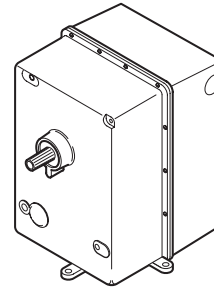


## Proportional or Floating Actuators

These actuators provide control of heavy dampers, large valves, and other high torque applications in heating, ventilating, air conditioning, and similar applications which do not require return to a normal position.

Features:

- High torque proportional gear train actuators accept the following signals:
  - 100 to 1,000  $\Omega$  slidewire (requires AE-504).
  - SPDT floating or snap-acting controller.
  - Variable Vdc .
  - Variable mAdc.
- Torques to 1,600 lb-in.
- Available in 24 and 120 Vac models.
- Standard SPDT auxiliary switch.
- Rugged die cast aluminum housings.
- Oil immersed motor and gear train.



MP-9710 and MP-9750 only

### Model Chart

Model No.	Control		Input	Torque Lb-in. <sup>a</sup>	Timing Sec.	Stroke	Misc.
	Type	Amp Rating					
MP-9713 <sup>b</sup>	1, 2	4.0 at 24 Vac	24 Vac, 60 Hz, 4.0 A	800	135	180°	—
MP-9750 <sup>b</sup>	1, 2	0.9 at 120 Vac	120 Vac, 60 Hz, 0.9 A	800	135	180°	Built-in Trans. <sup>c</sup>
MP-9810	3, 4	1.8 at 120 Vac	120 Vac, 60 Hz, 1.8 A	1300	115	180°	—
MP-9830	3, 4	1.8 at 120 Vac	120 Vac, 60 Hz, 1.8 A	1300	60	90°	—
MP-9910	3, 4	1.8 at 120 Vac	120 Vac, 60 Hz, 1.8 A	1600	145	180°	—

<sup>a</sup> 1 lb-in. = 0.113 N-m.

<sup>b</sup> UL Listed.

<sup>c</sup> Note: MP-9750-xxx-2-x includes a built-in transformer with secondary leads wired externally to terminals 7 and 8 — Red (24 Vac) to 8 and Blue (12 Vac) to 7.

# MP-9xxx Series

## Actuator Drive Compatibility

Actuators	Actuator Drives Input Type				
	Vdc	Vdc	mA	Vdc/mA	mA/Vdc
Actuator Model	CP-8301-xxx <sup>a</sup>	CP-8391-456 <sup>a</sup>	CP-8391-716 <sup>a</sup>	CP-9301	CP-9302
MP-9610	—	X	X	—	—
MP-9713	X	—	—	X	X
MP-9750	X	X	X	X	X
MP-9810	—	X	X	—	—
MP-9830	—	X	X	—	—
MP-9910	—	X	X	—	—

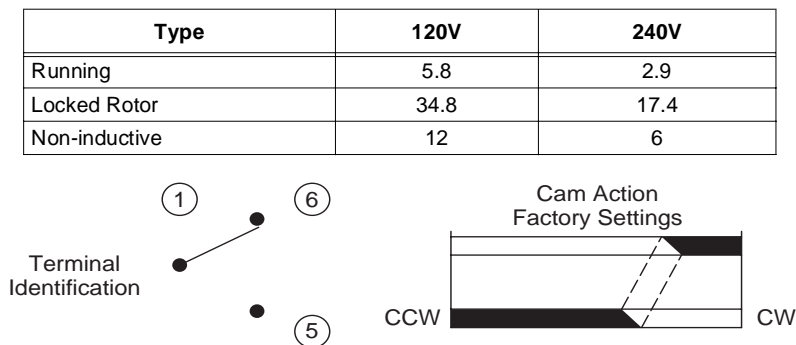
<sup>a</sup> May require close nipple conduit extensions for mounting x-6680.

## Specifications

<b>Control circuit</b>	Requires SPDT switch with neutral (floating) or two-position and proportional. Refer to Figure 1 for ratings.
<b>Shaft rotation</b>	Reversible proportional can stop at any point in the stroke.

## Specifications (Continued)

<b>Auxiliary switch</b>	Adjustable SPDT snap-acting. Factory set to close one contact and open the other at end of CW stroke. Refer to Figure 1.
<b>Environment</b>	
<b>Ambient temperature limits</b>	Shipping: -40 to 130°F (-40 to 54°C). Operating: -40 to 130°F (-40 to 54°C).
<b>Humidity</b>	5 to 95% RH.
<b>Locations</b>	NEMA Type 1 (NEMA 4 with AM-369).
<b>Connections</b>	Coded screw terminals.
<b>Case</b>	Die cast aluminum with two 1/2 in. conduit knockouts on each side.
<b>Mounting</b>	
<b>Dampers</b>	Upright preferred.
<b>Valves</b>	Upright with actuator above the center line of the valve body.
<b>Dimensions</b>	9-9/16 H x 9-1/2 W x 10-1/2 D in. (243 x 241 x 267 mm).
<b>Agency Listing</b>	MP-9713 and MP-9750 only: UL Listed.
<b>General Instructions</b>	Refer to F-11331.



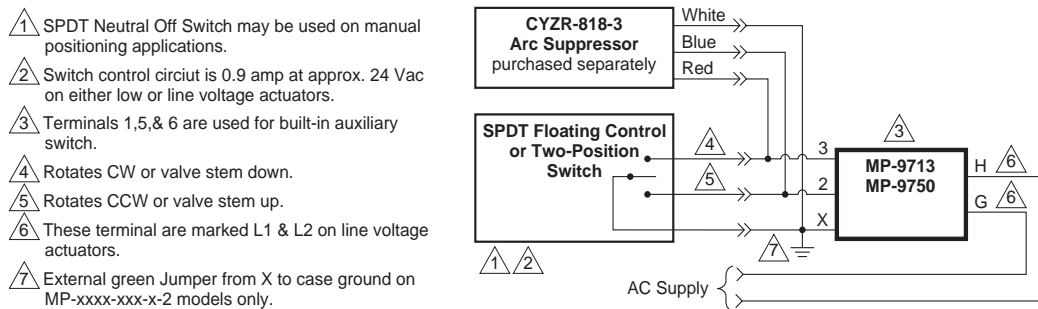
**Figure 1 Adjustable Auxiliary Switch SPDT Rating Amps.**

## Accessories

Model No.	Description
<b>Damper Linkage Accessories</b>	
AE-504	100 to 1000 $\Omega$ input actuator drive.
AM-321	Two step switch kit.
AM-332	100 $\Omega$ single potentiometer.
AM-341	Four step switch kit.
AM-342	Two step switch and potentiometer kit.
AM-345	Actuator mount, time delay relay for MP-9810, MP-9830 and MP-9910, field modified for panel mounting.
AM-369	NEMA 4 gasket kit. <sup>a</sup>
AM-392	Crank arm for actuator, 1/2 in. slot provides for adjustable radius from 1 in. (25 mm) to 5 in. (127 mm), zinc plated.
AM-394	Connecting link, two (2) 1/2 in. dia. threaded rods with turnbuckle and two (2) 1/2 in. dia. ball joint connectors, adjustable from 15-3/4 to 24-3/4 in.
CYZR-818-3	Arc suppressor.

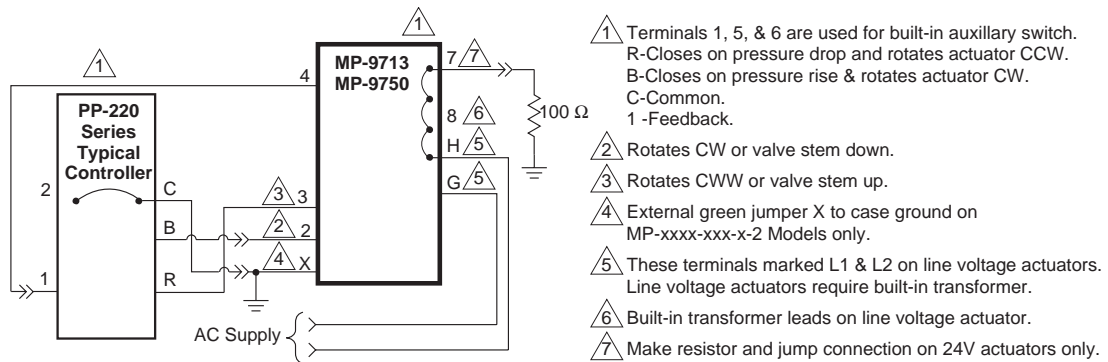
<sup>a</sup> Back cover plate prevents the use of other accessory kits.

## Typical Applications



- 1 SPDT Neutral Off Switch may be used on manual positioning applications.
- 2 Switch control circuit is 0.9 amp at approx. 24 Vac on either low or line voltage actuators.
- 3 Terminals 1,5,& 6 are used for built-in auxiliary switch.
- 4 Rotates CW or valve stem down.
- 5 Rotates CCW or valve stem up.
- 6 These terminal are marked L1 & L2 on line voltage actuators.
- 7 External green Jumper from X to case ground on MP-xxxx-xxx-x-2 models only.

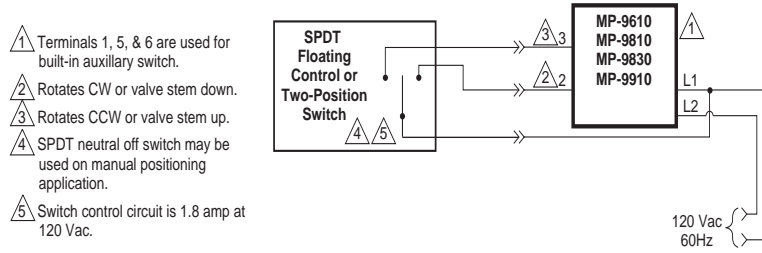
**Figure 2 Typical Reversible Floating or Two-Position.**



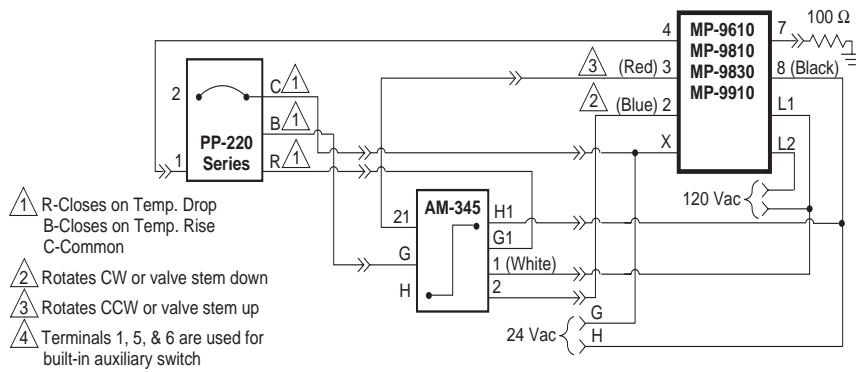
- 1 Terminals 1, 5, & 6 are used for built-in auxiliary switch. R-Closes on pressure drop and rotates actuator CCW. B-Closes on pressure rise & rotates actuator CW. C-Common. 1 -Feedback.
- 2 Rotates CW or valve stem down.
- 3 Rotates CWW or valve stem up.
- 4 External green jumper X to case ground on MP-xxxx-xxx-x-2 Models only.
- 5 These terminals marked L1 & L2 on line voltage actuators. Line voltage actuators require built-in transformer.
- 6 Built-in transformer leads on line voltage actuator.
- 7 Make resistor and jump connection on 24V actuators only.

**Figure 3 Typical Proportional Electric.**

# MP-9xxx Series



**Figure 4 Typical Reversible Floating or Two-Position.**



**Figure 5 Typical Proportional Electric.**