

# CONTROL VALVES

## GLOBE VALVE ACTUATORS FORTA SERIES



### DESCRIPTION

The **Schneider Electric Forta Series globe valve actuator** is a programmable linear actuator family for use with VB7000, VB8000 and VB9000 series two- and three-way valves. The actuators are easily configured for floating or proportional control, direct or reverse action, stroke timing and flow characteristics. An automatic input control signal setup allows for easy field installation onto existing Schneider Electric globe valves. The Forta actuator can also be purchased as part of a complete valve assembly for new applications/installations (order the VU Series).



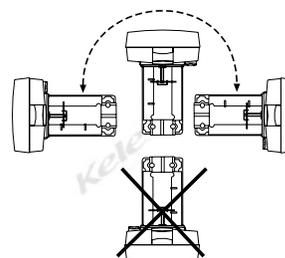
3

CONTROL VALVES

### FEATURES

- Floating or proportional control in the same actuator
- Proportional configuration 0-10, 2-10 VDC or 4-20 mA, 500Ω resistor included
- Direct/Reverse action (switch selectable)
- Configurable run time
- Manual override
- Electronic valve sequencing and flow characteristic (equal percentage or linear) selection
- Torque overload protection (full stroke)
- Easy auto zero and span

### MOUNTING



### SPECIFICATIONS

<b>Supply Voltage</b>	24 VAC ±10%, 50/60 Hz	<b>Valve Mounting</b>	U-Bolt or Screw Mount
<b>Supply VA</b>		<b>AV-821</b>	Used with U-Bolt version on current VB-7XXX valves
<b>M400</b>	6 VA	<b>AV-822</b>	Used with U-Bolt version on current VB-8XXX valves and older VB-9XXX valves
<b>M800</b>	15 VA		
<b>M1500</b>	24 VA	<b>Manual Override</b>	Yes
<b>Control Signal</b>	Floating or Proportional 0/2-10 VDC or 4-20 mA	<b>Operating Temperature</b>	14° to 122°F (-10° to 50°C) for chilled water applications; maximum temperature reduces to 90°F (32°C) when media temperature is 366°F (186°C)
<b>Motor</b>	Brushless DC	<b>Operating Humidity</b>	15% to 95% RH non-condensing
<b>Noise</b>	32 dBA maximum	<b>Enclosure Rating</b>	NEMA 2 (IP54) if both conduit connectors used, otherwise NEMA 1 (IP40)
<b>Conduit Connection</b>	Two knockouts, 7/8" (2.2 cm)	<b>Dimensions</b>	
<b>Wiring</b>	Screw terminals	<b>Tall U-Bolt Style</b>	9.5"H x 6.3"W x 4.6"D (24.2 x 16.0 x 11.7 cm)
<b>Feedback</b>	2-10 VDC	<b>Screw Mount</b>	6.4"H x 6.3"W x 4.6"D (16.3 x 16.0 x 11.7 cm)
<b>Auxiliary Switch</b>	Two SPDT, 4A resistive @ 24 VAC (model specific)	<b>Weight</b>	3.9 lb (1.8 Kg)
<b>Action</b>	Non-spring return, direct or reverse DIP switch selectable	<b>Approvals</b>	C-tick, CE
<b>Force</b>		<b>Warranty</b>	1 year
<b>M400</b>	90 lbf (400 N)		
<b>M800</b>	180 lbf (800 N)	<b>Note:</b>	Screw version actuators designed for VB-7XXX only.
<b>M1500</b>	337 lbf (1500 N)		
<b>Stroke</b>	3/8" to 2" (.9 to 5.2 cm)		
<b>Stroke Time</b>	Floating, 60 or 300 seconds; Proportional, 15 seconds (for 1/2" stroke)		



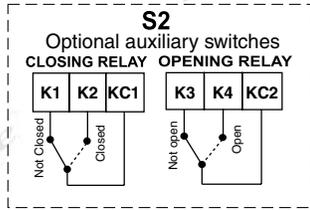
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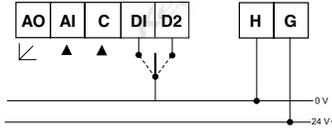
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### WIRING



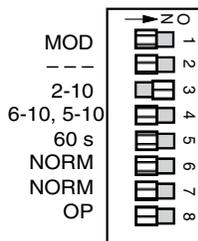
\*add- S2 to model number for auxiliary switch



Terminal	Function	Description
G	24 vac	power
H	24 vac	power
AI	+	input signal
C	-	signal common
D1	Floating	Extend/Retract*
D2	Floating	Extend/Retract*
A0	+	feedback signal

\*Exact operation will vary based on the settings of DIP switch #1 and #7

### DIP SWITCH SETTINGS



Function in the "OFF" position	"ON" position	Description
Modulating	Increase/decrease	Control
—	Sequence	Control
0-10	0-10 V	Voltage range
2-6, 0-5	6-10 V, 5-10 V	Part of voltage range
300 s	60 s	Running time
INV	Inverted	Direction of movement
LIN/LG	Linear/Logarithmic	Valve characteristic
ADJ	End position adjustment	Operation/End position adjustment

### COMPATIBILITY

**VB-7000 Bronze Valve**  
(AV-821 linkage required for M400A, M800A, M1500A)

Valve size	M400A/ M400A-VB (90 lbf)	M800A/ M800A-VB (180 lbf)	M1500A/ M1500A-VB (337 lbf)
1/2"	✓		
3/4"	✓	✓	
1"	✓	✓	
1-1/4"	✓	✓	
1-1/2"	✓	✓	✓
2"	✓	✓	✓

**VB-8000/9000 Flanged Iron Valve**  
(AV-822 linkage required)

Valve size	M400A (90 lbf)	M800A (180 lbf)	M1500A (337 lbf)
2-1/2"		✓	✓
3"		✓	✓
4"		✓	✓
5"			✓
6"			✓

\* VB-9313 only

### ORDERING INFORMATION

#### MODEL

MODEL	DESCRIPTION
<b>M400A</b>	90 lbf, NSR, proportional/floating control, U-bolt mount actuator (requires AV-81x linkage)
<b>M400A-S2</b>	90 lbf, NSR, proportional/floating control, U-bolt mount actuator, auxiliary switch (requires AV-81x linkage)
<b>M400A-S2-VB</b>	90 lbf, NSR, proportional/floating control, screw-mount, U-bolt mount actuator, auxiliary switch (VB-7XXX only)
<b>M400A-VB</b>	90 lbf, NSR, proportional/floating control, screw-mount (VB-7XXX only)
<b>M800A</b>	180 lbf, NSR, proportional/floating control, U-bolt mount actuator (requires AV-81x linkage)
<b>M800A-S2</b>	180 lbf, NSR, proportional/floating control, U-bolt mount actuator, auxiliary switch (requires AV-81x linkage)
<b>M800A-S2-VB</b>	180 lbf, NSR, proportional/floating control, screw-mount, auxiliary switch (VB-7XXX only)
<b>M800A-VB</b>	180 lbf, NSR, proportional/floating control, screw-mount
<b>M1500A</b>	337 lbf, NSR, proportional/floating control, U-bolt mount actuator (requires AV-81x linkage)
<b>M1500A-S2</b>	337 lbf, NSR, proportional/floating control, U-bolt mount actuator, auxiliary switch (requires AV-81x linkage)
<b>M1500A-S2-VB</b>	337 lbf, NSR, proportional/floating control, screw-mount, auxiliary switch (VB-7XXX only)
<b>M1500A-VB</b>	337 lbf, NSR, proportional/floating control, screw-mount

#### ACCESSORIES

<b>AV-821</b>	Linkage for VB-7xxx valves (required for U-bolt mount actuator)
<b>AV-822</b>	Linkage for VB-8xxx & VB-9xxx valves (required for U-bolt mount actuator)