



WTT4SLC-3B0062B03

WTT4 PowerProx

TIME-OF-FLIGHT SENSORS

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

Type	part no.
WTT4SLC-3B0062B03	1118144

Other models and accessories → www.sick.com/WTT4_PowerProx

Detailed technical data

Features

Functional principle	Photoelectric proximity sensor
Functional principle detail	Background suppression, Optical time-of-flight
Housing design (light emission)	Rectangular
Sensing range max.	50 mm ... 1,300 mm ¹⁾
Sensing range	100 mm ... 1,300 mm ²⁾
Distance value	
Measuring range	90 mm ... 1,300 mm ¹⁾
Resolution	1 mm
Repeatability	4,5 mm ... 11 mm ^{3) 4) 5)}
Accuracy	- 10 mm, + 80 mm
Distance value output	Via IO-Link
Update rate of the distance value	0.8 ms
Type of light	Visible red light
Light source	Laser ⁶⁾
Light spot size (distance)	Ø 4 mm (1,000 mm)

¹⁾ Object with 6 ... 90% remission (based on standard white, DIN 5033).
²⁾ Adjustable.
³⁾ Equivalent to 1 σ .
⁴⁾ See characteristic curves repeatability.
⁵⁾ 6% ... 90% remission factor.
⁶⁾ Average service life: 50,000 h at T_U = +25 °C.

Wave length	658 nm
Laser class	1 (IEC 60825-1 / CDRH 21 CFR 1040.10 & 1040.11)
Adjustment	Single teach-in button, IO-Link
Pin 2 configuration	External input, Teach-in input, Sender off input, Detection output, logic output
Safety-related parameters	
MTTF _D	256 years
DC _{avg}	0 %
T _M (mission time)	10 years

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2) Adjustable.

3) Equivalent to 1 σ .

4) See characteristic curves repeatability.

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

6) Average service life: 50,000 h at T_U = +25 °C.

Interfaces

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

Electronics

Supply voltage U_B	10 V DC ... 30 V DC ¹⁾
Ripple	< 5 V _{pp} ²⁾
Current consumption	25 mA ³⁾
Switching output	Push-pull: PNP/NPN

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

2) May not fall below or exceed U_y tolerances.

3) Without load.

4) Signal transit time with resistive load.

5) With light/dark ratio 1:1.

6) A = V_S connections reverse-polarity protected.

7) B = output reverse-polarity protected.

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

9) Below T_U = -10 °C a warm-up time is necessary.

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

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⁶⁾ A = V_S connections reverse-polarity protected.

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Mechanics

Dimensions (W x H x D)	12.2 mm x 41.8 mm x 17.3 mm
Housing material	Plastic, MABS, ABS
Optics material	Plastic, PMMA
Weight	10 g
Connection type	Cable with M12 male connector, 4-pin, 1,547 mm
Connection type Detail	
Cable diameter	Ø 3.4 mm
Conductor cross section	0.14 mm ²

Ambient data

Ambient operating temperature	-40 °C ... +50 °C ¹⁾
Ambient temperature, storage	-40 °C ... +75 °C

¹⁾ As of $T_a = 45 \text{ °C}$, a max.load current $I_{\max} = 50 \text{ mA}$ is permitted.

Smart Task

Smart Task name	Base logics
Logic function	Direct AND OR WINDOW Hysteresis
Timer function	Deactivated

	Switch-on delay Off delay ON and OFF delay Impulse (one shot)
Inverter	Yes
Switching signal	
Switching signal Q _{L1}	Switching output
Switching signal Q _{L2}	Switching output

Certificates

EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
Moroccan declaration of conformity	✓
China-RoHS	✓
cULus certificate	✓
IO-Link	✓
Laser safety (IEC 60825-1) certificate	✓

Classifications

ECLASS 5.0	27270904
ECLASS 5.1.4	27270904
ECLASS 6.0	27270904
ECLASS 6.2	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

Technical drawing of the M12x1 15.9 connector, showing dimensions in mm (inches).

Front View (Top):

- Overall width: 12.2 (0.48)
- Distance from top edge to center of pin: 8.4 (0.33)
- Pin diameter: Ø 10.5 (0.41)

Side View (Right):

- Overall height: 40.3 (1.59)
- Distance from top edge to center of pin: 29.1 (1.15)
- Pin length: 11.2 (0.44)
- Pin diameter: Ø 10.5 (0.41)
- Distance from bottom of pin to base: 2.6 (0.10)

Detail View (Bottom):

- Overall height: 47 (1.85)
- Base diameter: Ø 15.9 (0.63)
- Thread: M12 x 1

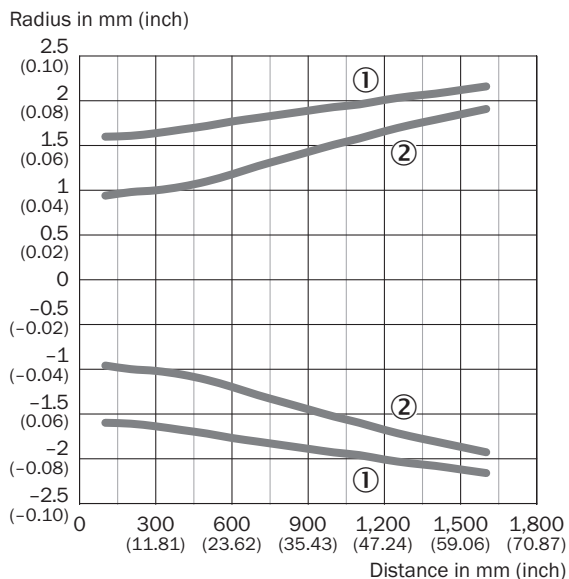
Callouts:

- ①: Pin
- ②: Pin
- ③: Pin
- ④: Pin
- ⑤: Pin
- ⑥: Pin

- 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

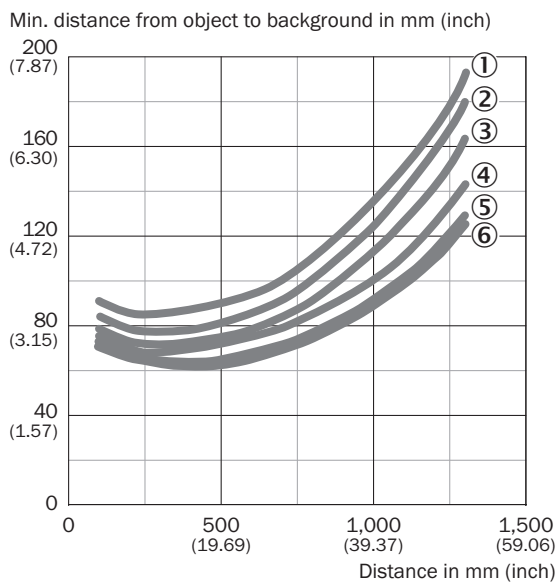
Figure 1: Schematic diagram of the four-qubit quantum circuit. The circuit consists of four horizontal lines representing qubits: BN (top), WH, BU, and BK (bottom). BN is initialized to 1, WH to 2, BU to 3, and BK to 4. The circuit includes a Hadamard gate on BN, followed by a CNOT gate with BN as control and WH as target. Then, WH and BU are entangled via a CNOT gate with WH as control and BU as target. Finally, BU and BK are entangled via a CNOT gate with BU as control and BK as target. The output is measured on all four qubits, yielding values 1, 2, 3, and 4 respectively, which correspond to the labels (L+), MF, -(M), and QL1/C.

Light spot size



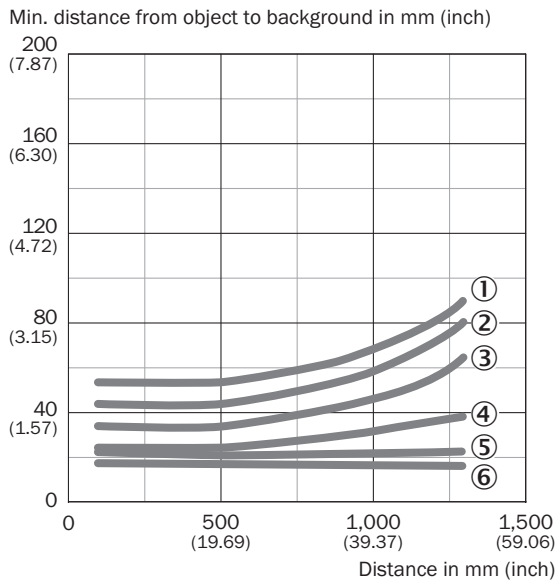
- ① Light spot horizontal
- ② Light spot vertical

Scanning range



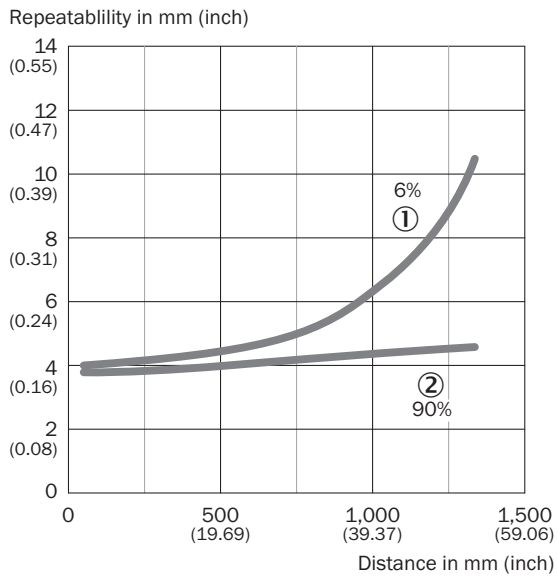
- ① 6 % / 90 % AVG1
- ② 6 % / 90 % AVG2
- ③ 6 % / 90 % AVG4
- ④ 6 % / 90 % AVG8
- ⑤ 6 % / 90 % AVG64
- ⑥ 6 % / 90 % AVG512

Scanning range



- 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



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

Recommended accessories

Other models and accessories → www.sick.com/WTT4_PowerProx

	Brief description	Type	part no.
Mounting systems			
	Description: Plate N08N for universal clamp bracket Material: Stainless steel, stainless steel Details: Stainless steel 1.4571 (sheet), Stainless steel 1.4408 (clamp) Items supplied: Universal clamp (5322627), mounting hardware Usable for: W100, W150, W4-3, W4S-3, W8, W9-3, W8G, W8 Laser, W8 Inox, G6, W100 Laser, W100-2, W4-3 Glass, W4S-3 Glass, RAY10, W4SLG-3, W9, GR18, MultiPulse, Reflex Array, Multi-Line, LUT3, KT5, KT8, KT10, CS8, G6 Inox	BEF-KHS-N08N	2051616
connectors and cables			
	Connection type head A: Male connector, M12, 4-pin, straight, A-coded Description: Unshielded Connection systems: Screw-type terminals Permitted cross-section: ≤ 0.75 mm²	STE-1204-G	6009932
	Connection type head A: Female connector, M12, 4-pin, straight, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 5 m, 4-wire, PVC Description: Sensor/actuator cable, unshielded Application: Zones with chemicals, Uncontaminated zones	YF2A14-050VB3XLEAX	2096235

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.”

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