

**Output Type:**  
Linear

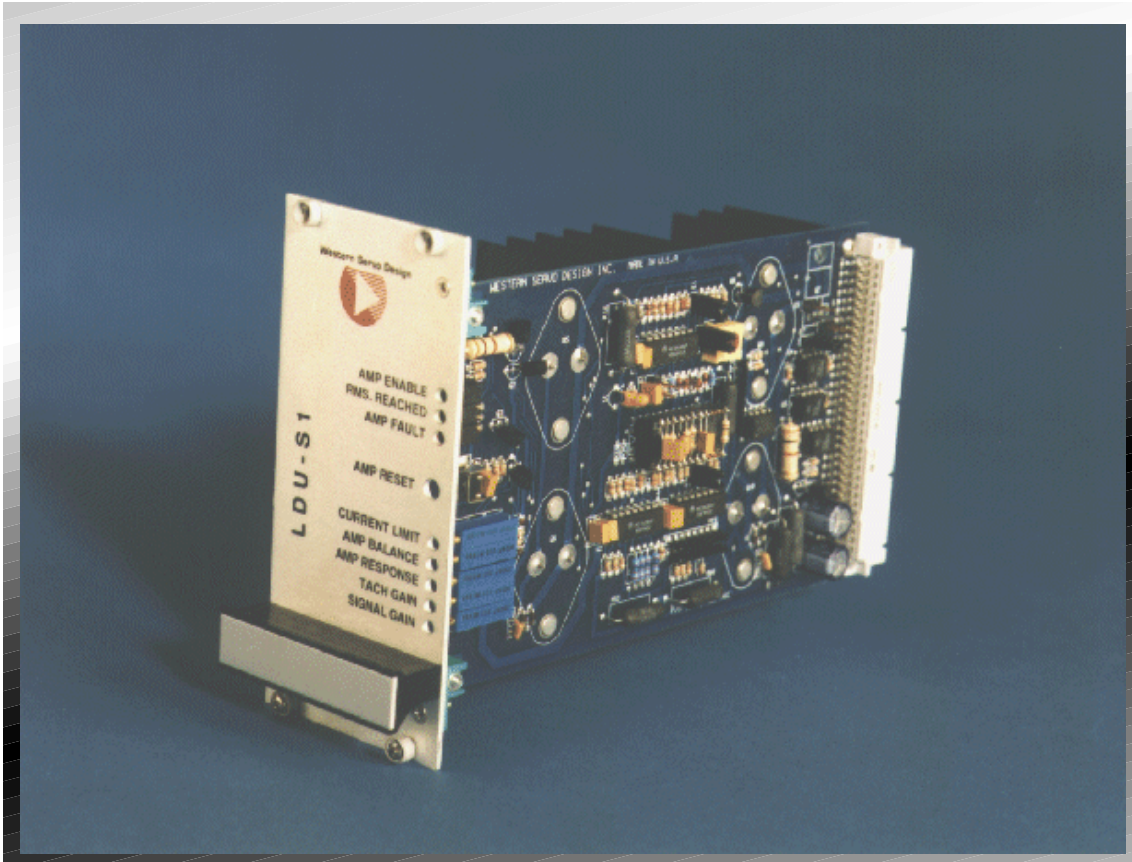
**Voltage:**  
Up to 40 VDC

**Amperage:**  
Up to 15 A Peak

**Mounting:**  
3U Rack Mount

**Modes:**  
Velocity or Torque

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



# LDU-S1

Low-Power Brush-Type Linear Servo Amplifier

The LDU-S1 is a low power brushed linear servo amplifier in a Eurocard 3U form factor. It is ideally suited to "stand alone" torque or velocity control applications or for position 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.

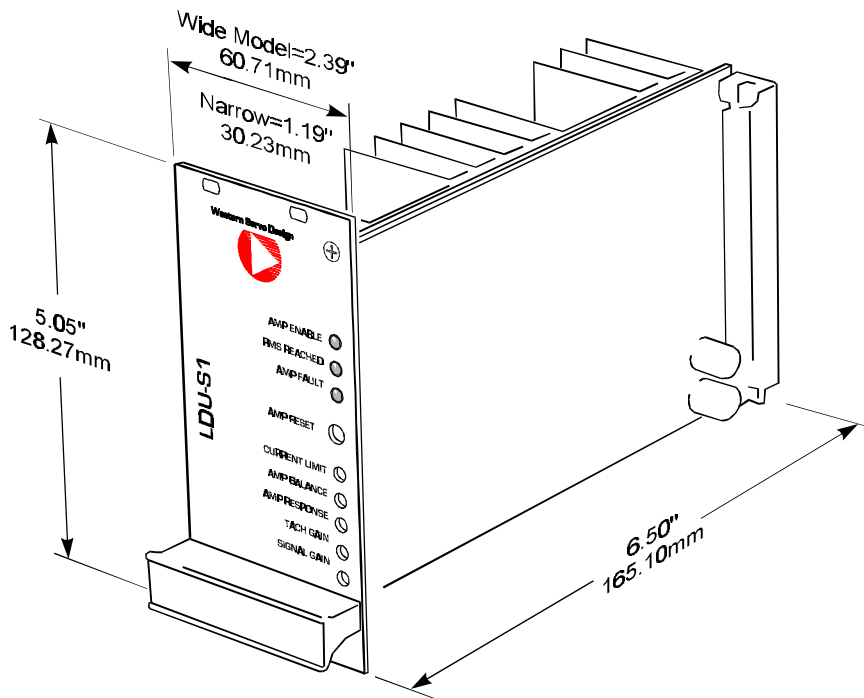
The LDU-S1 has simple potentiometer adjustments for Signal Gain, Tachometer Gain, System Response, Balance, and Current Limit and a plug in Personality Component Carrier to allow customized component changes for the peak current and loop compensation parameters. The unit includes an Amp Enable input and enabled indicator LED. The amplifier also has over current limiting and RMS current shutdown circuitry. The LDU-S1 has numerous advantages over PWM type amplifiers including minimum motor heating, increased brush life and the ability to drive zero inductance loads.

- Eurocard 3U form factor
- Torque/Velocity Mode Jumper Selected
- Can Accept Tachometer Input in Velocity Mode
- Over Current Bus Protection
- RMS Current Shutdown with Amp
- Fault Output and Indicator LEDs
- Amp Fault Reset Switch and Reset Input
- Amp Enable Input and Indicator LED
- Travel Limit Inputs
- Drives Zero or Low Inductance Loads
- Can be Powered from Uni-polar or Bi-polar Bus Supply
- Bus Voltage: 20 - 40 VDC
- Continuous Current: 2 or 5 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	4/15
Bus Voltage	20 to 40 VDC	20 to 40 VDC
Peak Output Current*	5 A for 0.5 sec	15 A for 0.5 sec
Continuous Output Current*	2 A	5 A
Command Input Voltage	0 to ±10 V	0 to ±10 V
Tachometer Input Voltage	0 to ±40 V	0 to ±40 V
Command Input Impedance	20 kOhm	20 kOhm
Tachometer Input Resistance	20 kOhm	20 kOhm
Minimum Load Inductance	0 H	0 H
Torque Gain	0.5 A/V	1.5 A/V
Bandwidth	20 kHz	20 kHz
Weight	Narrow: .48 Lb (.22 kG) Standard: .91 Lb (.41 kG)	
Recommended Chassis	CHU-S3, CHU-S6 Eurocard	
Available Accessories	ACC-V1A Standard Backplane, ACC-V1B Narrow Backplane, PCU-S1 Rack Mount Power Supply, ACC-V3A PMAC Interface Board	

\*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 & POWER	
<b>ROW A</b>	
Pin	Function
1 - 3	Motor Phase A
4 - 6	Motor Phase B
7	No Connection
8	Optoisolator Power In (+12VDC)
9	Opto / Bus Ground**
10 - 12	No Connection
13	Optoisolator Power In (+12VDC)
14	No Connection
15	RMS Limit Fault Out
16 - 17	No Connection
18	Amp Fault Out
19	Amp Reset In
20	+ Limit
21	Bus Ground
22	- Limit
23	Bus Ground
24 - 26	No Connection
27 - 29	Bus -V
30 - 32	Bus +V
<b>ROW B</b>	
Pin	Function
1 - 3	Motor Phase A
4 - 6	Motor Phase B
7 - 26	No Connection
27 - 29	Bus Ground
30 - 32	Bus +V
<b>ROW C</b>	
Pin	Function
1 - 3	Motor Phase A
4 - 6	Motor Phase B
7	No Connection
8	Optoisolator Power In (+12VDC)
9	Bus Ground
12	No Connection
13	Tachometer In
14	Tachometer Return
15	No Connection
16	Command In
17	Command Return
18 - 26	No Connection
27 - 29	Bus -V
30 - 32	Bus +V

\*\*Consult the User's Manual for jumper settings, Backplane and Power Supply

### Ordering Information:

Product	Order Number
LDU-S1-4/5 Amp 1.2" 40 VDC/5A Peak	WS-002-0004
LDU-S1-4/15 Amp 40 VDC/15A Peak	WS-002-0012
ACC-V1A Standard Backplane	WS-011-0003
ACC-V1B Narrow (1.2") Backplane	WS-011-0005

### Represented By: