



**WTB4SL-3P1162V**

W4SL-3V

**PHOTOELECTRIC SENSORS**

**SICK**  
Sensor Intelligence.



Illustration may differ



### Ordering information

| Type           | Part no. |
|----------------|----------|
| WTB4SL-3P1162V | 1058256  |

Other models and accessories → [www.sick.com/W4SL-3V](http://www.sick.com/W4SL-3V)

### Detailed technical data

#### Features

|  |   |
|--|---|
| <b>Sensor/ detection principle</b>     | Photoelectric proximity sensor, Background suppression                |
| <b>Dimensions (W x H x D)</b>          | 15.3 mm x 55.4 mm x 22.2 mm   |
| <b>Housing design</b>                  | Washdown <sup>1)</sup>  |
| <b>Housing design (light emission)</b> | Rectangular   |
| <b>Mounting hole</b>                   | M3  |
| <b>Sensing range max.</b>              | 25 mm ... 300 mm <sup>2)</sup>  |
| <b>Sensing range</b>                   | 25 mm ... 300 mm <sup>2)</sup>  |
| <b>Type of light</b>                   | Visible red light   |
| <b>Light source</b>                    | Laser <sup>3)</sup>   |
| <b>Light spot size (distance)</b>      | Ø 1 mm (170 mm)   |
| <b>Wave length</b>                     | 650 nm  |
| <b>Laser class</b>                     | 1 (EN 60825-1:2014, IEC 60825-1:2014 / CDRH 21 CFR 1040.10 & 1040.11) |
| <b>Adjustment</b>                      | Single teach-in button  |

<sup>1)</sup> Difference between standard/washdown and hygiene: The essential difference between a standard/washdown product and a hygiene product is that where the process and contact with the medium (activity in the vicinity of the food) are concerned, a hygiene product is designed in accordance with the latest standards and hygiene design guidelines, and materials are selected accordingly.

<sup>2)</sup> Object with 90 % reflectance (referred to standard white, DIN 5033).

<sup>3)</sup> Average service life: 50,000 h at T<sub>U</sub> = +25 °C.

## Mechanics/electronics

|   |  |
|---|--|
| <b>Supply voltage</b>                         | 10 V DC ... 30 V DC <sup>1)</sup>                      |
| <b>Ripple</b>                                 | < 5 V <sub>pp</sub> <sup>2)</sup>                      |
| <b>Power consumption</b>                      | ≤ 30 mA <sup>3)</sup>                                  |
| <b>Switching output</b>                       | PNP <sup>4)</sup>                                      |
| <b>Output function</b>                        | Complementary  |
| <b>Switching mode</b>                         | Light/dark switching <sup>4)</sup>                     |
| <b>Output current I<sub>max.</sub></b>        | ≤ 100 mA   |
| <b>Response time</b>                          | ≤ 0.5 ms <sup>5)</sup>                                 |
| <b>Switching frequency</b>                    | 1,000 Hz <sup>6)</sup>                                 |
| <b>Connection type</b>                        | Cable, 4-wire, 2 m <sup>7)</sup>                       |
| <b>Cable material</b>                         | PVC  |
| <b>Conductor cross-section</b>                | 0.14 mm <sup>2</sup>                                   |
| <b>Circuit protection</b>                     | A <sup>8)</sup><br>B <sup>9)</sup><br>C <sup>10)</sup> |
| <b>Protection class</b>                       | III  |
| <b>Weight</b>                                 | 80 g   |
| <b>Housing material</b>                       | Stainless steel, Stainless steel V4A (1.4404, 316L)    |
| <b>Optics material</b>                        | Plastic, PMMA  |
| <b>Enclosure rating</b>                       | IP66<br>IP67<br>IP68<br>IP69K <sup>11)</sup>           |
| <b>Ambient operating temperature</b>          | -10 °C ... +50 °C                                      |
| <b>Ambient operating temperature extended</b> | -30 °C ... +55 °C <sup>12) 13)</sup>                   |
| <b>Ambient storage temperature</b>            | -30 °C ... +70 °C                                      |

1) Limit values when operated in short-circuit protected network: max. 8 A.

2) May not exceed or fall below U<sub>v</sub> tolerances.

3) Without load.

4) Q = light switching.

5) Signal transit time with resistive load.

6) With light/dark ratio 1:1.

7) Do not bend below 0 °C.

8) A = V<sub>S</sub> connections reverse-polarity protected.

9) B = inputs and output reverse-polarity protected.

10) C = interference suppression.

11) Only in case of correctly mounted IP69K connecting cable.

12) As of T<sub>a</sub> = 50 °C, a max. supply voltage V<sub>max.</sub> = 24 V and a max. load current I<sub>max.</sub> = 50 mA is permitted.

13) Operation below T<sub>u</sub> -10 °C is possible if the sensor is already switched on at T<sub>u</sub> > -10 °C, then cools down, and the supply voltage is subsequently not switched off. Switching on below T<sub>u</sub> -10 °C is not permissible.

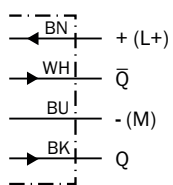
## Classifications

|                     |          |
|---------------------|----------|
| <b>ECl@ss 5.0</b>   | 27270904 |
| <b>ECl@ss 5.1.4</b> | 27270904 |
| <b>ECl@ss 6.0</b>   | 27270904 |

|                       |          |
|-----------------------|----------|
| <b>ECl@ss 6.2</b>     | 27270904 |
| <b>ECl@ss 7.0</b>     | 27270904 |
| <b>ECl@ss 8.0</b>     | 27270904 |
| <b>ECl@ss 8.1</b>     | 27270904 |
| <b>ECl@ss 9.0</b>     | 27270904 |
| <b>ETIM 5.0</b>       | EC002719 |
| <b>ETIM 6.0</b>       | EC002719 |
| <b>UNSPSC 16.0901</b> | 39121528 |

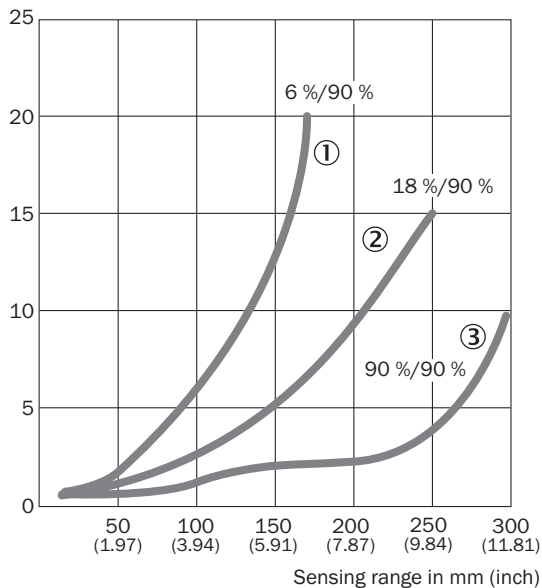
### Connection diagram

Cd-094



### Characteristic curve

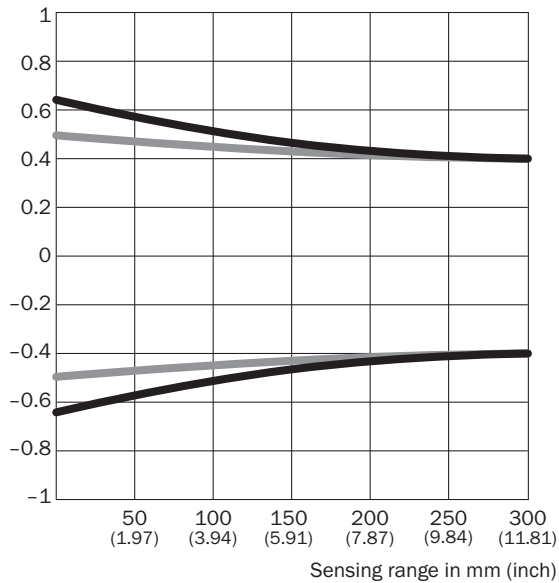
% of sensing range



- ① Sensing range on black, 6% remission
- ② Sensing range on gray, 18 % remission
- ③ Sensing range on white, 90% remission

### Light spot size

Radius in mm (inch)

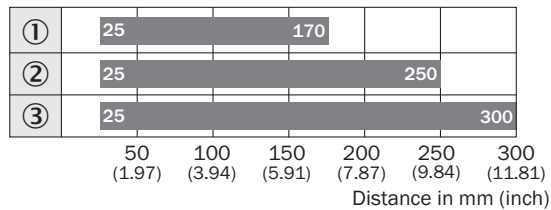


### Dimensions in mm (inch)

| Sensing range                   | Vertical      | Horizontal    |
|---------------------------------|---------------|---------------|
| <b>50 mm</b><br><b>(1.97)</b>   | 1.2<br>(0.05) | 1.0<br>(0.04) |
| <b>100 mm</b><br><b>(3.94)</b>  | 1.1<br>(0.04) | 1.0<br>(0.04) |
| <b>200 mm</b><br><b>(7.87)</b>  | 0.9<br>(0.04) | 0.9<br>(0.04) |
| <b>300 mm</b><br><b>(11.81)</b> | 0.8<br>(0.03) | 0.8<br>(0.03) |

— Vertical  
 — Horizontal

### Sensing range diagram

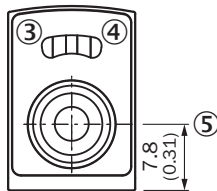
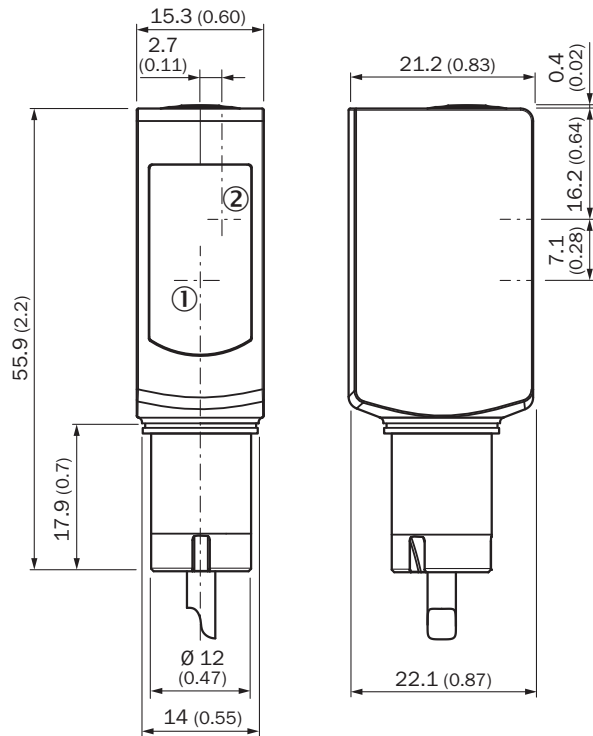


■ Sensing range typ. max.

- ① Sensing range on black, 6% remission
- ② Sensing range on gray, 18 % remission
- ③ Sensing range on white, 90% remission

### Dimensional drawing (Dimensions in mm (inch))


WTB4SL-3, cable



- ① Center of optical axis, sender
- ② Center of optical axis, receiver
- ③ LED indicator yellow: Status of received light beam
- ④ LED indicator green: Supply voltage active
- ⑤ Single teach-in button

### Recommended accessories

Other models and accessories → [www.sick.com/W4SL-3V](http://www.sick.com/W4SL-3V)

|   | Brief description  | Type         | Part no. |
|---|--|--------------|----------|
| Universal bar clamp systems   |  |              |          |
|  | Plate N02N for universal clamp bracket, Stainless steel 1.4571 (sheet), Stainless steel 1.4408 (clamp), Universal clamp (5322626), mounting hardware | BEF-KHS-N02N | 2051618  |

## SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

**For us, that is “Sensor Intelligence.”**

## WORLDWIDE PRESENCE:

Contacts and other locations –[www.sick.com](http://www.sick.com)