



1) Sensing surface



### Basic features

Approval/Conformity	CE UKCA cULus WEEE
Basic standard	IEC 60947-5-2

### Display/Operation

Function indicator	yes
Power indicator	no

### Electrical connection

Connection	M8x1-Male, 3-pin
Polarity reversal protected	yes
Protection against device mix-ups	yes
Short-circuit protection	yes

### Electrical data

Load capacitance max. at Ue	0.5 $\mu$ F
Min. operating current I <sub>m</sub>	0 mA
No-load current I <sub>o</sub> max., damped	4 mA
No-load current I <sub>o</sub> max., undamped	12 mA
Operating voltage U <sub>b</sub>	10...30 VDC
Output resistance R <sub>a</sub>	33.0 kOhm + D
Rated insulation voltage U <sub>i</sub>	75 V DC
Rated operating current I <sub>e</sub>	200 mA
Rated operating voltage U <sub>e</sub> DC	24 V
Rated short circuit current	100 A
Ready delay t <sub>v</sub> max.	10 ms
Residual current I <sub>r</sub> max.	80 $\mu$ A
Ripple max. (% of U <sub>e</sub> )	15 %
Switching frequency	3000 Hz
Utilization category	DC -13
Voltage drop static max.	2.5 V

### Environmental conditions

Ambient temperature	-25...70 °C
Contamination scale	3
EN 60068-2-27, Shock	Half-sinus, 30 g <sub>n</sub> , 11 ms
EN 60068-2-6, Vibration	55 Hz, amplitude 1 mm, 3x30 min
IP rating	IP67

### Functional safety

MTTF (40 °C)	830 a
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## Interface

Switching output PNP normally closed (NC)

## Material

Housing material Zinc, Die casting  
 Material sensing surface PBT

## Mechanical data

Dimension 59 x 8 x 8 mm  
 Installation for flush mounting  
 Size 8x8  
 Tightening torque 0.5 Nm

## Range/Distance

Assured operating distance Sa 1.6 mm  
 Hysteresis H max. (% of Sr) 15.0 %  
 Rated operating distance Sn 2 mm  
 Real switching distance sr 2 mm  
 Repeat accuracy max. (% of Sr) 5.0 %  
 Switching distance marking ■■  
 Temperature drift max. (% of Sr) 10 %  
 Tolerance Sr ±10 %

## Remarks

The sensor is functional again after the overload has been eliminated.  
 For more information about MTTF and B10d see MTTF / B10d Certificate

Indication of the MTTF- / B10d value does not represent a binding composition and/or life expectancy assurance; these are simply experiential values with no warranty implications. These declared values also do not extend the expiration period for defect claims or affect it in any way.

## Connector Drawings



## Wiring Diagrams (Schematic)

