

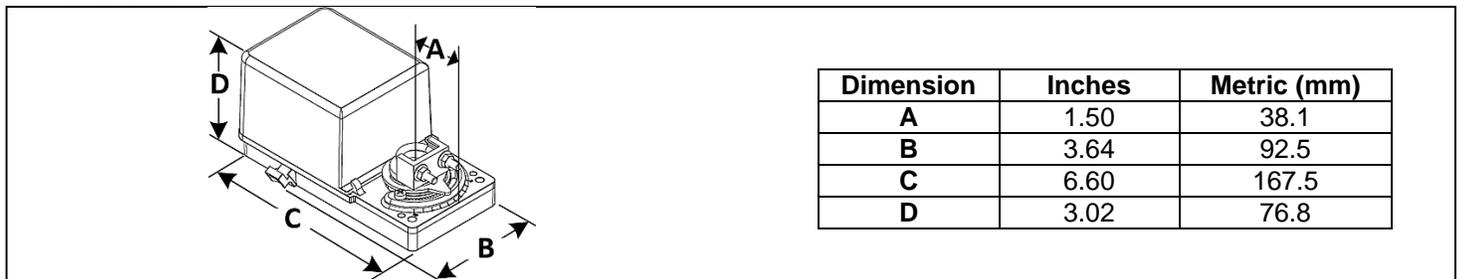

**Features:**

- Mounts easy on round & square shaft (with option –8).
- External clutch for manual adjustments.
- Maintenance free.
- Position indicator.
- Fail safe by *Enerdrive System*<sup>1</sup> (on model 060, 065 & 080).
- Auxiliary switches (on model 020 & 080).

**BT000S**  
**BT005S**  
**BT020S**  
**BT060S**  
**BT065S**  
**BT080S**

Technical Data	BT000S	BT005S	BT020S	BT060S	BT065S	BT080S
Auxiliary switches	-	-	2 (10° & 90°)	-	-	2 (10° & 90°)
Feedback	-	Yes	-	-	Yes	-
Fail safe - <i>Enerdrive</i>	-			Yes		
Power consumption	6 VA			15VA Peak, 6VA		
Control signal	3 wire / 2 position, 3 wire / 3 point floating			2 wire / 2 position, 4 wire / 3 point floating		
Power supply	22-26 Vac or 24-32 Vdc			22-26 Vac or 28-32 Vdc		
Running time through 90°	90 - 110 sec. (Fail-safe 20-35 sec)					
Torque	50 in.lb. [5,6 Nm] at rated voltage					
Electrical connection	18 AWG [0.8 mm <sup>2</sup> ] minimum					
Inlet bushing	2 inlet bushing of 13/16in [20.6 mm]					
Angle of rotation	0 to 90 degrees, mechanically adjustable (factory set with 90° stroke)					
Direction of rotation	Reversible, Clockwise (CW) or Counterclockwise (CCW) (factory set with CW direction)					
Ambient temperature	-22°F to +122°F [-30°C to +50°C]					
Storage temperature	-22°F to +122°F [-30°C to +50°C]					
Relative Humidity	5 to 95 % non condensing					
Weight	3 lbs. [1.4 kg]					
Ingress protection	IP22 equivalent to Nema type 2, IP54 equivalent to Nema type 3R if water tight inlet bushings (not supplied NEP617) are installed					

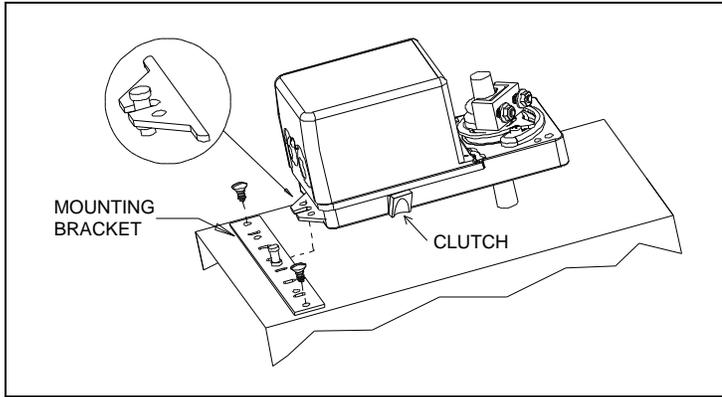
**Warning: Do not press the clutch when actuator is powered**

**Dimensions**

**Caution**

We strongly recommend that all Neptronic® products be wired to a separate transformer and that transformer shall service only Neptronic® products. This precaution will prevent interference with, and/or possible damage to incompatible equipment.  
 When multiple actuators are wired on a single transformer, polarity must be observed. Long wiring runs create voltage drop which may affect the actuator performance.

<sup>1</sup> *Enerdrive System* U.S.A. Patent #5,278,454

**Mechanical installation**

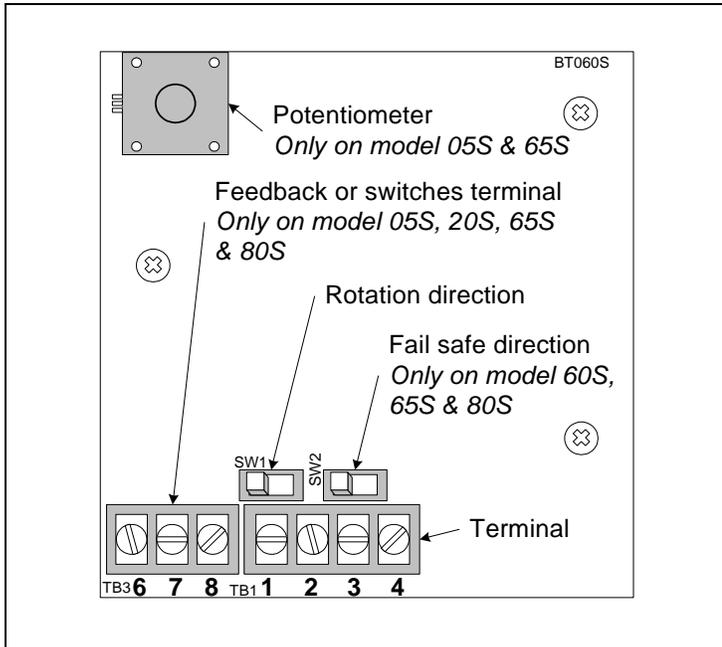


1. Manually close the damper blades and positioned the actuator at 0° or 90°.
2. Slide the actuator onto the shaft.
3. Tighten the nuts on the “U” bolt to the shaft with a 8mm wrench to a torque of 60 in.lb. [6,7 Nm].
4. Slide the mounting bracket under the actuator. Ensure free movement of the slot at the base of the actuator. The bracket pin must be placed in the mid distance of the slot.
5. Fix the bracket to the ductwork with #8 self-tapping screws.

**Wiring Diagrams**

<p><b>Models BT000S, 005S &amp; 020S</b></p> <p><b>3 wire / 2 position (ON-OFF)</b></p>	<p><b>Models BT060S, 065S &amp; 080S</b></p> <p><b>2 wire / 2 position (ON-OFF)</b></p>
<p><b>3 wire / 3 point floating</b></p>	<p><b>4 wire / 3 point floating</b></p>

**PC Board**



**Dip switch settings**

**Rotation direction (SW1)**

CW (0 to 90°)		CCW (90 to 0°)	
------------------	--	-------------------	--

---

**Fail safe direction (SW2)**

Fail safe return at 0°		Fail safe return at 90°	
---------------------------	--	----------------------------	--

**Stroke adjustment**

To adjust the stroke, move the adjustment screws at the desired position.