

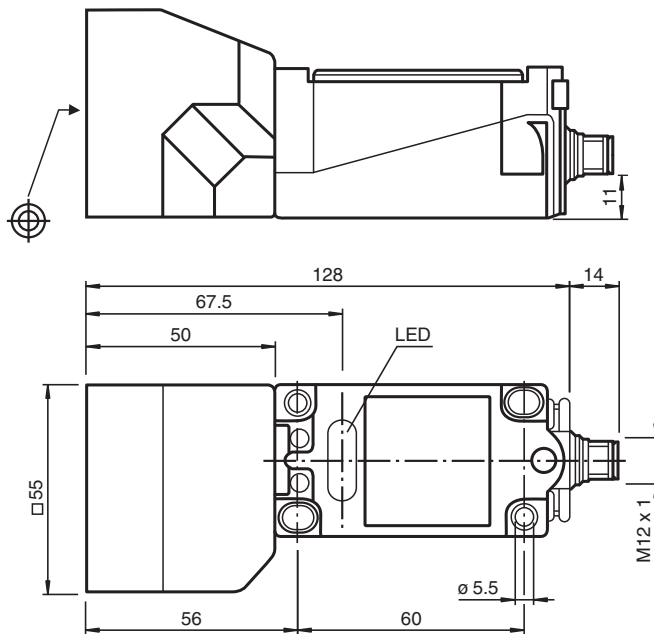
# Inductive sensor

## NJ40+U1+E2-V1

■ 40 mm non-flush



### Dimensions



### Technical Data

#### General specifications

|                            |       |                    |
|----------------------------|-------|--------------------|
| Switching function         |       | Normally open (NO) |
| Output type                |       | PNP                |
| Rated operating distance   | $s_n$ | 40 mm              |
| Installation               |       | non-flush          |
| Output polarity            |       | DC                 |
| Assured operating distance | $s_a$ | 0 ... 32.4 mm      |
| Reduction factor $r_{Al}$  |       | 0.5                |
| Reduction factor $r_{Cu}$  |       | 0.45               |
| Reduction factor $r_{304}$ |       | 0.8                |
| Output type                |       | 3-wire             |

#### Nominal ratings

|                             |       |                            |
|-----------------------------|-------|----------------------------|
| Operating voltage           | $U_B$ | 10 ... 60 V                |
| Switching frequency         | $f$   | 0 ... 100 Hz               |
| Hysteresis                  | $H$   | 1 ... 10 % typ. 5 %        |
| Reverse polarity protection |       | reverse polarity protected |
| Short-circuit protection    |       | pulsing                    |
| Voltage drop                | $U_d$ | $\leq 2.8$ V               |
| Voltage drop at $I_L$       |       |                            |

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

Pepperl+Fuchs Group  
www.pepperl-fuchs.com

USA: +1 330 486 0001  
fa-info@us.pepperl-fuchs.com

Germany: +49 621 776 1111  
fa-info@de.pepperl-fuchs.com

Singapore: +65 6779 9091  
fa-info@sg.pepperl-fuchs.com

 **PEPPERL+FUCHS**

## Technical Data

|                                                                     |       |                           |
|---------------------------------------------------------------------|-------|---------------------------|
| Voltage drop $I_L = 1 \text{ mA}$ , switching element on            | $U_d$ | 0.5 ... 2.3 V typ. 0.9 V  |
| Voltage drop $I_L = 10 \text{ mA}$ , switching element on           | $U_d$ | 0.8 ... 2.2 V typ. 1.4 V  |
| Voltage drop $I_L = 20 \text{ mA}$ , switching element on           | $U_d$ | 0.9 ... 2.3 V typ. 1.5 V  |
| Voltage drop $I_L = 50 \text{ mA}$ , switching element on           | $U_d$ | 0.9 ... 2.5 V typ. 1.6 V  |
| Voltage drop $I_L = 100 \text{ mA}$ , switching element on          | $U_d$ | 1 ... 2.6 V typ. 1.8 V    |
| Voltage drop $I_L = 200 \text{ mA}$ , switching element on          | $U_d$ | 1.2 ... 2.8 V typ. 2 V    |
| Operating current                                                   | $I_L$ | 0 ... 200 mA              |
| Off-state current                                                   | $I_r$ | 0 ... 0.5 mA typ. 0.01 mA |
| Off-state current $T_U = 40^\circ \text{C}$ , switching element off |       | $\leq 100 \mu\text{A}$    |
| No-load supply current                                              | $I_0$ | $\leq 10 \text{ mA}$      |
| Time delay before availability                                      | $t_v$ | $\leq 100 \text{ ms}$     |
| Operating voltage indicator                                         |       | LED, green                |
| Switching state indicator                                           |       | LED, yellow               |

### Compliance with standards and directives

|                     |  |                  |
|---------------------|--|------------------|
| Standard conformity |  |                  |
| Standards           |  | EN IEC 60947-5-2 |

### Approvals and certificates

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

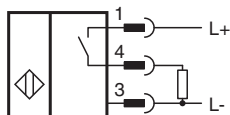
### Ambient conditions

|                     |  |                                                                  |
|---------------------|--|------------------------------------------------------------------|
| Ambient temperature |  | $-25 \dots 70^\circ \text{C}$ ( $-13 \dots 158^\circ \text{F}$ ) |
| Storage temperature |  | $-25 \dots 85^\circ \text{C}$ ( $-13 \dots 185^\circ \text{F}$ ) |

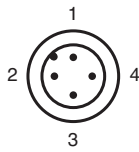
### Mechanical specifications

|                      |  |                |
|----------------------|--|----------------|
| Connection type      |  | Connector plug |
| Housing material     |  | PBT            |
| Sensing face         |  | PBT            |
| Degree of protection |  | IP67           |
| Connector            |  |                |
| Threading            |  | M12 x 1        |
| Number of pins       |  | 4              |
| Dimensions           |  |                |
| Height               |  | 55 mm          |
| Width                |  | 55 mm          |
| Length               |  | 128 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) |