



WTB4SLC-3P2262A71  
W4

PHOTOELECTRIC SENSORS

**SICK**  
Sensor Intelligence.



Illustration may differ



Ordering information

Type	part no.
WTB4SLC-3P2262A71	1080941

Other models and accessories → [www.sick.com/W4](http://www.sick.com/W4)

Detailed technical data

Features

<b>Functional principle</b>		Photoelectric proximity sensor
<b>Functional principle detail</b>		Background suppression
<b>Sensing range max.</b>		25 mm ... 300 mm <sup>1)</sup>
<b>Sensing range</b>		25 mm ... 300 mm <sup>1)</sup>
<b>Emitted beam</b>		
	Light source	Laser <sup>2)</sup>
	Type of light	Visible red light
	Light spot size (distance)	Ø 1 mm (170 mm)
<b>Key laser figures</b>		
	Normative reference	EN 60825-1:2014, IEC 60825-1:2014 / CDRH 21 CFR 1040.10 & 1040.11
	Laser class	1
	Wave length	650 nm
<b>Adjustment</b>		Cable, Single teach-in button
<b>Special applications</b>		Detecting small objects
<b>Mounting hole</b>		M3
<b>Pin 2 configuration</b>		External input, Teach-in input, Sender off input, Detection output, logic output

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

<sup>2)</sup> Average service life: 50,000 h at T<sub>U</sub> = +25 °C.

## Safety-related parameters

<b>MTTF<sub>D</sub></b>	326 years (EN ISO 13849-1) <sup>1)</sup>
<b>DC<sub>avg</sub></b>	0 %
<b>T<sub>M</sub> (mission time)</b>	10 years

<sup>1)</sup> Mode of calculation: Parts-Count-calculation.

## Communication interface

<b>IO-Link</b>	✓ , COM2 (38,4 kBaud)
Data transmission rate	COM2 (38,4 kBaud)
Cycle time	2.3 ms
Process data length	16 Bit
Process data structure	Bit 0 = switching signal Q <sub>L1</sub>
	Bit 1 = switching signal Q <sub>L2</sub>
	Bit 2 ... 15 = measuring value
VendorID	26
DeviceID HEX	0x80010B
DeviceID DEC	8388875

## 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>	30 mA <sup>3)</sup>
<b>Protection class</b>	III
<b>Digital output</b>	
Type	PNP <sup>4)</sup>
	<sup>5)</sup>
Switching mode	Light/dark switching <sup>4)</sup>
Output current I <sub>max.</sub>	≤ 100 mA
Response time	≤ 0.5 ms <sup>6)</sup>
Repeatability (response time)	150 μs <sup>7)</sup>
Switching frequency	1,000 Hz <sup>8)</sup>
<b>Output function</b>	Complementary
<b>Circuit protection</b>	A <sup>9)</sup>

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

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

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

<sup>4)</sup> Q = light switching.

<sup>5)</sup> Pin 4: This switching output must not be connected to another output.

<sup>6)</sup> Signal transit time with resistive load.

<sup>7)</sup> Valid for Q \ on Pin2, if configured with software.

<sup>8)</sup> With light/dark ratio 1:1.

<sup>9)</sup> A = V<sub>S</sub> connections reverse-polarity protected.

<sup>10)</sup> B = inputs and output reverse-polarity protected.

<sup>11)</sup> C = interference suppression.

	B <sup>10)</sup> C <sup>11)</sup>
Response time Q/ on Pin 2	300 µs ... 450 µs <sup>6) 7)</sup>

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

2) May not fall below or exceed  $U_V$  tolerances.

3) Without load.

4) Q = light switching.

5) Pin 4: This switching output must not be connected to another output.

6) Signal transit time with resistive load.

7) Valid for Q \ on Pin2, if configured with software.

8) With light/dark ratio 1:1.

9) A =  $V_S$  connections reverse-polarity protected.

10) B = inputs and output reverse-polarity protected.

11) C = interference suppression.

## Mechanics

Housing	Rectangular
Design detail	Slim
Dimensions (W x H x D)	12.2 mm x 41.8 mm x 17.3 mm
Connection	Male connector M8, 4-pin
Material	
Housing	Plastic, Novodur
Front screen	Plastic, PMMA
Weight	100 g

## Ambient data

Enclosure rating	IP66 IP67
Ambient operating temperature	-10 °C ... +50 °C
Ambient operating temperature extended	-30 °C ... +55 °C <sup>1) 2)</sup>
Ambient temperature, storage	-30 °C ... +70 °C
RoHS certificate	✓

1) As of  $T_a = 50\text{ °C}$ , a max. supply voltage  $V_{max.} = 24\text{ V}$  and a max. load current  $I_{max.} = 50\text{ mA}$  is permitted.

2) Operation below  $T_u -10\text{ °C}$  is possible if the sensor is already switched on at  $T_u > -10\text{ °C}$ , then cools down, and the supply voltage is subsequently not switched off. Switching on below  $T_u -10\text{ °C}$  is not permissible.

## Smart Task

Smart Task name	Counter + debouncing
Logic function	Direct WINDOW Hysteresis
Timer function	Deactivated Switch-on delay Off delay ON and OFF delay Impulse (one shot)
Inverter	Yes

1) SIO Direct: sensor operation in standard I/O mode without IO-Link communication and without using internal sensor logic or time parameters (set to "direct"/"deactivated").

2) SIO Logic: Sensor operation in standard I/O mode without IO-Link communication. Sensor-internal logic or timing parameters plus Automation Functions used.

3) IOL: Sensor operation with full IO-Link communication and usage of logic, timing and Automation Function parameters.

<b>Maximum counting frequency</b>	SIO Direct: — <sup>1)</sup> SIO Logic: 1000 Hz <sup>2)</sup> IOL: 650 Hz <sup>3)</sup>
<b>Counter reset</b>	SIO Direct: — SIO Logic: 1,5 ms IOL: 1,5 ms
<b>Min. Time between two process events (switches)</b>	SIO Direct: — SIO Logic: 500 µs IOL: 800 µs
<b>Debounce time max.</b>	SIO Direct: — SIO Logic: 30.000 ms IOL: 30.000 ms
<b>Switching signal</b>	
Switching signal Q <sub>L1</sub>	Output type (dependant on the adjusted threshold)
Switching signal Q <sub>L2</sub>	Output type (dependant on the adjusted threshold)
<b>Measuring value</b>	Counting value

<sup>1)</sup> SIO Direct: sensor operation in standard I/O mode without IO-Link communication and without using internal sensor logic or time parameters (set to "direct"/"deactivated").

<sup>2)</sup> SIO Logic: Sensor operation in standard I/O mode without IO-Link communication. Sensor-internal logic or timing parameters plus Automation Functions used.

<sup>3)</sup> IOL: Sensor operation with full IO-Link communication and usage of logic, timing and Automation Function parameters.

## Diagnosis

<b>Device status</b>	Yes
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## Certificates

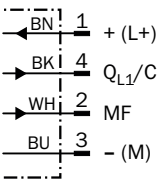
<b>EU declaration of conformity</b>	✓
<b>UK declaration of conformity</b>	✓
<b>ACMA declaration of conformity</b>	✓
<b>Moroccan declaration of conformity</b>	✓
<b>China RoHS</b>	✓
<b>ECOLAB certificate</b>	✓
<b>IO-Link certificate</b>	✓
<b>Laser safety (IEC 60825-1) certificate</b>	✓
<b>Information according to Art. 3 of Data Act (Regulation EU 2023/2854)</b>	✓

## Classifications

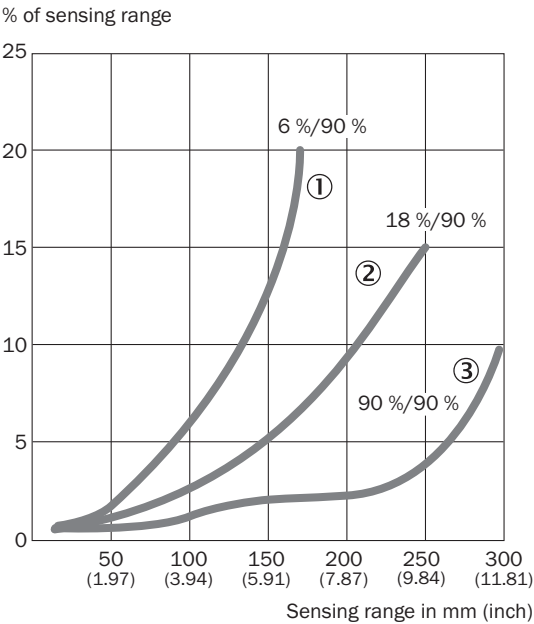
<b>ECLASS 5.0</b>	27270904
<b>ECLASS 5.1.4</b>	27270904
<b>ECLASS 6.0</b>	27270904
<b>ECLASS 6.2</b>	27270904
<b>ECLASS 7.0</b>	27270904
<b>ECLASS 8.0</b>	27270904
<b>ECLASS 8.1</b>	27270904
<b>ECLASS 9.0</b>	27270904
<b>ECLASS 10.0</b>	27270904
<b>ECLASS 11.0</b>	27270904
<b>ECLASS 12.0</b>	27270903

ETIM 5.0	EC002719
ETIM 6.0	EC002719
ETIM 7.0	EC002719
ETIM 8.0	EC002719
UNSPSC 16.0901	39121528

Connection diagram Cd-367

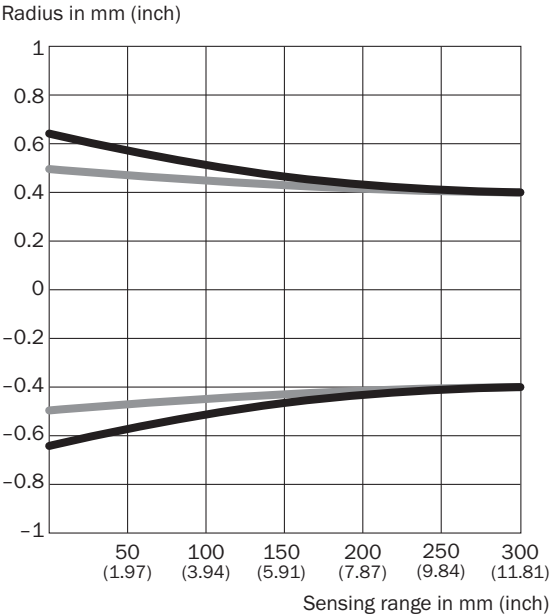


Characteristic curve



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

Light spot size

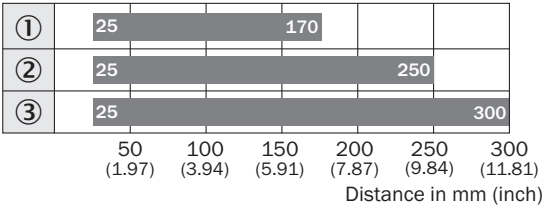


Dimensions in mm (inch)

Sensing range	Vertical	Horizontal
50 mm (1.97)	1.2 (0.05)	1.0 (0.04)
100 mm (3.94)	1.1 (0.04)	1.0 (0.04)
200 mm (7.87)	0.9 (0.04)	0.9 (0.04)
300 mm (11.81)	0.8 (0.03)	0.8 (0.03)

Vertical  
Horizontal

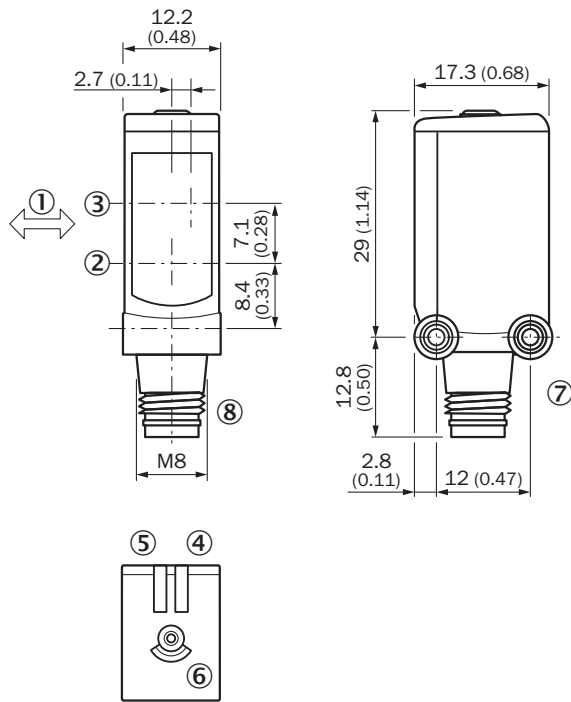
Sensing range diagram



■ Sensing range typ. max.

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

### Dimensional drawing







Dimensions in mm (inch)

- ① Standard direction of the material being detected
- ② Center of optical axis, sender
- ③ Center of optical axis, receiver
- ④ LED indicator green: Supply voltage active
- ⑤ LED indicator yellow: Status of received light beam
- ⑥ single teach-in button
- ⑦ Threaded mounting hole M3
- ⑧ Connection



## Recommended accessories

Other models and accessories → [www.sick.com/W4](http://www.sick.com/W4)

	Brief description	Type	part no.
connectors and cables			
	<ul style="list-style-type: none"> <li><b>Connection type head A:</b> Female connector, M8, 4-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, 4-wire, PVC</li> <li><b>Description:</b> Sensor/actuator cable, unshielded</li> <li><b>Application:</b> Zones with chemicals, Uncontaminated zones</li> </ul>	YF8U14-050VA3XLEAX	2095889
	<ul style="list-style-type: none"> <li><b>Connection type head A:</b> Male connector, M8, 4-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-0804-G	6037323
	<ul style="list-style-type: none"> <li><b>Connection type head A:</b> Female connector, M8, 4-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, 4-wire, PUR, halogen-free</li> <li><b>Description:</b> Sensor/actuator cable, unshielded</li> <li><b>Application:</b> Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation</li> </ul>	YF8U14-050UA3XLEAX	2094792
Mounting systems			
	<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

## 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)