

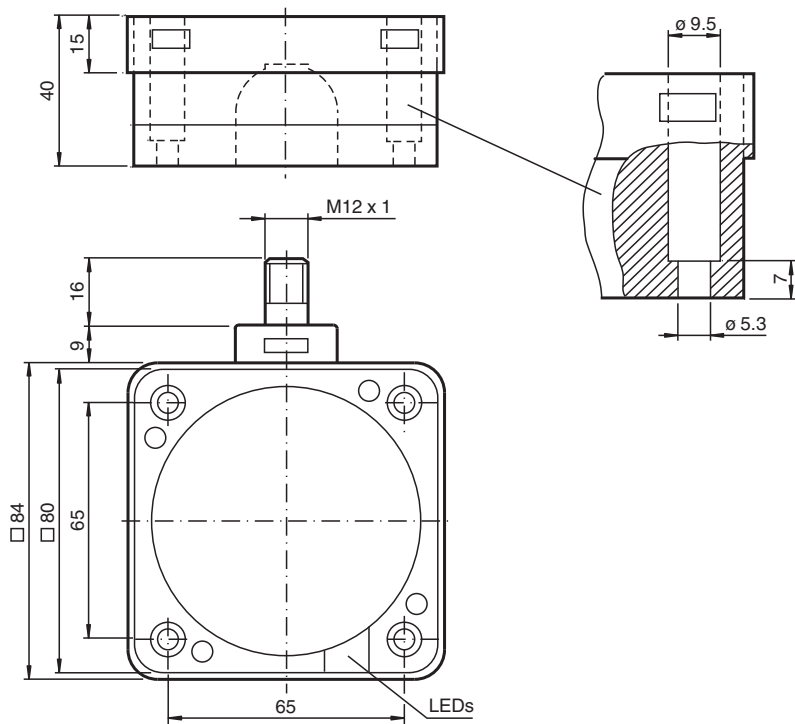


Inductive sensor  
NCB40-FP-N0-P1-V1

■ 40 mm flush



Dimensions



Technical Data

| General specifications     |       |                         |
|----------------------------|-------|-------------------------|
| Switching function         |       | Normally closed (NC)    |
| Output type                |       | NAMUR                   |
| Rated operating distance   | $s_n$ | 40 mm                   |
| Installation               |       | flush                   |
| Assured operating distance | $s_a$ | 0 ... 32 mm             |
| Actual operating distance  | $s_r$ | 36 ... 44 mm typ. 40 mm |
| Reduction factor $r_{AI}$  |       | 0.35                    |
| Reduction factor $r_{Cu}$  |       | 0.35                    |

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

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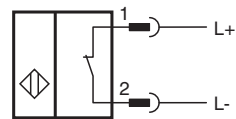
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**PEPPERL+FUCHS**

## Technical Data

|                                                 |       |                                                                                             |
|-------------------------------------------------|-------|---------------------------------------------------------------------------------------------|
| Reduction factor $r_{304}$                      |       | 0.8                                                                                         |
| Output type                                     |       | 2-wire                                                                                      |
| <b>Nominal ratings</b>                          |       |                                                                                             |
| Installation conditions                         |       |                                                                                             |
| F                                               |       | 100 mm                                                                                      |
| Nominal voltage                                 | $U_o$ | 8.2 V ( $R_i$ approx. 1 k $\Omega$ )                                                        |
| Switching frequency                             | f     | 0 ... 80 Hz                                                                                 |
| Hysteresis                                      | H     | 0 ... 5 typ. 3 %                                                                            |
| Reverse polarity protection                     |       | reverse polarity protected                                                                  |
| Short-circuit protection                        |       | yes                                                                                         |
| <b>Current consumption</b>                      |       |                                                                                             |
| Measuring plate not detected                    |       | $\geq 3$ mA                                                                                 |
| Measuring plate detected                        |       | $\leq 1$ mA                                                                                 |
| Time delay before availability                  | $t_v$ | $\leq 20$ ms                                                                                |
| Switching state indicator                       |       | LED, yellow                                                                                 |
| <b>Functional safety related parameters</b>     |       |                                                                                             |
| MTTF <sub>d</sub>                               |       | 2368 a                                                                                      |
| Mission Time ( $T_M$ )                          |       | 20 a                                                                                        |
| Diagnostic Coverage (DC)                        |       | 0 %                                                                                         |
| <b>Compliance with standards and directives</b> |       |                                                                                             |
| <b>Standard conformity</b>                      |       |                                                                                             |
| NAMUR                                           |       | EN 60947-5-6:2000<br>IEC 60947-5-6:1999                                                     |
| Electromagnetic compatibility                   |       | NE 21:2007                                                                                  |
| Standards                                       |       | EN 60947-5-2:2007<br>EN 60947-5-2/A1:2012<br>IEC 60947-5-2:2007<br>IEC 60947-5-2 AMD 1:2012 |
| <b>Approvals and certificates</b>               |       |                                                                                             |
| EAC conformity                                  |       | TR CU 012/2011                                                                              |
| <b>FM approval</b>                              |       |                                                                                             |
| Control drawing                                 |       | 116-0165                                                                                    |
| <b>UL approval</b>                              |       |                                                                                             |
| Ordinary Location                               |       | E87056                                                                                      |
| Hazardous Location                              |       | E501628                                                                                     |
| Control drawing                                 |       | 116-0451                                                                                    |
| CSA approval                                    |       | cCSAus Listed, General Purpose                                                              |
| CCC approval                                    |       | CCC approval / marking not required for products rated $\leq 36$ V                          |
| <b>Ambient conditions</b>                       |       |                                                                                             |
| Ambient temperature                             |       | -25 ... 100 °C (-13 ... 212 °F)                                                             |
| Storage temperature                             |       | -40 ... 100 °C (-40 ... 212 °F)                                                             |
| <b>Mechanical specifications</b>                |       |                                                                                             |
| Connection type                                 |       | Connector plug M12 x 1 , 4-pin                                                              |
| Housing material                                |       | PBT                                                                                         |
| Sensing face                                    |       | PBT                                                                                         |
| Housing base                                    |       | PBT                                                                                         |
| Degree of protection                            |       | IP67                                                                                        |
| <b>General information</b>                      |       |                                                                                             |
| Use in the hazardous area                       |       | see instruction manuals                                                                     |

Connection



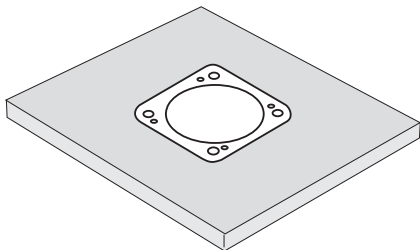
Wire colors in accordance with EN 60947-5-6

|   |  |    |         |
|---|--|----|---------|
| 1 |  | BN | (brown) |
| 2 |  | BU | (blue)  |

Installation Conditions

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.



Accessories

|  |                      |                                              |
|--|----------------------|----------------------------------------------|
|  | <b>V1-G-N-2M-PUR</b> | Female cordset, M12, 2-pin, NAMUR, PUR cable |
|  | <b>V1-W-N-2M-PUR</b> | Female cordset, M12, 2-pin, NAMUR, PUR cable |

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