

Spring-return actuator for fire and smoke dampers 180° in ventilation and air-conditioning systems.

- Torque 11/8.5 Nm
- Nominal voltage AC 230 V
- Control: Open/close
- Damper rotation: 10 mm form-fit



Technical Data

Electrical data	Nominal voltage	AC 230 V, 50/60 Hz	
	Nominal voltage range	AC 198 ... 264 V	
	Power consumption	8 W @ nominal torque / 3 W at rest	
	For wire sizing	12.5 VA / I _{max} . 500 mA @ 5 ms	
Functional data	Auxiliary switch	2 x 1 SPDT	
	Contact rating (contacts gold plate on silver)	1 mA ... 6 A (3 A), DC 5 V ... AC 250 V <input type="checkbox"/>	
	Switching points	25° / 145° (angles of rotation of damper: 5° / 80°)	
	Connecting cable motor	1 m, 2 x 0.75 mm ² (halogen-free)	
	auxiliary switch	1 m, 6 x 0.75 mm ² (halogen-free)	
	Torque motor	Min. 11 Nm	
	spring-return	Min. 8.5 Nm	
	Direction of rotation	Selected by mounting L/R	
	Angle of rotation	Max. 180°	
	Running time motor	140 s	
spring-return	~20 s (t _{amb} = 20°C)		
Sound power level	motor	Max. 45 dB (A)	
	spring-return	~62 dB (A)	
Damper rotation	Form-fit 10 mm		
Position indication	Mechanical with pointer		
Service life	Min. 50'000 safe positions		
Working conditions	Protection class	II totally insulated <input type="checkbox"/>	
	Degree of protection	IP54 in all mounting positions	
	EMC low-voltage directive	CE according to 89/336/EEC, 92/31/EEC, 93/68/EEC CE according to 73/23/EEC	
	Mode of operation	Type 1.AA.B (according to EN60730-1)	
	Rated impulse voltage	4 kV (according to EN60730-1)	
	Control pollution degree	3 (according to EN60730-1)	
	Ambient temperature range	normal duty	-30 ... +50°C
		safety duty	The safe position will be attained up to max. 75°C when initiated by a thermal trip
	Non-operating temperature	-40 ... +80°C	
	Ambient humidity range	According to EN 60730-1	
Maintenance	Maintenance-free		
Dimensions / weight	Dimensions	See «Dimensions» on page 2	
	Weight	Approx. 3'100 g	

Safety notes



- The actuator is not allowed to be used outside the specified field of application, especially in aircraft or in any other airborne means of transport.
- **Caution: Power supply voltage!**
- The actuator is adapted and mounted to the fire and smoke damper by the damper manufacturer. For this reason, the actuator is only supplied direct 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 electronic and electrical components and may not be disposed of with the household waste. Observe local regulations and valid laws.

Product features

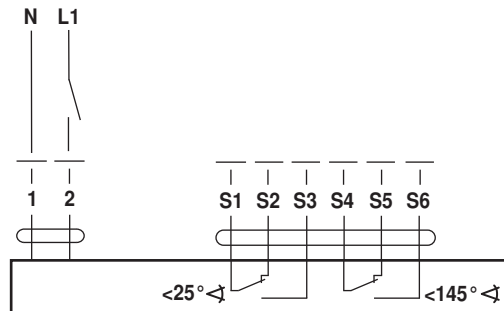
- Mode of operation** The actuator moves the damper to its normal working position while tensioning the return spring at the same time. If the power supply is interrupted, the energy stored in the spring moves the damper back to its safe position.
- Signalling** Two microswitches with fixed settings 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.

Electrical installation

Wiring diagram

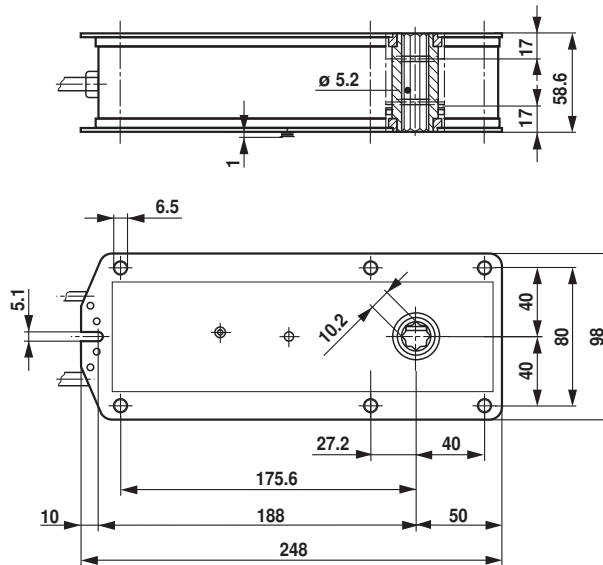
Note

- Caution: Main power supply voltage!
- A device that disconnects the pole conductors (minimum contact gap 3 mm) is required for isolation from the power supply.
- Parallel connection of several actuators possible. Power consumption must be observed!



Dimensions [mm]

Dimensional diagrams



Spring-return actuator, combined with thermo-electric tripping device (72 °C), for fire and smoke dampers 180° in ventilation and air-conditioning systems.

- Torque 11/8.5 Nm
- Nominal voltage AC 230 V
- Control: Open/close
- Damper rotation: 10 mm form-fit



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 1 SPDT		
	Contact rating (contacts gold plate on silver)	1 mA ... 6 A (3 A), DC 5 V ... AC 250 V <input type="checkbox"/>		
	Switching points	25° \swarrow / 145° \swarrow (angles of rotation of damper: 5° \swarrow / 80° \swarrow)		
	Thermal trips	Tf1: duct outside temperature 72 °C Tf2 + Tf3: duct inside temperature 72 °C		
	Connecting cable	motor	1 m, 2 x 0.75 mm ² (halogen-free)	
auxiliary switch		1 m, 6 x 0.75 mm ² (halogen-free)		
Functional data	Torque	motor	Min. 11 Nm	
		spring-return	Min. 8.5 Nm	
	Direction of rotation	Selected by mounting L/R		
	Angle of rotation	Max. 180° \swarrow		
	Running time	motor	140 s	
		spring-return	~20 s (t _{amb} = 20 °C)	
	Sound power level	motor	Max. 45 dB (A)	
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	Damper rotation	Form-fit 10 mm		
	Position indication	Mechanical with pointer		
Service life	Min. 50'000 safe positions			
Working conditions	Protection class	II totally insulated <input type="checkbox"/>		
	Degree of protection	IP54 in all mounting positions		
	EMC low-voltage directive	CE according to 89/336/EEC, 92/31/EEC, 93/68/EEC		
		CE according to 73/23/EEC		
	Mode of operation	Type 1.AA.B (according to EN60730-1)		
	Rated impulse voltage	4 kV (according to EN60730-1)		
	Control pollution degree	3 (according to EN60730-1)		
	Ambient temperature range	normal duty	-30 ... +50 °C	
		safety duty	The safe position will be attained up to max. 75 °C	
	Non-operating temperature	-40 ... +50 °C		
Ambient humidity range	According to EN 60730-1			
Maintenance	Maintenance-free			
Dimensions / weight	Dimensions	See «Dimensions» on page 2		
	Weight	Approx. 3'100 g		

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Product features

Mode of operation

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Thermo-electric tripping device
BAE72B-S

Thermal trip Tf1 operates if the ambient temperature exceeds 72°C. Replaceable thermal trip Tf2/Tf3 operates if the temperature inside the duct exceeds 72°C. Tf1, Tf2 or Tf3 trips cause the power supply to be interrupted permanently so that it cannot be uncanceled.

Note
The function of the thermal trip and the test switch is only warranted if the actuator is connected to the power supply and has reached its operating position.

The LED is lit when
– there is a supply voltage,
– the temperature fuses are OK and
– the test switch is not pressed.

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.

Accessories

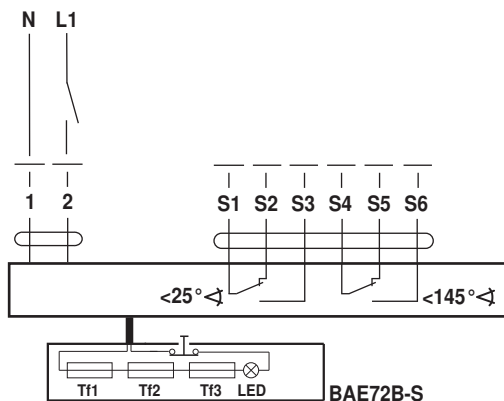
	Description	Type
Electrical accessories	Blanking cover (without canal sensor function)	ZBAE0
	Spare thermoelectric tripping device Duct inside temperature 72°C	ZBAE72
	Spare thermoelectric tripping device Duct inside temperature 95°C, colour green	ZBAE95

Electrical installation

Wiring diagram

Note

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Dimensions [mm]

Dimensional diagrams

