

Modulating damper actuator for adjusting dampers in technical building installations

- Air damper size up to approx. 2 m<sup>2</sup>
- Nominal torque 10 Nm
- Nominal voltage AC 230 V
- Control Modulating DC (0)2...10 V
- Position feedback DC 2...10 V
- With connecting terminals


**Technical data**

<b>Electrical data</b>	Nominal voltage	AC 230 V	
	Nominal voltage frequency	50/60 Hz	
	Nominal voltage range	AC 85...264 V	
	Power consumption in operation	3.5 W	
	Power consumption in rest position	1 W	
	Power consumption for wire sizing	6.5 VA	
	Connection supply	Terminals 4 mm <sup>2</sup> (cable Ø 4...10 mm, 2-wire)	
	Connection control	Terminals 4 mm <sup>2</sup> (cable Ø 4...10 mm, 4-wire)	
	Parallel operation	Yes (note the performance data)	
	<b>Functional data</b>	Torque motor	Min. 10 Nm
Positioning signal Y		DC 0...10 V	
Positioning signal Y note		Input impedance 100 kΩ	
Operating range Y		DC 2...10 V	
Position feedback U		DC 2...10 V	
Position feedback U note		Max. 1 mA	
Auxiliary supply		DC 24 V ±30%, max. 10 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		Gear disengagement 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)	
Spindle driver		Universal spindle clamp 8...26.7 mm	
Position indication		Mechanically, pluggable	
<b>Safety</b>		Protection class IEC/EN	II Protective insulated
		Protection class UL	II Protective insulated
		Degree of protection IEC/EN	IP54
	Degree of protection NEMA/UL	NEMA 2, UL Enclosure Type 2	
	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	
	Certification UL	cULus according to UL 60730-1A, UL 60730-2-14 and CAN/CSA E60730-1:02	
	Mode of operation	Type 1	
	Rated impulse voltage supply	2.5 kV	
Rated impulse voltage control	0.8 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		
<b>Weight</b>	Weight approx.	0.78 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.
- 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 is connected with a standard modulating signal of DC 0...10V and drives to the position defined by the positioning signal. Measuring voltage U serves for the electrical display of the damper position 0...100% and as slave control signal for other actuators.
<b>Simple direct mounting</b>	Simple direct mounting on the damper spindle with an universal spindle clamp, supplied with an anti-rotation device to prevent the actuator from rotating.
<b>Manual override</b>	Manual override with push-button possible (the gear is disengaged for as long as the button is pressed or remains locked).
<b>High functional reliability</b>	The actuator is overload protected, requires no limit switches and automatically stops when the end stop is reached.
<b>Adjustable angle of rotation</b>	Adjustable angle of rotation with mechanical end stops.

**Accessories**

	Description	Type
<b>Electrical accessories</b>	Auxiliary switch, add-on, 1 x SPDT	S1A
	Auxiliary switch, add-on, 2 x SPDT	S2A
	Auxiliary switch, add-on, 2 x SPDT, grey	S2A GR
	Feedback potentiometer 140 Ohm, add-on	P140A
	Feedback potentiometer 140 Ohm, add-on, grey	P140A GR
	Feedback potentiometer 200 Ohm, add-on	P200A
	Feedback potentiometer 500 Ohm, add-on	P500A
	Feedback potentiometer 500 Ohm, add-on, grey	P500A GR
	Feedback potentiometer 1 kOhm, add-on	P1000A
	Feedback potentiometer 2.8 kOhm, add-on	P2800A
	Feedback potentiometer 2.8 kOhm, add-on, grey	P2800A GR
	Feedback potentiometer 1 kOhm, add-on, grey	P1000A GR
	Feedback potentiometer 5 kOhm, add-on	P5000A
	Feedback potentiometer 5 kOhm, add-on, grey	P5000A GR
	Feedback potentiometer 10 kOhm, add-on	P10000A
	Feedback potentiometer 10 kOhm, add-on, grey	P10000A GR
	Signal converter voltage/current, supply AC/DC 24V	Z-UIC
	Digital position indicator for front-panel mounting, 0...99%, front mass 72 x 72 mm	ZAD24
	Range controller for wall mounting, adjustable electron. Min./max. angle of rotation limitation	SBG24
	Positioner for wall mounting, range 0...100%	SGA24
Positioner in a conduit box, range 0...100%	SGE24	

Accessories

	Description	Type
	Positioner for front-panel mounting, range 0...100%	SGF24
	Positioner for wall mounting, range 0...100%	CRP24-B1
Mechanical accessories	Description	Type
	Actuator arm, for standard spindle clamp (reversible) K-SA	AH-20
	Actuator arm, for one-sided spindle clamp K-ENSA	AH-25
	Shaft extension 250 mm, for damper spindles Ø 8...25 mm	AV8-25
	Spindle clamp, one side for NM..A	K-ENMA
	Spindle clamp, one side for NM..A, SM..A	K-ENSA
	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
	Spindle clamp, reversible for NM..A and LMQ..	K-NA
	Angle of rotation limiter, for K-NA	20334-00001
	Universal mounting bracket 180 mm	Z-ARS180
	Form fit insert 8x8 mm, for NM..A	ZF8-NMA
	Form fit insert 10x10 mm, for NM..A / SM..A	ZF10-NSA
	Form fit insert 12x12 mm, for NM..A / SM..A	ZF12-NSA
	Form fit insert 15x15 mm	ZF15-NSA
	Form fit insert 16x16 mm, for NM..A / SM..A	ZF16-NSA
	Mounting kit for linkage operation, NM..A for flat installation	ZG-NMA
	Base plate extension from NM..A to NM..	Z-NMA
	Position indication for LM..A, NM..A, SM..A, GM..A	Z-PI
	Terminal protection IP54	Z-TP
	Cable sleeve for Ø 4-6 mm, suitable for strain relief NG	43235-00001
	Strain relief bushing (cable sleeve) for Ø 6-8 mm, suitable for strain relief NG	43235-00002
	Cable sleeve for Ø 8-10 mm, suitable for strain relief NG	43235-00003

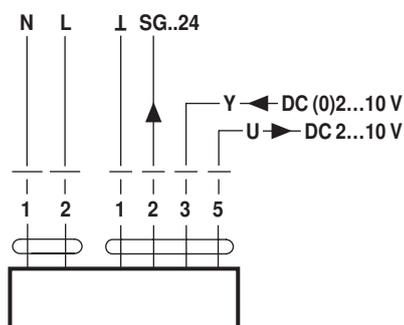
Electrical installation

**Notes**

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

Wiring diagrams

AC 230 V, modulating



Dimensions [mm]

Spindle length

		Min. 40
		Min. 20

Clamping range

	8...26.7	≥8	≤26.7
	8...20	≥8	≤20

\*Option: Spindle clamp mounted below (accessories K-NA needed)

Dimensional drawings

