

Top-Line spring-return actuator, combined with thermoelectric tripping device (72 °C), for fire and smoke dampers 90° in ventilation and air-conditioning systems, integrated in LONWORKS® or BELIMO MP bus networks

- Nominal torque 18 Nm / 12 Nm
- Nominal voltage AC/DC 24 V
- Control open-close
- Damper rotation form fit 12 mm (10 mm with enclosed adapter)


**Technical data**

<b>Electrical data</b>	Nominal voltage	AC/DC 24 V
	Nominal voltage frequency	50/60 Hz
	Nominal voltage range	AC 19.2 V ... 28.8 V / DC 21.6 V ... 28.8 V
	Power consumption in operation	8 W
	Power consumption at rest	3.5 W
	Power consumption for wire sizing	11 VA
	Power consumption for wire sizing note	I <sub>max</sub> 8.3 A @ 5 ms
	Connection supply / control	Cable 1 m, 4 x 0.75 mm <sup>2</sup> (halogen-free)
	Connection plug	Supply / control: 4-pole plug, suitable for BKN230-24LON and BKN230-24MP
	Cable length thermoelectric tripping device	1 m
<b>Functional data</b>	Torque motor	Min. 18 Nm
	Torque spring-return	Min. 12 Nm
	Direction of rotation motor	Can be selected by mounting L / R
	Angle of rotation	Max. 95° (incl. 5° initial spring tension)
	Running time motor	<120 s / 90°
	Running time spring-return	~16 s (tamb = 20 °C)
	Sound power level motor max.	45 dB (A)
	Sound power level spring-return max.	63 dB (A)
	Damper rotation	Form fit 12 mm (10 mm with enclosed adapter)
	Position indication	Mechanically, with pointer
Service life	Min. 60,000 safety positions	
<b>Safety</b>	Response temperature thermal fuse	Tf1: Duct outside temperature 72 °C Tf2 and Tf3: Duct inside temperature 72 °C
	Protection class IEC/EN	III Safety extra-low voltage
	Degree of protection IEC/EN	IP54 in all mounting positions
	EMC	CE according to 2004/108/EC
	Low-voltage directive	CE according to 2006/95/EC
	Certification IEC/EN	Certified according to IEC/EN 60730-1 and IEC/EN 60730-2-14
	Mode of operation	Type 1
	Rated impulse voltage supply / control	0.8 kV
	Control pollution degree	3
	Ambient temperature normal duty	-30 °C ... 50 °C
	Ambient temperature safety duty	The safety position will be attained up to max. 75 °C
	Non-operating temperature	-40 °C ... 50 °C
	Ambient humidity	95% r.h., non-condensing
Maintenance	Maintenance-free	
<b>Weight</b>	Weight approx.	2.8 kg

## 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.
- 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 electrical and electronic components and is not allowed to 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 while tensioning the return spring at the same time. The damper is turned back to the safety position by spring energy if the supply voltage is interrupted or if the temperature switch is tripped.  
Safety through permanent monitoring:  
When integrated in bus systems, additional information can be called up and monitored from the actuator:
- Announcement of the current position OPEN / running OPEN or CLOSED / CLOSED
  - Status of the BAE tripping device
  - Fault messages, such as, e.g. damper blocked, BAE tripped
  - Central triggering of a function test
  - Evaluation of a smoke detector contact
  - Watchdog function (actuator moves into safety position), if no communication is possible for longer than 60 seconds.
- Note: If the actuator is used with the BKN230-24LON, then the watchdog function of the BKN module is to be activated.
- Manual operation** Without power supply, the damper can be operated manually and fixed in any required position. It can be unlocked manually or automatically by applying the supply voltage.
- Connecting** The actuator is equipped with a connection plug. This means that it can be integrated via communication and power supply unit (see «Accessories») in LONWORKS® or in MP bus networks.
- Connection plug



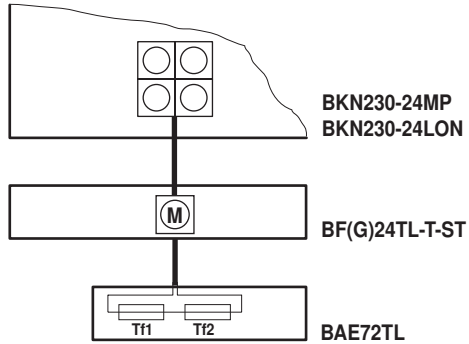
## Accessories

	Description	Data sheet name
<b>Electrical accessories</b>	Communication and power supply unit for integration in LONWORKS® network	BKN230-24LON
	Communication and power supply unit for integration in MP bus network	BKN230-24MP
	Belimo PC-Tool, software for adjustments and diagnostics	MFT-P
	Blanking cover (has no duct sensor function) for BAE..	ZBAE0
	Spare thermoelectric tripping device for BAE..., duct inside temperature 72°C	ZBAE72
	Spare thermoelectric tripping device for BAE..., duct inside temperature 95°C, colour green	ZBAE95
	ZIP-USB-MP interface	ZIP-USB-MP
<b>Mechanical accessories</b>	Adapter with clamp for rotary axes up to 20 mm for BF.. and BLF..	ZK-BF
	Adapter with DM18 rotary axis, L = 33 mm for BF.. and BLF..	ZA18-BF
	Adapter 12/8 mm for BF.. and BLF..	ZA8-BF
	Adapter 12/11 mm for BF.. and BLF..	ZA11-BF
	Bracket for SN2-C7 auxiliary switch for BF.. and BR..	ZSN-BF

**Electrical installation**

Wiring diagrams

AC/DC 24, open-close



**Dimensions [mm]**

Dimensional drawings

