



1) Sensing surface Ø8



### Basic features

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

### Display/Operation

|                    |     |
|--------------------|-----|
| Function indicator | yes |
| Power indicator    | no  |

### Electrical connection

|                                   |                      |
|-----------------------------------|----------------------|
| Cable diameter D                  | 4.60 mm              |
| Cable length L                    | 5 m                  |
| Conductor cross-section           | 0.34 mm <sup>2</sup> |
| Connection type                   | Cable, 5.00 m, PUR   |
| Number of conductors              | 3                    |
| Polarity reversal protected       | yes                  |
| Protection against device mix-ups | yes                  |
| Short-circuit protection          | yes                  |

### Electrical data

|   |               |
|---|---------------|
| Load capacitance max. at U <sub>e</sub>       | 1 µF          |
| Min. operating current I <sub>m</sub>         | 0 mA          |
| No-load current I <sub>o</sub> max., damped   | 9 mA          |
| No-load current I <sub>o</sub> max., undamped | 4 mA          |
| Operating voltage U <sub>b</sub>              | 10...30 VDC   |
| Output resistance R <sub>a</sub>              | 33.0 kOhm + D |
| Protection class                              | II            |
| Rated insulation voltage U <sub>i</sub>       | 250 V AC      |
| 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 µA         |
| Ripple max. (% of U <sub>e</sub> )            | 15 %          |
| Switching frequency                           | 2000 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                                  |

### Interface

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

## Material

|                          |       |
|--------------------------|-------|
| Housing material         | PA 12 |
| Material jacket          | PUR   |
| Material sensing surface | PA 12 |

## Mechanical data

|                   |                    |
|-------------------|--------------------|
| Dimension         | 40 x 12 x 26 mm    |
| Installation      | for flush mounting |
| Size              | 40x12x26           |
| Tightening torque | 0.25 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 %  |
| Temperature drift max. (% of Sr) | 10 %   |
| Tolerance Sr                     | ±10 %  |

## Remarks

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

## Wiring Diagrams (Schematic)

