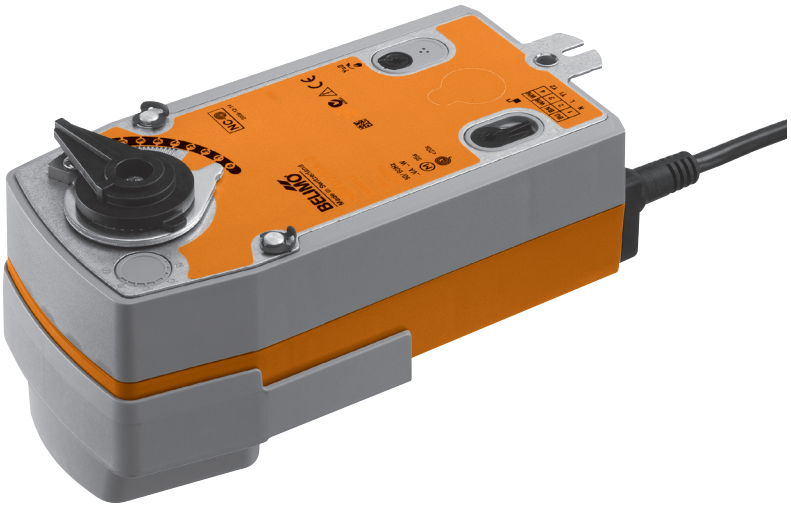
3-point rotary actuator with emergency function for control ball valves

- **Torque 10 Nm**
- **Nominal voltage AC 230 V**
- **Control: 3-point**
- **NRF230A-3: Deenergised NC**
  NRF230A-3-O: Deenergised NO



Technical data

Electrical data	Nominal voltage		AC 230 V, 50/60 Hz
	Nominal voltage range		AC 198 ... 264 V
	Power consumption	In operation	4 W @ nominal torque
		At rest	3 W
		For wire sizing	15 VA
	Connection		Cable 1 m, 4 x 0.75 mm²
	Parallel connection		Yes (Note performance data for supply!)
Functional data	Torque	Motor	Min. 10 Nm @ nominal voltage
		Spring return	Min. 10 Nm
	Direction of rotation	Motor	Reversible with switch ↷ / ↶
		Spring return	
		– NRF230A-3	Deenergised NC, ball valve closed (A – AB = 0%)
		– NRF230A-3-O	Deenergised NO, ball valve open (A – AB = 100%)
	Angle of rotation		Max. 90°∢
	Running time	Motor	90 s / 90°∢
		Spring return	≤20 s @ –20 ... 50°C / max. 60s @ –30°C
	Sound power level	Motor	≤45 dB (A)
		Spring return	≤62 dB (A)
	Position indication		Mechanical
Safety	Protection class		**II** totally insulated ⧈
	Degree of protection		IP54
	EMC		CE according to 2004/108/EC
	Low-voltage directive		CE according to 2006/95/EC
	Certification		Certified to IEC/EN 60730-1 and IEC/EN 60730-2-14
	Mode of operation		Type 1.AA
	Rated impulse voltage		4 kV
	Control pollution degree		3
	Ambient temperature		–30 ... +50°C
	Media temperature		+5 ... +130°C (in ball valve) –10°C with stem heating upon request
	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 kg (without ball valve)

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.**
- **Caution: Power supply voltage!**
- **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 moves the ball valve to the operating position at the same time as tensioning the return spring. The damper is turned back to the safety position by spring force if the supply voltage is interrupted.

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

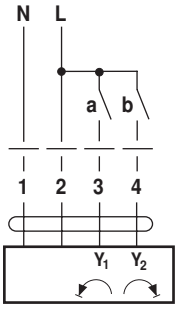
High operational reliability
The actuator is overload-proof, requires no limit switches and automatically stops when the end stop is reached.

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

Electrical installation

Wiring diagram

Notes
- Caution: Power supply voltage!
- Parallel connection of other actuators possible. Note the performance data.



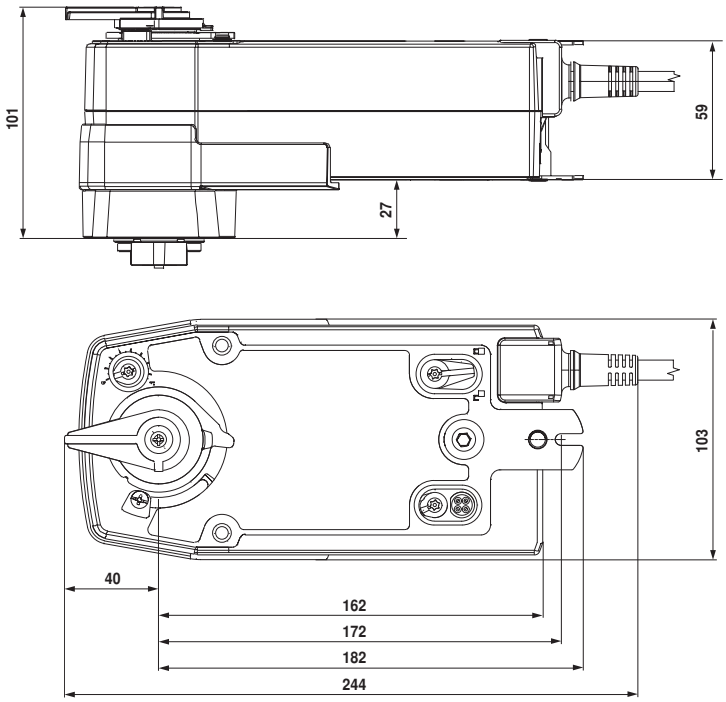
Cable colours:
1 = blue
2 = brown
3 = white
4 = white

Direction of rotation

a (Y_1)	b (Y_2)	NO (L) Reversing switch	NC (R) Reversing switch	
				A – AB = 100%
		stop	stop	
				A – AB = 0%

Dimensions [mm]

Dimensional drawings



Further documentations

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

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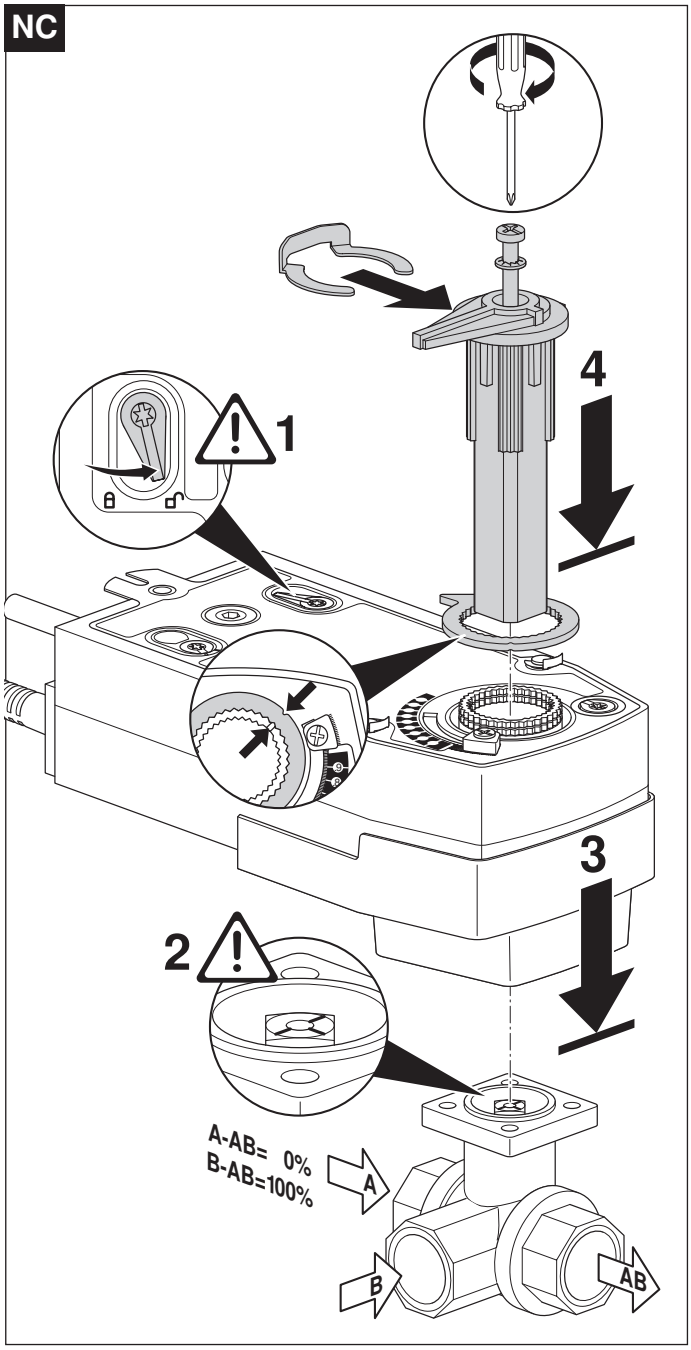
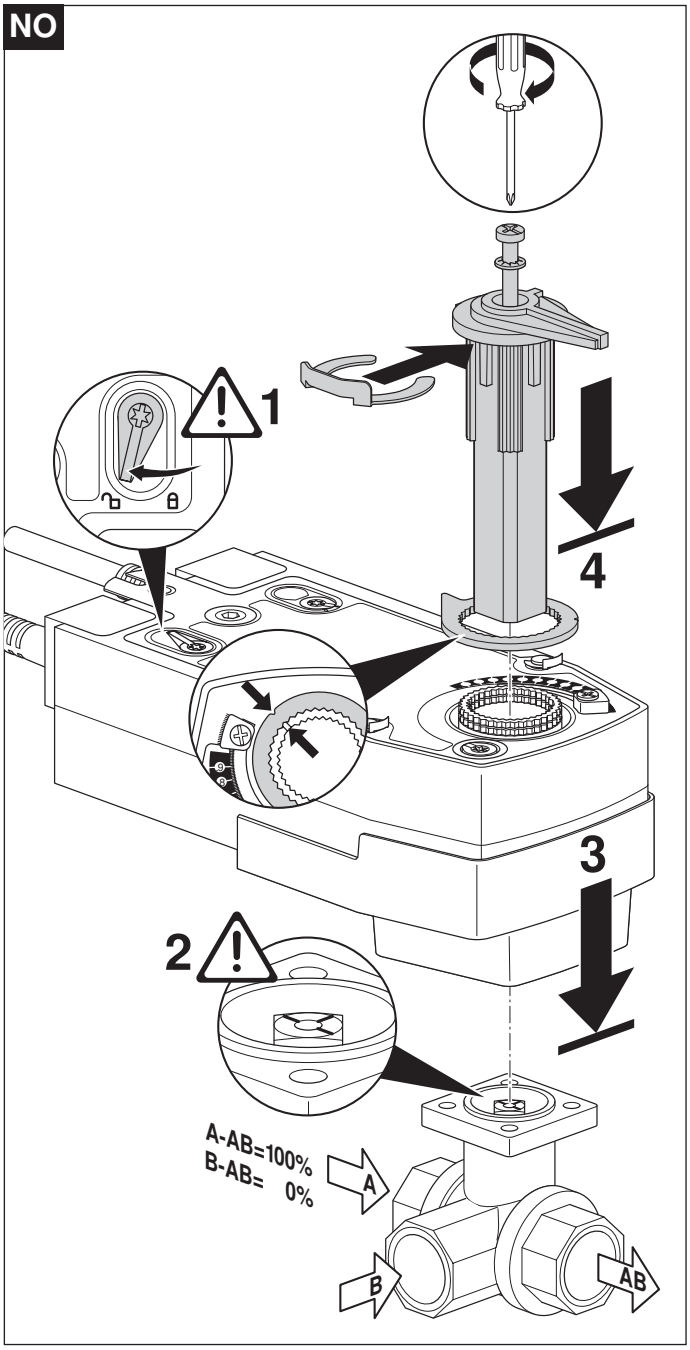
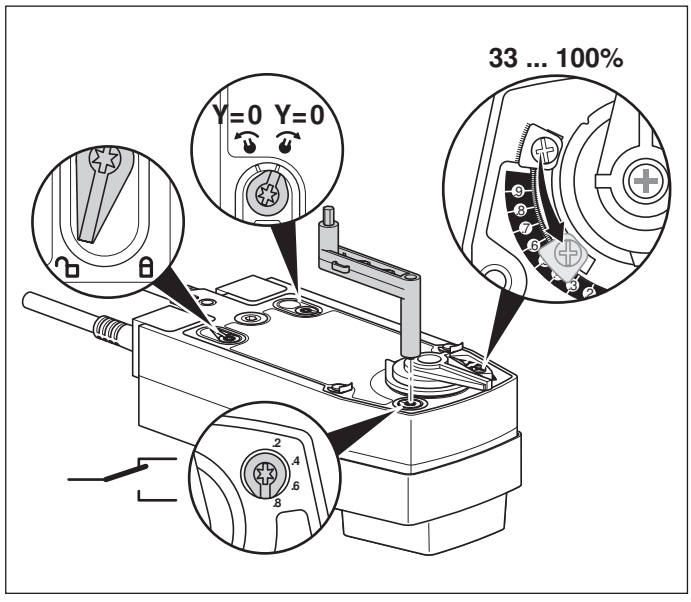
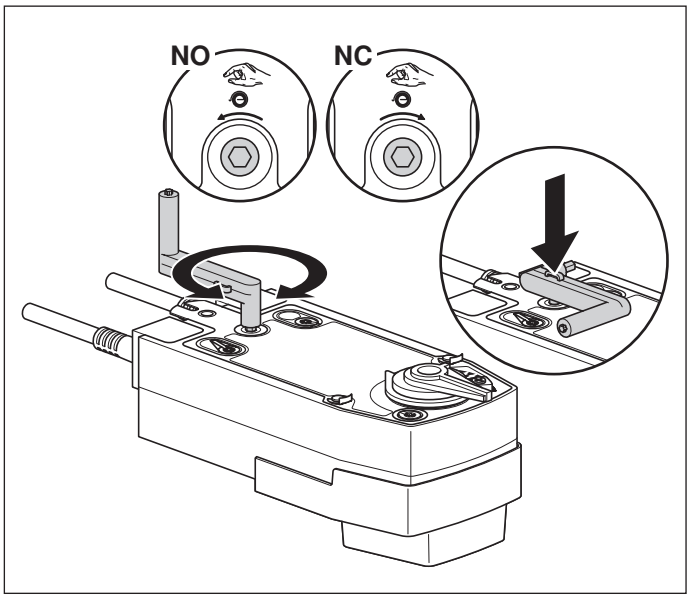
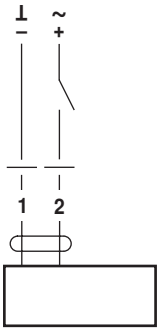




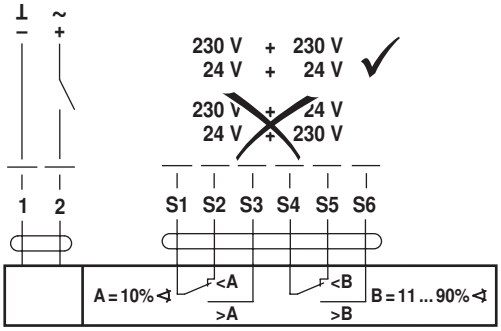




AC 24 V / DC 24 V

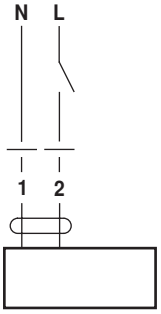


NRF24A(-O)
SRF24A(-O)

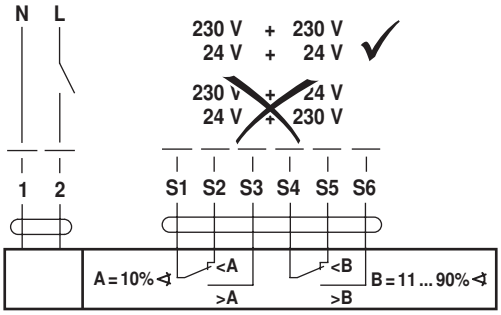


NRF24A-S2(-O)
SRF24A-S2(-O)

AC 100 ... 240 V ⚠

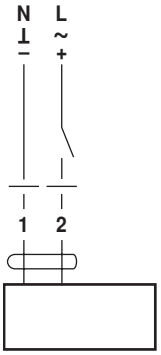


NRF230A(-O)
SRF230A(-O)

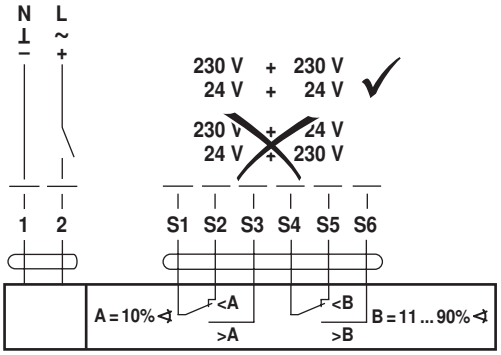


NRF230A-S2(-O)
SRF230A-S2(-O)

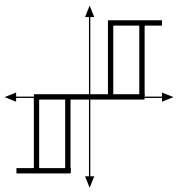
AC 24 ... 240 V / DC 24 ... 125 V ⚠



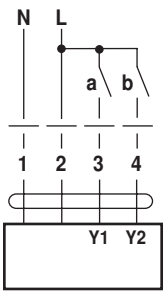
NRFA(-O)
SRFA(-O)



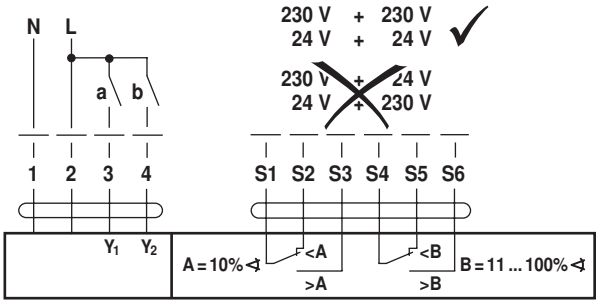
NRFA-S2(-O)
SRFA-S2(-O)



AC 100 ... 240 V ⚠



NRF(D)230A-3(-O)
SRF230A-3(-O)



NRF(D)230A-3-S2(-O)
SRF230A-3-S2(-O)

a (Y1)	b (Y2)	NO	NC	
				A – AB = 100%
		stop	stop	
				A – AB = 0%