



WSE250-2P1131

W250-2

PRODUCT PORTFOLIO

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

Type	Part no.
WSE250-2P1131	6044703

Included in delivery: BEF-W250 (1)

Other models and accessories → www.sick.com/W250-2

Detailed technical data

Features

Sensor/ detection principle	Through-beam photoelectric sensor
Dimensions (W x H x D)	20 mm x 65 mm x 43.9 mm
Housing design (light emission)	Rectangular
Sensing range max.	0 m ... 50 m
Sensing range	0 m ... 40 m
Type of light	Visible red light
Light source	LED ¹⁾
Light spot size (distance)	Ø 0.6 m (20 m)
Angle of dispersion	Approx. 2°
Adjustment	Potentiometer, 2 turns ²⁾

¹⁾ Average service life: 100,000 h at T_J = +25 °C.

²⁾ With position indicator.

Mechanics/electronics

Supply voltage	10 V DC ... 30 V DC ¹⁾
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¹⁾ Limit values when operated in short-circuit protected network: max. 8 A.

²⁾ May not exceed or fall below 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 = inputs and output reverse-polarity protected.

⁹⁾ C = interference suppression.

¹⁰⁾ D = outputs overcurrent and short-circuit protected.

¹¹⁾ The AC/DC devices comply with the Radio Safety Requirements for the industrial sector (Radio Safety Class A). They may cause radio interference if used in a residential area.

Ripple	$\leq 5 V_{pp}$ ²⁾
Power consumption, sender	20 mA ³⁾
Power consumption, receiver	20 mA ³⁾
Switching output	PNP
Switching mode	Light/dark switching
Switching mode selector	Selectable via L/D control cable
Output current I_{max}	≤ 100 mA
Response time	≤ 0.5 ms ⁴⁾
Switching frequency	1,000 Hz ⁵⁾
Angle of reception	20°
Connection type	Cable, 4-wire, 2 m ⁶⁾
Cable material	PVC
Conductor cross-section	0.18 mm ²
Cable diameter	Ø 3.8 mm
Circuit protection	A ⁷⁾ B ⁸⁾ C ⁹⁾ D ¹⁰⁾
Protection class	III
Weight	300 g
Housing material	Plastic, ABS
Optics material	Plastic, PMMA
Enclosure rating	IP67
Items supplied	BEF-W250 mounting bracket
EMC	EN 60947-5-2 ¹¹⁾
Ambient operating temperature	-25 °C ... +55 °C
Ambient storage temperature	-40 °C ... +70 °C
UL File No.	NRKH2.E300503 & NRKH8.E300503

1) Limit values when operated in short-circuit protected network: max. 8 A.

2) May not exceed or fall below 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 = inputs and output reverse-polarity protected.

9) C = interference suppression.

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

11) The AC/DC devices comply with the Radio Safety Requirements for the industrial sector (Radio Safety Class A). They may cause radio interference if used in a residential area.

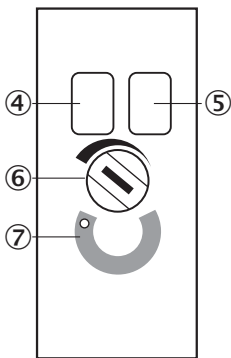
Classifications

ECl@ss 5.0	27270901
ECl@ss 5.1.4	27270901
ECl@ss 6.0	27270901

ECl@ss 6.2	27270901
ECl@ss 7.0	27270901
ECl@ss 8.0	27270901
ECl@ss 8.1	27270901
ECl@ss 9.0	27270901
ETIM 5.0	EC002716
ETIM 6.0	EC002716
UNSPSC 16.0901	39121528

Adjustments possible

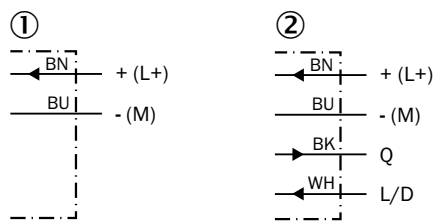
WSE250-2, sender



- ④ LED indicator green: Stability indicator
- ⑤ LED indicator yellow: Status of received light beam
- ⑥ Sensitivity control: potentiometer
- ⑦ Position indicator for sensitivity setting (270°)

Connection diagram

Cd-058

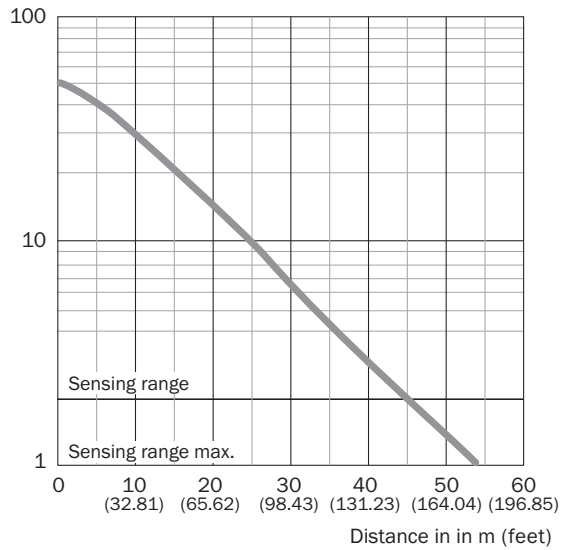


- ① Sender
- ② Receiver

Characteristic curve

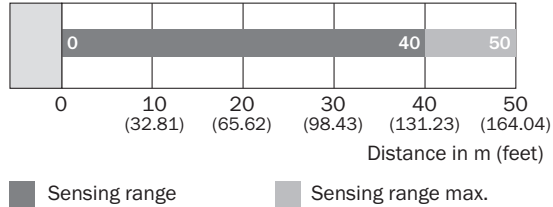
WSE250-2

Operating reserve



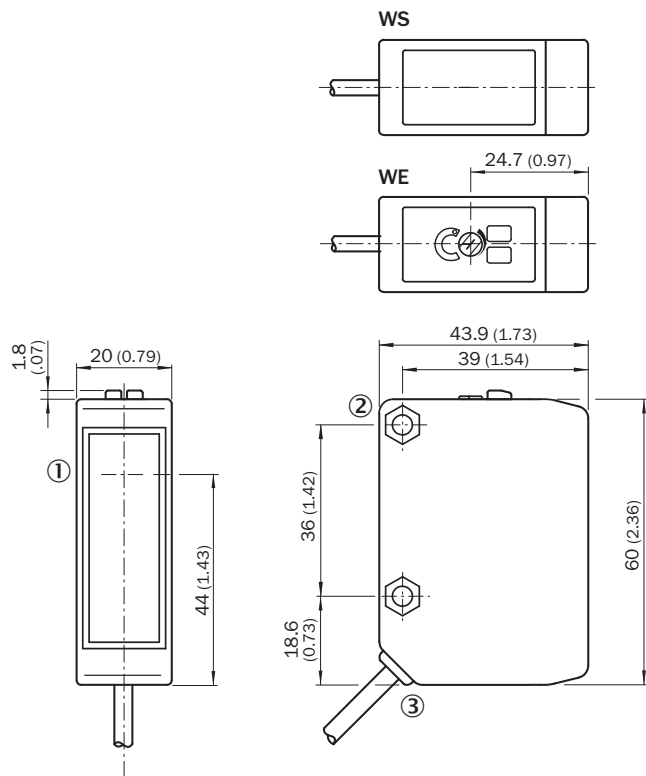
Sensing range diagram

WSE250-2



Dimensional drawing (Dimensions in mm (inch))




WSE250-2, DC, cable




- ① Center of the optical axis, sender (WS 250), receiver (WE 250)
- ② Mounting hole \varnothing 4.2 mm, for M4 hexagon nuts on both sides
- ③ Connection cable

Recommended accessories

Other models and accessories → www.sick.com/W250-2

	Brief description	Type	Part no.
Universal bar clamp systems			
	Plate N02 for universal clamp bracket, Zinc plated steel (sheet), Zinc die cast (clamping bracket), Universal clamp (5322626), mounting hardware	BEF-KHS-N02	2051608
Mounting brackets and plates			
	Mounting bracket, steel, zinc coated, mounting hardware included	BEF-W250	5305850
Plug connectors and cables			
	Head A: female connector, M12, 4-pin, straight Head B: - Cable: unshielded	DOS-1204-G	6007302

	Brief description	Type	Part no.
	Head A: female connector, M12, 4-pin, angled Head B: - Cable: unshielded	DOS-1204-W	6007303

SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

For us, that is “Sensor Intelligence.”

WORLDWIDE PRESENCE:

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