



**Feature:**

- 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 60, 65 & 80).
- Auxiliary switches (on model 20 & 80).

ST000S  
ST005S  
ST020S  
ST060S  
ST065S  
ST080S  
ST800S  
ST805S  
ST820S  
ST860S  
ST865S  
ST880S

Technical Data	ST000S	ST005S	ST020S	ST060S	ST065S	ST080S	ST800S	ST805S	ST820S	ST860S	ST865S	ST880S
<b>Auxiliary switches</b>	No	No	Yes (2)	No	No	Yes (2)	No	No	Yes (2)	No	No	Yes (2)
<b>Feedback</b>	No	Yes	No	No	Yes	No	No	Yes	No	No	Yes	No
<b>Fail safe - Enerdrive</b>	No			Yes			No			Yes		
<b>Power consumption</b>	8 VA			20VA Crête, 8VA			6 watts			15 watts initial charging, 6 watts normal operation		
<b>Control signal</b>	3 wire / 2 position, 3 wire / 3 point floating			2 wire / 2 position, 4 wire / 3 point floating			3 wire / 2 position, 3 wire / 3 point floating			2 wire / 2 position, 4 wire / 3 point floating		
<b>Power supply</b>	22 to 26 VAC or 28 to 32 VDC						40 to 56 VDC					
<b>Running time through 90°</b>	90 - 110 sec. (Fail-safe 20-35 sec)											
<b>Torque</b>	70 in.lb. [8 Nm] at rated voltage											
<b>Electrical connection</b>	18 AWG [0.8 mm <sup>2</sup> ] minimum											
<b>Inlet bushing</b>	2 inlet bushing of 5/8 in [15.9 mm] & 7/8 in [22.2 mm]											
<b>Angle of rotation</b>	0 to 90 degrees, mechanically adjustable (factory set with 90° stroke)											
<b>Direction of rotation</b>	Reversible, Clockwise (CW) or Counterclockwise (CCW) (factory set with CW direction)											
<b>Ambient temperature</b>	-22°F to +122°F [-30°C to +50°C]											
<b>Storage temperature</b>	-22°F to +122°F [-30°C to +50°C]											
<b>Relative Humidity</b>	5 to 95 % non condensing.											
<b>Ingress protection</b>	IP22 equivalent to Nema type 2, IP54 equivalent to Nema type 3R if water tight inlet bushings (not supplied NEP617) are installed											
<b>Weight</b>	3 lbs. [1.4 kg]											
<b>Warning: Do not press the clutch when actuator is powered</b>												

**Dimensions**

Dimension	Inches	Metric (mm)
<b>A</b>	1.50	38.1
<b>B</b>	3.26	82.8
<b>C</b>	6.60	167.5
<b>D</b>	3.01	76.4

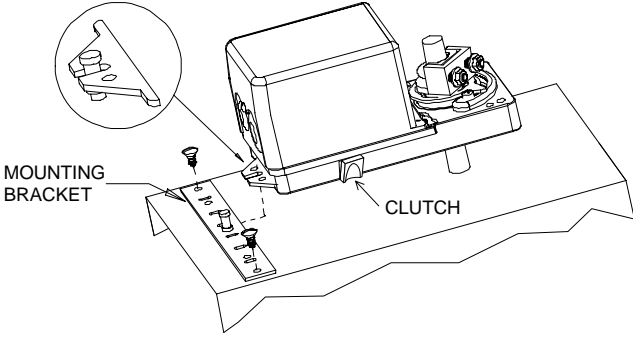
**Caution**

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.

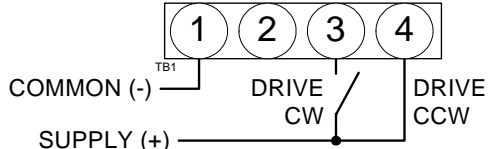
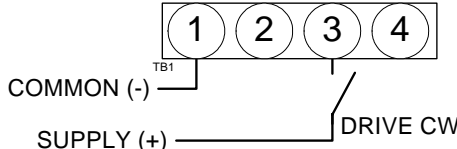
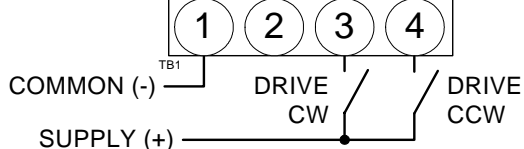
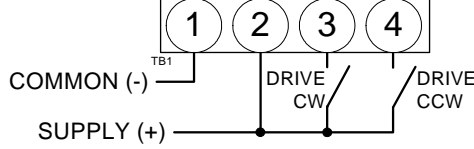
<sup>1</sup> Enerdrive System U.S.A. Patent #5,278,454



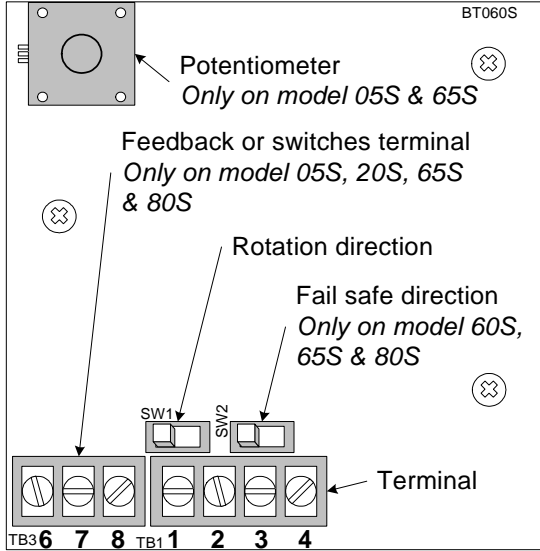




Mechanical installation

	<ol style="list-style-type: none"> <li>1. Manually close the damper blades and positioned the actuator at 0° or 90°.</li> <li>2. Slide the actuator onto the shaft.</li> <li>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].</li> <li>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.</li> <li>5. Fix the bracket to the ductwork with #8 self-tapping screws.</li> </ol>
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Wiring Diagrams

<p>Models ST000S, 005S, 020S, 800S, 805S &amp; 820S</p> <p>3 wire / 2 position (ON-OFF)</p> 	<p>Models ST060S, 065S, 080S, 860S, 865S &amp; 880S</p> <p>2 wire / 2 position (ON-OFF)</p> 
<p>3 wire / 3 point floating</p> 	<p>4 wire / 3 point floating</p> 

PC Board

 <p>BT060S</p> <p>Potentiometer Only on model 05S &amp; 65S</p> <p>Feedback or switches terminal Only on model 05S, 20S, 65S &amp; 80S</p> <p>Rotation direction</p> <p>Fail safe direction Only on model 60S, 65S &amp; 80S</p> <p>Terminal</p> <p>TB3 6 7 8 TB1 1 2 3 4</p>	<p>Dip switch settings</p> <p><b>Rotation direction (SW1)</b></p> <p>CW (0 to 90°)  CCW (90 to 0°) </p> <hr style="border-top: 1px dashed black;"/> <p><b>Fail safe direction (SW2)</b></p> <p>Fail safe return at 0°  Fail safe return at 90° </p>
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Stroke adjustment

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