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

**Voltage:** +/- 10%
- **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 (Note 5)
- **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-9A** 230 VAC, 1 Phase (Note 4)
- **C-10** 480 VAC, 1 Phase (Note 3)

**Contact factory for other input voltages**

**NOTES:**
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, BL6000 & BL7000 includes option 21-00 Cabinet
   See mechanical specification 3.
4. C9A for Models BL4500, BL5000 & BL5100 in the 8.75” chassis
5. C-5 requires contactor and fuses in place of circuit breakers.

**Frequency:** 47—63 Hz. (Contact factory for additional frequency options)

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

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

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

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

CONTROLS/INDICATORS
Power On/Off: Circuit breaker (See note 4)
Meters: Three (3) DMM: True RMS Volts, True RMS Amps, Frequency
Voltage Adjust: Ten-turn potentiometer to adjust voltage
Frequency Adjust: Ten-turn potentiometer to adjust frequency
Phase select: Three-position switch for phase A, B or C *
Line Drop: Allows for front panel adjustment of output to compensate for voltage drop over long distance
Phase angle adjust: Allows for front panel adjustment of phase angle A-B and B-C *
Output: Toggle switch
Indicators: Power On, Constant Current, Overtemp, Overload Latch
External Synch: Synchronizes AC output with external input
Remote Control: 0-10 VDC programming for voltage and frequency...contact closure output on/off...external synch

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

OPTIONS
CE: CE Mark
E: Extended frequency range, 45-1000 Hz
I: IEEE-488 Interface
IR: RS232 Interface
L: Locking pot
MA: Mounting Angles (2 per chassis)
MT: Motor test (not available on BL9200 BL12000, BL15000 and BL20000)
R: Ruggedized for use in areas with shock and vibration
S1: Slides for Mechanical Specifications 4
S3: Slides for Mechanical Specifications 1
S10 Slides for Mechanical Specifications 2
T1D: 0-135 & 0-270 VAC L-N on BL3x350 (adds 3.5” chassis)
T3D: 0-135 & 0-270 VAC L-N on BL3300 (add 3.5” chassis)
T5: 0-300 VAC L-N on BL5000 (add 7” chassis)
T5D: 0-135 & 0-300 VAC L-N on BL5000 (add 7” chassis)
T10: 0-300 VAC L-N on BL10000 (add 7” chassis)
T10D: 0-135 & 0-300 VAC L-N on BL10000 (add 7” chassis)
T15: 0-300 VAC L-N on BL15000
T20: 0-300 VAC L-N on BL20000
T20DO: 0-135 & 0-300 VAC on BL20000
T31D: 0-135 & 0-270 VAC on BL31000 (adds 7” chassis)
T51D: 0-135 & 0-270 VAC on BL51000 (adds 7” chassis)
V: Fixed output voltage (ie 115 )
F: Fixed output frequency (ie 400)
21-00: Cabinet with casters

Ordering Information
BL X X 0 0 C - X - X
Model Input Options
BL10000C-1-T10-230/50
Optional fixed voltage
Optional fixed frequency

www.behlman.com
BL High-Power Series

- I or IR options
- Analog remote control...standard
- AC output connection
- Ground stud
- DC-DC Cable supplied
- Fan connections...used with option "T"
- Range relay control (Used with "T" option)

Output chassis rear view

Input chassis rear view