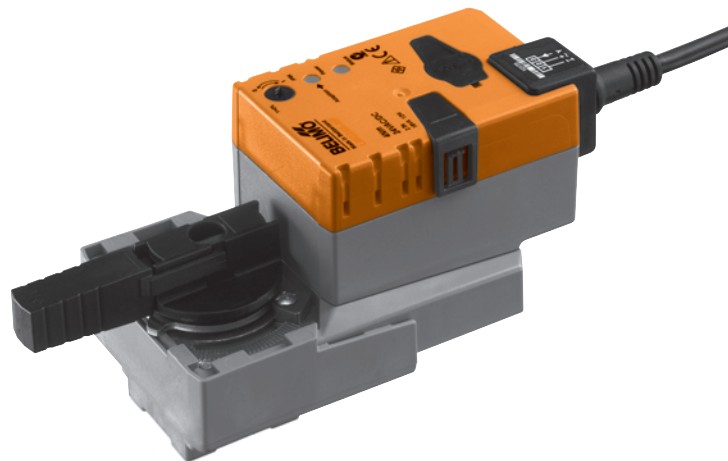



Rotary actuator for 2 and 3 way control ball valves

- Torque 4 Nm
- Nominal voltage AC/DC 24 V
- Control: Open-close
- Running time 9 s


Technical data

Electrical data	Nominal voltage	AC 24 V, 50/60 Hz / DC 24 V
	Nominal voltage range	AC/DC 19.2 ... 28.8 V / DC 21.6 ... 28.8 V
	Power consumption	In operation 12 W @ nominal torque At rest 1.5 W For wire sizing 18 VA (I max. 20 A @ 5 ms)
	Connection	Cable 1 m, 3 x 0.75 mm ²
	Parallel connection	Possible, note the performance data
Functional data	Torque (nominal torque)	Min. 4 Nm @ nominal voltage
	Manual override	Gearing latch disengaged with push-button, can be locked
	Running time	9 s / 90° \leq
	Sound power level	Max. 52 dB (A)
	Position indication	Mechanical, pluggable
Safety	Protection class	III Safety extra-low voltage
	Degree of protection	IP54 in any mounting position, UL/NEMA 2
	EMC	CE according to 2004/108/EC
	Certification	cULus according to UL 60730-1A and UL 60730-2-14 and CAN/CSA E60730-01:02 Certified to IEC/EN 60730-1 and IEC/EN 60730-2-14
	Mode of operation	Type 1 (EN 60730-1)
	Rated impulse voltage	0.8 kV (EN 60730-1)
	Control pollution degree	3 (EN 60730-1)
	Ambient temperature	0 ... +40 °C (no restrictions)  +40 ... +50 °C (Caution: can only be used with restrictions. Please contact your Belimo representative.)
	Non-operating temperature	-40 ... +80 °C
	Ambient humidity	95% r.H., non-condensating (EN 60730-1)
Maintenance	Maintenance-free	
Dimensions / Weight	Dimensions	See «Dimensions» on page 2
	Weight	Approx. 950 g

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. Any legal regulations or regulations issued by authorities must be observed during assembly.
- The switch for changing the direction of rotation may only be operated by authorised 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.
- Self adaptation is necessary when the system is commissioned and after each adjustment of the angle (press the adaptation push-button)
- 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

- 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 fitting can be selected in 90° steps.
- Manual override** Manual override with push-button possible (the gear is disengaged for as long as the button is pressed or remains locked).
- 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.
- Home position** When the supply voltage is switched on for the first time, i.e. at commissioning or after pressing the «gear disengagement» switch, the actuator moves to the home position. Factory setting: Y2 (counter-clockwise rotation)

Rotary actuator	Rotary valve
	A – AB = 0%
	A – AB = 100%

The actuator then moves into the position defined by the control signal.

Accessories

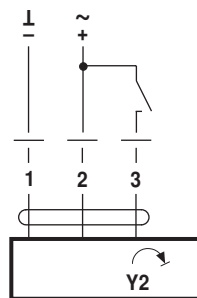
	Description	Data sheet
Electrical accessories	Auxiliary switch S..A..	T2 - S..A..
	Feedback potentiometer P..A..	T2 - P..A..

Electrical installation

Wiring diagrams

Note

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



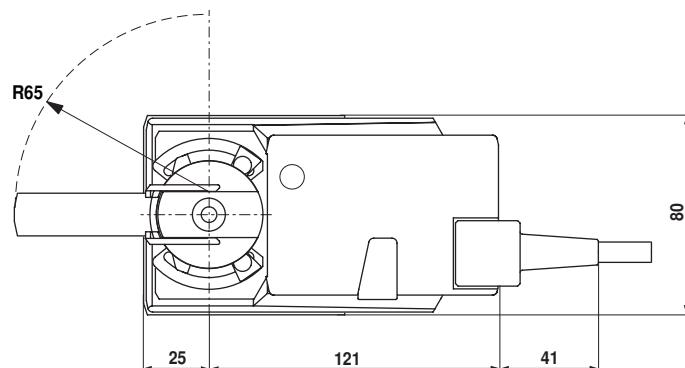
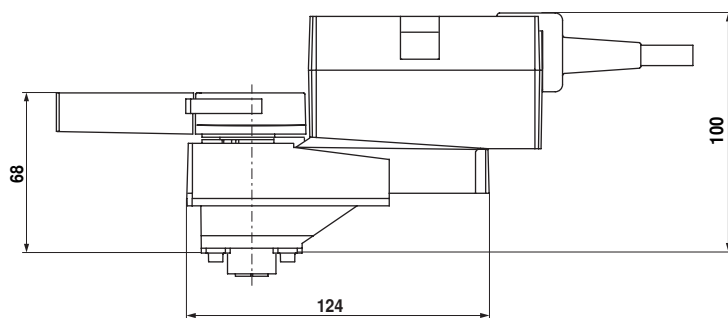
Direction of rotation



Rotary actuator	Rotary valve
Y2	A – AB = 0%

Dimensions [mm]

Dimensional drawings



Operating controls and indicators

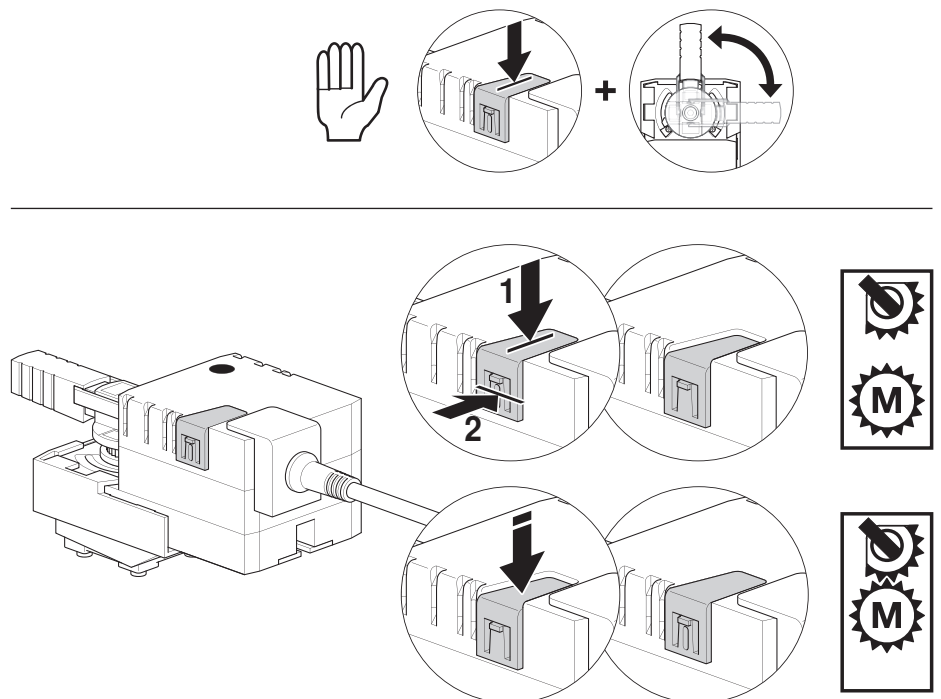
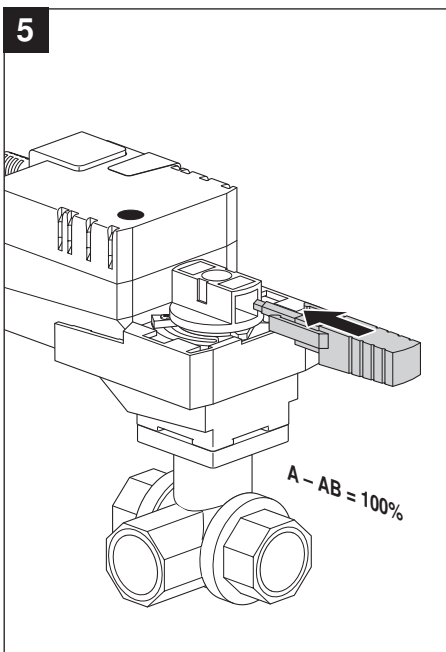
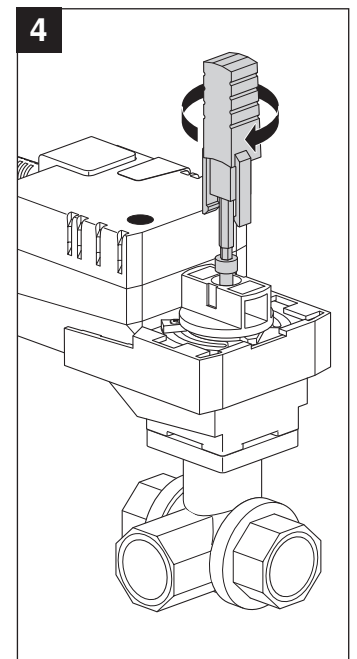
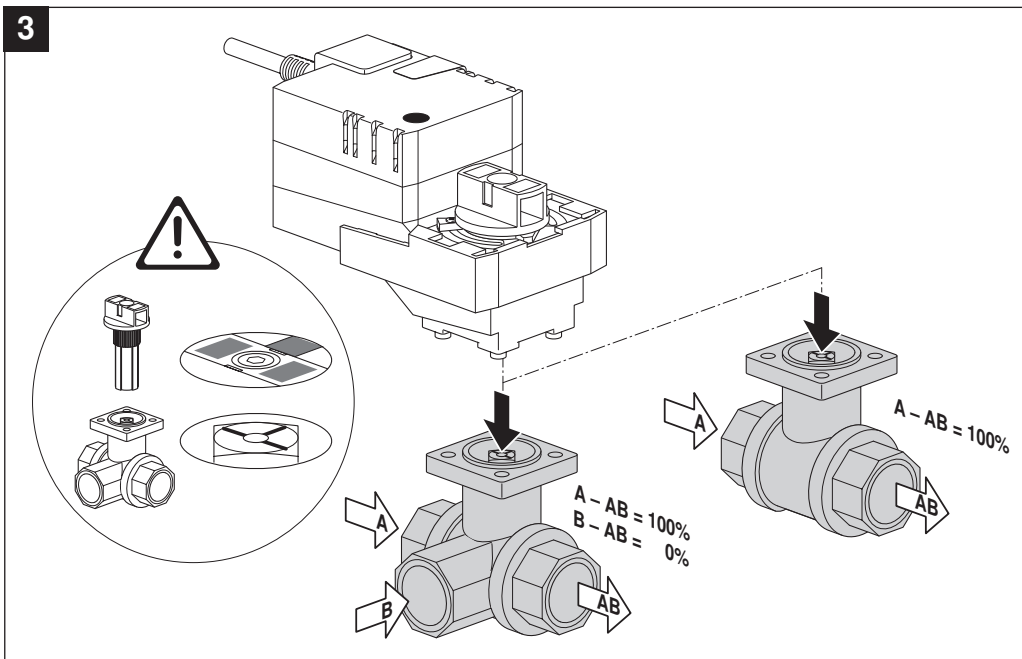
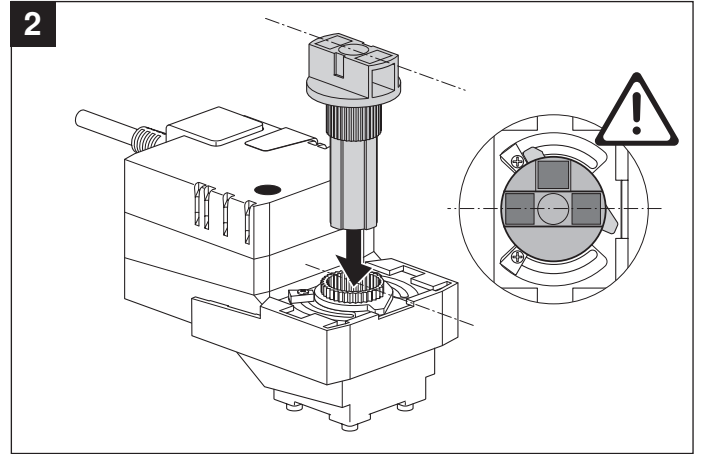
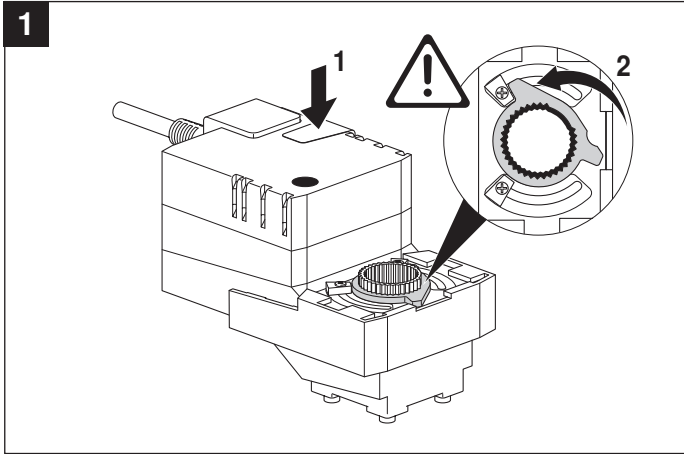


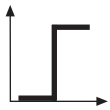
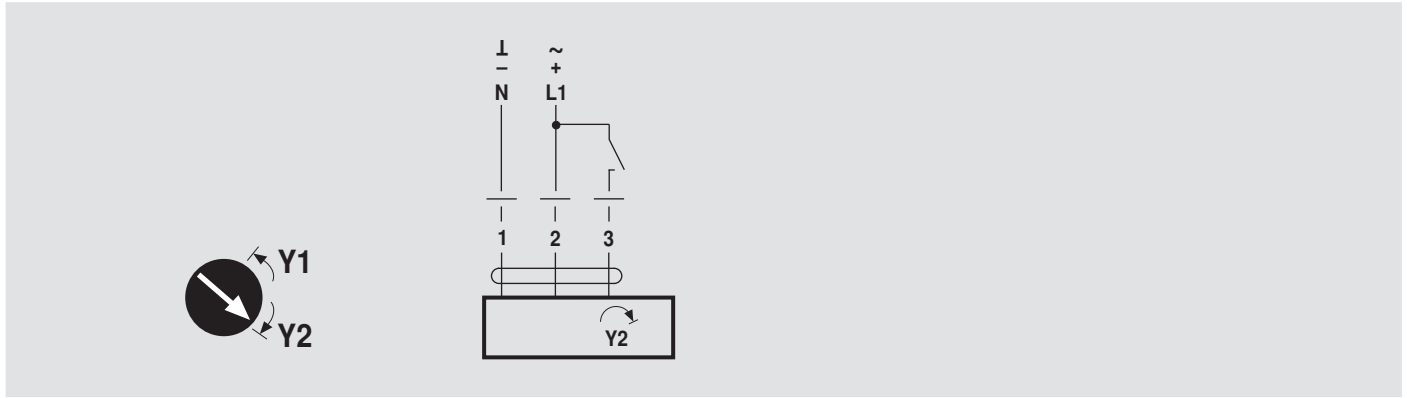
- ① **Direction of rotation switch**
Switching over: Direction of rotation changes
- ② **Push-button and green LED display**
Off: No voltage supply or fault
On: In operation
Press button: Switches on angle of rotation adaptation followed by standard operation
- ③ **Push-button and yellow LED display**
Off: Standard operation
On: Adaptation or synchronising process active
Press button: No function
- ④ **Gear disengagement switch**
Press button: Gear disengaged, motor stops, manual override possible
Release button: Gear engaged, synchronisation starts, followed by standard operation

Further documentations

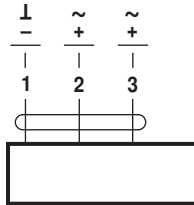
- Complete overview «The complete range of water solutions»
- Data sheets for ball valves
- Installation instructions for actuators resp. ball valves
- Notes for project planning (hydraulic characteristic curves and circuits, installation regulations, commissioning, maintenance etc.)

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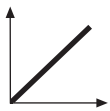




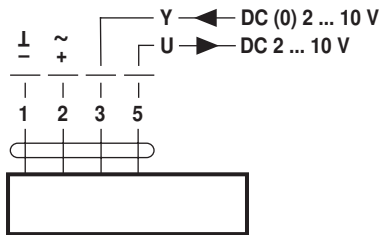
AC 24 V / DC 24 V



LRQ..
NRQ..



AC 24 V / DC 24 V



LRQ..-SR LRQ..-SZ
NRQ..-SR NRQ..-SZ