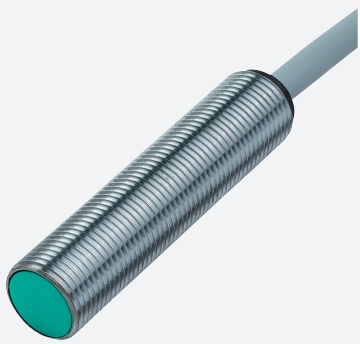


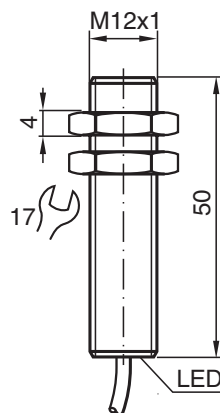


## Inductive sensor NEB6-12GM50-E1

- Increased operating distance
- 6 mm flush



### Dimensions



### Technical Data

#### General specifications

|                              |       |                                                                             |
|------------------------------|-------|-----------------------------------------------------------------------------|
| Switching function           |       | Normally closed (NC)                                                        |
| Output type                  |       | NPN                                                                         |
| Rated operating distance     | $s_n$ | 6 mm                                                                        |
| Installation                 |       | quasi flush                                                                 |
| Output polarity              |       | DC                                                                          |
| Assured operating distance   | $s_a$ | 0 ... 4.8 mm                                                                |
| Actuating element            |       | mild steel, e. g. 1.0037, SR235JR (formerly St37-2)<br>18 mm x 18 mm x 1 mm |
| Reduction factor $r_{Al}$    |       | 0.28                                                                        |
| Reduction factor $r_{Cu}$    |       | 0.2                                                                         |
| Reduction factor $r_{304}$   |       | 0.7                                                                         |
| Reduction factor $r_{Brass}$ |       | 0.35                                                                        |

#### Nominal ratings

|                         |  |                                                          |
|-------------------------|--|----------------------------------------------------------|
| Installation conditions |  |                                                          |
| A                       |  | in steel 1.0037 (St37): 2.4 mm<br>in other metal: 1.2 mm |

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

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 **PEPPERL+FUCHS**

## Technical Data

|                                |       |                                       |
|--------------------------------|-------|---------------------------------------|
| B                              |       | 12 mm                                 |
| C                              |       | 18 mm                                 |
| F                              |       | 24 mm                                 |
| Operating voltage              | $U_B$ | 10 ... 30 V DC                        |
| Switching frequency            | $f$   | 0 ... 800 Hz                          |
| Hysteresis                     | H     | 0.06 ... 1.2 mm                       |
| Reverse polarity protection    |       | yes                                   |
| Short-circuit protection       |       | pulsing                               |
| Overload resistance            |       | yes                                   |
| Wire breakage protection       |       | yes                                   |
| Surge suppression              |       | yes                                   |
| Ripple                         |       | 10 %                                  |
| Voltage drop                   | $U_d$ | $\leq 2$ V                            |
| Repeat accuracy                | R     | 0.3 mm                                |
| Operating current              | $I_L$ | 0 ... 200 mA , above 70°C max. 150 mA |
| Off-state current              | $I_r$ | $\leq 10$ $\mu$ A                     |
| No-load supply current         | $I_0$ | $\leq 15$ mA                          |
| Time delay before availability | $t_v$ | $\leq 50$ ms                          |
| Switching state indicator      |       | LED, yellow                           |

### Functional safety related parameters

|                          |  |        |
|--------------------------|--|--------|
| MTTF <sub>d</sub>        |  | 1740 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

|                |  |                                                                    |
|----------------|--|--------------------------------------------------------------------|
| EAC conformity |  | TR CU 020/2011                                                     |
| UL approval    |  | cULus Listed, General Purpose                                      |
| CCC approval   |  | CCC approval / marking not required for products rated $\leq 36$ V |

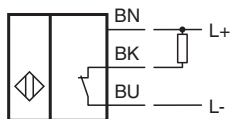
### Ambient conditions

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

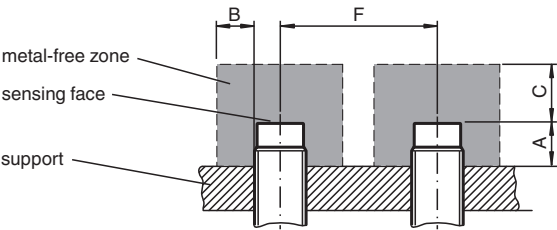
### Mechanical specifications

|                      |  |                      |
|----------------------|--|----------------------|
| Connection type      |  | cablE PUR , 2 m      |
| Core cross-section   |  | 0.34 mm <sup>2</sup> |
| Housing material     |  | brass, nickel-plated |
| Sensing face         |  | PBT                  |
| Degree of protection |  | IP67                 |
| Mass                 |  | 80 g                 |

## Connection



Installation



Accessories

|                                                                                   |              |                        |
|-----------------------------------------------------------------------------------|--------------|------------------------|
|  | <b>BF 12</b> | Mounting flange, 12 mm |
|-----------------------------------------------------------------------------------|--------------|------------------------|