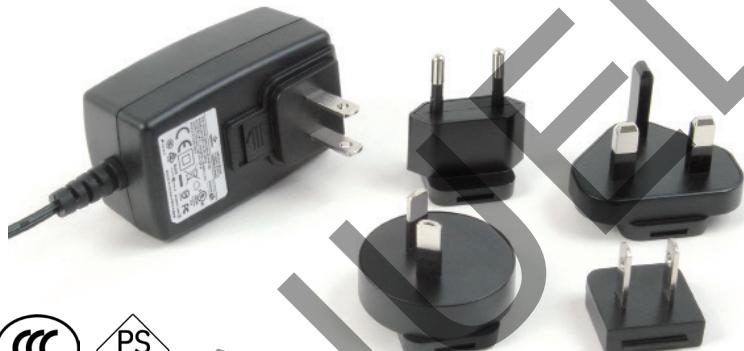


**SERIES: EMSA 30W | DESCRIPTION: AC-DC POWER SUPPLY**
**FEATURES**

- up to 30 W power
- interchangeable AC blades
- universal input (90~264 Vac)
- single regulated output from 12~24 V
- short circuit protection
- UL/cUL, GS, RCM, CCC safety approvals
- level V efficiency
- custom designs available


**MODEL**

MODEL	output voltage (Vdc)	output current max (A)	output power max (W)	ripple and noise <sup>1</sup> max (mVp-p)	efficiency level
EMSA120250	12	2.5	30	300	V
EMSA200150	20	1.5	30	300	V
EMSA240125	24	1.25	30	300	V

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

**PART NUMBER KEY**
**EMSA120250 X - XX - SZ - CXX**

 Base Number  
example of 12 Vdc, 2.5 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

**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
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	Vac
isolation resistance	input to output at 500 Vdc	100		4,242	Vdc
safety approvals	UL 60950-1, EN 60950-1/IEC 60950-1, RCM, CCC				MΩ
EMI/EMC	Class B, VCCI Class II, CE				
leakage current				0.25	mA
RoHS compliant	yes				

**ENVIRONMENTAL**

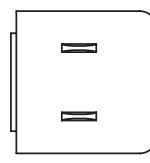
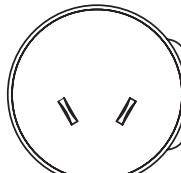
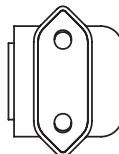
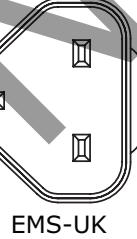
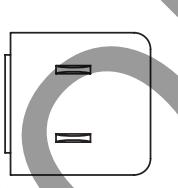
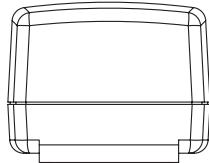
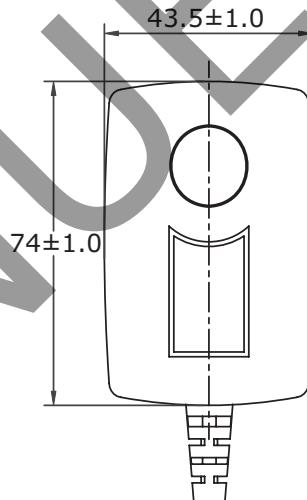
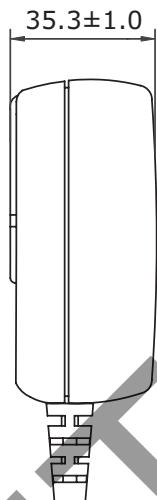
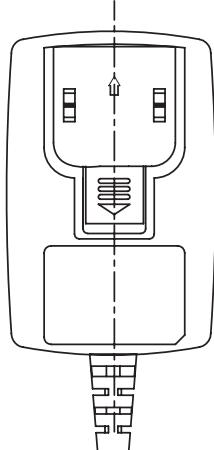
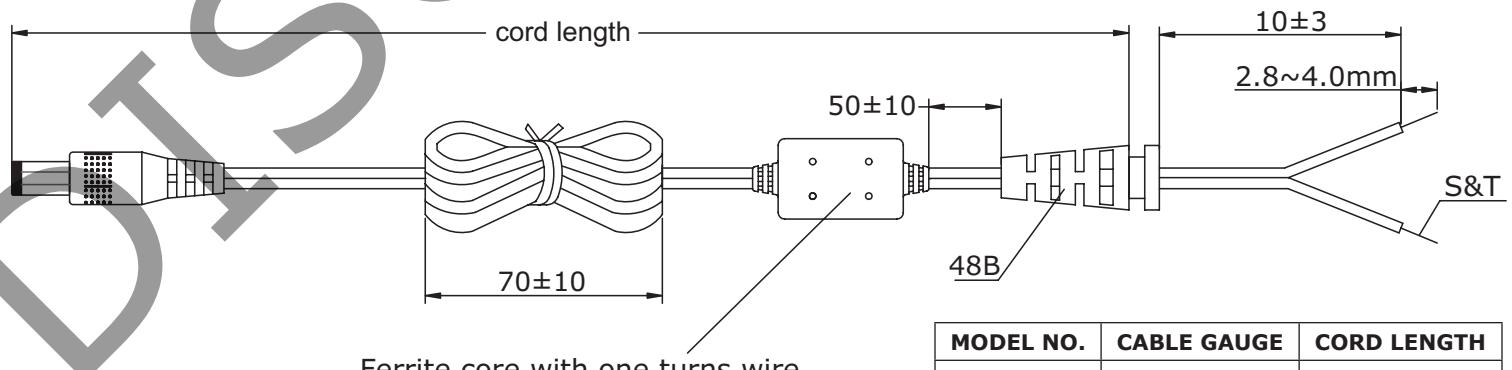
parameter	conditions/description	min	typ	max	units
operating temperature		0		40	°C
storage temperature		-10		70	°C
operating humidity		20		80	%
storage humidity		10		90	%

**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**

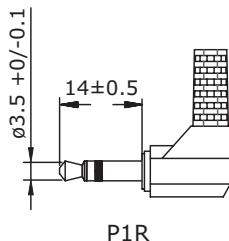
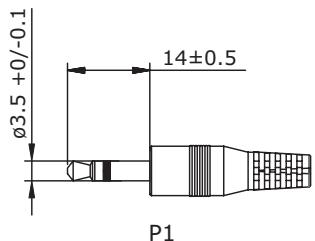
units: mm

**DC CORD**

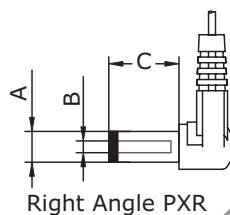
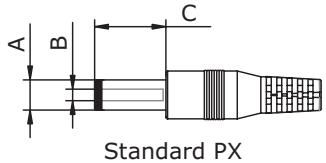
MODEL NO.	CABLE GAUGE	CORD LENGTH
EMSA120250	18 AWG	1530 ± 100
EMSA200150	20 AWG	1530 ± 100
EMSA240125	20 AWG	1530 ± 100

## OUTPUT PLUG OPTIONS

### 3.5 mm Phono Plug

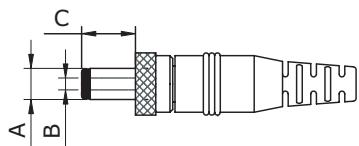


### Standard DC Plug



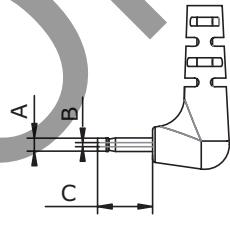
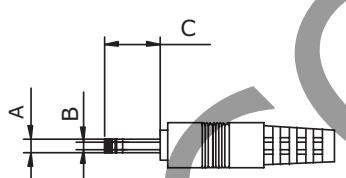
	A	B	C	Unit
P5/P5R	5.5	2.1	9.5	mm
P6/P6R	5.5	2.5	9.5	mm
P7/P7R	3.5	1.35	9.5	mm
P8/P8R	3.8	1.35	9.5	mm
P9/P9R	3.8	1.05	9.5	mm

### Locking DC Plug

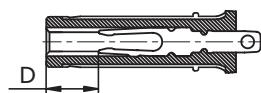


	A	B	C	Unit
P10	5.5	2.1	9.5	mm
P11	5.5	2.5	9.5	mm

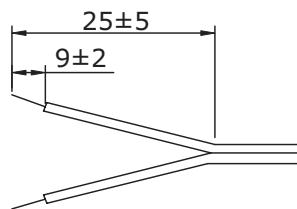
### EIAJ Plugs



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



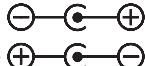
### Stripped and Tinned



### 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
1.05	corrected dc cord gauge values	03/01/2013

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



**CUI INC**<sup>®</sup>

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.

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