



WL12G-3V2572

W12G

SMALL PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

| Type | Part no. |
|--------------|----------|
| WL12G-3V2572 | 1053537 |

Other models and accessories → www.sick.com/W12G

Detailed technical data

Features

| | |
|--|--|
| Device type | Photoelectric sensors |
| Sensor/ detection principle | Photoelectric retro-reflective sensor, autocollimation |
| Dimensions (W x H x D) | 15.5 mm x 48.5 mm x 42 mm |
| Housing design (light emission) | Rectangular |
| Sensing range max. | 0 m ... 4 m ¹⁾ |
| Type of light | Visible red light |
| Light source | PinPoint LED ²⁾ |
| Light spot size (distance) | Ø 25 mm (1.5 m) |
| Wave length | 660 nm |
| Adjustment | Single teach-in button ³⁾ |
| AutoAdapt | ✓ |
| Special applications | Detecting transparent objects |

¹⁾ Reflector PL80A.

²⁾ Average service life: 100,000 h at T_U = +25 °C.

³⁾ Mode I, 10 % attenuation.

Mechanics/electronics

| | |
|--|--|
| Supply voltage | 10 V DC ... 30 V DC ¹⁾ |
| Ripple | < 5 V _{pp} ²⁾ |
| Current consumption | 40 mA ³⁾ |
| Switching output | PNP |
| Switching mode | Light/dark switching |
| Signal voltage PNP HIGH/LOW | Approx. V _S - 2.5 V / 0 V |
| Output current I_{max.} | ≤ 100 mA |
| Response time | ≤ 333 μs ⁴⁾ |
| Switching frequency | 1,500 Hz ⁵⁾ |
| Connection type | Male connector M12, 5-pin |
| Circuit protection | A ⁶⁾ B ⁷⁾ C ⁸⁾ D ⁹⁾ |
| Protection class | III |
| Weight | 120 g |
| Polarisation filter | ✓ |
| Housing material | Metal, zinc diecast |
| Optics material | Plastic, PMMA |
| Enclosure rating | IP66 IP67 |
| Special feature | Detecting transparent objects |
| Operating mode | Mode I, 10 % attenuation, Mode II, 18 % attenuation |
| Plausibility output, stable detection | Approx. 0 V |
| Plausibility output, unstable detection | V _S - 2.5 V |
| Ambient operating temperature | -40 °C ... +60 °C |
| Ambient temperature, storage | -40 °C ... +75 °C |
| UL File No. | NRKH.E181493 & NRKH7.E181493 |

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

²⁾ May not exceed or fall below U_y tolerances.

³⁾ Without load.

⁴⁾ Signal transit time with resistive load.

⁵⁾ With light/dark ratio 1:1.

⁶⁾ A = V_S connections reverse-polarity protected.

⁷⁾ B = inputs and output reverse-polarity protected.

⁸⁾ C = interference suppression.

⁹⁾ D = outputs overcurrent and short-circuit protected.

Safety-related parameters

| | |
|-------------------------|-------------|
| MTTF_D | 1,099 years |
| DC_{avg} | 0 % |

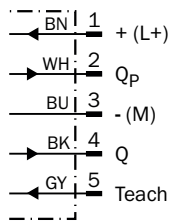
Classifications

| | |
|-------------------|----------|
| ECI@ss 5.0 | 27270902 |
|-------------------|----------|

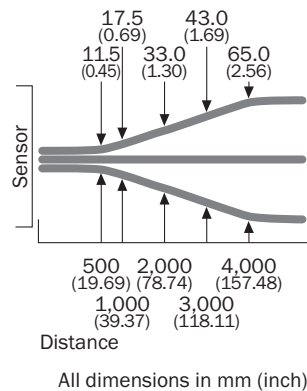
| | |
|-----------------------|----------|
| ECl@ss 5.1.4 | 27270902 |
| ECl@ss 6.0 | 27270902 |
| ECl@ss 6.2 | 27270902 |
| ECl@ss 7.0 | 27270902 |
| ECl@ss 8.0 | 27270902 |
| ECl@ss 8.1 | 27270902 |
| ECl@ss 9.0 | 27270902 |
| ECl@ss 10.0 | 27270902 |
| ECl@ss 11.0 | 27270902 |
| ETIM 5.0 | EC002717 |
| ETIM 6.0 | EC002717 |
| ETIM 7.0 | EC002717 |
| ETIM 8.0 | EC002717 |
| UNSPSC 16.0901 | 39121528 |

Connection diagram

Cd-147

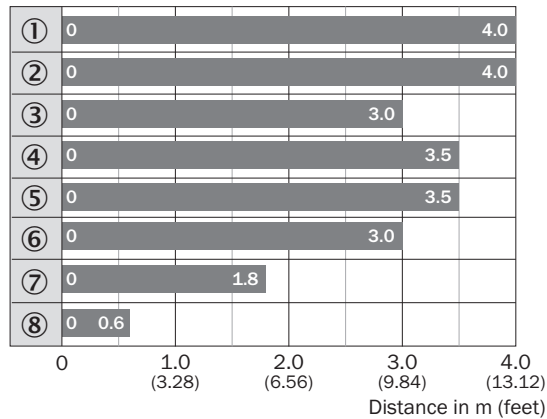


Light spot size



Sensing range diagram

WL12G-3



■ Sensing range max.

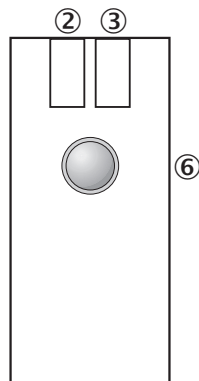
- ① Reflector PL80A
- ② Reflector C110A
- ③ Reflector P250F
- ④ Reflector PL50A
- ⑤ Reflector PL40A
- ⑥ Reflector PL30A
- ⑦ Reflector PL20A
- ⑧ Reflective tape REF-IRF-56

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-Flasche / Folie / glas | 1 ... 5 s | 30 ... 100 ms | grün / green |
| II | 18 % | Farbglasflaschen / Colored glass bottles | 5 ... 10 s | 100 ... 200 ms | blau / blue |

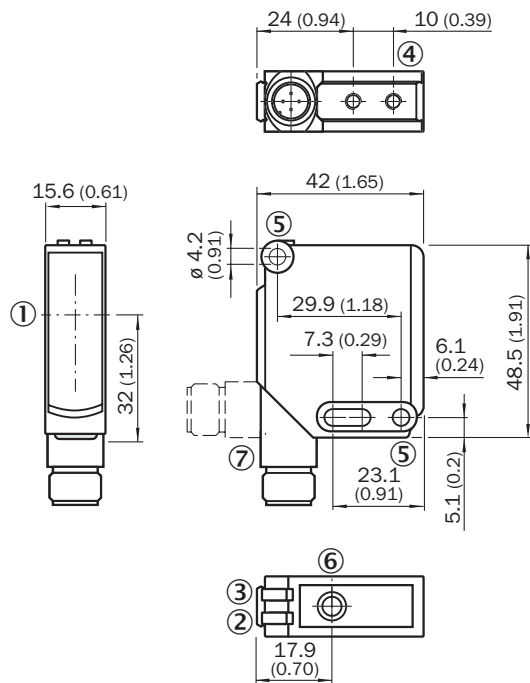
Adjustments

Teach-in



- ② LED indicator yellow: Status of received light beam
- ③ Green LED indicator: power on, teach-in mode I Blue LED indicator: teach-in mode II
- ⑥ Single teach-in button, Function 1: teach-in sensitivity on reflector, Function 2: change operation/teach-in mode



Dimensional drawing (Dimensions in mm (inch))



- ① Optical axis
- ② LED indicator yellow: Status of received light beam
- ③ LED indicator green: Supply voltage active
- ④ M4 threaded mounting hole, 4 mm deep
- ⑤ Mounting hole, $\varnothing 4.2$ mm
- ⑥ Sensitivity setting: single teach-in button
- ⑦ Connection

Recommended accessories

Other models and accessories → 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 |

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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.”

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