



1) Sensing surface, 2) Metal plate



Basic features

| | |
|---------------------|---------------|
| Additional features | Factor 1 |
| Approval/Conformity | cULus |
| | CE |
| | UKCA |
| | WEEE |
| Basic standard | IEC 60947-5-2 |
| Trademark | Factor 1 |

Display/Operation

| | |
|--------------------|-----|
| Function indicator | yes |
| Power indicator | yes |

Electrical connection

| | |
|-----------------------------------|----------------------------|
| Connection | M12x1-Male, 4-pin, A-coded |
| Polarity reversal protected | yes |
| Protection against device mix-ups | yes |
| Short-circuit protection | yes |

Electrical data

| | |
|---|---------------|
| Load capacitance max. at Ue | 1 μ F |
| Magnetic field strength, interference field | 100 kA/m |
| Min. operating current Im | 0 mA |
| No-load current Io max., damped | 20 mA |
| No-load current Io max., undamped | 15 mA |
| Operating voltage Ub | 10...30 VDC |
| Output resistance Ra | 33.0 kOhm + D |
| Protection class | II |
| Rated insulation voltage Ui | 250 V AC |
| Rated operating current Ie | 200 mA |
| Rated operating voltage Ue DC | 24 V |
| Rated short circuit current | 100 A |
| Ready delay tv max. | 30 ms |
| Residual current Ir max. | 80 μ A |
| Ripple max. (% of Ue) | 15 % |
| Switching frequency | 1000 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 _n , 11 ms |
| EN 60068-2-6, Vibration | 55 Hz, amplitude 1 mm, 3x30 min |
| IP rating | IP67 |
| Magnetic field immune | magnetic field immune (AC/DC) |

Functional safety

MTTF (40 °C) 455 a

Interface

Switching output PNP normally open/normally closed (NO/NC)

Material

Housing material PBT
Material sensing surface PBT

Mechanical data

Dimension 40 x 40 x 62 mm
Installation Flush on one side
Size 40x40

Range/Distance

| | |
|----------------------------------|--------|
| Assured operating distance Sa | 2.3 mm |
| Hysteresis H max. (% of Sr) | 15.0 % |
| Rated operating distance Sn | 25 mm |
| Real switching distance sr | 25 mm |
| Repeat accuracy max. (% of Sr) | 5.0 % |
| Temperature drift max. (% of Sr) | 10 % |
| Tolerance Sr | ±10 % |

Remarks

LED 1: Function

LED 2: Operating voltage

The sensor is functional again after the overload has been eliminated.

Installed non-flush. For installation conditions see Instruction 939225.

Switching distance and tolerance data apply to the sensing surface location shown.

Installation: The sensor front edge must protrude at least 10 mm over metallic installation materials.

Sensor does not respond to loose aluminum chips on the sensing surface.

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

