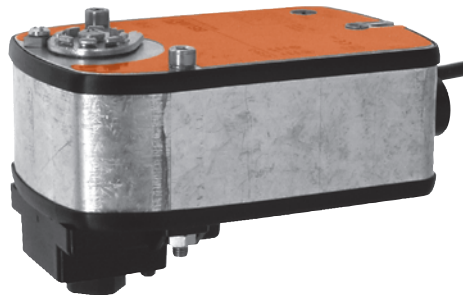


Rotary actuator with emergency control function for 2- and 3-way ball valves

- Torque 4 Nm
- Nominal voltage AC/DC 24 V
- Control: Open/close
- 2 auxiliary switches
- LRF24-S: Deenergised NC
LRF24-S-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 5 W at nominal torque Holding position 2,5 W For wire sizing 7 VA	
	Auxiliary switch	2 x SPDT, 3 (0.5) A, AC 250 V II □ Switching points: 10° ↙ fixed, 85° ↘ fixed	
	Connection	Motor Cable 1 m, 2 x 0.75 mm ² Auxiliary switch Cable 1 m, 6 x 0.75 mm ²	
	Parallel connection	Yes (Note performance data for supply!)	
	Functional data	Torque (nominal torque)	Motor Min. 4 Nm at nominal voltage Spring return Min. 4 Nm
Direction of rotation		LRF24-S Deenergised NC, ball valve closed (A – AB = 0%) LRF24-S-O Deenergised NO, ball valve open (A – AB = 100%)	
Manual override		With hand crank, can be fixed in any position	
Angle of rotation		95° ↘	
Running time		Motor 40 ... 75 s (0 ... 4 Nm) Spring return ~20 s at –20 ... 50°C / max. 60 s at –30°C	
Noise level		Motor Max. 50 dB (A) Spring return ~62 dB (A)	
Service life		Min. 60'000 emergency settings	
Position indication		Mechanical	
Safety		Protection class	III Extra low voltage
		Degree of protection	IP54
	EMC	CE according to 89/336/EEC	
	Low voltage directive	CE according to 2006/95/EC	
	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. 1.4 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.
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.

Product features

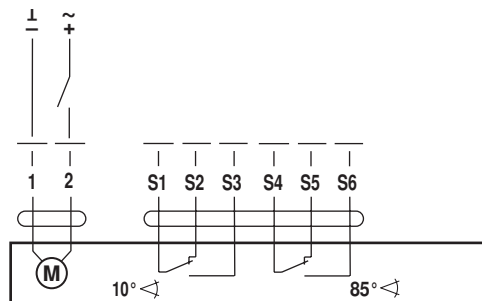
Mode of operation	The actuator moves the ball valve to its normal working position while tensioning the return spring at the same time. If the power supply is interrupted, the energy stored in the spring moves the ball valve back to its safe position.
Simple direct mounting	With WLF mounting kit (accessory) 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° \triangleleft steps.
Manual override	The ball valve can be manually operated and fixed in any position using a hand crank. Release of the locking mechanism can be achieved manually or automatically by applying the supply voltage.
High functional reliability	The actuator is overload-proof, requires no limit switches and automatically stops when the end stop is reached.
Signalling	The actuator has two auxiliary switches with fixed settings. They permit a 10° \triangleleft or 85° \triangleleft angle of rotation to be signalled.
Combination valve actuators	Refer to the valve documentation for suitable valves, their permitted media temperatures and closing pressures.

Electrical installation

Wiring diagram

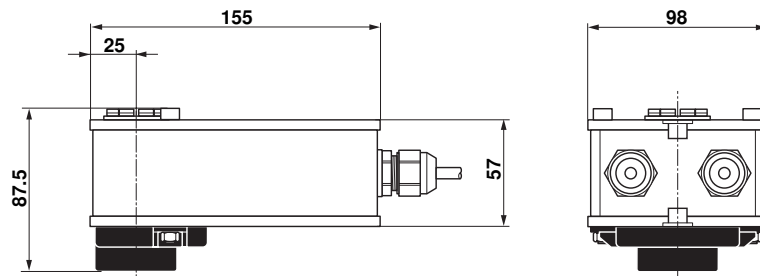
Note

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



Dimensions [mm]

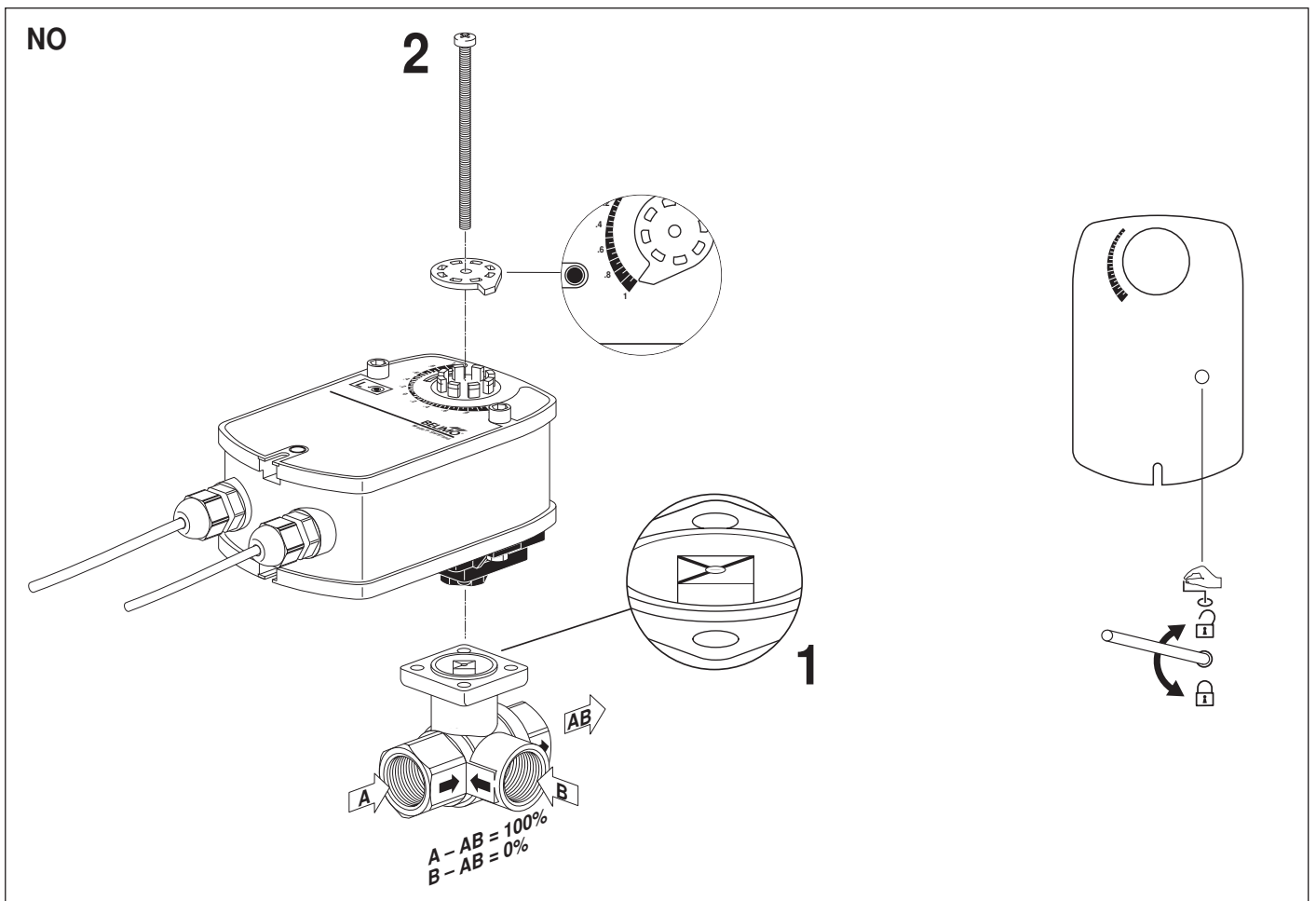
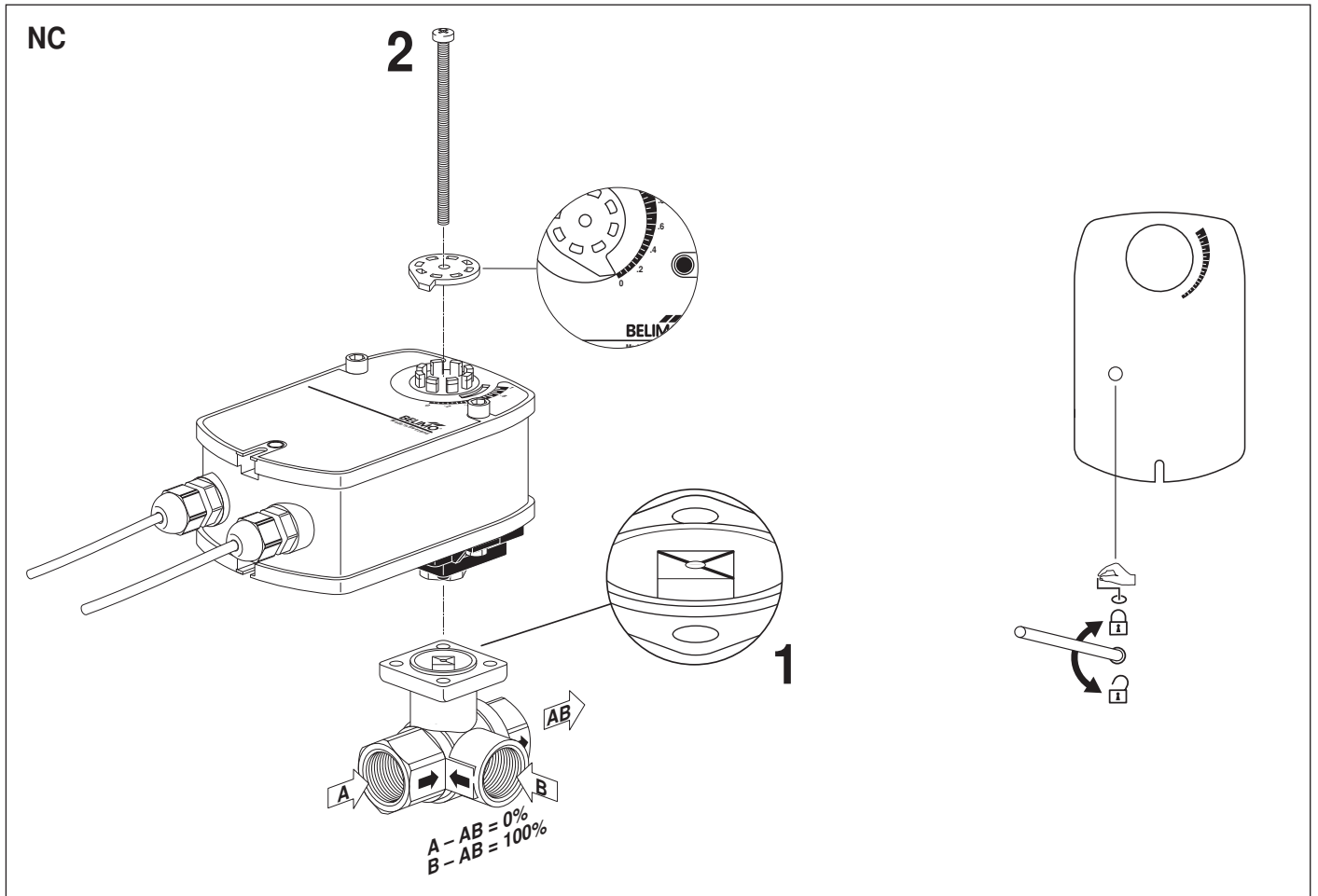
Dimensional diagrams

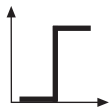
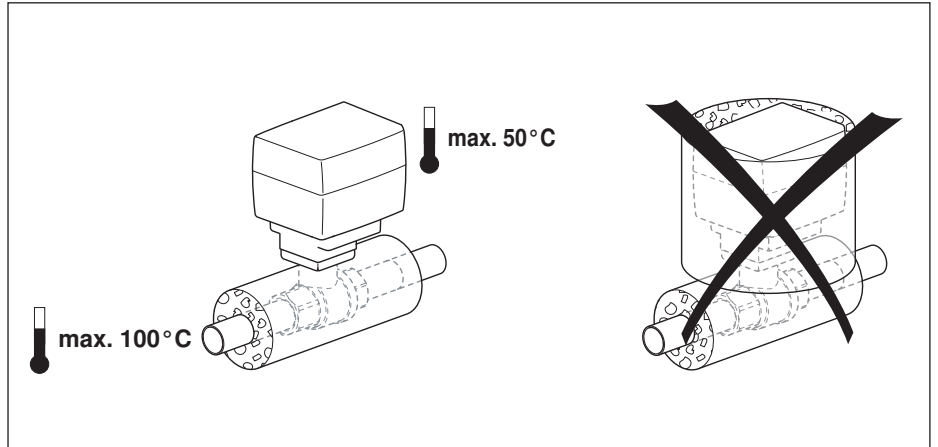
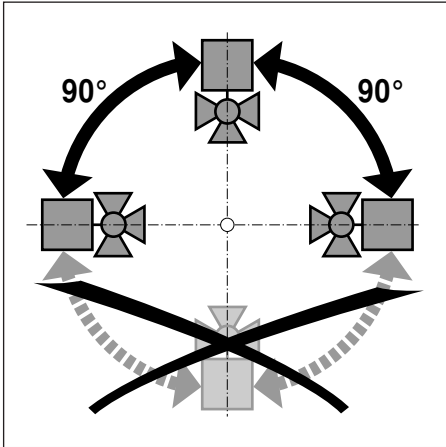


Further documentations

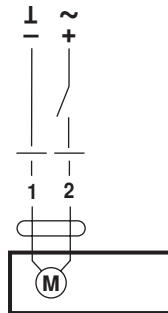
- Complete overview of actuators for water solutions
- Data sheets for ball valves
- Installation instructions for actuators and/or ball valves
- Notes for project planning (hydraulic characteristic curves and circuits, installation regulations, commissioning, maintenance etc.)

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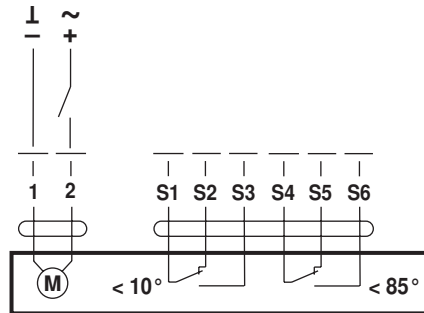




AC 24 V

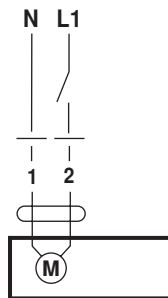


LRF24 (-O)

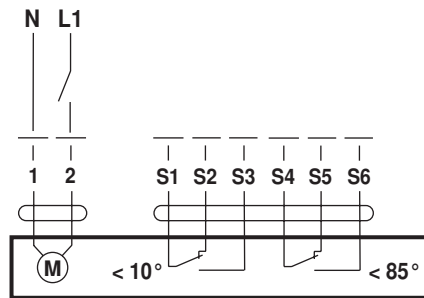


LRF24-S (-O)

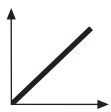
AC 230 V



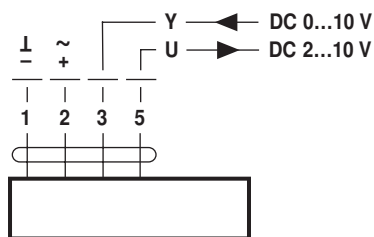
LRF230 (-O)



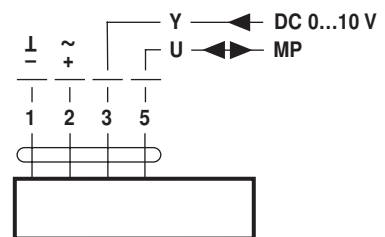
LRF230-S (-O)



AC 24 V / DC 24 V



LRF24-SR (-O)



LRF24-MP (-O)