



# WTE11-2P2432

W11-2

SMALL PHOTOELECTRIC SENSORS

**SICK**  
Sensor Intelligence.



Illustration may differ



## Ordering information

| Type         | Part no. |
|--------------|----------|
| WTE11-2P2432 | 1041381  |

Other models and accessories → [www.sick.com/W11-2](http://www.sick.com/W11-2)

## Detailed technical data

### Features

|  |                                  |
|--|----------------------------------|
| <b>Functional principle</b>            | Photoelectric proximity sensor   |
| <b>Functional principle detail</b>     | Energetic                        |
| <b>Dimensions (W x H x D)</b>          | 15.6 mm x 48.5 mm x 42 mm        |
| <b>Housing design (light emission)</b> | Rectangular                      |
| <b>Sensing range max.</b>              | 40 mm ... 1,000 mm <sup>1)</sup> |
| <b>Sensing range</b>                   | 40 mm ... 600 mm                 |
| <b>Type of light</b>                   | Visible red light                |
| <b>Light source</b>                    | LED <sup>2)</sup>                |
| <b>Light spot size (distance)</b>      | Ø 90 mm (600 mm)                 |
| <b>Wave length</b>                     | 633 nm                           |
| <b>Adjustment</b>                      | Single teach-in button           |

<sup>1)</sup> Object with 90% remission (based on standard white, DIN 5033).

<sup>2)</sup> Average service life: 100,000 h at T<sub>U</sub> = +25 °C.

### Mechanics/electronics

|                                     |                                   |
|-------------------------------------|-----------------------------------|
| <b>Supply voltage U<sub>B</sub></b> | 10 V DC ... 30 V DC <sup>1)</sup> |
|-------------------------------------|-----------------------------------|

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

<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> C = interference suppression.

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

|  |   |
|--|---|
| <b>Ripple</b>                          | < 5 V <sub>pp</sub> <sup>2)</sup>                     |
| <b>Current consumption</b>             | 30 mA <sup>3)</sup>                                   |
| <b>Switching output</b>                | PNP   |
| <b>Output function</b>                 | Complementary   |
| <b>Switching mode</b>                  | Light/dark switching                                  |
| <b>Signal voltage PNP HIGH/LOW</b>     | U <sub>v</sub> - 2.5 V / approx. 0 V                  |
| <b>Output current I<sub>max.</sub></b> | ≤ 100 mA  |
| <b>Response time</b>                   | ≤ 2.5 ms <sup>4)</sup>                                |
| <b>Switching frequency</b>             | 200 Hz <sup>5)</sup>                                  |
| <b>Connection type</b>                 | Male connector M12, 4-pin                             |
| <b>Circuit protection</b>              | A <sup>6)</sup><br>C <sup>7)</sup><br>D <sup>8)</sup> |
| <b>Protection class</b>                | II  |
| <b>Weight</b>                          | 120 g   |
| <b>Housing material</b>                | Plastic, ABS  |
| <b>Optics material</b>                 | Plastic, PMMA   |
| <b>Enclosure rating</b>                | IP66<br>IP67  |
| <b>Ambient operating temperature</b>   | -30 °C ... +60 °C                                     |
| <b>Ambient temperature, storage</b>    | -40 °C ... +75 °C                                     |
| <b>UL File No.</b>                     | NRKH.E181493 & NRKH7.E181493                          |

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) Signal transit time with resistive load.

5) With light/dark ratio 1:1.

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

7) C = interference suppression.

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

### Safety-related parameters

|                                     |             |
|-------------------------------------|-------------|
| <b>MTTF<sub>D</sub></b>             | 1,342 years |
| <b>DC<sub>avg</sub></b>             | 0 %         |
| <b>T<sub>M</sub> (mission time)</b> | 20 years    |

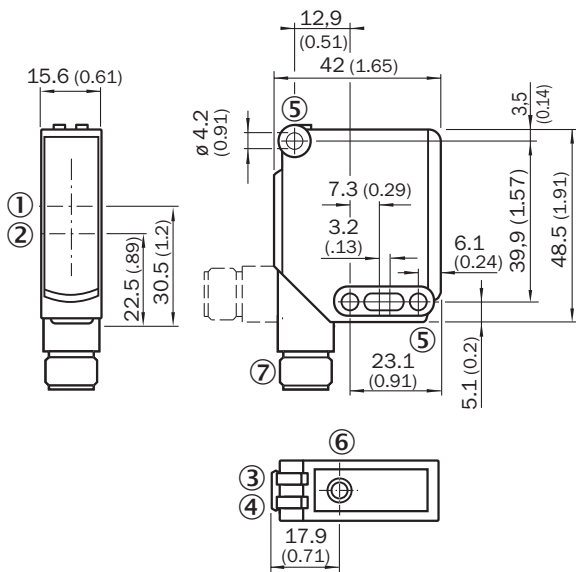
### Classifications

|                     |          |
|---------------------|----------|
| <b>eCl@ss 5.0</b>   | 27270903 |
| <b>eCl@ss 5.1.4</b> | 27270903 |
| <b>eCl@ss 6.0</b>   | 27270903 |
| <b>eCl@ss 6.2</b>   | 27270903 |
| <b>eCl@ss 7.0</b>   | 27270903 |
| <b>eCl@ss 8.0</b>   | 27270903 |
| <b>eCl@ss 8.1</b>   | 27270903 |
| <b>eCl@ss 9.0</b>   | 27270903 |

|                       |          |
|-----------------------|----------|
| <b>eCl@ss 10.0</b>    | 27270904 |
| <b>eCl@ss 11.0</b>    | 27270904 |
| <b>eCl@ss 12.0</b>    | 27270903 |
| <b>ETIM 5.0</b>       | EC001821 |
| <b>ETIM 6.0</b>       | EC001821 |
| <b>ETIM 7.0</b>       | EC002719 |
| <b>ETIM 8.0</b>       | EC002719 |
| <b>UNSPSC 16.0901</b> | 39121528 |

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

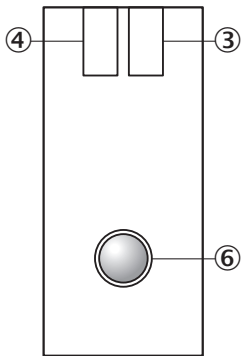
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- ① Optical axis, sender
- ② Optical axis, receiver
- ③ LED indicator green: Supply voltage active
- ④ LED indicator yellow: Status of received light beam
- ⑤ Mounting hole  $\varnothing$  4.2 mm
- ⑥ Sensitivity setting: single teach-in button
- ⑦ Connector M12 or cable

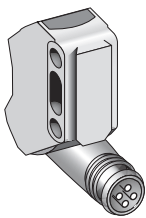
## Adjustments

WTE11-2, WSE11-2



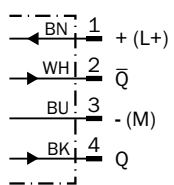
- ③ LED indicator green: Supply voltage active
- ④ LED indicator yellow: Status of received light beam
- ⑥ Adjustment sensing range: single teach-in button

## Connection type



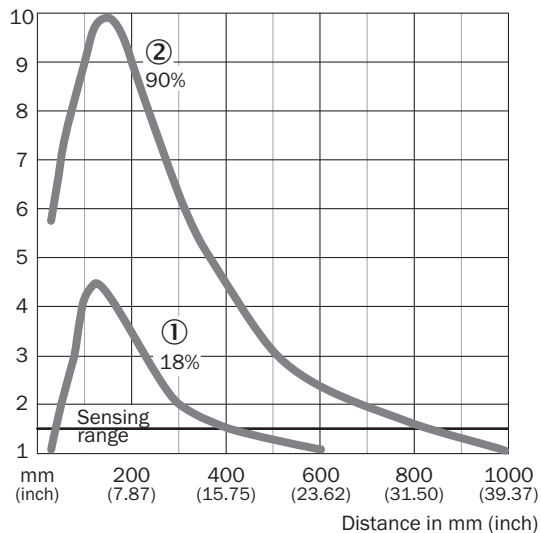
## Connection diagram

Cd-083



### Characteristic curve

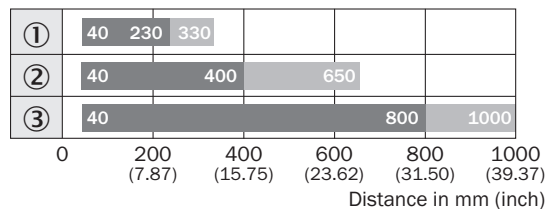
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- ① Sensing range on gray, 18% remission factor
- ② Sensing range on white, 90% remission factor

### Sensing range diagram


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

### Recommended accessories

Other models and accessories → [www.sick.com/W11-2](http://www.sick.com/W11-2)

|   | Brief description  | Type       | Part no. |
|---|--|------------|----------|
| Mounting brackets and plates  |  |            |          |
|  | Mounting bracket, large, stainless steel, mounting hardware included | BEF-WG-W12 | 2013942  |

|   | <b>Brief description</b>  | <b>Type</b>        | <b>Part no.</b> |
|---|---|--------------------|-----------------|
| Plug connectors and cables  |   |                    |                 |
|  | Head A: female connector, M12, 4-pin, straight, A-coded<br>Head B: Flying leads<br>Cable: Sensor/actuator cable, PVC, unshielded, 5 m | YF2A14-050VB3XLEAX | 2096235         |
|  | Head A: male connector, M12, 4-pin, straight<br>Cable: unshielded   | STE-1204-G         | 6009932         |

## 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)