

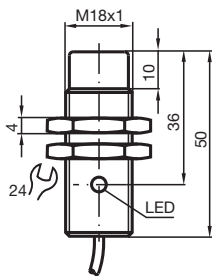
# Inductive sensor NJ8-18GM50-E3-5M



- Comfort series
- 8 mm non-flush



## Dimensions



## Technical Data

### General specifications

|                              |       |                          |
|------------------------------|-------|--------------------------|
| Switching function           |       | Normally closed (NC)     |
| Output type                  |       | PNP                      |
| Rated operating distance     | $s_n$ | 8 mm                     |
| Installation                 |       | non-flush                |
| Output polarity              |       | DC                       |
| Assured operating distance   | $s_a$ | 0 ... 6.48 mm            |
| Actual operating distance    | $s_r$ | 7.2 ... 8.8 mm typ. 8 mm |
| Reduction factor $r_{Al}$    |       | 0.42                     |
| Reduction factor $r_{Cu}$    |       | 0.4                      |
| Reduction factor $r_{304}$   |       | 0.72                     |
| Reduction factor $r_{Brass}$ |       | 0.5                      |
| Output type                  |       | 3-wire                   |

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

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**PEPPERL+FUCHS**

## Technical Data

### Nominal ratings

|                                                        |       |                            |
|--------------------------------------------------------|-------|----------------------------|
| Installation conditions                                |       |                            |
| A                                                      |       | 10 mm                      |
| B                                                      |       | 54 mm                      |
| C                                                      |       | 24 mm                      |
| Operating voltage                                      | $U_B$ | 10 ... 60 V                |
| Switching frequency                                    | $f$   | 0 ... 1000 Hz              |
| Hysteresis                                             | H     | 1 ... 10 typ. 7.5 %        |
| Reverse polarity protection                            |       | reverse polarity protected |
| Short-circuit protection                               |       | pulsing                    |
| Voltage drop                                           | $U_d$ | $\leq 3$ V                 |
| Voltage drop at $I_L$                                  |       |                            |
| Voltage drop $I_L = 100$ mA, switching element on      | $U_d$ | 1.5 ... 2.5 V typ. 1.9 V   |
| Operating current                                      | $I_L$ | 0 ... 200 mA               |
| Lowest operating current                               | $I_m$ | 0 mA                       |
| Off-state current                                      | $I_r$ | 0 ... 0.5 mA typ. 0.01 mA  |
| Off-state current $T_U = 40$ °C, switching element off |       | $\leq 100$ $\mu$ A         |
| No-load supply current                                 | $I_0$ | $\leq 9$ mA                |
| Time delay before availability                         | $t_v$ | $\leq 30$ ms               |
| Switching state indicator                              |       | LED, yellow                |

### Functional safety related parameters

|                          |  |        |
|--------------------------|--|--------|
| MTTF <sub>d</sub>        |  | 1424 a |
| Mission Time ( $T_M$ )   |  | 20 a   |
| Diagnostic Coverage (DC) |  | 0 %    |

### Compliance with standards and directives

|                     |  |                                         |
|---------------------|--|-----------------------------------------|
| Standard conformity |  |                                         |
| Standards           |  | EN 60947-5-2:2007<br>IEC 60947-5-2:2007 |

### Approvals and certificates

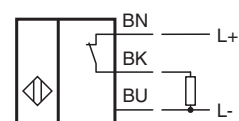
|              |  |                                                   |
|--------------|--|---------------------------------------------------|
| UL approval  |  | cULus Listed, General Purpose                     |
| CSA approval |  | cCSAus Listed, General Purpose                    |
| CCC approval |  | Certified by China Compulsory Certification (CCC) |

### Ambient conditions

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

### Mechanical specifications

|                      |  |                                   |
|----------------------|--|-----------------------------------|
| Connection type      |  | cable PVC , 5 m                   |
| Core cross-section   |  | 0.5 mm <sup>2</sup>               |
| Housing material     |  | Stainless steel 1.4305 / AISI 303 |
| Sensing face         |  | PBT                               |
| Degree of protection |  | IP67                              |



## Connection Assignment

Accessories

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

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