



WT9L-P330

W9

SMALL PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

Type	Part no.
WT9L-P330	1023977

Other models and accessories → www.sick.com/W9

Detailed technical data

Features

Sensor/ detection principle	Photoelectric proximity sensor, Background suppression
Dimensions (W x H x D)	12 mm x 40 mm x 22 mm
Housing design (light emission)	Rectangular
Sensing range max.	30 mm ... 150 mm ¹⁾
Type of light	Visible red light
Light source	Laser ²⁾
Light spot size (distance)	Ø 0.5 mm (60 mm)
Laser class	2 (IEC 60825-1 / CDRH 1040.10)
Adjustment	Potentiometer, 7 turns

¹⁾ Object with 90 % reflectance (referred to standard white, DIN 5033).

²⁾ Average service life: 50,000 h at T_J = +25 °C.

Mechanics/electronics

Supply voltage	10 V DC ... 30 V DC ¹⁾
Ripple	≤ 5 V _{pp} ²⁾
Power consumption	35 mA

¹⁾ Limit values.

²⁾ May not exceed or fall below U_v tolerances.

³⁾ Signal transit time with resistive load.

⁴⁾ With light/dark ratio 1:1.

⁵⁾ A = V_S connections reverse-polarity protected.

⁶⁾ B = inputs and output reverse-polarity protected.

⁷⁾ C = interference suppression.

⁸⁾ Reference voltage: 50 V DC.

Switching output	PNP
Output function	Complementary
Switching mode	Light/dark switching
Signal voltage PNP HIGH/LOW	Approx. $V_S - 2.0\text{ V} / 0\text{ V}$
Output current I_{\max}	< 100 mA
Response time	< 0.6 ms ³⁾
Switching frequency	1,000 Hz ⁴⁾
Connection type	Male connector M8, 4-pin
Circuit protection	A ⁵⁾ B ⁶⁾ C ⁷⁾
Protection class	III ⁸⁾
Weight	20 g
Housing material	Plastic, ABS
Enclosure rating	IP67
Ambient operating temperature	-10 °C ... +50 °C
Ambient storage temperature	-25 °C ... +70 °C

1) Limit values.

2) May not exceed or fall below U_V tolerances.

3) Signal transit time with resistive load.

4) With light/dark ratio 1:1.

5) A = V_S connections reverse-polarity protected.

6) B = inputs and output reverse-polarity protected.

7) C = interference suppression.

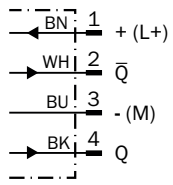
8) Reference voltage: 50 V DC.

Classifications

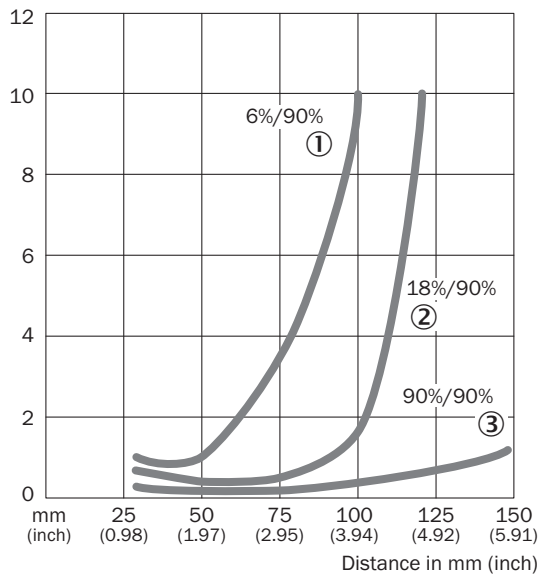
ECl@ss 5.0	27270904
ECl@ss 5.1.4	27270904
ECl@ss 6.0	27270904
ECl@ss 6.2	27270904
ECl@ss 7.0	27270904
ECl@ss 8.0	27270904
ECl@ss 8.1	27270904
ECl@ss 9.0	27270904
ECl@ss 10.0	27270904
ECl@ss 11.0	27270904
ETIM 5.0	EC002719
ETIM 6.0	EC002719
ETIM 7.0	EC002719
UNSPSC 16.0901	39121528

Connection diagram

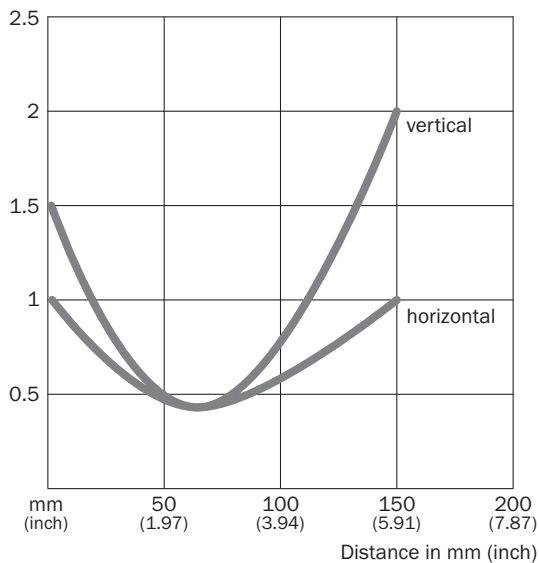
Cd-083



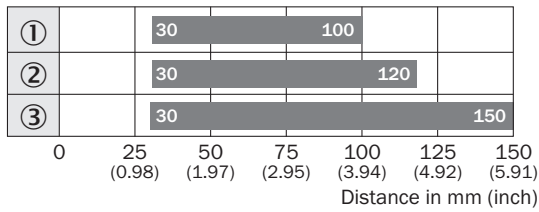
Characteristic curve



Light spot size



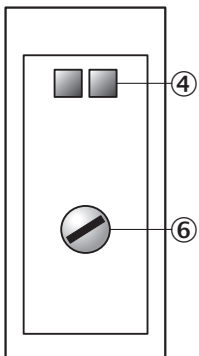
Sensing range diagram



■ Sensing range

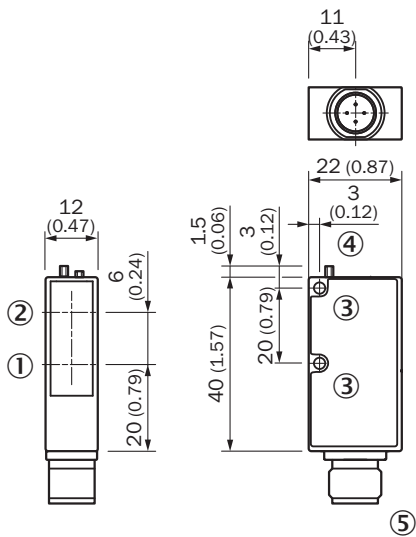
- ① Sensing range on black, 6 % remission
- ② Sensing range on gray, 18 % remission
- ③ Sensing range on white, 90 % remission

Adjustments possible



- ④ LED signal strength indicator
- ⑥ Adjustment of sensing range




Dimensional drawing (Dimensions in mm (inch))



- ① Center of optical axis, sender
- ② Center of optical axis, receiver
- ③ Mounting hole \varnothing 3.2 mm
- ④ LED signal strength indicator
- ⑤ Connector M12 or M8, 4-pin, 2 m connection cable or 120 mm cable with connector M12, 4-pin

Recommended accessories

Other models and accessories → www.sick.com/W9

	Brief description	Type	Part no.
Mounting brackets and plates			
	Mounting bracket, steel, zinc coated, mounting hardware included	BEF-WN-W9-2	2022855
Plug connectors and cables			
	Head A: female connector, M8, 4-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 5 m	YF8U14-050VA3XLEAX	2095889
	Head A: male connector, M8, 4-pin, straight Head B: - Cable: unshielded	STE-0804-G	6037323

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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