SICK.COM

DATA SHEET

CSM1-P1114

CSM1
Color sensors

SICK Sensor Intelligence

Illustration may differ

COLOR SENSORS

CSM1-P1114

ORDERING INFORMATION

Type	part no.
CSM1-P1114	1022569

Further device versions and accessories at www.sick.com/CSM1

DETAILED TECHNICAL DATA

FEATURES

Housing design	Rectangular
Dimensions (W x H x D)	12 mm x 40 mm x 22 mm
Light source	LED, RGB [1]
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 [2]
Sensing distance tolerance	± 2 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.

[2] From leading edge of lens.

ELECTRONICS

Supply voltage	12 V DC ... 24 V DC [1]
Ripple	< 5 V_{pp} [2]
Current consumption	< 35 mA [3]

[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] Reference voltage DC 50 V.

Switching frequency	1.5 kHz [4]
Response time	500 µs
Switching output	PNP
Switching output (voltage)	PNP: HIGH = U_V ≤ 2 V / LOW approx. 0 V
Output (channel)	1 color
Input, teach-in (ET)	PNP Teach: U = 10 V ... < U_V Run: U < 2 V
Protection class	II [5]
Circuit protection	U_V connections, reverse polarity protected Output Q short-circuit protected Interference pulse suppression
Connection type	Male connector M12, 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] Reference voltage DC 50 V.

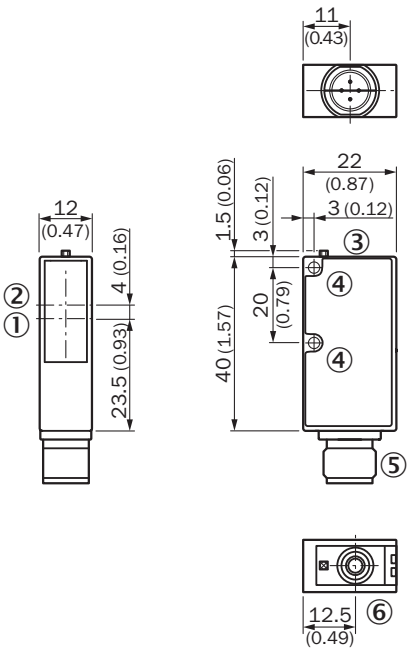
MECHANICS

Housing material	ABS
Weight	11 g

AMBIENT DATA

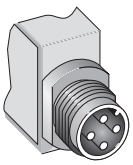
Ambient operating temperature	–10 °C ... +55 °C
Ambient temperature, storage	–20 °C ... +75 °C
Shock load	According to IEC 60068
Enclosure rating	IP67
UL File No.	NRKH.E181493 & NRKH7.E181493

DIMENSIONAL DRAWING

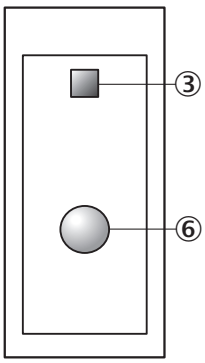


Dimensions in mm (inch)
① Center of optical axis, sender
② Center of optical axis, receiver
③ LED signal strength indicator
④ Mounting hole, Ø 3 mm
⑤ Male connector M12
⑥ Teach-in button

PINOUTS

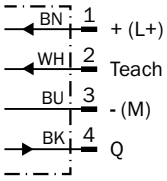


ADJUSTMENTS



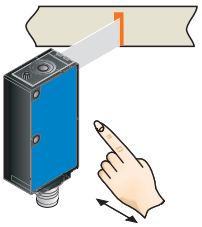
③ LED signal strength indicator
⑥ Teach-in button

CONNECTION DIAGRAM CD-092



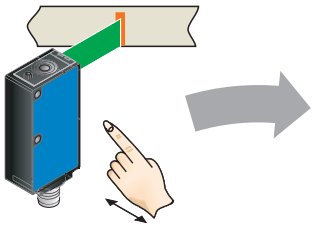
SETTING THE SWITCHING THRESHOLD

1. Trigger teach-in

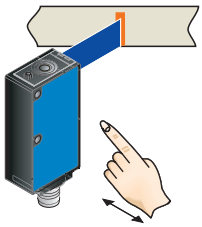


Position object in light field.
Press teach-in button > 1 s.

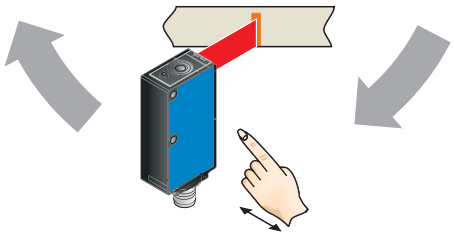
2. Select color tolerance



Press teach-in button > 1 s
when transmitted light is green
= tolerance medium (standard setting).



Press teach-in button > 1 s
when transmitted light is blue
= tolerance precise.



Press teach-in button > 1 s
when transmitted light is red
= tolerance coarse.

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/1022569

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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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