

Glentek's High Power Linear Servo Amplifiers

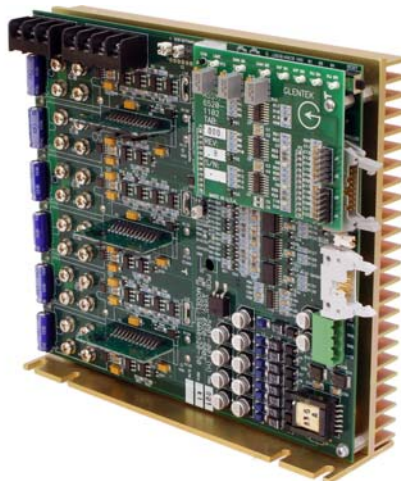
Glentek's linear servo amplifiers utilize the new ISO-BIAS® current sense technology developed at Glentek, providing industry's most stable low drift and low noise amplifiers.

Glentek offers the latest in high performance Linear Brush/Brushless Servo Amplifiers for the control of rotary, voice coil and linear brushless motors with extensive utilization of surface mount technology and special heat transfer techniques.

All models can operate in current (torque) mode and accept a +/-10V analog input as a command reference and phase locked loop control can be provided for very precise velocity control.

Typical applications are medical, high speed semiconductor processing machines, linear air bearing systems, metrology systems, voice coil applications, etc.

- **Bandwidth** All servo amplifiers have a nominal 4000 Hertz current loop bandwidth which varies with the motor inductance. Higher bandwidths are available upon request.
- **Linear output stage** Provides high bandwidth, low noise and zero crossover distortion.
- **Multimode operation** The trapezoidal and 2-Phase/3-Phase Current Mode servo amplifiers can operate in current (torque) mode. In addition, the Trapezoidal servo amplifier can close the velocity loop via feedback of a DC tachometer.
- **Wide operating voltage** Operating voltages range from either +/-24 to +/-75VDC.
- **Fault protection** Short from output to output, short from output to ground, amplifier RMS over current, amplifier under/over voltage, amplifier over temperature, motor over temperature.
- **Status Indicator** 7-segment display indicates amplifier status and diagnostics.
- **External fault reset** An input is provided to reset the amplifier in the event of a fault.
- **Reset/Balance button** A push button is provided for system reset and current loop balance.
- **Dedicated inputs** +/- limits, inhibit, fault, motor over temperature and reset.
- **Current limit** Peak motor current is adjustable.
- **Ergonomic design** Easy access to connectors, adjustments and test points.
- **SMT construction** Provides ultra compact size, cost competitive package and high reliability. Dimensions: 7.50 in (L) X 8.00 in (H) X 2.33 in (W).



Specifications

Electrical															
Bus Voltage	± 20 VDC to ± 75 VDC.														
External Bias Voltages	± 13 VDC to ± 17 VDC @ 0.5A maximum.														
Power Output	460 W/phase @ 25°C heatsink temperature (Calculated using 0.27°C/W junction to heatsink thermal resistance and 150°C max junction temperature)														
Peak Current Output	25A														
Continuous Current Output	10 A RMS @ ± 46 V phase output, 25°C heatsink temperature														
Bandwidth	4 KHz nominal with 2mH phase to phase inductive load. Varies with motor inductance, higher bandwidths available.														
Current Monitor Test Point (Abs. I)	10 A/V (output of three phase, full wave rectifier)														
Fault Output	TTL compatible, normally low, can sink up to 500mA														
Reset Input, Enable (Inhibit) Input	TTL compatible, Active Low														
Motor Temp Switch input	Accepts normally closed temperature switch														
Faults															
Bias Under Voltage Lockout	Amplifier resets if the Bias Voltages are less than ± 12.5 VDC														
Bus Under Voltage Lockout	Amplifier faults and is inhibited if the \pm Bus voltages are less than ± 16 VDC for 120 ms														
Low Speed Electronic Circuit Breaker (LS ECB)	Amplifier faults and is inhibited if the three phase rectified current (measured at AbsI) exceeds the selected trip level for the selected trip time. Trip levels and times are jumper selectable to 2, 3, 4, and 5 A; 1.25, 2.5, 5.0 and 10 s respectively.														
High Speed Electronic Circuit Breaker (HS ECB)	Amplifier faults and is inhibited if the three phase rectified current (measured at AbsI) exceeds the selected trip level for the selected trip time. Trip levels and times are jumper selectable to 12, 15, 18, and 20 A; 1, 2, 5, and 10 ms respectively.														
Over Temperature Lockout	Amplifier faults and is inhibited if the heatsink temperature reaches 75°C or the motor temperature switch opens.														
Manual Fault Reset and Current Loop Balance	Side mounted, push button.														
7 Segment LED Diagnostics Fault codes	<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;"><u>Code</u></th> <th style="text-align: left;"><u>Fault</u></th> </tr> </thead> <tbody> <tr> <td>0</td> <td>Amplifier enabled and operational</td> </tr> <tr> <td>S</td> <td>High Speed ECB Trip</td> </tr> <tr> <td>L</td> <td>Low Speed ECB Trip</td> </tr> <tr> <td>H</td> <td>Heatsink/Motor Over Temperature</td> </tr> <tr> <td>B</td> <td>\pmBus Over Voltage Lockout</td> </tr> <tr> <td>U</td> <td>\pmBus Under Voltage Lockout</td> </tr> </tbody> </table>	<u>Code</u>	<u>Fault</u>	0	Amplifier enabled and operational	S	High Speed ECB Trip	L	Low Speed ECB Trip	H	Heatsink/Motor Over Temperature	B	\pm Bus Over Voltage Lockout	U	\pm Bus Under Voltage Lockout
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U	\pm Bus Under Voltage Lockout														
Environmental															
Operating Temperature	0°C to +60°C														
Storage Temperature	-40°C to +80°C														
Humidity	10% to 95% non-condensing														