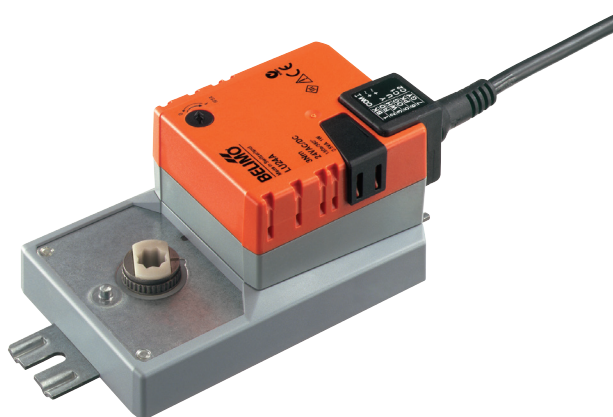


Full-rotation actuator for adjusting dampers and disks in technical building installations

- Air damper size up to approx. 0.6 m²
- Nominal torque 3 Nm
- Nominal voltage AC/DC 24 V
- Control Open-close, 3-point
- Spindle driver Form fit 12 mm or 8 mm (with insert)



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	1 W
	Power consumption in rest position	0.5 W
	Power consumption for wire sizing	2.5 VA
	Connection supply / control	Cable 1 m, 3 x 0.75 mm²
	Parallel operation	Yes (note the performance data)
Functional data	Torque motor	Min. 3 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	∞
	Angle of rotation note	Endless (adjustable 0...330° with angle of rotation limiter ZDB-LU)
	Running time motor	150 s / 360°
	Sound power level motor	45 dB(A)
	Spindle driver	Form fit 12 mm or 8 mm (with insert)
Safety	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
Weight	Weight	0.63 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.

Safety notes

- Mechanical interfaces which are not expressly provided by Belimo for this actuator must not be attached.
- 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	Form-fit direct mounting on a 12 mm or 8 mm damper spindle (with insert). The actuator can also be optionally equipped with a 10 mm form fit or an 8...12 mm clamp (see «Accessories»).
Manual override	Manual override with push-button possible (the gear is disengaged for as long as the button is pressed or remains locked).
High functional reliability	The actuator is overload protected, requires no limit switches and automatically stops when the end stop is reached.
Adjustable angle of rotation	The angle of rotation of the full-rotation actuator can be adjusted in 10° increments between 0 and 330° with angle of rotation limiter ZDB-LU.

Accessories

	Description	Type
Electrical accessories	Positioner for wall mounting, range 0...100%	CRP24-B1
	Description	Type
Mechanical accessories	Spindle clamp LU.. for clamping range 8...12 mm	K-LU
	Angle of rotation limitation LU.., with scaling 0...330°	ZDB-LU
	Form fit insert 10x10 mm, for LU..	ZF10-LUA

Electrical installation

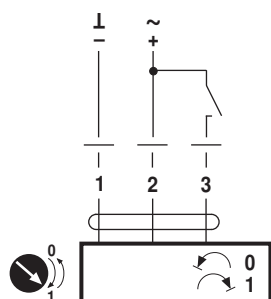


Notes

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

Wiring diagrams

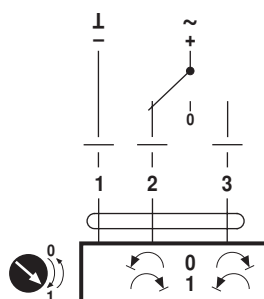
AC/DC 24 V, open-close



Cable colours:

1 = black
2 = red
3 = white

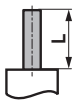


AC/DC 24 V, 3-point





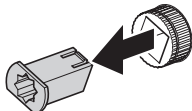

Cable colours:

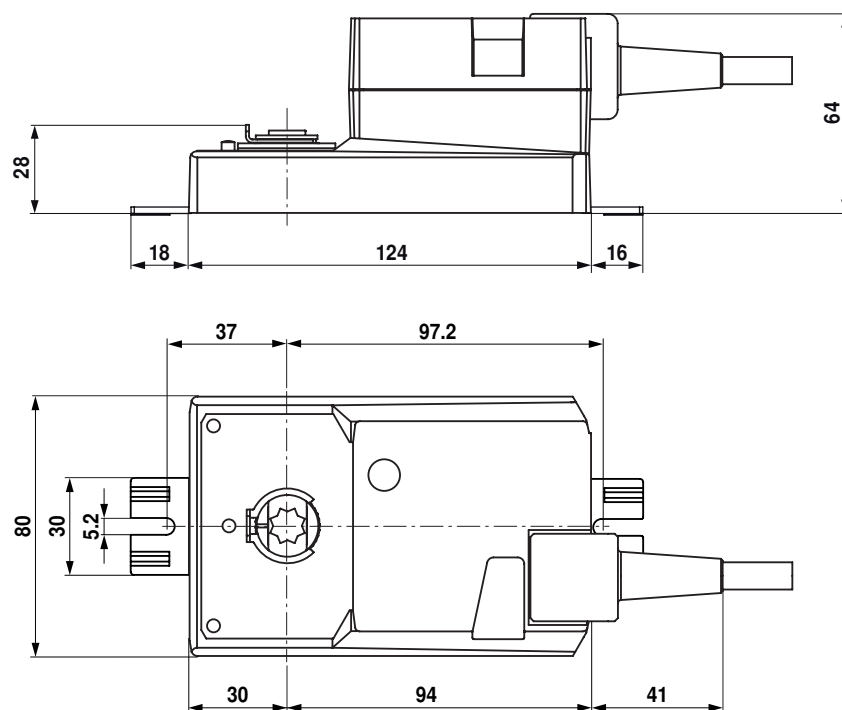
1 = black
2 = red
3 = white

Dimensions [mm]
Spindle length

		Min. 20
		-

Clamping range

		8
		12

Dimensional drawings


Full-rotation actuator for adjusting dampers and disks in technical building installations

- Air damper size up to approx. 0.6 m²
- Nominal torque 3 Nm
- Nominal voltage AC/DC 24 V
- Control Modulating DC (0)2...10 V
- Position feedback DC 2...10 V
- Spindle driver Form fit 12 mm or 8 mm (with insert)



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	1.5 W
	Power consumption in rest position	0.5 W
	Power consumption for wire sizing	3 VA
	Connection supply / control	Cable 1 m, 4 x 0.75 mm ²
	Parallel operation	Yes (note the performance data)
Functional data	Torque motor	Min. 3 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	0...330°
	Angle of rotation note	fixed setting
	Running time motor	150 s / 360°
	Sound power level motor	45 dB(A)
	Spindle driver	Form fit 12 mm or 8 mm (with insert)
Safety	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
Weight	Ambient humidity	95% r.h., non-condensing
	Maintenance	Maintenance-free
	Weight	0.66 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.

Safety notes

- 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.
- The locking ring for angle of rotation limiting must not be removed.
- Mechanical interfaces which are not expressly provided by Belimo for this actuator must not be attached.
- 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

Mode of operation	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.
Simple direct mounting	Form-fit direct mounting on a 12 mm or 8 mm damper spindle (with insert). The actuator can also be optionally equipped with a 10 mm form fit or an 8...12 mm clamp (see «Accessories»).
Manual override	Manual override with push-button possible (the gear is disengaged for as long as the button is pressed or remains locked).
High functional reliability	The actuator is overload protected, requires no limit switches and automatically stops when the end stop is reached.

Accessories

	Description	Type
Electrical accessories	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
	Positioner for front-panel mounting, range 0...100%	SGF24
	Positioner for wall mounting, range 0...100%	CRP24-B1
	Description	Type
Mechanical accessories	Spindle clamp LU.. for clamping range 8...12 mm	K-LU
	Form fit insert 10x10 mm, for LU..	ZF10-LUA

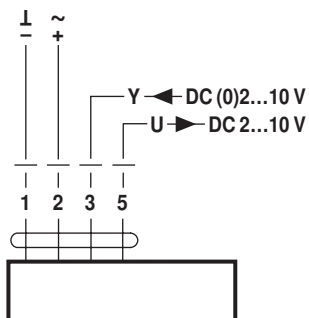
Electrical installation

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:

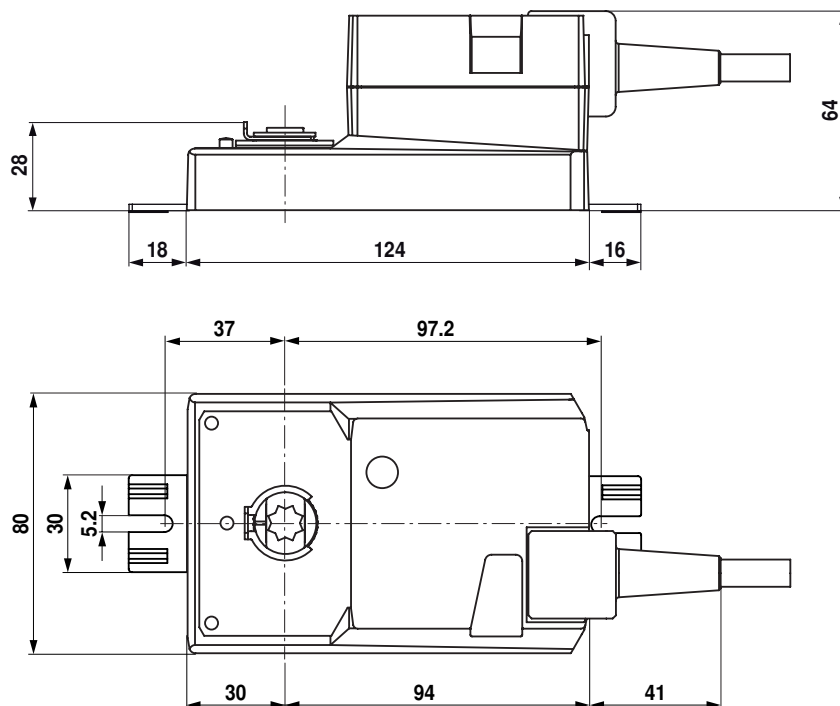
- 1 = black
- 2 = red
- 3 = white
- 5 = orange

Dimensions [mm]
Spindle length

		Min. 20
		-

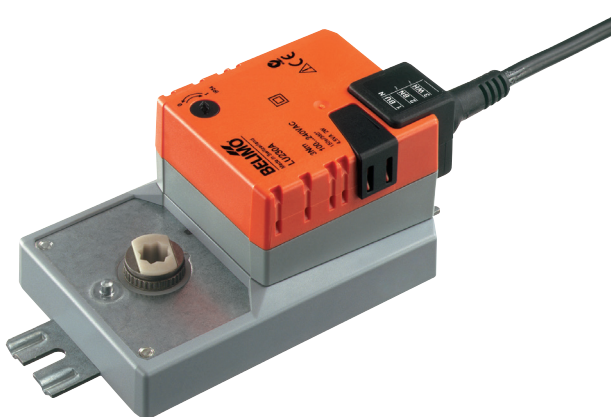
Clamping range

		8
		12

Dimensional drawings


Full-rotation actuator for adjusting dampers and disks in technical building installations

- Air damper size up to approx. 0.6 m²
- Nominal torque 3 Nm
- Nominal voltage AC 230 V
- Control Open-close, 3-point
- Spindle driver Form fit 12 mm or 8 mm (with insert)



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	2 W
	Power consumption in rest position	1 W
	Power consumption for wire sizing	4 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. 3 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	∞
	Angle of rotation note	Endless (adjustable 0...330° with angle of rotation limiter ZDB-LU)
	Running time motor	150 s / 360°
	Sound power level motor	45 dB(A)
	Spindle driver	Form fit 12 mm or 8 mm (with insert)
Safety	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	4 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	0.63 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!
- 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.
- Mechanical interfaces which are not expressly provided by Belimo for this actuator must not be attached.
- 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	Form-fit direct mounting on a 12 mm or 8 mm damper spindle (with insert). The actuator can also be optionally equipped with a 10 mm form fit or an 8...12 mm clamp (see «Accessories»).
Manual override	Manual override with push-button possible (the gear is disengaged for as long as the button is pressed or remains locked).
High functional reliability	The actuator is overload protected, requires no limit switches and automatically stops when the end stop is reached.
Adjustable angle of rotation	The angle of rotation of the full-rotation actuator can be adjusted in 10° increments between 0 and 330° with angle of rotation limiter ZDB-LU.

Accessories

	Description	Type
Mechanical accessories	Spindle clamp LU.. for clamping range 8...12 mm	K-LU
	Angle of rotation limitation LU.., with scaling 0...330°	ZDB-LU
	Form fit insert 10x10 mm, for LU..	ZF10-LUA

Electrical installation

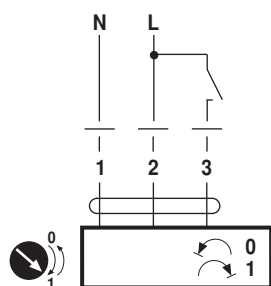


Notes

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

Wiring diagrams

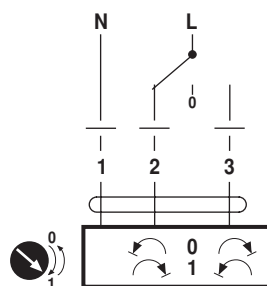
AC 230 V, open-close



Cable colours:

1 = blue
2 = brown
3 = white

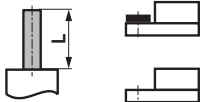
AC 230 V, 3-point





Cable colours:

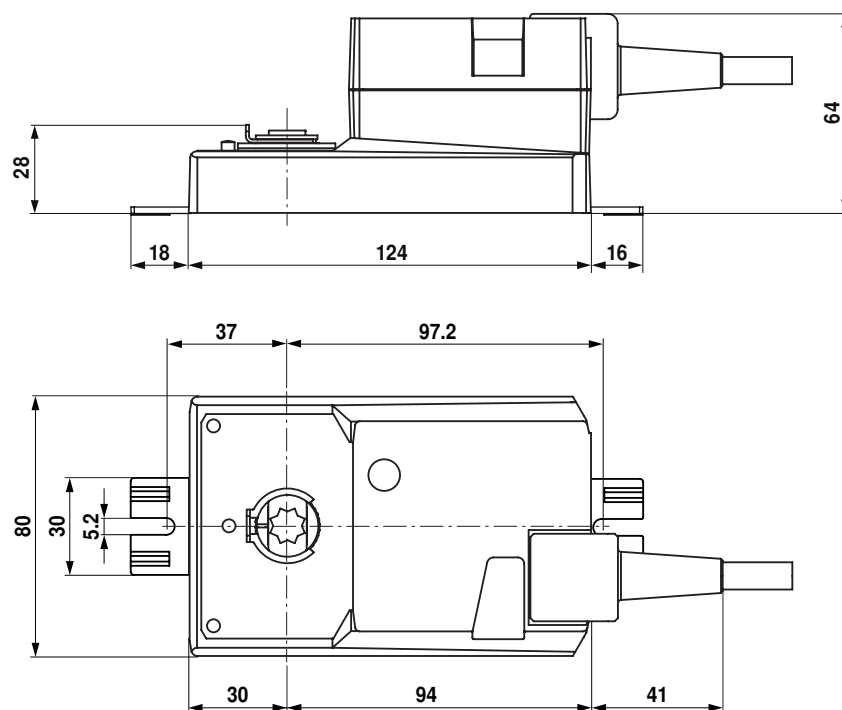
1 = blue
2 = brown
3 = white

Dimensions [mm]
Spindle length

	Min. 20
	-

Clamping range

	 8
	12

Dimensional drawings


Full-rotation actuator for adjusting dampers and disks in technical building installations

- Air damper size up to approx. 0.6 m²
- Nominal torque 3 Nm
- Nominal voltage AC 230 V
- Control Modulating DC (0)2...10 V
- Position feedback DC 2...10 V
- Spindle driver Form fit 12 mm or 8 mm (with insert)



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	2 W
	Power consumption in rest position	1 W
	Power consumption for wire sizing	4 VA
	Connection supply	Cable 1 m, 2 x 0.75 mm ²
	Connection control	Cable 1 m, 4 x 0.75 mm ²
	Parallel operation	Yes (note the performance data)
Functional data	Torque motor	Min. 3 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
	Auxiliary supply	DC 24 V ±30%, max. 10 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	0...330°
	Angle of rotation note	fixed setting
	Running time motor	150 s / 360°
	Sound power level motor	45 dB(A)
	Spindle driver	Form fit 12 mm or 8 mm (with insert)
Safety	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	4 kV
	Rated impulse voltage 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	0.66 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!
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- 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

Mode of operation	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.
Simple direct mounting	Form-fit direct mounting on a 12 mm or 8 mm damper spindle (with insert). The actuator can also be optionally equipped with a 10 mm form fit or an 8...12 mm clamp (see «Accessories»).
Manual override	Manual override with push-button possible (the gear is disengaged for as long as the button is pressed or remains locked).
High functional reliability	The actuator is overload protected, requires no limit switches and automatically stops when the end stop is reached.

Accessories

	Description	Type
Electrical accessories	Positioner for wall mounting, range 0...100%	SGA24
	Positioner in a conduit box, range 0...100%	SGE24
	Positioner for front-panel mounting, range 0...100%	SGF24
	Description	Type
Mechanical accessories	Spindle clamp LU.. for clamping range 8...12 mm	K-LU
	Form fit insert 10x10 mm, for LU..	ZF10-LUA

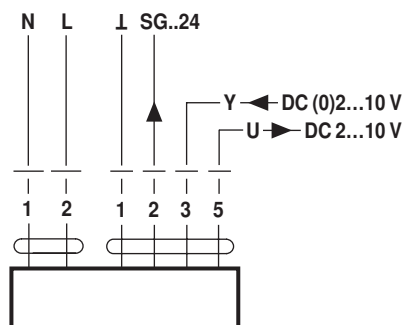
Electrical installation

Notes

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

Wiring diagrams

AC 230 V, modulating


Cable colours:

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

Dimensions [mm]
Spindle length

		Min. 20
		-

Clamping range

		8
		12

Dimensional drawings
