



## Safety sensor Extreme BZ 16-03T IP69 Extreme Material number: 1355634

### Features/Options:

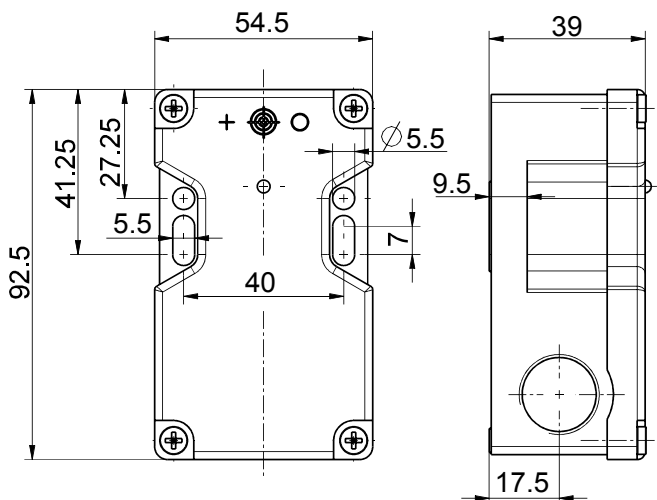
- Version with higher degree of protection IP69: suitable for cleaning with 80 °C hot water at 100 bar pressure at a distance of 100 mm from different directions
- Thermoplastic enclosure
- Long life
- Differential inputs: Induction / magnetic operating principle
- Internal monitoring, high manipulation protection
- Potential-free outputs

- Signalling contact
- Status LED
- 3 NC contacts
- Actuating plane: actuating from the top "T"
- Rated switching distance  $s_n = 12$  mm
- Wiring compartment

### Notes

- The actuator is not included in the delivery of the switches
- 1 cable gland M20x1.5 - IP69 and 2 locking screws M20x1.5 included in delivery

### Dimensions



### Technical data

Applied standards	EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4, EN 60947-5-2, EN 60947-5-3, EN ISO 14119, EN 60204-1, EN ISO 13849-1, EN 62061, 2004/108/EG
Enclosure	thermoplastic, glass-fibre reinforced, impact resistant, self-extinguishing UL 94 V-0
Sensor type	type 4 interlocking device
Coding level	low coding
Tightening torque	enclosure mounting screws: max. 2 Nm cover screws: max. 1.5 Nm actuator screws: max. 2 Nm
Degree of protection	IP 69 (IEC/EN 60529)
Safety-relevant data:	
EN ISO 13849-1	Performance Level PL e
Category	3
$B_{10d}$ (10 % load)	20 million
$T_M$	max. 20 years
MTTF <sub>d</sub>	100 years
DC/DC <sub>avg</sub>	96 %
EN 62061	SIL CL 3
PFH <sub>d</sub>	$\geq 4.29 \times 10^{-8}$ 1/h
$h_{op}$	8 h/day

Errors and omissions excepted.



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### Technical data

$d_{op}$	220 days/year
$t_{zyklus}$	20 s
Note	The safety-related data are based on a load of 24 V / 0.1 A / DC-1 for the enabling paths. With higher load currents for the enabling paths and other requirement rates $n_{op}$ , the safety-related data vary from the given data and can be provided on request.
Rated switching distance $s_n$	12 mm (10 mm with flush mounting)
Assured switching distance »ON« $s_{ao}$	10 mm (8 mm with flush mounting)
Assured switching distance »OFF« $s_{ar}$	25 mm
Hysteresis	approx. 6 mm
Sideways tolerance	$\leq 3$ mm
Repeatability	$\pm 1$ mm
Rated operating current/voltage $I_e/U_e$	140 mA/24 VDC $\pm 15$ % (reverse voltage protected); output contacts: max. 3 A/24 VAC/DC, min. 10 mA/5 VAC/DC; signalling contact: max. 1 A/24 VAC/DC, min. 100 $\mu$ A/100 mVDC
No-load supply current $I_0$	$\leq 70$ mA
Short-circuit protection	$U_e$ : 0.25 A (slow blow); output contacts: 4 A (gG/gN) incoming series-connected
Outputs	2 enabling paths (2 NC) 1 signalling contact (1 NC)
Switching voltage	max. 30 VAC/DC
Conditional short-circuit current	100 A
Utilisation category	AC-15; DC-13 (output contacts) AC-12; DC-12 (signalling contact)
Rated insulation voltage $U_i$	250 VAC
Rated impulse withstand voltage $U_{imp}$	1.5 kV
Voltage drop at $I_e$	max. 0.6 V
Overvoltage category	III

Errors and omissions excepted.

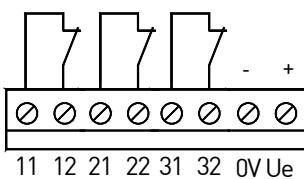


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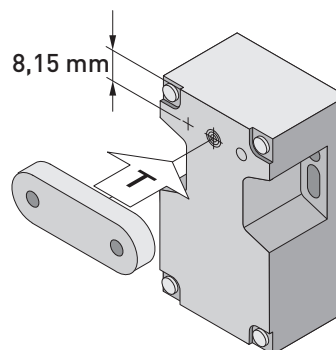
### Technical data

Switching frequency	max. 1 Hz
Attendance delay $t_v$	< 300 ms
Risk time	max. 165 ms
Degree of pollution	3
Ambient temperature	0 °C ... +55 °C
Storage and shipping temperature	-20 °C ... +70 °C
Mechanical life	50 mio. operations
Contact material	output contacts: AgSnO self-cleaning, positive-guided; signalling contact: AgNi, gold-plated
Contact resistance	output contacts: 100 mΩ in new condition; signalling contact: max. 30 mΩ
Connection	wiring compartment with socket screw clamps 8-pole
Cable entry	3 x M20 x 1.5 (press-out blanks in enclosure)
Cable cross-section	min. 0.14 mm <sup>2</sup> / AWG 28 max. 1.5 mm <sup>2</sup> / AWG 16
Weight	203 g

### Contact diagram



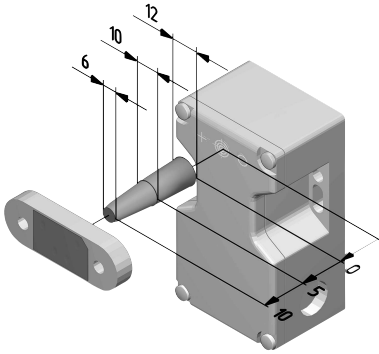
### Actuating planes



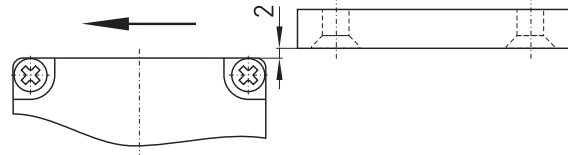


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## Axial misalignment



## Approach from side



Minimum distance 2 mm for approach from side.