

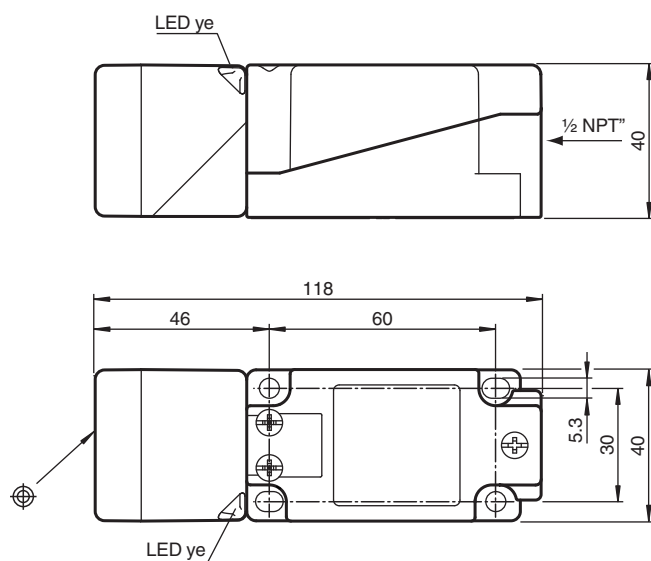


## Inductive sensor NBN40-U2K-N0

- Sensor head bidirectional and rotatable
- 40 mm non-flush



### Dimensions



### Technical Data

#### General specifications

|                            |       |                      |
|----------------------------|-------|----------------------|
| Switching function         |       | Normally closed (NC) |
| Output type                |       | NAMUR                |
| Rated operating distance   | $s_n$ | 40 mm                |
| Installation               |       | non-flush            |
| Assured operating distance | $s_a$ | 0 ... 32.4 mm        |
| Actual operating distance  | $s_r$ | 36 ... 44 mm         |
| Reduction factor $r_{Al}$  |       | 0.31                 |
| Reduction factor $r_{Cu}$  |       | 0.3                  |

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

Pepperl+Fuchs Group  
www.pepperl-fuchs.com

USA: +1 330 486 0001  
fa-info@us.pepperl-fuchs.com

Germany: +49 621 776 1111  
fa-info@de.pepperl-fuchs.com

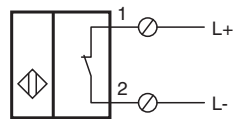
Singapore: +65 6779 9091  
fa-info@sg.pepperl-fuchs.com

**PEPPERL+FUCHS**

## Technical Data

|                                                 |       |                                                                                                                                            |
|-------------------------------------------------|-------|--------------------------------------------------------------------------------------------------------------------------------------------|
| Reduction factor $r_{304}$                      |       | 0.74                                                                                                                                       |
| Output type                                     |       | 2-wire                                                                                                                                     |
| <b>Nominal ratings</b>                          |       |                                                                                                                                            |
| Nominal voltage                                 | $U_o$ | 8 V                                                                                                                                        |
| Switching frequency                             | $f$   | 0 ... 150 Hz                                                                                                                               |
| Hysteresis                                      | $H$   | typ. 5 %                                                                                                                                   |
| Reverse polarity protection                     |       | yes                                                                                                                                        |
| Short-circuit protection                        |       | yes                                                                                                                                        |
| <b>Current consumption</b>                      |       |                                                                                                                                            |
| Measuring plate not detected                    |       | min. 2.2 mA                                                                                                                                |
| Measuring plate detected                        |       | $\leq 1$ mA                                                                                                                                |
| Switching state indicator                       |       | LED, yellow                                                                                                                                |
| <b>Functional safety related parameters</b>     |       |                                                                                                                                            |
| MTTF <sub>d</sub>                               |       | 1415 a                                                                                                                                     |
| Mission Time ( $T_M$ )                          |       | 20 a                                                                                                                                       |
| Diagnostic Coverage (DC)                        |       | 0 %                                                                                                                                        |
| <b>Compliance with standards and directives</b> |       |                                                                                                                                            |
| Standard conformity                             |       |                                                                                                                                            |
| NAMUR                                           |       | EN 60947-5-6:2000<br>IEC 60947-5-6:1999                                                                                                    |
| Electromagnetic compatibility                   |       | NE 21:2007                                                                                                                                 |
| Standards                                       |       | EN 60947-5-2:2007<br>EN 60947-5-2/A1:2012<br>IEC 60947-5-2:2007<br>IEC 60947-5-2 AMD 1:2012                                                |
| <b>Approvals and certificates</b>               |       |                                                                                                                                            |
| UL approval                                     |       |                                                                                                                                            |
| Ordinary Location                               |       | E87056                                                                                                                                     |
| Hazardous Location                              |       | E501628                                                                                                                                    |
| Control drawing                                 |       | 116-0451                                                                                                                                   |
| CCC approval                                    |       | CCC approval / marking not required for products rated $\leq 36$ V                                                                         |
| <b>Ambient conditions</b>                       |       |                                                                                                                                            |
| Ambient temperature                             |       | -25 ... 100 °C (-13 ... 212 °F)                                                                                                            |
| Storage temperature                             |       | -40 ... 100 °C (-40 ... 212 °F)                                                                                                            |
| <b>Mechanical specifications</b>                |       |                                                                                                                                            |
| Connection type                                 |       | screw terminals                                                                                                                            |
| Information for connection                      |       | A maximum of two conductors with the same core cross section may be mounted on one terminal connection!<br>tightening torque 1.2 Nm + 10 % |
| Core cross-section                              |       | up to 2.5 mm <sup>2</sup>                                                                                                                  |
| Minimum core cross-section                      |       | without wire end ferrule 0.5 mm <sup>2</sup> , with connector sleeves 0.34 mm <sup>2</sup>                                                 |
| Maximum core cross-section                      |       | without wire end ferrule 2.5 mm <sup>2</sup> , with connector sleeves 1.5 mm <sup>2</sup>                                                  |
| Housing material                                |       | PA                                                                                                                                         |
| Sensing face                                    |       | PA                                                                                                                                         |
| Degree of protection                            |       | IP68 / IP69K                                                                                                                               |
| Mass                                            |       | 225 g                                                                                                                                      |
| Note                                            |       | Tightening torque: 1.8 Nm (housing)                                                                                                        |
| <b>General information</b>                      |       |                                                                                                                                            |
| Use in the hazardous area                       |       | see instruction manuals                                                                                                                    |

Connection



Accessories

|                                                                                   |               |                          |
|-----------------------------------------------------------------------------------|---------------|--------------------------|
|  | <b>MHW 01</b> | Modular mounting bracket |
|-----------------------------------------------------------------------------------|---------------|--------------------------|

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