

# BLC Series

### FEATURES

- Multi-Pulse Input Rectification – Low Harmonic Distortion
- Fixed or Adjustable Volts & Frequency
- Low cost per VA – Cost Savings
- Rugged construction
- CE Mark



Behlman's BLC Series AC Power Sources supply clean, regulated AC power in a rugged design at competitive prices. The BLC Series is available with either single or three-phase output in a range of power from 3 KVA to 9 KVA. Inputs are three-phase mains power with most models available with single-phase input.

The BLC 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 European standards. Unique protection circuitry provides for over-temperature protection; short-circuit protection and voltage fold-back during overloads to maintain undistorted waveforms.

Voltage and Frequency adjustment, line drop compensation, phase angle adjust, external sync and output on/off with remote power connection and CE Mark come standard. Units are available with optional fixed voltage and frequency, output transformers and Analog remote control interface. 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.

Rugged construction, quiet operation and high efficiency make the BLC series ideal for industrial product testing, precision avionic test and power conversion, ATE, bulk power and motor generator replacement.

**INPUT**

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

Voltage: +/- 10%

- C2** 220/380 VAC, 3-phase
- C6** 230/400 VAC, 3-phase
- C7** 240/415 VAC, 3-phase
- C8** 230 VAC, 1-phase (Note 1 & 4)
- C9** 230 VAC, 1-phase (Note 2 & 4)

*Contact factory for other input voltages*

**NOTES:**

1. Input C8 for Models BLC3001, BLC3002 & BLC3003 requires 7.0”H chassis in place of 3.5”H
2. Input C9 for Models BLC6001, BLC6002 & BLC6003
3. Contact factory for 0-135 / 0-135 VAC, split single phase
4. Single phase input versions produce line current harmonics in excess of some European limits. Connection to a public power supply must be reviewed by end user to meet EU/EMC directives.

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

**Table 1: BLC Series Model Selection**

Model Number	Power	Output Volts AC	Current	Mechanical Specifications
<b>BLC3001</b>	3000 VA	0-135, single-Phase	22 A	A or B
<b>BLC6001</b>	6000 VA	0-135, single-Phase	44 A	C
<b>BLC3002</b>	3000 VA	0-270, single phase (see note 3)	11 A	A or B
<b>BLC6002</b>	6000 VA	0-270, single phase (see note 3)	22 A	C
<b>BLC3003</b>	3000 VA	0-135, L-N, 3-phase	7.5 A/phase	A or B
<b>BLC6003</b>	6000 VA	0-135, L-N, 3-phase	15 A/phase	C
<b>BLC9003</b>	9000 VA	0-135, L-N, 3-phase	22 A/phase	C

*Contact factory for other output voltages*

**MECHANICAL SPECIFICATIONS**

- A.** (2) 19” (48.3 cm) rack-mount chassis 7.0” H & 3.5” H x 23” D (17.8 cm and 8.9 cm H x 58.4 cm D).  
Weight- 150 lbs (68.1 kgs) (Three-phase input)
- B.** (2) 19” (48.3 cm) rack-mount chassis 7.0” H x 22” D (17.8 cm H x 55.9 cm D)...  
Weight- 225 lbs (102.2 kgs) (Single-phase input)
- C.** (2) 19” (48.36 cm) rack-mount chassis 7.0” H & 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)

**OUTPUT**

**Power:** See Table 1  
**Voltage:** See Table 1  
**Frequency:** 45-500 Hz (Option E: 45-1000 Hz)  
**Current:** See Table 1  
**Crest Factor:** 3:1 Typical  
**Power Factor:** 100% of rated output into any power factor load  
**THD:** 1.0% @ 50Hz; 3% @ 500Hz (full linear loads)  
**Amplitude stability:** 1.0% for 24 hrs @ constant temp.  
**Line Regulation:** <0.1% for +/- 10% line change  
**Load Regulation:** <0.7% no load to full load  
**Efficiency:** 80% typical

**PROTECTIVE CIRCUITS**

**Input:** Fuses  
**Power On/Off:** Electronic control of input power  
**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 the input power  
**Thermal:** Internal temperature sensor prevents heat damage

**CONTROLS/INDICATORS**

**Power On/Off:** Push to start, Push to stop  
**Meters:**  
**Voltage:** 1V resolution, 2% of reading +/- 1 digit  
**Current:** 0.1A resolution, 2% of reading +/- 1digit  
**Frequency:** 1Hz resolution, 2% of reading +/- 1digit  
**Voltage Adjust:** Continuous multi-turn potentiometer  
**Frequency Adjust:** Continuous multi-turn potentiometer  
**Phase select:** Three-position switch for phase A, B or C (Three-phase units only)  
**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 (+/- 30°) (Three-phase units only)  
**Output:** On/Off Pushbutton Switch  
**Remote Power:** Remote power On/Off  
**Indicators:** Power, Start, Standby, Constant Current, Overtemp, Overload Latch Output, High, Remote

**CONTROLS/INDICATORS cont.**

**External Synch:** Synchronizes AC output with external input. BNC Conn (J2)  
**High:** High/Low switch for units with dual voltage range  
**Remote:** Remote/Local switch for units with remote interface option

**ENVIRONMENTAL / CONNECTIONS**

**Operating Temp:** 32° F to 96° F (0-40° C)  
**Humidity:** 0-95% RH non-condensing  
**AC Input:** Enclosed terminal safety type  
**AC Output:** Enclosed terminal safety type  
**DC In/Out:** Circular connector (J1)  
**Remote Power:** Terminal Block (TB2)  
**Remote Control Interface:** DB-9 connector (J3)

**CE MARK:**

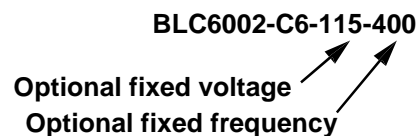
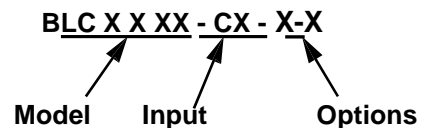
**Safety:** IEC-61010-1, class1 general safety requirements and IEC-60950-1 where applicable

**EMC:** IAW IEC61326-1

**OPTIONS**

**A:** Analog remote control (Isolated 0-10Vdc) & Contact closure for Output On / Off.  
**E:** Extended frequency range, 45-1000 Hz  
**L:** Locking pot  
**MA:** Mounting Angles (2 per chassis)  
**MT:** Motor test  
**S:** Slides for mechanical spec "B" or "C"  
**T3D:** 0-135 & 0-270 VAC L-N on BLC3003 (add 3.5" chassis)  
**T6D:** 0-135 & 0-270 VAC L-N on BLC6003 (add 7" chassis)  
**T9D:** 0-135 & 0-270 VAC L-N on BLC9003 (add 7" chassis)  
**T31D:** 0-135 & 0-270 VAC on BLC3001 (adds 7" chassis)  
**T61D:** 0-135 & 0-270 VAC on BLC6001 (adds 7" chassis)  
**V:** Fixed output voltage (i.e. 115 )  
**F:** Fixed output frequency (i.e. 400)  
**21-00:** Cabinet with casters

**Ordering Information**



**BLC Series**

AC output



Ground External Synch

**Control/Output chassis rear view**

Remote power



**Input chassis rear view  
Three-phase 3KVA**

DC-DC Connector  
Cable supplied

AC input



Remote power

Ground stud

**Input chassis rear view  
Single-phase 3KVA (7.0"H) or Single & Three-phase 6-9KVA (8.75"H)**



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