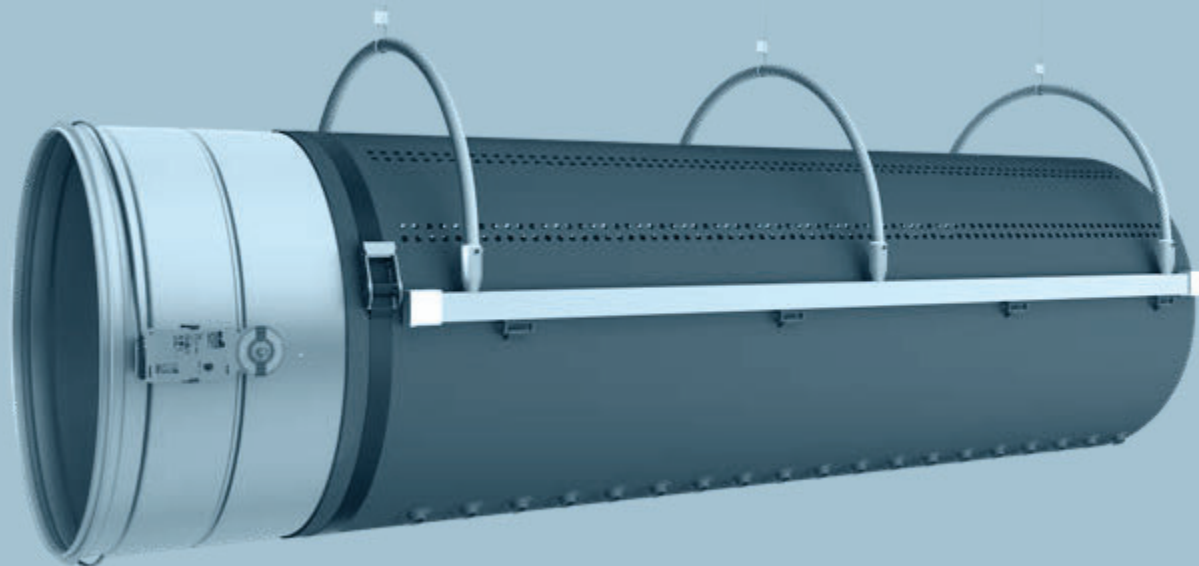


FabricAir[®] VarioDuct[™]

– Commissioning, Maintenance, Warranty and Working Conditions



The FabricAir[®] VarioDuct[™] enables two separate airflow solutions in one duct

COMMISSIONING

Always operate the FabricAir[®] VarioDuct[™] at its designed air volumes and static pressures stated on the technical drawings.

Moving the membrane with actuator

The actuator rotates in both directions: clockwise and counter clockwise. The actuator is overload protected, does not require limit switches and it automatically stops when the end stop is reached, which will be either at the 12 o'clock or 6 o'clock positions depending on the rotation direction.

Important! Never stop the actuator manually in between. Instead let it stop automatically. This will ensure that the membrane efficiently covers half the duct, activating either the upper or lower airflow patterns. The FabricAir[®] VarioDuct[™] must not be run with the membrane positioned in between.

When switching the membrane position, do so with duct inlet air velocity ≤ 5 m/s.

Important! Follow all safety and electrical installation notes stated on the actuator manufacturer's technical data sheet, which is added at the end of this document.

Moving the membrane with manual handle

Move the manual handle up or down to change the position of the membrane. Fix the position of the membrane using the wing screw on the handle.

Important! The FabricAir[®] VarioDuct[™] must not be run with the membrane positioned in between. Make sure the handle is vertical and pointing upward or downward – depending on the desired position of the membrane - when fixing with the wing screw.

To be continued on the next page...

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When switching the membrane position, do so with duct inlet air velocity \leq 5 m/s.

MAINTENANCE

The FabricAir® VarioDuct™ damper and its actuator are maintenance-free.

For maintenance of FabricAir® VarioDuct™ fabric ducting please refer to FabricAir laundering instructions.



WARRANTY

5 years on all parts, provided that all commissioning and installation guidelines, working conditions and actuator manufacturer's technical instructions are observed.

WORKING CONDITIONS

When switching the membrane position, do so with duct inlet air velocity \leq 5 m/s, regardless if the damper is controlled automatically or manually.

AMBIENT CONDITIONS (AUTOMATIC CONTROL)

Non-operating temperature	From -40°C [-40°F] to 80°C [176°F]
Operating temperature	From -30°C [-22°F] to 50°C [122°F]
Relative humidity	95% (non-condensing)

AMBIENT CONDITIONS (MANUAL CONTROL)

Non-operating temperature	From -40°C [-40°F] to 120°C [248°F]
Operating temperature	From -40°C [-40°F] to 80°C [176°F]
Relative humidity	0-100%

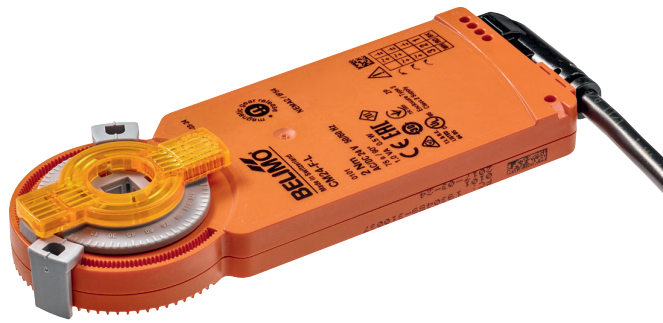
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Damper actuator for adjusting dampers in technical building installations

- Air damper size up to approx. 0.4 m²
- Nominal torque 2 Nm
- Nominal voltage AC/DC 24 V
- Control Open-close, 3-point
- Spindle driver Form fit 8x8 mm



Technical data

Electrical data	Nominal voltage	AC/DC 24 V
	Nominal voltage frequency	50/60 Hz
	Nominal voltage range	AC 19.2...28.8 V / DC 19.2...28.8 V
	Power consumption in operation	0.5 W
	Power consumption in rest position	0.2 W
	Power consumption for wire sizing	1 VA
	Connection supply / control	Cable 1 m, 3 x 0.75 mm ²
	Parallel operation	Yes (note the performance data)
Functional data	Torque motor	Min. 2 Nm
	Direction of motion motor	ccw rotation
	Manual override	with magnet
	Angle of rotation	0...287.5°
	Angle of rotation note	Without limitation: endless 315° with one end stop clip mounted on the actuator
	Running time motor	75 s / 90°
	Sound power level motor	35 dB(A)
	Spindle driver	Form fit 8x8 mm
	Position indication	Mechanically, pluggable (with integrated magnet for gear disengagement)
	Safety	Protection class IEC/EN
Protection class UL		UL Class 2 Supply
Degree of protection IEC/EN		IP54
Degree of protection NEMA/UL		NEMA 2, UL Enclosure Type 2
EMC		CE according to 2014/30/EU
Certification IEC/EN		IEC/EN 60730-1 and IEC/EN 60730-2-14
Certification UL		cULus according to UL 60730-1A, UL 60730-2-14 and CAN/CSA E60730-1:02
Mode of operation		Type 1
Rated impulse voltage supply / control		0.8 kV
Control pollution degree		3
Ambient temperature		-30...50°C
Non-operating temperature		-40...80°C
Ambient humidity		95% r.h., non-condensing
Maintenance	Maintenance-free	
Weight	Weight	0.24 kg

Safety notes



- The device must not be used outside the specified field of application, especially not in aircraft or in any other airborne means of transport.
- Outdoor application: only possible in case that no (sea)water, snow, ice, insulation or aggressive gases interfere directly with the actuator and that is ensured that the ambient conditions remain at any time within the thresholds according to the data sheet.
- Only authorised specialists may carry out installation. All applicable legal or institutional installation regulations must be complied during installation.
- 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

- Cables must not be removed from the device.
- To calculate the torque required, the specifications supplied by the damper manufacturers concerning the cross-section, the design, the installation site and the ventilation conditions must be observed.
- The device contains electrical and electronic components and must not be disposed of as household refuse. All locally valid regulations and requirements must be observed.

Product features

- Simple direct mounting** The actuator with its hollow spindle is mounted in a form-fit manner directly on the damper spindle and can be optionally secured with the Z-ARCM anti-rotation clip to prevent it from rotating.
- Manual override** Manual override with magnet possible (the gear is disengaged as long as the magnet adheres to the magnet symbol). The magnet for gear disengagement is integrated in the position indication.
- Adjustable angle of rotation** Adjustable angle of rotation with mechanical end stops.
- High functional reliability** The actuator is overload protected, requires no limit switches and automatically stops when the end stop is reached.

Accessories

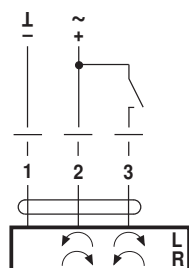
	Description	Type
Mechanical accessories	Anti-rotation clip for CM..	Z-ARCM
	Magnet disengagement	Z-MA
	Position indicator CM..	Z-PICM
	End stop clips CM.. / CQ..	Z-ESCM

Electrical installation

	Notes	<ul style="list-style-type: none"> • Connection via safety isolating transformer. • Parallel connection of other actuators possible. Observe the performance data.
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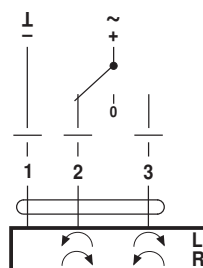
Wiring diagrams

AC/DC 24 V, open-close



Cable colours:
 1 = black
 2 = red
 3 = white

AC/DC 24 V, 3-point



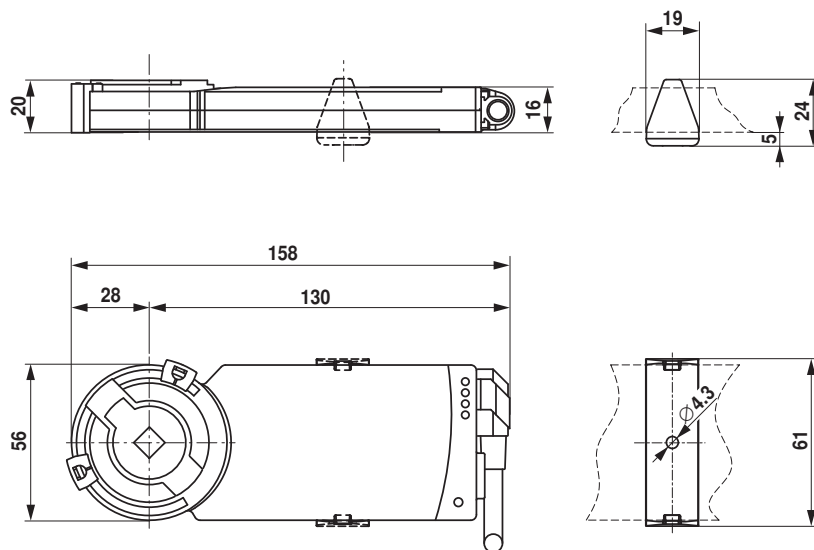
Cable colours:
 1 = black
 2 = red
 3 = white

Dimensions [mm]

Spindle length

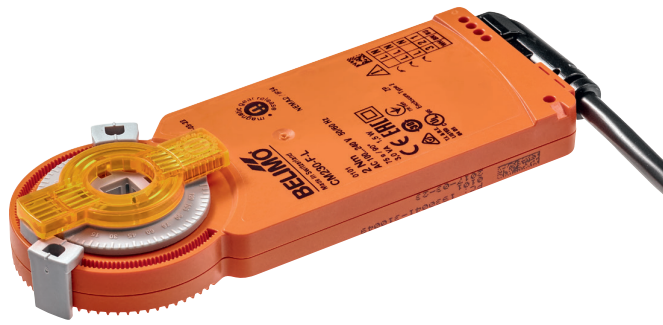
	Min. 25
	-

Dimensional drawings



Damper actuator for adjusting dampers in technical building installations

- Air damper size up to approx. 0.4 m²
- Nominal torque 2 Nm
- Nominal voltage AC 230 V
- Control Open-close, 3-point
- Spindle driver Form fit 8x8 mm



Technical data

Electrical data	Nominal voltage	AC 230 V
	Nominal voltage frequency	50/60 Hz
	Nominal voltage range	AC 85...265 V
	Power consumption in operation	1.5 W
	Power consumption in rest position	1 W
	Power consumption for wire sizing	3 VA
	Connection supply / control	Cable 1 m, 3 x 0.75 mm ²
	Parallel operation	Yes (note the performance data)
Functional data	Torque motor	Min. 2 Nm
	Direction of motion motor	ccw rotation
	Manual override	with magnet
	Angle of rotation	0...287.5°
	Angle of rotation note	Without limitation: endless 315° with one end stop clip mounted on the actuator
	Running time motor	75 s / 90°
	Sound power level motor	35 dB(A)
	Spindle driver	Form fit 8x8 mm
	Position indication	Mechanically, pluggable (with integrated magnet for gear disengagement)
	Safety	Protection class IEC/EN
Protection class UL		II reinforced insulation
Degree of protection IEC/EN		IP54
Degree of protection NEMA/UL		NEMA 2, UL Enclosure Type 2
EMC		CE according to 2014/30/EU
Low voltage directive		CE according to 2014/35/EU
Certification IEC/EN		IEC/EN 60730-1 and IEC/EN 60730-2-14
Certification UL		cULus according to UL 60730-1A, UL 60730-2-14 and CAN/CSA E60730-1:02
Mode of operation		Type 1
Rated impulse voltage supply / control		2.5 kV
Control pollution degree		3
Ambient temperature		-30...50°C
Non-operating temperature		-40...80°C
Ambient humidity		95% r.h., non-condensing
Maintenance	Maintenance-free	
Weight	Weight	0.25 kg

Safety notes



- The device must not be used outside the specified field of application, especially not in aircraft or in any other airborne means of transport.
- Outdoor application: only possible in case that no (sea)water, snow, ice, insulation or aggressive gases interfere directly with the actuator and that is ensured that the ambient conditions remain at any time within the thresholds according to the data sheet.
- Caution: Power supply voltage!
- Only authorised specialists may carry out installation. All applicable legal or institutional installation regulations must be complied during installation.

Safety notes

- 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.
- Cables must not be removed from the device.
- To calculate the torque required, the specifications supplied by the damper manufacturers concerning the cross-section, the design, the installation site and the ventilation conditions must be observed.
- The device contains electrical and electronic components and must not be disposed of as household refuse. All locally valid regulations and requirements must be observed.

Product features

- Simple direct mounting** The actuator with its hollow spindle is mounted in a form-fit manner directly on the damper spindle and can be optionally secured with the Z-ARCM anti-rotation clip to prevent it from rotating.
- Manual override** Manual override with magnet possible (the gear is disengaged as long as the magnet adheres to the magnet symbol). The magnet for gear disengagement is integrated in the position indication.
- Adjustable angle of rotation** Adjustable angle of rotation with mechanical end stops.
- High functional reliability** The actuator is overload protected, requires no limit switches and automatically stops when the end stop is reached.

Accessories

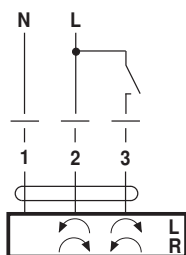
	Description	Type
Mechanical accessories	Anti-rotation clip for CM..	Z-ARCM
	Magnet disengagement	Z-MA
	Position indicator CM..	Z-PICM
	End stop clips CM.. / CQ..	Z-ESCM

Electrical installation

	<p>Notes</p> <ul style="list-style-type: none"> • Caution: Power supply voltage! • Parallel connection of other actuators possible. Observe the performance data.
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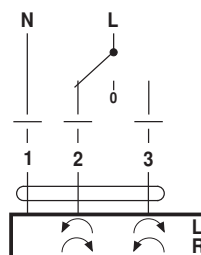
Wiring diagrams

AC 230 V, open-close



Cable colours:
 1 = blue
 2 = brown
 3 = white

AC 230 V, 3-point



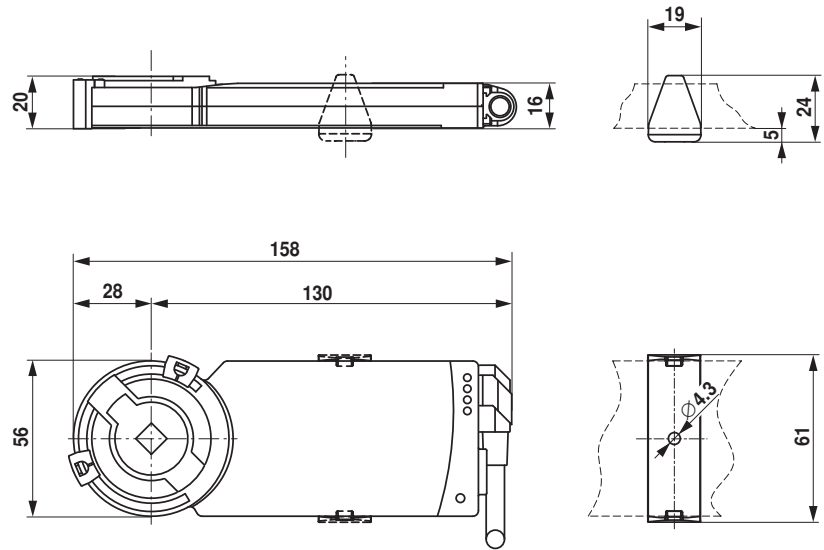
Cable colours:
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 3 = white

Dimensions [mm]

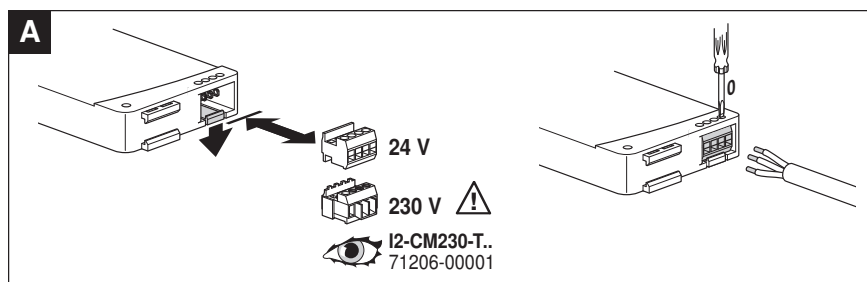
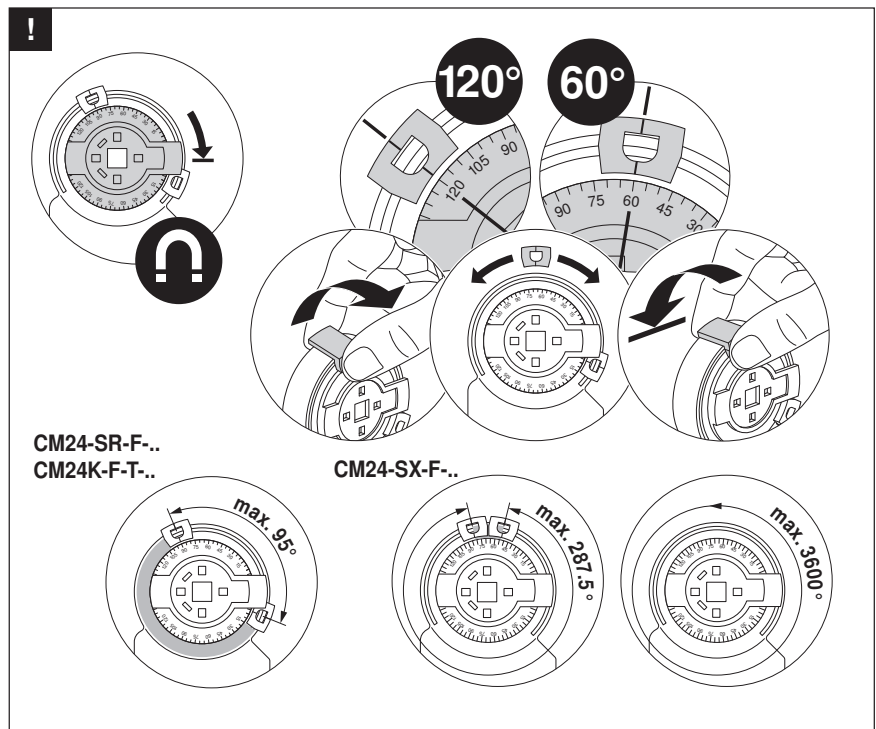
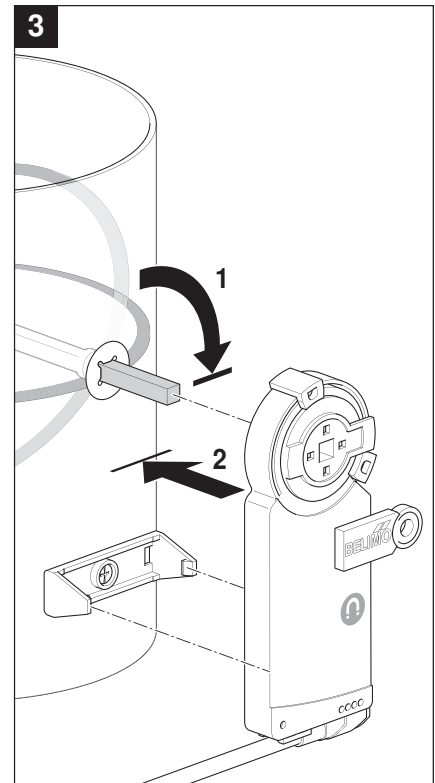
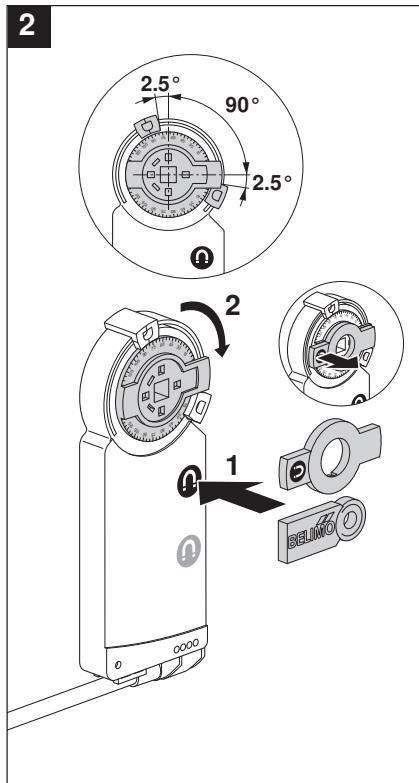
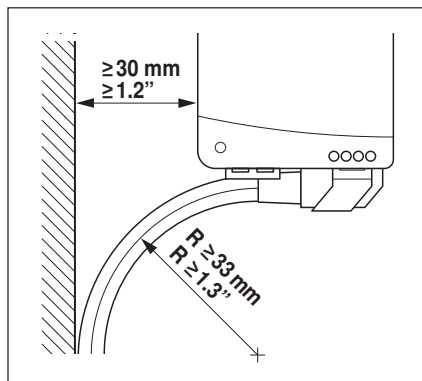
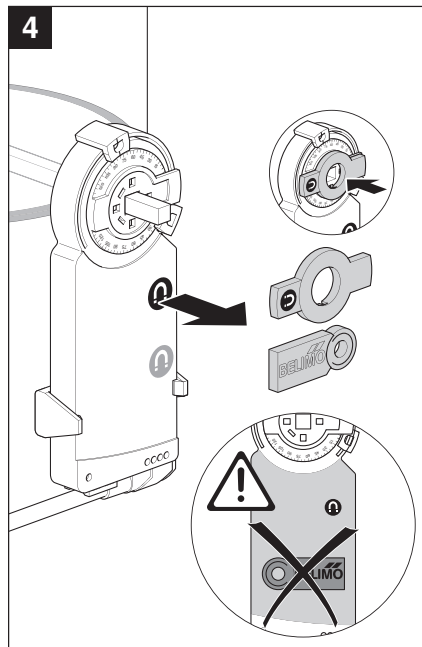
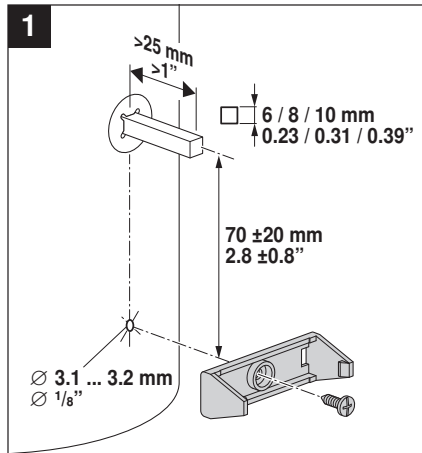
Spindle length

	Min. 25
	-

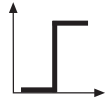
Dimensional drawings



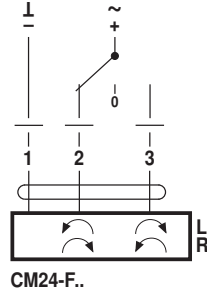
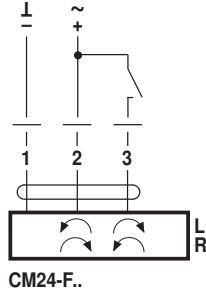
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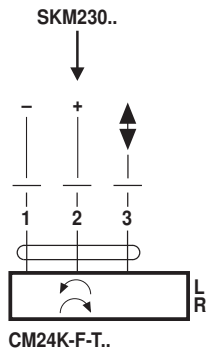
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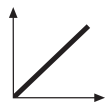
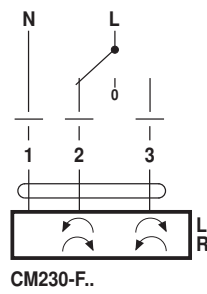
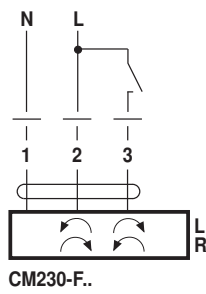
AC 24 V / DC 24 V



DC 24 V
(SKM230..)



AC 100 ... 240 V ⚠



AC 24 V / DC 24 V

