



Photoelectric sensors  
W4SLG-3, Photoelectric retro-reflective sensor,  
autocollimation

WL4SLG-3E1134



**Model Name** > [WL4SLG-3E1134](#)  
**Part No.** > [1058248](#)

**At a glance**

- Precise laser light spot, laser class 1
- Teach-in button can be switched between detection of transparent and smallest non-transparent objects
- Automatic switching threshold adaptation provides automatic adjustment to changes in light conditions
- Sensing ranges up to 4.5 m
- Autocollimation optics prevent blind spots
- Choice of adjustment via teach-in button, potentiometer, cable, or IO-Link

**Your benefits**

- One device for detecting both transparent objects and the smallest non-transparent objects at sensing ranges up to 4.5 m, thus reducing the variety of sensors and saving on storage costs
- Highly visible, even laser light spot with a sharp contour to facilitate alignment
- The highest degree of machine design flexibility. Autocollimation permits detection even through small drilled holes
- High-quality sensor manufacturing and testing reduce maintenance costs
- Established and proven housing design for easy installation
- IO-Link facilitates initial system performance diagnostics and uses additional sensor functions to reduce complex control programming



*Illustration may differ*



**Features**

Sensor/detection principle:	Photoelectric retro-reflective sensor, autocollimation
Dimensions (W x H x D):	12.2 mm x 41.8 mm x 17.3 mm
Housing design (light emission):	Rectangular
Mounting hole:	M3
Sensing range max.:	0 m ... 4.5 m <sup>1) 2)</sup>
Sensing range::	0 m ... 2 m <sup>3) 4)</sup>
Type of light:	Visible red light
Light source:	Laser <sup>5)</sup>
Laser class:	1, 1 (EN60825-1:2008-05 & IEC 60825-1:2007-03/CDRH 21 CFR 1040.10 & 1040.11)
Wave length:	650 nm
Adjustment:	Single teach-in button, Cable
Light spot size (distance):	Ø 1 mm (500 mm)

<sup>1) 3)</sup> REF-AC1000 <sup>2) 4)</sup> We recommend using reflective tape REF-AC1000 or reflectors based on this reflective tape, like P41F, PLV14-A, PLH25-M12 or PLH25-D12, to ensure reliable operation. Reflectors with larger-scaled triple structures should only be used after application clarification <sup>5)</sup> Average service life 50,000 h at T<sub>A</sub> = +25

°C

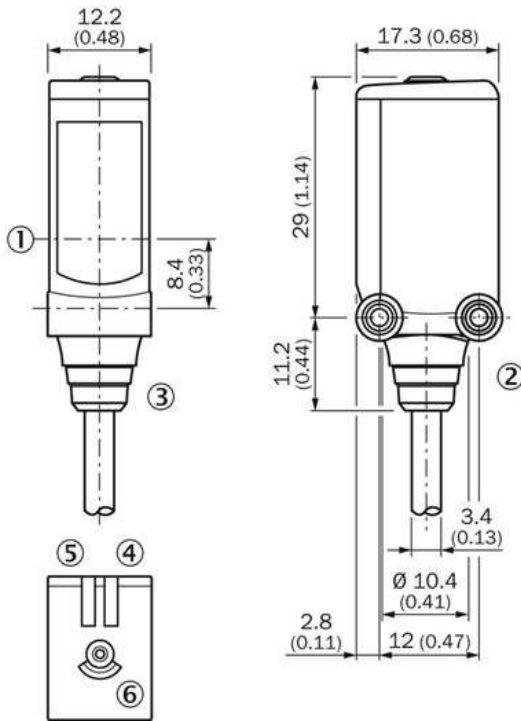
## Mechanics/electronics

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Supply voltage:	10 V DC ... 30 V DC <sup>1)</sup>
Ripple:	< 5 Vpp <sup>2)</sup>
Power consumption:	≤ 30 mA <sup>3)</sup>
Output type:	NPN <sup>4)</sup>
Switching mode:	Dark switching <sup>5)</sup>
Output current I <sub>max.</sub> :	≤ 100 mA
Response time:	≤ 0.5 ms <sup>6)</sup>
Switching frequency:	1,000 Hz <sup>7)</sup>
Connection type:	Cable, 4-wire, 2 m <sup>8)</sup>
Cable material:	PVC
Conductor cross-section:	0.14 mm <sup>2</sup>
Circuit protection:::	A, B, C <sup>9)</sup> <sup>10)</sup> <sup>11)</sup>
Protection class:	III
Weight:	100 g
Polarisation filter:	✓
IO-Link:	-
Optics material:	PMMA
Enclosure rating:	IP 66 IP 67
Special feature:	Detection of transparent objects
Ambient operating temperature:	-10 °C ... +50 °C
Ambient storage temperature:	-30 °C ... +70 °C
Ambient operating temperature extended:::	-30 °C ... +55 °C <sup>12)</sup> <sup>13)</sup>
Housing material:	Plastic, Bayblend

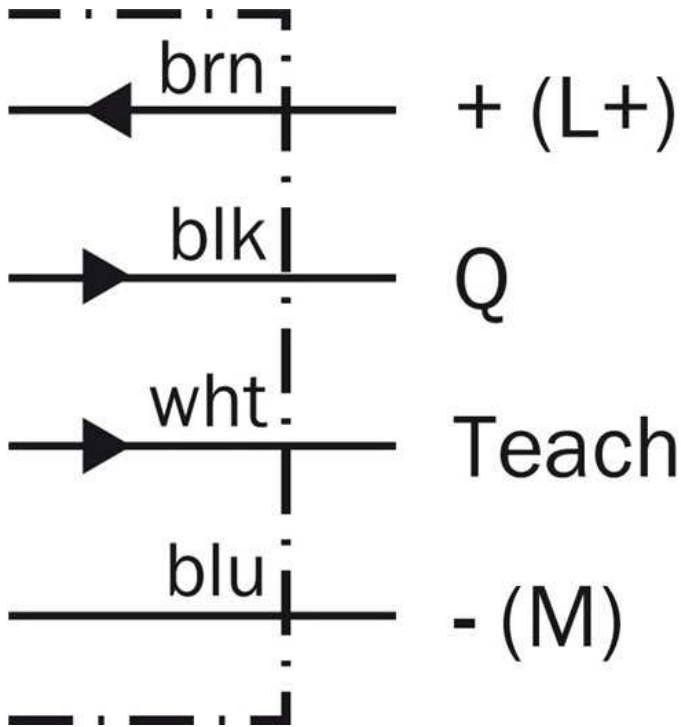
<sup>1)</sup> Limit values, operation in short-circuit protected network max. 8 A <sup>2)</sup> May not exceed or fall short of  $V_S$  tolerances <sup>3)</sup> Without load <sup>4) 5)</sup> Q = dark switching <sup>6)</sup> Signal transit time with resistive load <sup>7)</sup> With light/dark ratio 1:1 <sup>8)</sup> Do not bend below 0 °C <sup>9)</sup> A =  $V_S$  connections reverse-polarity protected <sup>10)</sup> B = inputs and output reverse-polarity protected <sup>11)</sup> C = interference suppression <sup>12)</sup> As of  $T_a = 50$  °C, a max. supply voltage  $V_{max.} = 24$  V and a max. load current  $I_{max.} = 50$  mA is permitted <sup>13)</sup> Using the sensor below  $T_a = -10$  °C is possible, if the sensor is turned on at  $T_a > -10$  °C, then the environment cools down and the sensor is not disconnected from the supply voltage during the whole time. It is not allowed to turn on the sensor below  $T_a = -10$  °C

**Dimensional drawing**

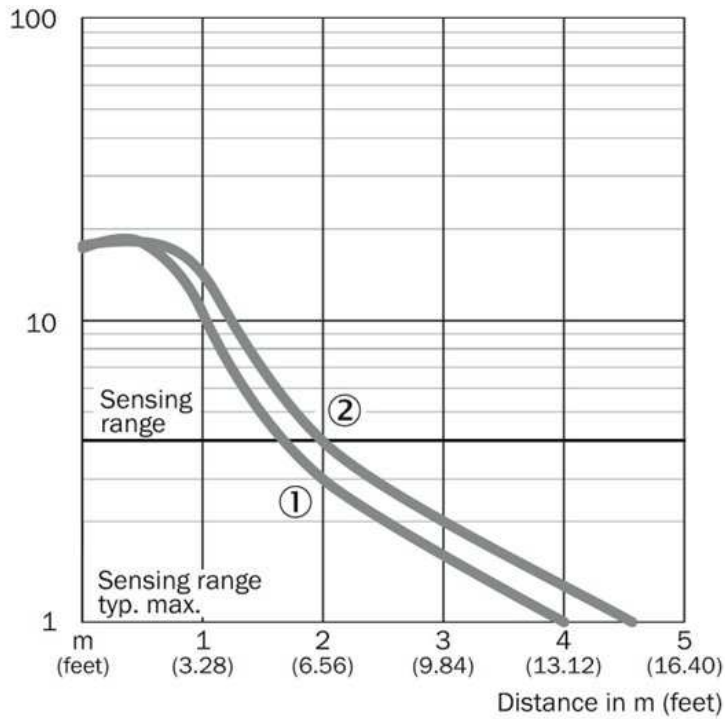


- |1| Center of optical axis
- |2| Threaded mounting hole M3
- |3| Connection
- |4| Status indicator LED green: supply voltage on
- |5| Status indicator LED, yellow: Status of received light beam
- |6| single teach-in button

**Connection diagram**

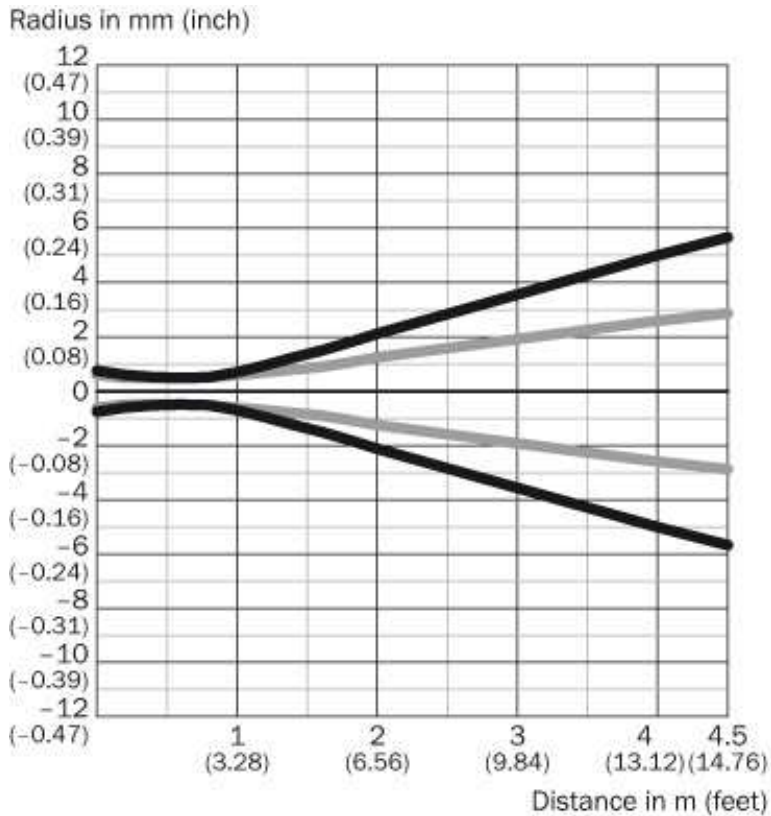


## Characteristic curve



[1] PLV14-A / PLH25-M12 / PLH25-D12  
 [2] P41F / REF-AC1000

## Light spot size

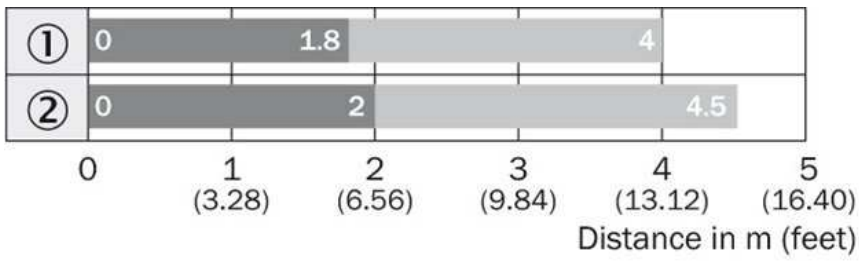


### Dimensions in mm (inch)

Sensing range	Vertical	Horizontal
<b>0.5 m</b> (1.64 feet)	< 1.0 (0.04)	< 1.0 (0.04)
<b>1 m</b> (3.28 feet)	1.5 (0.06)	1.2 (0.05)
<b>2 m</b> (6.56 feet)	4.3 (0.17)	2.6 (0.10)
<b>4.5 m</b> (14.76 feet)	11.3 (0.44)	5.6 (0.22)

— Vertical  
 — Horizontal

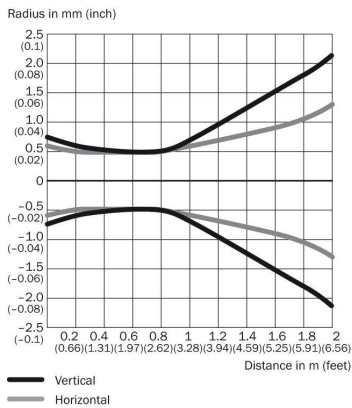
## Sensing range diagram



|1| PLV14-A / PLH25-M12 / PLH25-D12  
|2| P41F / REF-AC1000

■ Sensing range      ■ Sensing range max.

## Lichtfleckgröße (Detailansicht)



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