

### Series

**BT00**

### Description

These compact quarter turn actuators are directly coupled to either a 1/2 inch round or 3/8 inch square jack shaft or remotely mounted using an adaptor kit. All actuators are bidirectional. The stroke can be mechanically limited to less than 90°.



BT00 Series

### Features

- Torque rate of 50 in.lb [5.6 Nm]
- Auxiliary switches (on models BT120 & BT220)
- Feedback (on models BT105 & BT205)
- High voltage power supply, 120 or 240 Vac
- Mounts easily on round and square shafts (with option-8)
- External clutch for manual adjustments
- Maintenance free
- Position indicator

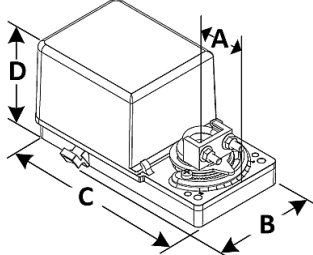

### Applications

- Small dampers
- Unit ventilators
- 1/4 turn valves
- VAV box control
- Fan coils

### Models

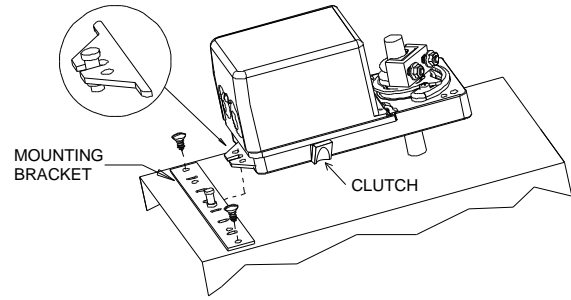
Model #	Auxiliary Switches	Feedback	Power Consumption	Power Supply
BT100	-	-	4 Watts at 120 Vac (0.166A AC)	110 to 130 Vac 50/60Hz
BT105	-	Yes		
BT120	Yes (2)	-		
BT200	-	-	7 Watts at 240 Vac (0.166A AC)	220 to 250 Vac 50/60Hz
BT205	-	Yes		
BT220	Yes (2)	-		

### Common Specifications

Specification	Description
Torque	50 in.lb. [5.6 Nm] at rated voltage
Running Time through 90°	20 to 30 seconds, torque dependant
Electrical Connection	18 AWG [0.8 mm <sup>2</sup> ] minimum
Control Signal	3 wire/2 position, 3 wire/3 point floating
Angle of Rotation	0 to 90°, mechanically adjustable (default: 90° stroke)
Direction of Rotation	Reversible, CW: Clockwise, CCW: Counter Clockwise (default: CW)
Inlet Bushing	2 inlet bushings: 13/16" [20.6mm]
Ingress Protection	IP22 equivalent to Nema type 2, IP54 equivalent to Nema type 3R if water tight inlet bushings (not supplied NEP617) are installed
Operating 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
Weight	3 lbs. [1.4 kg]
<b>Dimensions</b> A = 1.50"   38.1mm B = 3.64"   92.5mm C = 6.60"   167.5mm D = 3.02"   76.8mm	
	Certifications 

### Mechanical Installation

1. Manually close the damper blades and position the actuator to 0° or 90°.
2. Slide the actuator onto the shaft.
3. Tighten the nuts on the "U" bolt to the shaft with an 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. Place the bracket pin at mid distance of the slot.
5. Affix the bracket to the ductwork with #8 self-tapping screws.



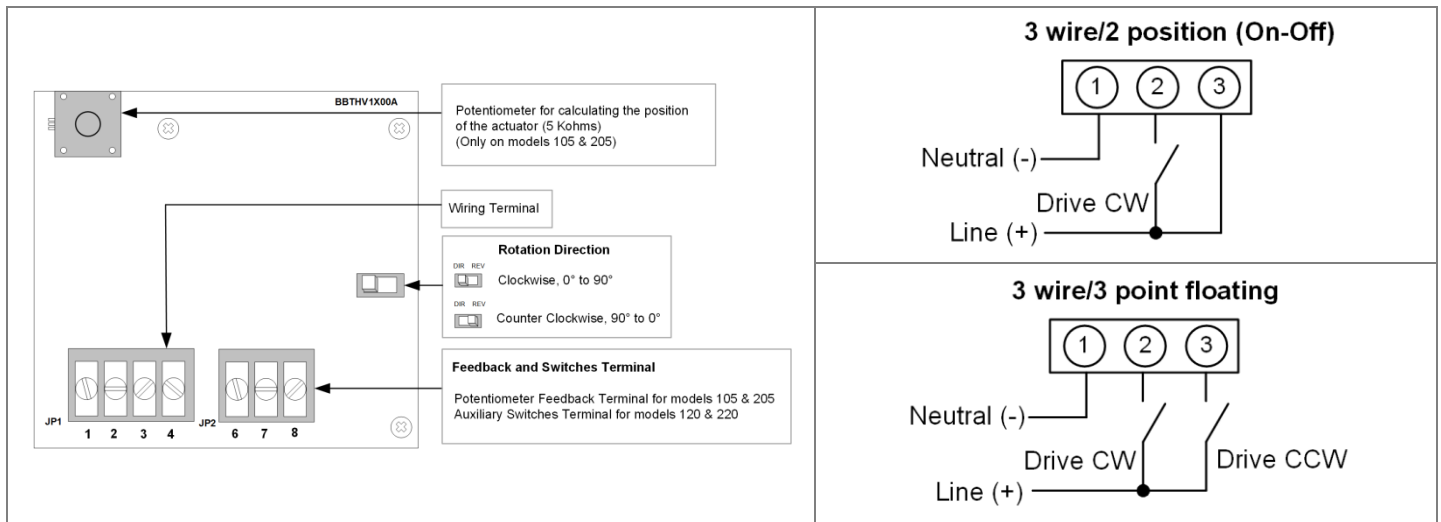
**⚠ Do not press the clutch when the actuator is powered.**

### Connections and Configurations

We strongly recommend wiring all Neptronic® products to a separate transformer and that transformer shall service only Neptronic® products. This precaution prevents interference with, and/or possible damage to incompatible equipment. Observe polarity when wiring multiple actuators on a single transformer. Long wiring runs create voltage drops, which may affect actuator performance.



**Caution: Risk of electric shock. Disconnect power prior to connecting.**



### Stroke Adjustment

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