WL12G-3F3072S06

W12

PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.

WL12G-3F3072S06 | W12
PHOTOELECTRIC SENSORS

Illustration may differ

Ordering information

Type	part no.
WL12G-3F3072S06	1053543

Other models and accessories → www.sick.com/W12
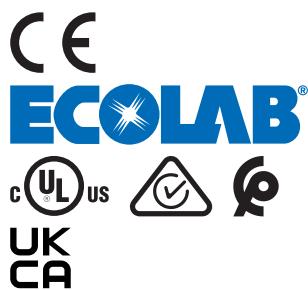
Detailed technical data

Features

Functional principle	Photoelectric retro-reflective sensor
Functional principle detail	Without reflector minimum distance (autocollimation/coaxial optics)
Sensing range max.	0 m … 4 m [1]
Polarisation filters	Yes
Emitted beam	
Light source	PinPoint LED [2]
Type of light	Visible red light
Light spot size (distance)	Ø 25 mm (1.5 m)
Key LED figures	
Wave length	660 nm
Adjustment	Single teach-in button [3]
Special features	Mode II inapplicable
Special applications	Detecting transparent objects
AutoAdapt	✓

[1] Reflector PL80A.
[2] Average service life: 100,000 h at T_U = +25 °C.
[3] Mode I, 10 % attenuation.

Safety-related parameters

$MTTF_D$	1,099 years
DC_{avg}	0 %

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
Switching mode	Dark switching
Output current I$_{max.}$	≤ 100 mA
Response time	≤ 333 µs [4]
Switching frequency	1,500 Hz [5]
Circuit protection	A [6] B [7] C [8] D [9]
Special feature	Detecting transparent objects
Operating mode	Mode I, 10 % attenuation

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

[2] May not fall below or exceed 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.

Mechanics

Housing	Rectangular
Dimensions (W x H x D)	15.5 mm x 48.5 mm x 42 mm
Connection	Cable with connector MOLEX MINI-FIT, 3-pin, 250 mm
Connection detail	
Length of cable (L)	250 mm
Material	
Housing	Metal, zinc diecast
Front screen	Plastic, PMMA
Cable	Plastic, PVC
Weight	120 g

Ambient data

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

Certificates

EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
Moroccan declaration of conformity	✓
China-RoHS	✓
ECOLAB certificate	✓
cULus certificate	✓
Photobiological safety (DIN EN 62471) certificate	✓

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

Adjustments Teach-in
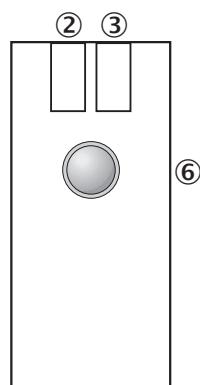
② LED indicator yellow: Status of received light beam
③ green LED indicator: power on, teach-in mode I

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

Light spot size

17.5
(0.69)   43.0
             (1.69)
11.5   33.0   65.0
(0.45) (1.30)   (2.56)

Sensor

500   2,000   4,000
(19.69) (78.74) (157.48)
     1,000   3,000
     (39.37) (118.11)
Distance
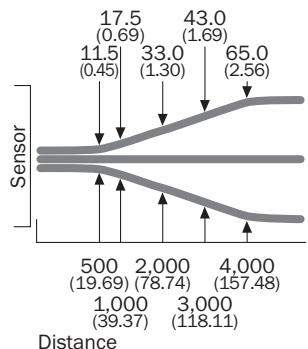
All dimensions in mm (inch)

Sensing range diagram WL12G-3

①	0	4.0
②	0	4.0
③	0	3.0
④	0	3.5
⑤	0	3.5
⑥	0	3.0
⑦	0	1.8
⑧	0	0.6

0   1.0   2.0   3.0   4.0
         (3.28)   (6.56)   (9.84)   (13.12)
              Distance in m (feet)
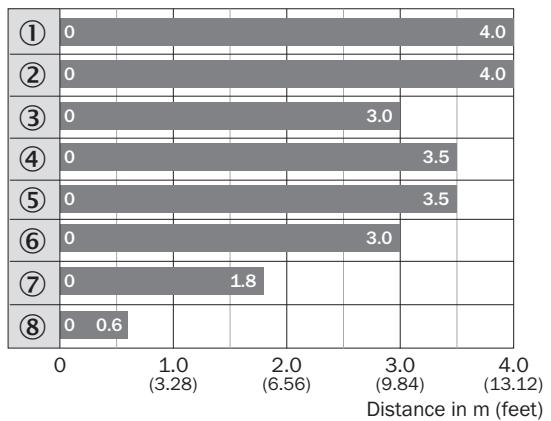
■ Sensing range max.
① Reflector PL80A
② Reflector C110A
③ Reflector P250F
④ Reflector PL50A
⑤ Reflector PL40A
⑥ Reflector PL30A
⑦ Reflector PL20A
⑧ Reflective tape REF-IRF-56

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

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
reflectors and optics			
	• **Description:** Fine triple reflector, screw connection, suitable for laser sensors • **Dimensions:** 52 mm 62 mm • **Ambient operating temperature:** –30 °C ... +65 °C	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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