

**Output Type:**  
Linear

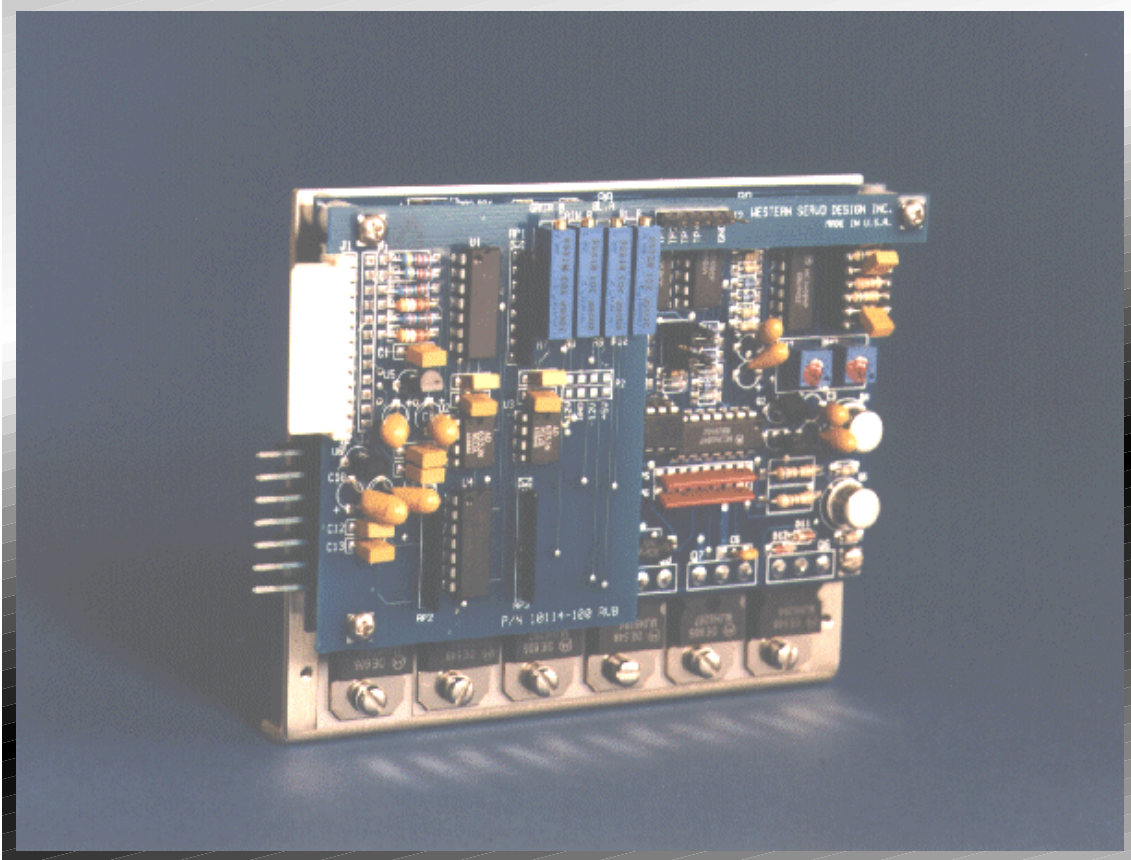
**Voltage:**  
Up to 40 VDC

**Amperage:**  
Up to 15 A Peak

**Mounting:**  
3E Edge Mount

**Modes:**  
Torque

**Commutation:**  
Ext Sine or Analog Hall



# BLH-S3

Low-Power Linear Brushless Servo Amplifier

The BLH-S3 is a low power brushless linear servo amplifier in a 3E Edge Mount format. It is ideally suited to high precision positioning applications or if electrical noise and excess motor heating cannot be tolerated, or when low inertia/low inductance loads must be driven. This amplifier is configured for self commutation using Analog Hall effect sensors. Look to the BLH-S1 if External Sinusoidal commutation or Digital Hall sensors are required.

The BLH-S3 is a single card unit with a small plug in Personality Component Carrier to allow customized component changes for the peak current, gain, and integration factors. The Hall sensors provide two sine waves out of phase by 60° or 120°. The optimal third phase is derived by the amplifier. This eliminates "cogging" and greatly enhances low speed operation while allowing the amplifier to be driven with a standard  $\pm 10V$  analog input command. An optional backplane is available to allow quick and easy access to motor, power, control and other I/O signals.

- ⦿ 3E Edge Mount Format
- ⦿ Accepts Analog Hall Effect Sensors
- ⦿ Two Commutation Modes: Hall Effect and External Sinusoidal Input
- ⦿ Zero Electrical Noise
- ⦿ Amp Enable Input
- ⦿ Personality Component Carrier allows Custom Current Loop and Peak Current Configurations
- ⦿ Bus Voltage: 20 - 40 VDC
- ⦿ Continuous Current: 2 or 4 Amperes
- ⦿ Excellent for use with Precision Positioning Systems
- ⦿ Hall Power generated from Bus Voltage
- ⦿ Designed for Three-Phase Wye or Delta Wound Motors
- ⦿ Advanced Design, Superior Quality and High Reliability
- ⦿ One Year Parts and Labor Warranty

## SPECIFICATIONS

Standard Models:	4/8	4/15
Bus Voltage	20 to 40 VDC	20 to 40 VDC
Peak Output Current	8 A for 0.5 sec	15 A for 0.5 sec
Continuous Output Current*	2 A RMS	4 A RMS
Command Input Voltage	0 to ±10 V	0 to ±10 V
Command Input Impedance	40 kOhm	40 kOhm
Minimum Load Inductance	0 H	0 H
Torque Gain	0.8 A/V	1.5 A/V
Bandwidth	20 kHz	20 kHz
Weight	.50 Lb (226.80 g)	
Recommended Chassis	EPS, LDP, PBS	

\*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

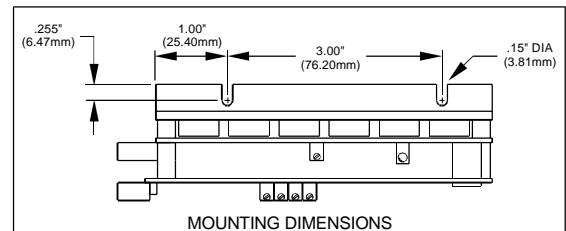
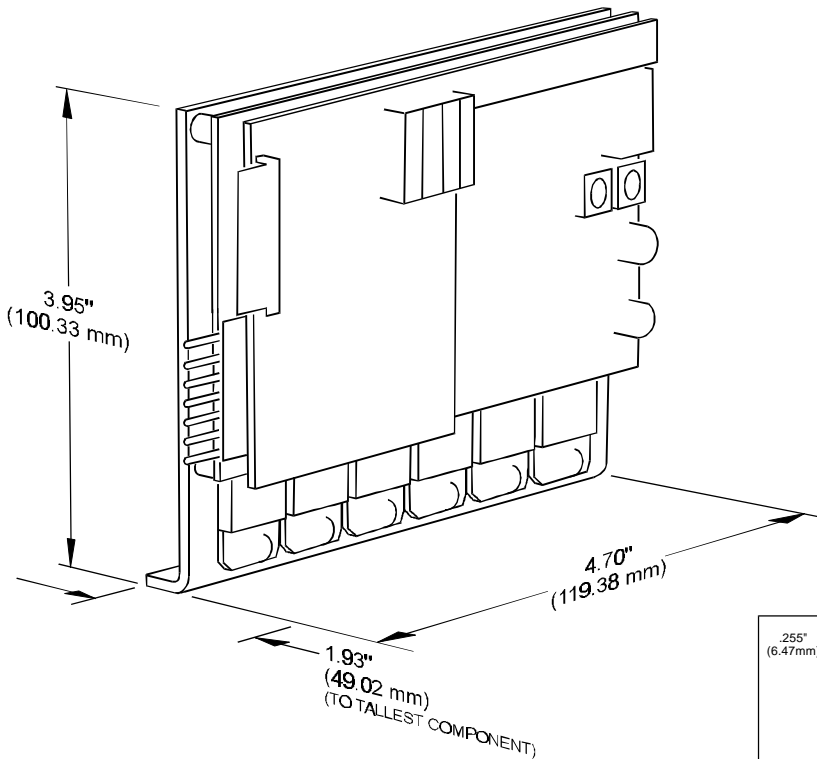
### J1: SIGNALS

Pin	Function
1	Command Input (-)
2	Command Input (+)
3	Command Return
4	No Connection
5	No Connection
6	Amp Enable In (Opto Isolated)
7	Optoisolator Power In (+12 VDC)
8	+5 VDC Out (for Hall sensors)
9	Linear Hall A Input
10	Linear Hall B Input
11	No Connection
12	Hall Return

### J2: MOTOR & BUS POWER

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

Consult User's Manual for jumper settings.



### Ordering Information:

Product	Order Number
BLH-S3-4/8 Amplifier 40 VDC/8A Peak	WS-001-0017
BLH-S3-4/15 Amplifier 40 VDC/15 A Peak	WS-001-0018

### Represented By:

