Product data sheet

WL4SLG-3P5254H

W4SLG-3H

MINIATURE PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.

Illustration may differ

Ordering information

Type	Part no.
WL4SLG-3P5254H	1109333

Other models and accessories → www.sick.com/W4SLG-3H

Detailed technical data

Features

Sensor/ detection principle	Photoelectric retro-reflective sensor, autocollimation
Dimensions (W x H x D)	15.3 mm x 63.2 mm x 22.2 mm
Housing design	Hygiene [1]
Housing design (light emission)	Rectangular
Mounting hole	M3
Sensing range max.	0 m ... 3.5 m [2]
Sensing range	0 m ... 2.2 m [2]
Type of light	Visible red light
Light source	Laser [3]
Light spot size (distance)	Ø 1 mm (500 mm)
Wave length	650 nm
Laser class	1 (EN 60825-1:2014, IEC 60825-1:2014 / CDRH 21 CFR 1040.10 & 1040.11)
Adjustment	Teach-in by wire [4]
Special applications	Hygienic and washdown zones, Detecting transparent objects, Detecting small objects

[1] Difference between standard/washdown and hygiene: The essential difference between a standard/washdown product and a hygiene product is that where the process and contact with the medium (activity in the vicinity of the food) are concerned, a hygiene product is designed in accordance with the latest standards and hygiene design guidelines, and materials are selected accordingly.

[2] Reflective tape REF-AC1000.

[3] Average service life: 50,000 h at T_U = +25 °C.

[4] External teach-in: pulse > 2 s with voltage Uv with PNP and M with NPN.

Mechanics/electronics

Supply voltage	10 V DC ... 30 V DC [1]
Ripple	< 5 V_{pp} [2]
Current consumption	30 mA [3]
Switching output	PNP
Switching mode	Light switching
Output current $I_{max.}$	≤ 100 mA
Response time	≤ 0.5 ms [4]
Switching frequency	1,000 Hz [5]
Connection type	Male connector M8, 4-pin [6]
Mechanical connection	D12 adapter shaft
Circuit protection	A [7] B [8] C [9]
Protection class	III
Weight	140 g
Polarisation filter	✓
Housing material	Stainless steel, Stainless steel V4A (1.4404, 316L)
Optics material	Plastic, PMMA
Enclosure rating	IP66 IP67 IP68 IP69K [10]
Special feature	Detecting transparent objects, D12 adapter shaft
Ambient operating temperature	–10 °C ... +50 °C
Ambient operating temperature extended	–30 °C ... +55 °C [11] [12]
Ambient storage temperature	–30 °C ... +70 °C

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

[2] May not exceed or fall below U_V tolerances.

[3] Without load.

[4] Signal transit time with resistive load.

[5] With light/dark ratio 1:1.

[6] Max. tightening torque: 0.6 Nm.

[7] A = V_S connections reverse-polarity protected.

[8] B = inputs and output reverse-polarity protected.

[9] C = interference suppression.

[10] Only in case of correctly mounted IP69K connecting cable.

[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] Operation below Tu –10 °C is possible if the sensor is already switched on at Tu > –10 °C, then cools down, and the supply voltage is subsequently not switched off. Switching on below Tu –10 °C is not permissible.

Safety-related parameters

$MTTF_D$	589 years (EN ISO 13849-1) [1]
DC_{avg}	0%

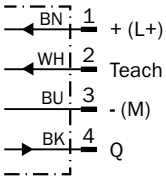
[1] Mode of calculation: Parts-Count-calculation.

Classifications

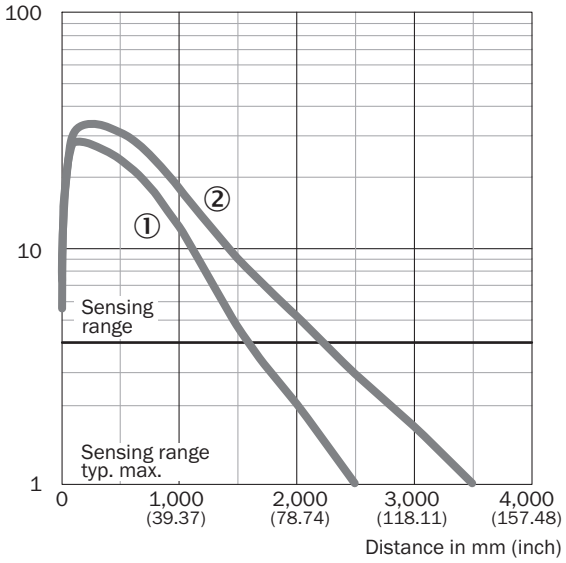
ECl@ss 5.0	27270902
ECl@ss 5.1.4	27270902
ECl@ss 6.0	27270902
ECl@ss 6.2	27270902
ECl@ss 7.0	27270902
ECl@ss 8.0	27270902
ECl@ss 8.1	27270902
ECl@ss 9.0	27270902
ECl@ss 10.0	27270902
ECl@ss 11.0	27270902
ETIM 5.0	EC002717
ETIM 6.0	EC002717
ETIM 7.0	EC002717
UNSPSC 16.0901	39121528

Connection diagram

Cd-092

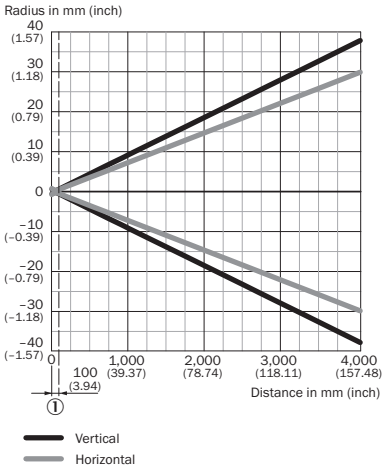


Characteristic curve



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

Light spot size

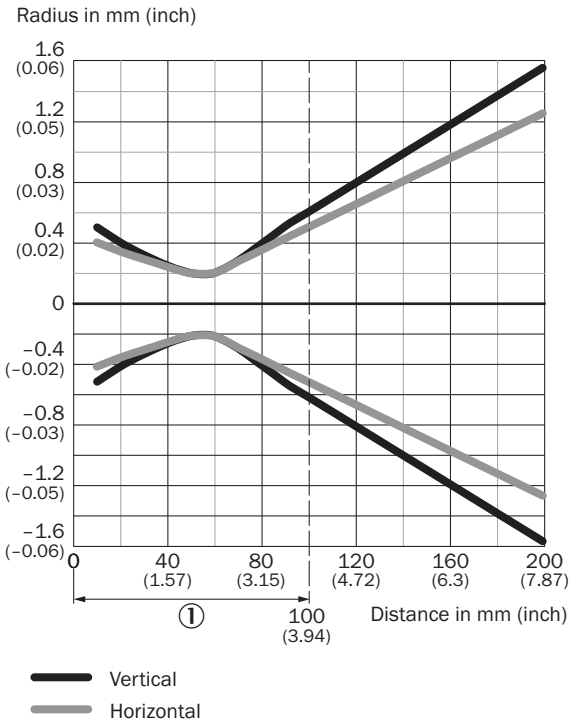


Dimensions in mm (inch)

Sensing range	Vertical	Horizontal
60 mm (2.36)	0.4 (0.02)	0.4 (0.02)
200 mm (7.87)	3.2 (0.13)	2.4 (0.09)
2,000 mm (78,74)	40 (1.57)	30 (0.18)
3,500 mm (137.80)	60 (2.36)	50 (1.97)

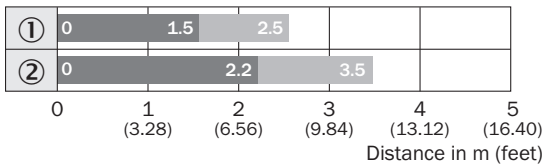
① Minimum distance between sensor and reflector

Light spot size (detailed view)



① Minimum distance between sensor and reflector

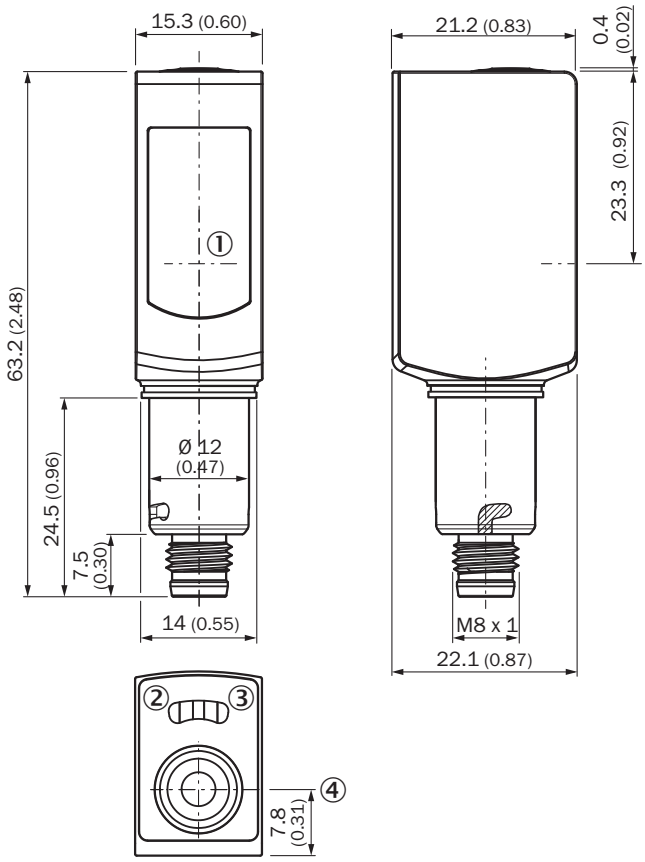
Sensing range diagram



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

Dimensional drawing (Dimensions in mm (inch))

WTB4S-3H, WTF4S-3H, with single teach-in button, D12 adapter shaft, L-adaption



① Center of optical axis
② LED indicator yellow: Status of received light beam
③ LED indicator green: Supply voltage active
④ Single teach-in button

Recommended accessories

Other models and accessories ➜ www.sick.com/W4SLG-3H

	Brief description	Type	Part no.
Reflectors			
	Stainless steel reflector, washdown design, chemically resistant, IP 69K enclosure rating, screw connection, PMMA front screens, 14 mm, Stainless steel V4A (1.4404, 316L), Screw-on, 2 hole mounting	PLV14-A	2063405
Plug connectors and cables			
	Head A: female connector, M8, 4-pin, straight Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 5 m This product is generally resistant to chemical cleaning agents (see ECOLAB). Please do not use cleaning agents of any other Kind., Not resistant against lactic acid & hydrogen peroxide (H2O2)	DOL-0804-G05MNI	6059194

SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

For us, that is “Sensor Intelligence.”

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