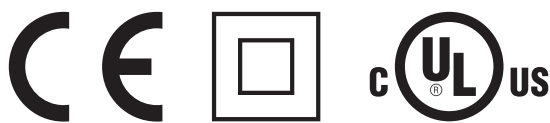


# Inductive sensor

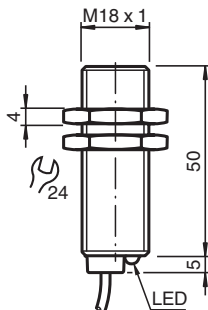
## NRB8-18GM50-A2-C



- Reduction factor = 1
- Magnetic field resistant
- Weld Immune



### Dimensions



### Technical Data

|                                    |                |                            |
|------------------------------------|----------------|----------------------------|
| <b>General specifications</b>      |                |                            |
| Rated operating distance           | S <sub>n</sub> | 8 mm                       |
| Installation                       |                | flush                      |
| Output polarity                    |                | switched high              |
| Assured operating distance         | S <sub>a</sub> | 0 ... 6.48 mm              |
| Reduction factor r <sub>Al</sub>   |                | 1                          |
| Reduction factor r <sub>Cu</sub>   |                | 1                          |
| Reduction factor r <sub>304</sub>  |                | 1                          |
| Reduction factor r <sub>Si37</sub> |                | 1                          |
| Output type                        |                | 4-wire                     |
| <b>Nominal ratings</b>             |                |                            |
| Operating voltage                  | U <sub>B</sub> | 10 ... 30 V DC             |
| Switching frequency                | f              | 0 ... 600 Hz               |
| Hysteresis                         | H              | typ. 5 %                   |
| Reverse polarity protection        |                | reverse polarity protected |
| Short-circuit protection           |                | pulsing                    |

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

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**PEPPERL+FUCHS**

## Technical Data

|                                |           |                                              |
|--------------------------------|-----------|----------------------------------------------|
| Voltage drop                   | $U_d$     | $\leq 2 \text{ V}$                           |
| Rated insulation voltage       | $U_{BIS}$ | 60 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         | $I_0$     | $\leq 14 \text{ mA}$                         |
| Time delay before availability | $t_v$     | max. 15 ms                                   |
| Constant magnetic field        | B         | 200 mT                                       |
| Alternating magnetic field     | B         | 200 mT                                       |
| Switching state indicator      |           | all direction LED, yellow                    |

### Functional safety related parameters

|                                |  |        |
|--------------------------------|--|--------|
| MTTF <sub>d</sub>              |  | 1393 a |
| Mission Time (T <sub>M</sub> ) |  | 20 a   |
| Diagnostic Coverage (DC)       |  | 0 %    |

### Compliance with standards and directives

|                     |  |                                                                                             |
|---------------------|--|---------------------------------------------------------------------------------------------|
| 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 |

### Approvals and certificates

|                                 |           |                                                                            |
|---------------------------------|-----------|----------------------------------------------------------------------------|
| Protection class                |           | II                                                                         |
| Rated insulation voltage        | $U_i$     | 60 V                                                                       |
| Rated impulse withstand voltage | $U_{imp}$ | 800 V                                                                      |
| UL approval                     |           | cULus Listed, General Purpose<br>Class 2 power source                      |
| CCC approval                    |           | CCC approval / marking not required for products rated $\leq 36 \text{ V}$ |

### Ambient conditions

|                     |  |                                |
|---------------------|--|--------------------------------|
| Ambient temperature |  | -25 ... 70 °C (-13 ... 158 °F) |
| Storage temperature |  | -40 ... 85 °C (-40 ... 185 °F) |

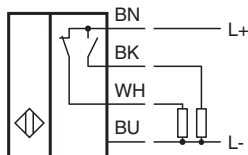
### Mechanical specifications

|                      |  |                      |
|----------------------|--|----------------------|
| Connection type      |  | cabl PUR , 2 m       |
| Core cross-section   |  | 0.34 mm <sup>2</sup> |
| Housing material     |  | Brass, PTFE coated   |
| Sensing face         |  | PPS                  |
| Degree of protection |  | IP68 / IP69K         |
| Mass                 |  | 80 g                 |

### General information

|                   |  |                                          |
|-------------------|--|------------------------------------------|
| Scope of delivery |  | 2 self locking nuts in scope of delivery |
|-------------------|--|------------------------------------------|

## Connection



## Accessories



BF 18

Mounting flange, 18 mm

Accessories

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

Release date: 2020-03-24 Date of issue: 2020-03-30 Filename: 292526\_eng.pdf