

**date** 09/04/2013

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### SERIES: ETMA 250W | DESCRIPTION: MEDICAL AC-DC POWER SUPPLY

#### **FEATURES**

- up to 250 W power
- universal input (90~264 Vac)
- single regulated output from 12~48 V
- over voltage, overload and short circuit protections
- full medical safety approvals
- active PFC
- level V efficiency
- custom designs available

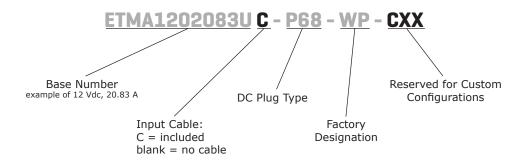




MODEL	output voltage	output current	output power	ripple and noise¹	efficiency level
	(Vdc)	max (A)	max (W)	<b>max</b> (mVp-p)	
ETMA1202083U	12	20.83	250	240	V
ETMA1601563U	16	15.63	250	300	V
ETMA1901316U	19	13.16	250	300	V
ETMA2001250U	20	12.5	250	300	V
ETMA2401042U	24	10.42	250	300	V
ETMA360694U	36	6.94	250	300	V
ETMA480521U	48	5.21	250	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**



parameter	conditions/description	min	typ	max	units
voltage		90		264	Vac
frequency		47		63	Hz
current	at 90 Vac, 60 Hz			3.5	А
inrush current	at 230 Vac, cold start			150	А
no load power consumption				0.5	W

## **OUTPUT**

parameter	conditions/description	min	typ	max	units
line regulation			±1		%
load regulation			±5		%
hold-up time	at 115 Vac	16			ms
temperature coefficient			±0.05		%/°C

### **PROTECTIONS**

parameter	conditions/description			
	12 V output	110	133	%
	16 V output	110	130	%
	19 V output	111	137	%
over voltage protection	20 V output	118	130	%
	24, 36 V outputs	110	125	%
	48 V output	110	120	%
overload protection	shutdown and auto restart	110	160	%
short circuit protection	continuous, auto restart			

### **SAFETY & COMPLIANCE**

parameter	conditions/description	min	typ	max	units
isolation voltage	input to output for 2 seconds input to frame ground for 2 seconds			4,242 2,121	Vdc Vdc
insulation resistance	input to output, at 500 Vdc input to frame ground, at 500 Vdc	20 20			MΩ MΩ
safety approvals	UL/cUL UL 60601-1, TUV EN 60601-1, CB IEC	C 60601-1			
EMI/EMC	FCC Part 18 Class B, EN 60601-1, EN 55011				
MTBF	at 25°C, max. load	140,000			hours
RoHS compliant	yes				

### **ENVIRONMENTAL**

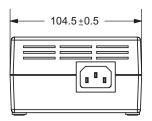
parameter	conditions/description	min	typ	max	units
operating temperature		0		50	°C
storage temperature		-10		70	°C
humidity	non-condensing	20		90	%

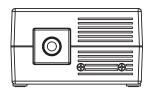
### **MECHANICAL**

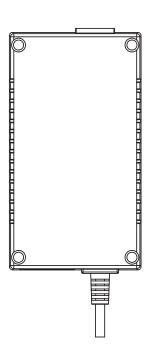
parameter	conditions/description	min	typ	max	units
dimensions	7.42 x 4.11 x 2.36 (188.5 x 104.5 x 60 mm)				inch
weight			1.06		kg
input plug	IEC320 / C14				

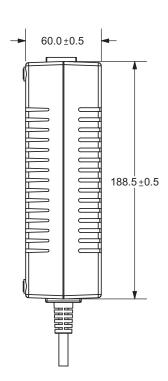
# **MECHANICAL DRAWING**

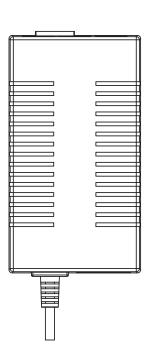
units: mm



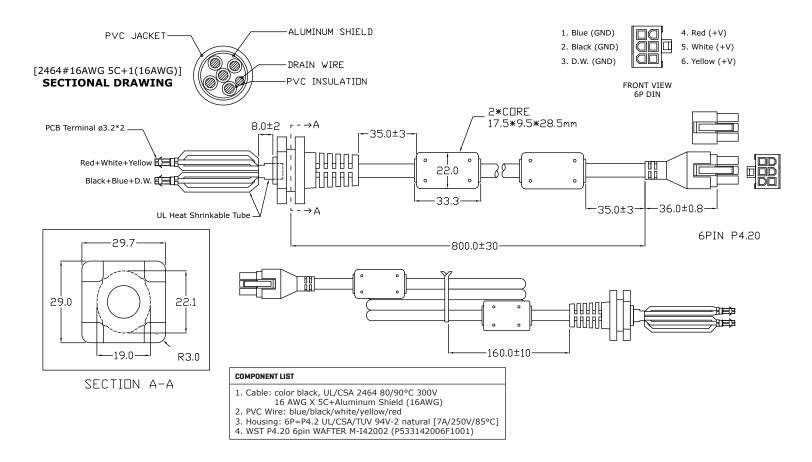




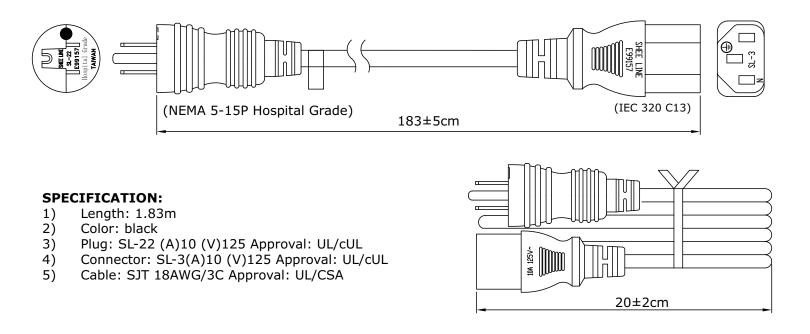




#### DC CORD



#### **AC CORD**



#### **REVISION HISTORY**

rev.	description	date
1.0	initial release	03/05/2012
1.01	updated dc cord drawing	06/05/2012
1.02	description and warranty updated	08/21/2012
1.03	replaced TUV approval with Nemko	09/04/2013

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 two (2) 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.