

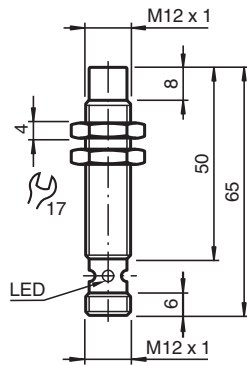


## Inductive sensor NBN8-12GM50-A0-V1

- 8 mm non-flush
- Increased operating distance



### Dimensions



### Technical Data

#### General specifications

|                            |       |               |
|----------------------------|-------|---------------|
| Switching function         |       | complementary |
| Output type                |       | NPN           |
| Rated operating distance   | $s_n$ | 8 mm          |
| Installation               |       | non-flush     |
| Output polarity            |       | DC            |
| Assured operating distance | $s_a$ | 0 ... 6.48 mm |
| Reduction factor $r_{AI}$  |       | 0.39          |
| Reduction factor $r_{CU}$  |       | 0.35          |
| Reduction factor $r_{304}$ |       | 0.7           |

#### Nominal ratings

|                             |       |                            |
|-----------------------------|-------|----------------------------|
| Operating voltage           | $U_B$ | 10 ... 30 V                |
| Switching frequency         | $f$   | 0 ... 1500 Hz              |
| Hysteresis                  | $H$   | typ. 5%                    |
| Reverse polarity protection |       | reverse polarity protected |
| Short-circuit protection    |       | pulsing                    |

Release date: 2020-03-23 Date of issue: 2020-03-30 Filename: 187653\_eng.pdf

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

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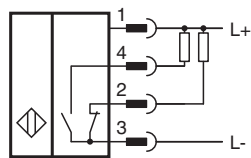
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**PEPPERL+FUCHS**

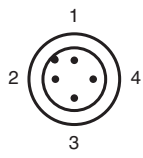
Technical Data

|                                                 |       |                                                                           |
|-------------------------------------------------|-------|---------------------------------------------------------------------------|
| Voltage drop                                    | $U_d$ | $\leq 3\text{ V}$                                                         |
| 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                              |
| Switching state indicator                       |       | Multihole-LED, yellow                                                     |
| <b>Functional safety related parameters</b>     |       |                                                                           |
| MTTF <sub>d</sub>                               |       | 1702 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>IEC 60947-5-2:2007                                   |
| <b>Approvals and certificates</b>               |       |                                                                           |
| EAC conformity                                  |       | TR CU 020/2011                                                            |
| UL approval                                     |       | cULus Listed, General Purpose                                             |
| CSA approval                                    |       | cCSAus Listed, General Purpose                                            |
| CCC approval                                    |       | CCC approval / marking not required for products rated $\leq 36\text{ V}$ |
| <b>Ambient conditions</b>                       |       |                                                                           |
| Ambient temperature                             |       | -25 ... 70 °C (-13 ... 158 °F)                                            |
| <b>Mechanical specifications</b>                |       |                                                                           |
| Connection type                                 |       | Connector M12 x 1 , 4-pin                                                 |
| Housing material                                |       | brass, nickel-plated                                                      |
| Sensing face                                    |       | PBT                                                                       |
| Degree of protection                            |       | IP67                                                                      |
| <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) |

## Accessories

|                                                                                   |                    |                                       |
|-----------------------------------------------------------------------------------|--------------------|---------------------------------------|
|  | <b>BF 12</b>       | Mounting flange, 12 mm                |
|  | <b>V1-G-2M-PUR</b> | Female cordset, M12, 4-pin, PUR cable |
|  | <b>V1-W-2M-PUR</b> | Female cordset, M12, 4-pin, PUR cable |