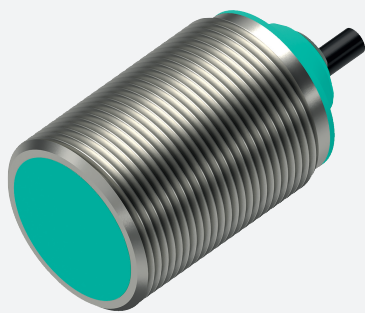




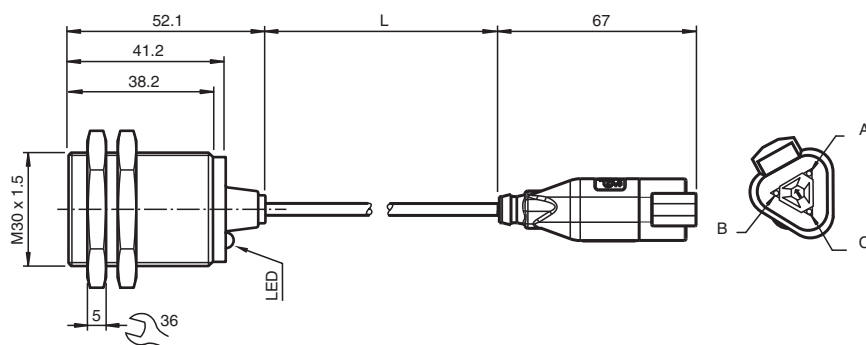
## Inductive sensor

### NBB15-30GM40-EU-M1-300MM-3DT04

- 15 mm flush
- 0.5 / 4.5 VDC switching output for mobile equipment controls
- Extended temperature range  
-40 ... +85 °C
- 3-pin Deutsch connector (DT04)
- Highly shock and vibration resistant
- Raised EMC resistance 30 V/m
- With increased sealing, protection class  
IP68 / IP69K



## Dimensions



## Technical Data

### General specifications

|                              |       |                                                                             |
|------------------------------|-------|-----------------------------------------------------------------------------|
| Output type                  |       | Digital voltage output                                                      |
| Rated operating distance     | $s_n$ | 15 mm                                                                       |
| Installation                 |       | flush                                                                       |
| Output polarity              |       | DC                                                                          |
| Assured operating distance   | $s_a$ | 0 ... 12.15 mm                                                              |
| Actuating element            |       | mild steel, e. g. 1.0037, SR235JR (formerly St37-2)<br>45 mm x 45 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           | $U_B$ | 7 ... 30 V DC              |
| Switching frequency         | $f$   | 0 ... 500 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                    |

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

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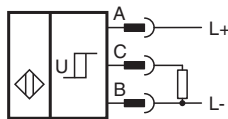
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**PEPPERL+FUCHS**

Technical Data

|                                          |                |                                                                                     |
|------------------------------------------|----------------|-------------------------------------------------------------------------------------|
| Time delay before availability           | t <sub>v</sub> | ≤ 100 ms                                                                            |
| Load resistor                            |                | min. 20 kΩ                                                                          |
| 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                          |                | fixed cable with plug                                                               |
| Housing material                         |                | brass , white bronze coated                                                         |
| Sensing face                             |                | PBT , green                                                                         |
| Degree of protection                     |                | IP68 / IP69K                                                                        |
| Connector                                |                |                                                                                     |
| Connection assembly                      |                | Deutsch connector DT04-3P-CE02<br>Deutsch contact 1060-16-0622<br>Deutsch wedge W3P |
| Cable                                    |                |                                                                                     |
| Cable diameter                           |                | 6 mm ± 0.2 mm                                                                       |
| Bending radius                           |                | > 6 x cable diameter                                                                |
| Material                                 |                | PUR                                                                                 |
| Color                                    |                | black                                                                               |
| Number of cores                          |                | 3                                                                                   |
| Core cross section                       |                | 0.75 mm <sup>2</sup>                                                                |
| Length                                   | L              | 285 mm ± max. 10 mm                                                                 |
| Dimensions                               |                |                                                                                     |
| Length                                   |                | 50 mm                                                                               |
| Diameter                                 |                | 30 mm                                                                               |
| General information                      |                |                                                                                     |
| Scope of delivery                        |                | 2 self locking nuts in scope of delivery                                            |

Connection

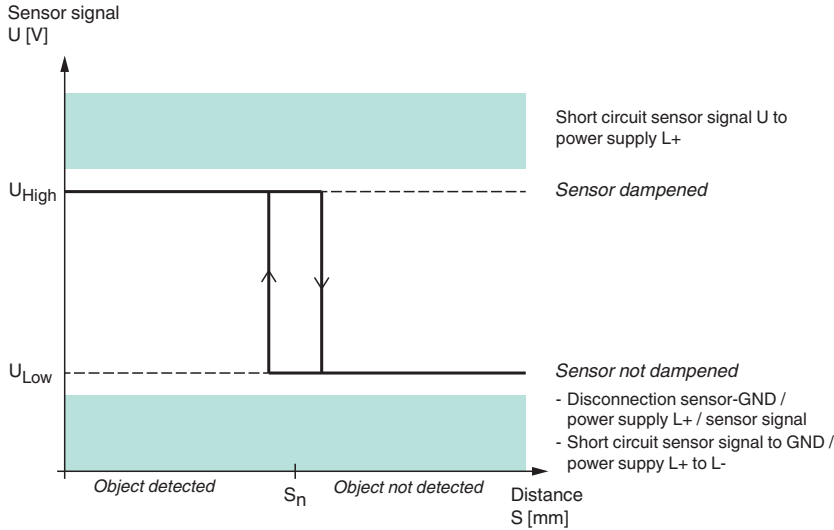


Wire colors

|   |    |
|---|----|
| A | BN |
| B | BU |
| C | BK |

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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 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                |

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