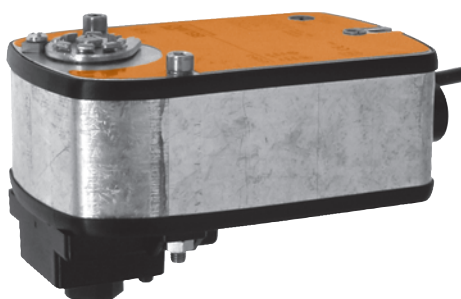


Modulating rotary actuator with emergency control function for 2 and 3 way control ball valves

- Torque 4 Nm
- Nominal voltage AC/DC 24 V
- Control: modulating DC 0 ... 10 V
- Position feedback DC 2 ... 10 V
- deenergised NC



Technical data

Electrical data	Nominal voltage	AC 24 V, 50/60 Hz / DC 24 V
	Nominal voltage range	AC 19.2 ... 28.8 V / DC 21.6 ... 28.8 V
	Power consumption	Spring lift 2.5 W @ nominal torque
		Holding position 1 W
	For wire sizing	5 VA (Imax. 5.8 A @ 5 ms)
	Connection	Cable 1 m, 4 x 0.75 mm ²
	Parallel operation	Yes (note performance data for supply!)
Functional data	Torque (nominal torque)	Motor Min. 4 Nm @ nominal voltage
		Spring return Min. 4 Nm
	Control	Control signal Y DC 0 ... 10 V, typical input impedance 100 kΩ
		Operating range DC 2 ... 10 V
	Position feedback (measuring voltage U)	DC 2 ... 10 V, max. 0.7 mA
	Direction of rotation	Deenergised NC, ball valve closed (A – AB = 0%)
	Manual override	With hand crank, can be fixed in any position
	Angle of rotation	95° ↯
	Running time	Motor 150 s (0 ... 4 Nm)
		Spring return ~20 s @ –20 ... 50°C / max. 60 s @ –30°C
	Sound power level	Motor Max. 30 dB (A)
		Spring return ~62 dB (A)
Service life	Min. 60'000 emergency settings	
Position indication	Mechanical	
Safety	Protection class	III Safety low voltage
	Degree of protection	IP54
	EMC	CE according to 2004/108/EC
	Mode of operation	Type 1 (EN 60730-1)
	Rated impulse voltage	0.8 kV (EN 60730-1)
	Control pollution degree	2 (EN 60730-1)
	Ambient temperature	–30 ... +50°C
	Medium temperature	+5 ... +100°C (in ball valve)
	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. 1.5 kg (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. Any legal regulations or regulations issued by authorities must be observed during assembly.
- 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.

Product features

Mode of operation The actuator is controlled with a standard modulating signal of DC 0 ... 10 V and moves into the position defined by the control signal while tensioning the return spring at the same time. If the power supply is interrupted, the energy stored in the spring moves the ball valve back to its safe position.

Simple direct mounting With mounting kit WLF (accessory) simple 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 override The ball valve can be manually operated and fixed in any position using a hand crank. Unlocking is manual or automatic by applying the operating voltage.



Please note: The hand crank may only be operated when the actuator is deenergised.

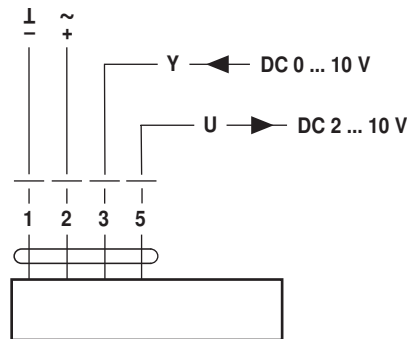
High operational reliability The actuator is overload-proof, requires no limit switches and automatically stops when the end stop is reached.

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

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

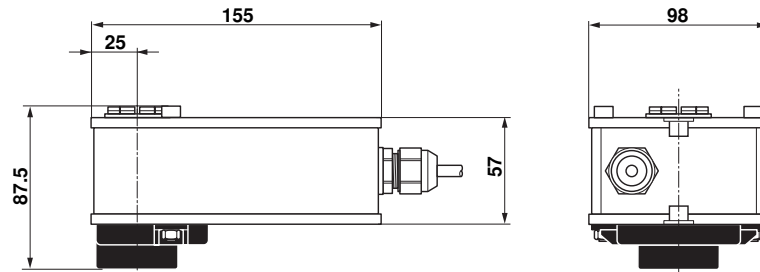


Direction of rotation

LRF24-SR	
R	
Direction of rotation switch	
R	L
Y = 0	A - AB = 0%

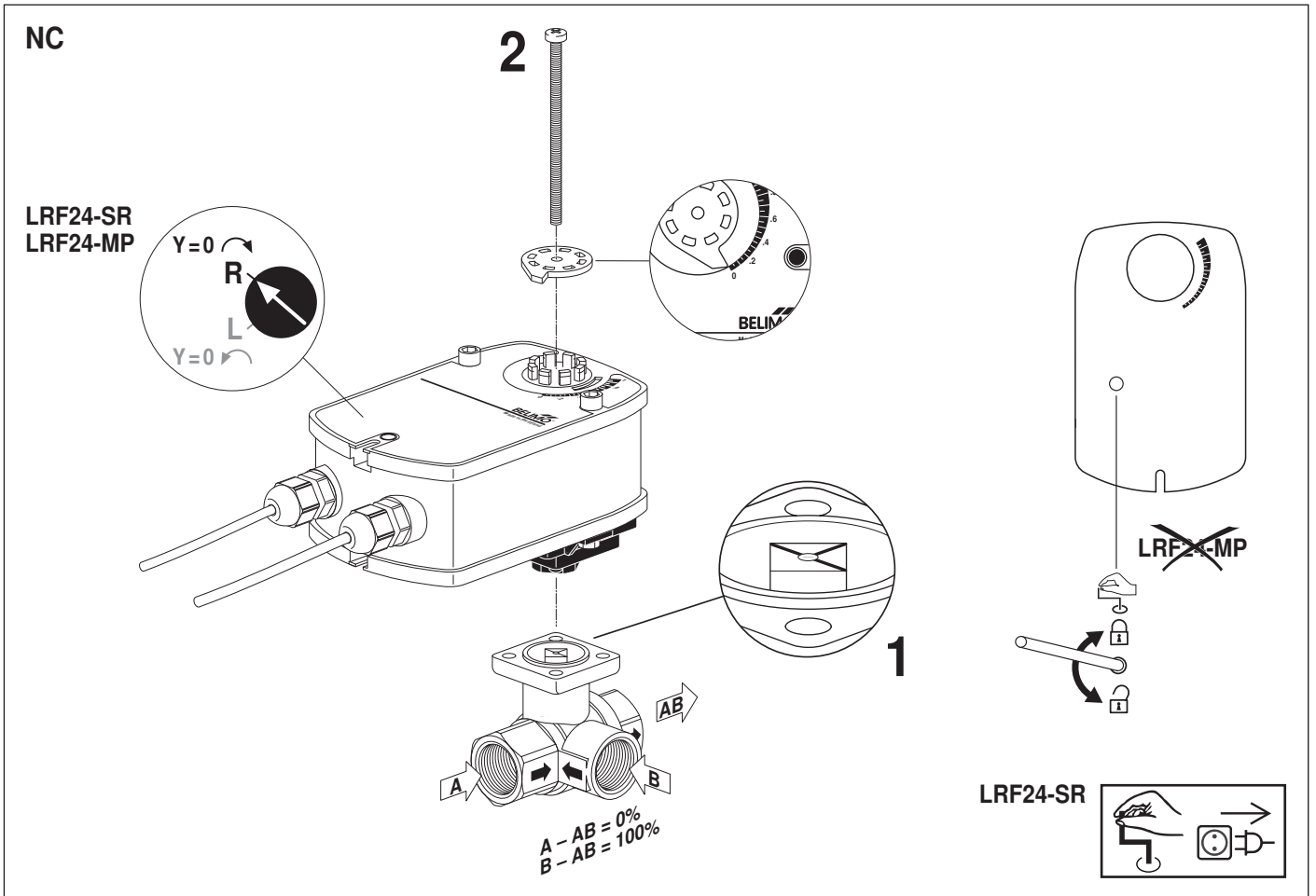
Dimensions [mm]

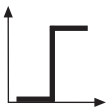
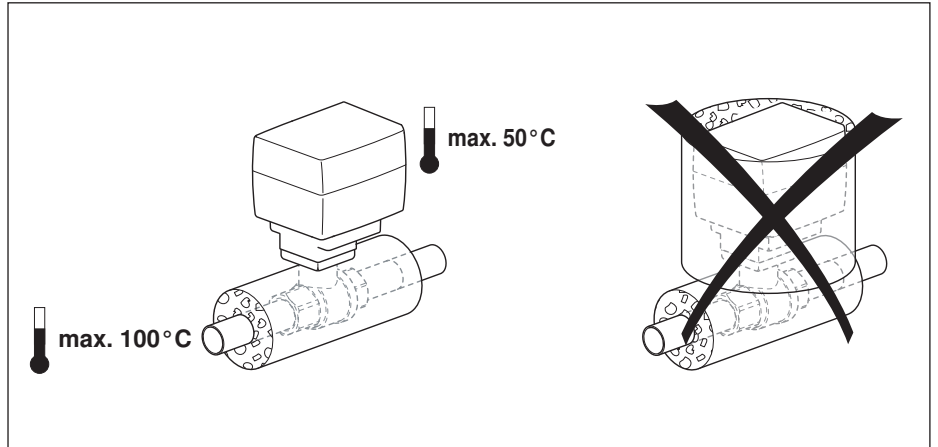
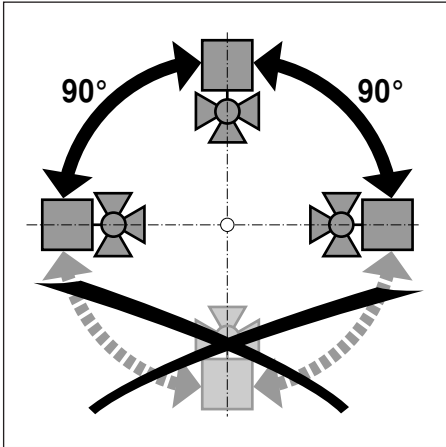
Dimensional drawings



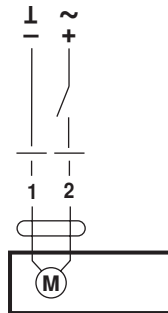
Further documentations

- Complete overview «The complete product range of water solutions»
- Data sheets for characterised control valves
- Mounting instructions for actuators or characterised control valves, respectively
- Notes for project planning (hydraulic characteristic curves and circuits, installation regulations, commissioning, maintenance, etc.)

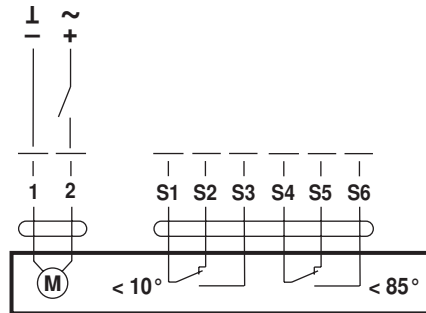




AC 24 V

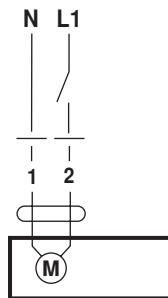


LRF24 (-O)

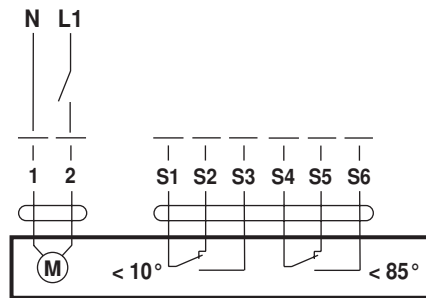


LRF24-S (-O)

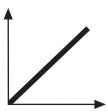
AC 230 V



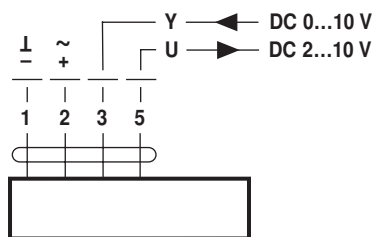
LRF230 (-O)



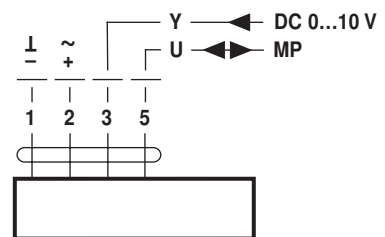
LRF230-S (-O)



AC 24 V / DC 24 V



LRF24-SR



LRF24-MP (-O)

