



DATA SHEET

WL4SLG-3P3232

W4
Photoelectric sensors

SICK

Sensor Intelligence

PHOTOELECTRIC SENSORS

WL4SLG-3P3232

ORDERING INFORMATION

Type	part no.
WL4SLG-3P3232	1058245

Further device versions and accessories at www.sick.com/W4



Illustration may differ



DETAILED TECHNICAL DATA

FEATURES

Functional principle	Photoelectric retro-reflective sensor	
Functional principle detail	Without reflector minimum distance (autocollimation/coaxial optics)	
Sensing range max.	0 m ... 4.5 m ¹⁾ 2)	
Sensing range	0 m ... 2 m ¹⁾ 2)	
Polarisation filter	Yes	
Emitted beam	Light source	Laser ³⁾
	Type of light	Visible red light
	Light spot size (distance)	Ø 1 mm (500 mm)
Key laser figures	Normative reference	EN 60825-1:2014, IEC 60825-1:2014 / CDRH 21 CFR 1040.10 & 1040.11
	Laser class	1 ⁴⁾
	Wave length	650 nm
Adjustment	Single teach-in button	
Special applications	Detecting transparent objects, Detecting small objects	
Mounting hole	M3	

¹⁾ Reflective tape REF-AC1000.

²⁾ To ensure reliable operation, we recommend using REF-AC1000 reflective tape or reflective-tap reflectors such as P41F, PLV14-A, PLH25-M12, or PLH25-D12. Reflectors with large-scale triple structures must only be used if deemed suitable for the application.

³⁾ Average service life: 50,000 h at T_v = +25 °C.

⁴⁾ Do not intentionally look into the laser beam. Never point the laser beam at people's eyes.

AutoAdapt



¹⁾ Reflective tape REF-AC1000.

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SAFETY-RELATED PARAMETERS

MTTF _D	647 years (EN ISO 13849-1) ¹⁾
DC _{avg}	0 %

¹⁾ Mode of calculation: Parts-Count-calculation.

ELECTRONICS

Supply voltage U _B	10 V DC ... 30 V DC ¹⁾										
Ripple	< 5 V _{pp} ²⁾										
Current consumption	30 mA ³⁾										
Protection class	III										
Digital output	<table border="0"> <tr> <td>Type</td> <td>PNP⁴⁾</td> </tr> <tr> <td>Switching mode</td> <td>Light/dark switching⁴⁾</td> </tr> <tr> <td>Output current I_{max}</td> <td>≤ 100 mA</td> </tr> <tr> <td>Response time</td> <td>≤ 0.5 ms⁵⁾</td> </tr> <tr> <td>Switching frequency</td> <td>1,000 Hz⁶⁾</td> </tr> </table>	Type	PNP ⁴⁾	Switching mode	Light/dark switching ⁴⁾	Output current I _{max}	≤ 100 mA	Response time	≤ 0.5 ms ⁵⁾	Switching frequency	1,000 Hz ⁶⁾
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Output function	Complementary										
Circuit protection	<table border="0"> <tr> <td>A⁷⁾</td> </tr> <tr> <td>B⁸⁾</td> </tr> <tr> <td>C⁹⁾</td> </tr> </table>	A ⁷⁾	B ⁸⁾	C ⁹⁾							
A ⁷⁾											
B ⁸⁾											
C ⁹⁾											

¹⁾ Limit values when operated in short-circuit protected network: max. 8 A.

²⁾ May not fall below or exceed U_B tolerances.

³⁾ Without load.

⁴⁾ Q = light switching.

⁵⁾ Signal transit time with resistive load.

⁶⁾ With light/dark ratio 1:1.

⁷⁾ A = V_S connections reverse-polarity protected.

⁸⁾ B = inputs and output reverse-polarity protected.

⁹⁾ C = interference suppression.

MECHANICS

Housing	Rectangular		
Design detail	Slim		
Dimensions (W x H x D)	12.2 mm x 41.8 mm x 17.3 mm		
Connection	Cable with M8 male connector, 4-pin ¹⁾		
Connection detail	<table border="0"> <tr> <td>Conductor size</td> <td>0.14 mm²</td> </tr> </table>	Conductor size	0.14 mm ²
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¹⁾ Do not bend below 0 °C.

PHOTOELECTRIC SENSORS - WL4SLG-3P3232

Length of cable (L)		120 mm ¹⁾
Material	Housing	Plastic, Novodur
	Front screen	Plastic, PMMA
	Cable	Plastic, PVC
Weight	100 g	

¹⁾ Do not bend below 0 °C.

AMBIENT DATA

Enclosure rating	IP66 IP67
Ambient operating temperature	-10 °C ... +50 °C
Ambient operating temperature extended	-30 °C ... +55 °C ^{1) 2)}
Ambient temperature, storage	-30 °C ... +70 °C
RoHS certificate	✓

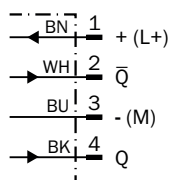
¹⁾ As of $T_a = 50\text{ °C}$, a max. supply voltage $V_{\text{max}} = 24\text{ V}$ and a max. load current $I_{\text{max}} = 50\text{ mA}$ is permitted.

²⁾ Operation below $T_u -10\text{ °C}$ is possible if the sensor is already switched on at $T_u > -10\text{ °C}$, then cools down, and the supply voltage is subsequently not switched off. Switching on below $T_u -10\text{ °C}$ is not permissible.

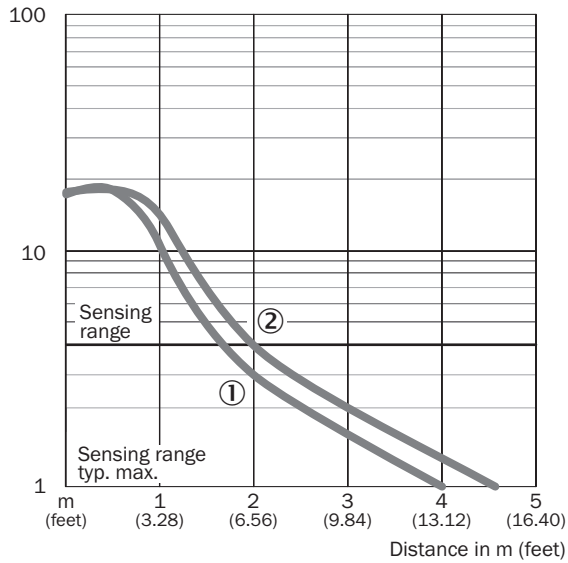
CERTIFICATES

EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
Moroccan declaration of conformity	✓
China RoHS	✓
ECOLAB certificate	✓
Laser safety (IEC 60825-1) certificate	✓

CONNECTION DIAGRAM CD-083

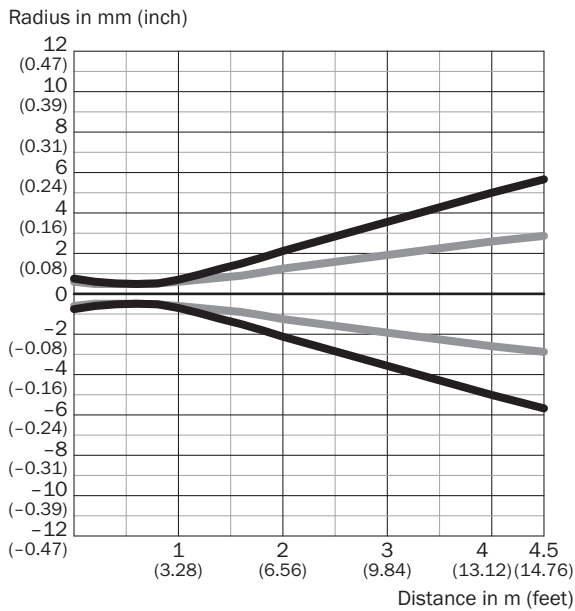


CHARACTERISTIC CURVE



- ① Reflector PLV14-A / PLH25-M12 / PLH25-D12
- ② Reflector P41F / reflective tape REF-AC1000

LIGHT SPOT SIZE OVERVIEW



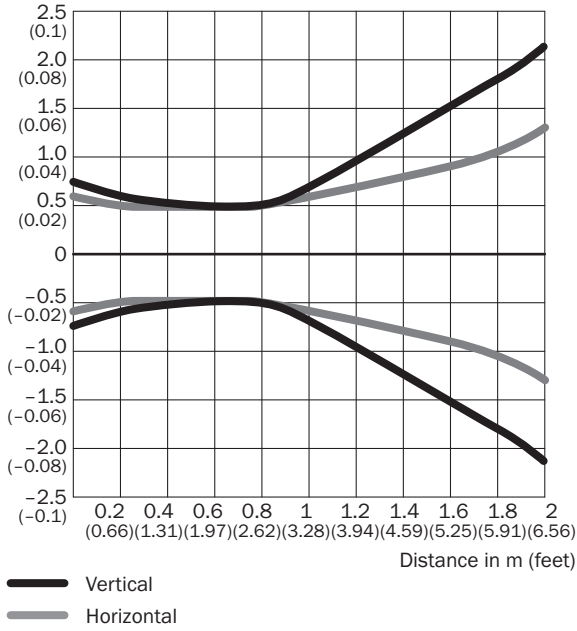
Dimensions in mm (inch)

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)

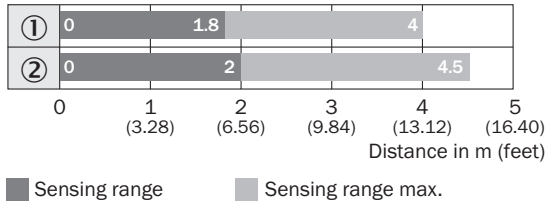
— Vertical
— Horizontal

LIGHT SPOT SIZE (DETAILED VIEW)

Radius in mm (inch)

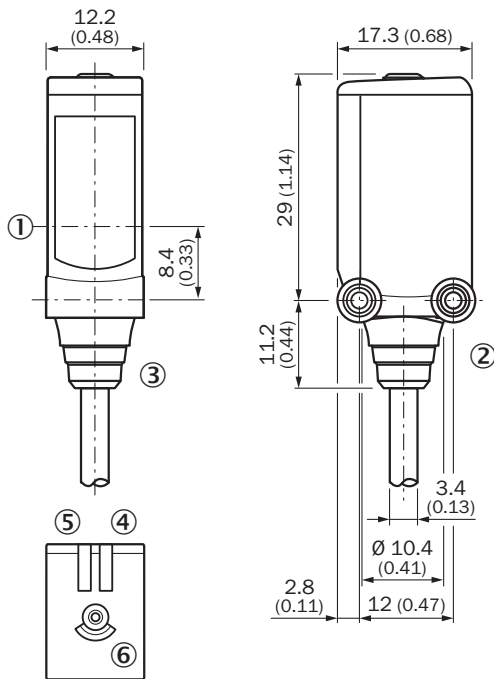


SENSING RANGE DIAGRAM



- ① Reflector PLV14-A / PLH25-M12 / PLH25-D12
- ② Reflector P41F / reflective tape REF-AC1000

DIMENSIONAL DRAWING WL4SL-3, WL4SLG-3, WSE4SL-3, CABLE



Dimensions in mm (inch)

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

Further information as well as suitable accessories, example applications and downloads such as CAD dimensional models, operating instructions and software can be found at www.sick.com/1058245



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SICK AT A GLANCE

SICK is a leading global technology company for intelligent sensors and integrated solutions in industrial automation. Our technologies set benchmarks, making your industrial processes more efficient, safer and more sustainable – both in logistics and manufacturing operations.

SICK combines sensor intelligence with industry expertise and certified consulting services. We provide the ideal foundation for scalable as well as tailor-made automation solutions and create added value along the entire value chain. Our close partnerships with our customers are more than just a promise: Together, we optimize productivity, improve quality, protect health and safety, and help build a sustainable future. All with empathy and trust.

Since 1946, we have been developing innovative technologies with passion and a pioneering spirit. With a global network in around 40 countries, SICK has a global presence and is always close by. The company's headquarters are located in Waldkirch near Freiburg, Germany. Our customers benefit from our understanding of both local and global requirements, which enables us to deliver tailor-made solutions

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