



WL4SLG-3F2234

W4

MINIATURE PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

Type	Part no.
WL4SLG-3F2234	1058244

Other models and accessories → www.sick.com/W4

Detailed technical data

Features

Functional principle		Photoelectric retro-reflective sensor
Functional principle detail		Autocollimation
Sensing range max.		0 m ... 4.5 m ^{1) 2)}
Sensing range		0 m ... 2 m ^{1) 2)}
Polarisation filters		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
	Wave length	650 nm
Adjustment		Cable, Single teach-in button ⁴⁾
Special applications		Detecting transparent objects, Detecting small objects

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_U = +25 °C.

⁴⁾ 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).

Mounting hole	M3
AutoAdapt	✓

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Safety-related parameters

MTTF _D	655 years (EN ISO 13849-1) ¹⁾
DC _{avg}	0 %

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

Electrical data

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	
Type	PNP ⁴⁾
Switching mode	Dark switching ⁴⁾
Output current I _{max.}	≤ 100 mA
Response time	≤ 0.5 ms ⁵⁾
Switching frequency	1,000 Hz ⁶⁾
Circuit protection	A ⁷⁾ B ⁸⁾ C ⁹⁾
Special feature	Detecting transparent objects

- ¹⁾ Limit values when operated in short-circuit protected network: max. 8 A.
- ²⁾ May not exceed or fall below U_y tolerances.
- ³⁾ Without load.
- ⁴⁾ Q = dark 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.

Mechanical data

Housing	Rectangular
Design detail	Slim
Dimensions (W x H x D)	12.2 mm x 41.8 mm x 17.3 mm
Connection	Male connector M8, 4-pin
Material	
Housing	Plastic, Novodur
Front screen	Plastic, PMMA

Weight	100 g
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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 °C, a max. supply voltage V_{max.} = 24 V and a max. load current I_{max.} = 50 mA is permitted.

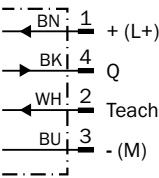
²⁾ Operation below Tu -10 °C is possible if the sensor is already switched on at Tu > -10 °C, then cools down, and the supply voltage is subsequently not switched off. Switching on below Tu -10 °C is not permissible.

Classifications

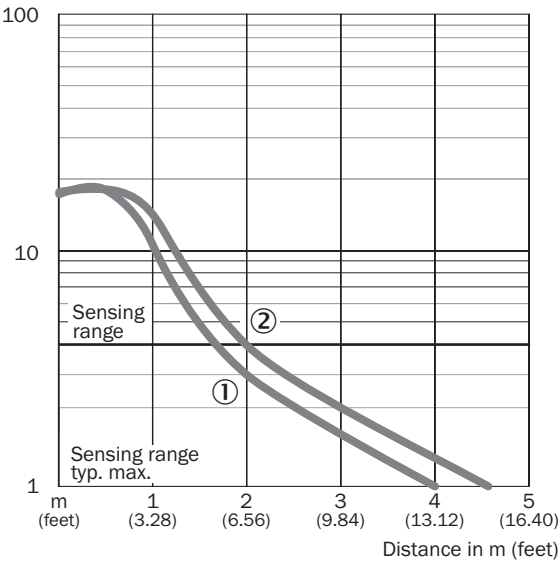
ECLASS 5.0	27270902
ECLASS 5.1.4	27270902
ECLASS 6.0	27270902
ECLASS 6.2	27270902
ECLASS 7.0	27270902
ECLASS 8.0	27270902
ECLASS 8.1	27270902
ECLASS 9.0	27270902
ECLASS 10.0	27270902
ECLASS 11.0	27270902
ECLASS 12.0	27270902
ETIM 5.0	EC002717
ETIM 6.0	EC002717
ETIM 7.0	EC002717
ETIM 8.0	EC002717
UNSPSC 16.0901	39121528

Connection diagram

Cd-195

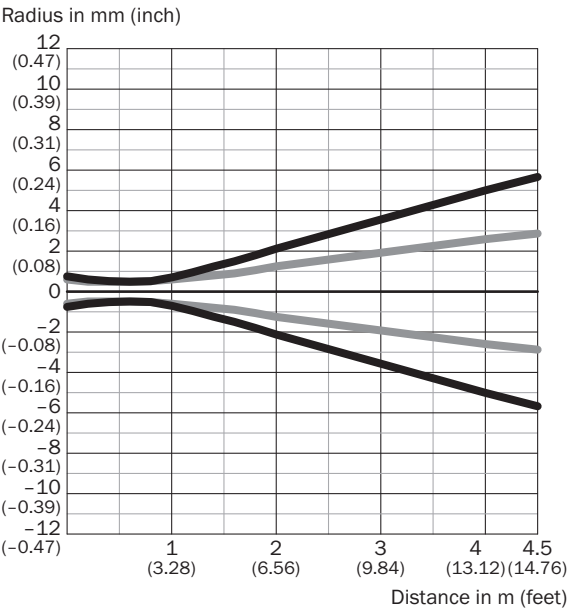


Characteristic curve



Light spot size

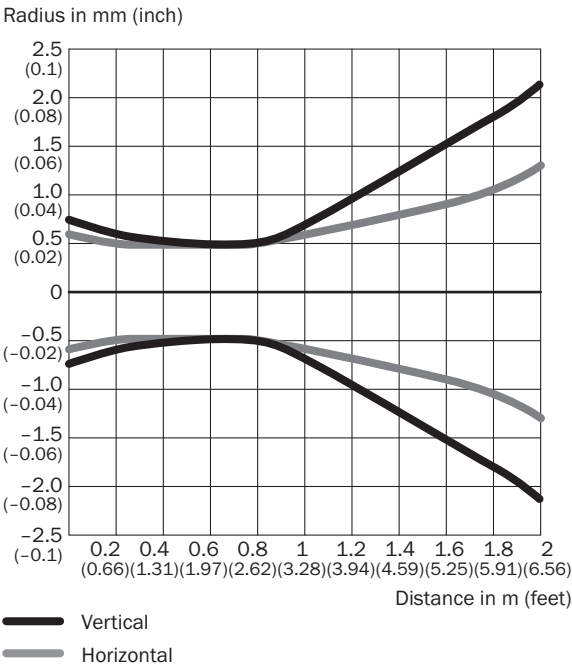
Overview



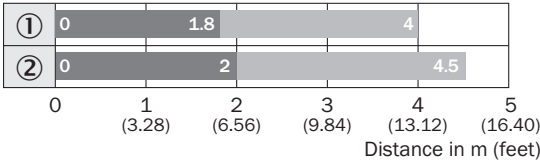
Dimensions in mm (inch)

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)

Light spot size (detailed view)



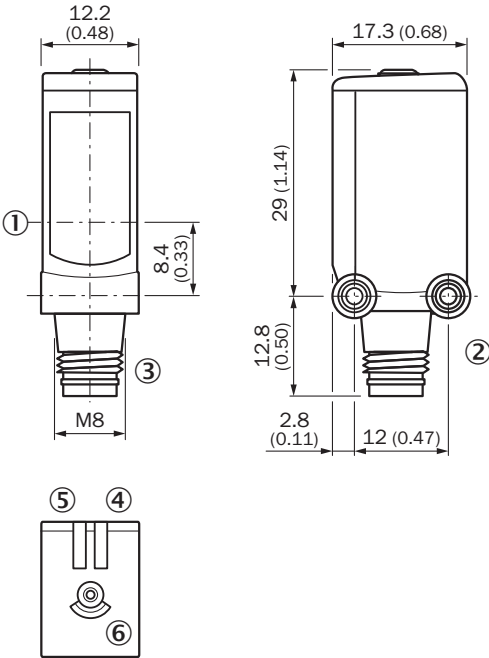
Sensing range diagram



- Sensing range ■ Sensing range max.
- ① Reflector PLV14-A / PLH25-M12 / PLH25-D12
- ② Reflector P41F / reflective tape REF-AC1000

Dimensional drawing (Dimensions in mm (inch))

WL4SL-3, WL4SLG-3, WSE4SL-3, plug

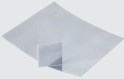


- ① Center of optical axis
- ② Threaded mounting hole M3
- ③ Connection
- ④ LED indicator green: Supply voltage active
- ⑤ LED indicator yellow: Status of received light beam
- ⑥ Single teach-in button

Recommended accessories

Other models and accessories → www.sick.com/W4

	Brief description	Type	Part no.
Mounting brackets and plates			
	Mounting bracket for floor mounting, Stainless steel 1.4571, mounting hardware included	BEF-W4-B	2051630
	Universal mounting bracket for reflectors, steel, zinc coated	BEF-WN-REFX	2064574
Plug connectors and cables			
	• Connection type head A: Female connector, M8, 4-pin, straight, A-coded • Connection type head B: Flying leads • Signal type: Sensor/actuator cable • Cable: 5 m, 4-wire, PVC • Description: Sensor/actuator cable, unshielded • Application: Zones with chemicals	YF8U14-050VA3XLEAX	2095889

	Brief description	Type	Part no.
	• Connection type head A: Male connector, M8, 4-pin, straight • Description: Unshielded • Connection systems: Screw-type terminals • Permitted cross-section: 0.14 mm² ... 0.5 mm²	STE-0804-G	6037323
Reflectors			
	Suitable for laser sensors, self-adhesive, cut, see alignment note, 56.3 mm x 56.3 mm, self-adhesive	REF-AC1000-56	4063030

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.”

WORLDWIDE PRESENCE:

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