

Modulating damper actuator for factory installation in an equipment in technical building installations

- Air damper size up to approx. 0.2 m<sup>2</sup>
- Torque motor 1 Nm
- Nominal voltage AC/DC 24 V
- Control modulating 2...10 V
- Position feedback 2...10 V
- Mechanical interface Form fit 8x8 mm
- with plug



## 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     | 1.5 W  |
|                        | Power consumption in rest position | 0.5 W  |
|                        | Power consumption for wire sizing  | 2.5 VA   |
|                        | Connection supply / control        | Connector plug (Cable-side connector socket not included in scope of delivery)         |
|                        | Connection plug                    | Molex Mini-Fit Jr. 39303045  |
|                        | Parallel operation                 | Yes (note the performance data)  |
| <b>Functional data</b> | Torque motor                       | 1 Nm   |
|                        | Operating range Y                  | 2...10 V   |
|                        | Input impedance                    | 100 kΩ   |
|                        | Position feedback U                | 2...10 V   |
|                        | Position feedback U note           | Max. 1 mA  |
|                        | Position accuracy                  | ±5%  |
|                        | Direction of motion motor          | clockwise rotation   |
|                        | Direction of motion note           | Y = 0 V: right end stop, position 0  |
|                        | Manual override                    | No   |
|                        | Angle of rotation                  | 95°, fixed setting   |
|                        | Running time motor                 | 22 s / 90°   |
|                        | Sound power level, motor           | 35 dB(A)   |
|                        | Mechanical interface               | Form fit 8x8 mm  |
| Position indication    | No                                 |  |
| <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        | IP20   |
|                        | Degree of protection NEMA/UL       | NEMA 1   |
|                        | Enclosure                          | UL Enclosure Type 1  |
|                        | EMC                                | CE according to 2014/30/EU   |
|                        | Certification IEC/EN               | IEC/EN 60730-1 and IEC/EN 60730-2-14   |
|                        | UL Approval                        | cURus according to UL60730-1A, UL60730-2-14 and CAN/CSA E60730-1                       |
|                        | Hygiene test                       | According to VDI 6022 Part 1 / SWKI VA 104-01, cleanable and disinfected, low emission |

**Technical data**

|                    |  |                             |
|--------------------|--|-----------------------------|
| <b>Safety data</b> | Type of action                         | Type 1                      |
|                    | Rated impulse voltage supply / control | 0.8 kV                      |
|                    | Pollution degree                       | 2                           |
|                    | 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                                 | 0.09 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.
- The device is not designed for applications where chemical influences (gases, fluids) are present or for utilisation in corrosive environments in general.
- The device is considered a component and intended for installation in an equipment at the factory. The required protection against accidental contact with live parts must be provided by the damper or system manufacturer.
- 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.
- The plug connections may only be used according to the installation instructions. The Molex plug connection has a mandatory locking mechanism that prevents unintentional disconnection. Operating the locking mechanism and the entire plug connection under voltage is not permitted.
- 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 is connected with a standard control signal of 0...10 V and drives to the position defined by the control signal. Measuring voltage U serves for the electrical display of the damper position 0...100% and as control signal for other actuators.   |
| <b>Simple direct mounting</b>       | The actuator is mounted directly on the damper shaft (ø6...12.7 mm) with a universal shaft clamp and then secured with the anti-rotation clip, to prevent it from rotating.<br>The anti-rotation clip Z-ARCM is not included in the scope of delivery.  |
| <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>Hidden synchronisation</b>       | If the actuator drives to the lower end stop during ongoing operation, it performs a synchronisation of the control signal at DC 2 V. This ensures that the signal range also corresponds to the effective functional range in ongoing operation. The bottom end stop is actively approached as soon as the control signal is <DC 2.1 V. The actuator drives to the new specified position as soon as the control signal is once again >DC 2.3 V. |

Parts included

End stop clip

Accessories

| Mechanical accessories | Description                            | Type   |
|------------------------|--|--------|
|                        | Anti-rotation clip, Multipack 20 pcs.  | Z-ARCM |
|                        | End stop clip, Multipack 20 pcs.       | Z-ESCM |
|                        | Protective covering, Multipack 20 pcs. | Z-PCUM |

Electrical installation



Supply from isolating transformer.

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

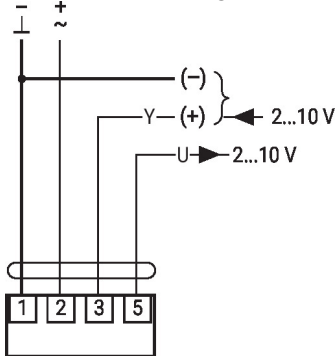
Cable-side connector socket is not included in scope of delivery

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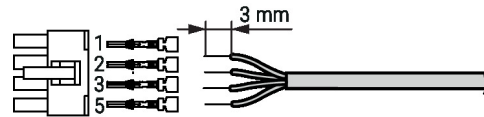
Wiring diagrams

AC/DC 24 V, modulating

Molex PN 39014040 / 39000039 (0.5...1.0 mm<sup>2</sup>)



|   |   |      |   |
|---|---|------|---|
| 1 | 2 | 3    |   |
| — | — | 2 V  | ↻ |
| — | — | 10 V | ↻ |



Dimensions

Spindle length

|  |         |
|--|---------|
|  | Min. 25 |
|  | -       |

