



# WLG4S-3F3132

W4S-3 Glass

PHOTOELECTRIC SENSORS

**SICK**  
Sensor Intelligence.



Illustration may differ



### Ordering information

| Type         | Part no. |
|--------------|----------|
| WLG4S-3F3132 | 1043838  |

Other models and accessories → [www.sick.com/W4S-3\\_Glass](http://www.sick.com/W4S-3_Glass)

### Detailed technical data

#### Features

|  |  |
|--|--|
| <b>Sensor/detection principle</b>      | Photoelectric retro-reflective sensor, autocollimation |
| <b>Dimensions (W x H x D)</b>          | 12.2 mm x 41.8 mm x 17.3 mm                            |
| <b>Housing design (light emission)</b> | Rectangular  |
| <b>Sensing range max.</b>              | 0.01 m ... 5 m <sup>1)</sup>                           |
| <b>Sensing range</b>                   | 0 m ... 3 m <sup>1)</sup>                              |
| <b>Type of light</b>                   | Visible red light                                      |
| <b>Light source</b>                    | PinPoint LED <sup>2)</sup>                             |
| <b>Light spot size (distance)</b>      | Ø 45 mm (1.5 m)  |
| <b>Wave length</b>                     | 650 nm   |
| <b>Adjustment</b>                      | Single teach-in button                                 |
| <b>AutoAdapt</b>                       | ✓  |

<sup>1)</sup> Reflector PL80A.

<sup>2)</sup> Average service life: 100,000 h at T<sub>U</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</b>               | ≤ 20 mA <sup>3)</sup>                                 |
| <b>Output type</b>                     | PNP   |
| <b>Switching mode</b>                  | Dark switching  |
| <b>Output current I<sub>max.</sub></b> | ≤ 100 mA  |
| <b>Response time</b>                   | < 0.5 ms <sup>4)</sup>                                |
| <b>Switching frequency</b>             | 1,000 Hz <sup>5)</sup>                                |
| <b>Angle of reception</b>              | 30°   |
| <b>Attenuation along light beam</b>    | > 8 %   |
| <b>Connection type</b>                 | Cable with connector M8, 3-pin, 100 mm <sup>6)</sup>  |
| <b>Cable material</b>                  | PVC   |
| <b>Conductor cross-section</b>         | 0.14 mm <sup>2</sup>                                  |
| <b>Cable diameter</b>                  | Ø 3.4 mm  |
| <b>Circuit protection</b>              | A <sup>7)</sup><br>C <sup>8)</sup><br>D <sup>9)</sup> |
| <b>Protection class</b>                | III   |
| <b>Weight</b>                          | 30 g  |
| <b>Polarisation filter</b>             | ✓   |
| <b>Housing material</b>                | Plastic, ABS, Plastic, PMMA                           |
| <b>Optics material</b>                 | Plastic, PMMA   |
| <b>Enclosure rating</b>                | IP67<br>IP66  |
| <b>Special feature</b>                 | Detecting transparent objects                         |
| <b>Ambient operating temperature</b>   | -40 °C ... +60 °C                                     |
| <b>Ambient storage temperature</b>     | -40 °C ... +75 °C                                     |
| <b>UL File No.</b>                     | NRKH.E181493 & NRKH7.E181493                          |

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

<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> Do not bend below 0 °C.

<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.

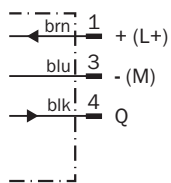
## Classifications

|                     |          |
|---------------------|----------|
| <b>ECl@ss 5.0</b>   | 27270902 |
| <b>ECl@ss 5.1.4</b> | 27270902 |
| <b>ECl@ss 6.0</b>   | 27270902 |
| <b>ECl@ss 6.2</b>   | 27270902 |

|                       |          |
|-----------------------|----------|
| <b>ECl@ss 7.0</b>     | 27270902 |
| <b>ECl@ss 8.0</b>     | 27270902 |
| <b>ECl@ss 8.1</b>     | 27270902 |
| <b>ECl@ss 9.0</b>     | 27270902 |
| <b>ETIM 5.0</b>       | EC002717 |
| <b>ETIM 6.0</b>       | EC002717 |
| <b>UNSPSC 16.0901</b> | 39121528 |

### Connection diagram

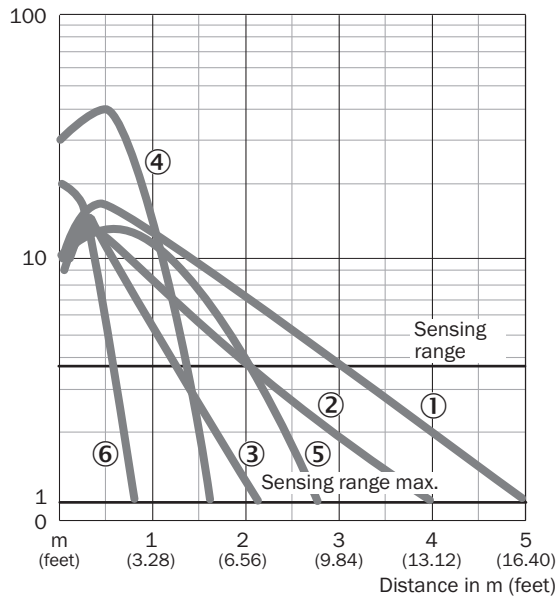
Cd-045



### Characteristic curve

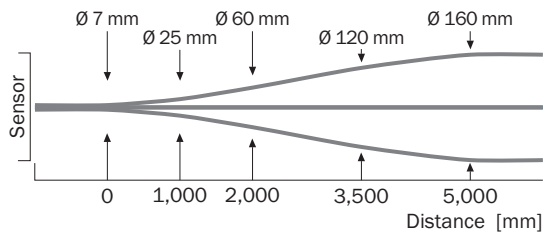
WL4S-3, WLG4S-3, 5 m

Operating reserve



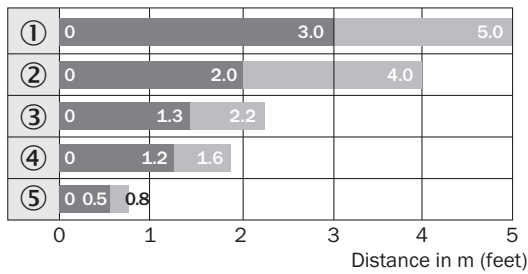
- ① Reflector PL80A
- ② Reflector PL40A
- ③ Reflector PL20A
- ④ PL10F reflector
- ⑤ Reflector P250 CHEM
- ⑥ Reflective tape REF-IRF-56

### Light spot size



### Sensing range diagram

WL4S-3, WLG4S-3, 5 m

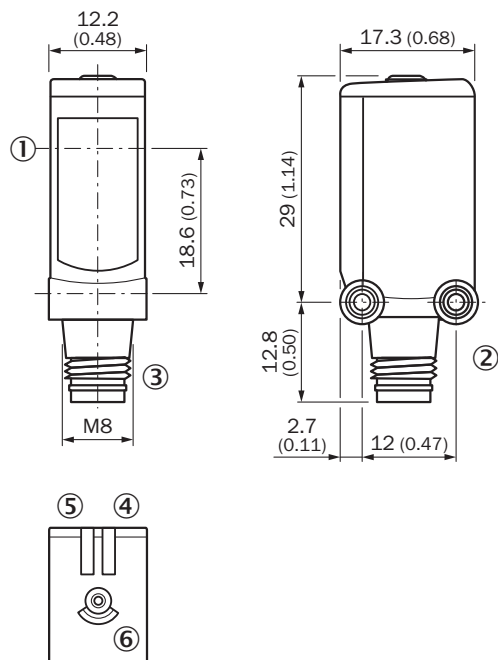


■ Sensing range      ■ Sensing range max.

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

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




WL4S-3, WLG4S-3, single teach-in button






- ① Center of optical axis
- ② Threaded mounting hole M3
- ③ Connection
- ④ LED indicator green: Supply voltage active
- ⑤ LED indicator orange: status of received light beam
- ⑥ Teach-in button

### Recommended accessories

Other models and accessories → [www.sick.com/W4S-3\\_Glass](http://www.sick.com/W4S-3_Glass)

|   | Brief description  | Type         | Part no. |
|---|--|--------------|----------|
| <b>Universal bar clamp systems</b>  |  |              |          |
|  | Plate N02 for universal clamp bracket, Zinc plated steel (sheet), Zinc die cast (clamping bracket), Universal clamp (5322626), mounting hardware     | BEF-KHS-N02  | 2051608  |
|   | Plate N02N for universal clamp bracket, Stainless steel 1.4571 (sheet), Stainless steel 1.4408 (clamp), Universal clamp (5322626), mounting hardware | BEF-KHS-N02N | 2051618  |
|  | Plate N08 for universal clamp bracket, Zinc plated steel (sheet), Zinc die cast (clamping bracket), Universal clamp (5322626), mounting hardware     | BEF-KHS-N08  | 2051607  |
|   | Plate N08N for universal clamp bracket, Stainless steel 1.4571 (sheet), Stainless steel 1.4408 (clamp), Universal clamp (5322626), mounting hardware | BEF-KHS-N08N | 2051616  |
| <b>Device protection (mechanical)</b>   |  |              |          |
|  | Safety bracket for floor mounting, Stainless steel 1.4571, mounting hardware included  | BEF-SW-W4S   | 2051497  |

|   | Brief description   | Type          | Part no. |
|---|---|---------------|----------|
| <b>Plug connectors and cables</b>   |   |               |          |
|    | Head A: female connector, M8, 3-pin, straight<br>Head B: cable<br>Cable: PVC, unshielded, 2 m                           | DOL-0803-G02M | 6010785  |
|   | Head A: female connector, M8, 3-pin, straight<br>Head B: cable<br>Cable: PVC, unshielded, 5 m                           | DOL-0803-G05M | 6022009  |
|    | Head A: female connector, M8, 3-pin, angled<br>Head B: cable<br>Cable: PVC, unshielded, 2 m                             | DOL-0803-W02M | 6008489  |
|   | Head A: female connector, M8, 3-pin, angled<br>Head B: cable<br>Cable: PVC, unshielded, 5 m                             | DOL-0803-W05M | 6022010  |
|    | Head A: female connector, M8, 3-pin, straight<br>Head B: -<br>Cable: unshielded   | DOS-0803-G    | 7902077  |
|    | Head A: female connector, M8, 3-pin, angled<br>Head B: -<br>Cable: unshielded   | DOS-0803-W    | 7902078  |
|    | Head A: male connector, M8, 3-pin, straight<br>Head B: -<br>Cable: unshielded   | STE-0803-G    | 6037322  |
| <b>Reflectors</b>   |   |               |          |
|   | Rectangular, screw connection, 80 mm x 80 mm, PMMA/ABS, Screw-on, 2 hole mounting                                       | PL80A         | 1003865  |
|  | Fine triple reflector, screw connection, suitable for laser sensors, 47 mm x 47 mm, PMMA/ABS, Screw-on, 2 hole mounting | P250F         | 5308843  |
|  | Fine triple reflector, screw connection, suitable for laser sensors, 18 mm x 18 mm, PMMA/ABS, Screw-on, 2 hole mounting | PL10F         | 5311210  |
|  | Fine triple reflector, screw connection, suitable for laser sensors, 38 mm x 16 mm, PMMA/ABS, Screw-on, 2 hole mounting | PL20F         | 5308844  |
|  | Fine triple reflector, screw connection, suitable for laser sensors, 56 mm x 28 mm, PMMA/ABS, Screw-on, 2 hole mounting | PL30F         | 5326523  |
|  | Fine triple reflector, screw connection, suitable for laser sensors, 76 mm x 45 mm, PMMA/ABS, Screw-on, 2 hole mounting | PL81-1F       | 5325060  |
|  | Suitable for laser sensors, self-adhesive, cut, see alignment note, 56.3 mm x 56.3 mm, self-adhesive                    | REF-AC1000-56 | 4063030  |
|  | Fine triple reflector, chemically resistant, screw connection, 18 mm x 18 mm, Plastic, Screw-on, 2 hole mounting        | PL10F CHEM    | 5321636  |
|  | Chemically resistant, screw connection, suitable for laser sensors, 16 mm x 38 mm, Plastic, Screw-on, 2 hole mounting   | PL20F-CHEM    | 5326089  |

|   | Brief description   | Type      | Part no. |
|---|---|-----------|----------|
|  | Stainless steel reflector, hygienic design, chemically resistant, enclosure rating IP69K, D12 adapter shaft, 25 mm x 25 mm, Stainless steel V4A (1.4404, 316L), D12-adapter shaft         | PLH25-D12 | 2063404  |
|  | Stainless steel reflector, hygienic design, chemically resistant, Enclosure rating IP 69K, M12-adapter thread, 25 mm x 25 mm, Stainless steel V4A (1.4404, 316L), M12-adapter thread      | PLH25-M12 | 2063403  |
|  | Stainless steel reflector, washdown design, chemically resistant, IP 69K enclosure rating, screw connection, 14 mm x 14 mm, Stainless steel V4A (1.4404, 316L), Screw-on, 2 hole mounting | PLV14-A   | 2063405  |



## 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)