

Spring-return actuator with emergency control function for adjusting dampers in technical building installations

- Air damper size up to approx. 0.5 m<sup>2</sup>
- Nominal torque 2.5 Nm
- Nominal voltage AC/DC 24 V
- Control Open-close
- With integrated auxiliary switch


**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 21.6...28.8 V                                 |
|  | Power consumption in operation           | 2.5 W   |
|  | Power consumption in rest position       | 1.5 W   |
|  | Power consumption for wire sizing        | 5 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, 2 x 0.75 mm <sup>2</sup>                                 |
|  | Connection auxiliary switch              | Cable 1 m, 3 x 0.75 mm <sup>2</sup>                                 |
|  | Parallel operation                       | Yes (note the performance data)                                     |
|  | <b>Functional data</b>                   | Torque motor  |
| Torque spring return                           |  | Min. 2.5 Nm   |
| Direction of motion motor                      |  | Selectable by mounting L / R  |
| Direction of motion emergency control function |  | Selectable by mounting L / R  |
| Manual override                                |  | No  |
| Angle of rotation                              |  | Max. 95°  |
| Angle of rotation note                         |  | adjustable starting at 37% in 2.5% steps (with mechanical end stop) |
| Running time motor                             |  | 75 s / 90°  |
| Running time emergency control position        |  | <25 s / 90°   |
| Sound power level motor                        |  | 50 dB(A)  |
| Spindle driver                                 |  | Universal spindle clamp 6...12.7 mm                                 |
| Position indication                            |  | Mechanical  |
| Service life                                   |  | Min. 60,000 emergency positions                                     |
| <b>Safety</b>                                  |  | Protection class IEC/EN   |
|  | Protection class auxiliary switch IEC/EN | II Protective insulated   |
|  | Degree of protection IEC/EN              | IP42  |
|  | 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                                |
|  | Mode of operation                        | Type 1.AA.B   |
|  | Rated impulse voltage supply / control   | 0.8 kV  |
|  | Rated impulse voltage auxiliary switch   | 2.5 kV  |
|  | Control pollution degree                 | 3   |
| <b>Weight</b>                                  | Ambient temperature                      | -30...50 °C   |
|  | Non-operating temperature                | -40...80 °C   |
|  | Ambient humidity                         | 95% r.h., non-condensing  |
|  | Maintenance                              | Maintenance-free  |
|  | Weight approx.                           | 0.78 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.
- 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>Mode of operation</b>            | The actuator moves the damper to the operating position at the same time as tensioning the return spring. The damper is turned back to the safety position by spring energy when the supply voltage is interrupted. |
| <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>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>Mechanical accessories</b> | Actuator arm TF..   | AH-TF  |
|                               | Shaft extension 170 mm, for damper spindles Ø 6...20 mm         | AV6-20 |
|                               | 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    |
|                               | Screw fastening kit TF..  | SB-TF  |
|                               | Angle of rotation limiter TF..                                  | ZDB-TF |
|                               | Form fit adapter GR, 14x14x40 mm                                | ZF8-TF |
|                               | Mounting kit for linkage operation TF..                         | ZG-TF1 |

Electrical installation

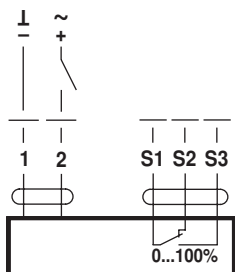


Notes

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

Wiring diagrams

AC/DC 24 V, open-close

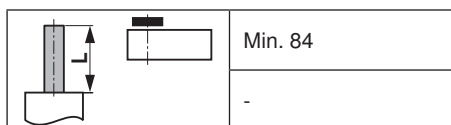


Cable colours:

- 1 = black
- 2 = red
- S1 = white
- S2 = white
- S3 = white

Dimensions [mm]

Spindle length



Clamping range

|          |          |
|----------|----------|
|          |          |
| 6...12.7 | 6...12.7 |

Dimensional drawings

