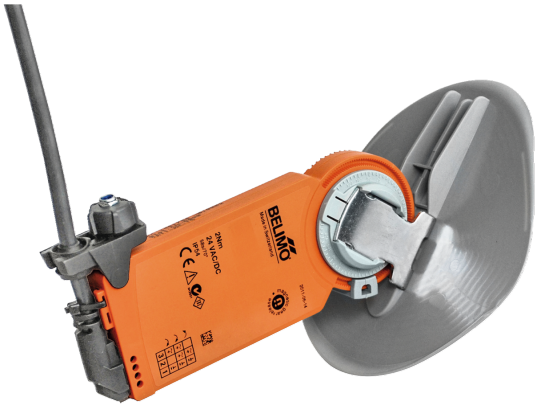
Compact actuator with damper blade, for the control or isolation of volumetric airflows in air-conditioning plants, particularly where space is limited

- **Round duct diameter DN 125**
- **Torque motor 2 Nm**
- **Nominal voltage AC/DC 24 V**
- **Control Open/close, 3-point**
- **Suitable for round ducts in accordance with DIN EN 1506**



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	0.5 W
	Power consumption in rest position	0.2 W
	Power consumption for wire sizing	1 VA
	Connection supply / control	Cable 1 m, 3x 0.75 mm²
	Parallel operation	Yes (note the performance data)
Functional data	Torque motor	2 Nm
	Round duct diameter	DN 125
	Manual override	with magnet
	Angle of rotation	70°
	Running time motor	58 s / 70°
	Sound power level, motor	35 dB(A)
	Airtightness	Class 2 (DIN EN 1751)
	Resistance coefficient ζ	0.3 (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	4.6 MJ
	Protection class IEC/EN	III, Safety Extra-Low Voltage (SELV)
	Power source UL	Class 2 Supply
	Degree of protection IEC/EN	IP54
	Degree of protection NEMA/UL	NEMA 2
	Housing	UL Enclosure Type 2
	EMC	CE according to 2014/30/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

Technical data

Safety data	Rated impulse voltage supply / control	0.8 kV
	Pollution degree	3
	Ambient humidity	Max. 95% RH, non-condensing
	Ambient temperature	-30...50°C [-22...122°F]
	Storage temperature	-40...80°C [-40...176°F]
	Servicing	maintenance-free
Weight	Weight	0.30 kg
	Packaging quantity	Multipack 20 pcs.

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.
- 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 authorised 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 round duct 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.

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 train disengagement as long as the magnet adheres to the magnet symbol). The Z-MA magnet for the gear train disengagement is enclosed.

Adjustable angle of rotation

Adjustable angle of rotation with mechanical end stops.

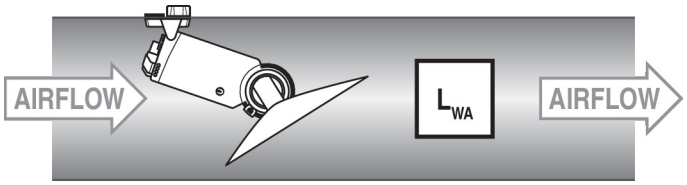
High functional reliability

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

Product features

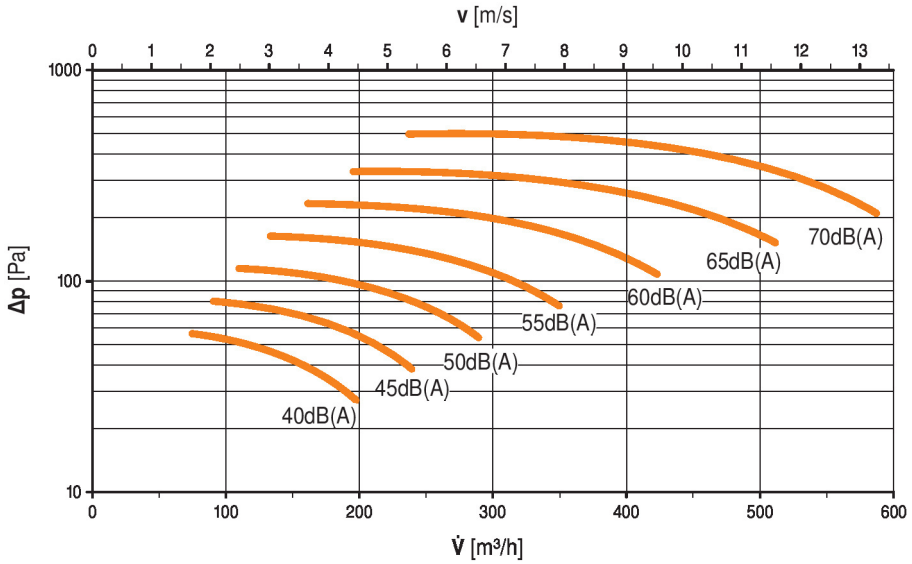
Flow noise

The noise caused by the airflow in the round duct with a built-in air damper and passed through it. Below, the sound power levels listed are A-evaluated in the round 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



Volumetric flow
Air velocity v
Pressure loss Δp

Accessories

Mechanical accessories

Description	Type
Gear train disengagement magnet, Multipack 20 pcs.	Z-MA

Electrical installation

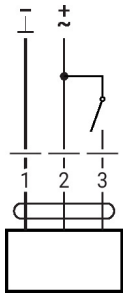
Supply from isolating transformer.

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

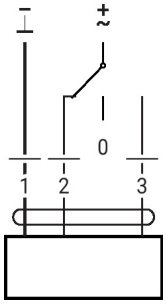
Wire colours:
1 = black
2 = red
3 = white

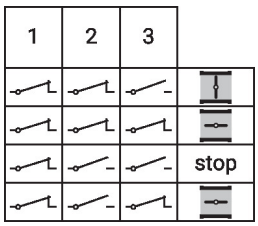
Electrical installation

AC/DC 24 V, open/close



AC/DC 24 V, 3-point





Installation notes

Round ducts

• Belimo recommends the use of spiral ducts with 0.5 mm metal gauge (in accordance with DIN EN 1506) and with the fold on the outside of the round duct. Spiral ducts are usually rounder than longitudinally folded round ducts. Leakages can be reduced as a result. The interior side of the spiral ducts is smooth. The welded or folded seam can inhibit the function of the damper blade with longitudinally welded or folded round ducts. If such round ducts are nevertheless 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 round ducts is not recommended.

• Do not place the fastening holes of the actuator across from the longitudinal fold. The damper blade could become damaged after a short time. The fastening holes should be drilled approximately 40 mm away from the longitudinal fold. This will reduce the damper noise and damage to the damper blade to a minimum.