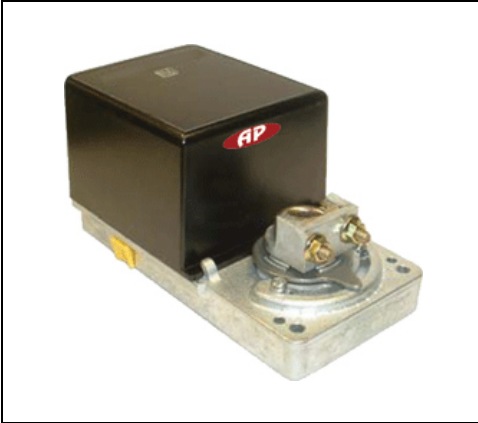




# Actuator Installation instruction



### Feature:

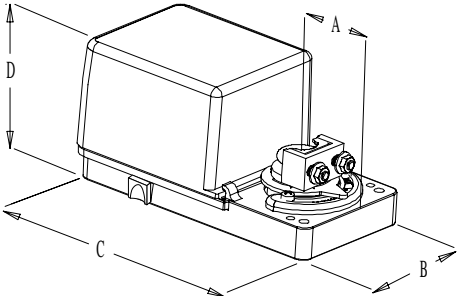
- Mounts easy on round & square shaft (with option -8).
- External clutch for manual adjustments.
- Maintenance free.
- Position indicator.
- Feedback (on model AP).
- Auxiliary switches (on model AAX).
- Constant running time.

### New Number

BBT24A	BT400
BBT24AAX	BT420
BBT24AP	BT405
BBTS24A	BT400S
BBTS24AAX	BT420S
BBTS24AP	BT405S

Technical Data	BBT24A <i>BT400</i>	BBT24AAX <i>BT420</i>	BBT24AP <i>BT405</i>	BBTS24A <i>BT400S</i>	BBTS24AAX <i>BT420S</i>	BBTS24AP <i>BT405S</i>
Auxiliary switches	No	Yes (2)	No	No	Yes (2)	No
Feedback	No	No	Yes	No	No	Yes
Running time through 90°	90 sec at 60 Hz 110 sec at 50 Hz			180 sec at 60 Hz 220 sec at 50 Hz		
Power consumption	3 VA					
Control signal	3 wire / 3 point floating					
Torque	50 in.lb. [5,6 Nm] at rated voltage					
Power supply	22 to 26 VAC					
Electrical connection	18 AWG [0.8 mm <sup>2</sup> ] minimum					
Inlet bushing	2 inlet bushing of 5/8 in [15.9 mm] & 7/8 in [22.2 mm]					
Angle of rotation	0 to 90 degrees, mechanically adjustable (factory set with 90° stroke)					
Ambient temperature	0°F to +122°F [-18° 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]					
Warning: Do not press the clutch when actuator is powered						

### Dimensions



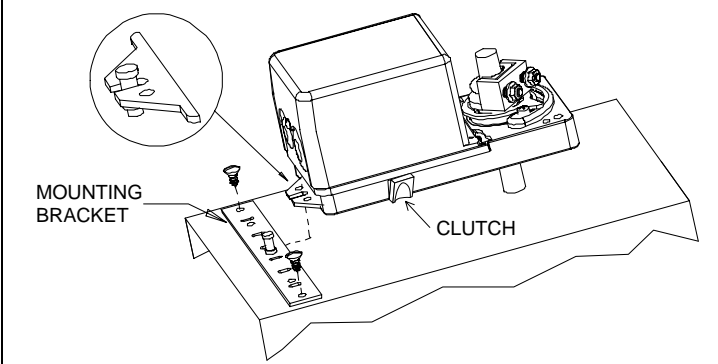
Dimension	Inches	Metric (mm)
A	1.50	38.1
B	3.26	82.8
C	6.60	167.5
D	3.01	76.4

### 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.



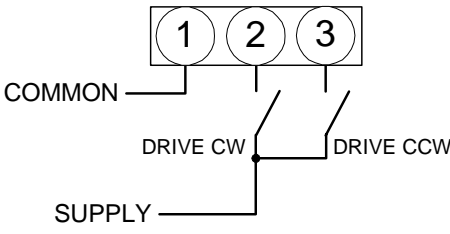
Mechanical installation



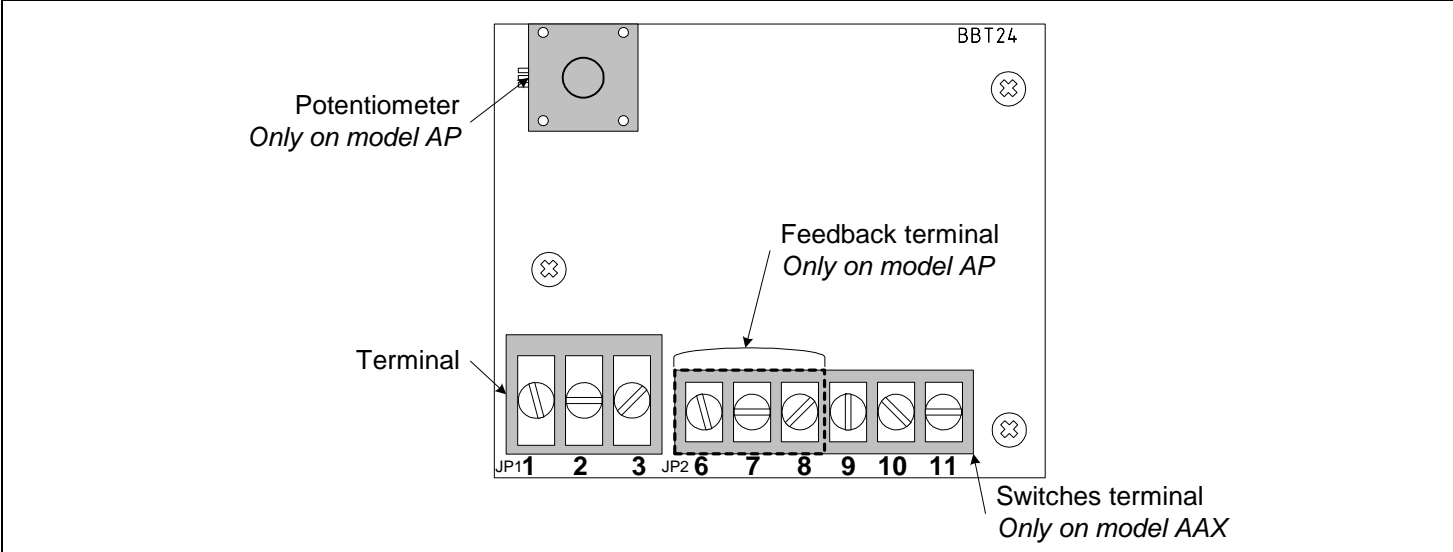
1. Manually close the damper blades and positioned the actuator at 0° or 90°.
2. Slide the actuator onto the shaft.
3. Tighten the nuts on the “U” bolt to the shaft with a 8mm wrench to a torque of 60 in.lb. [6,7 Nm].
4. Slide the mounting bracket under the actuator. Ensure free movement of the slot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

3 wire / 3 point floating



PC Board



Potentiometer  
*Only on model AP*

Feedback terminal  
*Only on model AP*

Terminal

JP11 2 3 JP2 6 7 8 9 10 11

Switches terminal  
*Only on model AAX*

BBT24

Stroke adjustment

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