

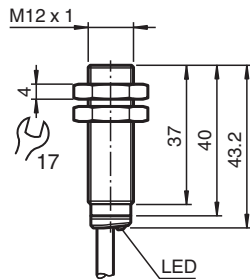
Inductive sensor

NBB2-12GM40-E2-5M-PUR-Y0188

- 2 mm flush
- Extended temperature range
-40 ... +85 °C
- Extended operating voltage range
- Flexible use with versatile mounting opportunities



Dimensions



Technical Data

General specifications

| | | |
|------------------------------|-------|---|
| Switching function | | Normally open (NO) |
| Output type | | PNP |
| Rated operating distance | s_n | 2 mm |
| Installation | | flush |
| Output polarity | | DC |
| Assured operating distance | s_a | 0 ... 1.62 mm |
| Actuating element | | mild steel, e. g. 1.0037, SR235JR (formerly St37-2) 12 mm x 12 mm x 1 mm |
| Reduction factor r_{Al} | | 0.29 |
| Reduction factor r_{Cu} | | 0.23 |
| Reduction factor r_{304} | | 0.78 |
| Reduction factor r_{Brass} | | 0.42 |
| Output type | | 3-wire |

Nominal ratings

| | | |
|--------------------------------|-------|----------------------------|
| Operating voltage | U_B | 5 ... 36 V |
| Switching frequency | f | 0 ... 3500 Hz |
| Hysteresis | H | typ. 5 % |
| Reverse polarity protection | | reverse polarity protected |
| Short-circuit protection | | pulsing |
| Voltage drop | U_d | ≤ 1 V |
| Operating current | I_L | 0 ... 200 mA |
| Off-state current | I_r | max. 20 μ A |
| No-load supply current | I_o | ≤ 10 mA |
| Time delay before availability | t_v | ≤ 10 ms |
| Switching state indicator | | LED, yellow |

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Technical Data

| Functional safety related parameters | | |
|--|------------------|--|
| MTTF _d | | 1721 a |
| Mission Time (T _M) | | 20 a |
| Diagnostic Coverage (DC) | | 0 % |
| Conformity | | |
| PWIS conformity | | VDMA 24364-A1/B2/C1/T100°C-W |
| Compliance with standards and directives | | |
| Standard conformity | | |
| Standards | | EN IEC 60947-5-2 |
| Approvals and certificates | | |
| Protection class | | II |
| Rated insulation voltage | U _i | 36 V |
| Rated impulse withstand voltage | U _{imp} | 500 V |
| UL approval | | cULus Listed, General Purpose, Class 2 Power Source |
| CCC approval | | CCC approval / marking not required for products rated ≤36 V |
| Ambient conditions | | |
| Ambient temperature | | -40 ... 85 °C (-40 ... 185 °F) |
| Storage temperature | | -40 ... 85 °C (-40 ... 185 °F) |
| Mechanical specifications | | |
| Connection type | | cable |
| Housing material | | brass , white bronze coated |
| Sensing face | | PBT , green |
| Degree of protection | | IP65 / IP66 / IP67 / IP68 |
| Cable | | |
| Wire end ferrules | | yes |
| Cable diameter | | 4.3 mm ± 0.15 mm |
| Bending radius | | > 10 x cable diameter |
| Material | | PUR |
| Color | | black |
| Number of cores | | 3 |
| Core cross section | | 0.34 mm ² |
| Length | L | 5 m |
| Mass | | 149 g |
| Dimensions | | |
| Length | | 43 mm |
| Diameter | | 12 mm |
| Mounting | | with nuts, M12 |
| Tightening torque | | ≤ 10 Nm |
| General information | | |
| Scope of delivery | | Supplied with two nuts and washers |

Connection

