

SL AND B SERIES AC POWER SOURCES

PRODUCT OVERVIEW

Elgar SL and B Series power sources are wide range, solid-state linear amplifiers that convert the incoming line to low distortion, stable sine wave power.

These solid-state frequency changers are bench-top/19" rack-mount units that can be driven over their full voltage and frequency ranges by fixed, variable or programmable plug-in oscillators (see Elgar's full selection on page 14) or from an external source.

The SL and B's save critical panel space and money by providing up to 50% more power density than most competitive models. All offer overload and over-temperature protection, can operate continuously at up to 150% rated capacity, and provide up to three output voltage ranges.

FEATURES AND BENEFITS

Continuous Duty at 150% Rated Capacity

Due to their conservative design, the SL Series provides continuous duty at 150% rated capacity into a linear resistive load, while the B Series models are rated at 100% (see charts on page 11).

Low Harmonic Distortion

The SL and B Series power sources provide low harmonic distortion—normally below 0.3% midband, 0.6% over full frequency range.

Wide Frequency Range

Elgar AC power sources offer frequencies from 45 Hz to 5 kHz at full rated power (optionally expandable to 10kHz).

Configurable

SL and B Series components can be used as building blocks for creating a full range of single, dual and three-phase AC power sources.

Output Power Volt Ampere Rating

Single-phase	120 VA to 15 kVA
Dual-phase	240 VA to 18 kVA
Three-phase	150 VA to 36 kVA

Two Year Warranty

Elgar offers a two year warranty on the SL, SX and B Series power supplies. These proven, reliable products are backed up with the best warranty in the industry.



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OPTIONS

Programmable via IEEE-448 GPIB

Elgar's SL and B Series, when used with a Plug-In Programmer, provide full GPIB control of voltage, frequency, phase angle, voltage dropouts and test readback of output parameters.

Range Change Relays

An optional internal range change relay switches between 130 VAC and 260 VAC ranges under GPIB control or front panel local control when used with a PIP or a modified oscillator.

Test Option/Built-In Test Equipment (BITE)

This feature is available when used with an Elgar PIP 9012A, PIP 9023 or PIP 704 that also has the test option. Depending on the PIP, the RMS voltage, RMS current, frequency, phase angle and true power in watts can be read from the front panel or over the GPIB.

Programmable Current Limit

When equipped with the test option (Built-in Test Equipment/BITE), a current limit may be programmed via the GPIB or from the front panel which, if exceeded, will cause system shutdown and status reporting.

Remote Sense

This feature provides full programming accuracy without sacrificing response time and is available with Elgar Plug-In Programmers and other selected oscillators for 0.015% regulation.

Disconnect Relay

The optional internal output relay connects the load to the output of the power source under GPIB control or from the front panel keypad with a Plug-In Programmer.

APPLICATIONS

The linear design of the SL and B Series provides a highly regulated, clean sine wave, making these units ideal for linear loads in general purpose test applications as well as for Automatic Test Equipment systems and avionics testing.

- Power fault simulation when used with an Elgar Plug-In Programmer
- Frequency conversion (60 to 50Hz or 50 to 60Hz) for generating international or USA power
- Power supply testing
- Gyro testing
- Avionics testing

Since all Elgar AC power sources require a plug-in signal source, please refer to page 14 of this catalog.

OUTPUT

Voltage Range: SL Series: 0-65/130/260 VAC
B Series: 0-32, 0-65, 0-130, 0-260 VAC
(varies per model). Specific output range is selected by jumper change on rear panel. Consult Elgar for other voltage ranges.

Rated Power Voltage Range: Full rated VA from 55-65 VAC, 110-130 VAC, or 220-260 VAC over a $\pm 10\%$ input and rated PF range.

SL Series: continuous duty at 150% of rated capacity at 55°C*.

B Series: continuous duty at 100% capacity.*

Load Power Factor: Unity to ± 0.7 PF at rated VA with an output voltage adjustment range of 85-100% of full scale.*

Frequency Range: 45 Hz-5 kHz at full rated power.

Total Harmonic Distortion:

SL Series: 0.4% 200 Hz to 1000 Hz
0.6% Full frequency range

B Series: 0.5% 100 Hz to 1000 Hz
0.9% Full frequency range

Load Regulation: $\pm 1\%$, no load to full load over full frequency range. Better than $\pm 0.25\%$ for fixed frequency output. Adjustable to $\pm 0.1\%$ for specific load conditions and to $\pm 0.015\%$ with a PIP.

Line Regulation: $\pm 0.25\%$ at rated load for a $\pm 10\%$ input change at full scale output voltage.

Response Time: <2 microseconds

AC Noise Level: 70 dB below full output voltage with input grounded.

INPUT

Voltage - SL Series: 115/208/230 VAC, $\pm 10\%$ (208 VAC is not available on 351 SL and 501 SL/SX models or on B Series.)

-Three phase B Series models: 208/240/416 VAC L-L for 1753B and 3001. User selectable.

Frequency: 47-63 Hz (400 Hz option, special order)

Efficiency: Up to 45%

GENERAL

Operating Temperature Range: 0° to +55°C

Operating Humidity Range: Up to 95% non-condensing

Metering: SL Series: 0-300 VAC output voltmeter, $\pm 3\%$ accuracy
B Series: 0-150 VAC

Controls: Input power switch/circuit breaker and pilot light. Full range, 10-turn output voltage control potentiometer.

*See Power Rating Curve on page 11.

SINGLE-PHASE OUTPUT POWER

MODEL	POWER Total VA	OUTPUT			INPUT		PHYSICAL			COMMENTS
		Vol. Range (RMS) L-N	Max Current (RMS) ①	Frequency Range (Hz)	Voltage and Phase	Nominal/Max (kVA) ②	Height and Depth (in/mm) ③	Weight WT (lbs/kg)		
121B	120	0-130 0-260	1.1 0.55	45 to 5k	115 or 230, 1 ϕ	0.4	3.5/89 H 15/381 D	47/21 Net 51/23 Ship	0-32V/4.4A range available; Model 121B-101	
251B	250	0-32 0-130 0-260	9.2 2.25 1.1	45 to 5k	115 or 230, 1 ϕ	0.8	5.25/133 H 16/405 D	49/22 Net 55/25 Ship		
351SL-11	350	0-65 0-130 0-260	8.0 4.0 2.0	45 to 5k	115 or 230, 1 ϕ	1.0/1.6	5.25/133 H 21/533 D	75/34 Net 83/38 Ship		
501SL-11	500	0-65 0-130 0-260	11.5 5.8 2.9	45 to 5k	115 or 230, 1 ϕ	1.5/2.2	5.25/133 H 21/533 D	80/36 Net 88/40 Ship		
751SL-11	750	0-65 0-130 0-260	17.3 8.65 4.3	45 to 5k	115, 208 or 230, 1 ϕ	2.2/3.2	7.00/178 H 21/533 D	115/52 Net 25/57 Ship		
1001SL-11	1000	0-65 0-130 0-260	23.1 11.5 5.8	45 to 5k	115, 208 or 230, 1 ϕ	3.0/4.2	7.00/178 H 21/533 D	125/57 Net 135/61 Ship		
1751SL-11	1750	0-65 0-130 0-260	40.4 20.2 10.1	45 to 5k	115, 208 or 230, 1 ϕ	5.2/7.5	12.25/311 H 21/533 D	90/86 Net 200/91 Ship		
3001	3000	0-65 0-130 0-260	54.5 27.2 13.6	45 to 3k	208 or 416, L-L, 3 ϕ	9.0	17.5/445 H 22/560 D	315/143 Net 361/164 Ship		
3500SL-11	3500	0-65 0-130 0-260	80.8 40.4 20.2	45 to 5k	115, 208 or 230, 1 ϕ	10.5/15.0	24.50/622 H 21/533 D	80/172 Net 400/182 Ship	2ea 1751SL, 1ea 400SR, 1ea signal cable	
6000-1	6000	0-130 0-260 0-520	54.5 27.2 13.6	45 to 3k	208 or 416, L-L, 3 ϕ	18.0	35/890 H 22/560 D	630/286 Net 722/328 Ship	2ea 3001 (series), 1ea 400SR 1ea signal cable	
9000-1	9000	0-130 0-260	81.8 40.9	45 to 3k	208 or 416, L-L, 3 ϕ	27.0	52.5/1335 H 22/560 D	45/429 Net 1083/492 Ship	3a 3001-165A (parallel) 2ea 400SR, 1ea signal cable	

① All SL models are specified at 150% of nominal output current into a linear resistive load. ② SL models show value in kVA for both nominal and 150% load.

③ Width on all units is 19".