

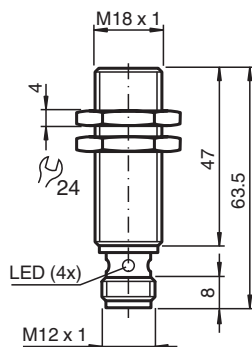


## Inductive sensor NEB12-18GM50-E1-V1

- Increased operating distance
- 12 mm quasi flush



### Dimensions



### Technical Data

#### General specifications

|                              |                                                                             |               |
|------------------------------|-----------------------------------------------------------------------------|---------------|
| Switching function           | Normally closed (NC)                                                        |               |
| Output type                  |                                                                             | NPN           |
| Rated operating distance     | $s_n$                                                                       | 12 mm         |
| Installation                 |                                                                             | quasi flush   |
| Output polarity              |                                                                             | DC            |
| Assured operating distance   | $s_a$                                                                       | 0 ... 9.72 mm |
| Actuating element            | mild steel, e. g. 1.0037, SR235JR (formerly St37-2)<br>36 mm x 36 mm x 1 mm |               |
| Reduction factor $r_{Al}$    |                                                                             | 0.26          |
| Reduction factor $r_{Cu}$    |                                                                             | 0.2           |
| Reduction factor $r_{304}$   |                                                                             | 0.63          |
| Reduction factor $r_{Brass}$ |                                                                             | 0.33          |
| Output type                  |                                                                             | 3-wire        |

#### Nominal ratings

|                         |       |                              |
|-------------------------|-------|------------------------------|
| Installation conditions |       |                              |
| A                       |       | in steel 1.0037 (St37): 4 mm |
| B                       |       | 14 mm                        |
| C                       |       | 36 mm                        |
| F                       |       | 36 mm                        |
| Operating voltage       | $U_B$ | 10 ... 30 V                  |

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

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PEPPERL+FUCHS

## Technical Data

|                                  |       |                   |
|----------------------------------|-------|-------------------|
| Switching frequency              | f     | 0 ... 500 Hz      |
| Hysteresis                       | H     | 0.12 ... 1.8 mm   |
| Reverse polarity protection      |       | yes               |
| Short-circuit protection         |       | pulsing           |
| Overload resistance              |       | yes               |
| Wire breakage protection         |       | yes               |
| Inductive overvoltage protection |       | yes               |
| Surge suppression                |       | yes               |
| Ripple                           |       | 10 %              |
| Voltage drop                     | $U_d$ | $\leq 2$ V        |
| Repeat accuracy                  | R     | 0.6 mm            |
| Operating current                | $I_L$ | 0 ... 200 mA      |
| Off-state current                | $I_r$ | $\leq 10$ $\mu$ A |
| No-load supply current           | $I_0$ | $\leq 11$ mA      |
| Time delay before availability   | $t_v$ | $\leq 50$ ms      |
| Switching state indicator        |       | LED, yellow       |

### Functional safety related parameters

|                                |  |        |
|--------------------------------|--|--------|
| MTTF <sub>d</sub>              |  | 2650 a |
| Mission Time (T <sub>M</sub> ) |  | 20 a   |
| Diagnostic Coverage (DC)       |  | 0 %    |

### Compliance with standards and directives

|                     |  |                  |
|---------------------|--|------------------|
| Standard conformity |  |                  |
| Standards           |  | EN IEC 60947-5-2 |

### Approvals and certificates

|              |  |                                                                    |
|--------------|--|--------------------------------------------------------------------|
| UL approval  |  | cULus Listed, General Purpose                                      |
| CCC approval |  | CCC approval / marking not required for products rated $\leq 36$ V |

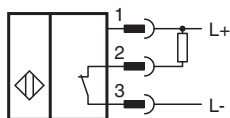
### Ambient conditions

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

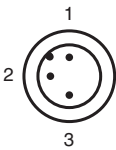
### Mechanical specifications

|                      |  |                                |
|----------------------|--|--------------------------------|
| Connection type      |  | Connector plug M12 x 1 , 3-pin |
| Housing material     |  | brass, nickel-plated           |
| Sensing face         |  | PBT                            |
| Degree of protection |  | IP67                           |
| Mass                 |  | 50 g                           |
| Dimensions           |  |                                |
| Length               |  | 69 mm                          |
| Diameter             |  | 18 mm                          |

## Connection



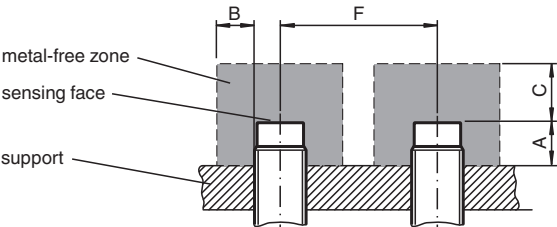
Connection Assignment



Wire colors in accordance with EN 60947-5-2

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

Installation



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