

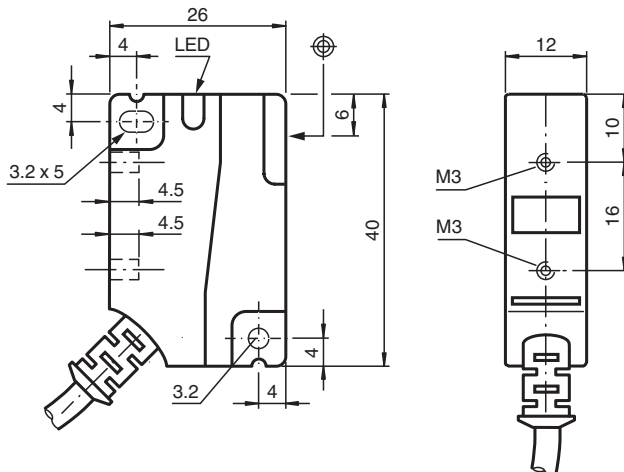
Inductive sensor

NBB4-F1-E2

- 4 mm flush
- 3-wire DC



Dimensions



Technical Data

General specifications

| | | |
|------------------------------|-------|--------------------|
| Switching function | | Normally open (NO) |
| Output type | | PNP |
| Rated operating distance | s_n | 4 mm |
| Installation | | flush |
| Output polarity | | DC |
| Assured operating distance | s_a | 0 ... 3.24 mm |
| Reduction factor r_{Al} | | 0.4 |
| Reduction factor r_{Cu} | | 0.45 |
| Reduction factor r_{304} | | 0.8 |
| Reduction factor r_{Brass} | | 0.55 |
| Output type | | 3-wire |

Nominal ratings

| | | |
|-----------------------------|-------|----------------------------|
| Operating voltage | U_B | 10 ... 30 V DC |
| Switching frequency | f | 0 ... 1400 Hz |
| Hysteresis | H | typ. 5% |
| Reverse polarity protection | | reverse polarity protected |

Release date: 2025-02-19 Date of issue: 2025-02-19 Filename: 184367_eng.pdf

Technical Data

| | | |
|---|-----------|--|
| Short-circuit protection | | pulsing |
| Voltage drop | U_d | ≤ 2.5 V |
| Rated insulation voltage | U_{BIS} | 60 V |
| Operating current | I_L | 0 ... 250 mA |
| Off-state current | I_r | 0 ... 0.01 mA typ. 0.1 μ A at 25 °C |
| No-load supply current | I_0 | ≤ 15 mA |
| Switching state indicator | | LED, yellow |
| Functional safety related parameters | | |
| MTTF _d | | 1640 a |
| Mission Time (T _M) | | 20 a |
| Diagnostic Coverage (DC) | | 0 % |
| Compliance with standards and directives | | |
| Standard conformity | | |
| Standards | | EN IEC 60947-5-2 |
| Approvals and certificates | | |
| Protection class | | II |
| Rated insulation voltage | U_i | 60 V |
| Rated impulse withstand voltage | U_{imp} | 800 V |
| 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) |
| Mechanical specifications | | |
| Connection type | | cable |
| Housing material | | PA |
| Sensing face | | PA |
| Degree of protection | | IP67 |
| Cable | | |
| Wire end ferrules | | yes |
| Cable diameter | | 5.2 mm \pm 0.2 mm |
| Bending radius | | > 10 x cable diameter |
| Material | | PVC |
| Color | | grey |
| Number of cores | | 3 |
| Core cross section | | 0.5 mm ² |
| Length | L | 2 m |
| Tightening torque, fastening screws | | Threading M3 \leq 1.1 Nm |
| Dimensions | | |
| Height | | 40 mm |
| Width | | 12 mm |
| Length | | 26 mm |

Connection

