

# **Technical data sheet**

Modulating damper actuator for adjusting dampers in technical building installations

- Air damper size up to approx. 0.4 m<sup>2</sup>
- Torque motor 2 Nm
- Nominal voltage AC/DC 24 V
- Control modulating
- Mechanical interface Form fit 8x8 mm
- with connecting terminals



## **Technical data**

Electrical data	Nominal voltage	AC/DC 24 V
	Nominal voltage frequency	50/60 Hz
	Nominal voltage range	AC 19.228.8 V / DC 19.228.8 V
	Power consumption in operation	1 W
	Power consumption in rest position	0.5 W
	Power consumption for wire sizing	1.5 VA
	Connection supply / control	Terminals 1.5 mm <sup>2</sup> Cu wire or 1.0 mm <sup>2</sup> Cu strands (4-wire) Terminals for 4 x 1.5 mm <sup>2</sup> CU wire or 4 x 1.0 mm <sup>2</sup> CU strands
	Parallel operation	Yes (note the performance data)
Functional data	Torque motor	2 Nm
	Operating range Y	210 V
	Input impedance	100 kΩ
	Position feedback U	210 V
	Position feedback U note	Max. 1 mA
	Position accuracy	±5%
	Direction of motion motor	counter-clockwise rotation
	Direction of motion note	Y = 0 V: left end stop, position 0
	Manual override	with magnet
	Angle of rotation	95°, fixed setting
	Running time motor	75 s / 90°
	Sound power level, motor	35 dB(A)
	Mechanical interface	Form fit 8x8 mm
	Position indication	Mechanical, pluggable (with integrated magnet for gear train disengagement)
Safety data	Protection class IEC/EN	III, Safety Extra-Low Voltage (SELV)
	Power source UL	Class 2 Supply
	Degree of protection IEC/EN	IP20
	Degree of protection NEMA/UL	NEMA 1
	Enclosure	UL Enclosure Type 1
	EMC	CE according to 2014/30/EU
	Certification IEC/EN	IEC/EN 60730-1 and IEC/EN 60730-2-14



#### **Technical data**

afety data	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 disinfectable, low emission
	Type of action	Туре 1
	Rated impulse voltage supply / control	0.8 kV
	Pollution degree	2
	Ambient humidity	Max. 95% RH, non-condensing
	Ambient temperature	-3050°C [-22122°F]
	Storage temperature	-4080°C [-40176°F]
	Servicing	maintenance-free
Weight	Weight	0.18 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.
- Only authorised specialists may carry out installation. All applicable legal or institutional • installation regulations must be complied with during installation.
- The mechanical end stops for limiting the angle of rotation may only be removed for ٠ adjustment. They must always be mounted during operation.
- 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**

Mode of operation	The actuator is connected with a standard control signal of 010 V and drives to the position defined by the control signal. Measuring voltage U serves for the electrical display of the damper position 0100% and as control signal for other actuators.
Simple direct mounting	The actuator with its hollow shaft is mounted in a form-fit manner directly on the damper shaft and then secured with the anti-rotation clip, to prevent it from rotating. The anti-rotation clip Z-ARCM is included in the scope of delivery.
Manual override	Manual override with magnet possible (the gear train is disengaged as long as the magnet adheres to the magnet symbol). The magnet for gear train disengagement is integrated in the position indication.
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.



Product features			
Hidd	len synchronisation	If the actuator drives to the lower end stop during ongoing open synchronisation of the control signal at DC 2 V. This ensures that corresponds to the effective functional range in ongoing operat actively approached as soon as the control signal is <dc 2.1="" the<br="" v.="">specified position as soon as the control signal is once again &gt;De</dc>	t the signal range also ion. The bottom end stop is he actuator drives to the new
Accessories			
	chanical accessories	Description	Туре
	chanical accessories	Description Anti-rotation clip, Multipack 20 pcs.	<b>Type</b> Z-ARCM
	chanical accessories		
Accessories Mec	chanical accessories	Anti-rotation clip, Multipack 20 pcs.	Z-ARCM

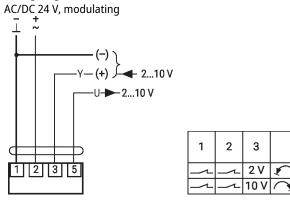
#### **Electrical installation**



Supply from isolating transformer.

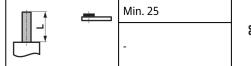
Parallel connection of other actuators possible. Observe the performance data.

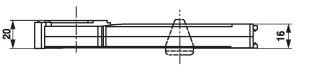
#### Wiring diagrams

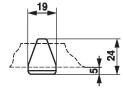


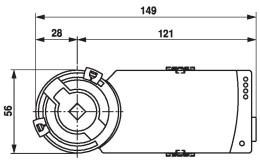
### Dimensions

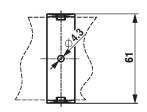
## Spindle length











1) Anti-rotation clip, accessory part Z-ARCM

2) Position indicator with integrated magnet for gear train disengagement, accessory part Z-PICM