

**Output Type:**  
Linear

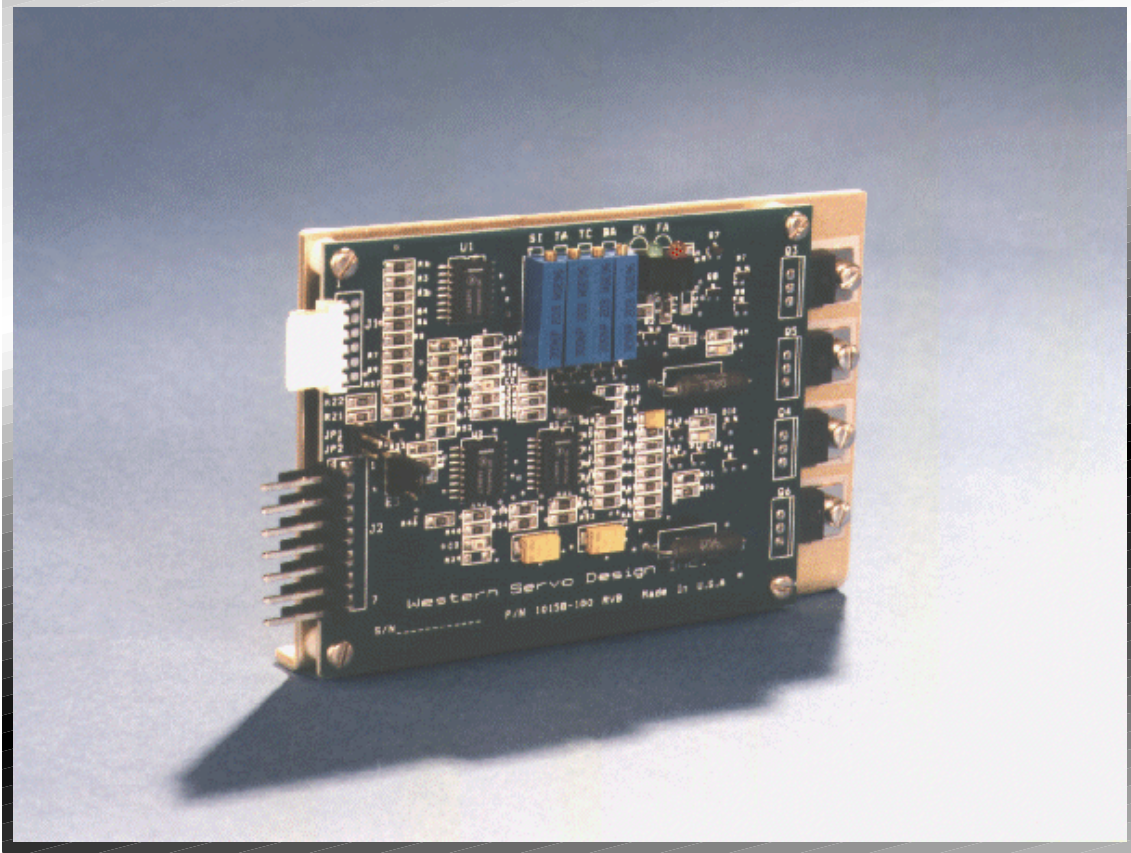
**Voltage:**  
Up to 40 VDC

**Amperage:**  
Up to 5 A Peak

**Mounting:**  
3E Edge Mount

**Modes:**  
Velocity or Torque

**Command:**  
 $\pm 10V$



# LDH-S3

Low-Power Brush-Type Linear Servo Amplifier

The LDH-S3 is a low power brushed linear servo amplifier in a 3E Edge Mount format. It is ideally suited to "stand alone" torque or velocity control applications or for position/velocity/acceleration control if used with a motion controller and position feedback device. When configured for torque control, the amplifier operates as a voltage controlled current source. When configured for velocity control, the amplifier operates as a voltage controlled voltage source. If configured for velocity control, the amplifier can be further configured to accept a tachometer feedback signal for improved motor response, low speed smoothness and velocity accuracy.

The LDH-S3 has simple potentiometer adjustments for Signal Gain, Tachometer Gain, System Response and Balance. The unit includes an Amp Enable input and Enable Indicator LED. Until the amplifier is enabled, the command input is essentially zeroed, and the output transistors disabled. The more compact Surface Mount Devices allow the addition of RMS Fault protection circuitry. The LDH-S3 has numerous advantages over PWM type amplifiers including minimum motor heating, increased brush life, high bandwidth, and the ability to drive zero inductance loads.

- ◉ 3E Edge Mount Format
- ◉ Torque/Velocity Mode Jumper Selected
- ◉ Can Accept Tachometer Input in Velocity Mode
- ◉ Disable Signal Zeroes Command Input and Disables Motor Output
- ◉ RMS Fault Protection and Indicator LED
- ◉ Amp Enable Input and Indicator LED
- ◉ Minimum Electrical Noise
- ◉ Drives Zero or Low Inductance Loads
- ◉ Accepts Uni-polar or Bi-polar Bus Supply
- ◉ Bus Voltage: 20 - 40 VDC
- ◉ Continuous Current: 2 Amperes
- ◉ Excellent for use with Precision Positioning Systems
- ◉ Designed for Brushed DC Motors
- ◉ Advanced Design, Superior Quality and High Reliability
- ◉ One Year Parts and Labor Warranty

## SPECIFICATIONS

Standard Models: 4/5	
Bus Voltage	20 to 40 VDC
Peak Output Current*	5 A for 0.5 sec
Continuous Output Current*	2 A
Command Input Voltage	0 to $\pm 10$ V
Tachometer Input Voltage	0 to $\pm 40$ V
Command Input Impedance	20 kOhm
Tachometer Input Resistance	20 kOhm
Minimum Load Inductance	0 H
Torque Gain	0.5 A/V
Bandwidth	20 kHz
Weight	.25 Lb (113.40 g)
Recommended Chassis	LDP, EPS

\*All ratings with forced air cooling to maintain 40°C heat sink temperature. Failure to keep constant air flow to the heat sink will reduce the output current capacity and may result in damage to the unit.

## PINOUTS

### J1: SIGNALS

Pin	Function
1	Command In
2	Command Return
3	Tachometer Return
4	Tachometer In
5	Amp Enable In
6	Amp Enable Return

### J3: POWER & MOTOR

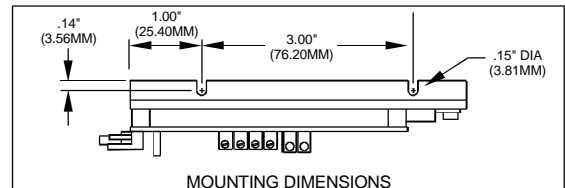
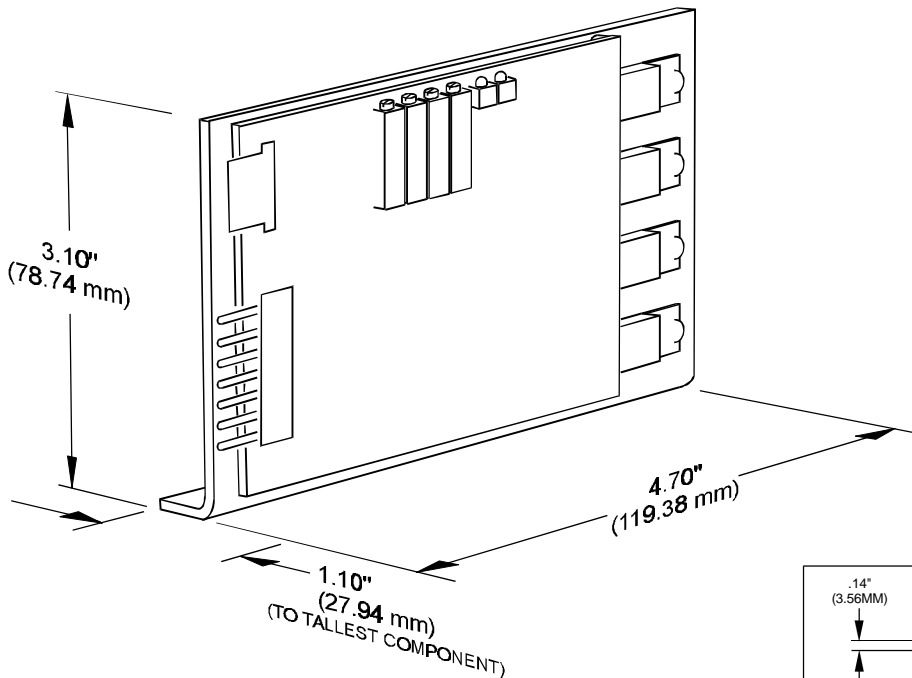
(Uni-Polar Supply)

Pin	Function
1	Bus Ground
2	No Connection
3	Bus +V (+20 to +40 VDC)
4	No Connection
5	Motor Phase A (+)
6	No Connection
7	Motor Phase B (-)

(Bi-Polar Supply)

Pin	Function
1	Bus -V (-10 to -20 VDC)
2	Bus Ground
3	Bus +V (+10 to +20 VDC)
4	No Connection
5	Motor Phase A (+)
6	No Connection
7	Motor Phase B (-)

Note: Jumper E3 determines power supply style.  
Consult the User's Manual for jumper settings.



MOUNTING DIMENSIONS

### Ordering Information:

Product	Order Number
LDH-S3-4/5 Amp 40 VDC / 5A Peak	WS-000-0015

### Represented By:

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