

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
- Damper rotation: Form-fit 8 mm



Type overview

Type	Direction of rotation
CM24-SR-F-L	Y = 0 V left end stop position 0
CM24-SR-F-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° \sphericalangle, limited on both sides by means of adjustable, mechanical end stops
	Running time	75 s / 90° \sphericalangle
	Sound power level	Max. 35 dB (A)
	Damper rotation	Form-fit 8 mm
	Position indication	Mechanical, pluggable (with integrated magnet for gear disengagement)
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	-30 ... +50 °C
	Non-operating temperature	-40 ... +80 °C
	Ambient humidity	95% RH, non-condensating (EN 60730-1)
	Maintenance	Maintenance-free
Dimensions / Weight	Dimensions	See «Dimensions» on page 2
	Weight	Approx. 185 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.
- 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.

Safety notes

(Continue)

- 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** The hollow spindle of the actuator is mounted directly on the damper spindle (□ 8 mm) with a positive-fit connection. 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).

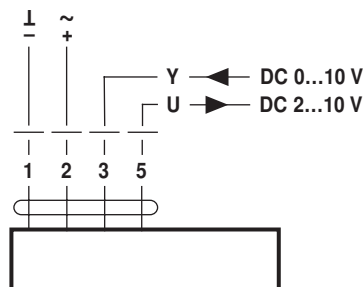
Type	Home position
CM24-SR-F-L	Y = 0 V Left stop
CM24-SR-F-R	Y = 0 V Right stop

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

Electrical installation

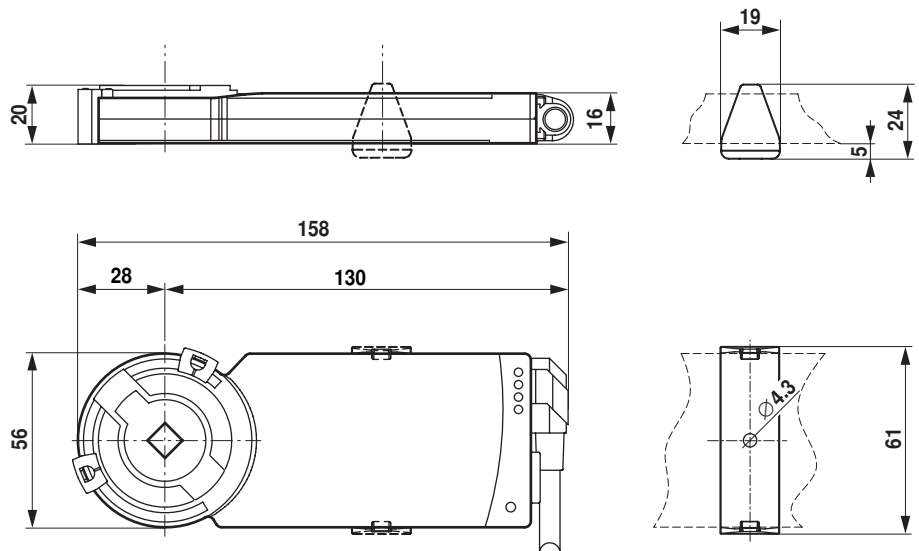
Wiring diagram

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



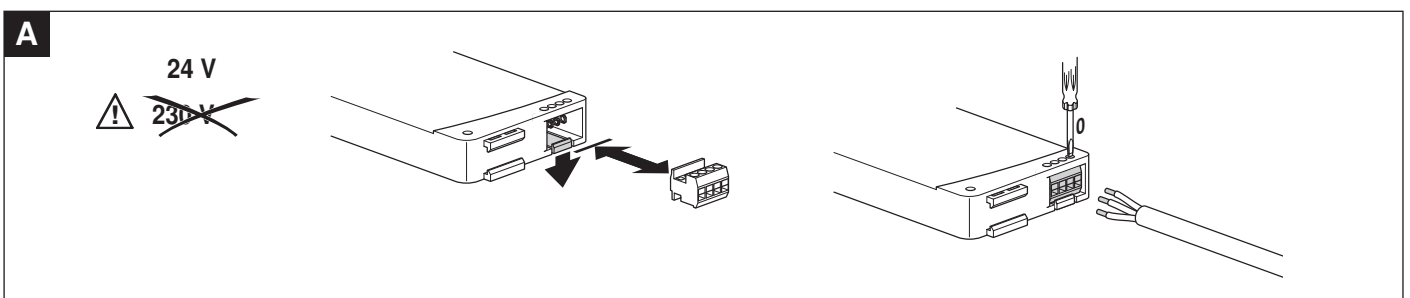
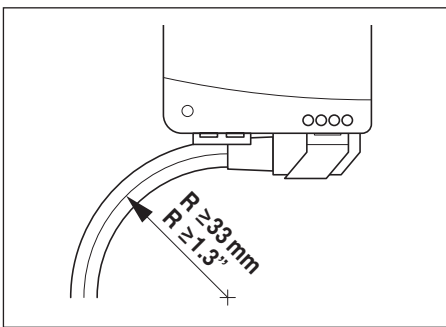
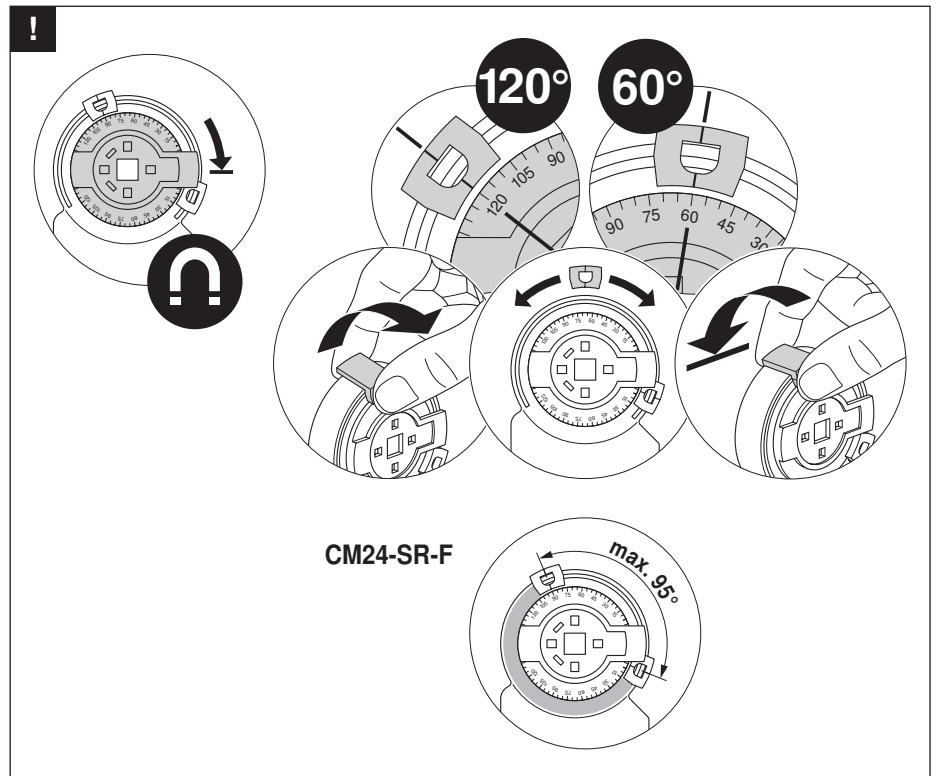
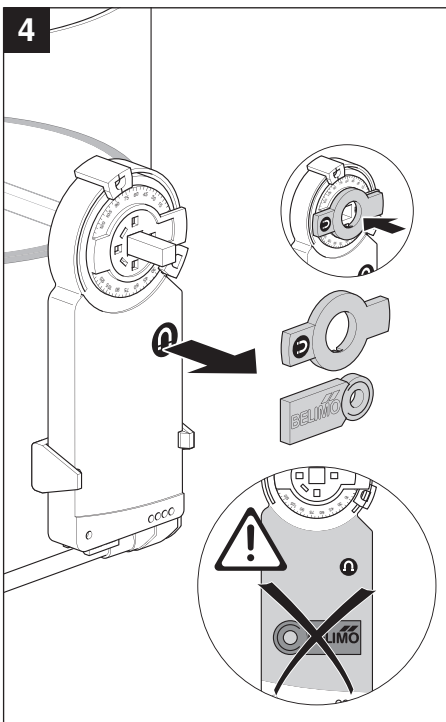
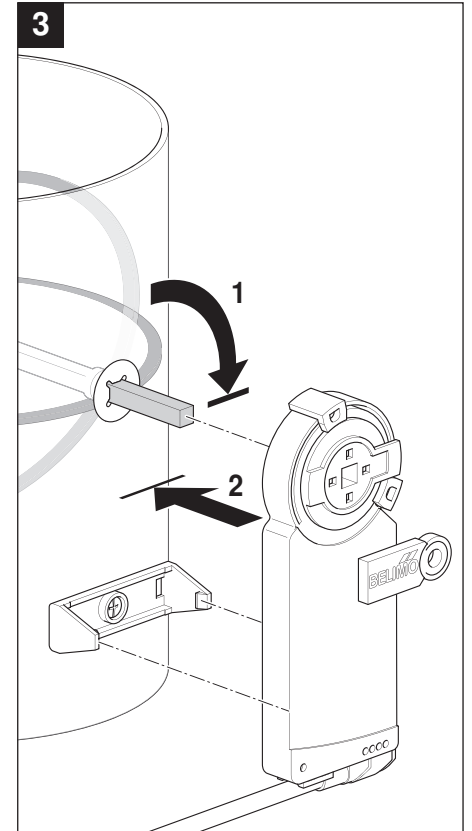
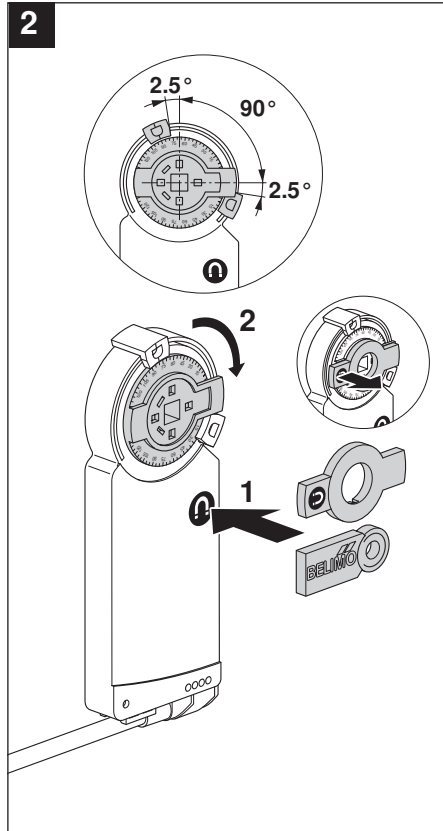
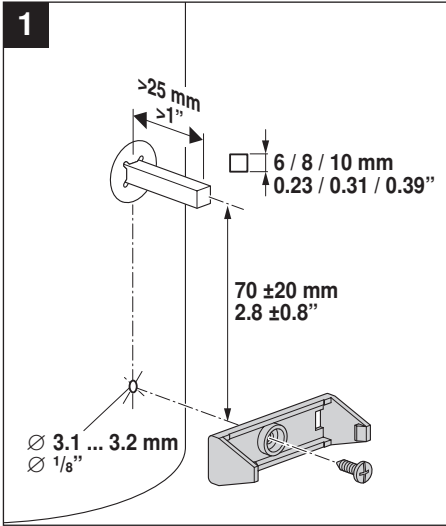
Dimensions [mm]

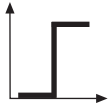
Dimensional drawings



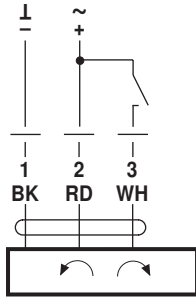
Damper spindle	Length	□ I
	≥ 25	8

70670-00001.D

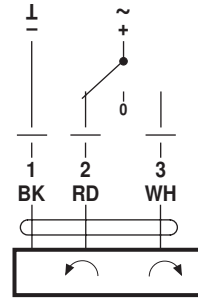




AC 24 V
DC 24 V

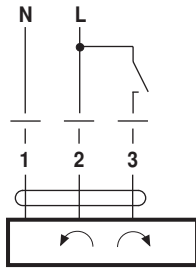


CM24-F

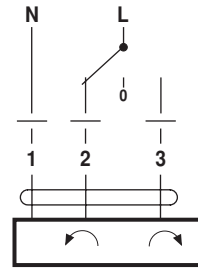


CM24-F

AC 100 ... 240 V

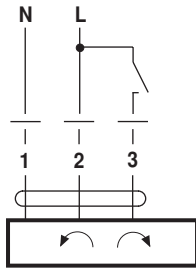


CM230-F

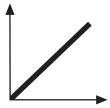


CM230-F

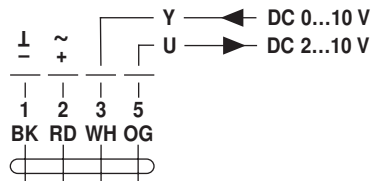
AC 230 V



CM230-1-F



AC 24 V / DC 24 V



CM24-SR-F