

SICK.COM



DATA SHEET

WL4S-3F1330

W4
Photoelectric sensors

SICK Sensor Intelligence

PHOTOELECTRIC SENSORS

WL4S-3F1330

ORDERING INFORMATION

Type	part no.
WL4S-3F1330	1042068

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 m ¹⁾	
Sensing range	0 m ... 2.5 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	None	

¹⁾ Reflector PL80A.

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

SAFETY-RELATED PARAMETERS

MTTF _D	3,027 years
DC _{avg}	0 %
T _M (mission time)	20 years

ELECTRONICS

Supply voltage U_B	10 V DC ... 30 V DC ¹⁾
Ripple	< 5 V _{pp} ²⁾
Current consumption	20 mA ³⁾
Protection class	III
Digital output	Type PNP Switching mode Dark switching Output current I_{max} ≤ 100 mA Response time < 0.5 ms ⁴⁾ Switching frequency 1,000 Hz ⁵⁾
Circuit protection	A ⁶⁾ C ⁷⁾ D ⁸⁾

¹⁾ Limit values.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_V connections reverse-polarity protected.⁷⁾ C = interference suppression.⁸⁾ D = outputs overcurrent and short-circuit protected.**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, 3-wire, 2 m ¹⁾
Connection detail	Conductor size 0.14 mm ² Cable diameter Ø 3.4 mm Length of cable (L) 2 m ¹⁾
Material	Housing Plastic, ABS Front screen Plastic, PMMA Cable Plastic, PVC
Weight	30 g

¹⁾ Do not bend below 0 °C.**AMBIENT DATA**

Enclosure rating	IP67 IP66
Ambient operating temperature	-40 °C ... +60 °C
Ambient temperature, storage	-40 °C ... +75 °C
UL File No.	NRKH.E181493 & NRKH7.E181493

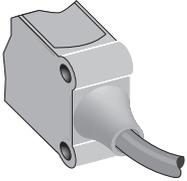
CERTIFICATES

EU declaration of conformity	✓
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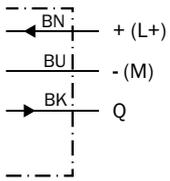
PHOTOELECTRIC SENSORS - WL4S-3F1330

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

CONNECTION TYPE

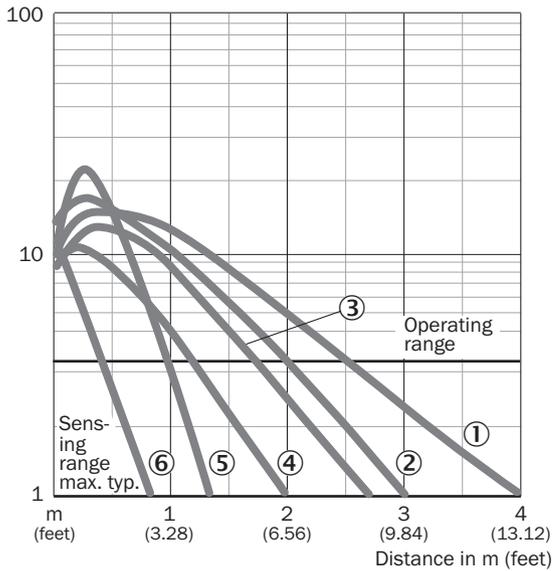


CONNECTION DIAGRAM CD-043



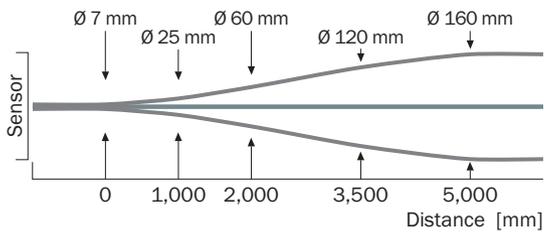
CHARACTERISTIC CURVE WL4S-3

Operating reserve

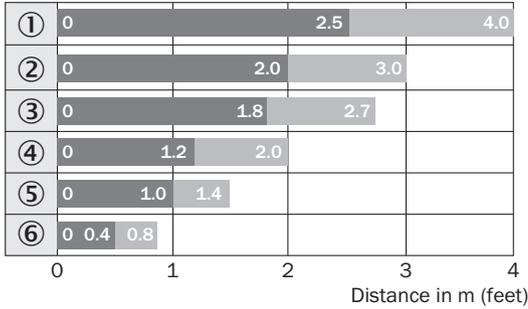


- ① Reflector PL80A
- ② Reflector P250F
- ③ Reflector PL40A
- ④ Reflector PL20F
- ⑤ PL10F reflector
- ⑥ Reflective tape REF-IRF-56

LIGHT SPOT SIZE



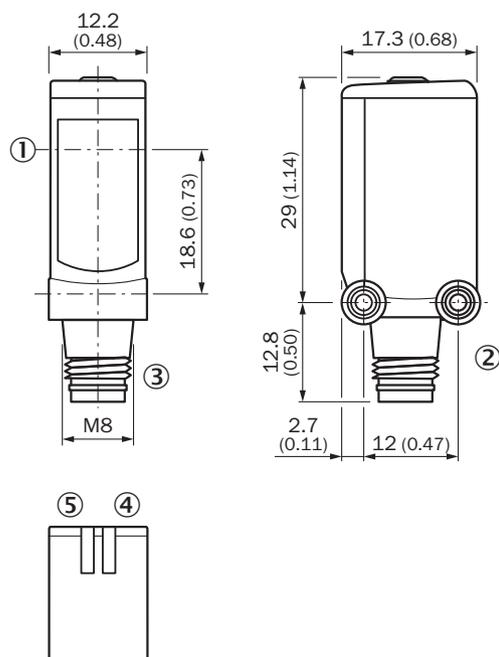
SENSING RANGE DIAGRAM WL4S-3, WLG4S-3, 4 M



■ Sensing range ■ Sensing range max.

- ① Reflector PL80A
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- ③ Reflector PL40A
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DIMENSIONAL DRAWING WL4S-3, WSE4S-3, POTENTIOMETER



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

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/1042068



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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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