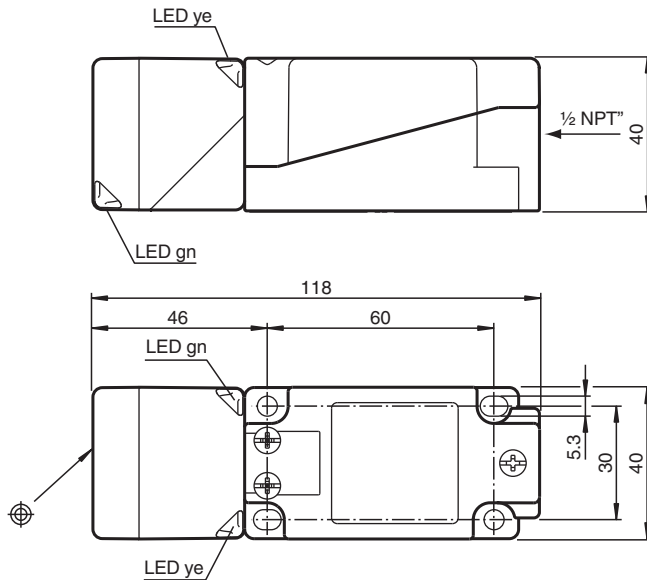


Inductive sensor NBB20-U4-E2-C

- Sensor head bidirectional and rotatable
- 20 mm flush
- 3-wire DC
- 4 LEDs indicator for 360° visibility



Dimensions



Technical Data

General specifications

| | | |
|------------------------------|-------|-------------------------|
| Switching function | | Normally open (NO) |
| Output type | | PNP |
| Rated operating distance | s_n | 20 mm |
| Installation | | flush |
| Output polarity | | DC |
| 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 |
| Reduction factor r_{Brass} | | 0.41 |
| Output type | | 3-wire |

Nominal ratings

Technical Data

| | | |
|---|-------|---|
| Operating voltage | U_B | 10 ... 30 V DC |
| Switching frequency | f | 0 ... 5 Hz |
| Hysteresis | H | typ. 5 % |
| Reverse polarity protection | | reverse polarity protected |
| Short-circuit protection | | pulsing |
| Voltage drop | U_d | ≤ 3 V |
| Operating current | I_L | 0 ... 200 mA |
| Off-state current | I_r | 0 ... 0.5 mA |
| No-load supply current | I_0 | ≤ 20 mA |
| Time delay before availability | t_v | 300 ms |
| Constant magnetic field | B | 150 mT |
| Alternating magnetic field | B | 150 mT |
| Operating voltage indicator | | LED, green |
| Switching state indicator | | LED, yellow |
| Functional safety related parameters | | |
| MTTF _d | | 1420 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 Load Type: General Purpose Circuitry: Class 2 Power Source Enclosure Type Rating: Type 1 Supply/Switching Voltage: 30 V DC Output Switching Current: 200 mA |
| CCC approval | | CCC approval / marking not required for products rated ≤ 36 V |
| Ambient conditions | | |
| Ambient temperature | | -25 ... 85 °C (-13 ... 185 °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 with epoxy powder coating |
| Sensing face | | PA |
| Housing base | | metal |
| 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) |

Connection

