



Photoelectric sensors
W12G, Photoelectric retro-reflective sensor

WL12G-3P2582S04



Model Name > **WL12G-3P2582S04**
Part No. > **1059644**



Illustration may differ

At a glance

- Reliable detection of transparent objects
- IR sender, wave length 850 nm
- Reliable detection of clear materials, e.g. glass ,PET-Bottles
- Static threshold
- Tree threshold operation levels (Mode 1= 40% + Mode 2 =18% +Mode 3 = 10 %), selectable by teach-in via button or external teach-in (ET)

Your benefits

- Reliable detection of transparent objects, including PET bottles and transparent film
- Precise switching characteristics and high-performance object detection provides increased productivity
- Rugged metal housing (optional Teflon® coating available) requires less maintenance due to its resistance to high-pressure cleaning environments
- Highly visible status LEDs simplify commissioning, reduce installation time and provide quick diagnostics information



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 ... 4 m ¹⁾
Type of light:	Infrared light
Light source:	LED ²⁾
Wave length:	850 nm
Adjustment:::	Cable, Teach-in button ^{3) 4) 5)}
Light spot size (distance):	Ø 25 mm (1.5 m)

¹⁾ PL80A ²⁾ Average service life of 100,000 h at T_A = +25 °C ³⁾ Mode I, 40 % attenuation ⁴⁾ Mode II, 18 % attenuation ⁵⁾ Mode I, 10 % attenuation

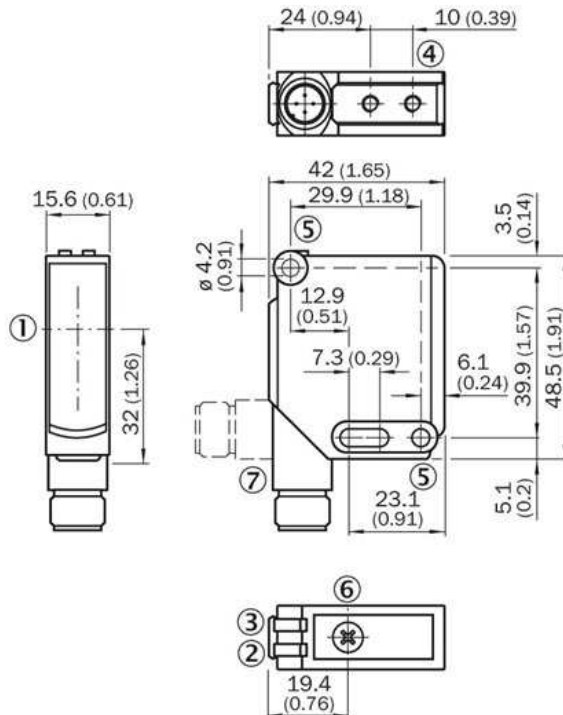
Mechanics/electronics

Supply voltage:	10 V DC ... 30 V DC ¹⁾
Ripple:	≤ 5 Vpp ²⁾
Power consumption:	≤ 40 mA ³⁾
Output type:	PNP ⁴⁾
Switching mode:	Light switching ⁵⁾
Output current I _{max} .:	100 mA

Response time:	$\leq 333 \mu\text{s}$ ⁶⁾
Switching frequency:	1,500 Hz ⁷⁾
Connection type:	Connector M12, 5-pin
Circuit protection:::	A, B, C, D ^{8) 9) 10)}
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
Ambient operating temperature:	$\leq +60 \text{ }^\circ\text{C}$
Ambient storage temperature:	$-40 \text{ }^\circ\text{C} \dots +75 \text{ }^\circ\text{C}$
UL File No.:	NRKH.E181493 & NRKH7.E181493
Signal voltage PNP HIGH/LOW:	Approx. VS - 2.5 V/0 V

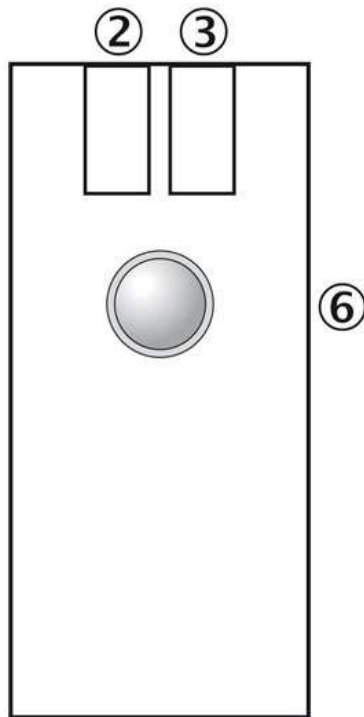
1) Limit values, operation in short-circuit protected network max. 8 A ²⁾ May not exceed or fall short of V_S tolerances ³⁾ Without load ^{4) 5)} PNP toff 50 ms ⁶⁾ Signal transit time with resistive load ⁷⁾ With light/dark ratio 1:1 ⁸⁾ A = V_S connections reverse-polarity protected ⁹⁾ C = interference suppression ¹⁰⁾ D = outputs overcurrent and short-circuit protected

Dimensional drawing



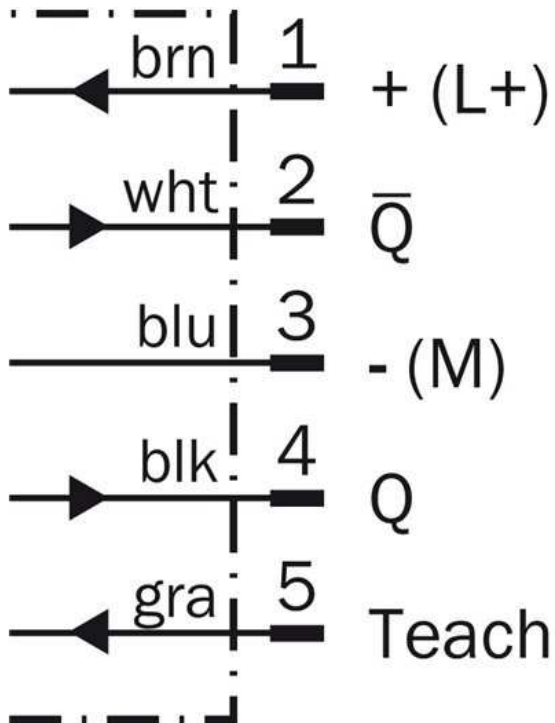
- [1] Optical axis
- [2] LED indicator yellow: Light received
- [3] Green LED indicator: supply voltage active
- [4] M4 threaded mounting hole, 4 mm deep
- [5] Mounting hole, \varnothing 4.2 mm
- [6] Sensitivity adjustment: poti
- [7] Connection

Adjustments possible

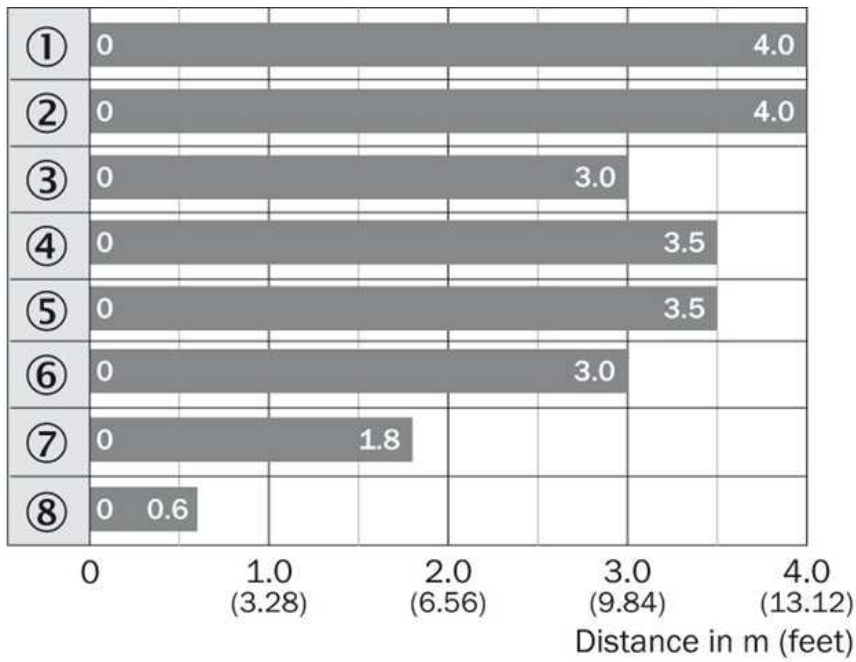


- |2| LED indicator yellow: Light received
- |3| LED indicator, green: power on, teach-in mode I, LED indicator, blue: teach-in mode II
- |6| Single teach-in button, function
 - 1: teach-in sensitivity on reflector
 - , function 2: change operation/teach-in mode

Connection diagram



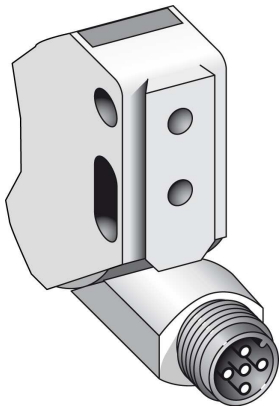
Sensing range diagram



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

■ Sensing range max.

Connection type



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