



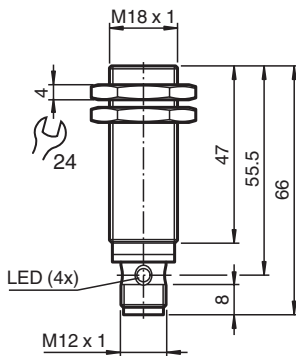
# Inductive sensor

## NBB5-18GM50-E2-V1

- 5 mm flush
- Extended temperature range  
-40 ... +85 °C
- Extended operating voltage range
- Flexible use with versatile mounting opportunities



### 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   |
| Actuating element            |       | mild steel, e. g. 1.0037, SR235JR (formerly St37-2)<br>18 mm x 18 mm x 1 mm |
| Reduction factor $r_{Al}$    |       | 0.35  |
| Reduction factor $r_{Cu}$    |       | 0.29  |
| Reduction factor $r_{304}$   |       | 0.73  |
| Reduction factor $r_{Brass}$ |       | 0.44  |
| Output type                  |       | 3-wire  |

#### Nominal ratings

|                             |       |                            |
|-----------------------------|-------|----------------------------|
| Operating voltage           | $U_B$ | 5 ... 36 V                 |
| Switching frequency         | $f$   | 0 ... 1950 Hz              |
| Hysteresis                  | $H$   | typ. 5 %                   |
| Reverse polarity protection |       | reverse polarity protected |
| Short-circuit protection    |       | pulsing                    |
| Voltage drop                | $U_d$ | ≤ 1 V                      |
| Operating current           | $I_L$ | 0 ... 200 mA               |
| Off-state current           | $I_r$ | max. 20 $\mu$ A            |
| No-load supply current      | $I_0$ | ≤ 10 mA                    |

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

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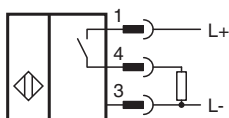
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PEPPERL+FUCHS

## Technical Data

|   |                  |  |
|---|------------------|--|
| Time delay before availability                  | $t_v$            | $\leq 10$ ms   |
| Switching state indicator                       |                  | Multihole-LED, yellow  |
| <b>Functional safety related parameters</b>     |                  |  |
| MTTF <sub>d</sub>                               |                  | 1721 a   |
| Mission Time (T <sub>M</sub> )                  |                  | 20 a   |
| Diagnostic Coverage (DC)                        |                  | 0 %  |
| <b>Conformity</b>                               |                  |  |
| PWIS conformity                                 |                  | VDMA 24364-A1/B2/C1/T100°C-W                                       |
| <b>Compliance with standards and directives</b> |                  |  |
| Standard conformity                             |                  |  |
| Standards                                       |                  | EN IEC 60947-5-2   |
| <b>Approvals and certificates</b>               |                  |  |
| Protection class                                |                  | II   |
| Rated insulation voltage                        | U <sub>i</sub>   | 36 V   |
| Rated impulse withstand voltage                 | U <sub>imp</sub> | 500 V  |
| UL approval                                     |                  | cULus Listed, General Purpose, Class 2 Power Source                |
| CCC approval                                    |                  | CCC approval / marking not required for products rated $\leq 36$ V |
| Marine approval                                 |                  | DNVGL TAA00003AK   |
| <b>Ambient conditions</b>                       |                  |  |
| Ambient temperature                             |                  | -40 ... 85 °C (-40 ... 185 °F)                                     |
| Storage temperature                             |                  | -40 ... 85 °C (-40 ... 185 °F)                                     |
| <b>Mechanical specifications</b>                |                  |  |
| Connection type                                 |                  | Connector plug   |
| Housing material                                |                  | brass , white bronze coated  |
| Sensing face                                    |                  | PBT , green  |
| Degree of protection                            |                  | IP65 / IP66 / IP67 / IP68  |
| <b>Connector</b>                                |                  |  |
| Threading                                       |                  | M12 x 1  |
| Number of pins                                  |                  | 3  |
| Mass  |                  | 61 g   |
| <b>Dimensions</b>                               |                  |  |
| Length  |                  | 66 mm  |
| Diameter  |                  | 18 mm  |
| Mounting  |                  | with nuts, M18   |
| Tightening torque                               |                  | 0 ... 30 Nm  |
| <b>General information</b>                      |                  |  |
| Scope of delivery                               |                  | 2 self locking nuts in scope of delivery                           |

## Connection



# Connection Assignment



Wire colors in accordance with EN 60947-5-2

|   |    |         |
|---|----|---------|
| 1 | BN | (brown) |
| 2 | WH | (white) |
| 3 | BU | (blue)  |
| 4 | BK | (black) |

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