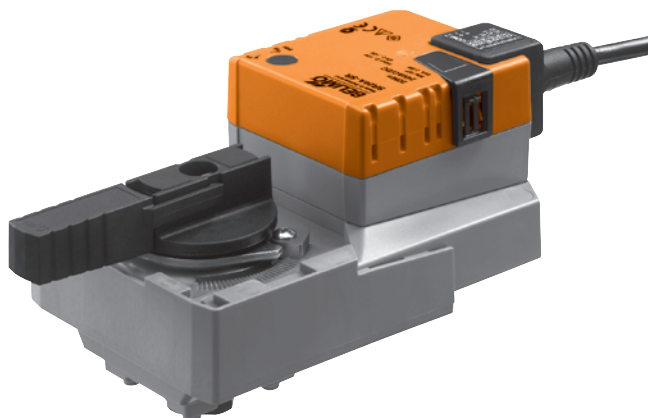


**Modulating rotary actuator for
2 and 3-way control ball valves**

- Torque 20 Nm
- Nominal voltage AC/DC 24 V
- Control: Modulating DC 0 ... 10 V
- Position feedback: DC 2 ... 10 V


Technical data

Electrical data	Nominal voltage	AC 24 V, 50/60 Hz DC 24 V
	Power supply range	AC/DC 19.2 ... 28.8 V
	Power consumption	In operation 2 W at nominal torque At rest 0.4 W For wire sizing 4 VA
	Connection	Cable 1 m, 4 x 0.75 mm ²
	Parallel connection	Possible, note performance data
Functional data	Torque (nominal torque)	Min. 20 Nm at nominal voltage
	Control	Control Signal Y DC 0 ... 10 V, typical input impedance 100kΩ Operating range DC 2 ... 10 V
	Position feedback	DC 2 ... 10 V, max. 1 mA (Measuring voltage U)
	Position accuracy	±5%
	Manual override	Gearing latch disengaged with pushbutton (temporary-permanent)
	Running time	90 s / 90°↔
	Noise level	Max. 45 dB (A) (without the valve)
	Position indication	Mechanical, add-on
Safety	Protection class	III Extra low voltage
	Degree of protection	IP54 in any mounting position
	EMC	CE according to 89/336/EWG
	Mode of operation	Type 1 (to EN 60730-1)
	Rated impulse voltage	0.8 kV (to EN 60730-1)
	Control pollution degree	3 (to EN 60730-1)
	Ambient temperature range	0 ... +50 °C
	Media temperature	+5 ... +110 °C in control ball valve (-10 °C with stem heating upon request)
	Non-operating temperature	-40 ... +80 °C
	Ambient humidity range	95% r.H., non-condensating (to EN 60730-1)
Maintenance	Maintenance-free	
Dimensions / Weight	Dimensions	See «Dimensions» on page 2
	Weight	Approx. 1000 g

Safety notes


- The rotary 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 switch for changing the direction of rotation may only be operated by authorized personnel. The direction of rotation must not be reversed in a frost protection circuit.
- 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 by means of a standard control signal DC 0 ... 10 V. It opens to the position dictated by this signal. The measuring voltage U allows the damper position (0 ... 100%) to be electrically indicated and serves as a follow-up control signal for other actuators.
- Simple direct mounting** Straightforward direct mounting on the ball valve with only one screw. The assembly tool is integrated in the plug-on position indicator. The mounting position in relation to the ball valve can be selected in 90° steps.
- Adjustable angle of rotation** Adjustable angle of rotation with mechanical end stops.
- High functional reliability** The actuator is overload-proof, requires no limit switches and automatically stops when the end stop is reached.
- Position feedback U5** Operation of the ball valve is optimised by a limiting ring. This ring reduces the angle of rotation from 95° to 90°, i.e. U5 will deviate from Y by approximately 0.3 V when the valve is closed.

Accessories

	Description	Data sheet
Electrical accessories	Auxiliary switch S..A..	T2 - S..A..
	Feedback potentiometer P..A..	T2 - P..A..

Electrical installation

Wiring diagram

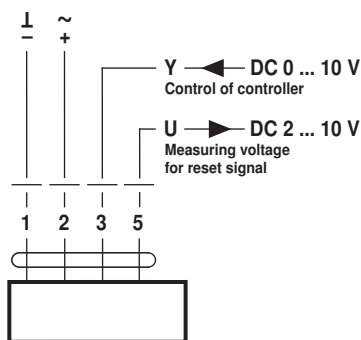
- Notes**
- Connect via safety isolation transformer.
 - Parallel connection of other actuators possible. Note performance data.
 - Direction of rotation switch is covered. Factory setting: Direction of rotation Y2



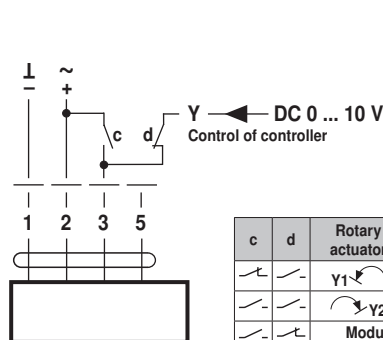
Direction of rotation



Standard connection



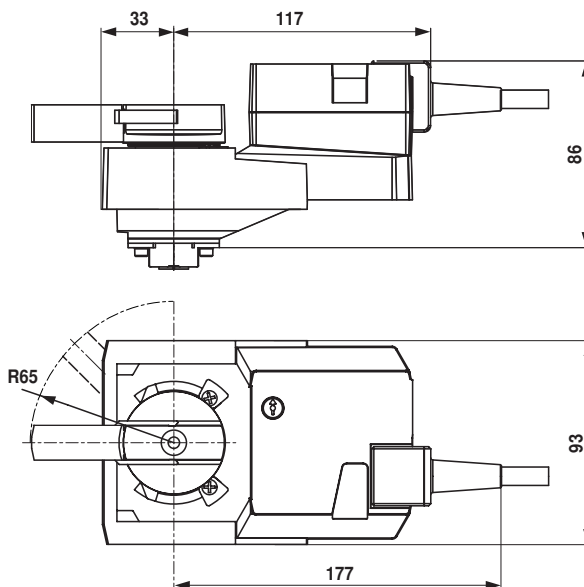
Override control (frost protection circuit)



c	d	Rotary actuator	Rotary valve
↖	↖	Y1	A - AB = 100%
↖	↗	Y2	A - AB = 0%
↖	↖		Modulating operation

Abmessungen [mm]

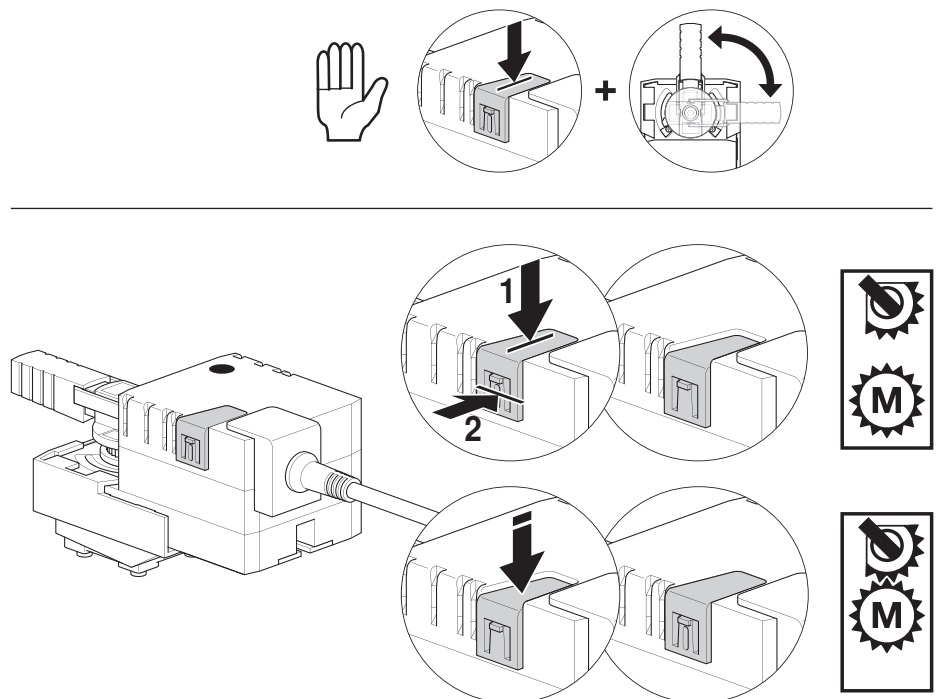
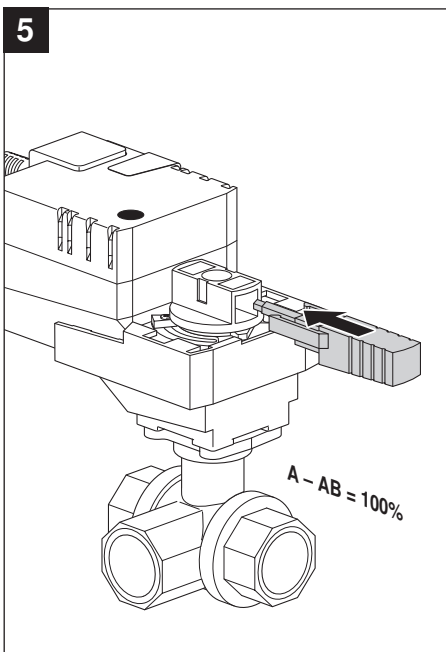
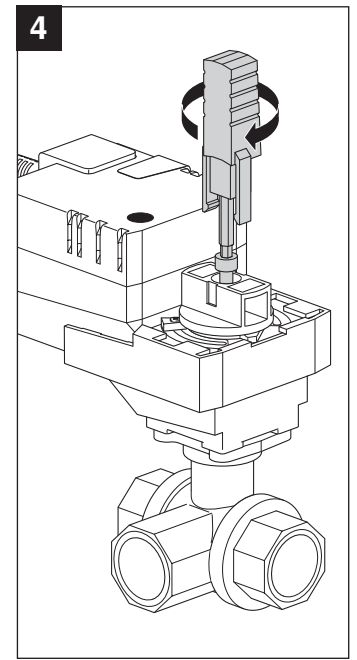
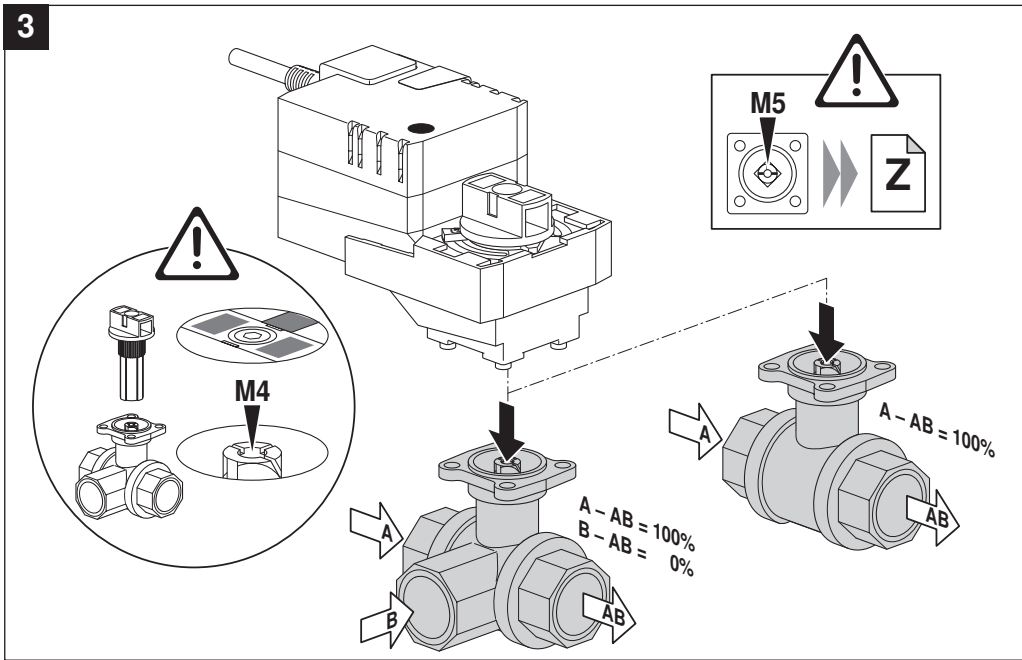
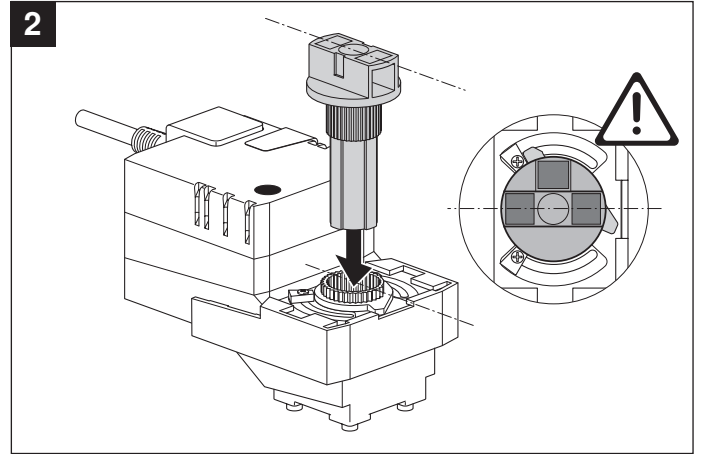
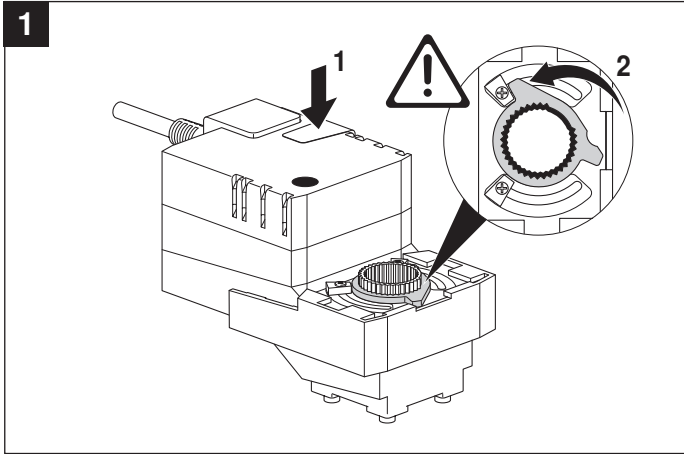
Massbilder

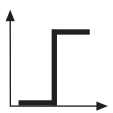
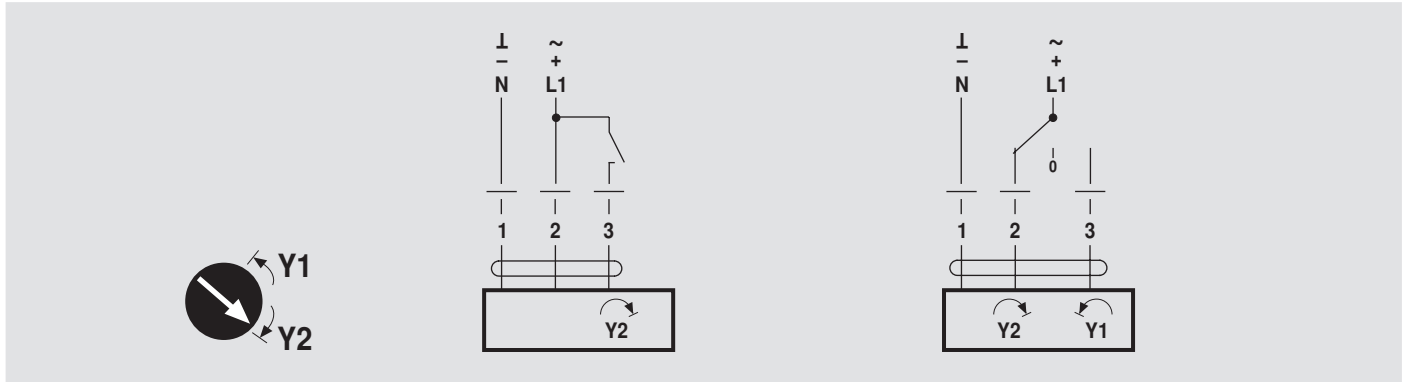


Further documentations

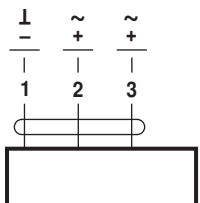
- Complete overview of actuators for water solutions
- Data sheets for ball valves
- Installation instructions for actuators and/or ball valves
- Notes for project planning (hydraulic characteristic curves and circuits, installation regulations, commissioning, maintenance etc.)

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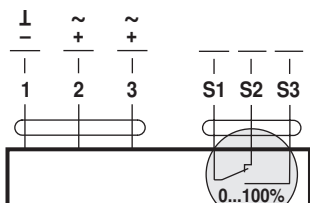




AC 24 V / DC 24 V

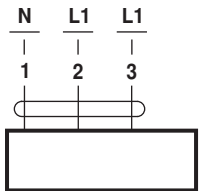


LR24A NR24A
SR24A

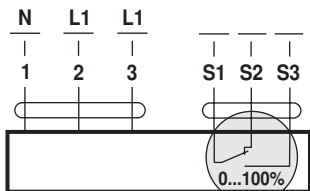


LR24A-S NR24A-S
SR24A-S

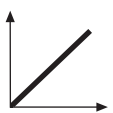
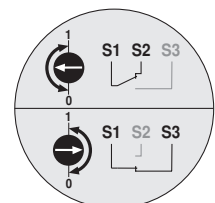
AC 100 ... 240 V ⚠



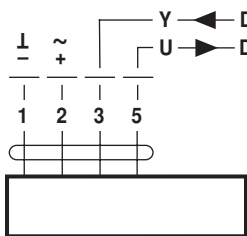
LR230A NR230A
SR230A



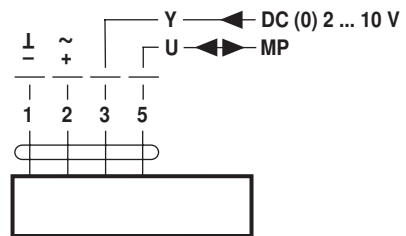
LR230A-S NR230A-S
SR230A-S



AC 24 V / DC 24 V



TRC24A-SR LR24A-MF
LR(C)24A-SR NR24A-MF
NR(C)24A-SR SR24A-MF
SR24A-SR



LR24A-MP NR24A-MP
SR24A-MP

LONWORKS[®] AC 24 V / DC 24 V

