

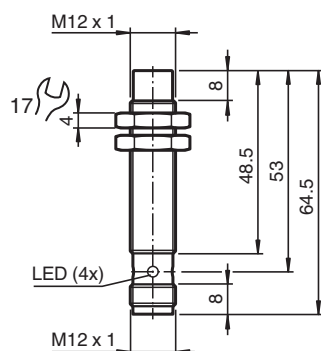


Inductive sensor NBN4-12GM50-E0-V1

- 4 mm non-flush
- Extended temperature range
-40 ... +85 °C
- Extended operating voltage range
- Flexible use with versatile mounting opportunities



Dimensions



Technical Data

General specifications

| | | |
|------------------------------|-------|---|
| Switching function | | Normally open (NO) |
| Output type | | NPN |
| Rated operating distance | s_n | 4 mm |
| Installation | | non-flush |
| Output polarity | | DC |
| Assured operating distance | s_a | 0 ... 3.24 mm |
| Actuating element | | mild steel, e. g. 1.0037, SR235JR (formerly St37-2) 12 mm x 12 mm x 1 mm |
| Reduction factor r_{Al} | | 0.47 |
| Reduction factor r_{Cu} | | 0.43 |
| Reduction factor r_{304} | | 0.85 |
| Reduction factor r_{Brass} | | 0.55 |
| Output type | | 3-wire |

Nominal ratings

| | | |
|---------------------|-------|---------------|
| Operating voltage | U_B | 5 ... 36 V |
| Switching frequency | f | 0 ... 2650 Hz |

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

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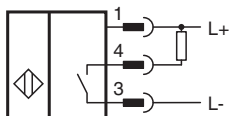
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PF PEPPERL+FUCHS

Technical Data

| | | |
|---|-----------|---|
| Hysteresis | H | typ. 5 % |
| Reverse polarity protection | | reverse polarity protected |
| Short-circuit protection | | pulsing |
| Voltage drop | U_d | ≤ 1 V |
| Operating current | I_L | 0 ... 200 mA |
| Off-state current | I_r | max. 20 μ A |
| No-load supply current | I_o | ≤ 10 mA |
| Time delay before availability | t_v | ≤ 10 ms |
| Switching state indicator | | Multihole-LED, yellow |
| Functional safety related parameters | | |
| MTTF _d | | 1707 a |
| Mission Time (T _M) | | 20 a |
| Diagnostic Coverage (DC) | | 0 % |
| Conformity | | |
| PWIS conformity | | VDMA 24364-A1/B2/C1/T100°C-W |
| Compliance with standards and directives | | |
| Standard conformity | | |
| Standards | | EN 60947-5-2:2007 EN 60947-5-2/A1:2012 IEC 60947-5-2:2007 IEC 60947-5-2 AMD 1:2012 |
| Approvals and certificates | | |
| Protection class | | II |
| Rated insulation voltage | U_i | 36 V |
| Rated impulse withstand voltage | U_{imp} | 500 V |
| UL approval | | cULus Listed, General Purpose, Class 2 Power Source |
| CCC approval | | CCC approval / marking not required for products rated ≤ 36 V |
| Ambient conditions | | |
| Ambient temperature | | -40 ... 85 °C (-40 ... 185 °F) |
| Storage temperature | | -40 ... 85 °C (-40 ... 185 °F) |
| Mechanical specifications | | |
| Connection type | | Connector plug |
| Housing material | | brass , white bronze coated |
| Sensing face | | PBT , green |
| Degree of protection | | IP68 |
| Connector | | |
| Threading | | M12 x 1 |
| Number of pins | | 3 |
| Mass | | 28 g |
| Tightening torque | | 0 ... 10 Nm |
| General information | | |
| Scope of delivery | | 2 self locking nuts in scope of delivery |

Connection











Connection Assignment



Wire colors in accordance with EN 60947-5-2

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

Accessories

| | | |
|---|------------------------|---|
|  | BF 12 | Mounting flange, 12 mm |
|  | BF 12-F | Plastic mounting adapter, 12 mm |
|  | V1-G-2M-PUR | Female cordset single-ended M12 straight A-coded, 4-pin, PUR cable grey |
|  | V1-W-2M-PUR | Female cordset single-ended M12 angled A-coded, 4-pin, PUR cable grey |
|  | V1-G-BK2M-PUR-U | Female cordset single-ended M12 straight A-coded, 4-pin, PUR cable black, UL approved, drag chain suitable, torsion resistant |
|  | V1-W-BK2M-PUR-U | Female cordset single-ended M12 angled A-coded, 4-pin, PUR cable black, UL approved, drag chain suitable, torsion resistant |
|  | V1-G-BK | Female connector M12 straight A-coded 4-pin, for cable diameter 4 - 6 mm, field-attachable |
|  | V1-W-BK | Female connector M12 angled A-coded 4-pin, for cable diameter 4 - 6 mm, field-attachable |

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