Fire and smoke spring return actuator BLF24-SR, modulating

- For modulating control of fire protection dampers in HVAC systems.
- Torque: motor 4 Nm, spring return 4 Nm [1)]
- Running time: motor 150s, spring return ~ 20 s
- Nominal voltage AC/DC 24 V
- DC 2..10 V modulating control

Technical data

Electric data	Nominal voltage	AC 24 V / 50/60 Hz, DC24 V
	Power supply range	AC 19.2 ... 28.8 V, DC 21.6 ... 28.8 V
	Power consumption	2.5 W @ running / 1 W @ holding
	For wire sizing	5 VA (Imax 5.8A @ 5 ms)
	Connection cable Auxilary Switch	1 m, 4 x 0.75 mm² 1 m, 3 x 0.75 mm²
Function data	Torque - Motor - Spring return	min. 4 Nm [1)] min. 4 Nm [1)]
	Control signal Y	DC 0..10 V @ input impedence 100K•
	Operation range	DC 2..10 V
	Measuring voltage U	DC 2..10 V max. 0.5 mA
	Direction of rotation	motor: selectable by L/R switch spring return: selectable by L/R installation
	Angle of rotation	max. 95°
	Auxilary switch	1 SPDT, 1mA...3(0.5)A, 250V ⧈ fixed at 5°
	Running time - Motor - Spring return	150 s ~ 20 s
	Sould power level	Motor max. 45 dB (A), Spring approx. 62dB (A)
	Position indication	mechanical
	Service life	> 60,000 cycles
Working conditions	Protection class	III (safety extra-low voltage)
	Degree of protection	IP54
	Agency listed	CE
	Ambient temperature - Normal duty	...-30 ... +50°C
	- Safety duty	24 hr @ 75°C
	Non-operation temperature	...-40 ... +80°C
	Humidity test	95% RH, non condensing
	Maintenance	maintenance free
Dimensions / weight	Dimensions (l x b x h)	185 x 98 x 57.6 mm
	Shaft diameter	12 x 12 mm (8/10 mm with adpator)
	Weight	1630 g

Safety notes

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- **The enclosure of the actuator equipment may only be opened by the manufacturer. It contains no component which the user can replace or repair.**
- **Caution must be used when replacing failed motors with new Belimo actuators. Many old motors did not have internal springs and depended on external springs on the side of the damper or wrapped around the damper shaft to close the damper.**

[1)] **Torque requirements:** When caculating the torque required to operate dampers, it is essential to take into account all the data supplied by the damper manufacturer concerning cross sectional area, design, mounting and air flow condition

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Product features

Mode of Operation The actuator moves the damper to its normal working position while tension the return spring at the same time. If the power supply is interrupted, the energy stored in the spring moves the damper back to its safe position.

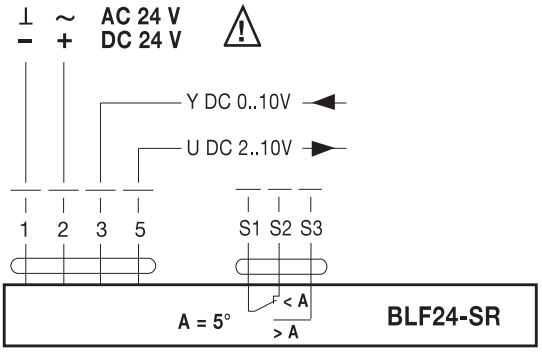
Square shaft mounting Mounting the actuator on the damper spindle through a sqaure shaft adaptor. The square shaft adaptor maintaining a perfect connection. An anti-rotation device has to be installed by the fire damper manufacturer, or order an anti-rotation strip device LF-P separately.

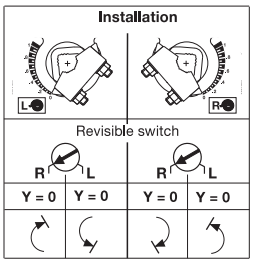
Internal Aux. switch The actuator has one fixed internal auxiliary switches, which allow angle of rotation of 5° to be signalled.

High function reliability The actuator is overload-proof, needs no limit switches, halts automatically at the end stops.

Wiring diagram

Wiring diagram





Notes:

- Connection via safety isolating transformer!
- Parallel connection of several actuator is possible. Power consumption must be observed.

Dimensions

measurement [mm]