

AV330/AV352 Linkages, MP motors & CP-9302 Actuator Drive



AV330 Linkage with Motor & CP-9302 Drive on 2 inch Valve



AV352 Linkage with Motor & CP-9302 Drive on 5 inch Valve

APPLICATION:

The **AV330 and AV352 Linkages** are assembled to MP motors and CP-9302 Actuator Drives to form MP Motor-Actuators. Six motors are used with these linkages. The **MP361, MP371, and MP381 Motors** use a 24VAC power supply. The **MP465, MP475, and MP485 Motors** use a 120VAC power supply.

The MP361, MP371, MP465, and MP475 Motors have spring returns that drive a valve's stem to a particular position on loss of power. The MP381 and MP485 Motors are non-spring return. *See the "Fail Position" table below to learn what effect this has for each valve.*

The **CP-9302 Actuator Drive** responds to a milliampere (mAdc) or a dc voltage (Vdc) signal. The actuator drive causes a motor-actuator to drive a valve's plug into position with respect to the signal from a controller.

ACTUATOR SPECIFICATIONS:

Control Signal: 4-20 mAdc (Factory Setting), 0-10 Vdc, Adjustable, Field Selectable
 Start Point Adjustable from 2 to 16 mAdc, or 0 to 10 Vdc
 Span Adjustable from 8 to 16 mAdc, or 3 to 16.5 Vdc
 Deadband Factory Set at 3% of Span, Adjustable to 5%

Control Action: See Below
 Power Consumption: 60VA (except MP381: 52.8VA)
 Timing: Approx 90 Seconds/inch (except MP381 & MP485: 130 Seconds)

Feedback Signal: Not Available
 Manual Override: Not Available
 Auxillary Switch: Adjustable SPDT

Construction: Die Cast Aluminum Motor Housing and Yoke (with AV330) or Cast Iron Yoke (with AV352). CP-9302 Injection Molded Plastic Case with Aluminum Cover. Motor Cases have Two 1/2" Conduit Knock-outs on Each Side.

Connections: Motors: Coded Screw Terminals
 CP-9302: Color Coded Pigtail Leads

Locations: NEMA Type 1 Indoor Only
 Temperature Limits: Ambient: 32°F - 130°F
 Humidity: 5 to 95%RH, Non-condensing
 Mounting: Vertical Above Centerline of Valve

CONTROL ACTION:

Single and Double-Seated Valves:
 Increasing Signal Closes Valve (Factory Setting) Reversible

3-Way Mixing and Diverting Valves:
 Increasing Signal Closes Lower Port / Opens Upper Port (Factory Setting) Reversible

Motor	Fail Position	
	Single & Double Seated Valves	Mixing and Diverting Valves
MP361 or MP465	Fails Closed	Upper Port Open/Lower Port Closed
MP371 or MP475	Fails Open	Upper Port Closed/Lower Port Open
MP381 or MP485	Fails Last Position	Fails Last Position

Motor	Power Supply		
	Volts	Hz	Amps
MP361	24	60	2.5
MP371	24	60	2.5
MP381	24	60	2.2
MP465	120	60	0.5
MP475	120	60	0.5
MP485	120	60	0.5

Adjustable Auxiliary Switch
 SPDT Rating AMPS

Type	120V	240V
Running	5.8	2.9
Locked Rotor	34.8	17.4
Non Inductive	12	6

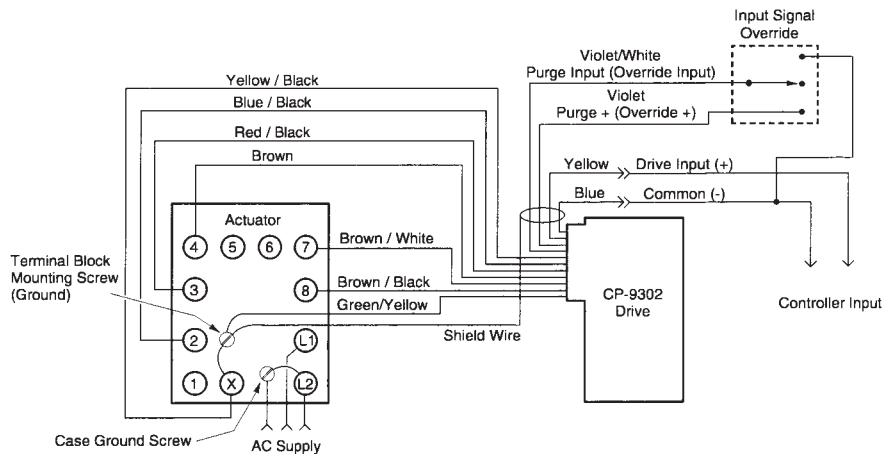
Terminal Identification: ①, ⑤, ⑥
 Cam Action Factory Settings: CCW, CW

Switch is factory set to close one contact and open the other at the end of CW rotation.

ACTUATOR WIRING DIAGRAM:

Actuator & CP-9302 Drive CP-9302

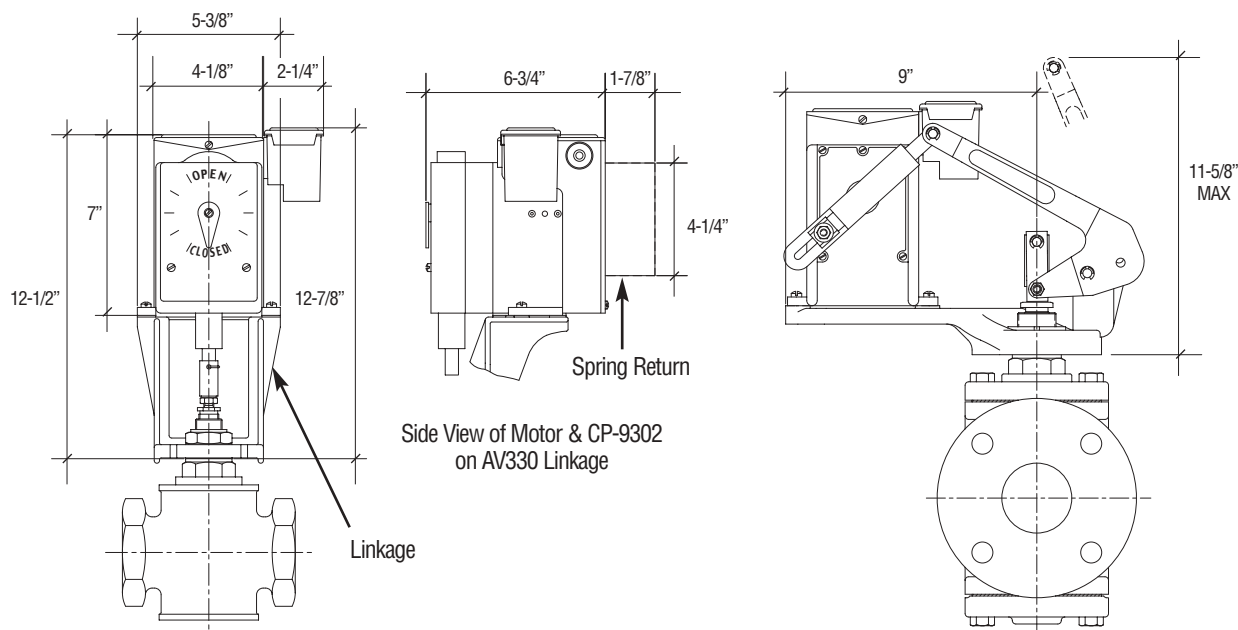
To Reverse Control Action:
Reverse blue/black and red/black leads, and reverse brown/black and brown/white leads.



The L1 and L2 terminals are marked H and G on 24VAC Actuators. 24VAC models are equipped with a jumper from terminal G to the case ground screw.

Input signal override control, dry contact closure. Connecting violet/white to blue lead forces actuator to drive to low signal end of travel. Connecting the violet/white to the violet lead forces the actuator to drive to the high signal end of travel. If not used tape off violet/white and violet leads.

OVERALL DIMENSIONS:



Motor, CP-9302, and AV330 Linkage Mounted on Valve

Motor, CP-9302, and AV352 Linkage Mounted on Valve

