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DATA SHEET

WTT4SLC-3B2262A00

WTT4 PowerProx
Time-of-flight sensors

SICK Sensor Intelligence

Illustration may differ

TIME-OF-FLIGHT SENSORS

WTT4SL-C-3B2262A00

ORDERING INFORMATION

Type	part no.
WTT4SLC-3B2262A00	1097190

Further device versions and accessories at www.sick.com/WTT4_PowerProx

DETAILED TECHNICAL DATA

FEATURES

Functional principle	Photoelectric proximity sensor
Functional principle detail	Background suppression, Optical time-of-flight, distance value
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	1,000 µm
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]

[1] Object with ó ... 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.

[7] Do not intentionally look into the laser beam. Never point the laser beam at people's eyes.

Light spot size (distance)	Ø 4 mm (1,000 mm)
Wave length	658 nm
Laser class	1 (IEC 60825-1 / CDRH 21 CFR 1040.10 & 1040.11) [7]
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)	20 years

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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 Qint.1 Bit 3 = detection signal Qint.2 Bit 4 = detection signal Qint.3 Bit 5 = detection signal Qint.4 Bit 6 = detection signal Qint.5 Bit 7 = detection signal Qint.6 Bit 8 = detection signal Qint.7 Bit 9 = detection signal Qint.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]

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

[2] May not fall below or exceed U_V 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.

Current consumption	25 mA [3]
Switching output	Push-pull: PNP/NPN
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 $I_{max.}$	≤ 50 mA
Response time	≤ 5 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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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	Male connector M8, 4-pin

AMBIENT DATA

Ambient operating temperature	–40 °C ... +50 °C [1]
Ambient temperature, storage	–40 °C ... +75 °C

[1] As of T_a = 45 °C, a max.load current I_{max} = 50 mA is permitted.

SMART TASK

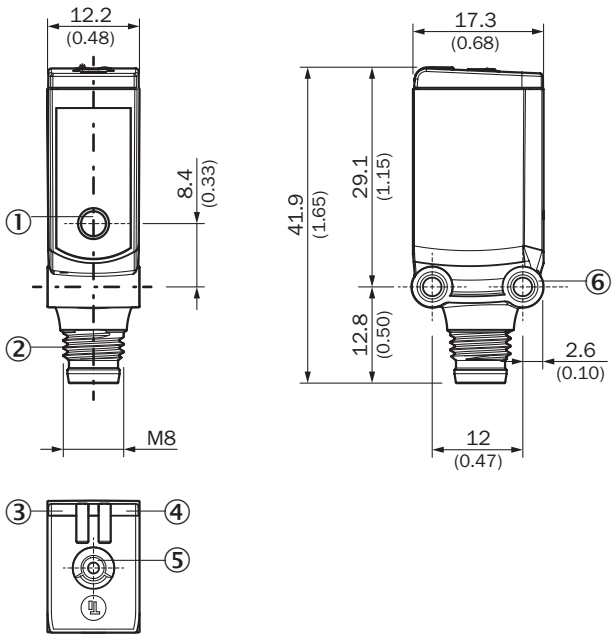
Smart Task name	Base logics
Logic function	Direct AND OR WINDOW Hysteresis
Timer function	Deactivated Switch-on delay

	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

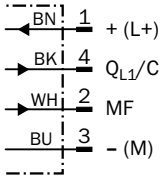
EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
Moroccan declaration of conformity	✓
China RoHS	✓
China Compulsory Product Certification (CCC) exempt	✓
cULus certificate	✓
IO-Link certificate	✓
Laser safety (IEC 60825-1) certificate	✓
Information according to Art. 3 of Data Act (Regulation EU 2023/2854)	✓

DIMENSIONAL DRAWING

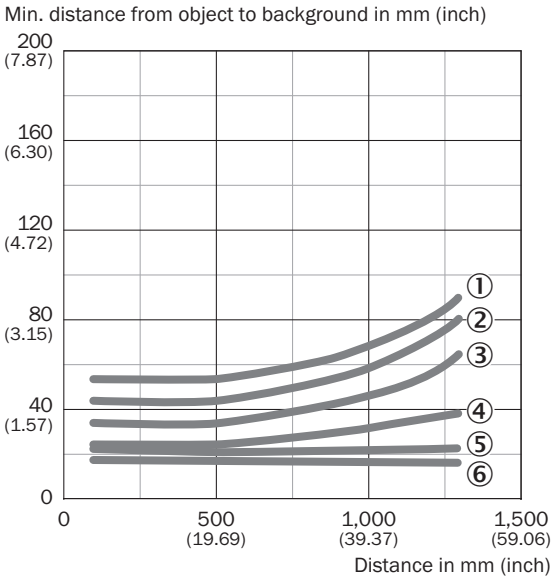


Dimensions in mm (inch)
① Center of optical axis
② Connection
③ LED indicator green: power
④ LED indicator yellow: Status of received light beam
⑤ single teach-in button
⑥ Threaded mounting hole M3

CONNECTION DIAGRAM CD-367

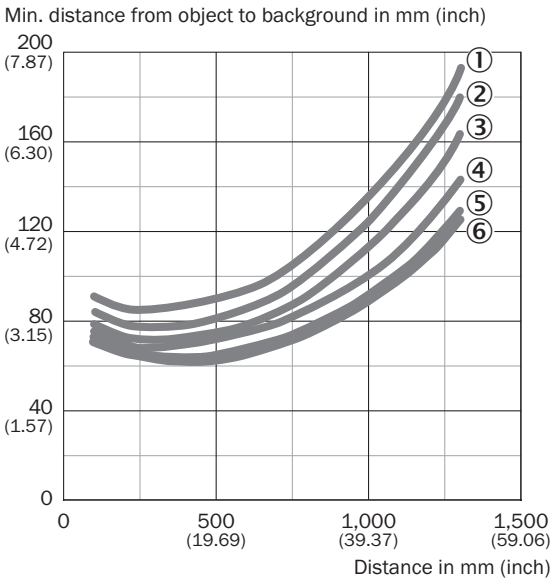


CHARACTERISTIC CURVE



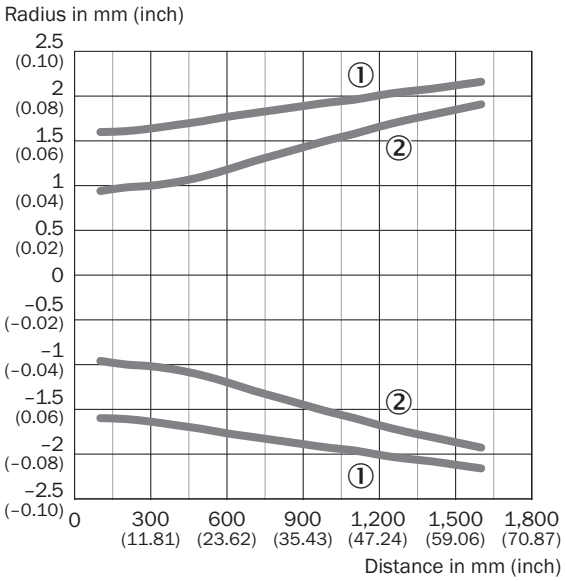
① 90 % / 90 % AVG1
② 90 % / 90 % AVG2
③ 90 % / 90 % AVG4
④ 90 % / 90 % AVG8
⑤ 90 % / 90 % AVG64
⑥ 90 % / 90 % AVG512

CHARACTERISTIC CURVE



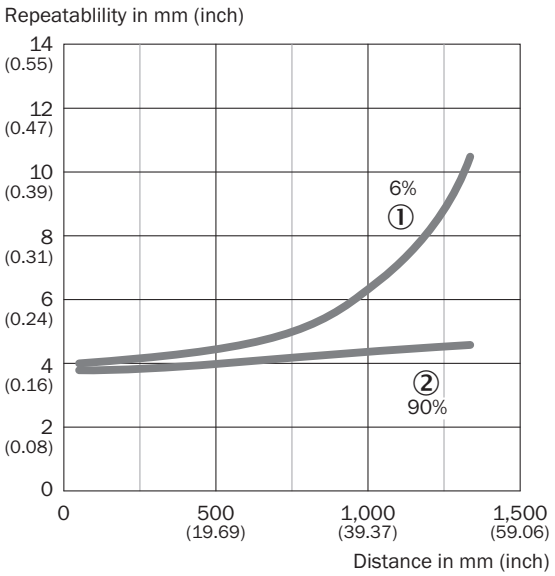
① 6 % / 90 % AVG1
② 6 % / 90 % AVG2
③ 6 % / 90 % AVG4
④ 6 % / 90 % AVG8
⑤ 6 % / 90 % AVG64
⑥ 6 % / 90 % AVG512

LIGHT SPOT SIZE



① Light spot horizontal
② Light spot vertical

REPEATABILITY



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

Further information as well as suitable accessories, example applications and downloads such as CAD dimensional models, operating instructions and software can be found at www.sick.com/1097190

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SICK AT A GLANCE

SICK is a leading global technology company for intelligent sensors and integrated solutions in industrial automation. Our technologies set benchmarks, making your industrial processes more efficient, safer and more sustainable – both in logistics and manufacturing operations.

SICK combines sensor intelligence with industry expertise and certified consulting services. We provide the ideal foundation for scalable as well as tailor-made automation solutions and create added value along the entire value chain. Our close partnerships with our customers are more than just a promise: Together, we optimize productivity, improve quality, protect health and safety, and help build a sustainable future. All with empathy and trust.

Since 1946, we have been developing innovative technologies with passion and a pioneering spirit. With a global network in around 40 countries, SICK has a global presence and is always close by. The company's headquarters are located in Waldkirch near Freiburg, Germany. Our customers benefit from our understanding of both local and global requirements, which enables us to deliver tailor-made solutions

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