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DATA SHEET

WL4S-3P1032HS01

W4
Photoelectric sensors

SICK Sensor Intelligence

PHOTOELECTRIC SENSORS

WL4S-3P1032HS01

ORDERING INFORMATION

Type	part no.
WL4S-3P1032HS01	1050684

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 ... 5 m ¹⁾	
Sensing range	0 m ... 3 m ¹⁾	
Polarisation filter	Yes	
Emitted beam	Light source	PinPoint LED ²⁾
	Type of light	Visible red light
	Light spot size (distance)	Ø 45 mm (1.5 m)
Key LED figures	Wave length	650 nm
	Adjustment	Single teach-in button
Special features	Connection cable 2 m	
Special applications	Hygienic and washdown zones	
Housing design	Hygiene	

¹⁾ Reflector PL80A.

²⁾ Average service life: 100,000 h at T_u = +25 °C.

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	Type PNP Switching mode Light/dark switching Output current I_{max} ≤ 100 mA Response time < 0.5 ms ⁴⁾ Switching frequency 1,000 Hz ⁵⁾
Circuit protection	A ⁶⁾ B ⁷⁾ C ⁸⁾
Special feature	D12 adapter shaft

¹⁾ Limit values, reverse-polarity protected, operation in short-circuit protected network: max. 8 A.

²⁾ May not fall below or exceed U_V tolerances.

³⁾ Without load.

⁴⁾ Signal transit time with resistive load.

⁵⁾ With light/dark ratio 1:1.

⁶⁾ A = V_B connections reverse-polarity protected.

⁷⁾ B = inputs and output reverse-polarity protected.

⁸⁾ C = interference suppression.

MECHANICS

Housing	Rectangular
Design detail	Slim
Dimensions (W x H x D)	15.25 mm x 63.2 mm x 22.15 mm
Connection	Cable, 4-wire, 5 m ¹⁾
Connection detail	Conductor size 0.14 mm ² Length of cable (L) 5 m ¹⁾
Material	Housing Metal, Stainless steel V4A (1.4404, 316L) Front screen Plastic, PMMA Cable Plastic, PVC
Weight	125 g

¹⁾ Do not bend below 0 °C.

AMBIENT DATA

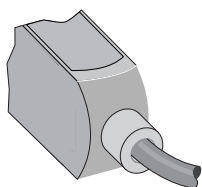
Enclosure rating	IP66 IP67 IP68 IP69K
Ambient operating temperature	-30 °C ... +70 °C ¹⁾ -30 °C ... +60 °C
Ambient temperature, storage	-30 °C ... +75 °C
UL File No.	FDA, UL No. NRKH.E181493 & cUL No. NRKH7.E181493

¹⁾ At $UV \leq 24$ V and $IA < 30$ mA.

CERTIFICATES

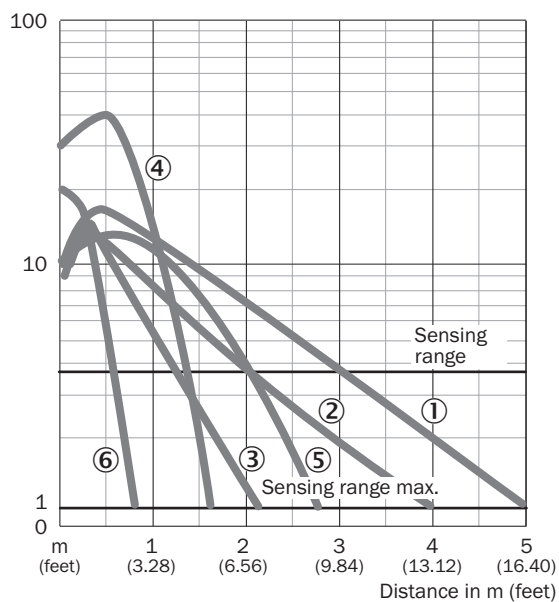
EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
Moroccan declaration of conformity	✓
China RoHS	✓
ECOLAB certificate	✓
Photobiological safety (DIN EN 62471) certificate	✓

CONNECTION TYPE



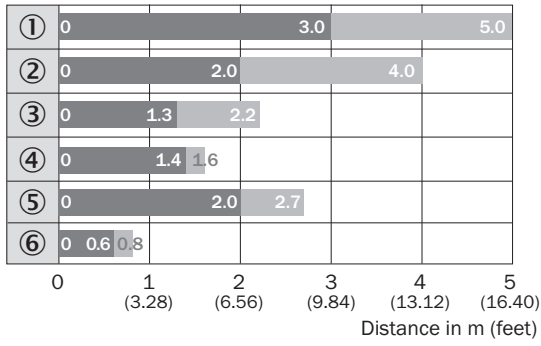
CHARACTERISTIC CURVE WL4S-3, WLG4S-3, 5 M

Operating reserve



- ① Reflector PL80A
- ② Reflector PL40A
- ③ Reflector PL20A
- ④ PL10F reflector
- ⑤ Reflector P250 CHEM
- ⑥ Reflective tape REF-IRF-56

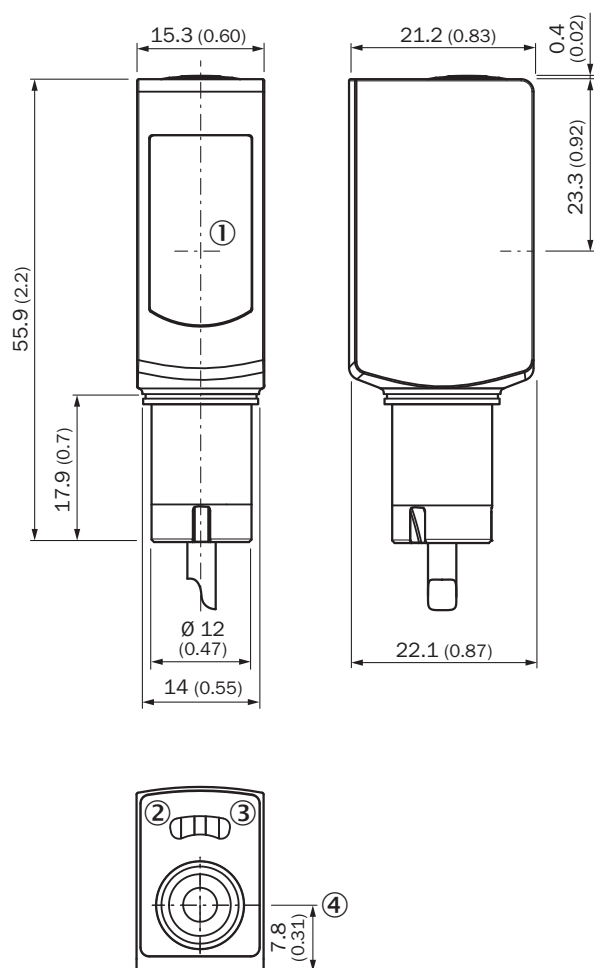
SENSING RANGE DIAGRAM WL4S-3, WLG4S-3, 5 M



■ Sensing range ■ Sensing range max.

- ① Reflector PL80A
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DIMENSIONAL DRAWING WL4SL-3, WL4SLG-3, WSE4SL-3, CABLE



Dimensions in mm (inch)

- 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

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/1050684



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SICK AT A GLANCE

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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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