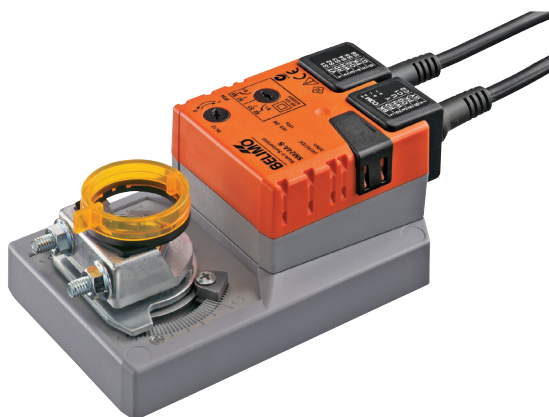


Damper actuator for adjusting dampers in technical building installations

- Air damper size up to approx. 4 m<sup>2</sup>
- Nominal torque 20 Nm
- Nominal voltage AC/DC 24 V
- Control Open-close, 3-point
- With integrated auxiliary switch



## 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 W   |                         |
|  | Power consumption in rest position     | 0.2 W   |                         |
|  | Power consumption for wire sizing      | 4 VA  |                         |
|  | Auxiliary switch                       | 1 x SPDT, 0...100%  |                         |
|  | Switching capacity auxiliary switch    | 1 mA...3 (0.5 inductive) A, AC 250 V                                  |                         |
|  | Connection supply / control            | Cable 1 m, 3 x 0.75 mm²   |                         |
|  | Connection auxiliary switch            | Cable 1 m, 3 x 0.75 mm²   |                         |
| Parallel operation                       | Yes (note the performance data)        |   |                         |
| Functional data                          | Torque motor                           | Min. 20 Nm  |                         |
|  | Direction of motion motor              | Selectable with switch 0 (ccw rotation) / 1 (cw rotation)             |                         |
|  | Manual override                        | Gear disengagement with push-button, can be locked                    |                         |
|  | Angle of rotation                      | Max. 95°  |                         |
|  | Angle of rotation note                 | can be limited on both sides with adjustable mechanical end stops     |                         |
|  | Running time motor                     | 150 s / 90°   |                         |
|  | Sound power level motor                | 45 dB(A)  |                         |
|  | Spindle driver                         | Universal spindle clamp reversible 10...20 mm                         |                         |
|  | Position indication                    | Mechanically, pluggable   |                         |
|  | Safety                                 | Protection class IEC/EN   | II Protective insulated |
| Protection class UL                      |  | II Protective insulated   |                         |
| Protection class auxiliary switch IEC/EN |  | II Protective insulated   |                         |
| Degree of protection IEC/EN              |  | IP54  |                         |
| Degree of protection NEMA/UL             |  | NEMA 2, UL Enclosure Type 2   |                         |
| EMC                                      |  | CE according to 2004/108/EC   |                         |
| Low voltage directive                    |  | CE according to 2006/95/EC  |                         |
| Certification IEC/EN                     |  | IEC/EN 60730-1 and IEC/EN 60730-2-14                                  |                         |
| Certification UL                         |  | cULus according to UL 60730-1A, UL 60730-2-14 and CAN/CSA E60730-1:02 |                         |
| Mode of operation                        |  | Type 1.B  |                         |
|  | 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  |                         |
|  | Non-operating temperature              | -40...80°C  |                         |
|  | Ambient humidity                       | 95% r.h., non-condensing  |                         |
|  | Maintenance                            | Maintenance-free  |                         |
|  | Weight                                 | Weight approx.  | 1.2 kg                  |

## Safety notes



- The device must not be used outside the specified field of application, especially not in aircraft or in any other airborne means of transport.

## Safety notes

- 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.
- To calculate the torque required, the specifications supplied by the damper manufacturers concerning the cross-section, the design, the installation site and the ventilation conditions must be observed.
- 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>       | Simple direct mounting on the damper spindle with an universal spindle clamp, supplied with an anti-rotation device to prevent the actuator from rotating. |
| <b>Manual override</b>              | Manual override with push-button possible (the gear is disengaged for as long as the button is pressed or remains locked).                                 |
| <b>High functional reliability</b>  | The actuator is overload protected, requires no limit switches and automatically stops when the end stop is reached.                                       |
| <b>Adjustable angle of rotation</b> | Adjustable angle of rotation with mechanical end stops.  |
| <b>Flexible signalization</b>       | With adjustable auxiliary switch (0 ... 100%)  |

## Accessories

|                               | Description   | Type       |
|-------------------------------|---|------------|
| <b>Electrical accessories</b> | Auxiliary switch, add-on, 1 x SPDT                              | S1A        |
|                               | Auxiliary switch, add-on, 2 x SPDT                              | S2A        |
|                               | Auxiliary switch, add-on, 2 x SPDT, grey                        | S2A GR     |
|                               | Feedback potentiometer 140 Ohm, add-on                          | P140A      |
|                               | Feedback potentiometer 140 Ohm, add-on, grey                    | P140A GR   |
|                               | Feedback potentiometer 200 Ohm, add-on                          | P200A      |
|                               | Feedback potentiometer 500 Ohm, add-on                          | P500A      |
|                               | Feedback potentiometer 500 Ohm, add-on, grey                    | P500A GR   |
|                               | Feedback potentiometer 1 kOhm, add-on                           | P1000A     |
|                               | Feedback potentiometer 2.8 kOhm, add-on                         | P2800A     |
|                               | Feedback potentiometer 2.8 kOhm, add-on, grey                   | P2800A GR  |
|                               | Feedback potentiometer 1 kOhm, add-on, grey                     | P1000A GR  |
|                               | Feedback potentiometer 5 kOhm, add-on                           | P5000A     |
|                               | Feedback potentiometer 5 kOhm, add-on, grey                     | P5000A GR  |
|                               | Feedback potentiometer 10 kOhm, add-on                          | P10000A    |
|                               | Feedback potentiometer 10 kOhm, add-on, grey                    | P10000A GR |
|                               | Description   | Type       |
| <b>Mechanical accessories</b> | Actuator arm, for standard spindle clamp (reversible) K-SA      | AH-20      |
|                               | Actuator arm, for one-sided spindle clamp K-ENSA                | AH-25      |
|                               | Shaft extension 250 mm for CrNi (INOX)                          | AV12-25-I  |
|                               | Shaft extension 250 mm, for damper spindles Ø 8...25 mm         | AV8-25     |
|                               | Straight ball joint with M8, suitable for damper crank arms KH8 | KG10A      |
|                               | Angled ball joint with M8, suitable for damper crank arms KH8   | KG8        |
|                               | Damper crank arm, for damper spindles                           | KH8        |
|                               | Spindle clamp, one side for NM..A, SM..A                        | K-ENSA     |
|                               | Spindle clamp, one side for SM..A                               | K-ENSA-I   |
|                               | Spindle clamp, reversible for SM..A and NMQ..                   | K-SA       |

## Accessories

| Description   | Type        |
|---|-------------|
| Universal mounting bracket 180 mm                               | Z-ARS180    |
| Universal mounting bracket 230 mm                               | Z-ARS230    |
| Angle of rotation limiter, for K-NA                             | 20334-00001 |
| Form fit insert 10x10 mm, for NM..A / SM..A                     | ZF10-NSA    |
| Form fit insert 12x12 mm, for NM..A / SM..A                     | ZF12-NSA    |
| Form fit insert 15x15 mm  | ZF15-NSA    |
| Form fit insert 16x16 mm, for NM..A / SM..A                     | ZF16-NSA    |
| Mounting kit for linkage operation, SM..A for flat installation | ZG-SMA      |
| Position indication for LM..A, NM..A, SM..A, GM..A              | Z-PI        |
| Base plate extension from SM..A to SM../AM../SMD24R             | Z-SMA       |

## Electrical installation

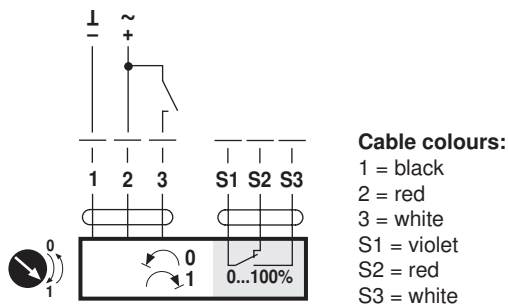


## Notes

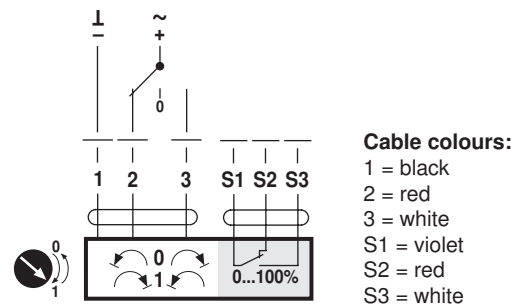
- Connection via safety isolating transformer.
- Parallel connection of other actuators possible. Observe the performance data.

## Wiring diagrams

AC/DC 24 V, open-close

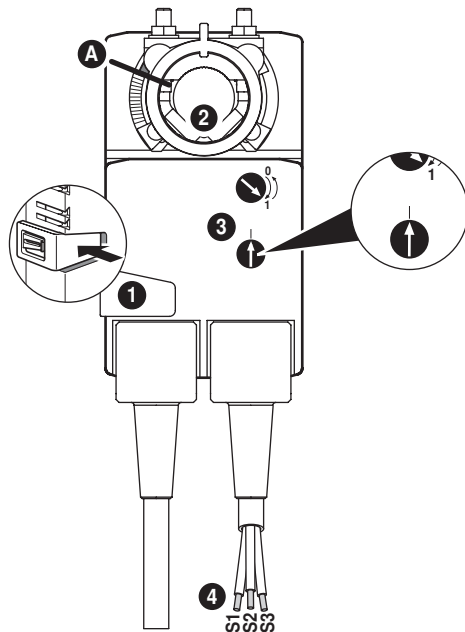


AC/DC 24 V, 3-point



## Operating controls and indicators

## Auxiliary switch settings



## Note

Perform settings on the actuator only in deenergised state.

## 1 Gear disengagement

Holding button pressed down: Gear is disengaged.  
Manual override is possible.

## 2 Spindle clamp

Turn until edge line **A** displays the desired switching position of the actuator and release button **1**.

## 3 Auxiliary switch

Turn rotary knob until the arrow points to the vertical line.

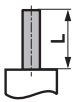


## 4 Cable

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 [mm]

#### Spindle length

|  |   |         |
|--|---|---------|
|  |  | Min. 48 |
|  |  | Min. 20 |

#### Clamping range

|                    |  |  |  |
|--------------------|---|---|---|
|                    | 10...20   | $\geq 10$   | $\leq 20$   |
| <b>CrNi (INOX)</b> | 12...20   | $\geq 10$   | $\leq 20$   |

With utilisation of a round spindle made of CrNi (INOX):  $\varnothing$  12...20 mm

#### Dimensional drawings

