

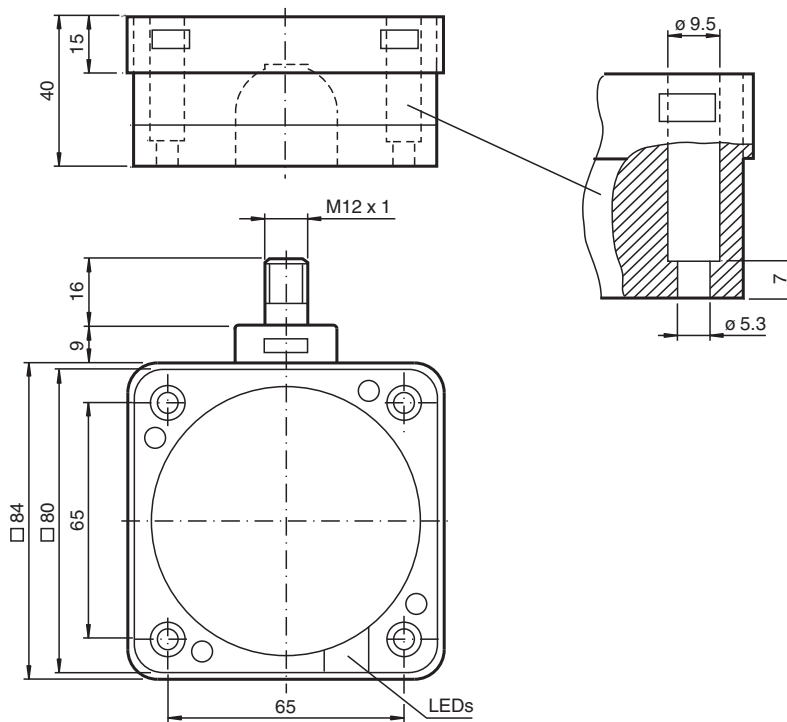
Inductive sensor

NCB50-FP-E2-C-P1-V1

- 50 mm flush
- 3-wire DC
- Weld Immune
- Optimum use at a distance >50 cm



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 |
| Output type | | 3-wire |

Nominal ratings

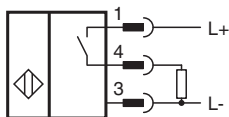
| | | |
|---------------------|-------|----------------|
| Operating voltage | U_B | 10 ... 60 V DC |
| Switching frequency | f | 0 ... 1 Hz |

Release date: 2025-06-06 Date of issue: 2025-06-06 Filename: 132412_eng.pdf

Technical Data

| | | |
|---|-------|---|
| Hysteresis | H | typ. 3 % |
| Reverse polarity protection | | reverse polarity protected |
| Short-circuit protection | | pulsing |
| Voltage drop | U_d | ≤ 3 V |
| Operating current | I_L | 0 ... 200 mA |
| Off-state current | I_r | 0 ... 0.5 mA |
| No-load supply current | I_0 | ≤ 20 mA |
| Time delay before availability | t_v | ≤ 1 s |
| Tuning-out | | ≥ 50 ms |
| Operating voltage indicator | | LED, green |
| Switching state indicator | | LED, yellow |
| Functional safety related parameters | | |
| MTTF _d | | 960 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 Circuitry: Class 2 Power Source Enclosure Type Rating: Type 1 Supply/Switching Voltage: 60 V DC Output Switching Current: 200 mA |
| CCC approval | | Certified by China Compulsory Certification (CCC) |
| Ambient conditions | | |
| Ambient temperature | | -25 ... 70 °C (-13 ... 158 °F) |
| Mechanical specifications | | |
| Connection type | | Connector plug |
| Housing material | | PBT/metal |
| Sensing face | | PBT, active surface PTFE coated |
| Housing base | | PBT |
| Degree of protection | | IP68 |
| Connector | | |
| Threading | | M12 x 1 |
| Number of pins | | 4 |
| Dimensions | | |
| Height | | 40 mm |
| Width | | 84 mm |
| Length | | 84 mm |

Connection



Connection Assignment



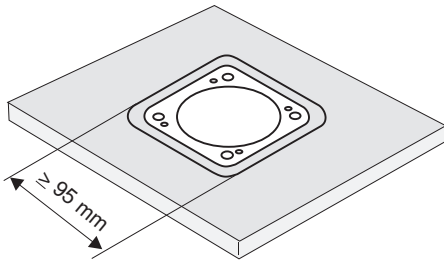
Wire colors in accordance with EN 60947-5-2

| | | |
|---|----|---------|
| 1 | BN | (brown) |
| 2 | WH | (white) |
| 3 | BU | (blue) |
| 4 | BK | (black) |

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.