

WL12G-3N2572

W12G

SMALL PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

Type	Part no.
WL12G-3N2572	1053530

Included in delivery: BEF-KH-W12 (2)

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

Detailed technical data

Features

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	$\leq 5 V_{pp}$ ²⁾
Power consumption	40 mA ³⁾
Switching output	NPN
Switching mode	Light/dark switching
Signal voltage NPN HIGH/LOW	Approx. $V_S / < 2.5 V$
Output current I_{max}	100 mA
Response time	$\leq 333 \mu s$ 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
Items supplied	2 x clamps BEF-KH-W12, incl. screws
Special feature	Detecting transparent objects
Operating mode	Mode I, 10 % attenuation, Mode II, 18 % attenuation
Ambient operating temperature	-40 °C ... +60 °C
Ambient storage temperature	-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_V 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%

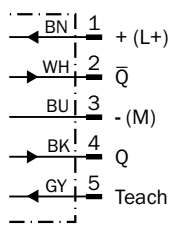
Classifications

ECl@ss 5.0	27270902
ECl@ss 5.1.4	27270902

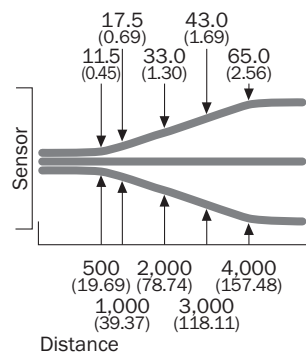
ECl@ss 6.0	27270902
ECl@ss 6.2	27270902
ECl@ss 7.0	27270902
ECl@ss 8.0	27270902
ECl@ss 8.1	27270902
ECl@ss 9.0	27270902
ECl@ss 10.0	27270902
ECl@ss 11.0	27270902
ETIM 5.0	EC002717
ETIM 6.0	EC002717
ETIM 7.0	EC002717
UNSPSC 16.0901	39121528

Connection diagram

Cd-146



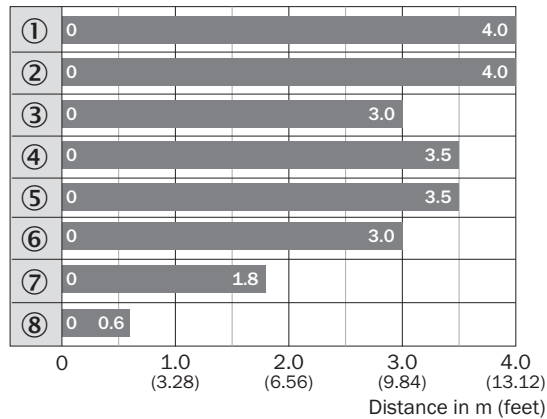
Light spot size



All dimensions in mm (inch)

Sensing range diagram

WL12G-3



■ Sensing range max.

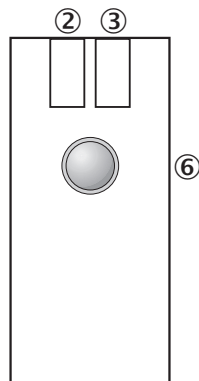
- ① Reflector PL80A
- ② Reflector C110A
- ③ Reflector P250F
- ④ Reflector PL50A
- ⑤ Reflector PL40A
- ⑥ Reflector PL30A
- ⑦ Reflector PL20A
- ⑧ Reflective tape REF-IRF-56

Functions

Teach-in-Modus für Objekte / Teach-in mode for objects	Lichtdämpfung / Light attenuation	Objekttyp / Object type	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

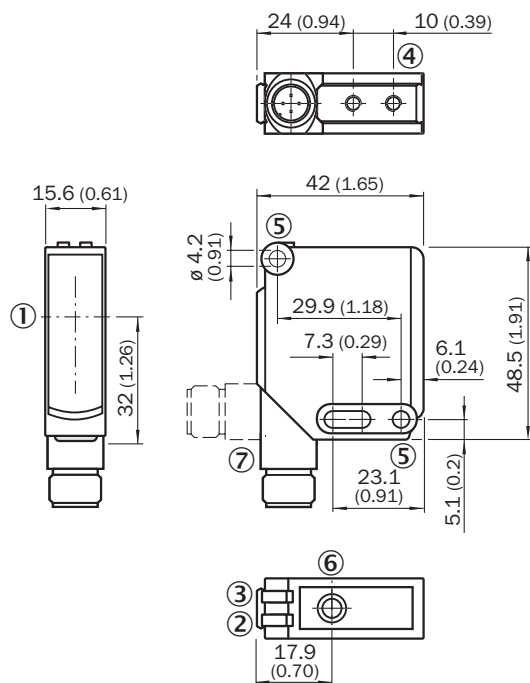
Adjustments possible

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, 47 mm x 47 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.”

WORLDWIDE PRESENCE:

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