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DATA SHEET

WTB4S-3P1035VS06

W4
Photoelectric sensors

SICK Sensor Intelligence

PHOTOELECTRIC SENSORS

WTB4S-3P1035VS06

ORDERING INFORMATION

Type	part no.
WTB4S-3P1035VS06	1051749

Further device versions and accessories at www.sick.com/W4



Illustration may differ



DETAILED TECHNICAL DATA

FEATURES

Functional principle	Photoelectric proximity sensor	
Functional principle detail	Background suppression	
Sensing range max.	4 mm ... 120 mm ¹⁾	
Sensing range	10 mm ... 120 mm ¹⁾	
Emitted beam	Light source	PinPoint LED ²⁾
	Type of light	Visible red light
	Light spot size (distance)	Ø 2.5 mm (50 mm)
Key LED figures	Wave length	650 nm
	Adjustment	Cable ³⁾
Special applications	Hygienic and washdown zones	
Housing design	Washdown	

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

²⁾ Average service life: 100,000 h at T_u = +25 °C.

³⁾ External teach-in: pulse > 2 s with voltage U_v with PNP and M with NPN.

ELECTRONICS

Supply voltage U_B	10 V DC ... 30 V DC ¹⁾										
Ripple	< 5 V _{pp} ²⁾										
Current consumption	30 mA ³⁾										
Protection class	III										
Digital output	<table border="0"> <tr> <td>Type</td> <td>PNP</td> </tr> <tr> <td>Switching mode</td> <td>Light switching</td> </tr> <tr> <td>Output current I_{max}</td> <td>≤ 100 mA</td> </tr> <tr> <td>Response time</td> <td>< 0.5 ms ⁴⁾</td> </tr> <tr> <td>Switching frequency</td> <td>1,000 Hz ⁵⁾</td> </tr> </table>	Type	PNP	Switching mode	Light switching	Output current I_{max}	≤ 100 mA	Response time	< 0.5 ms ⁴⁾	Switching frequency	1,000 Hz ⁵⁾
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Output current I_{max}	≤ 100 mA										
Response time	< 0.5 ms ⁴⁾										
Switching frequency	1,000 Hz ⁵⁾										
Circuit protection	A ⁶⁾ B ⁷⁾ C ⁸⁾										

¹⁾ Limit values, reverse-polarity protected, operation in short-circuit protected network: max. 8 A.

²⁾ May not fall below or exceed U_V tolerances.

³⁾ Without load.

⁴⁾ Signal transit time with resistive load.

⁵⁾ With light/dark ratio 1:1.

⁶⁾ A = V_V connections reverse-polarity protected.

⁷⁾ B = inputs and output reverse-polarity protected.

⁸⁾ C = interference suppression.

MECHANICS

Housing	Rectangular						
Design detail	Slim						
Dimensions (W x H x D)	15.25 mm x 44.5 mm x 22.2 mm						
Connection	Cable, 4-wire, 10 m ¹⁾						
Connection detail	<table border="0"> <tr> <td>Length of cable (L)</td> <td>10 m ¹⁾</td> </tr> </table>	Length of cable (L)	10 m ¹⁾				
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Material	<table border="0"> <tr> <td>Housing</td> <td>Metal, Stainless steel V4A (1.4404, 316L)</td> </tr> <tr> <td>Front screen</td> <td>Plastic, PMMA</td> </tr> <tr> <td>Cable</td> <td>Plastic, PVC</td> </tr> </table>	Housing	Metal, Stainless steel V4A (1.4404, 316L)	Front screen	Plastic, PMMA	Cable	Plastic, PVC
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Front screen	Plastic, PMMA						
Cable	Plastic, PVC						

¹⁾ Do not bend below 0 °C.

AMBIENT DATA

Enclosure rating	IP66 IP67 IP68 IP69K ¹⁾
Ambient operating temperature	-30 °C ... +70 °C ²⁾ -30 °C ... +60 °C
Ambient temperature, storage	-30 °C ... +75 °C
UL File No.	NRKH.E181493 & NRKH7.E181493

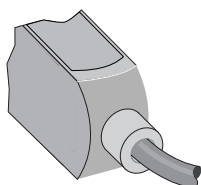
¹⁾ Only in case of correctly mounted IP69K connecting cable.

²⁾ At $UV \leq 24$ V and $IA < 30$ mA.

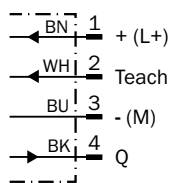
CERTIFICATES

EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
Moroccan declaration of conformity	✓
China RoHS	✓
ECOLAB certificate	✓
Photobiological safety (DIN EN 62471) certificate	✓

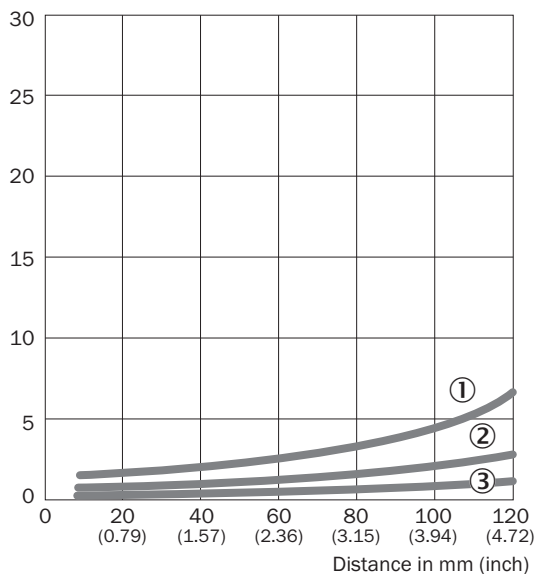
CONNECTION TYPE



CONNECTION DIAGRAM CD-092

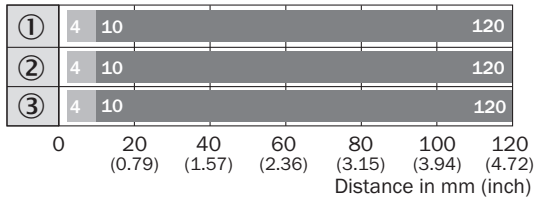


CHARACTERISTIC CURVE WTB4S-3, 120 MM



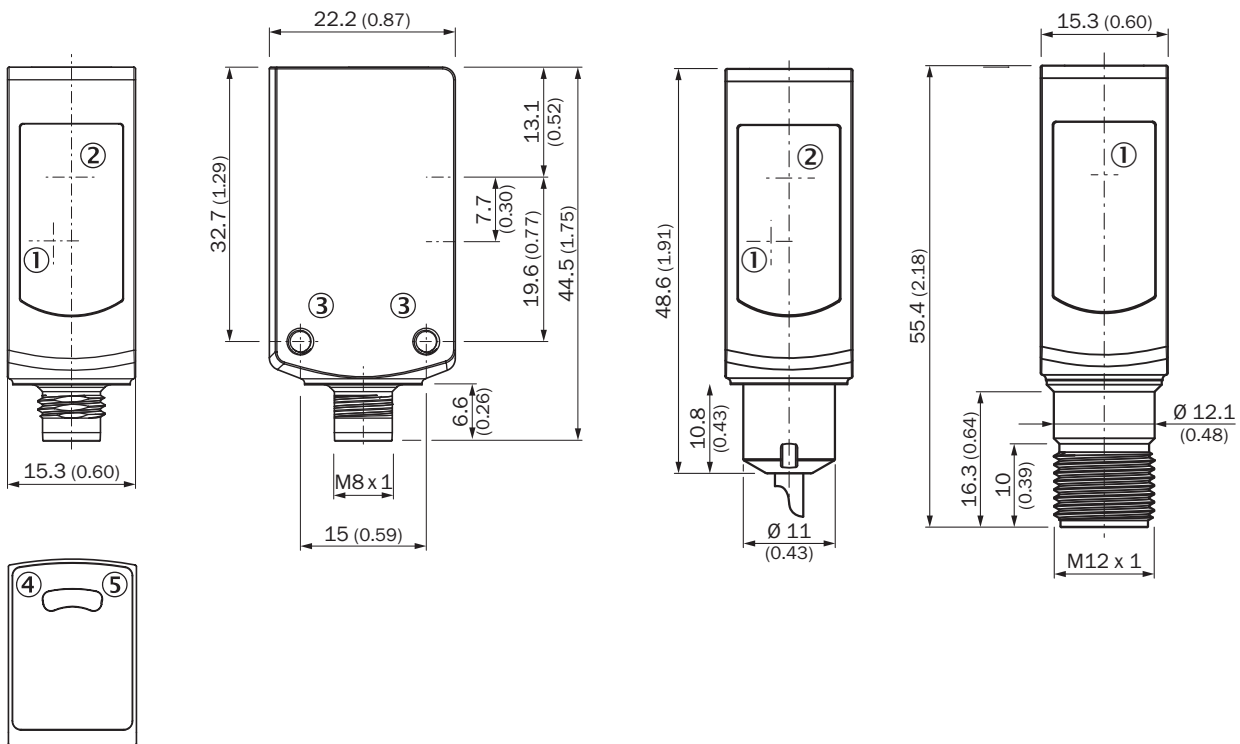
- ① Sensing range on black, 6% remission factor
- ② Sensing range on gray, 18% remission factor
- ③ Sensing range on white, 90% remission factor

SENSING RANGE DIAGRAM WTB4S-3, 120 MM



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

DIMENSIONAL DRAWING WTB4S-3V, WTF4S-3V, WITHOUT SINGLE TEACH-IN BUTTON



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

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/1051749



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SICK AT A GLANCE

SICK is a leading global technology company for intelligent sensors and integrated solutions in industrial automation. Our technologies set benchmarks, making your industrial processes more efficient, safer and more sustainable – both in logistics and manufacturing operations.

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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