WL4S-3E1332
W4S-3

MINIATURE PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.

Illustration may differ

Ordering information

Type	Part no.
WL4S-3E1332	1042081

Other models and accessories ➜ www.sick.com/W4S-3

Detailed technical data

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
Sensing range max.	0 m ... 5 m [1]
Sensing range	0 m ... 3 m [1]
Type of light	Visible red light
Light source	PinPoint LED [2]
Light spot size (distance)	Ø 45 mm (1.5 m)
Wave length	650 nm
Adjustment	Single teach-in button

[1] Reflector PL80A.
[2] Average service life: 100,000 h at T_U = +25 °C.

Mechanics/electronics

Supply voltage	10 V DC ... 30 V DC [1]
Ripple	< 5 V$_{pp}$ [2]
Power consumption	20 mA [3]
Switching output	NPN
Switching mode	Dark switching
Output current I$_{max.}$	≤ 100 mA
Response time	< 0.5 ms [4]
Switching frequency	1,000 Hz [5]
Connection type	Cable, 3-wire, 2 m [6]
Cable material	PVC
Conductor cross-section	0.14 mm²
Cable diameter	Ø 3.4 mm
Circuit protection	A [7] C [8] D [9]
Protection class	III
Weight	30 g
Polarisation filter	✓
Housing material	Plastic, ABS
Optics material	Plastic, PMMA
Enclosure rating	IP67 IP66
Ambient operating temperature	–40 °C ... +60 °C
Ambient storage temperature	–40 °C ... +75 °C
UL File No.	NRKH.E181493 & NRKH7.E181493

[1] Limit values.

[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] Do not bend below 0 °C.

[7] A = V$_S$ connections reverse-polarity protected.

[8] C = interference suppression.
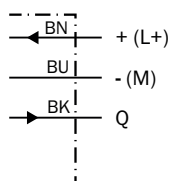
[9] D = outputs overcurrent and short-circuit protected.

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

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ECl@ss 9.0	27270902
ETIM 5.0	EC002717
ETIM 6.0	EC002717
UNSPSC 16.0901	39121528

Connection diagram

Cd-043

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BN ──── + (L+)
BU ──── - (M)
BK ──── Q
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Light spot size

Ø 7 mm   Ø 60 mm   Ø 160 mm
Ø 25 mm   Ø 120 mm

Sensor

0   1,000   2,000   3,500   5,000

Distance [mm]
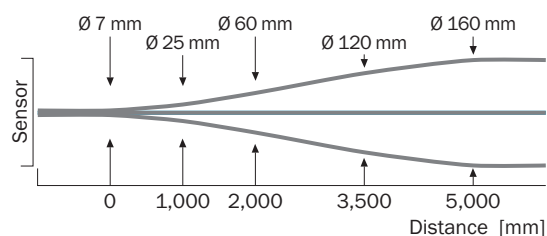
Sensing range diagram

WL4S-3, WLG4S-3, 5 m

	0			3.0			5.0
①	0			3.0			5.0
②	0		2.0		4.0		
③	0	1.3	2.2				
④	0	1.2	1.6				
⑤	0 0.5	0.8					

0   1   2   3   4   5

Distance in m (feet)
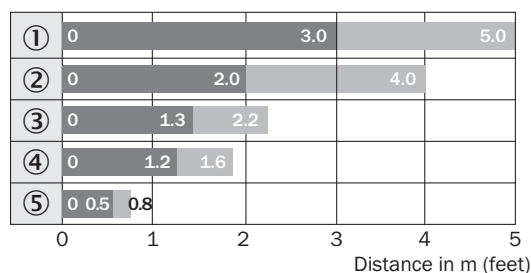
■ Sensing range   ■ Sensing range max.

① Reflector PL80A
② Reflector PL40A
③ Reflector PL20A
④ PL10F reflector
⑤ Reflective tape REF-IRF-56

Dimensional drawing (Dimensions in mm (inch))

WL4S-3, WLG4S-3, single teach-in button
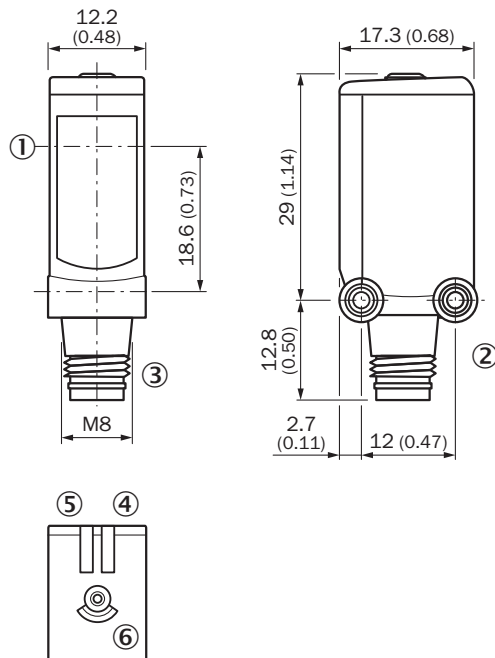
① Center of optical axis
② Threaded mounting hole M3
③ Connection
④ LED indicator green: Supply voltage active
⑤ Orange LED indicator: status of received light beam
⑥ Teach-in button

Recommended accessories

Other models and accessories → www.sick.com/W4S-3

	Brief description	Type	Part no.
Universal bar clamp systems			
	Plate N08 for universal clamp bracket, Zinc plated steel (sheet), Zinc die cast (clamping bracket), Universal clamp (5322626), mounting hardware	BEF-KHS-N08	2051607
Device protection (mechanical)			
	Safety bracket for floor mounting, Stainless steel 1.4571, mounting hardware included	BEF-SW-W4S	2051497
Reflectors			
	Rectangular, screw connection, 47 mm x 47 mm, PMMA/ABS, Screw-on, 2 hole mounting	P250	5304812
	Rectangular, screw connection, 38 mm x 15 mm, PMMA/ABS, Screw-on, 2 hole mounting	PL20A	1012719

	Brief description	Type	Part no.
	Rectangular, screw connection, 56 mm x 28 mm, PMMA/ABS, Screw-on, 2 hole mounting	PL30A	1002314
	Rectangular, screw connection, 37 mm x 56 mm, PMMA/ABS, Screw-on, 2 hole mounting	PL40A	1012720
	Rectangular, screw connection, 80 mm x 80 mm, PMMA/ABS, Screw-on, 2 hole mounting	PL80A	1003865
	Fine triple reflector, screw connection, suitable for laser sensors, 18 mm x 18 mm, PMMA/ABS, Screw-on, 2 hole mounting	PL10F	5311210
	Self-adhesive	REF-IRF-56	5314244
	Round, plugable for metal plates, PMMA/ABS, Plug-in for sheets	PL22-3	1004488

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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