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DATA SHEET

WS/WE100-2P1439

W100-2
Photoelectric sensors

SICK Sensor Intelligence



Illustration may differ

PHOTOELECTRIC SENSORS

WS/WE100-2P1439

ORDERING INFORMATION

Type	part no.
WS/WE100-2P1439	6052366

Further device versions and accessories at www.sick.com/W100-2

DETAILED TECHNICAL DATA

FEATURES

Functional principle	Through-beam photoelectric sensor
Dimensions (W x H x D)	11 mm x 31 mm x 20 mm
Housing design (light emission)	Rectangular
Sensing range max.	0 m ... 33 m
Sensing range	0 m ... 20 m
Type of light	Visible red light
Light source	LED [1]
Light spot size (distance)	Ø 850 mm (12 m)
Wave length	632 nm
Adjustment	Potentiometer, 270° (Sensitivity)

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

MECHANICS/ELECTRONICS

Supply voltage U_B	10 V DC ... 30 V DC [1]
Ripple	± 10 % [2]
Power consumption, sender	≤ 15 mA [3]
Power consumption, receiver	≤ 20 mA [3]
Switching output	PNP
Switching mode	Light/dark switching
Switching mode selector	Selectable via light/dark rotary switch
Signal voltage PNP HIGH/LOW	U_V - 1,8 V / ca. 0 V
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	Plastic, PVC
Conductor cross section	0.18 mm²
Circuit protection	A [7] B [8] D [9]
Protection class	III
Housing material	Plastic, ABS/PC/POM
Optics material	Plastic, PMMA
Enclosure rating	IP67
Items supplied	2 Stainless steel mounting brackets (1.4301/304) BEF-W100-A
Ambient operating temperature	–25 °C ... +55 °C
Ambient temperature, storage	–40 °C ... +70 °C

[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] Do not bend below 0 °C.

[7] A = V_S connections reverse-polarity protected.

[8] B = output reverse-polarity protected.

[9] D = outputs overcurrent and short-circuit protected.

SAFETY-RELATED PARAMETERS

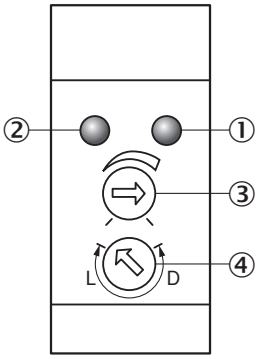
$MTTF_D$	565 years
DC_{avg}	0 %

CERTIFICATES

EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
Moroccan declaration of conformity	✓
China RoHS	✓

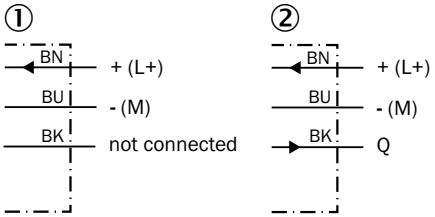
China Compulsory Product Certification (CCC) exempt	✓
cRUus certificate	✓
Photobiological safety (DIN EN 62471) certificate	✓

ADJUSTMENTS W100-2



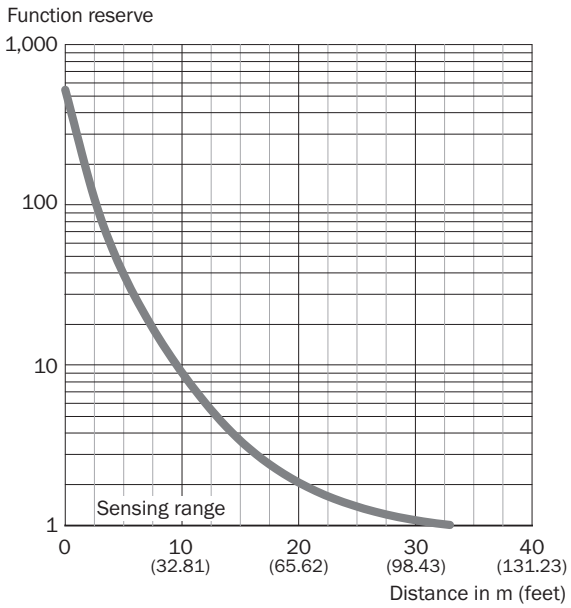
① LED indicator orange: switching output active
② LED indicator green: power on
③ Sensing range adjustment: potentiometer
④ Light/ dark rotary switch: L = light switching, D = dark switching

CONNECTION DIAGRAM CD-049

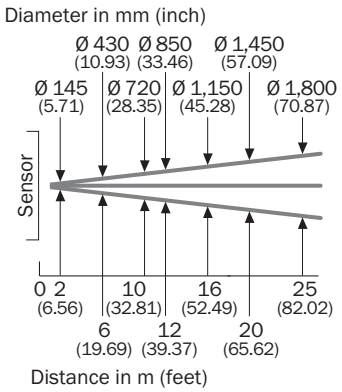


① sender
② receiver

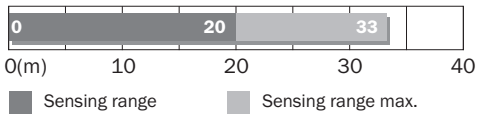
CHARACTERISTIC CURVE WS/WE100-2



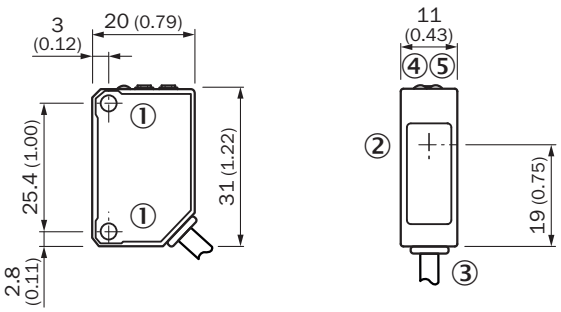
LIGHT SPOT SIZE



SENSING RANGE DIAGRAM WS/WE100-2



DIMENSIONAL DRAWING



Dimensions in mm (inch)
① Threaded mounting hole M3
② Center of optical axis, sender (WS),
② Center of optical axis, receiver (WE)
③ Connection
④ LED indicator orange: switching output active
⑤ LED indicator green: power on

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/6052366

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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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