

## Safety sensors

// BZ 16-02D Order no.: 90570002

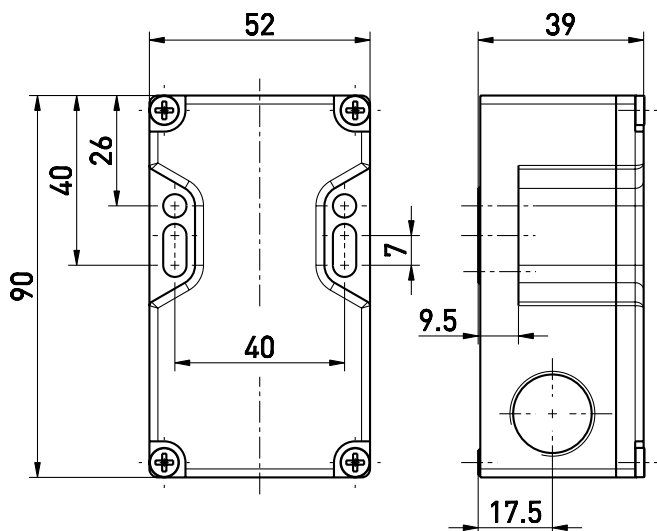
### Features/Options

- Thermoplastic enclosure
- Long life
- Differential inputs: Induction/Hall sensor operating principle
- Internal monitoring, high manipulation protection
- Potential-free outputs

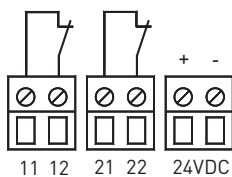
- 2 NC contacts
- Actuating plane: actuating from the top "D"
- Switching capacity  $s_{ao}$  10 mm,  $s_{ar}$  20 mm
- With terminal space

Note: The actuator is not included in the delivery of the switches.

### Dimensions



### Contact diagram



### Technical data

#### Standards

EN 61000-6-1, -2, -3, -4;  
EN 60947-5-2;  
EN 60947-5-3/PDF-M\*; EN 954-1;  
EN 1088; EN ISO 13849-1;  
DIN EN 62061; 2004/108/EG

#### Enclosure

glass-fibre reinforced  
thermoplastic, self-extinguishing

#### Limit distances

switch-on distance  $s_{ao}$  = 10 mm,  
switch-off distance  $s_{ar}$  = 20 mm  
(When no ferromagnetic material  
is present in the vicinity of the  
sensor or actuator. Minimum  
distance 2 mm for approach from  
side.)

#### Hysteresis

approx. 6 mm

#### Sideways tolerance

≤ 3 mm

#### Repeatability

< 1 mm

#### Safety-relevant data:

EN 954-1

Category 4 \*

EN ISO 13849-1

PL e

$T_M$

max. 20 years

MTTFd

57.8 years

DIN EN 62061

SIL CL 3

PFH<sub>D</sub>

≥ 3 × 10<sup>-8</sup>

$I_e/U_e$

160 mA/24 VDC ± 15 %  
(reverse voltage protected)

Residual current

≤ 70 mA

Max. fuse rating  $U_e$

0.25 A (slow blow)

Output contacts

2 enabling paths (2 NC)

Switching voltage

max. 250 VAC

Cond. short-circuit current

100 A

Voltage drop

refer to contact resistance

Max. fuse rating

4 A (gL/gG) incoming  
series-connected

Utilisation category

AC-15; DC-13

$I_e/U_e$  of the outputs

3 A/230 VAC; 4 A/24 VDC

$U_i$

250 VAC

Overvoltage category

III

Degree of pollution

3

$U_{imp}$

4 kV

Max. switching frequency

1 Hz

Risk time

< 200 ms

Degree of protection

IP 67 to IEC/EN 60529

Ambient temperature

0 °C ... + 55 °C

Mech. life

50 mio. operations

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### Contacts

AgSnO self-cleaning,  
positive-guided

### Contact resistance

100 mΩ in new condition

### Connection

cable entry M20 x 1.5, terminal  
space with self-lifting clamps for  
max. 2 x 1.5 mm<sup>2</sup> (incl. conductor  
ferrules)

### Approvals



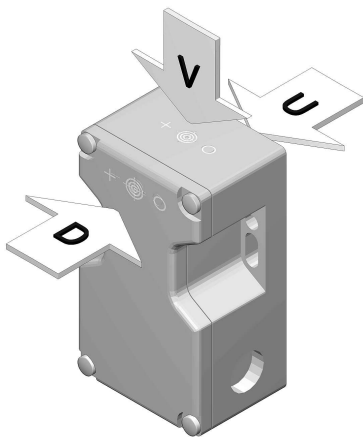
\* is only achieved in combination  
with a safety module

### Weight

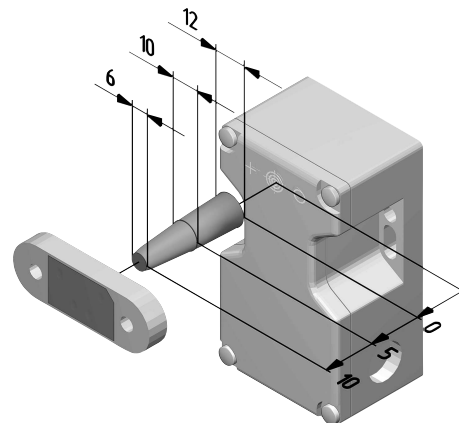
240g

Errors and omissions excepted.

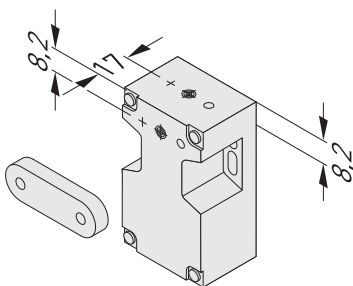
### Actuating planes



### Switching capacity



### Actuator positioning



### Distance for actuation from side

