

Speedy

M5410 C1001/L1001

SMALL ON/OFF LINEAR VALVE ACTUATORS

PRODUCT DATA



APPLICATION

The Honeywell M5410C1001 and M5410L1001 actuators are designed specifically to provide ON/OFF control in conjunction with the V5822/23 and V5832/33 series of small linear valves (DN15/20), the VSxF/VSxC series (DN15/20/25), as well as with the V100/V2000 TRV series.

The M5410C1001 and M5410L1001 actuators are suitable for use in all kinds of fast-acting ON/OFF control systems, including boiler and solar systems, fan coil units, induction units, small reheaters, and recoolers as well as for zone control applications. They are employed in electronic temperature control systems using hot and/or cold water as the controlled medium.

They are operated by an SPST signal.

FEATURES

- Suitable for ON/OFF control without feedback
- Short runtime
- Electronic switch-off in the end position ensures long-term reliability and saves energy
- Furnished with prewired connection cable
- Simple, standardized valve/actuator coupling – thus, no tools required for mounting
- Small size allows installation where space is limited
- High resistance to glycol and other chemicals

SPECIFICATIONS

Input voltage

M5410C1001	24 Vac ±20%, 50 Hz; 24 Vdc +20%...-10%
M5410L1001	230 Vac +10%...-15%, 50 Hz

Power consumption

M5410C1001	<8 W during operation <0.5 W in end position
M5410L1001	<1.8 W during operation <1.8 W in end position

Input signal

M5410C1001	<10 mA
M5410L1001	1 mA

Control mode

	ON/OFF
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Stroke

	6.5 mm
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Runtime (push/pull)

	approx. 1.8 mm/s and 0.4 mm/s
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Stem force

	90 N (minimum)
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Protection standard

	IP 54
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Insulation class

	II
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Connection cable

	1.5 m
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Max. cable length

	See section "Wiring" on pg. 2
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Ambient operating limits

	0...60 °C
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Weight

	0.2 kg
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Suitable valves

	V5822/23, V5832/33 (DN15/20) VSxF/VSxC (DN15/20/25), and V100/V2000 TRV
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VERSIONS

OS number	power supply	stroke	action at open contact	manual operation	stem force (min.)
M5410C1001	24 Vac	6.5 mm	stem retracts	via valve adjustment cap	90 N
M5410L1001	230 Vac	6.5 mm	stem retracts	via valve adjustment cap	90 N

OPERATION

The actuator movement is produced by a screw spindle driven in both directions through a set of gears by a d.c. motor. The motor is switched OFF electronically when the actuator has built up the closing force. The actuator is fixed to the valve body by means of a coupling ring requiring no tools for mounting. The actuator is maintenance-free and furnished complete with a ready-to-wire connecting cable.

MOUNTING

NOTE: The actuator may be mounted only either beside or above the valve. Adjust the valve in the proper position before mounting the actuator.

Remove the adjustment cap before fixing the actuator to the valve. For easy mounting, ensure that the actuator is in the "retracted" (factory-supplied) position before fixing the actuator to the valve body.

The actuator must be mounted by hand. Do not use tools or additional force, as that could damage the actuator and valve.

DIMENSIONS

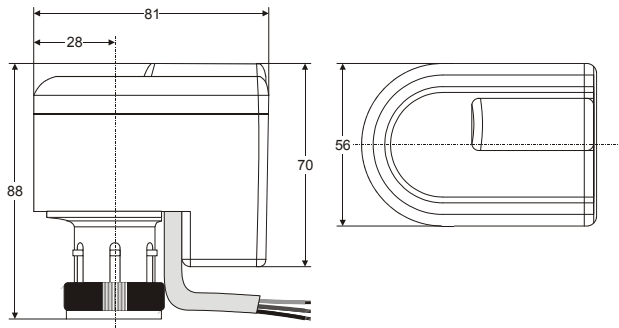


Fig. 1. Dimensions (in mm)

WIRING M5410L1001

! CAUTION

- Newer models (identified by the subscript "2" at the end of the model number appearing on the manufacturer's plate, e.g., "M5410L1001₂") are protected against miswiring. Incorrect wiring will damage older models (lacking the subscript "2").

The electrical installation must comply with Fig. 2.

NOTE: The maximum permissible cable length (use $3 \times 1.5 \text{ mm}^2$) between the actuator and the controller is 40 m. If a suppression capacitor (max. 1.5 nF) has been installed in the line, the max. permissible cable length is 15 m. Exceeding this limit will result in actuator malfunction.

NOTE: Older models (lacking the subscript "2") should not be wired in parallel with newer models (e.g., "M5410L1001₂"), as the older models will then not function properly.

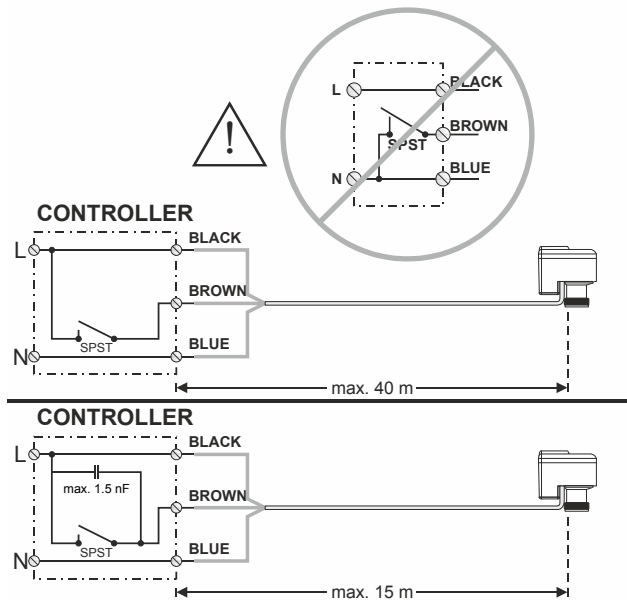


Fig. 2. Electrical wiring M5410L1001

M5410C1001

The electrical installation must comply with Fig. 3.

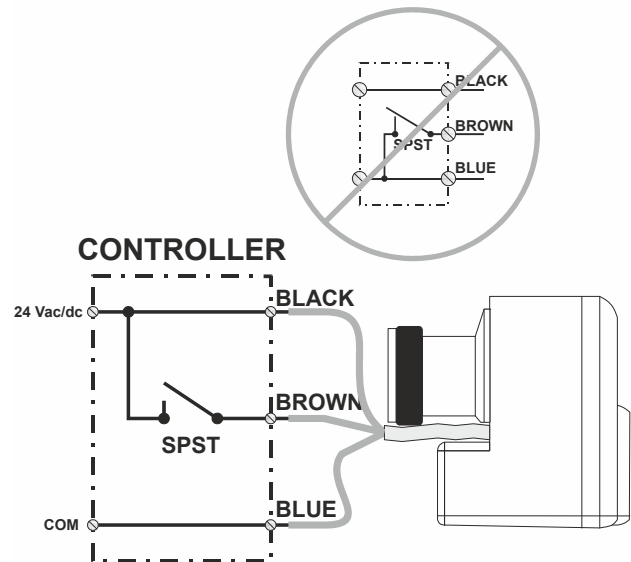


Fig. 3. Electrical wiring M5410C1001

ACTION

Closing the contact at the brown cable will drive the actuator to the "extended" position. Upon opening the contact, the actuator will drive back to the "retracted" position.

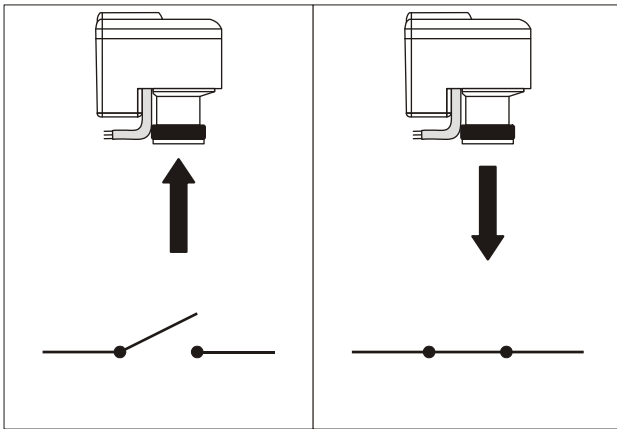


Fig. 4. Action



CAUTION

In case of power failure, the actuator will not necessarily stay at its current position. Rather, the actuator stem will retract to an extent depending upon the remaining charge in the actuator's capacitor. Thus, in the case of a "stem-up-to-open" valve, the valve may open slightly, allowing a minimum circulation of fluid in the system. Please NOTE that this is not a guaranteed safety function like that offered by a spring-return actuator!

Honeywell

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