

- CE      SP<sup>®</sup> US      C UL<sup>®</sup> US

Technical drawing of the LED light tube (part 1) showing dimensions: M12x1, 2, 4, 17, 47, 55, and LED.

|                             |       |                                         |
|-----------------------------|-------|-----------------------------------------|
| Switching function          |       | Normally open (NO)                      |
| Output type                 |       | NPN                                     |
| Rated operating distance    | $s_n$ | 5 mm                                    |
| Installation                |       | flush (Requirements: see drawing below) |
| Output polarity             |       | DC                                      |
| Assured operating distance  | $s_a$ | 0 ... 4.05 mm                           |
| Actuating element           |       | Ferrous and nonferrous targets          |
| Reduction factor $r_{Al}$   |       | 0.3                                     |
| Reduction factor $r_{Cu}$   |       | 0.2                                     |
| Reduction factor $r_{304}$  |       | 0.85                                    |
| Reduction factor $r_{St37}$ |       | 1                                       |
| Output type                 |       | 3-wire                                  |



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## Technical Data

### Nominal ratings

|                             |       |                            |
|-----------------------------|-------|----------------------------|
| Operating voltage           | $U_B$ | 10 ... 30 V DC             |
| Switching frequency         | $f$   | 0 ... 360 Hz               |
| Hysteresis                  | $H$   | 3 ... 15 typ. 5 %          |
| Reverse polarity protection |       | reverse polarity protected |
| Short-circuit protection    |       | pulsing                    |
| Voltage drop                | $U_d$ | $\leq 2$ V DC              |
| Operating current           | $I_L$ | $\leq 200$ mA              |
| Off-state current           | $I_r$ | $\leq 10$ $\mu$ A          |
| No-load supply current      | $I_0$ | $\leq 10$ mA               |
| Operating voltage indicator |       | LED, green                 |
| Switching state indicator   |       | LED, yellow                |

### Functional safety related parameters

|                          |  |       |
|--------------------------|--|-------|
| MTTF <sub>d</sub>        |  | 900 a |
| Mission Time ( $T_M$ )   |  | 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 |  | CCC approval / marking not required for products rated $\leq 36$ V |

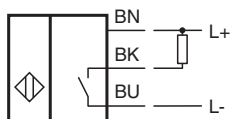
### Ambient conditions

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

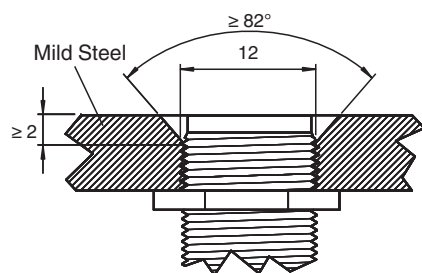
### Mechanical specifications

|                      |  |                                   |
|----------------------|--|-----------------------------------|
| Connection type      |  | cabl PUR , 2 m                    |
| Core cross-section   |  | 0.34 mm <sup>2</sup>              |
| Housing material     |  | Stainless steel 1.4305 / AISI 303 |
| Sensing face         |  | Stainless steel 1.4305 / AISI 303 |
| Degree of protection |  | IP69K                             |

## Connection



## Mounting



Sensor face is flush with mounting surface.

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**

Accessories

|                                                                                   |              |              |
|-----------------------------------------------------------------------------------|--------------|--------------|
|  | <b>AB-12</b> | Mounting aid |
|-----------------------------------------------------------------------------------|--------------|--------------|

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