

Models

LA-830 30 Amps / 3000 Watts Peak

LA-835 35 Amps / 4500 Watts Peak

LA-840 40 Amps / 6000 Watts Peak

Details

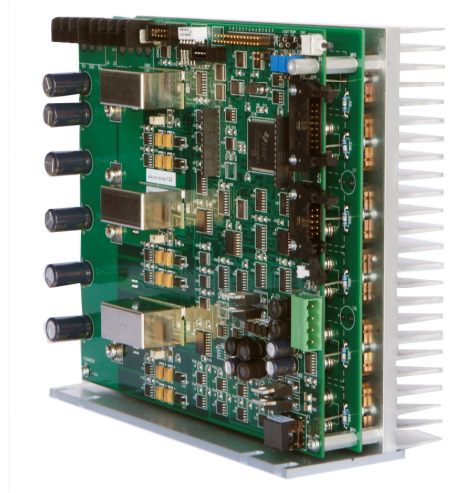
The LA series Linear Servo Amplifiers are the perfect choice for systems requiring low radiated noise and zero distortion from the drive electronics. These high power current mode linear amplifiers are well suited to drive loads such as brushless and brush servo motors or voice coils. Commutation options 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

800 Watts Continuous/ 3000 Watts Peak (15A Cont./30A Peak)
800 Watts Continuous/ 4500 Watts Peak (18A Cont./35A Peak)
800 Watts Continuous/ 6000 Watts Peak (20A Cont./40A 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 4.75"

MODEL NUMBERING EXAMPLE

LA-830-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.