

Inductive sensor

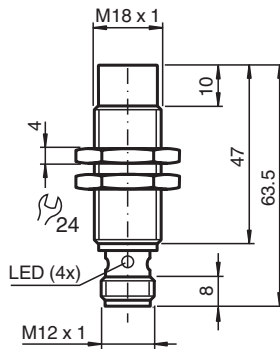
NEN20-18GM50-E3-V1



- Increased operating distance
- 20 mm non-flush



Dimensions



Technical Data

General specifications

| | | |
|------------------------------|-------|---|
| Switching function | | Normally closed (NC) |
| Output type | | PNP |
| Rated operating distance | s_n | 20 mm |
| Installation | | non-flush |
| Output polarity | | DC |
| Assured operating distance | s_a | 0 ... 16.2 mm |
| Actuating element | | mild steel, e. g. 1.0037, SR235JR (formerly St37-2) 60 mm x 60 mm x 1 mm |
| Reduction factor r_{Al} | | 0.35 |
| Reduction factor r_{Cu} | | 0.3 |
| Reduction factor r_{304} | | 0.7 |
| Reduction factor r_{Brass} | | 0.45 |
| Output type | | 3-wire |

Nominal ratings

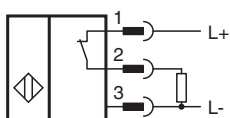
| | | |
|-------------------------|-------|-------------------------------|
| Installation conditions | | |
| A | | in steel 1.0037 (St37): 20 mm |
| B | | 30 mm |
| C | | 60 mm |
| F | | 78 mm |
| Operating voltage | U_B | 10 ... 30 V |

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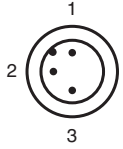
Technical Data

| | | |
|---|-------|--|
| Switching frequency | f | 0 ... 200 Hz |
| Hysteresis | H | 0.1 ... 2 mm |
| Reverse polarity protection | | yes |
| Short-circuit protection | | pulsing |
| Overload resistance | | yes |
| Wire breakage protection | | yes |
| Inductive overvoltage protection | | yes |
| Surge suppression | | yes |
| Ripple | | 10 % |
| Voltage drop | U_d | ≤ 2 V |
| Repeat accuracy | R | 1 mm |
| Operating current | I_L | 0 ... 200 mA |
| Off-state current | I_r | ≤ 10 μ A |
| No-load supply current | I_0 | ≤ 11 mA |
| Time delay before availability | t_v | ≤ 50 ms |
| Switching state indicator | | LED, yellow |
| Functional safety related parameters | | |
| MTTF _d | | 2650 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, General Purpose |
| CCC approval | | CCC approval / marking not required for products rated ≤ 36 V |
| Ambient conditions | | |
| Ambient temperature | | -25 ... 85 °C (-13 ... 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 | | IP67 |
| Connector | | |
| Threading | | M12 x 1 |
| Number of pins | | 3 |
| Mass | | 30 g |
| Tightening torque, fastening screws | | max. 20 Nm |
| Dimensions | | |
| Length | | 69 mm |
| Diameter | | 18 mm |

Connection



Connection Assignment



Wire colors in accordance with EN 60947-5-2

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

Installation Conditions

