

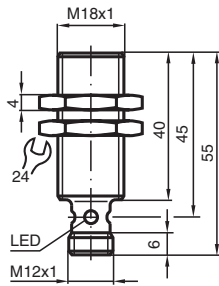
# Inductive sensor NBB5-18GM40-Z3-V1



- 5 mm flush
- 2-wire DC



## Dimensions



## Technical Data

### General specifications

|                            |       |                          |
|----------------------------|-------|--------------------------|
| Switching function         |       | Normally open (NO)       |
| Output type                |       | Two-wire                 |
| Rated operating distance   | $s_n$ | 5 mm                     |
| Installation               |       | flush                    |
| Output polarity            |       | DC                       |
| Assured operating distance | $s_a$ | 0 ... 4.05 mm            |
| Actual operating distance  | $s_r$ | 4.5 ... 5.5 mm typ. 5 mm |
| Reduction factor $r_{Al}$  |       | 0.34                     |
| Reduction factor $r_{Cu}$  |       | 0.31                     |
| Reduction factor $r_{304}$ |       | 0.72                     |
| Output type                |       | 2-wire                   |

### Nominal ratings

|                   |       |            |
|-------------------|-------|------------|
| Operating voltage | $U_B$ | 5 ... 60 V |
|-------------------|-------|------------|

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

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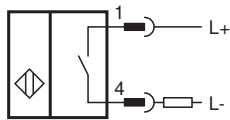
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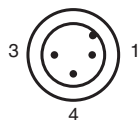
Technical Data

|                                          |                |                                                   |
|------------------------------------------|----------------|---------------------------------------------------|
| Switching frequency                      | f              | 0 ... 500 Hz                                      |
| Hysteresis                               | H              | 1 ... 10 % typ. 5 %                               |
| Reverse polarity protection              |                | reverse polarity tolerant                         |
| Short-circuit protection                 |                | pulsing                                           |
| Voltage drop                             | U <sub>d</sub> | ≤ 5 V                                             |
| Operating current                        | I <sub>L</sub> | 2 ... 100 mA                                      |
| Lowest operating current                 | I <sub>m</sub> | 2 mA                                              |
| Off-state current                        | I <sub>r</sub> | 0 ... 0.5 mA typ.                                 |
| Switching state indicator                |                | Multihole-LED, yellow                             |
| Functional safety related parameters     |                |                                                   |
| MTTF <sub>d</sub>                        |                | 1870 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                             |                | Certified by China Compulsory Certification (CCC) |
| Ambient conditions                       |                |                                                   |
| Ambient temperature                      |                | -25 ... 70 °C (-13 ... 158 °F)                    |
| Mechanical specifications                |                |                                                   |
| Connection type                          |                | Connector plug                                    |
| Housing material                         |                | brass, nickel-plated                              |
| Sensing face                             |                | PBT                                               |
| Degree of protection                     |                | IP67                                              |
| Connector                                |                |                                                   |
| Threading                                |                | M12 x 1                                           |
| Number of pins                           |                | 3                                                 |
| Mass                                     |                | 55 g                                              |
| Dimensions                               |                |                                                   |
| Length                                   |                | 40 mm                                             |
| Diameter                                 |                | 18 mm                                             |

Connection



Connection Assignment



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Connection Assignment

Wire colors in accordance with EN 60947-5-2

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

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