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DATA SHEET

WTB4-3N1192

MultiLine
Photoelectric sensors

SICK Sensor Intelligence



Illustration may differ

PHOTOELECTRIC SENSORS

WTB4-3N1192

ORDERING INFORMATION

Type	part no.
WTB4-3N1192	1059272

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

DETAILED TECHNICAL DATA

FEATURES

Functional principle	Photoelectric proximity sensor
Functional principle detail	Background suppression
Dimensions (W x H x D)	16 mm x 39.5 mm x 12 mm
Housing design (light emission)	Rectangular
Sensing range max.	5 mm ... 120 mm [1]
Sensing range	40 mm ... 120 mm [1]
Type of light	Visible red light
Light source	PinPoint LED [2]
Light spot size (distance)	5 mm x 22 mm (40 mm) [3]
Wave length	650 nm
Adjustment	Single teach-in button
Special feature	Line-shaped light spot
Special applications	Detecting perforated objects, Detecting uneven, shiny objects, Detecting objects wrapped in film
Special features	Multi-background suppression

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

[2] Average service life: 100,000 h at T_U = +25 °C.

[3] Two parallel line-shaped light spots.

MECHANICS/ELECTRONICS

Supply voltage	10 V DC ... 30 V DC [1]
Ripple	< 5 V_{pp} [2]
Current consumption	30 mA [3]
Switching output	NPN
Output function	Complementary
Switching mode	Light/dark switching
Output current $I_{max.}$	≤ 100 mA
Response time	< 1.2 ms [4]
Switching frequency	400 Hz [5]
Connection type	Cable, 4-wire, 2 m [6]
Cable material	PVC
Circuit protection	A [7] C [8] D [9]
Protection class	III
Weight	30 g
Housing material	Plastic, ABS
Optics material	Plastic, PMMA
Enclosure rating	IP67 IP66
Special feature	Line-shaped light spot
Ambient operating temperature	–40 °C ... +60 °C
Ambient temperature, storage	–40 °C ... +75 °C
UL File No.	NRKH.E181493 & NRKH7.E181493

[1] Limit values when operated in short-circuit protected network: max. 8 A.

[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.

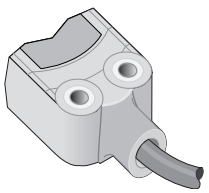
[6] Do not bend below 0 °C.

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

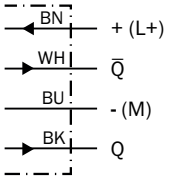
[8] C = interference suppression.

[9] D = outputs overcurrent and short-circuit protected.

CONNECTION TYPE

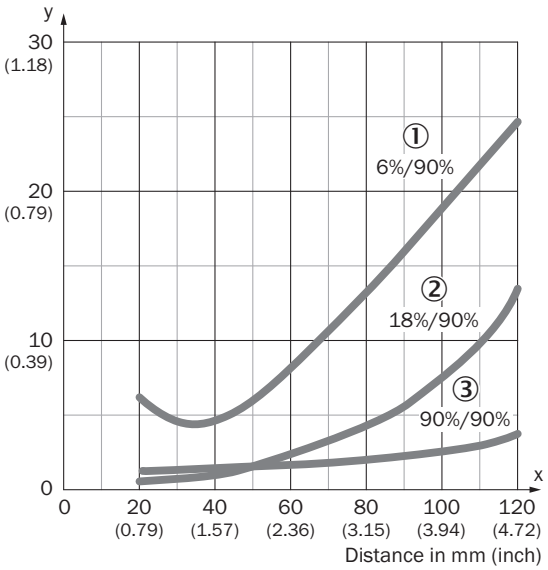


CONNECTION DIAGRAM CD-094



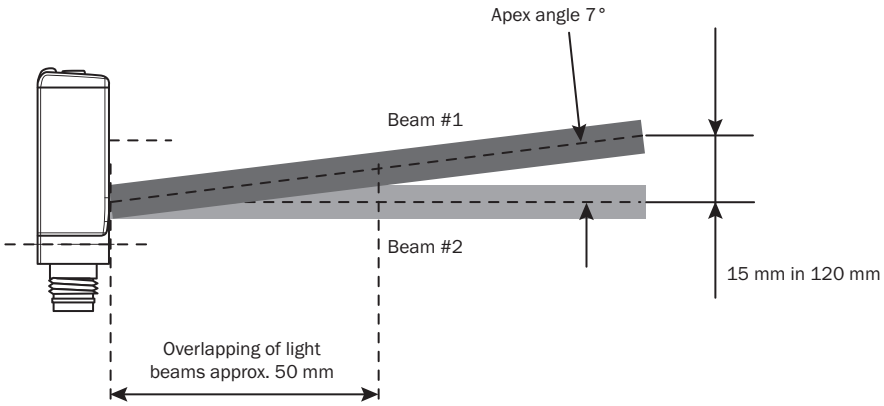
CHARACTERISTIC CURVE

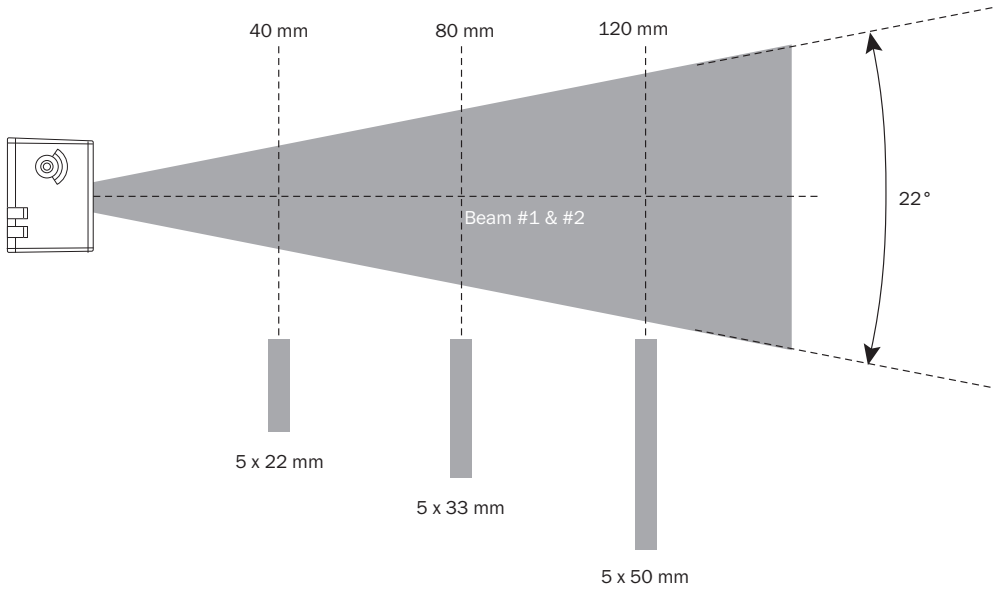
Minimum distance in mm (y) between the set sensing range and white background (90 % remission)



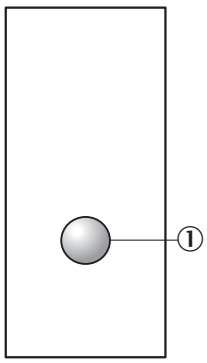
① Black object, 6% remission factor
② Gray object, 18% remission factor
③ White object, 90% remission factor

LIGHT SPOT SIZE



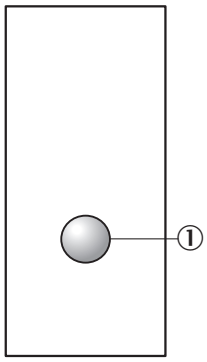


ADJUSTMENTS



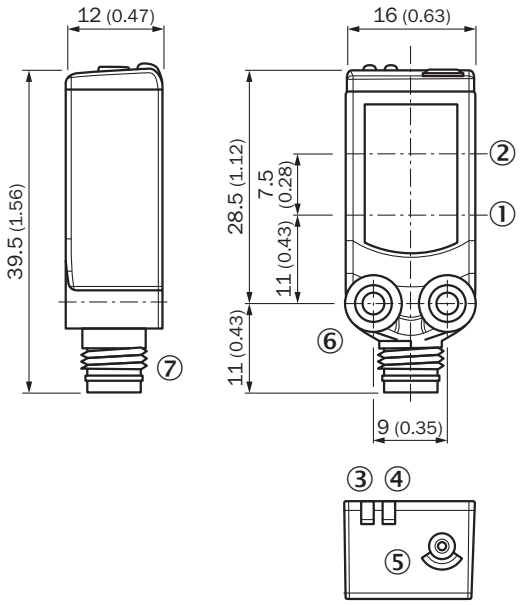
① Teach-in button

ADJUSTMENTS TEACH-IN BUTTON



① Teach-in button

DIMENSIONAL DRAWING



Dimensions in mm (inch)
① optical axis, sender
② optical axis, receiver
③ LED indicator yellow: Status of received light beam
④ LED indicator green: Supply voltage active
⑤ Teach-in button
⑥ Threaded mounting hole M3
⑦ Connection

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/1059272

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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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