



# WTT4SLC-3B1162A00

WTT4 PowerProx

TIME-OF-FLIGHT SENSORS

**SICK**  
Sensor Intelligence.



Illustration may differ



### Ordering information

Type	Part no.
WTT4SLC-3B1162A00	1097191

Other models and accessories → [www.sick.com/WTT4\\_PowerProx](http://www.sick.com/WTT4_PowerProx)

### Detailed technical data

#### Features

<b>Functional principle</b>	Photoelectric proximity sensor
<b>Functional principle detail</b>	Background suppression, Optical time-of-flight
<b>Housing design (light emission)</b>	Rectangular
<b>Sensing range max.</b>	50 mm ... 1,300 mm <sup>1)</sup>
<b>Sensing range</b>	100 mm ... 1,300 mm <sup>2)</sup>
<b>Distance value</b>	
Measuring range	90 mm ... 1,300 mm <sup>1)</sup>
Resolution	1 mm
Repeatability	4,5 mm ... 11 mm <sup>3) 4) 5)</sup>
Accuracy	- 10 mm, + 80 mm
Distance value output	Via IO-Link
Update rate of the distance value	0.8 ms
<b>Type of light</b>	Visible red light
<b>Light source</b>	Laser <sup>6)</sup>
<b>Light spot size (distance)</b>	Ø 4 mm (1,000 mm)
<b>Wave length</b>	658 nm
<b>Laser class</b>	1 (IEC 60825-1 / CDRH 21 CFR 1040.10 & 1040.11)

<sup>1)</sup> Object with 6 ... 90% remission (based on standard white, DIN 5033).

<sup>2)</sup> Adjustable.

<sup>3)</sup> Equivalent to 1  $\sigma$ .

<sup>4)</sup> See characteristic curves repeatability.

<sup>5)</sup> 6% ... 90% remission factor.

<sup>6)</sup> Average service life: 50,000 h at  $T_U = +25 \text{ }^\circ\text{C}$ .

<b>Adjustment</b>	Single teach-in button, IO-Link
<b>Pin 2 configuration</b>	External input, Teach-in input, Sender off input, Detection output, logic output
<b>Safety-related parameters</b>	
	MTTF <sub>D</sub> 256 years
	DC <sub>avg</sub> 0 %
	T <sub>M</sub> (mission time) 20 years

1) Object with 6 ... 90% remission (based on standard white, DIN 5033).

2) Adjustable.

3) Equivalent to 1  $\sigma$ .

4) See characteristic curves repeatability.

5) 6% ... 90% remission factor.

6) Average service life: 50,000 h at T<sub>U</sub> = +25 °C.

## Interfaces

<b>Communication interface</b>	IO-Link V1.1
<b>Communication Interface detail</b>	COM3 (230,4 kBaud)
<b>Cycle time</b>	0.8 ms
<b>Process data length</b>	4 Byte
<b>Process data structure</b>	Bit 0 = switching signal Q <sub>L1</sub> Bit 1 = switching signal Q <sub>L2</sub> Bit 2 = detection signal Q <sub>int.1</sub> Bit 3 = detection signal Q <sub>int.2</sub> Bit 4 = detection signal Q <sub>int.3</sub> Bit 5 = detection signal Q <sub>int.4</sub> Bit 6 = detection signal Q <sub>int.5</sub> Bit 7 = detection signal Q <sub>int.6</sub> Bit 8 = detection signal Q <sub>int.7</sub> Bit 9 = detection signal Q <sub>int.8</sub> Bit 10 ... 15 = empty Bit 16 ... 31 = distance value
<b>VendorID</b>	26
<b>DeviceID HEX</b>	0x80021D
<b>DeviceID DEC</b>	8389149

## Electronics

<b>Supply voltage U<sub>B</sub></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>	25 mA <sup>3)</sup>
<b>Switching output</b>	Push-pull: PNP/NPN
<b>Output function</b>	Factory setting: Pin 2 / white (MF): NPN normally open (light switching), PNP normally closed (dark switching), Pin 4 / black (QL1 / C): NPN normally closed (dark switching), PNP normally open (light switching), IO-Link

1) Limit values. Operated in short-circuit protected network: max. 8 A.

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

3) Without load.

4) Signal transit time with resistive load.

5) With light/dark ratio 1:1.

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

7) B = output reverse-polarity protected.

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

9) Below T<sub>U</sub> = -10 °C a warm-up time is necessary.

<b>Switching mode</b>	Light/dark switching
<b>Output current <math>I_{max}</math></b>	$\leq 50$ mA
<b>Response time</b>	$\leq 5$ ms <sup>4)</sup>
<b>Switching frequency</b>	100 Hz <sup>5)</sup>
<b>Input</b>	MF <sub>in</sub> = multifunctional input programmable
<b>Circuit protection</b>	A <sup>6)</sup> B <sup>7)</sup> D <sup>8)</sup>
<b>Protection class</b>	III
<b>Enclosure rating</b>	IP67
<b>Warm-up time</b>	< 10 min <sup>9)</sup>
<b>Initialization time</b>	< 300 ms

<sup>1)</sup> Limit values. Operated in short-circuit protected network: max. 8 A.

<sup>2)</sup> May not fall below or exceed  $U_V$  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> A =  $V_S$  connections reverse-polarity protected.

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

<sup>8)</sup> D = outputs overcurrent and short-circuit protected.

<sup>9)</sup> Below  $T_u = -10$  °C a warm-up time is necessary.

### Mechanics

<b>Dimensions (W x H x D)</b>	12.2 mm x 41.8 mm x 17.3 mm
<b>Housing material</b>	Plastic, MABS, ABS
<b>Optics material</b>	Plastic, PMMA
<b>Weight</b>	10 g
<b>Connection type</b>	Cable, 4-wire, 2 m
<b>Connection type Detail</b>	
Cable diameter	Ø 3.4 mm
Conductor cross section	0.14 mm <sup>2</sup>

### Ambient data

<b>Ambient operating temperature</b>	-40 °C ... +50 °C <sup>1)</sup>
<b>Ambient temperature, storage</b>	-40 °C ... +75 °C

<sup>1)</sup> As of  $T_a = 45$  °C, a max.load current  $I_{max} = 50$  mA is permitted.

### Smart Task

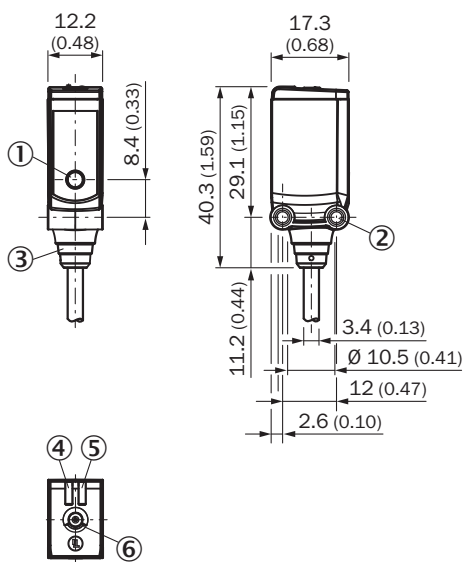
<b>Smart Task name</b>	Base logics
<b>Logic function</b>	Direct AND OR WINDOW Hysteresis
<b>Timer function</b>	Deactivated Switch-on delay Off delay ON and OFF delay Impulse (one shot)

<b>Inverter</b>	Yes
<b>Switching signal</b>	
Switching signal Q <sub>L1</sub>	Switching output
Switching signal Q <sub>L2</sub>	Switching output

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

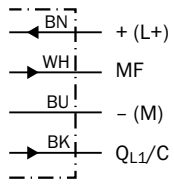
Dimensional drawing (Dimensions in mm (inch))



- ① Center of optical axis
- ② Threaded mounting hole M3
- ③ Connection
- ④ LED indicator green: power
- ⑤ LED indicator yellow: Status of received light beam
- ⑥ Single teach-in button

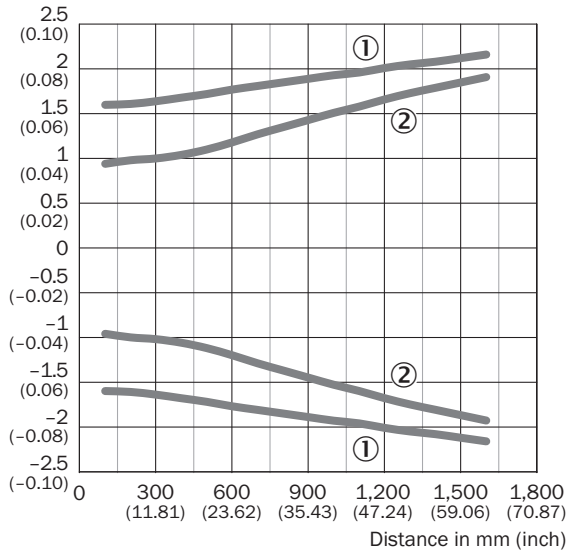
### Connection diagram

Cd-389



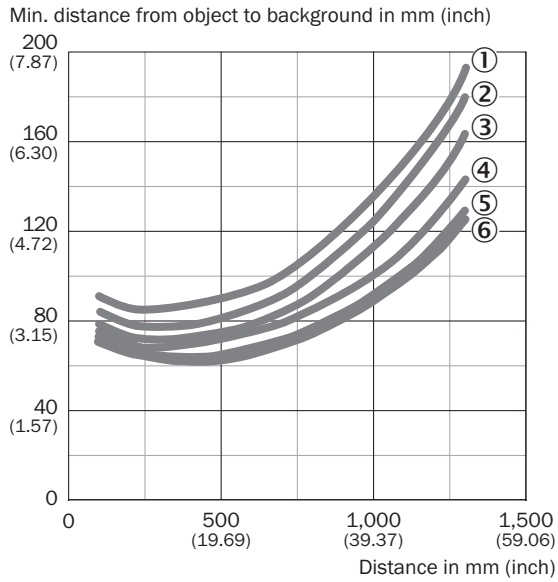
### Light spot size

Radius in mm (inch)

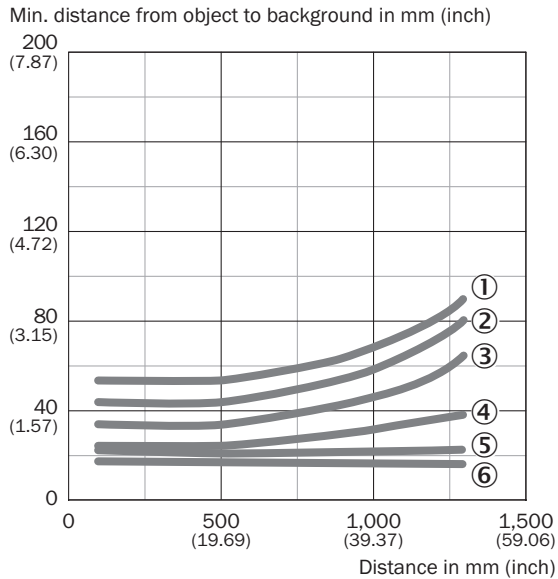


- ① Light spot horizontal
- ② Light spot vertical

## Scanning range



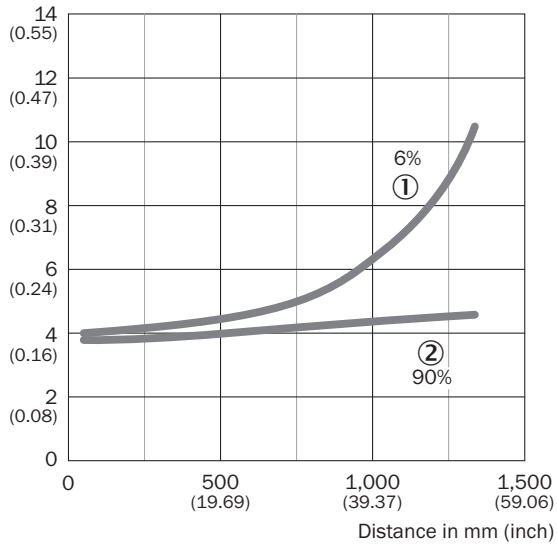
- ① 6 % / 90 % AVG1
- ② 6 % / 90 % AVG2
- ③ 6 % / 90 % AVG4
- ④ 6 % / 90 % AVG8
- ⑤ 6 % / 90 % AVG64
- ⑥ 6 % / 90 % AVG512



- ① 90 % / 90 % AVG1
- ② 90 % / 90 % AVG2
- ③ 90 % / 90 % AVG4
- ④ 90 % / 90 % AVG8
- ⑤ 90 % / 90 % AVG64
- ⑥ 90 % / 90 % AVG512

### Repeatability


Repeatability in mm (inch)



- ① 6 % remission, on black
- ② 90 % remission, on white

### Recommended accessories

Other models and accessories → [www.sick.com/WTT4\\_PowerProx](http://www.sick.com/WTT4_PowerProx)

	Brief description	Type	Part no.
Universal bar clamp systems			
	Plate NO8N for universal clamp bracket, Stainless steel 1.4571 (sheet), Stainless steel 1.4408 (clamp), Universal clamp (5322627), mounting hardware	BEF-KHS-NO8N	2051616



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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.”

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