



DATA SHEET

WL4-3F3130

W4
Photoelectric sensors

SICK Sensor Intelligence



Illustration may differ

PHOTOELECTRIC SENSORS

WL4-3F3130

ORDERING INFORMATION

Type	part no.
WL4-3F3130	1028153

Further device versions and accessories at www.sick.com/W4

DETAILED TECHNICAL DATA

FEATURES

Functional principle	Photoelectric retro-reflective sensor	
Functional principle detail	With minimum distance to reflector (dual lens system)	
Sensing range max.	0.01 m ... 4.5 m ¹⁾	
Sensing range	0.02 m ... 3.5 m ¹⁾	
Polarisation filter	Yes	
Emitted beam	Light source	PinPoint LED ²⁾
	Type of light	Visible red light
	Light spot size (distance)	Ø 75 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.

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	<div>Type</div> <div>PNP</div> <div>Switching mode</div> <div>Dark switching</div> <div>Output current I_{max}</div> <div>≤ 100 mA</div> <div>Response time</div> <div>< 0.5 ms ⁴⁾</div> <div>Switching frequency</div> <div>1,000 Hz ⁵⁾</div>
Circuit protection	<div>A ⁶⁾</div> <div>C ⁷⁾</div> <div>D ⁸⁾</div>

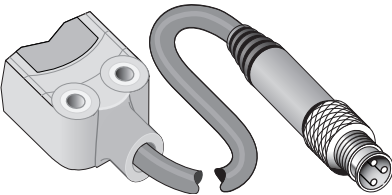
¹⁾ Limit values.²⁾ May not fall below or exceed U_V tolerances.³⁾ Without load.⁴⁾ Signal transit time with resistive load.⁵⁾ With light/dark ratio 1:1.⁶⁾ A = V_G connections reverse-polarity protected.⁷⁾ C = interference suppression.⁸⁾ D = outputs overcurrent and short-circuit protected.**MECHANICS**

Housing	Rectangular
Design detail	Flat
Dimensions (W x H x D)	16 mm x 39.5 mm x 12 mm
Connection	Cable with connector M8, 3-pin ¹⁾
Connection detail	<div>Conductor size</div> <div>0.14 mm²</div> <div>Cable diameter</div> <div>Ø 3.4 mm</div> <div>Length of cable (L)</div> <div>100 mm ¹⁾</div>
Material	<div>Housing</div> <div>Plastic, ABS</div> <div>Front screen</div> <div>Plastic, PMMA</div> <div>Cable</div> <div>Plastic, PVC</div>
Weight	30 g

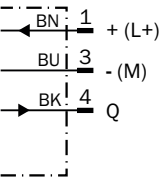
¹⁾ Do not bend below 0 °C.**AMBIENT DATA**

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

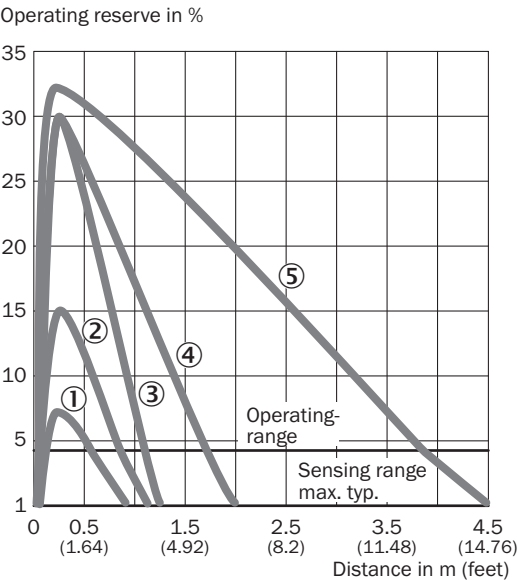
CONNECTION TYPE



CONNECTION DIAGRAM CD-045

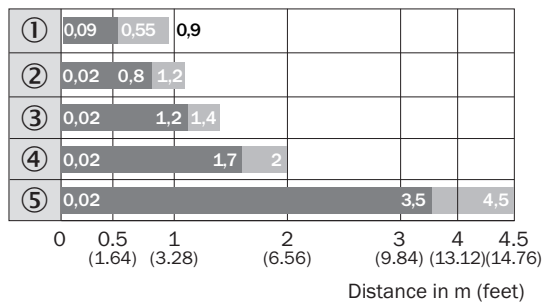


CHARACTERISTIC CURVE WLG4-3 WITH POLARISATION FILTER



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

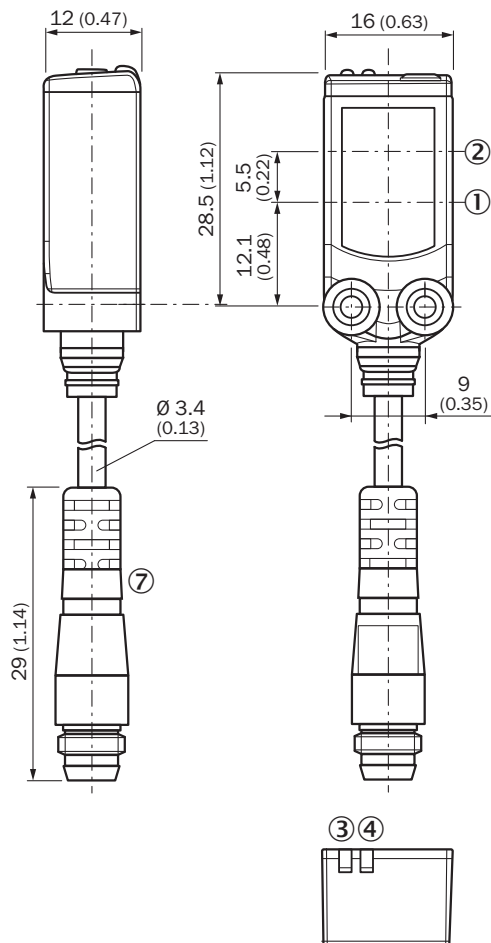
SENSING RANGE DIAGRAM WLG4-3 WITH POLARISATION FILTER



■ Sensing range ■ Sensing range max.

- ① Reflective tape REF-IRF-56
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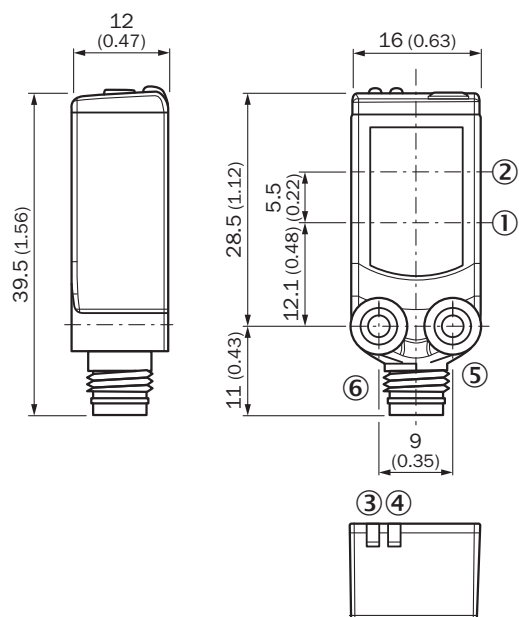
DIMENSIONAL DRAWING WL4-3



Dimensions in mm (inch)

- ① Center of optical axis, sender
- ② Center of optical axis, receiver
- ③ Orange LED indicator: status of received light beam
- ④ LED indicator green: Supply voltage active
- ⑦ Connection

DIMENSIONAL DRAWING WL4-3



Dimensions in mm (inch)

- ① Center of optical axis, sender
- ② Center of optical axis, receiver
- ③ Orange LED indicator: status of received light beam
- ④ LED indicator green: Supply voltage active
- ⑤ Threaded mounting hole M3
- ⑥ Connection

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/1028153



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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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