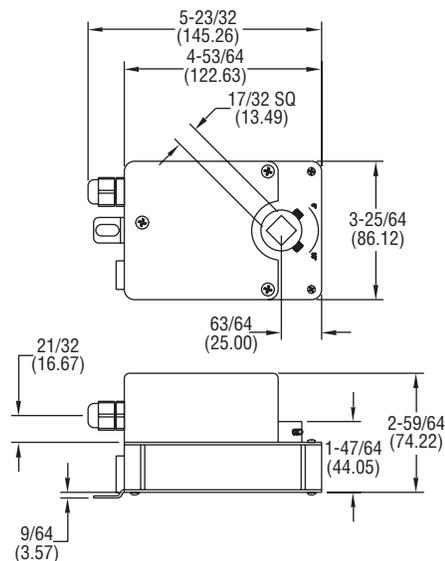




# Series DDC 17, 35, 53, 70 in-lb Modulating Damper Actuator

## Specifications - Installation and Operating Instructions



**Series DDC Direct Coupled Actuators** are non-spring return actuators that are perfect for positioning of dampers and valves in HVAC Systems. Actuators are designed to accept 4 to 20 mA or 0 to 10 VDC modulating control signals and are 24 VAC powered. Actuators produce 17 to 70 in-lb (2 to 8 Nm) of torque. Unit features a 0 to 100 VDC feedback signal of damper position.

### Features

- Direct mount.
- Actuator travel indicator.
- Overload protection.
- Manual override.
- Modulating 4 to 20 mA or 0 to 10 VDC control signal.
- Position feedback signal.
- 60,000 cycles nominal.

### FUNCTION TESTING

Press the manual button on the back of the actuator. The gearing inside the actuator will break away. The damper can be operated manually while pressing the manual button. **DO NOT OPERATE WHEN POWER IS ON!**

### SPECIFICATIONS

**Power Requirements:** 24 VAC,  $\pm 10\%$ , 50/60 Hz, single phase.

**Power Consumption:** 4 VA.

**Control Input:** 4-20 mA or 0-10 VDC.

**Overload Protection:** Magnetic clutch.

**Angle of Rotation:** 95° (mechanically adjustable).

**Accuracy:**  $\pm 5\%$ .

**Fits Shaft Diameter:** 0.4" (10 mm) or 0.5" (13 mm).

**Position Indication:** Visual indicator.

**Direction of rotation:** CW/CCW.

**Running Time:** 17 in-lb, 35 in-lb, 53 in-lb: 72 sec.; 70 in-lb: 160 sec.

**Electrical Connection:** Terminal block, 18 AWG.

**Manual Override:** Push button.

**Temperature Limit:** -22 to 122°F (-30 to 50°C).

**Sound:** <45 dB.

**Life Expectancy:** 60000 full cycles.

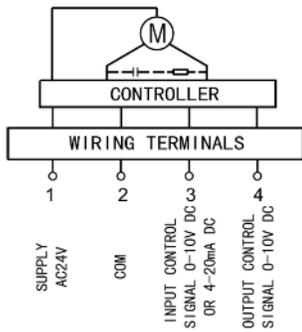
**Housing:** NEMA 2 (IP40).

**Wiring Connection:** Terminal block.

**Standard Accessories:** (2) imitative baffles, (2) baffle setscrews, (1) actuator body setscrew, and (1) aluminum gasket.

**Weight:** 1.72 lb (0.78 kg).

### WIRING DIAGRAM



### CHART 1: ACTUATOR ACTION

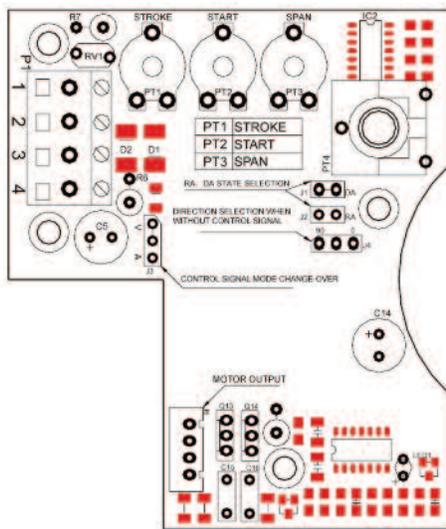
INPUT CONTROL SIGNAL		ROTATE DIRECTION
DA	RA	
INCREASING	DECREASING	↻
DECREASING	INCREASING	↺

#### Set Up

- Set jumper J1 or J2 to proper selection for reverse or direct acting. See Chart 1: Actuator Action above for more detail.
- Set jumper J3 for Voltage or Current input control signal.
- Set jumper J4 for actuator direction on loss of control signal.
- Potentiometer PT1 adjusts the stroke of the actuator.

#### MAINTENANCE

Upon final installation of the Series DDC Non-Spring Return Direct Coupled Actuator, no routine maintenance is required. A periodic check of the system calibration is recommended. The Series DDC is not field serviceable and should be returned if repair is needed (field repair should not be attempted and may void warranty). Be sure to include a brief description of the problem plus any relevant application notes. Contact customer service to receive a return good authorization number before shipping.



#### Square shaft installation

Before installation, the aluminum gasket should be put into the hole of Output Axle. Fix with square damper shaft. The rotating angle of the actuator can be set by internal potentiometer. The match between working range and feedback signal is automatically done by the actuator.

