

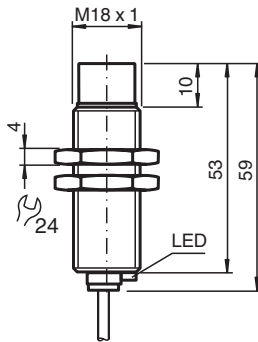
# Inductive sensor NEN20-18GM50-E3



- 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)<br>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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Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

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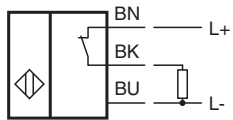
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## Technical Data

|                                                 |                |                                                              |
|-------------------------------------------------|----------------|--------------------------------------------------------------|
| 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 <sub>d</sub> | ≤ 2 V                                                        |
| Repeat accuracy                                 | R              | 1 mm                                                         |
| Operating current                               | I <sub>L</sub> | 0 ... 200 mA                                                 |
| Off-state current                               | I <sub>r</sub> | ≤ 10 µA                                                      |
| No-load supply current                          | I <sub>0</sub> | ≤ 11 mA                                                      |
| Time delay before availability                  | t <sub>v</sub> | ≤ 50 ms                                                      |
| Switching state indicator                       |                | LED, yellow                                                  |
| <b>Functional safety related parameters</b>     |                |                                                              |
| MTTF <sub>d</sub>                               |                | 2650 a                                                       |
| Mission Time (T <sub>M</sub> )                  |                | 20 a                                                         |
| Diagnostic Coverage (DC)                        |                | 0 %                                                          |
| <b>Compliance with standards and directives</b> |                |                                                              |
| Standard conformity                             |                |                                                              |
| Standards                                       |                | EN IEC 60947-5-2                                             |
| <b>Approvals and certificates</b>               |                |                                                              |
| UL approval                                     |                | cULus Listed, General Purpose                                |
| CCC approval                                    |                | CCC approval / marking not required for products rated ≤36 V |
| <b>Ambient conditions</b>                       |                |                                                              |
| Ambient temperature                             |                | -25 ... 85 °C (-13 ... 185 °F)                               |
| Storage temperature                             |                | -40 ... 85 °C (-40 ... 185 °F)                               |
| <b>Mechanical specifications</b>                |                |                                                              |
| Connection type                                 |                | cable                                                        |
| Housing material                                |                | brass, nickel-plated                                         |
| Sensing face                                    |                | PBT                                                          |
| Degree of protection                            |                | IP67                                                         |
| Cable                                           |                |                                                              |
| Wire end ferrules                               |                | yes                                                          |
| Cable diameter                                  |                | 4.3 mm ± 0.2 mm                                              |
| Bending radius                                  |                | > 10 x cable diameter                                        |
| Material                                        |                | PUR                                                          |
| Color                                           |                | black                                                        |
| Number of cores                                 |                | 3                                                            |
| Core cross section                              |                | 0.34 mm <sup>2</sup>                                         |
| Length                                          | L              | 2 m                                                          |
| Mass                                            |                | 100 g                                                        |
| Tightening torque, fastening screws             |                | max. 20 Nm                                                   |
| Dimensions                                      |                |                                                              |
| Length                                          |                | 53 mm                                                        |
| Diameter                                        |                | 18 mm                                                        |

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## Connection Assignment



## Installation

