



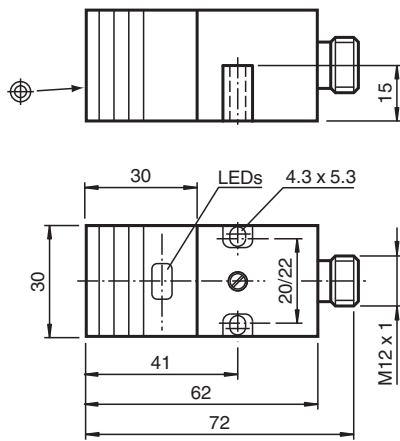
# Inductive sensor

## NJ15-M1-E2-V1-Y222496

- 15 mm non-flush
- 3-wire DC



### Dimensions



### Technical Data

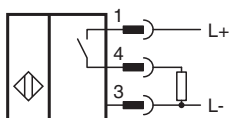
| General specifications      |       |                             |
|-----------------------------|-------|-----------------------------|
| Switching function          |       | Normally open (NO)          |
| Output type                 |       | PNP                         |
| Rated operating distance    | $s_n$ | 15 mm                       |
| Installation                |       | non-flush                   |
| Output polarity             |       | DC                          |
| Assured operating distance  | $s_a$ | 0 ... 12.15 mm              |
| Actual operating distance   | $s_r$ | 13.5 ... 16.5 mm typ. 15 mm |
| Reduction factor $r_{Al}$   |       | 0.39                        |
| Reduction factor $r_{Cu}$   |       | 0.36                        |
| Reduction factor $r_{304}$  |       | 0.73                        |
| Output type                 |       | 3-wire                      |
| Nominal ratings             |       |                             |
| Operating voltage           | $U_B$ | 10 ... 60 V DC              |
| Switching frequency         | $f$   | 0 ... 200 Hz                |
| Hysteresis                  | $H$   | typ. 5 %                    |
| Reverse polarity protection |       | yes                         |

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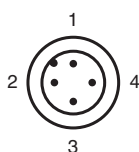
## Technical Data

|                                                            |           |                                |
|------------------------------------------------------------|-----------|--------------------------------|
| Short-circuit protection                                   |           | pulsing                        |
| Voltage drop                                               | $U_d$     | $\leq 2.5 \text{ V}$           |
| Voltage drop at $I_L$                                      |           |                                |
| Voltage drop $I_L = 200 \text{ mA}$ , switching element on | $U_d$     | 1 ... 2.5 V typ. 2.2 V         |
| Rated insulation voltage                                   | $U_{BIS}$ | 500 V                          |
| Operating current                                          | $I_L$     | 0 ... 200 mA                   |
| No-load supply current                                     | $I_0$     | $\leq 14 \text{ mA}$           |
| Time delay before availability                             | $t_v$     | $\leq 50 \text{ ms}$           |
| Operating voltage indicator                                |           | LED, green                     |
| Switching state indicator                                  |           | LED, yellow                    |
| <b>Functional safety related parameters</b>                |           |                                |
| MTTF <sub>d</sub>                                          |           | 1000 a                         |
| Mission Time ( $T_M$ )                                     |           | 20 a                           |
| Diagnostic Coverage (DC)                                   |           | 0 %                            |
| <b>Compliance with standards and directives</b>            |           |                                |
| Standard conformity                                        |           |                                |
| Standards                                                  |           | EN IEC 60947-5-2               |
| <b>Ambient conditions</b>                                  |           |                                |
| Ambient temperature                                        |           | -25 ... 70 °C (-13 ... 158 °F) |
| <b>Mechanical specifications</b>                           |           |                                |
| Connection type                                            |           | Connector plug                 |
| Housing material                                           |           | PBT/metal RAL 7011             |
| Sensing face                                               |           | PBT                            |
| Degree of protection                                       |           | IP67                           |
| Connector                                                  |           |                                |
| Threading                                                  |           | M12 x 1                        |
| Number of pins                                             |           | 4                              |
| Dimensions                                                 |           |                                |
| Height                                                     |           | 30 mm                          |
| Width                                                      |           | 30 mm                          |
| Length                                                     |           | 62 mm                          |

## Connection



## Connection Assignment



## Connection Assignment

Wire colors in accordance with EN 60947-5-2

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