

Modulating damper actuator for adjusting dampers in technical building installations

- Air damper size up to approx. 2 m<sup>2</sup>
- Torque motor 10 Nm
- Nominal voltage AC/DC 24 V
- Control modulating 2...10 V
- Position feedback 2...10 V
- Mechanical interface Form fit 8x8 mm



## 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 19.2...28.8 V
	Power consumption in operation	2 W
	Power consumption in rest position	0.4 W
	Power consumption for wire sizing	4 VA
	Connection supply / control	Cable 1 m, 4x 0.75 mm <sup>2</sup>
	Parallel operation	Yes (note the performance data)
<b>Functional data</b>	Torque motor	10 Nm
	Operating range Y	2...10 V
	Input impedance	100 kΩ
	Position feedback U	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	with push-button, can be locked
	Angle of rotation	Max. 95°
	Angle of rotation note	can be limited on both sides with adjustable mechanical end stops
	Running time motor	150 s / 90°
	Sound power level, motor	35 dB(A)
	Mechanical interface	Form fit 8x8 mm
Position indication	Mechanical, pluggable	
<b>Safety data</b>	Protection class IEC/EN	III, Safety Extra-Low Voltage (SELV)
	Power source 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

**Technical data**

<b>Safety data</b>	UL Approval	cULus according to UL60730-1A, UL60730-2-14 and CAN/CSA E60730-1 The UL marking on the actuator depends on the production site, the device is UL-compliant in any case
	Hygiene test	According to VDI 6022 Part 1 / SWKI VA 104-01, cleanable and disinfected, low emission
	Type of action	Type 1
	Rated impulse voltage supply / control	0.8 kV
	Pollution degree	3
	Ambient humidity	Max. 95% RH, non-condensing
	Ambient temperature	-30...50°C [-22...122°F]
	Storage temperature	-40...80°C [-40...176°F]
	Servicing	maintenance-free
	<b>Weight</b>	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.
- Cables must not be removed from the device.
- 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.
- 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**

<b>Operating mode</b>	The actuator is connected with a standard control signal of 0...10 V and drives to the position defined by the control signal. Measuring voltage U serves for the electrical display of the damper position 0...100% and as control signal for other actuators.
<b>Simple direct mounting</b>	Simple direct mounting on the damper shaft with form-fit hollow shaft. For screw fitting to the application the actuator is supplied with two fastening clips, one on each short side.
<b>Manual override</b>	Manual override with push-button possible (the gear train is disengaged for as long as the button is pressed or remains locked).
<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

Electrical accessories	Description	Type
	Auxiliary switch 1x SPDT add-on	S1A
	Auxiliary switch 2x SPDT add-on	S2A
	Feedback potentiometer 140 Ω add-on	P140A
	Feedback potentiometer 1 kΩ add-on	P1000A
	Feedback potentiometer 10 kΩ add-on	P10000A
	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 for standard shaft clamp (one-sided)	AH-25
	Shaft extension 240 mm ø20 mm for damper shaft ø8...22.7 mm	AV8-25
	Form fit insert 8x8 mm, Multipack 20 pcs.	ZF8-NMA
	Form fit insert 10x10 mm, Multipack 20 pcs.	ZF10-NSA
	Form fit insert 12x12 mm, Multipack 20 pcs.	ZF12-NSA
	Form fit insert 15x15 mm, Multipack 20 pcs.	ZF15-NSA
	Form fit insert 16x16 mm, Multipack 20 pcs.	ZF16-NSA
	Mounting kit for linkage operation for flat installation	ZG-NMA

## Electrical installation



Supply from isolating transformer.

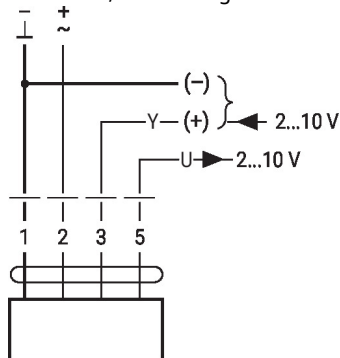
Parallel connection of other actuators possible. Observe the performance data.

## Wire colours:

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

## Wiring diagrams

AC/DC 24 V, modulating



1	2	3		
		2 V		
		10 V		

## Dimensions

## Spindle length

		Min. 25
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