



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

WL4SLG-3F3234



Model Name > **WL4SLG-3F3234**
Part No. > **1058246**

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 ^{1) 2)}
Sensing range:	0 m ... 2 m ^{3) 4)}
Type of light:	Visible red light
Light source:	Laser ⁵⁾
Laser class:	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 and teach-in via cable ⁶⁾
Light spot size (distance):	Ø 1 mm (500 mm)

^{1) 3)} REF-AC1000 ^{2) 4)} 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 ⁵⁾ Average service life 50,000 h at T_A = +25

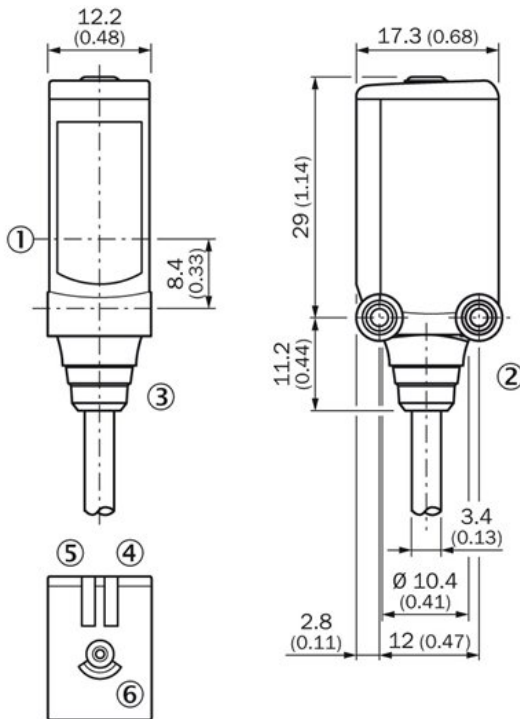
°C ⁶⁾ Adjustment via cable (ET): white cable or PIN2 according to the desired sensitivity > 2 ... < 8 s or put > 8 s on L+ (PNP) or on M (NPN)

Mechanics/electronics

Supply voltage:	10 V DC ... 30 V DC ¹⁾
Power consumption:	≤ 30 mA ²⁾
Output type:	PNP ³⁾
Switching mode:	Dark-switching ⁴⁾
Output current I _{max} :	≤ 100 mA
Response time:	≤ 0.5 ms ⁵⁾
Switching frequency:	1,000 Hz ⁶⁾
Connection type:	Cable with connector M8, 4-pin, 120 mm ⁷⁾
Cable material:	PVC
Conductor cross-section:	0.14 mm ²
Circuit protection:::	A, B, C ⁸⁾ ⁹⁾ ¹⁰⁾
Protection class:	III
Weight:	100 g
Polarisation filter:	✓
IO-Link:	-
Housing material:	Plastic, Bayblend
Optics material:	PMMA
Enclosure rating:	IP 66 IP 67
Special feature:	For transparent objects
Ambient operating temperature:	-10 °C ... 50 °C
Ambient storage temperature:	-30 °C ... 70 °C
Ambient operating temperature extended::	-30 °C ... 55 °C ¹¹⁾ ¹²⁾
MTTFd:	647 a (EN ISO 13849-1) ¹³⁾

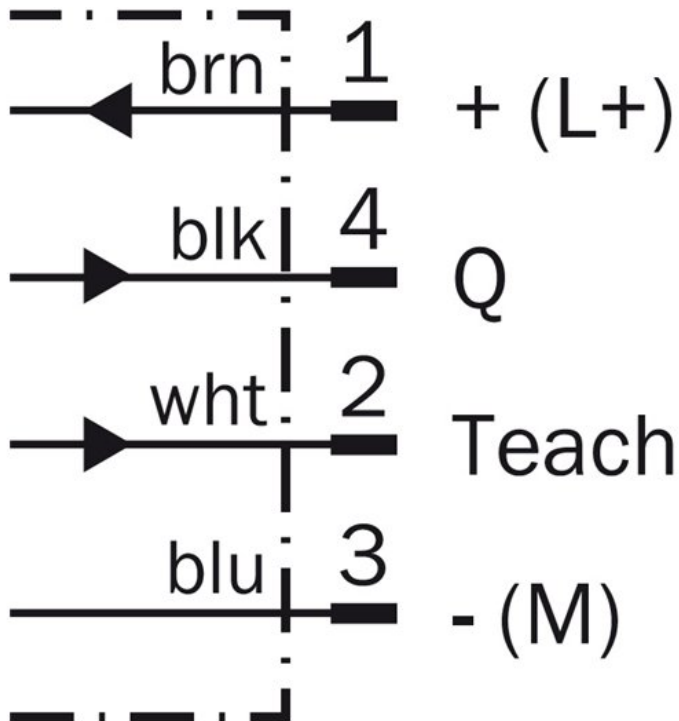
¹⁾ Limit values, operation in short-circuit protected network max. 8 A ²⁾ Without load ³⁾ ⁴⁾ Q = dark-switching ⁵⁾ Signal transit time with resistive load ⁶⁾ With light/dark ratio 1:1 ⁷⁾ Do not bend below 0 °C ⁸⁾ A = V_S connections reverse-polarity protected ⁹⁾ B = inputs and output reverse-polarity protected ¹⁰⁾ C = interference suppression ¹¹⁾ 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 ¹²⁾ 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 ¹³⁾ Mode of calculation: Parts-Count-calculation

Dimensional drawing

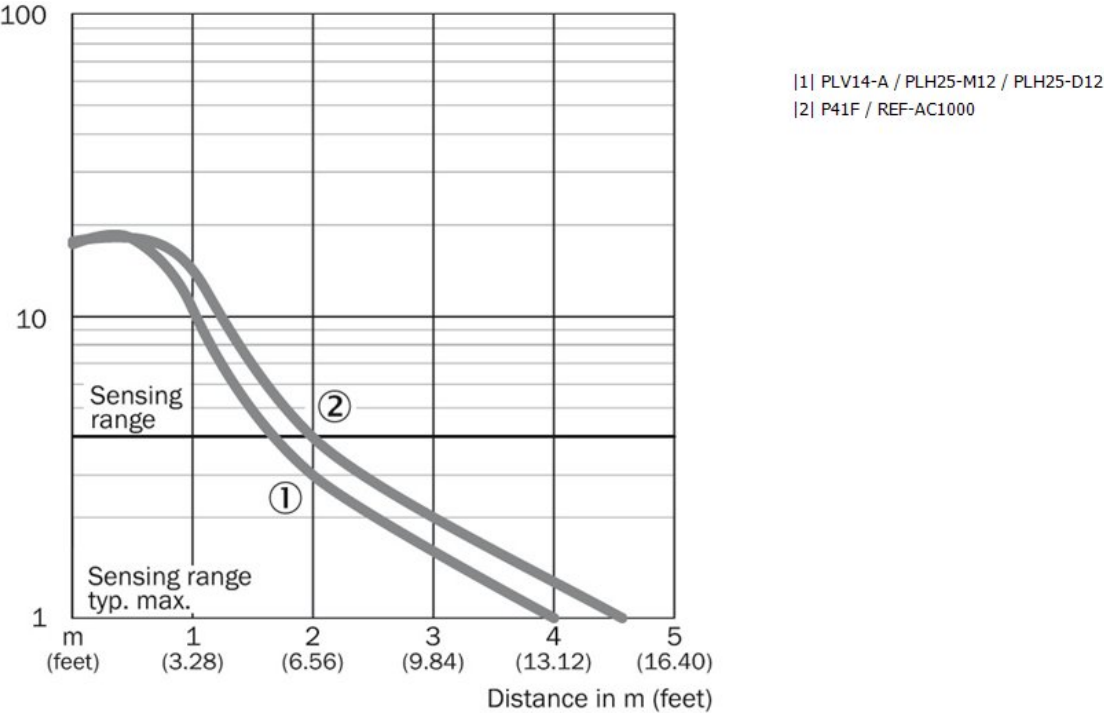


- [1] Center of optical axis
- [2] Threaded mounting hole M3
- [3] Connection
- [4] Status indicator LED green: power on
- [5] Status indicator LED, yellow: Status of received light beam
- [6] single teach-in button

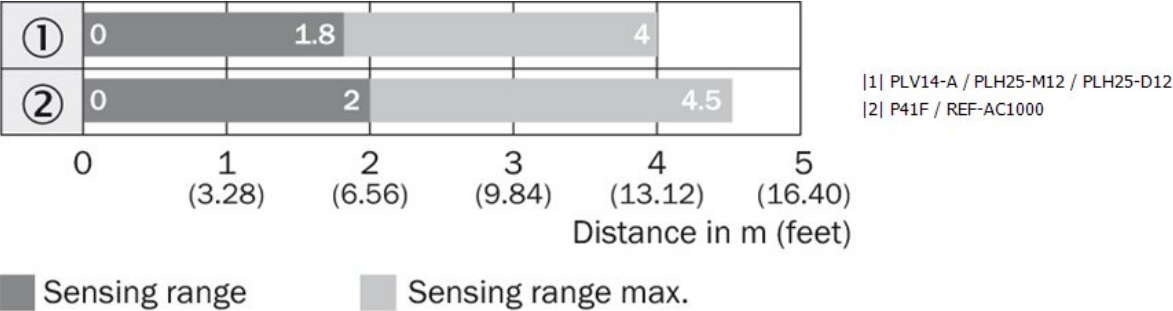
Connection diagram



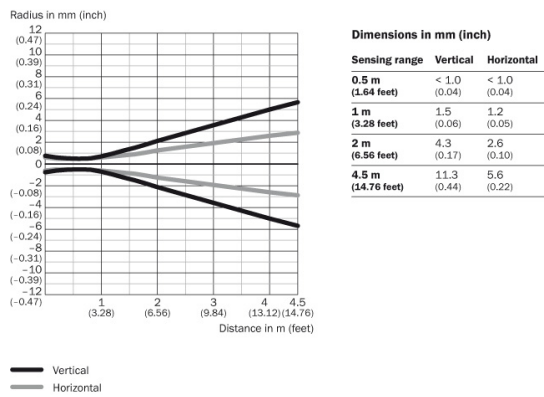
Characteristic curve



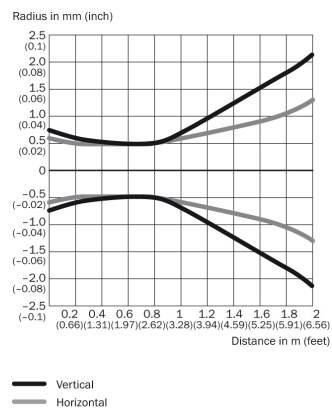
Sensing range diagram



Light spot size



Lichtfleckgröße (Detailansicht)



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