



# CSM-WP1B1C1P

CSM

COLOR SENSORS

**SICK**  
Sensor Intelligence.



Illustration may differ



### Ordering information

Type	part no.
CSM-WP1B1C1P	1122736

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

### Detailed technical data

#### Features

<b>Dimensions (W x H x D)</b>	12 mm x 31.5 mm x 21 mm
<b>Sensing distance</b>	≤ 15 mm
<b>Sensing distance tolerance</b>	± 4 mm
<b>Housing design</b>	Small
<b>Light source</b>	LED, RGB <sup>1)</sup>
<b>Wave length</b>	640 nm, 525 nm, 470 nm
<b>Light spot size</b>	4.9 mm x 10.1 mm
<b>Light spot direction</b>	Vertical
<b>Adjustment</b>	Teach-in button
<b>Teach-in mode</b>	Teach-in static/dynamic ET: Teach-in dynamic

<sup>1)</sup> Average service life: 100,000 h at T<sub>J</sub> = +25 °C.

#### Electronics

<b>Supply voltage</b>	12 V DC ... 24 V DC <sup>1)</sup>
<b>Ripple</b>	< 5 V <sub>pp</sub> <sup>2)</sup>
<b>Current consumption</b>	< 50 mA <sup>3)</sup>
<b>Switching frequency</b>	1.7 kHz <sup>4)</sup>
<b>Response time</b>	300 μs <sup>5)</sup>

<sup>1)</sup> Limit values: DC 12 V (-10 %) ... DC 24 V (+20 %). Operation 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> With light/dark ratio 1:1.

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

<sup>6)</sup> At supply voltage > 24 V, I<sub>max</sub> = 50 mA. I<sub>max</sub> is consumption count of all Q<sub>N</sub>.

<b>Jitter</b>	150 µs
<b>Switching output</b>	PNP
<b>Switching output (voltage)</b>	PNP: HIGH = $U_V \leq 2 \text{ V}$ / LOW approx. 0 V
<b>Switching mode</b>	Light/dark switching
<b>Output (channel)</b>	1 color
<b>Output current <math>I_{\text{max}}</math></b>	< 100 mA <sup>6)</sup>
<b>Input, teach-in (ET)</b>	PNP: Teach: $U = 10 \text{ V} \dots < V_S$ , Run: $U < 2 \text{ V}$ or open
<b>Time delay</b>	None
<b>Protection class</b>	III
<b>Circuit protection</b>	$U_V$ connections, reverse polarity protected Output Q short-circuit protected Interference pulse suppression
<b>Connection type</b>	Male connector M8, 4-pin

1) Limit values: DC 12 V (-10 %) ... DC 24 V (+20 %). Operation in short-circuit protected network max. 8 A.

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

3) Without load.

4) With light/dark ratio 1:1.

5) Signal transit time with resistive load.

6) At supply voltage > 24 V,  $I_{\text{max}} = 50 \text{ mA}$ .  $I_{\text{max}}$  is consumption count of all  $Q_n$ .

## Mechanics

<b>Housing material</b>	ABS
<b>Optics material</b>	PMMA
<b>Weight</b>	Approx. 20 g

## Ambient data

<b>Ambient operating temperature</b>	-10 °C ... +55 °C
<b>Ambient temperature, storage</b>	-20 °C ... +75 °C
<b>Shock load</b>	According to IEC 60068
<b>Enclosure rating</b>	IP67
<b>UL File No.</b>	NRKH.E348498 & NRKH7.E348498

## Connection type/pinouts

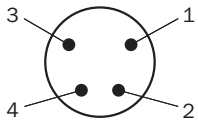
<b>Connection type</b>	Male connector M8, 4-pin
<b>Pinouts</b>	
BN 1	+ (L+)
WH 2	ET
BU 3	- (M)
BK 4	Q

## Certificates

<b>EU declaration of conformity</b>	✓
<b>UK declaration of conformity</b>	✓
<b>ACMA declaration of conformity</b>	✓

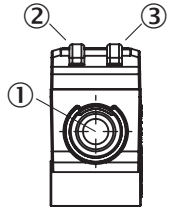


Pinouts, see table Technical data: Connection type/pinouts



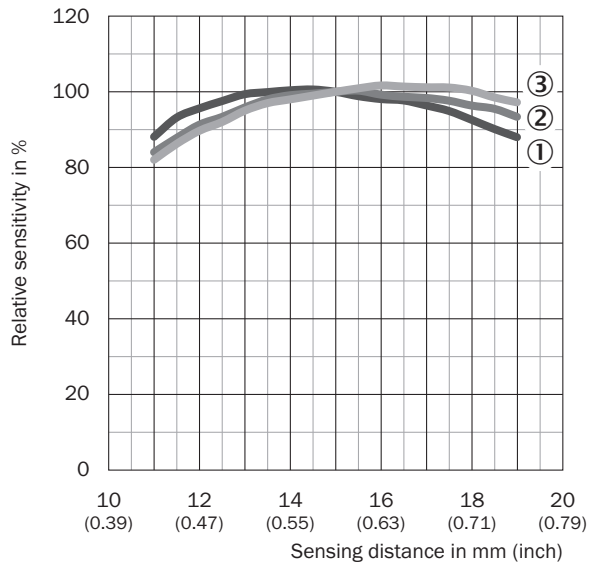
Male connector, M8, 4-pin, uncoded

display and adjustment elements



- ① Teach-in button
- ② LED yellow
- ③ LED green

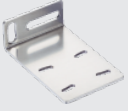


Sensing distance



- ① Red
- ② Green
- ③ blue

### Recommended accessories

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

	Brief description	Type	part no.
Mounting systems			
	<ul style="list-style-type: none"> <li>• <b>Material:</b> Stainless steel</li> <li>• <b>Details:</b> Stainless steel (1.4301)</li> <li>• <b>Suitable for:</b> W4S, W4S</li> </ul>	BEF-WN-G6	2062909
connectors and cables			
	<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 mm<sup>2</sup> ... 0.5 mm<sup>2</sup></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, 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

## 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)