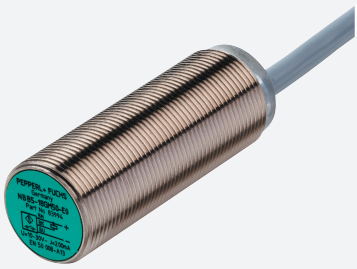


## Inductive sensor

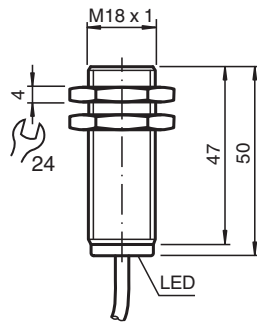
### NBB8-18GM50-E2-3G-3D-5M



- 8 mm flush
- Increased operating distance
- ATEX-approval for zone 2 and zone 22



## Dimensions



## Technical Data

### General specifications

|                            |       |                    |
|----------------------------|-------|--------------------|
| Switching function         |       | Normally open (NO) |
| Output type                |       | PNP                |
| Rated operating distance   | $s_n$ | 8 mm               |
| Installation               |       | flush              |
| Output polarity            |       | DC                 |
| Assured operating distance | $s_a$ | 0 ... 6.48 mm      |
| Reduction factor $r_{AI}$  |       | 0.45               |
| Reduction factor $r_{Cu}$  |       | 0.4                |
| Reduction factor $r_{304}$ |       | 0.7                |
| Output type                |       | 3-wire             |

### Nominal ratings

|                             |       |                            |
|-----------------------------|-------|----------------------------|
| Operating voltage           | $U_B$ | 10 ... 30 V                |
| Switching frequency         | $f$   | 0 ... 500 Hz               |
| Hysteresis                  | $H$   | typ. 5 %                   |
| Reverse polarity protection |       | reverse polarity protected |

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

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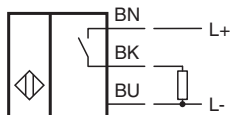
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**PEPPERL+FUCHS**

## Technical Data

|                                                              |       |                                                                                                                                    |
|--------------------------------------------------------------|-------|------------------------------------------------------------------------------------------------------------------------------------|
| Short-circuit protection                                     |       | pulsing                                                                                                                            |
| Voltage drop                                                 | $U_d$ | $\leq 3 \text{ V}$                                                                                                                 |
| Operating current                                            | $I_L$ | 0 ... 200 mA                                                                                                                       |
| Off-state current                                            | $I_r$ | 0 ... 0.5 mA typ. 0.1 $\mu\text{A}$ at 25 °C                                                                                       |
| No-load supply current                                       | $I_0$ | $\leq 15 \text{ mA}$                                                                                                               |
| Time delay before availability                               | $t_v$ | $\leq 20 \text{ ms}$                                                                                                               |
| Switching state indicator                                    |       | LED, yellow                                                                                                                        |
| <b>Functional safety related parameters</b>                  |       |                                                                                                                                    |
| MTTF <sub>d</sub>                                            |       | 2240 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                                                                                                      |
| CSA approval                                                 |       | cCSAus Listed, General Purpose                                                                                                     |
| CCC approval                                                 |       | CCC approval / marking not required for products rated $\leq 36 \text{ V}$                                                         |
| <b>Ambient conditions</b>                                    |       |                                                                                                                                    |
| Ambient temperature                                          |       | -25 ... 70 °C (-13 ... 158 °F)                                                                                                     |
| <b>Mechanical specifications</b>                             |       |                                                                                                                                    |
| Connection type                                              |       | cable PVC, 5 m                                                                                                                     |
| Core cross-section                                           |       | 0.34 mm <sup>2</sup>                                                                                                               |
| Housing material                                             |       | brass, nickel-plated                                                                                                               |
| Sensing face                                                 |       | PBT                                                                                                                                |
| Degree of protection                                         |       | IP66 / IP67                                                                                                                        |
| Cable                                                        |       |                                                                                                                                    |
| Cable diameter                                               |       | 4.8 mm $\pm$ 0.2 mm                                                                                                                |
| Bending radius                                               |       | > 10 x cable diameter                                                                                                              |
| <b>Equipment protection level Dc (tc)</b>                    |       |                                                                                                                                    |
| <b>Special conditions</b>                                    |       |                                                                                                                                    |
| Maximum permissible ambient temperature<br>T <sub>Umax</sub> |       | dependant of the load current $I_L$ and the max. operating voltage $U_{Bmax}$<br>Information can be taken from the following list. |
| <b>General information</b>                                   |       |                                                                                                                                    |
| Use in the hazardous area                                    |       | see instruction manuals                                                                                                            |

## Connection



## Accessories

**BF 18**

Mounting flange, 18 mm

Accessories

|                                                                                   |               |                                       |
|-----------------------------------------------------------------------------------|---------------|---------------------------------------|
|  | <b>EXG-18</b> | Quick mounting bracket with dead stop |
|-----------------------------------------------------------------------------------|---------------|---------------------------------------|

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