



# CSM-WP11122P

CSM

COLOR SENSORS

**SICK**  
Sensor Intelligence.



Illustration may differ



## Ordering information

Type	Part no.
CSM-WP11122P	1067291

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>	12.5 mm
<b>Sensing distance tolerance</b>	± 3 mm
<b>Housing design (light emission)</b>	Rectangular
<b>Light source</b>	LED, RGB <sup>1)</sup>
<b>Wave length</b>	640 nm, 525 nm, 470 nm
<b>Light spot size</b>	1.5 mm x 6.5 mm
<b>Light spot direction</b>	Vertical
<b>Adjustment</b>	Teach-in button
<b>Teach-in mode</b>	Static 1-point teach-in

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

### Mechanics/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>
<b>Jitter</b>	150 μs
<b>Switching output</b>	PNP

<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 exceed or fall below U<sub>v</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>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_{\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>Connection type</b>	Cable with M12 male connector, 4-pin, 0.2 m
<b>Cable diameter</b>	Ø 3.4 mm
<b>Protection class</b>	III
<b>Circuit protection</b>	$U_V$ connections, reverse polarity protected Output Q short-circuit protected Interference pulse suppression
<b>Enclosure rating</b>	IP67
<b>Weight</b>	Approx. 25 g
<b>Housing material</b>	Plastic, ABS
<b>Optics material</b>	Plastic, PMMA

<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 exceed or fall below  $U_V$  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,  $I_{\max} = 50 \text{ mA}$ .  $I_{\max}$  is consumption count of all  $Q_n$ .

## 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>UL File No.</b>	NRKH.E348498 & NRKH7.E348498

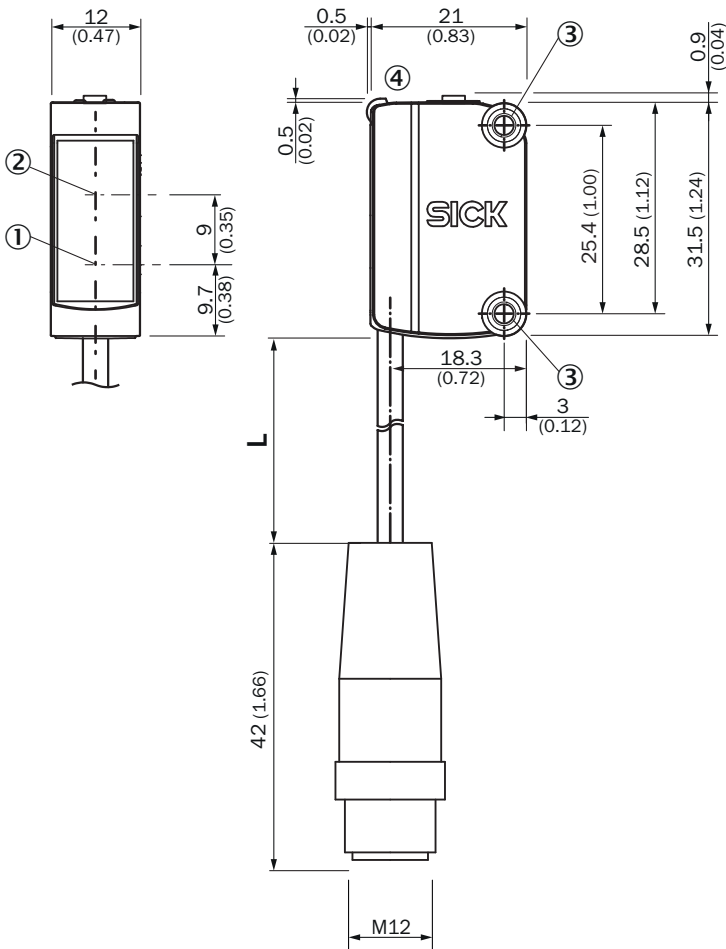
## Classifications

<b>ECl@ss 5.0</b>	27270907
<b>ECl@ss 5.1.4</b>	27270907
<b>ECl@ss 6.0</b>	27270907
<b>ECl@ss 6.2</b>	27270907
<b>ECl@ss 7.0</b>	27270907
<b>ECl@ss 8.0</b>	27270907
<b>ECl@ss 8.1</b>	27270907
<b>ECl@ss 9.0</b>	27270907
<b>ECl@ss 10.0</b>	27270907
<b>ECl@ss 11.0</b>	27270907
<b>ETIM 5.0</b>	EC001817
<b>ETIM 6.0</b>	EC001817
<b>ETIM 7.0</b>	EC001817
<b>ETIM 8.0</b>	EC001817
<b>UNSPSC 16.0901</b>	39121528

Connection/pin assignment

<b>Connection type</b>	Cable with M12 male connector, 4-pin, 0.2 m
<b>Connection type Detail</b>	
Cable material	PVC
Conductor cross-section	0.15 mm <sup>2</sup>
<b>Pin assignment</b>	
BN 1	+ (L+)
WH 2	ET
BU 3	- (M)
BK 4	Q

Dimensional drawing (Dimensions in mm (inch))

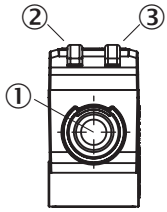


For length of cable (L), see technical data

- ① Center of optical axis, sender
- ② Center of optical axis, receiver
- ③ Mounting holes M3
- ④ Display and adjustment elements

## Adjustments

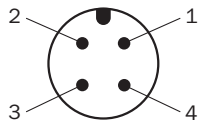
Display and adjustment elements



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

## Connection type

Connection type, see table: **Connection/pin assignment**

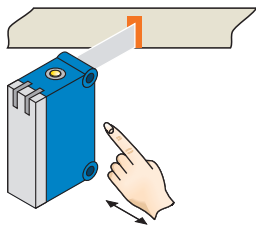


M12 male connector, 4-pin, A-coding

## Concept of operation

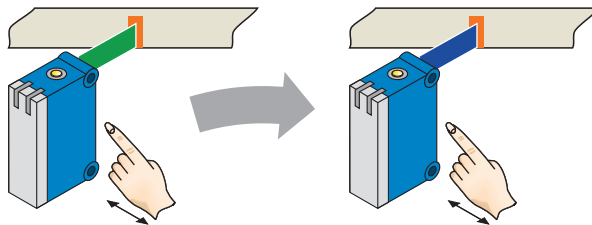
Setting the switching threshold

### 1. Trigger teach-in



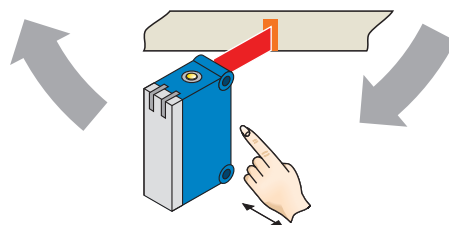
Position object in light field.  
 Press teach-in button > 1 s.

### 2. Select color tolerance



Press teach-in button when  
 transmitted light is green  
 = **tolerance medium**  
 (standard setting).

Press teach-in button when  
 transmitted light is blue  
 = **tolerance precise.**

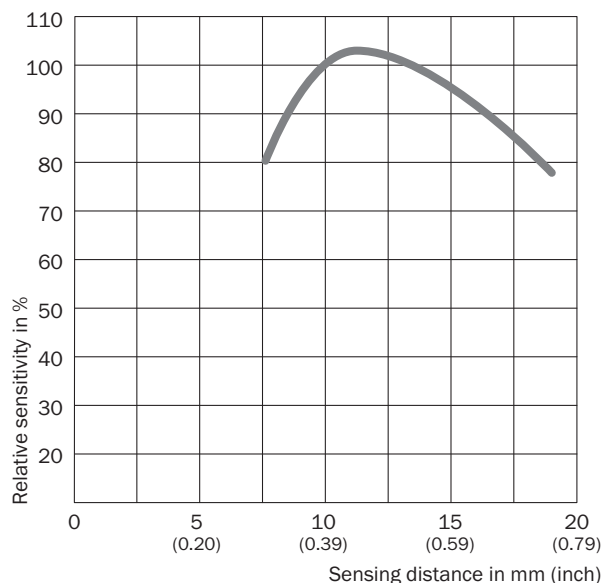


Press teach-in button when  
 transmitted light is red  
 = **tolerance coarse.**

Teach-in can also be performed using an external control signal (only dynamic teach-in).




Keylock activation and deactivation: hold down teach-in button > 30 s.

## Sensing distance



**Recommended accessories**

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

	<b>Brief description</b>	<b>Type</b>	<b>Part no.</b>
<b>Mounting brackets and plates</b>			
	Stainless steel (1.4301)	BEF-WN-G6	2062909
<b>Plug connectors and cables</b>			
	Head A: female connector, M12, 4-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 5 m	YF2A14-050VB3XLEAX	2096235
	Head A: male connector, M12, 4-pin, straight Cable: unshielded	STE-1204-G	6009932

## 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)