



Photoelectric sensors  
W12G, Photoelectric retro-reflective sensor

WL12G-3P3572S12



**Model Name** > **WL12G-3P3572S12**  
**Part No.** > **1053545**



Illustration may differ



### Features

Sensor/detection principle:	Photoelectric retro-reflective sensor
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 ... 500 mm <sup>1)</sup>
Type of light:	Visible red light
Light source:	PinPoint LED <sup>2)</sup>
Wave length:	660 nm
Special features:	Without continuous threshold adaption, Without polarisation filter
Adjustment::	Single teach-in button
Light spot size (distance):	Ø 25 mm (1.5 m)
Continuous threshold adaption:	-

<sup>1)</sup> P250F <sup>2)</sup> Average service life of 100,000 h at T<sub>A</sub> = +25 °C <sup>3)</sup> Mode I, 10 % attenuation <sup>4)</sup> Mode II, 18 % attenuation

### Mechanics/electronics

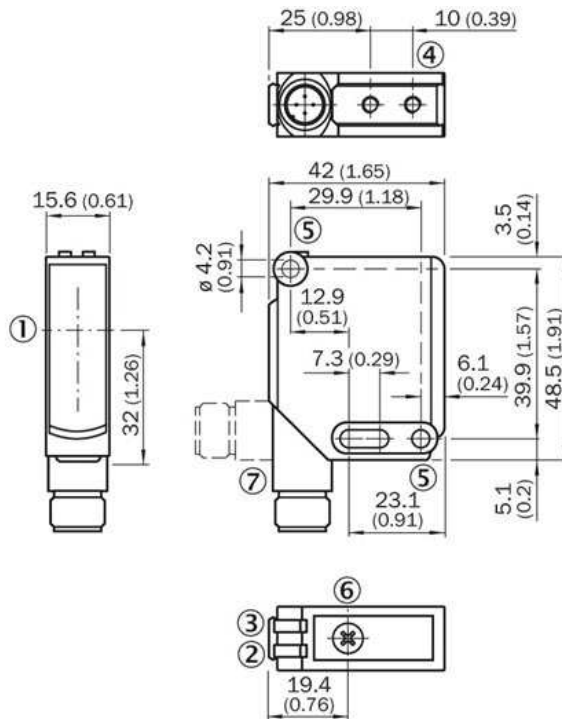
Supply voltage:	10 V DC ... 30 V DC <sup>1)</sup>
Ripple:	≤ 5 Vpp <sup>2)</sup>
Power consumption:	≤ 40 mA <sup>3)</sup>
Output type:	PNP
Output function:	Complementary
Switching mode:	Light/dark switching
Output current I <sub>max.</sub> :	100 mA
Response time:	≤ 333 µs <sup>4)</sup>
Switching frequency:	± 1,500 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 IP 67
Special feature:	Detection of transparent objects
Operating mode:	Mode I, 10 % attenuation, Mode II, 18 % attenuation
Ambient operating temperature:	≤ +60 °C
Ambient storage temperature:	-40 °C ... +75 °C
UL File No.:	NRKH.E181493 & NRKH7.E181493
Signal voltage NPN HIGH/LOW:	Approx. VS / < 2.5 V
Housing material:	Metal, Zinc diecast

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)

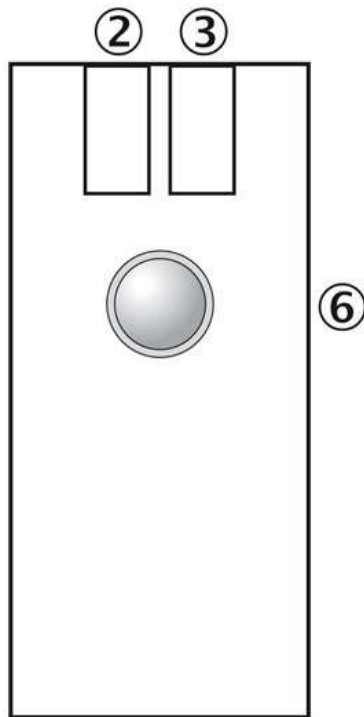
D = outputs overcurrent and short-circuit protected

## Dimensional drawing



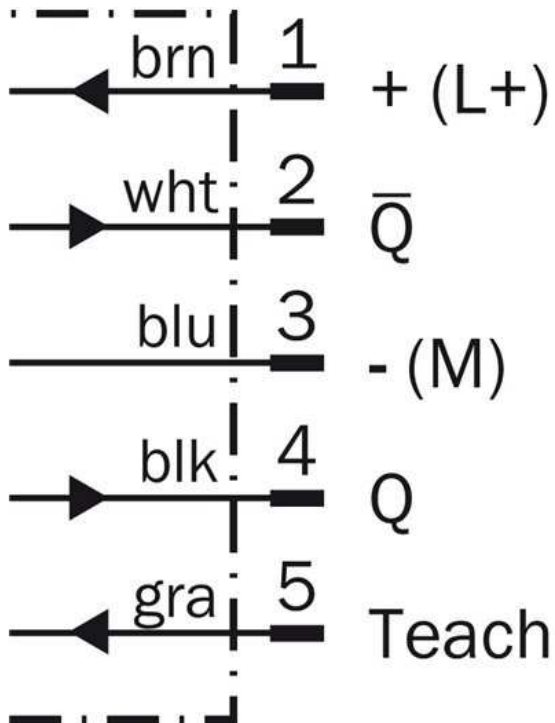
- [1] Optical axis
- [2] LED indicator yellow: Light received
- [3] Green LED indicator: supply voltage active
- [4] M4 threaded mounting hole, 4 mm deep
- [5] Mounting hole, Ø 4.2 mm
- [6] Sensitivity adjustment: poti
- [7] Connection

## Adjustments possible

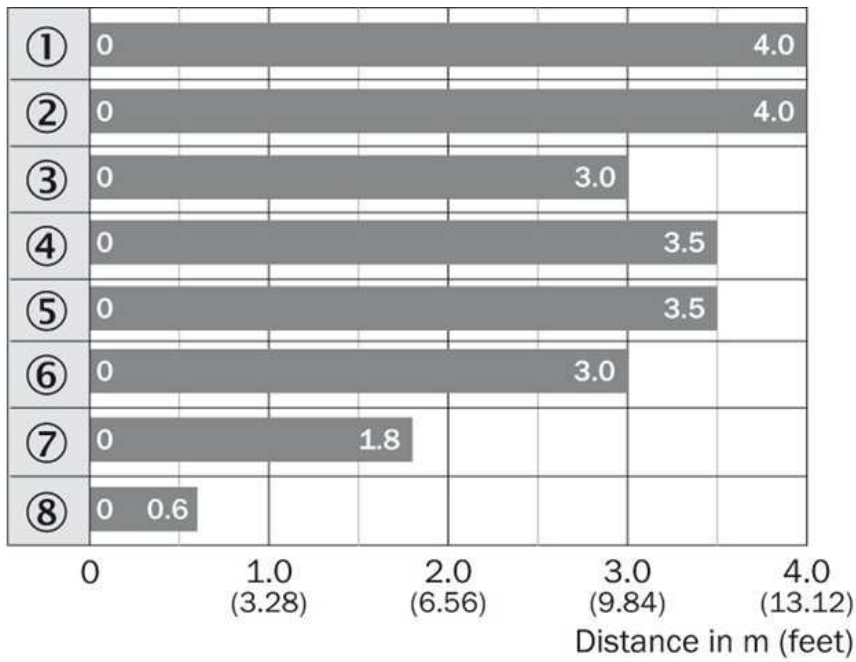


- |2| LED indicator yellow: Light received
- |3| LED indicator, green: power on, teach-in mode I, LED indicator, blue: teach-in mode II
- |6| Single teach-in button, function
  - 1: teach-in sensitivity on reflector
  - , function 2: change operation/teach-in mode

## Connection diagram



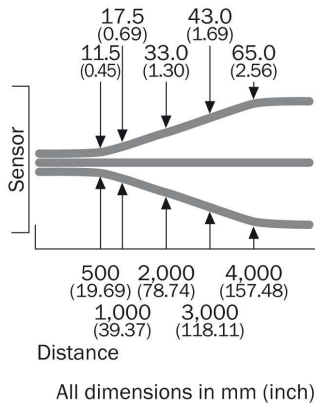
## Sensing range diagram



- |1| PL80A
- |2| C110A
- |3| P250F
- |4| PL50A
- |5| PL40A
- |6| PL30A
- |7| PL20A
- |8| REF-IRF-56

■ Sensing range max.

## Light spot size



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