### 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**: 2.5 W
- **Power consumption in rest position**: 0.2 W
- **Power consumption for wire sizing**: 5.5 VA
- **Connection supply / control**: Cable 1 m, 3 x 0.75 mm²
- **Parallel operation**: Yes (note the performance data)

**Functional data**
- **Torque motor**: 20 Nm
- **Manual override**: with push-button, can be locked
- **Running time motor**: 90 s / 90°
- **Sound power level, motor**: 45 dB(A)
- **Position indication**: Mechanically, integrated, two-section

**Safety**
- **Protection class IEC/EN**: III Safety Extra-Low Voltage (SELV)
- **Protection class UL**: 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
- **Certification UL**: cULus according to UL60730-1A, UL60730-2-14 and CAN/CSA E60730-1:02
- **Certification UL note**: The UL marking on the actuator depends on the production site, the device is UL-compliant in any case

**Mode of operation**: Type 1
- **Rated impulse voltage supply / control**: 0.8 kV
- **Control pollution degree**: 3
- **Ambient temperature**: 0...50°C
- **Storage temperature**: -40...80°C
- **Ambient humidity**: Max. 95% r.H., non-condensing
- **Servicing**: maintenance-free

**Mechanical data**
- **Connection flange**: F03/F04/F05

**Weight**
- **Weight**: 0.91 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 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 surface temperature between actuator and fitting may not exceed 50°C.
- 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

Application
For rotary valves and butterfly valves with the following mechanical specifications:
- ISO 5211: F03, F04, F05 (hole circle diameter on the flange for mounting the fitting)
- ISO 5211: quadratic, flat head or wedge-shaped stem head geometry

Tappet shaft
The form fit adapter is not included in the scope of delivery (see «Accessories»).

Simple direct mounting
Simple direct mounting on the rotary valve or butterfly valve with mounting flange. The mounting orientation in relation to the fitting can be selected in 90° steps.

Manual override
Manual override with push-button possible (the gear 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.

Position indication
The two-section position indication (lever) can be reduced to 70 mm, the front part of the lever can be attached to the cable (clip).
### Accessories

#### Electrical accessories

<table>
<thead>
<tr>
<th>Description</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auxiliary switch 1 x SPDT add-on</td>
<td>S1A</td>
</tr>
<tr>
<td>Auxiliary switch 2 x SPDT add-on</td>
<td>S2A</td>
</tr>
<tr>
<td>Feedback potentiometer 140 Ω add-on</td>
<td>P140A</td>
</tr>
<tr>
<td>Feedback potentiometer 200 Ω add-on</td>
<td>P200A</td>
</tr>
<tr>
<td>Feedback potentiometer 500 Ω add-on</td>
<td>P500A</td>
</tr>
<tr>
<td>Feedback potentiometer 1 kΩ add-on</td>
<td>P1000A</td>
</tr>
<tr>
<td>Feedback potentiometer 2.8 kΩ add-on</td>
<td>P2800A</td>
</tr>
<tr>
<td>Feedback potentiometer 5 kΩ add-on</td>
<td>P5000A</td>
</tr>
<tr>
<td>Feedback potentiometer 10 kΩ add-on</td>
<td>P10000A</td>
</tr>
</tbody>
</table>

#### Mechanical accessories

<table>
<thead>
<tr>
<th>Description</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form fit adapter square 8x8x57 mm (LxWxH)</td>
<td>ZSV-08</td>
</tr>
<tr>
<td>Form fit adapter square 9x9x57 mm (LxWxH)</td>
<td>ZSV-09</td>
</tr>
<tr>
<td>Form fit adapter square 10x10x57 mm (LxWxH)</td>
<td>ZSV-10</td>
</tr>
<tr>
<td>Form fit adapter square 11x11x57 mm (LxWxH)</td>
<td>ZSV-11</td>
</tr>
<tr>
<td>Form fit adapter square 11x11x57 mm (LxBxH, inside square)</td>
<td>ZSV-11-4K</td>
</tr>
<tr>
<td>Form fit adapter square 12x12x57 mm (LxWxH)</td>
<td>ZSV-12</td>
</tr>
<tr>
<td>Form fit adapter square 14x14x57 mm (LxWxH)</td>
<td>ZSV-14</td>
</tr>
<tr>
<td>Form fit adapter two flats 8xØ17x57 mm (WxØxH)</td>
<td>ZSF-08</td>
</tr>
<tr>
<td>Form fit adapter two flats 9xØ12x57 mm (WxØxH)</td>
<td>ZSF-09</td>
</tr>
<tr>
<td>Form fit adapter two flats 10xØ17x57 mm (WxØxH)</td>
<td>ZSF-10</td>
</tr>
<tr>
<td>Form fit adapter two flats 11xØ14x57 mm (WxØxH)</td>
<td>ZSF-11</td>
</tr>
<tr>
<td>Form fit adapter two flats 14xØ18x57 mm (WxØxH)</td>
<td>ZSF-14</td>
</tr>
<tr>
<td>Form fit adapter wedge groove Ø12x4x57 mm (ØxWxH)</td>
<td>ZSK-12</td>
</tr>
<tr>
<td>Form fit adapter wedge groove Ø14x5x57 mm (ØxWxH)</td>
<td>ZSK-14</td>
</tr>
</tbody>
</table>

#### Electrical installation

- Connection via safety isolating transformer.
- Parallel connection of other actuators possible. Observe the performance data.
- Direction of rotation switch is covered. Factory setting: Direction of rotation Y2.

#### Wiring diagrams

**AC/DC 24 V, open/close**

```
1  ~  2  3
```

Cable colours:
1 = black
2 = red
3 = white

**AC/DC 24 V, 3-point**

```
1  ~  2  3
```

Cable colours:
1 = black
2 = red
3 = white

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www.belimo.com
SR24A-R
Rotary actuator (Retrofit), Open/close, 3-point, AC/DC 24 V, 20 Nm

Dimensions [mm]

Dimensional drawings

Further documentation

- General notes for project planning