



Photoelectric sensors
W12G, Photoelectric retro-reflective sensor,
autocollimation

WL12G-3P2582S10



Model Name > [WL12G-3P2582S10](#)
Part No. > [1053544](#)



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 ¹⁾
Type of light:	Infrared light
Light source:	LED ²⁾
Wave length:	660 nm
Adjustment:	Teach-in button ^{3) 4)}
Light spot size (distance):	Ø 100 mm (3 m)
Continuous threshold adaption:	✓

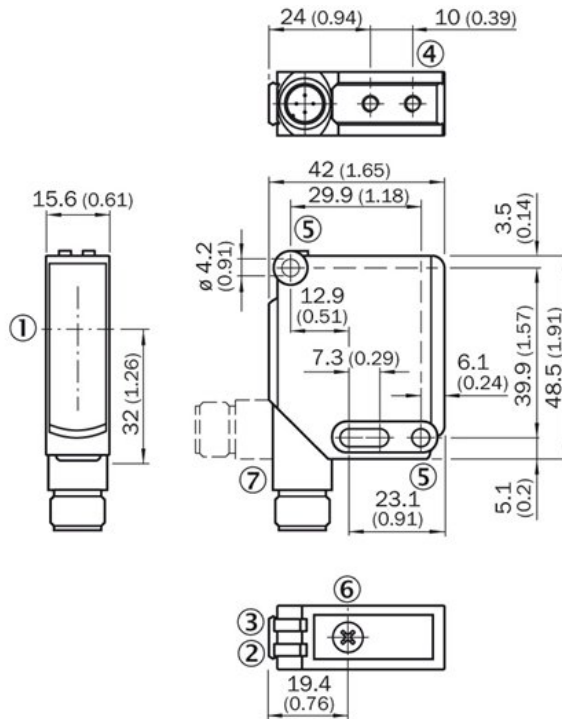
1) PL80A 2) Average service life of 100,000 h at $T_A = +25\text{ °C}$ 3) Mode I, 10 % attenuation 4) Mode II, 18 % attenuation

Mechanics/electronics

Supply voltage:	10 V DC ... 30 V DC ¹⁾
Ripple:	$\leq 5\text{ Vpp}$ ²⁾
Current consumption:	$\leq 40\text{ mA}$ ³⁾
Output type:	PNP, with time delay t_{off} 50 ms
Switching mode:	Light switching
Output current $I_{max.}$:	100 mA
Response time:	$\leq 333\text{ }\mu\text{s}$ ⁴⁾
Switching frequency:	1,500 Hz ⁵⁾
Connection type:	Male connector M12, 5-pin
Circuit protection::::	A, B, C, D ^{6) 7) 8) 9)}
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

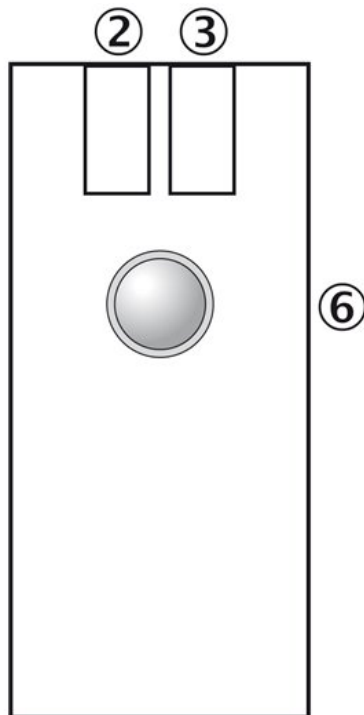
¹⁾ Limit values, operation in short-circuit protected network max. 8 A ²⁾ May not exceed or fall short of V_S tolerances ³⁾ Without load ⁴⁾ Signal transit time with resistive load ⁵⁾ With light/dark ratio 1:1 ⁶⁾ A = V_S connections reverse-polarity protected ⁷⁾ B = inputs and output reverse-polarity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

Dimensional drawing



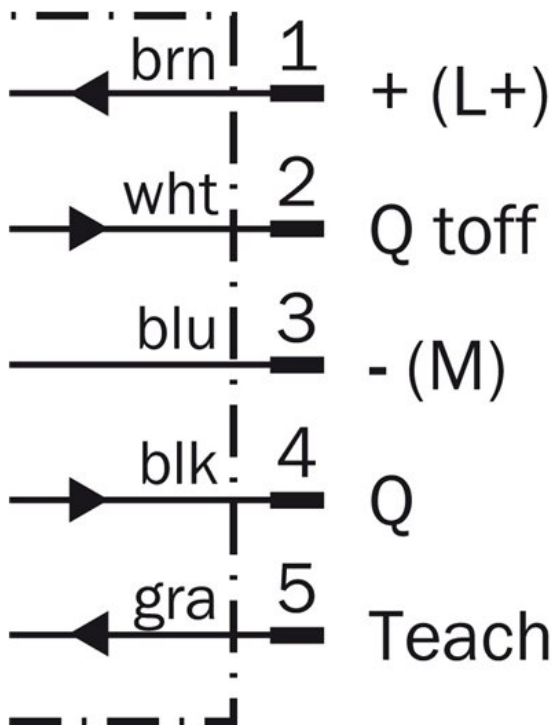
- |1| Optical axis
- |2| LED indicator yellow: Light received
- |3| Green LED indicator: supply voltage active
- |4| M4 threaded mounting hole, 4 mm deep
- |5| Mounting hole, $\varnothing 4.2$ mm
- |6| Sensitivity adjustment: poti
- |7| Connection

Adjustments possible

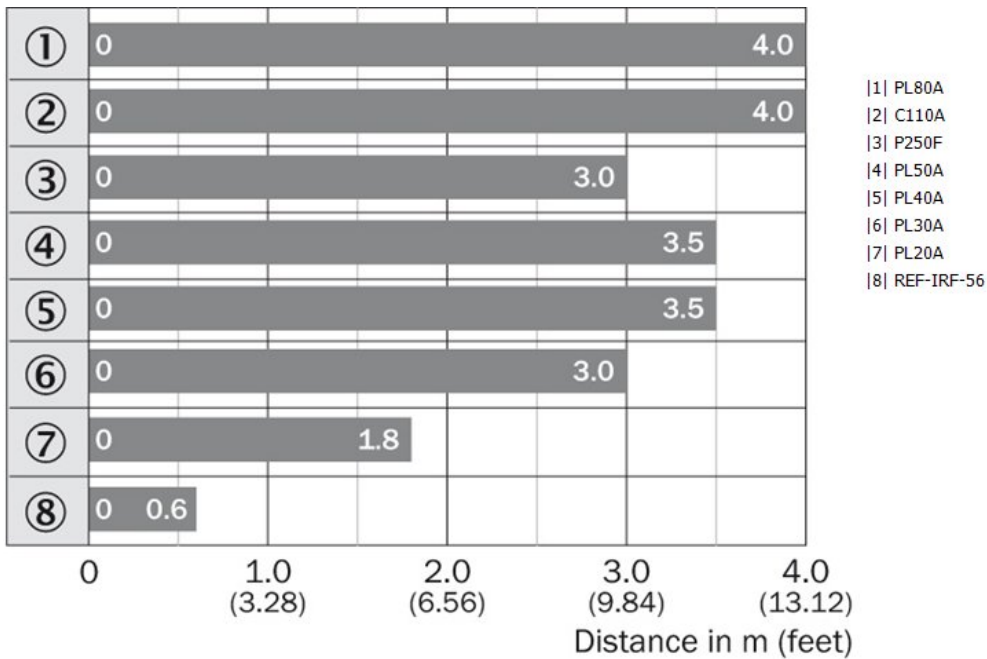


- |2| LED indicator yellow: Light received
- |3| LED indicator, green: power on, teach-in mode I, LED indicator, blue: teach-in mode II
- |6| Single teach-in button, function
 - 1: teach-in sensitivity on reflector
 - , function 2: change operation/teach-in mode

Connection diagram



Sensing range diagram



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