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ISO 9001



ML6425, ML7425 Spring Return Electric Linear Valve Actuators

The ML6425 and ML7425 Spring Return Electric Linear Valve Actuators provide floating or modulating control to operate standard Honeywell valves in heating, ventilating, and air conditioning (HVAC) applications. The modulating actuators accept an analog signal of 0 to 10 Vdc or 2 to 10 Vdc, and an internal selector plug can be used to reverse the direction of action.

SPECIFICATIONS

Models:

Model	Spring Return Action	Description
ML6425A	Drives valve stem down on power failure	Electric Linear Valve Actuator
ML7425A		
ML6425B	Draws valve stem up on power failure	
ML7425B		

Dimensions:

- See Fig. 1.

Weight:

- 5.1 lb (2.3 kg).

Electrical Ratings:

- Power Input: 24 Vac \pm 15%, 60 Hz.
- Power Consumption:
 - ML6425: 11 VA maximum at 24 Vac.
 - ML7425: 12 VA maximum at 24 Vac.
- Signal Source Output Resistance: 1 kOhm maximum.
- Signal Load: 1 mA maximum.

Signal Inputs (Supply Voltage Between Terminals):

- ML6425:
 - B and 24 Vac: Drives valve stem down.
 - W and 24 Vac: Draws valve stem up.
- ML7425: 0 to 10 Vdc or 2 to 10 Vdc.

Stem Force:

- 135 lbf (600N).

Actuator Stroke:

- 3/4 in. (20 mm).

Actuator Run Time at 60 Hz:

- 90 seconds.

Spring Return Time:

- 12 seconds.

Temperature Ranges:

- Ambient: 14°F to 122°F (-10°C to +50°C).
- Storage: -40°F to +158°F (-40°C to +70°C).
- Maximum Valve Medium: 300°F (150°C).

Humidity:

- 5 to 95 percent relative humidity, noncondensing.

SPECIFICATION DATA

FEATURES

- Accurate valve positioning.
- Quick and easy installation.
- No separate linkage or adjustments required.
- Conduit connector is standard.
- True spring return on power failure.
- Low power consumption.
- High close-off ratings.
- Force-limiting end switches.
- Direct/reverse action.
- Synchronous motor.
- Maintenance-free, corrosion-resistant design.
- Position feedback signal with ML7425.
- Fail-safe position selection for control signal loss with ML7425.

Close-off Pressure Ratings:

- See Table 1.

Protection Standard:

- IP54.

Approvals:

- Underwriter's Laboratories, Inc. UL94-5V Flame Retardant.
- Meets CE requirements.

Cable entry:

- Conduit connector and one knockout on case.

Actuator Material:

- Cover: ABS-FR plastic.
- Base: PBTP-FR plastic.
- Yoke: Diecast aluminum.

Accessories:

- 43196000-001 High Temperature Kit (for actuators with 3/4 in. stroke). Increases the maximum temperature to 428°F (220°C).
- 43196000-102 High Temperature Kit (for actuators with 1-1/2 in. stroke). Increases the maximum temperature to 428°F (220°C).
- 43191679-111 Single Auxiliary Potentiometer (10K ohm).
- 43191679-112 Single Auxiliary Potentiometer (220 ohm).
- 43191680-102 Dual Auxiliary Switch (24 Vac use only).

ML6420/ML6425 Only

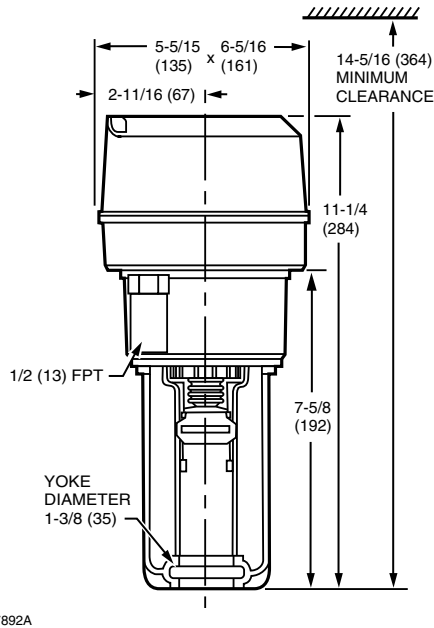
- 43191679-101 Single Auxiliary Potentiometer.
- 43191679-102 Single Auxiliary Potentiometer.
- 43191679-103 Dual Auxiliary Potentiometer.
- 43191679-104 Dual Auxiliary Potentiometer.
- 43191680-105 Dual Auxiliary Switch (24 Vac use only).

ML7420/ML7425 Only

- 43191680-205 Dual Auxiliary Switch (24 Vac use only).



TYPICAL SPECIFICATION



M7892A

Fig. 1. Approximate dimensions of ML6425, ML7425 Electric Linear Valve Actuator in in. (mm).

Valve actuators shall mount directly to the bonnet of the valve, and connect to the valve stem without requiring adjustments, linkages, brackets or adapters.

Direct coupled valve actuators shall be 24 Vac power, available with floating or analog control signal inputs, and available for either direct (stem down to close) or reverse acting (stem up to close) stroke direction. Actuators shall have a field selectable stroke position on signal failure.

Models with spring return and non-spring return shall be available. Non-spring return actuators shall have manual override capability without removal of the actuator cover or actuator. Spring return models shall have manual override capability under the cover, for emergency override during periods of no power.

Auxilliary switches, auxilliary feedback, and high temperature kits for steam applications, shall be optional factory accessories for direct coupled valve actuators.

Direct coupled valve actuators shall be manufactured by the same company as manufactures the valves. Actuators shall be UL and CSA listed, manufactured under ISO 9001 International Quality Control Standards.

Table 1. Close-off ratings for ML6425, ML7425 Electric Linear Valve Actuators and Honeywell Valves (psi).

Type	Valve	1/2 in.	3/4 in.	1 in.	1-1/4 in.	1-1/2 in.	2 in.	2-1/2 in.	3 in.
Flange	V5011A	—	—	—	—	—	—	28	16
	V3350/3351/3450/3451	—	—	—	—	—	—	21	14
	V5013B,C; V3360/3361/3460/3461	—	—	—	—	—	—	21 ^a	14 ^a
NPT	V5011F,G	150 ^b	150 ^b	150 ^b	134 ^b	77	49	28	16
	V5011H,J	150	150	150	145	—	—	—	—
	V5011N1xxx, V5011N3xxx, V5013N	230	230	163	104	67	37	—	—
	V5011N2xxx	100	100	100	100	67	37	—	—
	V5013F	150	150	150	126	77	49	—	—

^a Represents maximum pressure difference between the outlet and either of the two inlets.

^b Do not exceed 100 psi with V5011G valves used in steam applications.

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