

## Actuator for smoke control dampers 90°

- Torque motor 40 Nm
- Nominal voltage AC/DC 24 V
- Control Open/close
- Mechanical interface Form fit 12x12 mm, continuous hollow shaft



# **Technical data**

## **Electrical data**

Nominal voltage	AC/DC 24 V	
Nominal voltage frequency	50/60 Hz	
Nominal voltage range	AC 19.228.8 V / DC 21.628.8 V	
Switching thresholds min. ON voltage	AC 19.2 V / DC 21.6 V	
Switching thresholds max. OFF voltage	AC 6.5 V / DC 6.5 V	
Power consumption in operation	12 W	
Power consumption in rest position	0.5 W	
Power consumption for wire sizing	18 VA	
Power consumption for wire sizing note	wire sizing note Imax 8.2 A @ 5 ms	
Auxiliary switch	2 x SPDT	
Switching capacity auxiliary switch	1 mA6 A (3 A inductive), DC 5 VAC 250 V	
Switching points auxiliary switch	3° / 87°	
Tolerance	±2°	
Connection supply / control	Cable 1 m, 3 x 0.75 mm², halogen-free	
Connection auxiliary switch	Cable 1 m, 6 x 0.75 mm², halogen-free	
Torque motor	40 Nm	

## **Functional data**

Torque motor	40 Nm	
Inhibiting torque dynamic	40 Nm	
Inhibiting torque static (voltage-free)	50 Nm	
Direction of motion motor	selectable by mounting L/R	
Manual override	with hand crank	
Angle of rotation	Max. 100°	
Angle of rotation note	Including 5° mechanical overrun at both sides	
Running time motor	<60 s / 90°	
Sound power level, motor	62 dB(A)	
Mechanical interface	Form fit 12x12 mm, continuous hollow shaft	
Position indication	Mechanically, with pointer	
Service life	Min. 10'000 cycles	

# Safety data

Protection class IEC/EN	III Safety Extra-Low Voltage (SELV)	
Protection class auxiliary switch IEC/EN	II reinforced insulation	
Degree of protection IEC/EN	IP54	
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.B	
Rated impulse voltage supply / control	0.8 kV	
Rated impulse voltage auxiliary switch	2.5 kV	
Control pollution degree	3	
Ambient temperature	-3050°C	
Storage temperature	-4080°C	



Technical data sheet	BE24-12

Ambient humidity	Max. 95% r.H., non-condensing	
Servicing	maintenance-free	
Weight	2.8 kg	

Weight

## 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 to and installed on the smoke control 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 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.
- Because of the fact that very high torques are applied to the damper shaft, the use of St50 (as a minimum) is recommended.
- 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

2-wire open/close control. The actuator is overload-proof and can thus remain energised even at the end stops.

Signalling

Two microswitches with fixed settings are installed in the actuator for indicating the damper end positions. 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.

Manual operation

The hand crank included in the shipment can be used for manual operation of the actuator.

Standards / Regulations

The design of the actuator is based on the specific requirements from the European standards:

- EN 12101-8: Smoke and heat control systems Part 8: Smoke control dampers
- $\bullet \ EN\ 1366\text{-}10: Fire\ resistance\ tests\ for\ service\ installations\ -\ Part\ 10: Smoke\ control\ dampers$
- EN 13501-4: Fire classification of construction products and building elements Part 4: Classification using data from fire resistance tests on components of smoke control systems

Delivery notes

Incl. Hand crank, Pointer, Protective bag

## Accessories

Electrical accessories	Description	Туре
	Cable set with plug 0.5 m for communication and power supply unit	ZST-BS
Mechanical accessories	Description	Туре
	Hand crank 40 mm for BLF, BF, BLE, BE	ZK1-B
	Hand crank 70 mm for BLF, BF, BLE, BE	ZK2-B
	Protective bag with wire, 100 pcs.	ZSD-B.1
	Pointer 12x12 mm for BLF, BF, BLE	ZZ12-B

#### **Electrical installation**



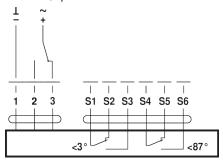
Supply from isolating transformer.

Parallel connection of other actuators possible. Observe the performance data and the switching thresholds.

Combination of power supply voltage and safety extra-low voltage not permitted at the both auxiliary switches.



**Wiring diagrams** AC/DC 24 V, open/close



# **Dimensions**

# **Dimensional drawings**

