



# WL12G-3P3572S12

## W12

PHOTOELECTRIC SENSORS

**SICK**  
Sensor Intelligence.

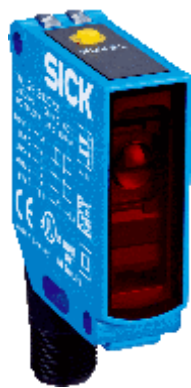
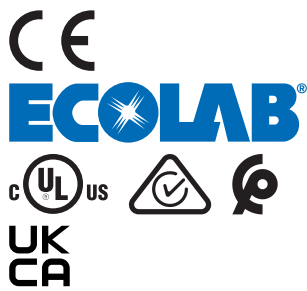


Illustration may differ



Ordering information

Type	part no.
WL12G-3P3572S12	1053545

Other models and accessories → [www.sick.com/W12](http://www.sick.com/W12)

Detailed technical data

Features

<b>Functional principle</b>		Photoelectric retro-reflective sensor
<b>Sensing range max.</b>		0 m ... 500 mm <sup>1)</sup>
<b>Emitted beam</b>	Light source	PinPoint LED <sup>2)</sup>
	Type of light	Visible red light
	Light spot size (distance)	Ø 25 mm (1.5 m)
<b>Key LED figures</b>		
	Wave length	660 nm
<b>Adjustment</b>		Single teach-in button
<b>Special features</b>		Without continuous threshold adaption
<b>Special applications</b>		Detecting transparent objects

<sup>1)</sup> Reflector P250F.  
<sup>2)</sup> Average service life: 100,000 h at T<sub>U</sub> = +25 °C.

## Electronics

<b>Supply voltage <math>U_B</math></b>	10 V DC ... 30 V DC <sup>1)</sup>
<b>Ripple</b>	< 5 V <sub>pp</sub> <sup>2)</sup>
<b>Current consumption</b>	40 mA <sup>3)</sup>
<b>Protection class</b>	III
<b>Digital output</b>	
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 <sup>4)</sup>
Switching frequency	1,500 Hz <sup>5)</sup>
<b>Output function</b>	Complementary
<b>Circuit protection</b>	A <sup>6)</sup> B <sup>7)</sup> C <sup>8)</sup> D <sup>9)</sup>
<b>Special feature</b>	Detecting transparent objects
<b>Operating mode</b>	Mode I, 10 % attenuation, Mode II, 18 % attenuation

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

<sup>2)</sup> May not fall below or exceed  $U_Y$  tolerances.

<sup>3)</sup> Without load.

<sup>4)</sup> Signal transit time with resistive load.

<sup>5)</sup> With light/dark ratio 1:1.

<sup>6)</sup> A =  $V_S$  connections reverse-polarity protected.

<sup>7)</sup> B = inputs and output reverse-polarity protected.

<sup>8)</sup> C = interference suppression.

<sup>9)</sup> D = outputs overcurrent and short-circuit protected.

## Mechanics

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

## Ambient data

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

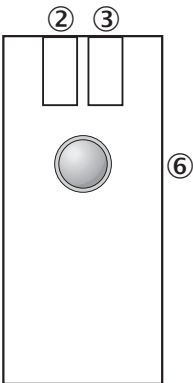
Certificates

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

Classifications

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

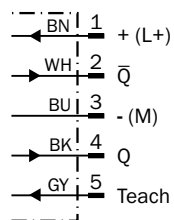
Adjustments Teach-in



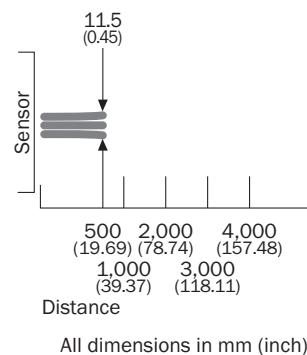
- ② LED indicator yellow: Status of received light beam  
③ green LED indicator: power on, teach-in mode I

- 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

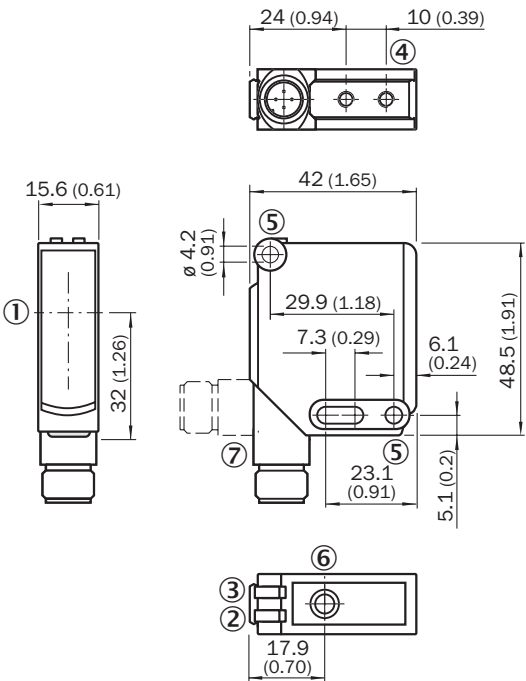
## Connection diagram Cd-146



## Light spot size



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

Recommended accessories

Other models and accessories → [www.sick.com/W12](http://www.sick.com/W12)

	Brief description	Type	part no.
Mounting systems			
	<ul style="list-style-type: none"><li><b>Description:</b> Universal mounting bracket for reflectors</li><li><b>Dimensions (W x H x L):</b> 85 mm x 90 mm x 35 mm</li><li><b>Material:</b> Steel</li><li><b>Details:</b> Steel, zinc coated</li><li><b>Suitable for:</b> C110A, P250, PL20, PL30A, PL40A, PL80A</li></ul>	BEF-WN-REFX	2064574
reflectors and optics			
	<ul style="list-style-type: none"><li><b>Description:</b> Fine triple reflector, screw connection, suitable for laser sensors</li><li><b>Dimensions:</b> 52 mm 62 mm</li><li><b>Ambient operating temperature:</b> -30 °C ... +65 °C</li></ul>	P250F	5308843

	Brief description	Type	part no.
connectors and cables			
	<ul style="list-style-type: none"> <li>• <b>Connection type head A:</b> Male connector, M12, 5-pin, straight, A-coded</li> <li>• <b>Description:</b> Unshielded</li> <li>• <b>Connection systems:</b> Screw-type terminals</li> <li>• <b>Permitted cross-section:</b> ≤ 0.75 mm<sup>2</sup></li> <li>• <b>Note:</b> For field bus technology</li> </ul>	STE-1205-G	6022083
	<ul style="list-style-type: none"> <li>• <b>Connection type head A:</b> Female connector, M12, 5-pin, straight, A-coded</li> <li>• <b>Connection type head B:</b> Flying leads</li> <li>• <b>Signal type:</b> Sensor/actuator cable</li> <li>• <b>Cable:</b> 5 m, 5-wire, PVC</li> <li>• <b>Description:</b> Sensor/actuator cable, unshielded</li> <li>• <b>Application:</b> Zones with chemicals, Uncontaminated zones</li> </ul>	YF2A15-050VB5XLEAX	2096240

## 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.”

## WORLDWIDE PRESENCE:

Contacts and other locations –[www.sick.com](http://www.sick.com)