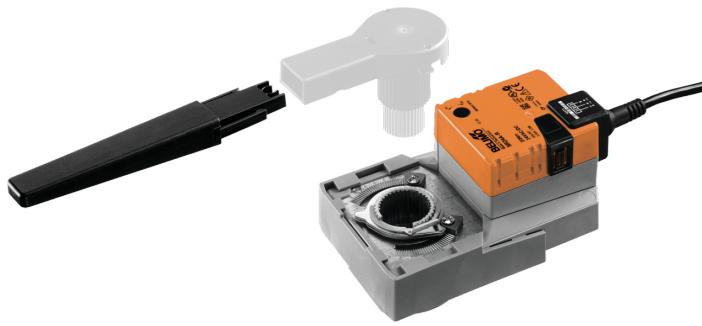


**RetroFIT+ rotary actuator for rotary valves and butterfly valves**

- Torque motor 20 Nm
- Nominal voltage AC/DC 24 V
- Control Open/close, 3-point



Picture may differ from product

**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         | 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, 3x 0.75 mm <sup>2</sup>                                                                                                                                        |
|                        | Parallel operation                     | Yes (note the performance data)                                                                                                                                           |
| <b>Functional data</b> | 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                    | Mechanical, integrated, two-section                                                                                                                                       |
| <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                                                                                                                                                                    |
|                        | Housing                                | 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                    | 0...50°C [32...122°F]                                                                                                                                                     |
|                        | Storage temperature                    | -40...80°C [-40...176°F]                                                                                                                                                  |
|                        | Servicing                              | maintenance-free                                                                                                                                                          |
| <b>Mechanical data</b> | Connection flange                      | F03/F04/F05                                                                                                                                                               |
| <b>Weight</b>          | Weight                                 | 0.91 kg                                                                                                                                                                   |

## Safety notes



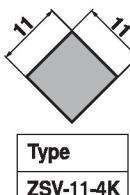
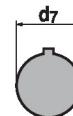
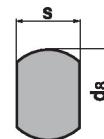
- This device has been designed for use in stationary heating, ventilation and air-conditioning systems and must not be used outside the specified field of application, especially in aircraft or in any other airborne means of transport.
- Outdoor application: only possible in case that no (sea) water, snow, ice, insolation or aggressive gases interfere directly with the 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 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 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 spindle head geometry

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



| Type   | s<br>[mm] |
|--------|-----------|
| ZSV-08 | 8         |
| ZSV-09 | 9         |
| ZSV-10 | 10        |
| ZSV-11 | 11        |
| ZSV-12 | 12        |
| ZSV-14 | 14        |

| Type   | s<br>[mm] | d8<br>[mm] |
|--------|-----------|------------|
| ZSF-08 | 8         | 17         |
| ZSF-09 | 9         | 12         |
| ZSF-10 | 10        | 17         |
| ZSF-11 | 11        | 14         |
| ZSF-14 | 14        | 18         |

| Type   | d7<br>[mm] |
|--------|------------|
| ZSK-12 | 12         |
| ZSK-14 | 14         |

**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 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.

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

## Accessories

| Electrical accessories | Description                     | Type |
|------------------------|---------------------------------|------|
|                        | Auxiliary switch 1x SPDT add-on | S1A  |

## Accessories

|                        | Description                                                                  | Type      |
|------------------------|------------------------------------------------------------------------------|-----------|
|                        | Auxiliary switch 2x SPDT add-on                                              | S2A       |
|                        | Feedback potentiometer 140 $\Omega$ add-on                                   | P140A     |
|                        | Feedback potentiometer 1 k $\Omega$ add-on                                   | P1000A    |
|                        | Feedback potentiometer 10 k $\Omega$ add-on                                  | P10000A   |
| Mechanical accessories | Description                                                                  | Type      |
|                        | Form fit adapter square 8x8x57 mm (LxWxH)                                    | ZSV-08    |
|                        | Form fit adapter square 9x9x57 mm (LxWxH)                                    | ZSV-09    |
|                        | Form fit adapter square 10x10x57 mm (LxWxH)                                  | ZSV-10    |
|                        | Form fit adapter square 11x11x57 mm (LxWxH)                                  | ZSV-11    |
|                        | Form fit adapter square 11x11x57 mm (LxWxH, inside square)                   | ZSV-11-4K |
|                        | Form fit adapter square 12x12x57 mm (LxWxH)                                  | ZSV-12    |
|                        | Form fit adapter square 14x14x57 mm (LxWxH)                                  | ZSV-14    |
|                        | Form fit adapter flat head 8x $\varnothing$ 17x57 mm (Wx $\varnothing$ xH)   | ZSF-08    |
|                        | Form fit adapter flat head 9x $\varnothing$ 12x57 mm (Wx $\varnothing$ xH)   | ZSF-09    |
|                        | Form fit adapter flat head 10x $\varnothing$ 17x57 mm (Wx $\varnothing$ xH)  | ZSF-10    |
|                        | Form fit adapter flat head 11x $\varnothing$ 14x57 mm (Wx $\varnothing$ xH)  | ZSF-11    |
|                        | Form fit adapter flat head 14x $\varnothing$ 18x57 mm (Wx $\varnothing$ xH)  | ZSF-14    |
|                        | Form fit adapter wedge groove $\varnothing$ 12x4x57 mm ( $\varnothing$ xWxH) | ZSK-12    |
|                        | Form fit adapter wedge groove $\varnothing$ 14x5x57 mm ( $\varnothing$ xWxH) | ZSK-14    |

## Electrical installation



Supply from isolating transformer.

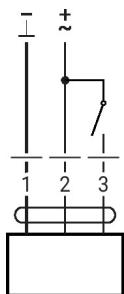
Parallel connection of other actuators possible. Observe the performance data.

Direction of rotation switch is covered. Factory setting: Direction of rotation Y2.

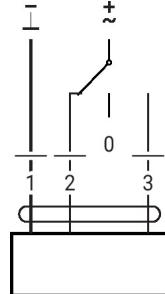
## Wire colours:

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

AC/DC 24 V, open/close

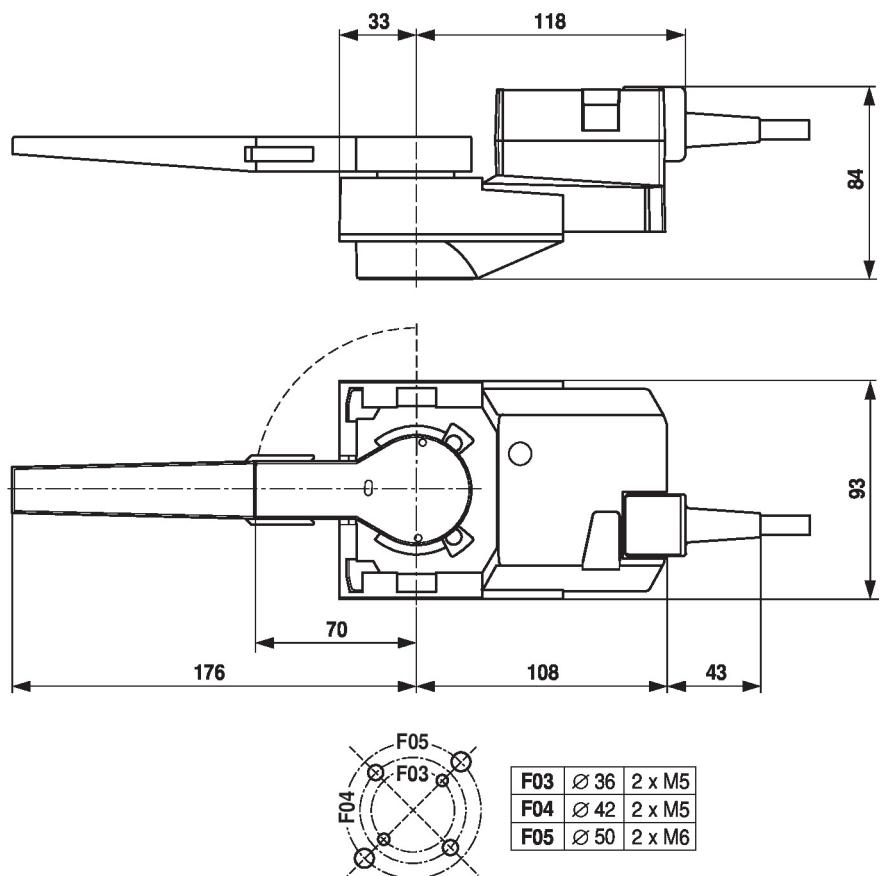


AC/DC 24 V, 3-point



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

## Dimensions



## Further documentation

- General notes for project planning