ML7420A6025
ELECTRIC LINEAR VALVE ACTUATOR

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
Ri = 100 kΩ
Stroke
20 mm
Run time
1 min (at 50 Hz)
Close-off force
≥600 N

Safety
Protection class
III as per EN60730-1
Protection standard
IP52 as per EN60529
Flame retardant housing
V0 as per UL94 (with metal cable gland)

Wiring terminals
1.5 mm²
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 knock-outs are provided for cable fitting:
- 2x ∅21.2 mm (M20)
- 1x ∅18.9 mm (M18)
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.

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.

<table>
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<th>High-Temperature Kit</th>
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### CLOSE-OFF PRESSURE RATINGS

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<th>valve size</th>
<th>stroke</th>
<th>stem force</th>
<th>valve close-off pressure ratings (in kPa)</th>
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<tr>
<td>inch</td>
<td>½ ¾ 1 1 ½ 2 2 ½ 3</td>
<td>15 20 25 32 40 50 65 80</td>
<td>V5013R/E 1600 1600 1000 700 460 260</td>
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For details on the valves, see following Specification Data No.:

- V5011R EN0B-0064GE51
- V5011S EN0B-0085GE51
- V5016A EN0B-0040GE51
- V5049A EN0B-0238GE51
- V5095A EN0B-0412GE51
- V5013R EN0B-0065GE51
- V5013E EN0B-0446GE51
- V5328A EN0B-0432GE02
- V5329A/5050A EN0B-0310GE51
- V5025A EN0B-0442GE51
- V5013R EN0B-0065GE51

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**Fig. 2. ML7420A6025, dimensions (in mm)**

**Fig. 3. ML7420A6025, wiring and accessories**