



# WTB4S-3N1132H

W4

PHOTOELECTRIC SENSORS

**SICK**  
Sensor Intelligence.



Illustration may differ



Ordering information

Type	part no.
WTB4S-3N1132H	1048098

Other models and accessories → [www.sick.com/W4](http://www.sick.com/W4)

Detailed technical data

Features

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

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

<sup>2)</sup> Average service life: 100,000 h at T<sub>U</sub> = +25 °C.

Safety-related parameters

MTTF <sub>D</sub>	1,231 years
DC <sub>avg</sub>	0 %
T <sub>M</sub> (mission time)	20 years

## Electronics

<b>Supply voltage <math>U_B</math></b>	10 V DC ... 30 V DC <sup>1)</sup>
<b>Ripple</b>	< 5 V <sub>pp</sub> <sup>2)</sup>
<b>Current consumption</b>	30 mA <sup>3)</sup>
<b>Protection class</b>	III
<b>Digital output</b>	
Type	NPN
Switching mode	Light/dark switching
Output current I <sub>max.</sub>	≤ 100 mA
Response time	< 0.5 ms <sup>4)</sup>
Switching frequency	1,000 Hz <sup>5)</sup>
<b>Circuit protection</b>	A <sup>6)</sup> B <sup>7)</sup> C <sup>8)</sup>

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

<sup>2)</sup> May not fall below or exceed U<sub>y</sub> tolerances.

<sup>3)</sup> Without load.

<sup>4)</sup> Signal transit time with resistive load.

<sup>5)</sup> With light/dark ratio 1:1.

<sup>6)</sup> A = V<sub>S</sub> connections reverse-polarity protected.

<sup>7)</sup> B = inputs and output reverse-polarity protected.

<sup>8)</sup> C = interference suppression.

## Mechanics

<b>Housing</b>	Rectangular
<b>Design detail</b>	Slim
<b>Dimensions (W x H x D)</b>	15.25 mm x 63.2 mm x 22.15 mm
<b>Connection</b>	Cable, 4-wire, 2 m <sup>1)</sup>
<b>Connection detail</b>	
Conductor size	0.14 mm <sup>2</sup>
Length of cable (L)	2 m <sup>1)</sup>
<b>Material</b>	
Housing	Metal, Stainless steel V4A (1.4404, 316L)
Front screen	Plastic, PMMA
Cable	Plastic, PVC
<b>Weight</b>	80 g

<sup>1)</sup> Do not bend below 0 °C.

## Ambient data

<b>Enclosure rating</b>	IP66 IP67 IP68 IP69K
<b>Ambient operating temperature</b>	-30 °C ... +70 °C <sup>1)</sup> -30 °C ... +60 °C

<sup>1)</sup> At UV ≤ 24 V and IA < 30 mA.

<b>Ambient temperature, storage</b>	-30 °C ... +75 °C
<b>UL File No.</b>	FDA, UL No. NRKH.E181493 & cUL No. NRKH7.E181493

<sup>1)</sup> At UV ≤ 24 V and IA < 30 mA.

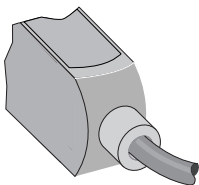
## Certificates

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

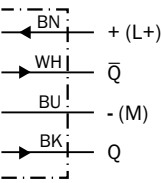
## Classifications

<b>ECLASS 5.0</b>	27270904
<b>ECLASS 5.1.4</b>	27270904
<b>ECLASS 6.0</b>	27270904
<b>ECLASS 6.2</b>	27270904
<b>ECLASS 7.0</b>	27270904
<b>ECLASS 8.0</b>	27270904
<b>ECLASS 8.1</b>	27270904
<b>ECLASS 9.0</b>	27270904
<b>ECLASS 10.0</b>	27270904
<b>ECLASS 11.0</b>	27270904
<b>ECLASS 12.0</b>	27270903
<b>ETIM 5.0</b>	EC002719
<b>ETIM 6.0</b>	EC002719
<b>ETIM 7.0</b>	EC002719
<b>ETIM 8.0</b>	EC002719
<b>UNSPSC 16.0901</b>	39121528

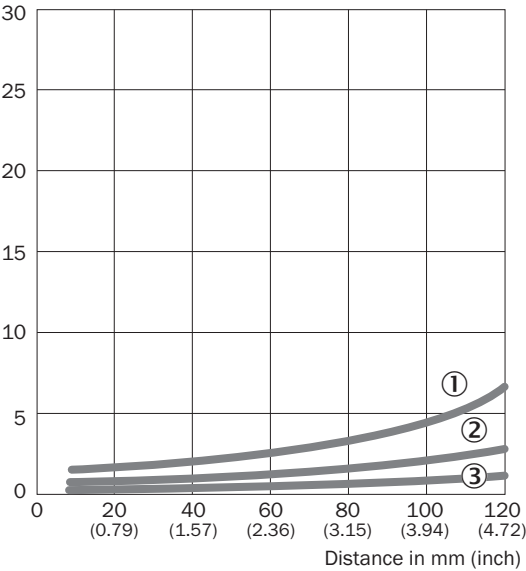
## Connection type



Connection diagram Cd-094

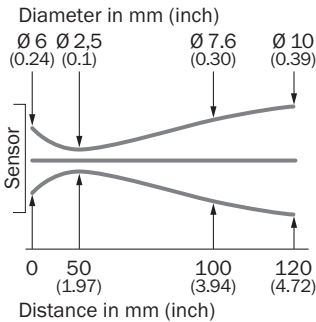


Characteristic curve WTB4S-3, 120 mm

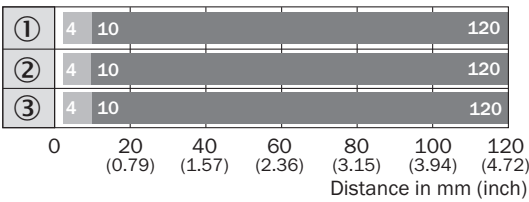


- ① Sensing range on black, 6% remission factor
- ② Sensing range on gray, 18% remission factor
- ③ Sensing range on white, 90% remission factor

Light spot size

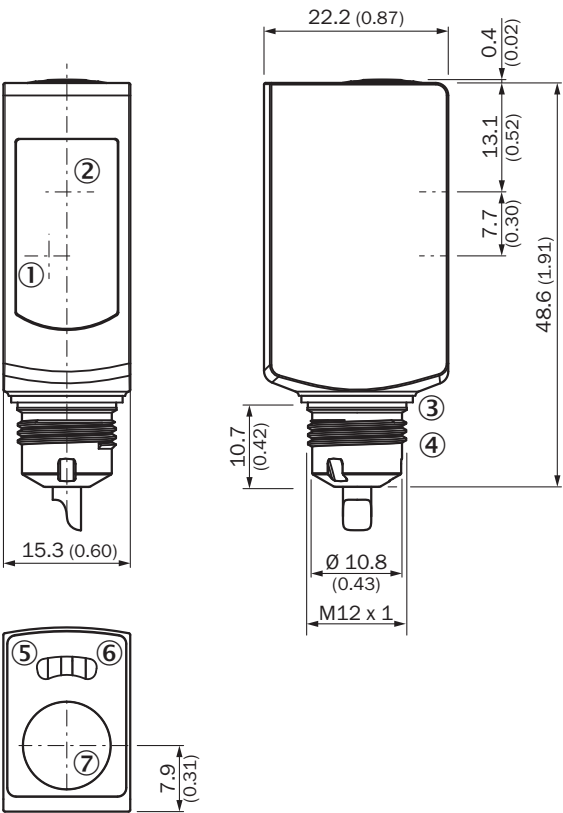


Sensing range diagram WTB4S-3, 120 mm



- 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-3H, WTF4S-3H, with single teach-in button



- Dimensions in mm (inch)
- ① Center of optical axis, receiver  
② Center of optical axis, sender  
③ Sealing ring (tightening torque 6 Nm)  
④ Connector M12  
⑤ LED indicator yellow: Status of received light beam  
⑥ LED indicator green: Supply voltage active  
⑦ Teach-in button

Recommended accessories

Other models and accessories → [www.sick.com/W4](http://www.sick.com/W4)

	Brief description	Type	part no.
connectors and cables			
	<ul style="list-style-type: none"><li>• <b>Connection type head A:</b> Male connector, M8, 4-pin, straight, A-coded</li><li>• <b>Description:</b> Unshielded</li><li>• <b>Connection systems:</b> Screw-type terminals</li><li>• <b>Permitted cross-section:</b> 0.14 mm² ... 0.5 mm²</li></ul>	STE-0804-G	6037323
	<ul style="list-style-type: none"><li>• <b>Connection type head A:</b> Male connector, M12, 4-pin, straight, A-coded</li><li>• <b>Description:</b> Unshielded</li><li>• <b>Connection systems:</b> Screw-type terminals</li><li>• <b>Permitted cross-section:</b> ≤ 0.75 mm²</li></ul>	STE-1204-G	6009932

## 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:

Contacts and other locations –[www.sick.com](http://www.sick.com)