



# WL12G-3V2572S05

## W12G

SMALL PHOTOELECTRIC SENSORS

**SICK**  
Sensor Intelligence.



Illustration may differ



Ordering information

| Type            | Part no. |
|-----------------|----------|
| WL12G-3V2572S05 | 1069340  |

Other models and accessories → [www.sick.com/W12G](http://www.sick.com/W12G)

Detailed technical data

Features

|                                    |                            |                                       |
|------------------------------------|----------------------------|---------------------------------------|
| <b>Functional principle</b>        |                            | Photoelectric retro-reflective sensor |
| <b>Functional principle detail</b> |                            | Autocollimation                       |
| <b>Sensing range max.</b>          |                            | 0 m ... 1.5 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) | 1.5 mm x 9 mm (60 mm)                 |
| <b>Key LED figures</b>             |                            |                                       |
|                                    | Wave length                | 660 nm                                |
| <b>Adjustment</b>                  |                            | Single teach-in button <sup>3)</sup>  |
| <b>Special features</b>            |                            | Mode III, 40 % attenuation            |
| <b>Special applications</b>        |                            | Detecting transparent objects         |
| <b>AutoAdapt</b>                   |                            | ✓                                     |

<sup>1)</sup> Reflector PL80A.  
<sup>2)</sup> Average service life: 100,000 h at T<sub>U</sub> = +25 °C.  
<sup>3)</sup> Mode I, 10 % attenuation.

## Electrical data

|                                                |                                                                                 |
|------------------------------------------------|---------------------------------------------------------------------------------|
| <b>Supply voltage <math>U_B</math></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>                     | 40 mA <sup>3)</sup>                                                             |
| <b>Protection class</b>                        | III                                                                             |
| <b>Digital output</b>                          |                                                                                 |
| Type                                           | PNP                                                                             |
| Switching mode                                 | Light switching                                                                 |
| Signal voltage PNP HIGH/LOW                    | Approx. $V_S - 2.5 \text{ V} / 0 \text{ V}$                                     |
| Output current $I_{\max}$                      | ≤ 100 mA                                                                        |
| Response time                                  | ≤ 333 μs <sup>4)</sup>                                                          |
| Switching frequency                            | 1,500 Hz <sup>5)</sup>                                                          |
| <b>Circuit protection</b>                      | A <sup>6)</sup><br>B <sup>7)</sup><br>C <sup>8)</sup><br>D <sup>9)</sup>        |
| <b>Special feature</b>                         | Detecting transparent objects                                                   |
| <b>Operating mode</b>                          | Mode I, 10 % attenuation, Mode II, 18 % attenuation, Mode III, 40 % attenuation |
| <b>Plausibility output, stable detection</b>   | Approx. 0 V                                                                     |
| <b>Plausibility output, unstable detection</b> | $V_S - 2.5 \text{ V}$                                                           |

<sup>1)</sup> Limit values when operated in short-circuit protected network: max. 8 A.

<sup>2)</sup> May not exceed or fall below  $U_V$  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 =  $V_S$  connections reverse-polarity protected.

<sup>7)</sup> B = inputs and output reverse-polarity protected.

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

<sup>9)</sup> D = outputs overcurrent and short-circuit protected.

## Mechanical data

|                               |                           |
|-------------------------------|---------------------------|
| <b>Housing</b>                | Rectangular               |
| <b>Dimensions (W x H x D)</b> | 15.5 mm x 48.5 mm x 42 mm |
| <b>Connection</b>             | Male connector M12, 5-pin |
| <b>Material</b>               |                           |
| Housing                       | Metal, zinc diecast       |
| Front screen                  | Plastic, PMMA             |
| <b>Weight</b>                 | 120 g                     |

## Ambient data

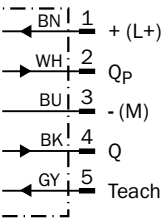
|                                      |                              |
|--------------------------------------|------------------------------|
| <b>Enclosure rating</b>              | IP66<br>IP67                 |
| <b>Ambient operating temperature</b> | -40 °C ... +60 °C            |
| <b>Ambient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

Classifications

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

Connection diagram

Cd-147

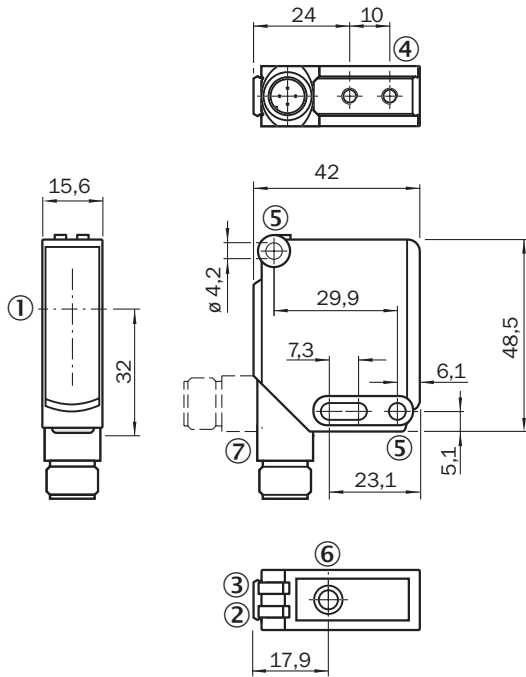


Functions

| Teach-in-Modus für Objekte / Teach-in mode for objects | Lichtdämpfung / | Objekttyp /                                            | Teach-in-Zeit / Teach-in time | Ext. Teach-in über Leitung / Ext. cable teach-in | Anzeige-LED / LED indicator |
|--------------------------------------------------------|-----------------|--------------------------------------------------------|-------------------------------|--------------------------------------------------|-----------------------------|
| I                                                      | 10 %            | PET-Flasche / Folie / Glas / PET-Bottle / Foil / glass | 1 ... 5 s                     | 30 ... 100 ms                                    | grün / green                |
| II                                                     | 18 %            | Farbglasflaschen / Colored glass bottles               | 5 ... 10 s                    | 100 ... 200 ms                                   | blau / blue                 |

| Mode                          | I                 | II                         | III                  |
|-------------------------------|-------------------|----------------------------|----------------------|
| Light attenuation             | 10 %              | 18 %                       | 40%                  |
| Object Typ                    | PET-bottle / foil | Glass / white Glass bottle | Colored glass bottle |
| Teach time button / (s)       | 2...5             | 5...10                     | > 10                 |
| Teach time Extern (ET) / (ms) | 30...99           | 100 ...199                 | > 200                |
| Color Status LED              | Green             | Blue                       | Bright blue          |

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



- ① Optical axis
- ② LED indicator yellow: Status of received light beam
- ③ Green LED indicator: supply voltage active, mode I is set, blue LED indicator: mode II is set, bright blue indicator: mode III is set
- ④ M4 threaded mounting hole, 4 mm deep
- ⑤ Mounting hole, Ø 4.2 mm
- ⑥ Sensitivity setting: single teach-in button
- ⑦ Connection

## Recommended accessories

Other models and accessories → [www.sick.com/W12G](http://www.sick.com/W12G)

|                                                                                     | Brief description                                                                                                        | Type        | Part no. |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|-------------|----------|
| Mounting brackets and plates                                                        |                                                                                                                          |             |          |
|  | Universal mounting bracket for reflectors, steel, zinc coated                                                            | BEF-WN-REFX | 2064574  |
| Reflectors                                                                          |                                                                                                                          |             |          |
|  | Fine triple reflector, screw connection, suitable for laser sensors, 52 mm x 62 mm, PM-MA/ABS, Screw-on, 2 hole mounting | P250F       | 5308843  |

## 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)