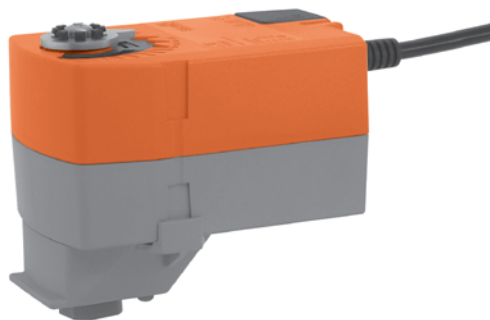


Modulating rotary actuator with emergency control function for 2- and 3-way characterized control valves

- Torque 2 Nm
- Nominal voltage AC/DC 24 V
- Control: modulating DC 0 ... 10 V, position feedback DC 2 ... 10 V
- TRF24-SR: Deenergised NC  
TRF24-SR-O: Deenergised NO


**Technical data**

<b>Electrical data</b>	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 2.5 W at nominal torque Holding position 1 W For wire sizing 4 VA	
	Connection	Cable 1 m, 4 x 0.75 mm <sup>2</sup>	
	Parallel connection	Yes (Note performance data for supply!)	
<b>Functional data</b>	Torque (nominal torque)	Motor Min. 2 Nm at nominal voltage Spring return Min. 2 Nm	
	Control	Control signal Y DC 0 ... 10 V, typical input impedance 100 kΩ Working range DC 2 ... 10 V	
	Position feedback (Measuring voltage U)	DC 2 ... 10 V, max. 0.5 mA	
	Direction of rotation	Motor Adjustable with switch ↻ resp. ↺ Spring return TRF24-SR Deenergised NC, ball valve closed (A – AB = 0%) TRF24-SR-O Deenergised NO, ball valve open (A – AB = 100%)	
	Manual override	No	
	Angle of rotation	Max. 95° ↻	
	Running time	Motor 90 s / 90° ↻ Spring return <25 s at –20 ... 50°C / max. 60 s at –30°C	
	Noise level	Motor Max. 35 dB (A) Spring return ~62 dB (A)	
	Service life	Min. 60'000 emergency settings	
	Position indication	Mechanical	
	<b>Safety</b>	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	
<b>Dimensions / Weight</b>	Dimensions	See «Dimensions» on page 2	
	Weight	Approx. 600 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 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.

## Product features

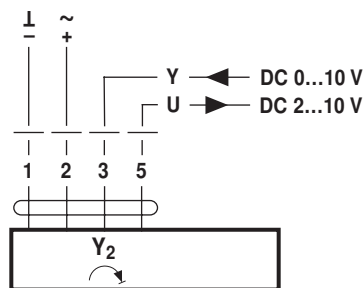
- Mode of operation** The actuator is controlled by means of a standard control signal DC 0 ... 10 V. The actuator moves the damper to its normal working position while tensioning the return spring at the same time. If the power supply is interrupted, the energy stored in the spring moves the damper 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  $90^\circ$  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.

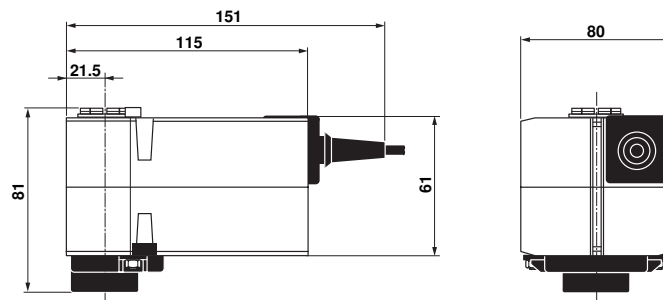


### Direction of rotation

TRF24-SR-O	TRF24-SR	
		
Reversing switch		
		
Y <sub>2</sub> = 0	Y <sub>2</sub> = 0	A - AB = 0%
		

## Dimensions [mm]

### Dimensional diagrams



### Further documentations

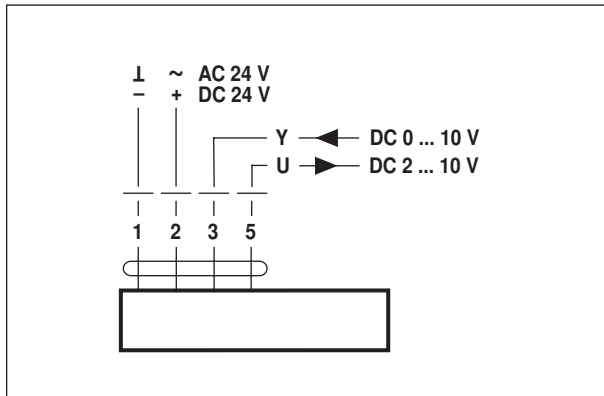
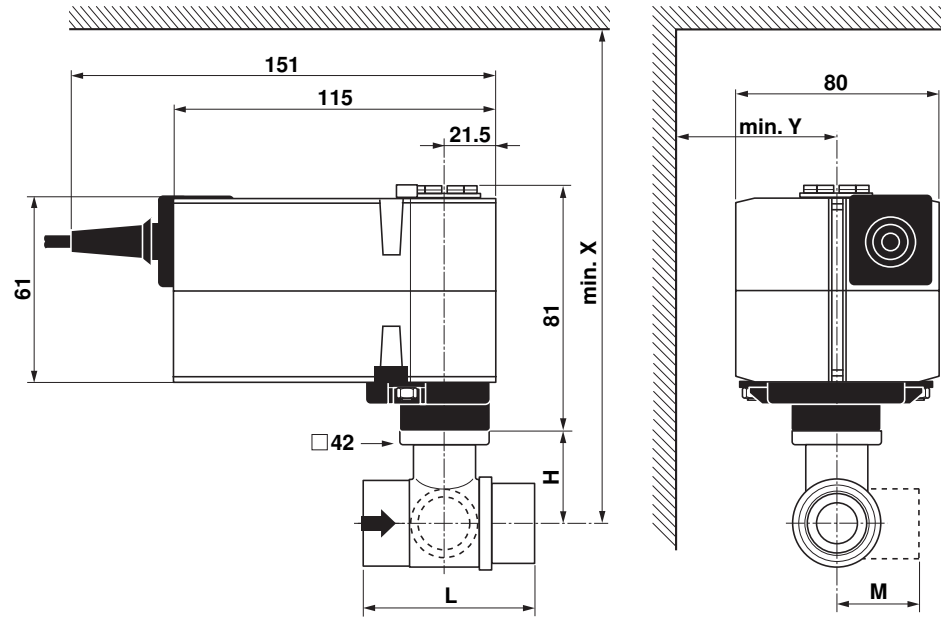
- Complete overview of actuators for water solutions
- Data sheets for ball valves
- Installation instructions for actuators and/or ball valves
- Notes for project planning (hydraulic characteristic curves and circuits, installation regulations, commissioning, maintenance etc.)





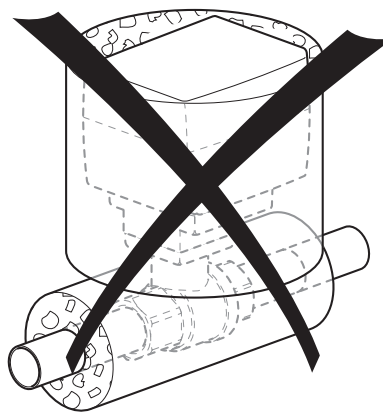
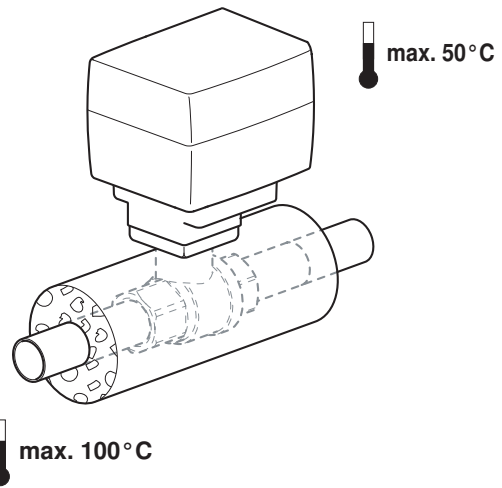
TRFD24-SR (-O) (-T)  
TRF24-SR (-O) (-T)



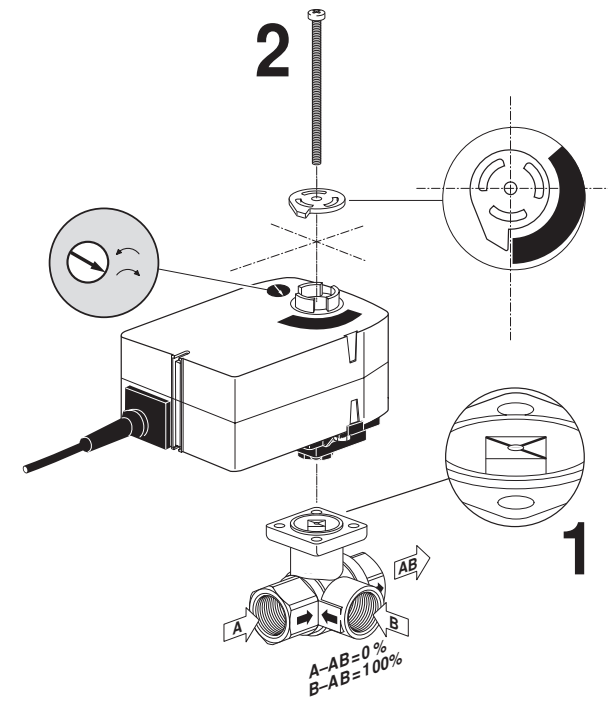
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		DN		Rp	G	PN	mm			TRFD..(-O)(-T)		TRF..(-O)(-T)	
		mm	"				L	H	M	X	Y	X	Y
R2..K	R3..K	10	3/8	3/8			52	35	28	180	80		
R4..K	R5..K	10	3/8		3/4		69	31.5	34	180	80		
R2..	R3..	15	1/2	1/2			67	45	39			190	80
R4..	R5..	15	1/2		1		74	44	38			190	80
R6..R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



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



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

