

## Models

**LA-1535 35 Amps / 3000 Watts Peak**

**LA-1545 45 Amps / 4500 Watts Peak**

**LA-1555 55 Amps / 6000 Watts Peak**

## Details

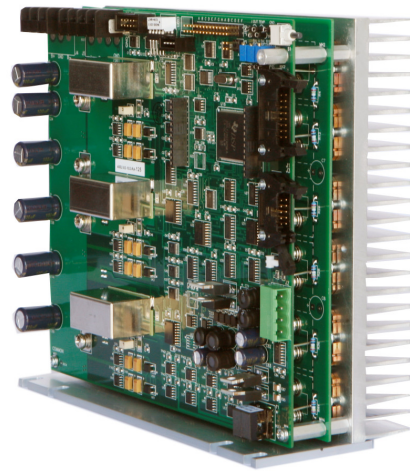
The LA series Linear Servo Amplifiers are the perfect choice for systems requiring low radiated noise and zero distortion from the drive electronics. These high power current mode linear amplifiers are well suited to drive loads such as brushless and brush servo motors or voice coils. Commutation options include externally commutated 2-phase sine input or trapezoidal commutation using motor mounted hall sensors. With our optional VMC-3000 plug-in motion board, full sinusoidal commutation can be provided from a motor mounted encoder.

With true linear output (as opposed to pulse width modulation), these amplifiers are extremely quiet and provide very low distortion for smooth motor operation.

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.

A 7-segment LED display provides a continuous visual indication of system status. The DSP disables the outputs and displays an error code in the event of system malfunction.

In addition to the modules shown, we also offer multi-axis baseplates that can include power supplies and fans, requiring only AC power to run.



## 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**
- **External Sinusoidal or Trapezoidal commutation**
- **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 Jumpers or Serial Interface**
- **Dedicated Limit inputs (Trapezoidal Mode)**
- **Exclusive Autobalance Feature Speeds Setup**
- **7-Segment Display Shows Status in Real-Time**
- **Optional Single-Axis Motion Controller**
- **Factory Programmable Options**

**OUTPUT POWER OPTIONS**

1500 Watts Continuous/ 3000 Watts Peak (20A Cont./35A Peak)  
1500 Watts Continuous/ 4500 Watts Peak (25A Cont./45A Peak)  
1500 Watts Continuous/ 6000 Watts Peak (30A Cont./55A Peak)

**OUTPUT CONNECTIONS**

Motor Phases A, B, C (3-phase)  
Motor Phases A,B (Single Phase)  
Hall Power +5V, Common  
Motor Current (I RMS Out)  
Fault (Open Collector, +5V pull-up)  
RS232 - Transmit

**INPUT CONNECTIONS**

Command A, +/- 10V, Single-Ended or Differential  
Command B, +/- 10V, Single-Ended or Differential  
Limits +/-  
Enable  
Reset  
Hall Sensors A, B, C  
Motor Temperature Switch  
RS232 - Receive

**COMMUTATION**

External 2-Phase Sinusoidal, +/- 10V using Command A&B  
Trapezoidal, +/- 10V using Command A  
Sinusoidal with option plug-in card.

**BANDWIDTH**

10kHz Maximum

**MOTOR BUS VOLTAGE**

+/-135VDC Maximum (trip level at +/-140VDC)

**INDICATORS**

7-Segment LED for system status

**MECHANICAL**

Dimensions 7.50" x 8.00" x 5.75"

**MODEL NUMBERING EXAMPLE**

LA-1535-T-01  
Linear amplifier  
800W Continuous/30A Peak  
T=Three Phase, S=Single Phase  
Standard Configuration

**PROGRAMMABLE / JUMPER SETTINGS**

RMS Overcurrent Trip Level  
RMS Overcurrent Trip Time  
Absolute Overcurrent Trip Level  
Motor Reverse (Trap Mode)  
Commutation Mode  
Input Filter 3dB Frequency  
Transconductance Ratio  
Command Signal Type  
Current Loop Bandwidth

**FAULT PROTECTION**

Safe Operating Area  
Absolute Overcurrent  
RMS Overcurrent  
Bus Overvoltage  
Bus Undervoltage  
+/-15V Bias Supply  
Amplifier Over Temperature  
Motor Over Temperature  
Hall Sensor Error  
Hall Sensor 5V Supply  
Internal 5V Supply  
Internal 2.5V Supply  
Autobalance  
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 @300mA per side  
+/- DC Motor Bus Supply

**OPTIONS**

Breakout modules for I/O connections  
VMC-3000 Motion control card

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.