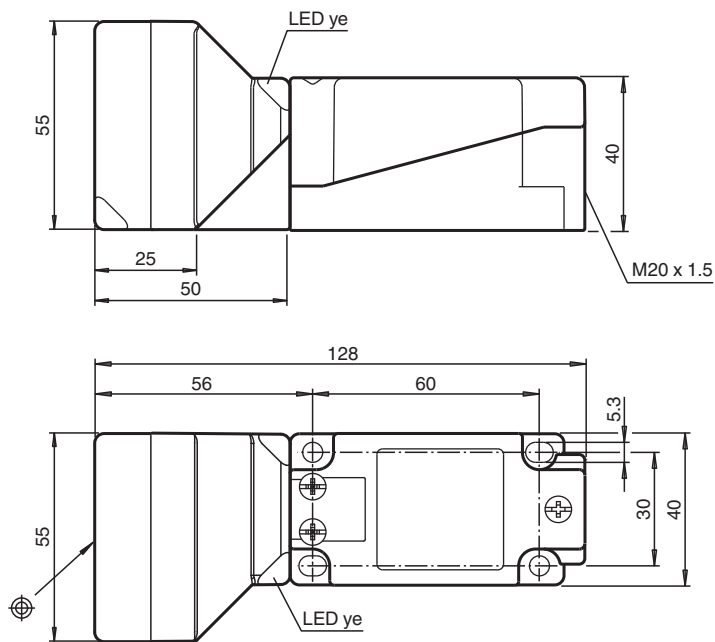


## Inductive sensor NBN40-U1L-Z2

- Sensor head bidirectional and rotatable
- Basic series
- 40 mm non-flush
- 2-wire DC
- 2 LEDs indicator for 360° visibility



### Dimensions



### Technical Data

#### General specifications

|                            |       |                              |
|----------------------------|-------|------------------------------|
| Switching function         |       | Normally open/closed (NO/NC) |
| Output type                |       | Two-wire                     |
| Rated operating distance   | $s_n$ | 40 mm                        |
| Installation               |       | non-flush                    |
| Output polarity            |       | DC                           |
| Assured operating distance | $s_a$ | 0 ... 32.4 mm                |
| Actual operating distance  | $s_r$ | 36 ... 44 mm typ. 40 mm      |
| Reduction factor $r_{AI}$  |       | 0.39                         |
| Reduction factor $r_{Cu}$  |       | 0.37                         |

Release date: 2022-05-23 Date of issue: 2022-05-23 Filename: 233001\_eng.pdf

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

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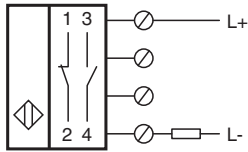
**PF** PEPPERL+FUCHS

## Technical Data

|   |           |  |
|---|-----------|--|
| Reduction factor $r_{304}$                        |           | 0.76   |
| Output type                                       |           | 2-wire   |
| <b>Nominal ratings</b>                            |           |  |
| Operating voltage                                 | $U_B$     | 5 ... 60 V DC  |
| Switching frequency                               | $f$       | 0 ... 100 Hz   |
| Hysteresis  | $H$       | 1 ... 10 typ. 5 %  |
| Reverse polarity protection                       |           | reverse polarity tolerant  |
| Short-circuit protection                          |           | pulsing  |
| Voltage drop                                      | $U_d$     | $\leq 5$ V   |
| Voltage drop at $I_L$                             |           |  |
| Voltage drop $I_L = 100$ mA, switching element on | $U_d$     | ... 5 V  |
| Rated insulation voltage                          | $U_{BIS}$ | 60 V   |
| Operating current                                 | $I_L$     | 2 ... 200 mA   |
| Off-state current                                 | $I_r$     | 0 ... 1 mA typ. 0.7 mA   |
| Switching state indicator                         |           | 2 LED, yellow  |
| <b>Functional safety related parameters</b>       |           |  |
| MTTF <sub>d</sub>                                 |           | 1170 a   |
| Mission Time ( $T_M$ )                            |           | 20 a   |
| Diagnostic Coverage (DC)                          |           | 0 %  |
| <b>Compliance with standards and directives</b>   |           |  |
| Standard conformity                               |           |  |
| Standards   |           | EN 60947-5-2:2007<br>IEC 60947-5-2:2007  |
| <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, General Purpose  |
| CSA approval                                      |           | cCSAus Listed, General Purpose   |
| <b>Ambient conditions</b>                         |           |  |
| Ambient temperature                               |           | -25 ... 85 °C (-13 ... 185 °F)   |
| Storage temperature                               |           | -25 ... 85 °C (-13 ... 185 °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   |
| Housing base                                      |           |  |
|   |           | plastic  |
| Degree of protection                              |           |  |
|   |           | IP68 / IP69K   |
| Mass  |           |  |
|   |           | 225 g  |
| Note  |           |  |
|   |           | Tightening torque: 1.8 Nm (housing)  |

Release date: 2022-05-23 Date of issue: 2022-05-23 Filename: 233001\_eng.pdf

## Connection



## Accessories

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

Release date: 2022-05-23 Date of issue: 2022-05-23 Filename: 233001\_eng.pdf