



Photoelectric sensors  
W12G, Photoelectric retro-reflective sensor,  
autocollimation

WL12G-3P2572



**Model Name** > [WL12G-3P2572](#)  
**Part No.** > [1053535](#)



*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>                             |
| Wave length:                     | 660 nm   |
| Adjustment:                      | Single teach-in button                                 |
| Light spot size (distance):      | Ø 25 mm (1.5 m)  |
| Continuous threshold adaption:   | ✓  |

1) PL80A 2) Average service life of 100,000 h at  $T_A = +25\text{ °C}$

## Mechanics/electronics

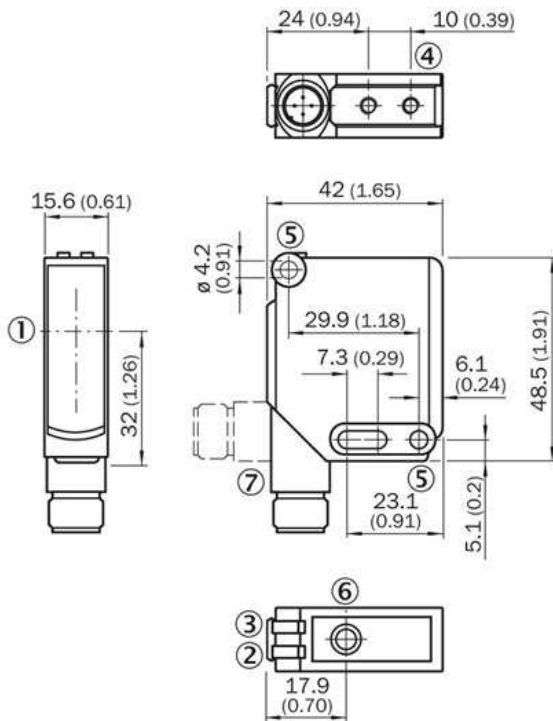
---

|                                    |   |
|------------------------------------|---|
| 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:                       | PNP   |
| 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:               | ✓   |
| Special device:                    | -   |
| Optics material:                   | PMMA  |
| Enclosure rating:                  | IP 66<br>IP 67                                      |
| Special feature:                   | Detection of transparent objects                    |
| Operating mode:                    | Mode I, 10 % attenuation, Mode II, 18 % attenuation |
| 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 PNP HIGH/LOW:       | Approx. VS - 2.5 V / 0 V                            |
| Housing material:                  | Metal, Zinc diecast                                 |

<sup>1)</sup> Limit values, operation in short-circuit protected network max. 8 A <sup>2)</sup> May not exceed or fall short of  $V_S$  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>

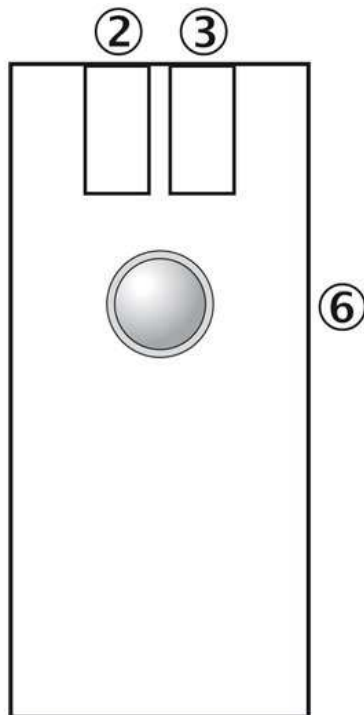
D = outputs overcurrent and short-circuit protected

## Dimensional drawing



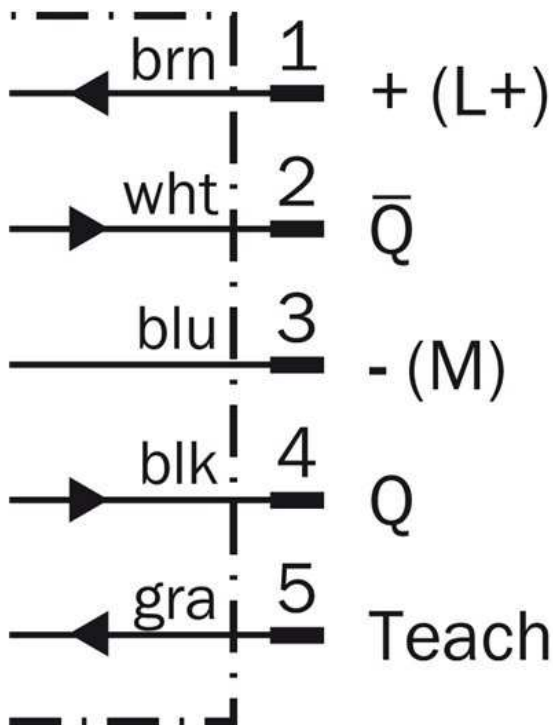
- |1| Optical axis
- |2| Status indicator LED,  
yellow: Status of received light beam
- |3| Status indicator LED green: supply voltage on
- |4| M4 threaded mounting hole, 4 mm deep
- |5| Mounting hole,  $\varnothing 4.2$  mm
- |6| Sensitivity setting: single teach-in button
- |7| Connection

## Adjustments possible

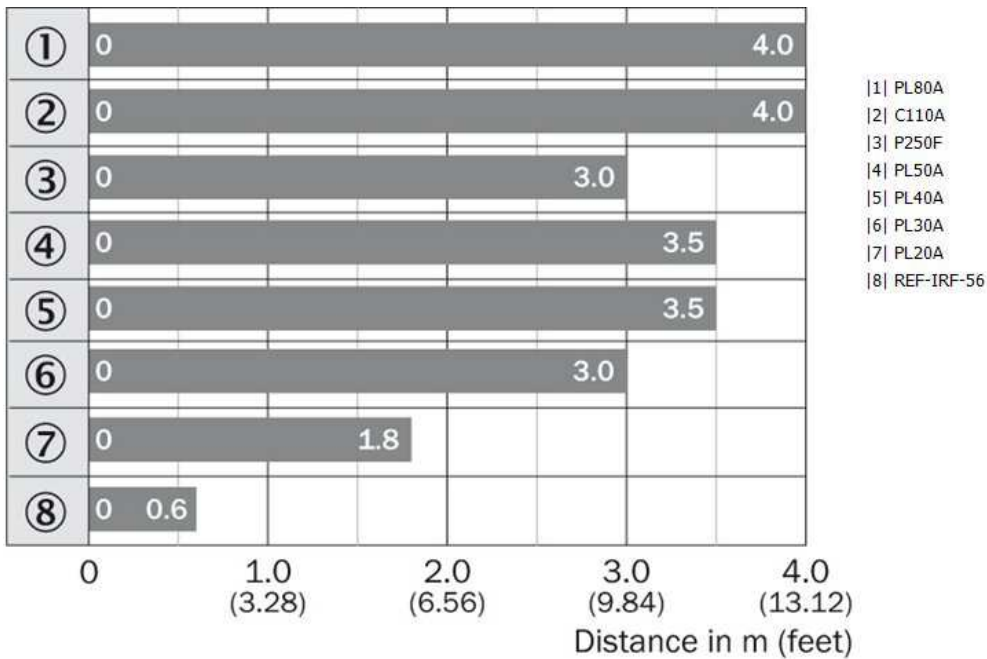


- |2| Status indicator LED,  
yellow: Status of received light beam
- |3| LED indicator, green: power on,  
teach-in mode I, LED indicator, blue: teach-in mode II
- |6| Single teach-in button, function  
1: teach-in sensitivity on reflector  
, function 2: change operation/teach-in mode

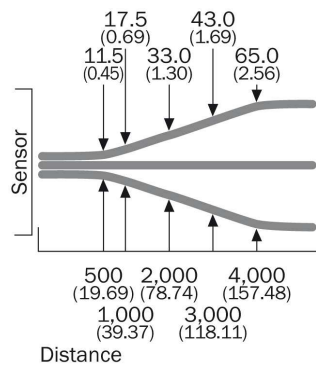
Connection diagram



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)