**LA Series Stand-Alone Linear Servo Amplifiers**

<table>
<thead>
<tr>
<th>Series</th>
<th>Current Cont./Peak</th>
<th>± VDC Bus Voltage</th>
<th>Power Cont./Peak</th>
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<tbody>
<tr>
<td>LA-415*-SA</td>
<td>5/15A</td>
<td>±12 - ±85VDC</td>
<td>400/1800W</td>
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<tr>
<td>LA-525*-SA</td>
<td>10/25A</td>
<td>±12 - ±85VDC</td>
<td>500/1950W</td>
</tr>
<tr>
<td>LA-830*-SA</td>
<td>15/30A</td>
<td>±12 - ±150VDC</td>
<td>800/3000W</td>
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</table>

**Details**

The LA Series Stand-Alone 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 VMC2 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 onboard 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
- Integrated Power Supplies (only AC power required)
- Optional Single-Axis Motion Controller
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
Dimensions
LA-415*-SA: 12.18” x 6.28” x 7.87”
LA-525*-SA: 12.18” x 6.28” x 7.87”
LA-830*-SA: 17.70” x 8.75” x 7.93”

Weight
LA-415*-SA: 22 pounds
LA-525*-SA: 22 pounds
LA-830*-SA: 26 pounds

Mounting
10-32 x 0.5 Inch 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 Storage
5 to 95% Relative Humidity. Non-condensing.

POWER REQUIREMENTS
115VAC / 10A or 230VAC / 5A

OPTIONS
Breakout modules for I/O connections
Optically Isolated I/O available
VMC2 Plug-in motion board

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.