BELIMO

Technical data sheet Rotary actuator TRFD24-SR (-O)

Modulating rotary actuator with emergency control function for 2- and 3-way characterized control valves

- **Torque 1.6 Nm**
- **Nominal voltage AC/DC 24 V**
- **Control: modulating DC 0 ... 10 V, position feedback DC 2 ... 10 V**
- **TRFD24-SR: Deenergised NC TRFD24-SR-O: Deenergised NO**

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	Spring return Holding position For wire sizing	2.5 W at nominal torque 1 W 4 VA
	Connection		Cable 1 m, 4 x 0.75 mm²
	Parallel connection		Yes (Note performance data for supply!)
Functional data	Torque (nominal torque)	Motor Spring return	Min. 1.6 Nm at nominal voltage Min. 1.6 Nm
	Control Control signal Y Working range		DC 0 ... 10 V, typical input impedance 100 kΩ DC 2 ... 10 V
	Position feedback (Measuring voltage U)		DC 2 ... 10 V, max. 0.5 mA
	Direction of rotation Spring return	Motor TRFD24-SR TRFD24-SR-O	Adjustable with switch ↷ resp. ↶ Deenergised NC, ball valve closed (A – AB = 0%) Deenergised NO, ball valve open (A – AB = 100%)
	Manual override		No
	Angle of rotation		Max. 95°∢
	Running time	Motor Spring return	90 s / 90°∢ <25 s at –20 ... 50°C / max. 60 s at –30°C
	Noise level	Motor Spring return	Max. 35 dB (A) ~62 dB (A)
	Service life		Min. 60'000 emergency settings
	Position indication		Mechanical
Safety	Protection class		III Extra low voltage
	Degree of protection		IP42 in all mounting positions
	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		–30 ... +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. 600 g (without ball valve)

Safety notes

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- **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 cable is not allowed to be removed from the unit.**
- **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.**

Modulating rotary actuator with emergency control function
AC/DC 24 V, 1.6 Nm

Product features

Mode of operation
The actuator is controlled by means of a standard control signal DC 0 ... 10 V.
The actuator moves the damper to its normal working position while tensioning the return spring at the same time. If the power supply is interrupted, the energy stored in the spring moves the damper back to its safe position.

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.

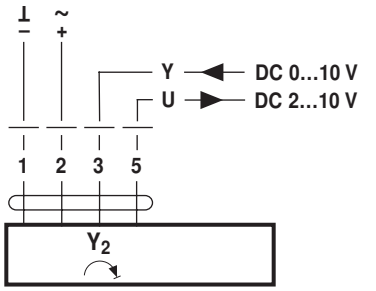
High functional reliability
The actuator is overload-proof, requires no limit switches and automatically stops when the end stop is reached.

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

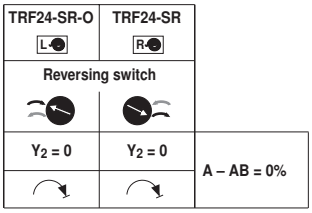
Electrical installation

Wiring diagram / Direction of rotation

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

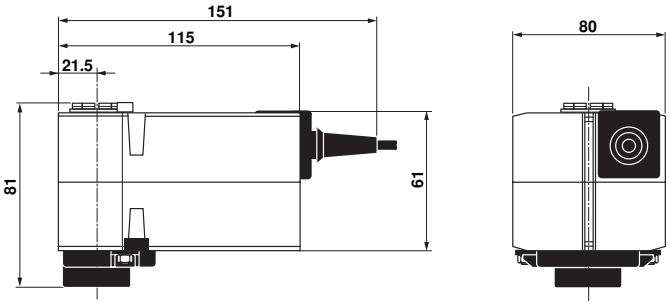


Direction of rotation



Dimensions [mm]

Dimensional diagrams



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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TRFD24-SR (-O) (-T)
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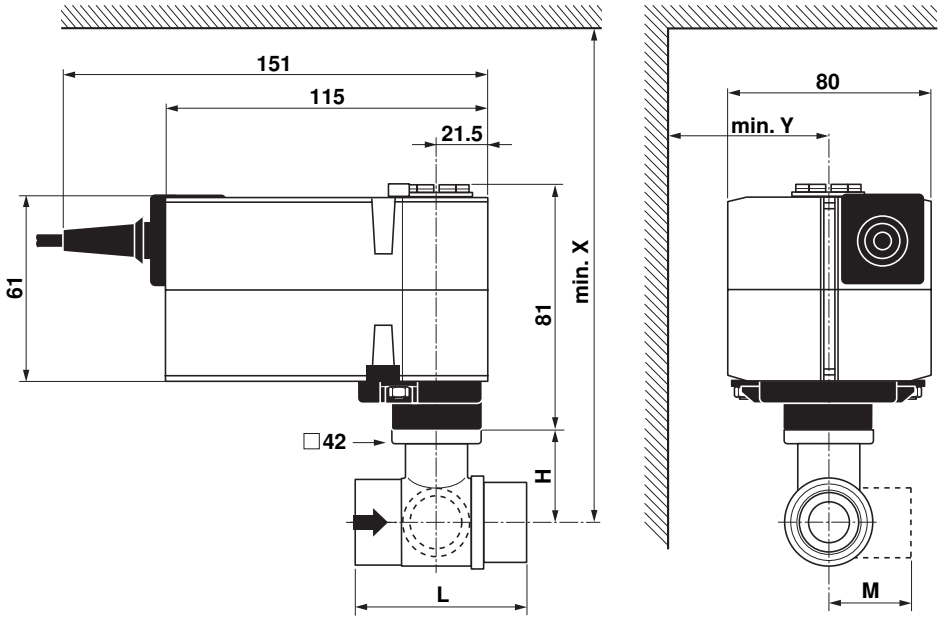
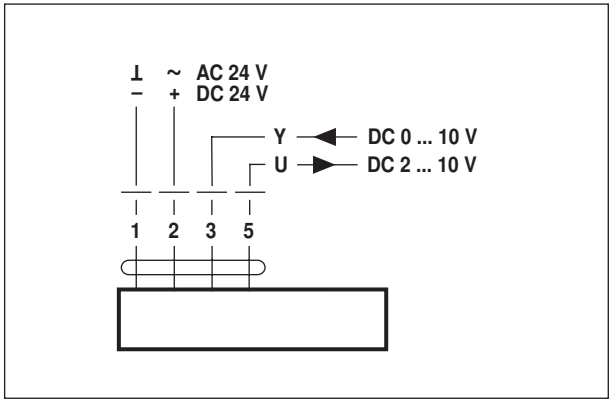
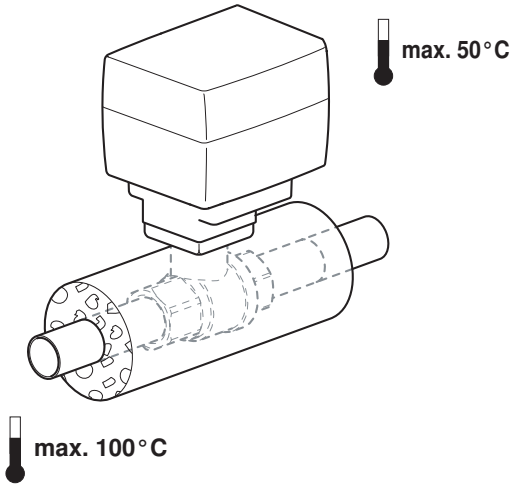
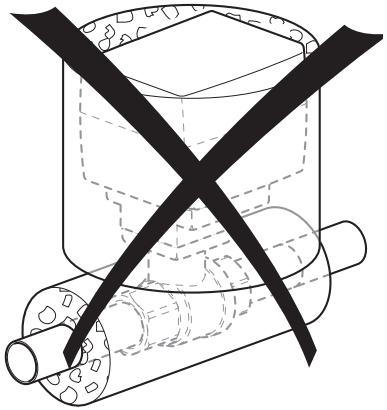




		DN		Rp	G	PN	mm						
										TRFD..(-O)(-T)		TRF..(-O)(-T)	
		mm	”	”	”		L	H	M	X	Y	X	Y
R2..K	**R3..K**	10	3/8	3/8			52	35	28	180	80		
R4..K	**R5..K**	10	3/8		3/4		69	31.5	34	180	80		
R2..	**R3..**	15	1/2	1/2			67	45	39			190	80
R4..	**R5..**	15	1/2		1		74	44	38			190	80
R6..R	**R7..R**	15	1/2			6	101.5	45	73			190	80





TRFD.. (-T)
TRF.. (-T)

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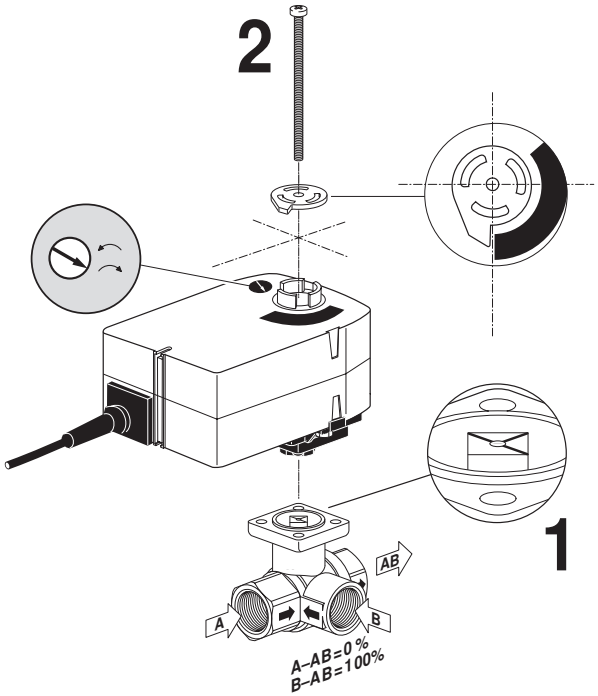

TRFD..-O (-T)
TRF..-O (-T)

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