

RobustLine damper actuator for adjusting dampers in industrial plants and in technical building installations

- Air damper size up to approx. 4 m²
- Torque motor 20 Nm
- Nominal voltage AC/DC 24 V
- Control Open-close, 3-point
- with integrated auxiliary switch
- Optimum protection against corrosion and chemical influences, UV radiation, damp and condensation


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 19.2...28.8 V	
	Power consumption in operation	2 W	
	Power consumption in rest position	0.2 W	
	Power consumption for wire sizing	4 VA	
	Auxiliary switch	1 x SPDT, 0...100%	
	Switching capacity auxiliary switch	1 mA...3 (0.5 inductive) A, AC 250 V	
	Connection supply / control	Cable 1 m, 3 x 0.75 mm ² (halogen-free)	
	Connection auxiliary switch	Cable 1 m, 3 x 0.75 mm ² (halogen-free)	
	Parallel operation	Yes (note the performance data)	
	Functional data	Torque motor	20 Nm
		Direction of motion motor	selectable with switch 0 (ccw rotation) / 1 (cw rotation)
Manual override		with push-button, can be locked	
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 spindle clamp 14...20 mm	
Position indication		Mechanically, pluggable	
Safety		Protection class IEC/EN	III Safety Extra-Low Voltage (SELV)
	Protection class auxiliary switch IEC/EN	II reinforced insulation	
	Degree of protection IEC/EN	IP66/67	
	Degree of protection NEMA/UL	NEMA 4, UL Enclosure Type 4	
	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	
	Certification UL	cULus according to UL60730-1A, UL60730-2-14 and CAN/CSA E60730-1:02	
	Mode of operation	Type 1.B	
	Rated impulse voltage supply / control	0.8 kV	
	Rated impulse voltage auxiliary switch	2.5 kV	
	Control pollution degree	4	
	Ambient temperature	-30...50 °C	
	Non-operating temperature	-40...80 °C	
	Ambient humidity	100% r.H.	
	Maintenance	Maintenance-free	
	Weight	Weight	2.1 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.
- 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!

Safety notes

- 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.
- The cables must not be removed from the device installed in the interior.
- To calculate the torque required, the specifications supplied by the damper manufacturers concerning the cross-section, the design, the installation site 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 information on chemical resistance refers to laboratory tests with raw materials and finished products and to trials in the field in the areas of application indicated.
- The materials used may be subjected to external influences (temperature, pressure, constructional fixture, effect of chemical substances, etc.), which cannot be simulated in laboratory tests or field trials.
- The information regarding areas of application and resistance can therefore only serve as a guideline. 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. The chemical or mechanical resistance of the materials used is not alone sufficient for judging the suitability of a product. Regulations pertaining to combustible liquids such as solvents etc. must be taken into account with special reference to explosion protection.
- When used under high UV loads, e.g. extreme sunlight, the use of flexible metallic or equivalent cable conduits is recommended.

Product features

Fields of application	The actuator is particularly suitable for utilisation in outdoor applications and is protected against the following weather conditions: <ul style="list-style-type: none"> - Wood drying - Animal breeding - Food processing - Agricultural - Swimming baths / bathrooms - Rooftop ventilation plant rooms - General outdoor applications - Changing atmosphere - Laboratories
Resistances	Noxious gas test EN 60068-2-60 (Fraunhofer Institut ICT / DE) Salt fog spray test EN 60068-2-52 (Fraunhofer Institut ICT / DE) Ammoniac test DIN 50916-2 (Fraunhofer Institut ICT / DE) Climate test IEC60068-2-30 (Trikon Solutions AG / CH) Disinfectant (animals) (Trikon Solutions AG / CH) UV Test (Solar radiation at ground level) EN 60068-2-5, EN 60068-2-63 (Quinel / Zug CH)
Used materials	Actuator housing polypropylene (PP) Cable glands / hollow shaft polyamide (PA) Connecting cable FRNC Clamp / screws in general Steel 1.4404 Seals EPDM Form fit insert aluminium anodised
Simple direct mounting	Simple direct mounting on the damper spindle with an universal spindle clamp, supplied with an anti-rotation device to prevent the actuator from rotating.
Manual override	Manual override with push-button possible (the gear is disengaged for as long as the button is pressed or remains locked).
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.

Product features

Flexible signalization With adjustable auxiliary switch (0 ... 100%)
The housing cover must be removed to set the auxiliary switch.

Electrical installation

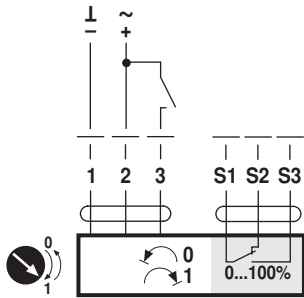


Notes

- Connection via safety isolating transformer.
- Parallel connection of other actuators possible. Observe the performance data.

Wiring diagrams

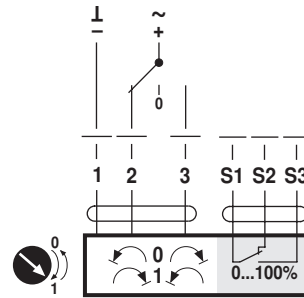
AC/DC 24 V, open-close



Cable colours:

- 1 = black
- 2 = red
- 3 = white
- S1 = violet
- S2 = red
- S3 = white

AC/DC 24 V, 3-point

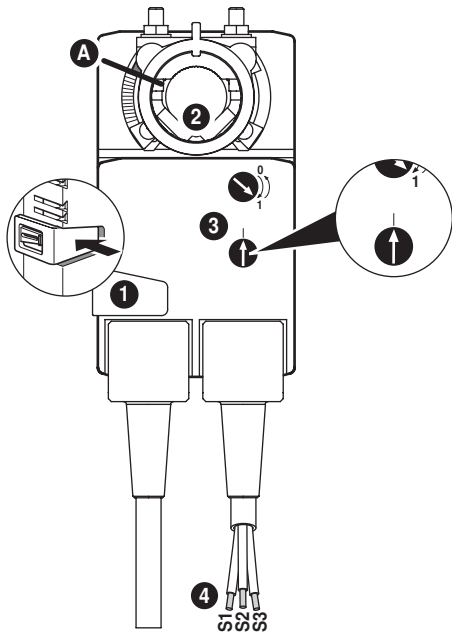


Cable colours:

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- 3 = white
- S1 = violet
- S2 = red
- S3 = white

Operating controls and indicators

Auxiliary switch settings



Note: Perform settings on the actuator only in deenergised state.

1 Gear disengagement

Holding button pressed down: Gear is disengaged.
Manual override is possible.

2 Spindle clamp

Turn until edge line **A** displays the desired switching position of the actuator and release button **1**.

3 Auxiliary switch

Turn rotary knob until the arrow points to the vertical line.

4 Cable

Connect continuity tester to S1 + S2 or to S1 + S3.

If the auxiliary switch should switch in the opposite direction, rotate the auxiliary switch by 180°.

Dimensions [mm]

Spindle length

	-
	20...58

Clamping range

14...20	10...14	14...20

Dimensional drawings

