Aktor M

Motorised Actuator

Motorised actuators are used in the heating, venting and air conditioning trades. The actuators can be used for room temperature control, among other things.

The Aktor M is a modulating 0(2)-10 V or 0(4)-20 V actuator that also features either on/off or floating control. The actuator has 0-10 V position feedback. The scope of delivery includes an adapter for connecting the actuator to Oventrop valves.

Features

+ Automatic recognition of the control signal
+ Maintenance-free
+ Manual adjustment possible

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Product Details

Functions

- Compensation of external disturbances through dynamic hysteresis
- Actuator heating to prevent the formation of condensation
- Adjustable characteristic line
- Priority circuit
- Valve blocking protection
- Automatic stroke adjustment
- Wire breakage detection

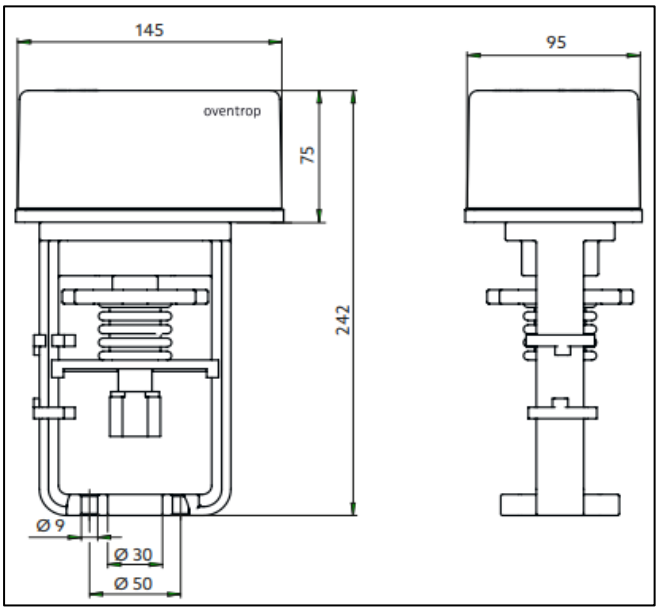
The characteristic line of the actuator is linearised by Yin and Yout. Yin indicates the absolute value and Yout the relative value. Depending on the set valve characteristic line, Yout can therefore deviate from Yin when the control position is reached. Example equal percentage characteristic line: Yin=4 V → Yout=3.5 V

LED Display

LED display	Meaning
LED lights up green	Normal operation Valve blocking protection Safety end position
LED flashes green	Initialisation run
LED lights up green + flashes red quickly LED flashes orange quickly	Wire breakage at DIP switch B5 ON and 2...10 V or 4...20 mA and Yin < 1 V or 2 mA
LED lights up green + flashes red LED flashes orange	Manual adjustment or manual mode (stop) Actuator does not follow the control signal
LED lights up red	Unsolvable blockade
LED flashes red	Initialisation failed / Actuator does not follow the control signal
LED flashes red quickly	Operating voltage too low

Technical Data

Operating voltage	24 V AC/DC ±10%; 50-60 Hz
Power consumption	0.6 W in sleep mode 1.5 W with a positioning time of 9 s/mm 4.5 W with a positioning time of 2.6 s/mm
Switch-on current	Max. 7 A, < 1 ms, < 0.049 A^2s * Sleep mode: 1.6 VA (AC); 0.6 W (DC)
Dimensioning	18 VA (AC); 9 W (DC) with actuator heating: 24 VA (AC); 12 W (DC)
Control	On/off Floating (open/stop/closed) 0(2)...10 V or 0(4)...20 mA
Max. stroke	20 mm
Positioning force	1000 N
Positioning speed (adjustable via DIP switches)	1.9 s/mm 2.6 s/mm 5.5 s/mm (factory setting) 9 s/mm
Position feedback	0(2)...10 V DC; 5 mA for positioning stroke 0...100 %; invertible;.approx. 12.5 V signal in case of fault or 0(4)...20 mA; Ri= 0.5 kΩ for positioning stroke 0...100 %; invertible; approx. 0 mA signal in case of fault
Protection type	IP 54 top IP 40 bottom
Protection class	III according to EN 60730
Mounting position	360°
Ambient temperature	0...55 °C
Storage temperature	0...40 °C
Actuator	Reversible synchronous motor



Dimensions

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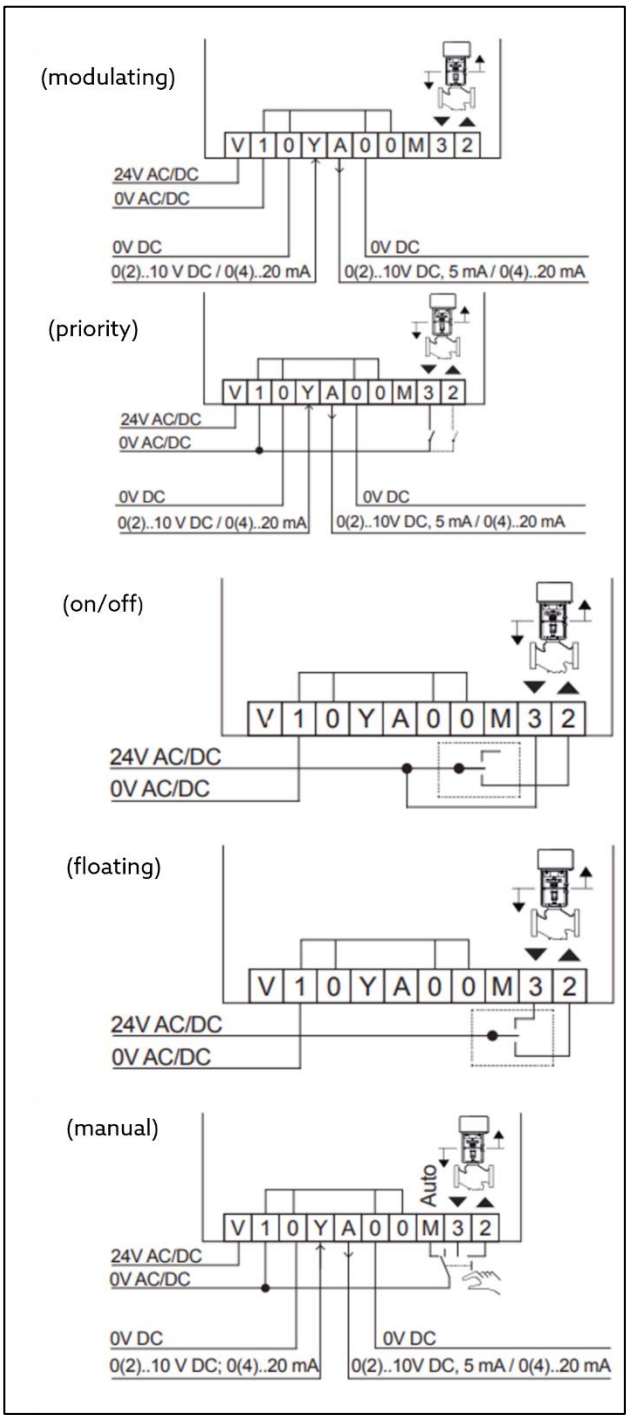
Range of applications, installation and mounting

The electrical connection must comply with the regulations of the local Electricity Board.

The connecting cable must not laid on heat-carrying pipes or the like, as this accelerates the ageing of the cable material.

The Oventrop actuators can be operated in all installation positions, except for installation vertically downwards.

Depending on the wiring (see wiring diagrams), the actuator ca be used as floating, on/off or 0(2) – 10 V or 0(4) – 20 mA actuator.



Wiring diagrams

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EN-12201-1158023-DB-V2415 – March 2024

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