



# CMS-5X COLOR MARK SENSOR

## Features

- ▶ Ultra Fast Response
- ▶ Unmatched accuracy with multi-color sensing
- ▶ Compact & Sleek Design
- ▶ Standard mounting for easy installation
- ▶ Ambient light noise rejection for better color recognition
- ▶ Scratch resistance lens for dusty applications

## Specification

Operating Distance	10-15 mm
Minimum Spot Diameter	5 mm
Emission Type	Red (630 nm) Green (520 nm) Blue (465 nm)
Ambient Light Rejection	YES
Vibration	0.5 mm amplitude, 10 to 55 Hz Frequency
Response Time	2 Milisecond
Minimum Mark Output Delay	20ms

## Output

Output	NPN/PNP
Output Current	25mA max

## Auxiliary Power Supply

Power Supply	12-24V DC
Current Consumption	35mA max.@24V DC

## LED Indication & Keys

LED 1	Mark LED (Green)
LED 2	Output LED (Red)
LED 3	Background LED (Yellow)
PUSH BUTTON	Button 1 : Mark Button Button 2 : Background Button

## Environmental

Operating Temperature	-10 to 50 °C
Storage Temperature	-20 to 70 °C
Relative Humidity	95% RH Non-condensing

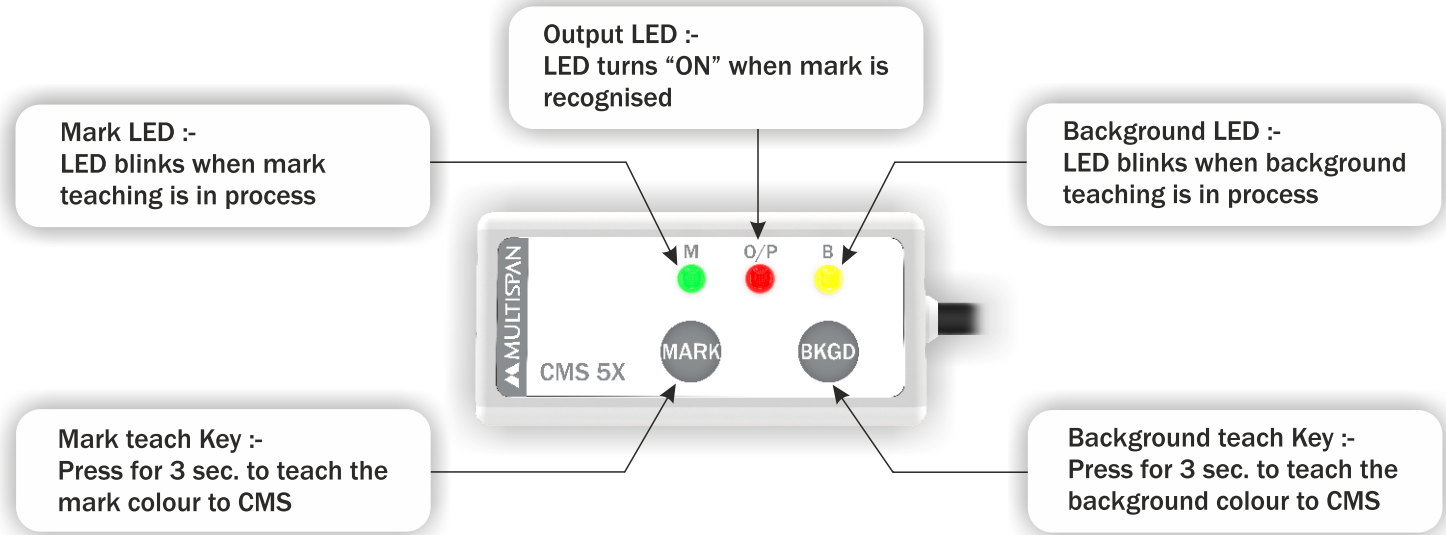
## Physical

Dimension(mm)	44 (H) x 57 (W) x 27 (D)
Housing Material	ABS
Color	White
Connection	Shielded 4 Wire Cable
Lens Material	Glass
Weight	150 gm

## Application

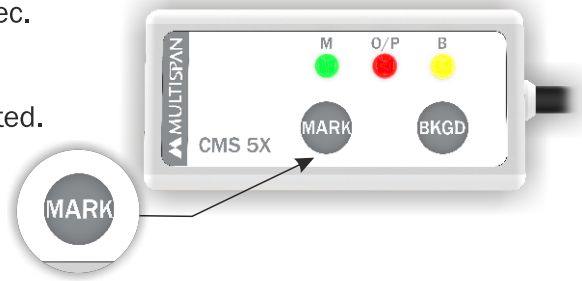
Printing Machinery  
Packaging Machinery  
Food & Beverage  
Pharmaceutical Applications

## User Interface



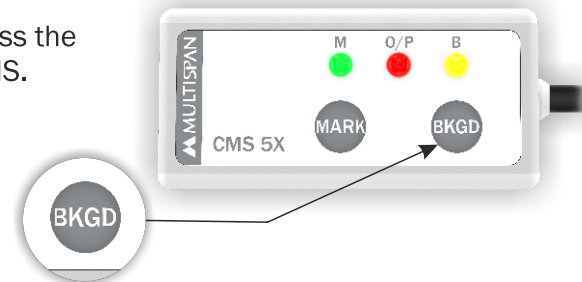
## Mark Teaching

- Align the light spot on the mark then press the mark key for 3 sec. to teach the mark colour to CMS.
- Wait till all the 3 colour (R-G-B) sensing is automatically completed.
- The Mark LED will continuously blink till the mark teaching is in process as soon as the mark teaching is completed the background LED will start blinking for background sensing.

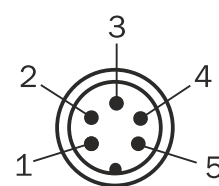
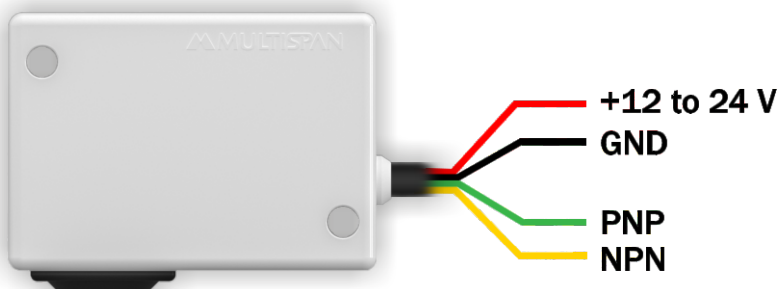


## Background Teaching

- Align the light spot on the background (non-mark area) then press the background key for 3 sec. to teach the background colour to CMS.
- Wait till all the 3 colour (R-G-B) sensing is completed.
- The background LED will continuously blink till the background teaching is in process as soon as the background teaching is completed the background LED will turn "OFF".



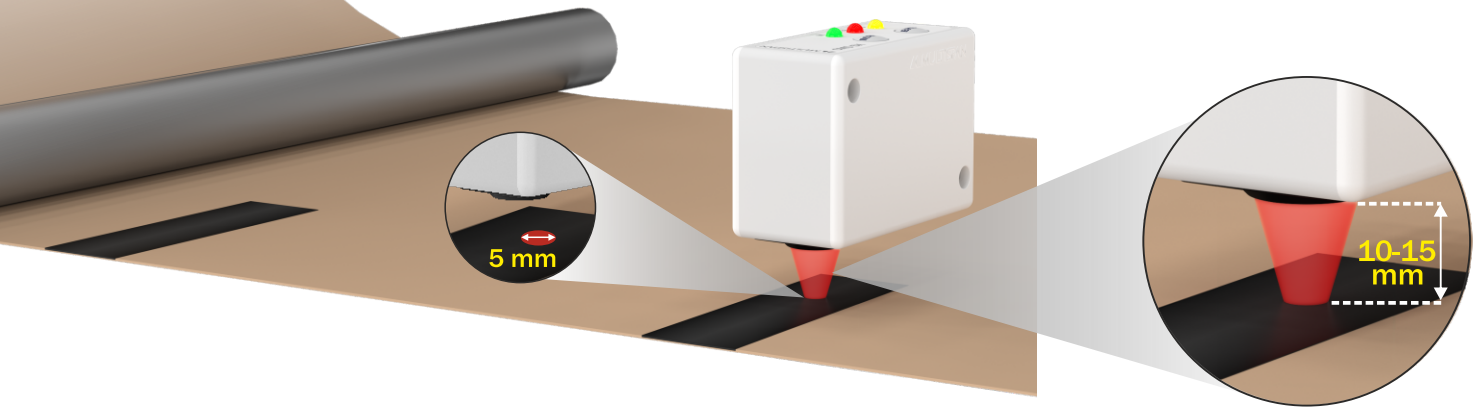
## Electrical Connection & Pinout



1. +12 to +24 V
2. GND
3. NPN
4. PNP
5. Not Connected

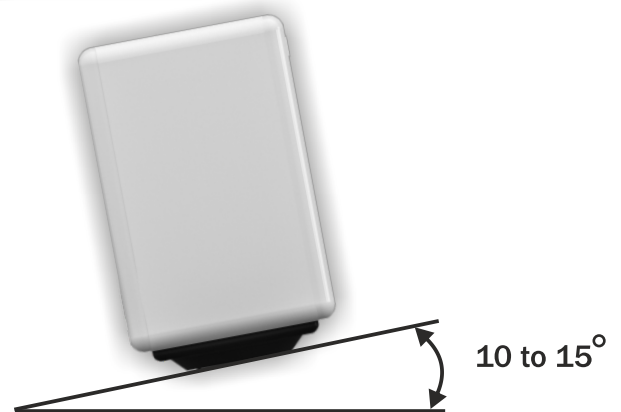
## Spot Characteristics

**NOTE :** The spot dimension will change according to the distance between sensor and the packaging material.



## Sensing Glossy Surface

- Object with a glossy surface have a large amount of specular reflection particles that may destabilize sensing. In such a case, by slightly tilting the sensor, the output can be more stable.
- If the surface of the sensing object has a shine, mount the sensor inclining approx. 10 to 15 degrees against the packaging material.



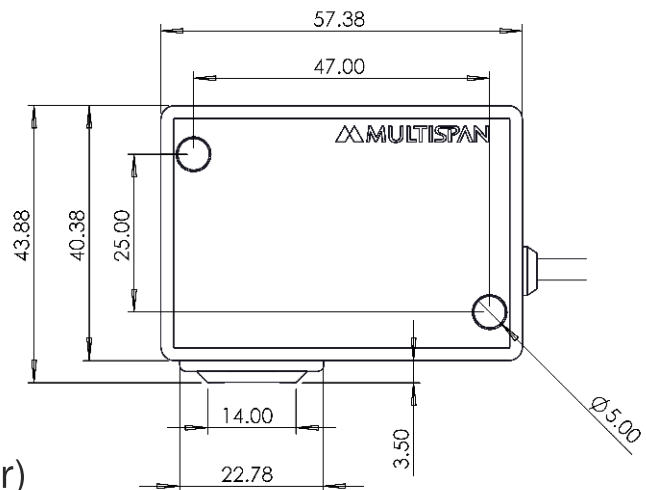
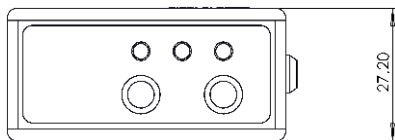
## Precautions For Proper Wiring

- Take care that wrong wiring will damage the sensor.
- Verify that the supply voltage variation is within the rating.
- Do not use during the initial transient time (3 sec.) after the power supply is switched on.
- Do not run the wires together with high-voltage lines or power lines. This can cause malfunction due to induction.
- Take care that short-circuit of the load or wrong wiring may burn or damage the sensor.
- However, in order to reduce noise, make the wiring as short as possible.

## Precautions for Proper Use

- Take care that the sensor is not directly exposed to fluorescent light from a rapid-starter lamp or a high frequency light device or sunlight etc., as it may affect the sensing performance.
- Do not touch the lens of the sensor by hand directly. If the lens becomes dirty, wipe it off with a soft cloth gently.
- Do not use this sensor in places having excessive vapor, dust, etc., or where it may come in direct contact with water, or corrosive gas, It may damage the sensor.
- Take care that the product does not come in contact with water, oil, grease, or organic solvents, such as, thinner, etc.
- This sensor cannot be used in an environment containing inflammable or explosive gases.
- Never disassemble or modify the sensor otherwise the warranty will be void.

## Dimension



All Dimensions are in mm(Millimeter)

Multispan reserves the right to change specifications without prior notice. Printing and typographical errors reserved.  
Product improvement and upgrade is a constant procedure. So for more updated operating information & support.  
Please contact our Helpline: +91-9081078683 or Email At [service@gmail.com](mailto:service@gmail.com)

### Multispan Control Instruments Pvt. Ltd.

72/B, Phase 1, GIDC Estate, Vatva, Ahmedabad-382445, Gujarat, India.

☎ +91-9081078683/9978990114/9978991479

✉ [marketing@multispanindia.com](mailto:marketing@multispanindia.com)

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