

Inductive sensor

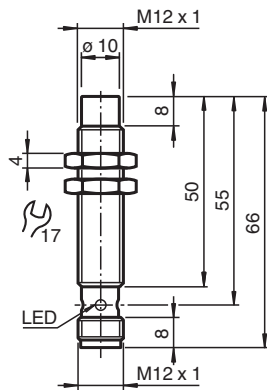
NBN8-12GM50-EI-V1-M1



- 8 mm non-flush
- Extended temperature range
-40 ... +85 °C
- Digital current output
- E1-Type approval



Dimensions



Technical Data

| General specifications | | |
|------------------------------|-------|---|
| Output type | | Digital current output |
| Rated operating distance | s_n | 8 mm |
| Installation | | non-flush |
| Output polarity | | DC |
| Assured operating distance | s_a | 0 ... 6.48 mm |
| Actuating element | | mild steel, e. g. 1.0037, SR235JR (formerly St37-2) 24 mm x 24 mm x 1 mm |
| Reduction factor r_{Al} | | 0.5 |
| Reduction factor r_{Cu} | | 0.45 |
| Reduction factor r_{304} | | 0.7 |
| Reduction factor r_{Brass} | | 0.5 |
| Output type | | 3-wire |
| Nominal ratings | | |
| Operating voltage | U_B | 9 ... 30 V DC |
| Switching frequency | f | 0 ... 1500 Hz |
| Hysteresis | H | 2 ... 15 % |

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

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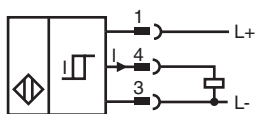
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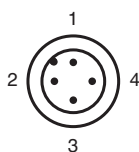
Technical Data

| | | |
|---|-------|---|
| Reverse polarity protection | | reverse polarity protected |
| Short-circuit protection | | yes |
| Temperature drift | | ≤ 10 % |
| Time delay before availability | t_v | ≤ 5 ms |
| Load resistor | | 100 ... 250 Ohm |
| Switching state indicator | | LED, yellow |
| Functional safety related parameters | | |
| MTTF _d | | 1583 a |
| Mission Time (T _M) | | 20 a |
| Diagnostic Coverage (DC) | | 0 % |
| Digital output | | |
| Output value | | object detected: 10 mA ± 1 mA object not detected: 5 mA ± 1 mA |
| 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 | | |
| UL approval | | cULus Listed, General Purpose, Class 2 Power Source |
| E1 Type approval | | 10R-04 |
| Ambient conditions | | |
| Ambient temperature | | -40 ... 85 °C (-40 ... 185 °F) |
| Storage temperature | | -40 ... 85 °C (-40 ... 185 °F) |
| Mechanical specifications | | |
| Connection type | | Connector plug M12 x 1 , 4-pin |
| Housing material | | brass, nickel-plated |
| Sensing face | | PBT |
| Degree of protection | | IP68 / IP69K |
| Mass | | 27 g |
| General information | | |
| Scope of delivery | | 2 self locking nuts in scope of delivery |

Connection



Connection Assignment

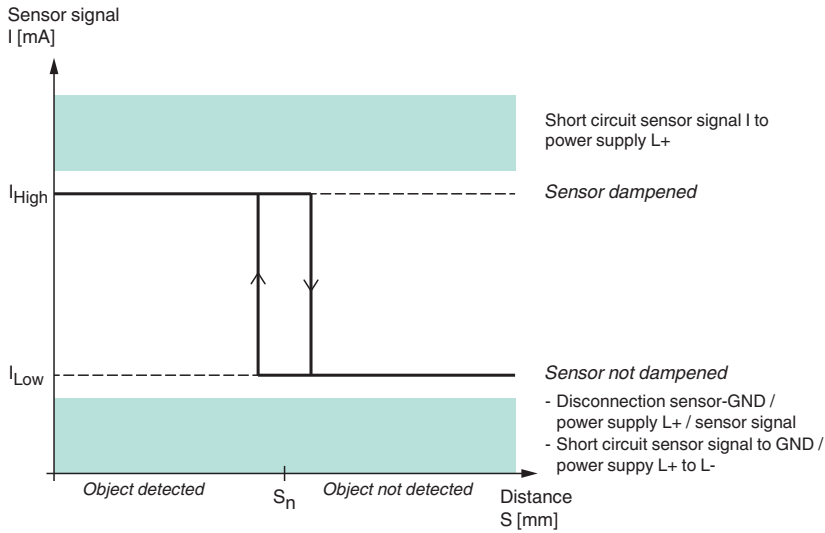


Connection Assignment

Wire colors in accordance with EN 60947-5-2

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

Characteristic Curve



Accessories

| | | |
|---|--------------------|---|
|  | BF 12 | Mounting flange, 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 |

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