

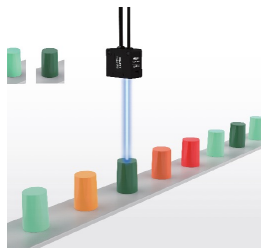
High Precision Digital RGB Colour Sensor

[CX-21]

- Stores up to 8 colors
- High precision color sensing with 16-bit RGB processing
- Digital display – Easy setup and monitoring



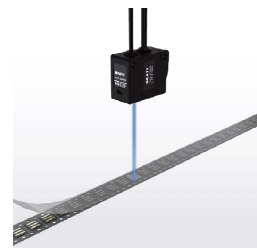
Applications



Different colour on packaging detection



Mark spot on material detection



Top/bottom detection before final packaging

Overview

Code Reader

Handheld Reader

Vision Sensor

Vision System

Fiberoptic Sensor

Photoelectric Sensor

RGB Colour Sensor

Proximity Sensor

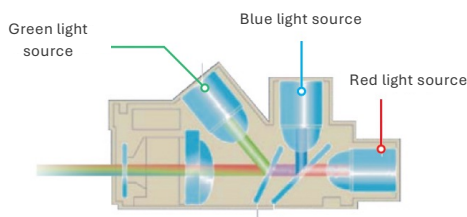
Ultrasonic Sensor

Safety Curtain

Ionizer

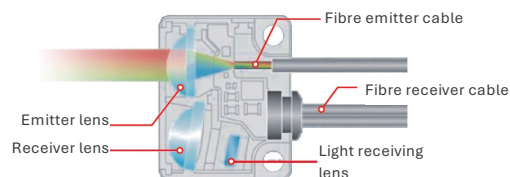
Optimized special lens structure

Equipped with triple 16-bit RGB calculation. Uses red, green, and blue light with advanced processing to achieve precise target recognition.



Composite structure with high precision

Creating a precise single light spot while reducing the overall size of the sensor head. The built-in light reception circuit further enhances detection performance and stability.



Store up to 8 colours

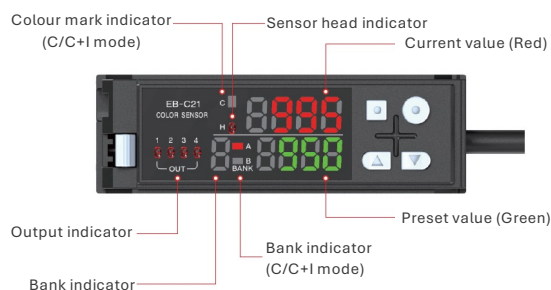
Capable of simultaneously storing up to 8 colours. Featuring four signal outputs.

Easy setup with 1 button

Capable of simultaneously storing up to 8 colours. Featuring four signal outputs.



Easily visible digital monitor



Specifications

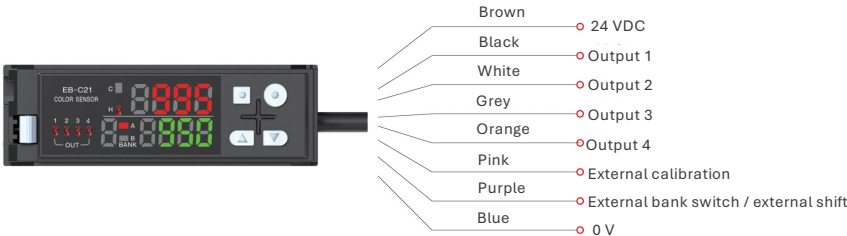
Amplifier

Model	NPN	CX-21N
	PNP	CX-21P
Response time	200 μs (HIGHSPEED) / 1 ms (FINE) / 4 ms (TURBO) / 8 ms (SUPER)	
Control output	NPN (PNP) open-collector x 4 channels, 40 VDC (30 VDC) max., Up to 100 mA for one output, Up to 200 mA in total of 4 outputs, Residual voltage: 1.0 V max.	
Protection circuit	Reverse-polarity protection, overcurrent protection, surge absorber	
External calibration input	Non-voltage input, Input time: 20 ms min.	
External shift input	Non-voltage input, Input time: 20 ms min.	
Timer function	Timer OFF / OFF-delay / ON-delay / One-shot, Timer time: 1 to 1,000 ms adjustable	
Power supply	24 VDC, Ripple (P-P): 10% max.	
Current consumption	Normal mode: 1.5 W (62.5 mA max.) , Eco-mode: 1 W (42.0 mA max.)	
Ambient temperature	-10 to +55°C, (No condensation)	
Vibration resistance	10 to 55 Hz, double amplitude: 1.5 mm, 2 hours in each of X, Y and Z axis directions	
Material	Housing, cover: Polycarbonate	
Weight	Approx. 150 g (with 2 m cable)	

Sensor head

Model	CZ-R52N	CZ-R20N
Detection range	28 to 52 mm (Recommended: 40 mm)	11 to 20 mm (Recommended: 15 mm)
Smallest spot diameter	4.5 mm dia. at 40 mm	1 mm dia. at 15 mm
Minimum bend radius	25 mm	15 mm
Light source	Red LED (665 nm) / Green LED (520 nm) / Blue LED (465 nm)	
Ambient light	Incandescent lamp: 10,000 lux max. Sunlight: 20,000 lux max.	
Vibration resistance	10 to 55 Hz, double amplitude: 1.5 mm, 2 hours in each of X, Y and Z axis directions	
Enclosure rating	IP40	
Material	Housing: Polycarbonate, Lens: Polyarylate	
Weight	Approx. 40 g	Approx. 45 g

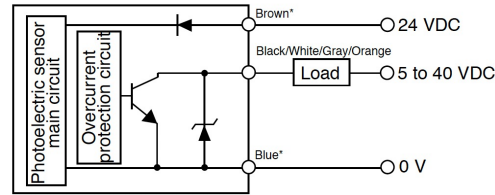
Wiring Diagram



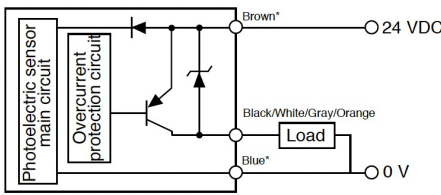
Input / Output Circuits

Output

CX-21N

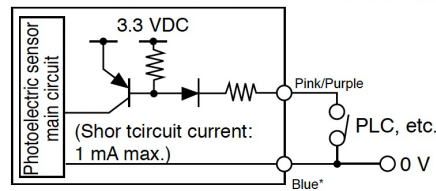


CX-21P

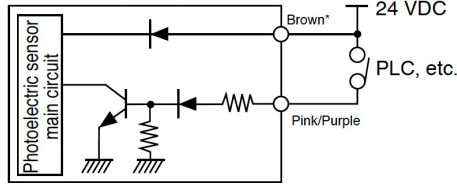


Input

CX-21N



CX-21P



Overview

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Handheld Reader

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Vision System

Fiberoptic Sensor

Photoelectric Sensor

RGB Colour Sensor

Proximity Sensor

Ultrasonic Sensor

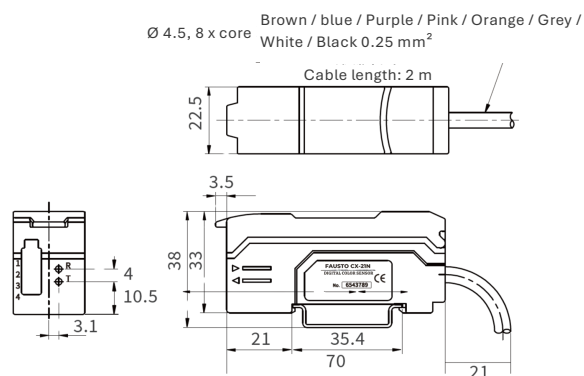
Safety Curtain

Ionizer

CX-21 High Precision Digital RGB Colour Sensor

Dimensions

CX-21



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Reader

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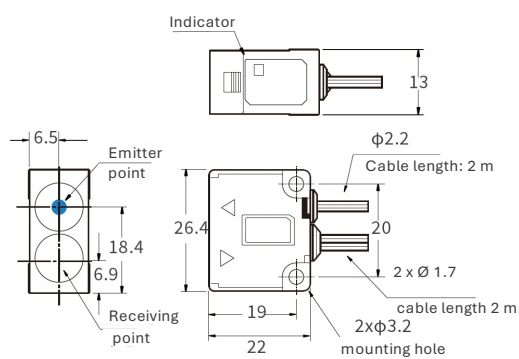
Proximity Sensor

Ultrasonic Sensor

Safety Curtain

Ionizer

CZ-R52



CZ-R20

