

### Feature:

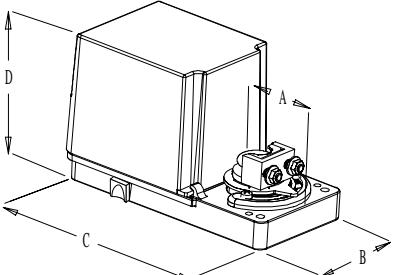
- Mounts easy on round & square shaft (with option –8).
- External clutch for manual adjustments.
- Maintenance free.
- Position indicator.
- Fail safe by *Enerdrive System*<sup>1</sup> (on model 60S, 65S & 80S).
- Auxiliary switches (on model 20S & 80S).

ST100S  
ST105S  
ST120S  
ST160S  
ST165S  
ST180S  
ST200S  
ST205S  
ST220S  
ST260S  
ST265S  
ST280S

Technical Data	ST100S	ST105S	ST120S	ST160S	ST165S	ST180S	ST200S	ST205S	ST220S	ST260S	ST265S	ST280S
<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 Peak, 8VA			8 VA			20VA Peak, 8VA		
<b>Control signal</b>	3 wire / 2 position, 4 wire / 3 point floating			2 wire / 2 position, 4 wire / 3 point floating			3 wire / 2 position, 4 wire / 3 point floating			2 wire / 2 position, 4 wire / 3 point floating		
<b>Power supply</b>	110 to 130 VAC 50/60Hz						220 to 250 VAC 50/60Hz					
<b>Running time through 90°</b>	90 - 110 sec (Fail-safe 20-30 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>	0°F to +122°F [-18° 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>Weight</b>	3 lbs. [1.4 kg]											

Warning: Do not press the clutch when actuator is powered

### 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>	model 00S, 05S & 20S	3.01 / 76.4
	model 60S, 65S & 80S	3.72 / 94.5

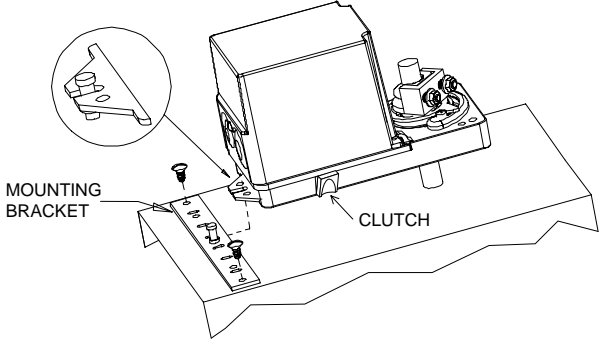
### Caution

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.

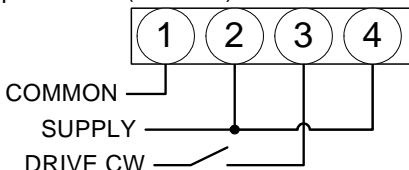
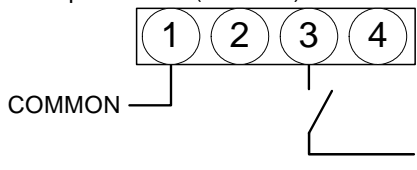
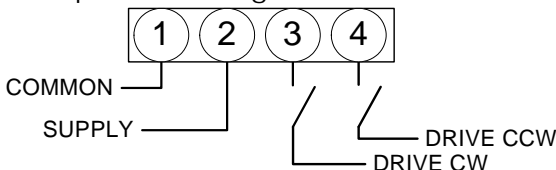
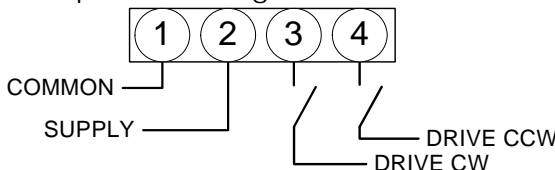
<sup>1</sup> Enerdrive System U.S.A. Patent #5,278,454



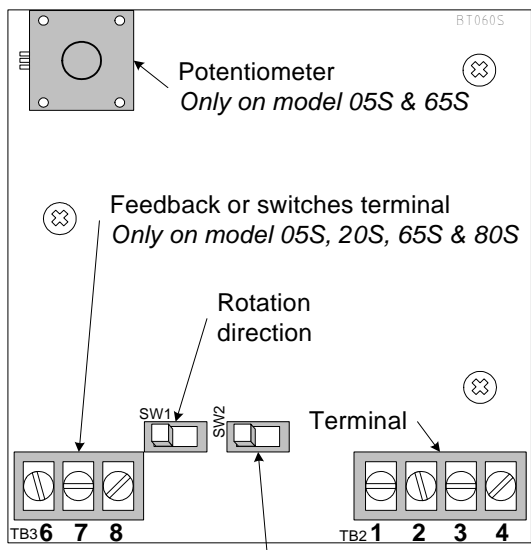




Mechanical installation

	<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 ST100S, 105S, 120S, 200S, 205S &amp; 220S</p> <p>3 wire / 2 position (ON-OFF)</p> 	<p>Models ST160S, 165S, 180S, 260S, 265S &amp; 280S</p> <p>2 wire / 2 position (ON-OFF)</p> 
<p>4 wire / 3 point floating</p> 	<p>4 wire / 3 point floating</p> 

PC Board

 <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>SW1</p> <p>SW2</p> <p>Terminal</p> <p>Fail safe direction Only on model 60S, 65S &amp; 80S</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.