CUI INC®

SERIES: EMSA 40W | **DESCRIPTION:** AC-DC POWER SUPPLY

FEATURES

- up to 40 W power
- interchangeable AC blades
- universal input (90~264 Vac)
- single regulated output from 12~24 V
- over voltage and short circuit protection
- UL/cUL, GS, RCM, CCC, PSE safety approvals
- level V efficiency
- custom designs available

MODEL	output voltage (Vdc)	output current max (A)	output power max (W)	ripple and noise[1] max (mVp-p)	efficiency level
EMSA120300	12	3.0	36	300	V
EMSA200200	20	2.0	40	300	V
EMSA240167	24	1.67	40	300	V

Notes: 1. At full load, 100 ~ 240 Vac input, 20 MHz bandwidth oscilloscope, each output terminated with 10 μF aluminum electrolytic and 0.1 μF ceramic capacitors.

PART NUMBER KEY

EMSA120300 X - XX - SZ - CXX

Base Number
example of 12 Vdc, 3 A

DC Plug Type

Factory Designation

Reserved for Custom Configurations

Blades:
"blank" = North American, European, United Kingdom, Australian, and China blades included
N = North American blade included
E = European blade included
B = United Kingdom blade included
A = Australian blade included
C = China blade included
K = No blades included

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INPUT

parameter	conditions/description	min	typ	max	units
voltage		90		264	Vac
frequency		47		63	Hz
current				1.0	A RMS
no load power consumption				0.3	W

OUTPUT

parameter	conditions/description	min	typ	max	units
line regulation			±1		%
load regulation			±5		%

PROTECTIONS

parameter	conditions/description
over voltage protection	output voltage clamped by internal protection zener
short circuit protection	output shut down and auto restart

SAFETY & COMPLIANCE

parameter	conditions/description	min	typ	max	units
isolation voltage	input to output at 10 mA for 1 minute			3,000 4,242	Vac Vdc
isolation resistance	input to output at 500 V dc	100			MΩ
safety approvals	UL 60950-1, EN 60950-1/IEC 60950-1, RCM, CCC, PSE				
EMI/EMC	FCC part 15B, CISPR 22 Class B, EN 61204-3, EN 55022 Class B, EN 55024, EN 61000-3-(2, 3), IEC 6100-3-(2, 3), IEC 6100-4-(2, 3, 4, 5, 6, 11), CE				
leakage current				0.25	mA
RoHS compliant	yes				

ENVIRONMENTAL

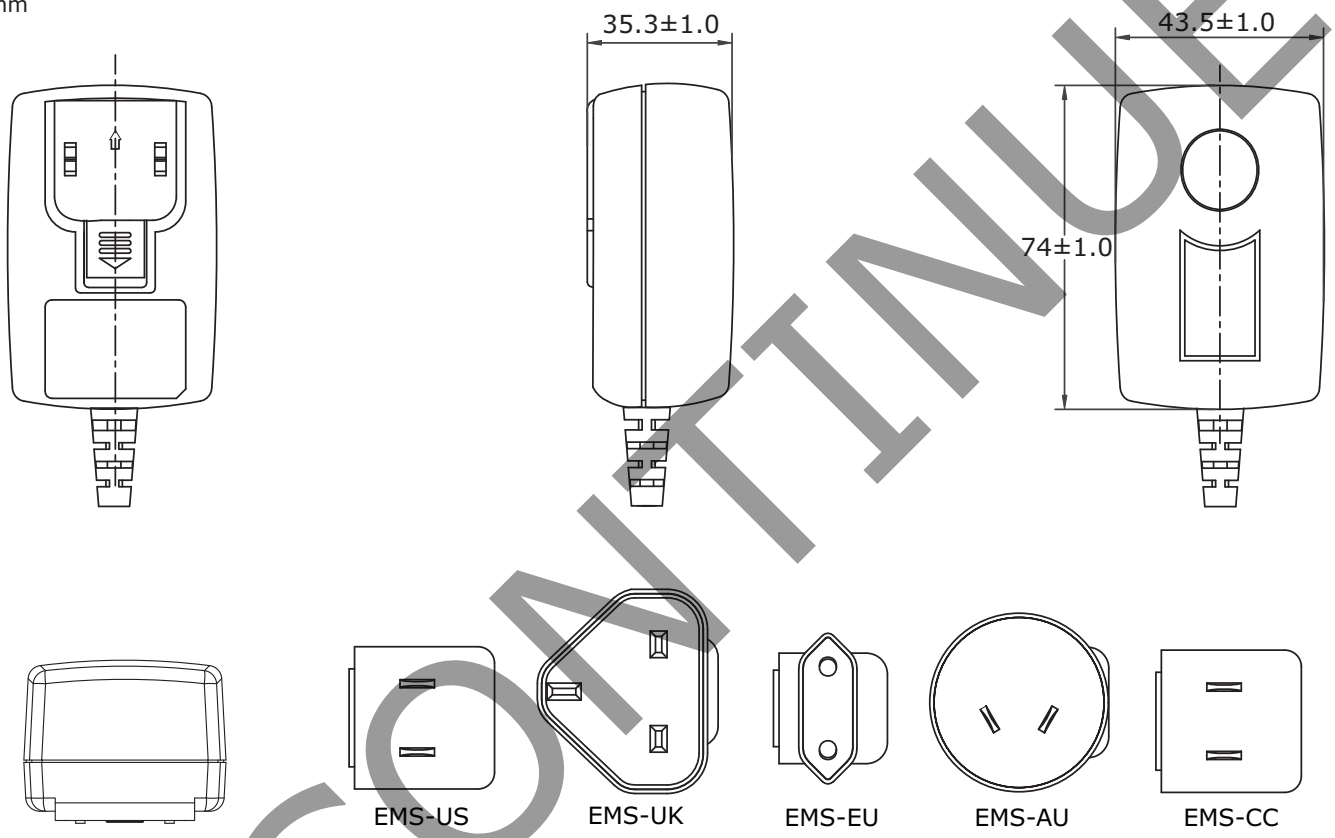
parameter	conditions/description	min	typ	max	units
operating temperature		0		40	°C
storage temperature		-10		70	°C
operating humidity		20		80	%
storage humidity		10		90	%

MECHANICAL

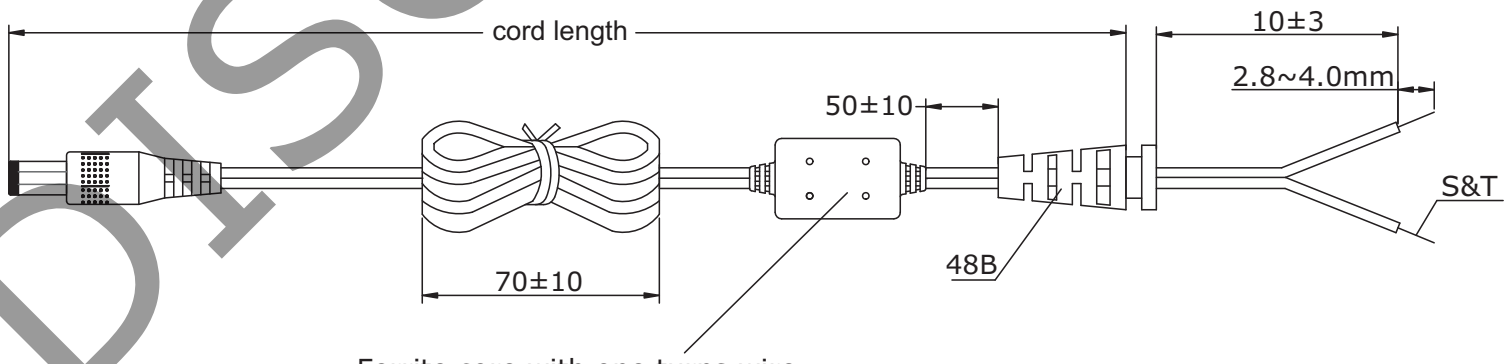
parameter	conditions/description	min	typ	max	units
dimensions	2.913 x 1.713 x 1.390 (74 x 43.5 x 35.3 mm)				inch
input plug	multi-blade (US, UK, Europe, Australia, China)				

MECHANICAL DRAWING

units: mm



DC CORD



Black wire, white stripe: Positive

Ferrite core with one turns wire
12x20x7.3(018)

MODEL NO.	CABLE GAUGE	CORD LENGTH
EMSA120300	18 AWG	1530 ± 100
EMSA200200	20 AWG	1530 ± 100
EMSA240167	20 AWG	1530 ± 100

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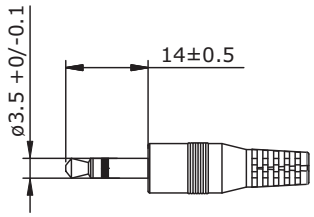
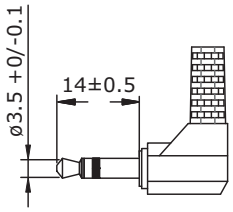
OUTPUT PLUG OPTIONS

3.5 mm Phono Plug



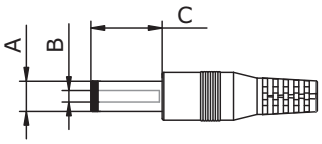
P1



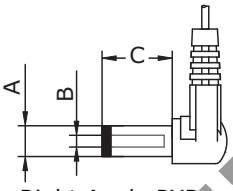
P1R

*Tip positive

Standard DC Plug



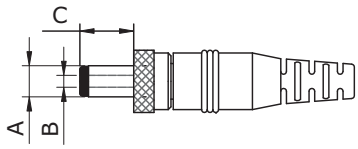
Standard PX



Right Angle PXR

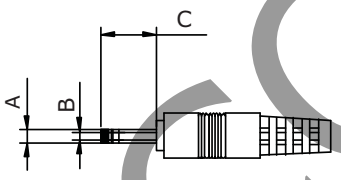
	A	B	C	Unit
P5/P5R	5.5	2.1	9.5	mm
P6/P6R	5.5	2.5	9.5	mm
P7/P7R	3.5	1.35	9.5	mm
P8/P8R	3.8	1.35	9.5	mm
P9/P9R	3.8	1.05	9.5	mm

Locking DC Plug

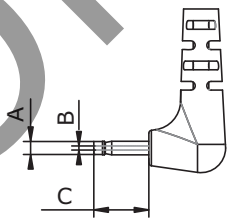


	A	B	C	Unit
P10	5.5	2.1	9.5	mm
P11	5.5	2.5	9.5	mm

EIAJ Plugs

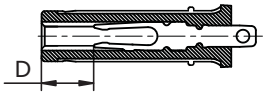


Standard PXX

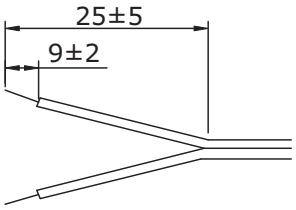


Right Angle PXXR

	EIAJ	A	B	C	D	Unit
P12/P12R	EIAJ-1	2.35	0.7	9.5	NA	mm
P13/P13R	EIAJ-2	4.0	1.7	9.5	5.0	mm
P14/P14R	EIAJ-3	4.75	1.7	9.5	5.0	mm



Stripped and Tinned



DC PLUG TYPE

ST

Stripped and Tinned

PXX X X

Plug Type

Plug Angle:
"Blank" = Standard
R = Right Angle

Plug Polarity:
"Blank" = N/A
P = Center Positive
N = Center Negative

*Contact CUI for additional output plug options.

REVISION HISTORY

rev.	description	date
1.0	initial release	06/21/2010
1.01	new template applied	08/08/2011
1.02	PSE safety approval added	09/07/2011
1.03	updated P7/P7R B dimension	03/23/2012
1.04	V-Infinity branding removed, safety and EMI/EMC data updated	08/21/2012

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

DISCONTINUED

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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.

CUI reserves the right to make changes to the product at any time without notice. Information provided by CUI is believed to be accurate and reliable. However, no responsibility is assumed by CUI for its use, nor for any infringements of patents or other rights of third parties which may result from its use.

CUI products are not authorized or warranted for use as critical components in equipment that requires an extremely high level of reliability. A critical component is any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.