



# WTV2S-2P3285S45

W2S-2

MINIATURE PHOTOELECTRIC SENSORS

**SICK**  
Sensor Intelligence.



### Ordering information

Type	Part no.
WTV2S-2P3285S45	1094671

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

Illustration may differ



### 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>	4 mm ... 30 mm <sup>1)</sup>
<b>Type of light</b>	Visible blue light
<b>Light source</b>	LED <sup>2)</sup>
<b>Light spot size (distance)</b>	2 mm (10 mm) 3 mm
<b>Wave length</b>	445 nm
<b>Adjustment</b>	Cable (Teach-in)
<b>Special applications</b>	Detecting small objects, Detecting uneven, shiny objects, Detecting objects wrapped in film
<b>Special features</b>	V-optics Preset 14 mm on black

<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>J</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>Current consumption</b>	20 mA <sup>3)</sup>
<b>Switching output</b>	PNP
<b>Switching mode</b>	Light switching
<b>Output current <math>I_{max}</math></b>	< 50 mA
<b>Response time</b>	< 0.5 ms <sup>4)</sup>
<b>Switching frequency</b>	1,000 Hz <sup>5)</sup>
<b>Connection type</b>	Cable with M8 male connector, 4-pin, 2 m <sup>6)</sup>
<b>Cable material</b>	PVC
<b>Cable diameter</b>	$\varnothing$ 3 mm
<b>Circuit protection</b>	A <sup>7)</sup> B <sup>8)</sup> D <sup>9)</sup>
<b>Housing material</b>	Plastic, ABS/PC
<b>Optics material</b>	Plastic, PMMA
<b>Enclosure rating</b>	IP67
<b>Ambient operating temperature</b>	-25 °C ... +50 °C
<b>Ambient storage temperature</b>	-40 °C ... +75 °C

<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 °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>ECl@ss 5.0</b>	27270904
<b>ECl@ss 5.1.4</b>	27270904
<b>ECl@ss 6.0</b>	27270904
<b>ECl@ss 6.2</b>	27270904
<b>ECl@ss 7.0</b>	27270904
<b>ECl@ss 8.0</b>	27270904
<b>ECl@ss 8.1</b>	27270904
<b>ECl@ss 9.0</b>	27270904
<b>ECl@ss 10.0</b>	27270904
<b>ECl@ss 11.0</b>	27270904
<b>ETIM 5.0</b>	EC002719
<b>ETIM 6.0</b>	EC002719
<b>ETIM 7.0</b>	EC002719

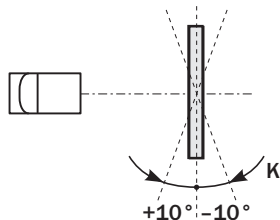
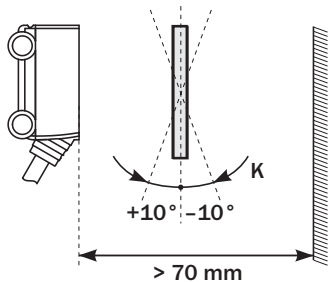
UNSPSC 16.0901

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## Installation note

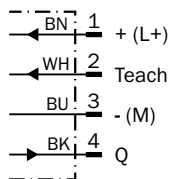
When detecting highly transparent objects, a distance of > 70 mm to the background should be maintained!

Maximum tilt angle

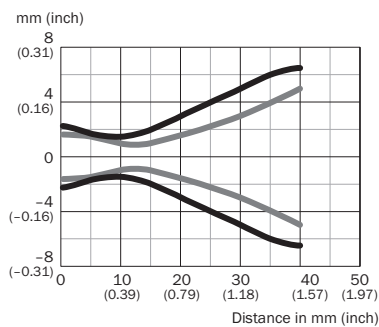


## Connection diagram

Cd-092



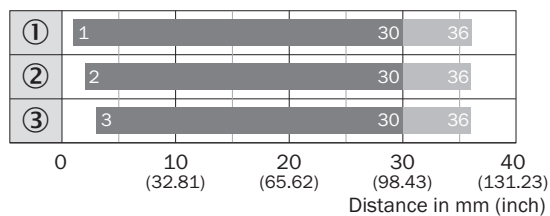
## Light spot size



### Dimensions in mm (inch)

Sensing range	Spot diameter
<b>10</b> (0.39)	2 x 3 (0.08 x 0.12)
<b>20</b> (0.79)	3.5 x 6 (0.14 x 0.24)
<b>30</b> (1.18)	6 x 10 (0.24 x 0.39)
<b>40</b> (1.57)	9 x 13 (0.35 x 0.51)

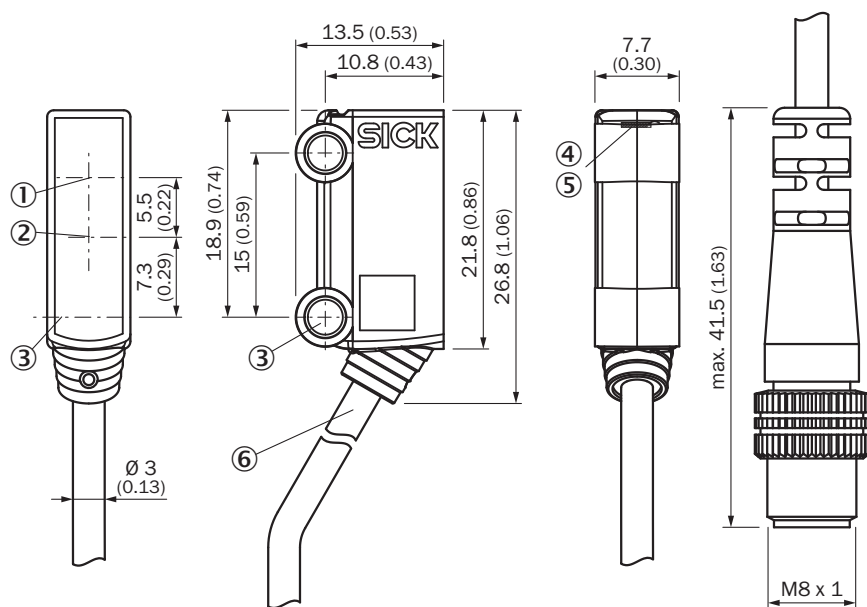
### Sensing range diagram



- Sensing range      ■ Sensing range max. typ.
- ① Sensing range on white, 90% remission
- ② Sensing range on gray, 18% remission
- ③ Sensing range on black, 6% 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.
Plug connectors and cables			
	Head A: female connector, M8, 4-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 5 m	YF8U14-050VA3XLEAX	2095889
	Head A: male connector, M8, 4-pin, straight Head B: - Cable: unshielded	STE-0804-G	6037323

## 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)