

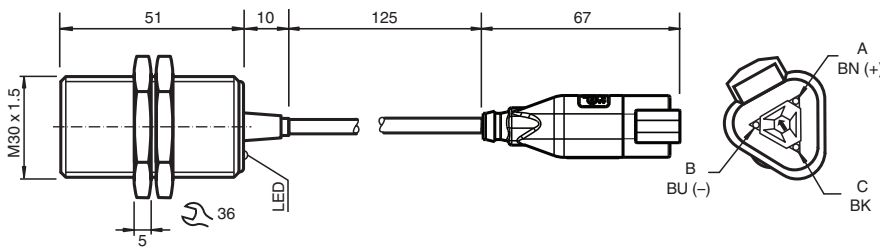
Inductive sensor

NBB15-30GM50-E2-M-150MM-3DT0-4

- 15 mm flush
- Extended temperature range
-40 ... +85 °C
- E1-Type approval
- Increased noise immunity 100 V/m
- With increased sealing, protection class
IP68 / IP69K
- Highly shock and vibration resistant



Dimensions



Technical Data

General specifications

| | | |
|------------------------------|-------|--------------------|
| Switching function | | Normally open (NO) |
| Output type | | PNP |
| Rated operating distance | s_n | 15 mm |
| Installation | | flush |
| Output polarity | | DC |
| Assured operating distance | s_a | 0 ... 12.15 mm |
| Reduction factor r_{Al} | | 0.45 |
| Reduction factor r_{Cu} | | 0.4 |
| Reduction factor r_{304} | | 0.7 |
| Reduction factor r_{Brass} | | 0.5 |
| Output type | | 3-wire |

Nominal ratings

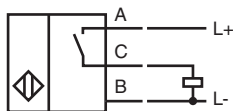
| | | |
|-----------------------------|-------|----------------------------|
| Operating voltage | U_B | 5 ... 60 V |
| Switching frequency | f | 0 ... 600 Hz |
| Hysteresis | H | typ. 5 % |
| Reverse polarity protection | | reverse polarity protected |
| Short-circuit protection | | pulsing |

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Technical Data

| | | |
|---|-----------|---|
| Inductive overvoltage protection | | yes |
| Surge suppression | | yes |
| Voltage drop | U_d | ≤ 2 V |
| Rated insulation voltage | U_{BIS} | 60 V |
| Operating current | I_L | 0 ... 200 mA |
| Off-state current | I_r | 0 ... 0.5 mA typ. 6 μ A at 25 °C |
| No-load supply current | I_o | ≤ 7 mA |
| Time delay before availability | t_v | ≤ 220 ms |
| Switching state indicator | | LED, yellow |
| Functional safety related parameters | | |
| MTTF _d | | 830.5 a |
| Mission Time (T _M) | | 20 a |
| Diagnostic Coverage (DC) | | 0 % |
| Compliance with standards and directives | | |
| Standard conformity | | |
| Standards | | EN IEC 60947-5-2 |
| 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 | | PBT |
| Degree of protection | | IP68 / IP69K |
| Connector | | |
| Number of pins | | 3 |
| Connection assembly | | Deutsch connector DT04-3P-CE02 Deutsch wedge W3P Deutsch contact 1060-16-0622 |
| Cable | | |
| Cable diameter | | 6 mm \pm 0.2 mm |
| Bending radius | | > 10 x cable diameter |
| Material | | PUR |
| Color | | black |
| Number of cores | | 3 |
| Core cross section | | 0.75 mm ² |
| Length | L | 125 mm |
| Dimensions | | |
| Length | | 51 mm |
| Diameter | | 30 mm |
| Note | | molded Connector |

Connection



Wire colors

| | | |
|---|--|----|
| A | | BN |
| B | | BU |
| C | | BK |

Technical Features

Interference immunity in accordance with
DIN ISO 11452-2: 100 V/m
Frequency band 20 MHz up to 2 GHz

Mains-borne interference in accordance with ISO
7637-2: Pulse 1 2a 2b 3 a 3b 4 5
Severity level III III III III III III III
Failure criterion C A C A A A B

EN 61000-4-2: CD: 8 kV / AD: 15 kV
Severity level IV IV

EN 61000-4-3: 30 V/m (80...2500 MHz)
Severity level IV

EN 61000-4-4: 2 kV
Severity level III

EN 61000-4-6: 10 V (0.01...80 MHz)
Severity level III

EN 55011: Class A