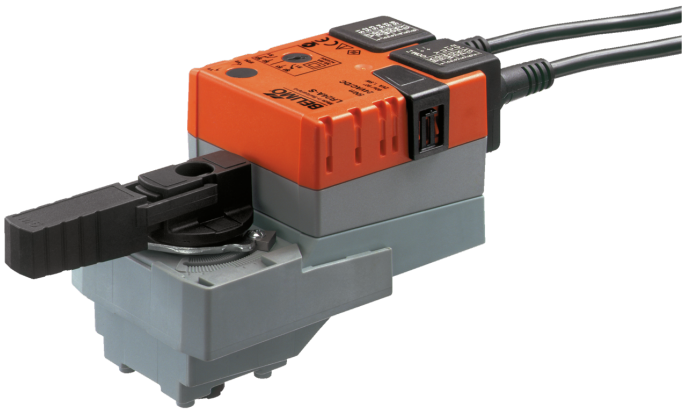
Rotary actuator for ball valves

- Torque motor 5 Nm
- Nominal voltage AC/DC 24 V
- Control Open/close, 3-point
- with integrated auxiliary switch



Picture may differ from product

## 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 19.2...28.8 V |
| | Power consumption in operation | 1.5 W |
| | Power consumption in rest position | 0.2 W |
| | Power consumption for wire sizing | 2 VA |
| | Auxiliary switch | 1x SPDT, 0...100% |
| | Switching capacity auxiliary switch | 1 mA...3 A (0.5 A inductive), DC 5 V...AC 250 V |
| | Connection supply / control | Cable 1 m, 3x 0.75 $mm^2$ |
| | Connection auxiliary switch | Cable 1 m, 3x 0.75 $mm^2$ |
| | Parallel operation | Yes (note the performance data) |
| **Functional data** | Torque motor | 5 Nm |
| | Manual override | with push-button, can be locked |
| | Running time motor | 90 s / 90° |
| | Sound power level, motor | 35 dB(A) |
| | Position indication | Mechanical, pluggable |
| **Safety data** | Protection class IEC/EN | III, Safety Extra-Low Voltage (SELV) |
| | Power source UL | Class 2 Supply |
| | Protection class auxiliary switch IEC/EN | II, reinforced insulation |
| | Degree of protection IEC/EN | IP54 |
| | Degree of protection NEMA/UL | NEMA 2 |
| | Housing | UL Enclosure Type 2 |
| | 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 |
| | UL Approval | cULus according to UL60730-1A, UL60730-2-14 and CAN/CSA E60730-1<br>The UL marking on the actuator depends on the production site, the device is UL-compliant in any case |
| | Type of action | Type 1 |
| | Rated impulse voltage supply / control | 0.8 kV |
| | Rated impulse voltage auxiliary switch | 2.5 kV |
| | Pollution degree | 3 |
| | Ambient humidity | Max. 95% RH, non-condensing |
| | Ambient temperature | -30...50°C [-22...122°F] |
| | Storage temperature | -40...80°C [-40...176°F] |
| | Servicing | maintenance-free |

## Technical data

| | | |
|---|---|---|
| **Weight** | Weight | 0.51 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 if no (sea) water, snow, ice, sunlight or aggressive gases act directly on the device and if it is ensured that the ambient conditions remain within the limit values specified in the data sheet at all times.
- Only authorised specialists may carry out installation. All applicable legal or institutional installation regulations must be complied with during installation.
- The switch for changing the direction of rotation may only be operated by authorised specialists. The direction of rotation must not in particular be reversed in a frost protection circuit.
- 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

**Simple direct mounting**
Straightforward direct mounting on the ball valve with only one central screw. The assembly tool is integrated in the plug-in position indicator. The mounting orientation in relation to the ball valve can be selected in 90° steps.

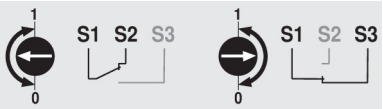
**Manual override**
Manual override with push-button possible (the gear train is disengaged for as long as the button is pressed or remains locked).

**Adjustable angle of rotation**
Adjustable angle of rotation with mechanical end stops.

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

**Flexible signalling**
With adjustable auxiliary switch (0...100%)

Auxiliary switch




## Accessories

**Electrical accessories**

| Description | Type |
|---|---|
| Auxiliary switch 1x SPDT add-on | S1A |
| Auxiliary switch 2x SPDT add-on | S2A |
| Feedback potentiometer 140 Ω add-on | P140A |
| Feedback potentiometer 1 kΩ add-on | P1000A |
| Feedback potentiometer 10 kΩ add-on | P10000A |

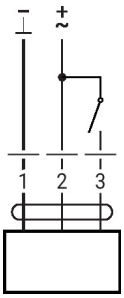
## Electrical installation

**Supply from isolating transformer.**
**Parallel connection of other actuators possible. Observe the performance data.**
**Direction of rotation switch is covered. Factory setting: Direction of rotation Y2.**

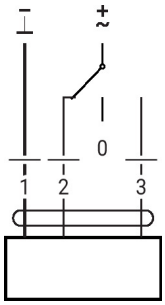
## Electrical installation

**Wire colours:**
1 = black
2 = red
3 = white
S1 = violet
S2 = red
S3 = white

AC/DC 24 V, open/close

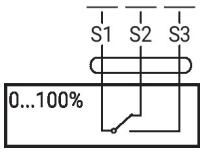



AC/DC 24 V, 3-point

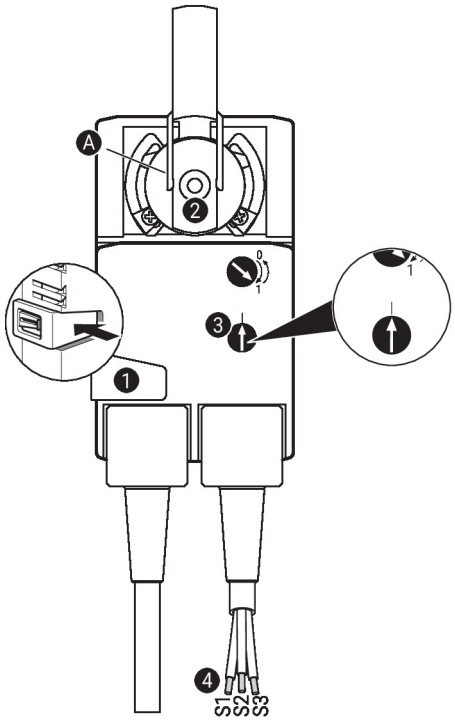



| 1 | 2 | 3 | |
|---|---|---|---|
| | | | A–AB = 0% |
| | | | A–AB = 100% |
| | | | stop |
| | | | A–AB = 100% |

Auxiliary switch




## Operating controls and indicators




**Auxiliary switch settings**

> ⚠ **Note:** Perform settings on the actuator only in deenergised state.

**For the auxiliary switch position settings, carry out points ❶ to ❹ successively.**

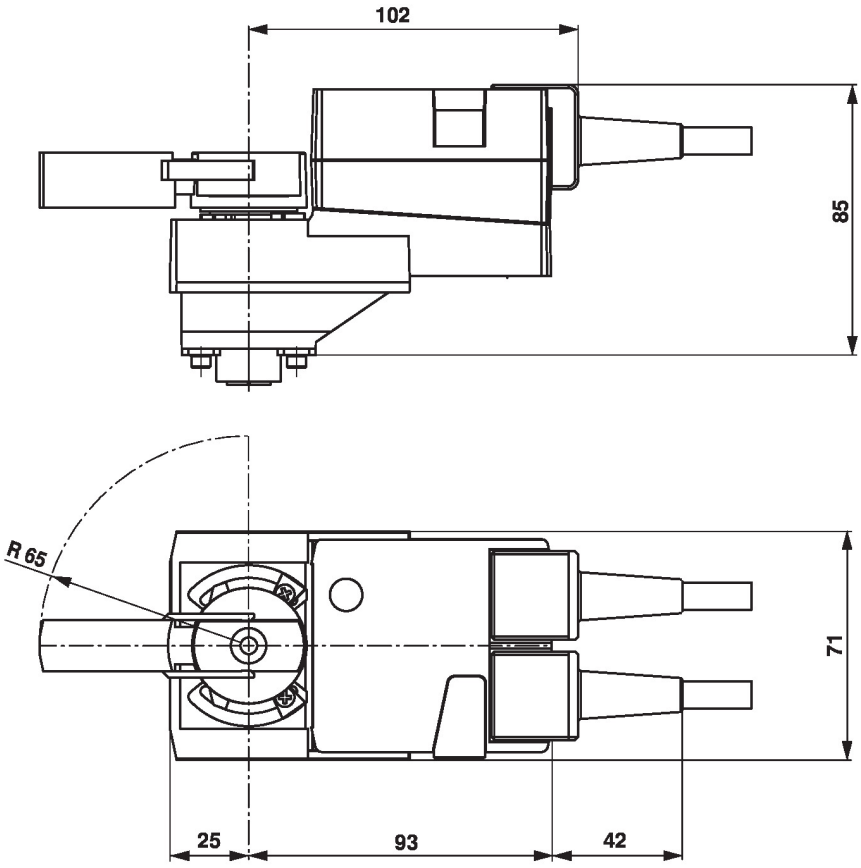
❶ **Manual override button**
Holding button pressed down: Gear train disengages.
Manual override is possible.

❷ **Shaft clamp**
Turn until edge line Ⓐ displays the desired switching position of the actuator and release button ❶.

❸ **Auxiliary switch**
Turn rotary knob until the arrow points to the vertical line.

❹ **Cable**
Connect continuity tester to S1 + S2 or to S1 + S3.
If the auxiliary switch should switch in the opposite direction, rotate the auxiliary switch by 180°.

## Dimensions




## 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