[DC Linear Actuator L16-100-150-12-P](#)

The Actuonix L16 series of linear actuators are compact DC motors geared to push or pull loads along the stroke of the actuator. This actuator comes with a built-in potentiometer, allowing your application to monitor the actuator's position.

The 3577 linear actuator has a stroke length of 100mm and a 150:1 gearbox. It is able to move at a rate of 8 mm/s and can exert up to 175N of force at lower speeds.

Comes packaged with

- Two mounting clamps

- Two mounting brackets

- Two rod end options: a clevis end and a threaded end with nut

Connection

In order to connect this actuator to a terminal block, you'll need to cut off the 5-pin connector and strip the wires. For more details, see the "Compatible Products" tab.

Warning

This actuator does not have built-in limit switches, so you may damage the motor or gears if you run the actuator beyond its minimum or maximum stroke. We recommend using the actuator's built-in potentiometer in your program to ensure that the motor is shut off whenever the potentiometer voltage gets close to 0V or 5V. Have a look at the "Resources" tab for a link to a project

that implements a control loop using the potentiometer value.

Product Specifications

Motor Properties

Motor Type	DC Linear Actuator
Stroke Length	100 mm
Maximum Speed	8 mm/s
Peak Power Point	(@ 4 mm/s) 175 N
Peak Efficiency Point	(@ 7 mm/s) 75 N
Gear Ratio	150:1
Positional Error Max	400 ?¼m

Electrical Properties

Rated Voltage	12 V DC
Potentiometer Impedance	18 k?©

Physical Properties

Gear Train Material	Metal
Backdrive Force	102 N
Side Force Max	30 N
Wire Length	350 mm
Weight	74 g
Operating Temperature Min	-10 ?°C
Operating Temperature Max	50 ?°C
IP Rating	IP54

DC Motor Controllers

You'll need a motor controller to get control of the position of this actuator. In order to connect it to a controller, attach the red wire to the "+" terminal on the controller, and the black wire to the "-" terminal.

If you decide to use a motor controller with an analog input, you can connect the integrated potentiometer by soldering the wires to a Phidget cable and connecting it to the input. If you decide to use a stand-alone motor controller, you'll also need a device with an analog input to read the potentiometer.

Phidget Cables

To easily connect the internal potentiometer to an IO board we recommend you use a Phidget cable. Just cut off the ends of one of the cables and connect the red wire to potentiometer power, the black wire to potentiometer ground, and the white wire to the potentiometer wiper as described in the table below. You can solder multiple cables together in order to make even longer Phidget cables, but you should be aware of the effects of having long wires in your system.

Wire Color	Function
Orange	Potentiometer Ground
Purple	Potentiometer Wiper
Red	Actuator Motor Power
Black	Actuator Motor Ground
Yellow	Potentiometer Power