

Rotary actuator fail-safe for adjusting dampers in technical building installations

- Air damper size up to approx. 0.8 m<sup>2</sup>
- Torque motor 4 Nm
- Nominal voltage AC 230 V
- Control Open/close
- with integrated auxiliary switch



## Technical data

|                        |  |  |
|------------------------|--|--|
| <b>Electrical data</b> | Nominal voltage                          | AC 230 V   |
|                        | Nominal voltage frequency                | 50/60 Hz   |
|                        | Nominal voltage range                    | AC 198...264 V   |
|                        | Power consumption in operation           | 5 W  |
|                        | Power consumption in rest position       | 3 W  |
|                        | Power consumption for wire sizing        | 7 VA   |
|                        | Power consumption for wire sizing note   | Imax 150 mA @ 10 ms  |
|                        | Auxiliary switch                         | 1x SPDT, 0...100%  |
|                        | Switching capacity auxiliary switch      | 1 mA...3 A (0.5 A inductive), DC 5 V...AC 250 V  |
|                        | Connection supply / control              | Cable 1 m, 2x 0.75 mm <sup>2</sup>   |
|                        | Connection auxiliary switch              | Cable 1 m, 3x 0.75 mm <sup>2</sup>   |
|                        | Parallel operation                       | Yes (note the performance data)  |
| <b>Functional data</b> | Torque motor                             | 4 Nm   |
|                        | Torque fail-safe                         | 4 Nm   |
|                        | Direction of motion motor                | selectable by mounting L/R   |
|                        | Direction of motion fail-safe            | selectable by mounting L/R   |
|                        | Manual override                          | No   |
|                        | Angle of rotation                        | Max. 95°   |
|                        | Angle of rotation note                   | Adjustable 37...100% with integrated mechanical limitation                               |
|                        | Running time motor                       | 75 s / 90°   |
|                        | Running time fail-safe                   | <20 s @ -20...50°C / <60 s @ -30°C   |
|                        | Sound power level, motor                 | 50 dB(A)   |
|                        | Mechanical interface                     | Universal shaft clamp 8...16 mm  |
|                        | Position indication                      | Mechanical   |
| Service life           | Min. 60'000 fail-safe positions          |  |
| <b>Safety data</b>     | Protection class IEC/EN                  | II, reinforced insulation  |
|                        | Protection class auxiliary switch IEC/EN | II, reinforced insulation  |
|                        | Degree of protection IEC/EN              | IP54   |
|                        | EMC                                      | CE according to 2014/30/EU   |
|                        | Low voltage directive                    | CE according to 2014/35/EU   |
|                        | Certification IEC/EN                     | IEC/EN 60730-1 and IEC/EN 60730-2-14   |
|                        | Hygiene test                             | According to VDI 6022 Part 1 / SWKI VA 104-01, cleanable and disinfectable, low emission |
|                        | Type of action                           | Type 1.B   |

**Technical data**

|                    |  |                             |
|--------------------|--|-----------------------------|
| <b>Safety data</b> | Rated impulse voltage supply / control | 4 kV                        |
|                    | Rated impulse voltage auxiliary switch | 4 kV                        |
|                    | Pollution degree                       | 3                           |
|                    | Ambient humidity                       | Max. 95% RH, non-condensing |
|                    | Ambient temperature                    | -30...50°C [-22...122°F]    |
|                    | Storage temperature                    | -40...80°C [-40...176°F]    |
|                    | Servicing                              | maintenance-free            |
| <b>Weight</b>      | Weight                                 | 1.7 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.
- Caution: Power supply voltage!
- Only authorised specialists may carry out installation. All applicable legal or institutional installation regulations must be complied with 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 and the design, as well as the installation situation 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>Operating mode</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 shaft with a universal shaft clamp, supplied with an anti-rotation device to prevent the actuator from rotating.   |
| <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>Flexible signalling</b>          | With adjustable auxiliary switch (0...100%)   |

**Accessories**

| <b>Electrical accessories</b> | <b>Description</b>   | <b>Type</b> |
|-------------------------------|--|-------------|
|                               | Auxiliary switch 2x SPDT                                       | S2A-F       |
|                               | Feedback potentiometer 1 kΩ                                    | P1000A-F    |
| <b>Mechanical accessories</b> | <b>Description</b>   | <b>Type</b> |
|                               | Shaft extension 170 mm ø10 mm for damper shaft ø6...16 mm      | AV6-20      |
|                               | Shaft clamp reversible, clamping range ø16...20 mm             | K6-1        |
|                               | Ball joint suitable for damper crank arm KH8 / KH10            | KG10A       |
|                               | Ball joint suitable for damper crank arm KH8                   | KG8         |
|                               | Damper crank arm Slot width 8.2 mm, clamping range ø10...18 mm | KH8         |

**Accessories**

| Description  | Type      |
|--|-----------|
| Actuator arm, clamping range $\varnothing 8...16$ mm, Slot width 8.2 mm    | KH-LF     |
| Angle of rotation limiter, with end stop                                   | ZDB-LF    |
| Form fit adapter 8x8 mm  | ZF8-LF    |
| Mounting kit for linkage operation for flat installation                   | ZG-LF1    |
| Mounting kit for linkage operation for side installation Slot width 6.2 mm | ZG-LF3    |
| Anti-rotation mechanism 180 mm, Multipack 20 pcs.                          | Z-ARS180L |

**Electrical installation**

**Caution: Power supply voltage!**

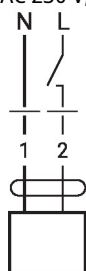
Parallel connection of other actuators possible. Observe the performance data.

**Wire colours:**

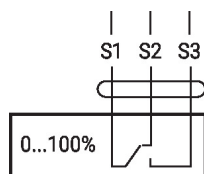
- 1 = blue
- 2 = brown
- S1 = violet
- S2 = red
- S3 = white

**Wiring diagrams**

AC 230 V, open/close



Auxiliary switch



## Dimensions

## Spindle length

|  |  |         |
|--|--|---------|
|  |  | Min. 84 |
|  |  | Min. 20 |

## Clamping range

|        |        |
|--------|--------|
|        |        |
| 8...16 | 8...16 |

