BELIMO

Technical data sheet BF24-RE

Spring-return actuator for fire and smoke dampers 90° in ventilation and air-conditioning systems

- Torque 15 Nm / 15 Nm
- Nominal voltage AC/DC 24 V
- Control Open/close
- Mechanical interface Universal shaft clamp 3/4"



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 21.6...28.8 V
	Power consumption in operation	8 W
	Power consumption in rest position	2 W
	Power consumption for wire sizing	11 VA
	Power consumption for wire sizing note	Imax 8.3 A @ 5 ms
	Auxiliary switch	2 x SPDT
	Switching capacity auxiliary switch	Contact gold-plated silver: 1 mA...6 A (3 A inductive), DC 5 V...AC 250 V (II, reinforced insulation)
	Switching points auxiliary switch	<10° (fix) / >30°...90° (adjustable)
	Connection supply / control	Cable 1 m, 2 x 0.75 mm^2 (halogen-free)
	Connection auxiliary switch	Cable 1 m, 6 x 0.75 mm^2 (halogen-free)
Functional data	Torque motor	15 Nm
	Torque fail-safe	15 Nm
	Direction of motion motor	selectable by mounting L/R
	Manual override	with position stop
	Angle of rotation	Max. 95°
	Angle of rotation note	incl. 5° initial spring tension
	Running time motor	<75 s / 90°
	Running time fail-safe	16 s @ 20°C
	Sound power level, motor	45 dB(A)
	Sound power level, fail-safe	63 dB(A)
	Mechanical interface	Universal shaft clamp 3/4"
	Position indication	Mechanical, through shaft clamp
	Service life	Min. 20'000 safety positions
Safety data	Protection class IEC/EN	III, Safety Extra-Low Voltage (SELV)
	Degree of protection IEC/EN	IP54 IP protection in all mounting positions
	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
	Mode of operation	Type 1.AA.B
	Pollution degree	3
	Ambient humidity	Max. 95% RH, non-condensing
	Ambient temperature normal operation	-30...50°C
	Storage temperature	-40...80°C [-40...176°F]
	Servicing	maintenance-free

Weight	Weight	2.9 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.
- The actuator is adapted and installed on the fire and smoke damper by the damper manufacturer. For this reason, the actuator is only supplied directly to safety damper manufacturers. The manufacturer then bears full responsibility for the proper functioning of the damper.
- 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 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

Mode of operation The actuator moves the damper to the operating position at the same time as tensioning the return spring. The damper is turned back to the safety position by spring energy when the supply voltage is interrupted.

Manual override Without power supply, the actuator can be operated manually and fixed in any required position. It can be unlocked manually or automatically by applying the supply voltage.

Signalling Two microswitches with fixed settings are installed in the actuator for indicating the damper end positions. The electrical contacts of these microswitches are equipped with a gold/silver coating that permits integration both in circuits with low currents (mA range) and in ones with larger-sized currents (A range) in accordance with the specifications in the data sheet. It should be noted with this application however that the contacts can no longer be used in the milliampere range after larger currents have been applied to them, even if this has taken place only once.

The position of the damper blade can be read off on a mechanical position indication.

Delivery notes Incl. Hand crank, Pointer, Anti-rotation bracket

Accessories

Electrical accessories

Description	Type
Auxiliary switch 2 x SPDT	SN2-C7
Thermoelectric tripping device with control key, Duct inside temperature 72°C (colour black), Duct outside temperature 72°C	BAT72
Thermoelectric tripping device with control key, Duct inside temperature 72°C (colour black), Duct outside temperature 72°C	BAT72/9
Cable set with plug 0.5 m for communication and power supply unit	ZST-BS

Mechanical accessories

Description	Type
Hand crank 40 mm	ZK1-B
Hand crank 70 mm	ZK2-B
Protective bag with wire, Multipack 100 pcs.	ZSD-B.1

Electrical installation

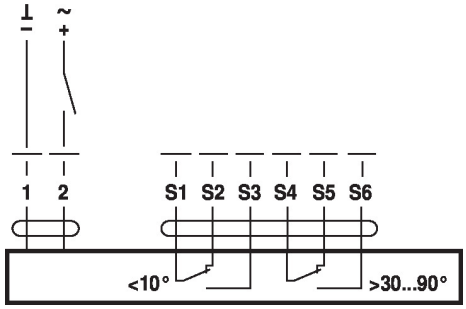


Supply from isolating transformer.

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

Wiring diagrams

AC/DC 24 V, open/close



Cable colours:

1 = black
2 = white
S1 = white
S2 = white
S3 = white
S4 = white
S5 = white
S6 = white

Dimensions

