

**SERIES:** EMMA 15W | **DESCRIPTION:** MEDICAL AC-DC POWER SUPPLY

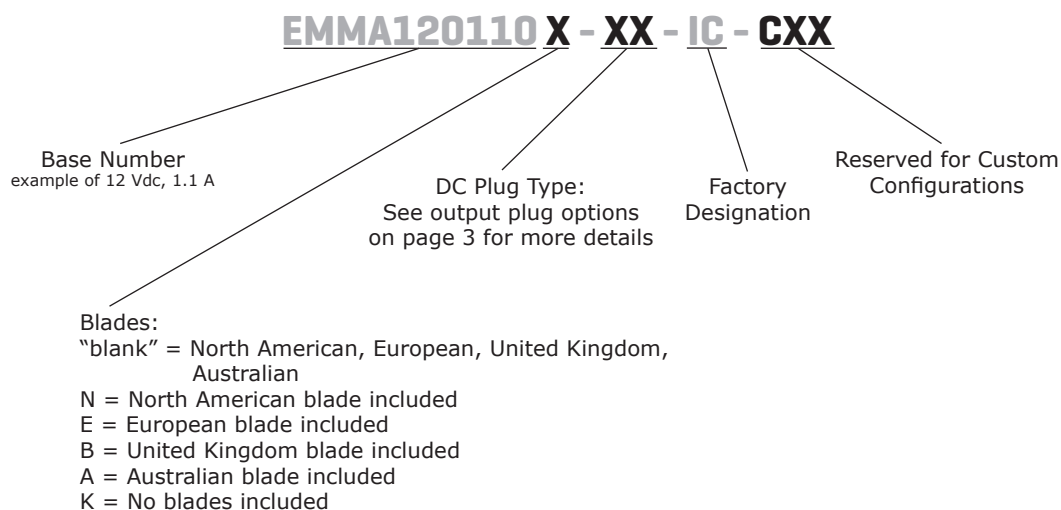
**FEATURES**

- up to 15 W power
- interchangeable AC blades
- universal input (90~264 Vac)
- single regulated output from 5~24 Vdc
- over voltage and short circuit protections
- UL/cUL, CE safety approvals
- medical 60601-1 4th edition safety approvals
- designed for 2 x MOPP applications
- level V efficiency



MODEL	output voltage	output current max	output power max	ripple and noise <sup>1</sup> max	efficiency level
	(Vdc)	(A)	(W)	(mVp-p)	
EMMA050200	5	2	10	50	V
EMMA120110	12	1.1	13.2	120	V
EMMA150100	15	1.0	15	150	V
EMMA240063	24	0.625	15	240	V

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

**PART NUMBER KEY**


## INPUT

parameter	conditions/description	min	typ	max	units
voltage		90		264	Vac
frequency		47		63	Hz
inrush current	at 240 V ac			50	A
no load power consumption				0.3	W

## OUTPUT

parameter	conditions/description	min	typ	max	units
line regulation <sup>1</sup>			±1		%
load regulation <sup>2</sup>	5 Vdc output all other outputs		±4 ±2		% %
voltage accuracy	5 Vdc output all other outputs		±3 ±2		% %
hold-up time	at 115 Vac		10		ms
switching frequency			95		kHz
temperature coefficient			±0.05		%/°C

Note: 1. measured from 100 ~ 240 Vac, full load  
2. measured from 60% to full load and from 60 ~ 20% load (60% ±40% load)

## PROTECTIONS

parameter	conditions/description
over voltage protection	TVS component to clamp
short circuit protection	continuous, auto restart

## SAFETY & COMPLIANCE

parameter	conditions/description	min	typ	max	units
isolation voltage	input to output			5,656	Vdc
safety approvals	medical IEC 60601-1, EN 60601-1, UL 60601-1 4th edition				
EMI/EMC	EN5 5011 Class B, FCC Part 15 Class B, EN 60601-1-2, EN 61000-3-(2,3)				
leakage current				0.1	mA
MTBF	as per MIL-HDBK-217F, 115 Vac, 25 °C	200,000			hours
RoHS	2011/65/EU				

## ENVIRONMENTAL

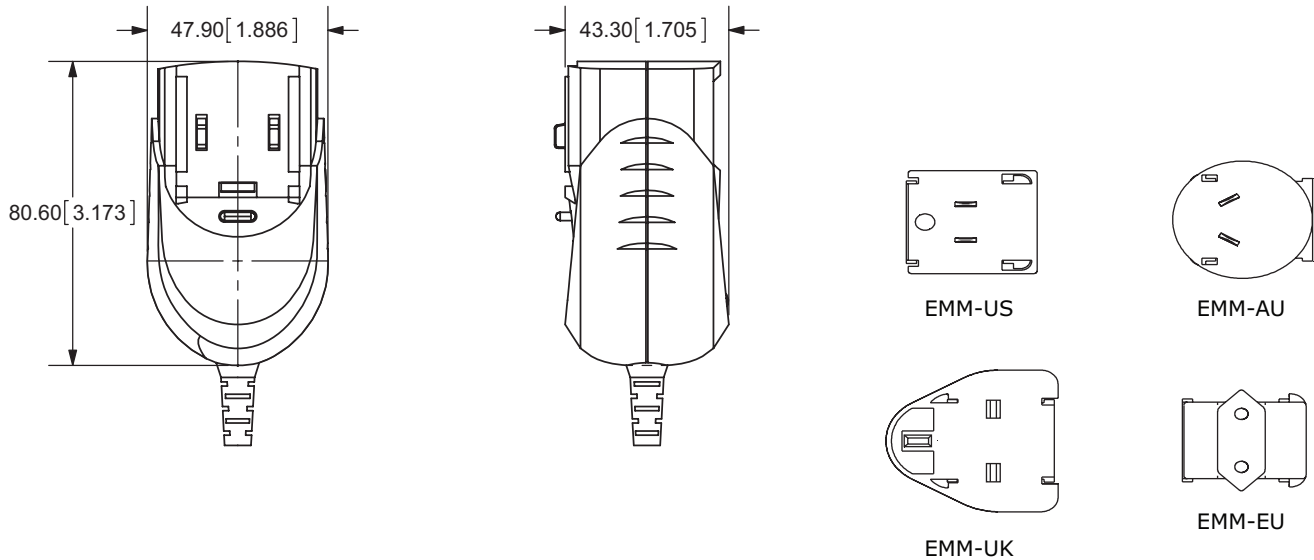
parameter	conditions/description	min	typ	max	units
operating temperature		0		50	°C
storage temperature		-20		85	°C
humidity	non-condensing			93	%

## MECHANICAL

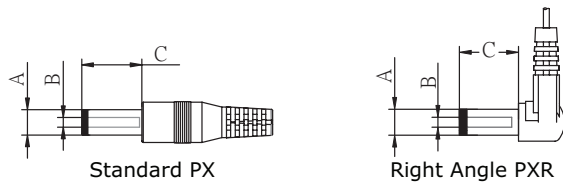
parameter	conditions/description	min	typ	max	units
dimensions	80.60 x 47.90 x 43.30 (3.173 x 1.886 x 1.705 inch)				mm
input plug	interchangeable blades (US, Europe, UK, Australia)				
weight			130		g

## MECHANICAL DRAWING

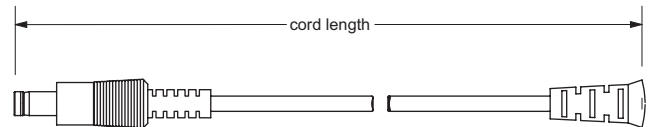
units: mm [inches]  
tolerance: ±0.5[0.02]



## DC OUTPUT PLUG OPTIONS / DC CORD



	A	B	C	Unit
P5/P5R	5.5	2.1	9.5	mm
P6/P6R	5.5	2.5	9.5	mm



MODEL NO.	CABLE GAUGE	CORD LENGTH
EMMA050200	18 AWG	1,800 mm ±50
EMMA120110	18 AWG	1,800 mm ±50
EMMA150100	18 AWG	1,800 mm ±50
EMMA240063	18 AWG	1,800 mm ±50

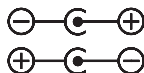
### PXXXX

Plug Type

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

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

N = Center Negative



## REVISION HISTORY

rev.	description	date
1.0	initial release	12/16/2011
1.01	updated P7/P7R B dimension	03/23/2012
1.02	V-Infinity branding removed	08/21/2012
1.03	updated safety approvals	04/29/2013
1.04	updated datasheet	07/17/2015
1.05	updated to medical 60601-1 4th edition	06/20/2017

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



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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.

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