



1) Sensing surface



**Basic features**

Approval/Conformity	cULus CE UKCA 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	1 µF
Min. operating current I <sub>m</sub>	0 mA
No-load current I <sub>o</sub> max., damped	6 mA
No-load current I <sub>o</sub> max., undamped	2 mA
Operating voltage U <sub>b</sub>	10...30 VDC
Output resistance R <sub>a</sub>	Open drain
Rated insulation voltage U <sub>i</sub>	75 V DC
Rated operating current I <sub>e</sub>	100 mA
Rated operating voltage U <sub>e</sub> DC	24 V
Rated short circuit current	100 A
Ready delay t <sub>v</sub> max.	21 ms
Residual current I <sub>r</sub> max.	10 µA
Ripple max. (% of U <sub>e</sub> )	10 %
Switching frequency	5000 Hz
Utilization category	DC -13
Voltage drop static max.	2 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)	305 a
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## Interface

Switching output PNP normally open (NO)

## Material

Housing material Stainless steel  
 Material sensing surface PBT

## Mechanical data

Dimension  $\varnothing 5 \times 41$  mm  
 Installation for flush mounting  
 Mounting length 20.00 mm  
 Size M5x0.5  
 Tightening torque 1 Nm

## Range/Distance

Assured operating distance  $S_a$  1.21 mm  
 Hysteresis H max. (% of  $S_r$ ) 15.0 %  
 Rated operating distance  $S_n$  1.5 mm  
 Real switching distance  $s_r$  1.5 mm  
 Repeat accuracy max. (% of  $S_r$ ) 5.0 %  
 Switching distance marking ■■  
 Temperature drift max. (% of  $S_r$ ) 10 %  
 Tolerance  $S_r$   $\pm 10$  %

## Remarks

The sensor is functional again after the overload has been eliminated.  
 EMC: Surge resistance  
 External protection circuit is required. Document 825345, Section 2.  
 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

