

Spring-return actuator with emergency control function for adjusting dampers in technical building installations

- Air damper size up to approx. 0.8 m²
- Nominal torque 4 Nm
- Nominal voltage AC 230 V
- Control Open-close
- With integrated auxiliary switch


Technical data

Electrical data	Nominal voltage	AC 230 V	
	Nominal voltage frequency	50/60 Hz	
	Nominal voltage range	AC 198...264 V	
	Power consumption in operation	5 W	
	Power consumption in rest position	3 W	
	Power consumption for wire sizing	7 VA	
	Power consumption for wire sizing note	I _{max} 150 mA @ 10 ms	
	Auxiliary switch	1 x SPDT, 0...100%	
	Switching capacity auxiliary switch	1 mA...3 (0.5 inductive) A, AC 250 V	
	Connection supply / control	Cable 1 m, 2 x 0.75 mm ²	
	Connection auxiliary switch	Cable 1 m, 3 x 0.75 mm ²	
	Parallel operation	Yes (note the performance data)	
	Functional data	Torque motor	Min. 4 Nm
		Torque spring return	Min. 4 Nm
Direction of motion motor		Selectable by mounting L / R	
Direction of motion emergency control function		Selectable by mounting L / R	
Manual override		No	
Angle of rotation		Max. 95°	
Angle of rotation note		Adjustable 37...100% with integrated mechanical limitation	
Running time motor		40...75 s / 90°	
Running time emergency control position		<20 s / 90°	
Running time emergency setting position note		<20 s @ -20...50°C / <60 s @ -30°C	
Sound power level motor		50 dB(A)	
Spindle driver		Universal spindle clamp 8...16 mm	
Position indication		Mechanical	
Service life		Min. 60,000 emergency positions	
Safety	Protection class IEC/EN	II Protective insulated	
	Protection class auxiliary switch IEC/EN	II Protective insulated	
	Degree of protection IEC/EN	IP54	
	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	
	Mode of operation	Type 1.B	
	Rated impulse voltage supply / control	4 kV	
	Rated impulse voltage auxiliary switch	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 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!
- 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

Mode of operation	The actuator moves the damper to the operating position at the same time as tensioning the return spring. The damper is turned back to the safety position by spring energy when the supply voltage is interrupted.
Simple direct mounting	Simple direct mounting on the damper spindle with an universal spindle clamp, supplied with an anti-rotation device to prevent the actuator from rotating.
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	Adjustable angle of rotation with mechanical end stops.
Flexible signalization	With adjustable auxiliary switch (0 ... 100%)

Accessories

	Description	Type
Electrical accessories	Auxiliary switch, 2 x SPDT	S2A-F
	Feedback potentiometer, 200 Ohm, incl. installation accessories	P200A-F
	Feedback potentiometer 1 kOhm, incl. installation accessories	P1000A-F
	Description	Type
Mechanical accessories	Shaft extension 170 mm, for damper spindles Ø 6...20 mm	AV6-20
	Shaft extension 250 mm, for damper spindles Ø 8...25 mm	AV8-25
	Spindle clamp, for damper spindles Ø 16...20 mm	K6-1
	Straight ball joint with M8, suitable for damper crank arms KH8	KG10A
	Angled ball joint with M8, suitable for damper crank arms KH8	KG8
	Damper crank arm, for damper spindles	KH8
	Actuator arm, for damper spindles Ø 8...16 mm	KH-LF
	Angle of rotation limiter, for LF with end stop	ZDB-LF
	Additional shaft adapter 4-kt. 8x8mm for LF	ZF8-LF
	Mounting kit for linkage operation LF..	ZG-LF1
	Mounting kit for linkage operation LF., suitable for damper spindles Ø 10...18 mm	ZG-LF3

Electrical installation

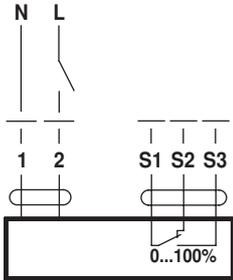


Notes

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

Wiring diagrams

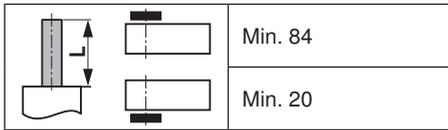
AC 230 V, open-close



Cable colours:
 1 = blue
 2 = brown
 S1 = white
 S2 = white
 S3 = white

Dimensions [mm]

Spindle length



Clamping range

8...16	8...16

Dimensional drawings

