Data sheet

CSX-WNFA542252ZZZZ

CSS/CSX High Speed

COLOR SENSORS

SICK
Sensor Intelligence.

Illustration may differ

Ordering information

Type	part no.
CSX-WNFA542252ZZZZ	1120186

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

Detailed technical data

Features

Parameter presettings	None
Housing design	Large
Dimensions (W x H x D)	30 mm x 53 mm x 78.5 mm
Light source	LED, RGB [1]
Light emission	Short device side
Light spot size	Ø 12 mm
Light spot direction	Round, large
Wave length	460 nm, 530 nm, 625 nm
LED risk group marking	1
Color mode	C (Color) C + I (Color + Illumination)
Sensing distance	60 mm
Sensing distance tolerance	± 9 mm
Teach-in mode	Single value teach-in Multi value teach-in
Output mode	2 colors in standard mode/best fit mode 3 colors in coded mode
Output (channel)	2 × hardware switching outputs
Adjustment of the sensitivity	Continuous: 0 ... 999
Available job banks	4
Safety-related parameters	
$MTTF_D$	263.7 years

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

Interfaces

Digital output	Q_1, Q_2
Number	2
Digital input	In_1, In_2
Number	2

Electronics

Supply voltage	10.8 V DC ... 28.8 V DC [1]
Ripple	≤ 5 V_{pp} [2]
Current consumption	< 120 mA [3]
Switching frequency	13.8 kHz
Response time	
	36 µs
Jitter	18 µs
Switching output	NPN
Switching output (voltage)	NPN: HIGH = V_S / LOW ≤ 3 V
Output current $I_{max.}$	100 mA [4]
Input, teach-in (ET)	Teach: U < 2 V
Input, blanking input (AT)	Blanked: U < 2 V
Retention time (ET)	3 s, non-volatile memory
Time delay	None
Protection class	III
Circuit protection	U_V connections, reverse polarity protected Output Q short-circuit protected Interference pulse suppression
Connection type	
	Plug, M12, 5-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] Total current of all Outputs.

Mechanics

Housing material	VISTAL®
Optics material	Glass
Weight	94 g

Ambient data

Ambient operating temperature	–20 °C ... +60 °C
Ambient temperature, storage	–25 °C ... +75 °C
Shock load	According to IEC 60068-2-27 (30 g/11 ms)
Enclosure rating	IP67
UL File No.	E181493

Connection type/pinouts

Connection type	

	Plug, M12, 5-pin
Pinouts	
BN 1	+ (L+)
WH 2	Q_{L2}/IN_1
BU 3	- (M)
BK 4	Q_{L1}
GY 5	In_2

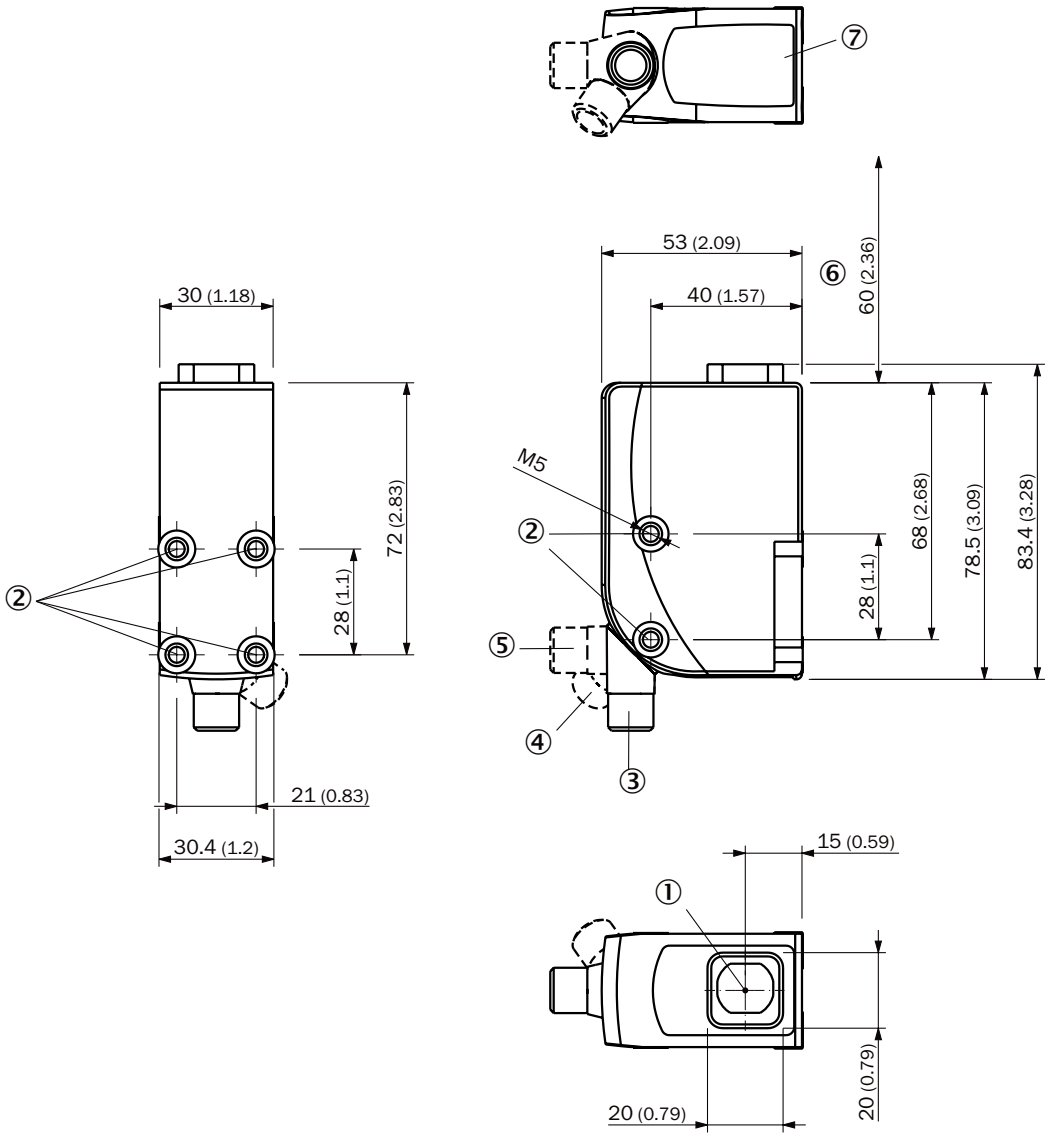
Classifications

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

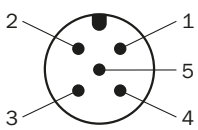
EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
Moroccan declaration of conformity	✓
China RoHS	✓
cULus certificate	✓
Photobiological safety (IEC EN 62471)	✓

Dimensional drawing, sensor



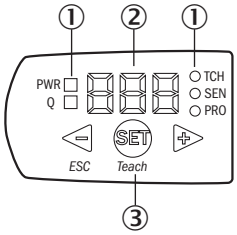
Dimensions in mm (inch)
① Optical axis
② fixing hole
③ M12 male connector, delivery state
④ M12 male connector, end stop right
⑤ M12 male connector, end stop left
⑥ Sensing distance
⑦ display and adjustment elements

Pinouts, see table Technical data: Connection type/pinouts



Male connector, M12, 5-pin, A-coded

display and adjustment elements



① LEDs (status display)
② 7-segment display
③ Plus/minus button

Recommended accessories

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

	Brief description	Type	part no.
Mounting systems			
	• **Description:** Plate K for universal clamp bracket • **Material:** Steel • **Details:** Steel, zinc coated • **Items supplied:** Universal clamp (2022726), mounting hardware • **Usable for:** W11-2, W12-3, W14-2, W18-3, W23-2, W24-2, W27-3, W30, W32, W34, W36, PL50A, PL80A, P250, UC12, LUT3, KT2, KT5-2, KT8, CS8, DT2, DS30, DS40, W12-2 Laser, W16, W26, KT5	BEF-KHS-K01	2022718
connectors and cables			
	• **Connection type head A:** Male connector, M12, 5-pin, straight, A-coded • **Description:** Unshielded • **Connection systems:** Screw-type terminals • **Permitted cross-section:** ≤ 0.75 mm² • **Note:** For field bus technology	STE-1205-G	6022083
	• **Connection type head A:** Female connector, M12, 5-pin, straight, A-coded • **Connection type head B:** Flying leads • **Signal type:** Sensor/actuator cable • **Cable:** 5 m, 5-wire, PVC • **Description:** Sensor/actuator cable, unshielded • **Application:** Zones with chemicals, Uncontaminated zones	YF2A15-050VB5XLEAX	2096240

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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.

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