



## W11-2

High-performance photoelectric sensors with application flexibility in industrial environments

**SMALL PHOTOELECTRIC SENSORS**

**SICK**  
Sensor Intelligence.



### Technical data overview

|                               |   |
|-------------------------------|---|
| <b>Dimensions (W x H x D)</b> | 15.6 mm x 48.5 mm x 42 mm   |
| <b>Sensing range max.</b>     | 20 mm ... 350 mm <sup>1)</sup><br>30 mm ... 1,100 mm <sup>1)</sup><br>150 mm <sup>2)</sup><br>35 mm ... 350 mm <sup>1)</sup><br>40 mm ... 1,000 mm <sup>1)</sup><br>0.15 m ... 10 m <sup>3)</sup><br>0.05 m ... 3 m <sup>3)</sup><br>0.05 m ... 10 m <sup>3)</sup><br>0 m ... 20 m<br>0 m ... 1.7 m |
| <b>Light source</b>           | LED / PinPoint LED (depending on type)  |
| <b>Type of light</b>          | Visible red light   |
| <b>Enclosure rating</b>       | IP66<br>IP67<br>IP69K<br>IP68   |
| <b>Housing material</b>       | Plastic ABS   |
| <b>Adjustment</b>             | Potentiometer, 5 turns<br>None<br>Single teach-in button  |

<sup>1)</sup> Object with 90 % reflectance (referred to standard white, DIN 5033).

<sup>2)</sup> Object with 18 % reflectance.

<sup>3)</sup> Reflector PL80A.

### Product description

The W11-2 photoelectric sensor family offers a complete technology with high-performance sensing capabilities for a wide range of automation applications. Whether for applications in material handling or packaging, the W11-2 offers optimum performance in a small, rugged housing. These easy-to-use sensors provide dependable object detection and high reliability in industrial environments.

### At a glance

- Uniform housing, mounting and connection systems
- Rugged sensors for industrial use
- PinPoint LED technology provides highly visible light spot
- Space-saving plastic housing in chemically, thermally or mechanically resistant designs
- Dovetail mounting – mounting holes and oblong holes
- Highly visible 360° status LEDs

### Your benefits

- Reliable object detection due to superior ASIC technology with a high immunity to ambient light
- PinPoint technology provides a bright, small and precise light spot that enables quick and easy sensor alignment
- Precise switching characteristics ensure high performance even in changing application conditions
- Highly visible 360° status LEDs provide quick and easy setup
- Compact and rugged housing design easily fits in tight spaces
- Uniform housing, mounting and connection systems simplify installation
- Versatile mounting options, including dovetail, side mounting and standard mounting holes enable quick installation

## Ordering information

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

- **Sensor principle:** Photoelectric proximity sensor
- **Detection principle:** Background suppression
- **Light source:** LED
- **Voltage type:** DC
- **Switching mode:** Light/dark switching
- **Type of light:** visible red light

| Sensing range max. | Switching output | Adjustment    | Connection type                  | Type         | Part no. |
|--------------------|------------------|---------------|----------------------------------|--------------|----------|
| 20 mm ... 350 mm   | NPN              | Potentiometer | Cable, 4-wire, 2 m <sup>1)</sup> | WTB11-2N1131 | 1041379  |
|                    |                  |               | Male connector M12, 4-pin        | WTB11-2N2431 | 1041378  |
|                    | PNP              | Potentiometer | Cable, 4-wire, 2 m <sup>1)</sup> | WTB11-2P1131 | 1041377  |
|                    |                  |               | Male connector M12, 4-pin        | WTB11-2P2431 | 1041376  |

<sup>1)</sup> Do not bend below 0 °C.

- **Sensor principle:** Photoelectric proximity sensor
- **Detection principle:** Background suppression
- **Light source:** PinPoint LED
- **Voltage type:** DC
- **Switching mode:** Light/dark switching
- **Type of light:** visible red light

| Sensing range max. | Switching output | Adjustment    | Connection type           | Type            | Part no. |
|--------------------|------------------|---------------|---------------------------|-----------------|----------|
| 150 mm             | PNP              | None          | Male connector M12, 4-pin | WTB11-2P2430S03 | 1047923  |
| 30 mm ... 1,100 mm | NPN              | Potentiometer | Male connector M12, 4-pin | WTB11-2N2461    | 1051818  |
|                    |                  |               |                           | WTB11-2K2461    | 1051075  |
|                    | PNP              | Potentiometer | Male connector M12, 4-pin | WTB11-2P2461    | 1044442  |
|                    |                  |               |                           | WTB11-2P2461P04 | 1046950  |

- **Sensor principle:** Photoelectric proximity sensor
- **Detection principle:** Foreground suppression
- **Light source:** LED
- **Voltage type:** DC
- **Switching mode:** Light/dark switching
- **Type of light:** visible red light

| Sensing range max. | Switching output | Adjustment    | Connection type           | Type         | Part no. |
|--------------------|------------------|---------------|---------------------------|--------------|----------|
| 35 mm ... 350 mm   | PNP              | Potentiometer | Male connector M12, 4-pin | WTF11-2P2431 | 1041380  |

- **Sensor principle:** Photoelectric proximity sensor
- **Detection principle:** Energetic
- **Light source:** LED
- **Voltage type:** DC
- **Switching mode:** Light/dark switching
- **Type of light:** visible red light

| Sensing range max. | Switching output | Adjustment      | Connection type                  | Type         | Part no. |
|--------------------|------------------|-----------------|----------------------------------|--------------|----------|
| 40 mm ... 1,000 mm | NPN              | Teach-in button | Cable, 4-wire, 2 m <sup>1)</sup> | WTE11-2N1132 | 1041384  |
|                    |                  |                 | Male connector M12, 4-pin        | WTE11-2N2432 | 1041383  |
|                    | PNP              | Teach-in button | Cable, 4-wire, 2 m <sup>1)</sup> | WTE11-2P1132 | 1041382  |
|                    |                  |                 | Male connector M12, 4-pin        | WTE11-2P2432 | 1041381  |

<sup>1)</sup> Do not bend below 0 °C.

- **Sensor principle:** Photoelectric retro-reflective sensor
- **Detection principle:** Dual lens
- **Light source:** LED
- **Voltage type:** DC
- **Switching mode:** Light/dark switching
- **Type of light:** visible red light

| Sensing range max. | Switching output | Adjustment      | Connection type                  | Type           | Part no. |
|--------------------|------------------|-----------------|----------------------------------|----------------|----------|
| 0.05 m ... 3 m     | PNP              | None            | Male connector M12, 4-pin        | WL11-2P2430S05 | 1056080  |
| 0.15 m ... 10 m    | NPN              | None            | Cable, 4-wire, 2 m <sup>1)</sup> | WL11-2N1130    | 1041388  |
|                    |                  |                 | Male connector M12, 4-pin        | WL11-2N2430    | 1041387  |
|                    | PNP              | Teach-in button | Male connector M12, 4-pin        | WL11-2K2432    | 1054233  |
|                    |                  |                 |                                  | WL11-2P2432    | 1048542  |
|                    |                  |                 |                                  | WL11-2P2432P07 | 1050674  |
|                    |                  |                 |                                  | WL11-2P1130    | 1041386  |
|                    | None             | None            | Cable, 4-wire, 2 m <sup>1)</sup> | WL11-2P2430    | 1041385  |
|                    |                  |                 |                                  | WL11-2P2430P02 | 1046468  |
| WL11-2P2430P03     |                  |                 |                                  | 1046949        |          |
|                    |                  |                 | WL11-2P2440                      | 1041389        |          |

<sup>1)</sup> Do not bend below 0 °C.

- **Sensor principle:** Photoelectric retro-reflective sensor
- **Detection principle:** Dual lens
- **Light source:** LED
- **Voltage type:** DC
- **Switching mode:** Light switching
- **Type of light:** visible red light

| Sensing range max. | Switching output | Adjustment | Connection type           | Type           | Part no. |
|--------------------|------------------|------------|---------------------------|----------------|----------|
| 0.05 m ... 10 m    | PNP              | None       | Male connector M12, 4-pin | WL11-2P2430S02 | 1047578  |

| Sensing range max. | Switching output | Adjustment | Connection type           | Type           | Part no. |
|--------------------|------------------|------------|---------------------------|----------------|----------|
| 0.15 m ... 10 m    | PNP              | None       | Male connector M12, 4-pin | WL11-2P2430P05 | 1047579  |

- **Sensor principle:** Photoelectric retro-reflective sensor
- **Detection principle:** Dual lens
- **Light source:** LED
- **Voltage type:** DC
- **Switching mode:** Dark switching
- **Type of light:** visible red light

| Sensing range max. | Switching output | Adjustment | Connection type           | Type           | Part no. |
|--------------------|------------------|------------|---------------------------|----------------|----------|
| 0.05 m ... 10 m    | PNP              | None       | Male connector M12, 4-pin | WL11-2F2430S04 | 1048753  |

- **Sensor principle:** Photoelectric retro-reflective sensor
- **Detection principle:** Dual lens
- **Light source:** LED
- **Voltage type:** DC
- **Type of light:** visible red light

| Sensing range max. | Switching output | Adjustment      | Connection type           | Type           | Part no. |
|--------------------|------------------|-----------------|---------------------------|----------------|----------|
| 0.15 m ... 10 m    | PNP              | Teach-in button | Male connector M12, 4-pin | WL11-2K2432P08 | 1054232  |

- **Sensor principle:** Through-beam photoelectric sensor
- **Light source:** LED
- **Voltage type:** DC
- **Switching mode:** Light/dark switching
- **Type of light:** visible red light

| Sensing range max. | Switching output | Adjustment | Connection type                  | Type            | Part no. |
|--------------------|------------------|------------|----------------------------------|-----------------|----------|
| 0 m ... 1.7 m      | PNP              | None       | Male connector M12               | WSE11-2P2430S05 | 1055057  |
| 0 m ... 20 m       | NPN              | None       | Cable, 4-wire, 2 m <sup>1)</sup> | WSE11-2N1130    | 1057574  |
|                    |                  |            |                                  | WSE11-2N1130    | 1041397  |
|                    |                  |            | Male connector M12, 4-pin        | WSE11-2N2430    | 1057573  |
|                    |                  |            |                                  | WSE11-2N2430    | 1041396  |
|                    | PNP              | None       | Cable, 4-wire, 2 m <sup>1)</sup> | WSE11-2P1130    | 1057572  |
|                    |                  |            |                                  | WSE11-2P1130    | 1041395  |
|                    |                  |            | Male connector M12, 4-pin        | WSE11-2K2430    | 1057575  |
|                    |                  |            |                                  | WSE11-2K2430    | 1051336  |
|                    |                  |            | WSE11-2P2430                     | 1057571         |          |
|                    |                  |            | WSE11-2P2430                     | 1041394         |          |

<sup>1)</sup> Do not bend below 0 °C.

## 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)