

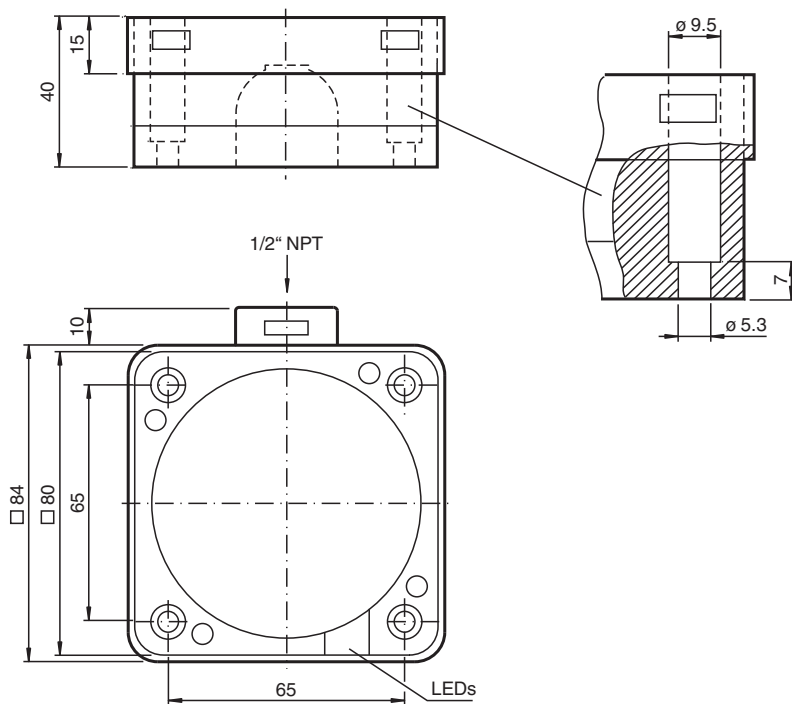


## Inductive sensor NCB50-FP-E2-P4

- Comfort series
- 50 mm flush
- 3-wire DC



### Dimensions



### Technical Data

#### General specifications

|                            |       |                    |
|----------------------------|-------|--------------------|
| Switching function         |       | Normally open (NO) |
| Output type                |       | PNP                |
| Rated operating distance   | $s_n$ | 50 mm              |
| Installation               |       | flush              |
| Output polarity            |       | DC                 |
| Assured operating distance | $s_a$ | 0 ... 40.5 mm      |
| Reduction factor $r_{Al}$  |       | 0.38               |
| Reduction factor $r_{Cu}$  |       | 0.35               |
| Reduction factor $r_{304}$ |       | 0.83               |

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

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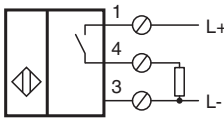
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**PEPPERL+FUCHS**

# Technical Data

|                                                 |       |                                                                                                                                            |
|-------------------------------------------------|-------|--------------------------------------------------------------------------------------------------------------------------------------------|
| Output type                                     |       | 3-wire                                                                                                                                     |
| <b>Nominal ratings</b>                          |       |                                                                                                                                            |
| Operating voltage                               | $U_B$ | 10 ... 60 V DC                                                                                                                             |
| Switching frequency                             | $f$   | 0 ... 80 Hz                                                                                                                                |
| Hysteresis                                      | $H$   | typ. 3 %                                                                                                                                   |
| Reverse polarity protection                     |       | reverse polarity protected                                                                                                                 |
| Short-circuit protection                        |       | pulsing                                                                                                                                    |
| Voltage drop                                    | $U_d$ | $\leq 3$ V                                                                                                                                 |
| Operating current                               | $I_L$ | 0 ... 200 mA                                                                                                                               |
| Off-state current                               | $I_r$ | 0 ... 0.5 mA                                                                                                                               |
| No-load supply current                          | $I_0$ | $\leq 20$ mA                                                                                                                               |
| Time delay before availability                  | $t_v$ | $\leq 300$ ms                                                                                                                              |
| Operating voltage indicator                     |       | LED, green                                                                                                                                 |
| Switching state indicator                       |       | LED, yellow                                                                                                                                |
| <b>Functional safety related parameters</b>     |       |                                                                                                                                            |
| MTTF <sub>d</sub>                               |       | 940 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>               |       |                                                                                                                                            |
| UL approval                                     |       | cULus Listed, General Purpose                                                                                                              |
| CCC approval                                    |       | Certified by China Compulsory Certification (CCC)                                                                                          |
| <b>Ambient conditions</b>                       |       |                                                                                                                                            |
| Ambient temperature                             |       | -25 ... 70 °C (-13 ... 158 °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 ferrules 0.5 mm <sup>2</sup> , with connector sleeves 0.34 mm <sup>2</sup>                                                |
| Maximum core cross-section                      |       | without wire end ferrules 2.5 mm <sup>2</sup> , with connector sleeves 1.5 mm <sup>2</sup>                                                 |
| Housing material                                |       | PBT                                                                                                                                        |
| Sensing face                                    |       | PBT                                                                                                                                        |
| Housing base                                    |       | metal                                                                                                                                      |
| Degree of protection                            |       | IP68                                                                                                                                       |
| Dimensions                                      |       |                                                                                                                                            |
| Height                                          |       | 40 mm                                                                                                                                      |
| Width                                           |       | 84 mm                                                                                                                                      |
| Length                                          |       | 84 mm                                                                                                                                      |

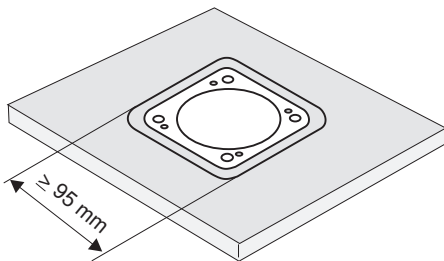
# Connection



## Mounting

These sensors are especially designed for embeddable mounting in conveyor floors. Due to its precise location in metal base plates the sensor is afforded a high degree of mechanical protection. No clearance is required between the sensor and the base plate, avoiding the need for protective guarding to prevent possible foot injury.

The large sensing range ensures positive detection, and thus provides consistent control and monitoring of the conveyor.



### Warning!

Once the metal screening has been removed, the sensor can no longer be embeddable mounted.