

Linear actuator for adjusting dampers and slide valves in technical building installations

- Actuating force 100 N
- Nominal voltage AC/DC 24 V
- Control Open/close (unsuitable for 3-point controls)
- Length of Stroke Max. 100 mm, adjustable in 20 mm increments
- Running time motor 3.5 s



Technical data

E	lectri	ادعا	Ы	ata
	ecu	La	u	ala

Nominal voltage	AC/DC 24 V
Nominal voltage frequency	50/60 Hz
Nominal voltage range	AC 19.228.8 V / DC 21.628.8 V
Power consumption in operation	13 W
Power consumption in rest position	2 W
Power consumption for wire sizing	23 VA
Power consumption for wire sizing note	Imax 20 A @ 5 ms
Connection supply / control	Cable 1 m, 3 x 0.75 mm ²
Parallel operation	Yes (note the performance data)
Actuating force motor	100 N

Functional data

Actuating force motor	100 N
Direction of motion motor	selectable with switch 0 (extended) / 1 (retracted)
Manual override	with push-button, can be locked
Stroke	100 mm
Length of Stroke	Max. 100 mm, adjustable in 20 mm increments
Minimum stroke	40 mm
Stroke limitation	can be limited on both sides with mechanical end stops
Running time motor	3.5 s / 100 mm
Sound power level, motor	56 dB(A)
Protection class IFC/FN	III. Safety Extra-Low Voltage (SELV)

Safety data

Sound power level, motor	56 dB(A)
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
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
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	-3040°C [-22104°F]
Ambient temperature note	Caution: +40+50°C utilisation possible only under certain restrictions. Please contact your supplier.



-40 80°C [-40 176°F]

Safety data Storage temper

Storage temperature	4000 C[40170 1]	
Servicing	maintenance-free	

Weight Weight 0.63 k

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 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.
- The rotary supports and coupling pieces available as accessories must always be used if transverse forces are likely. In addition, the actuator must not be tightly bolted to the application. It must remain movable via the rotary support (refer to «Installation notes»).
- If the actuator is exposed to severely contaminated ambient air, appropriate precautions must be taken on the system side. Excessive deposits of dust, soot etc. can prevent the gear rod from being extended and retracted correctly.
- If not installed horizontally, the maual override button may only be actuated when there is no pressure on the gear rod.
- To calculate the actuating force required for air dampers and slide valves, the specifications supplied by the damper manufacturers concerning the cross section, the design, the installation situation and the ventilation conditions must be observed.
- If a rotary support and/or coupling piece is used, actuation force losses are to be expected.
- Self-adaptation is necessary when the system is commissioned or whenever the stroke limiting is adjusted (press the adaptation push-button).
- 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

Simple direct mounting

The actuator can be directly connected with the application using the enclosed screws. The head of the gear rod is connected to the moving part of the ventilating application individually on the mounting side or with the Z-KS2 coupling piece provided.

Manual override

Manual override with push-button possible (the gear train is disengaged for as long as the button is pressed or remains locked).

Adjustable stroke

If a stroke limitation will be adjusted, the mechanical operating range on this side of the gear rod can be used starting with an extension length of 20 mm and then can be limited respectively in increments of 20 mm by means of mechanical end stops Z-AS2.

A minimum permissible stroke of 40 mm must be allowed for.

High functional reliability

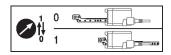
The actuator is overload protected, requires no limit switches and automatically stops when the end stop is reached.

Home position

The first time the supply voltage is switched on, i.e. at the time of commissioning, the actuator carries out an adaptation, which is when the operating range and position feedback adjust themselves to the mechanical setting range.

The detection of the mechanical end stops enables a gentle approach to the end positions, thus protecting the actuator mechanics.

The actuator then moves into the position defined by the control signal.





Accessories

Mechanical accessories

Description	Туре
End stop kit, Multipack 20 pcs.	Z-AS2
Rotary support, for linear actuator, for compensation of transverse forces	Z-DS1
Coupling piece M6	Z-KS2

Electrical installation



Supply from isolating transformer.

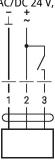
Parallel connection of other actuators possible. Observe the performance data.

Wire colours:

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

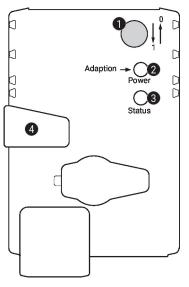
Wiring diagrams

AC/DC 24 V, open/close



1	2	3		
	~	_/_	¥	*
_~	~	7	*	¥
~	_/_	_/_	stop	stop

Operating controls and indicators



1 Direction of stroke switch

Switch over: Direction of stroke changes

2 Push-button and LED display green

Off: No power supply or malfunction

On: In operation

Press Triggers stroke adaptation, followed by standard mode

button:

3 Push-button and LED display yellow

Off: Standard mode

On: Adaptation or synchronisation process active

Press button: No function

4 Manual override button

Press button: Gear train disengages, motor stops, manual override possible
Release Gear train engages, synchronisation starts, followed by standard

button: mode

Check power supply connection

2 Off and 3 On Possible wiring error in power supply



Installation notes



If a rotary support and/or coupling piece is used, losses in the actuation force losses are to be expected.

Applications without transverse forces

The linear actuator is screwed directly to the housing at three points. Afterwards, the head of the gear rod is fastened to the moving part of the ventilation application (e.g. damper or slide valve).

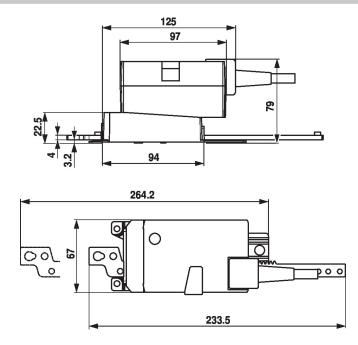
Applications with transverse forces

Connect the coupling piece with the internal thread (Z-KS2) to the head of the gear rod. Screw the rotary support (Z-DS1) to the ventilation application. Afterwards, the linear actuator is screwed to the previously mounted rotary support with the enclosed screw. Then, the coupling piece, which is mounted to the head of the gear rod, is attached to the moving part of the ventilating application (e.g. damper or slide valve). The transverse forces can be compensated for to a certain limit with the rotary support and/or coupling piece. The maximum permissible swivel angle of the rotary support and coupling piece is 10°, laterally and upwards.

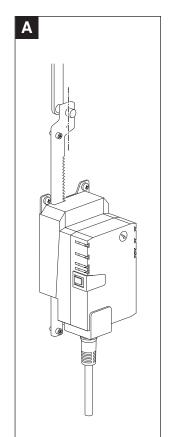
Negative force

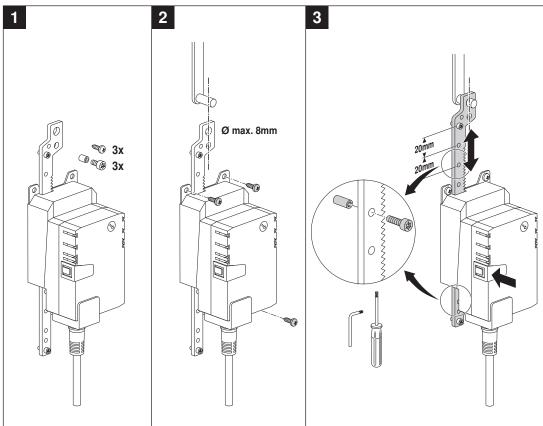
Max. 50% of the actuating force (Caution: Application possible only under certain restrictions. Please contact your supplier.)

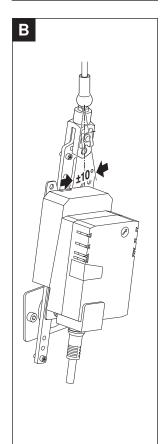
Dimensions

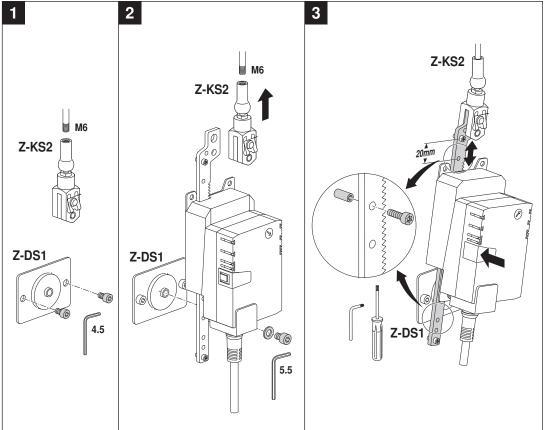






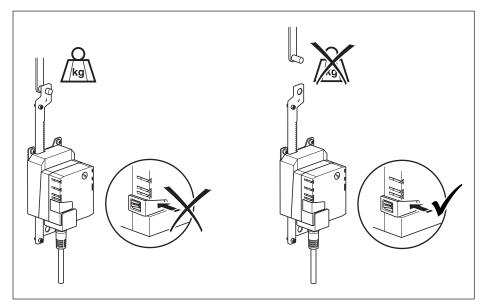


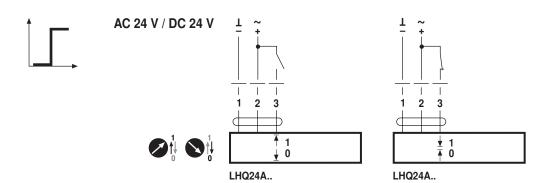


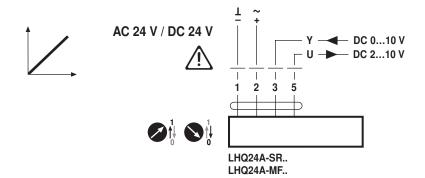












SALES CONTACT



www.airmax-hvac.com



080-614-4944, 061-5098787



@airmax (Line Official)



Windcontrol.info@gmail.com





Address

No.56/392 Moo12 Sisa Chorakhe Noi, Bang Sao Thong, Samut Prakan, 10570

