## Technical data

### Electrical data
- **Nominal voltage**: AC/DC 24 V
- **Nominal voltage frequency**: 50/60 Hz
- **Nominal voltage range**: AC 19.2...28.8 V / DC 21.6...28.8 V
- **Power consumption in operation**: 5 W
- **Power consumption in rest position**: 2.5 W
- **Power consumption for wire sizing**: 7 VA
- **Auxiliary switch**: 2 x SPDT, 1 x 10° / 1 x 85°
- **Switching capacity auxiliary switch**: 1 mA...3 A (0.5 A inductive), AC 250 V
- **Connection supply / control**: Cable 1 m, 2 x 0.75 mm²
- **Connection auxiliary switch**: Cable 1 m, 6 x 0.75 mm²
- **Parallel operation**: Yes (note the performance data)

### Functional data
- **Torque motor**: 4 Nm
- **Torque fail-safe**: 4 Nm
- **Direction of motion fail-safe**: Deenergised NC, valve closed (A – AB = 0%)
- **Manual override**: hand lever
- **Running time motor**: 75 s / 90°
- **Running time fail-safe**: <20 s / 90°
- **Sound power level, motor**: 50 dB(A)
- **Position indication**: Mechanical
- **Service life**: Min. 60'000 fail-safe positions

### Safety
- **Protection class IEC/EN**: III Safety Extra-Low Voltage (SELV)
- **Protection class auxiliary switch IEC/EN**: II reinforced insulation
- **Degree of protection IEC/EN**: IP54
- **EMC**: CE according to 2014/30/EU
- **Low voltage directive**: CE according to 2014/35/EU
- **Certification IEC/EN**: IEC/EN 60730-1 and IEC/EN 60730-2-14
- **Mode of operation**: Type 1
- **Rated impulse voltage supply / control**: 0.8 kV
- **Rated impulse voltage auxiliary switch**: 2.5 kV
- **Control pollution degree**: 3
- **Ambient temperature**: -30...50°C
- **Storage temperature**: -40...80°C
- **Ambient humidity**: Max. 95% r.H., non-condensing
- **Servicing**: maintenance-free

### Weight
- **Weight**: 1.5 kg
Safety notes

• This device has been designed for use in stationary heating, ventilation and air-conditioning systems and must not be used outside the specified field of application, especially in aircraft or in any other airborne means of transport.

• Outdoor application: only possible in case that no (sea) water, snow, ice, insolation or aggressive gases interfere directly with the actuator and that is ensured that the ambient conditions remain at any time within the thresholds according to the data sheet.

• Only authorised specialists may carry out installation. All applicable legal or institutional installation regulations must be complied during installation.

• 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.

• Cables must not be removed from the device.

• The device contains electrical and electronic components and must not be disposed of as household refuse. All locally valid regulations and requirements must be observed.

Product features

Mode of operation
The actuator moves the valve to the operating position at the same time as tensioning the return spring. The valve is turned back to the fail-safe position by spring force when the supply voltage is interrupted.

Simple direct mounting
Simple direct mounting on the ball valve with only one screw. The mounting orientation in relation to the ball valve can be selected in 90° steps.

Manual override
The valve can be manually operated and fixed in any position using a hand crank. Unlocking is carried out manually or automatically by applying the operating voltage.

High functional reliability
The actuator is overload protected, 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° or 85° angle of rotation to be signaled.

Electrical installation

Notes
• Connection via safety isolating transformer.
• Parallel connection of other actuators possible. Observe the performance data.

Wiring diagrams

AC/DC 24 V, open/close

Cable colours:
1 = black
2 = red
S1 = violet
S2 = red
S3 = white
S4 = orange
S5 = pink
S6 = grey
LRF24-S

Rotary actuator fail-safe, Open/close, AC/DC 24 V, 4 Nm, with 2 integrated auxiliary switches

**Dimensions [mm]**

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<thead>
<tr>
<th>Dimensional drawings</th>
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<tr>
<td>155</td>
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**Further documentation**

- The complete product range for water applications
- Data sheets for ball valves
- Installation instructions for actuators and/or ball valves
- General notes for project planning