

# Inductive sensor

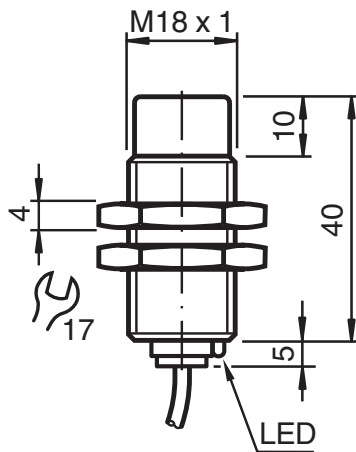
## NRN15-18GH40-E2



- Reduction factor = 1
- Magnetic field resistant
- Stainless steel housing
- Front face FDA conform



### Dimensions



### Technical Data

| General specifications      |       |                            |
|-----------------------------|-------|----------------------------|
| Switching function          |       | Normally open (NO)         |
| Output type                 |       | PNP                        |
| Rated operating distance    | $s_n$ | 15 mm                      |
| Installation                |       | non-flush                  |
| Output polarity             |       | DC                         |
| Assured operating distance  | $s_a$ | 0 ... 12.15 mm             |
| Reduction factor $r_{Al}$   |       | 1                          |
| Reduction factor $r_{Cu}$   |       | 1                          |
| Reduction factor $r_{304}$  |       | 1                          |
| Reduction factor $r_{St37}$ |       | 1                          |
| Output type                 |       | 3-wire                     |
| Nominal ratings             |       |                            |
| Operating voltage           | $U_B$ | 10 ... 30 V DC             |
| Switching frequency         | $f$   | 0 ... 800 Hz               |
| Hysteresis                  | $H$   | typ. 5 %                   |
| Reverse polarity protection |       | reverse polarity protected |

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## Technical Data

|   |           |   |
|---|-----------|---|
| Short-circuit protection                        |           | pulsing   |
| Voltage drop                                    | $U_d$     | $\leq 2$ 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. 0.1 $\mu$ A at 25 °C  |
| No-load supply current                          | $I_0$     | $\leq 14$ mA  |
| Time delay before availability                  | $t_v$     | max. 15 ms  |
| Constant magnetic field                         | B         | 200 mT  |
| Alternating magnetic field                      | B         | 200 mT  |
| Switching state indicator                       |           | Multihole-LED, yellow   |
| <b>Functional safety related parameters</b>     |           |   |
| MTTF <sub>d</sub>                               |           | 1393 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>               |           |   |
| Protection class                                |           | II  |
| Rated insulation voltage                        | $U_i$     | 60 V  |
| Rated impulse withstand voltage                 | $U_{imp}$ | 800 V   |
| UL approval                                     |           | cULus Listed<br>Load Type: General Purpose<br>Circuitry: Class 2 Power Source<br>Enclosure Type Rating: Type 1<br>Supply/Switching Voltage: 30 V DC<br>Output Switching Current: 200 mA |
| CCC approval                                    |           | CCC approval / marking not required for products rated $\leq 36$ V  |
| <b>Ambient conditions</b>                       |           |   |
| Ambient temperature                             |           | -40 ... 85 °C (-40 ... 185 °F)  |
| Storage temperature                             |           | -40 ... 85 °C (-40 ... 185 °F)  |
| <b>Mechanical specifications</b>                |           |   |
| Connection type                                 |           | cabLe   |
| Housing material                                |           | Stainless steel 1.4404 / AISI 316L  |
| Sensing face                                    |           | LCP, (conforms with FDA)  |
| Degree of protection                            |           | IP68 / IP69K  |
| <b>Cable</b>                                    |           |   |
| Wire end ferrules                               |           | yes   |
| Cable diameter                                  |           | 4.3 mm $\pm$ 0.15 mm  |
| Bending radius                                  |           | > 10 x cable diameter   |
| Material  |           | PVC   |
| Color   |           | black   |
| Number of cores                                 |           | 3   |
| Core cross section                              |           | 0.34 mm <sup>2</sup>  |
| Length  | L         | 2 m   |
| Mass  |           | 73 g  |
| <b>Dimensions</b>                               |           |   |
| Length  |           | 45 mm   |
| Diameter  |           | 18 mm   |
| <b>General information</b>                      |           |   |
| Scope of delivery                               |           | Supplied with 2 nuts  |

## Connection Assignment



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