



# WTB4-3P3171S65

MultiPulse

PHOTOELECTRIC SENSORS

**SICK**  
Sensor Intelligence.



Illustration may differ

### Ordering information

Type	part no.
WTB4-3P3171S65	1054788

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

### Detailed technical data

#### Features

<b>Functional principle</b>	Photoelectric proximity sensor
<b>Functional principle detail</b>	Background suppression
<b>Dimensions (W x H x D)</b>	16 mm x 39.5 mm x 12 mm
<b>Housing design (light emission)</b>	Rectangular
<b>Sensing range max.</b>	4 mm ... 150 mm <sup>1)</sup>
<b>Sensing range</b>	15 mm ... 150 mm <sup>1)</sup>
<b>Type of light</b>	Visible red light
<b>Light source</b>	PinPoint LED <sup>2)</sup>
<b>Light spot size (distance)</b>	5 mm x 28 mm (50 mm)
<b>Wave length</b>	650 nm
<b>Adjustment</b>	Potentiometer, 5 turns
<b>Special feature</b>	Line-shaped light spot, Oscillating output
<b>Special applications</b>	Detecting perforated objects, Detecting objects with position tolerances, Detecting small objects
<b>Special features</b>	Sensor with self-monitoring

<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.

#### Mechanics/electronics

<b>Supply voltage</b>	10 V DC ... 30 V DC <sup>1)</sup>
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<sup>1)</sup> Limit values.

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

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

<sup>4)</sup> Pulsed.

<sup>5)</sup> Signal transit time with resistive load.

<sup>6)</sup> With light/dark ratio 1:1.

<sup>7)</sup> Do not bend below 0 °C.

<sup>8)</sup> A = V<sub>S</sub> connections reverse-polarity protected.

<sup>9)</sup> C = interference suppression.

<sup>10)</sup> D = outputs overcurrent and short-circuit protected.

<b>Ripple</b>	< 5 V <sub>pp</sub> <sup>2)</sup>
<b>Current consumption</b>	20 mA <sup>3)</sup>
<b>Switching output</b>	PNP <sup>4)</sup>
<b>Switching mode</b>	Light switching <sup>4)</sup>
<b>Output current I<sub>max.</sub></b>	≤ 100 mA
<b>Response time</b>	< 0.5 ms <sup>5)</sup>
<b>Switching frequency</b>	2 Hz <sup>6)</sup>
<b>Connection type</b>	Cable with connector M8, 3-pin, 300 mm <sup>7)</sup>
<b>Cable material</b>	PVC
<b>Conductor cross section</b>	0.14 mm <sup>2</sup>
<b>Cable diameter</b>	Ø 3.4 mm
<b>Circuit protection</b>	A <sup>8)</sup> C <sup>9)</sup> D <sup>10)</sup>
<b>Protection class</b>	III
<b>Weight</b>	30 g
<b>Special device</b>	✓
<b>Housing material</b>	Plastic, ABS
<b>Optics material</b>	Plastic, PMMA
<b>Enclosure rating</b>	IP67 IP66
<b>Special feature</b>	Line-shaped light spot, Oscillating output
<b>Ambient operating temperature</b>	-40 °C ... +60 °C
<b>Ambient temperature, storage</b>	-40 °C ... +75 °C
<b>UL File No.</b>	NRKH.E181493 & NRKH7.E181493

1) Limit values.

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

3) Without load.

4) Pulsed.

5) Signal transit time with resistive load.

6) With light/dark ratio 1:1.

7) Do not bend below 0 °C.

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

9) C = interference suppression.

10) D = outputs overcurrent and short-circuit protected.

## Safety-related parameters

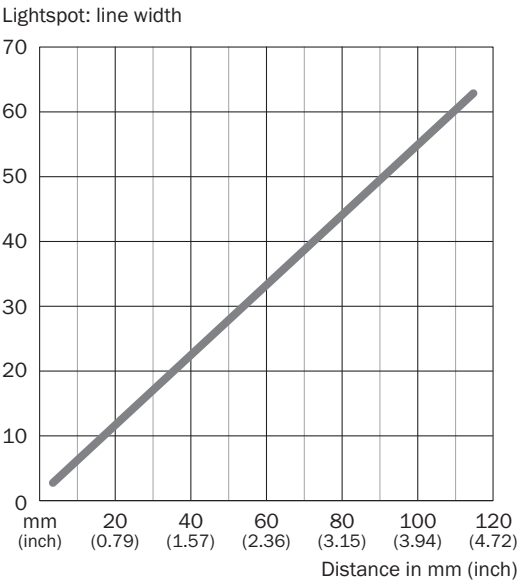
<b>MTTF<sub>D</sub></b>	1,112 years
<b>DC<sub>avg</sub></b>	0 %

## Classifications

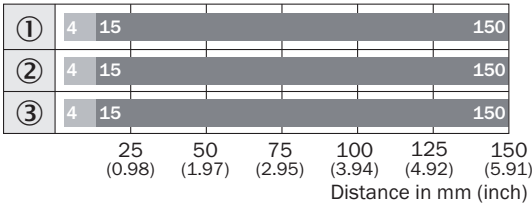
<b>ECLASS 5.0</b>	27270904
<b>ECLASS 5.1.4</b>	27270904
<b>ECLASS 6.0</b>	27270904
<b>ECLASS 6.2</b>	27270904

ECLASS 7.0	27270904
ECLASS 8.0	27270904
ECLASS 8.1	27270904
ECLASS 9.0	27270904
ECLASS 10.0	27270904
ECLASS 11.0	27270904
ECLASS 12.0	27270903
ETIM 5.0	EC002719
ETIM 6.0	EC002719
ETIM 7.0	EC002719
ETIM 8.0	EC002719
UNSPSC 16.0901	39121528

Light spot size WTB4-3, line-shaped light spot

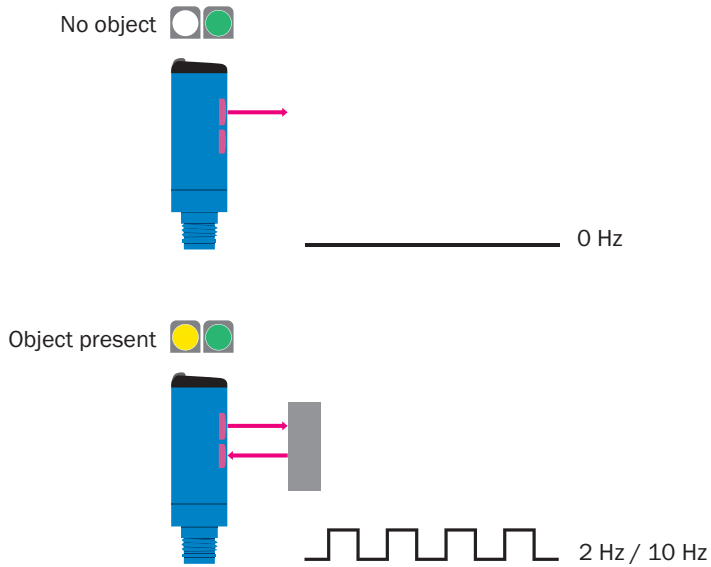


Sensing range diagram WTB4-3

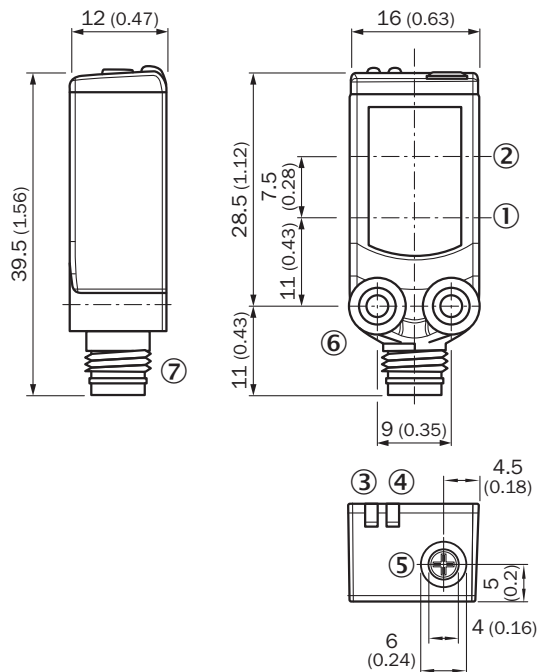


- Sensing range max.
- Sensing range
- ① sensing range on black, 6% remission
- ② Sensing range on gray, 18 % remission
- ③ sensing range on white, 90% remission

## Functional principle



## 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 Potentiometer
- ⑥ Threaded mounting hole M3
- ⑦ Connection

### Recommended accessories

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

	Brief description	Type	part no.
Mounting systems			
	<ul style="list-style-type: none"> <li><b>Description:</b> Mounting bracket for floor mounting</li> <li><b>Material:</b> Stainless steel</li> <li><b>Details:</b> Stainless steel 1.4571</li> <li><b>Items supplied:</b> Mounting hardware included</li> <li><b>Suitable for:</b> W4S, W4F, W4S</li> </ul>	BEF-W4-B	2051630
	<ul style="list-style-type: none"> <li><b>Description:</b> Plate N08 for universal clamp bracket</li> <li><b>Material:</b> Steel, zinc diecast</li> <li><b>Details:</b> Zinc plated steel (sheet), Zinc die cast (clamping bracket)</li> <li><b>Items supplied:</b> Universal clamp (5322626), mounting hardware</li> <li><b>Usable for:</b> W100, W150, W4S, W4F, W8, W9-3, W8G, W8 Laser, W8 Inox, G6, W100 Laser, W100-2, W10, G6 Inox, RAY10, W4SLG-3, W9, GR18, MultiPulse, Reflex Array, MultiLine, LUT3, KT5, KT8, KT10, CS8</li> </ul>	BEF-KHS-N08	2051607
	<ul style="list-style-type: none"> <li><b>Description:</b> Mounting bracket for wall mounting</li> <li><b>Material:</b> Stainless steel</li> <li><b>Details:</b> Stainless steel 1.4571</li> <li><b>Items supplied:</b> Mounting hardware included</li> <li><b>Suitable for:</b> W4S, W4F, W4S</li> </ul>	BEF-W4-A	2051628
	<ul style="list-style-type: none"> <li><b>Description:</b> Plate N11N for universal clamp bracket</li> <li><b>Material:</b> Stainless steel</li> <li><b>Details:</b> Stainless steel 1.4571 (sheet), Stainless steel 1.4408 (clamp)</li> <li><b>Items supplied:</b> Universal clamp (5322627), mounting hardware</li> <li><b>Usable for:</b> DeltaPac, Glare, WTD20E</li> </ul>	BEF-KHS-N11N	2071081
connectors and cables			
	<ul style="list-style-type: none"> <li><b>Connection type head A:</b> Male connector, M8, 3-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-0803-G	6037322
	<ul style="list-style-type: none"> <li><b>Connection type head A:</b> Female connector, M8, 3-pin, straight, A-coded</li> <li><b>Connection type head B:</b> Flying leads</li> <li><b>Signal type:</b> Sensor/actuator cable</li> <li><b>Cable:</b> 5 m, 3-wire, PVC</li> <li><b>Description:</b> Sensor/actuator cable, unshielded</li> <li><b>Application:</b> Zones with chemicals, Untamminated zones</li> </ul>	YF8U13-050VA1XLEAX	2095884
	<ul style="list-style-type: none"> <li><b>Connection type head A:</b> Female connector, M8, 3-pin, straight, A-coded</li> <li><b>Connection type head B:</b> Flying leads</li> <li><b>Signal type:</b> Sensor/actuator cable</li> <li><b>Cable:</b> 5 m, 3-wire, PUR, halogen-free</li> <li><b>Description:</b> Sensor/actuator cable, unshielded</li> <li><b>Application:</b> Untamminated zones, Zones with oils and lubricants, Robot, Drag chain operation</li> </ul>	YF8U13-050UA1XLEAX	2094788

## 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)