



WE2000-B4100

W2000

COMPACT PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

Type	Part no.
WE2000-B4100	7024004

Other models and accessories → www.sick.com/W2000

Detailed technical data

Features

Dimensions (W x H x D)	45 mm x 73.7 mm x 48.6 mm
Housing design (light emission)	Rectangular
Sensing range max.	50 m
Sensing range	≤ 50 m
Focus	Approx. 1.3°
Type of light	Infrared light
Light source	LED ¹⁾
Light spot size (distance)	Ø 320 mm (14 m)
Angle of dispersion	Approx. 1.3°
Adjustment	Potentiometer
Special features	Receiver

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

Mechanics/electronics

Supply voltage	10 V DC ... 30 V DC ¹⁾
Ripple	< 5 V ²⁾
Current consumption	80 mA ³⁾
Switching output	PNP NPN
Output function	Complementary
Switching mode	Light/dark switching
Switching mode selector	Selectable via light/dark selector

¹⁾ Limit values.

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⁾ A = V_S connections reverse-polarity protected.

⁷⁾ C = interference suppression.

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

⁹⁾ Reference voltage: 50 V DC.

Signal voltage PNP HIGH/LOW	Approx. $V_S - 2.0\text{ V} / 0\text{ V}$
Output current I_{\max}	$\leq 100\text{ mA}$
Response time	$\leq 1\text{ ms}^{4)}$
Switching frequency	$500\text{ Hz}^{5)}$
Connection type	Male connector M12, 4-pin
Circuit protection	A ⁶⁾ C ⁷⁾ D ⁸⁾
Protection class	II ⁹⁾
Weight	150 g
Housing material	Plastic, Glassfibre reinforced plastic
Enclosure rating	IP67
Ambient operating temperature	$-25\text{ °C} \dots +40\text{ °C}$
Ambient temperature, storage	$-40\text{ °C} \dots +70\text{ °C}$
UL File No.	242366 & cUL No. NRKH7.E147756

1) Limit values.

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) A = V_S connections reverse-polarity protected.

7) C = interference suppression.

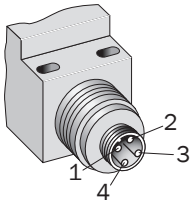
8) D = outputs overcurrent and short-circuit protected.

9) Reference voltage: 50 V DC.

Classifications

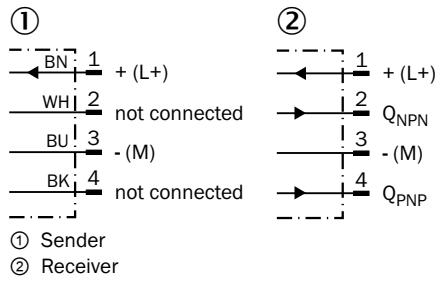
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eCl@ss 12.0	27270901
ETIM 5.0	EC002716
ETIM 6.0	EC002716
ETIM 7.0	EC002716
ETIM 8.0	EC002716
UNSPSC 16.0901	39121528

Connection type



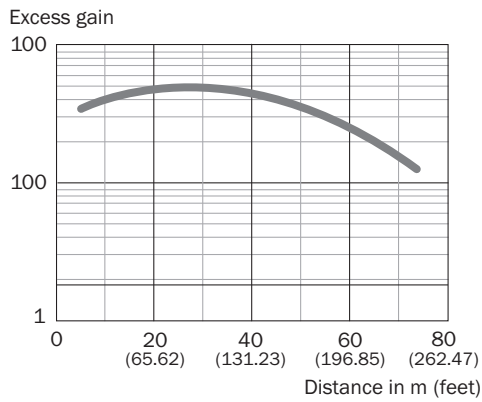
Connection diagram

Cd-215



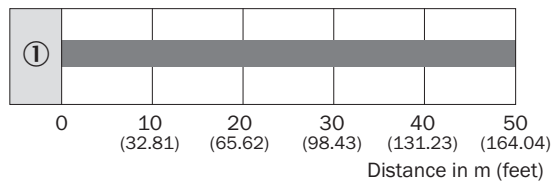
Characteristic curve

WS/WE2000



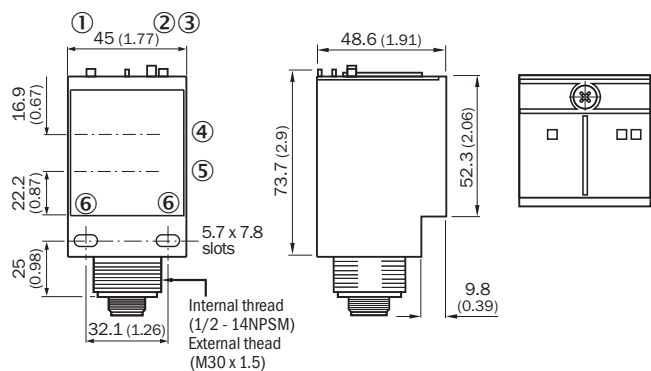
Sensing range diagram

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■ Sensing range



Dimensional drawing (Dimensions in mm (inch))



- ① LED indicator green: Supply voltage active
- ② Status indicator LED red: signal strength
- ③ Status indicator LED, yellow: Output active
- ④ Center of emitter optical axis
- ⑤ Center of receiver optical axis
- ⑥ Mounting hole \varnothing 0.2 mm x 0.8 mm

Recommended accessories

Other models and accessories → www.sick.com/W2000

	Brief description	Type	Part no.
Plug connectors and cables			
	Head A: female connector, M12, 4-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 5 m	YF2A14-050VB3XLEAX	2096235
	Head A: male connector, M12, 4-pin, straight Cable: unshielded	STE-1204-G	6009932

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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:

Contacts and other locations –www.sick.com