

# Inductive sensor

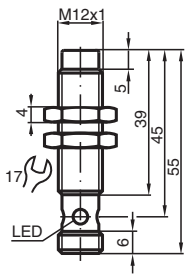
## NBN4-12GM40-Z3-V1



- 4 mm non-flush
- 2-wire DC



### Dimensions



### Technical Data

| General specifications      |       |                           |
|-----------------------------|-------|---------------------------|
| Switching function          |       | Normally open (NO)        |
| Output type                 |       | Two-wire                  |
| Rated operating distance    | $s_n$ | 4 mm                      |
| Installation                |       | non-flush                 |
| Output polarity             |       | DC                        |
| Assured operating distance  | $s_a$ | 0 ... 3.24 mm             |
| Actual operating distance   | $s_r$ | 3.6 ... 4.4 mm typ.       |
| Reduction factor $r_{Al}$   |       | 0.37                      |
| Reduction factor $r_{Cu}$   |       | 0.36                      |
| Reduction factor $r_{304}$  |       | 0.74                      |
| Output type                 |       | 2-wire                    |
| Nominal ratings             |       |                           |
| Operating voltage           | $U_B$ | 5 ... 60 V                |
| Switching frequency         | $f$   | 0 ... 1000 Hz             |
| Hysteresis                  | $H$   | 1 ... 10 typ. 5 %         |
| Reverse polarity protection |       | reverse polarity tolerant |

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

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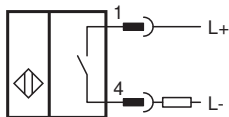
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**Technical Data**

|   |       |   |
|---|-------|---|
| Short-circuit protection                        |       | pulsing   |
| Voltage drop                                    | $U_d$ | $\leq 5$ V  |
| Operating current                               | $I_L$ | 2 ... 100 mA                                      |
| Lowest operating current                        | $I_m$ | 2 mA  |
| Off-state current                               | $I_r$ | 0 ... 0.5 mA typ.                                 |
| Switching state indicator                       |       | Multihole-LED, yellow                             |
| <b>Functional safety related parameters</b>     |       |   |
| MTTF <sub>d</sub>                               |       | 2300 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>               |       |   |
| UL approval                                     |       | cULus Listed, General Purpose                     |
| CCC approval                                    |       | Certified by China Compulsory Certification (CCC) |
| <b>Ambient conditions</b>                       |       |   |
| Ambient temperature                             |       | -25 ... 70 °C (-13 ... 158 °F)                    |
| <b>Mechanical specifications</b>                |       |   |
| Connection type                                 |       | Connector plug M12 x 1 , 4-pin                    |
| Housing material                                |       | brass, nickel-plated                              |
| Sensing face                                    |       | PBT   |
| Degree of protection                            |       | IP67  |

**Connection**



**Connection Assignment**



Wire colors in accordance with EN 60947-5-2

- |   |  |    |         |
|---|--|----|---------|
| 1 |  | BN | (brown) |
| 2 |  | WH | (white) |
| 3 |  | BU | (blue)  |
| 4 |  | BK | (black) |

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