CUI INC®

SERIES: EMSA 18W UN | **DESCRIPTION:** AC-DC POWER SUPPLY

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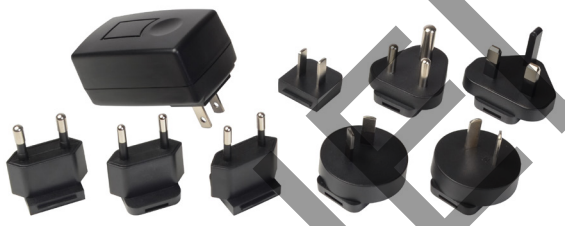
FEATURES

- 18 W power
- universal input (90~264 Vac)
- worldwide safety approvals
- ac input - 9 country blades
- single regulated output
- over voltage and short circuit protections
- 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
EMSA120150-UN	12	1.5	18	150	V

Notes: 1. Ripple and noise measured with 20 MHz bandwidth oscilloscope, each output terminated with 10 µF aluminum electrolytic and 0.1 µF ceramic capacitors.

PART NUMBER KEY

EMSA120150 - UN - XX - SZ - CXX

- **EMSA120150** — Base Number, example of 12 Vdc, 1.50 A
- **UN** — Blades: UN = North American, European, United Kingdom, Australian, China, Korea, Argentina, Brazil, South Africa
- **XX** — DC Plug Type: see output plug options on page 4
- **SZ** — Factory Designation
- **CXX** — Reserved for Custom Configurations

INPUT

parameter	conditions/description	min	typ	max	units
voltage		90		264	Vac
frequency		47		63	Hz
current	RMS			0.6	A
inrush current	at 115 Vac, cold start at 230 Vac, cold start			40 80	A A
leakage current				0.25	mA
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	min	typ	max	units
over voltage protection	output voltage clamped by internal protection zener				
short circuit protection	output shutdown and auto restart				

SAFETY & COMPLIANCE

parameter	conditions/description	min	typ	max	units
isolation voltage	input to output for 1 minute at 10mA max		3,000 4,242		Vac Vdc
isolation resistance	input to output at 500 Vdc	100			MΩ
safety standards	UL 60950-1, EN 60950-1, IEC 60950-1				
safety approvals	UL/cUL, GS, Australia, China, Japan, Korea, Argentina, Brazil, Israel, Malaysia, Mexico, Ukraine, Russia, Singapore, South Africa, Saudi Arabia, Taiwan				
EMI/EMC	FCC Part 15 Subpart B, Class B, CE				
RoHS	2011/65/EU				

ENVIRONMENTAL

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

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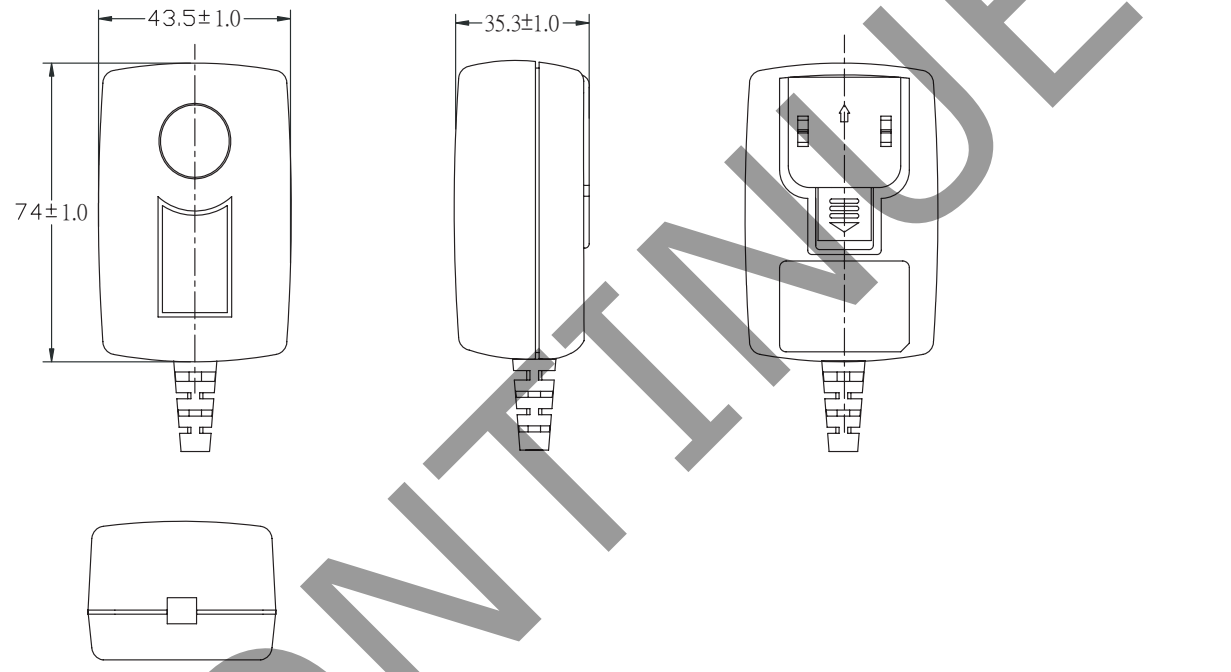
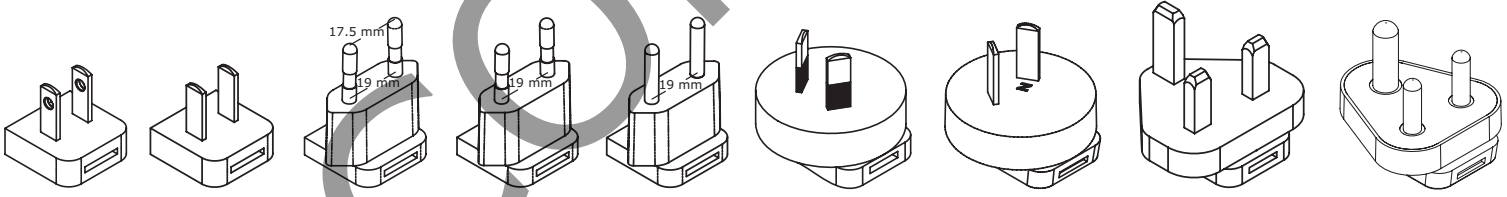
MECHANICAL

parameter	conditions/description	min	typ	max	units
dimensions	74.0 x 43.5 x 35.3				mm
input blade	Interchangeable: US, UK, Europe, Australia, China, Korea, Argentina, Brazil, South Africa				
weight	including input blades		238		g

MECHANICAL DRAWING

units: mm
tolerance: ±1 mm

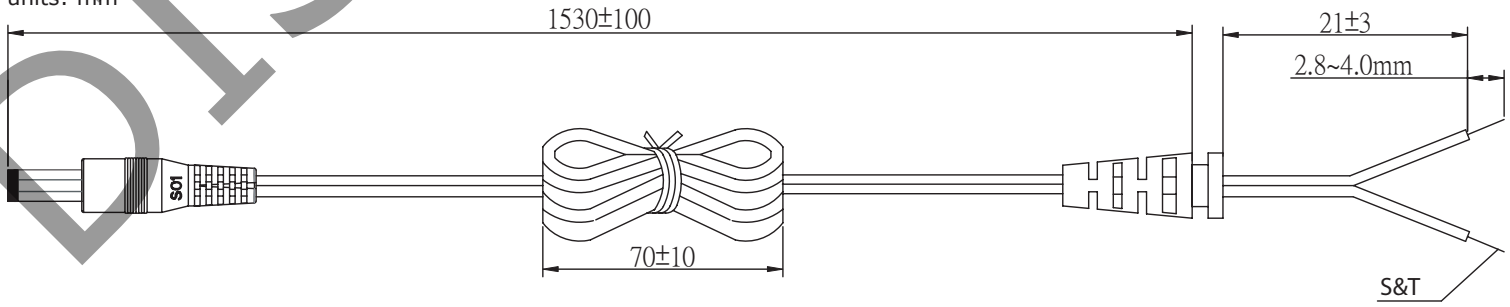




NORTH AMERICA | CHINA | EUROPE Ø4.0 mm | KOREA Ø4.8 mm | BRAZIL Ø4.0 mm | AUSTRALIA/ NEW ZEALAND | ARGENTINA | UNITED KINGDOM | SOUTH AFRICA

DC CORD

units: mm



MODEL NO.	CABLE GAUGE	WIRE OD	CORD LENGTH
EMSA120150	20 AWG	Ø1.9 x 3.8	1,530 ±100

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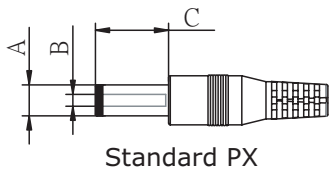
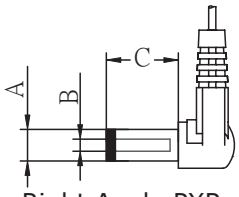
OUTPUT PLUG OPTIONS

Standard DC Plug



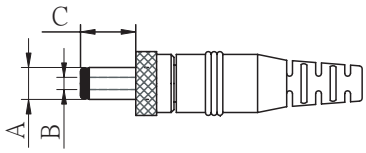
Standard PX



Right Angle PXR

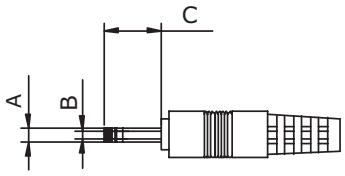
	A	B	C	Unit
P5/P5R	5.5	2.1	9.5	mm
P6/P6R	5.5	2.5	9.5	mm
P7/P7R	3.5	1.35	9.5	mm
P8/P8R	3.8	1.35	9.5	mm
P9/P9R	3.8	1.05	9.5	mm

Locking DC Plug

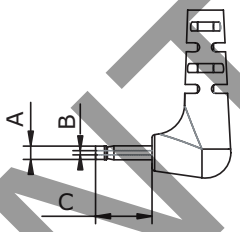


	A	B	C	Unit
P10	5.5	2.1	9.5	mm
P11	5.5	2.5	9.5	mm

EIAJ DC Plug

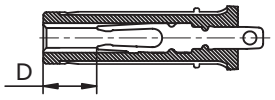


Standard PXX

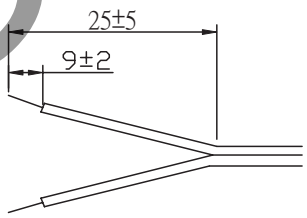


Right Angle PXXR

	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

PXX X X

Plug Type:
PXX = See above plug options
ST = Stripped and Tinned

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

Plug Polarity:
P = Center Positive

N = Center Negative

*Contact CUI for additional plug options

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REVISION HISTORY

rev.	description	date
1.0	initial release	08/04/2014

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.