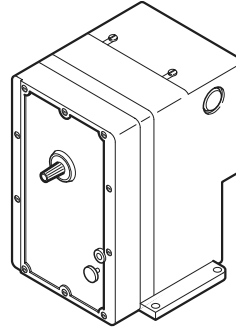


## Two-Position, Oil-Submerged Actuators

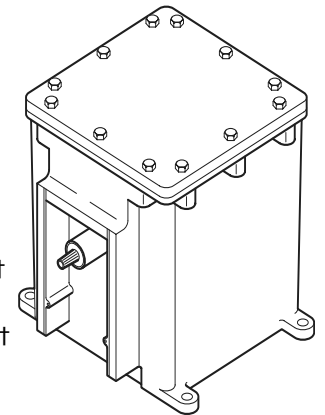
These actuators provide two-position operation of dampers, valves, and other equipment requiring the return to normal position upon power interruption.

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. <sup>a</sup> 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		48/48			
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		104/38			
MA-416	208		No					
MA-416-500	208		Yes		120/39			
MA-418	120		No					
MA-418-500	120		Yes					
MA-419	240		No					
MA-419-500	240		Yes					
MA5-419	240		50	No				
MA5-419-500	240			Yes				

<sup>a</sup> 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<sup>a b</sup>.

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

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

<sup>b</sup> Models for hazardous locations are only available as factory enclosure/actuator assemblies.

## Specifications

<b>Control circuit</b>	Two wire.
<b>Spring return</b>	CCW to original position when actuator is de-energized.
<b>Auxiliary switch (-500 models)</b>	SPDT makes (or breaks) circuit at powered end of stroke (fixed).
<b>Nominal damper area</b>	Actuator sizing should be done in accordance with damper manufacturer's specifications.
<b>Environment</b>	
<b>Ambient temperature limits</b>	Shipping and storage: -40 to 136°F (-40 to 58°C). Operating: -40 to 136° (-40 to 58°C).
<b>Humidity</b>	5 to 95% RH, non-condensing.
<b>Locations</b>	NEMA 4 <sup>a</sup> .
<b>Connections</b>	Coded screw terminals.
<b>Case</b>	Die cast aluminum with two 1/2 in. conduit openings.
<b>Mounting</b>	Allow 6 in. (152 mm) clearance above the actuator wiring compartment. Refer to Model Chart for additional data.
<b>Dimensions</b>	
<b>Base actuators</b>	5-3/4 H x 5-3/8 W x 6-9/16 D in. (146 x 136 x 167 mm).
<b>Hazardous location actuators</b>	8-7/8 H x 8-1/2 W x 10-5/8 D in. (225 x 216 x 167 mm).
<b>No load timing<sup>b</sup> at 75°F (24°C)</b>	20 seconds.
<b>Agency Listings</b>	
<b>UL 873</b>	File E9429 Temperature Indicating and Regulating Equipment.
<b>CSA</b>	C22.2 No. 24 File LR 3728.
<b>General Instructions</b>	Refer to F-06491.

<sup>a</sup> When used with gasket (provided) and water-tight conduit connectors (not provided).

<sup>b</sup> Spring return timing with full load opposing spring approximately 60 seconds.

## Accessories

Model No.	Description
<b>Damper linkage.</b>	
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).
<b>Valve linkage for 60 lb-in. (6.8 N-m) actuators only (except MA7, MA8-xxx).</b>	
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.
<b>Valve Only (To be used with 60 lb-in. (6.8 N-m) MA7-xxx and MA8-xxx hazardous location actuators only)</b>	
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

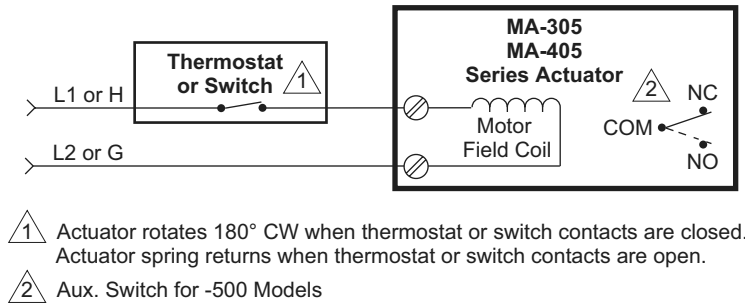


Figure 1 Wiring for MA-305 and 405 Series.

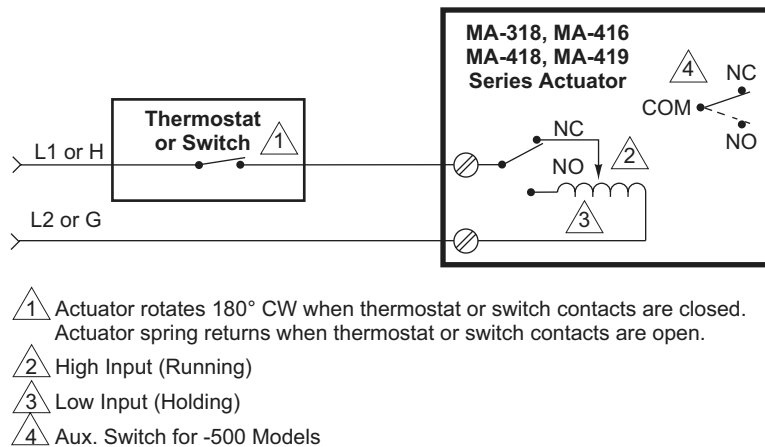


Figure 2 Wiring for MA-318, 416, 418, and 419 Series.