# 4. VB-7000 Globe Valves Actuators & Linkages

# MP-52xx Electronic Hydraulic Proportional SR Actuators

## Application

These MP-52xx Series actuators provide electronic proportional control of valves requiring the return to normal position upon power interruption.

#### Features

- · Compatibility with 2...15 Vdc System 8000 input signals.
- · Proportional control by variable Vdc input signal.
- · Spring return
- Fixed 3 Vdc operating span.
- Non-adjustable start point and non-positive positioning. Typically, one actuator is controlled from one Vdc output signal.
- 10,000 Ω or greater input impedance.
- · 24 and 120 Vac models.
- Die cast lower housing with ½" (12.7 mm) conduit opening and painted steel upper housing.
- · Hydraulic actuator with oil-immersed motor, transducer, and pump.



MP-52xx Proportional

				ľ	Model <sup>*</sup>	Table				
	Actuator Power Input					40.4	Timing in Seconds @ 72° F (22° C)			
Part Number	AC Voltage ± 10%	60 Hz		50 Hz		10 Amps Auxiliary	To Extend		Retract	Required Linkage
		Watts	Amps	Watts	Amps	Switcha	(No Load Stroke)	To Retract	on Power Loss	Lilikage
MP-5210	120	11.7	0.16	12.9	0.19	No	- 60	40	15	AV-7600-1 AV-601 <sup>b</sup>
MP-5210-500						Yes				
MP-5213	24	12.0	0.80	13.2	0.97	No				
MP-5213-500						Yes				

a - Common of switch is in series with AC power supply to the motor. Therefore, the switch must be wired to control the same voltage as the actuator itself.

b - May be required for steam or hot water.

Specifications		
Inputs		
Compatible with	215 Vdc from System 8000 controllers Opera ing Span: Approx. 3 Vdc fixed. See F-26235-2 for valves. Impedance: 10,000 Ω or greater.	
Power Input	Refer to Model Table.	
Connections	Color-coded 4 ft. (1.2 m) leads.	
Outputs		
Electrical	Auxiliary Switch (Mx-52xx-500 models), 10 Amps, 120/240 Vac adjustable SPDT, factory set to close the N.C. contact at the retracted end of stroke.	
Mechanical	Stroke, Valve: Approximately 9/16" (14.3 mm) over a nominal 6 Vdc (fully retracted) to 9 Vdc (full extended).	
Environment		
Temperature Limits	Shipping & Storage, -40140° F (-4061° C) For valve actuators: Refer to Pg. 29, 2. VB-7000 Series ½"2" Globe Valves	
Humidity	595% RH, non-condensing	
Location	NEMA Type 1	
Dimensions	6¾ x 3¼ Dia." (171 x 83 mm)	
Regulatory Compliance	RoHS and REACh	



Maximum Temperature of		rature of MP-541x or MPR- 1x	Maximum Ambient Temperature of MA-521x or MP-521x		
Media in the Valve Body (Check Valve Ratings)	AV-600 <sup>a</sup> or AV-7600 <sup>b</sup> Only for Chilled Water Applications Only	AV-600 <sup>a</sup> or AV-7600 <sup>b</sup> & AV-601	AV-600 <sup>a</sup> or AV-7600 <sup>b</sup> Only	AV-600 <sup>a</sup> or AV-7600 <sup>b</sup> & AV-601	
366°F (180°C)		88°F (31°C)	90°F (32°C)	90°F (32°C)	
340°F (171°C)	B. 11.11.	93°F (34°C)	100°F (38°C)	100°F (38°C)	
281°F (138°C)	Do Not Use	103°F (39°C)	115°F (46°C)	140°F (60°C) <sup>c</sup>	
181°F (83°C)		120°F (48°C)	4.4005 (0000)\$		
80°F (26°C)	140°F (60°C) <sup>c</sup>	140°F (60°C) <sup>c</sup>	- 140°F (60°C) <sup>c</sup>		

- a For detailed valve linkage installation instructions, refer to AV-600 Hydraulic Actuator Valve Linkage Kit Installation Instructions, F-26279.
- b For detailed valve linkage installation instructions, refer to AV-7600 Hydraulic Actuator Valve Linkage Kit Installation Instructions, F-26235.
- c Maximum allowable ambient temperature of the actuator.

Accessories		
Valve Linkages		
AV-601	Valve linkage extension for hot water and steam applications; use with AV-7600.	
AV-7600-1	Valve linkage for VB-7000.	

## Application

The AV-7600-1 valve linkage kit is used to field assemble MA-521x, MP-521x, MP-541x and MP-561x round hydraulic actuators to  $\frac{1}{2}$ " through 2" VB-7000 series valve bodies.

#### Features

- Provides direct-couple interface between MA, MP and MPR-5xxx actuators and valve bodies.
- · Kit fits all VB-7000 series valve bodies.
- Includes spring choices for higher 2-Way valve close off.
   Specifications
- Actuator mounting: In any upright position above the center line of the valve body. For steam applications only, mount the actuator above the valve body at 45° from vertical.

AV-7600-1 Hydraulic Actuator Valve Linkage Kit

