

Ready-to-connect damper actuator for VAV and CAV units in ventilation and air conditioning systems in buildings

- Air control damper size up to approx. 4 m²
- Torque 20 Nm
- Compatible with Belimo VAV controller VR..


Technical data

| | | | |
|----------------------------|--|---|----------------------|
| Electrical data | Nominal voltage | AC 24 V, 50/60 Hz / DC 24 V (from VR.. controller) | |
| | Power consumption | In operation | 4 W @ nominal torque |
| | | At rest | 1.25 W |
| | | For wire sizing | 6 VA |
| Connection | 0.5 m cable with 3-pin plug (compatible with VR.. controller) | | |
| Functional data | Torque (nominal torque) | Min. 20 Nm @ nominal voltage | |
| | Control | 6 V ±4 V (from VR.. controller) | |
| | Uni-rotation | ±5% | |
| | Direction of rotation | Can be selected with 0 / 1 switch | |
| | Direction of motion at Y = 2 V | In switch position 0 ↶ or 1 ↷ | |
| | Manual override | Disengaging the gearing latch by means of a pushbutton, self-resetting | |
| | Angle of rotation | Max. 95°↔, can be limited at both ends with adjustable mechanical end stops | |
| | Running time | 150 s | |
| | Sound power level | Max. 45 dB (A) | |
| | Position indication | Mechanical, plug-on | |
| Adaptation | Adaptation of the control range to the damper angle of rotation | | |
| Display | LED display for 24 V supply and states | | |
| Safety | Protection class | III Safety extra-low voltage | |
| | Degree of protection | IP54 in all mounting positions | |
| | EMC | CE according to 89/336/EEC | |
| | Mode of operation | Type 1 (in acc. with EN 60730-1) | |
| | Rated impulse voltage | 0.8 kV (in acc. with EN 60730-1) | |
| | Control pollution degree | 3 (in acc. with EN 60730-1) | |
| | Ambient temperature range | -30 ... +50 °C | |
| | Non-operating temperature range | -40 ... +80 °C | |
| | Ambient humidity range | 95% RH, non-condensating (EN 60730-1) | |
| | Maintenance | Maintenance-free | |
| Dimensions / weight | Dimensions | See „Dimensions“ on page 2 | |
| | Weight | Approx. 910 g | |

Safety notes


- The damper actuator is not allowed to be used outside the specified field of application, especially in aircraft or in any other airborne means of transport.
- It may only be installed by suitably trained personnel.
All applicable legal or institutional installation regulations must be complied with.
- 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 cable is not allowed to be removed from the unit.
- When the required torque is calculated, the cross section, design and installation site as well as the air flow conditions must be observed.

Safety notes

(continued)

- The device contains electrical and electronic components and is not allowed to be disposed of as household refuse. The local and currently valid regulations and requirements must be observed.

Product features

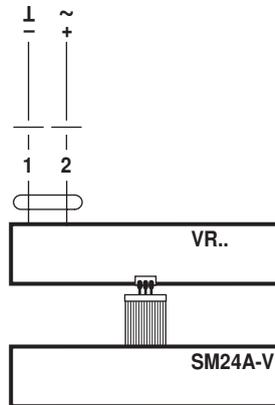
| | |
|-------------------------------------|--|
| Mode of operation | The actuator is controlled with a Belimo VAV controller VR.. and travels to the position defined by the control signal. |
| Simple direct mounting | Simple direct mounting on the damper spindle with a universal spindle clamp, supplied with an anti-rotation strap to prevent the actuator from rotating. |
| Manual override | Manual override with self-resetting pushbutton possible (the gear is disengaged for as long as the button is pressed). |
| Adjustable angle of rotation | Adjustable angle of rotation with mechanical end stops. |
| Adaptation | Angle-of-rotation sensing and adaptation of the control range. Triggered by pressing a button on the actuator, with LEDs for status display. |
| High functional reliability | The actuator is overload-proof, requires no limit switches and automatically stops when the end stop is reached. |

Accessories

| | Description | Data sheet |
|------------------------|-------------------------------|----------------|
| Electrical accessories | Auxiliary switch S..A.. | T2 - S..A.. |
| | Feedback potentiometer P..A.. | T2 - P..A.. |
| Mechanical accessories | Spindle extension AV6-20 | T2 - Z-SM..A.. |

Electrical installation

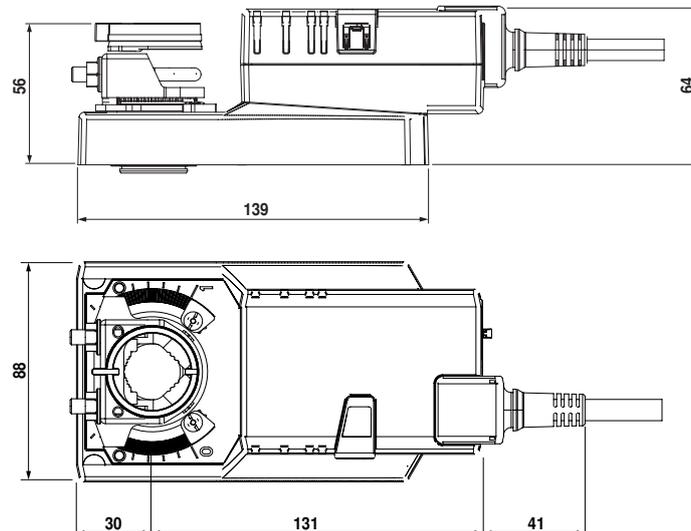
Wiring diagram



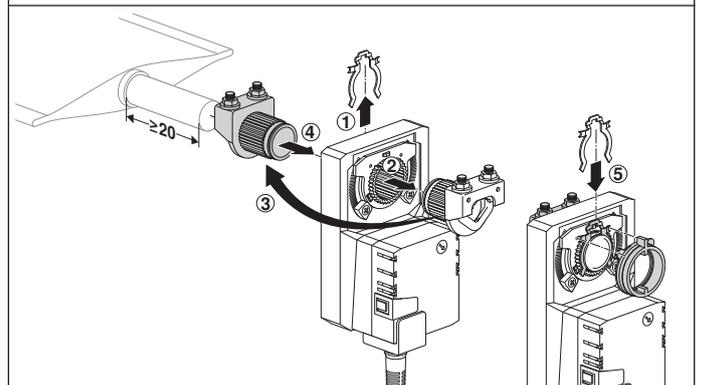
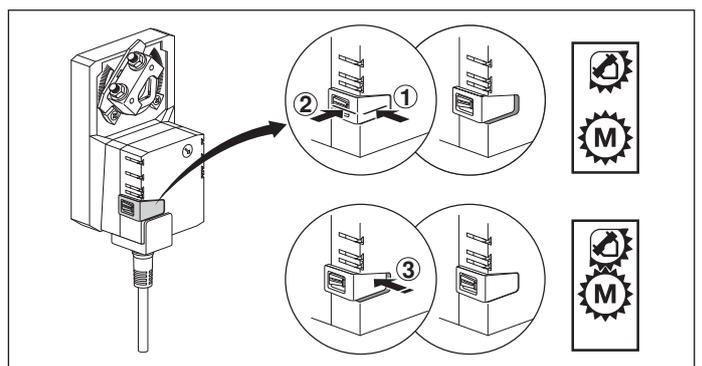
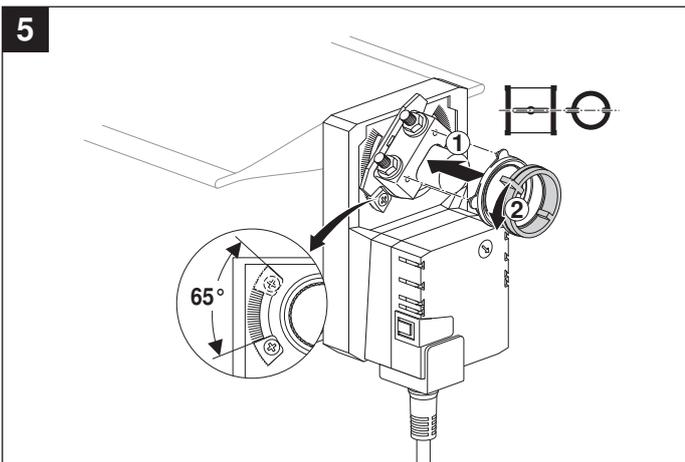
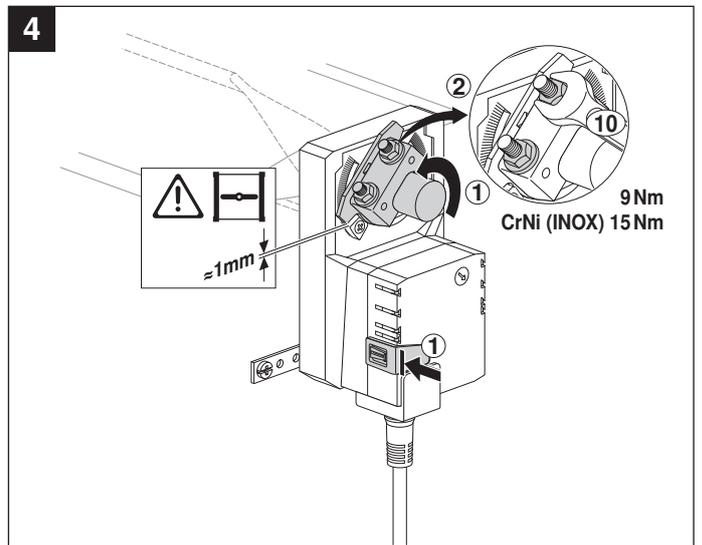
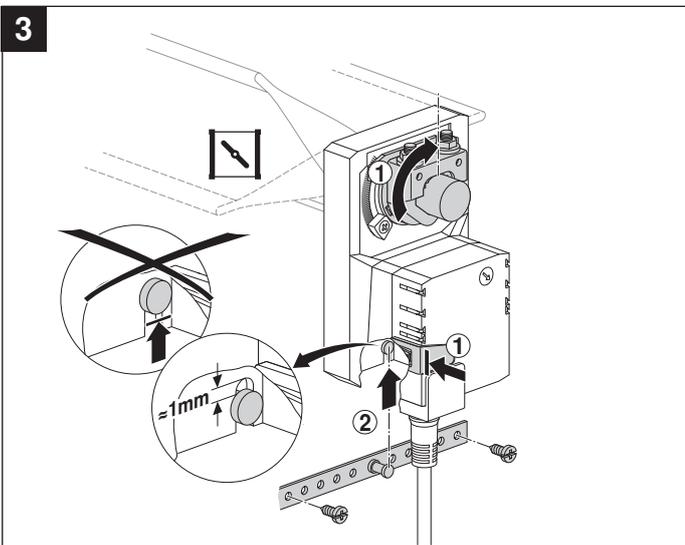
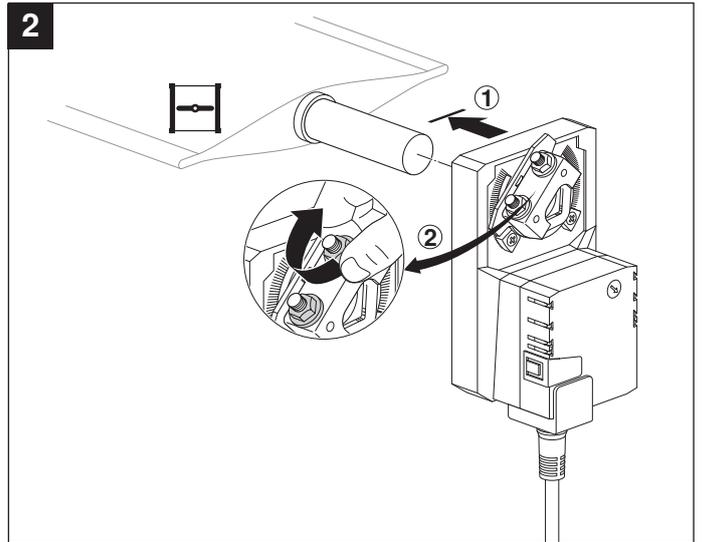
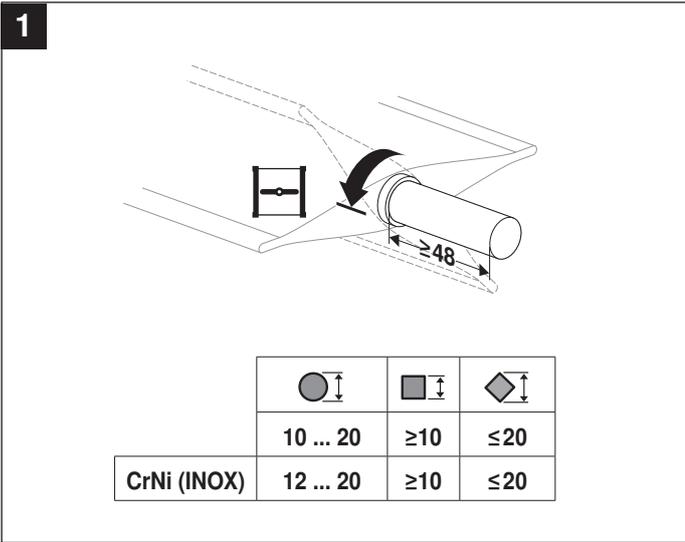
The ready-to-connect operating unit is connected to the VR.. controller with the 3-pin plug.

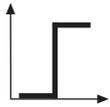
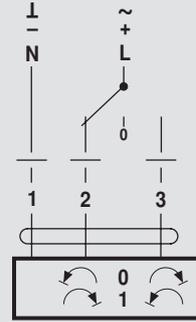
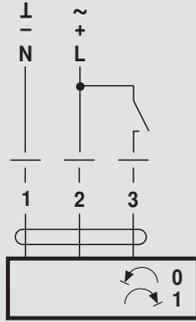
Dimensions [mm]

Dimensional diagrams

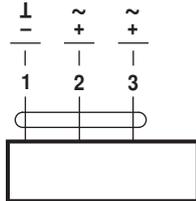


| Damper spindle | Length | |
|----------------|---------|------------------|
| Clamp, top | min. 48 | 10 ... 20 (26,7) |
| Clamp, bottom | min. 20 | 10 ... 20 |

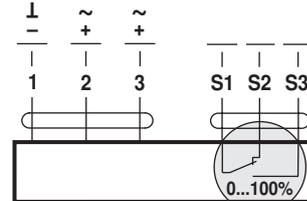




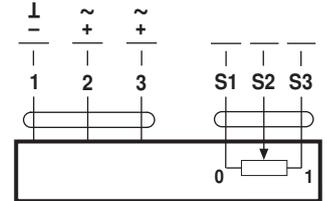
AC 24 V / DC 24 V



SM24A..
SMD24A..

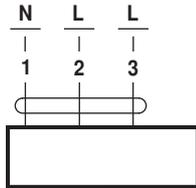


SM24A-S..

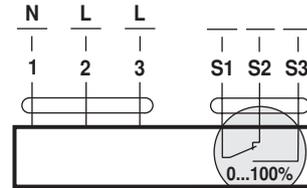


SM24AP5..

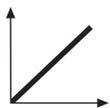
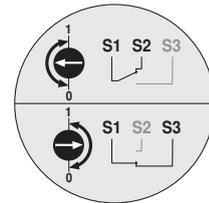
AC 100 ... 240 V ⚠



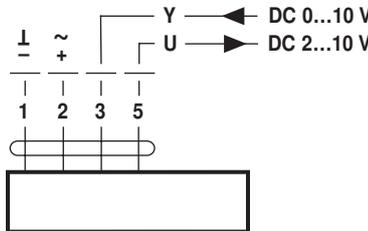
SM230A..
SMD230A..



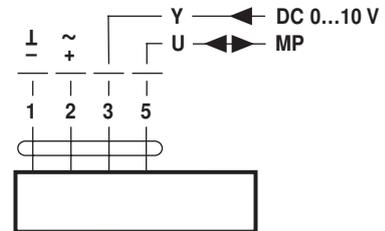
SM230A-S..



AC 24 V / DC 24 V

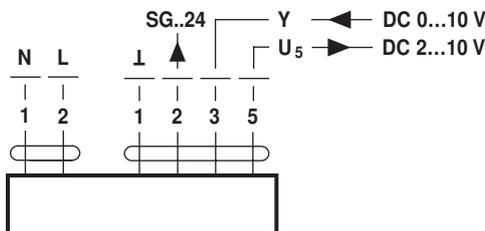


SM24A-SR..
SM24A-MF..

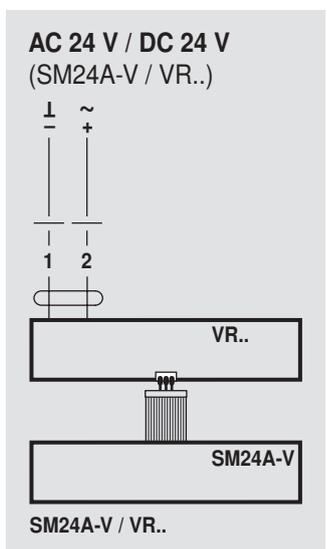


SM24A-MP..

AC 100 ... 240 V ⚠



SM230ASR..



AC 24 V / DC 24 V
(SM24A-V / VR..)

SM24A-V / VR..