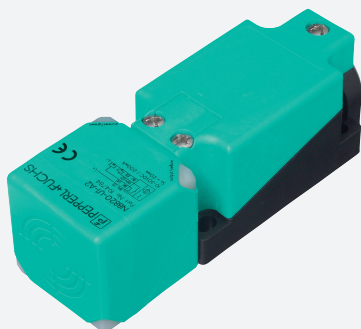




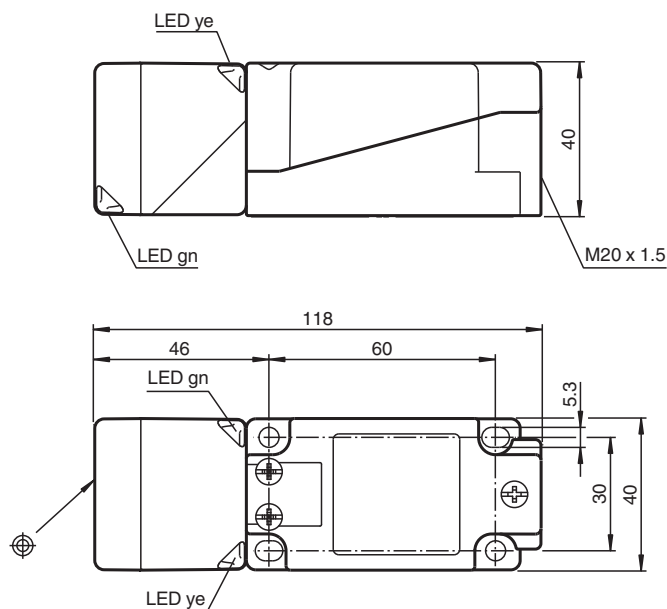
## Inductive sensor

### NBN30-U1-E3

- Sensor head bidirectional and rotatable
- 30 mm non-flush
- 4 LEDs indicator for 360° visibility



## Dimensions



## Technical Data

### General specifications

|                              |       |                         |
|------------------------------|-------|-------------------------|
| Switching function           |       | Normally closed (NC)    |
| Output type                  |       | PNP                     |
| Rated operating distance     | $s_n$ | 30 mm                   |
| Installation                 |       | non-flush               |
| Output polarity              |       | DC                      |
| Assured operating distance   | $s_a$ | 0 ... 24.3 mm           |
| Actual operating distance    | $s_r$ | 27 ... 33 mm typ. 30 mm |
| Reduction factor $r_{Al}$    |       | 0.33                    |
| Reduction factor $r_{Cu}$    |       | 0.31                    |
| Reduction factor $r_{304}$   |       | 0.74                    |
| Reduction factor $r_{Brass}$ |       | 0.38                    |
| Output type                  |       | 3-wire                  |

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

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**PEPPERL+FUCHS**

## Technical Data

### Nominal ratings

|                                                        |       |                            |
|--------------------------------------------------------|-------|----------------------------|
| Operating voltage                                      | $U_B$ | 10 ... 30 V                |
| Switching frequency                                    | $f$   | 0 ... 230 Hz               |
| Hysteresis                                             | $H$   | typ. 5 %                   |
| Reverse polarity protection                            |       | reverse polarity protected |
| Short-circuit protection                               |       | pulsing                    |
| Voltage drop                                           | $U_d$ | $\leq 2$ V                 |
| Operating current                                      | $I_L$ | 0 ... 200 mA               |
| Off-state current                                      | $I_r$ | 0 ... 0.5 mA typ. 0.01 mA  |
| Off-state current $T_U = 40$ °C, switching element off |       | $\leq 100$ $\mu$ A         |
| No-load supply current                                 | $I_0$ | $\leq 20$ mA               |
| Time delay before availability                         | $t_v$ | $\leq 50$ ms               |
| Operating voltage indicator                            |       | LED, green                 |
| Switching state indicator                              |       | LED, yellow                |

### Functional safety related parameters

|                          |  |        |
|--------------------------|--|--------|
| MTTF <sub>d</sub>        |  | 1980 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 $\leq 36$ V |

### Ambient conditions

|                     |  |                                |
|---------------------|--|--------------------------------|
| Ambient temperature |  | -25 ... 85 °C (-13 ... 185 °F) |
|---------------------|--|--------------------------------|

### Mechanical specifications

|                      |  |                                                                                   |
|----------------------|--|-----------------------------------------------------------------------------------|
| Connection type      |  | screw terminals                                                                   |
| Core cross section   |  | max. 2.5 mm <sup>2</sup>                                                          |
| Housing material     |  | PA/metal with epoxy powder coating                                                |
| Sensing face         |  | PA                                                                                |
| Housing base         |  | plastic                                                                           |
| Degree of protection |  | IP68 / IP69K                                                                      |
| Mass                 |  | 225 g                                                                             |
| Dimensions           |  |                                                                                   |
| Height               |  | 40 mm                                                                             |
| Width                |  | 40 mm                                                                             |
| Length               |  | 118 mm                                                                            |
| Note                 |  | Tightening torque: 1.8 Nm (housing)<br>Tightening torque: 1.0 Nm (Screw terminal) |

## Connection

