



DATA SHEET

WT9L-P330

W9
Photoelectric sensors



Illustration may differ

PHOTOELECTRIC SENSORS

WT9L-P330

ORDERING INFORMATION

Type	part no.
WT9L-P330	1023977

Further device versions and accessories at www.sick.com/W9

DETAILED TECHNICAL DATA

FEATURES

Functional principle	Photoelectric proximity sensor
Functional principle detail	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) ³⁾
Adjustment	Potentiometer, 7 turns

¹⁾ Object with 90% remission (based on standard white, DIN 5033).

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

³⁾ Do not intentionally look into the laser beam. Never point the laser beam at people's eyes.

MECHANICS/ELECTRONICS

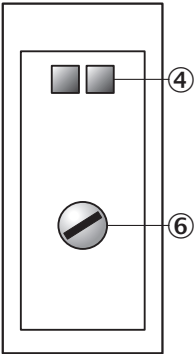
Supply voltage U_B	10 V DC ... 30 V DC ¹⁾
Ripple	< 5 V _{pp} ²⁾
Current consumption	35 mA
Switching output	PNP
Output function	Complementary
Switching mode	Light/dark switching
Signal voltage PNP HIGH/LOW	Approx. VS – 2.0 V / 0 V
Output current I_{max}	≤ 100 mA
Response time	< 0.6 ms ³⁾
Switching frequency	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 temperature, storage	-25 °C ... +70 °C

¹⁾ Limit values.
²⁾ May not fall below or exceed U_V tolerances.
³⁾ Signal transit time with resistive load.
⁴⁾ With light/dark ratio 1:1.
⁵⁾ A = V_B connections reverse-polarity protected.
⁶⁾ B = inputs and output reverse-polarity protected.
⁷⁾ C = interference suppression.
⁸⁾ Reference voltage: 50 V DC.

SAFETY-RELATED PARAMETERS

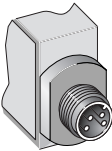
MTTF _D	309 years
DC _{avg}	0 %

ADJUSTMENTS

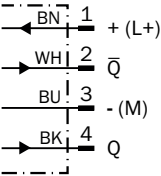


- ④ LED signal strength indicator
- ⑥ Adjustment of sensing range

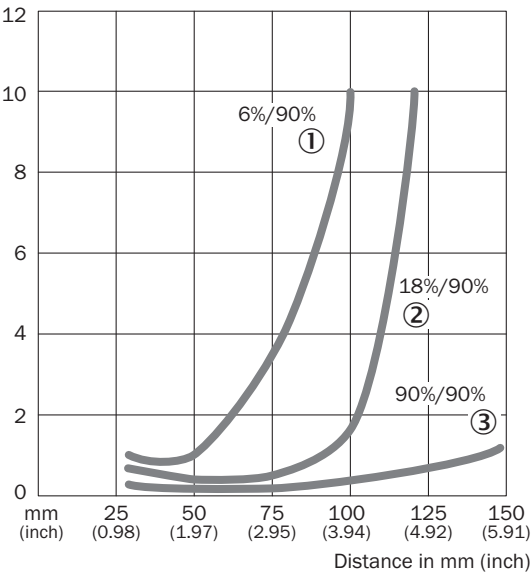
CONNECTION TYPE



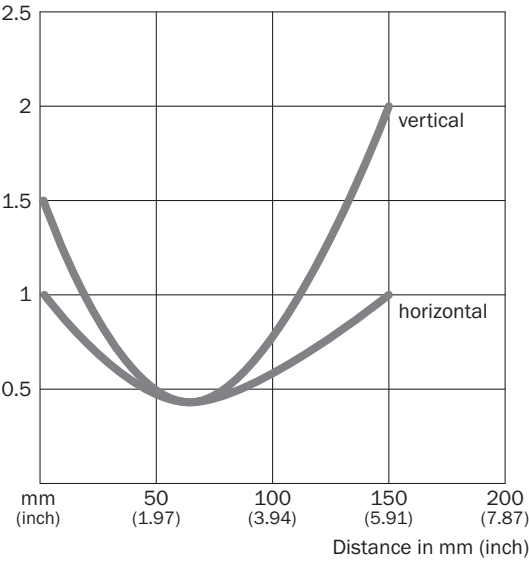
CONNECTION DIAGRAM CD-083



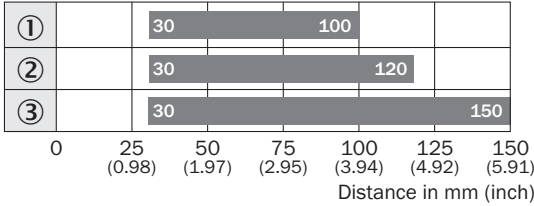
CHARACTERISTIC CURVE



LIGHT SPOT SIZE



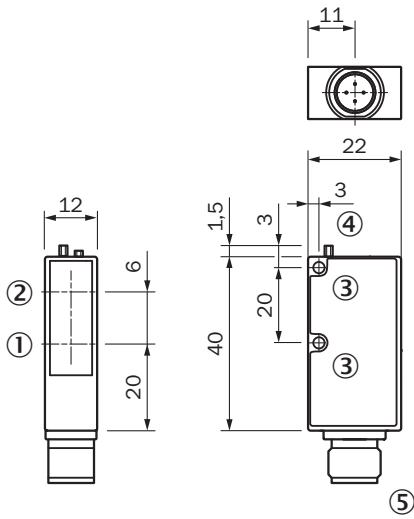
SENSING RANGE DIAGRAM



■ Sensing range

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

DIMENSIONAL DRAWING



Dimensions in mm (inch)

- ① Center of optical axis, sender
- ② Center of optical axis, receiver
- ③ mounting hole Ø 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

Further information as well as suitable accessories, example applications and downloads such as CAD dimensional models, operating instructions and software can be found at www.sick.com/1023977



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SICK AT A GLANCE

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