



# WSE27-3P2430P01

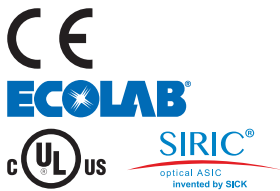
W27-3

COMPACT PHOTOELECTRIC SENSORS

**SICK**  
Sensor Intelligence.



Illustration may differ



### Ordering information

| Type            | Part no. |
|-----------------|----------|
| WSE27-3P2430P01 | 1029227  |

Other models and accessories → [www.sick.com/W27-3](http://www.sick.com/W27-3)

### Detailed technical data

#### Features

|  |   |
|--|---|
| <b>Functional principle</b>            | Through-beam photoelectric sensor                                 |
| <b>Dimensions (W x H x D)</b>          | 24.6 mm x 80.6 mm x 54 mm   |
| <b>Housing design (light emission)</b> | Rectangular   |
| <b>Sensing range max.</b>              | 0 m ... 35 m  |
| <b>Sensing range</b>                   | 0 m ... 25 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 600 mm (25 m)   |
| <b>Angle of dispersion</b>             | Approx. 1.5°  |
| <b>Wave length</b>                     | 645 nm  |
| <b>Adjustment</b>                      | None  |
| <b>Special features</b>                | WSE27-3P2430, 1027790, premounted on BEF-KHS-A01 mounting bracket |

<sup>1)</sup> Average service life: 100,000 h at T<sub>J</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, sender</b>            | 35 mA <sup>3)</sup>                                   |
| <b>Power consumption, receiver</b>          | 20 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>          | Approx. V <sub>S</sub> - 2.5 V / 0 V                  |
| <b>Output current I<sub>max.</sub></b>      | ≤ 100 mA  |
| <b>Response time</b>                        | ≤ 500 μs <sup>4)</sup>                                |
| <b>Switching frequency</b>                  | 1,000 Hz <sup>5)</sup>                                |
| <b>Angle of reception</b>                   | Approx. 3°  |
| <b>Connection type</b>                      | Male connector M12, 4-pin                             |
| <b>Circuit protection</b>                   | A <sup>6)</sup><br>B <sup>7)</sup><br>C <sup>8)</sup> |
| <b>Protection class</b>                     | II <sup>9)</sup>                                      |
| <b>Weight</b>                               | 200 g   |
| <b>Special device</b>                       | ✓   |
| <b>Housing material</b>                     | Plastic, ABS  |
| <b>Optics material</b>                      | Plastic, PMMA   |
| <b>Enclosure rating</b>                     | IP69K   |
| <b>Ambient operating temperature</b>        | -40 °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> | 1027790 WSE27-3P2430 1084152 WSE27-3P1030S09          |

<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> B = inputs and output reverse-polarity protected.

<sup>8)</sup> C = interference suppression.

<sup>9)</sup> Reference voltage: 50 V DC.

## Safety-related parameters

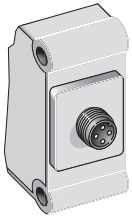
|                         |           |
|-------------------------|-----------|
| <b>MTTF<sub>D</sub></b> | 996 years |
| <b>DC<sub>avg</sub></b> | 0 %       |

## Classifications

|                     |          |
|---------------------|----------|
| <b>eCl@ss 5.0</b>   | 27270901 |
| <b>eCl@ss 5.1.4</b> | 27270901 |

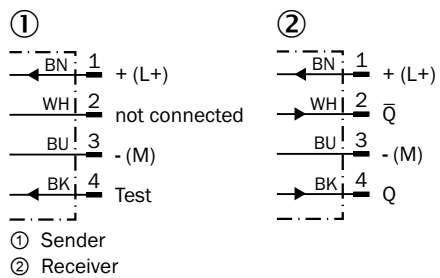
|                       |          |
|-----------------------|----------|
| <b>eCl@ss 6.0</b>     | 27270901 |
| <b>eCl@ss 6.2</b>     | 27270901 |
| <b>eCl@ss 7.0</b>     | 27270901 |
| <b>eCl@ss 8.0</b>     | 27270901 |
| <b>eCl@ss 8.1</b>     | 27270901 |
| <b>eCl@ss 9.0</b>     | 27270901 |
| <b>eCl@ss 10.0</b>    | 27270901 |
| <b>eCl@ss 11.0</b>    | 27270901 |
| <b>eCl@ss 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 |

### Connection type

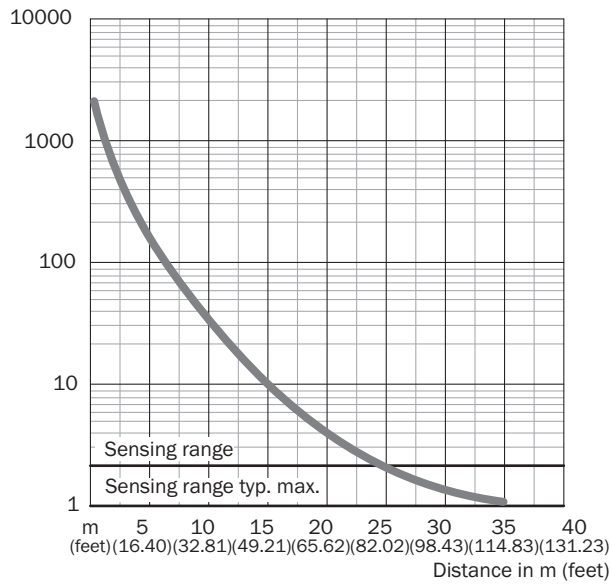


### Connection diagram

Cd-072

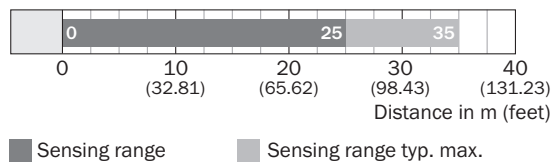


Characteristic curve



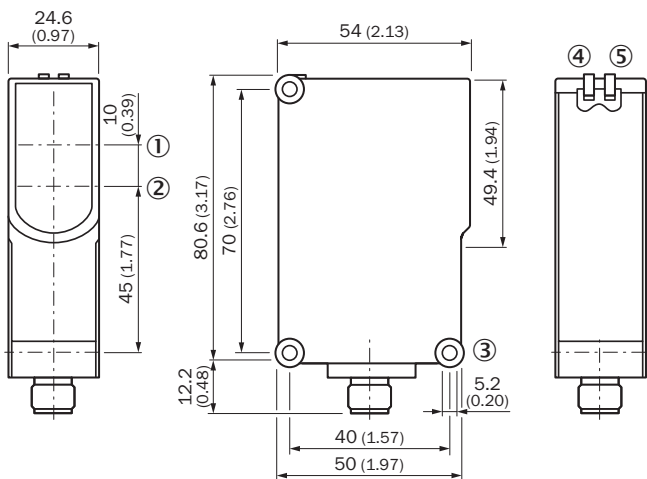
Sensing range diagram

WSE27-3



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




WL27-3, WSE27-3



- ① Optical axis, sender
- ② Optical axis, receiver
- ③ Mounting hole  $\varnothing$  5.2 mm
- ④ LED indicator green: Supply voltage active
- ⑤ LED indicator yellow: Status of received light beam

**Recommended accessories**

Other models and accessories → [www.sick.com/W27-3](http://www.sick.com/W27-3)

|   | Brief description   | Type               | Part no. |
|---|---|--------------------|----------|
| <b>Device protection (mechanical)</b>   |   |                    |          |
|  | Protective housing for W26, W27-3 and mounting rods with diameter 12 mm ... 20 mm, Zinc plated steel (protective housing), Zinc die cast (clamping bracket), Universal clamp BEF-KHS-KH1 (2022726), mounting hardware | BEF-SG-W27         | 2039601  |
| <b>Plug connectors and cables</b>   |   |                    |          |
|  | 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)