



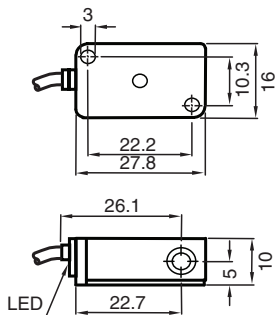
# Inductive sensor

## NCB2-V3-N0

- 2 mm flush
- Usable up to SIL 2 acc. to IEC 61508



### Dimensions



### Technical Data

| General specifications           |                |                      |  |
|----------------------------------|----------------|----------------------|--|
| Switching function               |                | Normally closed (NC) |  |
| Output type                      |                | NAMUR                |  |
| Rated operating distance         | S <sub>n</sub> | 2 mm                 |  |
| Installation                     |                | flush                |  |
| Assured operating distance       | S <sub>a</sub> | 0 ... 1.62 mm        |  |
| Reduction factor r <sub>AI</sub> |                | 0.3                  |  |

## Technical Data

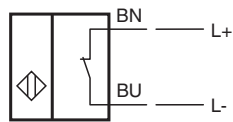
|                                                 |       |                                                                                             |
|-------------------------------------------------|-------|---------------------------------------------------------------------------------------------|
| Reduction factor $r_{Cu}$                       |       | 0.2                                                                                         |
| Reduction factor $r_{304}$                      |       | 0.7                                                                                         |
| Output type                                     |       | 2-wire                                                                                      |
| <b>Nominal ratings</b>                          |       |                                                                                             |
| Nominal voltage                                 | $U_o$ | 8.2 V ( $R_i$ approx. 1 k $\Omega$ )                                                        |
| Switching frequency                             | $f$   | 0 ... 2000 Hz                                                                               |
| Hysteresis                                      | $H$   | typ. 3 %                                                                                    |
| Current consumption                             |       |                                                                                             |
| Measuring plate not detected                    |       | $\geq 3$ mA                                                                                 |
| Measuring plate detected                        |       | $\leq 1$ mA                                                                                 |
| Switching state indicator                       |       | LED, yellow                                                                                 |
| <b>Functional safety related parameters</b>     |       |                                                                                             |
| Safety Integrity Level (SIL)                    |       | SIL 2                                                                                       |
| MTTF <sub>d</sub>                               |       | 2180 a                                                                                      |
| Mission Time ( $T_M$ )                          |       | 20 a                                                                                        |
| Diagnostic Coverage (DC)                        |       | 0 %                                                                                         |
| <b>Compliance with standards and directives</b> |       |                                                                                             |
| Standard conformity                             |       |                                                                                             |
| 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>               |       |                                                                                             |
| IECEx approval                                  |       |                                                                                             |
| Equipment protection level Ga                   |       | IECEx PTB 11.0021X                                                                          |
| Equipment protection level Gb                   |       | IECEx PTB 11.0021X                                                                          |
| Equipment protection level Da                   |       | IECEx PTB 11.0021X                                                                          |
| Equipment protection level Mb                   |       | IECEx PTB 11.0021X                                                                          |
| ATEX approval                                   |       |                                                                                             |
| Equipment protection level Ga                   |       | PTB 00 ATEX 2032 X                                                                          |
| Equipment protection level Gb                   |       | PTB 00 ATEX 2032 X                                                                          |
| Equipment protection level Da                   |       | PTB 00 ATEX 2032 X                                                                          |
| EAC conformity                                  |       | TR CU 012/2011                                                                              |
| FM approval                                     |       |                                                                                             |
| Control drawing                                 |       | 116-0165                                                                                    |
| UL approval                                     |       |                                                                                             |
| 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)                                                             |
| <b>Mechanical specifications</b>                |       |                                                                                             |
| Connection type                                 |       | cable PVC , 130 mm                                                                          |
| Core cross-section                              |       | 0.14 mm <sup>2</sup>                                                                        |
| Housing material                                |       | PBT                                                                                         |
| Sensing face                                    |       | PBT                                                                                         |
| Degree of protection                            |       | IP67                                                                                        |
| Cable                                           |       |                                                                                             |
| Cable diameter                                  |       | 2.6 mm $\pm$ 0.2 mm                                                                         |

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Technical Data

|                           |                         |
|---------------------------|-------------------------|
| Bending radius            | > 10 x cable diameter   |
| General information       |                         |
| Use in the hazardous area | see instruction manuals |

Connection



Accessories

|                                                                                   |                |                                                                |
|-----------------------------------------------------------------------------------|----------------|----------------------------------------------------------------|
|  | KCD2-SR-Ex1.LB | 24 V DC                                                        |
|  | KCD2-E2L       | Sensor output interface terminal with lead breakage monitoring |

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