

### 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 BL3100 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

#### INPUT

**Voltage:** See table 1  
**Frequency:** 47-63 Hz

#### OUTPUT

**Power:** 3000 VA  
**Voltage:** 0-135 V, single phase, 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:** 22 Amps  
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



Shown with a single phase input

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.

#### 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  
**Output:** Toggle switch  
**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

## MECHANICAL & ENVIRONMENTAL

### Dimensions:

Single ø Input: (2) 19" (48.3 cm) rack-mount chassis  
7" H and 7" H x 22" D  
(17.8 cm and 17.8 cm H x 55.9 cm D)

Three ø Input: (2) 19" (48.3 cm) rack-mount chassis  
3.5" H and 7" H x 22" D  
(8.9 cm and 17.8 cm H x 55.9 cm D)

Weight: 150 lbs (68.1 kgs)

## 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

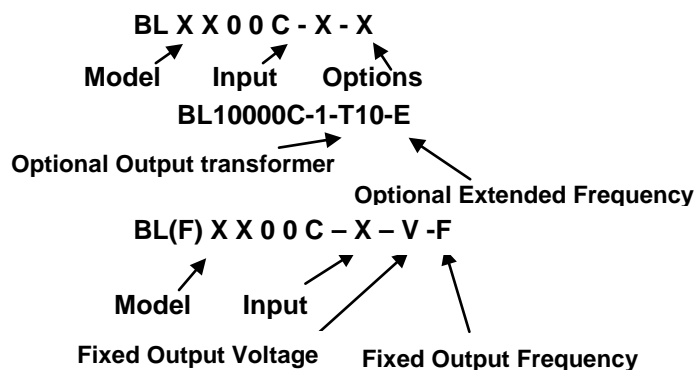
**E:** Extended frequency range, 45-1000 Hz  
**I:** IEEE-488 Interface  
**IR:** RS232 Interface  
**L:** Locking pot  
**MA:** Mounting Angles (2 per chassis)  
**MT:** Motor test  
**R:** Ruggedized for use in areas with shock and vibration  
**S:** Slides  
**T31D:** 0-135 & 0-270 VAC (adds 7" chassis)  
**V:** Fixed output voltage (ie 115 )  
**F:** Fixed output frequency (ie 400)  
**21-00:** Cabinet with casters

Input Voltages Table 1

| Option | Voltage +/- 10%         | Frequency   | Comments   |
|--------|-------------------------|-------------|--|
| C1     | 120/208 VAC, 3 phase    | 47Hz – 63Hz |  |
| C2     | 220/380 VAC, 3 phase    | 47Hz – 63Hz |  |
| C3     | 277/480 VAC, 3 phase    | 47Hz – 63Hz |  |
| C4     | 200 VAC, DELTA, 3 phase | 47Hz – 63Hz |  |
| C5     | 346/600 VAC, 3 phase    | 47Hz – 63Hz | Requires contactor and fuses in place of circuit breaker |
| C6     | 230/400VAC, 3 phase     | 47Hz – 63Hz |  |
| C7     | 240/415 VAC, 3 phase    | 47Hz – 63Hz |  |
| C8     | 115/230 VAC, 1 phase    | 47Hz – 63Hz | Requires 7"H chassis in place of 3.5"H                   |
| C9     | N/A                     | N/A         |  |
| C9A    | N/A                     | N/A         |  |
| C10    | N/A                     | N/A         |  |

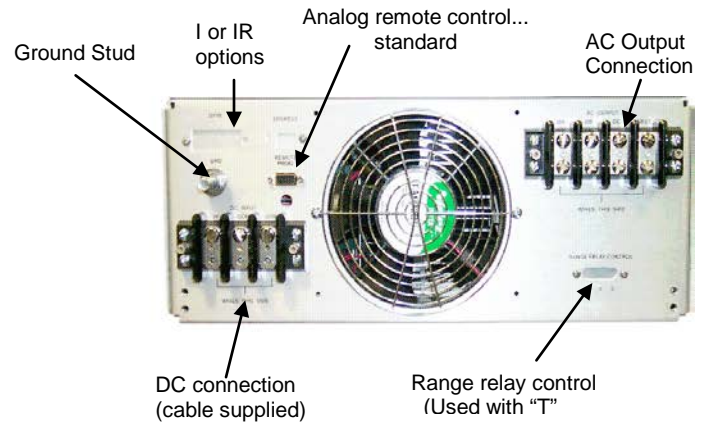
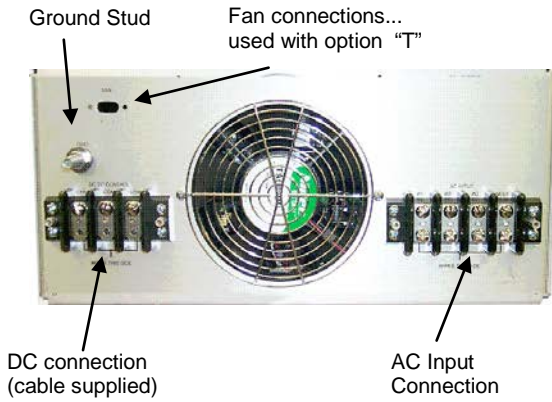
Contact factory for other input voltages

## Ordering Information



Contact factory for additional options.

# AC Power Source/ Frequency Converter



Rear View



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

**ORBIT** POWER GROUP  
**Behlman Electronics**

Headquarters:  
80 Cabot Court, Hauppauge, NY 11788  
631 435-0410 800 874-6727  
Fax: 631 951-4341

[sales@behlman.com](mailto:sales@behlman.com)

