



**ELMA**  
Your Solution Partner



## Model: BPA-R250-120

Total Power	250 Watts
Input Voltages	85-264 VAC
Outputs	Single plus 5VSB

### SPECIAL FEATURES

- Active Power Factor Correction
- Wide Range Input
- Redundant operation
- Single wire current sharing
- Diode isolation
- Power good signal
- PS\_On
- RoHS compliant – LF designation on power supply label indicates RoHS compliance
- UL, cUL, CB scheme and DEMKO to EN60950-1
- CE compliant

### ENVIRONMENTAL SPECIFICATIONS

Humidity: Up to 95% non-condensing

Storage Temperature: -20° to +85°C

Temperature coefficient:  $\pm 0.01\%$  / °C

Ambient Operating Temperature: 0 to +50°C continuous duty, full rating. Derate linearly to 50% of full rating at +71°C.

Cooling: 10-CFM fan cooling required

### SAFETY APPROVALS

UL & cUL 60950-1, 2nd Edition, 2014-10-14 (Information Technology Equipment – Safety – Part 1: General Requirements)  
IEC 60950-1 (2005) (2nd Edition): Am 1:2009 + Am 2:2013  
Demko EN 60950-1:2006/A11 :2009, EN 60950-1:2006/A12:2011, EN 60950-1:2006/A1:2010, EN 60950-1:2006 /A2:2013

- 250 Watts
- High Density - 1U Profile
- Power Factor and Harmonic Current Correction
- Redundant Operation

### ELECTRICAL SPECIFICATIONS

#### Input Specifications

Input Range..... 85-264 VAC  
Frequency..... 50-440 Hz  
EMI filter..... EN55022 Class B, FCC Part 15  
Inrush Current.....  $\leq 32A$  @ 230 VAC  
Input Current..... 5A  
Isolation..... 4242 VDC (Input to Output)  
Efficiency..... 80% @ 120 VAC  
Active PFC..... 0.99  
Switching Frequency..... 134KHz.  
Leakage.....  $< 300\mu A$  @ 63Hz

#### Output Specifications

DC Output..... Maximum continuous output power 250 Watts with 10-CFM fan cooling.

Line Regulation.....  $\pm 0.05\%$

Load Regulation.....  $\pm 1\%$  on both outputs

Ripple and Noise..... 1% Pk to Pk

Transient Response..... 2% Maximum deviation; returns to initial condition in 1 msec max.

BPA-R250-120 Rev. I Spec – 012519

Model: BPA-R250-120

ELECTRICAL SPECIFICATIONS (CONT')

Output Specifications

Long Term Stability..... 0.01% after 20 minute warm-up.

Hold-Up Time..... 20msec minimum

OVP..... 115% to 135% on both outputs. AC must be recycled to restart the unit.

Short-circuit Protection.....Hiccup method.

Overload Protection.....The overload protection feature will reduce the output voltage to a safe dissipation level when the output power rating exceeds 125% of maximum rated power. The unit will automatically return to regulation upon removal of the overload.

Diode Isolation..... Internal diode isolation provided for N+1 redundant operation.

Current Sharing..... VO1 output will current share within 5% when interconnected by a single wire.

Power Good..... A TTL high logic signal is provided on pin P3-1 when the output voltages are within normal operating conditions.

PS\_On.....The secondary outputs are enabled only upon mating pin P3-2 to output common on the customer's backplane.

OVERALL MECHANICAL DIMENSIONS

U-Bracket Construction  
5”L x 3.3”W x 1.5”H  
(127mm L X 83.82mm W X 38.1mm H)

PIN ASSIGNMENTS

DC Output Connectors  
P2-1, 2, 3, 4, 5.....DC Common  
P2-6, 7, 8, 9, 10.....+VO1

P3-8..... Fan 2 Sense  
P3-7..... Fan 1 Sense  
P3-6..... +VO1 Current Share  
P3-5.....+5VSB  
P3-4..... -VO1 Sense  
P3-3..... +VO1 Sense  
P3-2.....PS\_On  
P3-1..... Power Good

CONNECTOR

AC input Molex 26-60-4050  
DC output P2 - Molex 26-60-4100  
P3 – AMP 640456-8

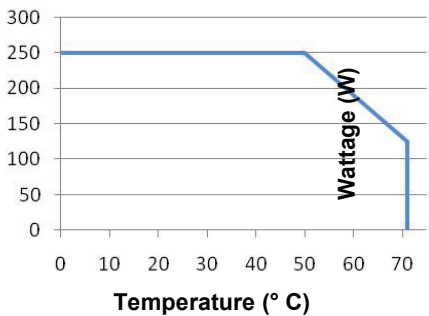
NOTES

- Specifications subject to change without notice.
- All dimensions in inches/mm
- Warranty: 1 year
- Weight: 1.25 lbs.

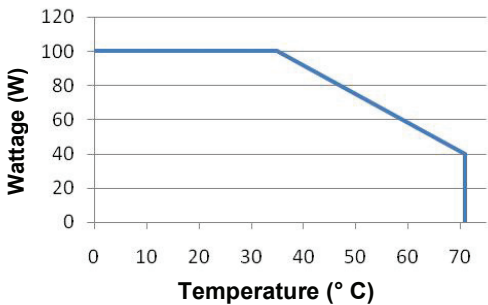
VOLTAGE/CURRENT RATING CHART

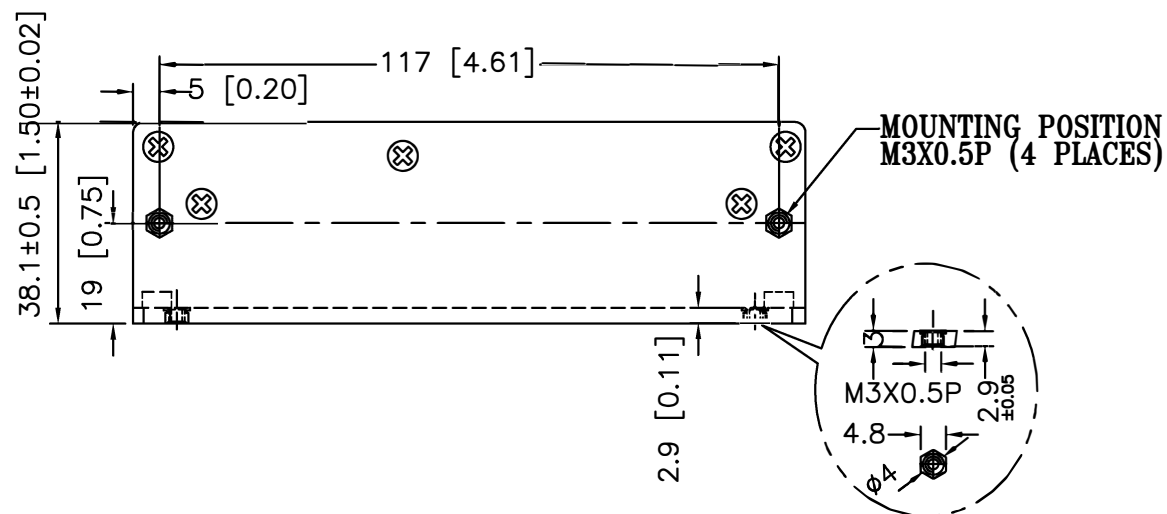
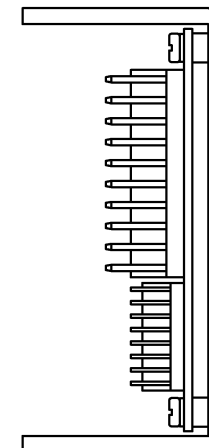
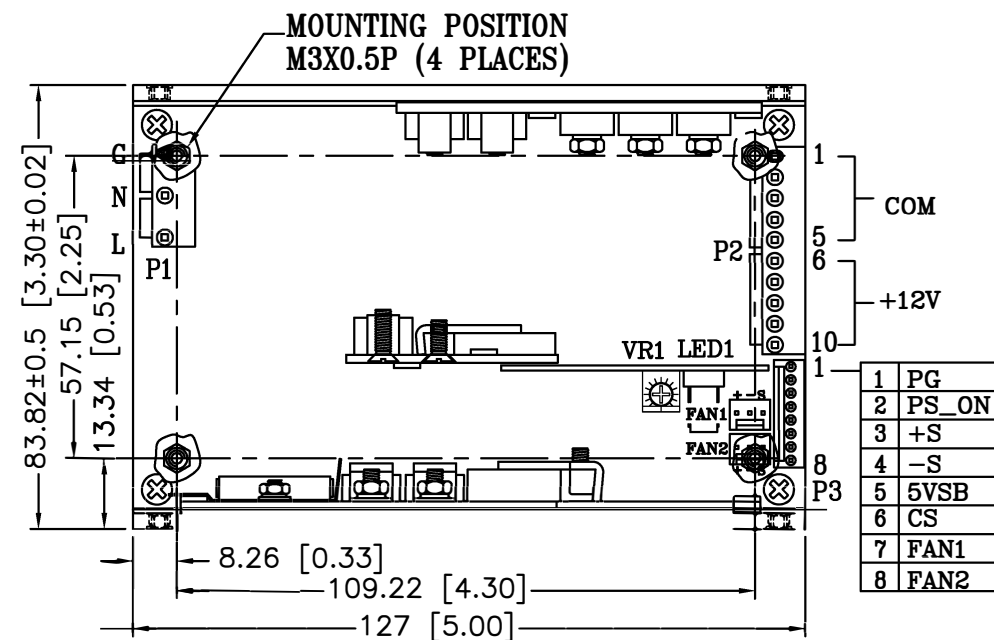
Part Number	Assignment	Voltage	Minimum	Maximum
BPA-R250-120	VO1	+12V	0A	20.8A
	5VSB	+5V	0A	0.1A

Power Derating Curve with 10CFM Fan Cooling



Power Derating Curve with Convection Cooling





*BluTek Power*

TITLE		OUTLINE DRAWING	
DRAWN	C. M. WU	DRG. NO.	BLU-155
CHECKED		MODEL NO.	BPA-R250-120

UNIT	mm[inches]	REV. NO.	I	SCALE	0.7 : 1	MAT'L	t=
THIRD	$\phi$			TOL.	± 0.2	DATE	09. 25. 2007



## IN/OUTPUT RATING & PIN ASSIGNMENT

MOD EL NO. : BPA-R250-120    LF

### INPUTS :

ASSIGNMENT	A.C. VOLTAGE	CURRENT	PIN NBR
L :	100-240V~	5A	P1-1
N :			P1-2
GND :		50-440Hz	P1-3

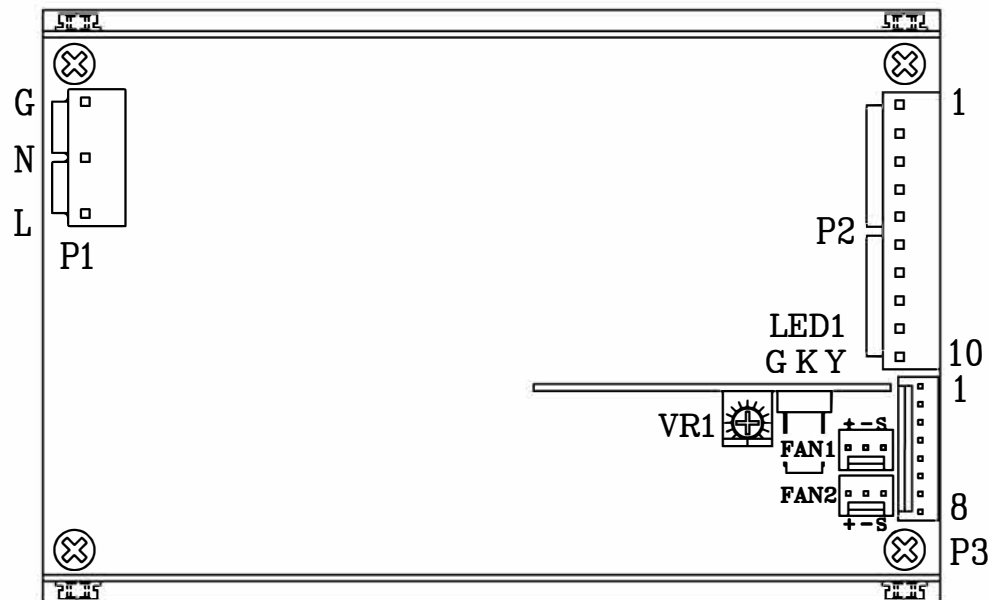
### OUTPUTS :

ASSIGNMENT	D.C. VOLTAGE	CURRENT	PIN NBR
VO1:	+12V $\equiv \equiv$	20.8A	P2-6,7,8,9,10
DC COM:			P2-1,2,3,4,5
PG:			P3-1
PS_ON:			P3-2
+S:			P3-3
-S:			P3-4
+5VSB:			P3-5
CS:			P3-6
FAN1:			P3-7
FAN2:			P3-8

MAXIMUM OUTPUT POWER: 250W

SIZE : A4	FM-4000-34/REV.A-080502'
UNIT : mm[inches]	FILENAME: PPSC0461
REV. NO.: A	DATE : 05. 16. 2007
DRAWN: 洪麗珍 L. J. Hun	CHECKED:

P1: Molex 26-60-4050  
or LCU P3060-05-2



P2: Molex 26-60-4100  
or LCU P3060-10

P3: AMP 640456-8  
or LCU P2050-08