



# WL2S-2N1330

W2S-2

MINIATURE PHOTOELECTRIC SENSORS

**SICK**  
Sensor Intelligence.



Illustration may differ



### Ordering information

| Type        | Part no. |
|-------------|----------|
| WL2S-2N1330 | 1064595  |

Other models and accessories → [www.sick.com/W2S-2](http://www.sick.com/W2S-2)

### Detailed technical data

#### Features

|                                        |                              |
|----------------------------------------|------------------------------|
| <b>Dimensions (W x H x D)</b>          | 7.7 mm x 21.8 mm x 13.5 mm   |
| <b>Housing design (light emission)</b> | Rectangular                  |
| <b>Sensing range max.</b>              | 0 m ... 1.2 m <sup>1)</sup>  |
| <b>Sensing range</b>                   | 0 m ... 0.55 m <sup>1)</sup> |
| <b>Type of light</b>                   | Visible red light            |
| <b>Light source</b>                    | PinPoint LED                 |
| <b>Light spot size (distance)</b>      | Ø 12 mm (250 mm)             |
| <b>Wave length</b>                     | 640 nm                       |
| <b>Adjustment</b>                      | None                         |

<sup>1)</sup> Reflector P250F.

#### 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>Current consumption</b> | 20 mA <sup>3)</sup>               |
| <b>Switching output</b>    | NPN                               |

<sup>1)</sup> Limit values.

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

<sup>3)</sup> Without load.

<sup>4)</sup> Signal transit time with resistive load.

<sup>5)</sup> With light/dark ratio 1:1.

<sup>6)</sup> A = V<sub>S</sub> connections reverse-polarity protected.

<sup>7)</sup> B = output reverse-polarity protected.

<sup>8)</sup> D = outputs overcurrent and short-circuit protected.

|                                             |                                                       |
|---------------------------------------------|-------------------------------------------------------|
| <b>Switching mode</b>                       | Light switching                                       |
| <b>Output current <math>I_{\max}</math></b> | $\leq 50 \text{ mA}$                                  |
| <b>Response time</b>                        | $< 0.5 \text{ ms}$ <sup>4)</sup>                      |
| <b>Switching frequency</b>                  | $1,000 \text{ Hz}$ <sup>5)</sup>                      |
| <b>Circuit protection</b>                   | A <sup>6)</sup><br>B <sup>7)</sup><br>D <sup>8)</sup> |
| <b>Polarisation filter</b>                  | ✓                                                     |
| <b>Housing material</b>                     | Plastic, ABS/PC                                       |
| <b>Optics material</b>                      | Plastic, PMMA                                         |
| <b>Enclosure rating</b>                     | IP67                                                  |
| <b>Ambient operating temperature</b>        | $-25 \text{ °C} \dots +50 \text{ °C}$                 |
| <b>Ambient storage temperature</b>          | $-40 \text{ °C} \dots +75 \text{ °C}$                 |

1) Limit values.

2) May not exceed or fall below  $U_V$  tolerances.

3) Without load.

4) Signal transit time with resistive load.

5) With light/dark ratio 1:1.

6) A =  $V_S$  connections reverse-polarity protected.

7) B = output reverse-polarity protected.

8) D = outputs overcurrent and short-circuit protected.

## Safety-related parameters

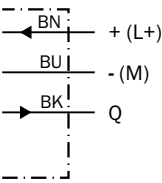
|                         |             |
|-------------------------|-------------|
| <b>MTTF<sub>D</sub></b> | 3,378 years |
| <b>DC<sub>avg</sub></b> | 0%          |

## Classifications

|                       |          |
|-----------------------|----------|
| <b>ECI@ss 5.0</b>     | 27270902 |
| <b>ECI@ss 5.1.4</b>   | 27270902 |
| <b>ECI@ss 6.0</b>     | 27270902 |
| <b>ECI@ss 6.2</b>     | 27270902 |
| <b>ECI@ss 7.0</b>     | 27270902 |
| <b>ECI@ss 8.0</b>     | 27270902 |
| <b>ECI@ss 8.1</b>     | 27270902 |
| <b>ECI@ss 9.0</b>     | 27270902 |
| <b>ECI@ss 10.0</b>    | 27270902 |
| <b>ECI@ss 11.0</b>    | 27270902 |
| <b>ETIM 5.0</b>       | EC002717 |
| <b>ETIM 6.0</b>       | EC002717 |
| <b>ETIM 7.0</b>       | EC002717 |
| <b>UNSPSC 16.0901</b> | 39121528 |

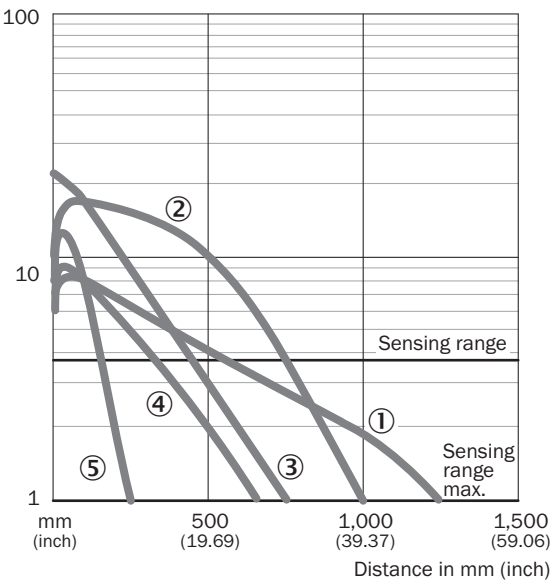
Connection diagram

Cd-044



Characteristic curve

WL2S-2

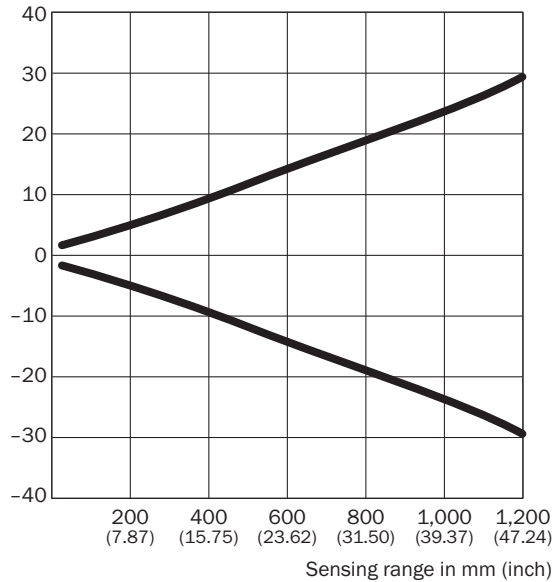


- ① Reflector P250F
- ② Reflector PL20F
- ③ Reflective tape REF-AC1000
- ④ PL10F reflector
- ⑤ Reflector PL8FH

## Light spot size

WL2S-2

Spot diameter in mm (inch)

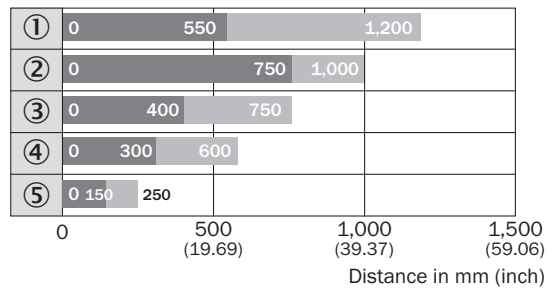


### Dimensions in mm (inch)

| Sensing range                  | Spot diameter  |
|--------------------------------|----------------|
| <b>20</b><br><b>(0.79)</b>     | 3.4<br>(0.13)  |
| <b>100</b><br><b>(3.94)</b>    | 6.5<br>(0.26)  |
| <b>250</b><br><b>(9.84)</b>    | 12.0<br>(0.47) |
| <b>500</b><br><b>(19.69)</b>   | 34.0<br>(1.34) |
| <b>1,000</b><br><b>(39.37)</b> | 48.0<br>(1.89) |
| <b>1,200</b><br><b>(47.24)</b> | 60.0<br>(2.36) |

## Sensing range diagram

WL2S-2

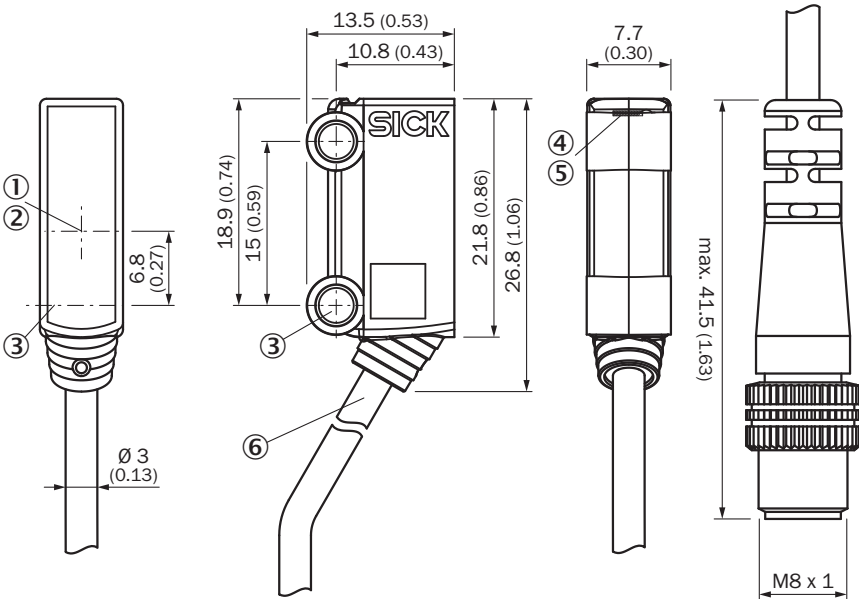


■ Sensing range    ■ Sensing range max.

- ① Reflector P250F
- ② Reflector PL20F
- ③ Reflective tape REF-AC1000
- ④ PL10F reflector
- ⑤ Reflector PL8FH

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

WL2S-2



**Recommended accessories**

**Reflectors and optics**

Reflectors

Fine triple reflectors

**Plug connectors and cables**

Plug connectors and cables

Field-attachable connectors

Other models and accessories → [www.sick.com/W2S-2](http://www.sick.com/W2S-2)

| Brief description                                                                                                       | Type       | Part no. |
|-------------------------------------------------------------------------------------------------------------------------|------------|----------|
| Fine triple reflector, screw connection, suitable for laser sensors, 20 mm x 32 mm, PMMA/ABS, Screw-on, 2 hole mounting | PL10F      | 5311210  |
| Brief description                                                                                                       | Type       | Part no. |
| Head A: male connector, M8, 3-pin, straight<br>Head B: -<br>Cable: unshielded                                           | STE-0803-G | 6037322  |

## 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)