

### BL High-Power Series

#### FEATURES

- Multi-Pulse Input Rectification – Low Harmonic Distortion
- Analog Remote Control – Remote Programming
- Low cost per VA – Cost Savings
- Compact Size – Less rack space



Behlman's BL High-Power Series AC Power Sources supply clean, regulated AC power in a compact design at competitive prices. The BL High-Power Series is available with either single- or three-phase output in a wide range of power from 1 KVA to 20 KVA. Inputs are any worldwide three-phase mains power with some models available with single-phase input.

The BL High-Power Series delivers all the quality features our customers have come to expect from Behlman; clean sine wave output with excellent line and load regulation, high efficiency and low harmonic distortion. A multi-pulse input transformer offers low-input harmonic distortion and high power factor as required by MIL-STD-1399 and European standards. Unique protection circuitry provides for over-temperature protection, short-circuit protection and voltage fold-back during overloads to maintain undistorted waveforms.

Amplitude and Frequency adjustment, line drop compensation, phase angle adjust and output on/off come standard. Units are supplied with analog remote control and available optional RS-232 and IEEE-488 remote control interfaces. Other options include CE mark, Extended Frequency range up to 1000 Hz and Motor Test option which has the capability to soft-start motors, pumps and compressors thereby eliminating the need for high power devices.

Small size, quiet operation and high efficiency make the BL High Power series ideal for industrial products testing, precision avionic test and power conversion, ATE, bulk power and motor generator replacement.

*The BL High Power series is easily modified to meet your requirements*

**INPUT**

Multi-pulse input transformer for low input current THD in the following configurations:

**Voltage:**

**C-1** 120/208 VAC, 3 Phase  
**C-2** 220/380 VAC, 3 Phase  
**C-3** 277/480 VAC, 3 Phase  
**C-4** 200 VAC, Delta, 3 Phase  
**C-5** 346/600 VAC, 3 Phase

**C-6** 230/400 VAC, 3 Phase  
**C-7** 240/415 VAC, 3 Phase  
**C-8** 115/230 VAC, 1 Phase (Note 1 & 2)  
**C-9** 230 VAC, 1 Phase (Note 3)  
**C-10** 480 VAC, 1 Phase (Note 3)

*Contact factory for other input voltages*

**NOTE:**

1. C-8 for Model BL3X350 in same 7"H chassis
2. C-8 for Models BL3100, BL3200 & BL3300 requires 7"H chassis in place of 3.5"H
3. C-9 & C-10 for Models BL4500, BL5000 & BL5100 includes option 21-00 Cabinet  
See mechanical specification 4

**Frequency:**

47 - 440 Hz

**Table 1: BL High-Power Series Model Selection**

Model Number	Power	Output Volts AC	Current	Mechanical Specifications
<b>BL3100</b>	3 KVA	0-135, 1 Phase	22 Amps	1
<b>BL5100</b>	5 KVA	0-135, 1 Phase	37 Amps	2
<b>BL7000</b>	7 KVA	0-135, 1 Phase	52 Amps	2
<b>BL3200</b>	3 KVA	0-270, 1 Phase	11 Amps	1
<b>BL4500</b>	4.5 KVA	0-270, 1 Phase	17 Amps	2
<b>BL6000</b>	6 KVA	0-270, 1 Phase	22 Amps	2
<b>BL9200</b>	9 KVA	0-270, 1 Phase	33 Amps	2
<b>BL12000</b>	12 KVA	0-270, 1 Phase	44 Amps	3
<b>BL3X350</b>	1 KVA	0-135, L - N, 3 Phase	2.6 Amps/ph	4
<b>BL3300</b>	3 KVA	0-135, L - N, 3 Phase	7.5 Amps/ph	1
<b>BL5000</b>	5 KVA	0-135, L - N, 3 Phase	12.5 Amps/ph	2
<b>BL10000</b>	10 KVA	0-135, L - N, 3 Phase	25 Amps/ph	2
<b>BL15000</b>	15 KVA	0-135, L - N, 3 Phase	37 Amps/ph	3
<b>BL20000</b>	20 KVA	0-135, L - N, 3 Phase	50 Amps/ph	3

*Contact factory for other output voltages*

**MECHANICAL SPECIFICATIONS**

1. (2) 19" (48.3 cm) rack-mount chassis 7" H and 3.5" H x 22" D (17.8 cm and 8.9 cm H x 55.9 cm D)...  
150 lbs (68.1 kgs)
2. (2) 19" (48.36 cm) rack-mount chassis 7" H and 8.75" H x 22" D (17.8 cm and 22.2 cm H x 55.9 cm D)...  
250 lbs (113.5 kgs)
3. High-strength cabinet with casters 28.3" H x 31.6" D x 22.1" W (71.9 cm H x 80.3 cm D x 55.6 cm W)...  
425 lbs (193.0 kgs)
4. (1) 19" (48.3 cm) rack-mount chassis 7" H and 22" D (17.8 cm x 55.9 mm D)...65 lbs (29.5 kgs)  
(C-8 Input Only)

## OUTPUT

<b>Power:</b>	See Table 1
<b>Voltage:</b>	See Table 1
Resolution:	1 V
Accuracy:	+/-2 % of full scale
<b>Frequency:</b>	45-500 Hz (Option E: 45-1000 Hz)
Resolution:	1 Hz
Accuracy:	+/-2 Hz
<b>Current:</b>	See Table 1
Resolution:	0.1 Amp, +/-1 digit
Accuracy:	+/-2 % of full scale
<b>Crest Factor:</b>	3:1
<b>Power Factor:</b>	100% of rated output into any power factor load
<b>Distortion:</b>	3% THD Typical
<b>Line Regulation:</b>	0.1% for +/- 10% line change
<b>Load Regulation:</b>	0.7% no load to full load
<b>Efficiency:</b>	80% typical

## PROTECTIVE CIRCUITS

<b>Input:</b>	Fast-acting main circuit breaker
<b>Constant Current:</b>	Overload automatically causes voltage fold back to provide maximum current without distorting output waveform
<b>Short Circuit:</b>	Short circuit electronically latches output open to protect load...power restored by cycling circuit breaker
<b>Thermal:</b>	Internal temperature sensor prevents heat damage

## CONTROLS/INDICATORS

<b>Power On/Off:</b>	Circuit breaker
<b>Meters:</b>	Three (3) DMM: True RMS Volts, True RMS Amps, Frequency
<b>Voltage Adjust:</b>	Ten-turn potentiometer to adjust voltage
<b>Frequency Adjust:</b>	Ten-turn potentiometer to adjust frequency
<b>Phase select:</b>	Three-position switch for phase A, B or C *
<b>Line Drop:</b>	Allows for front panel adjustment of output to compensate for voltage drop over long distance
<b>Phase angle adjust:</b>	Allows for front panel adjustment of phase angle A-B and B-C *
<b>Output:</b>	Toggle switch
<b>Indicators:</b>	Power On, Constant Current, Overtemp, Overload Latch
<b>External Synch:</b>	Synchronizes AC output with external input
<b>Remote Control</b>	0-10 VDC programming for voltage and frequency...contact closure for output on/off...external synch

\* (Three-phase units only)

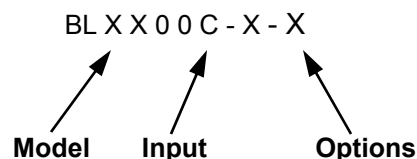
## ENVIRONMENTAL / CONNECTIONS

<b>Operating Temp:</b>	32° F to 131° F (0-55° C)
<b>Humidity:</b>	0-95% RH non-condensing
<b>Input Connections:</b>	Barrier strip on rear
<b>Output Connections:</b>	Barrier strip on rear
<b>Remote Control:</b>	DB-9 connector

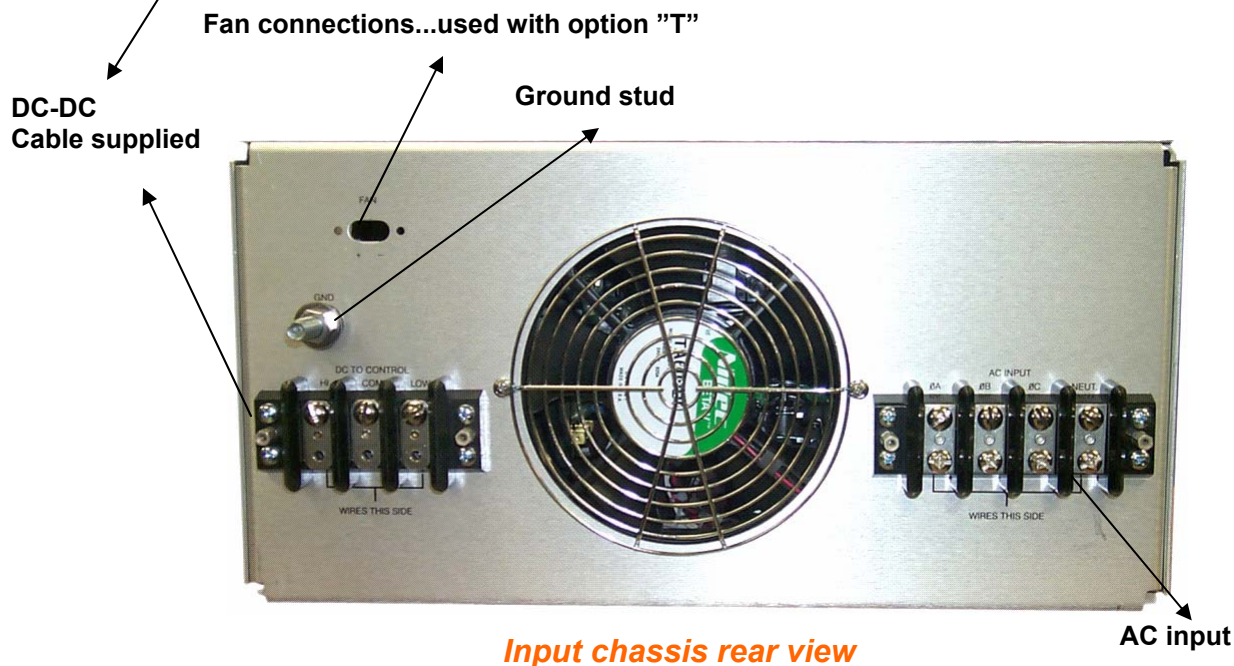
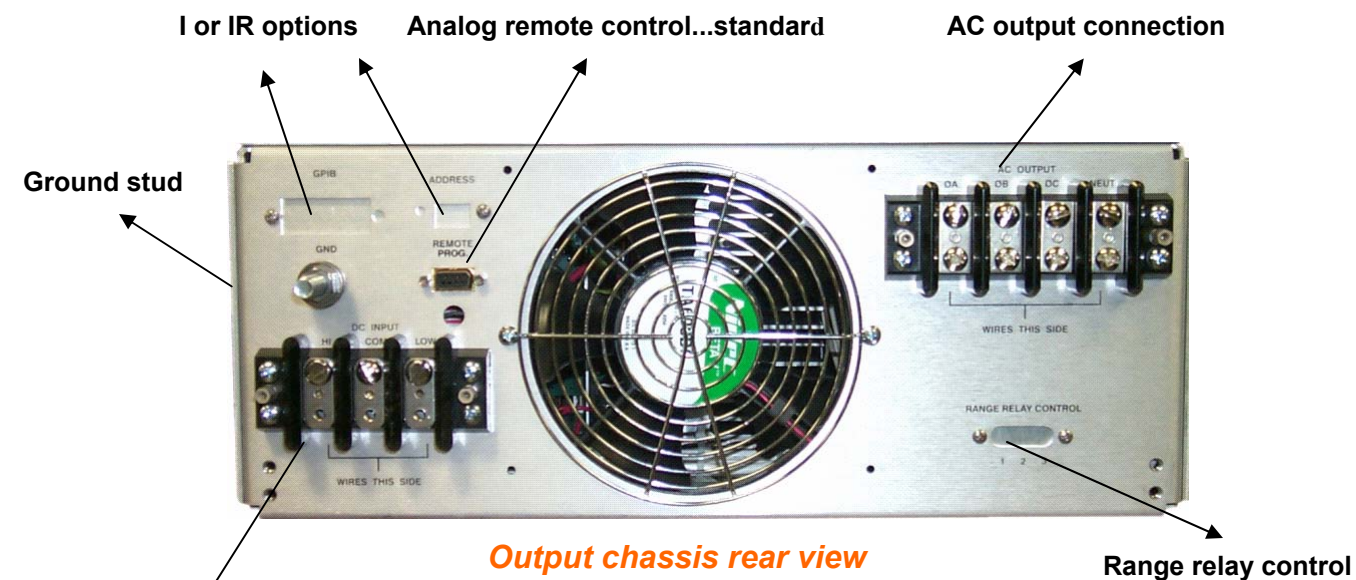
## OPTIONS

<b>CE:</b>	CE Mark
<b>E:</b>	Extended frequency range, 45-1000 Hz
<b>I:</b>	IEEE-488 Interface
<b>IR:</b>	RS232 Interface
<b>L:</b>	Locking pot
<b>MT:</b>	Motor test (not available on BL12000, BL15000 and BL20000)
<b>R:</b>	Ruggedized for use in areas with shock and vibration
<b>S1:</b>	Slides for Mechanical Specifications 4
<b>S3:</b>	Slides for Mechanical Specifications 1
<b>S10:</b>	Slides for Mechanical Specifications 2
<b>T3D:</b>	0-135 & 0-270 VAC L-N on BL3300 (add 3.5" chassis)
<b>T5:</b>	0-300 VAC L-N on BL5000 (add 7" chassis)
<b>T5D:</b>	0-135 & 0-300 VAC L-N on BL5000 (add 7" chassis)
<b>T10:</b>	0-300 VAC L-N on BL10000 (add 7" chassis)
<b>T10D:</b>	0-135 & 0-300 VAC L-N on BL10000 (add 7" chassis)
<b>T15:</b>	0-300 VAC L-N on BL15000
<b>T20:</b>	0-300 VAC L-N on BL20000
<b>21-00:</b>	Cabinet with casters

## Ordering Information



## **BL High-Power Series**



[www.behlman.com](http://www.behlman.com)

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