

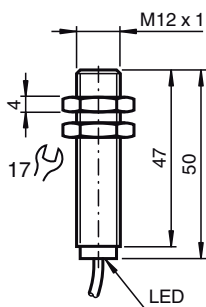
## Inductive sensor

### NBB4-12GM50-E0-6M

- Basic series
- 4 mm flush
- Increased operating distance



## Dimensions



## Technical Data

### General specifications

|                              |                    |               |
|------------------------------|--------------------|---------------|
| Switching function           | Normally open (NO) |               |
| Output type                  |                    | NPN           |
| Rated operating distance     | $s_n$              | 4 mm          |
| Installation                 |                    | flush         |
| Output polarity              |                    | DC            |
| Assured operating distance   | $s_a$              | 0 ... 3.24 mm |
| Reduction factor $r_{Al}$    |                    | 0.39          |
| Reduction factor $r_{Cu}$    |                    | 0.35          |
| Reduction factor $r_{304}$   |                    | 0.75          |
| Reduction factor $r_{Brass}$ |                    | 0.49          |
| Output type                  |                    | 3-wire        |

### Nominal ratings

|                             |       |                                        |
|-----------------------------|-------|----------------------------------------|
| Operating voltage           | $U_B$ | 10 ... 30 V                            |
| Switching frequency         | $f$   | 0 ... 800 Hz                           |
| Hysteresis                  | $H$   | typ. 5%                                |
| Reverse polarity protection |       | reverse polarity protected             |
| Short-circuit protection    |       | pulsing                                |
| Voltage drop                | $U_d$ | $\leq 3$ V                             |
| Operating current           | $I_L$ | 0 ... 200 mA                           |
| Off-state current           | $I_r$ | 0 ... 0.5 mA typ. 0.1 $\mu$ A at 25 °C |
| No-load supply current      | $I_0$ | $\leq 15$ mA                           |

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

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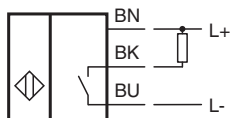
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 **PEPPERL+FUCHS**

## Technical Data

|                                                 |                                                                                             |
|-------------------------------------------------|---------------------------------------------------------------------------------------------|
| Switching state indicator                       | LED, yellow                                                                                 |
| <b>Functional safety related parameters</b>     |                                                                                             |
| MTTF <sub>d</sub>                               | 1600 a                                                                                      |
| Mission Time (T <sub>M</sub> )                  | 20 a                                                                                        |
| Diagnostic Coverage (DC)                        | 0 %                                                                                         |
| <b>Compliance with standards and directives</b> |                                                                                             |
| Standard conformity                             |                                                                                             |
| Standards                                       | EN 60947-5-2:2007<br>EN 60947-5-2/A1:2012<br>IEC 60947-5-2:2007<br>IEC 60947-5-2 AMD 1:2012 |
| <b>Approvals and certificates</b>               |                                                                                             |
| UL approval                                     | cULus Listed, General Purpose                                                               |
| CCC approval                                    | CCC approval / marking not required for products rated ≤36 V                                |
| <b>Ambient conditions</b>                       |                                                                                             |
| Ambient temperature                             | -25 ... 70 °C (-13 ... 158 °F)                                                              |
| <b>Mechanical specifications</b>                |                                                                                             |
| Connection type                                 | cable                                                                                       |
| Housing material                                | brass, nickel-plated                                                                        |
| Sensing face                                    | PBT                                                                                         |
| Degree of protection                            | IP67                                                                                        |
| Cable                                           |                                                                                             |
| Wire end ferrules                               | yes                                                                                         |
| Cable diameter                                  | 3 mm + 0.3 mm                                                                               |
| Bending radius                                  | > 10 x cable diameter                                                                       |
| Material                                        | PVC                                                                                         |
| Number of cores                                 | 3                                                                                           |
| Core cross-section                              | 0.14 mm <sup>2</sup>                                                                        |
| Length                                          | L 6 m                                                                                       |
| <b>General information</b>                      |                                                                                             |
| Scope of delivery                               | 2 self locking nuts in scope of delivery                                                    |

## Connection



## Accessories

|                                                                                     |               |                                       |
|-------------------------------------------------------------------------------------|---------------|---------------------------------------|
|  | <b>BF 12</b>  | Mounting flange, 12 mm                |
|  | <b>EXG-12</b> | Quick mounting bracket with dead stop |