



1) Sensing surface



Basic features

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|----------------------------|----------------------------|
| Approval/Conformity | cULus CE EAC 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_m | 0 mA |
| No-load current I_o max., damped | 6 mA |
| No-load current I_o max., undamped | 2 mA |
| Operating voltage U_b | 10...30 VDC |
| Output resistance R_a | Open drain |
| Rated insulation voltage U_i | 75 V DC |
| Rated operating current I_e | 100 mA |
| Rated operating voltage U_e DC | 24 V |
| Rated short circuit current | 100 A |
| Ready delay t_v max. | 21 ms |
| Residual current I_r max. | 10 µA |
| Ripple max. (% of U_e) | 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 gn, 11 ms |
| EN 60068-2-6, Vibration | 55 Hz, amplitude 1 mm, 3x30 min |
| Protection degree | IP67 |

Functional safety

| | |
|---------------------|-------|
| MTTF (40 °C) | 305 a |
|---------------------|-------|

Material

| | |
|--------------------------|-----------------|
| Housing material | Stainless steel |
| Material sensing surface | PBT |

Mechanical data

| | |
|--------------|--------------------|
| Dimension | Ø 4 x 41 mm |
| Installation | for flush mounting |
| Size | D4.0 |

Range/Distance

| | |
|----------------------------------|---------|
| Assured operating distance Sa | 1.21 mm |
| Hysteresis H max. (% of Sr) | 15.0 % |
| Rated operating distance Sn | 1.5 mm |
| Real switching distance sr | 1.5 mm |
| Repeat accuracy max. (% of Sr) | 5.0 % |
| Switching distance marking | ■ ■ |
| Temperature drift max. (% of Sr) | 10 % |
| Tolerance Sr | ±10 % |

Output/Interface

| | |
|------------------|------------------------|
| Switching output | PNP normally open (NO) |
|------------------|------------------------|

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

