

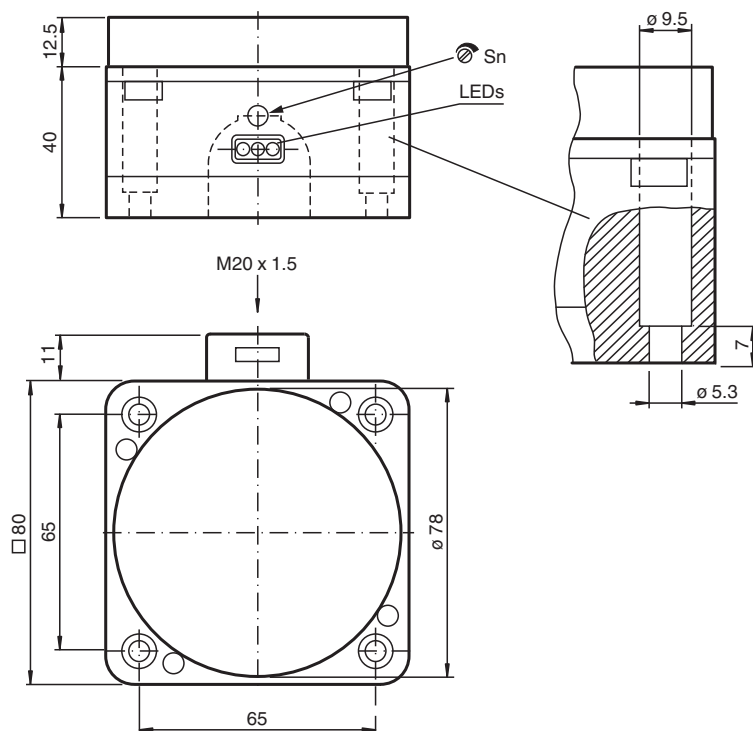


## Inductive sensor NJ60-FP-A2-P1-Y237069

- 60 mm non-flush
- Detects stainless steel tubes in bottles
- Steam resistant
- 1. oscillator frequency



### Dimensions



### Technical Data

#### General specifications

|                            |       |                       |
|----------------------------|-------|-----------------------|
| Switching function         |       | complementary         |
| Output type                |       | PNP                   |
| Rated operating distance   | $s_n$ | 60 mm                 |
| Installation               |       | non-flush             |
| Output polarity            |       | DC                    |
| Assured operating distance | $s_a$ | 0 ... 50 mm           |
| Measuring body             |       | high grade steel tube |
| Reduction factor $r_{Al}$  |       | 0.4                   |
| Reduction factor $r_{Cu}$  |       | 0.3                   |

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

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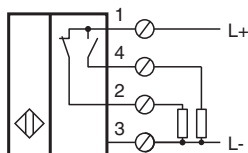
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**PEPPERL+FUCHS**

## Technical Data

|                                                 |       |                                                                                                                                            |
|-------------------------------------------------|-------|--------------------------------------------------------------------------------------------------------------------------------------------|
| Reduction factor $r_{304}$                      |       | 0.85                                                                                                                                       |
| Bottle speed                                    |       | ca. 2.5 m/s (65000 btls./h)                                                                                                                |
| Output type                                     |       | 4-wire                                                                                                                                     |
| Adjustment aid                                  |       | LED, green/red                                                                                                                             |
| <b>Nominal ratings</b>                          |       |                                                                                                                                            |
| Operating voltage                               | $U_B$ | 10 ... 30 V                                                                                                                                |
| Switching frequency                             | $f$   | 0 ... 100 Hz                                                                                                                               |
| Hysteresis                                      | $H$   | typ. 3 %                                                                                                                                   |
| Pulse extension                                 |       | 100 ms                                                                                                                                     |
| Reverse polarity protection                     |       | reverse polarity protected                                                                                                                 |
| Short-circuit protection                        |       | pulsing                                                                                                                                    |
| Voltage drop                                    | $U_d$ | $\leq 3$ V                                                                                                                                 |
| Operating current                               | $I_L$ | 0 ... 200 mA                                                                                                                               |
| No-load supply current                          | $I_0$ | $\leq 20$ mA                                                                                                                               |
| Time delay before availability                  | $t_v$ | $\leq 20$ ms                                                                                                                               |
| Operating voltage indicator                     |       | LED, green                                                                                                                                 |
| Switching state indicator                       |       | LED, yellow                                                                                                                                |
| <b>Compliance with standards and directives</b> |       |                                                                                                                                            |
| Standard conformity                             |       |                                                                                                                                            |
| Standards                                       |       | EN IEC 60947-5-2                                                                                                                           |
| <b>Approvals and certificates</b>               |       |                                                                                                                                            |
| UL approval                                     |       | cULus Listed, General Purpose                                                                                                              |
| <b>Ambient conditions</b>                       |       |                                                                                                                                            |
| Ambient temperature                             |       | 0 ... 60 °C (32 ... 140 °F)                                                                                                                |
| <b>Mechanical specifications</b>                |       |                                                                                                                                            |
| Connection type                                 |       | screw terminals                                                                                                                            |
| Information for connection                      |       | A maximum of two conductors with the same core cross section may be mounted on one terminal connection!<br>tightening torque 1.2 Nm + 10 % |
| Core cross section                              |       | up to 2.5 mm <sup>2</sup>                                                                                                                  |
| Minimum core cross-section                      |       | without wire end ferrules 0.5 mm <sup>2</sup> , with connector sleeves 0.34 mm <sup>2</sup>                                                |
| Maximum core cross-section                      |       | without wire end ferrules 2.5 mm <sup>2</sup> , with connector sleeves 1.5 mm <sup>2</sup>                                                 |
| Housing material                                |       | POM                                                                                                                                        |
| Sensing face                                    |       | POM                                                                                                                                        |
| Degree of protection                            |       | IP68                                                                                                                                       |
| <b>Dimensions</b>                               |       |                                                                                                                                            |
| Height                                          |       | 40 mm                                                                                                                                      |
| Width                                           |       | 80 mm                                                                                                                                      |
| Length                                          |       | 80 mm                                                                                                                                      |

## Connection



## Mounting

### Installation

The sensor should be mounted at least 30 mm above the conveyor chain. This ensures, that the sensor will not be influenced by the conveyor chain.

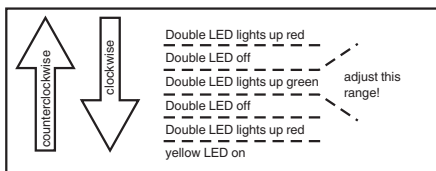
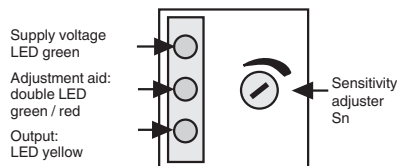
### Adjustment:

For correct operation, the sensor has to be adjusted according to the application.

The adjustment has to be carried out without the object, which has to be detected.

- 1) Supply the sensor (10 ... 30 V DC).  
leuchtet die grüne LED.
- 2) If the output is activated,  
the yellow LED is on
- 3) The adjustment is made without  
measuring body

The double LED in the middle has to light up green. If it doesn't, turn the sensitivity adjuster clockwise until the LED lights up yellow. Now turn the sensitivity adjuster counterclockwise until the double LED lights up green.



### Function check:

To check the correct adjustment, test the reliable detection of a stainless steel test tube in the bottle.