BluTek Power

## Model: BPA-RT3200-120

| | |
|---|---|
| *Max. Power* | *3200 Watts* |
| *Input Voltages* | *180-523VAC 3 Phase Delta* |
| *Outputs* | *Single plus 12VSB* |

## SPECIAL FEATURES

- Active Power Factor Correction
- Redundant operation
- Three Phase Delta Input
- Single wire digital current sharing
- Overload and Short Circuit protection
- Over Voltage Protection (OVP)
- Over Temperature Protection
- PS_ON/AC_OK/DC_OK/PS_KILL/PS_Present
- Fault LED's
- I²C interface PMBus Compatible
- Variable fan speed control
- UL, CUL, and DEMKO
- CE compliant
- ***Custom modifications available***

## ENVIRONMENTAL SPECIFICATIONS

Humidity: Up to 95% non-condensing

Storage Temperature: -20° to +85°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 | 60950-1 Second Edition |
| CUL | 60950-1 Second Edition |
| CB | 60950-1 Second Edition |
| DEMKO | EN60950-1 Second Edition |

## ELECTRICAL SPECIFICATIONS

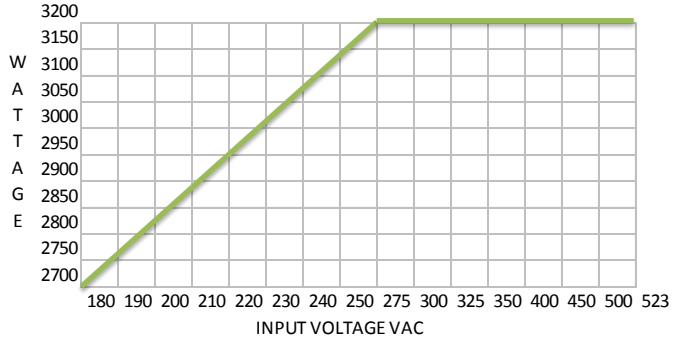
### Input Specifications

Input Range…….. 180 - 523VAC 3 Phase
Frequency……..47-63 Hz
EMI filter…….. EN55022 Class A, FCC Part 15
Inrush Current……≤32A @ 480VAC
Input Current…….. 20A @ 180VAC
Isolation (Input to Output)…….. 4242 VDC
Efficiency……93%
Active PFC……0.99
Switching Frequency……82KHz.
Leakage Current…….. ≤3.5mA

### Output Specifications

DC Output……..Maximum continuous output power 3200 Watts with self-contained fan cooling.

Output Power Derating Curve:




Line Regulation…… ±0.2%
Load Regulation…… ±1% on both outputs
Ripple and Noise……...2% Pk to Pk
Transient Response…….2% Maximum deviation; returns to initial condition in 1 msec max.

## *Model: BPA-RT3200-120*

### *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 both outputs

Short-circuit Protection……..delayed latching method on the primary output. The 12V standby utilizes the hiccup method.

Overload Protection……..Constant current with delayed latching method on the primary output. The 12V standby utilizes the hiccup method. The constant current method allows for a 130mS delay before the power supply shuts down if the output current rating exceeds 105% to 115% of maximum rated output current. The input must be recycled manually or may be digitally reset.

FET Isolation…….. Internal FET isolation provided for N+1 redundant operation.

Current Sharing……Outputs will current share within 5% when interconnected by a single wire.

PS On…….. a TTL LOW signal will turn the power supply on. PS_ON can also be used to reset a fault..

AC OK……. if pulled LOW by the power supply, will provide a 4ms warning prior to DC outputs dropping out of regulation.

ALERT……. A LOW signal indicates a fault that has occurred.

### *ELECTRICAL SPECIFICATIONS (CONT')*

Over Temperature Protection ….The power supply will shut down if temperature is greater than 115°C (internal temperature). The power supply is self-recovering once the internal temperature falls below 71°C.

Power Okay…….. A HIGH signal is provided when the input and output voltages are within normal operating conditions.

PS Present……. A pin on the power supply is used to identify that the power supply has been installed into the customer's backplane.

PS_KILL ……. This pin must connect to common or active low for the power supply to turn on

$I^2C$ …….……..... Monitors temperature, output voltage, input voltage, input current, and output current; controls Fan speed, LED's and connects to a serial NVRAM which is programmed with serial number. PMBUS software allows monitoring of overall operation of power supply.

### *OVERALL MECHANICAL DIMENSIONS*

16.98" L x 3.9" W x 1.58" H
(431.3mm x 99.0mm x 40.2mm)

### *PIN ASSIGNMENTS*

See Attached Hook-up Drawing

### *CONNECTOR*

Input/Output……..Molex 46437-1258

### *NOTES*

- Specifications subject to change without notice.
- All dimensions in inches/mm
- Warranty: 2 years
- Weight: Approx. 6.0 lbs

### *MODEL No. / OUTPUT VOLTAGE / CURRENT RATINGS CHART*

| Model No. | O/P Voltage (Vdc) | Minimum | Maximum |
|---|---|---|---|
| BPA-RT3200-120 | 12V | 0A | 266.6A |
| | 12VSB | 0A | 2.0A |

## *Model: BPA-RT3200-120*

## *PARAMETERS AND ALERTS (Customizable)*

### *LED'S*

| Status of power supply | Green LED | Yellow LED |
|---|---|---|
| Power up | OFF | OFF |
| Normal Operation | ON | OFF |
| Standby Mode | BLINK | OFF |
| PSU Tripped due to INPUT UNDER VOLTAGE | OFF | ON |
| PSU Tripped due to OUTPUT OVER VOLTAGE | OFF | ON |
| PSU Tripped due to FAN1 & FAN2 FAULTS | OFF | ON |
| PSU Tripped due to OVER TEMP FAULT | OFF | ON |
| PSU Tripped due to OUPUT OVER CURRENT FAULT | OFF | ON |
| PSU Tripped due to INPUT OVER POWER FAULT | OFF | ON |
| PSU has a Warning Condition due to OUT OV | ON | BLINK |
| PSU has a Warning Condition due to OUT UV | ON | BLINK |
| PSU has a Warning Condition due to OVER TEMP. | ON | BLINK |
| PSU has a Warning Condition due to FAN1 SPEED. | ON | BLINK |
| PSU has a Warning Condition due to FAN2 SPEED. | ON | BLINK |
| PSU has a Warning Condition due to INPUT OVER CURRENT | ON | BLINK |
| PSU as Warning Condition due to OUTPUT OVER POWER | ON | BLINK |

### *LIMITS VALUE*

| Parameters of PSU | Limit Value Default |
|---|---|
| Over-Temperature Fault Limit | 120°C |
| Over-Temperature Warning Limit | 110°C |
| Over-Temperature Fault Recovery Limit | 75°C |
| Over-Temperature Warning Recovery Limit | 107°C |
| **MAIN OUTPUT** | |
| Maximum Output Current Limit | 268 Amps |
| Maximum Output Power Warning Limit | 2800W at 180VAC Input<br>3300W at 250VAC Input |
| Minimum Output Under Voltage Limit | 11.0 VDC |
| **SECONDARY OUTPUT** | |
| Maximum Output Current Limit | 2.50 Amps |
| Maximum Output Over Voltage Limit | 12.80 VDC |
| **FAN SPEED** | |
| Minimum Speed for Fans 1 & 2 | 2500 RPM |

### *ALERTS*

| Status of power supply | SMB_ALERT State |
|---|---|
| Power up | LOW |
| Normal Operation | HIGH |
| Standby Mode | LOW |
| PSU Tripped due to INPUT UNDER VOLTAGE | LOW |
| PSU Tripped due to OUTPUT OVER VOLTAGE | LOW |
| PSU Tripped due to FAN1 FAULT | LOW |
| PSU Tripped due to FAN2 FAULT | LOW |
| PSU Tripped due to OVER TEMP FAULT | LOW |
| PSU Tripped due to OUPUT OVER CURRENT FAULT | LOW |
| PSU Tripped due to INPUT PIN OVER POWER FAULT | LOW |
| PSU has a Warning Condition due to OUT OV | LOW |
| PSU has a Warning Condition due to OUT UV | LOW |
| PSU has a Warning Condition due to OVER TEMP.<br>See Note.1 | LOW |
| PSU has a Warning Condition due to FAN1 SPEED | LOW |
| PSU has a Warning Condition due to FAN2 SPEED | LOW |
| PSU has a Warning Condition due to INPUT OVER CURRENT | LOW |
| PSU as Warning Condition due to OUTPUT OVER POWER | LOW |
| PSU has a Warning Condition due to UNDER TEMPERATURE. | LOW |