

Inductive sensor

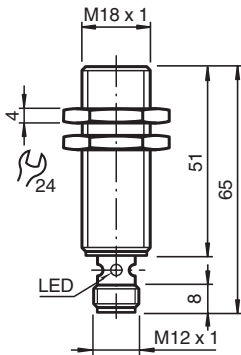
NBB8-18GM50-E2-V1-M



- 8 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 | 8 mm |
| Installation | | flush |
| Output polarity | | DC |
| Assured operating distance | s_a | 0 ... 6.48 mm |
| Reduction factor r_{Al} | | 0.4 |
| Reduction factor r_{Cu} | | 0.3 |
| Reduction factor r_{304} | | 0.7 |
| Reduction factor r_{Brass} | | 0.45 |
| Output type | | 3-wire |

Nominal ratings

| | | |
|----------------------------------|-------|----------------------------|
| Operating voltage | U_B | 5 ... 60 V |
| Switching frequency | f | 0 ... 1500 Hz |
| Hysteresis | H | typ. 5 % |
| Reverse polarity protection | | reverse polarity protected |
| Short-circuit protection | | pulsing |
| Inductive overvoltage protection | | yes |
| Surge suppression | | yes |

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Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

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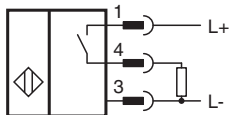
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Technical Data

| | | |
|---|-----------|--|
| Voltage drop | U_d | $\leq 2 \text{ V}$ |
| Rated insulation voltage | U_{BIS} | 60 V |
| Operating current | I_L | 0 ... 200 mA |
| Off-state current | I_r | 0 ... 0.5 mA typ. 0.1 μA at 25 °C |
| No-load supply current | I_0 | $\leq 7 \text{ mA}$ |
| Time delay before availability | t_v | $\leq 220 \text{ ms}$ |
| Switching state indicator | | Multihole-LED, yellow |
| Safety-relevant product characteristics | | |
| MTTF _d | | 1085.5 a |
| Mission Time (T _M) | | 20 a |
| Diagnostic Coverage (DC) | | 0 % |
| Compliance with standards and directives | | |
| Standard conformity | | |
| Standards | | EN IEC 60947-5-2 |
| Approvals and certificates | | |
| UL approval | | cULus Listed Circuitry: Class 2 Power Source Supply/Switching Voltage: 60 V DC Output Switching Current: 200 mA |
| CSA approval | | cCSAus Listed, General Purpose, Class 2 Power Source |
| CCC approval | | Certified by China Compulsory Certification (CCC) |
| E1 Type approval | | 10R-06 |
| Ambient conditions | | |
| Ambient temperature | | -40 ... 85 °C (-40 ... 185 °F) |
| Storage temperature | | -40 ... 85 °C (-40 ... 185 °F) |
| Mechanical specifications | | |
| Connection type | | Connector plug |
| Housing material | | brass, nickel-plated |
| Sensing face | | PBT |
| Degree of protection | | IP68 / IP69K |
| Connector | | |
| Threading | | M12 x 1 |
| Number of pins | | 3 |
| Mass | | 46 g |
| Dimensions | | |
| Length | | 65 mm |
| Diameter | | 18 mm |

Connection Assignment



Connection Assignment



Wire colors in accordance with EN 60947-5-2

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

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 |

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