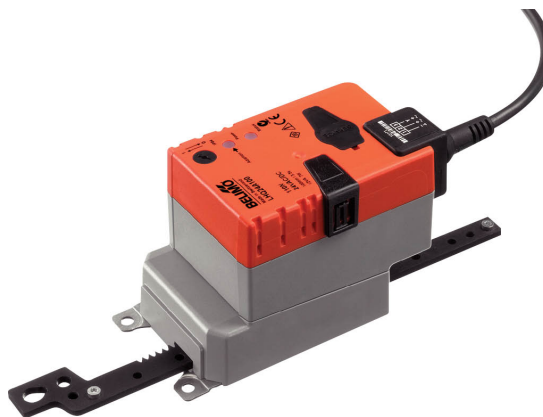


Linear actuator for adjusting dampers and slide valves in technical building installations

- Air damper size up to approx. 0.7 m²
- 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

| | | |
|------------------------|----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Electrical data | Nominal voltage | AC/DC 24 V |
| | Nominal voltage frequency | 50/60 Hz |
| | Nominal voltage range | AC 19.2...28.8 V / DC 21.6...28.8 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) |
| 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) |
| Safety data | 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 |
| | Certification UL | 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 |
| | Mode of operation | Type 1 |
| | Rated impulse voltage supply / control | 0.8 kV |
| | Pollution degree | 3 |
| | Ambient temperature | -30...40°C |
| | Ambient temperature note | Caution: +40...+50°C utilisation possible only under certain restrictions. Please contact your supplier. |
| | Storage temperature | -40...80°C |

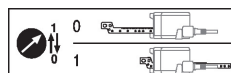
| | | |
|--------------------|------------------|-----------------------------|
| Safety data | Ambient humidity | Max. 95% RH, non-condensing |
| | Servicing | maintenance-free |
| Weight | Weight | 0.63 kg |

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, insulation 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 gear disengagement push-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 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 adaption, 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 positioning signal.



Accessories

| Mechanical accessories | Description | Type |
|------------------------|----------------------------------------------------------------------------|-------|
| | 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

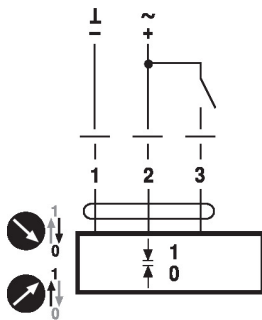


Supply from isolating transformer.

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

Wiring diagrams

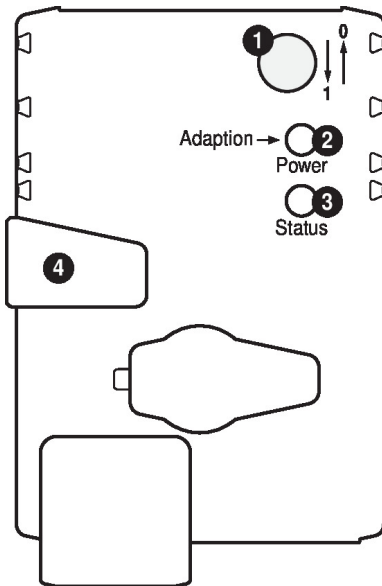
AC/DC 24 V, open/close



Cable colours:

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

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 button: Triggers stroke adaptation, followed by standard mode

3 Push-button and LED display yellow

Off: Standard mode

On: Adaptation or synchronising process active

Press button: No function

4 Gear disengagement button

Press button: Gear disengages, motor stops, manual override possible

Release button: Gear engages, synchronisation starts, followed by standard 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
Dimensional drawings
