



CSM-WN11124P

CSM

COLOR SENSORS

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

| Type | part no. |
|-------------|----------|
| CSM-WN1124P | 1082174 |

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

Detailed technical data

Features

| | |
|-----------------------------------|-------------------------|
| Housing design | Small |
| Dimensions (W x H x D) | 12 mm x 31.5 mm x 21 mm |
| Light source | LED, RGB ¹⁾ |
| Light emission | Long side of housing |
| Light spot size | 1.5 mm x 6.5 mm |
| Light spot direction | Vertical |
| Wave length | 640 nm, 525 nm, 470 nm |
| Sensing distance | ≤ 12.5 mm |
| Sensing distance tolerance | ± 3 mm |
| Adjustment | Teach-in button |
| Teach-in mode | Static 1-point teach-in |

¹⁾ Average service life: 100,000 h at T_U = +25 °C.

Electronics

| | |
|----------------------------|-----------------------------------|
| Supply voltage | 12 V DC ... 24 V DC ¹⁾ |
| Ripple | < 5 V _{pp} ²⁾ |
| Current consumption | < 50 mA ³⁾ |
| Switching frequency | 1.7 kHz ⁴⁾ |
| Response time | |

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⁾ At supply voltage > 24 V, I_{max} = 50 mA. I_{max} is consumption count of all Q_N.

| | |
|---|---|
| | 300 µs |
| Jitter | 150 µs |
| Switching output | NPN |
| Switching output (voltage) | NPN: HIGH = approx. U_V / LOW ≤ 2 V |
| Switching mode | Light/dark switching |
| Output (channel) | 1 color |
| Output current I_{\max} | < 100 mA ⁵⁾ |
| Input, teach-in (ET) | NPN: Teach: $U < 2$ V, Run: $U = 10$ V ... < U_V or open |
| Time delay | None |
| Protection class | III |
| Circuit protection | U_V connections, reverse polarity protected Output Q short-circuit protected Interference pulse suppression |
| Connection type | |
| | Cable open end, 4-wire, 2 m |

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⁵⁾ At supply voltage > 24 V, $I_{\max} = 50$ mA. I_{\max} is consumption count of all Q_N .

Mechanics

| | |
|-------------------------|--------------|
| Housing material | ABS |
| Optics material | PMMA |
| Weight | Approx. 25 g |

Ambient data

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

Connection type/pinouts

| | |
|-------------------------------|-----------------------------|
| Connection type | |
| | Cable open end, 4-wire, 2 m |
| Connection type Detail | |
| Cable material | PVC |
| Cable diameter | Ø 3.4 mm |
| Conductor cross section | 0.15 mm ² |
| Pinouts | |
| BN 1 | + (L+) |
| WH 2 | ET |
| BU 3 | - (M) |
| BK 4 | Q |

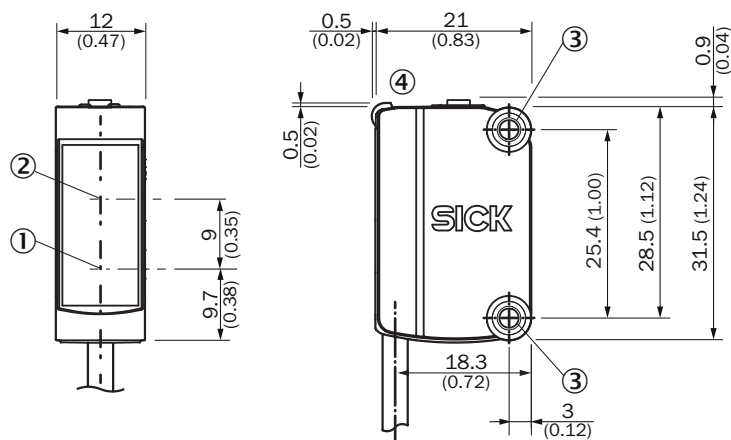
Classifications

| | |
|-----------------------|----------|
| ECLASS 5.0 | 27270907 |
| ECLASS 5.1.4 | 27270907 |
| ECLASS 6.0 | 27270907 |
| ECLASS 6.2 | 27270907 |
| ECLASS 7.0 | 27270907 |
| ECLASS 8.0 | 27270907 |
| ECLASS 8.1 | 27270907 |
| ECLASS 9.0 | 27270907 |
| ECLASS 10.0 | 27270907 |
| ECLASS 11.0 | 27270907 |
| ECLASS 12.0 | 27270907 |
| ETIM 5.0 | EC001817 |
| ETIM 6.0 | EC001817 |
| ETIM 7.0 | EC001817 |
| ETIM 8.0 | EC001817 |
| UNSPSC 16.0901 | 39121528 |

Certificates

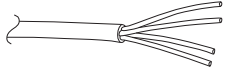
| | |
|--|---|
| EU declaration of conformity | ✓ |
| UK declaration of conformity | ✓ |
| ACMA declaration of conformity | ✓ |
| Moroccan declaration of conformity | ✓ |
| China RoHS | ✓ |
| cULus certificate | ✓ |
| Photobiological safety (IEC EN 62471) | ✓ |

Dimensional drawing



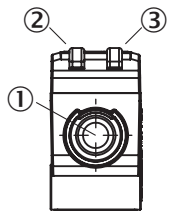
- ② Center of optical axis, receiver
- ③ Mounting holes M3
- ④ display and adjustment elements

Pinouts, see table [Technical data: Connection type/pinouts](#)



Cable with flying leads, 4-wire, AWG 26, 0.15 mm²

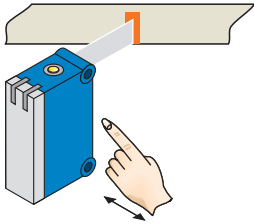
display and adjustment elements



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

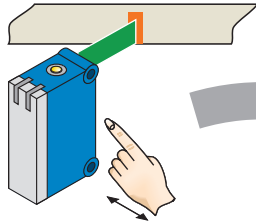
Setting the switching threshold

1. Trigger teach-in

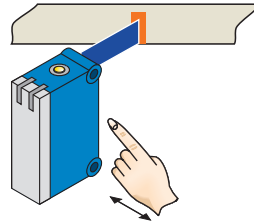


Position object in light field.
Press teach-in button > 1 s.

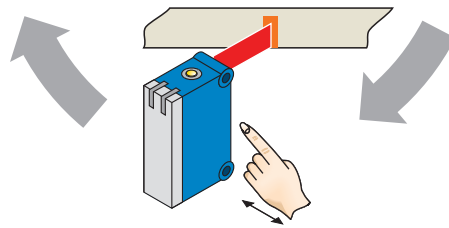
2. Select color tolerance



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



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

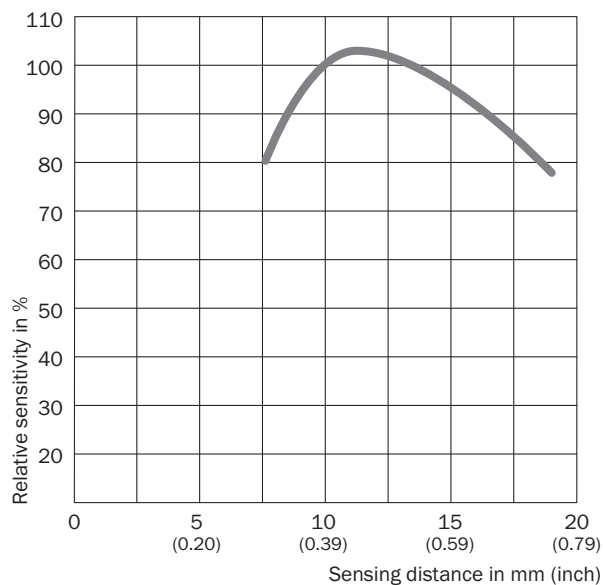


Press teach-in button when
transmitted light is red
= **tolerance coarse.**

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

| | Brief description | Type | part no. |
|---|--|------------|----------|
| Mounting systems | | | |
|  | <ul style="list-style-type: none"> Material: Stainless steel Details: Stainless steel (1.4301) Suitable for: W4S, W4S | BEF-WN-G6 | 2062909 |
| connectors and cables | | | |
|  | <ul style="list-style-type: none"> Connection type head A: Male connector, M8, 4-pin, straight, A-coded Description: Unshielded Connection systems: Screw-type terminals Permitted cross-section: 0.14 mm² ... 0.5 mm² | STE-0804-G | 6037323 |
|  | <ul style="list-style-type: none"> 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 |

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