

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 benchtop/19" rackmount units that can be driven over their full voltage and frequency ranges by fixed, variable or programmable plug-in oscillators.

The SL and B's 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%.

LOW HARMONIC DISTORTION

The SL and B Series power sources provide low harmonic distortion normally below 0.3% midband, 0.6% over the 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 10 kHz)

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 18 kVA
Dual phase	240 VA to 18 kVA
Three phase	150 VA to 36 kVA

WARRANTY

Elgar offers a two year warranty on the SL and B Series power supplies.



1001 SL and 400 SD

EMC/SAFETY (SLE Models Only)

CE The 1001 SLE and 1751 SLE have been designed to meet the requirements for the CE mark.

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 PIP9012A, PIP9023 or PIP704 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 50 Hz or 50 to 60 Hz) for generating international or USA power
- Power supply testing
- Gyro testing
- Avionics testing (400 Hz)



SPECIFICATIONS

OUTPUT

Voltage Range: SL Series: 0-65, 0-130, 0-260 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% of rated 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 to 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: < 50 microseconds

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

INPUT

Voltage SL Series: See model number description on page 23.

Three Phase B Series Models: See table

Frequency: 47 to 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 23.

Single Phase Output Power											
Model	Power		Output		Input		Physical			Comments	
	Total VA	Vol. Range (RMS)L-N	Max Current (RMS) ¹	Frequency Range (Hz)	Voltage and Nominal/Max Phase (kVA) ²		Height and Depth (in/mm)		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 5/127	H D	47/21 51/23	Net 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 16/405	H D	49/22 55/25	Net Ship	
351 SL-XX	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 21/533	H D	75/34 83/38	Net Ship	
501 SL-XX	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 21/533	H D	80/36 88/40	Net Ship	
751 SL-XX	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 21/533	H D	115/52 25/57	Net Ship	
1001 SL-XX & 1001 SLE-2X	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 21/533	H D	125/57 135/61	Net Ship	CE 1001 SLE-21 only
1751 SL-XX & 1751 SLE-2X	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 21/533	H D	190/86 200/91	Net Ship	CE 1751 SLE-21 only
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 22/560	H D	315/143 361/164	Net Ship	
3500 SL-XX & 3500 SLE-2X	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 21/533	H D	380/172 400/182	Net Ship	2ea 1751 SL, 1 ea 400 SR, 1ea signal cable CE 3500 SLE-21 only
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 22/560	H D	630/286 722/328	Net Ship	2ea 3001 (Series)1ea 400 SR 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 22/560	H D	945/429 1083/492	Net Ship	3ea 3001-165A (parallel) 2ea 400 SR, 1ea signal cable

¹ All SL models are specified at 150% of normal output current into a linear resistive load

² SL models show value in kVA for both nominal and 150% load

SL AND B SERIES SPECIFICATIONS

Dual Phase Output Power

Model	Power		Output		Input		Physical				Comments
	Total VA	Vol. Range (RMS)L-N	Max Current (RMS) ¹	Frequency Range (Hz)	Voltage and Nominal/Max		Height and Depth (in/mm) ³		Weight WT (lbs/kg)		
					Phase	(kVA) ²					
240-2	240	0-130	1.1	45 to 5K	115 or 230, 1ø	0.7	7/128	H	94/42	Net	2ea 121B in 2ø 90°, 1ea 400 SR, 1ea signal cable
		0-260	0.55				15/381	D	102/46	Ship	
500-2	500	0-32	9.2	45 to 5K	115 or 230, 1ø	1.5	10.5/267	H	98/44	Net	2ea 251B in 2ø 90°, 1ea 400 SR, 1ea signal cable
		0-130	2.25				16/406	D	110/50	Ship	
		0-260	1.1								
1000 SL-2-XX	1000	0-65	11.5	45 to 5K	115 or 230, 1ø	3.0/4.4	10.5/267	H	160/73	Net	2ea 501SL in 2ø 90°, 1ea 400 SR, 1ea signal cable
		0-130	5.8				21/533	D	176/80	Ship	
		0-260	2.9								
1500 SL-2-XX	1500	0-65	17.3	45 to 5K	115, 208 or 230, 1ø	4.5/6.4	14/356	H	230/105	Net	2ea 751SL in 2ø 90°, 1ea 400 SR, 1ea signal cable
		0-130	8.65				21/533	D	250/114	Ship	
		0-260	4.3								
2000 SL-2-XX & 2000 SLE-2-2X	2000	0-65	23.1	45 to 5K	115 or 208 or 230, 1ø	6.0/8.4	14/356	H	260/118	Net	2ea 1001 SL (or 1001 SLE) in 2ø 90°, & 1ea 400 SR, 1ea signal cable ☒ 2000 SLE-2-21 only
		0-130	11.5				21/533	D	280/127	Ship	
		0-260	5.8								
3500 SL-2-XX & 3500 SLE-2X	3500	0-65	40.4	45 to 5K	115, 208 or 230, 1ø	10.5/15.0	24.5/622	H	380/172	Net	2ea 1751 SL (or 1751 SLE) in 2ø 90°, & 1ea 400 SR, 1ea signal cable ☒ 3500 SLE-21 only
		0-130	20.2				21/533	D	400/182	Ship	
		0-260	10.1								
6000-2	6000	0-65	54.5	45 to 3K	208 or 416, L-L, 3ø	18.0	35/890	H	630/286	Net	2ea 3001 in 2ø 90°, 1ea 400 SR, 1ea signal cable
		0-130	27.2				22/560	D	722/328	Ship	
		0-260	13.6								

Three Phase Output Power

153B ³	150	0-30	2.0	45 to 5K	115 or 230, 1ø	0.5	5.25/133	H	70/32	Net	For 0-30V range specify Model 153B-121
		0-130	0.45				17/432	D	80/36	Ship	
360-3	360	0-130	1.1	45 to 5K	115 or 230, 1ø	1.3	10.5/267	H	141/64	Net	3ea 121B (4 wire Y), 2ea 400 SR, 1ea signal cable
		0-260	0.55				15/381	D	153/70	Ship	
503A ³	500	0-75	2.6	45 to 5K	115 or 230, 1ø	1.5	8.75/220	H	125/57	Net	75V L-N (130V L-L) 0-32V L-N option; Model 503B-121
		0-130	1.5				19/482	D	130/59	Ship	
750-3	750	0-32	9.2	45 to 5K	115 or 230, 1ø	2.2	15.75/400	H	147/66	Net	3ea 251B (4 wire Y) 2ea 400 SR, 1ea signal cable
		0-130	2.25				16/406	D	165/75	Ship	
		0-260	1.1								
1203 SL-XX ³	1200	0-65	9.7	45 to 5K	115, 208 or 230, 1ø	3.5/5.4	8.75/220	H	135/61	Net	
		0-130	4.8				21/533	D	142/65	Ship	
		0-260	2.4								
2253 SL-0X ³	2250	0-65	17.3	45 to 5K	208, 3ø	6.7/9.6	14/536	H	207/95	Net	
		0-130	8.65				19/482	D	225/103	Ship	
		0-260	4.3								
3000 SL-3-XX & 3000 SLE-3-2X	3000	0-65	23.1	45 to 5K	115, 208, 230, 1ø or 3ø	9.0/12.6	21/533	H	390/177	Net	3ea 1001 SL or 1001 SLE (4 wire Y), 2ea 400 SR, 1ea signal cable ☒ 3000 SLE-3-21 only
		0-130	11.5				21/533	D	420/191	Ship	
		0-260	5.8								
5250S SL-3-XX & 5250 SLE-3-2X	5250	0-65	40.4	45 to 5K	115, 208 or 230, 1ø or 3ø	15.7/22.5	36.75/933	H	570/259	Net	3ea 1751 SL or 1751 SLE (4 wire Y), & 2ea 400 SR, signal cable ☒ 5250 SLE-3-21 only
		0-130	20.2				21/533	D	600/273	Ship	
		0-260	10.1								
9000-3	9000	0-65	54.5	45 to 3K	208, or 416 L-L, 3ø	27.0	52.5/1335	H	945/429	Net	3ea 3001 (4 wire Y), 2ea 400 SR, 1ea signal cable
		0-130	27.2				22/560	D	1083/492	Ship	
		0-260	13.6								
18000-3	18000	0-130	54.5	45 to 3K	208 or 416 L-L, 3ø	54.0	105/2670	H	1890/858	Net	6ea 3001 (4 wire Y), 5ea 400 SR, 1ea signal cable
		0-260	27.2				22/560	D	2166/984	Ship	
		0-560	13.6								

*Other configurations available, please contact the factory.

¹ All SL models are specified at 150% of nominal output current into a linear resistive load.

² SL models show value in VA for both nominal and 150% load.

³ Three-phase system in one chassis.