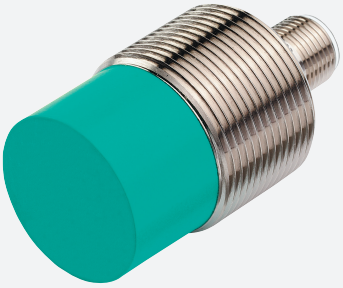
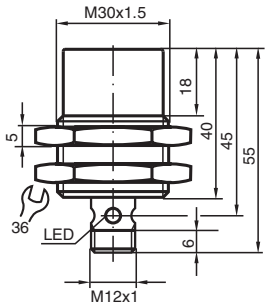


# Inductive sensor

## NBN15-30GM40-Z0-V1

- 15 mm non-flush
- Extended temperature range
- 2-wire DC

## Dimensions




## Technical Data

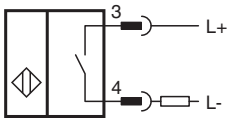
| | | |
|---|---|---|
| **General specifications** | | |
| Switching function | | Normally open (NO) |
| Output type | | Two-wire |
| Rated operating distance | $s_n$ | 15 mm |
| Installation | | non-flush |
| Output polarity | | DC |
| Assured operating distance | $s_a$ | 0 ... 12.15 mm ( -25 ... 70 °C (-13 ... 158 °F) )<br>0 ... 11.4 mm ( -40 ... -25 °C (-40 ... -13 °F) ) |
| Actual operating distance | $s_r$ | 13.5 ... 16.5 mm typ. |
| Reduction factor $r_{Al}$ | | 0.4 |
| Reduction factor $r_{Cu}$ | | 0.35 |
| Reduction factor $r_{304}$ | | 0.7 |
| Output type | | 2-wire |
| **Nominal ratings** | | |
| Operating voltage | $U_B$ | 5 ... 60 V |
| Switching frequency | f | 0 ... 150 Hz |
| Hysteresis | H | 1 ... 10 typ. 5 % |

Release date: 2024-05-28 Date of issue: 2024-06-05 Filename: 088215_eng.pdf

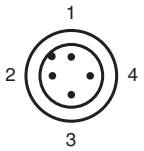
## Technical Data

| | | |
|---|---|---|
| Reverse polarity protection | | reverse polarity tolerant |
| Short-circuit protection | | pulsing |
| Voltage drop | $U_d$ | ≤ 5 V |
| Operating current | $I_L$ | 2 ... 100 mA |
| Lowest operating current | $I_m$ | 2 mA |
| Off-state current | $I_r$ | 0 ... 0.5 mA typ. |
| Switching state indicator | | Multihole-LED, yellow |
| **Functional safety related parameters** | | |
| $MTTF_d$ | | 1415 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 |
| CCC approval | | Certified by China Compulsory Certification (CCC) |
| **Ambient conditions** | | |
| Ambient temperature | | -40 ... 70 °C (-40 ... 158 °F) |
| **Mechanical specifications** | | |
| Connection type | | Connector plug M12 x 1 , 4-pin |
| Housing material | | brass, nickel-plated |
| Sensing face | | PBT |
| Degree of protection | | IP67 |
| Dimensions | | |
| Length | | 40 mm |
| Diameter | | 30 mm |

## Connection




## Connection Assignment




Release date: 2024-05-28 Date of issue: 2024-06-05 Filename: 088215_eng.pdf

## Connection Assignment

Wire colors in accordance with EN 60947-5-2

| | | |
|---|---|---|
| 1 | BN | (brown) |
| 2 | WH | (white) |
| 3 | BU | (blue) |
| 4 | BK | (black) |

Release date: 2024-05-28 Date of issue: 2024-06-05 Filename: 088215_eng.pdf