



DATA SHEET

# WSE4-3P2230S02

W4  
Photoelectric sensors

# SICK

Sensor Intelligence



Illustration may differ

# PHOTOELECTRIC SENSORS

## WSE4-3P2230S02

### ORDERING INFORMATION

| Type           | part no. |
|----------------|----------|
| WSE4-3P2230S02 | 1043260  |

Further device versions and accessories at [www.sick.com/W4](http://www.sick.com/W4)

### DETAILED TECHNICAL DATA

#### FEATURES

|                                      |                                             |
|--------------------------------------|---------------------------------------------|
| Functional principle                 | Through-beam photoelectric sensor           |
| Sensing range max.                   | 0 m ... 0.9 m                               |
| Sensing range                        | 0 m ... 0.6 m                               |
| Emitted beam                         |                                             |
| Light source                         | PinPoint LED <sup>1)</sup>                  |
| Type of light                        | Visible red light                           |
| Light spot size (distance)           | Ø 75 mm (2 m)                               |
| Key LED figures                      |                                             |
| Wave length                          | 650 nm                                      |
| Adjustment                           | None                                        |
| Part number of individual components | 2044498 WS4-3D2230S02 2044499 WE4-3P2230S02 |

<sup>1)</sup> Average service life: 100,000 h at T<sub>U</sub> = +25 °C.

#### ELECTRONICS

|                               |                                   |
|-------------------------------|-----------------------------------|
| Supply voltage U <sub>B</sub> | 10 V DC ... 30 V DC <sup>1)</sup> |
| Ripple                        | < 5 V <sub>PP</sub> <sup>2)</sup> |

<sup>1)</sup> Limit values.  
<sup>2)</sup> May not fall below or exceed U<sub>I</sub> tolerances.  
<sup>3)</sup> Sender.  
<sup>4)</sup> Signal transit time with resistive load.  
<sup>5)</sup> With light/dark ratio 1:1.  
<sup>6)</sup> A = V<sub>g</sub> connections reverse-polarity protected.  
<sup>7)</sup> C = interference suppression.  
<sup>8)</sup> D = outputs overcurrent and short-circuit protected.

|                       |                                                                                                                                                                                                                                                                                                                                                         |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Current consumption   | 20 mA <sup>3)</sup>                                                                                                                                                                                                                                                                                                                                     |
| Protection class      | III                                                                                                                                                                                                                                                                                                                                                     |
| Digital output        | <div> <div>Type</div> <div>PNP</div> </div> <div> <div>Switching mode</div> <div>Light/dark switching</div> </div> <div> <div>Output current I<sub>max.</sub></div> <div>≤ 100 mA</div> </div> <div> <div>Response time</div> <div>&lt; 0.1 ms <sup>4)</sup></div> </div> <div> <div>Switching frequency</div> <div>5,000 Hz <sup>5)</sup></div> </div> |
| Circuit protection    | <div>A <sup>6)</sup></div> <div>C <sup>7)</sup></div> <div>D <sup>8)</sup></div>                                                                                                                                                                                                                                                                        |
| Test input sender off | TE to 0 V                                                                                                                                                                                                                                                                                                                                               |

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

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

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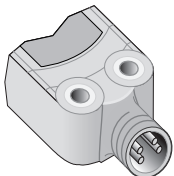
## MECHANICS

|                        |                                                                                                                       |
|------------------------|-----------------------------------------------------------------------------------------------------------------------|
| Housing                | Rectangular                                                                                                           |
| Design detail          | Flat                                                                                                                  |
| Dimensions (W x H x D) | 16 mm x 39.5 mm x 12 mm                                                                                               |
| Connection             | Male connector M8, 4-pin                                                                                              |
| Material               | <div> <div>Housing</div> <div>Plastic, ABS</div> </div> <div> <div>Front screen</div> <div>Plastic, PMMA</div> </div> |
| Weight                 | 60 g                                                                                                                  |

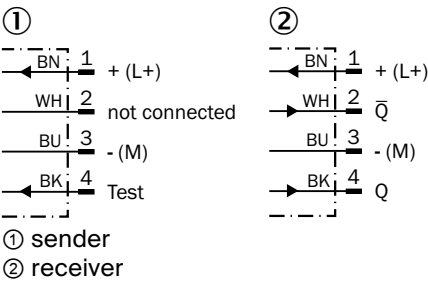
## AMBIENT DATA

|                               |                              |
|-------------------------------|------------------------------|
| Enclosure rating              | IP67<br>IP66                 |
| Ambient operating temperature | -40 °C ... +60 °C            |
| Ambient temperature, storage  | -40 °C ... +75 °C            |
| UL File No.                   | NRKH.E181493 & NRKH7.E181493 |

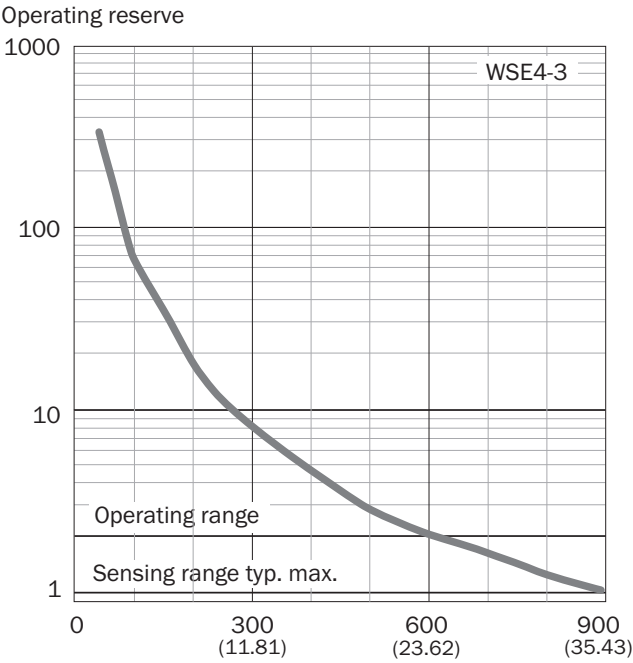
## CONNECTION TYPE



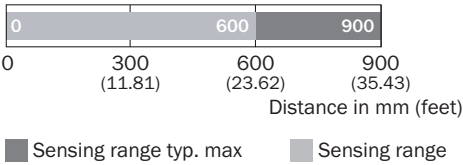
CONNECTION DIAGRAM CD-072

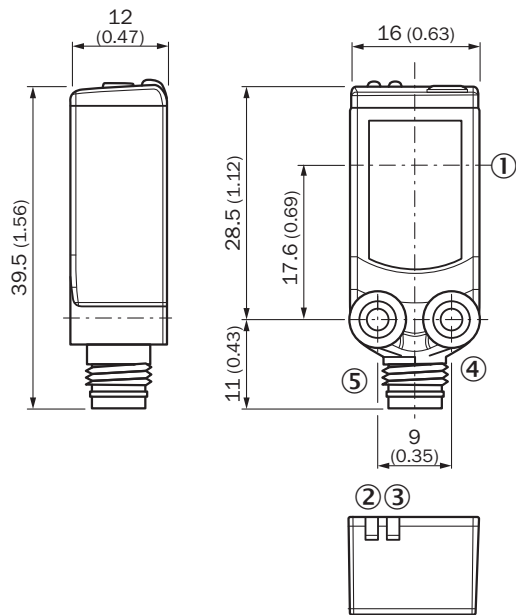


CHARACTERISTIC CURVE



SENSING RANGE DIAGRAM



**DIMENSIONAL DRAWING WSE4-3**

Dimensions in mm (inch)

- ① Center of optical axis
- ② Orange LED indicator: status of received light beam
- ③ LED indicator green: Supply voltage active
- ④ Threaded mounting hole M3
- ⑤ Connection

Further information as well as suitable accessories, example applications and downloads such as CAD dimensional models, operating instructions and software can be found at [www.sick.com/1043260](http://www.sick.com/1043260)



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WALDKIRCH  
GERMANY  
SICK.COM

# SICK AT A GLANCE

SICK is a leading global technology company for intelligent sensors and integrated solutions in industrial automation. Our technologies set benchmarks, making your industrial processes more efficient, safer and more sustainable – both in logistics and manufacturing operations.

SICK combines sensor intelligence with industry expertise and certified consulting services. We provide the ideal foundation for scalable as well as tailor-made automation solutions and create added value along the entire value chain. Our close partnerships with our customers are more than just a promise: Together, we optimize productivity, improve quality, protect health and safety, and help build a sustainable future. All with empathy and trust.

Since 1946, we have been developing innovative technologies with passion and a pioneering spirit. With a global network in around 40 countries, SICK has a global presence and is always close by. The company's headquarters are located in Waldkirch near Freiburg, Germany. Our customers benefit from our understanding of both local and global requirements, which enables us to deliver tailor-made solutions

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