BELIMO®

**Rotary actuator for
2 and 3-way ball valves**

- Torque 2 Nm
- Nominal voltage AC/DC 24 V
- Control: Open/close

Technical data

Electrical data	Nominal voltage		AC 24 V, 50/60 Hz
			DC 24 V
	Power supply range		AC 19.2 ... 28.8 V
			DC 21.6 ... 28.8 V
	Power consumption	In operation	0.5 W at nominal torque
		For wire sizing	0.5 VA
	Connection		Cable 1 m, 3 x 0.75 mm²
	Parallel connection		Yes (Note performance data for supply!)
Funktionsdaten	Torque (nominal torque)		Min. 2 Nm at nominal voltage
	Manual override		Temporary disengagement of gearing latch
	Running time		100 s / 90° ◁
	Noise level		Max. 35 dB (A)
	Position indication		Mechanical
Safety	Protection class		**III** Extra low voltage
	Degree of protection		IP40
	EMC		CE according to 89/336/EEC
	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		−7 ... +50°C
	Media temperature		+5 ... +100°C (in ball valve)
	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. 400 g (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.
- 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 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.

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Product features

|	
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.
Manual operation	Manual operation possible by lever (the gearing latch remains disengaged as long as the self-resetting lever is pressed).
Combination valve actuators	Refer to the valve documentation for suitable valves, their permitted media temperatures and closing pressures.

Electrical installation

Wiring diagrams

Notes
- Connect via safety isolation transformer. ⚠
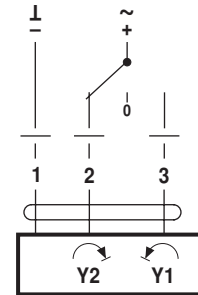- Parallel connection of other actuators possible. Note performance data for supply.
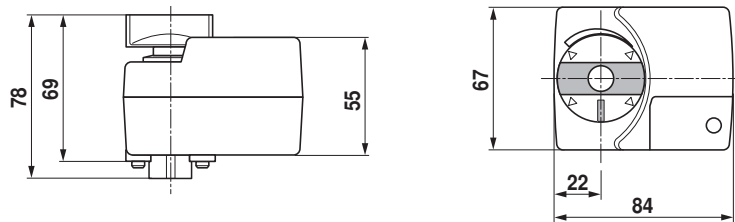
Open-close control
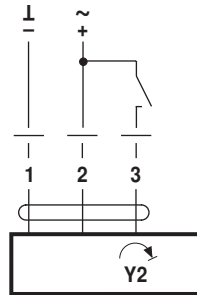
Rotary actuator		Rotary valve
Y2	↘	A – AB = 0%

3-3-point control

Dimensions [mm]

Dimensional diagrams

78 69 55 67 22 84

General notes

- Continuous pulsating into the end stop with pulsating 3-point control results in damage to the actuator. Steps must be taken to ensure that pulsating 3-point controllers stop in the end position.
- The actuator switches off for seven seconds in the case of blocking, then attempts to restart. If the blocked condition persists, the actuator attempts to restart once every two minutes a total of 15 times and subsequently once every two hours.
- Actuators for 3-point control in parallel operation must be synchronised once every week (by setting the controller signal to 0 or 100%) in order to guarantee uni-rotation.
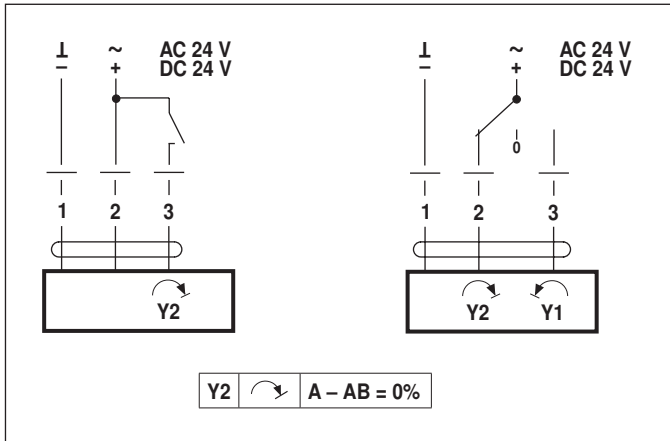- Pulse duration ≥ 0.5 s

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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TRD24 (-T)
TR24 (-T)

70299-00001.B

CE

⊥	~	AC 24 V
	+	DC 24 V
1	2	3

Y2

⊥	~	AC 24 V
	+	DC 24 V
1	2	3

0

Y2 Y1

| Y2 | ↷ | A – AB = 0% |
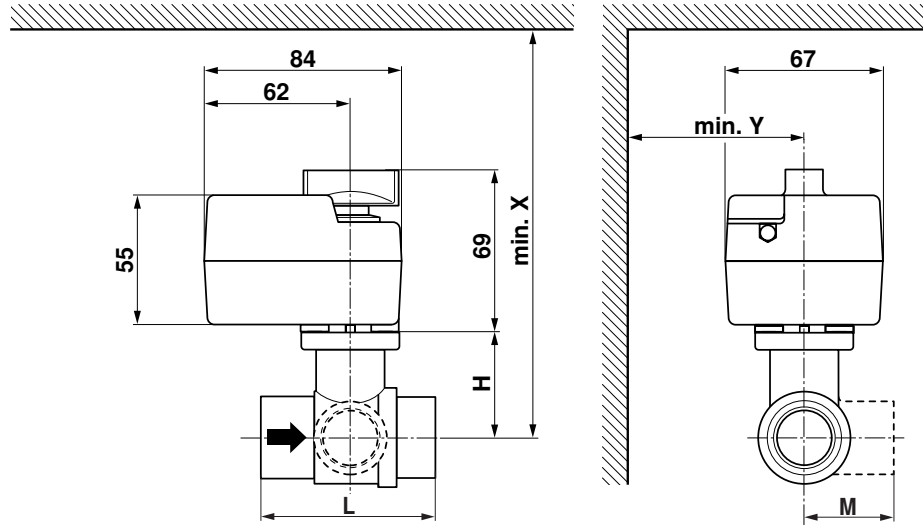
▷◁	⤸	DN		Rp	G	PN	mm				TRD24		TR24	
		mm	"	"	"		L	H	M	X	Y	X	Y
R2..K	R3..K	10	³/₈	³/₈			52	35	28	174	75		
R4..K	R5..K	10	³/₈		³/₄		69	31.5	34	171	75		
R2..	R3..	15	¹/₂	¹/₂			67	45	39			184	75
R4..	R5..	15	¹/₂		1		74	44	38			183	75
R6..R	R7..R	15	¹/₂			6	101.5	45	73			184	80

max. 50°C

max. 100°C

Nr. 1 ⊗
max. 0.8 Nm

CCW

CCW

A-AB=100%

A-AB=100%
B-AB=0%

A

AB

A

AB

B

CCW

CCW

CCW

CCW

AB

B =

A