


**Feature:**

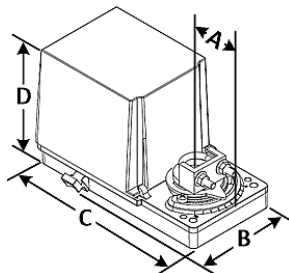
- Mounts easy on round & square shaft (with option –8).
- Power supply high voltage 120 or 240 VAC.
- External clutch for manual adjustments.
- Maintenance free.
- Position indicator.
- Fail safe by *Enerdrive System*<sup>1</sup>
- Auxiliary switches (on model 180 & 280).

**Old Number**

<b>BBTHV1160A</b>	<b>BT160</b>
<b>BBTHV1180A</b>	<b>BT180</b>
<b>BBTHV1260A</b>	<b>BT260</b>
<b>BBTHV1280A</b>	<b>BT280</b>

Technical Data	BT160 <i>BBTHV1160A</i>	BT180 <i>BBTHV1180A</i>	BT260 <i>BBTHV1260A</i>	BT280 <i>BBTHV1280A</i>
Auxiliary switches	No	Yes (2)	No	Yes (2)
Power supply	110 to 130 VAC 50/60Hz		220 to 250 VAC 50/60Hz	
Fail safe - <i>Enerdrive</i>	Yes			
Power consumption	8VA Peak, 5VA			
Control signal	2 wire / 2 position			
Running time through 90°	20 to 35 sec Torque dependant			
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 13/16" [20.6mm]			
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.			
Ingress protection	IP22 equivalent to Nema type 2			
Weight	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>	3.64	92.5
<b>C</b>	6.60	167.5
<b>D</b>	3.81	96.8

**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



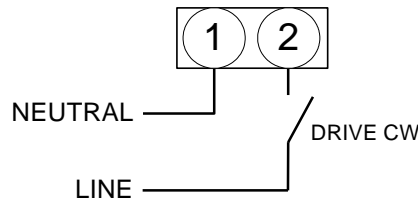
**Mechanical installation**

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 wire / 2 position (ON-OFF)**



**PC Board**

BBTHV1X60A

Switches  
Only on model  
180 & 280

Rotation & Fail Safe direction

DIR REV S1 Terminal

Switches terminal  
Only on model  
180 & 280

TB1 1 2 TB2 6 7 8

**Rotation direction**

CW (0 to 90°)		Fail Safe (90 to 0°)
CCW (90 to 0°)		Fail Safe (0 to 90°)

**Stroke adjustment**

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