Data sheet

CSM-WP117A2P

CSM

COLOR SENSORS

SICK
Sensor Intelligence.

Illustration may differ

Ordering information

Type	part no.
CSM-WP117A2P	1122733

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

Detailed technical data

Features

Dimensions (W x H x D)	12 mm x 31.5 mm x 21 mm
Sensing distance	≤ 12.5 mm
Sensing distance tolerance	± 3 mm
Housing design	Small
Light source	LED, RGB [1]
Wave length	640 nm, 525 nm, 470 nm
Light spot size	1.9 mm x 9.4 mm
Light spot direction	Vertical
Adjustment	Teach-in button, cable, IO-Link
Teach-in mode	Teach-in static/dynamic ET: Teach-in dynamic

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

Interfaces

IO-Link	✓ , IO-Link V1.1.0
Data transmission rate	38,4 kbit/s (COM2)
Cycle time	2.3 ms
VendorID	26
DeviceID HEX	800071
DeviceID DEC	8388721
Process data length	16 Bit

Process data structure A	Bit 0 = switching signal Q_{L1} Bit 1 = switching signal Q_{L2} Bit 2 = Quality of Run Alarm Bit 3 ... 5 = Emission Color Bit 6 ... 15 = Measurment Value RGB
Process data structure B	Bit 0 = switching signal Q_{L1} Bit 1 = switching signal Q_{L2} Bit 2 = switching signal Q_{L3} Bit 3 = switching signal Q_{L4} Bit 4 = switching signal Q_{L5} Bit 5 = switching signal Q_{L6} Bit 6 = switching signal Q_{L7} Bit 7 = switching signal Q_{L8} Bit 9 ... 15 = empty
Digital output	Q_1, Q_2
Number	2

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	300 µs [5]
Jitter	150 µs
Switching output	PNP
Switching output (voltage)	PNP: HIGH = U_V ≤ 2 V / LOW approx. 0 V
Switching mode	Light/dark switching
Output (channel)	8 colors via IO-Link
Output current $I_{max.}$	< 100 mA [6]
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 with M12 male connector, 4-pin, 0.2 m

[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_{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 with M12 male connector, 4-pin, 0.2 m
Connection type Detail	
Cable material	PVC
Cable diameter	Ø 3.4 mm
Conductor cross section	0.15 mm²
Pinouts	
BN 1	+ (L+)
WH 2	Q
BU 3	- (M)
BK 4	Q/C

Certificates

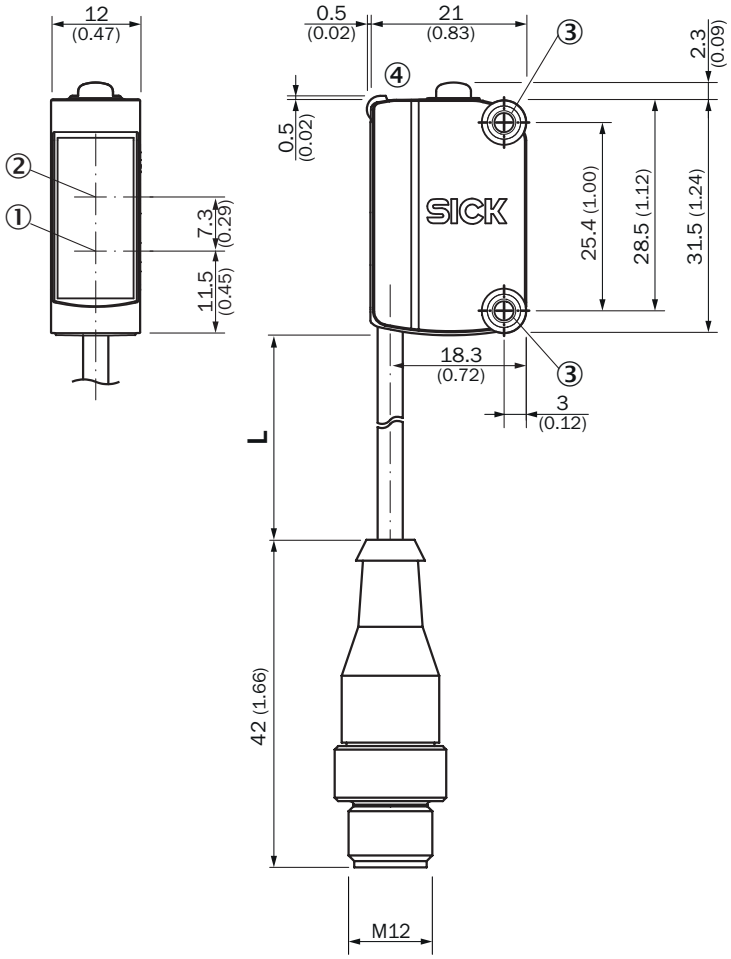
EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
Moroccan declaration of conformity	✓
China RoHS	✓
cULus certificate	✓
IO-Link	✓
Photobiological safety (IEC EN 62471)	✓
Information according to Art. 3 of Data Act (Regulation EU 2023/2854)	✓

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

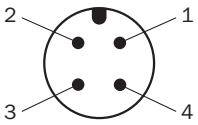
ETIM 5.0	EC001817
ETIM 6.0	EC001817
ETIM 7.0	EC001817
ETIM 8.0	EC001817
UNSPSC 16.0901	39121528

Dimensional drawing



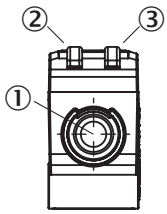
Dimensions in mm (inch)
For length of cable (L), see technical data
① Center of optical axis, sender
② Center of optical axis, receiver
③ Mounting holes M3
④ display and adjustment elements

Pinouts, see table Technical data: Connection type/pinouts



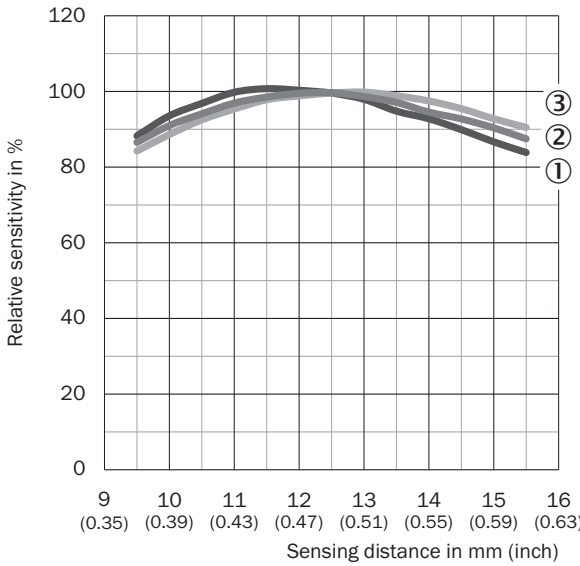
M12 male connector, 4-pin, A-coding

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

	Brief description	Type	part no.
Mounting systems			
	• **Material:** Stainless steel • **Details:** Stainless steel (1.4301) • **Suitable for:** W4S, W4S	BEF-WN-G6	2062909
connectors and cables			
	• **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
	• **Connection type head A:** Female connector, M12, 4-pin, straight, A-coded • **Connection type head B:** Flying leads • **Signal type:** Sensor/actuator cable • **Cable:** 5 m, 4-wire, PVC • **Description:** Sensor/actuator cable, unshielded • **Application:** Zones with chemicals, Uncontaminated zones	YF2A14-050VB3XLEAX	2096235

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