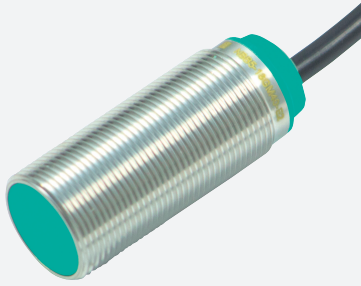


## Inductive sensor

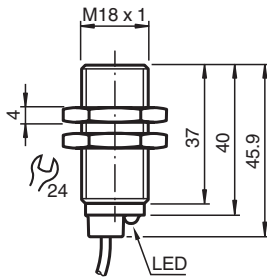
### NBB8-18GM40-EU-M1



- 8 mm flush
- 0.5 / 4.5 VDC switching output for mobile equipment controls
- Raised EMC resistance 30 V/m
- Extended temperature range  
-40 ... +85 °C
- Highly shock and vibration resistant
- With increased sealing, protection class  
IP68 / IP69K



## Dimensions



## Technical Data

### General specifications

|                              |       |                                                                             |
|------------------------------|-------|-----------------------------------------------------------------------------|
| Output type                  |       | Digital voltage output                                                      |
| Rated operating distance     | $s_n$ | 8 mm                                                                        |
| Installation                 |       | flush                                                                       |
| Output polarity              |       | DC                                                                          |
| Assured operating distance   | $s_a$ | 0 ... 6.48 mm                                                               |
| Actuating element            |       | mild steel, e. g. 1.0037, SR235JR (formerly St37-2)<br>24 mm x 24 mm x 1 mm |
| Reduction factor $r_{Al}$    |       | 0.4                                                                         |
| Reduction factor $r_{Cu}$    |       | 0.3                                                                         |
| Reduction factor $r_{304}$   |       | 0.7                                                                         |
| Reduction factor $r_{Brass}$ |       | 0.45                                                                        |
| Output type                  |       | 3-wire                                                                      |

### Nominal ratings

|                                |       |                            |
|--------------------------------|-------|----------------------------|
| Operating voltage              | $U_B$ | 7 ... 30 V DC              |
| Switching frequency            | $f$   | 0 ... 1600 Hz              |
| Hysteresis                     | $H$   | 2 ... 15 %                 |
| Reverse polarity protection    |       | reverse polarity protected |
| Short-circuit protection       |       | yes                        |
| Temperature drift              |       | ≤ 10 %                     |
| No-load supply current         | $I_0$ | ≤ 15 mA                    |
| Time delay before availability | $t_v$ | ≤ 100 ms                   |
| Load resistor                  |       | min. 20 kΩ                 |

Release date: 2024-07-03 Date of issue: 2024-07-03 Filename: 70128599\_eng.pdf

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

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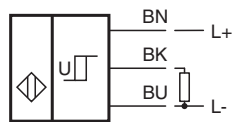
Singapore: +65 6779 9091  
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 **PEPPERL+FUCHS**

Technical Data

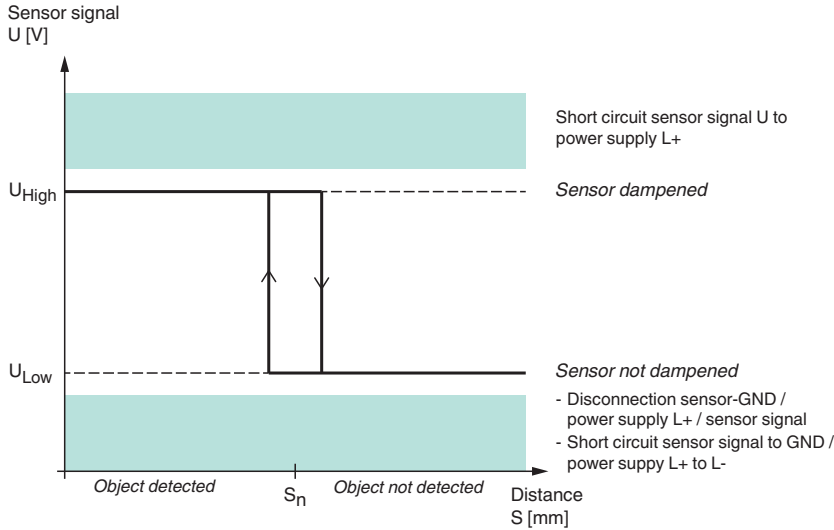
|                                          |                                                                      |
|------------------------------------------|----------------------------------------------------------------------|
| Switching state indicator                | LED, yellow                                                          |
| Digital output                           |                                                                      |
| Output value                             | object detected: 4.5 V ± 0.2 V<br>object not detected: 0.5 V ± 0.2 V |
| Compliance with standards and directives |                                                                      |
| Standard conformity                      |                                                                      |
| Standards                                | EN IEC 60947-5-2                                                     |
| Ambient conditions                       |                                                                      |
| Ambient temperature                      | -40 ... 85 °C (-40 ... 185 °F)                                       |
| Storage temperature                      | -40 ... 85 °C (-40 ... 185 °F)                                       |
| Mechanical specifications                |                                                                      |
| Connection type                          | cable                                                                |
| Housing material                         | brass , white bronze coated                                          |
| Sensing face                             | PBT , green                                                          |
| Degree of protection                     | IP68 / IP69K                                                         |
| Cable                                    |                                                                      |
| Cable diameter                           | 6 mm ± 0.2 mm                                                        |
| Bending radius                           | > 10 x cable diameter                                                |
| Material                                 | TPE                                                                  |
| Color                                    | black                                                                |
| Number of cores                          | 3                                                                    |
| Core cross section                       | 0.75 mm²                                                             |
| Length                                   | L 2 m                                                                |
| Dimensions                               |                                                                      |
| Length                                   | 46 mm                                                                |
| Diameter                                 | 18 mm                                                                |
| General information                      |                                                                      |
| Scope of delivery                        | 2 self locking nuts in scope of delivery                             |

Connection



Release date: 2024-07-03 Date of issue: 2024-07-03 Filename: 70128599\_eng.pdf

Operation



Technical Features

Mains-borne interference in accordance with ISO 7637-2:

|                   |     |     |     |     |     |     |
|-------------------|-----|-----|-----|-----|-----|-----|
| Pulse             | 1   | 2a  | 2b  | 3a  | 3b  | 4   |
| Severity level    | III | III | III | III | III | III |
| Failure criterion | A   | A   | C   | A   | A   | C   |

|                |                        |
|----------------|------------------------|
| EN 61000-4-2:  | CD: 8 kV / AD: 15 kV   |
| Severity level | IV                     |
| EN 61000-4-3:  | 36 V/m (80...2500 MHz) |
| Severity level | IV                     |
| EN 61000-4-4:  | 2 kV                   |
| Severity level | III                    |
| EN 61000-4-6:  | 30 V (0.01...80 MHz)   |
| Severity level | III                    |
| EN 55011:      | Class A                |

Release date: 2024-07-03 Date of issue: 2024-07-03 Filename: 70128599\_eng.pdf