

# Inductive sensor

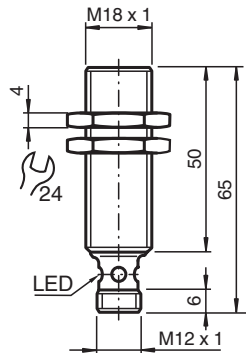
## NBB8-18GM50-E2-V1-3G-3D



- Increased operating distance
- 8 mm flush
- 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 $r_{Al}$  |       | 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 DC             |
| Switching frequency         | $f$   | 0 ... 500 Hz               |
| Hysteresis                  | $H$   | typ. 5 %                   |
| Reverse polarity protection |       | reverse polarity protected |
| Short-circuit protection    |       | pulsing                    |

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

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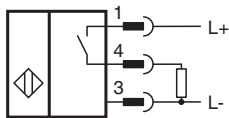
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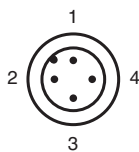
## Technical Data

|   |       |   |
|---|-------|---|
| 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                       |       | Multihole-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>               |       |   |
| ATEX approval                                   |       |   |
| Equipment protection level Gc (nA)              |       | PF 15 CERT 3754 X   |
| Equipment protection level Dc (tc)              |       | PF 15CERT3774 X   |
| UL approval                                     |       | cULus Listed, General Purpose   |
| CSA approval                                    |       | cCSAus Listed, General Purpose  |
| Marine approval                                 |       | DNVGL TAA0000160  |
| <b>Ambient conditions</b>                       |       |   |
| Ambient temperature                             |       | -25 ... 70 °C (-13 ... 158 °F)  |
| <b>Mechanical specifications</b>                |       |   |
| Connection type                                 |       | Connector plug M12 x 1 , 4-pin  |
| Housing material                                |       | brass, nickel-plated  |
| Sensing face                                    |       | PBT   |
| Degree of protection                            |       | IP67  |
| <b>General information</b>                      |       |   |
| Use in the hazardous area                       |       | see instruction manuals   |

## 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

|   |               |                                       |
|---|---------------|---------------------------------------|
|  | <b>BF 18</b>  | Mounting flange, 18 mm                |
|  | <b>EXG-18</b> | Quick mounting bracket with dead stop |

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