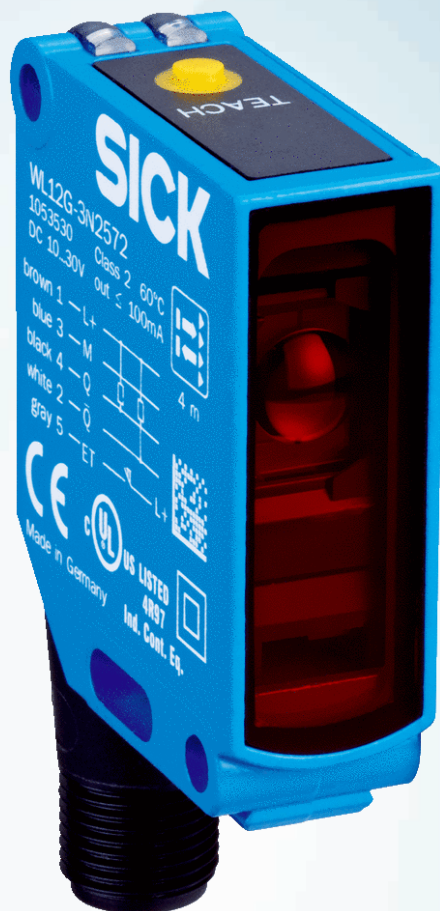




WL12G-3P2582S04

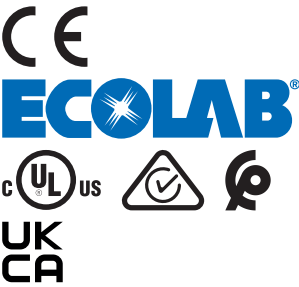
W12

PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

Type	part no.
WL12G-3P2582S04	1059644

Other models and accessories → www.sick.com/W12

Detailed technical data

Features

Functional principle		Photoelectric retro-reflective sensor
Sensing range max.		0 m ... 4 m ¹⁾
Polarisation filter		Yes
Emitted beam		
	Light source	LED ²⁾
	Type of light	Infrared light
	Light spot size (distance)	Ø 25 mm (1.5 m)
Key LED figures		
	Wave length	850 nm
Adjustment		Cable, Single teach-in button
Special features		Different functions selectable by teach-in. Function 1 = Sensitivity adjustment. Function 2 = Operation mode selection (Mode I = 40 %, Mode II = 18 %, Mode III = 10 %). Function 3 = change pin 4 and pin 2 assignments
Special applications		Detecting transparent objects
Items supplied		Further details can be found in the operating instructions 8015091

¹⁾ Reflector PL80A.
²⁾ Average service life: 100,000 h at T_U = +25 °C.

Electronics

Supply voltage U_B	10 V DC ... 30 V DC ¹⁾
Ripple	< 5 V _{pp} ²⁾
Current consumption	40 mA ³⁾
Protection class	III
Digital output	
Type	PNP ⁴⁾
Switching mode	Light switching ⁴⁾
Signal voltage PNP HIGH/LOW	Approx. V _S – 2.5 V / 0 V
Output current I _{max.}	≤ 100 mA
Response time	≤ 600 μs ⁵⁾
Switching frequency	1,500 Hz ⁶⁾
Circuit protection	A ⁷⁾ B C ⁸⁾ D ⁹⁾
Special feature	Detecting transparent objects
Operating mode	Mode I, 40 % attenuation, Mode II, 18 % attenuation, Mode III, 10 % attenuation

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

²⁾ May not fall below or exceed U_y tolerances.

³⁾ Without load.

⁴⁾ Device has two switching outputs: PNP toff = 50 ms / PNP = 600 μs, 1,500 Hz.

⁵⁾ Signal transit time with resistive load.

⁶⁾ With light/dark ratio 1:1.

⁷⁾ A = V_S connections reverse-polarity protected.

⁸⁾ C = interference suppression.

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

Mechanics

Housing	Rectangular
Dimensions (W x H x D)	15.5 mm x 48.5 mm x 42 mm
Connection	Plug, M12, 5-pin
Material	
Housing	Metal, zinc diecast
Front screen	Plastic, PMMA
Weight	120 g

Ambient data

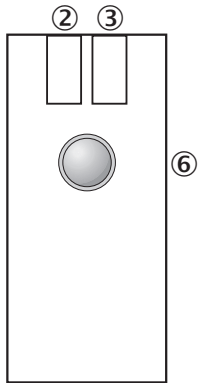
Enclosure rating	IP66 IP67
Ambient operating temperature	–40 °C ... +60 °C
Ambient temperature, storage	–40 °C ... +75 °C
UL File No.	NRKH.E181493 & NRKH7.E181493

Classifications

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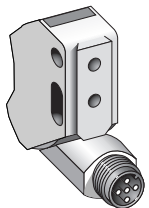
ECLASS 5.1.4	27270902
ECLASS 6.0	27270902
ECLASS 6.2	27270902
ECLASS 7.0	27270902
ECLASS 8.0	27270902
ECLASS 8.1	27270902
ECLASS 9.0	27270902
ECLASS 10.0	27270902
ECLASS 11.0	27270902
ECLASS 12.0	27270902
ETIM 5.0	EC002717
ETIM 6.0	EC002717
ETIM 7.0	EC002717
ETIM 8.0	EC002717
UNSPSC 16.0901	39121528

Adjustments Teach-in



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

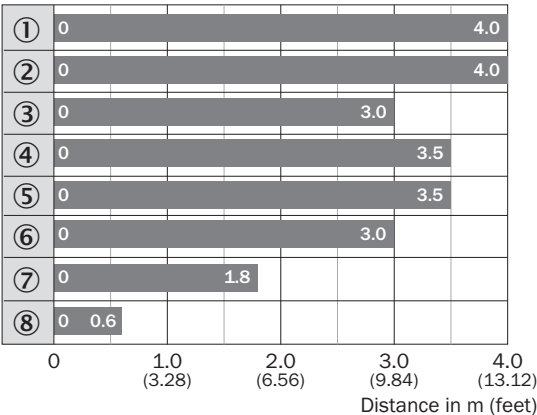
Connection type



Connection diagram Cd-353



Sensing range diagram WL12G-3



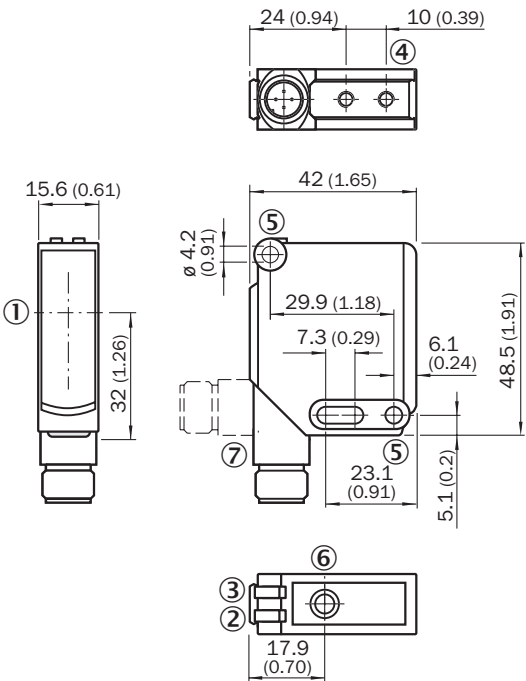
■ Sensing range max.

- 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 Lei- tung / Ext. cable teach	Anzeige-LED / LED indicator
I	40 %	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
III	10 %	dickwandige, farbige Glasflaschen/ thick-walled, colored glass bottles dickwandige Glasscheiben/ thick-walled glass panes opaque Targets, z.B. dickwandiges Milchglas/ opaque targets, e.g. thick-walled frosted glass	9 ... 12 s	150 ... 200 ms	hellblau (weiß)/ bright blue (white)

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/W12

	Brief description	Type	part no.
Mounting systems			
	Description: Universal mounting bracket for reflectors Dimensions (W x H x L): 85 mm x 90 mm x 35 mm Material: Steel Details: Steel, zinc coated Suitable for: C110A, P250, PL20, PL30A, PL40A, PL80A	BEF-WN-REFX	2064574
	Description: Mounting bracket, large Material: Stainless steel Details: Stainless steel Items supplied: Mounting hardware included Suitable for: W11-2, W12-3, W16	BEF-WG-W12	2013942
reflectors and optics			
	Strich		On request

	Brief description	Type	part no.
connectors and cables			
	Strich		On request
	Strich		On request
	Strich		On request

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.”

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