

# Inductive sensor

## NBB8-18GM60-B3B-V1

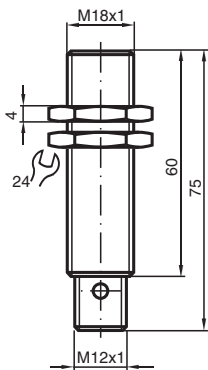


- 8 mm flush
- Cylindrical
- A/B node with extended addressing possibility for up to 62 nodes
- NO/NC selectable
- On/Off delay (disconnectable)

AS-Interface



### Dimensions



### Technical Data

| General specifications         |       |                                           |
|--------------------------------|-------|-------------------------------------------|
| Switching function             |       | Normally open/closed (NO/NC) programmable |
| Output type                    |       | AS-Interface                              |
| Rated operating distance       | $s_n$ | 8 mm                                      |
| Installation                   |       | flush                                     |
| Assured operating distance     | $s_a$ | 0 ... 6.48 mm                             |
| Reduction factor $r_{Al}$      |       | 0.4                                       |
| Reduction factor $r_{Cu}$      |       | 0.4                                       |
| Reduction factor $r_{304}$     |       | 0.7                                       |
| Reduction factor $r_{Brass}$   |       | 0.5                                       |
| Node type                      |       | A/B node                                  |
| AS-Interface specification     |       | V3.0                                      |
| Required gateway specification |       | $\geq V2.1$                               |
| Output type                    |       | 2-wire                                    |
| Nominal ratings                |       |                                           |
| Operating voltage              | $U_B$ | 26.5 ... 31.9 V via AS-i bus system       |
| Switching frequency            | $f$   | 0 ... 200 Hz                              |

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

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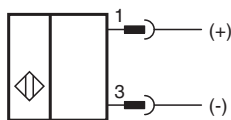
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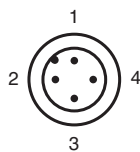
Technical Data

|                                          |                |                                                              |
|------------------------------------------|----------------|--------------------------------------------------------------|
| Hysteresis                               | H              | 1 ... 15 % typ. 5 %                                          |
| Reverse polarity protection              |                | reverse polarity protected                                   |
| No-load supply current                   | I <sub>0</sub> | ≤ 25 mA                                                      |
| Switching state indicator                |                | dual-LED, yellow                                             |
| Error indicator                          |                | dual-LED, red                                                |
| Functional safety related parameters     |                |                                                              |
| MTTF <sub>d</sub>                        |                | 926 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 ≤36 V |
| Ambient conditions                       |                |                                                              |
| Ambient temperature                      |                | -25 ... 70 °C (-13 ... 158 °F)                               |
| Storage temperature                      |                | -40 ... 85 °C (-40 ... 185 °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                           |                | 4                                                            |
| Dimensions                               |                |                                                              |
| Length                                   |                | 75 mm                                                        |
| Diameter                                 |                | 18 mm                                                        |

Connection



Connection Assignment



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

Additional Information

Programming Instructions

Adress 00     preset, alterable  
                 via Busmaster  
                 or programming units  
IO-Code     0  
ID-Code     A  
ID1-Code    7  
ID2-Code    E

Data bit

| Bit | Function        |
|-----|-----------------|
| D0  | Switching state |
| D1  | -               |
| D2  | -               |
| D3  | -               |

Parameter bit

| Bit | Function                                   |
|-----|--------------------------------------------|
| P0  | ON / Off delay<br>activated* / deactivated |
| P1  | Switching element function<br>NO* / NC     |
| P2  | not used                                   |
| P3  | not used                                   |

\*Standard setting

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