

Modulating rotary actuator fail-safe for adjusting dampers in technical building installations

- Air damper size up to approx. 0.5 m²
- Torque motor 2.5 Nm
- Nominal voltage AC 100...240 V
- Control modulating 2...10 V
- Position feedback 2...10 V



Technical data

Electrical data	Nominal voltage	AC 100...240 V
	Nominal voltage frequency	50/60 Hz
	Nominal voltage range	AC 85...265 V
	Power consumption in operation	2.5 W
	Power consumption in rest position	2 W
	Power consumption for wire sizing	5 VA
	Connection supply	Cable 1 m, 2x 0.75 mm ²
	Connection control	Cable 1 m, 3x 0.75 mm ²
	Parallel operation	Yes (note the performance data)
Functional data	Torque motor	2.5 Nm
	Torque fail-safe	2.5 Nm
	Operating range Y	2...10 V
	Input impedance	100 kΩ
	Position feedback U	2...10 V
	Position feedback U note	Max. 0.5 mA
	Position accuracy	±5%
	Direction of motion motor	selectable with switch 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 starting at 37° in 2.5% steps (with mechanical end stop)
	Running time motor	150 s / 90°
	Running time fail-safe	<25 s / 90°
	Sound power level, motor	50 dB(A)
	Mechanical interface	Universal shaft clamp 6...12.7 mm
	Position indication	Mechanical
Service life	Min. 60'000 fail-safe positions	
Safety data	Protection class IEC/EN	II, reinforced insulation
	Degree of protection IEC/EN	IP42
	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
	Hygiene test	According to VDI 6022 Part 1 / SWKI VA 104-01, cleanable and disinfected, low emission

Technical data

Safety data	Type of action	Type 1.AA
	Overvoltage category	II
	Rated impulse voltage supply	2.5 kV
	Rated impulse voltage control	2.5 kV
	Pollution degree	2
	Ambient humidity	Max. 95% RH, non-condensing
	Ambient temperature	-30...50°C [-22...122°F]
	Storage temperature	-40...80°C [-40...176°F]
Weight	Servicing	maintenance-free
	Weight	0.78 kg

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.
- Caution: Power supply voltage!
- 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.

Product features

Operating mode	The actuator is connected with a standard control signal of 0...10 V and 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.
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.
High functional reliability	The actuator is overload protected, requires no limit switches and automatically stops when the end stop is reached.

Accessories

Electrical accessories	Description	Type
	Signal converter voltage/current 100 kΩ 4...20 mA, Supply AC/DC 24 V	Z-UIC
	Positioner for wall mounting	SGA24
	Positioner for built-in mounting	SGE24
	Positioner for front-panel mounting	SGF24
	Positioner for wall mounting	CRP24-B1
Mechanical accessories	Description	Type
	Actuator arm	AH-TF

Accessories

Description	Type
Shaft extension 170 mm \varnothing 10 mm for damper shaft \varnothing 6...16 mm	AV6-20
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 \varnothing 10...18 mm	KH8
Screw fastening kit	SB-TF
Angle of rotation limiter, with end stop	ZDB-TF
Form fit adapter 8x8 mm	ZF8-TF
Mounting kit for linkage operation for flat and side installation	ZG-TF1
Anti-rotation mechanism 180 mm, Multipack 20 pcs.	Z-ARS180

Electrical installation



Caution: Power supply voltage!

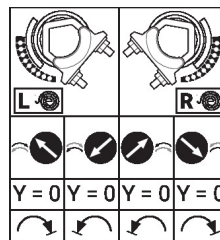
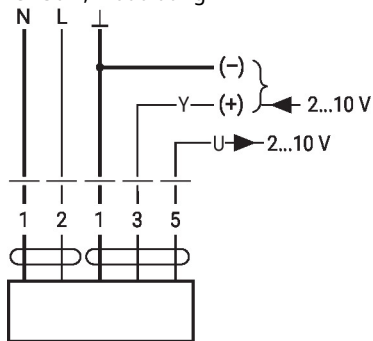
Parallel connection of other actuators possible. Observe the performance data.

Wire colours:

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

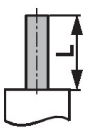
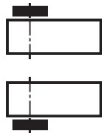


Wiring diagrams

AC 230 V, modulating





Dimensions

Spindle length

		Min. 84
		-

Clamping range

	
6...12.7	6...12.7

