

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

- For air dampers up to approx. 0.4 m²
- Torque 2 Nm
- Nominal voltage AC/DC 24 V
- Control: modulating DC 0 ... 10 V
- Position feedback DC 2 ... 10 V



Type overview

Type	Direction of rotation
CM24-SR-L	Y = 0 V left end stop position 0
CM24-SR-R	Y = 0 V right end stop position 0

Technical data

Electrical data	Nominal voltage	AC 24 V, 50/60 Hz DC 24 V	
	Nominal voltage range	AC/DC 19.2 ... 28.8 V	
	Power consumption	In operation 1 W @ nominal torque At rest 0.5 W For wire sizing 2 VA	
	Connection	Cable 1 m, 4 x 0.75 mm ²	
Functional data	Torque (nominal torque)	Min. 2 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	
	Position accuracy	±5%	
	Direction of rotation	See «Type overview»	
	Manual override	Gear disengagement with magnet	
	Angle of rotation	Max. 95°↔, limited on both sides by means of adjustable, mechanical end stops	
	Running time	75 s / 90°↔	
	Sound power level	Max. 35 dB (A)	
	Position indication	Mechanical, pluggable (with integrated magnet for gear disengagement)	
	Safety	Protection class	III Safety extra-low voltage / UL Class 2 Supply
		Degree of protection	IP54 in any mounting position NEMA2, UL Enclosure Type 2
		EMC	CE according to 2004/108/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	
Dimensions / Weight	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	-30 ... +50 °C	
	Non-operating temperature	-40 ... +80 °C	
	Ambient humidity	95% RH, non-condensating (EN 60730-1)	
	Maintenance	Maintenance-free	
	Dimensions	See «Dimensions» on page 2	
	Weight	Approx. 220 g	

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.
- The mechanical end stops for restricting the angle of rotation are only allowed to be removed for adjustment purposes. It is essential for them to be in place during operation.

Safety notes

(Continue)

- 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.
- 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

- 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 (∅ 6 ... 12.7 mm). The actuator is then secured with the anti-rotation strap supplied, to prevent it from rotating.
- Manual override** Manual override with magnet possible (the gear is disengaged as long as the magnet adheres to the symbol ⊕. The magnet for gear disengagement is integrated in the position indicator.
- 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.
- Home position** When the supply voltage is switched on for the first time and after every voltage interruption, the synchronisation process is started and the actuator travels to home position (Y = 0 V).

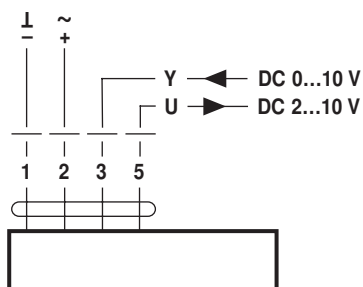
Type	Home position
CM24-SR-L	Y = 0 V Left stop
CM24-SR-R	Y = 0 V Right stop

The actuator then moves into the position defined by the control signal.

Electrical installation

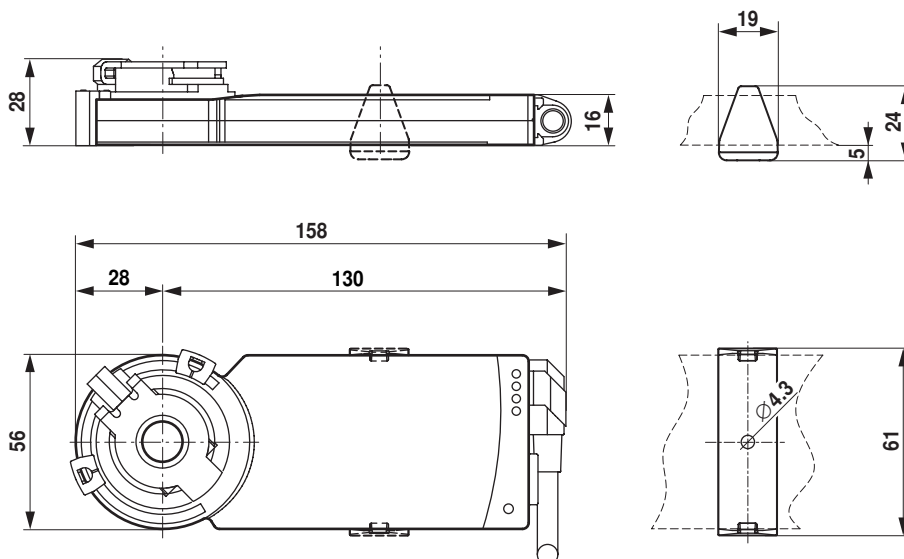
Wiring diagram

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



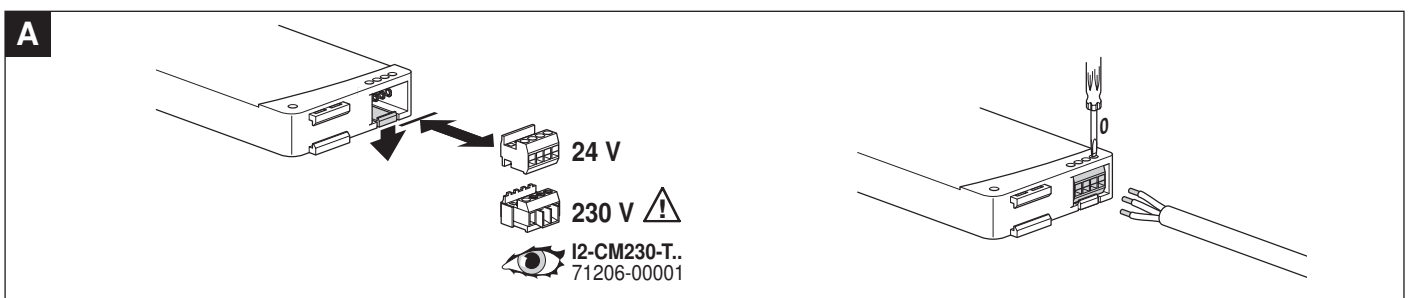
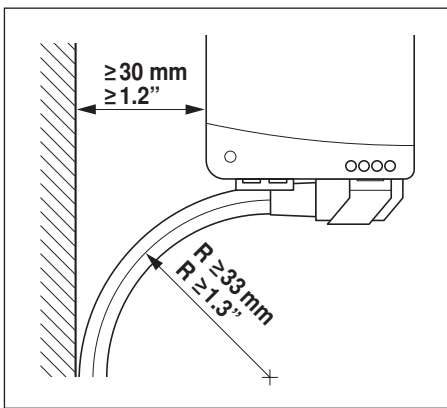
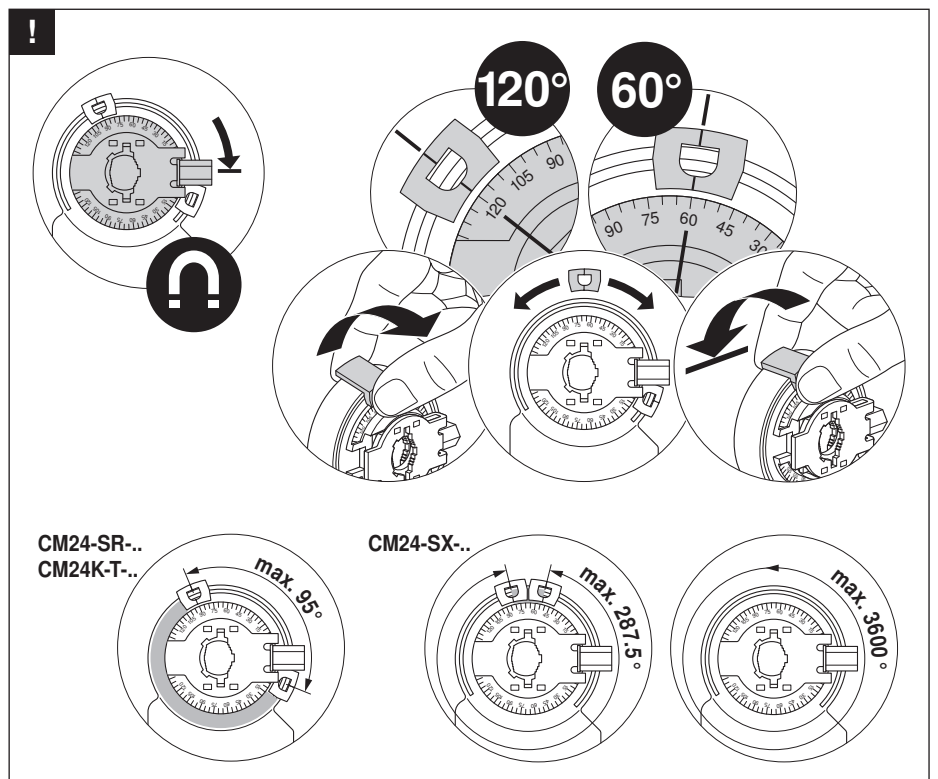
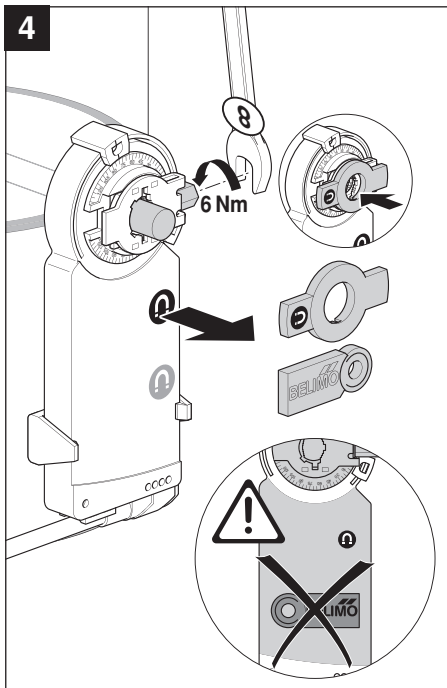
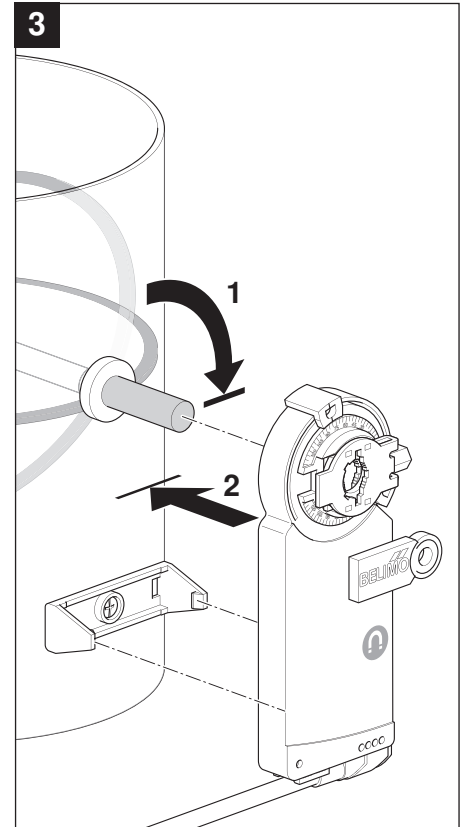
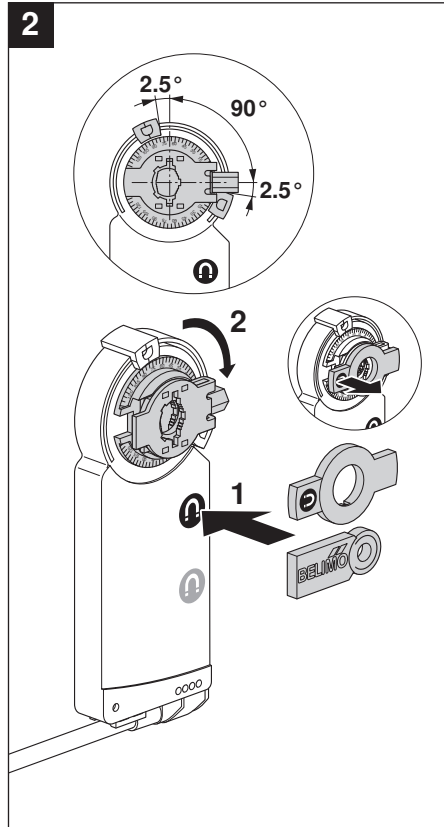
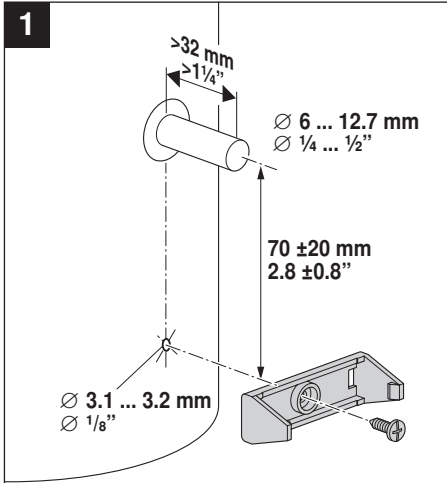
Dimensions [mm]

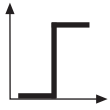
Dimensional drawings



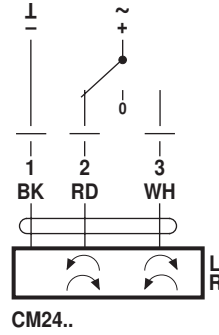
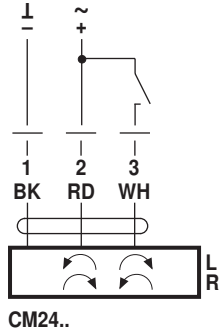
Damper spindle	Length	
	≥32	6 ... 12.7

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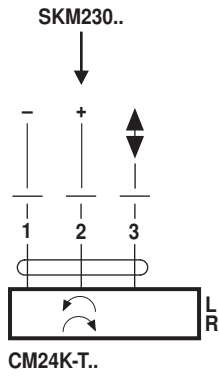




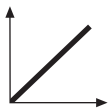
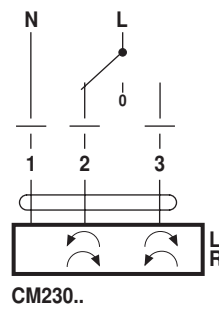
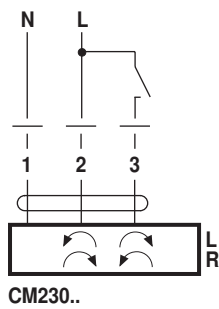
AC 24 V / DC 24 V



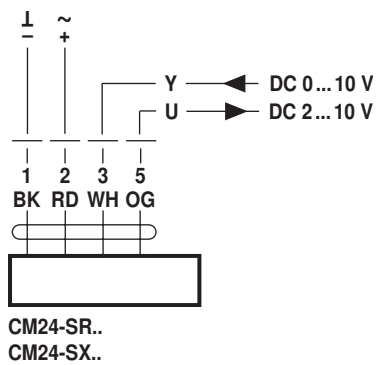
DC 24 V
(SKM230..)



AC 100 ... 240 V ⚠



AC 24 V / DC 24 V



Damper actuator for operating air control dampers in ventilation and air-conditioning systems for building services installations

- For air dampers up to approx. 0.4 m²
- Torque 2 Nm
- Nominal voltage AC 100 ... 240 V
- Control: Open-close or 3-point



Type overview

Type	Direction of rotation
CM230-L	counter-clockwise (ccw)
CM230-R	clockwise (cw)

Technical data

Electrical data	Nominal voltage	AC 100 ... 240 V, 50/60 Hz
	Nominal voltage range	AC 85 ... 265 V
	Power consumption	In operation 1.5 W @ nominal torque At rest 1 W For wire sizing 3 VA
	Connection	Cable 1 m, 3 x 0.75 mm ²
Functional data	Torque (nominal torque)	Min. 2 Nm @ nominal voltage
	Direction of rotation	See «Type overview»
	Manual override	Gear disengagement with magnet
	Angle of rotation	Without limit Endless With limit Fixed 315°↔ or 0 ... 287.5°↔ with mechanical end stops, can be adjusted in 2.5°↔ increments
	Running time	75 s / 90°↔
	Sound power level	Max. 35 dB (A)
	Position indicator	Mechanical, pluggable (with integrated magnet for gear disengagement)
Safety	Protection class	II totally insulated <input type="checkbox"/>
	Degree of protection	IP54 in any mounting position NEMA2, UL Enclosure Type 2
	EMC	CE according to 2004/108/EC CE according to 2006/95/EC
Dimensions / Weight	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 (EN 60730-1)
	Rated impulse voltage	2.5 kV (EN 60730-1)
	Control pollution degree	3 (EN 60730-1)
	Ambient temperature	-30 ... +50 °C
	Non-operating temperature	-40 ... +80 °C
	Ambient humidity	95% r.H., non-condensating (EN 60730-1)
	Maintenance	Maintenance-free
	Dimensions	See «Dimensions» on page 2
Weight	Approx. 220 g	

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.
- Caution: Power supply voltage !
- Assembly must be carried out by trained personnel. Any legal regulations or regulations issued by authorities must be observed during assembly.
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(Continue)

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Product features


- Simple direct mounting** Simple direct mounting on the damper spindle with a universal spindle clamp (\varnothing 6 ... 12.7 mm). The actuator is then secured with the anti-rotation strap supplied, to prevent it from rotating.
- Manual override** Manual override with magnet possible (the gear is disengaged as long as the magnet adheres to the symbol ⊕). The magnet for gear disengagement is integrated in the position indicator.
- 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.

Electrical installation

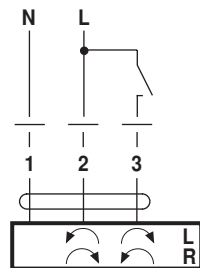
Wiring diagrams

Notes

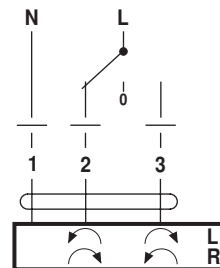
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- Other actuators can be connected in parallel. Please note the performance data.



Open-close control

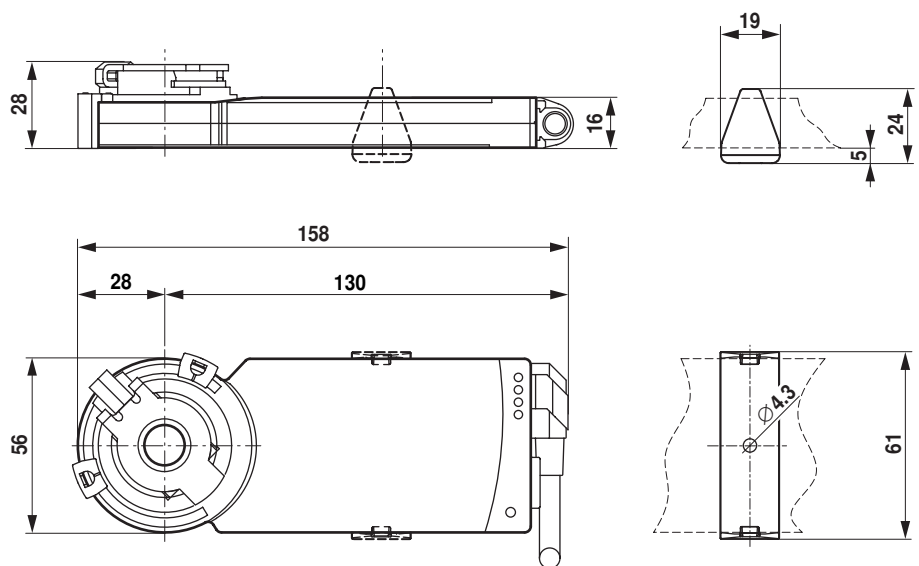



3-point control



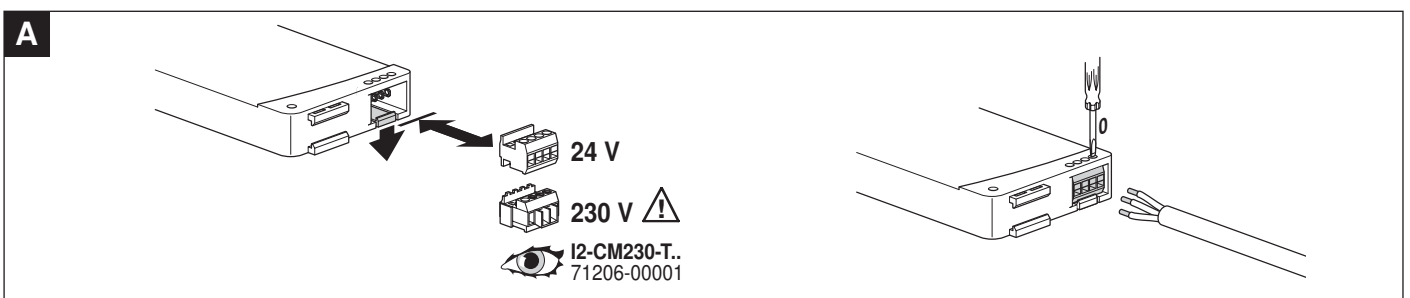
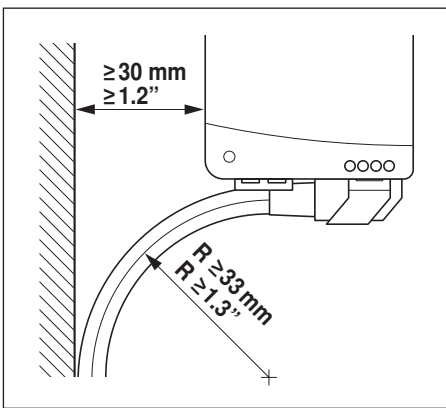
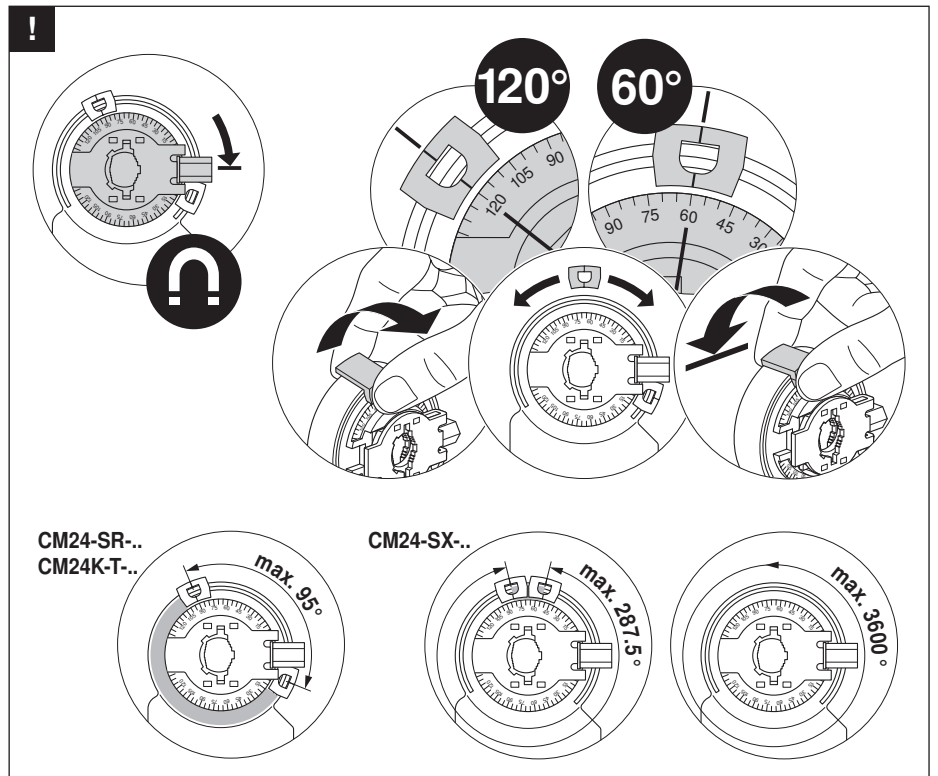
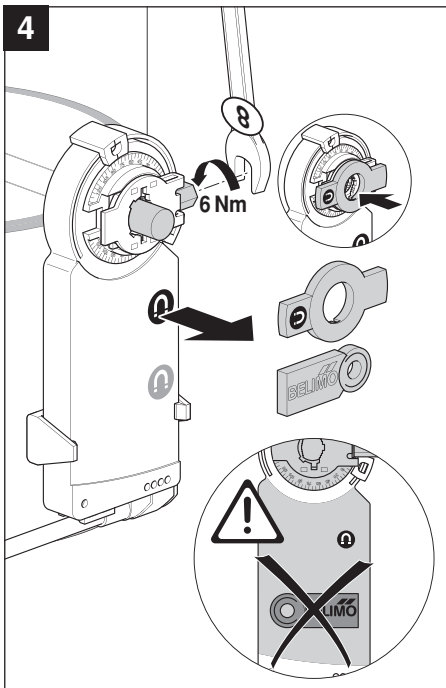
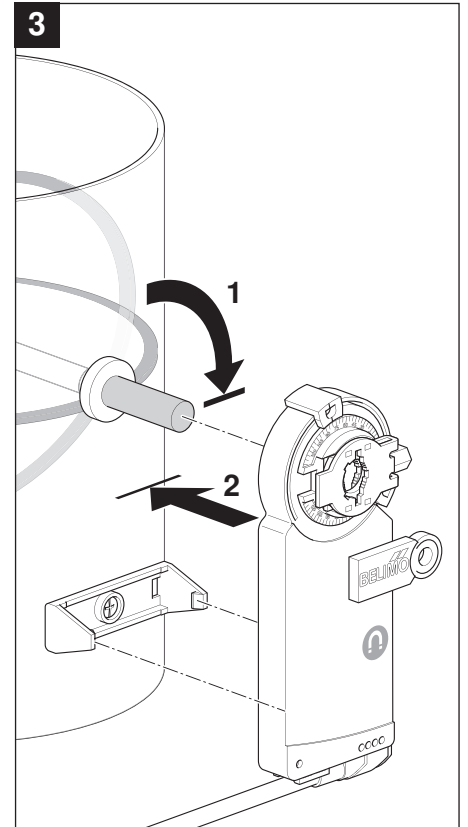
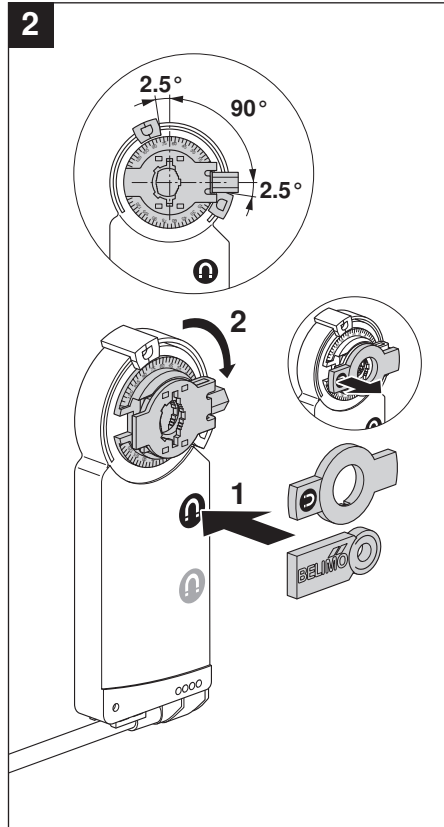
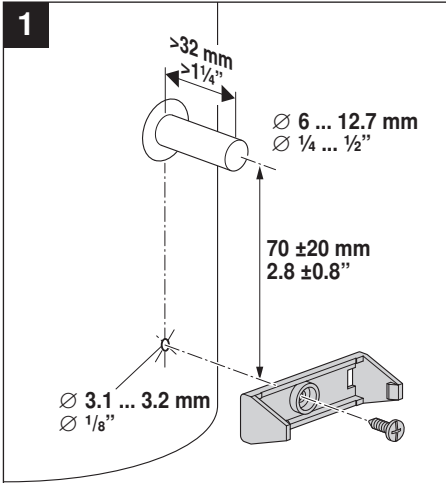
Dimensions [mm]

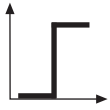
Dimensional drawings



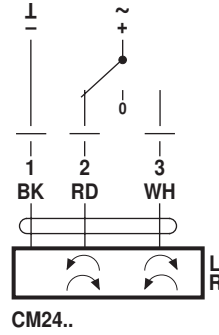
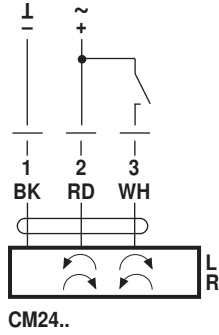
Damper spindle	Length	
	≥32	6 ... 12.7

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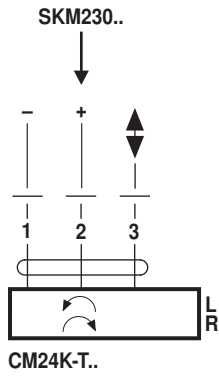




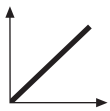
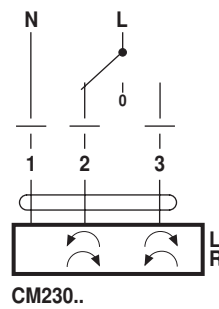
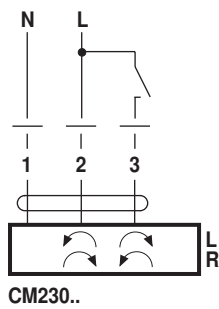
AC 24 V / DC 24 V



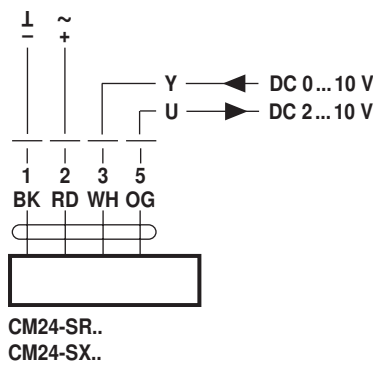
DC 24 V
(SKM230..)



AC 100 ... 240 V ⚠



AC 24 V / DC 24 V



Damper actuator for operating air control dampers in ventilation and air-conditioning systems for building services installations

- For air dampers up to approx. 0.4 m²
- Torque 2 Nm
- Nominal voltage AC/DC 24 V
- Control: Open-close or 3-point



Type overview

Type	Direction of rotation
CM24-L	counter-clockwise (ccw)
CM24-R	clockwise (cw)

Technical data

Electrical data	Nominal voltage	AC 24 V, 50/60 Hz / DC 24 V	
	Nominal voltage range	AC/DC 19.2 ... 28.8 V	
	Power consumption	In operation 0.5 W @ nominal torque At rest 0.2 W For wire sizing 1 VA	
	Connection	Cable 1 m, 3 x 0.75 mm ²	
Functional data	Torque (nominal torque)	Min. 2 Nm @ nominal voltage	
	Direction of rotation	See «Type overview»	
	Manual override	Gear disengagement with magnet	
	Angle of rotation	Without limit Endless With limit Fixed 315°↔ or 0 ... 287.5°↔ with mechanical end stops, can be adjusted in 2.5°↔ increments	
	Running time	75 s / 90°↔	
	Sound power level	Max. 35 dB (A)	
	Position indicator	Mechanical, pluggable (with integrated magnet for gear disengagement)	
Safety	Protection class	III Safety extra-low voltage / UL Class 2 Supply	
	Degree of protection	IP54 in any mounting position NEMA2, UL Enclosure Type 2	
EMC	Certification	CE according to 2004/108/EC 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 (EN 60730-1)	
	Rated impulse voltage	0.8 kV (EN 60730-1)	
	Control pollution degree	3 (EN 60730-1)	
	Ambient temperature	-30 ... +50 °C	
	Non-operating temperature	-40 ... +80 °C	
	Ambient humidity	95% r.H., non-condensating (EN 60730-1)	
	Maintenance	Maintenance-free	
	Dimensions / Weight	Dimensions	See «Dimensions» on page 2
		Weight	Approx. 220 g

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.
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(Continue)

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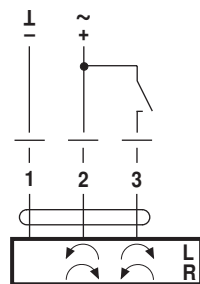
Electrical installation

Wiring diagrams

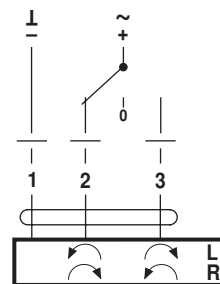
Note

- Connect via safety isolation transformer.
- Other actuators can be connected in parallel. Please note the performance data.

Open-close control

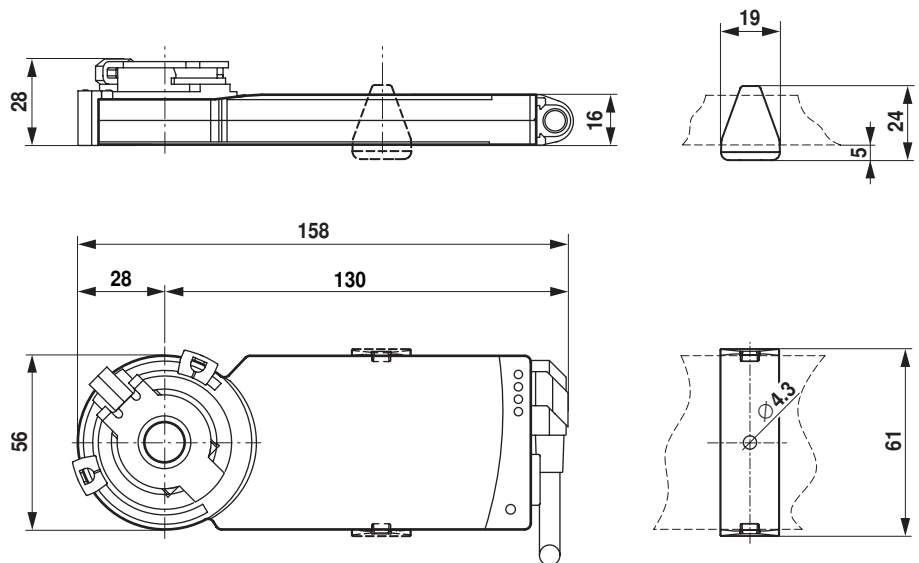


3-point control



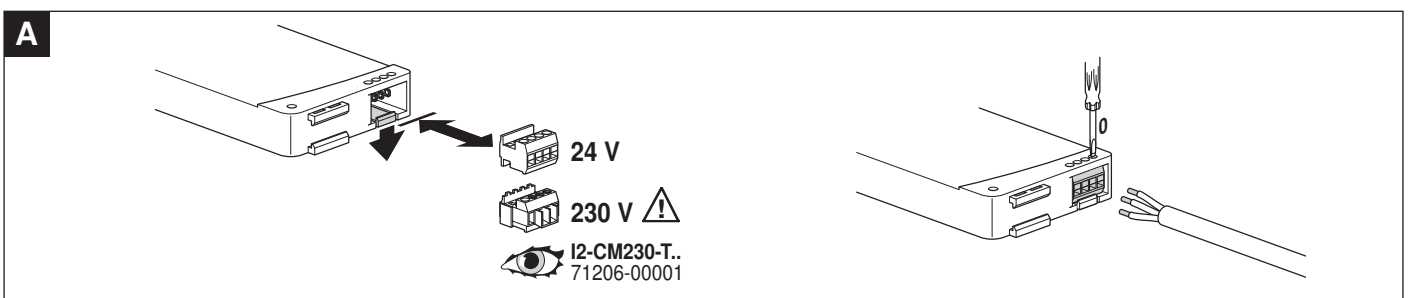
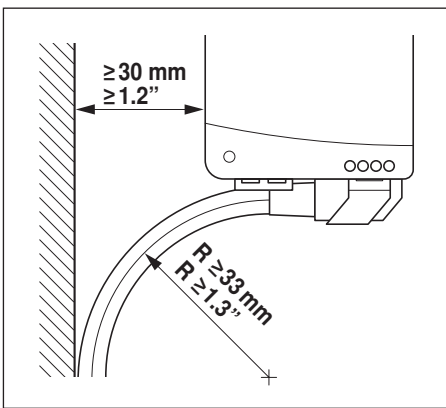
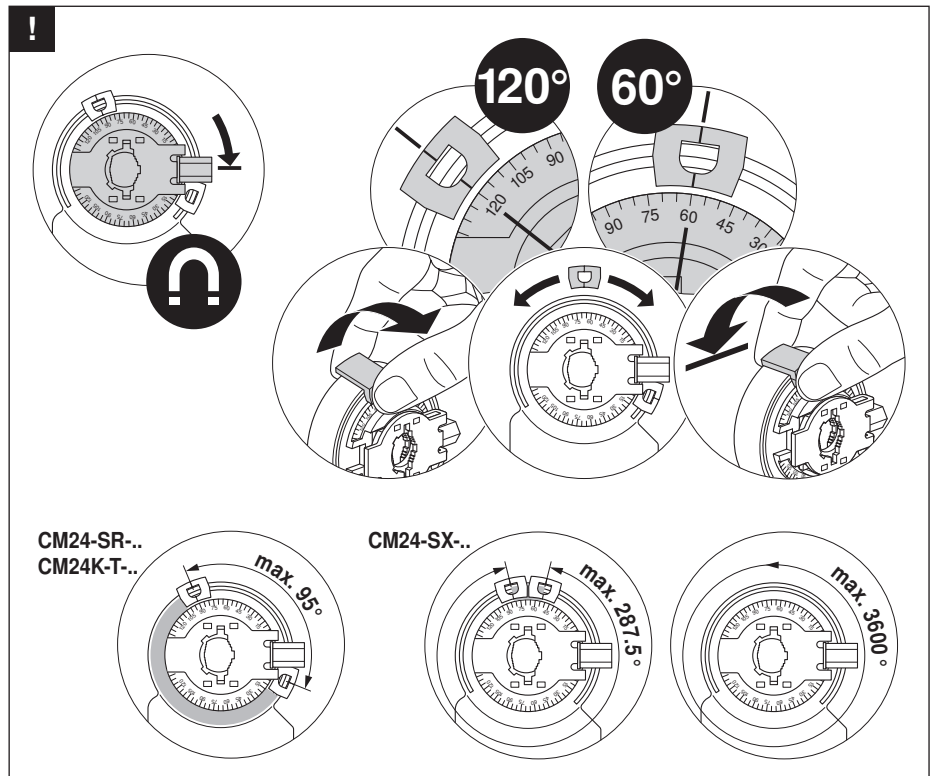
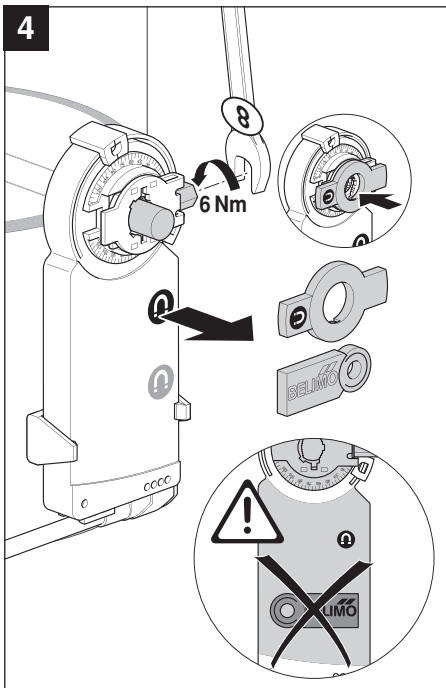
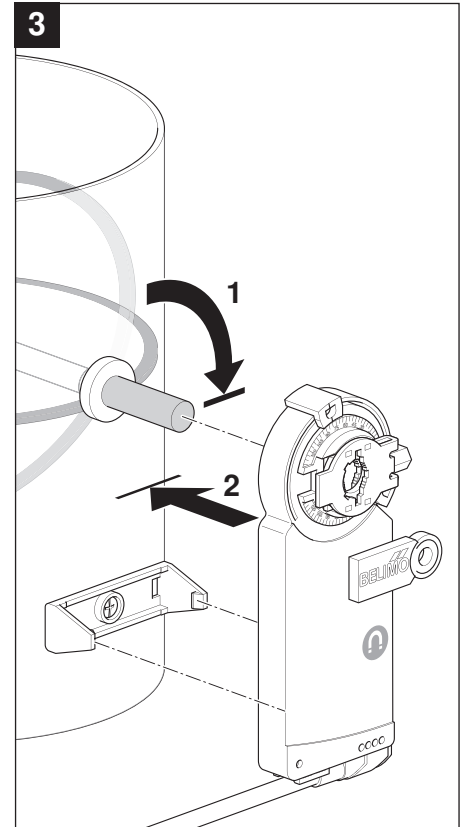
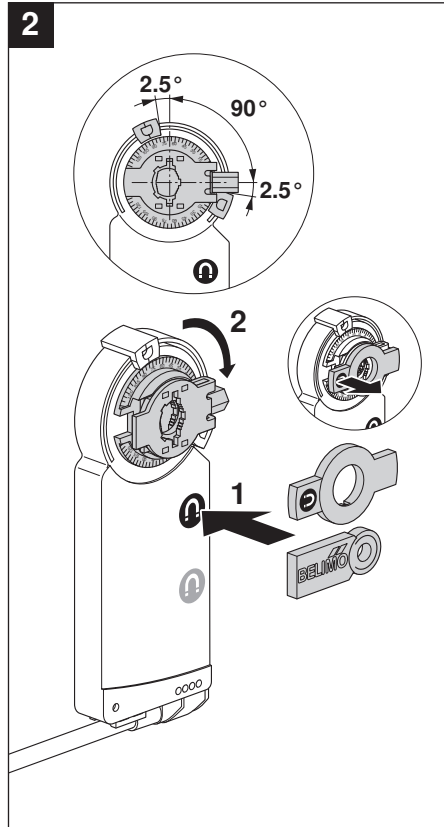
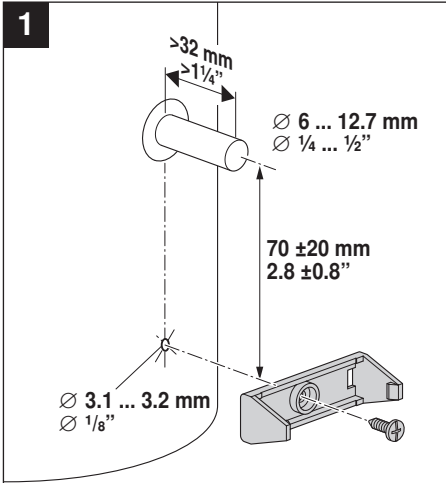
Dimensions [mm]

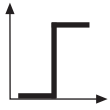
Dimensional drawings



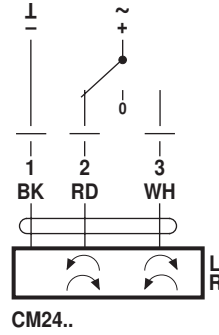
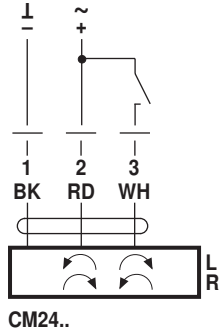
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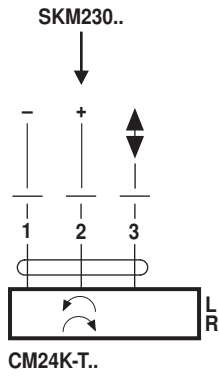




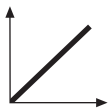
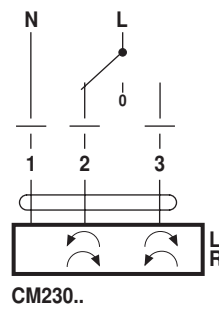
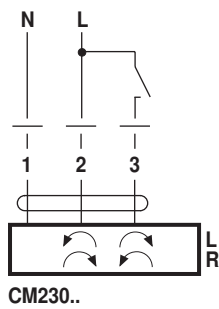
AC 24 V / DC 24 V



DC 24 V
(SKM230..)



AC 100 ... 240 V ⚠



AC 24 V / DC 24 V

