Product data sheet

WT2000-B4100

W2000

COMPACT PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.

Illustration may differ

Ordering information

Type	Part no.
WT2000-B4100	7024001

Detailed technical data

Features

Sensor/ detection principle	Photoelectric proximity sensor
Dimensions (W x H x D)	45 mm x 73.7 mm x 48.6 mm
Housing design (light emission)	Rectangular
Sensing range max.	0 m ... 3.5 m [1]
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Type of light	Infrared light
Light source	LED [2]
Light spot size (distance)	Ø 55 mm (2.5 m)
Angle of dispersion	Approx. 1.3°
Wave length	880 nm
Adjustment	Potentiometer adjustable via sensitivity adjustment

[1] Object with 90 % reflectance (referred to standard white, DIN 5033).
[2] 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 [2]
Power consumption	80 mA [3]
Switching output	PNP NPN
Output function	Complementary

[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.

Switching mode	Light/dark switching
Switching mode selector	Selectable via light/dark selector
Signal voltage PNP HIGH/LOW	Approx. VS – 2.0 V / 0 V
Output current $I_{max.}$	100 mA
Response time	≤ 1 ms [4]
Switching frequency	500 Hz [5]
Connection type	Male connector M12, 4-pin
Circuit protection	A [6] C [7] D [8]
Protection class	II [9]
Weight	150 g
Alarm output	PNP
Housing material	Plastic, Glassfibre reinforced plastic
Enclosure rating	IP67
Ambient operating temperature	–25 °C ... +40 °C
Ambient storage temperature	–40 °C ... +70 °C
UL File No.	242366 & cUL No. NRKH7.E147756

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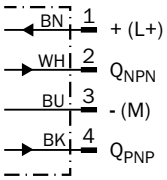
Classifications

ECl@ss 5.0	27270904
ECl@ss 5.1.4	27270904
ECl@ss 6.0	27270904
ECl@ss 6.2	27270904
ECl@ss 7.0	27270904
ECl@ss 8.0	27270904
ECl@ss 8.1	27270904
ECl@ss 9.0	27270904
ECl@ss 10.0	27270904
ECl@ss 11.0	27270904
ETIM 5.0	EC002719
ETIM 6.0	EC002719
ETIM 7.0	EC002719
UNSPSC 16.0901	39121528

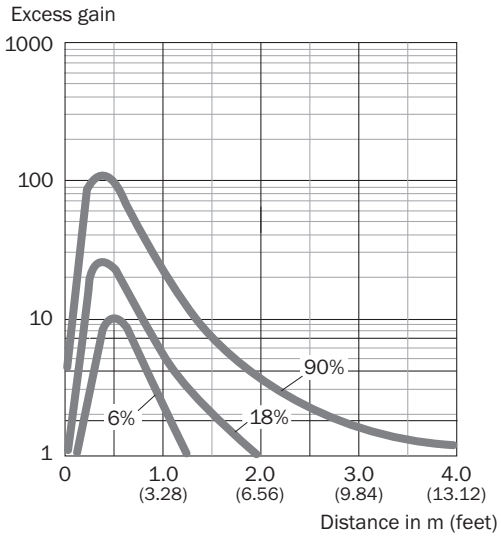
Connection diagram

Cd-086



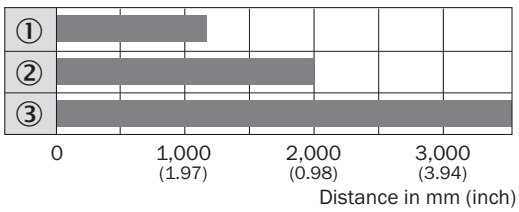
Characteristic curve

WT2000



Sensing range diagram

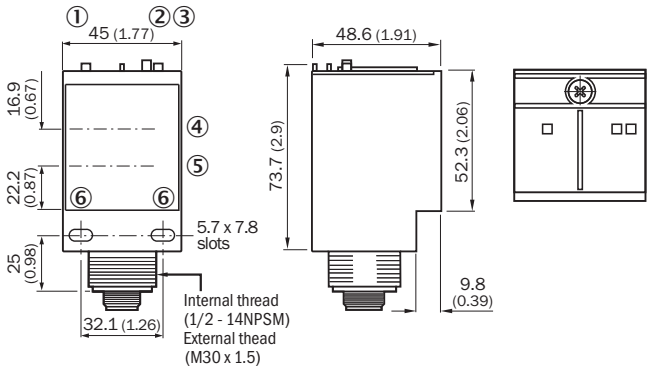
WT2000



Sensing range

① Sensing range on black, 6% remission
② Sensing range on gray, 18 % remission
③ Sensing range on white, 90% remission

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 ø 0.2 mm x 0.8 mm

Recommended accessories

Other models and accessories

	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 Head B: - Cable: unshielded	STE-1204-G	6009932

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.”

SICK
Sensor Intelligence.