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DATA SHEET

WL12G-3P3572S12

W12
Photoelectric sensors

SICK Sensor Intelligence



Illustration may differ

PHOTOELECTRIC SENSORS

WL12G-3P3572S12

ORDERING INFORMATION

Type	part no.
WL12G-3P3572S12	1053545

Further device versions and accessories at www.sick.com/W12

DETAILED TECHNICAL DATA

FEATURES

Functional principle	Photoelectric retro-reflective sensor
Sensing range max.	0 m ... 500 mm [1]
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
Special features	Without continuous threshold adaption
Special applications	Detecting transparent objects

[1] Reflector P250F.

[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
Switching mode	Light/dark switching
Signal voltage NPN HIGH/LOW	Approx. V_S / < 2.5 V
Output current $I_{max.}$	≤ 100 mA
Response time	≤ 333 µs [4]
Switching frequency	1,500 Hz [5]
Output function	Complementary
Circuit protection	A [6] B [7] C [8] D [9]
Special feature	Detecting transparent objects
Operating mode	Mode I, 10 % attenuation, Mode II, 18 % 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	Plug, M12, 5-pin
Material	
Housing	Metal, zinc diecast
Front screen	Plastic, PMMA
Weight	120 g

AMBIENT DATA

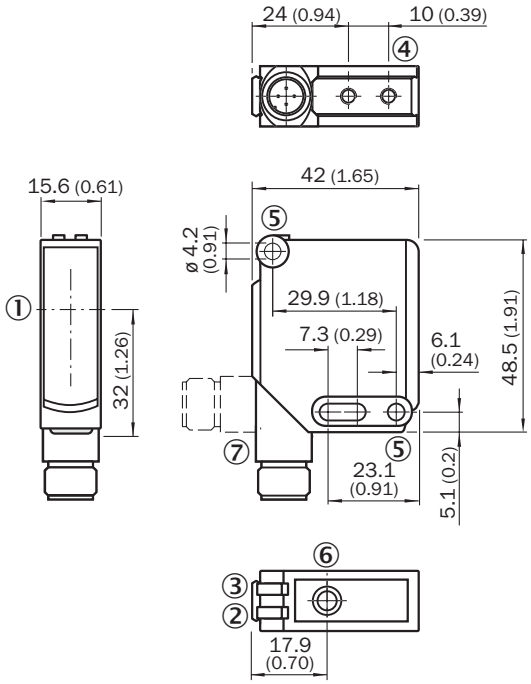
Enclosure rating	IP66 IP67
Ambient operating temperature	≤ +60 °C
Ambient temperature, storage	–40 °C ... +75 °C
UL File No.	NRKH.E181493 & NRKH7.E181493

CERTIFICATES

EU declaration of conformity	✓
UK declaration of conformity	✓

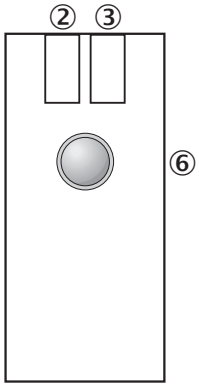
ACMA declaration of conformity	✓
Moroccan declaration of conformity	✓
China RoHS	✓
China Compulsory Product Certification (CCC) exempt	✓
ECOLAB certificate	✓
cULus certificate	✓
Photobiological safety (DIN EN 62471) certificate	✓

DIMENSIONAL DRAWING



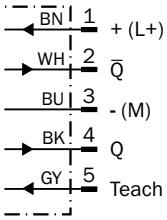
Dimensions in mm (inch)
① Optical axis
② LED indicator yellow: Status of received light beam
③ LED indicator green: Supply voltage active
④ M4 threaded mounting hole, 4 mm deep
⑤ Mounting hole, Ø 4.2 mm
⑥ Sensitivity setting: single teach-in button
⑦ Connection

ADJUSTMENTS TEACH-IN

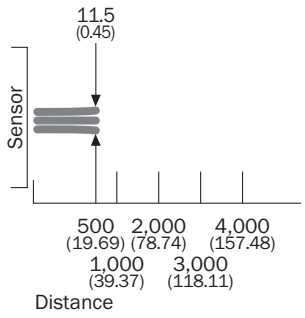


② LED indicator yellow: Status of received light beam
③ green LED indicator: power on, teach-in mode I
③ blue LED indicator: teach-in mode II
⑥ Single teach-in button,
⑥ function 1: teach-in sensitivity on reflector,
⑥ function 2: change operation/teach-in mode

CONNECTION DIAGRAM CD-146



LIGHT SPOT SIZE



All dimensions in mm (inch)

Further information as well as suitable accessories, example applications and downloads such as CAD dimensional models, operating instructions and software can be found at www.sick.com/1053545

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SICK AT A GLANCE

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SICK combines sensor intelligence with industry expertise and certified consulting services. We provide the ideal foundation for scalable as well as tailor-made automation solutions and create added value along the entire value chain. Our close partnerships with our customers are more than just a promise: Together, we optimize productivity, improve quality, protect health and safety, and help build a sustainable future. All with empathy and trust.

Since 1946, we have been developing innovative technologies with passion and a pioneering spirit. With a global network in around 40 countries, SICK has a global presence and is always close by. The company's headquarters are located in Waldkirch near Freiburg, Germany. Our customers benefit from our understanding of both local and global requirements, which enables us to deliver tailor-made solutions

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