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DATA SHEET

WS/WE9L-P430

W9
Photoelectric sensors

SICK Sensor Intelligence

Illustration may differ

PHOTOELECTRIC SENSORS

WS/WE9L-P430

ORDERING INFORMATION

Type	part no.
WS/WE9L-P430	1023992

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

DETAILED TECHNICAL DATA

FEATURES

Functional principle	Through-beam photoelectric sensor
Dimensions (W x H x D)	12 mm x 40 mm x 22 mm
Housing design (light emission)	Rectangular
Sensing range max.	0 m ... 50 m
Type of light	Visible red light
Light source	Laser [1]
Light spot size (distance)	Ø 1 mm (500 mm)
Laser class	2 (IEC 60825-1 / CDRH 1040.10) [2]
Adjustment	Single teach-in button
Part number of individual components	Sender, WS9L-D430, 2027847

[1] Average service life: 50,000 h at T_u = +25 °C.

[2] 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]
Power consumption, sender	35 mA
Power consumption, receiver	25 mA
Switching output	PNP
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 M12, 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
Part number of individual components	Sender, WS9L-D430, 2027847

[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.

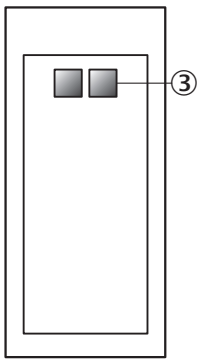
[5] A = V_s connections reverse-polarity protected.

[6] B = inputs and output reverse-polarity protected.

[7] C = interference suppression.

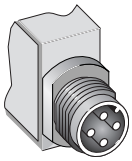
[8] Reference voltage: 50 V DC.

ADJUSTMENTS

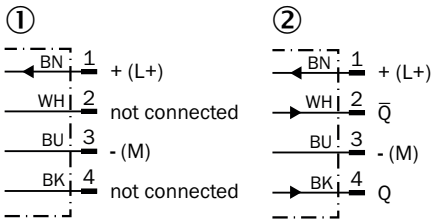


③ Power indicator green, WS in operation

CONNECTION TYPE

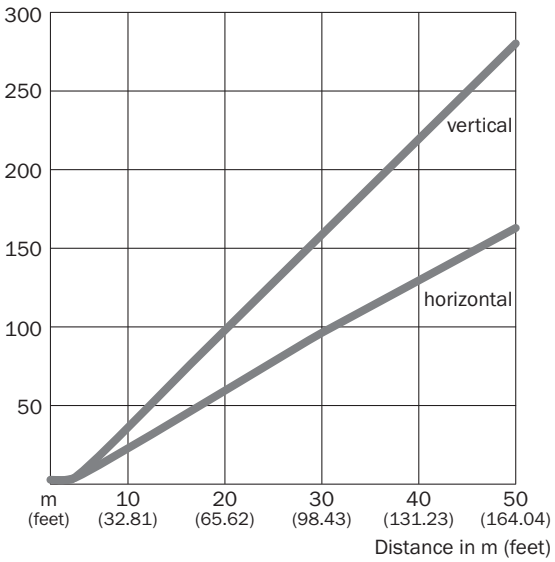


CONNECTION DIAGRAM CD-085

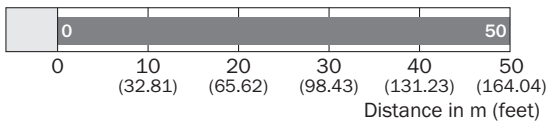


① sender
② receiver

LIGHT SPOT SIZE

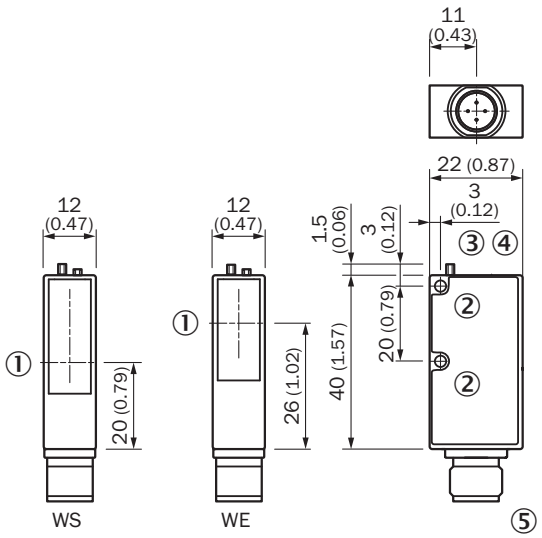


SENSING RANGE DIAGRAM



Sensing range/sensing range typ. max.

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 green status indicator, yellow receive indicator
⑤ Connection
⑥ Adjustment of sensing range

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/1023992

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SICK AT A GLANCE

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SICK combines sensor intelligence with industry expertise and certified consulting services. We provide the ideal foundation for scalable as well as tailor-made automation solutions and create added value along the entire value chain. Our close partnerships with our customers are more than just a promise: Together, we optimize productivity, improve quality, protect health and safety, and help build a sustainable future. All with empathy and trust.

Since 1946, we have been developing innovative technologies with passion and a pioneering spirit. With a global network in around 40 countries, SICK has a global presence and is always close by. The company's headquarters are located in Waldkirch near Freiburg, Germany. Our customers benefit from our understanding of both local and global requirements, which enables us to deliver tailor-made solutions

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