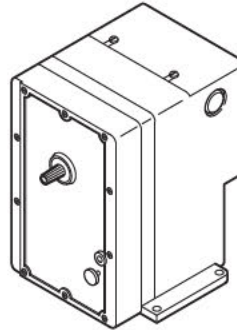


Two-Position, Oil-Submerged Actuators

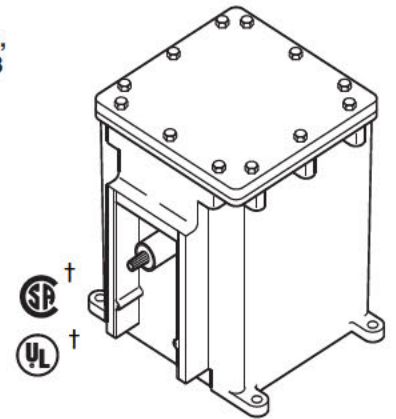
These actuators provide two-position operation of dampers, valves, and other equipment requiring the return to normal position upon power interruption.

Features:

- SPST controller.
- Spring return.
- 24, 120, 208, and 240 Vac models.
- SPDT auxiliary switch if actuator part number suffix is "-500."
- Rugged die cast aluminum.
- Oil immersed motor and gear train.
- Models for hazardous locations are only available as a factory enclosure/actuator assemblies.
- NEMA 4 with optional watertight conduit connectors, field supplied.



MA-3xx, MA5-318,
MA-4xx, MA5-418
(Standard)



MA6-3xx, MA8-3xx,
MA6-4xx, MA8-4xx, MA7-4xx
† Hazardous Locations

| Model Chart | | | | | | | | |
|-------------|--------------|----|--------------------------|--------------------------|---------------------|---------------------------|--|--------------------------------|
| Model No. | Power Supply | | Aux. ^a Switch | Input (Watts) | Va Running/ Holding | Rated Torque lb-in. (N-m) | Application and Mounting | Shaft Rotation |
| | Vac | Hz | | | | | | |
| MA-305 | 24 | 60 | No | 25 | 56/56 | 16 (1.8) | Damper actuators. Upright position preferred. | CW 180° when power is applied. |
| MA-305-500 | 24 | | Yes | | | | | |
| MA-405 | 120 | | No | | | | | |
| MA-405-500 | 120 | | Yes | | | | | |
| MA-318 | 24 | | No | 70 Running 25 Holding | 92/32 | 60 (6.8) | Damper and valve actuators. Output shaft horizontal. | CW 170° when power is applied. |
| MA-318-500 | 24 | | Yes | | | | | |
| MA-416 | 208 | | No | | | | | |
| MA-416-500 | 208 | | Yes | | | | | |
| MA-418 | 120 | | No | | | | | |
| MA-418-500 | 120 | | Yes | | | | | |
| MA-419 | 240 | | No | | | | | |
| MA-419-500 | 240 | | Yes | | | | | |
| MA5-419 | 240 | 50 | No | 120/39 | | | | |
| MA5-419-500 | 240 | | Yes | | | | | |

^a 2 FLA, 12 LRA at 24/120 Vac; 1 FLA, 6 LRA 2 240 Vac.

† Models for hazardous locations are only available as factory enclosure/actuator assemblies.

MA-3xx Series, MA-4xx Series

Part Numbers for Hazardous Location Applications^{a b}.

| Model No. | Damper Actuator Part Numbers for Hazardous Locations | Valve Actuator Part Numbers for Hazardous Locations |
|-------------|--|---|
| MA-305 | MA6-305 | — |
| MA-305-500 | MA6-305-500 | — |
| MA-405 | MA6-405 | — |
| MA-405-500 | MA6-405-500 | — |
| MA-318 | MA6-318 | MA8-318 |
| MA-318-500 | MA6-318-500 | MA8-318-500 |
| MA-416 | MA6-416 | MA8-416 |
| MA-416-500 | MA6-416-500 | MA8-416-500 |
| MA-418 | MA6-418 | MA8-418 |
| MA-418-500 | MA6-418-500 | MA8-418-500 |
| MA-419 | MA6-419 | MA8-419 |
| MA-419-500 | MA6-419-500 | MA8-419-500 |
| MA5-419 | MA7-419 | MA7-419 |
| MA5-419-500 | MA7-419-500 | MA7-419-500 |

^a Class 1, Groups C and D, and Class 2, Groups E, F and G, hazardous locations. Ref. EN-56-2, F-18451.

^b Models for hazardous locations are only available as factory enclosure/actuator assemblies.

Specifications

| | |
|--|---|
| Control circuit | Two wire. |
| Spring return | CCW to original position when actuator is de-energized. |
| Auxiliary switch (-500 models) | SPDT makes (or breaks) circuit at powered end of stroke (fixed). |
| Nominal damper area | Actuator sizing should be done in accordance with damper manufacturer's specifications. |
| Environment | |
| Ambient temperature limits | Shipping and storage: -40 to 136°F (-40 to 58°C). Operating: -40 to 136° (-40 to 58°C). |
| Humidity | 5 to 95% RH, non-condensing. |
| Locations | NEMA 4 ^a . |
| Connections | Coded screw terminals. |
| Case | Die cast aluminum with two 1/2 in. conduit openings. |
| Mounting | Allow 6 in. (152 mm) clearance above the actuator wiring compartment. Refer to Model Chart for additional data. |
| Dimensions | |
| Base actuators | 5-3/4 H x 5-3/8 W x 6-9/16 D in. (146 x 136 x 167 mm). |
| Hazardous location actuators | 8-7/8 H x 8-1/2 W x 10-5/8 D in. (225 x 216 x 167 mm). |
| No load timing^b at 75°F (24°C) | 20 seconds. |
| Agency Listings | |
| UL 873 | File E9429 Temperature Indicating and Regulating Equipment. |
| CSA | C22.2 No. 24 File LR 3728. |

^a When used with gasket (provided) and water-tight conduit connectors (not provided).

^b Spring return timing with full load opposing spring approximately 60 seconds.

Accessories

| Model No. | Description |
|---|--|
| Damper linkage. | |
| AM-111 | Crank arm for 5/16 in. diameter damper shaft. |
| AM-112 | Crank arm for 3/8 in. diameter damper shaft. |
| AM-113 | Crank arm for actuator or 1/2 in. diameter damper shaft. |
| AM-115 | Crank arm for 7/16 in. diameter damper shaft. |
| AM-116 | Splined crank arm for actuator. |
| AM-122 | Linkage connector straight type. |
| AM-123 | Damper clip. |
| AM-125 | 5/16 in. diameter x 20 in. damper rod. |
| AM-125-048 | 5/16 in. diameter x 48 in. damper rod. |
| AM-132 | Ball joint connector. |
| AM-161 | Damper linkage kit. |
| AM-161-1 | Damper linkage kit. |
| AM-301 | 90 degree mounting bracket (except MA6, MA7, MA8-xxx). |
| Valve linkage for 60 lb-in. (6.8 N-m) actuators only (except MA7, MA8-xxx). | |
| AV-29 and AV-300 | 2-1/2 and 3 in. VB-9323. |
| AV-391 | 1/2 to 2 in. VB-7xxx and 1/2 to 1-1/4 in. discontinued VB-9xxx. |
| AV-392 | 1-1/2 and 2 in. VB-92X3 or VB-93X3. |
| AV-395 | 2-1/2 to 4 in. VB-92X3 or VB-9313. |
| Valve Only (To be used with 60 lb-in. (6.8 N-m) MA7-xxx and MA8-xxx hazardous location actuators only) | |
| NYBA-37 | Stem extension for 1/2 to 2 in. VB-7xxx and 1/2 to 1-1/4 in. discontinued VB-9xxx, for actuators assembled in hazardous locations enclosure (use with AV-391 linkage kit). |
| NYBA-61 | Mounting bracket for hazardous locations enclosure (use with AV-391 linkage kit). |

Typical Applications

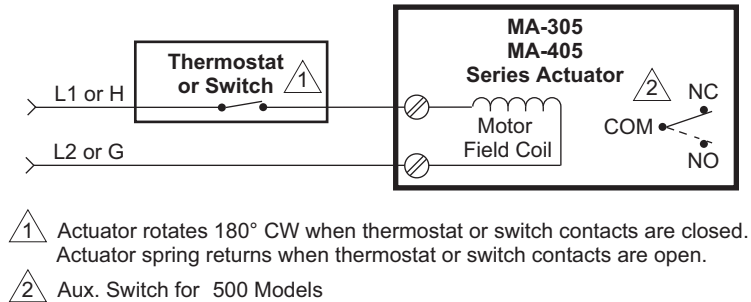


Figure 1 Wiring for MA-305 and 405 Series.

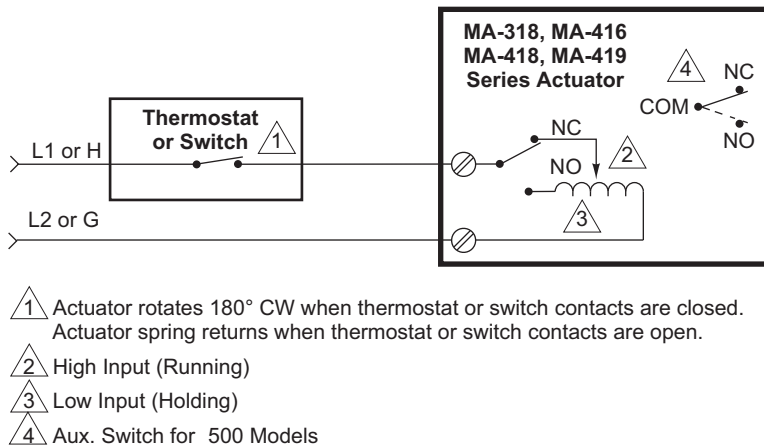


Figure 2 Wiring for MA-318, 416, 418, and 419 Series.