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

WL4SLG-3F2234

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Model Name > WL4SLG-3F2234
Part No. > 1058244

Illustration may differ

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 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

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, 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)

[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

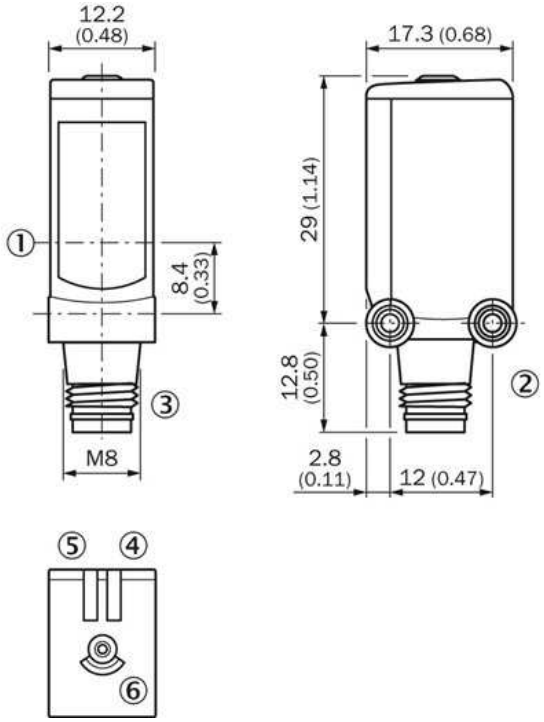
°C

Mechanics/electronics

Supply voltage:	10 V DC ... 30 V DC [1]
Ripple:	< 5 Vpp [2]
Power consumption:	≤ 30 mA [3]
Output type:	PNP [4]
Switching mode:	Dark switching [5]
Output current Imax.:	≤ 100 mA
Response time:	≤ 0.5 ms [6]
Switching frequency:	1,000 Hz [7]
Connection type:	Connector M8, 4-pin
Circuit protection:::	A, B, C [8] [9] [10]
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 [11] [12]
Housing material:	Plastic, Bayblend

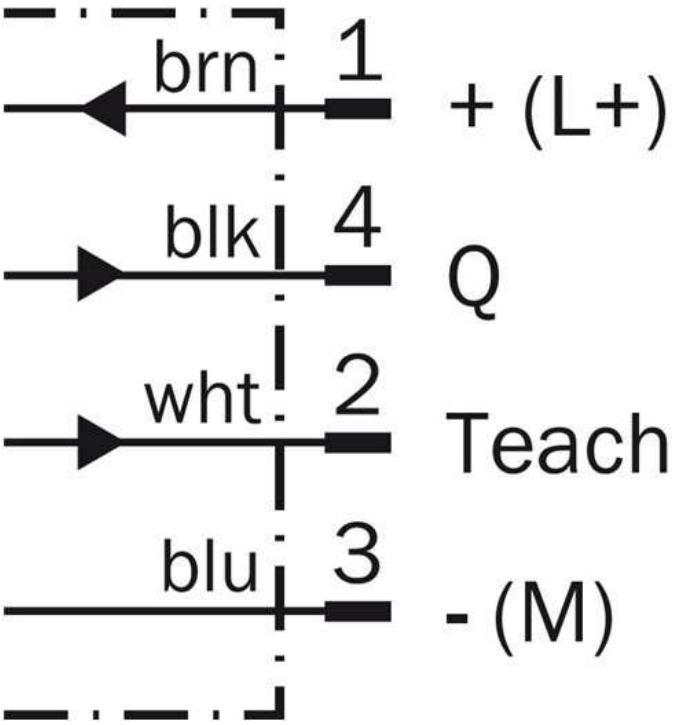
[1] Limit values, operation in short-circuit protected network max. 8 A [2] May not exceed or fall short of V_S tolerances [3] Without load [4] [5] Q = dark switching [6] Signal transit time with resistive load [7] With light/dark ratio 1:1 [8] A = V_S connections reverse-polarity protected [9] B = inputs 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

Dimensional drawing

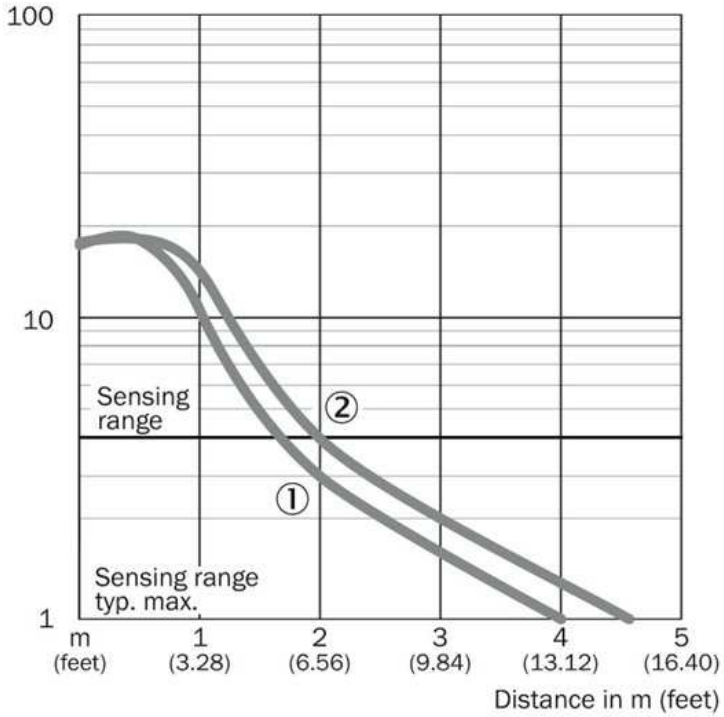


|1| Center of optical axis
|2| Threaded mounting hole M3
|3| Connection
|4| Status indicator LED green: supply voltage on
|5| Status indicator LED,
yellow: Status of received light beam
|6| single teach-in button

Connection diagram

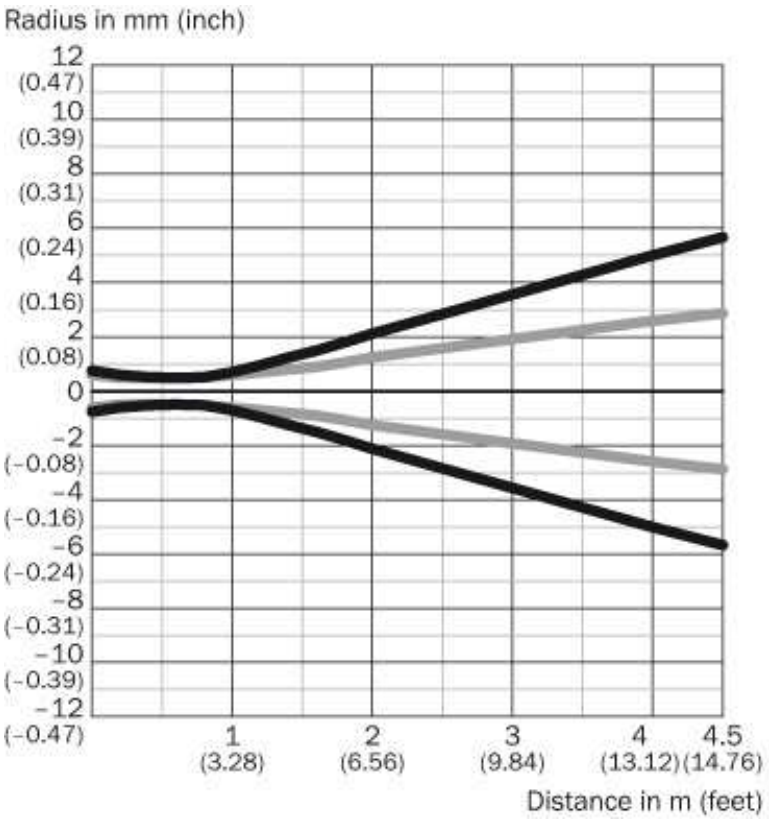


Characteristic curve



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

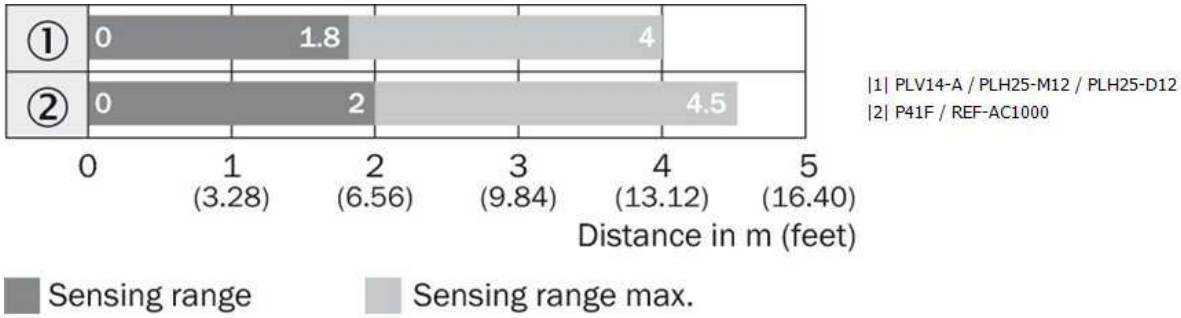
Light spot size



Dimensions in mm (inch)

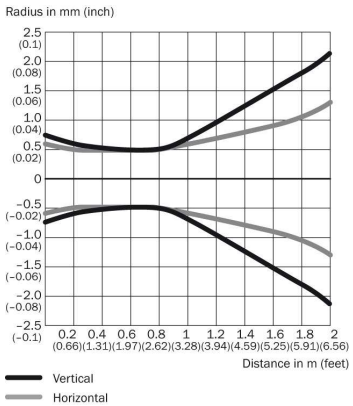
Sensing range	Vertical	Horizontal
0.5 m (1.64 feet)	< 1.0 (0.04)	< 1.0 (0.04)
1 m (3.28 feet)	1.5 (0.06)	1.2 (0.05)
2 m (6.56 feet)	4.3 (0.17)	2.6 (0.10)
4.5 m (14.76 feet)	11.3 (0.44)	5.6 (0.22)

Sensing range diagram



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

Lichtfleckgröße (Detailansicht)



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