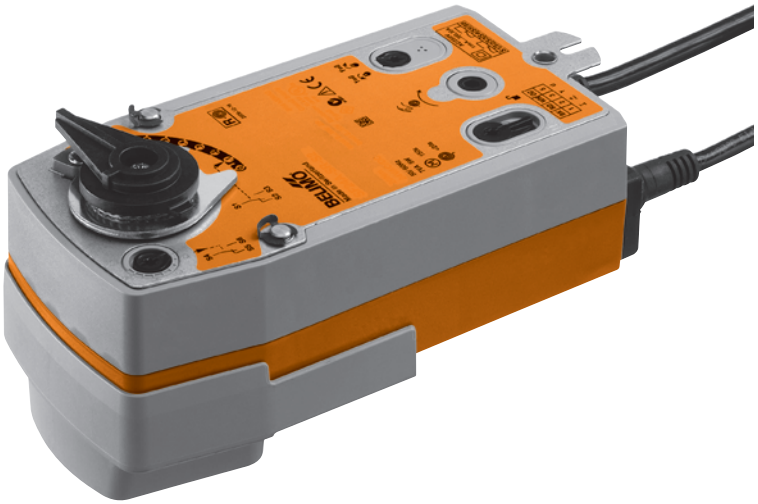
BELIMO

Technical data sheet SRF24A-SZ-S2-5(-O)

Modulating rotary actuator with emergency function for butterfly valves

- **Torque 20 Nm**
- **Nominal voltage AC/DC 24 V**
- **Control: modulating DC 0 ... 10 V**
- **Position feedback DC 0 ... 10 V**
- **Two integrated auxiliary switches**
- **SRF24A-SZ-S2-5: Deenergised NC**
  SRF24A-SZ-S2-5-O: Deenergised NO



Technical data

Electrical data	Nominal voltage	AC 24 V, 50/60 Hz / DC 24 V
	Nominal voltage range	AC 19.2 ... 28.8 V / DC 21.6 ... 28.8 V
	Power consumption In operation	5.5 W @ nominal torque
	At rest	3 W
	For wire sizing	8.5 VA
	Auxiliary switch	2 x SPDT, 1 mA ... 3 (0.5) A, AC 250 V ⧈ (1 x fix 10% / 1 x adjustable 11 ... 100%)
	Connection Motor	Cable 1 m, 4 x 0.75 mm²
	Auxiliary switch	Cable 1 m, 6 x 0.75 mm²
	Parallel connection	Yes (Note performance data for supply!)
Functional data	Torque Motor	Min. 20 Nm @ nominal voltage
	Spring return	Min. 20 Nm
	Control Control signal Y	DC 0 … 10 V, input impedance 100 kΩ
	Operating range	DC 0.5 ... 10 V
	Position feedback (measuring voltage U)	DC 0.5 ... 10 V, max. 0.5 mA
	Position accuracy	±5%
	Direction of rotation Motor	Reversible with switch ↷ / ↶
	Spring return	
	– SRF24A-SZ-S2-5	Deenergised NC, butterfly valve closed (A – AB = 0%)
	– SRF24A-SZ-S2-5-O	Deenergised NO, butterfly valve open (A – AB = 100%)
	Manual override	With hand crank and interlocking switch
	Angle of rotation	Max. 90°∢
	Running time Motor	≤90 s / 90°∢
	Spring return	≤20 s @ –20 ... 50°C / max. 60 s @ –30°C
	Sound power level Motor	≤45 dB (A)
	Spring return	≤62 dB (A)
	Position indication	Mechanical
Safety	Protection class	**III** Extra low voltage / UL Class 2 Supply
	Degree of protection	IP54 NEMA 2, UL Enclosure Type 2
	EMC	CE according to 2004/108/EC
	Low-voltage directive	CE according to 2006/95/EC
	Certification	cULus according to UL 60730-1A and UL 60730-2-14 and CAN/CSA E60730-1:02 Certified to IEC/EN 60730-1 and IEC/EN 60730-2-14
	Mode of operation	Type 1.AA.B
	Rated impulse voltage Actuator	0.8 kV
	Auxiliary switch	2.5 kV
	Control pollution degree	3
	Ambient temperature	–30 ... +50°C
	Media temperature	+5 ... +100°C (in butterfly valve)
	Non-operating temperature	–40 ... +80°C
	Ambient humidity	95% r.h., non-condensating
	Maintenance	Maintenance-free
Dimensions / Weight	Dimensions	See «Dimensions» on page 3
	Weight	Approx. 2.2 kg (without butterfly valve)

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Safety notes

- **The actuator has been designed for use in stationary heating, ventilation and air conditioning systems and is not allowed to be used outside the specified field of application, especially in aircraft or in any other airborne means of transport.**
- **It may only be installed by suitably trained personnel. All applicable legal or institutional installation regulations must be complied with.**
- **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.**
- **The cable must not be removed from the device.**
- **The device contains electrical and electronic components and is not allowed to be disposed of as household refuse. All locally valid regulations and requirements must be observed.**

Product features

Mode of operation
The actuator is controlled with a standard signal of DC 0 ... 10 V and moves the butterfly valve to the operating position at the same time as tensioning the return spring. The butterfly valve is turned back to the emergency position by spring force if the supply voltage is interrupted.

Simple direct mounting
Straightforward direct mounting on the butterfly valve with only one screw. The mounting position in relation to the butterfly valve can be selected in 90°∢ steps.

Manual override
Manual operation of the valve with the hand crank, locking in any position with the interlocking switch. Unlocking is manual or automatic by applying the operating voltage.

Adjustable angle of rotation
Adjustable angle of rotation with mechanical end stop.

High operational reliability
The actuator is overload-proof, requires no limit switches and automatically stops when the end stop is reached.

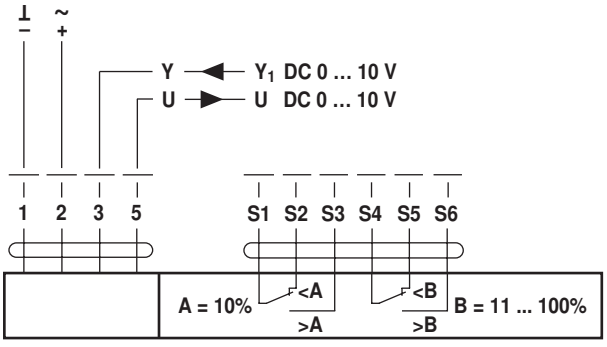
Flexible signalization
The actuator has one auxiliary switch with a fixed setting and one adjustable auxiliary switch. They permit a 10% or 11 ... 100% angle of rotation to be signalled.

Combination valve actuators
Refer to the valve documentation for suitable valves, their permitted media temperatures and closing pressures.

Electrical installation

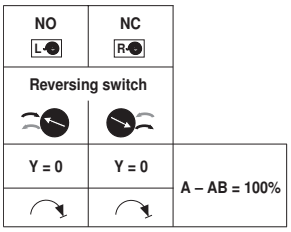
Wiring diagram

Notes
- Connect via safety isolation transformer.
- Parallel connection of other actuators possible. Note the performance data.



Cable colours:
1 = black
2 = red
3 = white
5 = orange
S1 = violet
S2 = red
S3 = white
S4 = orange
S5 = pink
S6 = grey

Direction of rotation



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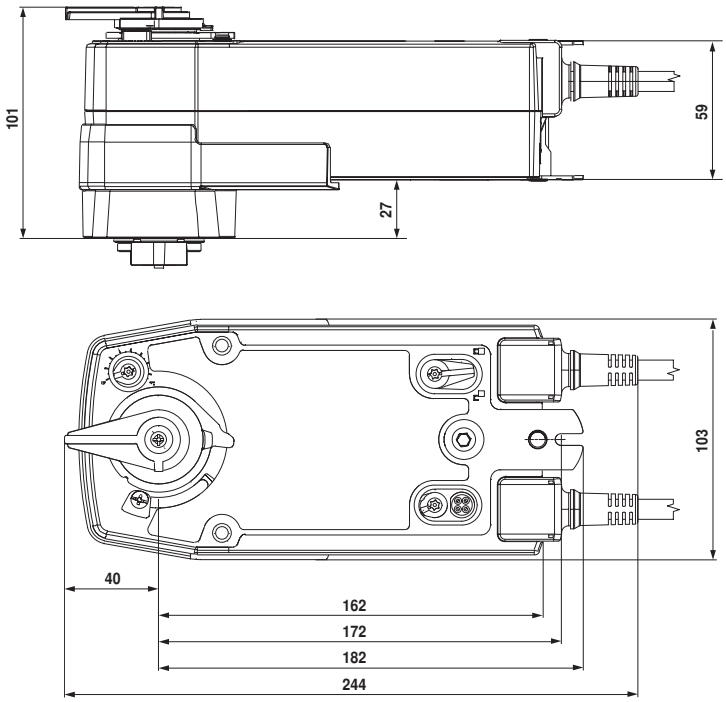
Dimensions [mm]

Dimensional drawings



Further documentations

- Complete overview «The comlete range of water solutions»
- Data sheets for butterfly valves
- Installation instructions for actuators and/or butterfly valves
- Notes for project planning (hydraulic characteristic curves and circuits, installation regulations, commissioning, maintenance etc.)

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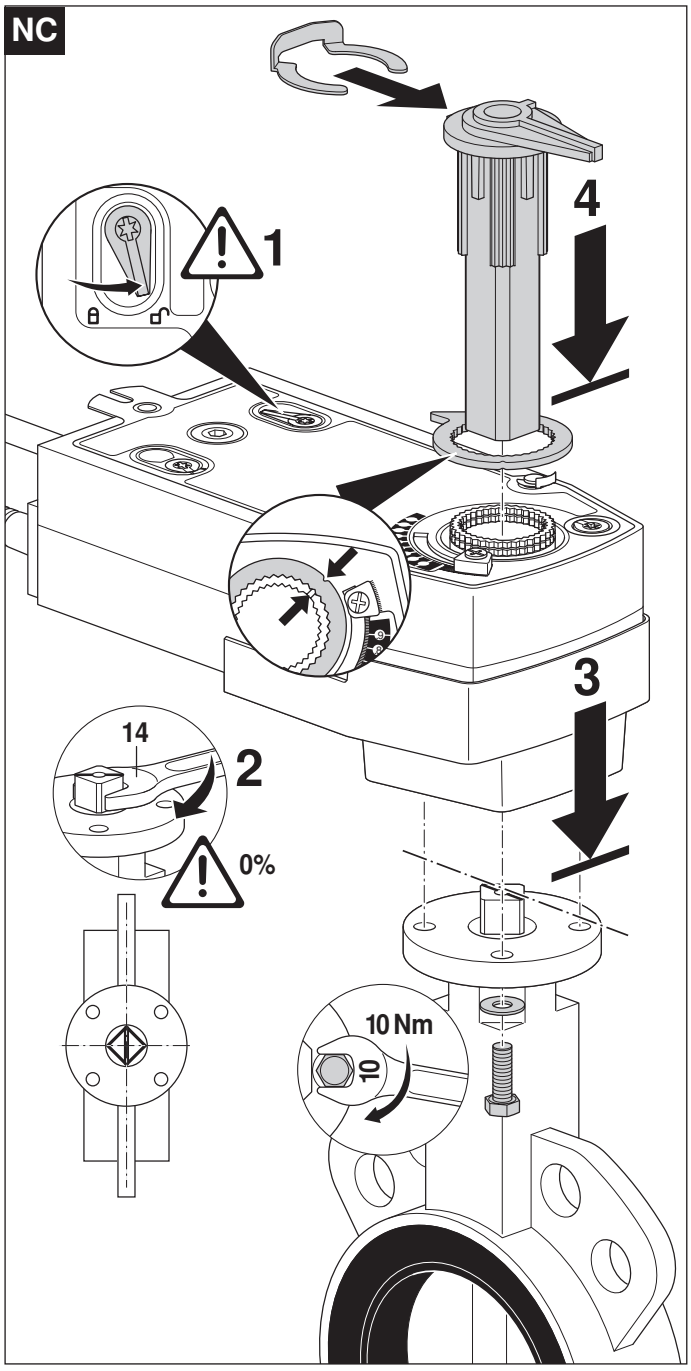

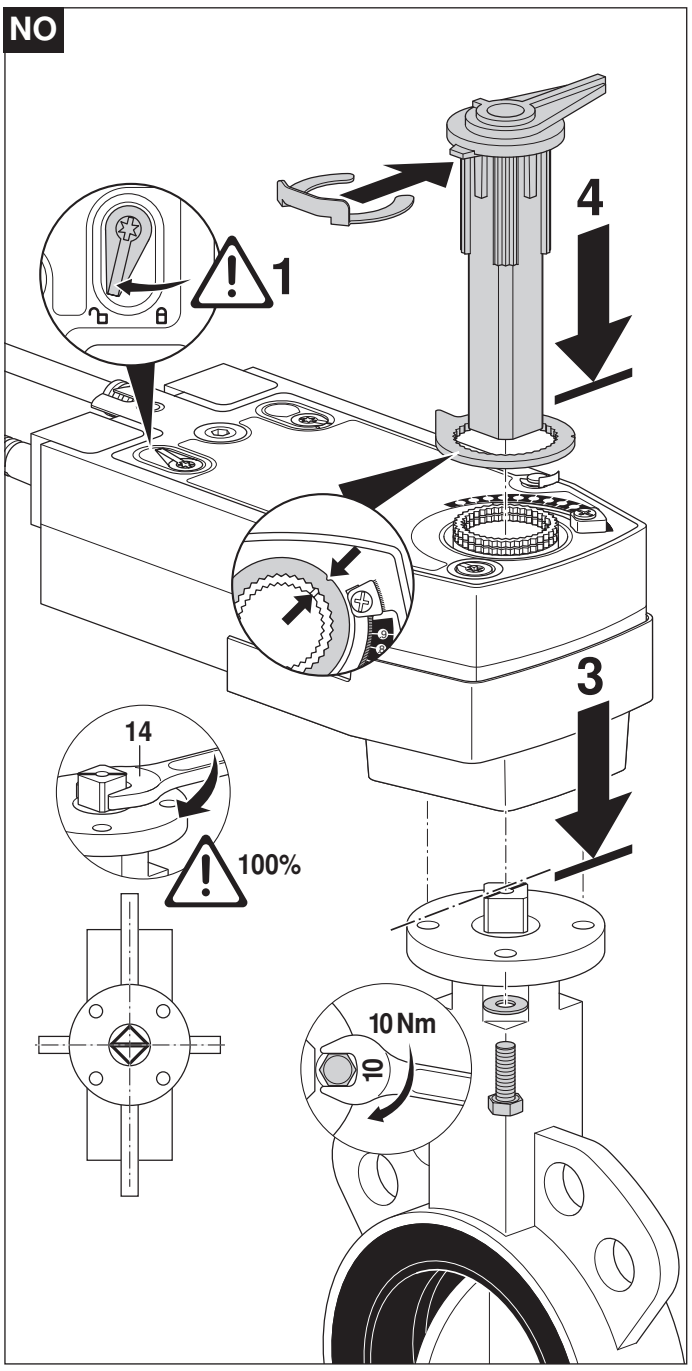

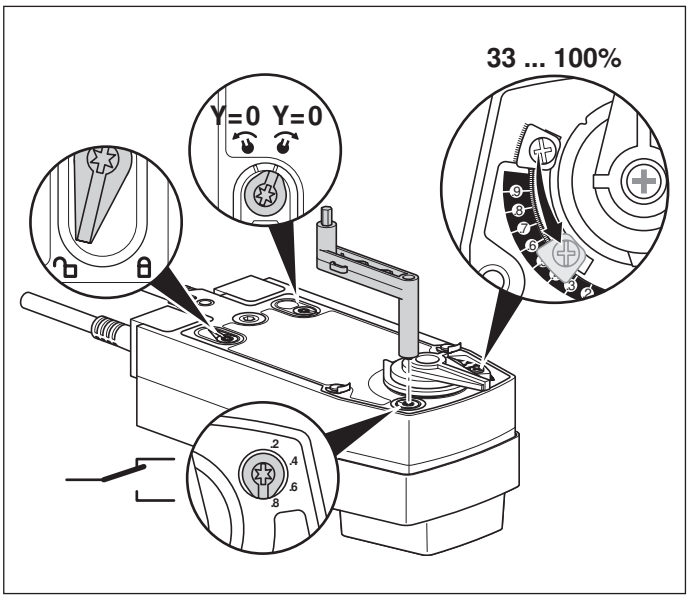

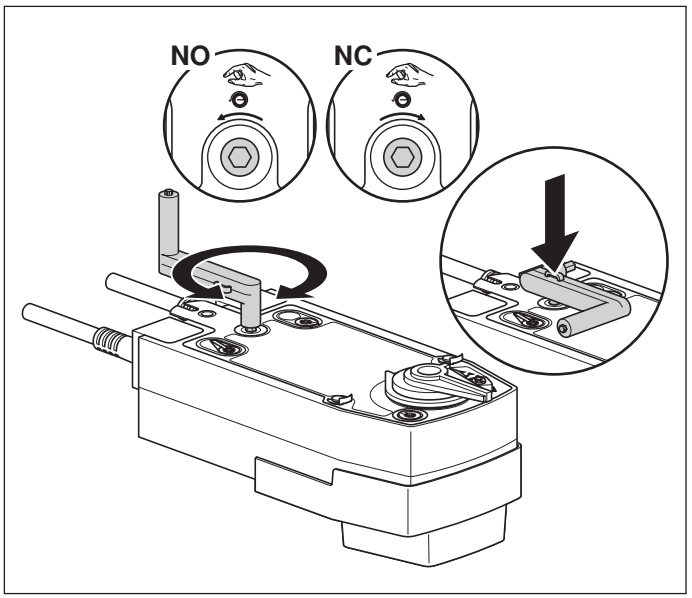

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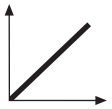
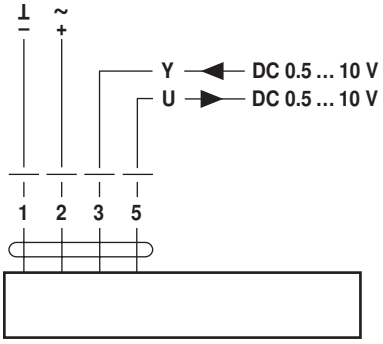


AC 24 V / DC 24 V



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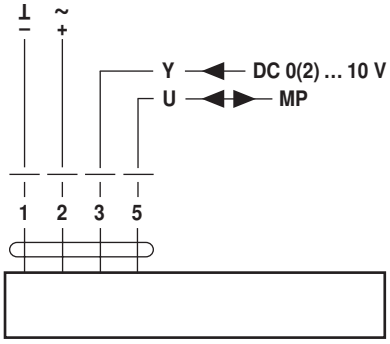

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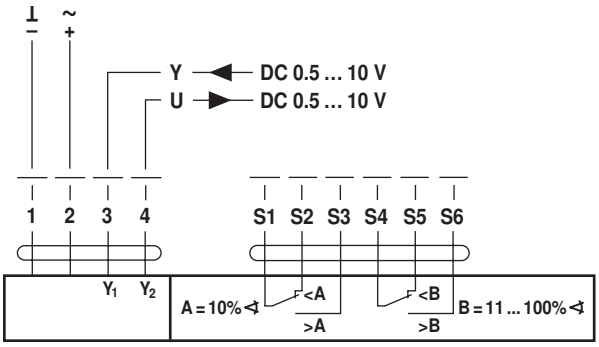

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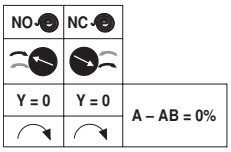

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