

Modulating damper actuator for adjusting dampers in technical building installations

- Air damper size up to approx. 8 m²
- Torque motor 40 Nm
- Nominal voltage AC/DC 24 V
- Control modulating 2...10 V
- Position feedback 2...10 V
- 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)



Picture may differ from product

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	4.5 W
	Power consumption in rest position	2 W
	Power consumption for wire sizing	6.5 VA
	Connection supply / control	Terminals 4 mm ² (cable Ø4...10 mm, 4-wire)
	Parallel operation	Yes (note the performance data)
Functional data		
	Torque motor	40 Nm
	Operating range Y	2...10 V
	Input impedance	100 kΩ
	Position feedback U	2...10 V
	Position feedback U note	Max. 1 mA
	Position accuracy	±5%
	Direction of motion motor	selectable with switch 0/1
	Direction of motion note	Y = 0 V: At switch position 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	III, Safety Extra-Low Voltage (SELV)
	Power source UL	Class 2 Supply
	Degree of protection IEC/EN	IP66/67
	Degree of protection NEMA/UL	NEMA 4X
	Housing	UL Enclosure Type 4X
	EMC	CE according to 2014/30/EU
	Low voltage directive	CE according to 2006/95/EC
	Certification IEC/EN	IEC/EN 60730-1 and IEC/EN 60730-2-14

Safety data	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	4	
Ambient humidity	Max. 100% RH	
Ambient temperature	-30...50°C [-22...122°F]	
Ambient temperature note	-40...50°C [104...122°F] for actuator with integrated heating	
Storage temperature	-40...80°C [-40...176°F]	
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.
- Only authorised specialists may carry out installation. All applicable legal or institutional installation regulations must be complied with during installation.
- Junction boxes must at least correspond with housing 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 and the design, as well as 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

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)
Operating mode	The actuator is controlled with a control signal Y (note the operating range) and drives to the position defined by the control signal. Measuring voltage U serves for the electrical display of the damper position 0...100% and as control signal for other actuators.
Simple direct mounting	Simple direct mounting on the damper shaft with a universal shaft clamp, supplied with an anti-rotation mechanism 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 2x SPDT add-on, grey		S2A GR
Feedback potentiometer 140 Ω add-on		P140A
Feedback potentiometer 1 kΩ add-on		P1000A
Feedback potentiometer 10 kΩ add-on		P10000A
Adapter for auxiliary switch and feedback potentiometer, Multipack 20 pcs.		Z-SPA
Signal converter voltage/current 100 kΩ 4...20 mA, Supply AC/DC 24 V		Z-UIC
Positioner for wall mounting		SGA24
Positioner for built-in mounting		SGE24
Positioner for front-panel mounting		SGF24
Positioner for wall mounting		CRP24-B1
Mechanical accessories	Description	Type
Cable gland for cable diameter ø4...10 mm		Z-KB-PG11
Options ex works only	Description	Type
Heater, with adjustable thermostat		HT24-MG
Heater, with mechanical humidistat		HH24-MG

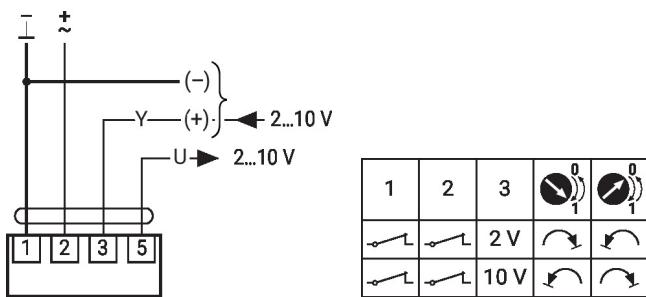
Electrical installation



Supply from isolating transformer.
 Parallel connection of other actuators possible. Observe the performance data.

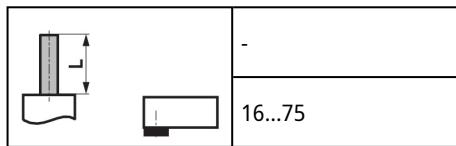
Electrical installation

AC/DC 24 V, modulating



Dimensions

Spindle length



Clamping range damper shaft

