



# WTB2S-2N1330

W2S-2

PHOTOELECTRIC SENSORS

**SICK**  
Sensor Intelligence.



Illustration may differ



### Ordering information

Type	Part no.
WTB2S-2N1330	1064578

Other models and accessories → [www.sick.com/W2S-2](http://www.sick.com/W2S-2)

### Detailed technical data

#### Features

<b>Sensor/detection principle</b>	Photoelectric proximity sensor, Background suppression
<b>Dimensions (W x H x D)</b>	7.7 mm x 21.8 mm x 13.5 mm
<b>Housing design (light emission)</b>	Rectangular
<b>Sensing range max.</b>	1 mm ... 36 mm <sup>1)</sup>
<b>Sensing range</b>	3 mm ... 30 mm <sup>1)</sup>
<b>Background suppression typ. from</b>	38 mm
<b>Type of light</b>	Visible red light
<b>Light source</b>	PinPoint LED <sup>2)</sup>
<b>Light spot size (distance)</b>	Ø 3 mm (15 mm)
<b>Wave length</b>	640 nm
<b>Adjustment</b>	None

<sup>1)</sup> Object with 90 % reflectance (referred to standard white, DIN 5033)

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

## Mechanics/electronics

<b>Supply voltage</b>	10 V DC ... 30 V DC <sup>1)</sup>
<b>Ripple</b>	$\leq 5 V_{pp}$ <sup>2)</sup>
<b>Power consumption</b>	$\leq 20 \text{ mA}$ <sup>3)</sup>
<b>Output type</b>	NPN
<b>Switching mode</b>	Light switching
<b>Output current <math>I_{max}</math></b>	$< 50 \text{ mA}$
<b>Response time</b>	$< 0.4 \text{ ms}$ <sup>4)</sup>
<b>Switching frequency</b>	1,200 Hz <sup>5)</sup>
<b>Connection type</b>	Cable, 3-wire, 2 m <sup>6)</sup>
<b>Cable material</b>	PVC
<b>Cable diameter</b>	$\varnothing 3 \text{ mm}$
<b>Circuit protection</b>	A <sup>7)</sup> B <sup>8)</sup> D <sup>9)</sup>
<b>Housing material</b>	ABS/PCplastic
<b>Optics material</b>	Plastic, PMMA
<b>Enclosure rating</b>	IP 67
<b>Ambient operating temperature</b>	$-25 \text{ }^{\circ}\text{C} \dots +50 \text{ }^{\circ}\text{C}$
<b>Ambient storage temperature</b>	$-40 \text{ }^{\circ}\text{C} \dots +75 \text{ }^{\circ}\text{C}$
<b>UL File No.</b>	NRKH.E181493

<sup>1)</sup> Limit values.

<sup>2)</sup> May not exceed or fall below  $U_V$  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> Do not bend below  $0 \text{ }^{\circ}\text{C}$ .

<sup>7)</sup> A =  $V_S$  connections reverse-polarity protected.

<sup>8)</sup> B = output reverse-polarity protected.

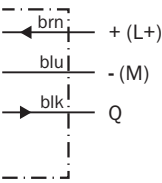
<sup>9)</sup> D = outputs overcurrent and short-circuit protected.

## Classifications

<b>ECI@ss 5.0</b>	27270904
<b>ECI@ss 5.1.4</b>	27270904
<b>ECI@ss 6.0</b>	27270904
<b>ECI@ss 6.2</b>	27270904
<b>ECI@ss 7.0</b>	27270904
<b>ECI@ss 8.0</b>	27270904
<b>ECI@ss 8.1</b>	27270904
<b>ECI@ss 9.0</b>	27270904
<b>ETIM 5.0</b>	EC002719
<b>ETIM 6.0</b>	EC002719
<b>UNSPSC 16.0901</b>	39121528

Connection diagram

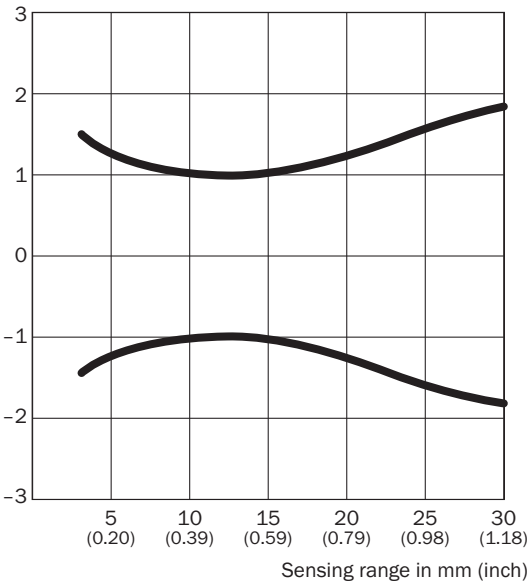
Cd-044



Light spot size

WTB2S-2, 36 mm

Spot diameter in mm (inch)

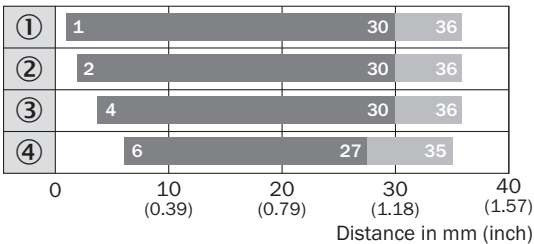


Dimensions in mm (inch)

Sensing range	Spot diameter
<b>10</b> (0.39)	3.2 (0.13)
<b>15</b> (0.59)	3.0 (0.12)
<b>20</b> (0.79)	3.8 (0.15)
<b>30</b> (1.18)	5.0 (0.20)

Sensing range diagram

WTB2S-2, 36 mm

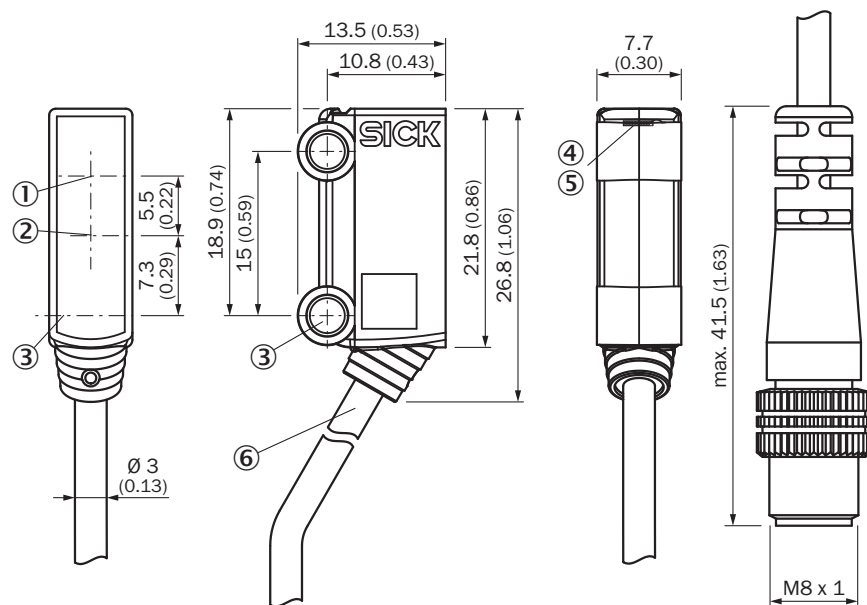


■ Sensing range    ■ Sensing range max.

- ① Sensing range on white, 90% remission
- ② Sensing range on gray, 18 % remission
- ③ Sensing range on black, 6% remission
- ④ Sensing range on ultra black, 1% remission

## Dimensional drawing (Dimensions in mm (inch))





WTB2S-2, 18 mm, 36 mm, WTV2S-2




- ① Optical axis receiver
- ② Optical axis sender
- ③ Mounting hole, Ø 3.2 mm
- ④ LED indicator green: Supply voltage active
- ⑤ LED indicator yellow: Status of received light beam
- ⑥ Connection

## Recommended accessories

Other models and accessories → [www.sick.com/W2S-2](http://www.sick.com/W2S-2)

	Brief description	Type	Part no.
Mounting brackets and mounting plates			
	Mounting bracket for floor mounting, steel, zinc coated, without mounting hardware	BEF-W2S-A	4034748
	Mounting bracket for wall mounting, steel, zinc coated, without mounting hardware	BEF-W2S-B	4034749
Terminal and alignment brackets			
	Ball clamp bracket, plastic, mounting hardware included	BEF-GH-MINI01	2023160
Plug connectors and cables			
	Head A: female connector, M8, 3-pin, straight Head B: - Cable: unshielded	DOS-0803-G	7902077
	Head A: female connector, M8, 3-pin, angled Head B: - Cable: unshielded	DOS-0803-W	7902078

	Brief description	Type	Part no.
	Head A: male connector, M8, 3-pin, straight Head B: - Cable: unshielded	STE-0803-G	6037322

## 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)