

ML7420A6025 ELECTRIC LINEAR VALVE ACTUATOR

SPECIFICATION DATA



ML7420A6025

GENERAL

The ML7420A6025 actuator is designed for modulating control with controllers providing an analog output of 2...10 Vdc.

It operates Honeywell's standard valves in heating, district heating, ventilation, and air conditioning (HVAC) applications. The direction of movement can be reversed by pressing the pushbutton (with LED) located on the printed circuit board.

FEATURES

- Easy and quick installation
- No separate linkage required
- No adjustments required
- Low power consumption
- Force-limiting end stops
- 2...10 Vdc signal input
- Direct / reverse action selectable
- Corrosion-resistant design
- Maintenance-free

SPECIFICATIONS

Supply voltage	24 Vac +/-15%, 50/60 Hz
Power consumption	5 VA
Temperature limits	
Ambient operating limits	-10...+50 °C at 5...95%rh
Ambient storage limits	-40...+70 °C at 5...95%rh
Medium valve temperature	Max. 150 °C (220 °C with High-Temperature Kit)
Signal	
Signal input voltage	y = 2...10 Vdc R _i = 100 kΩ
Stroke	20 mm
Run time	1 min (at 50 Hz)
Close-off force	≥600 N
Safety	
Protection class	II as per EN60730-1
Protection standard	IP52 as per EN60529
Flame retardant housing	V0 as per UL94 (only metal cable gland – not supplied)
Wiring terminals	1.5 mm ²
Weight	1.3 kg
Material	
Cover	ABS-FR
Base	Glass fiber reinforced plastic
Yoke	Aluminum die-cast
Dimensions	see Fig. 2.

OPERATION

General

The drive of a synchronous motor is converted into the linear motion of the actuator stem by a spur gear transmission. The actuator stem is connected with the valve stem by a button-keyed retainer connection.

An integrated spring package limits the stem force in either direction to a factory-set value.

The actuator switches off precisely when the specified stem force is reached.

Electrical Installation

Three cable glands can be fitted:

- two M20x1.5 (one of which is a knock-out)
- one M16x1.5 (knock-out)

Maximum cable length / diameter for field mounting: 200 m / 1.5 mm².

Action

The direction of action can be reversed by pressing the pushbutton (W3) located on the printed circuit board (see Fig. 1). If the corresponding LED is lit, this indicates that the actuator stem will retract at a control signal of 2 Vdc (factory setting); if it is dark, the actuator stem will extend at a control signal of 2 Vdc.

NOTE: The pushbutton (W3) is accessible after the cover has been removed and is located at the rear side of the protection sheet of the printed circuit board.

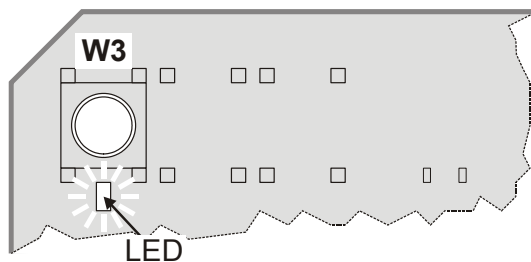


Fig. 1. Pushbutton and LED

Accessories

Auxiliary Switches

The actuator can be equipped on site with an auxiliary switch unit with two switches. Their switching points are adjustable over the full length of the actuator stroke. The switches can be used to switch pumps or to provide remote indication of any stroke position.

Order number: 43191680-205

High-Temperature Kit

The High-Temperature Kits are necessary for applications between 150 and 220 °C medium valve temperature.

order number High-Temp. Kit	valve	DN
43196000-001	V5011R/V5011S	15 – 50
	V5013R/V5013E	15 – 50
	V5328A/V5329A	15 – 32
43196000-002	V5328A/V5329A	40 – 80
	V5049A	15 – 65
	V5016/V5025/V5050A	15 – 80

CLOSE-OFF PRESSURE RATINGS

stem force		600 N							
stroke		20 mm							
valve size	mm	15	20	25	32	40	50	65	80
	inch	½	¾	1	1 ¼	1 ½	2	2 ½	3
valves		close-off pressure ratings (in kPa)							
V5011R/S		1600	1600	1000	700	460	260		
V5328A		1600/1000	1000	1000	600	350	200	120	50
V5016A		1600	1600	1600	1600	1600	1600	1600	1600
V5025A		2500	2500	2500	2500	2500	2500	2500	2500
V5049A		1600/1000	1000	1000	600	350	200	120	
V5013R/E		1600	1600	1000	700	460	260		
V5329C		600	600	600	600	480	260	160	100
V5329A		1000	1000	1000	790	480	260	160	100
V5050A		1000	1000	1000	600	350	200	120	50

For details on the valves, see following Specification Data No.:

V5011R	EN0B-0064GE51	V5328A	EN0B-0291GE51	V5095A	EN0B-0412GE51
V5011S	EN0B-0085GE51	V5329A/5050A	EN0B-0310GE51	V5013R	EN0B-0065GE51
V5016A	EN0B-0440GE51	V5025A	EN0B-0442GE51	V5013E	EN0B-0446GE51
V5049A	EN0B-0238GE51				

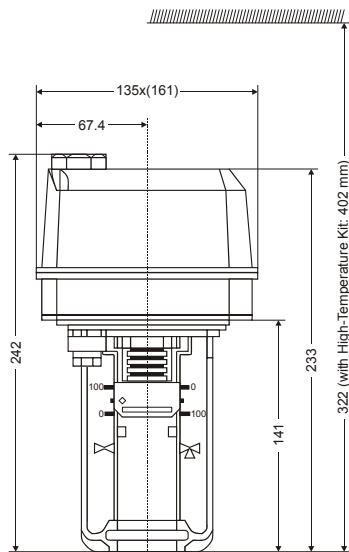


Fig. 2. ML7420A6025, dimensions (in mm)

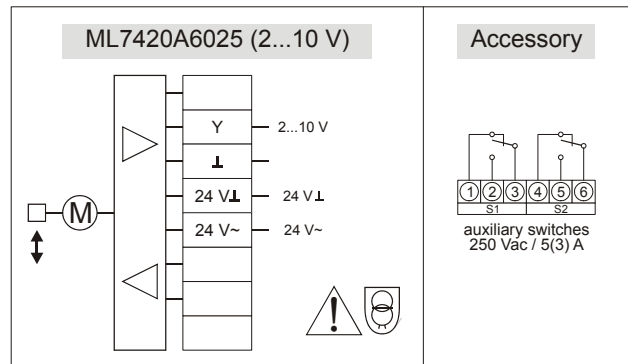


Fig. 3. ML7420A6025, wiring and accessories

Honeywell

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