



DATA SHEET

WS/WE2S-F113

W2
Photoelectric sensors

SICK

Sensor Intelligence



Illustration may differ

PHOTOELECTRIC SENSORS

WS/WE2S-F113

ORDERING INFORMATION

Type	part no.
WS/WE2S-F113	1022668

Further device versions and accessories at www.sick.com/W2

DETAILED TECHNICAL DATA

FEATURES

Functional principle	Through-beam photoelectric sensor
Dimensions (W x H x D)	7.6 mm x 25.1 mm x 12.5 mm
Housing design (light emission)	Rectangular
Sensing range max.	0 m ... 1.2 m
Type of light	Visible red light
Light source	PinPoint LED ¹⁾
Light spot size (distance)	Ø 10 mm (100 mm)
Wave length	660 nm
Adjustment	None
Part number of individual components	2025461 WS2S-D113 2025462 WE2S-F113

¹⁾ Average service life: 75,000 h at TU = +25 °C.

MECHANICS/ELECTRONICS

Supply voltage U _B	10 V DC ... 30 V DC ¹⁾
Ripple	< 5 V _{pp} ²⁾
Switching output	PNP

¹⁾ Limit values.

²⁾ May not fall below or exceed U_I tolerances.

³⁾ Signal transit time with resistive load.

⁴⁾ With light/dark ratio 1:1.

⁵⁾ Do not bend below 0 °C.

⁶⁾ A = V_I connections reverse-polarity protected.

⁷⁾ C = interference suppression.

⁸⁾ D = outputs overcurrent and short-circuit protected.

Switching mode	Dark switching
Output current I _{max}	≤ 50 mA
Response time	< 2.4 ms ³⁾
Switching frequency	200 Hz ⁴⁾
Connection type	Cable, 3-wire, 2 m ⁵⁾
Cable material	Plastic, PVC
Cable diameter	Ø 2.4 mm
Circuit protection	A ⁶⁾ C ⁷⁾ D ⁸⁾
Weight	36 g
Reverse polarity protection	✓
Short-circuit protection	✓
Housing material	Plastic, ABS
Optics material	Plastic, PMMA
Enclosure rating	IP67 IP69K
Ambient operating temperature	-20 °C ... +50 °C
Ambient temperature, storage	-40 °C ... +75 °C
Part number of individual components	2025461 WS2S-D113 2025462 WE2S-F113

¹⁾ Limit values.

²⁾ May not fall below or exceed U_v tolerances.

³⁾ Signal transit time with resistive load.

⁴⁾ With light/dark ratio 1:1.

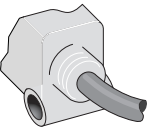
⁵⁾ Do not bend below 0 °C.

⁶⁾ A = V_s connections reverse-polarity protected.

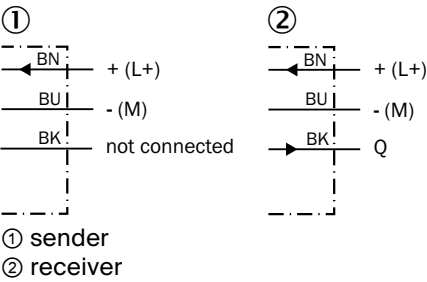
⁷⁾ C = interference suppression.

⁸⁾ D = outputs overcurrent and short-circuit protected.

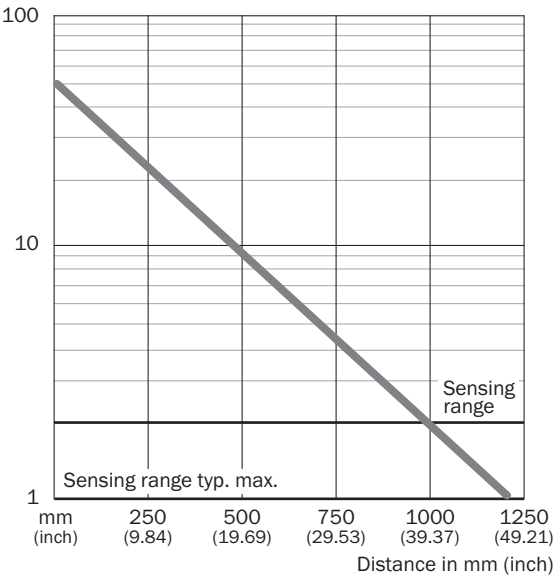
CONNECTION TYPE WX2S-X1XX



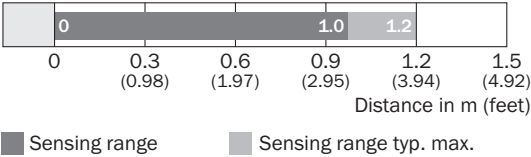
CONNECTION DIAGRAM CD-049



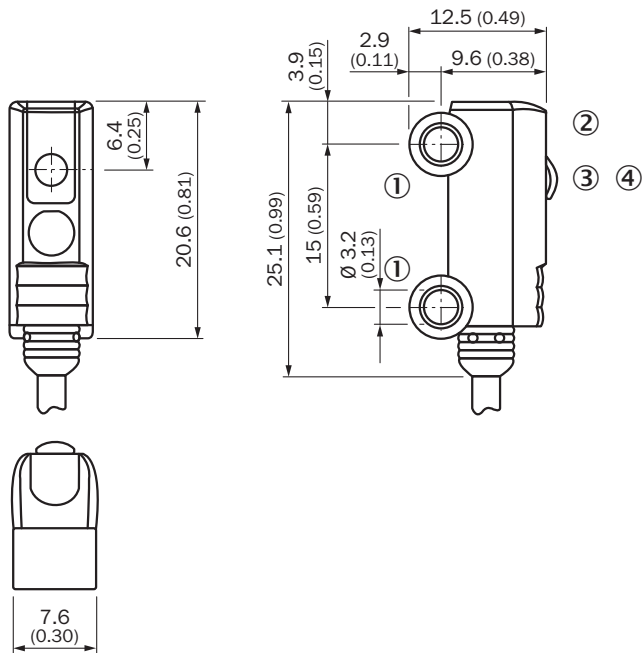
CHARACTERISTIC CURVE WS/WE2S



SENSING RANGE DIAGRAM WS/WE2S



DIMENSIONAL DRAWING WS/WE2S



Dimensions in mm (inch)

- ① Mounting hole, $\varnothing$ approx. 3.1 mm
- ② Receive indicator
- ③ Optical axis, receiver
- ④ Optical axis, sender

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/1022668



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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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