

# Inductive sensor

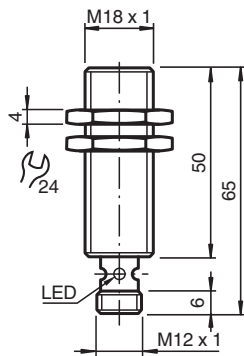
## NBB5-18GM50-E2-C-V1



- 5 mm flush
- Weld Immune



### Dimensions



### Technical Data

| General specifications      |       |                            |
|-----------------------------|-------|----------------------------|
| Switching function          |       | Normally open (NO)         |
| Output type                 |       | PNP                        |
| Rated operating distance    | $s_n$ | 5 mm                       |
| Installation                |       | flush                      |
| Output polarity             |       | DC                         |
| Assured operating distance  | $s_a$ | 0 ... 4.05 mm              |
| Reduction factor $r_{Al}$   |       | 0.3                        |
| Reduction factor $r_{Cu}$   |       | 0.2                        |
| Reduction factor $r_{304}$  |       | 0.6                        |
| Output type                 |       | 3-wire                     |
| Nominal ratings             |       |                            |
| Operating voltage           | $U_B$ | 10 ... 30 V DC             |
| Switching frequency         | $f$   | 0 ... 800 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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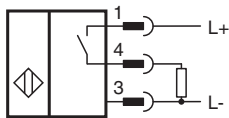
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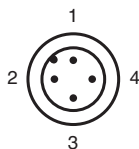
## Technical Data

|   |       |   |
|---|-------|---|
| 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                          | $I_0$ | $\leq 15 \text{ mA}$  |
| Constant magnetic field                         | B     | 150 mT  |
| Alternating magnetic field                      | B     | 150 mT  |
| Switching state indicator                       |       | Multihole-LED, yellow   |
| <b>Functional safety related parameters</b>     |       |   |
| MTTF <sub>d</sub>                               |       | 1740 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                                 |       | Connector plug M12 x 1, 4-pin   |
| Housing material                                |       | Brass, PTFE coated  |
| Sensing face                                    |       | PPS   |
| Degree of protection                            |       | IP67  |

## 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) |

## Accessories

|   |                      |   |
|---|----------------------|---|
|  | <b>BF 18</b>         | Mounting flange, 18 mm  |
|  | <b>V1-G-2M-PUR</b>   | Female cordset single-ended M12 straight A-coded, 4-pin, PUR cable grey   |
|  | <b>V1-W-2M-PUR</b>   | Female cordset single-ended M12 angled A-coded, 4-pin, PUR cable grey   |
|  | <b>V1-G-OR2M-POC</b> | Female cordset single-ended M12 straight A-coded, 4-pin, POC cable welding-bead resistant orange, suitable for robotic applications, torsion resistant, oil resistant, molecularly cross-linked |
|  | <b>V1-W-OR2M-POC</b> | Female cordset single-ended M12 angled A-coded, 4-pin, POC cable welding-bead resistant orange, suitable for robotic applications, torsion resistant, oil resistant, molecularly cross-linked   |

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