

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
- Damper rotation: Form-fit 8 mm



_				
11	ma	α	IDI	/iew
	/ DC	v	/CIV	/ I C VV

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

Power consumption In operation Nominal voltage AC 24 V, 50/60 Hz / DC 24 V		CM24-F-R clockwise (cw)	
Pictrical data Nominal voltage AC 24 V, 50/60 Hz / DC 24 V			
Nominal voltage range	Technical data		
Power consumption In operation At rest For wire sizing 1 VA Connection Cable 1 m, 3 x 0.75 mm² Functional data Torque (nominal torque) Direction of rotation Manual override Angle of rotation Without limit With limit Fixed 315° d or 0 287.5° d with mechanical end stops, can be adjusted in 2.5° d increments Running time 75 s / 90° d Sound power level Max. 35 dB (A) Damper rotation 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 PF4 in any mounting position NEMA2, UL Enclosure Type 2 EMC Certification Cultus according to UL 60730-1A and UL 60730-2-14 and CAN/CSA E60730-1.02 Certified to IEC/EN 60730-1 Ambient humidity Maintenance Dimensions / Weight Dimensions / Weight Dimensions / Weight Dimensions / Weight	Electrical data	Nominal voltage	AC 24 V, 50/60 Hz / DC 24 V
At rest For wire sizing 1 VA Connection Cable 1 m, 3 x 0.75 mm² 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 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) Damper rotation Form-fit 8 mm 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 1P54 in any mounting position NEMA2, UL Enclosure Type 2 EMC CE according to 2004/108/EC Certification 1Form-fit end CAN/CSA E60730-1:02 Certified to IE-0/EN 60730-1 and IEC/EN 60730-2-14 and CAN/CSA E60730-1:02 Certified to IE-0/EN 60730-1 Rated impulse voltage 0.8 kV (EN 60730-1) Ambient temperature -30 +50 ° C Anbient humidity 95% r.H., non-condensating (EN 60730-1) Maintenance Dimensions On page 2		Nominal voltage range	AC/DC 19.2 28.8 V
For wire sizing 1 VA Connection Cable 1 m, 3 x 0.75 mm² 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 With limit Encless Fixed 315 °< or 0 287.5 °< d with mechanical end stops, can be adjusted in 2.5 °< d increments Running time 75 s / 90 °<-d Max. 35 dB (A) Damper rotation Form-fit 8 mm Position indicator Mechanical, pluggable (with integrated magnet for gear disengagement) Fore-fit 8 mm Position indicator Mechanical, pluggable (with integrated magnet for gear disengagement) Fore-fit 8 mm Position ridicator Mechanical, pluggable (with integrated magnet for gear disengagement) Fore-fit 8 mm Position indicator Mechanical, pluggable (vith integrated magnet for gear disengagement) Fore-fit 8 mm Position indicator Mechanical, pluggable (vith integrated magnet for gear disengagement) Fore-fit 8 mm Mechanical, pluggable (vith integrated magnet for gear disengagement) Fore-fit 8 mm Position indicator Mechanical, pluggable (vith integrated magnet for gear disengagement) Fore-fit 8 mm Mechanical, pluggable (vith integrated magnet for gear disengagement) Fore-fit 8 mm Mechanical, pluggable (vith integrated magnet for gear disengagement) Fore-fit 8 mm Mechanical and youngable (vith integrated magnet for gear disengagement) Fore-fit 8 mm Mechanical pluggable (vith integrated magnet for gear disengagement) Fore-fit 8 mm Mechanical pluggable (vith integrated magnet for gear disengagement) Fore-fit 8 mm Mechanical pluggable (vith integrated magnet for gear disengagement) Fore-fit 8 mm Mechanical pluggable (vith integrated magnet for gear disengagement) Fore-fit 8 mm Mechanical pluggable (vith integrated magnet for gear disengagement) Fore-fit 8 mm Mechanical pluggable (vith integrated magnet for gear disengagement) Fore-fit 8 mm Mechanical pluggable (vith integrated magnet for gear disengagement) Fore-fit 8 mm Position 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		Power consumption In operation	0.5 W @ nominal torque
Functional data Functional data Torque (nominal torque) Direction of rotation See *Type overview> Manual override Angle of rotation Without limit With limit Hunning time Sound power level Sound power level Max. 35 dB (A) Damper rotation Position indicator Begree of protection Degree of protection Begree of protection Begree of protection Cettification FEMC Cettification Cettification Degree of protection Cettification Degree of protection Cettified to IEC/EN 60730-1 Bated impulse voltage Control pollution degree Ambient temperature Ambient temperature Ambient temperature Ambient temperature Dimensions / Weight Min. 2 Nm @ nominal voltage Cear disengagement with magnet Cear disengagement with magnet Fixed 315° or 0 n. 287.5° or 0 n. 287.			
Functional data Torque (nominal torque) Direction of rotation Manual override Angle of rotation With limit Birked 315° → or 0 287.5° → with mechanical end stops, can be adjusted in 2.5° → increments Running time Sound power level Damper rotation Position indicator Safety Safety Frotection class Degree of protection Portifiation Degree of protection Position in Certification Position in Certification Degree of protection Position in Certification Degree of protection Degree of protection Safety Mode of operation Rated impulse voltage Control pollution degree Ambient temperature Ambient temperature Ambient temperature Ambient memorance Dimensions / Weight Dimensions / Weight Dimensions / Dimensions Min. 2 Nm @ nominal voltage Gear disengagement with magnet Gear disengagement with magnet Gear disengagement with magnet Gear disengagement with magnet Endess Gear disengagement with magnet Endess House 31,50° or 287.5° or with mechanical end stops, can be adjusted in 2.5° or with mechanical end stops, can be adjusted in 2.5° or with mechanical end stops, can be dijusted in 2.5° or or 287.5° or			
Direction of rotation Manual override Angle of rotation Without limit With limit Fixed 315 ° ¬ or 0 287.5 ° ¬ with mechanical end stops, can be adjusted in 2.5 ° ¬ increments Running time Sound power level Max. 35 dB (A) Damper rotation 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 Cetrification EMC Cetrification CULus according to 2004/108/EC Certification ULus according to UL 60730-1A and UL 60730-2-14 and CAN/CSA E60730-1 :02 Certification Wode 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 -30 +50 ° C Ambient humidity Maintenance Maintenance-free Dimensions / Weight Dimensions See «Dimensions» on page 2		Connection	Cable 1 m, 3 x 0.75 mm ²
Manual override Gear disengagement with magnet Angle of rotation Without limit Endless Fixed 315° < 0 or 0 287.5° < with mechanical end stops, can be adjusted in 2.5° < increments Running time 75 s / 90° < degree of power level Max. 35 dB (A) Damper rotation Form-fit 8 mm Position indicator Mechanical, pluggable (with integrated magnet for gear disengagement) West 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 Cutting to Eleventary (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	Functional data	Torque (nominal torque)	Min. 2 Nm @ nominal voltage
Angle of rotation Without limit With limit With limit Running time Running time Sound power level Sound power level Max. 35 dB (A) Damper rotation Position indicator Mechanical, pluggable (with integrated magnet for gear disengagement) Will Safety extra-low voltage / UL Class 2 Supply Degree of protection Position Position Position class Will Safety extra-low voltage / UL Class 2 Supply Degree of protection Position NEMA2, UL Enclosure Type 2 EMC Cetification Cultus according to UL 60730-1 A 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 Rated impulse voltage Only to (EN 60730-1) Rated impulse voltage Control pollution degree Ambient temperature Ambient temperature Ambient humidity 95% r.H., non-condensating (EN 60730-1) Maintenance Dimensions / Weight Dimensions See «Dimensions» on page 2		Direction of rotation	
With limit Fixed 315° < or 0 287.5° < with mechanical end stops, can be adjusted in 2.5° < increments			Gear disengagement with magnet
can be adjusted in 2.5° < increments			
Running time 75 s / 90 ° ≺ Sound power level Max. 35 dB (A) Damper rotation Form-fit 8 mm 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 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 Rated impulse voltage 0.8 kV (EN 60730-1) Rated impulse voltage 3 (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		With limit	
Sound power level Damper rotation Form-fit 8 mm 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 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 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			
Damper rotation Form-fit 8 mm 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 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 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			
Position indicator Mechanical, pluggable (with integrated magnet for gear disengagement) 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 Cet 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 Mode of operation Type 1 (EN 60730-1) Control pollution degree 3 (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 Dimensions / Weight Dimensions See «Dimensions» on page 2			
(with integrated magnet for gear disengagement) Safety Protection class III Safety extra-low voltage / UL Class 2 Supply			
Safety Protection class Degree of protection P54 in any mounting position NEMA2, UL Enclosure Type 2 EMC Cetification Certification Certification Certification Certification Correction Correction Certification Correction Correcti		Position indicator	71 00
Degree of protection P54 in any mounting position NEMA2, UL Enclosure Type 2			
NEMA2, UL Enclosure Type 2	Safety	Protection class	· · · · · · · · · · · · · · · · · · ·
EMC Certification cULus 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 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		Degree of protection	
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 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 Dimensions / Weight Dimensions See «Dimensions» on page 2			
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 Dimensions / Weight Dimensions See «Dimensions» on page 2			
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		Certification	
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			
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		Made of appretion	
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			,
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			· · ·
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			1
Ambient humidity 95% r.H., non-condensating (EN 60730-1) Maintenance Maintenance-free Dimensions / Weight Dimensions See «Dimensions» on page 2			
Maintenance Maintenance-free Dimensions / Weight Dimensions See «Dimensions» on page 2			
Dimensions / Weight Dimensions See «Dimensions» on page 2			,
	Dimensions / Walnut		
weignt Approx. 185 g	Dimensions / Weight		
		weignt	дриих. 100 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 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.



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

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 ①. 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

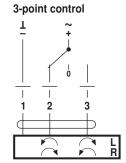
Wiring diagrams

Note

· Connect via safety isolation transformer.

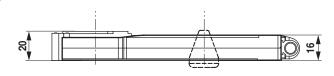
· Other actuators can be connected in parallel. Please note the performance data.

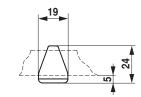
Open-close control

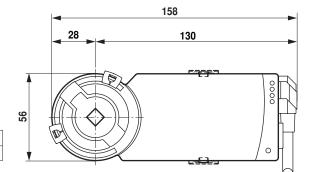


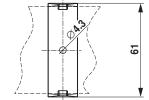
Dimensions [mm]

Dimensional drawings



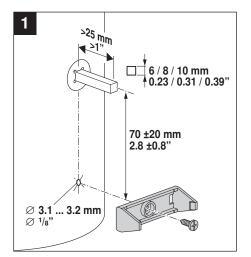


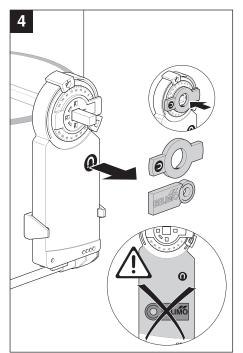


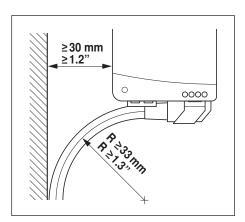


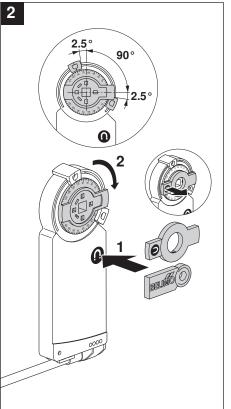
Damper spindle	Length	<u> </u>
	≥25	8

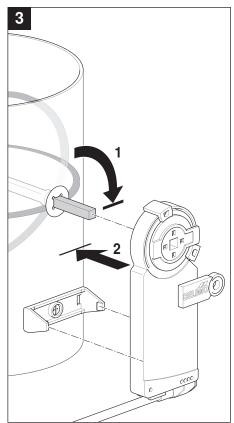


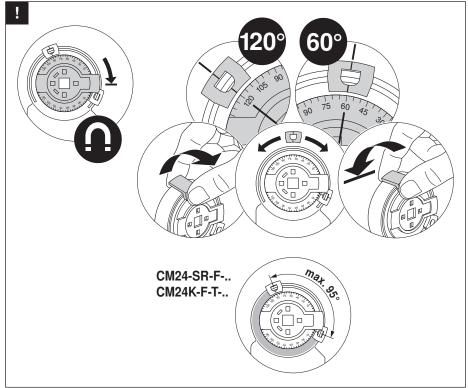


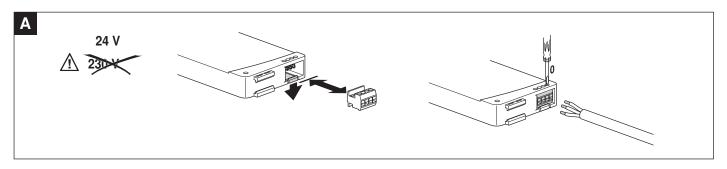








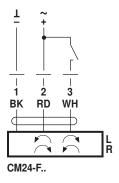


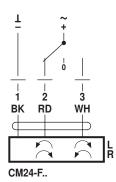




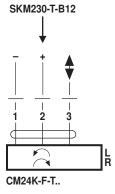


AC 24 V / DC 24 V

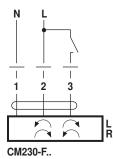


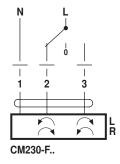


DC 24 V (SKM230..)

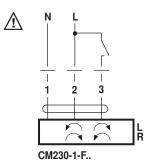


AC 100 ... 240 V





AC 230 V





AC 24 V / DC 24 V

