



Photoelectric sensors  
W12G, Photoelectric retro-reflective sensor,  
autocollimation

WL12G-3K2572



**Model Name** > [WL12G-3K2572](#)  
**Part No.** > [1053542](#)



*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:	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

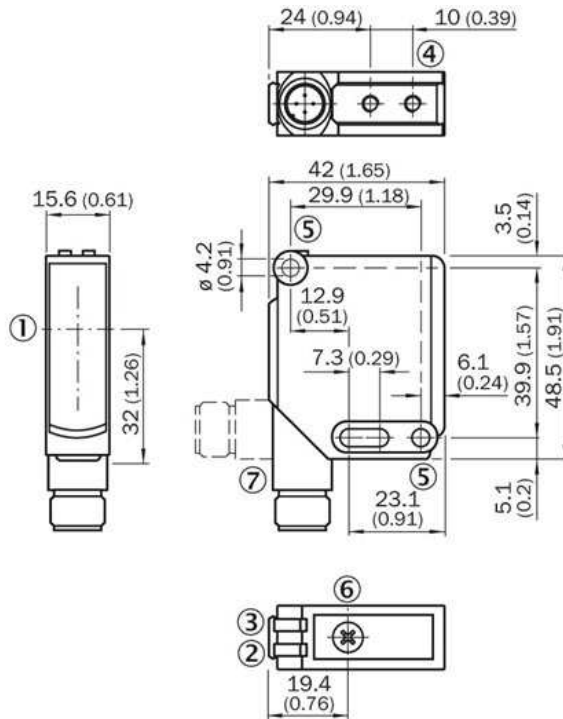
## Mechanics/electronics

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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:	✓
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
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

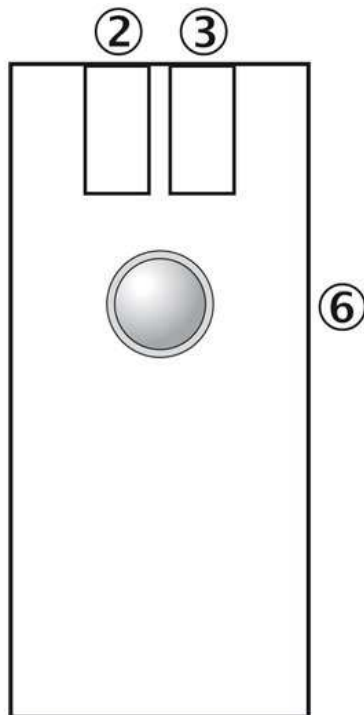
<sup>1)</sup> Limit values, operation in short-circuit protected network max. 8 A <sup>2)</sup> May not exceed or fall short of  $V_S$  tolerances <sup>3)</sup> Without load <sup>4)</sup> Signal transit time with resistive load <sup>5)</sup> With light/dark ratio 1:1 <sup>6)</sup> A =  $V_S$  connections 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



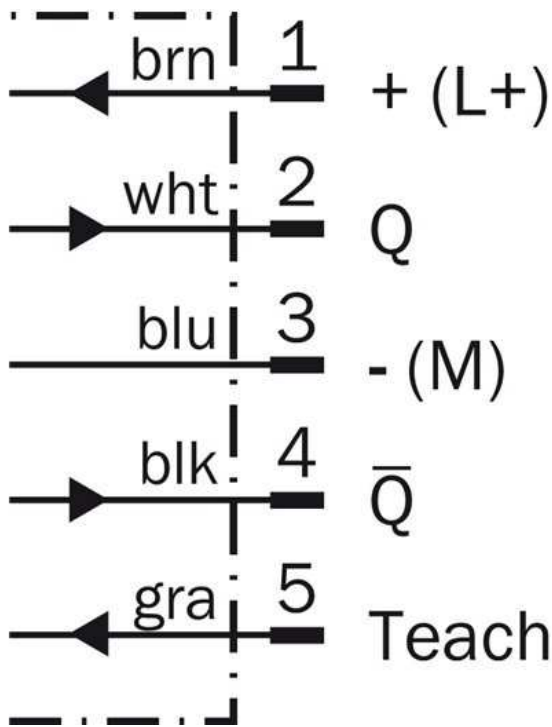
- |1| Optical axis
- |2| LED indicator yellow: Light received
- |3| Green LED indicator: supply voltage active
- |4| M4 threaded mounting hole, 4 mm deep
- |5| Mounting hole,  $\varnothing$  4.2 mm
- |6| Sensitivity adjustment: poti
- |7| Connection

## Adjustments possible

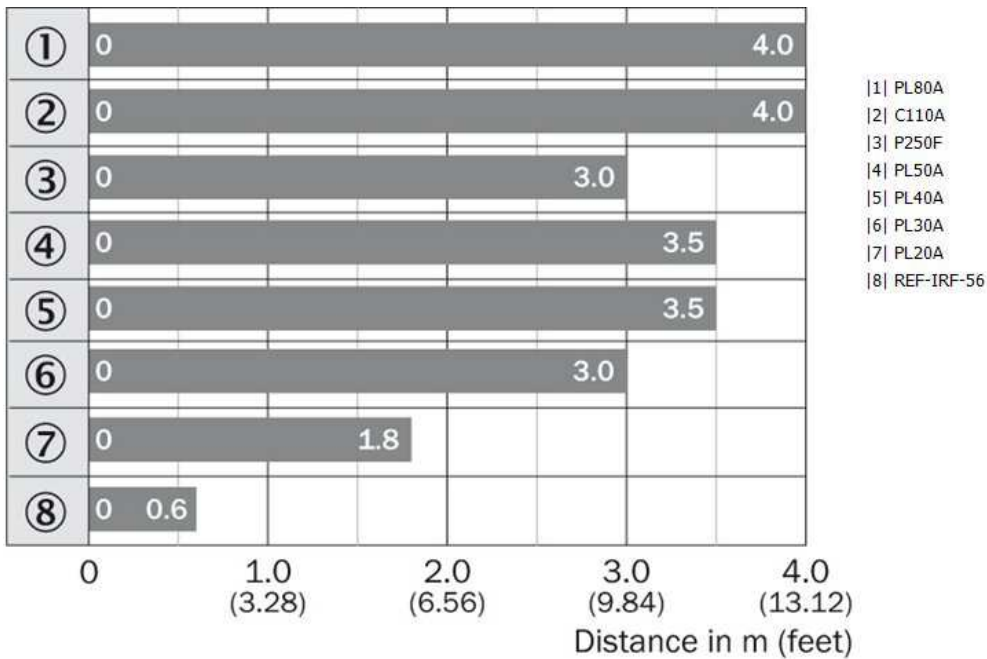


- |2| LED indicator yellow: Light received
- |3| LED indicator, green: power on, teach-in mode I, LED indicator, blue: teach-in mode II
- |6| Single teach button, function 1: teach-in sensitivity on reflector, function 2: change operation/teach-in mode

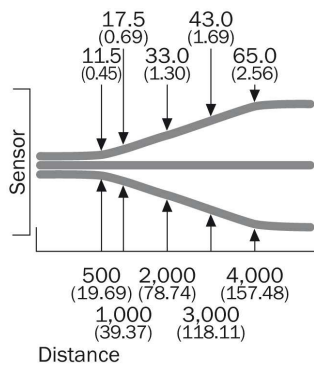
Connection diagram



Sensing range diagram



## Light spot size



All dimensions in mm (inch)

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