

# 800380 ACTUATOR

## INSTALLATION INSTRUCTIONS

### WARNINGS

Actuator must be field-installed with Anti-Rotation Strap provided. Screwing the actuator to ductwork through the plastic base may damage the actuator and void the warranty.

The actuator must be mounted so the metal heat sink faces up.

### NOTE

The damper or VAV box must have a ½-inch (0.5-inch) diameter shaft. The actuator shaft must extend at least 2½-inches from the damper or VAV box for proper mounting.

### Parts List

Qty	P/N	Description
1	800380	Electric actuator with T-Bracket and Anti-Rotation Strap.

### Tools Needed

- 7/16-inch deep drive socket or wrench
- Screw gun
- Short self-tapping screws (approx. ½-inch length)

### Installation Steps

1. Manually rotate the damper open and closed to confirm it fully rotates without any obstructions (typically screws or damper out-of-round).
2. Slide the electric actuator coupler onto the valve or damper shaft, until actuator sits flush on the valve or damper.
3. Insert the Anti-Rotation Strap post into the T-Bracket slot on the actuator. The post on the Anti-Rotation Strap must engage the slot on the T-Bracket. (Figure 1).
4. Screw down the Anti-Rotation Strap with two sheet metal screws. (Short self-tapping screws not provided).

5. Verify that the damper blade still fully rotates. If damper blade no longer fully rotates, change positioning of sheet metal screws from Step 4.
6. Close the damper and set Dip Switch #1 on the actuator:

Shaft Rotation to Open	Actuator DIP Switch #1
Clockwise ↻	On
Counterclockwise ↺	Off

7. Tighten the nuts on the U-bolt (7/16 socket).
8. Squeeze the two sides of the actuator cover together to remove cover. Wire actuator per wiring diagram (Figure 2).

### NOTE

When power is initially applied, the actuator will momentarily fully rotate in the clockwise direction.

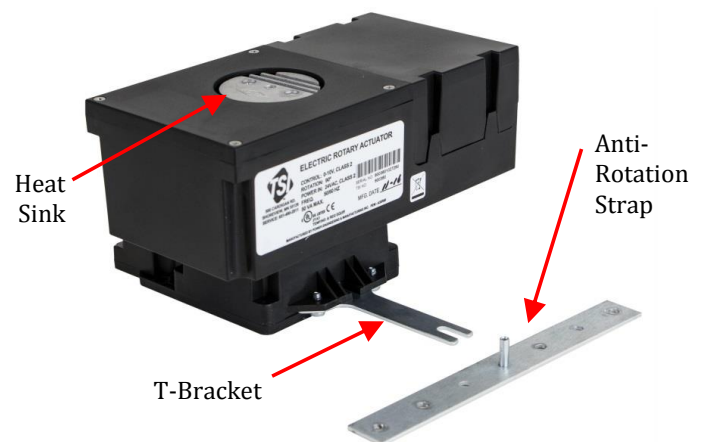


Figure 1: Electric Actuator

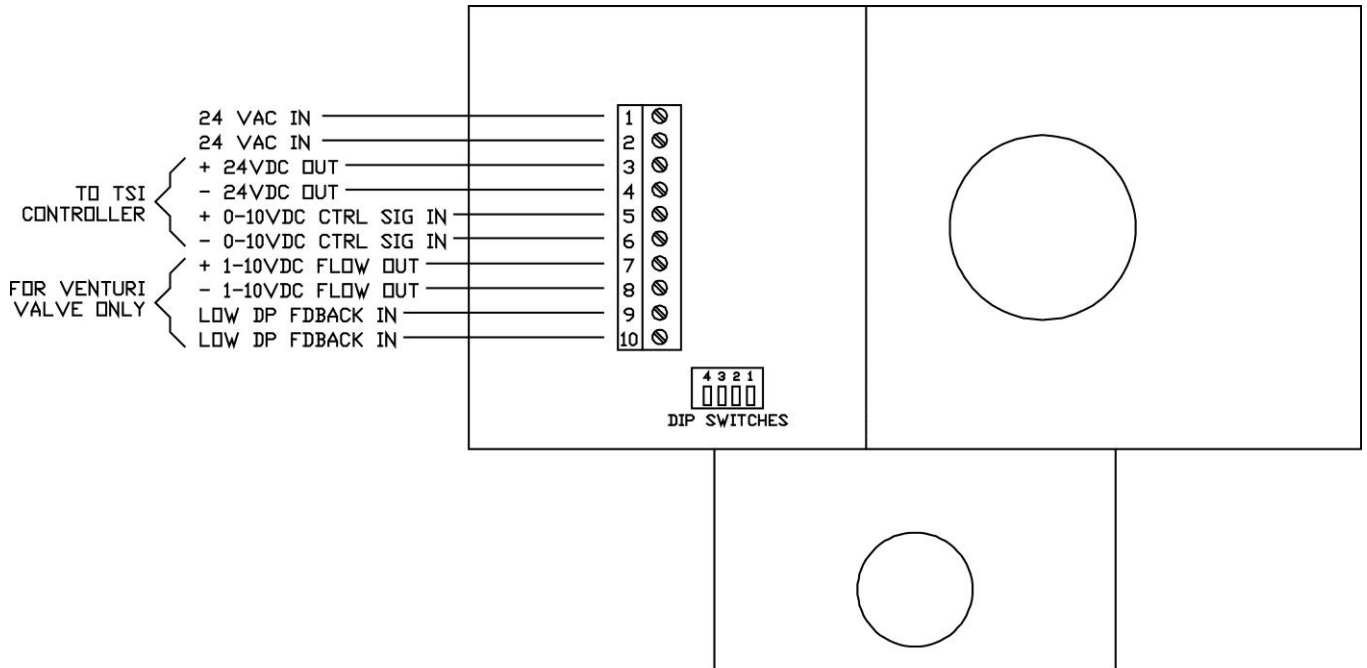
### Troubleshooting (Green LED)

Pattern	Meaning
Flashing	Error. Actuator overheated or bound. Cycle power to reset.
Off	Actuator does not have power
On (solid)	Normal operation



## CAUTION

Actuator must be wired to 24 VAC only. Wiring the unit to 120 VAC will cause serious damage to the unit and void the warranty.



DIP SWITCH FUNCTIONS				
SWITCH #	FUNCTION	ON POSITION	OFF POSITION	DEFAULT POSITION
1	DIRECTION	REVERSE	DIRECT	OFF (DIRECT)
2	INPUT SIGNAL	0-5 VDC	0-10 VDC	OFF (0-10 VDC)
3	INPUT SIGNAL	5-10 VDC	0-10 VDC	OFF (0-10 VDC)
4	ROTATION	45 DEG	90 DEG	OFF (90 DEG)

**Figure 2: Electric Actuator Wiring**

## WARNINGS

Actuator must be field-installed with Anti-Rotation Strap provided. Screwing the actuator to ductwork through the plastic base may damage the actuator and void the warranty.

The actuator must be mounted so the metal heat sink faces up.



UNDERSTANDING, ACCELERATED

TSI Incorporated - Visit our website [www.tsi.com](http://www.tsi.com) for more information.

USA Tel: +1 800 874 2811  
 UK Tel: +44 149 4 459200  
 France Tel: +33 1 41 19 21 99  
 Germany Tel: +49 241 523030

India Tel: +91 80 67877200  
 China Tel: +86 10 8219 7688  
 Singapore Tel: +65 6595 6388

