

Globe valve actuator with emergency control function for 2-way and 3-way globe valves

- Actuating force 1000 N
- Nominal voltage AC 230 V
- Control 3-point
- Nominal stroke 20 mm
- Design life SuperCaps: 15 years


Technical data

Electrical data	Nominal voltage	AC 230 V
	Nominal voltage frequency	50/60 Hz
	Nominal voltage range	AC 85...265 V
	Power consumption in operation	2 W
	Power consumption in rest position	1 W
	Power consumption for wire sizing	4.5 VA
	Connection supply / control	Cable 1 m, 4 x 0.75 mm ²
	Parallel operation	Yes (note the performance data)
Functional data	Actuating force motor	1000 N
	Setting emergency setting position (POP)	Actuator spindle retracted / extended, adjustable (POP rotary button)
	Manual override	with push-button
	Nominal stroke	20 mm
	Actuating time motor	150 s / 20 mm
	Actuating time emergency control function	35 s / 20 mm
	Sound power level motor	56 dB(A)
	Sound power level emergency control position	60 dB(A)
Safety	Position indication	Mechanically, 5...20 mm stroke
	Protection class IEC/EN	II reinforced insulation
	Protection class UL	UL Class 2 Supply
	Degree of protection IEC/EN	IP54
	Degree of protection NEMA/UL	NEMA 2, UL Enclosure Type 2
	EMC	CE according to 2014/30/EU
	Low voltage directive	CE according to 2014/35/EU
	Certification IEC/EN	IEC/EN 60730-1 and IEC/EN 60730-2-14
	Certification UL	cULus according to UL 60730-1A, UL 60730-2-14 and CAN/CSA E60730-1:02
	Mode of operation	Type 1..AA
	Rated impulse voltage supply / control	4 kV
	Control pollution degree	3
	Ambient temperature	0...50°C
	Non-operating temperature	-40...80°C
Ambient humidity	95% r.h., non-condensing	
Maintenance	Maintenance-free	
Weight	Weight	2.9 kg
Terms	Abbreviations	POP = Power off position / emergency setting position
		CPO = Controlled power off / controlled emergency control function
		PF = Power fail delay time / bridging time

Safety notes


- This device has been designed for use in stationary heating, ventilation and air conditioning systems and must not be used outside the specified field of application, especially in aircraft or in any other airborne means of transport.

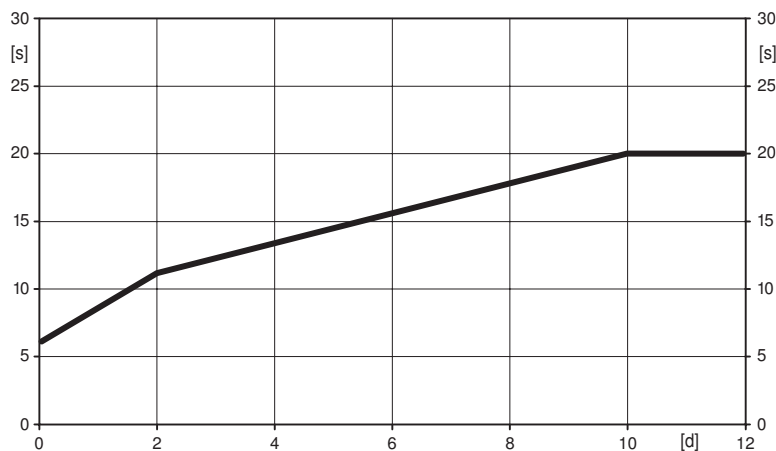
Safety notes

- Outdoor application: only possible in case that no (sea)water, snow, ice, insolation or aggressive gases interfere directly with the actuator and that is ensured that the ambient conditions remain at any time within the thresholds according to the data sheet.
- Only authorised specialists may carry out installation. All applicable legal or institutional installation regulations must be complied during installation.
- The switch for changing the direction of motion and so the closing point may be adjusted only by authorised specialists. The direction of motion is critical, particularly in connection with frost protection circuits.
- The device may only be opened at the manufacturer's site. It does not contain any parts that can be replaced or repaired by the user.
- Cables must not be removed from the device.
- The device contains electrical and electronic components and must not be disposed of as household refuse. All locally valid regulations and requirements must be observed.

Product features

- Mode of operation** The actuator moves the valve to the desired operating position at the same time as the integrated capacitors are loaded. Interrupting the supply voltage causes the valve to be moved to the selected emergency setting position (POP) by means of stored electrical energy.
- Pre-charging time (start up)** The capacitor actuators require a pre-charging time. This time is used for charging the capacitors up to a usable voltage level. This ensures that, in the event of an electricity interruption, the actuator can move at any time from its current position into the preset emergency setting position (POP). The duration of the pre-charging time depends mainly on how long the power was interrupted.

Typical pre-charging time



[d] = Electricity interruption in days
[s] = Pre-charging time in seconds

- Delivery condition (capacitors)** The actuator is completely discharged after delivery from the factory, which is why the actuator requires approximately 20 s pre-charging time before initial commissioning in order to bring the capacitors up to the required voltage level.

- Installation on third-party valves** The retrofit actuators for installation on a wide range of valves from various manufacturers are comprised of an actuator, bracket, universal valve neck adapter and universal valve stem adapter. Adapt the valve neck and valve stem to begin with, then attach the retrofit bracket to the valve neck adapter. Now fit the retrofit actuator into the bracket and connect it to the valve. Whilst taking the position of the valve closing point into account, secure the actuator to the bracket and then conduct the commissioning process. The valve neck adapter/actuator can be rotated through 360° on the valve neck, provided it is permitted by the size of the installed valve.

- Installation on Belimo valves** Use standard actuators from Belimo for mounting on Belimo globe valves. The installation of retrofit actuators on Belimo globe valves is technically possible.

Product features

Manual override	Manual control with push-button possible - temporary. The gear is disengaged and the actuator decoupled for as long as the button is pressed. The stroke can be adjusted by using a hexagon socket screw key (4 mm), which is inserted into the top of the actuator. The stroke spindle extends when the key is rotated clockwise.
High functional reliability	The actuator is overload protected, requires no limit switches and automatically stops when the end stop is reached.
Position indication	The stroke is indicated mechanically on the bracket with tabs. The stroke range adjusts itself automatically during operation.
Home position	Factory setting: Actuator spindle is retracted.
Direction of stroke switch	When actuated, the direction of stroke switch changes the running direction in normal operation. The direction of stroke switch has no influence on the emergency setting position (POP) which has been set.
Emergency setting position (POP) rotary knob	The rotary knob «Emergency setting position» can be used to adjust the desired emergency setting position (POP). The POP range always refers to the maximum height of stroke of the actuator. In the event of an electricity interruption, the actuator will move into the selected emergency setting position (POP), taking into account the bridging time (PF) of 2 s which was set ex-works.

Accessories

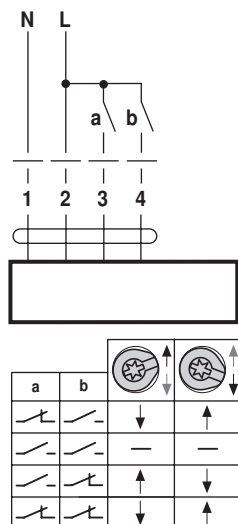
	Description	Type
Electrical accessories	Auxiliary switch, 2 x SPDT, add-on, grey	S2A-H

Electrical installation

	Notes	<ul style="list-style-type: none"> • Caution: Power supply voltage! • Parallel connection of other actuators possible. Observe the performance data. • Direction of stroke switch factory setting: Actuator spindle retracted.
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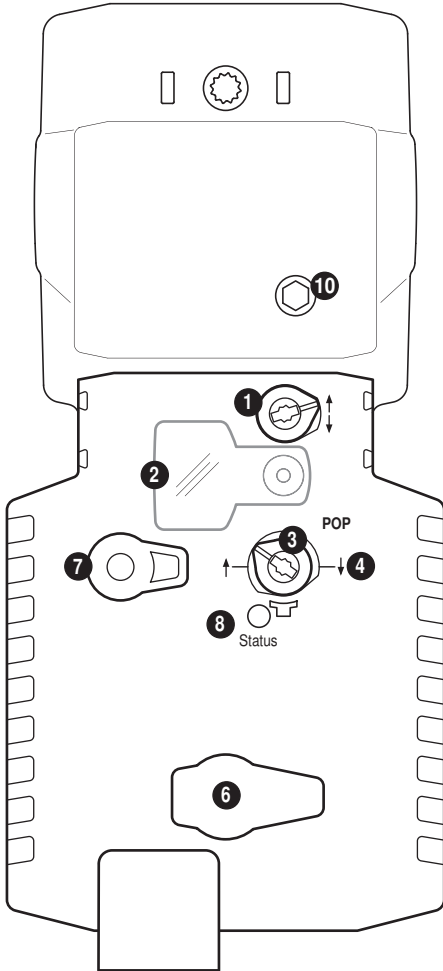
Wiring diagrams

AC 230 V, 3-point



Cable colours:
 1 = black
 2 = red
 3 = white
 4 = white

Operating controls and indicators

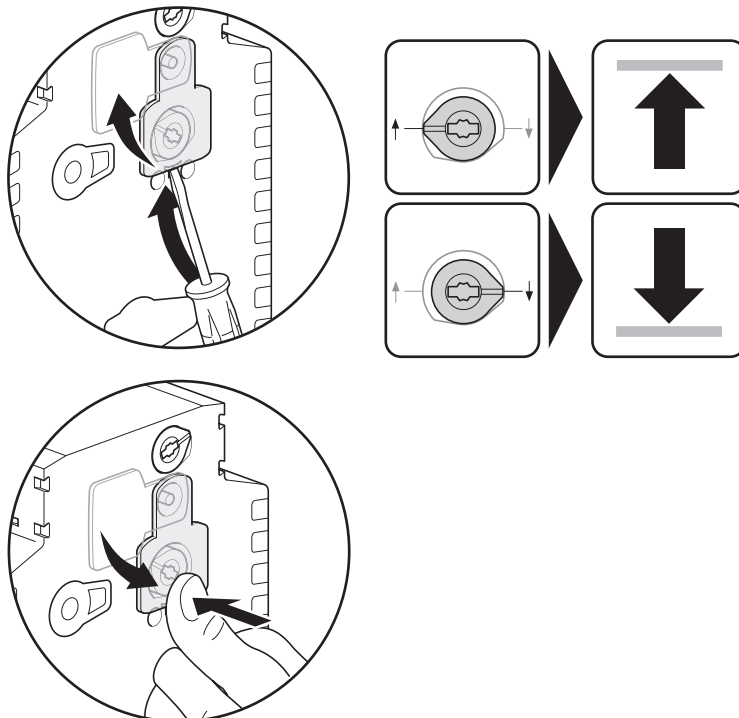


- 1 Direction of stroke switch**
Switch over: Direction of stroke changes
- 2 Cover, POP button**
- 3 POP button**
- 4 Scale for manual adjustment**
- 6 (No function)**
- 7 Gear disengagement button**
Press button: Gear disengaged, motor stops, manual operation possible
Release button: Gear engaged, standard mode

LED display 8 green	Meaning / function
On	Operation OK
Flashing	POP function active
Off	- Not in operation - Pre-charging time SuperCap - Fault SuperCap

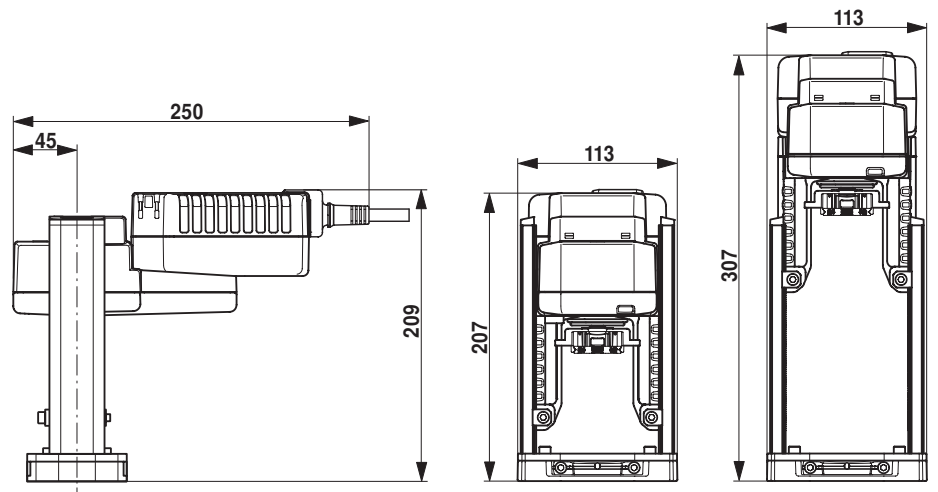
- 10 Manual override**
Clockwise: Actuator spindle extends
Counterclockwise: Actuator spindle retracts

Setting emergency setting position (POP)



Dimensions [mm]

Dimensional drawings



Further documentation

- Installation instructions for actuators