



Photoelectric sensors  
W12G, Photoelectric retro-reflective sensor,  
autocollimation

WL12G-3W2572



**Model Name** > [WL12G-3W2572](#)  
**Part No.** > [1053538](#)



*Illustration may differ*

**At a glance**

- Reliable detection of transparent objects
- Optional Continuous Threshold Adaption (CTA)
- Sensing range is adjustable via potentiometer or teach-in pushbutton
- Rugged housing for industrial use
- Highly visible red light spot for versatile detection of objects
- Quality monitoring thanks to IO-Link
- Key lock function, remote teach
- Diagnostics messages (contamination and short-circuit)

**Your benefits**

Reliable detection of transparent objects, including PET bottles and transparent film  
PinPoint LED technology provides a bright, small and precise light spot that enables quick and easy sensor alignment

Precise switching characteristics and high-performance object detection provides increased productivity

High immunity to optical interference reduces false readings

Rugged metal housing (optional Teflon® coating available) requires less maintenance due to its resistance to high-pressure cleaning environments

Quick and easy threshold adjustment (depending on type)

Simple monitoring of detection quality

Key lock function and parameter download prevent incorrect setting



**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 <sup>1)</sup>
Type of light:	Visible red light
Light source:	PinPoint LED <sup>2)</sup>
Adjustment.:	Teach-in button <sup>3) 4)</sup>
Light spot size (distance):	Ø 25 mm (1.5 m)
Continuous threshold adaption:	✓

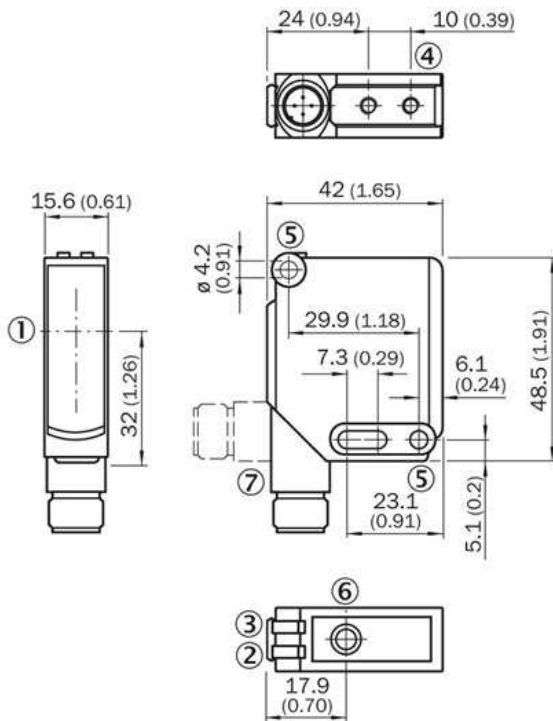
1) PL80A 2) Average service life of 100,000 h at  $T_A = +25\text{ °C}$  3) Mode I, 10 % attenuation 4) Mode II, 18 % attenuation

## Mechanics/electronics

Supply voltage:	10 V DC ... 30 V DC <sup>1)</sup>
Ripple:	$\leq 5\text{ Vpp}$ <sup>2)</sup>
Power consumption:	$\leq 40\text{ mA}$ <sup>3)</sup>
Output type:	NPN
Switching mode:	Light/dark switching
Output current I <sub>max.</sub> :	100 mA
Response time:	$\leq 333\text{ }\mu\text{s}$ <sup>4)</sup>
Switching frequency:	$\pm 1,500\text{ Hz}$ <sup>5)</sup>
Connection type:	Connector M12, 5-pin
Circuit protection::::	A, B, C, D <sup>6) 7) 8) 9)</sup>
Protection class:	II
Weight:	120 g
Polarisation filter:	✓
Housing material:	Metal, Zinc diecast
Optics material:	PMMA
Enclosure rating:	IP 66 IP 67
Special feature:	For transparent objects
Operating mode:	Mode I, 10 % attenuation, Mode II, 18 % attenuation
Plausibility output, stable detection:	Approx. VS
Plausibility output, unstable detection:	Approx. 1.5 V
Ambient operating temperature:	$\leq +60\text{ °C}$
Ambient storage temperature:	$-40\text{ °C} \dots +75\text{ °C}$
UL File No.:	NRKH.E181493 & NRKH7.E181493
Signal voltage NPN HIGH/LOW:	Approx. VS / < 2.5 V

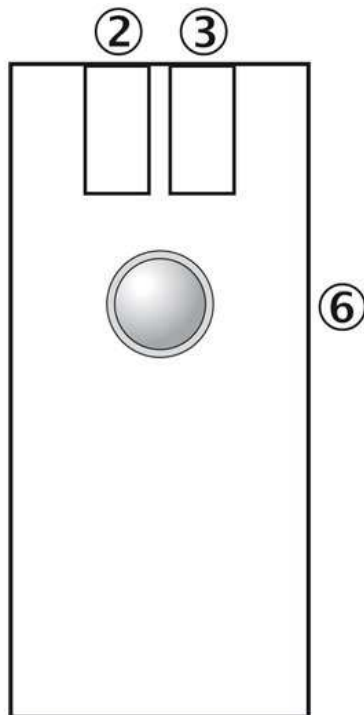
1) Limit values, operation in short-circuit protected network max. 8 A 2) May not exceed or fall short of  $V_S$  tolerances 3) Without load 4) Signal transit time with resistive load 5) With light/dark ratio 1:1 6) A =  $V_S$  connections reverse-polarity protected 7) B = inputs and output reverse-polarity protected 8) C = interference suppression 9) D = outputs overcurrent and short-circuit protected

## Dimensional drawing



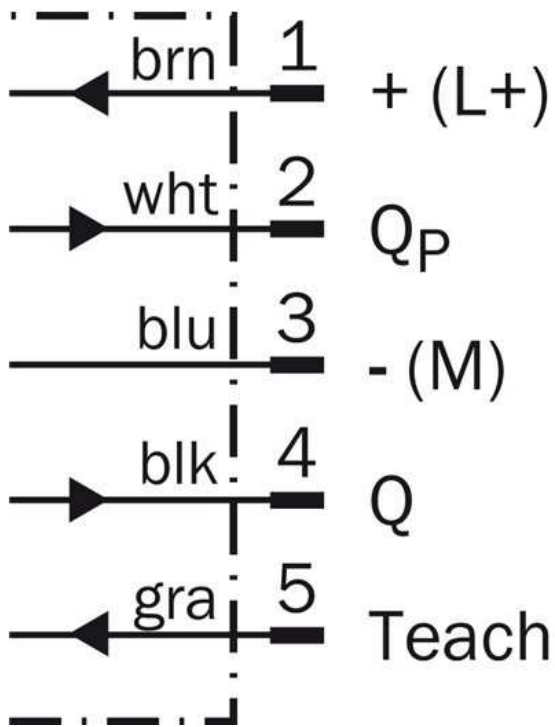
- [1] Optical axis
- [2] LED indicator yellow: Light received
- [3] Green LED indicator: supply voltage active
- [4] M4 threaded mounting hole, 4 mm deep
- [5] Mounting hole,  $\varnothing$  4.2 mm
- [6] Sensitivity setting: single teach-in button
- [7] Connection

## Adjustments possible

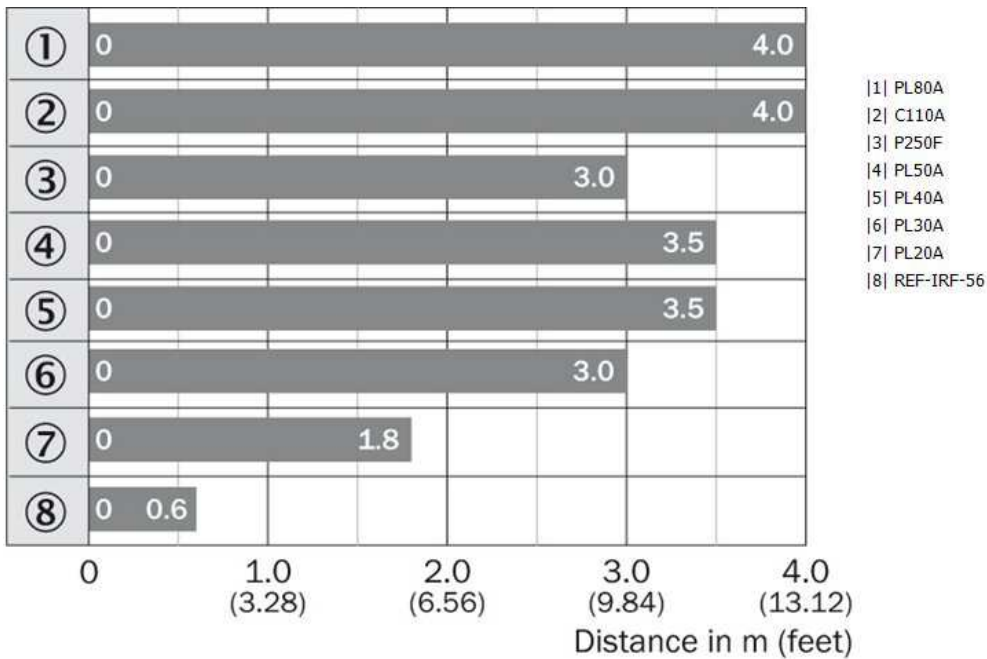


- [2] LED indicator yellow: Light received
- [3] LED indicator, green: power on, teach-in mode I, LED indicator, blue: teach-in mode II
- [6] Single teach-in button, function
  - 1: teach-in sensitivity on reflector
  - , function 2: change operation/teach-in mode

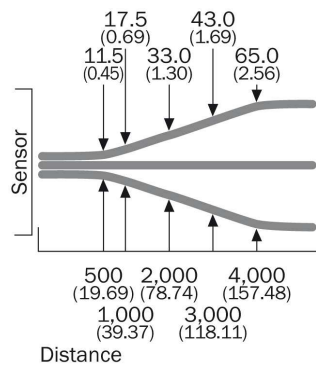
Connection diagram



Sensing range diagram



## Light spot size



All dimensions in mm (inch)

**Australia**

Phone +61 3 9457 0600  
1800 33 48 02 – tollfree  
E-Mail sales@sick.com.au

**Belgium/Luxembourg**

Phone +32 (0)2 466 55 66  
E-Mail info@sick.be

**Brasil**

Phone +55 11 3215-4900  
E-Mail marketing@sick.com.br

**Canada**

Phone +1 905 771 14 44  
E-Mail information@sick.com

**Česká republika**

Phone +420 2 57 91 18 50  
E-Mail sick@sick.cz

**China**

Phone +86 4000 121 000  
E-Mail info.china@sick.net.cn  
Phone +852-2153 6300  
E-Mail ghk@sick.com.hk

**Danmark**

Phone +45 45 82 64 00  
E-Mail sick@sick.dk

**Deutschland**

Phone +49 211 5301-301  
E-Mail info@sick.de

**España**

Phone +34 93 480 31 00  
E-Mail info@sick.es

**France**

Phone +33 1 64 62 35 00  
E-Mail info@sick.fr

**Great Britain**

Phone +44 (0)1727 831121  
E-Mail info@sick.co.uk

**India**

Phone +91-22-4033 8333  
E-Mail info@sick-india.com

**Israel**

Phone +972-4-6881000  
E-Mail info@sick-sensors.com

**Italia**

Phone +39 02 27 43 41  
E-Mail info@sick.it

**Japan**

Phone +81 (0)3 5309 2112  
E-Mail support@sick.jp

**Magyarország**

Phone +36 1 371 2680  
E-Mail office@sick.hu

**Nederland**

Phone +31 (0)30 229 25 44  
E-Mail info@sick.nl

**Norge**

Phone +47 67 81 50 00  
E-Mail sick@sick.no

**Österreich**

Phone +43 (0)22 36 62 28 8-0  
E-Mail office@sick.at

**Polska**

Phone +48 22 837 40 50  
E-Mail info@sick.pl

**România**

Phone +40 356 171 120  
E-Mail office@sick.ro

**Russia**

Phone +7-495-775-05-30  
E-Mail info@sick.ru

**Schweiz**

Phone +41 41 619 29 39  
E-Mail contact@sick.ch

**Singapore**

Phone +65 6744 3732  
E-Mail sales.gsg@sick.com

**Slovenija**

Phone +386 (0)1-47 69 990  
E-Mail office@sick.si

**South Africa**

Phone +27 11 472 3733  
E-Mail info@sickautomation.co.za

**South Korea**

Phone +82 2 786 6321/4  
E-Mail info@sickkorea.net

**Suomi**

Phone +358-9-25 15 800  
E-Mail sick@sick.fi

**Sverige**

Phone +46 10 110 10 00  
E-Mail info@sick.se

**Taiwan**

Phone +886 2 2375-6288  
E-Mail sales@sick.com.tw

**Türkiye**

Phone +90 (216) 528 50 00  
E-Mail info@sick.com.tr

**United Arab Emirates**

Phone +971 (0) 4 88 65 878  
E-Mail info@sick.ae

**USA/México**

Phone +1(952) 941-6780  
1 (800) 325-7425 – tollfree  
E-Mail info@sickusa.com

More representatives and agencies  
at [www.sick.com](http://www.sick.com)