



# WLG4S-3N2432V

W4

PHOTOELECTRIC SENSORS

**SICK**  
Sensor Intelligence.



Illustration may differ



Ordering information

| Type          | part no. |
|---------------|----------|
| WLG4S-3N2432V | 1054728  |

Other models and accessories → [www.sick.com/W4](http://www.sick.com/W4)

Detailed technical data

Features

|                                    |                            |                                                                     |
|------------------------------------|----------------------------|---------------------------------------------------------------------|
| <b>Functional principle</b>        |                            | Photoelectric retro-reflective sensor                               |
| <b>Functional principle detail</b> |                            | Without reflector minimum distance (autocollimation/coaxial optics) |
| <b>Sensing range max.</b>          |                            | 0 m ... 5 m <sup>1)</sup>                                           |
| <b>Sensing range</b>               |                            | 0 m ... 3 m <sup>1)</sup>                                           |
| <b>Polarisation filters</b>        |                            | Yes                                                                 |
| <b>Emitted beam</b>                |                            |                                                                     |
|                                    | Light source               | PinPoint LED <sup>2)</sup>                                          |
|                                    | Type of light              | Visible red light                                                   |
|                                    | Light spot size (distance) | Ø 45 mm (1.5 m)                                                     |
| <b>Key LED figures</b>             |                            |                                                                     |
|                                    | Wave length                | 650 nm                                                              |
| <b>Adjustment</b>                  |                            | Single teach-in button                                              |
| <b>Special applications</b>        |                            | Hygienic and washdown zones, Detecting transparent objects          |
| <b>Housing design</b>              |                            | Washdown                                                            |
| <b>AutoAdapt</b>                   |                            | ✓                                                                   |

<sup>1)</sup> Reflector PL80A.  
<sup>2)</sup> Average service life: 100,000 h at T<sub>U</sub> = +25 °C.

Safety-related parameters

|                   |             |
|-------------------|-------------|
| MTTF <sub>D</sub> | 1,215 years |
|-------------------|-------------|

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

## Electronics

|                                     |                                                       |
|-------------------------------------|-------------------------------------------------------|
| <b>Supply voltage U<sub>B</sub></b> | 10 V DC ... 30 V DC <sup>1)</sup>                     |
| <b>Ripple</b>                       | < 5 V <sub>pp</sub> <sup>2)</sup>                     |
| <b>Current consumption</b>          | 30 mA <sup>3)</sup>                                   |
| <b>Protection class</b>             | III                                                   |
| <b>Digital output</b>               |                                                       |
| Type                                | NPN                                                   |
| Switching mode                      | Light/dark switching                                  |
| Output current I <sub>max.</sub>    | ≤ 100 mA                                              |
| Response time                       | < 0.5 ms <sup>4)</sup>                                |
| Switching frequency                 | 1,000 Hz <sup>5)</sup>                                |
| <b>Attenuation along light beam</b> | > 8 %                                                 |
| <b>Output function</b>              | Complementary                                         |
| <b>Circuit protection</b>           | A <sup>6)</sup><br>B <sup>7)</sup><br>C <sup>8)</sup> |

<sup>1)</sup> Limit values, reverse-polarity protected, operation in short-circuit protected network: max. 8 A.

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

## Mechanics

|                               |                                            |
|-------------------------------|--------------------------------------------|
| <b>Housing</b>                | Rectangular                                |
| <b>Design detail</b>          | Slim                                       |
| <b>Dimensions (W x H x D)</b> | 15.25 mm x 49.2 mm x 22.2 mm               |
| <b>Connection</b>             | Male connector M12, 4-pin <sup>1) 2)</sup> |
| <b>Material</b>               |                                            |
| Housing                       | Metal, Stainless steel V4A (1.4404, 316L)  |
| Front screen                  | Plastic, PMMA                              |
| <b>Weight</b>                 | 45 g                                       |

<sup>1)</sup> Max. tightening torque: 0.7 Nm.

<sup>2)</sup> Do not bend below 0 °C.

## Ambient data

|                         |                               |
|-------------------------|-------------------------------|
| <b>Enclosure rating</b> | IP66<br>IP67<br>IP68<br>IP69K |
|-------------------------|-------------------------------|

<sup>1)</sup> At UV ≤ 24 V and IA < 30 mA.

|                                      |                                 |
|--------------------------------------|---------------------------------|
| <b>Ambient operating temperature</b> | -30 °C ... +60 °C <sup>1)</sup> |
| <b>Ambient temperature, storage</b>  | -30 °C ... +75 °C               |
| <b>UL File No.</b>                   | NRKH.E181493 & NRKH7.E181493    |

<sup>1)</sup> At UV ≤ 24 V and IA < 30 mA.

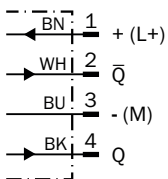
## Certificates

|                                                          |   |
|----------------------------------------------------------|---|
| <b>EU declaration of conformity</b>                      | ✓ |
| <b>UK declaration of conformity</b>                      | ✓ |
| <b>ACMA declaration of conformity</b>                    | ✓ |
| <b>Moroccan declaration of conformity</b>                | ✓ |
| <b>China-RoHS</b>                                        | ✓ |
| <b>ECOLAB certificate</b>                                | ✓ |
| <b>cULus certificate</b>                                 | ✓ |
| <b>Photobiological safety (DIN EN 62471) certificate</b> | ✓ |

## Classifications

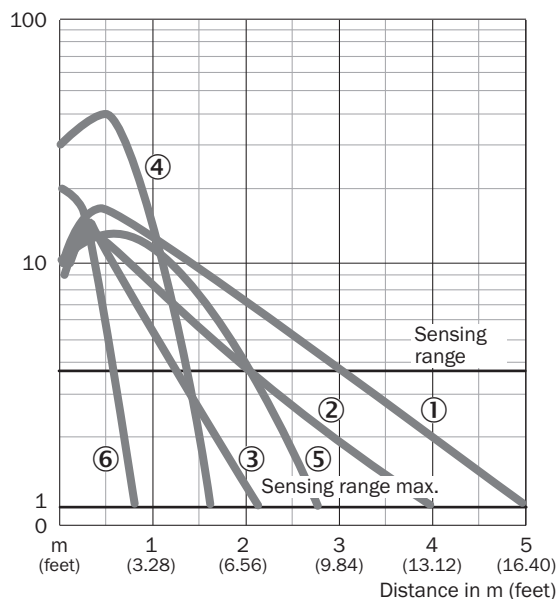
|                       |          |
|-----------------------|----------|
| <b>ECLASS 5.0</b>     | 27270902 |
| <b>ECLASS 5.1.4</b>   | 27270902 |
| <b>ECLASS 6.0</b>     | 27270902 |
| <b>ECLASS 6.2</b>     | 27270902 |
| <b>ECLASS 7.0</b>     | 27270902 |
| <b>ECLASS 8.0</b>     | 27270902 |
| <b>ECLASS 8.1</b>     | 27270902 |
| <b>ECLASS 9.0</b>     | 27270902 |
| <b>ECLASS 10.0</b>    | 27270902 |
| <b>ECLASS 11.0</b>    | 27270902 |
| <b>ECLASS 12.0</b>    | 27270902 |
| <b>ETIM 5.0</b>       | EC002717 |
| <b>ETIM 6.0</b>       | EC002717 |
| <b>ETIM 7.0</b>       | EC002717 |
| <b>ETIM 8.0</b>       | EC002717 |
| <b>UNSPSC 16.0901</b> | 39121528 |

## Connection diagram Cd-083



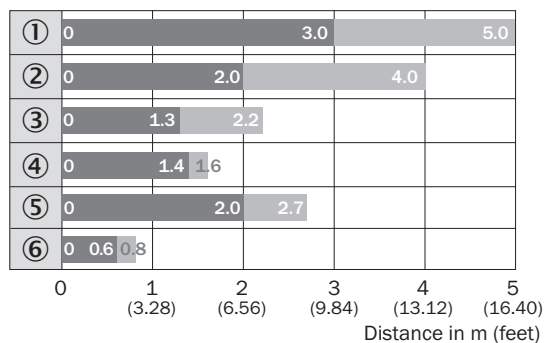
## Characteristic curve WL4S-3, WLG4S-3, 5 m

Operating reserve



- ① Reflector PL80A
- ② Reflector PL40A
- ③ Reflector PL20A
- ④ PL10F reflector
- ⑤ Reflector P250 CHEM
- ⑥ Reflective tape REF-IRF-56

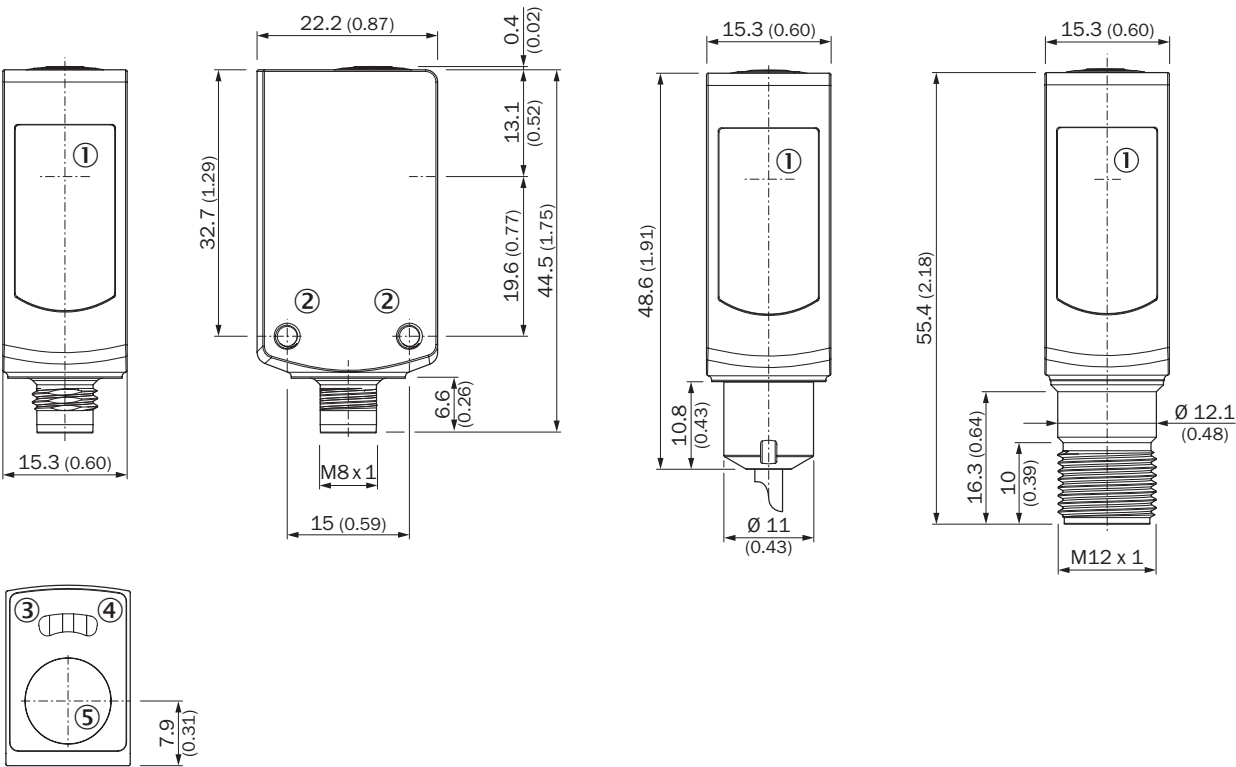
## Sensing range diagram WL4S-3, WLG4S-3, 5 m



■ Sensing range      ■ Sensing range max.

- ① Reflector PL80A
- ② Reflector PL40A
- ③ Reflector PL20A
- ④ PL10F reflector
- ⑤ Reflector P250 CHEM
- ⑥ Reflective tape REF-IRF-56

Dimensional drawing WL4S-3V, WLG4S-3V, with single teach-in button



Recommended accessories

Other models and accessories → [www.sick.com/W4](http://www.sick.com/W4)

|                                                                                     | Brief description                                                                                                                                                                                                                                                                                          | Type     | part no. |
|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|----------|
| Mounting systems                                                                    |                                                                                                                                                                                                                                                                                                            |          |          |
|  | <ul style="list-style-type: none"> <li><b>Description:</b> Mounting bracket for floor mounting</li> <li><b>Material:</b> Stainless steel</li> <li><b>Details:</b> Stainless steel 1.4571</li> <li><b>Items supplied:</b> Mounting hardware included</li> <li><b>Suitable for:</b> W4S, W4F, W4S</li> </ul> | BEF-W4-B | 2051630  |

|                                                                                   | Brief description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Type            | part no. |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|----------|
| reflectors and optics                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                 |          |
|  | <ul style="list-style-type: none"><li>• <b>Description:</b> Chemically resistant, screw connection</li><li>• <b>Dimensions:</b> 52 mm 61 mm</li><li>• <b>Ambient operating temperature:</b> -20 °C ... +140 °C</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | P250 CHEM       | 5321097  |
| connectors and cables                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                 |          |
|  | <ul style="list-style-type: none"><li>• <b>Connection type head A:</b> Female connector, M12, 4-pin, straight</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, PP</li><li>• <b>Description:</b> Sensor/actuator cable, unshielded</li><li>• <b>Connection systems:</b> Flying leads</li><li>• <b>Note:</b> This product is generally resistant to chemical cleaning agents (see ECOLAB) and other chemical compounds such as H2O2 and CH2O2. Before permanent installation is carried out, the material's resistance to the cleaning agent being used must be checked., Resistant against lactic acid &amp; hydrogen peroxide (H2O2)</li><li>• <b>Application:</b> Hygienic and washdown zones, Drag chain operation</li></ul> | DOL-1204-G05MRN | 6058476  |

## 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)