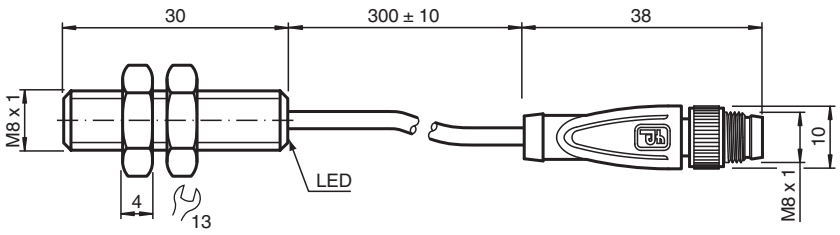


# Inductive sensor

# NBB2-8GM30-E2-0,3M-V3

- 2 mm flush
- Increased operating distance
- Extended temperature range
  -40 ... +85 °C

## Dimensions




## Technical Data

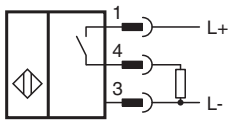
| | | |
|---|---|---|
| **General specifications** | | |
| Switching function | | Normally open (NO) |
| Output type | | PNP |
| Rated operating distance | $s_n$ | 2 mm |
| Installation | | flush |
| Output polarity | | DC |
| Assured operating distance | $s_a$ | 0 ... 1.62 mm |
| Actuating element | | mild steel, e. g. 1.0037, SR235JR (formerly St37-2)<br>8 mm x 8 mm x 1 mm |
| Reduction factor $r_{Al}$ | | 0.4 |
| Reduction factor $r_{Cu}$ | | 0.3 |
| Reduction factor $r_{304}$ | | 0.75 |
| Reduction factor $r_{Brass}$ | | 0.45 |
| Output type | | 3-wire |
| **Nominal ratings** | | |
| Operating voltage | $U_B$ | 5 ... 30 V |
| Switching frequency | f | 0 ... 6000 Hz |
| Hysteresis | H | typ. 5% |
| Reverse polarity protection | | reverse polarity protected |
| Short-circuit protection | | pulsing |
| Voltage drop | $U_d$ | ≤ 1.5 V |
| Operating current | $I_L$ | 0 ... 100 mA |
| Off-state current | $I_r$ | 0 ... 0.2 mA |
| No-load supply current | $I_0$ | ≤ 10 mA |

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## Technical Data

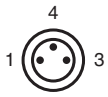
| | | |
|---|---|---|
| Time delay before availability | $t_v$ | ≤ 100 ms |
| Switching state indicator | | LED, yellow |
| **Functional safety related parameters** | | |
| $MTTF_d$ | | 960 a |
| Mission Time ($T_M$) | | 20 a |
| Diagnostic Coverage (DC) | | 0 % |
| **Compliance with standards and directives** | | |
| Standard conformity | | |
| Standards | | EN IEC 60947-5-2 |
| **Approvals and certificates** | | |
| UL approval | | cULus Listed, General Purpose, Class 2 Power Source |
| CCC approval | | CCC approval / marking not required for products rated ≤36 V |
| **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, nickel-plated |
| Sensing face | | LCP |
| Degree of protection | | IP65 / IP66 / IP67 |
| Connector | | |
| Threading | | M8 x 1 |
| Number of pins | | 3 |
| Cable | | |
| Cable diameter | | 3 mm - 0.2 mm |
| Bending radius | | > 12 x cable diameter |
| Material | | PVC |
| Color | | grey |
| Number of cores | | 3 |
| Core cross section | | 0.14 $mm^2$ |
| Length | L | 0.3 m |
| Dimensions | | |
| Length | | 30 mm |
| Diameter | | 8 mm |
| **General information** | | |
| Scope of delivery | | 2 hex nuts included |

## Connection




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## Connection Assignment




Wire colors in accordance with EN 60947-5-2

| | | |
|---|---|---|
| 1 | BN | (brown) |
| 3 | BU | (blue) |
| 4 | BK | (black) |

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