

Models

LA-415-SA 400W, 15A Peak LA-525-SA 500W, 25A Peak LA-830-SA 800W, 30A Peak

Details

The LA StandAlone Linear Servo Amplifier is the perfect choice for systems requiring low radiated noise and zero distortion from the drive electronics. This high power current mode linear amplifier is 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), this amplifier is extremely quiet and provides very low distortion for smooth motor operation.

The design of this amplifier 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.

The AC line powered stand alone package provides all the necessary power supplies, cooling fans and interfaces for most OEM applications.



Features

- Linear Output Control for quiet operation
- ●Three Power Levels 400W, 500W, 800W Continuous
- 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
- **•USB or RS-232 Communication with Amplifier**
- Configure Using Jumpers or Serial Interface
- Dedicated Limit inputs (Trapezoidal Mode)
- Compact Design Saves Panel Space
- Integrated Forced Air Cooling

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- Integrated Power Supplies (only AC power required)
- Optional Single-Axis Motion Controller



OUTPUT POWER OPTIONS

400 Watts Continuous/ 1200 Watts Peak (5A Cont./15A Peak) 500 Watts Continuous/ 1500 Watts Peak (10A Cont./25A Peak) 800 Watts Continuous/ 1500 Watts Peak (15A Cont./30A 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 USB 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 USB Receive AC Line Voltage, Single Phase (115 or 230 VAC)

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

+/-56VDC Nominal, other voltages available upon request.

INDICATORS

7-Segment LED for system status

MECHANICAL

400W, 500W Box
 Dimensions 12.18" x 6.28" x 7.87" (LWH)
 Weight 22 lbs
800W Box
 Dimensions 17.70" x 8.75" x 7.93" (LWH)
 Weight 26 lbs

Mounting 10-32 x 0.5 in screws (4)

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 Storage5 to 95% Relative Humidity. Non-condensing.

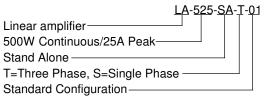
POWER REQUIREMENTS

115VAC / 10A or 230VAC / 5A

OPTIONS

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

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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