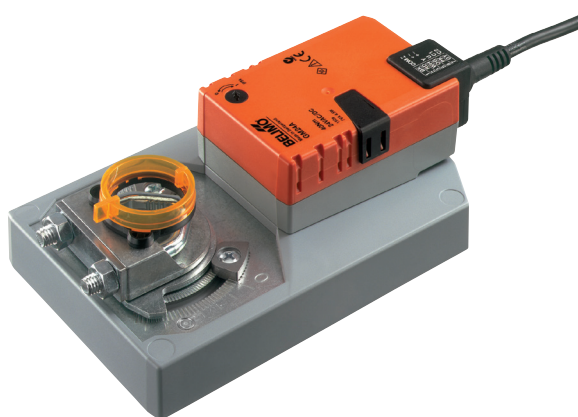


Damper actuator for adjusting dampers in technical building installations

- Air damper size up to approx. 8 m<sup>2</sup>
- Nominal torque 40 Nm
- Nominal voltage AC/DC 24 V
- Control Open-close (unsuitable for 3-point controls)



## Technical data

<b>Electrical data</b>	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	4 W
	Power consumption in rest position	2 W
	Power consumption for wire sizing	6 VA
	Connection supply / control	Cable 1 m, 3 x 0.75 mm <sup>2</sup>
	Parallel operation	Yes (note the performance data)
<b>Functional data</b>	Torque motor	Min. 40 Nm
	Direction of motion motor	Selectable with switch 0 (ccw rotation) / 1 (cw rotation)
	Manual override	Gear disengagement with push-button, can be locked
	Angle of rotation	Max. 95°
	Angle of rotation note	can be limited on both sides with adjustable mechanical end stops
	Running time motor	150 s / 90°
	Sound power level motor	45 dB(A)
	Spindle driver	Universal spindle clamp reversible 12...26.7 mm
	Position indication	Mechanically, pluggable
<b>Safety</b>	Protection class IEC/EN	III Safety extra-low voltage
	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 2004/108/EC
	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
<b>Weight</b>	Weight approx.	1.7 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, insolation 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.

## 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

<b>Simple direct mounting</b>	Simple direct mounting on the damper spindle with an universal spindle clamp, supplied with an anti-rotation device 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>High functional reliability</b>	The actuator is overload protected, requires no limit switches and automatically stops when the end stop is reached.
<b>Adjustable angle of rotation</b>	Adjustable angle of rotation with mechanical end stops.

## Accessories

	Description	Type
<b>Electrical accessories</b>	Auxiliary switch, add-on, 1 x SPDT	S1A
	Auxiliary switch, add-on, 2 x SPDT	S2A
	Auxiliary switch, add-on, 2 x SPDT, grey	S2A GR
	Feedback potentiometer 140 Ohm, add-on	P140A
	Feedback potentiometer 140 Ohm, add-on, grey	P140A GR
	Feedback potentiometer 200 Ohm, add-on	P200A
	Feedback potentiometer 500 Ohm, add-on	P500A
	Feedback potentiometer 500 Ohm, add-on, grey	P500A GR
	Feedback potentiometer 1 kOhm, add-on	P1000A
	Feedback potentiometer 2.8 kOhm, add-on	P2800A
	Feedback potentiometer 2.8 kOhm, add-on, grey	P2800A GR
	Feedback potentiometer 1 kOhm, add-on, grey	P1000A GR
	Feedback potentiometer 5 kOhm, add-on	P5000A
	Feedback potentiometer 5 kOhm, add-on, grey	P5000A GR
	Feedback potentiometer 10 kOhm, add-on	P10000A
	Feedback potentiometer 10 kOhm, add-on, grey	P10000A GR
	Description	Type
<b>Mechanical accessories</b>	Actuator arm, for standard spindle clamp (reversible) K-SA	AH-GMA
	Straight ball joint with M8, suitable for damper crank arms KH8	KG10A
	Damper crank arm, for damper spindles	KH10
	Universal mounting bracket 230 mm	Z-ARS230
	Mounting kit for linkage operation, GM..A	ZG-GMA
	Base plate extension from GM..A to GM..	Z-GMA
	Position indication for LM..A, NM..A, SM..A, GM..A	Z-PI

## Electrical installation

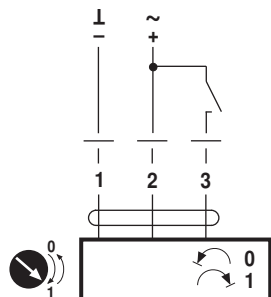


## Notes

- Connection via safety isolating transformer.
- Parallel connection of other actuators possible. Observe the performance data.

## Wiring diagrams

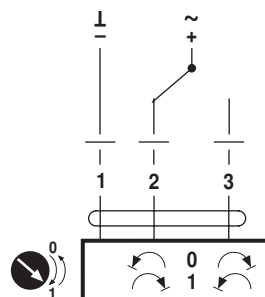
AC/DC 24 V, open-close (one-wire)



## Cable colours:

- 1 = black  
2 = red  
3 = white

AC/DC 24 V, open-close (two-wire)

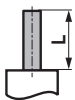





## Cable colours:

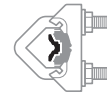





- 1 = black  
2 = red  
3 = white

## Dimensions [mm]

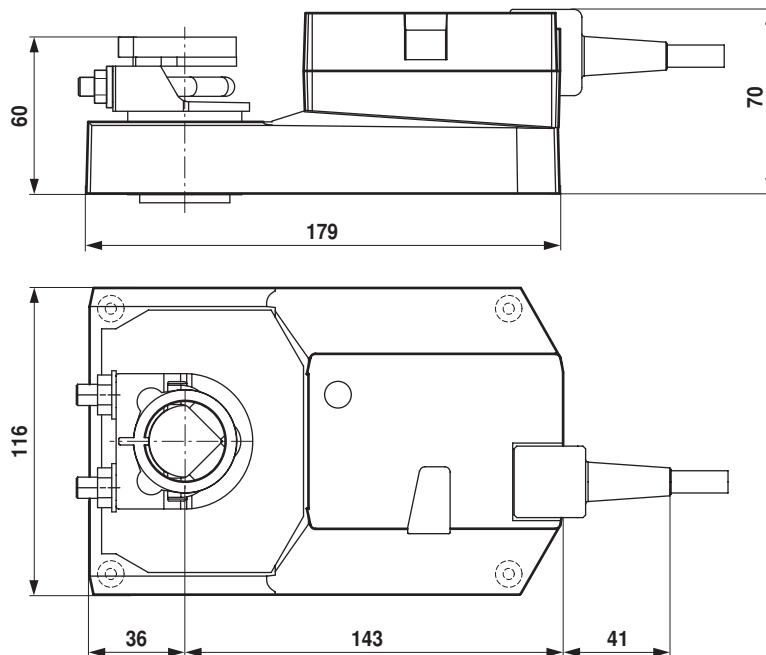
## Spindle length

		Min. 52
		Min. 20

## Clamping range

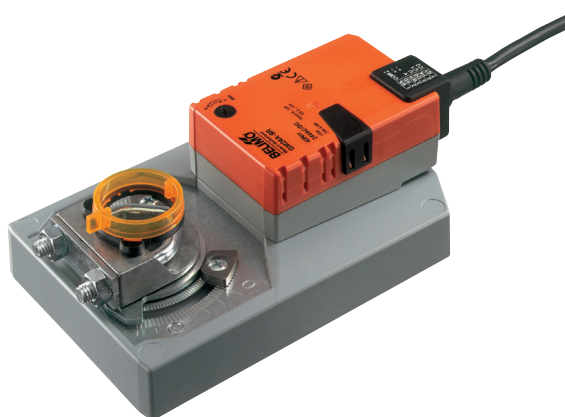
		
	12...22	12...18
		
	22...26.7	12...18

## Dimensional drawings



Modulating damper actuator for adjusting dampers in technical building installations

- Air damper size up to approx. 8 m<sup>2</sup>
- Nominal torque 40 Nm
- Nominal voltage AC/DC 24 V
- Control Modulating DC (0)2...10 V
- Position feedback DC 2...10 V



## Technical data

<b>Electrical data</b>	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	4.5 W
	Power consumption in rest position	2 W
	Power consumption for wire sizing	6.5 VA
	Connection supply / control	Cable 1 m, 4 x 0.75 mm <sup>2</sup>
	Parallel operation	Yes (note the performance data)
<b>Functional data</b>	Torque motor	Min. 40 Nm
	Positioning signal Y	DC 0...10 V
	Positioning signal Y note	Input impedance 100 kΩ
	Operating range Y	DC 2...10 V
	Position feedback U	DC 2...10 V
	Position feedback U note	Max. 1 mA
	Position accuracy	±5%
	Direction of motion motor	Selectable with switch 0 / 1
	Direction of motion note	Y = 0 V: At switch position 0 (ccw rotation) / 1 (cw rotation)
	Manual override	Gear disengagement with push-button, can be locked
	Angle of rotation	Max. 95°
	Angle of rotation note	can be limited on both sides with adjustable mechanical end stops
	Running time motor	150 s / 90°
	Sound power level motor	45 dB(A)
	Spindle driver	Universal spindle clamp reversible 12...26.7 mm
	Position indication	Mechanically, pluggable
<b>Safety</b>	Protection class IEC/EN	III Safety extra-low voltage
	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 2004/108/EC
	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
<b>Weight</b>	Ambient temperature	-30...50°C
	Non-operating temperature	-40...80°C
	Ambient humidity	95% r.h., non-condensing
	Maintenance	Maintenance-free
	Weight approx.	1.8 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, insolation 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.
- 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

<b>Mode of operation</b>	The actuator is connected with a standard modulating signal of DC 0...10V and drives to the position defined by the positioning 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 an universal spindle clamp, supplied with an anti-rotation device 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>High functional reliability</b>	The actuator is overload protected, requires no limit switches and automatically stops when the end stop is reached.
<b>Adjustable angle of rotation</b>	Adjustable angle of rotation with mechanical end stops.

## Accessories

	Description	Type
<b>Electrical accessories</b>	Auxiliary switch, add-on, 1 x SPDT	S1A
	Auxiliary switch, add-on, 2 x SPDT	S2A
	Auxiliary switch, add-on, 2 x SPDT, grey	S2A GR
	Feedback potentiometer 140 Ohm, add-on	P140A
	Feedback potentiometer 140 Ohm, add-on, grey	P140A GR
	Feedback potentiometer 200 Ohm, add-on	P200A
	Feedback potentiometer 500 Ohm, add-on	P500A
	Feedback potentiometer 500 Ohm, add-on, grey	P500A GR
	Feedback potentiometer 1 kOhm, add-on	P1000A
	Feedback potentiometer 2.8 kOhm, add-on	P2800A
	Feedback potentiometer 2.8 kOhm, add-on, grey	P2800A GR
	Feedback potentiometer 1 kOhm, add-on, grey	P1000A GR
	Feedback potentiometer 5 kOhm, add-on	P5000A
	Feedback potentiometer 5 kOhm, add-on, grey	P5000A GR
	Feedback potentiometer 10 kOhm, add-on	P10000A
	Feedback potentiometer 10 kOhm, add-on, grey	P10000A GR
	Signal converter voltage/current, supply AC/DC 24V	Z-UIC
	Digital position indicator for front-panel mounting, 0...99%, front mass 72 x 72 mm	ZAD24
	Range controller for wall mounting, adjustable electron. Min./max. angle of rotation limitation	SBG24
	Positioner for wall mounting, range 0...100%	SGA24
	Positioner in a conduit box, range 0...100%	SGE24

## Accessories

	Description	Type
	Positioner for front-panel mounting, range 0...100%	SGF24
	Positioner for wall mounting, range 0...100%	CRP24-B1
Mechanical accessories	Description	Type
	Actuator arm, for standard spindle clamp (reversible) K-SA	AH-GMA
	Straight ball joint with M8, suitable for damper crank arms KH8	KG10A
	Damper crank arm, for damper spindles	KH10
	Universal mounting bracket 230 mm	Z-ARS230
	Mounting kit for linkage operation, GM..A	ZG-GMA
	Base plate extension from GM..A to GM..	Z-GMA
	Position indication for LM..A, NM..A, SM..A, GM..A	Z-PI

## Electrical installation

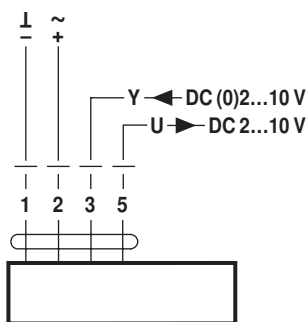


## Notes

- Connection via safety isolating transformer.
- Parallel connection of other actuators possible. Observe the performance data.

## Wiring diagrams

AC/DC 24 V, modulating







## Cable colours:

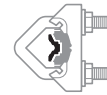





- 1 = black
- 2 = red
- 3 = white
- 5 = orange

## Dimensions [mm]

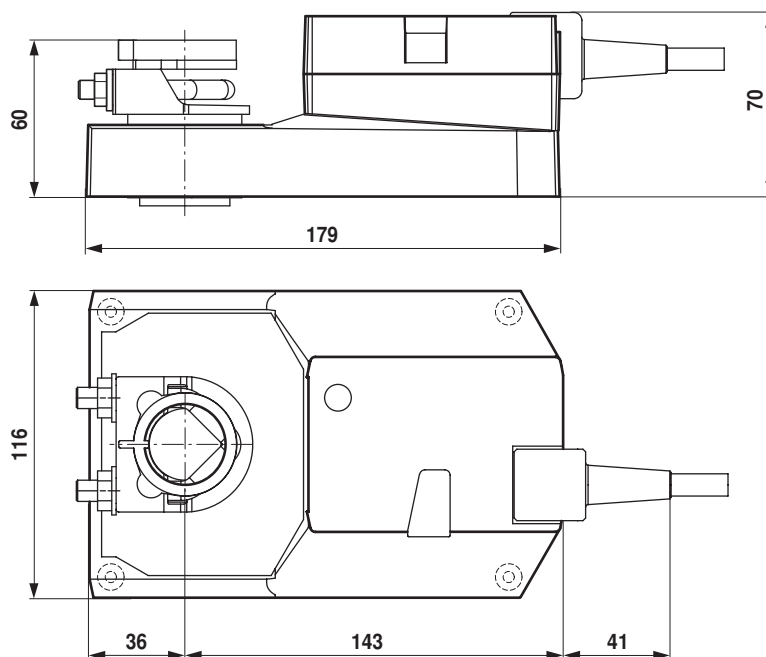
## Spindle length

		Min. 52
		Min. 20

## Clamping range

		
	12...22	12...18
		
	22...26.7	12...18

## Dimensional drawings



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

- For air dampers up to approx. 8 m<sup>2</sup>
- Torque 40 Nm
- Nominal voltage AC/DC 24 V
- Control: modulating DC 0 ... 10 V
- Position feedback DC 2 ... 10 V



### Technical data

<b>Electrical data</b>	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 4.5 W @ nominal torque
		At rest 2 W
<b>Functional data</b>		For wire sizing 6.5 VA
	Connection	Terminals 4 mm <sup>2</sup> (Kabel Ø 4 ... 10 mm, four-core)
	Torque (nominal torque)	Min. 40 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)	DC 2 ... 10 V, max. 1 mA
	Position accuracy	±5%
	Direction of rotation	Reversible with switch 0 / 1
	Direction of motion at Y = 0 V	At switch position 0 ↺ resp. 1 ↻
	Manual override	Gearing latch disengaged with push-button, can be locked
<b>Safety</b>	Angle of rotation	Max. 95° <↺, limited on both sides by means of adjustable, mechanical end stops
	Running time	150 s / 90° <↺
	Sound power level	Max. 45 dB (A)
	Position indication	Mechanical, pluggable
	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 E60730-01:02 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)
<b>Dimensions / Weight</b>	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 3
	Weight	Approx. 1.7 kg



## Safety notes



- This actuator is not allowed to be used outside the specified field of application, especially in aircraft or in any other airborne means of transport.
- It may only be installed by suitably 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.
- 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 moves to the position defined by the control signal. The 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

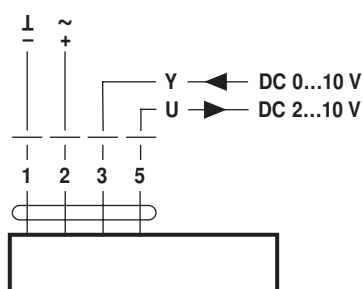
	Description	Data sheet
<b>Electrical accessories</b>	Auxiliary switch S..A..	T2 - S..A..
	Feedback potentiometer P..A..	T2 - P..A..
	Range controller SBG24	T2 - SBG24
	Positioner SG..24	T2 - SG..24
	Digital position indication ZAD24	T2 - ZAD24
<b>Mechanical accessories</b>	Various accessories (damper and actuator crank arms, anti-rotation strap etc.)	T2 - Z-GM..A..

## Electrical installation

## Wiring diagram

## Note






- Connect via safety isolation transformer.
- Parallel connection of other actuators possible. Note performance data for supply.

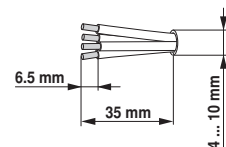
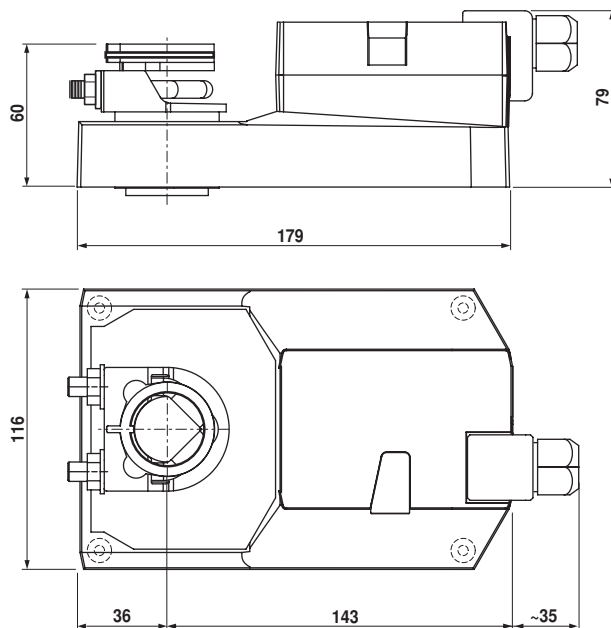
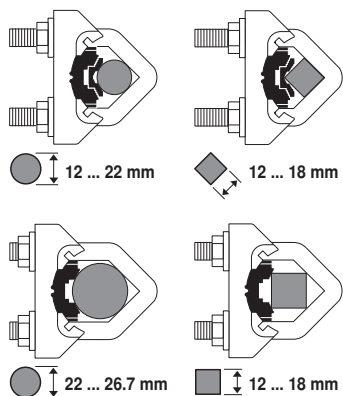


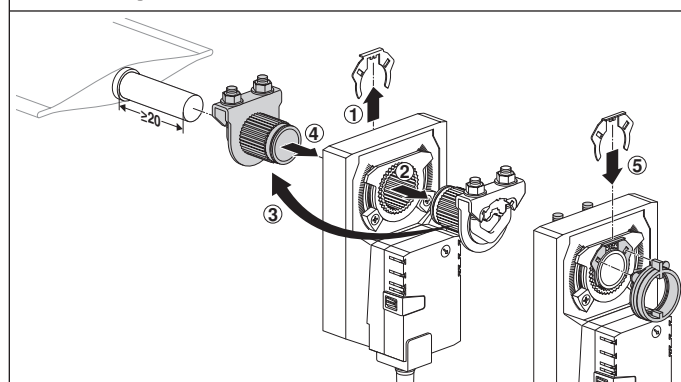
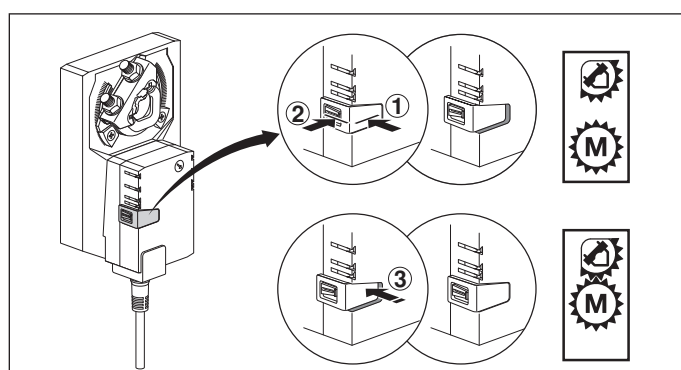
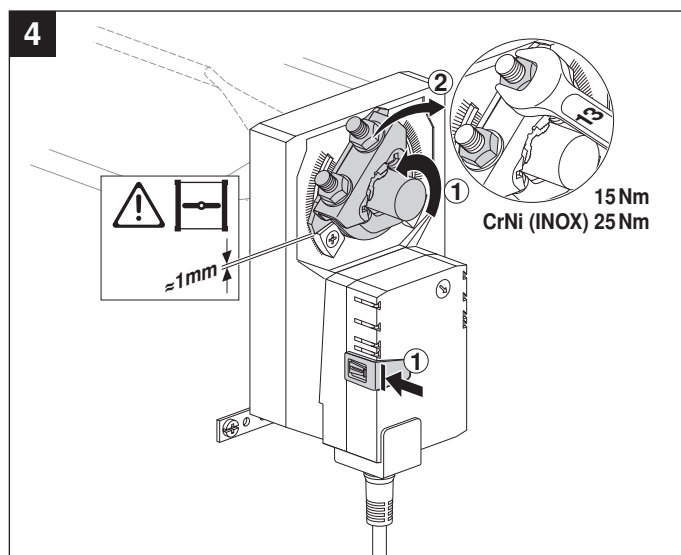
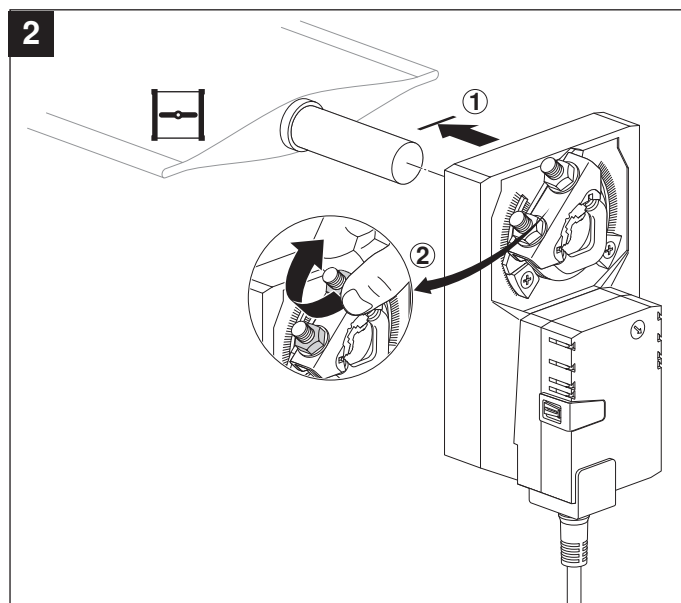
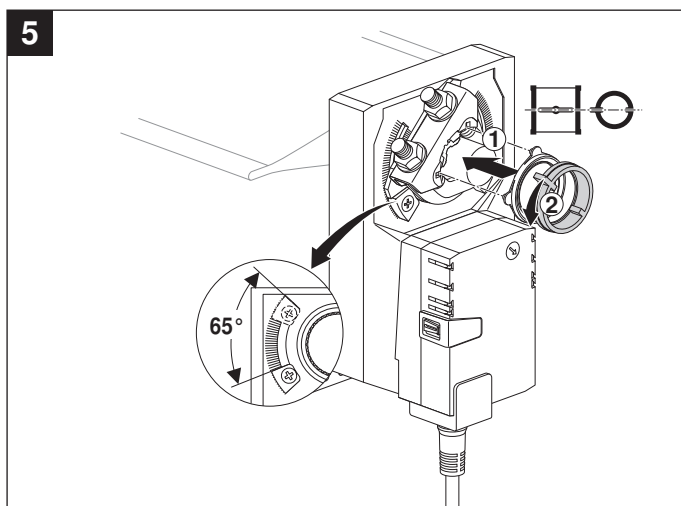
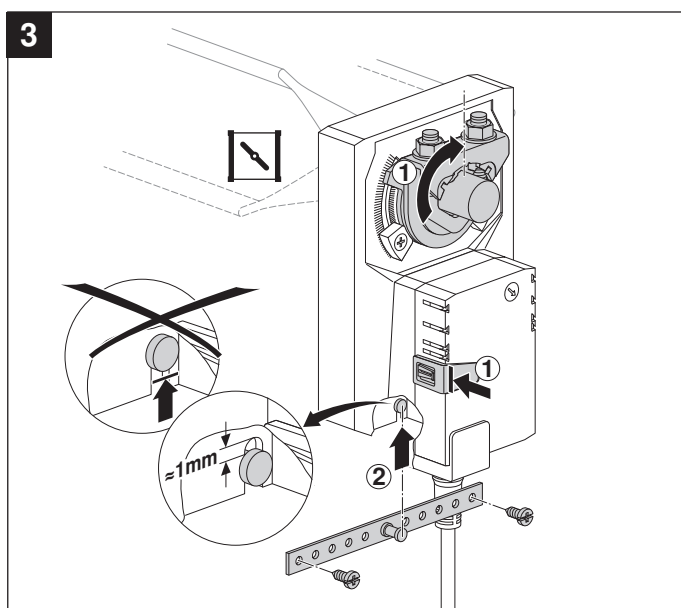
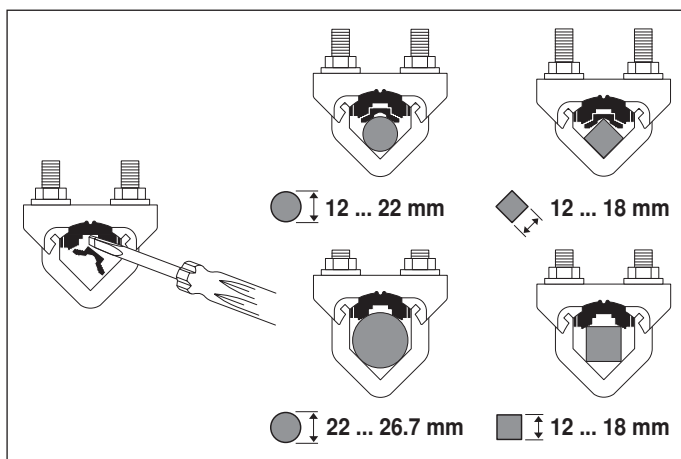
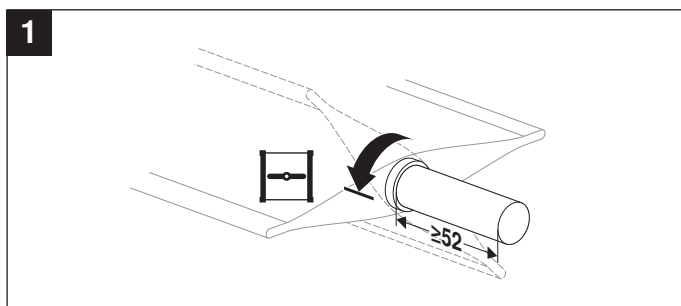


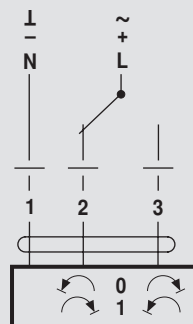
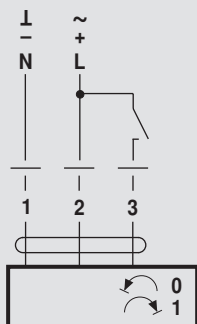
## Dimensions [mm]

## Dimensional drawings

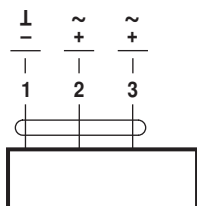
Damper spindle	Length			
	≥52	12 ... 26.7	≥12	≤25.2
	≥20	12 ... 26.7	≥12	≤25.2



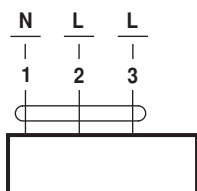





AC 24 V / DC 24 V



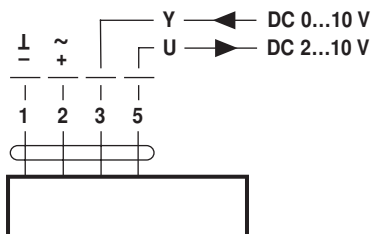
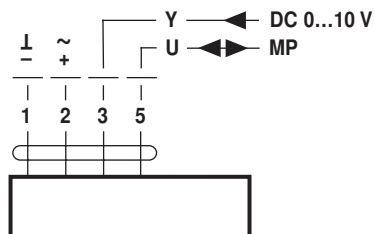
GM24A..

AC 100 ... 240 V 

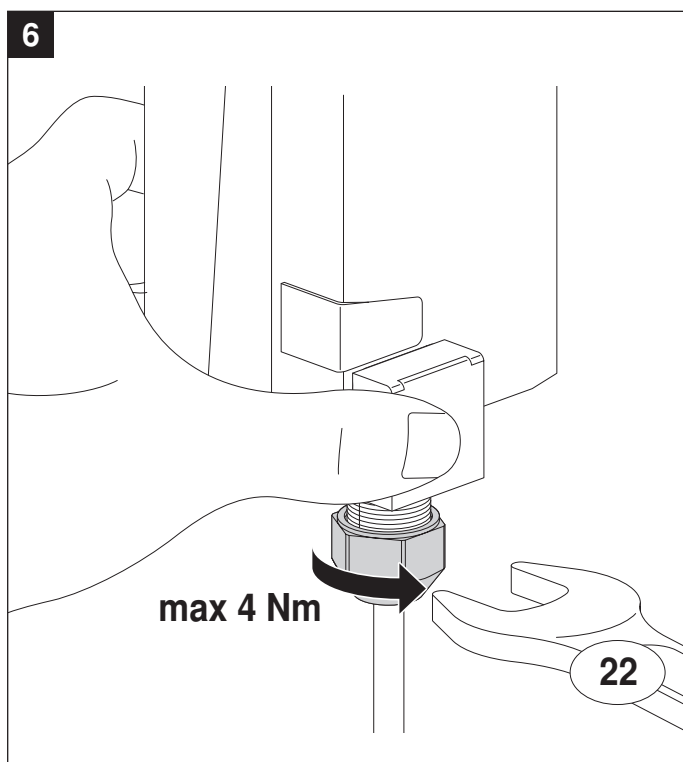
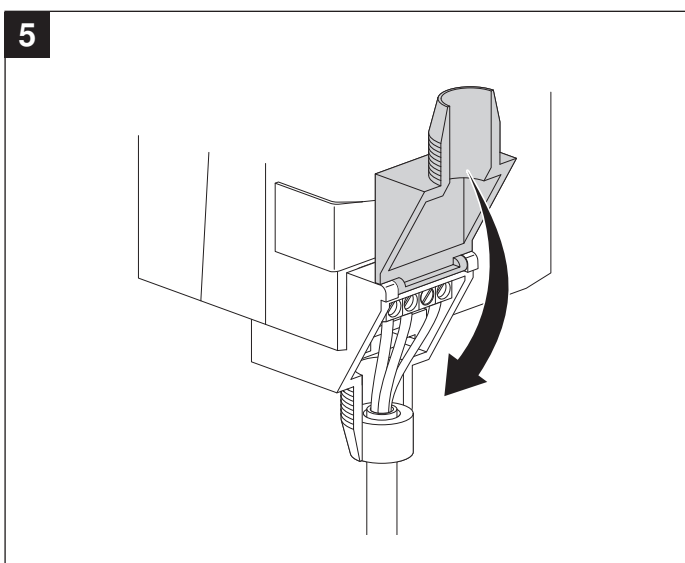
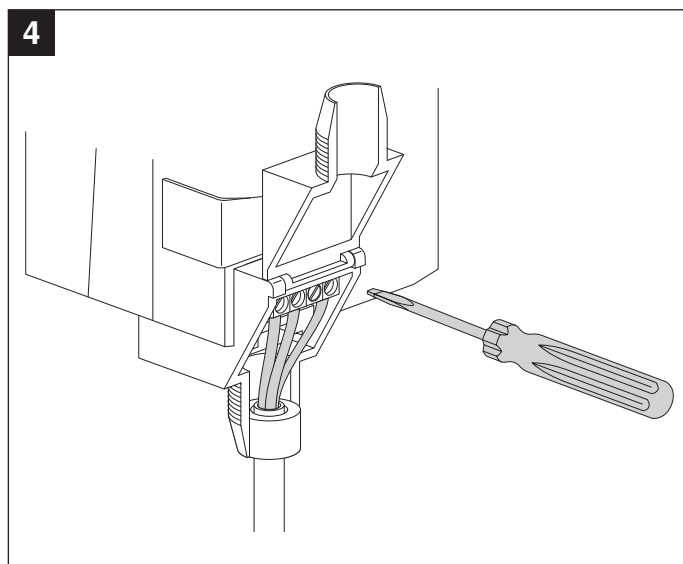
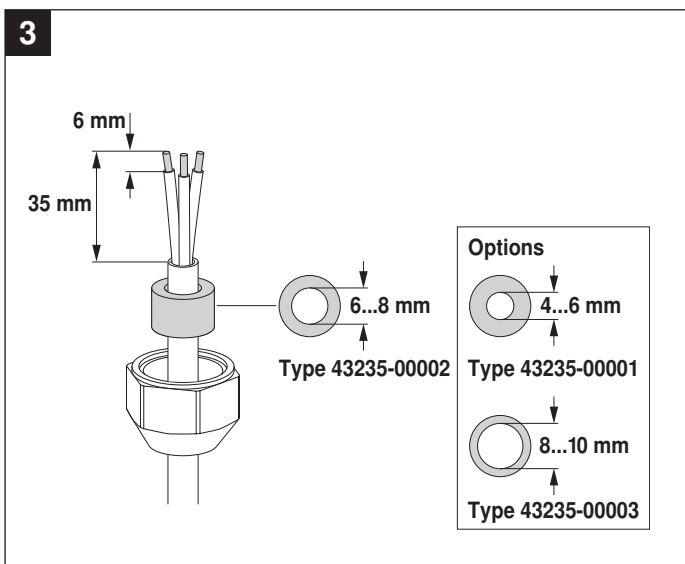
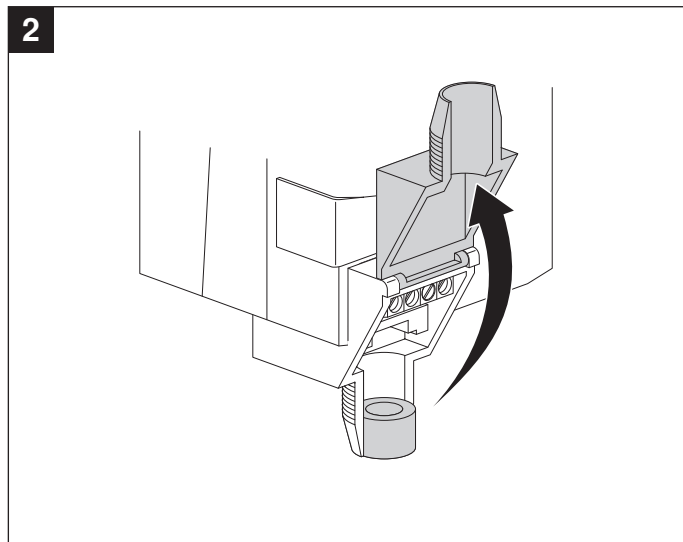
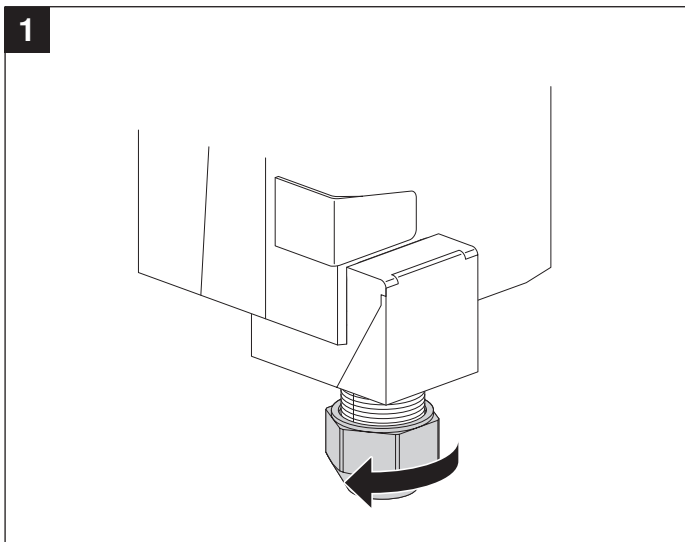
GM230A..



AC 24 V / DC 24 V

GM24A-SR..  
GM24A-MF..

GM24A-MP..



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

- For air dampers up to approx. 8 m<sup>2</sup>
- Torque 40 Nm
- Nominal voltage AC/DC 24 V
- Control: Open-close (not made for 3-point applications)



### Technical data

<b>Electrical data</b>	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 4 W @ nominal torque
		At rest 2 W
		For wire sizing 6 VA
	Connection	Terminals 4 mm <sup>2</sup> (Kabel Ø 4 ... 10 mm, three-core)
<b>Functional data</b>	Torque (nominal torque)	Min. 40 Nm @ nominal voltage
	Direction of rotation	Reversible with switch 0 ↺ resp. 1 ↻
	Manual override	Gearing latch disengaged with push-button, can be locked
	Angle of rotation	Max. 95°↺, limited on both sides by means of 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	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 E60730-01:02 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
<b>Dimensions / Weight</b>	Dimensions	See «Dimensions» on page 2
	Weight	Approx. 1.7 kg

### Safety notes



- This actuator is not allowed to be used outside the specified field of application, especially in aircraft or in any other airborne means of transport.
- It may only be installed by suitably 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.
- 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>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..
<b>Mechanical accessories</b>	Various accessories (damper and actuator crank arms, anti-rotation strap etc.)	T2 - Z-GM..A..

## Electrical installation

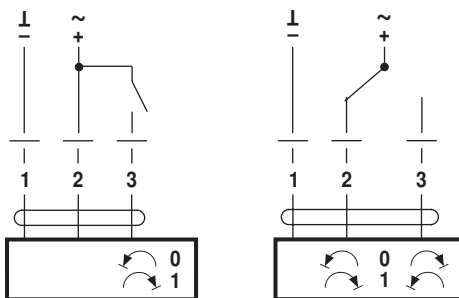
### Wiring diagrams

#### Note

- Connect via safety isolation transformer.
- Parallel connection of other actuators possible. Note performance data for supply.








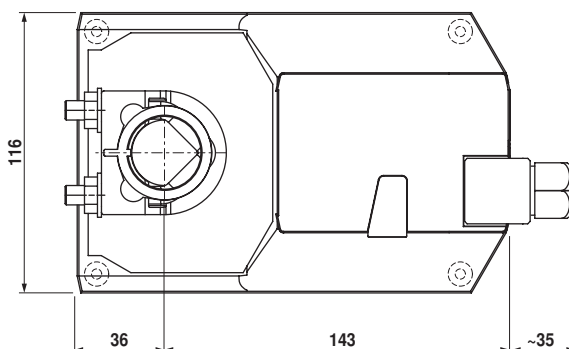
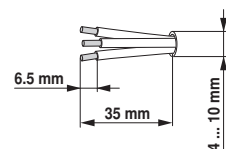
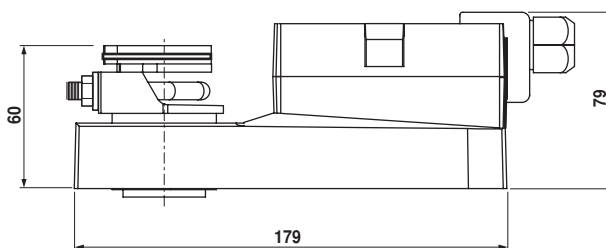
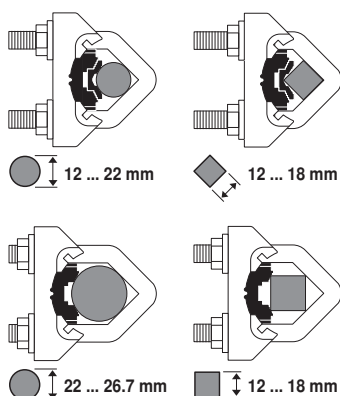
Direction of rotation

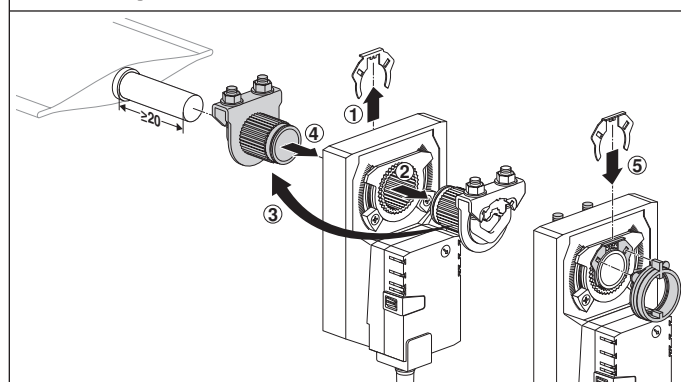
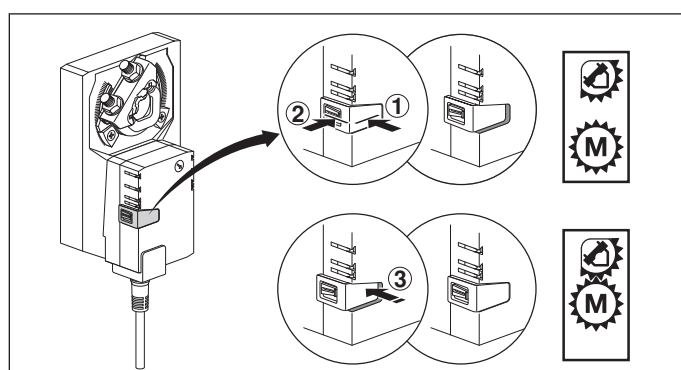
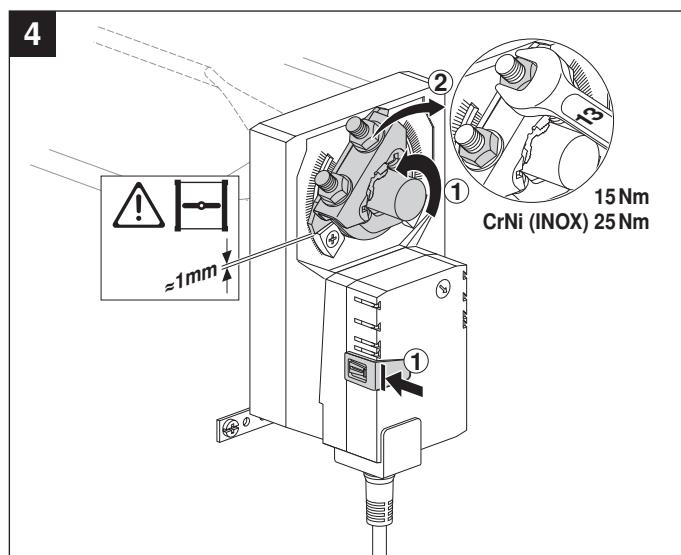
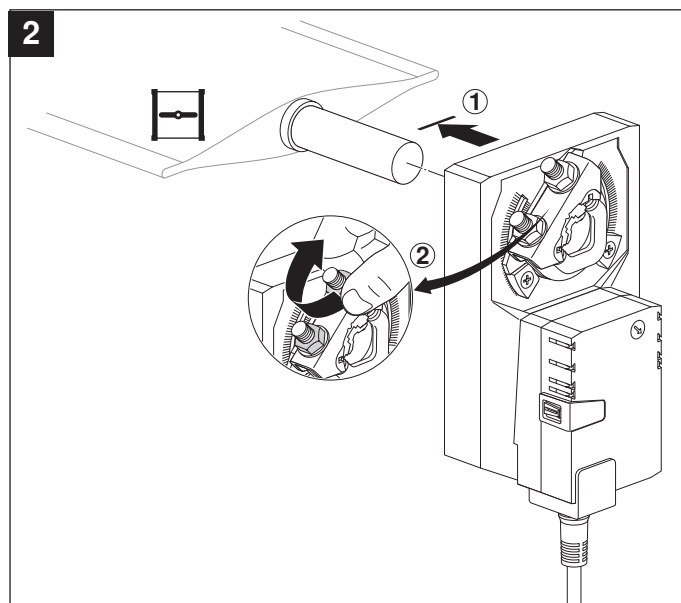
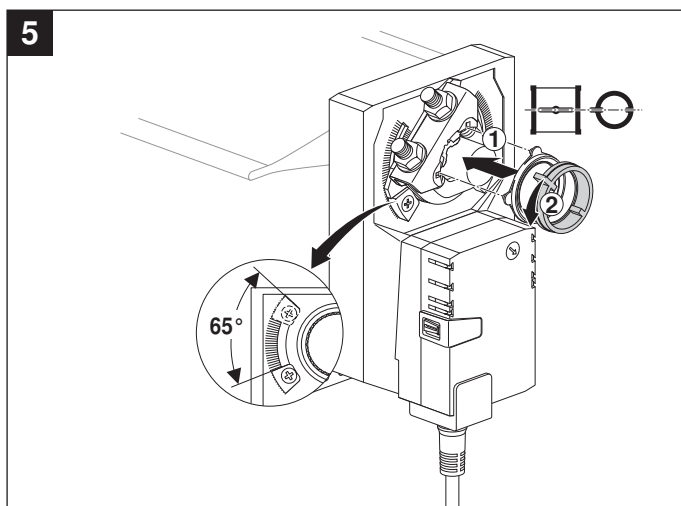
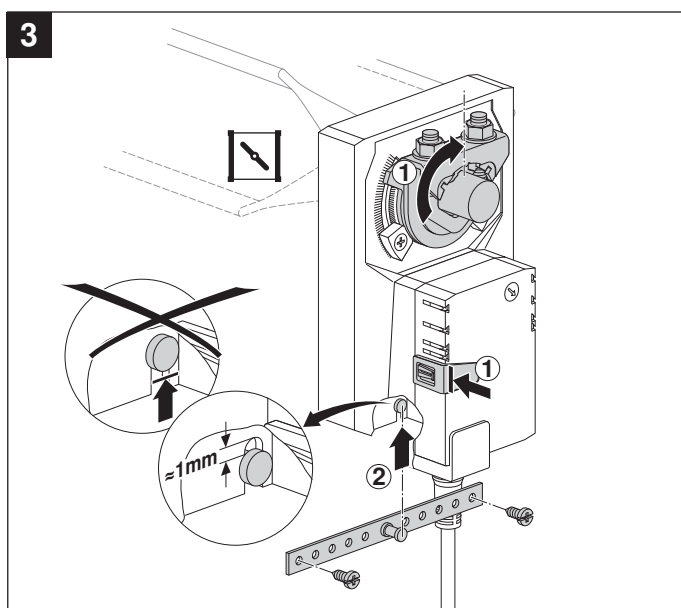
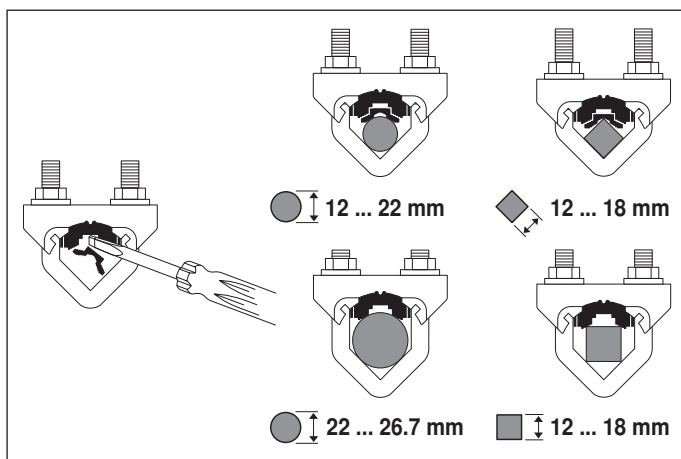
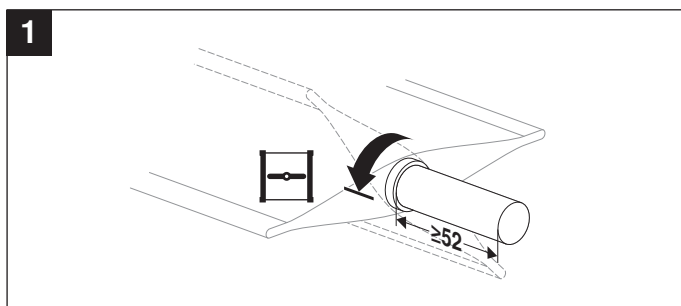


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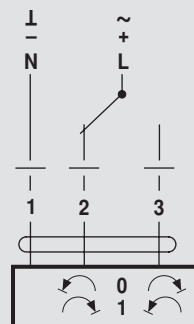
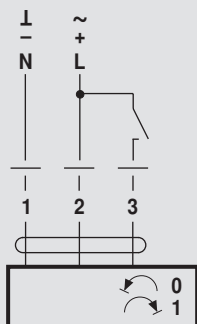
### Dimensional drawings

Damper spindle	Length			
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	≥20	12 ... 26.7	≥12	≤25.2

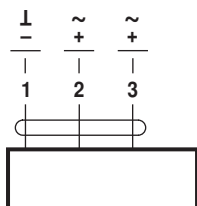




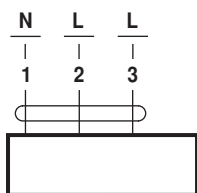




AC 24 V / DC 24 V



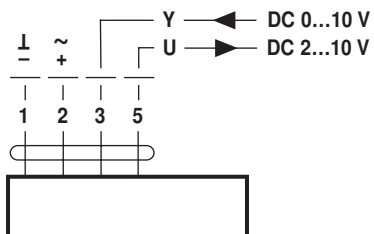
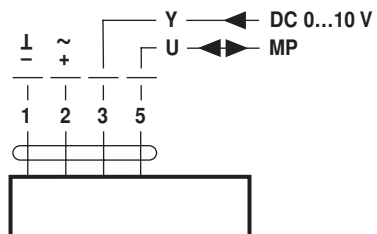
GM24A..

AC 100 ... 240 V 

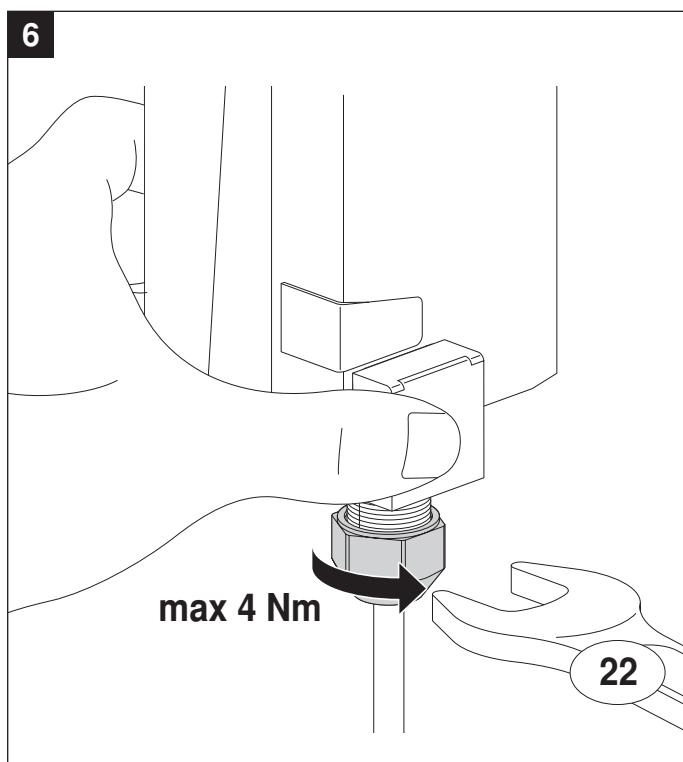
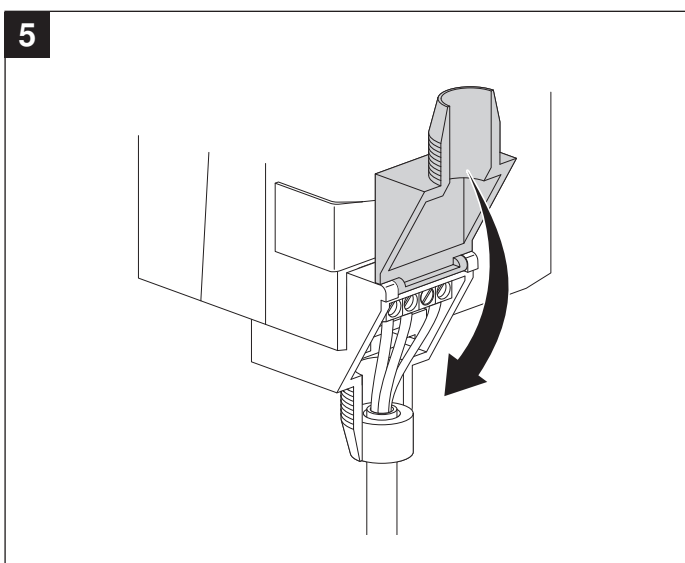
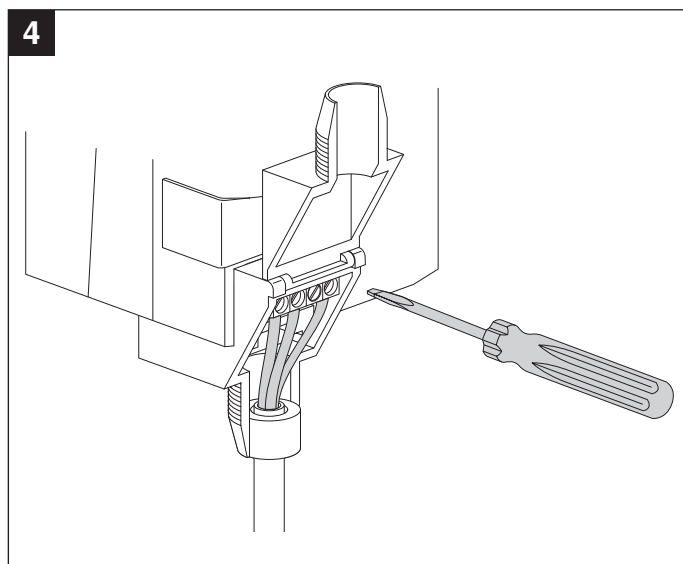
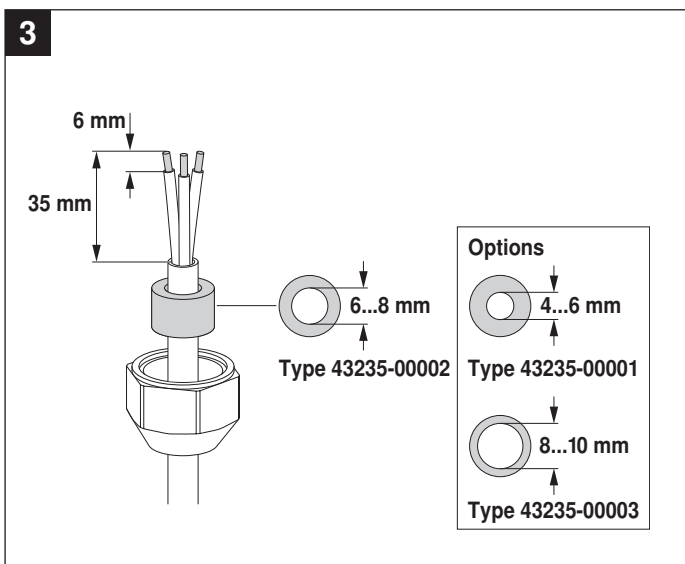
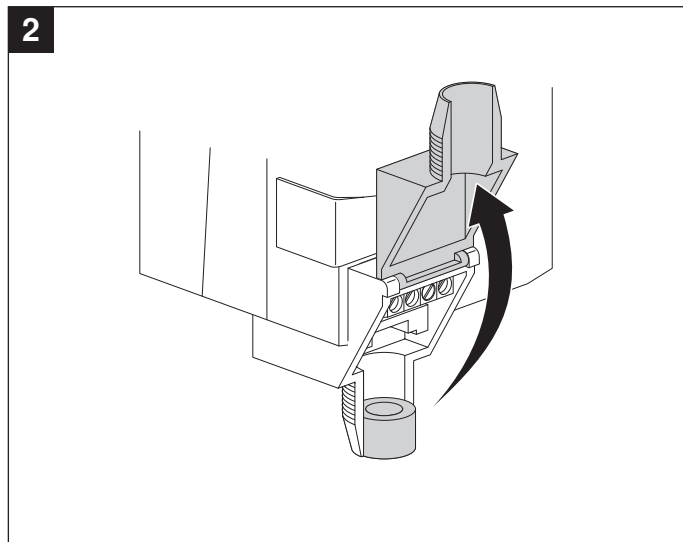
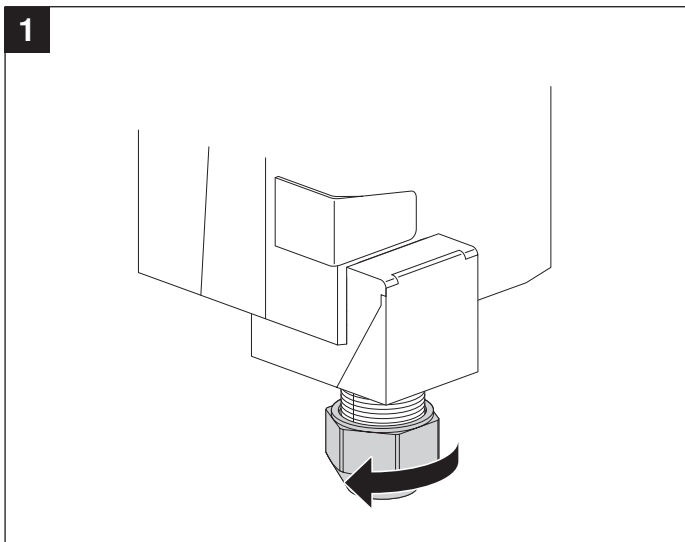
GM230A..



AC 24 V / DC 24 V

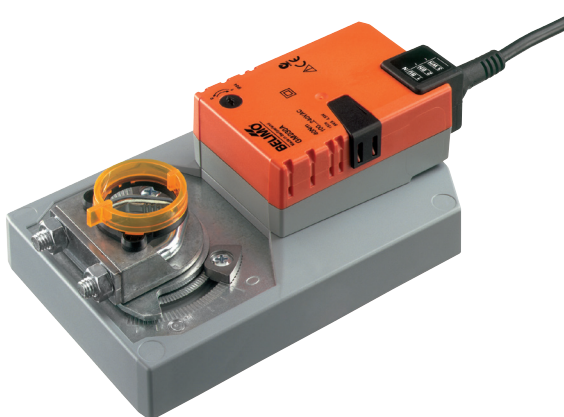
GM24A-SR..  
GM24A-MF..

GM24A-MP..



Damper actuator for adjusting dampers in technical building installations

- Air damper size up to approx. 8 m²
- Nominal torque 40 Nm
- Nominal voltage AC 230 V
- Control Open-close (unsuitable for 3-point controls)



## Technical data

<b>Electrical data</b>	Nominal voltage	AC 230 V
	Nominal voltage frequency	50/60 Hz
	Nominal voltage range	AC 85...264 V
	Power consumption in operation	5 W
	Power consumption in rest position	2.5 W
	Power consumption for wire sizing	9 VA
	Connection supply / control	Cable 1 m, 3 x 0.75 mm²
	Parallel operation	Yes (note the performance data)
<b>Functional data</b>	Torque motor	Min. 40 Nm
	Direction of motion motor	Selectable with switch 0 (ccw rotation) / 1 (cw rotation)
	Manual override	Gear disengagement with push-button, can be locked
	Angle of rotation	Max. 95°
	Angle of rotation note	can be limited on both sides with adjustable mechanical end stops
	Running time motor	150 s / 90°
	Sound power level motor	45 dB(A)
	Spindle driver	Universal spindle clamp reversible 12...26.7 mm
	Position indication	Mechanically, pluggable
<b>Safety</b>	Protection class IEC/EN	II Protective insulated
	Protection class UL	II Protective insulated
	Degree of protection IEC/EN	IP54
	Degree of protection NEMA/UL	NEMA 2, UL Enclosure Type 2
	EMC	CE according to 2004/108/EC
	Low voltage directive	CE according to 2006/95/EC
	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
<b>Weight</b>	Weight approx.	1.8 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, insolation 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!

## Safety notes

- 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.
- 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

<b>Simple direct mounting</b>	Simple direct mounting on the damper spindle with an universal spindle clamp, supplied with an anti-rotation device 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>High functional reliability</b>	The actuator is overload protected, requires no limit switches and automatically stops when the end stop is reached.
<b>Adjustable angle of rotation</b>	Adjustable angle of rotation with mechanical end stops.

## Accessories

	Description	Type
<b>Electrical accessories</b>	Auxiliary switch, add-on, 1 x SPDT	S1A
	Auxiliary switch, add-on, 2 x SPDT	S2A
	Auxiliary switch, add-on, 2 x SPDT, grey	S2A GR
	Feedback potentiometer 140 Ohm, add-on	P140A
	Feedback potentiometer 140 Ohm, add-on, grey	P140A GR
	Feedback potentiometer 200 Ohm, add-on	P200A
	Feedback potentiometer 500 Ohm, add-on	P500A
	Feedback potentiometer 500 Ohm, add-on, grey	P500A GR
	Feedback potentiometer 1 kOhm, add-on	P1000A
	Feedback potentiometer 2.8 kOhm, add-on	P2800A
	Feedback potentiometer 2.8 kOhm, add-on, grey	P2800A GR
	Feedback potentiometer 1 kOhm, add-on, grey	P1000A GR
	Feedback potentiometer 5 kOhm, add-on	P5000A
	Feedback potentiometer 5 kOhm, add-on, grey	P5000A GR
	Feedback potentiometer 10 kOhm, add-on	P10000A
	Feedback potentiometer 10 kOhm, add-on, grey	P10000A GR
	Positioner for wall mounting, range 0...100%	CRP24-B1
	Description	Type
<b>Mechanical accessories</b>	Actuator arm, for standard spindle clamp (reversible) K-SA	AH-GMA
	Straight ball joint with M8, suitable for damper crank arms KH8	KG10A
	Damper crank arm, for damper spindles	KH10
	Universal mounting bracket 230 mm	Z-ARS230
	Mounting kit for linkage operation, GM..A	ZG-GMA
	Base plate extension from GM..A to GM..	Z-GMA
	Position indication for LM..A, NM..A, SM..A, GM..A	Z-PI

## Electrical installation

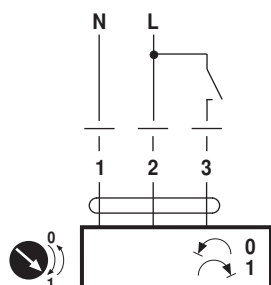


## Notes

- Caution: Power supply voltage!
- Parallel connection of other actuators possible. Observe the performance data.

## Wiring diagrams

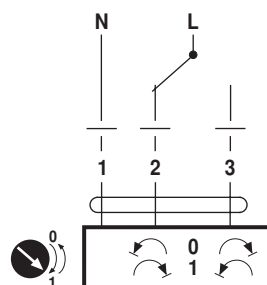
AC 230 V, open-close (one-wire)



## Cable colours:

- 1 = blue  
2 = brown  
3 = white

AC 230 V, open-close (two-wire)

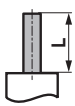


## Cable colours:

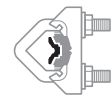
- 1 = blue  
2 = brown  
3 = white

## Dimensions [mm]

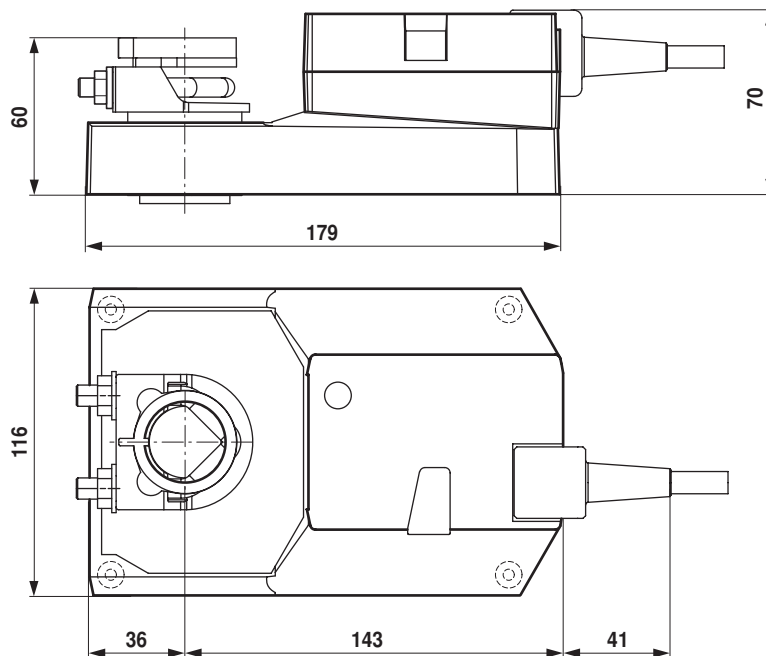
## Spindle length

	Min. 52
	Min. 20

## Clamping range

	12...22	12...18
	22...26.7	12...18

## Dimensional drawings



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

- For air dampers up to approx. 8 m<sup>2</sup>
- Torque 40 Nm
- Nominal voltage AC 100 ... 230 V
- Control: Open-close (not made for 3-point applications)



### 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 5 W @ nominal torque At rest 2.5 W For wire sizing 9 VA
	Connection	Terminals 4 mm <sup>2</sup> (Kabel Ø 4 ... 10 mm, three-core)
<b>Functional data</b>	Torque (nominal torque)	Min. 40 Nm @ nominal voltage
	Direction of rotation	Reversible with switch 0 ↺ resp. 1 ↻
	Manual override	Gearing latch disengaged with push-button, can be locked
	Angle of rotation	Max. 95°↔, limited on both sides by means of 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 □
	Degree of protection	IP54 in any mounting position NEMA2, UL Enclosure Type 2
	EMC	CE according to 2004/108/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 E60730-01:02 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
<b>Dimensions / Weight</b>	Dimensions	See «Dimensions» on page 2
	Weight	Approx. 1.7 kg

### Safety notes



- This actuator is not allowed to be used outside the specified field of application, especially in aircraft or in any other airborne means of transport.
- **Caution: Power supply voltage!**
- It may only be installed by suitably 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.
- 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>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..
<b>Mechanical accessories</b>	Various accessories (damper and actuator crank arms, anti-rotation strap etc.)	T2 - Z-GM..A..

## Electrical installation

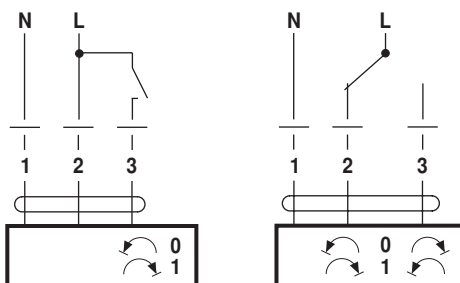
### Wiring diagrams

#### Note

- Caution: Power supply voltage!
- Parallel connection of other actuators possible. Note performance data for supply.








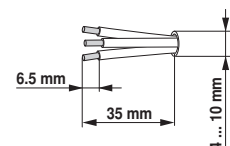
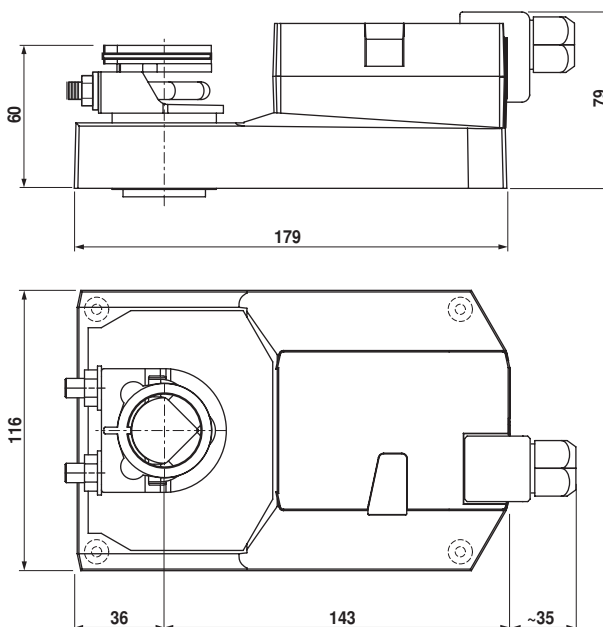
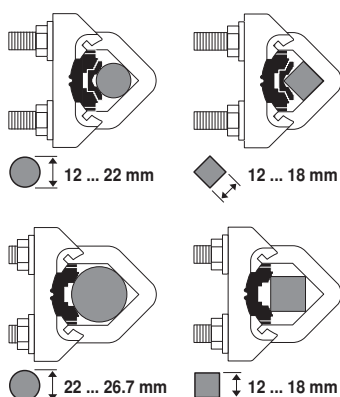
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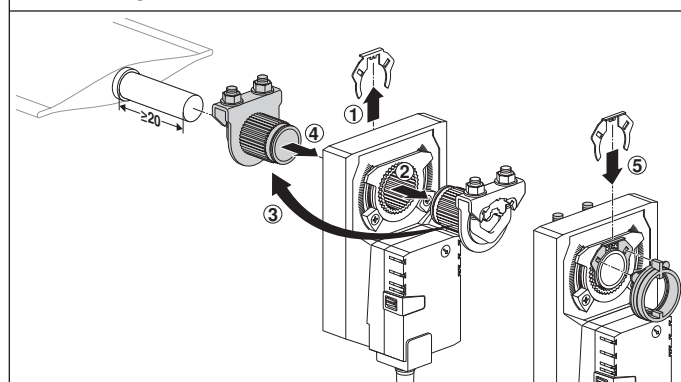
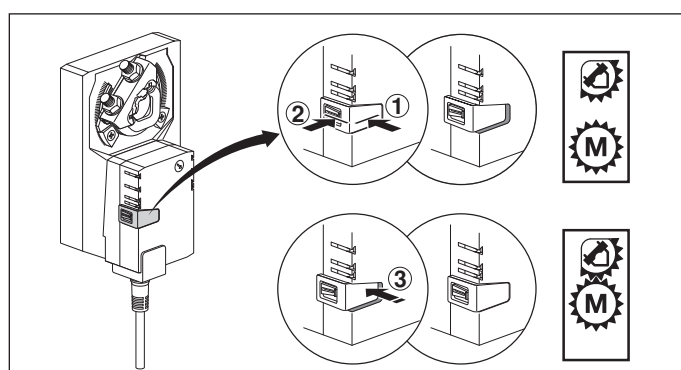
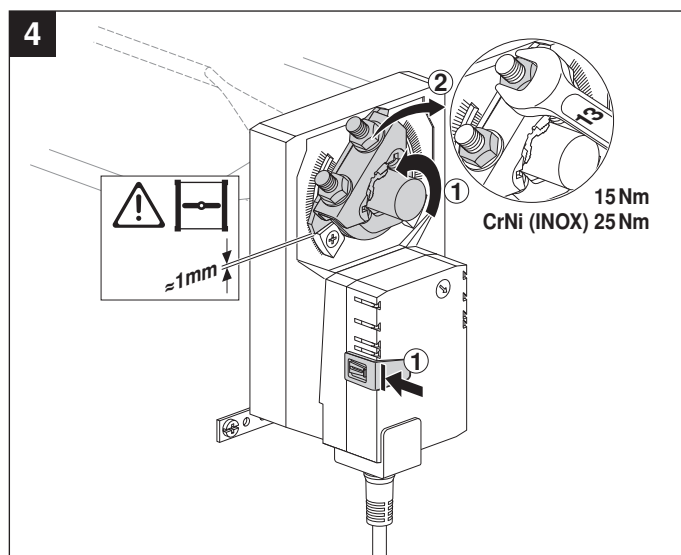
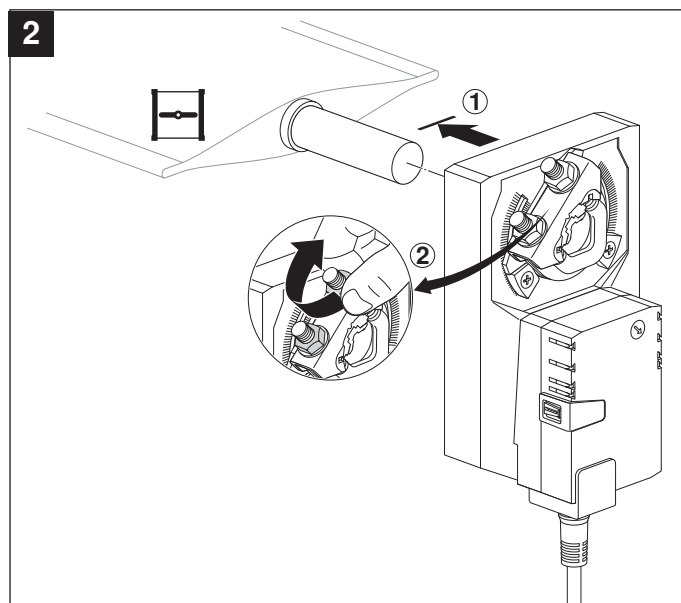
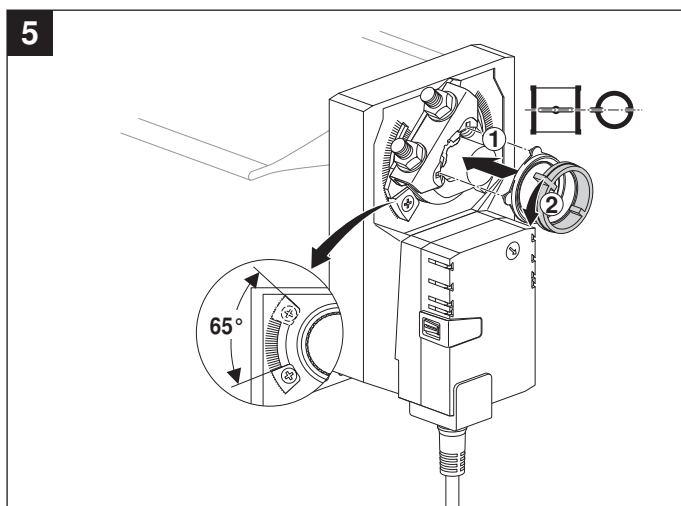
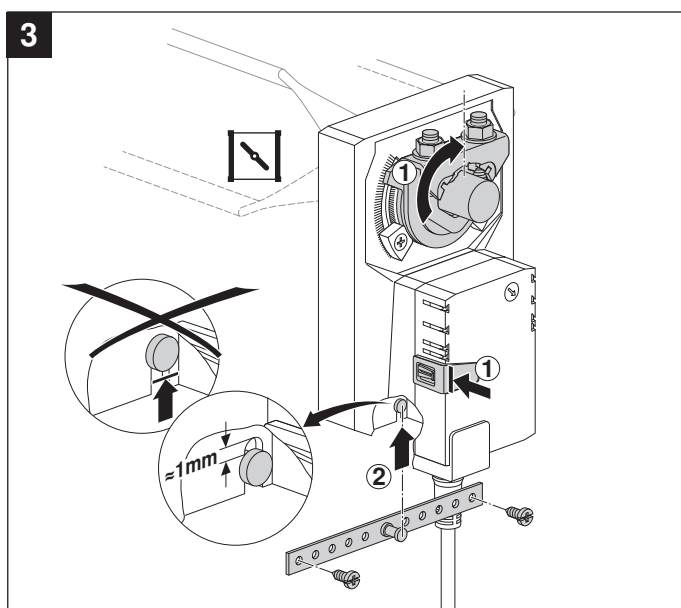
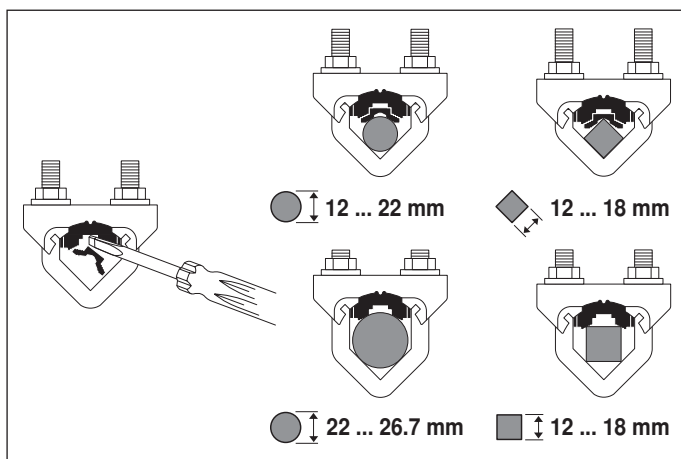
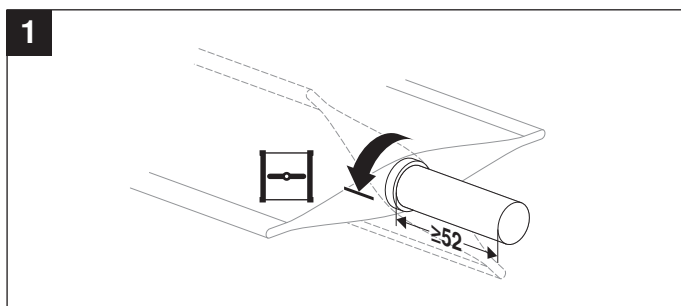
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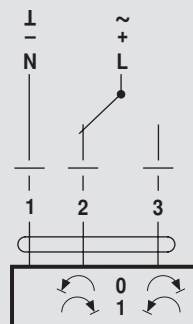
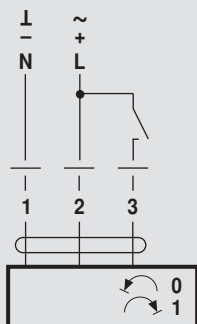
### Dimensional drawings

Damper spindle	Length			
	≥52	12 ... 26.7	≥12	≤25.2
	≥20	12 ... 26.7	≥12	≤25.2

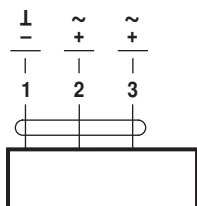




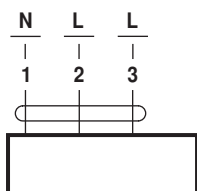




AC 24 V / DC 24 V



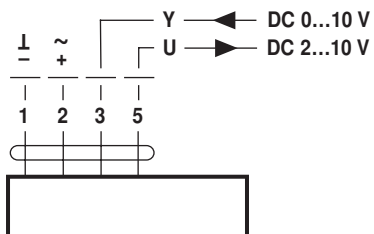
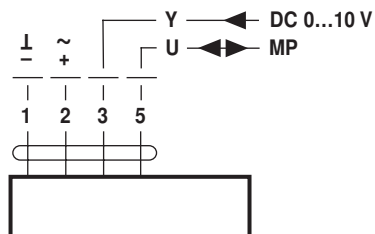
GM24A..

AC 100 ... 240 V 

GM230A..



AC 24 V / DC 24 V

GM24A-SR..  
GM24A-MF..

GM24A-MP..

