



# WSE11-2K2430

W11-2

SMALL PHOTOELECTRIC SENSORS

**SICK**  
Sensor Intelligence.



Illustration may differ



## Ordering information

| Type         | Part no. |
|--------------|----------|
| WSE11-2K2430 | 1057575  |

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

## Detailed technical data

### Features

|  |                                   |
|--|-----------------------------------|
| <b>Functional principle</b>            | Through-beam photoelectric sensor |
| <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>              | 0 m ... 20 m                      |
| <b>Sensing range</b>                   | 0 m ... 15 m                      |
| <b>Focus</b>                           | Approx. 1.5°                      |
| <b>Type of light</b>                   | Visible red light                 |
| <b>Light source</b>                    | LED <sup>1)</sup>                 |
| <b>Light spot size (distance)</b>      | Ø 220 mm (15 m)                   |
| <b>Angle of dispersion</b>             | Approx. 1.5°                      |
| <b>Wave length</b>                     | 633 nm                            |
| <b>Adjustment</b>                      | None                              |

<sup>1)</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> Pin 2 and pin 4 swapped over.
- <sup>5)</sup> Signal transit time with resistive load.
- <sup>6)</sup> With light/dark ratio 1:1.
- <sup>7)</sup> A = V<sub>S</sub> connections reverse-polarity protected.
- <sup>8)</sup> C = interference suppression.
- <sup>9)</sup> D = outputs overcurrent and short-circuit protected.

|   |   |
|---|---|
| <b>Ripple</b>                               | < 5 V <sub>pp</sub> <sup>2)</sup>                     |
| <b>Power consumption, sender</b>            | ≤ 25 mA <sup>3)</sup>                                 |
| <b>Power consumption, receiver</b>          | ≤ 20 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>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>5)</sup>                                |
| <b>Switching frequency</b>                  | 200 Hz <sup>6)</sup>                                  |
| <b>Connection type</b>                      | Male connector M12, 4-pin                             |
| <b>Circuit protection</b>                   | A <sup>7)</sup><br>C <sup>8)</sup><br>D <sup>9)</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<br>IP69K                                 |
| <b>Test input sender off</b>                | TE to 0 V   |
| <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                          |
| <b>Part number of individual components</b> | 2063410 WS11-2D2430 2063416 WE11-2K2430               |

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) Pin 2 and pin 4 swapped over.

5) Signal transit time with resistive load.

6) With light/dark ratio 1:1.

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

8) C = interference suppression.

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

### Safety-related parameters

|                                     |           |
|-------------------------------------|-----------|
| <b>MTTF<sub>D</sub></b>             | 982 years |
| <b>DC<sub>avg</sub></b>             | 0 %       |
| <b>T<sub>M</sub> (mission time)</b> | 20 years  |

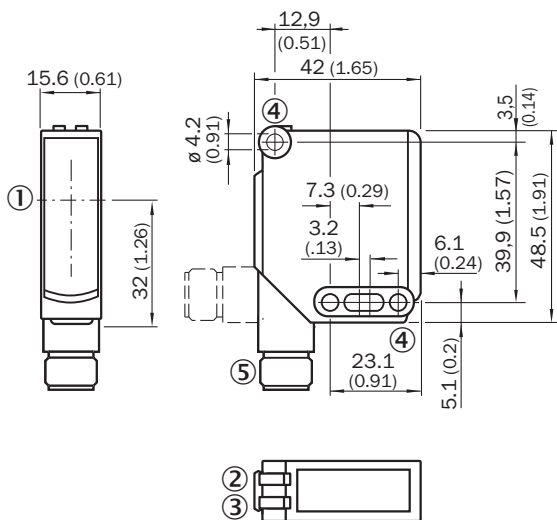
### Classifications

|                     |          |
|---------------------|----------|
| <b>ECLASS 5.0</b>   | 27270901 |
| <b>ECLASS 5.1.4</b> | 27270901 |
| <b>ECLASS 6.0</b>   | 27270901 |

|                       |          |
|-----------------------|----------|
| <b>ECLASS 6.2</b>     | 27270901 |
| <b>ECLASS 7.0</b>     | 27270901 |
| <b>ECLASS 8.0</b>     | 27270901 |
| <b>ECLASS 8.1</b>     | 27270901 |
| <b>ECLASS 9.0</b>     | 27270901 |
| <b>ECLASS 10.0</b>    | 27270901 |
| <b>ECLASS 11.0</b>    | 27270901 |
| <b>ECLASS 12.0</b>    | 27270901 |
| <b>ETIM 5.0</b>       | EC002716 |
| <b>ETIM 6.0</b>       | EC002716 |
| <b>ETIM 7.0</b>       | EC002716 |
| <b>ETIM 8.0</b>       | EC002716 |
| <b>UNSPSC 16.0901</b> | 39121528 |

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

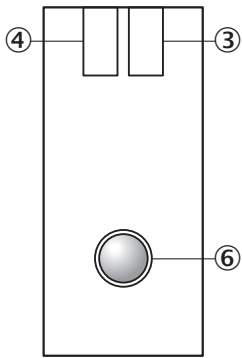
WSE11-2



- ① Center of optical axis
- ② LED indicator green: Supply voltage active
- ③ LED indicator yellow: Status of received light beam
- ④ Mounting hole  $\varnothing 4.2$  mm
- ⑤ M12 connector, 4-pin or cable

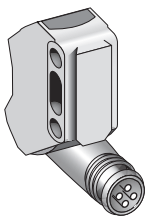
## Adjustments

WTE11-2, WSE11-2



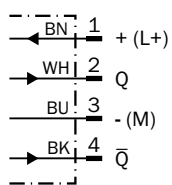
- ③ LED indicator green: Supply voltage active
- ④ LED indicator yellow: Status of received light beam
- ⑥ Adjustment sensing range: single teach-in button

## Connection type

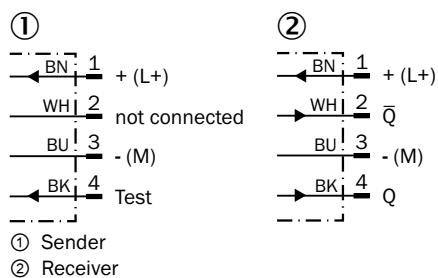


## Connection diagram

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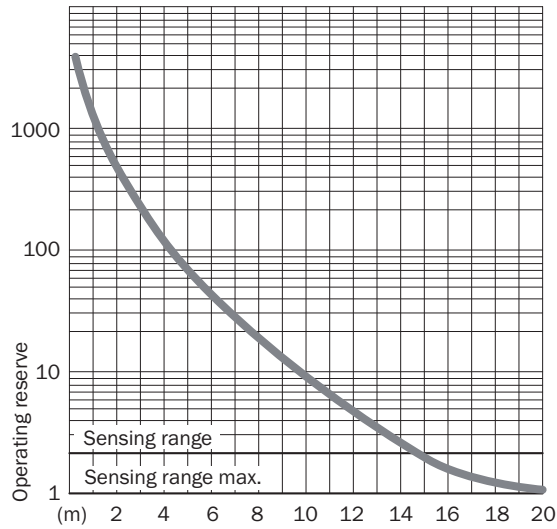


Cd-072






### Characteristic curve

WSE11-2



### Recommended accessories

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

|   | Brief description   | Type               | Part no. |
|---|---|--------------------|----------|
| <b>Mounting brackets and plates</b>   |   |                    |          |
|  | Mounting bracket, large, stainless steel, mounting hardware included  | BEF-WG-W12         | 2013942  |
| <b>Plug connectors and cables</b>   |   |                    |          |
|  | <ul style="list-style-type: none"> <li>• <b>Connection type head A:</b> Male connector, M12, 4-pin, straight</li> <li>• <b>Description:</b> Unshielded</li> <li>• <b>Connection systems:</b> Screw-type terminals</li> <li>• <b>Permitted cross-section:</b> ≤ 0.75 mm<sup>2</sup></li> </ul>   | STE-1204-G         | 6009932  |
| <b>Others</b>   |   |                    |          |
|  | <ul style="list-style-type: none"> <li>• <b>Connection type head A:</b> Female connector, M12, 4-pin, straight, A-coded</li> <li>• <b>Connection type head B:</b> Flying leads</li> <li>• <b>Signal type:</b> Sensor/actuator cable</li> <li>• <b>Cable:</b> 5 m, 4-wire, PVC</li> <li>• <b>Description:</b> Sensor/actuator cable, unshielded</li> <li>• <b>Application:</b> Zones with chemicals</li> </ul> | YF2A14-050VB3XLEAX | 2096235  |

## 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)