

Model: BPA-R500-5V2A

Total Power	500 Watts
Input Voltages	90-264 VAC
Outputs	Five



SPECIAL FEATURES

- Active Power Factor Correction
- Wide Range Input
- Redundant operation
- Single wire current sharing on +5V, +3.3V and +12V outputs
- Diode isolation
- Power good signal
- Power Disable
- Inhibit
- Remote Sensing
- Fan Fail
- No minimum load requirement
- I²C interface – Option
- Fan direction - Option
- UL, CUL, and DEMKO Approvals
- CE compliant
- Low profile height fits 1U constraints
- **Custom modifications available**

ENVIRONMENTAL SPECIFICATIONS

Humidity: Up to 95% non-condensing

Storage Temperature: -20° to +85°C

Temperature coefficient: ±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: Self-contained fan cooling.

SAFETY APPROVALS

UL 60950
 CUL 60950
 DEMKO EN60950

VOLTAGE/CURRENT RATING CHART

Voltage	Minimum	Maximum	Peak
+5V	0A	60A	60A
+3.3V	0A	35A	35A
+12V	0A	36A	36A
-12V	0A	5A	5A
+5VSB	0A	2A	2A

ELECTRICAL SPECIFICATIONS

Input Specifications

Input Range.....90-264 VAC
 Frequency.....47-63 Hz
 EMI filter.....EN55022 Class B, FCC Part 15
 Inrush Current..... ≤32A @ 230 VAC
 Input Current.....7.7A – 2.3A
 Isolation.....4242 VDC (Input to Output)
 Efficiency.....73% @ 120 VAC
 Active PFC.....0.99
 Switching Frequency.....134KHz.

Output Specifications

DC Output.....Maximum continuous output power 500 Watts with self-contained fan cooling.

Line Regulation.....±0.5%

Load Regulation.....±1% on all outputs

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

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

300-1 Route 17 South Suite B2
 Lodi, NJ 07644
 Phone: (973) 594-1800 Fax: (973) 594-1804
salesteam@blutekpower.com

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ELECTRICAL SPECIFICATIONS (CONT')

Output Specifications

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

Hold-Up Time..... 12msec minimum

OVP.....115% to 135% on all outputs

Short-circuit Protection.....Constant current with delayed latching method on all outputs except the 5V standby which utilizes the hiccup method.

Overload Protection.....Constant current with delayed latching method on all outputs except the 5V standby which utilizes the hiccup method. The constant current method allows for a 5 second delay before the power supply shuts down if the output current rating exceeds 110% to 130% of maximum rated output current. The AC must be recycled to reset.

Current Sharing.....The +5V, +3.3V and +12V outputs will current share within 5% when interconnected by a single wire.

Remote Sensing.....+5V, +3.3V and +12V outputs only.

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

Power Good..... A TTL high logic signal is provided on pin number P1-26 when the input and output voltages are within normal operating conditions.

Power Fail.....A TTL low logic signal is provided on pin number P1-29 when the input and output voltages are within normal operating conditions.

Power Disable.....The secondary outputs are enabled only upon mating pin P1-27 to output common on the customer's backplane.

InhibitA TTL low logic signal sent to pin number P1-22 inhibits all outputs except the 5VSB. Upon release of RTO signal, outputs are restored.

Fan Fail..... A TTL low logic signal is provided on pin number P1-32 when the fan speed is below 50% of normal operating speed.

OVERALL MECHANICAL DIMENSIONS

See attached outline drawing

PIN ASSIGNMENTS

P1-46	AC-N
P1-47	AC-L
P1-45	Ground
P1-1, 2, 3, 4, 6	+5V
P1-30	+5V +Sense
P1-28	+5V Current Share
P1-11, 13, 14	+3.3V
P1-23	+3.3V +Sense
P1-24	+3.3V Current Share
P1-15, 16, 18	+12V
P1-25	+12V +Sense
P1-31	+12V Current Share
P1-19	-12V
P1-21	5VSB
P1-5, 7, 8, 9, 10, 12, 17, 20	DC Common
P1-32	Fan Fail
P1-29	Power Fail
P1-26	Power Good
P1-27	Power Disable
P1-22	Inhibit
P1-35	Common
P1-33	SDA – I ² C Serial Bi-Directional Data Line. Open Drain
P1-34	SCL – I ² C Clock Input
P1-36	AO – User-Set I ² C Address Inputs
P1-37	A1 – User-Set I ² C Address Inputs
P1-38	3.3V INH
P1-39	A2 – User-Set I ² C Address Inputs
P1-40	O.S. – Over temperature Shutdown
P1-41	Open Drain Output. 5V INH

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ELECTRICAL SPECIFICATIONS (CONT')

CONNECTOR

AC input and DC output –
Positronics P/N PCIH47M400A1

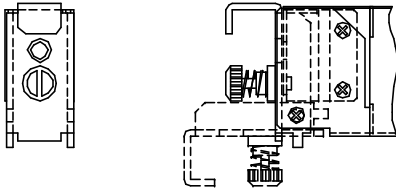
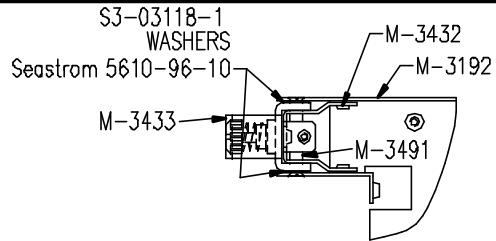
Option Designators

Model Number	Options
BPA-R500-5V2A0A	Fan blowing air out of P/S, no I ² C interface
BPA-R500-5V2A0B	Fan blowing air out of P/S, with I ² C interface
BPA-R500-5V2A1A	Fan blowing air into P/S, no I ² C interface
BPA-R500-5V2A1B	Fan blowing air into P/S, with I ² C interface

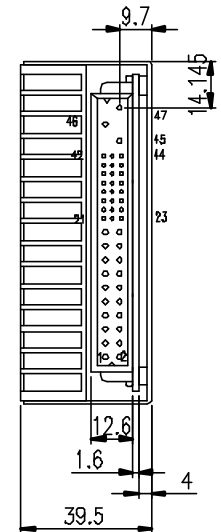
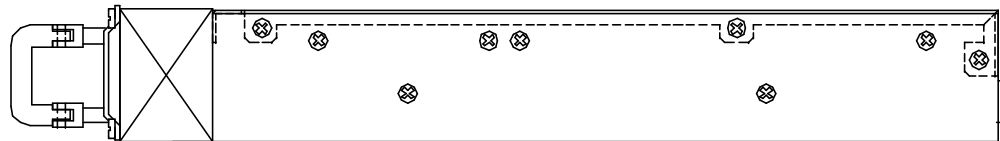
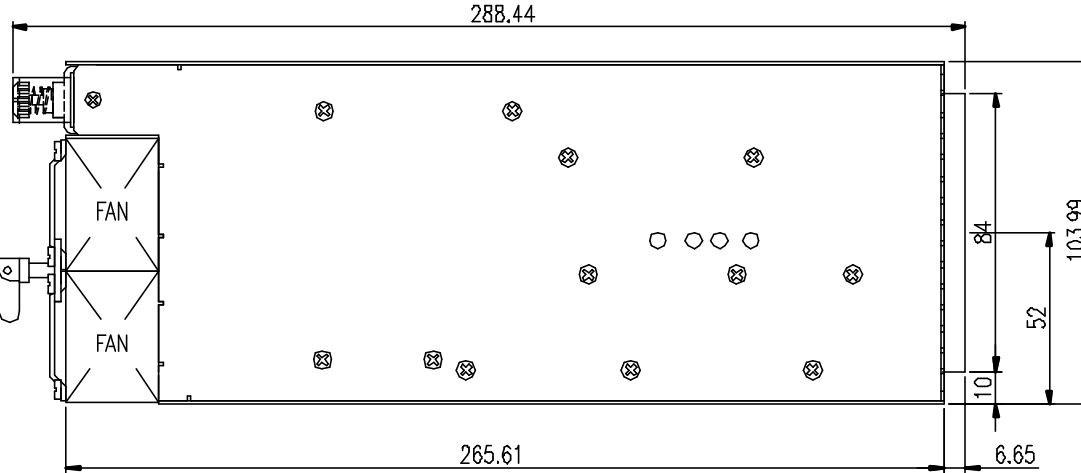
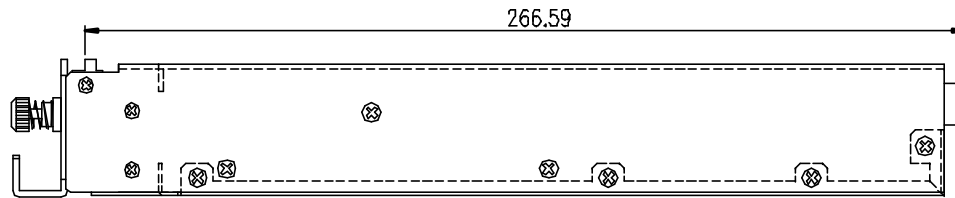
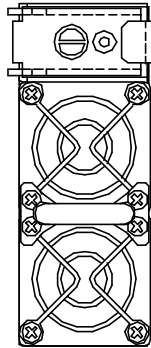
NOTES

- Specifications subject to change without notice.
- All dimensions in inches/mm
- Warranty: 1 year
- Weight: 3.5 lbs.

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LATCH DETAIL



A \varnothing :
 BPA-R500-5V2A
 BPA-R500-5V2B

<i>BluTek Power</i>			
TITLE		OUTLINE DRAWING	
DRAWN	L. J. HUN	DRG. NO.	BLU-161
CHECKED		MODEL NO.	

UNIT	mm[inches]	REV. NO.	A	SCALE	0.48 : 1	MAT'L	t=
THIRD	\varnothing	∇		TOL.	± 0.2	DATE	12. 06. 2005

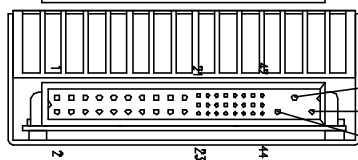
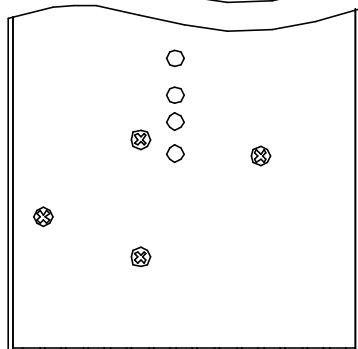
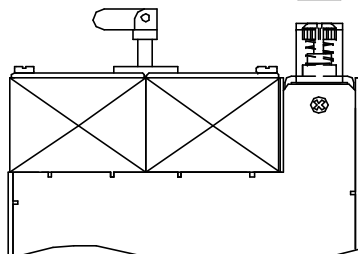
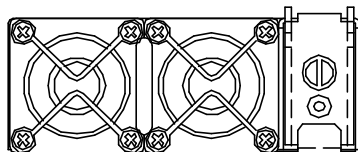


MODEL NO. : BPA-R500-5V2A

INPUTS :

ASSIGNMENT	A.C. VOLTAGE	CURRENT	PIN NBR
L:	100-240V~	7.7A	47
N:			46
GND:			45

50-60Hz



P2:
POSITRONIC
P/N: PCIH47M400A1

N=46
L=47
G=45

IN/OUTPUT RATING & PIN ASSIGNMENT

OUTPUTS :

ASSIGNMENT	D.C. VOLTAGE	CURRENT	PIN NBR
V01:	+5V ---	60A	1,2,3,4,6
V02:	+3.3V ---	35A	11,13,14
V03:	+12V ---	36A	15,16,18
V04:	-12V ---	5A	19
DC COM:			5,7,8,9,10,12,17,20
+5VSB:	+5VSBV ---	2A	21
COM:			35
+5VCS:			28
+3.3VCS:			24
+12VCS:			31
+5VS:			30
+3.3VS:			23
+12VS:			25
INH:	Inhibit		22
5V INH:			41
FF:			32
PG:			26
PF:	Power Good		29
PD:	Power Disable		27
SDA:			33
SCL:			34
O.S.:			40
A0:			36
A1:			37
A2:			39
N.C.:			38,45,46,47

MAXIMUM OUTPUT POWER: 500W

SIZE : A4	FM-4000-34/REV.A-080502'
UNIT :mm[inches]	FILENAME: PPSC0424
REV. NO.: A	DATE : 12. 06. 2005
DRAWN: 洪麗珍 L. J. Hun	CHECKED: