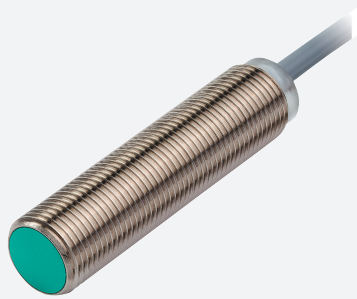


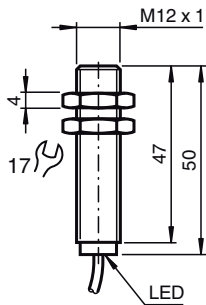
Inductive sensor  
NBB4-12GM50-E1



- Basic series
- Increased operating distance



Dimensions



Technical Data

| General specifications              |                |                                   |
|-------------------------------------|----------------|-----------------------------------|
| Switching function                  |                | Normally closed (NC)              |
| Output type                         |                | NPN                               |
| Rated operating distance            | s <sub>n</sub> | 4 mm                              |
| Installation                        |                | flush                             |
| Output polarity                     |                | DC                                |
| Assured operating distance          | s <sub>a</sub> | 0 ... 3.24 mm                     |
| Reduction factor r <sub>Al</sub>    |                | 0.39                              |
| Reduction factor r <sub>Cu</sub>    |                | 0.35                              |
| Reduction factor r <sub>304</sub>   |                | 0.75                              |
| Reduction factor r <sub>Brass</sub> |                | 0.49                              |
| Nominal ratings                     |                |                                   |
| Operating voltage                   | U <sub>B</sub> | 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 <sub>d</sub> | ≤ 3 V                             |
| Operating current                   | I <sub>L</sub> | 0 ... 200 mA                      |
| Off-state current                   | I <sub>r</sub> | 0 ... 0.5 mA typ. 0.1 µA at 25 °C |
| No-load supply current              | I <sub>0</sub> | ≤ 15 mA                           |
| Switching state indicator           |                | LED, yellow                       |

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

Pepperl+Fuchs Group  
www.pepperl-fuchs.com

USA: +1 330 486 0001  
fa-info@us.pepperl-fuchs.com

Germany: +49 621 776 1111  
fa-info@de.pepperl-fuchs.com

Singapore: +65 6779 9091  
fa-info@sg.pepperl-fuchs.com

 PEPPERL+FUCHS

## Technical Data

### Functional safety related parameters

|                                |        |
|--------------------------------|--------|
| MTTF <sub>d</sub>              | 1600 a |
| Mission Time (T <sub>M</sub> ) | 20 a   |
| Diagnostic Coverage (DC)       | 0 %    |

### Compliance with standards and directives

|                     |                                         |
|---------------------|-----------------------------------------|
| Standard conformity |                                         |
| Standards           | EN 60947-5-2:2007<br>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 |

### Ambient conditions

|                     |                                |
|---------------------|--------------------------------|
| Ambient temperature | -25 ... 70 °C (-13 ... 158 °F) |
|---------------------|--------------------------------|

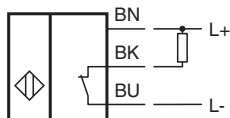
### Mechanical specifications

|                      |                          |
|----------------------|--------------------------|
| Connection type      | cable PVC , 2 m          |
| Cable version        | 3 x 0.14 mm <sup>2</sup> |
| Housing material     | brass, nickel-plated     |
| Sensing face         | PBT                      |
| Degree of protection | IP67                     |

### General information

|                   |                                          |
|-------------------|------------------------------------------|
| 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 |