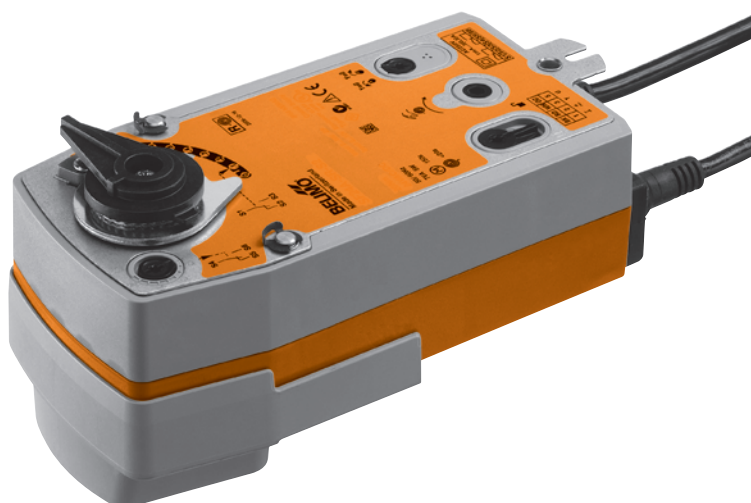


3-point rotary actuator with emergency function for 2- and 3-way control ball valves

- Torque 5 Nm
- Nominal voltage AC 230 V
- Control: 3-point
- Two integrated auxiliary switches
- NRFD230A-3-S2: Deenergised NC
- NRFD230A-3-S2-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 5 W @ nominal torque
		At rest 3 W
		For wire sizing 16 VA
	Auxiliary switch	2 x SPDT, 6 (3) A, AC 250 V <input type="checkbox"/> (1 x fix 10% / 1 x adjustable 11 ... 100%)
	Connection	Motor Cable 1 m, 4 x 0.75 mm ²
Functional data		Auxiliary switch Cable 1 m, 6 x 0.75 mm ²
	Parallel connection	Yes (Note performance data for supply!)
	Torque	Motor Min. 5 Nm @ nominal voltage
		Spring return Min. 5 Nm
	Direction of rotation	Motor Reversible with switch ↺ / ↻
		Spring return
		– NRFD230A-3-S2 Deenergised NC, ball valve closed (A – AB = 0%)
		– NRFD230A-3-S2-O Deenergised NO, ball valve open (A – AB = 100%)
	Angle of rotation	Max. 90° ↺
	Running time	Motor 35 s / 90° ↺
Safety		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
	Protection class	II totally insulated <input type="checkbox"/>
	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.B
Dimensions / Weight	Rated impulse voltage	Actuator 4 kV
		Auxiliary switch 2.5 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	See «Dimensions» on page 3
	Weight	Approx. 2.2 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

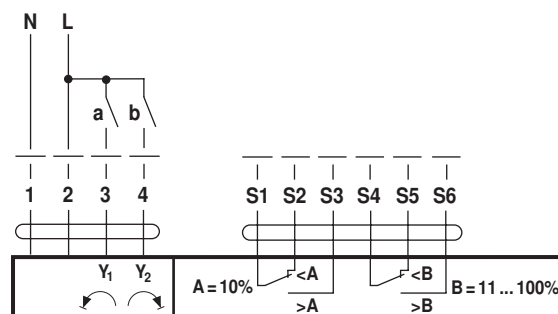
Mode of operation	The actuator moves the ball valve to the operating position at the same time as tensioning the return spring. The damper is turned back to the safety position by spring force if the supply voltage is interrupted.
Simple direct mounting	Straightforward direct mounting on the ball valve 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.
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

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



Cable colours:

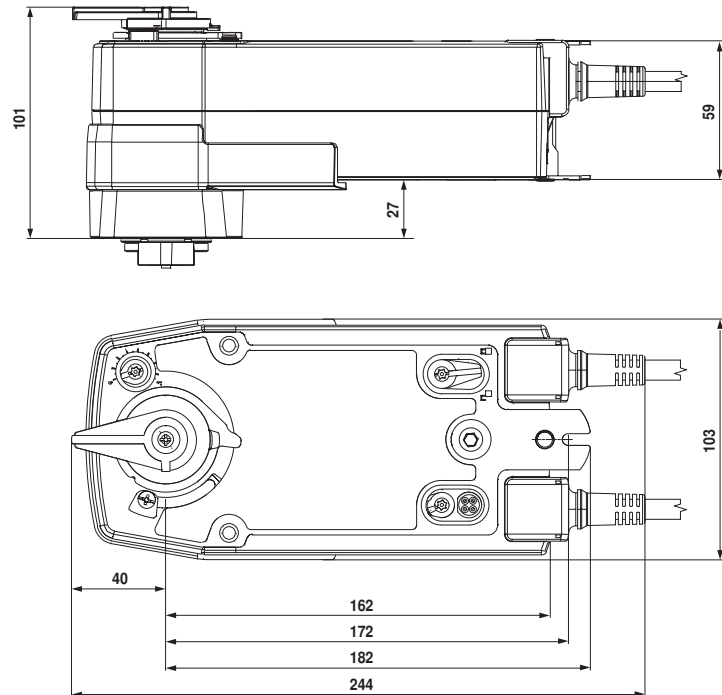
- 1 = blue
- 2 = brown
- 3 = white
- 4 = white
- S1 = violet
- S2 = red
- S3 = white
- S4 = orange
- S5 = pink
- S6 = grey

Direction of rotation

		NO L	NC R	
		Reversing switch		
a (Y ₁)	b (Y ₂)			
				A - AB = 100%
		stop	stop	
				A - AB = 0%

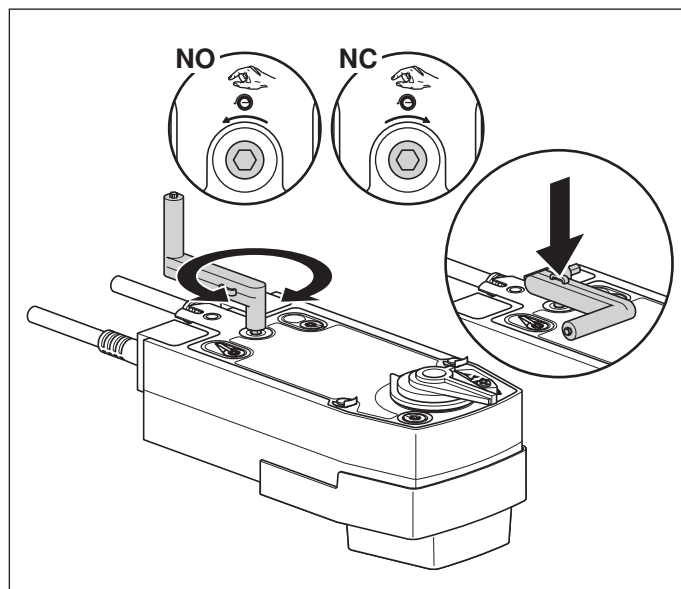
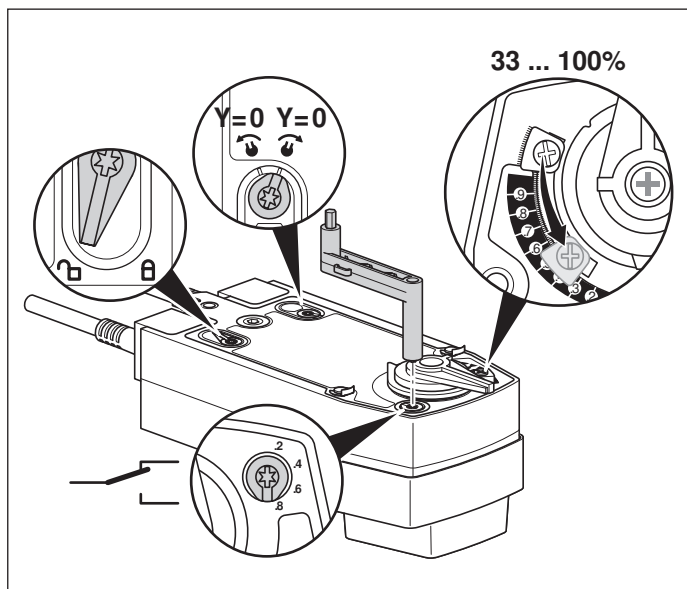
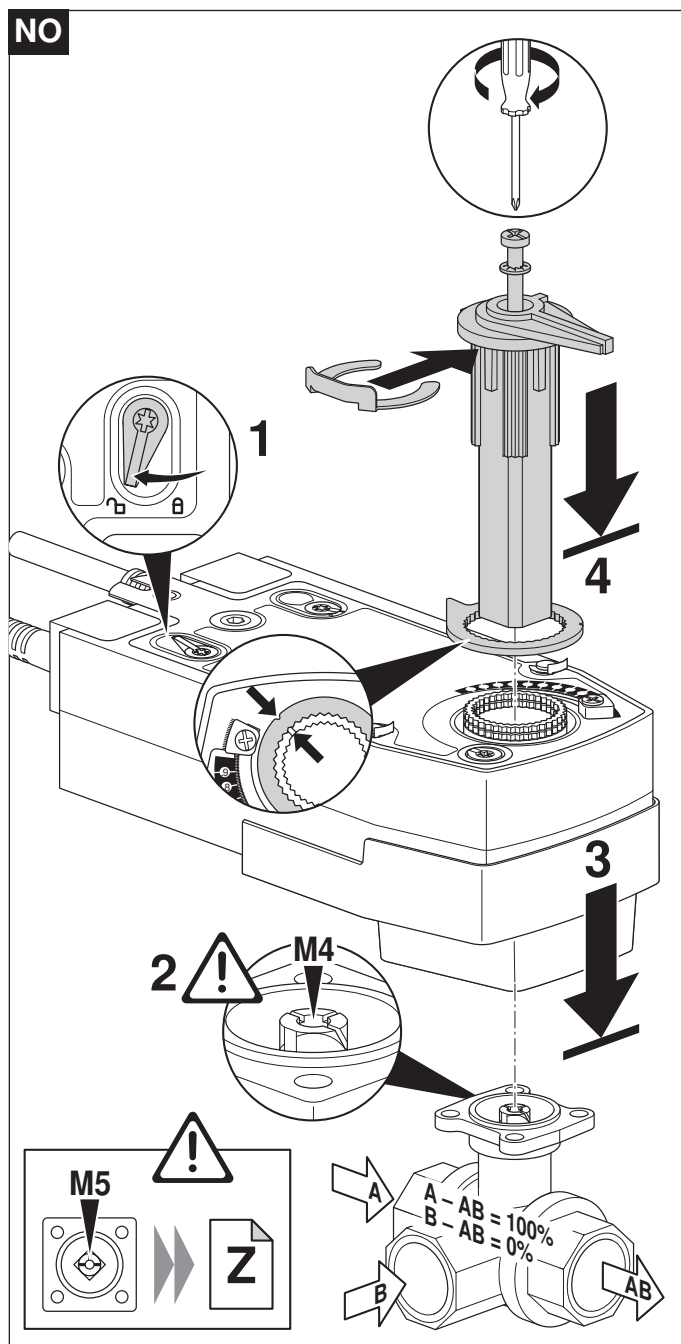
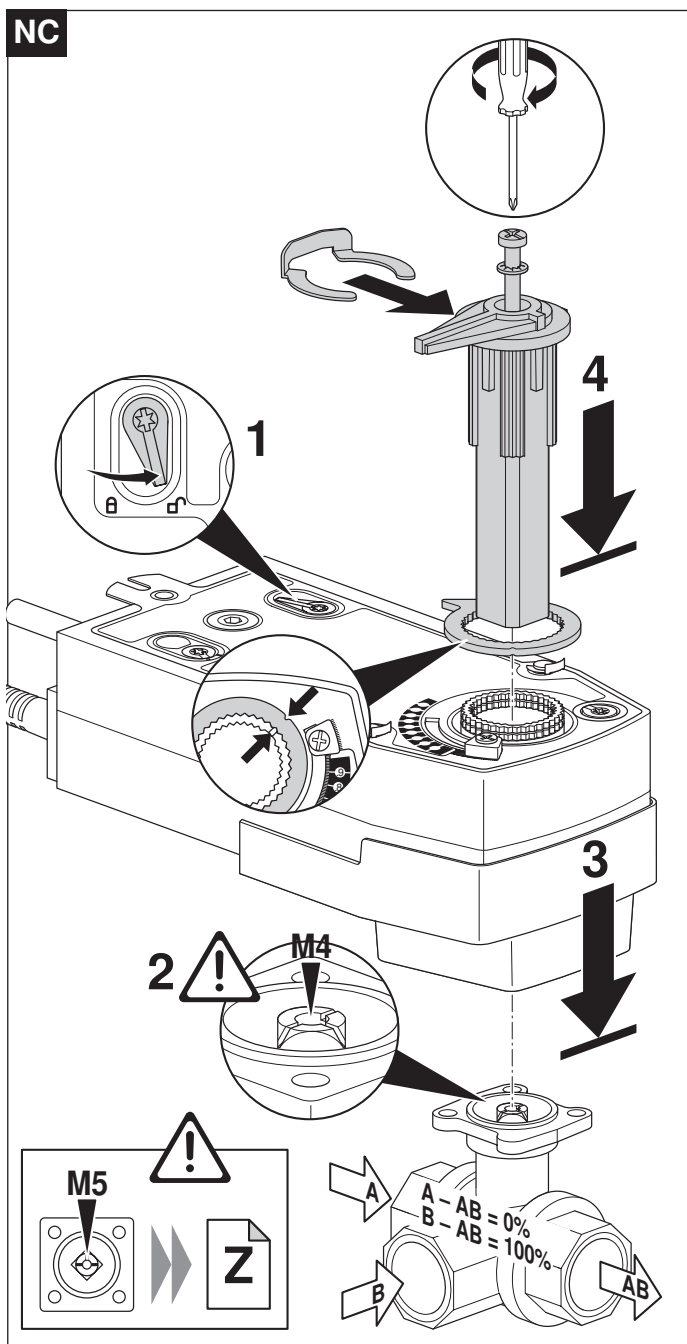
Dimensions [mm]

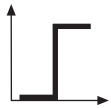
Dimensional drawings



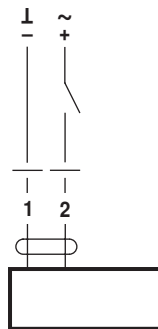
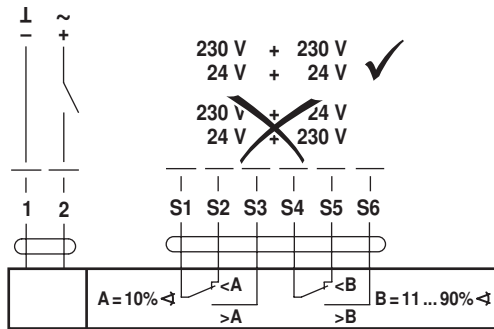
Further documentations

- Complete overview «The complete 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.)

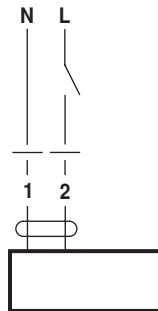
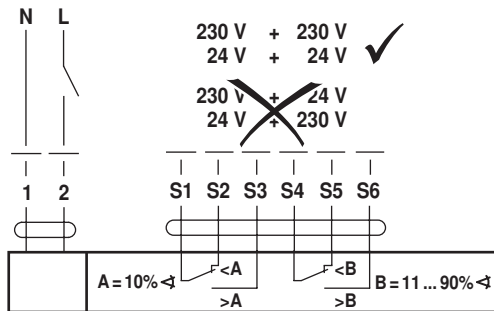




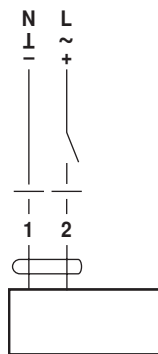
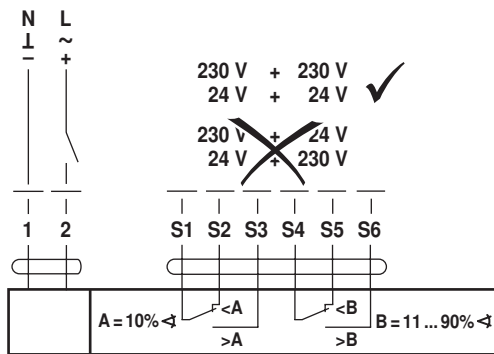
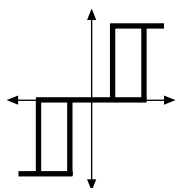
AC 24 V / DC 24 V

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

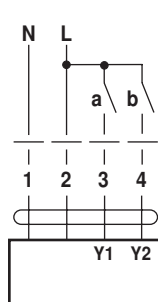
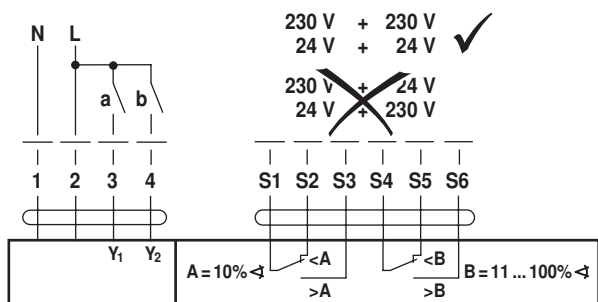
AC 230 V ⚠

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 230 V ⚠

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

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

