

SERIES BZ16

Dual-Channel Non-Contact Safety Interlock Switch (with “tamper-resistant” actuating key)



Features & Benefits

- **Tamper-resistant** ... cannot be bypassed with simple magnets.
- **10 mm actuating distance** ... extends application versatility.
- **Rugged, corrosion-resistant housing** ... tolerates most industrial environments.
- **IP 67 rated** ... ideal for wash-down applications.
- **Shock and vibration tolerant** ... designed to withstand mechanical abuse.
- **Non-contact operation** ... tolerant to minor misalignment.
- **Integral “positive-guided” relays** ... heightens reliability.

Description

The BZ16 is a non-contact safety interlock switch with an internal dual-channel design. The assembly consists of the switch and a coded actuating key. The switch can be actuated from the front, top, and rear with each version available with 1 NO/1 NC or 2 NC contacts.

Operation

When 24VDC is applied to the switch an internal oscillator is energized. The operating frequency is sent to a transmitting solenoid in the active area of the switch. When the actuating key is in the proper location it receives the signal, modifies it, and returns it to the switch. This signal is then sent to a monitoring module.

In addition a permanent magnet is located in the actuator. When the actuator is in place, the magnetic field activates a Hall-effect sensor in the active area. This signal is sent to a second monitoring module.

Thus this dual-channel device only operates if both channels are actuated concurrently. Any fault in either channel will be recognized by the next switching cycle such that authorized operation is prevented.

Typical Applications



The BZ16 safety interlock switch is suitable for sliding, hinged, or lift-off safety guards. It is ideal for food processing and other “washdown” applications.

AVAILABLE STANDARD MODELS

(Includes 1/2" NPT Plastic Adaptor)

Actuating Key sold separately ... see below

Part Number	Contact Configuration*	Description
BZ16-02D	2 NC	Front
BZ16-02V		Top
BZ16-02U		Rear
BZ16-11D	1 NO & 1 NC	Front
BZ16-11V		Top
BZ16-11U		Rear

ACTUATING KEY

(Sold separately)

Part Number	Description
BZ16 - B1	Actuating “Key”



A SAFETY CONTROLLER MAY BE REQUIRED TO MEET SAFETY CONTROL CATEGORIES 3 OR 4.

BZ16 TECHNICAL DATA

MECHANICAL SPECIFICATIONS

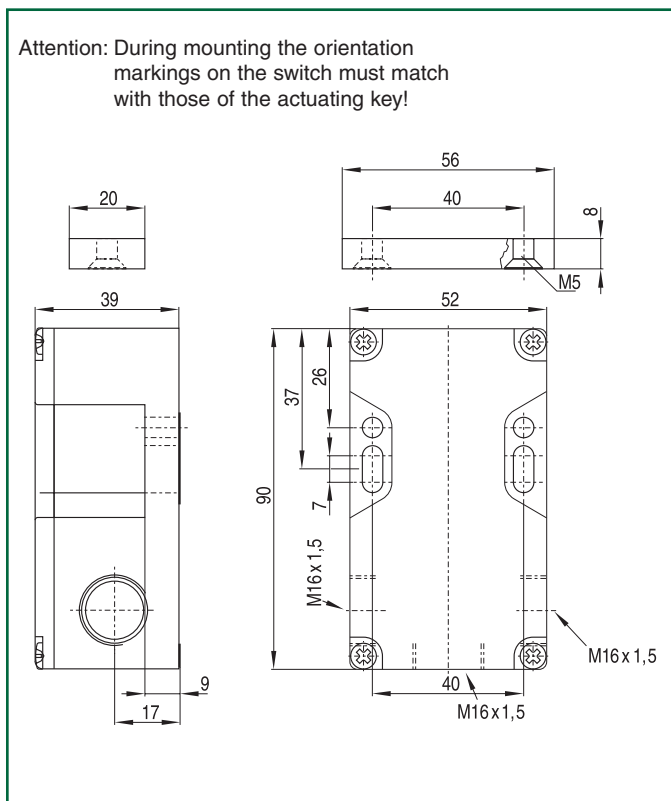
Housing	Fiberglass reinforced thermoplastic Self-extinguishing
Degree of Protection	IP67
Actuator	Non-contact (via coded actuator)
Switching Distance*	“On”: Max. 10mm (Note a minimum distance of 2 mm must be maintained when approaching the switch laterally) “Off”: Min. 20mm
Maximum Switching Frequency	1Hz
Operating Temperature	0°C to 55°C
Operating Principle	Magnetic & Hall Effect
Conformity to Standards	EN 60947-5-3/PDF-M EN 954-1, EN 1088 CE

*When no ferromagnetic material is present in the vicinity of the sensor or actuator.

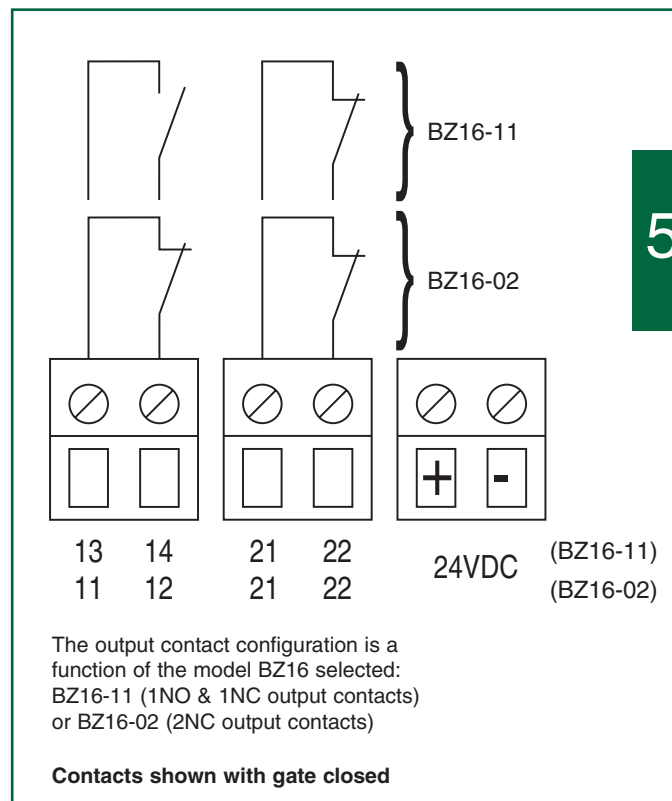
ELECTRICAL SPECIFICATIONS

Operating Voltage	24VDC \pm 15%
Contact Configuration	1 NO & 1 NC (or) 2 NC
Power Consumption	<4W
Maximum Switching Voltage	250VAC
Maximum Switching Capacity	250VAC (max), 1000VA, 4A DC13, 24VDC, 60W, 2.5A
Switching-on time	Approx. 200 ms
Type Connection	Screw terminals with self-lifting clamps (max. 2x2.5mm ² , AWG26-14 solid or stranded wires) (max. 2x1.5mm ² , AWG26-14 with ferrule)

DIMENSIONS



WIRING DIAGRAM



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