



WS/WE250-N440

W250

COMPACT PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

Type	Part no.
WS/WE250-N440	6026265

Included in delivery: BEF-W250 (1)

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

Detailed technical data

Features

Sensor/ detection principle	Through-beam photoelectric sensor
Dimensions (W x H x D)	20 mm x 65 mm x 43 mm
Housing design (light emission)	Rectangular
Sensing range max.	0 m ... 25 m
Sensing range	0 m ... 20 m
Type of light	Visible red light
Light source	LED ¹⁾
Light spot size (distance)	Ø 1.5 m (20 m)
Angle of dispersion	4°
Adjustment	None

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

Mechanics/electronics

Supply voltage	10 V DC ... 30 V DC ¹⁾
Ripple	≤ 5 V _{pp} ²⁾

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⁾ Rotatable through 90°.

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⁾ Reference voltage: 50 V DC.

Power consumption, sender	20 mA ³⁾
Power consumption, receiver	35 mA ³⁾
Switching output	NPN
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	Male connector M12, 4-pin ⁶⁾
Circuit protection	A ⁷⁾ B ⁸⁾ C ⁹⁾ D ¹⁰⁾
Protection class	II ¹¹⁾
Weight	140 g
Housing material	Plastic, ABS
Optics material	Plastic, PC
Enclosure rating	IP67
Items supplied	BEF-W250 mounting bracket
Ambient operating temperature	-25 °C ... +55 °C
Ambient storage temperature	-40 °C ... +70 °C
UL File No.	NRNT2.E128350 & NRNT8.E128350

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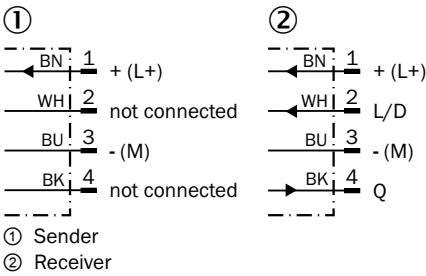
Classifications

ECI@ss 5.0	27270901
ECI@ss 5.1.4	27270901
ECI@ss 6.0	27270901
ECI@ss 6.2	27270901
ECI@ss 7.0	27270901
ECI@ss 8.0	27270901
ECI@ss 8.1	27270901
ECI@ss 9.0	27270901

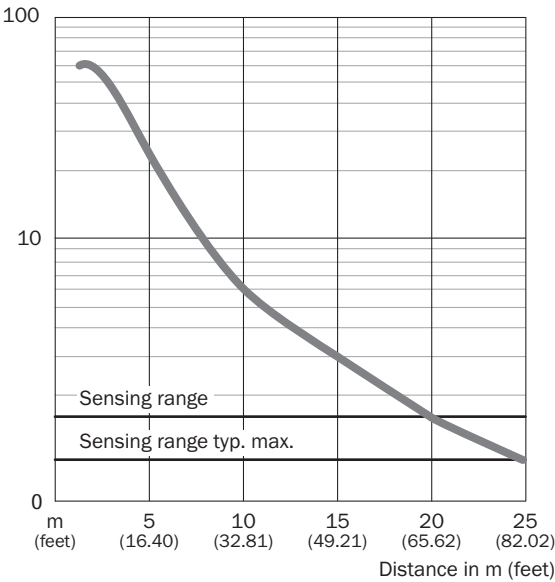
ETIM 5.0	EC002716
ETIM 6.0	EC002716
UNSPSC 16.0901	39121528

Connection diagram

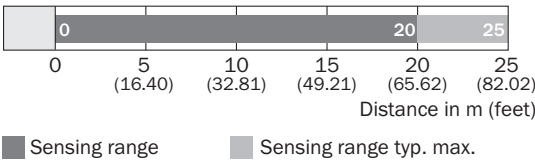
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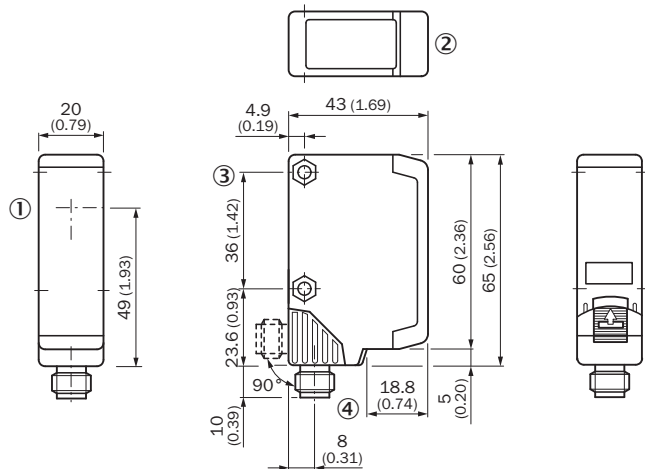
Characteristic curve



Sensing range diagram





Dimensional drawing (Dimensions in mm (inch))



- ① Center of the optical axis, sender (WS250), receiver (WE250)
- ② Red LED signal strength indicator (only receiver WE250)
- ③ Mounting hole \varnothing 4.2 mm, for M4 hexagon nuts on both sides
- ④ Connection cable or M12 connector - 4-pin; Connector position rotatable by 90° (V > H); V: Vertikal final position; H: Horizontal final position, can be locked with slider

Recommended accessories

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

	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

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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