BEHLMAN POWER PRODUCTS

AC Power Source/ Frequency Converter

FEATURES

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

MANUAL CONTROL OR PROGRAMMABLE AC POWER

The BL5100 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 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.

INPUT

Voltage: See table 1
Frequency: 47-63 Hz

OUTPUT

Power: 5000 VA
Voltage: 0-135 V, single phases, isolated
Resolution: 1 V
Accuracy: +/-2 % of full scale
Frequency: 45-500 Hz
(Option E: 45-1000 Hz)
Resolution: 1 Hz
Accuracy: +/-2 Hz
Current: 37 Amps / phase
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: 3.0% THD typical, measured at full load, 115 Volts, 60 Hz
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

PROTECTIVE CIRCUITS (cont)

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
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
Indicators: Power On, Constant Current, Over-temp, Overload Latch
External Synch: Synchronizes AC output with external input
Remote Control 0-10 VDC programming for voltage and frequency contact closure for output on/off...external synch

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MECHANICAL & ENVIRONMENTAL

Dimensions:
Single ø Input: **C-9A** - (2) 19” (48.3 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)
C-9 - 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)
Three ø Input: (2) 19” (48.3 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)

Weight: 250 lbs (113.5 kgs) three phase Input

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

Input Voltages Table 1

<table>
<thead>
<tr>
<th>Option</th>
<th>Voltage +/- 10%</th>
<th>Frequency</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1</td>
<td>120/208 VAC, 3 phase</td>
<td>47Hz – 63Hz</td>
<td></td>
</tr>
<tr>
<td>C2</td>
<td>220/380 VAC, 3 phase</td>
<td>47Hz – 63Hz</td>
<td></td>
</tr>
<tr>
<td>C3</td>
<td>277/480 VAC, 3 phase</td>
<td>47Hz – 63Hz</td>
<td></td>
</tr>
<tr>
<td>C4</td>
<td>200 VAC, DELTA, 3 phase</td>
<td>47Hz – 63Hz</td>
<td></td>
</tr>
<tr>
<td>C5</td>
<td>346/600 VAC, 3 phase</td>
<td>47Hz – 63Hz</td>
<td>Requires contactor and fuses in place of circuit breaker</td>
</tr>
<tr>
<td>C6</td>
<td>230/400VAC, 3 phase</td>
<td>47Hz – 63Hz</td>
<td></td>
</tr>
<tr>
<td>C7</td>
<td>240/415 VAC, 3 phase</td>
<td>47Hz – 63Hz</td>
<td></td>
</tr>
<tr>
<td>C8</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>C9</td>
<td>230 VAC, 1 phase</td>
<td>47Hz – 63Hz</td>
<td>Includes 21-00 stand alone cabinet</td>
</tr>
<tr>
<td>C9A</td>
<td>230 VAC, 1 phase</td>
<td>47Hz – 63Hz</td>
<td>Requires 8.75”H chassis</td>
</tr>
<tr>
<td>C10</td>
<td>480 VAC, 1 phase</td>
<td>47Hz – 63Hz</td>
<td>Includes 21-00 stand alone cabinet</td>
</tr>
</tbody>
</table>

Contact factory for other input voltages

Ordering Information

BL X X 0 0 C - X - X
Model Input Options
BL10000C-1-T10-E
Optional Output transformer
Optional Extended Frequency
BL(F) X X 0 0 C – X – V -F
Model Input
Fixed Output Voltage Fixed Output Frequency

Contact factory for additional options.

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**AC Power Source/Frequency Converter**

- DC connection (cable supplied)
- AC input connection
- Analog remote control...standard
- I or IR options
- Range relay control...(Used with “T”)

**Rear View**