

- Torque motor 18 in-lb [2 Nm]
- Nominal voltage AC/DC 24 V
- Control On/Off, Floating point



5-year warranty



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	0.5 W
	Power consumption in rest position	0.2 W
	Transformer sizing	1 VA
	Parallel operation	Yes (note the performance data)
	Electrical Connection	18 GA plenum cable, 1 m
	Overload Protection	electronic throughout full rotation
Functional data	Torque motor	18 in-lb [2 Nm]
	Pipe diameter	4" [DN 100]
	Position feedback U note	No Feedback
	Manual override	disengage with magnet
	Angle of rotation	70°
	Running Time (Motor)	58 s / 70°
	Noise level, motor	35 dB(A)
	Position indication	Mechanical, pluggable (with integrated magnet for gear train disengagement)
	Airtightness	Class 3 (DIN EN 1751)
	Resistance coefficient ζ	0.48 (in open position)
	Static differential pressure	max. 1000 Pa via the damper (4" w.g)
Safety data	Flame class	Damper blade UL 94 HB Actuator UL 94 V-0
	Fire behaviour group	Damper blade RF3 (CH) Actuator RF2 (CH)
	Fire load	4.2 MJ
	Protection class IEC/EN	III, Protective Extra-Low Voltage (PELV)
	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
	Agency Listing	cULus acc. to UL60730-1A/-2-14, CAN/CSA E60730-1:02, CE acc. to 2014/30/EU
	Quality Standard	ISO 9001
	UL Approval	cURus according to UL60730-1A, UL60730-2-14 and CAN/CSA E60730-1

Safety data	UL 2043 Compliant	Suitable for use in air plenums per Section 300.22(C) of the NEC and Section 602 of the IMC
	Type of action	Type 1
	Pollution degree	3
	Ambient humidity	Max. 95% RH, non-condensing
	Ambient temperature	-22...122°F [-30...50°C]
	Storage temperature	-40...176°F [-40...80°C]
	Servicing	maintenance-free
Weight	Weight	0.49 lb [0.22 kg]
Materials	Housing material	UL94-5VA

Footnotes †Rated Impulse Voltage 800V, Type action 1, Control Pollution Degree 3.

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.
- The device must not be used for safety applications, e.g. fire protection.
- As a rule, the device is resistant to a multitude of organic solvents and alkaline agents. Unusual ambient conditions will, however, require special clarifications. In particular, the damper may not be used in environments where it may be exposed to chemically aggressive substances, e.g. laboratory exhaust air or fume hood exhaust air (laboratory exhaust systems / fume hoods).
- Only authorized specialists may carry out installation. All applicable legal or institutional installation regulations must be complied with during installation.
- The CM..D.. (Art. 70949-00001) installation instructions must be observed in order to ensure smooth operation.
- Adherence to the pipe geometry specified in accordance with DIN EN 1506 must be ensured (no damage).
- 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 device contains electrical and electronic components and must not be disposed of as household refuse. All locally valid regulations and requirements must be observed.
- †Rated Impulse Voltage 800V, Type action 1, Control Pollution Degree 3.

Product features

Fields of application

- Airflow through the building shell
- Air distribution / comfort ventilation
- Air outlets
- Zone controls
- Devices with outside air: Facade devices / fan coils / fan-powered boxes / cabin units etc.
- Exhaust air systems, e.g. sanitary facilities

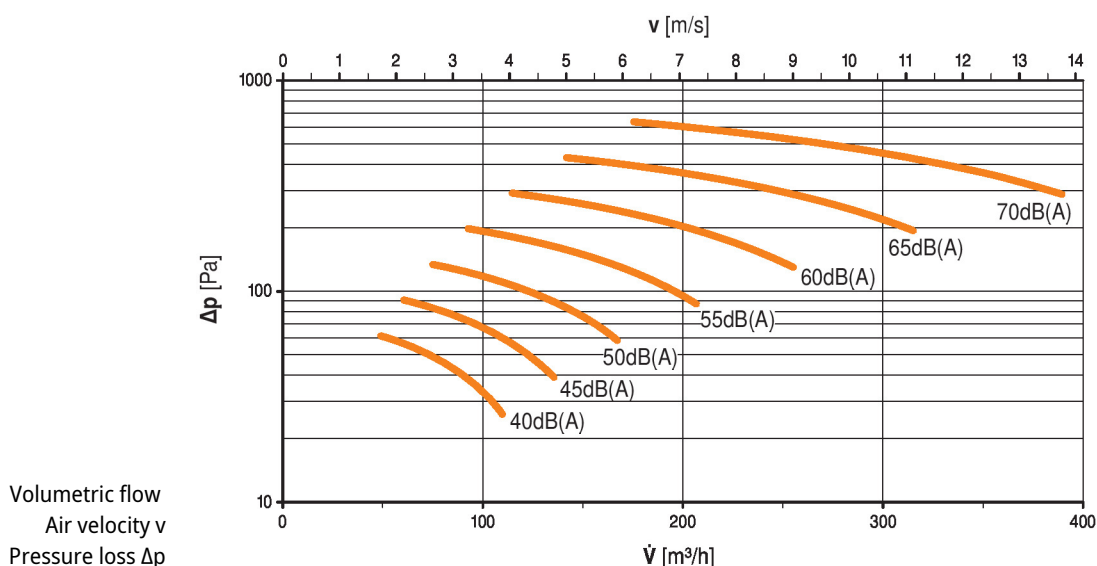
Manual override Manual override with magnet possible (gear disengagement as long as the magnet adheres to the magnet symbol). The Z-MA magnet for the gear disengagement is enclosed.

High functional reliability The actuator is overload protected, requires no limit switches and automatically stops when the end stop is reached.

Flow noise The noise caused by the flow of air in the pipe section with a built-in air damper and passed along inside it. Below the sound power levels listed are A-evaluated in the duct as a function of dimension, volumetric flow and pressure loss.



Sound power level LWA Sound power level with A-evaluation, including correction of the outlet reflection LWA



Accessories

Mechanical accessories

Description

Type

Gear train disengagement magnet, Multipack 20 pcs.

Z-MA

Electrical installation



Supply from isolating transformer.

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



Warning! Live electrical components!

During installation, testing, servicing and troubleshooting of this product, it may be necessary to work with live electrical components. Have a qualified licensed electrician or other individual who has been properly trained in handling live electrical components perform these tasks. Failure to follow all electrical safety precautions when exposed to live electrical components could result in death or serious injury.



Meets cULus requirements without the need of an electrical ground connection.



Provide overload protection and disconnect as required.



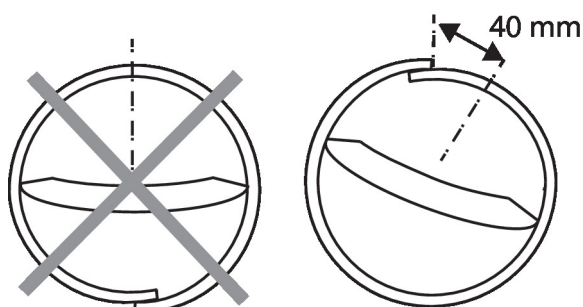
Actuators may also be powered by DC 24 V.



Actuators may be connected in parallel if not mechanically linked. Power consumption and input impedance must be observed.

Installation notes
Pipelines

- Belimo recommends the use of round folded spiral-seam pipelines (spiro pipes) with 0.5 mm metal gauge (in accordance with DIN EN 1506) and with the fold on the outside of the pipe. Folded spiral-seam pipes are usually rounder than longitudinally-welded pipes. Leakages can be reduced as a result. The interior side of the folded spiral-seam pipes is smooth. The welding seam can inhibit the function of the damper blade with longitudinally welded pipes. If longitudinally welded pipes nevertheless need to be used, Belimo cannot guarantee the proper functioning of the actuator.
- No protruding longitudinal fold facing inward permitted
- Use only galvanised sheet steel or chrome steel. Installation in plastic pipelines is not recommended.
- Do not place the fastening holes of the actuator across from the welding seam. The damper blade could become damaged after a short time. The fastening holes should be drilled approximately 40 mm away from the welding seam. This will reduce the damper noise and damage to the damper blade to a minimum.


Dimensions
