

Rotary actuator fail-safe for adjusting dampers in technical building installations

- Air damper size up to approx. 4 m<sup>2</sup>
- Torque motor 20 Nm
- Nominal voltage AC/DC 24 V
- Control Open/close


**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 21.6...28.8 V
	Power consumption in operation	5 W
	Power consumption in rest position	2.5 W
	Power consumption for wire sizing	7.5 VA
	Connection supply / control	Cable 1 m, 2 x 0.75 mm <sup>2</sup>
	Parallel operation	Yes (note the performance data)
<b>Functional data</b>	Torque motor	20 Nm
	Torque fail-safe	20 Nm
	Direction of motion motor	selectable by mounting L/R
	Direction of motion fail-safe	selectable by mounting L/R
	Manual override	by means of hand crank and locking switch
	Angle of rotation	Max. 95°
	Angle of rotation note	adjustable starting at 33% in 2.5% steps (with mechanical end stop)
	Running time motor	75 s / 90°
	Running time fail-safe	<20 s / 90°
	Running time fail-safe note	@ -20...50°C / <60 s @ -30°C
	Sound power level, motor	45 dB(A)
	Mechanical interface	Universal shaft clamp 10...25.4 mm
	Position indication	Mechanical
Service life	Min. 60'000 fail-safe positions	
<b>Safety</b>	Protection class IEC/EN	III Safety Extra-Low Voltage (SELV)
	Protection class UL	UL Class 2 Supply
	Degree of protection IEC/EN	IP54
	Degree of protection NEMA/UL	NEMA 2
	Enclosure	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 UL60730-1A, UL60730-2-14 and CAN/CSA E60730-1:02
	Certification UL note	The UL marking on the actuator depends on the production site, the device is UL-compliant in any case
	Mode of operation	Type 1.AA
	Rated impulse voltage supply / control	0.8 kV
	Control pollution degree	3
	Ambient temperature	-30...50°C
Storage temperature	-40...80°C	
Ambient humidity	Max. 95% r.H., non-condensing	
Servicing	maintenance-free	
<b>Weight</b>	Weight	3.3 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 moves the damper to the operating position at the same time as tensioning the return spring. The damper is turned back to the fail-safe position by spring force when the supply voltage is interrupted.
<b>Simple direct mounting</b>	Simple direct mounting on the damper shaft with a universal shaft clamp, supplied with an anti-rotation device to prevent the actuator from rotating.
<b>Manual override</b>	By using the hand crank the damper can be actuated manually and engaged with the locking switch at any position. Unlocking is carried out manually or automatically by applying the operating voltage.
<b>Adjustable angle of rotation</b>	Adjustable angle of rotation with mechanical end stops.
<b>High functional reliability</b>	The actuator is overload protected, requires no limit switches and automatically stops when the end stop is reached.

## Accessories

	Description	Type
<b>Electrical accessories</b>	Auxiliary switch 2 x SPDT	S2A-F
	Feedback potentiometer 200 Ω	P200A-F
	Feedback potentiometer 1 kΩ	P1000A-F
	Description	Type
<b>Mechanical accessories</b>	Shaft extension 240 mm Ø20 mm for damper shaft Ø 8...22.7 mm	AV8-25
	End stop indicator	IND-AFB
	Shaft clamp reversible, for central mounting, for damper shafts Ø12.7 / 19.0 / 25.4 mm	K7-2
	Ball joint suitable for damper crank arm KH8 / KH10	KG10A
	Ball joint suitable for damper crank arm KH8	KG8
	Damper crank arm Slot width 8.2 mm, clamping range Ø10...18 mm	KH8
	Actuator arm, for 3/4" shafts, clamping range Ø10...22 mm, Slot width 8.2 mm	KH-AFB
	Form fit insert 10x10 mm, Multipack 20 pcs.	ZF10-NSA-F
	Form fit insert 12x12 mm, Multipack 20 pcs.	ZF12-NSA-F
	Form fit insert 15x15 mm, Multipack 20 pcs.	ZF15-NSA-F
	Form fit insert 16x16 mm, Multipack 20 pcs.	ZF16-NSA-F
	Mounting kit for linkage operation for flat and side installation	ZG-AFB
	Base plate extension	Z-SF
	Anti-rotation mechanism 230 mm, Multipack 20 pcs.	Z-ARS230L
	Hand crank 63 mm	ZKN2-B

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

Dimensions [mm]

Spindle length

		Min. 85
		Min. 15

Clamping range

	10...22	10	14...25.4
	19...25.4	12...18	

Dimensional drawings

