

Damper actuator in the IP66/67 protective housing for adjusting dampers in HVAC plants, comparable industrial plants and technical building installations

- Air damper size up to approx. 8 m²
- Torque motor 40 Nm
- Nominal voltage AC 100...240 V
- Control Open/close (unsuitable for 3-point controls)
- Optimum weather protection for use outdoors (for use in ambient temperatures up to -40°C, there is a separate actuator available with built-in heater)


Technical data

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|------------------------|--|---|
| Electrical data | Nominal voltage | AC 100...240 V |
| | Nominal voltage frequency | 50/60 Hz |
| | Nominal voltage range | AC 85...265 V |
| | Power consumption in operation | 5 W |
| | Power consumption in rest position | 2.5 W |
| | Power consumption for wire sizing | 9 VA |
| | Connection supply / control | Terminals 4 mm ² (cable ø4...10 mm, 3-wire) |
| | Parallel operation | Yes (note the performance data) |
| Functional data | Torque motor | 40 Nm |
| | Direction of motion motor | selectable with switch 0 (ccw rotation) / 1 (cw rotation) |
| | Manual override | with push-button, can be locked (under protective housing) |
| | 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 | 45 dB(A) |
| | Mechanical interface | Universal shaft clamp 14...26.7 mm |
| | Position indication | Mechanical, pluggable |
| Safety data | Protection class IEC/EN | II, reinforced insulation |
| | Protection class UL | II, reinforced insulation |
| | Degree of protection IEC/EN | IP66/67 |
| | Degree of protection NEMA/UL | NEMA 4X |
| | Enclosure | UL Enclosure Type 4X |
| | EMC | CE according to 2014/30/EU |
| | Low voltage directive | CE according to 2014/35/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 | 2.5 kV |
| | Pollution degree | 4 |
| | Ambient humidity | Max. 100% RH |
| | Ambient temperature | -30...50°C [-22...122°F] |
| | Ambient temperature note | -40...50°C for actuator with integrated heating |
| | Storage temperature | -40...80°C [-40...176°F] |

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| Safety data | Servicing | maintenance-free |
| Weight | Weight | 3.4 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.
- Caution: Power supply voltage!
- Only authorised specialists may carry out installation. All applicable legal or institutional installation regulations must be complied during installation.
- Junction boxes must at least correspond with enclosure IP degree of protection!
- The cover of the protective housing may be opened for adjustment and servicing. When it is closed afterwards, the housing must seal tight (see installation instructions).
- 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 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.
- The device is not designed for applications where chemical influences (gases, fluids) are present or for utilisation in corrosive environments in general.
- The actuator may not be used in plenary applications (e.g. suspended ceilings or raised floors).
- The materials used may be subject to external influences (temperature, pressure, construction fastening, effect of chemical substances, etc.), which cannot be simulated in laboratory tests or field trials. In case of doubt, we definitely recommend that you carry out a test. This information does not imply any legal entitlement. Belimo will not be held liable and will provide no warranty.
- If cables which are not authorised for UL (NEMA) Type 4X applications are used, then flexible metallic cable conduits or suitable threaded cable conduits of equal value are to be used.
- When used under high UV loads, e.g. extreme sunlight, the use of flexible metallic or equivalent cable conduits is recommended.

Product features

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| Fields of application | The actuator is particularly suitable for utilisation in outdoor applications and is protected against the following weather conditions: - UV radiation - Rain / Snow - Dirt / Dust - Air humidity - Alternating climate / frequent and severe temperature fluctuations (Recommendation: use the actuator with integrated factory-installed heating which can be ordered separately to prevent internal condensation) |
| Simple direct mounting | Simple direct mounting on the damper shaft with a universal shaft clamp, supplied with an anti-rotation device to prevent the actuator from rotating. |
| Manual override | Manual override with push-button possible (the gear train is disengaged for as long as the button is pressed or remains locked). The housing cover must be removed for manual override. |
| Adjustable angle of rotation | Adjustable angle of rotation with mechanical end stops. Standard setting 0...90°. The housing cover must be removed to set the angle of rotation. |
| High functional reliability | The actuator is overload protected, requires no limit switches and automatically stops when the end stop is reached. |

Accessories

| Electrical accessories | Description | Type |
|------------------------|--|-----------|
| | Auxiliary switch 2 x SPDT add-on, grey | S2A GR |
| | Feedback potentiometer 140 Ω add-on | P140A |
| | Feedback potentiometer 200 Ω add-on | P200A |
| | Feedback potentiometer 500 Ω add-on | P500A |
| | Feedback potentiometer 1 kΩ add-on | P1000A |
| | Feedback potentiometer 2.8 kΩ add-on | P2800A |
| | Feedback potentiometer 5 kΩ add-on | P5000A |
| | Feedback potentiometer 10 kΩ add-on | P10000A |
| Mechanical accessories | Description | Type |
| | Cable gland for cable diameter $\varnothing 4 \dots 10$ mm | Z-KB-PG11 |
| Options ex works only | Description | Type |
| | Heater, with adjustable thermostat | HT230-MG |
| | Heater, with mechanical humidistat | HH230-MG |

Electrical installation

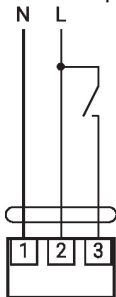


Caution: Power supply voltage!

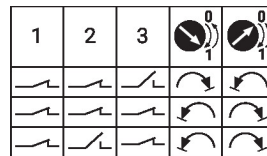
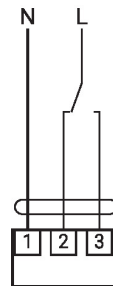
Parallel connection of other actuators possible. Observe the performance data.

Wiring diagrams

AC 230 V, open/close

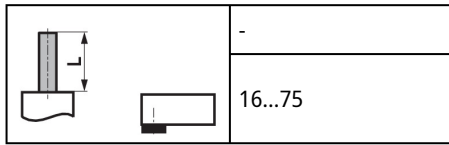


AC 230 V, open/close (2-wire)



Dimensions

Spindle length



Clamping range damper shaft

