

**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).
- Auxiliary switches (on model 20).

BM100S  
BM120S  
BM160S  
BM200S  
BM220S  
BM260S

Technical Data	BM100S	BM200S	BM120S	BM220S	BM160S	BM260S
<b>Power supply</b>	110 to 130 VAC 50/60Hz	220 to 250 VAC 50/60Hz	110 to 130 VAC 50/60Hz	220 to 250 VAC 50/60Hz	110 to 130 VAC 50/60Hz	220 to 250 VAC 50/60Hz
<b>Auxiliary switches</b>	No		Yes (2)		No	
<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		IP22 equivalent to Nema type 2			
<b>Fail safe - Enerdrive</b>	No				Yes	
<b>Power consumption</b>	6 VA				20 VA Peak 6 VA	
<b>Torque</b>	50 in.lb. [5,6 Nm] at rated voltage					
<b>Running time through 90°</b>	90 - 110 sec (Fail-safe 20-30 sec)					
<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>Control signal</b>	2 to 10 VDC or 4 to 20 mA (factory set 2 to 10 VDC)					
<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>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 100 & 200	3.01 / 76.4
	model 120, 160, 220 & 260	3.72 / 94.5

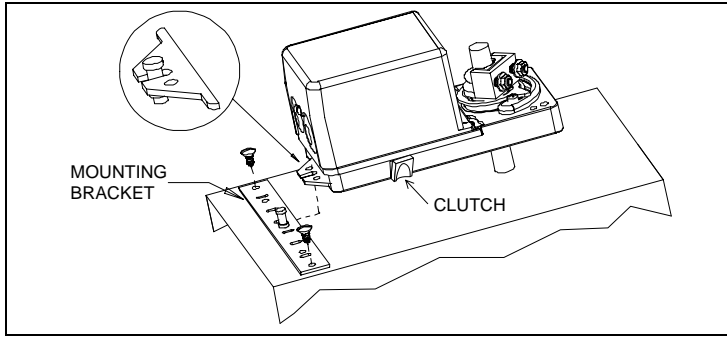
**Caution**

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

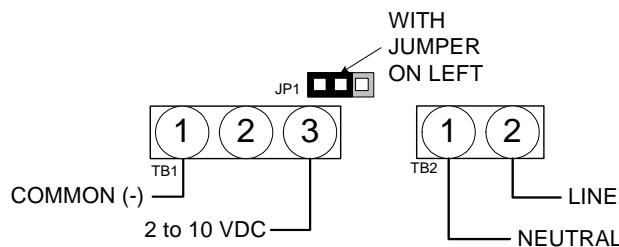


1. Manually close the damper blades and positioned the actuator at 0° or 90°.
2. Slide the actuator onto the shaft.
3. Tighten the nuts on the “U” bolt to the shaft with a 8mm wrench to a torque of 60 in.lb. [6,7 Nm].
4. Slide the mounting bracket under the actuator. Ensure free movement of the slot 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.

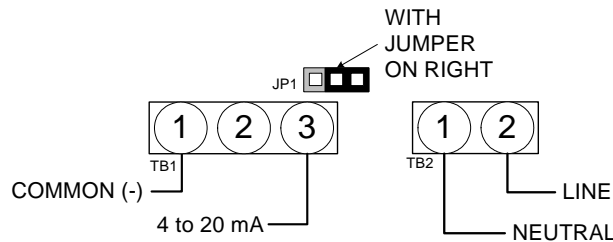
Wiring Diagrams

Caution: Risk of electric shock. Remove power prior to connect.

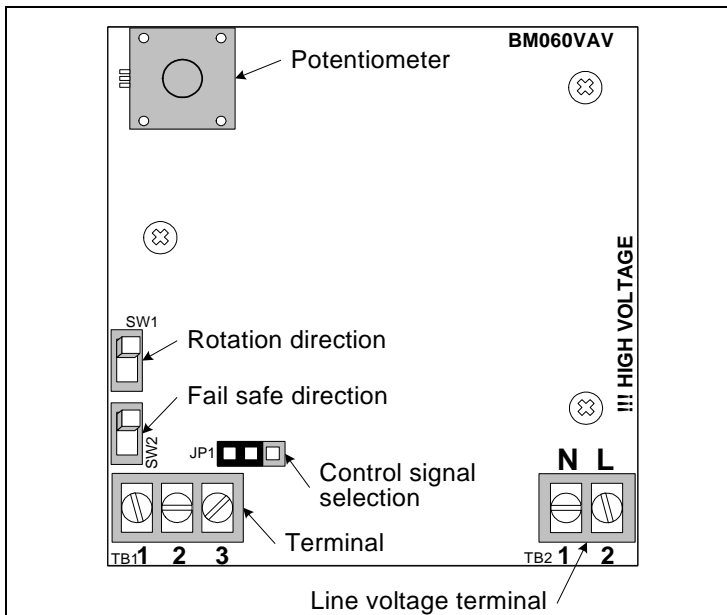
2 to 10 VCC



4 to 20 mA



PC Board



Dip switch settings

Rotation direction (SW1)

- CW (0 to 90°)
- CCW (90 to 0°)

Fail safe direction (SW2)

(only on model 60)

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

Stroke adjustment

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