

# Inductive sensor

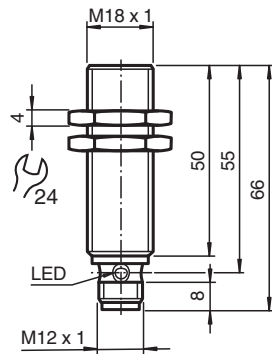
## NBB5-18GS50-Z4L-V1-3G-3D



- 5 mm flush
- 2-wire DC sensor with minimum off-state current
- Switching status indicator, yellow LED
- ATEX-/IECEx-approvals for zone 2/22 (Ex ec/tc)
- Stainless steel housing



### Dimensions



### Technical Data

#### General specifications

|                            |       |   |
|----------------------------|-------|---|
| Switching function         |       | Normally open (NO)                      |
| Output type                |       | Two-wire with minimum off-state current |
| Rated operating distance   | $s_n$ | 5 mm                                    |
| Installation               |       | flush                                   |
| Output polarity            |       | DC                                      |
| Assured operating distance | $s_a$ | 0 ... 4.05 mm                           |
| Actual operating distance  | $s_r$ | 4.5 ... 5.5 mm                          |
| Reduction factor $r_{AI}$  |       | 0.2                                     |
| Reduction factor $r_{Cu}$  |       | 0.13                                    |
| Reduction factor $r_{304}$ |       | 0.62                                    |
| Output type                |       | 2-wire                                  |

#### Nominal ratings

|                             |       |                   |
|-----------------------------|-------|-------------------|
| Operating voltage           | $U_B$ | 4 ... 30 V        |
| Switching frequency         | $f$   | 0 ... 500 Hz      |
| Hysteresis                  | $H$   | 1 ... 10 typ. 5 % |
| Reverse polarity protection |       | yes               |

Release date: 2023-09-15 Date of issue: 2023-09-15 Filename: 70134926-0006\_eng.pdf

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

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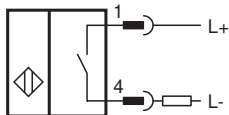
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PEPPERL+FUCHS

## Technical Data

|   |       |   |
|---|-------|---|
| Short-circuit protection                        |       | pulsing   |
| Voltage drop                                    | $U_d$ | $\leq 4 \text{ V}$  |
| Operating current                               | $I_L$ | 2 ... 30 mA   |
| Lowest operating current                        | $I_m$ | 2 mA  |
| Off-state current                               | $I_r$ | $\leq 200 \mu\text{A}$  |
| Switching state indicator                       |       | Multihole-LED, yellow   |
| <b>Functional safety related parameters</b>     |       |   |
| MTTF <sub>d</sub>                               |       | 1581 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>               |       |   |
| IECEX approval                                  |       |   |
| Equipment protection level Gc (ec)              |       | IECEX TUR 21.0017X  |
| Equipment protection level Dc (tc)              |       | IECEX TUR 21.0018X  |
| ATEX approval                                   |       |   |
| Equipment protection level Gc (ec)              |       | TÜV 20 ATEX 8523 X  |
| Equipment protection level Dc (tc)              |       | TÜV 20 ATEX 8524 X  |
| UL approval                                     |       | cULus Listed, General Purpose, Class 2 Power Source   |
| KCC approval                                    |       |   |
| Hazardous Location                              |       | 23-AV4BO-0236X  |
| <b>Ambient conditions</b>                       |       |   |
| Ambient temperature                             |       | -25 ... 70 °C (-13 ... 158 °F)  |
| Storage temperature                             |       | -40 ... 85 °C (-40 ... 185 °F)  |
| <b>Mechanical specifications</b>                |       |   |
| Connection type                                 |       | Connector plug M12 x 1 , 4-pin  |
| Housing material                                |       | Stainless steel 1.4305 / AISI 303   |
| Sensing face                                    |       | PBT   |
| Degree of protection                            |       | IP67  |
| Mass  |       | 59 g  |
| <b>General information</b>                      |       |   |
| Scope of delivery                               |       | 2 self locking nuts in scope of delivery  |

## Connection



## Connection Assignment

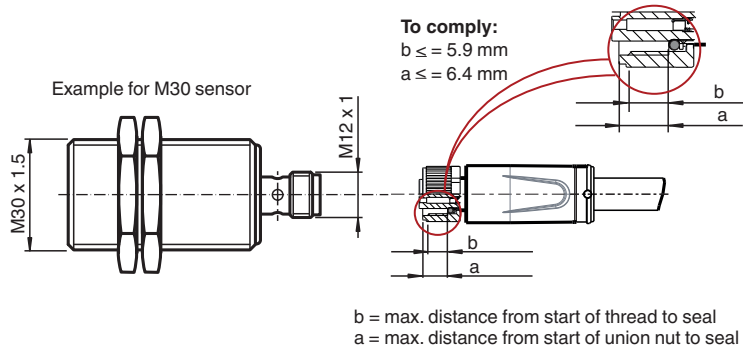


Wire colors in accordance with EN 60947-5-2

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

## Installation

### Requirement for male cordset to achieve IP degree of protection



## Accessories

|   |              |                        |
|---|--------------|------------------------|
|  | <b>BF 18</b> | Mounting flange, 18 mm |
|---|--------------|------------------------|

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