

# Inductive sensor

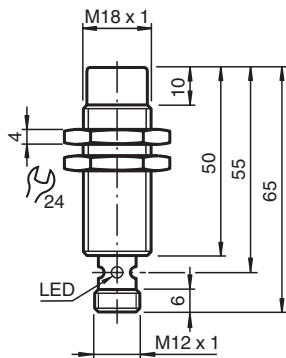
## NBN12-18GM50-EI-V1



- 12 mm non-flush
- Extended temperature range  
-40 ... +85 °C
- Digital current output



### Dimensions



### Technical Data

| General specifications       |       |  |                                                                             |
|------------------------------|-------|--|-----------------------------------------------------------------------------|
| Output type                  |       |  | Digital current output                                                      |
| Rated operating distance     | $s_n$ |  | 12 mm                                                                       |
| Installation                 |       |  | non-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>12 mm x 12 mm x 1 mm |
| Reduction factor $r_{Al}$    |       |  | 0.45                                                                        |
| Reduction factor $r_{Cu}$    |       |  | 0.4                                                                         |
| Reduction factor $r_{304}$   |       |  | 0.7                                                                         |
| Reduction factor $r_{Brass}$ |       |  | 0.5                                                                         |
| Output type                  |       |  | 3-wire                                                                      |
| Nominal ratings              |       |  |                                                                             |
| Operating voltage            | $U_B$ |  | 9 ... 30 V DC                                                               |
| Switching frequency          | $f$   |  | 0 ... 1000 Hz                                                               |
| Hysteresis                   | $H$   |  | 2 ... 15 %                                                                  |

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

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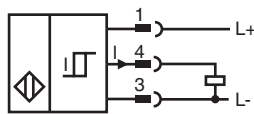
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**PEPPERL+FUCHS**

Technical Data

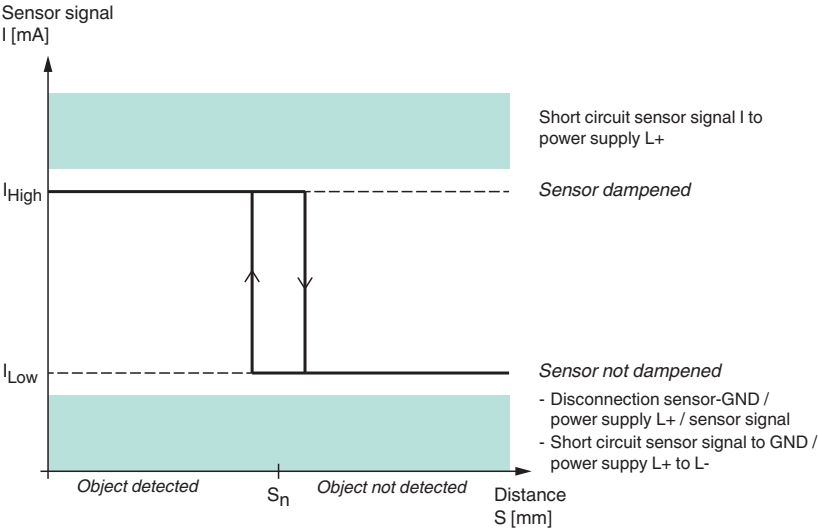
|                                          |                |                                                                   |
|------------------------------------------|----------------|-------------------------------------------------------------------|
| Reverse polarity protection              |                | reverse polarity protected                                        |
| Short-circuit protection                 |                | yes                                                               |
| Temperature drift                        |                | ≤ 10 %                                                            |
| Time delay before availability           | t <sub>v</sub> | ≤ 5 ms                                                            |
| Load resistor                            |                | 100 ... 250 Ohm                                                   |
| Switching state indicator                |                | LED, yellow                                                       |
| Functional safety related parameters     |                |                                                                   |
| MTTF <sub>d</sub>                        |                | 1601 a                                                            |
| Mission Time (T <sub>M</sub> )           |                | 20 a                                                              |
| Diagnostic Coverage (DC)                 |                | 0 %                                                               |
| Digital output                           |                |                                                                   |
| Output value                             |                | object detected: 10 mA ± 1 mA<br>object not detected: 5 mA ± 1 mA |
| Compliance with standards and directives |                |                                                                   |
| Standard conformity                      |                |                                                                   |
| Standards                                |                | EN IEC 60947-5-2                                                  |
| Approvals and certificates               |                |                                                                   |
| UL approval                              |                | cULus Listed, General Purpose, Class 2 Power Source               |
| Ambient conditions                       |                |                                                                   |
| Ambient temperature                      |                | -40 ... 85 °C (-40 ... 185 °F)                                    |
| Storage temperature                      |                | -40 ... 85 °C (-40 ... 185 °F)                                    |
| Mechanical specifications                |                |                                                                   |
| Connection type                          |                | Connector plug M12 x 1 , 4-pin                                    |
| Housing material                         |                | brass, nickel-plated                                              |
| Sensing face                             |                | PBT                                                               |
| Degree of protection                     |                | IP68 / IP69K                                                      |
| Dimensions                               |                |                                                                   |
| Length                                   |                | 65 mm                                                             |
| Diameter                                 |                | 18 mm                                                             |
| General information                      |                |                                                                   |
| Scope of delivery                        |                | 2 self locking nuts in scope of delivery                          |

Connection



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Characteristic Curve



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