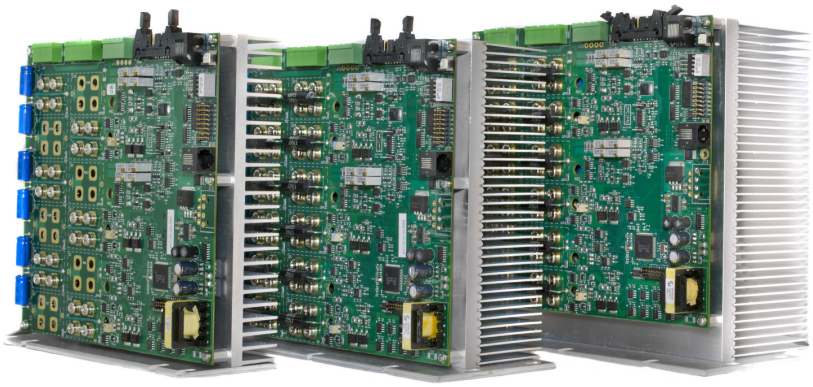
LALD Series
Linear Servo Amplifiers

Model	Current	Power
LALD-525	15/25 Amps	500/1900 Watts
LALD-540	15/40 Amps	500/3800 Watts
LALD-825	15/25 Amps	800/1900 Watts
LALD-840	15/40 Amps	800/3800 Watts
LALD-1525	15/25 Amps	1500/1900 Watts
LALD-1540	15/40 Amps	1500/3800 Watts



Details

The LALD series Linear Servo Amplifiers are the next generation of high-performance motion products from Varedan Technologies. They are the perfect choice for systems requiring low radiated noise, zero distortion and extremely low drift from the drive electronics. These current mode linear amplifiers are well suited to drive loads such as brushless and brush servo motors or voice coils. Commutation options include externally commutated 2-phase sine input for three-phase motors, or current mode control for single-phase motors.

With their true linear output (as opposed to pulse width modulation), these amplifiers are extremely quiet and provide very low distortion for smooth motor operation. These new amplifiers feature a proprietary current feedback scheme that provides an optimized current range that greatly reduces output drift over temperature, offering up to a 100x improvement over previous products. With this new technology, users can achieve high resolution, low noise, and ultra-low drift for sensitive low current operation while still having enough peak current to make fast moves for improved cycle times.

The design of these amplifiers includes an on-board high-speed DSP that monitors all key system functions in real time, and provides protection for the outputs by limiting output power to a “Safe Operating Area”. An intelligent user interface allows setup and storage of all system parameters via the serial interface. Non-volatile memory provides storage of the parameters during power off conditions.

Features

- **Linear Output Control for quiet operation**
- **Multiple Power Levels Share Common Interface**
- **Single-Phase and Three-Phase Versions**
- **Safe Operating Area Protection of Power Devices**
- **Zero Crossover Distortion**
- **Extremely Low Drift**
- **Over Current Protection**
- **Over Voltage Protection**
- **Up to 10kHz Bandwidth**
- **Non-volatile Storage of All System Parameters**
- **Serial User Interface for Programming/monitoring**
- **RS-232 Communication Interface**
- **Configure Using Serial Interface**
- **7-Segment Display Shows Status in Real-Time**
- **Factory Programmable Options**

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OUTPUT POWER OPTIONS

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OUTPUT CONNECTIONS

Motor Phases A, B, C (3-phase)
Motor Phases A,B (Single Phase)
Motor Currents (A,B,C Current Monitor)
Fault (0-5VDC)
RS232 - Transmit

INPUT CONNECTIONS

Command A, +/- 10V, Single-Ended or Differential
Command B, +/- 10V, Single-Ended or Differential
Enable (0-5VDC)
Reset (0-5VDC)
RS232 - Receive

COMMUTATION

3-Phase External 2-Phase Sinusoidal, +/- 10V Analog Input
Single-Phase Current, +/-10V Analog Input

BANDWIDTH

10kHz Maximum

MOTOR BUS VOLTAGE

+/-150VDC Maximum

INDICATORS

7-Segment LED for system status

MECHANICAL

Dimensions	LALD-5xx	7.50” x 8.00” x 2.612”
	LALD-8xx	7.50” x 8.00” x 3.871”
	LALD-15xx	7.50” x 8.00” x 4.871”

PROGRAMMABLE SETTINGS

RMS Overcurrent Trip Level
RMS Overcurrent Trip Time
Absolute Overcurrent Trip Level
Enable Level
Enable Source
Fault Output Level

FAULT PROTECTION

Safe Operating Area
Absolute Overcurrent
RMS Overcurrent
Bus Overvoltage
Bus Undervoltage
+/-15V Bias Supply
Amplifier Over Temperature
Internal 5V Supply
DSP Error
NVM Error

ENVIRONMENTAL LIMITS

0 to 70 deg. C Ambient
-40 to 85 deg. C Storage
5 to 95% Relative Humidity. Non-condensing.

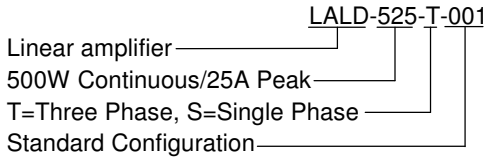
POWER REQUIREMENTS

+/-15vdc Bias Supply @600mA per side
+/- DC Motor Bus Supply

DRIFT SPECIFICATION

100uA/Deg C Normal Current Range
10uA /Deg C Low Current Range

MODEL NUMBERING EXAMPLE



Varedan Technologies warrants this product to be free from defects for a period of one year after the date of shipment and according to the Terms and Conditions of Sale.

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