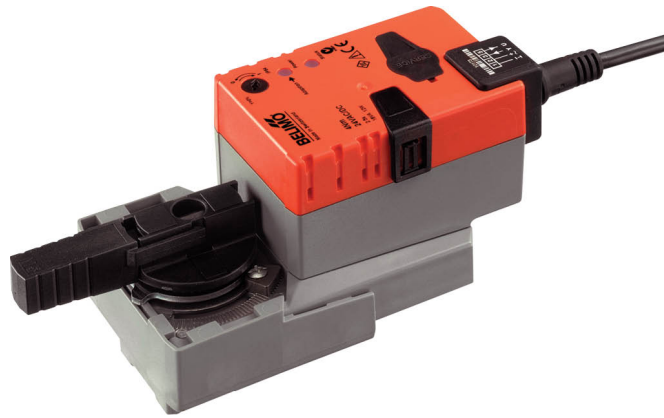


Rotary actuator for ball valves

- Torque motor 4 Nm
- Nominal voltage AC/DC 24 V
- Control Open/close
- Running time motor 9 s


**Technical data**

|                        |  |   |
|------------------------|--|---|
| <b>Electrical data</b> | 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         | 13 W  |
|                        | Power consumption in rest position     | 2 W   |
|                        | Power consumption for wire sizing      | 23 VA   |
|                        | Power consumption for wire sizing note | Imax 20 A @ 5 ms  |
|                        | Connection supply / control            | Cable 1 m, 3 x 0.75 mm <sup>2</sup>   |
|                        | Parallel operation                     | Yes (note the performance data)   |
| <b>Functional data</b> | Torque motor                           | 4 Nm  |
|                        | Manual override                        | with push-button, can be locked   |
|                        | Running time motor                     | 9 s / 90°   |
|                        | Sound power level, motor               | 45 dB(A)  |
|                        | Position indication                    | Mechanical, pluggable   |
| <b>Safety data</b>     | Protection class IEC/EN                | III, Safety Extra-Low Voltage (SELV)  |
|                        | Power source UL                        | Class 2 Supply  |
|                        | Degree of protection IEC/EN            | IP54  |
|                        | Degree of protection NEMA/UL           | NEMA 2  |
|                        | Enclosure                              | UL Enclosure Type 2   |
|                        | EMC                                    | CE according to 2014/30/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  |
|                        | Pollution degree                       | 3   |
|                        | Ambient humidity                       | Max. 95% RH, non-condensing   |
|                        | Ambient temperature                    | -30...40°C [-22...104°F]  |
|                        | Ambient temperature note               | Caution: +40...+50°C utilisation possible only under certain restrictions. Please contact your supplier.  |
|                        | Storage temperature                    | -40...80°C [-40...176°F]  |
|                        | Servicing                              | maintenance-free  |
|                        | <b>Weight</b>                          | Weight  |

**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 device and that it is ensured that the ambient conditions remain within the thresholds according to the data sheet at any time.
- Only authorised specialists may carry out installation. All applicable legal or institutional installation regulations must be complied 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.
- Self adaptation is necessary when the system is commissioned and after each adjustment of the angle of rotation (press the adaptation push-button once).
- 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**

|                                     |  |
|-------------------------------------|--|
| <b>Simple direct mounting</b>       | Straightforward direct mounting on the ball valve with only one central screw. The assembly tool is integrated in the plug-in position indication. The mounting orientation in relation to the ball valve can be selected in 90° steps.  |
| <b>Manual override</b>              | Manual override with push-button possible (the gear train is disengaged for as long as the button is pressed or remains locked).   |
| <b>Adjustable angle of rotation</b> | Adjustable angle of rotation with mechanical end stops.  |
| <b>High functional reliability</b>  | The actuator is overload protected, requires no limit switches and automatically stops when the end stop is reached.   |
| <b>Home position</b>                | <p>The first time the supply voltage is switched on, i.e. at the time of commissioning, the actuator carries out an adaptation, which is when the operating range and position feedback adjust themselves to the mechanical setting range.</p> <p>The detection of the mechanical end stops enables a gentle approach to the end positions, thus protecting the actuator mechanics.</p> <p>The actuator then moves into the position defined by the control signal.</p> <p>Factory setting: Y2 (counter-clockwise rotation).</p> |

**Accessories**

| Electrical accessories | Description                          | Type    |
|------------------------|--------------------------------------|---------|
|                        | Auxiliary switch 1 x SPDT add-on     | S1A     |
|                        | Auxiliary switch 2 x SPDT add-on     | S2A     |
|                        | Feedback potentiometer 140 Ω add-on  | P140A   |
|                        | Feedback potentiometer 200 Ω add-on  | P200A   |
|                        | Feedback potentiometer 500 Ω add-on  | P500A   |
|                        | Feedback potentiometer 1 kΩ add-on   | P1000A  |
|                        | Feedback potentiometer 2.8 kΩ add-on | P2800A  |
|                        | Feedback potentiometer 5 kΩ add-on   | P5000A  |
|                        | Feedback potentiometer 10 kΩ add-on  | P10000A |

**Electrical installation**

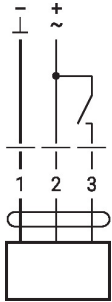

- Supply from isolating transformer.**
- Parallel connection of other actuators possible. Observe the performance data.**
- Direction of rotation switch is covered. Factory setting: Direction of rotation Y2.**

**Wire colours:**

- 1 = black
- 2 = red
- 3 = white

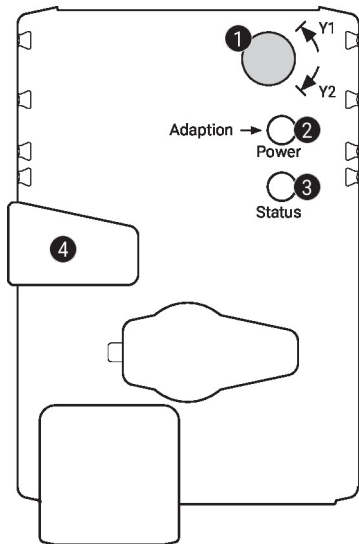
**Wiring diagrams**

AC/DC 24 V, open/close



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

**Operating controls and indicators**



**1 Direction of rotation switch**

Switch over:                      Direction of rotation changes

**2 Push-button and LED display green**

Off:                      No power supply or malfunction  
 On:                      In operation  
 Press                      Triggers angle of rotation adaptation, followed by standard mode button:

**3 Push-button and LED display yellow**

Off:                      Standard mode  
 On:                      Adaptation or synchronisation process active  
 Press button:              No function

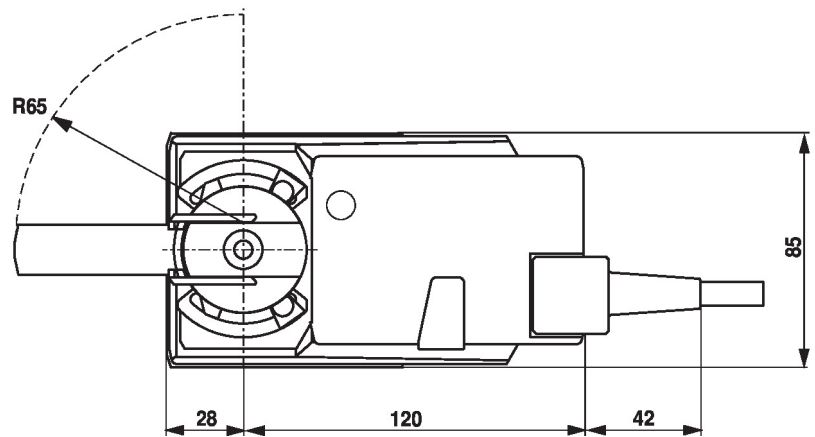
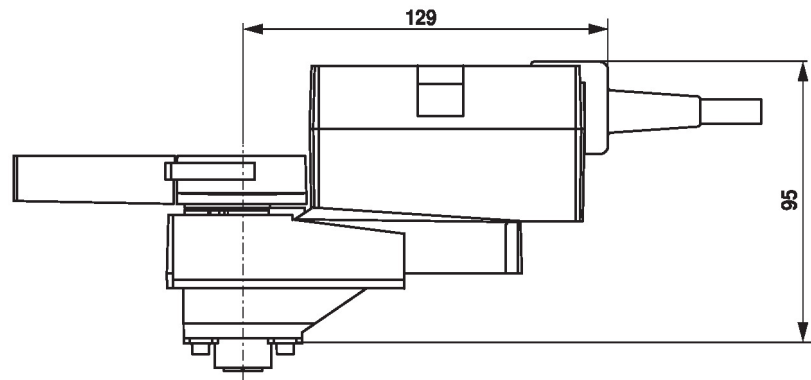
**4 Manual override button**

Press button:              Gear train disengages, motor stops, manual override possible  
 Release button:              Gear train engages, standard mode

**Check power supply connection**

**2** Off and **3** On                      Possible wiring error in power supply

## 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