

# SpaceLogic M900A Series

## Spring Return Actuators



### Product Description

The M900A series is a linear electro-mechanical actuator with “fail-safe” spring return operation for the control of two-way and three-way globe valves in:

- Hot water and steam systems
- Heating and cooling systems
- Air handling systems

M900A series utilize brushless DC motors and a high resolution control board to provide a very precise fluid control in globe valves. The actuator’s input signal range and optional

auxiliary switches of the actuator are adjusted automatically to the stroke of the valve.

The actuator automatically provides a consistent running time regardless of the valve stroke.

On power loss, the mechanical spring return mechanism drives the motor in turn, generating power to the board to control the spring return braking speed, avoiding mechanical stress and system water hammer. All actuators can be configured for either a 3-wire floating signal or various modulating control signals including sequencing.

### Specifications

M900ARx	Stem up (retract)
M900AEx	Stem down (extend)
Voltage Supply	24 Vac $\pm$ 10% 50-60Hz
Power Consumption	
Running	30 VA (21 W)
Rest	7 W
Running Time	
Modulating	20 sec.
Floating	60/300 sec. (selectable)
Spring Return	18 sec.
Transformer Sizing	50 VA
Stroke	
Range	0.35 in...1.2 in (9...30 mm)
Factory Set	.08 in (20 mm)
Force, nominal	202 Lbf (900N)
Duty Cycle	20%/60 minutes (full load, high amb.)
	80%/60 minutes (half load, room temp.)
Analog input	
Voltage	0...10 Vdc (factory)
Selectable Range Vdc	2...10, 0...5, 2...6, 5...10, 6...10
	4...20 MA, with a 500 ohm resistor (included)

Position Feedback	2...10 Vdc or 0...5 Vdc (0...100%)
Load	2 mA
Electrical Terminals	18 gauge
Environmental	
Storage	-13...149 °F (-25...65 °C)
Ambient Humidity Range	max. 95% non-condensing
Min. Ambient Temp.	14 °F (-10 °C)
Operating Max. Temp.	
122 °F (50 °C)	Chilled water applications
113 °F (45 °C)	at 281 °F (138°C) Fluid temp.
107 °F (42 °C)	at 300 °F (149 °C) Fluid temp.
100 °F (38 °C)	at 340 °F (171°C) Fluid temp.
90°F (32 °C)	at 366 °F (186 °C) Fluid temp.
Enclosure Rating	
M900ARW, M900AEW	NEMA 4 (IP65)
M900AR, M900AE	NEMA 2 (IP54)
Sound Power Level	43 dBa
Materials	Aluminum
Conduit Connection	North American 1/2 in conduit connectors, two on the side, two on the bottom
S2 Auxillary Switch Relays (optional)	SPDT, 24Vac 4A resistive (contacts made at 5% and 95% of end stroke)

Weight	
Short Yoke	6.9 lb (3.1 kg)
Tall Yoke	7.1 lb (3.2 kg)
Agency Listings	UL873, cULus, RCM, CE
Environmental	RoHS, REACH

### Available Products

Part Number	Spring Return	Tall U-Bolt Style <sup>1</sup>	Short Screw Mount Style <sup>2</sup>	NEMA 4 Enclosure Rating	Auxiliary Switches
M900AR	Retract	X			0
M900AE	Extend	X			0
M900AR-VB	Retract		X		0
M900ARW	Retract	X		X	0
M900ARW-VB	Retract		X	X	0
M900ARW-S2	Retract	X		X	2-SPDT
M900AEW-S2	Extend	X		X	2-SPDT

### Accessories

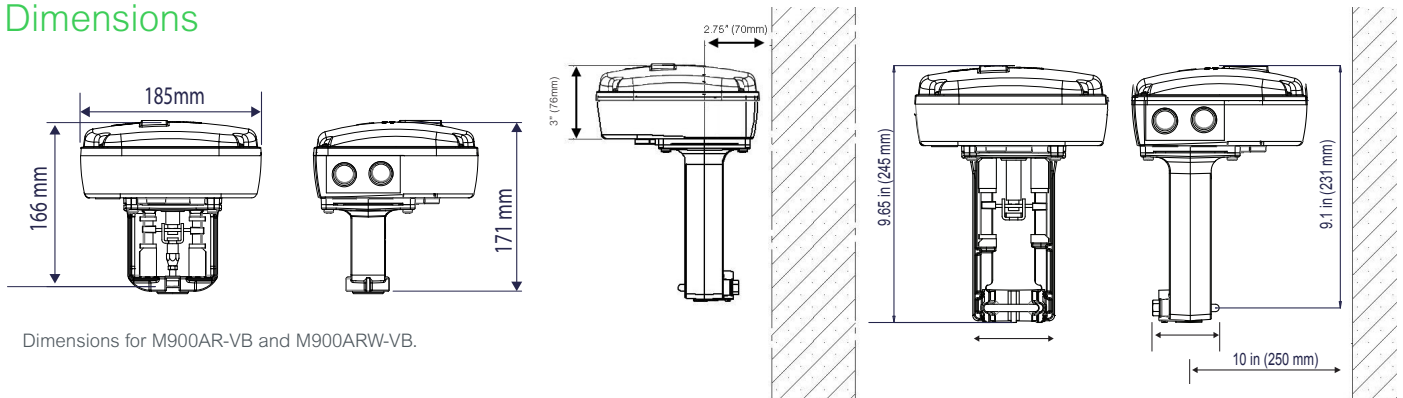
Part No.	Description	Required
AV-821	VB-7xxx series globe valve linkage kit	To mount the Tall U-Bolt M900A to VB-7xxx, order separately. F-27701
AV-822	VB-8xxx and VB-9313 Series 2-1/2 to 4" globe valve linkage kit	To mount the Tall U-Bolt M900A to VB-8xxx and VB-9313, order separately. F-27702
880 0104 000	S2 auxiliary end point switches	Optional Switches can be added to the standard models in the field

1 - VB-7xxx (1/2" to 2") and required AV-821, VB-8xxx (2-1/2" to 4") and required AV-822, and VB-9xxx (2-1/2" to 3") and required AV-822.\*

2 - For Direct VB-7xxx Mounting (No Linkage Required)

\* Sold separately.

### Dimensions



Dimensions for M900AR-VB and M900ARW-VB.

Dimensions for M900AR, M900AE, M900ARW, M900ARW-S2 and M900AEW-S2