

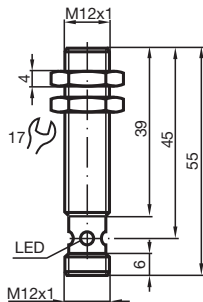
# Inductive sensor NCB2-12GM40-Z0-V1



- 2 mm flush
- 2-wire DC



## Dimensions



## Technical Data

### General specifications

|                            |       |                     |
|----------------------------|-------|---------------------|
| Switching function         |       | Normally open (NO)  |
| Output type                |       | Two-wire            |
| Rated operating distance   | $s_n$ | 2 mm                |
| Installation               |       | flush               |
| Output polarity            |       | DC                  |
| Assured operating distance | $s_a$ | 0 ... 1.62 mm       |
| Actual operating distance  | $s_r$ | 1.8 ... 2.2 mm typ. |
| Reduction factor $r_{AI}$  |       | 0.28                |
| Reduction factor $r_{Cu}$  |       | 0.23                |
| Reduction factor $r_{304}$ |       | 0.7                 |

### Nominal ratings

|                   |       |            |
|-------------------|-------|------------|
| Operating voltage | $U_B$ | 5 ... 60 V |
|-------------------|-------|------------|

Technical Data

|                             |                |                           |
|-----------------------------|----------------|---------------------------|
| Switching frequency         | f              | 0 ... 800 Hz              |
| Hysteresis                  | H              | 1 ... 10 typ. 5 %         |
| Reverse polarity protection |                | reverse polarity tolerant |
| Short-circuit protection    |                | pulsing                   |
| Voltage drop                | U <sub>d</sub> | ≤ 5 V                     |
| Operating current           | I <sub>L</sub> | 2 ... 100 mA              |
| Lowest operating current    | I <sub>m</sub> | 2 mA                      |
| Off-state current           | I <sub>r</sub> | 0 ... 0.5 mA typ.         |
| Switching state indicator   |                | Multihole-LED, yellow     |

Functional safety related parameters

|                                |  |        |
|--------------------------------|--|--------|
| MTTF <sub>d</sub>              |  | 2090 a |
| Mission Time (T <sub>M</sub> ) |  | 20 a   |
| Diagnostic Coverage (DC)       |  | 0 %    |

Compliance with standards and directives

|                     |  |                                         |
|---------------------|--|-----------------------------------------|
| Standard conformity |  |                                         |
| Standards           |  | EN 60947-5-2:2007<br>IEC 60947-5-2:2007 |

Approvals and certificates

|              |  |                                                   |
|--------------|--|---------------------------------------------------|
| UL approval  |  | cULus Listed, General Purpose                     |
| CSA approval |  | cCSAus Listed, General Purpose                    |
| CCC approval |  | Certified by China Compulsory Certification (CCC) |

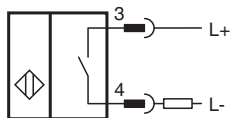
Ambient conditions

|                     |  |                                |
|---------------------|--|--------------------------------|
| Ambient temperature |  | -25 ... 70 °C (-13 ... 158 °F) |
|---------------------|--|--------------------------------|

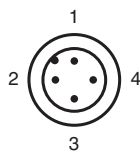
Mechanical specifications

|                      |  |                                   |
|----------------------|--|-----------------------------------|
| Connection type      |  | Connector M12 x 1 , 4-pin         |
| Housing material     |  | Stainless steel 1.4305 / AISI 303 |
| Sensing face         |  | PBT                               |
| Degree of protection |  | IP67                              |

Connection



Connection Assignment



Wire colors in accordance with EN 60947-5-2

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

Accessories

|                                                                                   |                    |                                       |
|-----------------------------------------------------------------------------------|--------------------|---------------------------------------|
|  | <b>BF 12</b>       | Mounting flange, 12 mm                |
|  | <b>EXG-12</b>      | Quick mounting bracket with dead stop |
|  | <b>V1-W-2M-PUR</b> | Female cordset, M12, 4-pin, PUR cable |
|  | <b>V1-G-2M-PUR</b> | Female cordset, M12, 4-pin, PUR cable |

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