

Modulating damper actuator for adjusting air dampers in ventilation and air-conditioning systems for building services installations

- For air dampers up to approx. 4 m<sup>2</sup>
- Torque 20 Nm
- Nominal voltage AC 100 ... 240 V
- Control: Modulating DC 0 ... 10 V
- Position feedback DC 2 ... 10 V



## Technical data

<b>Electrical data</b>	Nominal voltage	AC 100 ... 240 V, 50/60 Hz
	Nominal voltage range	AC 85 ... 265 V
	Power consumption	In operation 2.5 W @ nominal torque At rest 0.6 W For wire sizing 6 VA
	Connection	Power supply Cable 1 m, 2 x 0.75 mm <sup>2</sup> Signals Cable 1 m, 4 x 0.75 mm <sup>2</sup>
<b>Functional data</b>	Torque (nominal torque)	Min. 20 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
	Auxiliary supply	DC 24 V ±30%, max. 10 mA
	Position accuracy	±5%
	Direction of rotation	Reversible with switch 0 / 1
	Direction of motion at Y = 0 V	In switch position 0 ↺ resp. 1 ↻
	Manual override	Gearing latch disengaged with pushbutton, can be locked
	Angle of rotation	Max. 95°↔, can be limited at both ends with adjustable mechanical end stops
	Running time	150 s / 90°↔
	Sound power level	Max. 45 dB (A)
	Position indication	Mechanical, pluggable
<b>Safety</b>	Protection class	II Totally insulated <input type="checkbox"/>
	Degree of protection	IP54 in any mounting position NEMA 2, UL Enclosure Type 2
	EMC	CE according to 2004/108/EC CE according to 2006/95/EC
	Low voltage directive	CE according to 2006/95/EC
	Certification	cULus according to UL 60730-1A and UL 60730-2-14 and CAN/CSA E60730-1:02 Certified to IEC/EN 60730-1 and IEC/EN 60730-2-14
	Mode of operation	Type 1
	Rated impulse voltage	2.5 kV
	Control pollution degree	3
	Ambient temperature range	-30 ... +50 °C
	Non-operating temperature	-40 ... +80 °C
	Ambient humidity range	95% r.h., non-condensating
	Maintenance	Maintenance-free
<b>Dimensions / Weight</b>	Dimensions	See «Dimensions» on page 3
	Weight	Approx. 1.05 kg

## Safety notes



- The 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.
- **Caution Power supply voltage!**
- 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.
- 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

<b>Mode of operation</b>	The actuator is controlled with a standard modulating signal of DC 0 ... 10 V and travels to the position defined by the control signal. Measuring voltage U serves for the electrical display of the damper position 0 ... 100% and as slave control signal for other actuators.
<b>Simple direct mounting</b>	Simple direct mounting on the damper spindle with a universal spindle clamp, supplied with an anti-rotation strap to prevent the actuator from rotating.
<b>Manual override</b>	Manual override with push-button possible (the gear is disengaged for as long as the button is pressed or remains locked).
<b>Adjustable angle of rotation</b>	Adjustable angle of rotation with mechanical end stops.
<b>High functional reliability</b>	The actuator is overload-proof, requires no limit switches and automatically stops when the end stop is reached.

## Accessories

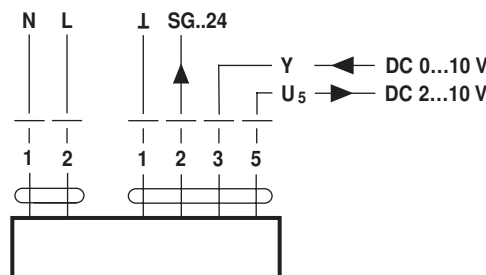
	Description	Data sheet
<b>Electrical accessories</b>	Auxiliary switch S..A..	T2 - S..A..
	Feedback potentiometer P..A..	T2 - P..A..
	Position sensor SGA24, SGE24 and SGF24	T2 - SG..24
<b>Mechanical accessories</b>	Various accessories (clamps, shaft extensions etc.)	T2 - Z-SM..A..

## Electrical installation

Wiring diagram

### Notes

- Caution Power supply voltage!
- Other actuators can be connected in parallel. Please note the performance data.

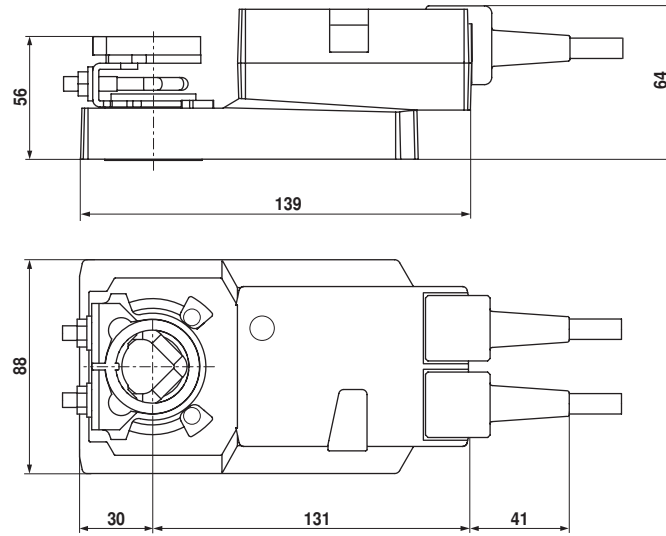


### Cable colours:

- 1 = blue
- 2 = brown
- 1 = black
- 2 = red
- 3 = white
- 5 = orange

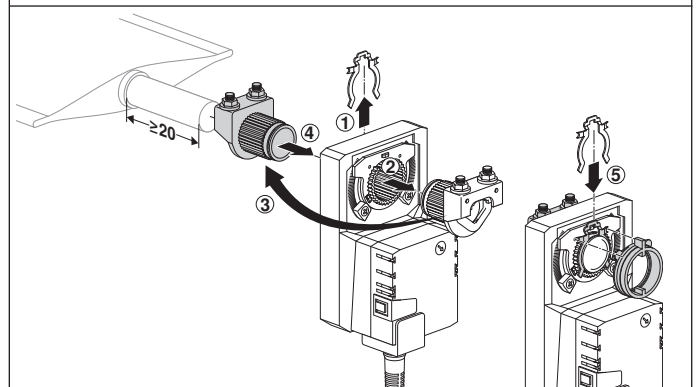
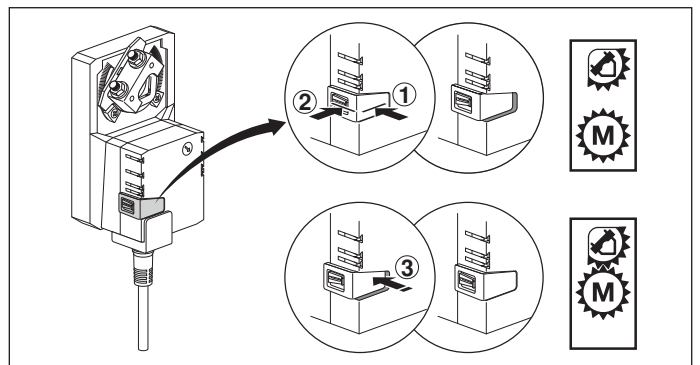
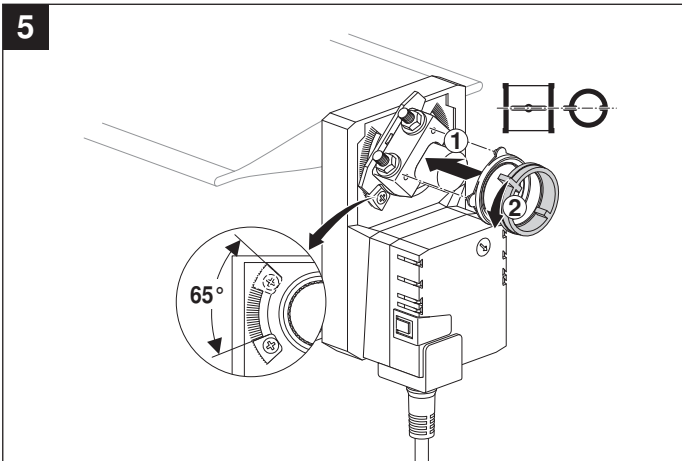
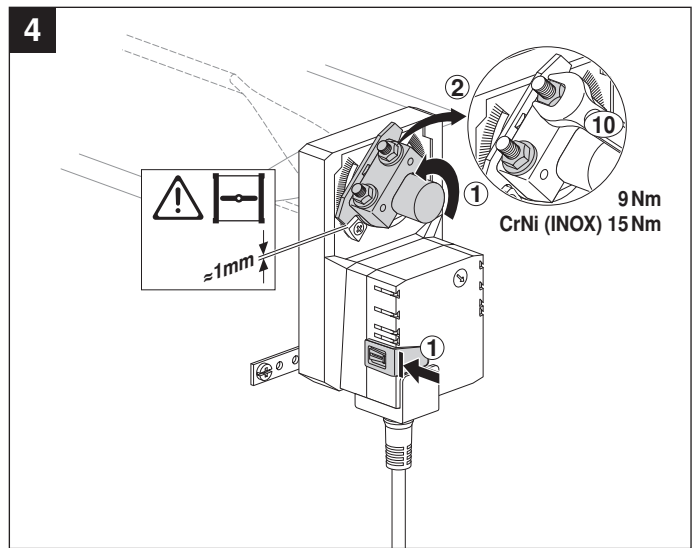
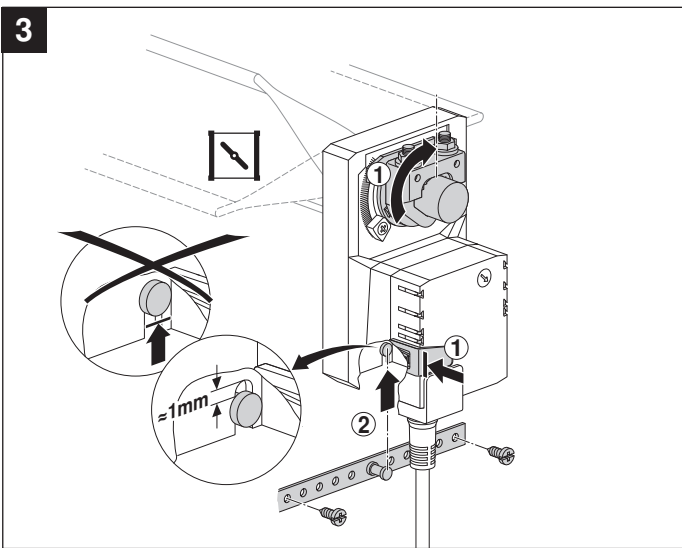
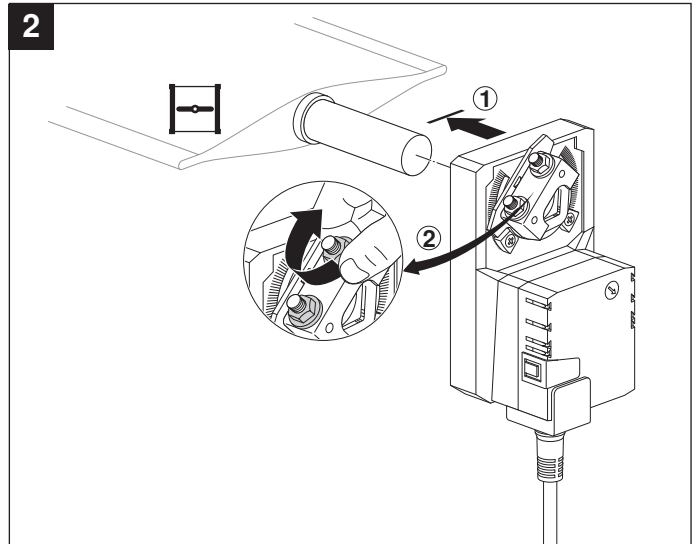
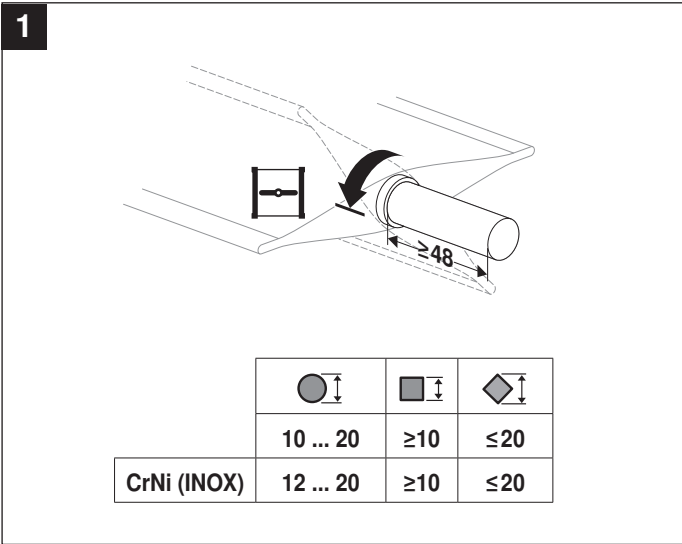
Dimensions [mm]

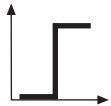
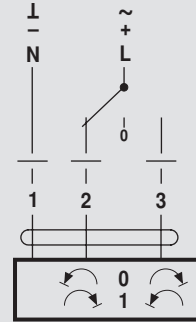
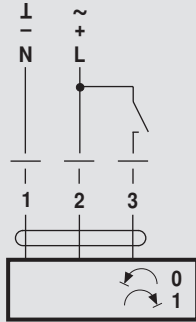
Dimensional drawings



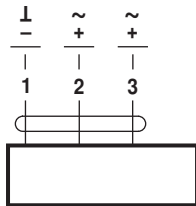
Damper spindle	Length			
	≥48	10 ... 20 <sup>1)</sup>	≥10	≤20
	≥20	10 ... 20 <sup>1)</sup>	≥10	≤20

<sup>1)</sup> CrNi (INOX) 12 ... 20

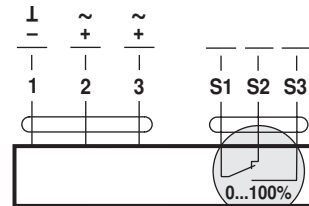




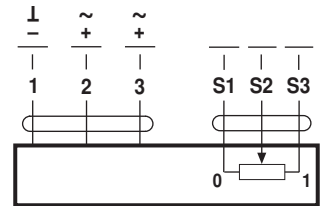
AC 24 V / DC 24 V



SM24A..  
SMD24A..

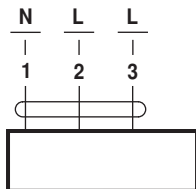


SM24A-S..

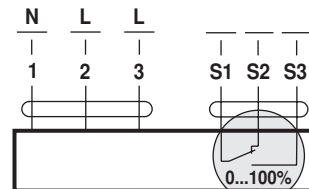


SM24AP5..

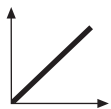
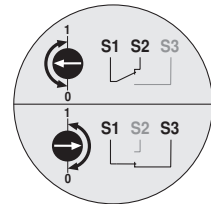
AC 100 ... 240 V ⚠



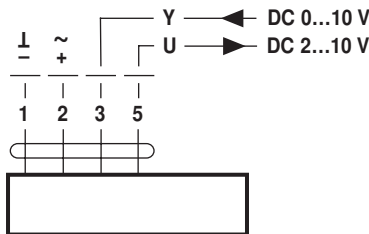
SM230A..  
SMD230A..



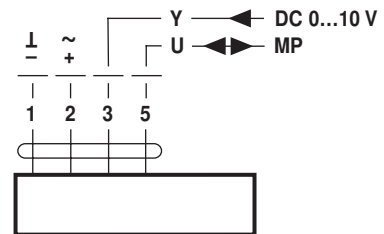
SM230A-S..



AC 24 V / DC 24 V

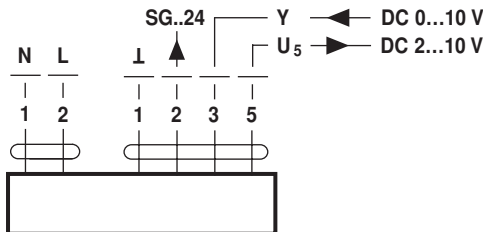


SM24A-SR..  
SM24A-MF..



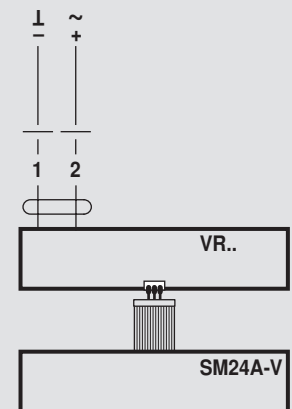
SM24A-MP..

AC 100 ... 240 V ⚠



SM230ASR..

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



SM24A-V / VR..