

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

- Torque 18/12 Nm
- Nominal voltage AC 230 V
- Control: Open-close
- Damper rotation: 12 mm form-fit
- SiHF connecting cables



Technical Data

Electrical data	Nominal voltage	AC 230 V, 50/60 Hz		
	Nominal voltage range	AC 198 ... 264 V		
	Power consumption	Motoring	8 W @ nominal torque	
		Holding	3 W	
		For wire sizing	12.5 VA / I _{max} . 500 mA @ 5 ms	
	Auxiliary switch	2 x SPST		
	Contact rating (contacts gold plate on silver)	1 mA ... 6 A (3 A), DC 5 V ... AC 250 V \square		
	Switching points	5°-↺ / 80°-↺		
	Connecting	Motor	SiHF cable, 1.2 m, 2 x 0.75 mm ² (silicone, halogen-free)	
		Auxiliary switch	SiHF cable, 1.2 m, 4 x 0.75 mm ² (silicone, halogen-free)	
Functional data	Torque	Motor	Min. 18 Nm	
		Spring return	Min. 12 Nm	
	Direction of rotation	Selected by mounting L / R		
	Angle of rotation	Max. 95°-↺ (incl. 5°-↺ spring pretensioning)		
	Running time	Motor	120 s	
		Spring return	16 s (t _{amb} = 20°C)	
	Sound power level	Motor	Max. 45 dB (A)	
		Spring return	≈62 dB (A)	
	Damper rotation	Form-fit 12 mm (10 mm with adapter supplied)		
	Position indication	Mechanical with pointer		
Service life	Min. 60'000 safety positions			
Safety	Protection class	II totally insulated \square		
	Degree of protection	IP54 in all mounting positions		
	EMC	CE according to 2014/30/EU		
	Low voltage directive	CE according to 2014/35/EU		
	Mode of operation	Type 1.AA.B (EN60730-1)		
	Rated impulse voltage	4 kV (EN60730-1)		
	Control pollution degree	3 (EN60730-1)		
	Ambient temperature	Normal duty	-30 ... +50°C	
		Safety duty	The safety position will be attained up to max. 75°C when initiated by a thermal trip	
	Non-operating temperature	-40 ... +80°C		
Ambient humidity	95% r.H., non-condensating (EN 60730-1)			
Maintenance	Maintenance-free			
Dimensions / weight	Dimensions	See «Dimensions» on page 3		
	Weight	Approx. 3.1 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 two switches integrated in the actuator are to be operated either on power supply voltage or at safety extra-low voltage. The combination power supply voltage/ safety extra-low voltage is not permitted.
- 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 its normal working position while tensioning 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 safety position.
Signalling	Two microswitches with fixed settings are installed in the actuator for indicating the damper end positions. The position of the damper blade can be read off on a mechanical position indicator.
Manual operation	Without power supply, the damper can be operated manually and fixed in any required position. Release of the locking mechanism can be achieved manually or automatically by applying the supply voltage.
Standards / Regulations	The design of the actuator is based on the specific requirements from the European standards: <ul style="list-style-type: none"> - EN 15650 Ventilation for buildings – Fire dampers - EN 1366-2 Fire resistance tests on service installations (Part 2: Fire dampers) - EN 13501-3 Fire classification of construction products and building elements (Part 3: Classification using data from fire resistance tests on products and elements used in building service installations: fire resisting ducts and fire dampers)
Recommendation for application	Regular operational checks (open-close control of the fire damper) enhance the safety of people, animals, property and the environment. Unless other requirements are stipulated – e. g. in the damper manufacturer's operating instructions – Belimo recommends the performance of monthly operational checks. Fire damper actuators from Belimo are designed in accordance with service life specifications contained in the technical data sheet for regular operational checks. Notes for regular operational checks can be found in the European Product Standard for Fire Dampers (EN 15650) under «Maintenance information».

Accessories

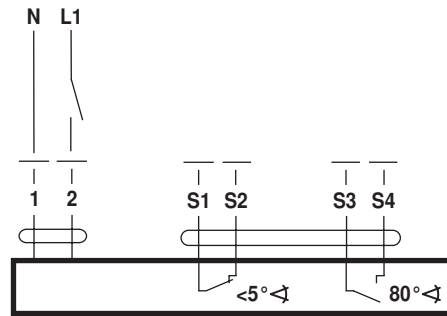
	Description	Type
Electrical accessories	Auxiliary switch, 1 x SPDT 6 A (2.5 A), AC 250 V	SN1
	Auxiliary switch, 2 x SPDT 6 A (2.5 A), AC 250 V	SN2
Mechanical accessories	Adapter with clamp for round spindle 10...20 mm / square 10...16 mm for BF	ZK-BF
	Adapter for form fit 12 mm with round spindle 18 mm, L = 33 mm for BF	ZA18-BF
	Adapter 12/8 mm for BF.. and BLF..	ZA8-BF
	Adapter 12/11 mm for BF.. and BLF..	ZA11-BF
	Bracket for auxiliary switch (SN2-C7) for BF, BR	ZSN-BF

Electrical installation

Wiring diagram

Note

- Caution: Power supply voltage!
- Parallel connection of several actuators possible. Power consumption must be observed!



Dimensions [mm]

Dimensional drawings

