

# The Ray Allen Company Inc.

1341 Distribution Way Suite 15, Vista, CA 92081 USA Phone 760 599 4720 FAX 760 599 4383  
[www.rayallencompany.com](http://www.rayallencompany.com)

## B6-7C / B6-11C actuator

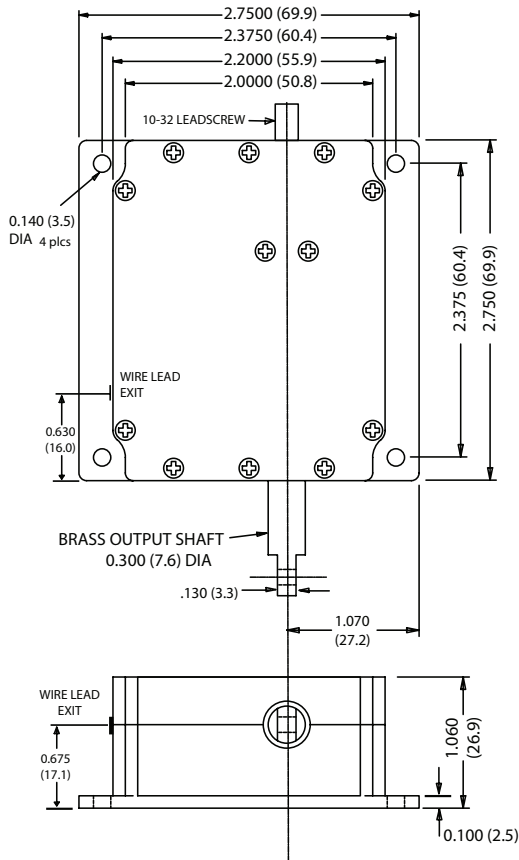
The B6 is a small, powerful 12-14 Volt DC actuator featuring internal travel limiting switches. A lower voltage can be used, but will result in less power and slower travel speed. When activated, the actuator will continue to run until the power is turned off or until it automatically shuts off at the end of its travel. Since the thrust is generated by means of a jackscrew, the output shaft will lock in any position when the power is off.

### Installing the B6-7C / B6-11C actuator

The B6-7C and B6-11C actuators have a brass output shaft designed to work with our C2 series clevis. B6 actuators can be mounted in any position, but they must be protected from water exposure. Model specifications are in the following table. Wiring instructions are on page 2.

**CAUTION!!** Make sure the actuator travels to each limit switch without binding up. Be sure to allow clearance for the leadscrew extending out the back of the B6 actuator.

Model No.	Operating Voltage	Travel Inch (mm)	Travel time (@13.5 VDC)	Weight OZ (g)	Max. Operating thrust lb.(kg)	Stall thrust (@12VDC) lb.(kg)	No load current	MAX Stall current
B6-7C	12-14 VDC	.7 (18)	12 seconds	5.2 (147)	50 (23)	130 (59)	100-200 mA	900 mA
B6-11C	12-14 VDC	1.1 (28)	19 seconds	5.2 (147)	50 (23)	130 (59)	100-200 mA	900 mA



### B6-7C / 11C Actuator

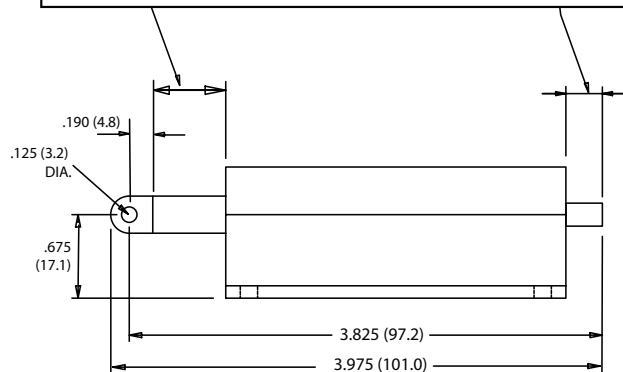
All dimensions are inches (mm)

Use these specifications for  
**B6-7C Actuator**

.750 (19.1) SHAFT EXTENDED — THEN THIS DIMENSION IS 0.130 (3.3)  
 .050 (1.3) SHAFT RETRACTED — THEN THIS DIMENSION IS .830 (21.1)

Use these specifications for  
**B6-11C Actuator**

1.155 (29.4) SHAFT EXTENDED — THEN THIS DIMENSION IS 0.0 (0.0)  
 .050 (1.3) SHAFT RETRACTED — THEN THIS DIMENSION IS .830 (21.1)



# The Ray Allen Company Inc.

1341 Distribution Way Suite 15, Vista, CA 92081 USA Phone 760 599 4720 FAX 760 599 4383  
www.rayallencompany.com

## B6 actuator wiring instructions

Voltage polarity determines the direction of travel. If 12 V+ is applied to the gray wire, the actuator will extend. If 12 V + is applied to the white wire, the actuator will retract. If you are using your own switching device remember that it will have to reverse the voltage polarity along with switching the power on and off.

The B6 actuator has an internal, electronically isolated, 0-5K ohm linear potentiometer to measure the position of the output shaft. The resistance between the green wire and the blue wire will increase from about 5-13Ohms to about 4.7k-5.2kOhms as the output shaft extends out of the actuator

The functions of the five, color coded, 24 gage wire leads are as described below. Ray Allen has color coded, 24 gage, 5 wire cable available for connecting to the servo.

**White wire\*** = Connects to switched power.

**Gray wire\*** = Connects to switched power.

**Orange wire** = Connects to Orange wire of RP4 indicator.

**Blue wire** = Connects to Blue wire of RP4 indicator.

**Green wire** = Connects to Green signal wire of RP4 indicator.

\* **NOTE:** It is very important to test these wire connections to determine if the servo(s) run in the direction that you desire. This direction can be changed by reversing the white and gray wires.

### B6 series internal wiring diagram

