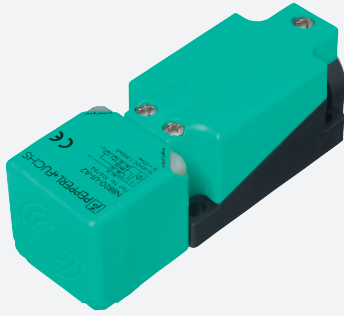


Inductive sensor

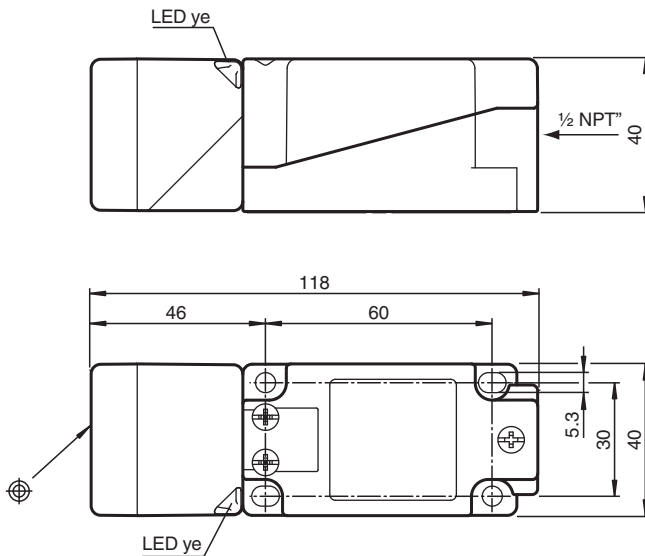
NBB20-U4K-N0



- Sensor head bidirectional and rotatable
- 20 mm flush
- 2 LEDs indicator for 360° visibility



Dimensions



Technical Data

General specifications

| | | |
|----------------------------|-------|-------------------------|
| Switching function | | Normally closed (NC) |
| Output type | | NAMUR |
| Rated operating distance | s_n | 20 mm |
| Installation | | flush |
| Assured operating distance | s_a | 0 ... 16.2 mm |
| Actual operating distance | s_r | 18 ... 22 mm typ. 20 mm |
| Reduction factor r_{Al} | | 0.33 |
| Reduction factor r_{Cu} | | 0.31 |
| Reduction factor r_{304} | | 0.74 |
| Output type | | 2-wire |

Nominal ratings

| | | |
|---------------------|-------|--------------------------------------|
| Nominal voltage | U_o | 8.2 V (R_i approx. 1 k Ω) |
| Switching frequency | f | 0 ... 300 Hz |
| Hysteresis | H | typ. 5 % |

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Technical Data

| | |
|---|--|
| Reverse polarity protection | reverse polarity protected |
| Short-circuit protection | yes |
| Current consumption | |
| Measuring plate not detected | ≥ 2.2 mA |
| Measuring plate detected | ≤ 1 mA |
| Switching state indicator | LED, yellow |
| Functional safety related parameters | |
| MTTF _d | 1697 a |
| Mission Time (T _M) | 20 a |
| Diagnostic Coverage (DC) | 0 % |
| Compliance with standards and directives | |
| Standard conformity | |
| NAMUR | EN 60947-5-6:2000 IEC 60947-5-6:1999 |
| Electromagnetic compatibility | NE 21:2007 |
| Standards | EN IEC 60947-5-2 |
| Approvals and certificates | |
| IECEX approval | |
| Equipment protection level Ga | IECEX PTB 11.0021X |
| Equipment protection level Gb | IECEX PTB 11.0021X |
| Equipment protection level Da | IECEX PTB 11.0021X |
| ATEX approval | |
| Equipment protection level Ga | PTB 00 ATEX 2032 X |
| Equipment protection level Gb | PTB 00 ATEX 2032 X |
| Equipment protection level Da | PTB 00 ATEX 2032 X |
| UL approval | |
| Ordinary Location | E87056 |
| Hazardous Location | E501628 |
| Control drawing | 116-0451 |
| CCC approval | |
| Hazardous Location | 2020322315002303 |
| NEPSI approval | |
| NEPSI certificate | GYJ16.1394X |
| CML approval | on request |
| Ambient conditions | |
| Ambient temperature | -25 ... 100 °C (-13 ... 212 °F) |
| Storage temperature | -40 ... 100 °C (-40 ... 212 °F) |
| Mechanical specifications | |
| Connection type | screw terminals |
| Information for connection | A maximum of two conductors with the same core cross section may be mounted on one terminal connection! tightening torque 1.2 Nm + 10 % |
| Core cross section | up to 2.5 mm ² |
| Minimum core cross-section | without wire end ferrules 0.5 mm ² , with connector sleeves 0.34 mm ² |
| Maximum core cross-section | without wire end ferrules 2.5 mm ² , with connector sleeves 1.5 mm ² |
| Housing material | PA/metal |
| Sensing face | PA |
| Degree of protection | IP68 / IP69K |
| Mass | 225 g |
| Dimensions | |
| Height | 40 mm |
| Width | 40 mm |
| Length | 118 mm |
| Note | Tightening torque: 1.8 Nm (housing) |

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Technical Data

General information

Use in the hazardous area

see instruction manuals

Connection Assignment

