

Technical data sheet

361C-024-20-S2

Spring return actuator

Description

Spring return actuator for adjusting dampers in HVAC installations

- Running time motor 150 s / 90°
- Running time spring 20 s / 90°
- Torque motor 20 Nm
- Torque spring 20 Nm
- Nominal voltage 24 VAC/DC
- Control continuous control (0)2...10 VDC
- Auxiliary switch 2 x freely adjustable
- Damper size up to approx 4 m²
- Shaft coupling clamp
◇ 9-18 mm / Ø 9-26 mm



Technical data

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| Electrical data | Nominal voltage | 24 VAC/DC, 50/60 Hz |
| | Nominal voltage range | 19...29 VAC/DC |
| | Power consumption motor (motion) | 8,0 W |
| | Power consumption standby (end position) | 2,0 W |
| | Wire sizing | 11,5 VA |
| | Control | continuous control (0)2...10 VDC / Ri > (100 kΩ) 50 kΩ (0)4...20 mA |
| | Feedback signal | (0)2...10 VDC, max. 5 mA |
| | Auxiliary switch | 2 x SPDT (Ag) |
| | Contact load | 5 (2,5) A, 250 VAC |
| | Switching point | 0°...95° |
| | Connection motor | cable 1000 mm, 4 x 0,75 mm ² (halogen free) |
| | Connection feedback potentiometer | - |
| | Connection auxiliary switch | cable 1000 mm, 6 x 0,75 mm ² (halogen free) |
| | Connection GUAC | - |

Technical data

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| Functional data | Torque motor | 20 Nm |
| | Torque spring | 20 Nm |
| | Damper size | up to approx 4 m ² |
| | Synchronised speed | ±5% |
| | Direction of rotation | selected by mounting |
| | Manual override | manual operation |
| | Angle of rotation | 0°...max. 95° can be limited with adjustable mechanical end stops |
| | Running time motor | 150 s / 90° |
| | Running time spring | 20 s / 90° |
| | Sound power level motor | < 35 dB(A) |
| | Sound power level spring | < 65 dB(A) |
| | Shaft coupling | clamp \diamond 9-18 mm / \varnothing 9-26 mm |
| | Position indication | mechanical with pointer |
| | Service life | > 60 000 cycles (0°...95°...0°) > 1 000 000 partial cycles (max. ±5°) |
| Safety | Protection class | III (safety extra-low voltage) |
| | Degree of protection | IP 54 |
| | EMC | CE (2014/30/EU) |
| | LVD | CE (2014/35/EU) |
| | RoHS | CE (2011/65/EU - 2015/863/EU - 2017/2102/EU) |
| | Mode of operation | Typ 1 (EN 60730-1) |
| | Rated impulse voltage | 0,8 kV (EN 60730-1) |
| | Control pollution degree | 3 (EN 60730-1) |
| | Ambient temperature normal operation | -30°C...+50°C |
| | Storage temperature | -30°C...+80°C |
| | Ambient humidity | 5...95% r.H., non condensing (EN 60730-1) |
| Maintenance | maintenance free | |
| Dimensions / Weight | Dimensions | 193 x 96 x 70 mm |
| | Weight | 1700 g |

Functionality / Properties

Operating mode

Connect power supply to wire 1+2 and a reference signal Y to wire 3 in range of (0)2...10 VDC, actuator drives to its specified position while the pre-tensioned spring is wound up the same time. The actual damper position (0...100%) is a feedback signal U on wire 4 for example to share with other actuators. If the power supply is interrupt, actuator drives back to position 0 by spring power. The actuator is still maintaining the minimum torque at the damper spindle.

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

Direct mounting

Simple direct mounting on the damper shaft with a clamp, protection against rotating with enclosed anti-rotation lock or rather at intended attachment points.

Manual override

The actuator can be operated only manually while the power supply is off. The supplied lever is to open and lock the damper position. The lock stays until the power supply is put on.

Signaling

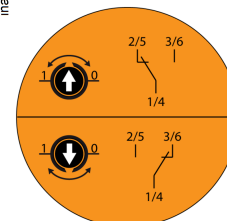
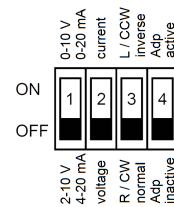
The two integrated auxiliary switches are freely adjustable in the angle of 0 - 95°. There are activated corresponding to the adjusted angle. The damper position can be checked by the mechanical pointer.

Mode switch

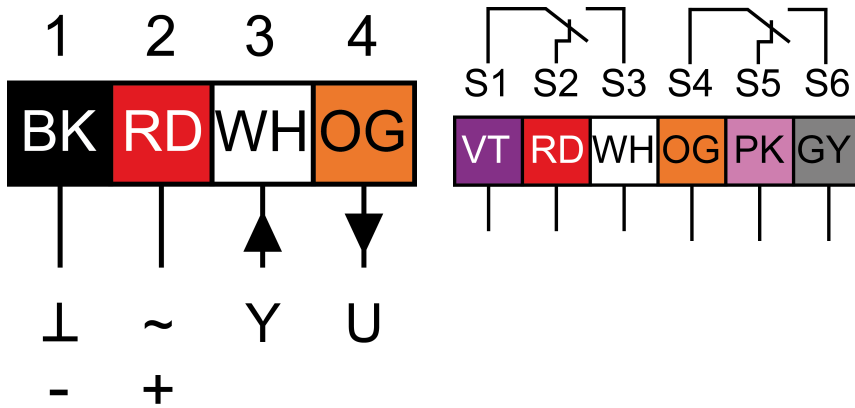
DIP switch under the case cover

Adaption drive

- Actuator power off
- Setting the mechanical end stops
- Actuator power on
- Adaption enable
- Actuator drive to position 0
- Actuator drive to position 1
- Adaption disable, if desired angular range reached or rather if actuator reached endstop
- "Y" refers to the measured angular range



Connector / Security Note



Safety remarks

- Connect via safety isolation transformer!
- The device is not allowed to be used outside the specified field of application, especially in airplanes.
- It may only be installed by suitably trained personnel. Any legal regulations or regulations issued by authorities must be observed during assembly.
- The device may only be opened at the manufacturer's site.
- The device is not allowed to be disposed of as household refuse. All locally valid regulations and requirements must be observed.
- When calculating the required torque, the specifications supplied by the damper manufacturer's (cross-section, design, installation site), and the air flow conditions must be observed.

Technical Drawing

