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.

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 150 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 ±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: ±1%, no load to full load over full frequency range. Better than ±0.25% for fixed frequency output. Adjustable to ±0.1% for specific load conditions and to ±0.015% with a PIP.

Line Regulation: ±0.25% at rated load for a ±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,
±10%(208 VAC is not available on 351 SL and 501 SL/SX models or on B Series.)


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, ±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

<table>
<thead>
<tr>
<th>MODEL</th>
<th>POWER</th>
<th>OUTPUT</th>
<th>INPUT</th>
<th>PHYSICAL</th>
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<tbody>
<tr>
<td></td>
<td>Total VA</td>
<td>Vol. Range (RMS) L-N</td>
<td>Max Current (RMS) ☑️</td>
<td>Frequency Range (Hz)</td>
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<tr>
<td>121B</td>
<td>120</td>
<td>0-130</td>
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<td>45 to 5k</td>
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<tr>
<td>251B</td>
<td>250</td>
<td>0-130</td>
<td>9.2</td>
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<td>0-65</td>
<td>8.0</td>
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<td>17.3</td>
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<td>9000</td>
<td>0-65</td>
<td>81.8</td>
<td>45 to 3k</td>
</tr>
</tbody>
</table>

* All SL models are specified at 150% of nominal output current into a linear resistive load.
☑️ SL models show value in kVA for both nominal and 150% load.
* Width on all units is 19".