



# 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](http://www.sick.com/CSS_CSX_High_Speed)

Detailed technical data

Features

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

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

## Mechanics/electronics

<b>Supply voltage</b>	10.8 V DC ... 28.8 V DC <sup>1)</sup>
<b>Ripple</b>	$\leq 5 \text{ V}_{\text{pp}}$ <sup>2)</sup>
<b>Current consumption</b>	$< 120 \text{ mA}$ <sup>3)</sup>
<b>Switching frequency</b>	13.8 kHz
<b>Response time</b>	36 $\mu\text{s}$
<b>Jitter</b>	18 $\mu\text{s}$
<b>Switching output</b>	NPN
<b>Switching output (voltage)</b>	NPN: HIGH = $V_{\text{S}}$ / LOW $\leq 3 \text{ V}$
<b>Output current <math>I_{\text{max.}}</math></b>	100 mA <sup>4)</sup>
<b>Input, teach-in (ET)</b>	Teach: $U < 2 \text{ V}$
<b>Input, blanking input (AT)</b>	Blanked: $U < 2 \text{ V}$
<b>Retention time (ET)</b>	3 s, non-volatile memory
<b>Connection type</b>	Male connector M12, 5-pin
<b>Protection class</b>	III
<b>Circuit protection</b>	$U_{\text{V}}$ connections, reverse polarity protected Output Q short-circuit protected Interference pulse suppression
<b>Enclosure rating</b>	IP67
<b>Weight</b>	94 g
<b>Housing material</b>	VISTAL®
<b>Optics material</b>	Glass

<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 fall below or exceed  $U_{\text{V}}$  tolerances.

<sup>3)</sup> Without load.

<sup>4)</sup> Total current of all Outputs.

## Communication interface

<b>Digital output</b>	Q <sub>1</sub> , Q <sub>2</sub>
Number	2
<b>Digital input</b>	In <sub>1</sub> , In <sub>2</sub>
Number	2

## Ambient data

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

## Connection type/pinouts

<b>Connection type</b>	Male connector M12, 5-pin
<b>Pinouts</b>	
BN 1	+ (L+)
WH 2	Q <sub>L2</sub> /In <sub>1</sub>
BU 3	– (M)

	BK 4	Q <sub>L1</sub>
	GY 5	In <sub>2</sub>

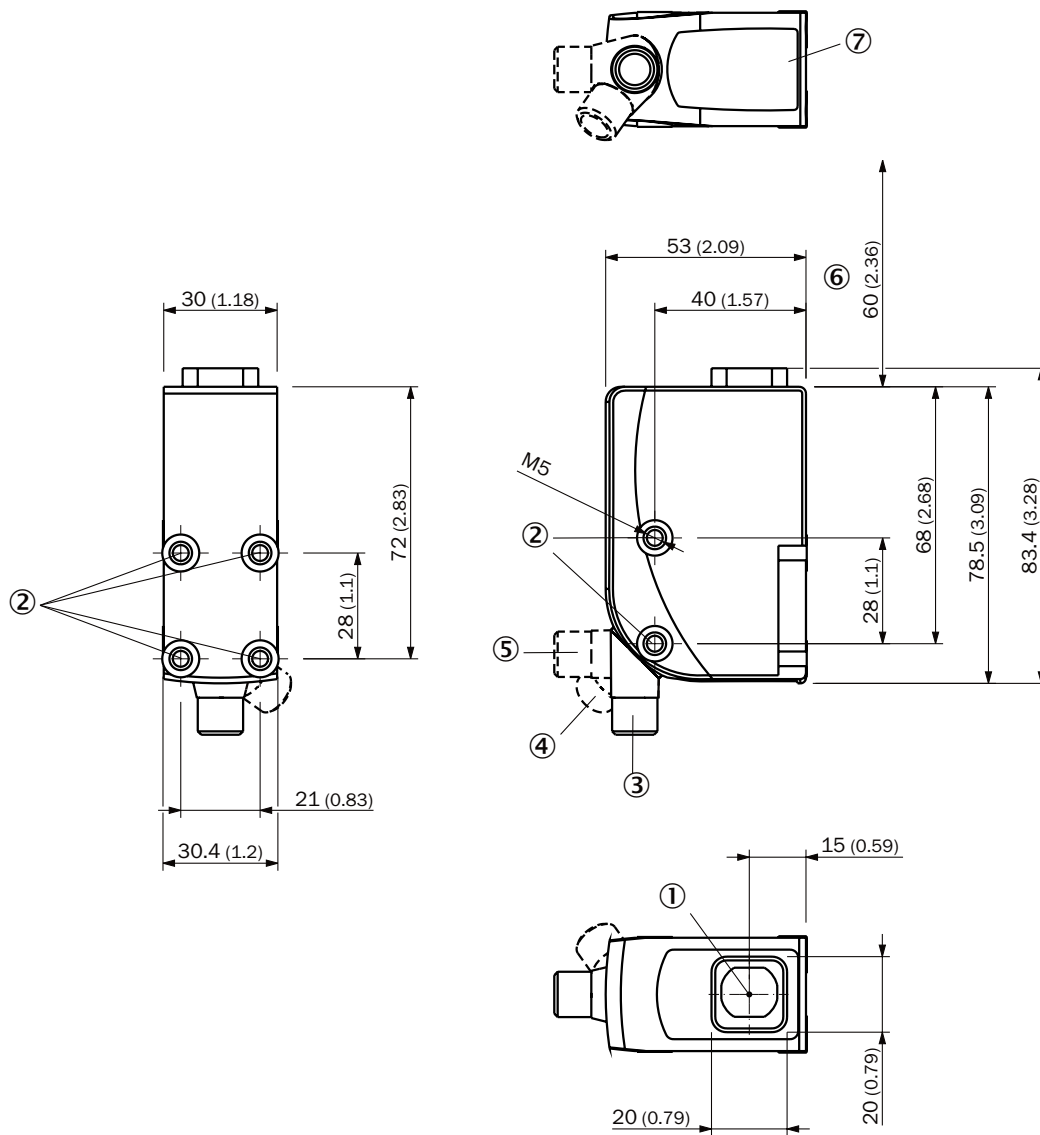
Certificates

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)	✓

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

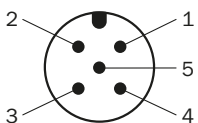
## Dimensional drawing, sensor



Dimensions in mm (inch)

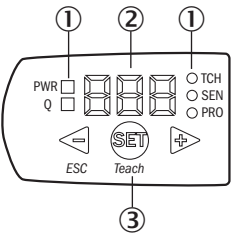
- ① Optical axis
- ② fixing hole
- ③ M12 male connector, delivery state
- ④ M12 male connector, end stop right
- ⑤ M12 male connector, end stop left
- ⑥ Sensing distance
- ⑦ display and adjustment elements

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



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](http://www.sick.com/CSS_CSX_High_Speed)

	Brief description	Type	part no.
connectors and cables			
	<ul style="list-style-type: none"><li>• <b>Connection type head A:</b> Male connector, M12, 5-pin, straight, A-coded</li><li>• <b>Description:</b> Unshielded</li><li>• <b>Connection systems:</b> Screw-type terminals</li><li>• <b>Permitted cross-section:</b> ≤ 0.75 mm²</li><li>• <b>Note:</b> For field bus technology</li></ul>	STE-1205-G	6022083
	<ul style="list-style-type: none"><li>• <b>Connection type head A:</b> Female connector, M12, 5-pin, straight, A-coded</li><li>• <b>Connection type head B:</b> Flying leads</li><li>• <b>Signal type:</b> Sensor/actuator cable</li><li>• <b>Cable:</b> 5 m, 5-wire, PVC</li><li>• <b>Description:</b> Sensor/actuator cable, unshielded</li><li>• <b>Application:</b> Zones with chemicals, Uncontaminated zones</li></ul>	YF2A15-050VB5XLEAX	2096240
Mounting systems			
	<ul style="list-style-type: none"><li>• <b>Description:</b> Plate K for universal clamp bracket</li><li>• <b>Material:</b> Steel</li><li>• <b>Details:</b> Steel, zinc coated</li><li>• <b>Items supplied:</b> Universal clamp (2022726), mounting hardware</li><li>• <b>Usable for:</b> 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</li></ul>	BEF-KHS-K01	2022718

## 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)