



Model Number

NRN75-FP-A2-P3-V1

Features

- 75 mm non-flush
- Reduction factor = 1

Accessories

V1-G

Female connector, M12, 4-pin, field attachable

V1-W

Female connector, M12, 4-pin, field attachable

V1-G-2M-PUR

Female cordset, M12, 4-pin, PUR cable

V1-W-2M-PUR

Female cordset, M12, 4-pin, PUR cable

Technical Data

General specifications

| | | | |
|----------------------------|-------|-------------|-------|
| Switching element function | | PNP | NO/NC |
| Rated operating distance | s_n | 75 mm | |
| Installation | | non-flush | |
| Output polarity | | DC | |
| Assured operating distance | s_a | 0 ... 55 mm | |
| Reduction factor r_{Al} | | 1 | |
| Reduction factor r_{Cu} | | 1 | |
| Reduction factor r_{304} | | 1 | |
| Reduction factor r_{S37} | | 1 | |

Nominal ratings

| | | |
|--------------------------------|-----------|----------------------------|
| Operating voltage | U_B | 10 ... 30 V DC |
| Switching frequency | f | 0 ... 50 Hz |
| Hysteresis | H | typ. 3 % |
| Reverse polarity protection | | reverse polarity protected |
| Short-circuit protection | | pulsing |
| Voltage drop | U_d | ≤ 3 V |
| Rated insulation voltage | U_{BIS} | 50 V |
| Operating current | I_L | 0 ... 200 mA |
| Off-state current | I_r | 0 ... 0.5 mA |
| No-load supply current | I_0 | ≤ 20 mA |
| Time delay before availability | t_v | ≤ 300 ms |
| Operating voltage indicator | | LED, green |
| Switching state indicator | | LED, yellow |

Functional safety related parameters

| | |
|--------------------------------|-------|
| MTTF _d | 824 a |
| Mission Time (T _M) | 20 a |
| Diagnostic Coverage (DC) | 0 % |

Ambient conditions

| | |
|---------------------|---|
| Ambient temperature | 0 ... 50 °C (32 ... 122 °F) (± 10 % changing operating distance) -25 ... 70 °C (-13 ... 158 °F) (± 20 % changing operating distance) |
|---------------------|---|

Mechanical specifications

| | |
|----------------------|--------------------------|
| Connection type | Connector M12 x 1, 4-pin |
| Housing material | PBT/metal |
| Sensing face | PBT |
| Housing base | metal |
| Degree of protection | IP68 |

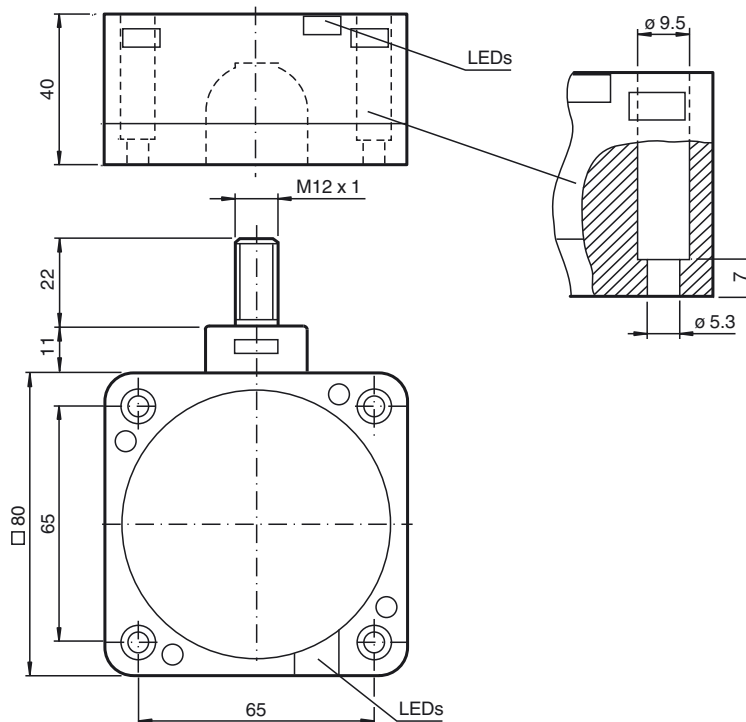
Compliance with standards and directives

| | |
|---------------------|---|
| Standard conformity | |
| Standards | EN 60947-5-2:2007 IEC 60947-5-2:2007 |

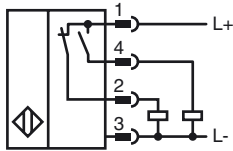
Approvals and certificates

| | |
|--------------|--|
| UL approval | cULus Listed, General Purpose |
| CSA approval | cCSAus Listed, General Purpose |
| CCC approval | CCC approval / marking not required for products rated ≤ 36 V |

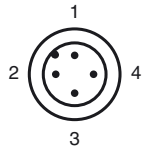
Dimensions



Electrical Connection



Pinout



Wire colors in accordance with EN 60947-5-2

| | | |
|---|----|---------|
| 1 | BN | (brown) |
| 2 | WH | (white) |
| 3 | BU | (blue) |
| 4 | BK | (black) |

Installation Hint

These sensors are also suitable for mounting on metal. The stated switching distance is achieved with a metal base plate, min. dimensions 225 mm x 225 mm.

When mounted on a non-metallic base plate the switching distance is reduced by approx. 10 %.

