

Magnetic controllers for safety functions

BERNSTEIN offers magnetic controllers for safety functions that fulfill performance level d according to EN 13849-1 and SIL 3 according to EN 61508 or rather EN 62061.

A safety system consists of the safety magnetic controllers and a coded transducer unit.

The anti-tamper security of the transducer unit is achieved by variable coding of the actuator magnets and magnetic switches.



Depending on the type of device, one or two coded transducer units (magnetic switch with corresponding magnet) of type:

- MAK-4236
- MAK-5236
- MAK-5336

can be connected to and monitored by the safety magnetic controllers.

The safety magnetic controller processes the NC or NO contact signals coming from the coded magnetic switches.

Thereby, it is possible to detect the opening of the safety guard (door, hatch, protective hood etc.) and to turn off the safety output. Thanks to the redundant evaluation, the magnetic controller is switched to the "safe state" should a fault or manipulation occur, or if the time difference is exceeded between the NC contact signal and the NO contact signal. An LED indicates that the safety magnetic controller is in the "safe state".

To ensure fault detection of the switch-off device, the MÜZ-102 offers the possibility to connect a return circuit. The system additionally features a NC contact for signalling purposes.

- Redundancy by NO and NC contacts
- Manipulation safety by coding
- Monitoring of the return circuit (depending on device type)



MAK-4236-x with magnet TK-42-CD



MAK-5236-x with magnet TK-52-CD / 2



MAK-5336-x with magnet TK-43-CD

Safety Magnetic Controllers

Magnetic controllers for safety functions

TÜV certified

- EN ISO 13849-1 Performance Level d
- EN 61508 and EN 62061 SIL 3
- EN 60947-5-3 Single fault security S



Coded transducer units

Magnetic switches

Type designation	MÜZ-102/D24-FL-DA	MÜZ-202/D24-FL
Article number	6392701306	6392702307
Max. number of connectable transducer units	1	2
Safety output, NO contact	●	●
Feedback circuit	●	–
Data output (NC contact)	●	–
Technical data		
Operating voltage	24 V DC	24 V DC
Operating current	60 mA	60 mA

Type designation	
Article number	
Cable length	
Type designation	
Article number	
Cable length	
Type designation	
Article number	
Cable length	

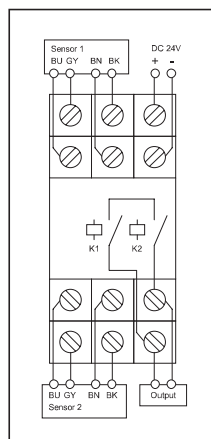
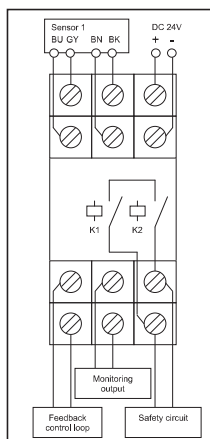
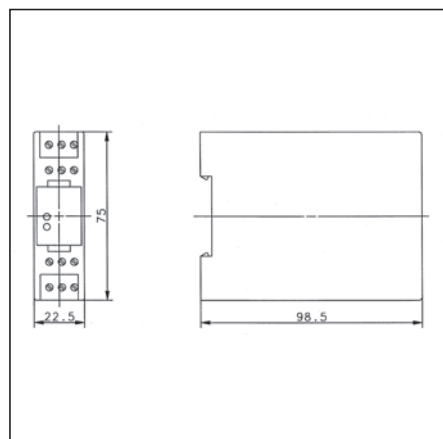
Switching capacity, safety output		
Switching voltage	max	AC 250 V
Switching current	max	8 A
Switching power	max	1700 VA
LED: Hazard status/switching status	●/–	●/–
LED: Supply voltage/ON	●	–
Relay: Positive-action/standard	●/–	●/–

Type designation	
Article number	
Cable length	
Type designation	
Article number	
Cable length	

Ambient conditions		
Temperature range	min/max	0 °C/+55 °C
		32 °F/+131 °F
Protection class (to IEC 529, EN 60529)		IP20
Enclosure material		PC
Mounting system (DIN 50022)		TS 35
Type of connection: Terminal block		max. 2.5 mm ²

Ambient conditions		
Temperature range	min/max	
Protection class (to IEC 529, EN 60529)		
Enclosure material		
Sensing distance	S on	min
	S on	max

Actuating magnet		
Type designation		
Article number		
Use: safety magnetic controller		
Article number		



All dimensions in mm

Other types available on request.