# Controlled Strength.

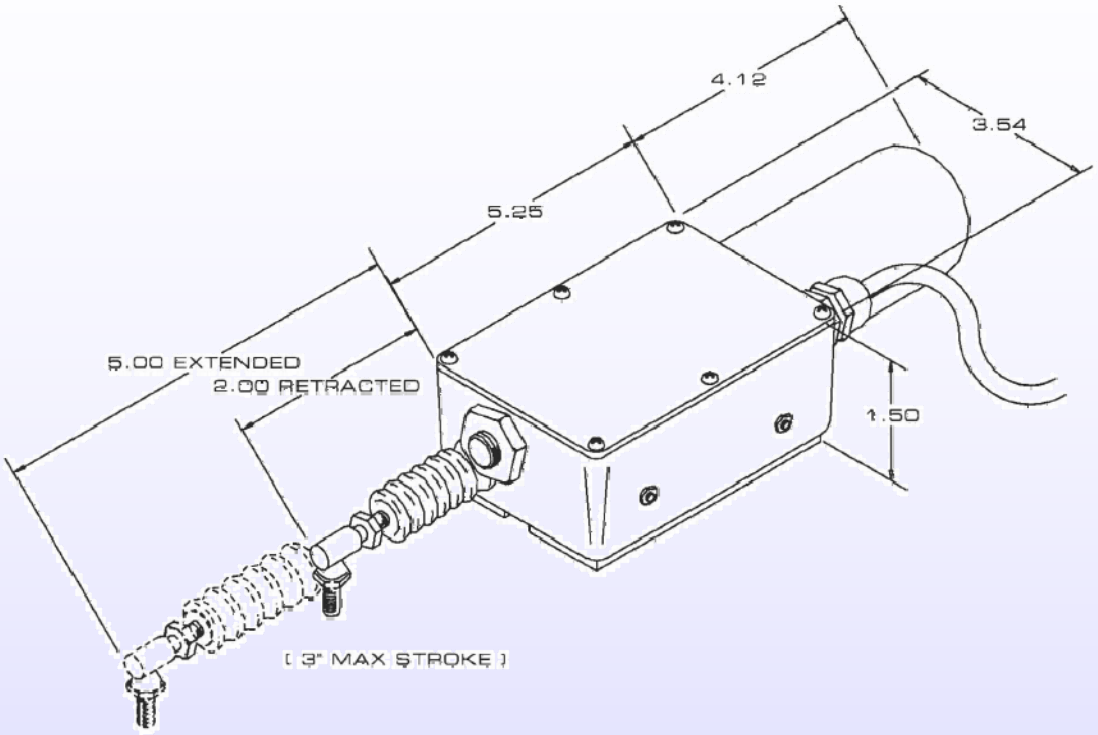
ELECTRIC REMOTE CONTROLS by Phoenix Dynamometer



## *PD463 Throttle Actuator*

The PD463 throttle actuator is designed for a wide range of applications. Its rugged cast aluminum body requires no field maintenance thanks to its weather resistant construction. With plenty of power and 100% load locking, it offers an adjustable stroke length (using internal limit switches), infinite number of position settings, multiple outputs, variable speeds, and a variety of mounting options. Controlled by a double-pole double-throw switch, it can deliver a three-inch maximum stroke at 50 pounds force. Available in speeds ranging from .06 to 2 inches/ seconds and 12VDC or 24VDC operating voltage.

# PD463 Throttle Actuator.




## FEATURES

- Easily adjustable limit switches to set stroke length
- Rugged cast aluminum body
- Dustproof and water resistant
- 3-inch maximum stroke
- Infinite position settings are possible providing operator with maximum control capability
- No field maintenance required
- Proven in the field under various applications

## OPTIONS

- Variable stroke speed
- Various outputs (cable, rod, custom)
- Standard, pivot, and tapped hole mounting
- Shock mounting kits available
- Standard or custom electric cable connector systems
- Closed loop position control via potentiometer provides closed loop circuit design

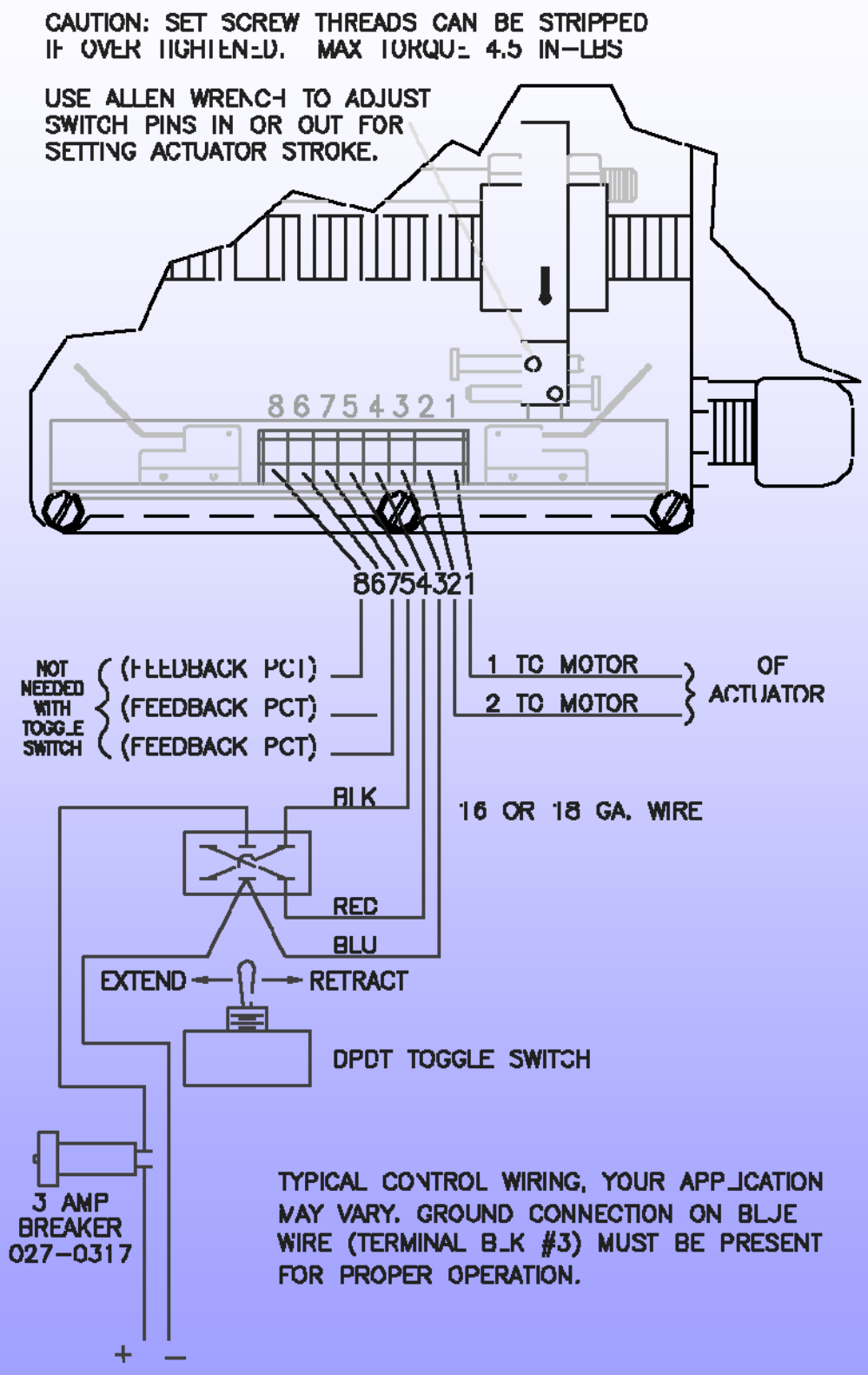
| Actuator Technical Specifications | |
|---|---|
| Operating voltage: | 12 or 24VDC nominal |
| Output Force Load: | 50-lbs |
| Motor current (no load): | 1 amp |
| Motor current stalled: | 7 amps |
| Stroke (max): | 3 inches |
| Stroke speed: | .06 to 2.0 inches/second |
| Weight: | 2.4-lbs |
| Operating Temp Range: | -40°F (-40°C) to 158°F (70°C) |
| Construction: | • All aluminum housing<br>• Stainless steel screw drive<br>• Sealed<br>• Dust proof and splash proof |
| Output: | Rod, cable or custom |





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# PD463 Throttle Actuator Wiring Diagram




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# PD463 Throttle Actuator Basic Setup

1. Complete the wiring of the electrical system per the enclosed wiring diagram Note the 3 Amp (slow blow) breaker in the circuit. This is highly recommended as a standard practice to protect the actuator from overload and failure. A slow blow fuse is required because draw can reach 7 amps when stalled.

2. Before applying power, double check the following important areas:

   a. Proper wiring technique is critical. All wires and cables should be tied down and positioned so they will not be accidentally pulled or knocked loose. All wiring subject to high wear or vibration should be run through loom to protect from shorting to the vehicle frame.

   b. Double check all ground wires as shown on the wiring diagram. All frame grounds should be free of corrosion, paint, and dirt. Wires shown running direct to the negative post of the battery should be attached there, or to a similar good direct ground. Frame grounding is not recommended for these wires. Note that this actuator is grounded with terminal #3. Terminals #4 and #5 provide bi-directional motor control.

   c. This is a negative ground, 12 or 24 VDC system. Be sure correct power is applied and regulated.

   d. Certain motor speeds require different wiring. Check the truth table on the wiring diagram.

3. Mount actuator to device that is to be stroked. Check to make sure mounting mechanism on the actuator matches mounting required to stroke the lever. This is a linear actuator and will be damaged if it is stroking a mechanism that is not moving in a straight linear motion. This arcing motion requires the actuator to be mounted with the pivot pin mounting bracket option. Also be sure to minimize side loads to the actuator rod end.

4. Before connecting the linkage, run unit back and forth to make sure that the stroke of the actuator matches that of the lever to be moved. If the stroke of the actuator needs to be adjusted, proceed as follows:

   a. Run unit back and forth and note how the adjustment pins contact the limit switches to set the stroke length.

      NOTE
      Before attempting any adjustment of the limit switches, turn the power off to prevent any accidental short circuits or injury.

   b. Determine which limit switches must be adjusted. Loosen the set screws, with the Allen wrench supplied, and slide the pins in or out to adjust the stroke as needed. Do not over tighten set screws.

      **CAUTION**
      **Do not attempt to adjust the stroke by bending the contacts on the limit switches. This is the most frequent mistake which causes failure of the limit switches and inevitable failure of the entire unit.**

5. With the proper stroke set, connect linkage to lever and run unit back and forth to make sure that the actuator runs freely without any binding.

   NOTE
   Be sure that the actuator contacts the limit switch before reaching the end of its mechanical stroke. Failure to do so could result in damage to the actuator.

6. Replace actuator cover.

7. Ready to begin operation.