

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

- Air damper size up to approx. 0.8 m²
- Torque motor 4 Nm
- Nominal voltage AC/DC 24 V
- Control Open/close
- with integrated auxiliary switch
- PWIS/LABS-compliant according to VDMA 24364



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 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 VA
	Power consumption for wire sizing note	Imax 5.8 A @ 5 ms
	Auxiliary switch	1x SPDT, 0...100%
	Switching capacity auxiliary switch	1 mA...3 A (0.5 A inductive), DC 5 V...AC 250 V
	Connection supply / control	Cable 1 m, 2x 0.75 mm ²
	Connection auxiliary switch	Cable 1 m, 3x 0.75 mm ²
	Parallel operation	Yes (note the performance data)
Functional data	Torque motor	4 Nm
	Torque fail-safe	4 Nm
	Direction of motion motor	selectable by mounting L/R
	Direction of motion fail-safe	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	75 s / 90°
	Running time fail-safe	<20 s @ -20...50°C / <60 s @ -30°C
	Sound power level, motor	50 dB(A)
	Mechanical interface	Universal shaft clamp 8...16 mm
	Position indication	Mechanical
Service life	Min. 60'000 fail-safe positions	
Safety data	Protection class IEC/EN	III, Safety Extra-Low Voltage (SELV)
	Protection class auxiliary switch IEC/EN	II, reinforced insulation
	Degree of protection IEC/EN	IP54
	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
	PWIS/LABS-conformity	According to VDMA 24364 (test class C1) Approved for use in zone II Cleaning with low-pressure plasma treatment

Technical data

Safety data	Hygiene test	According to VDI 6022 Part 1 / SWKI VA 104-01, cleanable and disinfectable, low emission
	Type of action	Type 1.B
	Rated impulse voltage supply / control	0.8 kV
	Rated impulse voltage auxiliary switch	2.5 kV
	Pollution degree	3
	Ambient humidity	Max. 95% RH, non-condensing
	Ambient temperature	-30...50°C [-22...122°F]
	Storage temperature	-10...40°C [14...104°F]
	Servicing	maintenance-free
	Weight	Weight

Safety notes


- This device has been designed for use in stationary heating, ventilation and air-conditioning systems and must not be used outside the specified field of application, especially 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 device and that it is ensured that the ambient conditions remain within the thresholds according to the data sheet at any time.
- Only authorised specialists may carry out installation. All applicable legal or institutional installation regulations must be complied with 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 and the design, as well as the installation situation 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.
- PWIS/LABS-conformity is guaranteed as long as the packaging is unopened. Once the PWIS/LABS-compliant packaging has been opened, the proper handling of the products is the responsibility of the customer. PWIS/LABS-conformity of unopened products is guaranteed for a period of one year after cleaning, provided they are handled properly, professionally and cleanly. Proof of proper, professional and clean handling is the responsibility of the purchaser. Ensure that the required cleanliness of the products is maintained. Do not touch the products with bare hands. Belimo accepts no liability for the consequences resulting from the contamination of a product caused by the customer.

Product features

Operating mode	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 shaft with a universal shaft clamp, supplied with an anti-rotation device to prevent the actuator from rotating.
Adjustable angle of rotation	Adjustable angle of rotation with mechanical end stops.
Flexible signalling	With adjustable auxiliary switch (0...100%)

Accessories

Electrical accessories	Description	Type
	Auxiliary switch 2x SPDT	S2A-F
	Feedback potentiometer 1 kΩ	P1000A-F
Mechanical accessories	Description	Type
	Shaft extension 170 mm ø10 mm for damper shaft ø6...16 mm	AV6-20
	Shaft clamp reversible, clamping range ø16...20 mm	K6-1
	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, clamping range ø8...16 mm, Slot width 8.2 mm	KH-LF
	Angle of rotation limiter, with end stop	ZDB-LF
	Form fit adapter 8x8 mm	ZF8-LF
	Mounting kit for linkage operation for flat installation	ZG-LF1
	Mounting kit for linkage operation for side installation Slot width 6.2 mm	ZG-LF3
	Anti-rotation mechanism 180 mm, Multipack 20 pcs.	Z-ARS180L

Electrical installation

Supply from isolating transformer.
Parallel connection of other actuators possible. Observe the performance data.
Wire colours:

1 = black

2 = red

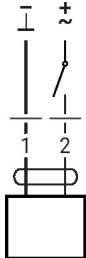
S1 = violet

S2 = red

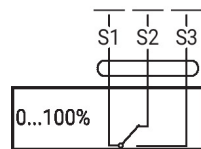
S3 = white

Wiring diagrams

AC/DC 24 V, open/close



Auxiliary switch



Dimensions

Spindle length

		Min. 84
		Min. 20 mm [0.75"]

Clamping range

8...16	8...16

