

Inductive sensor

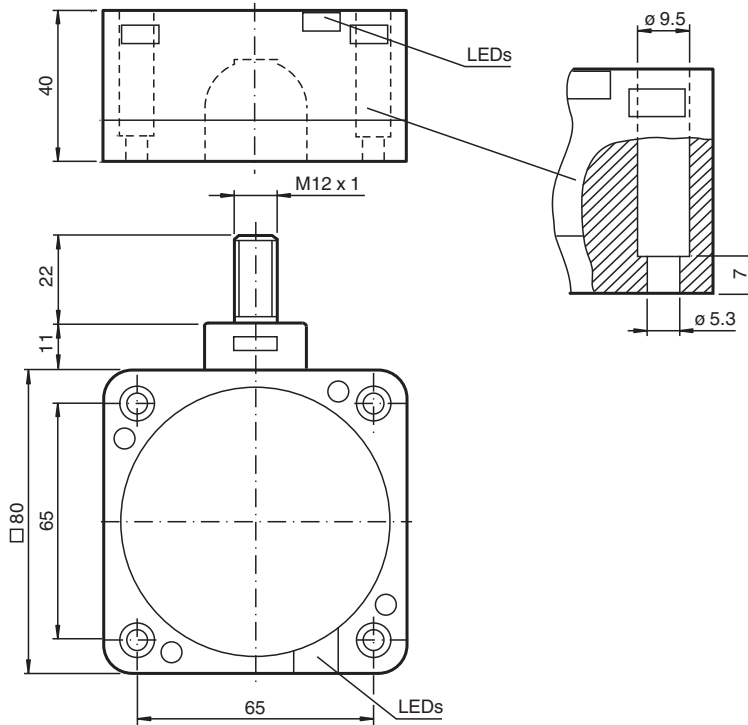
NRN75-FP-E2-C-P3-V1



- 75 mm non-flush
- Reduction factor = 1
- Weld Immune
- Short-term interference suppression magnetic fields



Dimensions



Technical Data

General specifications

| | | |
|----------------------------|-------|--------------------|
| Switching function | | Normally open (NO) |
| Output type | | PNP |
| 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 |

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Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

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PF PEPPERL+FUCHS

Technical Data

| | | |
|---|-----------|---|
| Reduction factor r_{S137} | | 1 |
| Output type | | 3-wire |
| Nominal ratings | | |
| Operating voltage | U_B | 10 ... 30 V DC |
| Switching frequency | f | 0 ... 1 Hz |
| Hysteresis | H | typ. 3 % |
| Reverse polarity protection | | reverse polarity protected |
| Short-circuit protection | | pulsing |
| Voltage drop | U_d | ≤ 3 V |
| Temperature drift | | ± 10 % at 0 ... 50 °C (32 ... 122 °F) ± 20 % at -25 ... 0 °C (-13 ... 32 °F) and 50 ... 70 °C (122 ... 158 °F) |
| 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 |
| Constant magnetic field | B | 5 mT |
| Alternating magnetic field | B | 5 mT |
| Tuning-out | | typ. 50 ms |
| Operating voltage indicator | | LED, green |
| Switching state indicator | | LED, yellow |
| Functional safety related parameters | | |
| MTTF _d | | 944 a |
| Mission Time (T_M) | | 20 a |
| Diagnostic Coverage (DC) | | 0 % |
| 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 |
| CCC approval | | CCC approval / marking not required for products rated ≤ 36 V |
| Ambient conditions | | |
| Ambient temperature | | -25 ... 70 °C (-13 ... 158 °F) |
| Mechanical specifications | | |
| Connection type | | Connector plug M12 x 1 , 4-pin |
| Housing material | | PBT/metal |
| Sensing face | | PBT, PTFE coated |
| Housing base | | PBT |
| Degree of protection | | IP68 |
| Dimensions | | |
| Height | | 40 mm |
| Width | | 80 mm |
| Length | | 80 mm |

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Connection



Connection Assignment



Wire colors in accordance with EN 60947-5-2

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

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Mounting

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 %.

