURES

- DoE Level VI, CoC Tier 2 efficiency
- 50 W power
- universal input (90~264 Vac)
- compact size
- single regulated output from 9~48 Vdc
- over voltage and short circuit protections
- UL/cUL and PSE safety approvals
- custom designs available
- certified to 60950-1 and 62368-1 standards

RoHS c UL us PSE CE FC LPS

MODEL

MODEL	output voltage (Vdc)	output current max (A)	output power max (W)	ripple and noise[1] max (mVp-p)	efficiency level[2]
SDI50-9-UD	9	5	45	100	VI
SDI50-12-UD	12	4.2	50	120	VI
SDI50-15-UD	15	3.34	50	150	VI
SDI50-18-UD	18	2.78	50	180	VI
SDI50-19-UD	19	2.64	50	190	VI
SDI50-24-UD	24	2.1	50	240	VI
SDI50-48-UD	48	1.05	50	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.
2. CoC Tier 2 compliant

PART NUMBER KEY

SDI50 - XX - UDX - XXX - CXX

- Base Number
- Output Voltage
- AC Inlet Type: IEC320/C8
- Input Cable:
  "Blank" = No Cable
  C = North America input cable
  2 = Europe input cable
  3 = United Kingdom input cable
  4 = Australia input cable
  5 = China input cable
  6 = South Korea input cable
  7 = Brazil input cable
  8 = South Africa input cable
  9 = Japan input cable
- DC Plug Type:
  XXX = See output plug options on page 5 for more details
- Reserved for Custom Configurations

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			70	A
leakage current				0.25	mA
no load power consumption	at 230 Vac 9 Vdc model all other models			 0.10 0.15	 W W

OUTPUT

parameter	conditions/description	min	typ	max	units
regulation			±5		%

PROTECTIONS

parameter	conditions/description	min	typ	max	units
over voltage protection	output latch off			180	%
over current protection	output shut down, auto recovery			180	%
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		3,000		Vac
isolation resistance	input to output at 500 Vdc	10			MΩ
safety approvals	UL/cUL (60950-1, 62368-1), PSE, LPS				
EMI/EMC	FCC Part 15B Class B, CE				
MTBF	as per Telcordia SR-332, 25°C	300,000			hours
RoHS	yes				

ENVIRONMENTAL

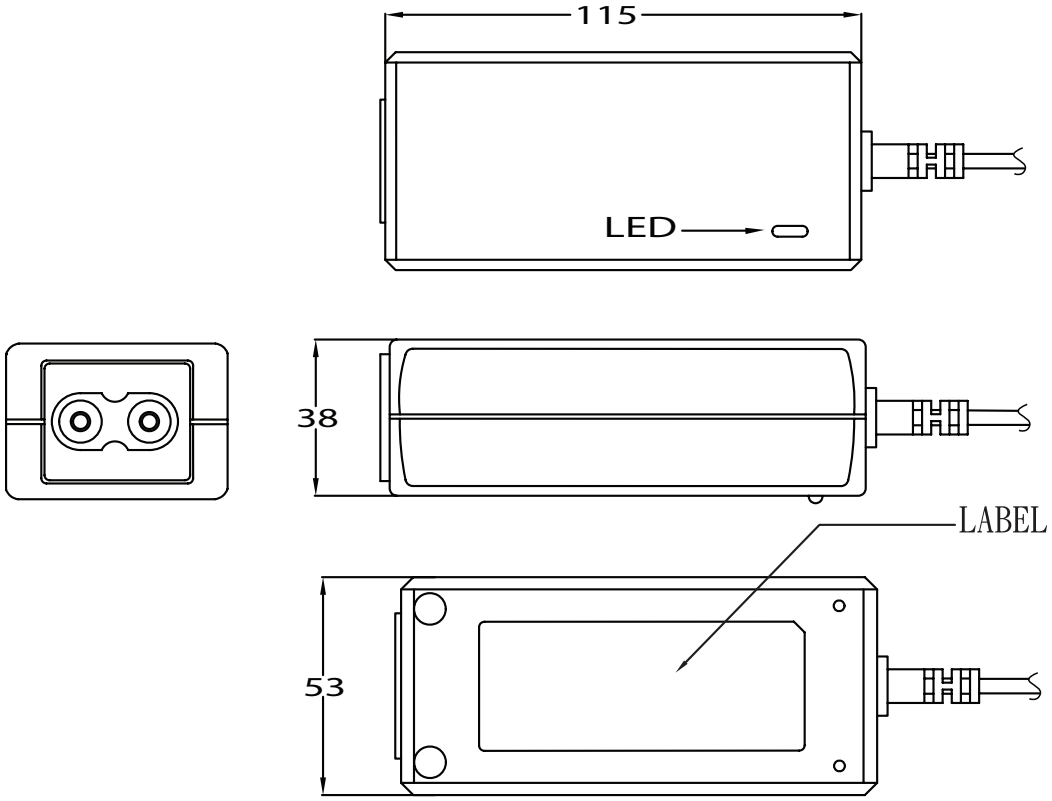
parameter	conditions/description	min	typ	max	units
operating temperature		0		40	°C
storage temperature		-20		80	°C
operating humidity	non-condensing	20		80	%
storage humidity	non-condensing	10		90	%

MECHANICAL

parameter	conditions/description	min	typ	max	units
dimensions	115 x 53 x 38				mm
inlet plug	IEC320/C8				
weight	without ac cord		310		g

MECHANICAL DRAWING

units: mm
tolerance: ±1.0 mm



DC CORD

units: mm

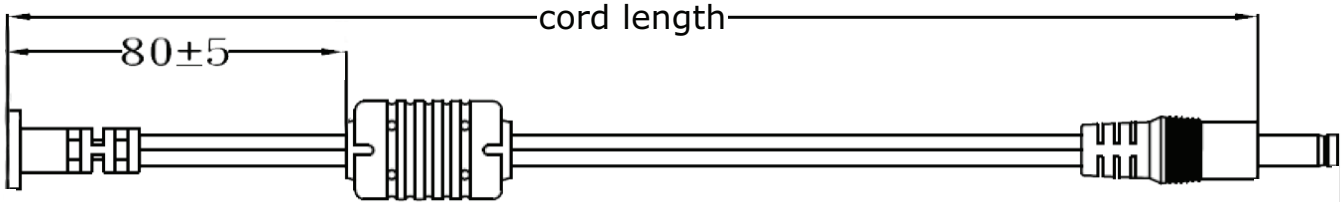
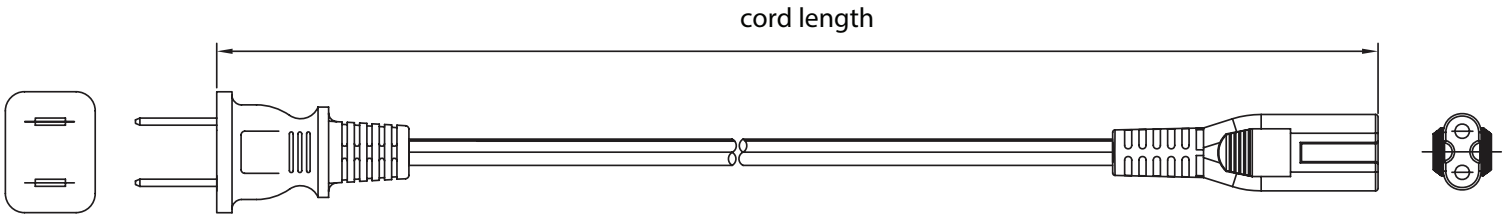


Table 1

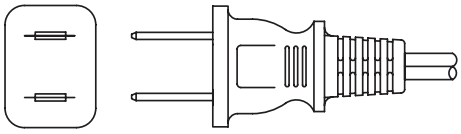
MODEL NO.	CABLE	CORD LENGTH
SDI50-9-UD	UL2468, 18 AWG	1,500 mm ±30
SDI50-12-UD	UL2468, 18 AWG	1,500 mm ±30
SDI50-15-UD	UL2468, 18 AWG	1,500 mm ±30
SDI50-18-UD	UL2468, 18 AWG	1,500 mm ±30
SDI50-19-UD	UL2468, 18 AWG	1,500 mm ±30
SDI50-24-UD	UL2468, 18 AWG	1,500 mm ±30
SDI50-48-UD	UL2468, 20 AWG	1,500 mm ±30

AC CORD

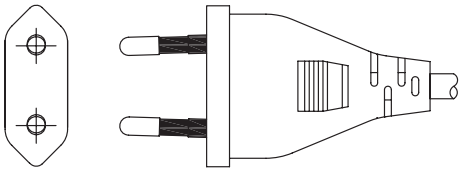
units: mm



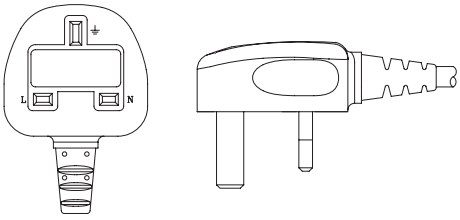
NORTH AMERICA



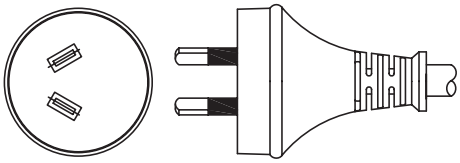
EUROPE



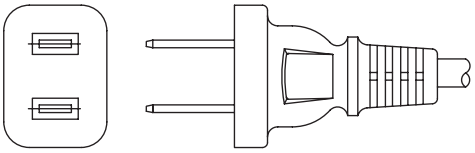
UNITED KINGDOM



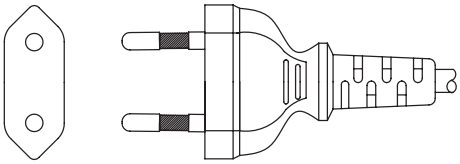
AUSTRALIA



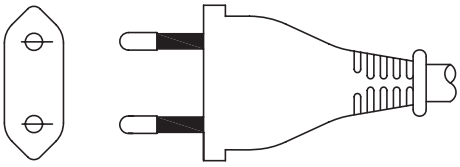
CHINA



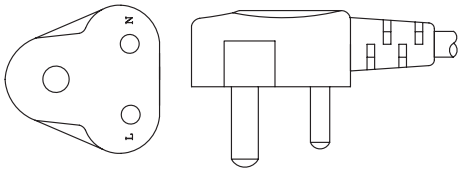
SOUTH KOREA



BRAZIL



SOUTH AFRICA



JAPAN

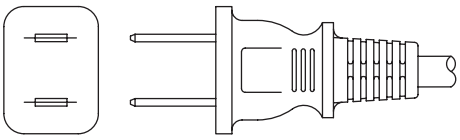


Table 2

AC INPUT	CORD LENGTH
North America	1,830 mm ±50
Europe	1,830 mm ±50
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 ±50

DC PLUG TYPE PART NUMBER KEY

X X X

Plug Polarity:
P = Center Positive

N = Center Negative

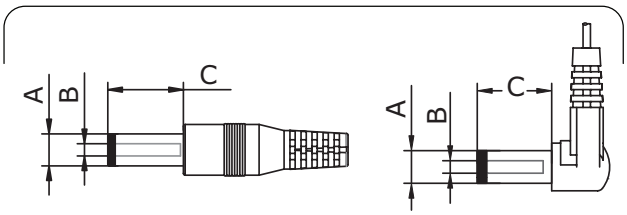
Plug Code:
X = Choose a code from the options below

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	5.5	2.1	9.5	•	N/A
•	•	11	Locking	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

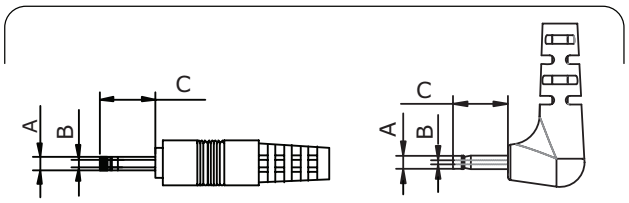
Note: 1. Contact CUI for additional plug options

Standard



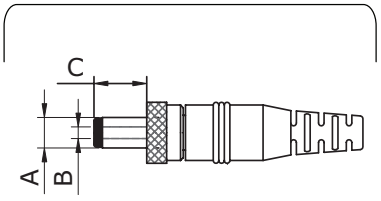
Straight Right Angle (R)

EIAJ

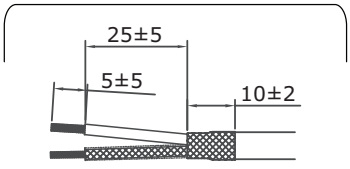


Straight Right Angle (R)

Locking



Stripped & Tinned



REVISION HISTORY

rev.	description	date
1.0	initial release	05/13/2015
1.01	updated datasheet	09/15/2016
1.02	added 62368-1 standard	08/31/2018
1.03	removed GS safety approval	03/02/2020

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

CUI INC
a bel group

Headquarters
20050 SW 112th Ave.
Tualatin, OR 97062
800.275.4899

Fax 503.612.2383
cui.com
techsupport@cui.com

CUI offers a two (2) year limited warranty. Complete warranty information is listed on our website.

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