



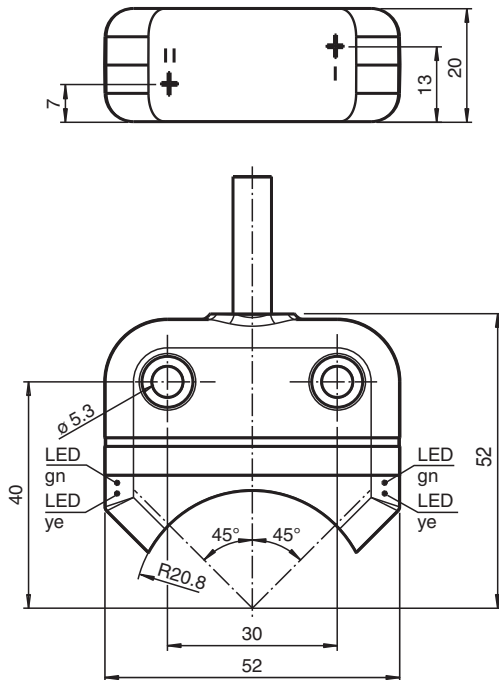
## Inductive sensor

### NBN4-F25-E8

- Direct mounting on standard actuators
- Small construction with sturdy plastic housing of protection class IP 67
- LED for power on



## Dimensions



## Technical Data

### General specifications

|                            |       |                        |
|----------------------------|-------|------------------------|
| Switching function         |       | 2 x normally open (NO) |
| Output type                |       | PNP                    |
| Rated operating distance   | $s_n$ | 4 mm                   |
| Installation               |       | flush mountable        |
| Output polarity            |       | DC                     |
| Assured operating distance | $s_a$ | 0 ... 3.24 mm          |
| Actual operating distance  | $s_r$ | 3.6 ... 4.4 mm typ.    |
| Reduction factor $r_{AI}$  |       | 0.5                    |
| Reduction factor $r_{Cu}$  |       | 0.4                    |
| Reduction factor $r_{304}$ |       | 1                      |

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 $r_{S137}$                     |       | 1.1                                                                |
| Output type                                     |       | 3-wire                                                             |
| <b>Nominal ratings</b>                          |       |                                                                    |
| Operating voltage                               | $U_B$ | 10 ... 30 V DC                                                     |
| Switching frequency                             | $f$   | 0 ... 1000 Hz                                                      |
| Hysteresis                                      | $H$   | typ. 5 %                                                           |
| Reverse polarity protection                     |       | reverse polarity protected                                         |
| Short-circuit protection                        |       | pulsing                                                            |
| Voltage drop                                    | $U_d$ | $\leq 2.5$ 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                          | $I_0$ | $\leq 22.5$ mA                                                     |
| Time delay before availability                  | $t_v$ | $\leq 100$ ms                                                      |
| Operating voltage indicator                     |       | LED, green                                                         |
| Switching state indicator                       |       | LED, yellow                                                        |
| <b>Functional safety related parameters</b>     |       |                                                                    |
| MTTF <sub>d</sub>                               |       | 860 a                                                              |
| Mission Time ( $T_M$ )                          |       | 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                                                       |
| CCC approval                                    |       | CCC approval / marking not required for products rated $\leq 36$ V |
| <b>Ambient conditions</b>                       |       |                                                                    |
| Ambient temperature                             |       | -25 ... 70 °C (-13 ... 158 °F)                                     |
| Storage temperature                             |       | -40 ... 85 °C (-40 ... 185 °F)                                     |
| <b>Mechanical specifications</b>                |       |                                                                    |
| Connection type                                 |       | cable PVC , 2000 mm                                                |
| Core cross section                              |       | 0.75 mm <sup>2</sup>                                               |
| Housing material                                |       | PBT                                                                |
| Sensing face                                    |       | PC                                                                 |
| Degree of protection                            |       | IP67                                                               |
| <b>Cable</b>                                    |       |                                                                    |
| Cable diameter                                  |       | 4.3 mm $\pm$ 0.1 mm                                                |
| Bending radius                                  |       | > 15 x cable diameter                                              |
| Mass                                            |       | 405 g                                                              |
| Tightening torque, fastening screws             |       | M5 x 25 : $\leq 2.7$ Nm                                            |
| <b>Dimensions</b>                               |       |                                                                    |
| Height                                          |       | 20 mm                                                              |
| Width                                           |       | 52 mm                                                              |
| Length                                          |       | 52 mm                                                              |
| Note                                            |       | Mounted on mechanical drive                                        |

## Connection

