

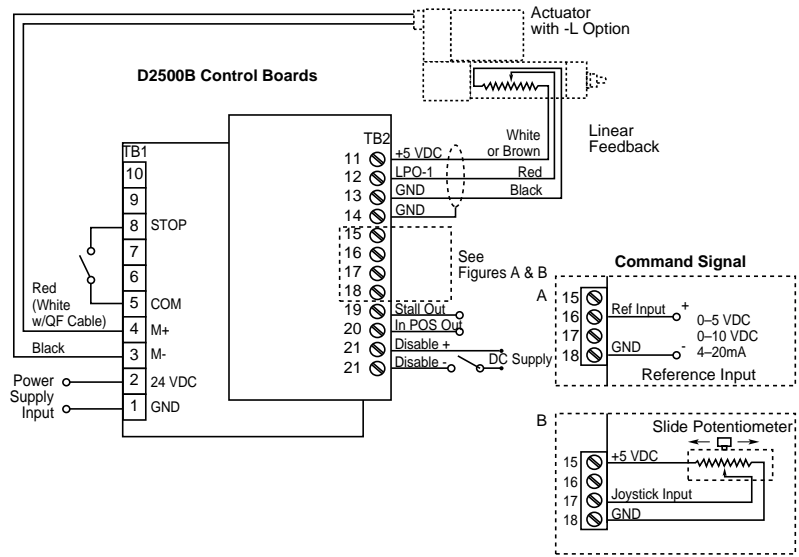


### Potentiometer Functions

Ten potentiometers are available to optimize system response and performance.

- Current Sense:** Sets the current draw to the motor, dictating the cylinder's thrust potential and stall threshold
- High:** Sets the main move velocity
- Low:** Sets the final creep speed prior to stopping (prevents overshoot).
- IR:** Sets the current regulation of the motor when the cylinder is traveling at low speeds with heavy loads.
- Sens:** Sets the system bandwidth, determining how close the feedback signal must be to the commanded signal before the cylinder is considered IN POSITION.
- Decel:** Sets the distance for the target position at which the cylinder decelerates to the final move speed.
- EX-L:** Sets the limit of travel in the Extend Direction.
- RT-L:** Sets the limit of travel in the Retract Direction.
- Scale:** Scales the Command Signal on the Reference Input down to 5 VDC (internally). Used with 0-10 VDC, 4-20mA.
- Offset:** Adjusts 4mA command signal to be equal to 0% cylinder extension.

### Typical Wiring



### Terminal Listing

#### TB1 10 Pin Terminal Strip

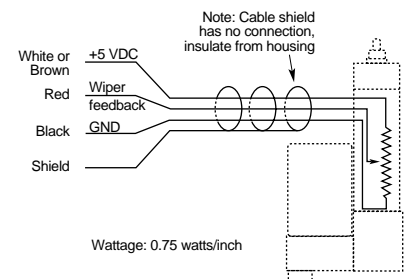
1	GND	External Supply Input: DC Ground
2	+24V	External Supply Input: +24 VDC
3	M-	Motor Negative Terminal
4	M+	Motor Positive Terminal
5	COM	DC Ground
8	STOP	Stop Input

#### TB2 12 Pin Terminal Connector

11	+5V	Linear Pot: +5 VDC Power Supply
12	LPO-1	Linear Pot: Wiper Input
13	GND	Linear Pot: DC Ground
14	GND	DC ground
15	+5V	+5 VDC Power Supply
16	REF INP	External Reference Input
17	Joystick INP	External Joystick Input
18	GND	DC Ground
19	Stall Out	Stall Output
20	IN POS Out	In Position Output
21	Disable+	Disable Input +
22	Disable-	Disable Input -

### -L Linear Potentiometer Option

A linear potentiometer resides within the cylinder housing. The potentiometer wiper moves with the cylinder thrust tube, providing an analog feedback signal to the control, proportional to the linear displacement (i.e., 0 VDC = 0% stroke; 2.5 VDC = 50% stroke; and 5 VDC = 100% stroke).





## Specifications

**Compatible Actuators:**  
NVD-L, N2D-L, EC2D-L



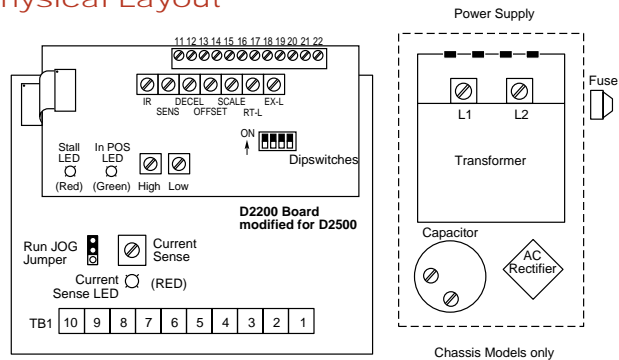
The D2500B Series is an analog position control which accepts an analog voltage or current command input and translates the signal into a proportional linear displacement. The control is used with electric cylinders containing a linear potentiometer (-L) option. Feedback from the linear potentiometer is proportional to distance. The control compares this feedback to the scaled command input, providing a closed loop linear positioning system.

NVD-L cylinders are available in standard lengths of 2, 4, 6, 8, 10 and 12 inches.

N2D-L cylinders are available in standard lengths of 2, 4, 6, 8, 10, 12 and 18 inches.

EC2D-L cylinders are available in standard lengths of 50, 100, 150, 200, 300, 450, and 600 mm.

### Physical Layout



### Power Requirements

D2500B  
D2501B, D2502B

20 to 30 VDC; 10 Amps maximum  
105-125VAC; 50/60 Hz (from factory) @ 2 Amps max  
208-245VAC; 50/60 Hz @ 1 Amp max (Jumper Selectable)

### Motor Output

0-28 VDC, 5 Amps max (adjustable clamp: 0-5 Amps). Note: Motor rated for 4.5 Amps continuous; 10 Amps peak

### Inputs

Stop

Sinking Input (1K Pullup to 12 VDC)  
High Level (OFF) 10.5-12 VDC (open circuit high)  
Low Level (On) 0-0.5 VDC capable of sinking 100mA

Disable

Optically-Isolated, Sinking or Sourcing  
Input 10-30 VDC at 20mA max  
0-5 VDC, 0-10 VDC, or 4-20mA

Position Command

### Outputs

Stall, IN POS

Open Collector (1K pullup to 12 VDC)  
High Level (OFF) 10.5-12 VDC (open circuit high)  
Low Level (ON) 0-5 VDC capable of sinking 100mA

### Operational

Variable Speed Range  
PWM Frequency

15:1  
2000Hz

### Environmental

Operating Temperature  
Storage Temperature

32° to 122°F [0° to 50°C]  
-40° to 185°F [-40° to 85°C]

### Dimensions

See page F-26



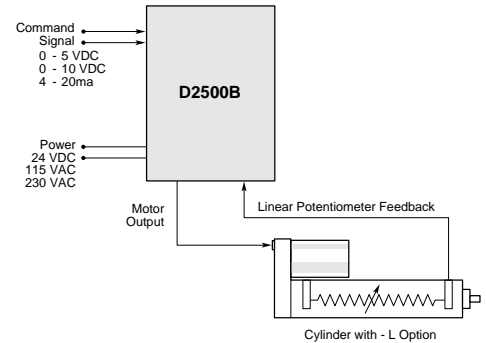
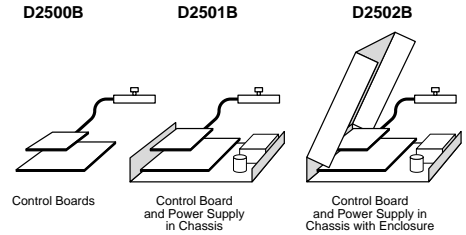
## Specifications

### D2500B Series

- Closed Loop Absolute Linear Positioning System.
- Accepts three types of remote analog command signals: 0 to 5 VDC, 0 to 10 VDC, and 4-20ma.
- Joystick Slide Pot - provided to give a 0-5 VDC command signal for initial testing and setup.
- 2 Inputs prevent cylinder motion - Stop and Disable.
- Dedicated Outputs.
  - Stall Output, when motor current exceeds current sensing threshold.

- LED Indicators to monitor system operation.
  - Stall Detect, In Position, and Current Sense.
- Tuning Potentiometers optimize system response and performance.
- Compatible with NV-D, N2-D and EC2-D Electric Cylinders with -L option.

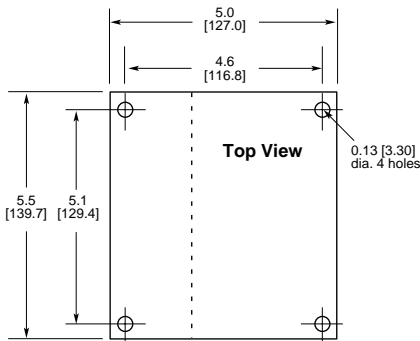
### D2500B Packaging Choices



### D2500B Dimensions in [mm]

#### Board Only Models

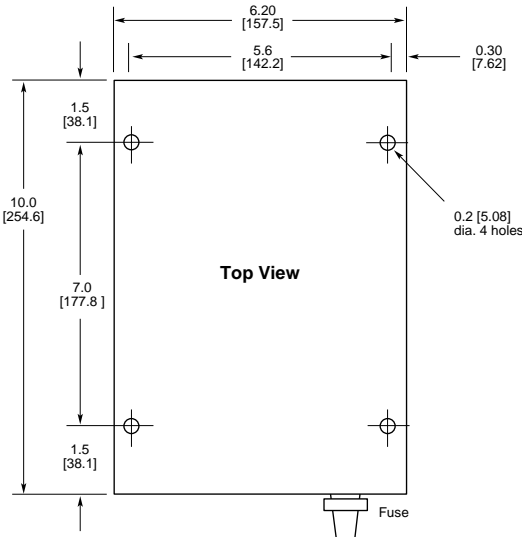
D2500B Two Boards: 2.1 in. [53.34]



#### Chassis Models

D2501B

D2502B: Depth 2.9 in. [73.66]



## How To Order

Model	Description
D2500B	Board only
D2501B	Board, power supply, chassis
D2502B	Board, power supply, chassis with enclosure

Note: A potentiometer is included for set up and testing purposes.



To confirm your selection, review the checklist on page F-8.