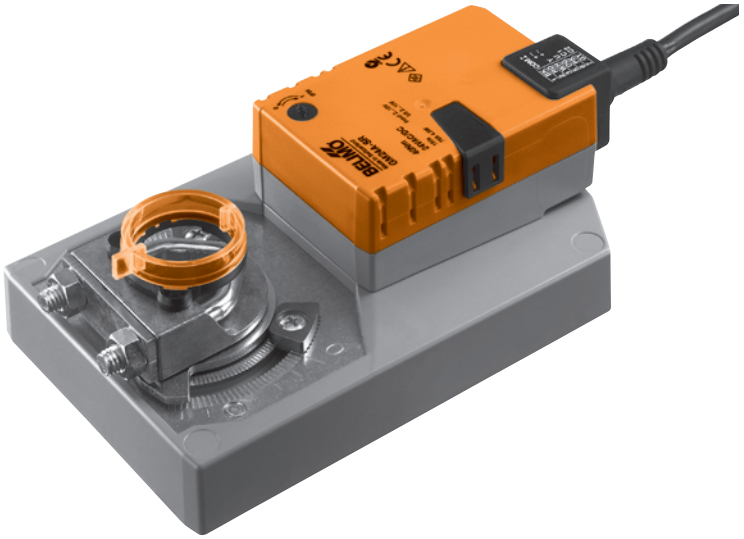
BELIMO

# Technical data sheet GM24A-SR

**Modulating damper actuator for operating air control dampers in ventilation and air-conditioning systems for building services installations**

- **For air control dampers up to approx. 8 m²**
- **Torque 40 Nm**
- **Nominal voltage AC/DC 24 V**
- **Control: modulating DC 0 ... 10 V, position feedback DC 2 ... 10 V**



## Technical data

| | | | |
|---|---|---|---|
| **Electrical data** | Nominal voltage | | AC 24 V, 50/60 Hz<br>DC 24 V |
| | Nominal voltage range | | AC/DC 19.2 ... 28.8 V |
| | Power consumption | In operation | 4.5 W @ nominal torque |
| | | At rest | 2 W |
| | | For wire sizing | 7 VA |
| | Connection | | Cable 1 m, 4 x 0.75 mm² |
| **Functional data** | Torque (nominal torque) | | Min. 40 Nm @ nominal voltage |
| | Control | Control signal Y | DC 0 ... 10 V, typical input impedance 100 kΩ |
| | | Operating range | DC 2 ... 10 V |
| | Position feedback (Measuring voltage U) | | DC 2 ... 10 V, max. 1 mA |
| | Posotion accuracy | | ±5% |
| | Direction of rotation | | Reversible with switch 0 / 1 |
| | Direction of rotation at Y = 0 V | | bei Schalterstellung 0 ↶ or 1 ↷ |
| | Manual override | | Gearing latch disengaged with pushbutton, detentable |
| | Angle of rotation | | Max. 95°∢, limited on both sides<br>by means of adjustable, mechanical end stops |
| | Running time | | 150 s / 90°∢ |
| | Sound power level | | Max. 45 dB (A) |
| | Position indication | | Mechanical, pluggable |
| **Safety** | Protection class | | **III** Safety extra-low voltage |
| | Degree of protection | | IP54 in any mounting position |
| | EMC | | CE according to 89/336/EEC |
| | Mode of operation | | Type 1 (EN 60730-1) |
| | Rated impulse voltage | | 0.8 kV (EN 60730-1) |
| | Control pollution degree | | 3 (EN 60730-1) |
| | Ambient temperature range | | –30 ... +50°C |
| | Non-operating temperature | | –40 ... +80°C |
| | Ambient humidity range | | 95% r.H., non-condensating (EN 60730-1) |
| | Maintenance | | Maintenance-free |
| **Dimensions / Weight** | Dimensions | | See «Dimensions» on page 2 |
| | Weight | | Approx. 1'700 g |

## Safety notes

⚠

- **The damper actuator is not allowed to be used outside the specified field of application, especially in aircraft or any other form of air transport.**
- **Assembly must be carried out by trained personnel. Any legal regulations or regulations issued by authorities must be observed during assembly.**
- **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 must not be removed from the device.**
- **When calculating the required torque, the specifications supplied by the damper manufacturers (cross section, design, installation site), and the air flow conditions must be observed.**

## Safety notes

*(Continue)*

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

## Product features

**Mode of operation**
The actuator is controlled by means of a standard control signal DC 0 ... 10 V. It opens to the position dictated by this signal. The measuring voltage U allows the damper position (0 ... 100%) to be electrically indicated and serves as a follow-up control signal for other actuators.

**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 operation is possible with the pushbutton (the gearing latch remains disengaged as long as the pushbutton is pressed or detented).

**Adjustable angle of rotation**
Adjustable angle of rotation with mechanical end stops.

**High functional reliability**
The actuator is overload-proof, requires no limit switches and automatically stops when the end stop is reached.

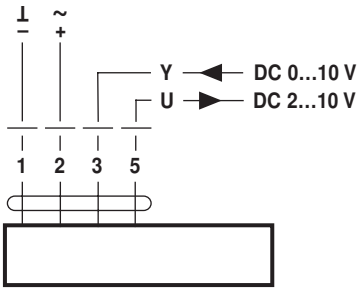
## Accessories

| | Description | Data sheet |
|---|---|---|
| **Electrical accessories** | Auxiliary switch, type S..A.. | T2 - S..A.. |
| | Feedback potentiometer, type P..A.. | T2 - P..A.. |
| | Range controller, type SBG24 | T2 - SBG24 |
| | Positioner, type SG..24 | T2 - SG..24 |
| | Digital position indication, type ZAD24 | T2 - ZAD24 |
| **Mechnical accessories** | Various accessories (Damper and actuator crank arms, anti-rotation strap etc.) | T2 - Z-GM..A.. |

## Electrical installation

**Wiring diagram**

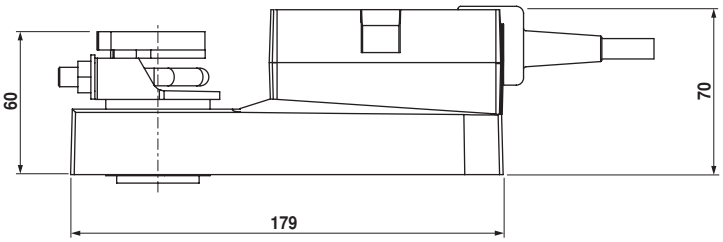
**Notes**
- Connection via safety isolating transformer.
- Other actuators can be connected in parallel. Please note the performance data.

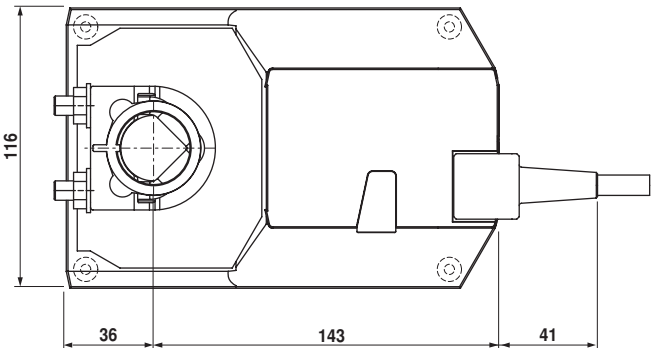



**Cable colours:**
1 = black
2 = red
3 = white
5 = orange

## Dimensions [mm]

**Dimensional drawings**




| Damper spindle | Length | ○ | □ | ◇ |
|---|---|---|---|---|
| | >52 | 14 ... 25.5 | >14 | <25.5 |
| | >20 | 14 ... 25.5 | >14 | <25.5 |

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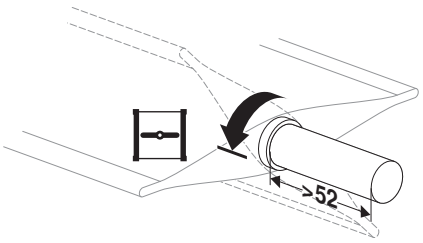
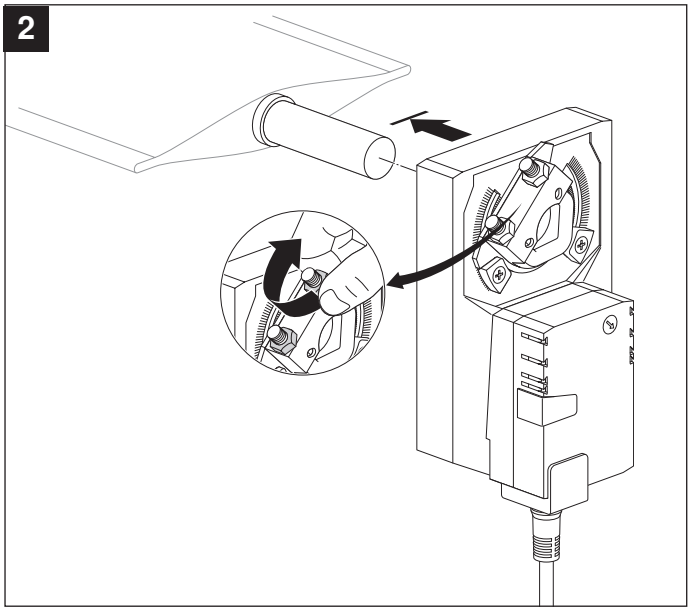
**1**




| | | |
|---|---|---|
| 14 ... 25.5 | > 14 | < 25.5 |

**2**



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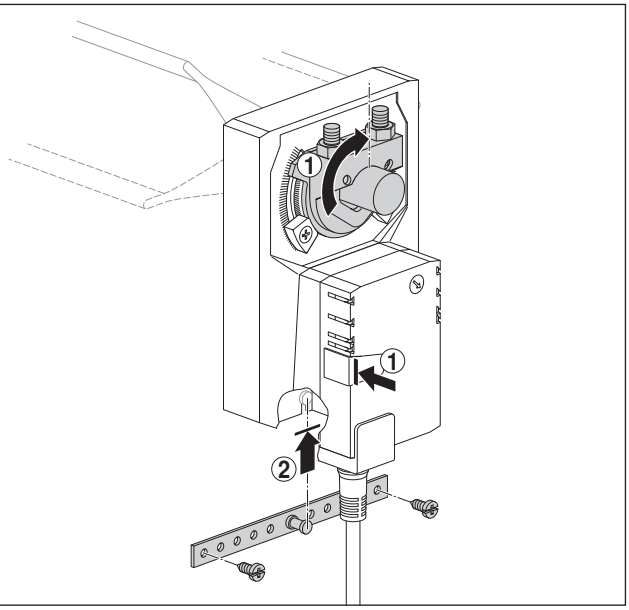


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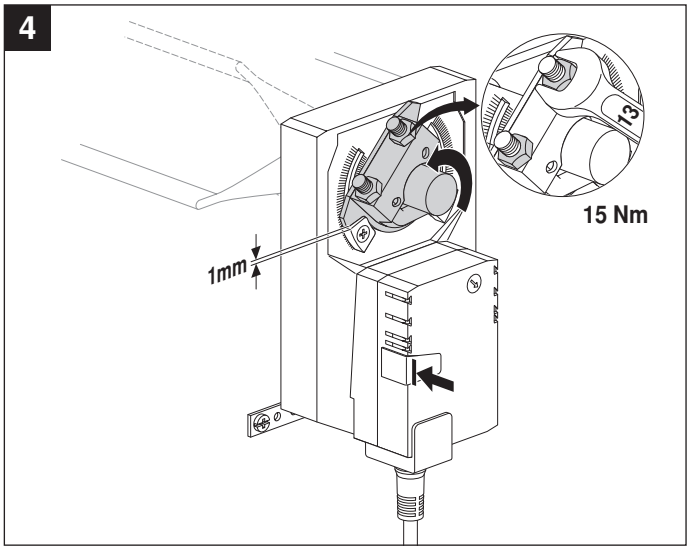
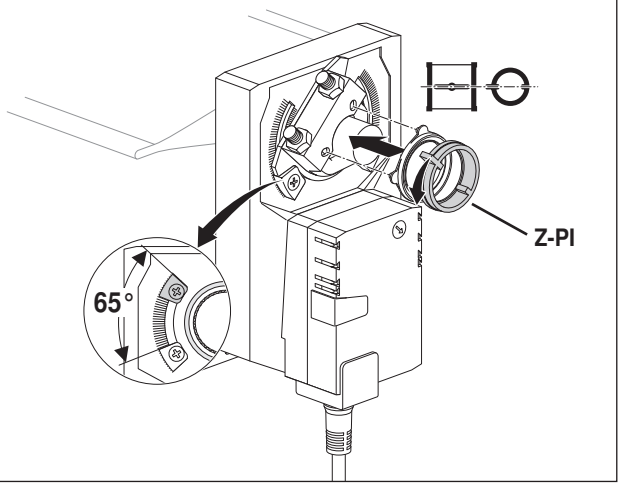
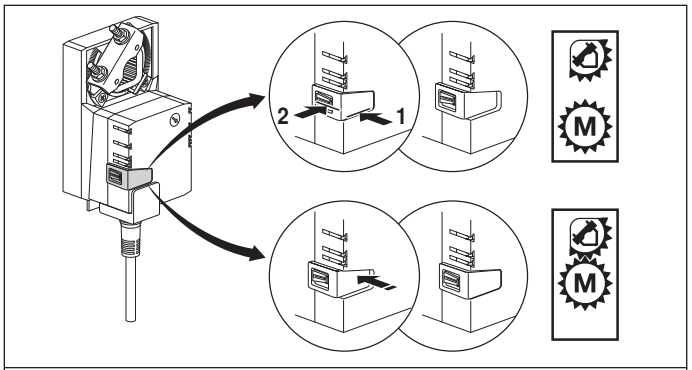
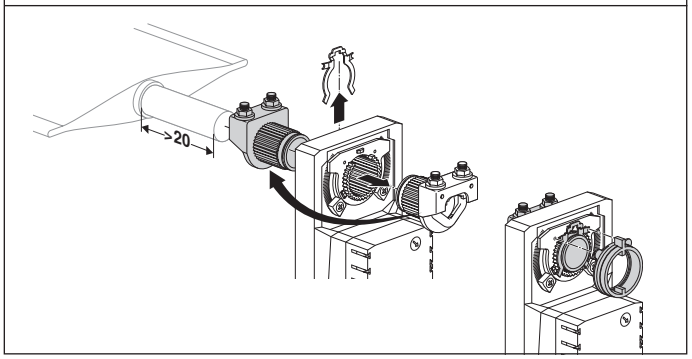
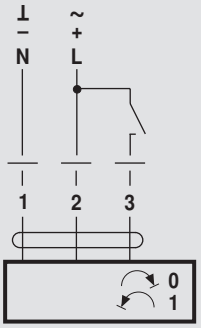


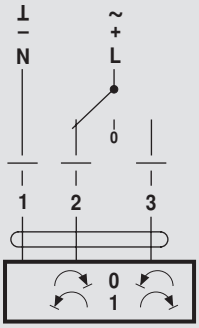

**5**



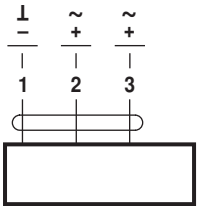



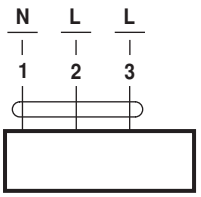




**AC 24 V / DC 24 V**

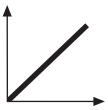



**GM24A..**

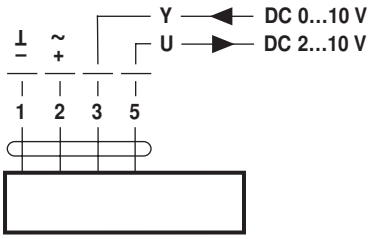
**AC 100 ... 240 V** ⚠



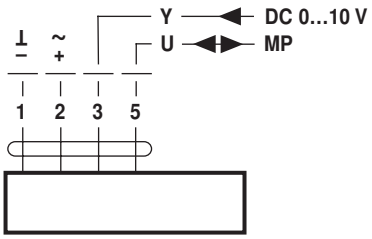

**GM230A..**



**AC 24 V / DC 24 V**

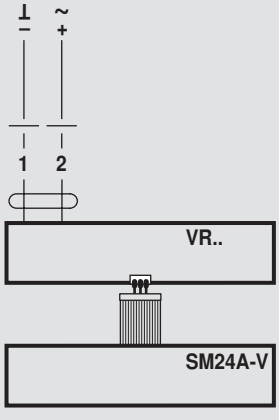



**GM24A-SR..**
**GM24A-MF..**




**GM24A-MP..**

**AC 24 V / DC 24 V**
(GM24A-V / VR..)




**GM230A-V / VR..**