



CMS-5X COLOUR 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

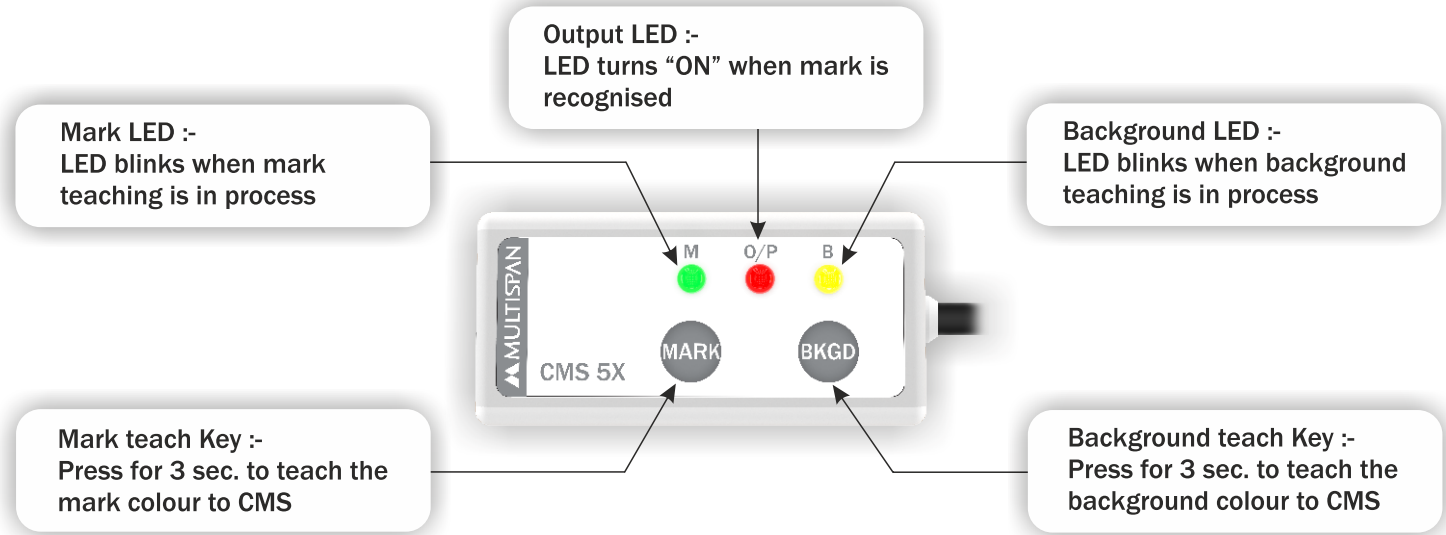
Physical

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

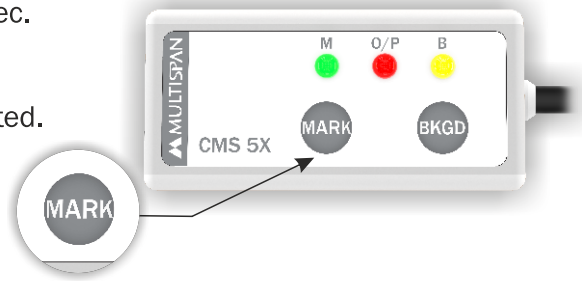
- Printing Machinery
- Packaging Machinery
- Food & Beverage
- Pharmaceutical Applications

User Interface



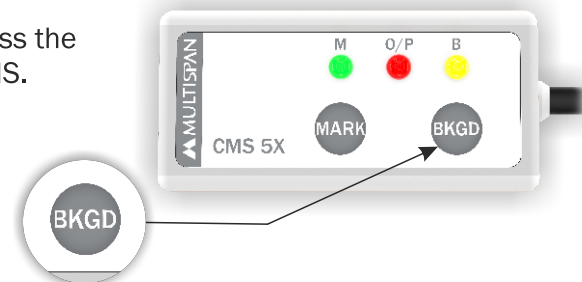
Mark Teaching

- 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.

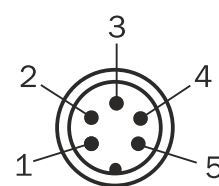
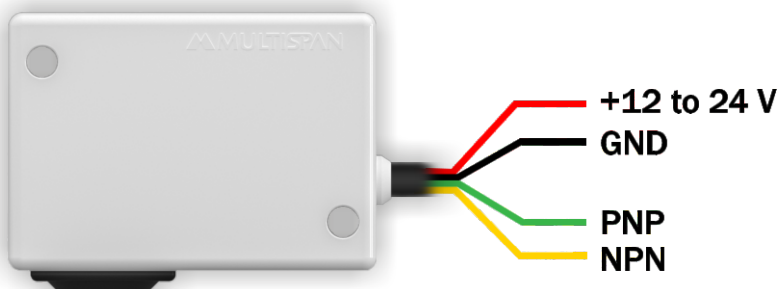


Background Teaching

- 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".



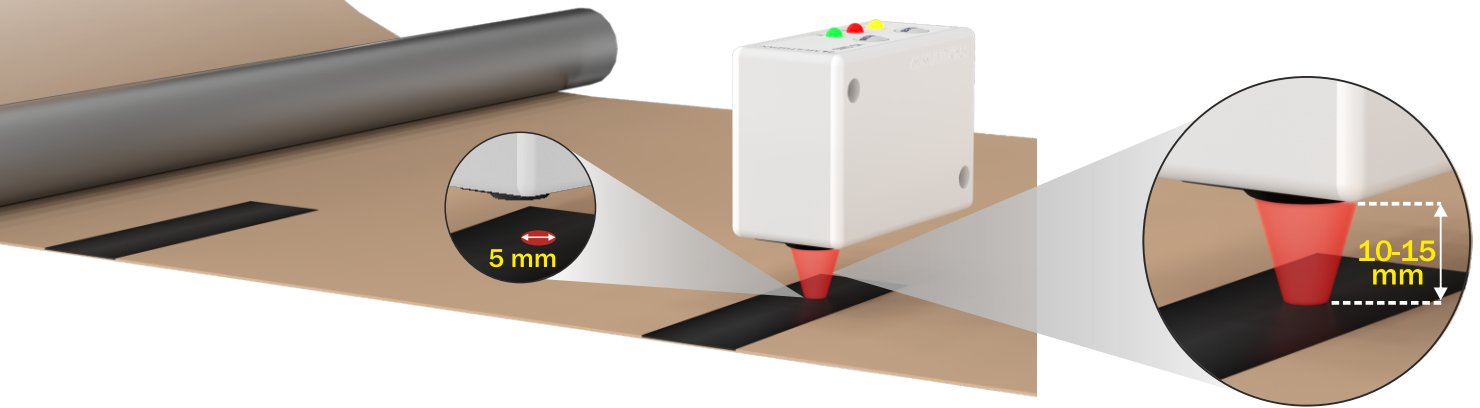
Electrical Connection & Pinout



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

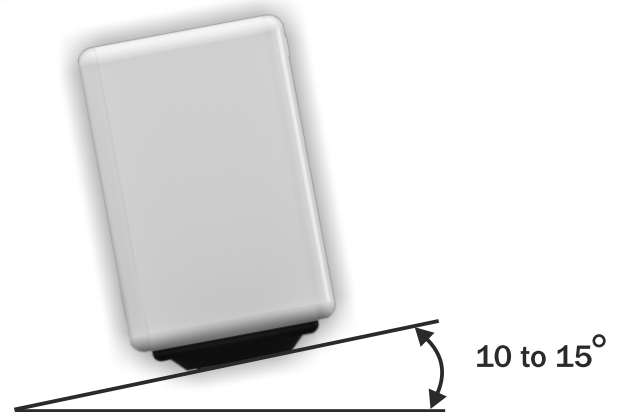
Spot Characteristics

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.



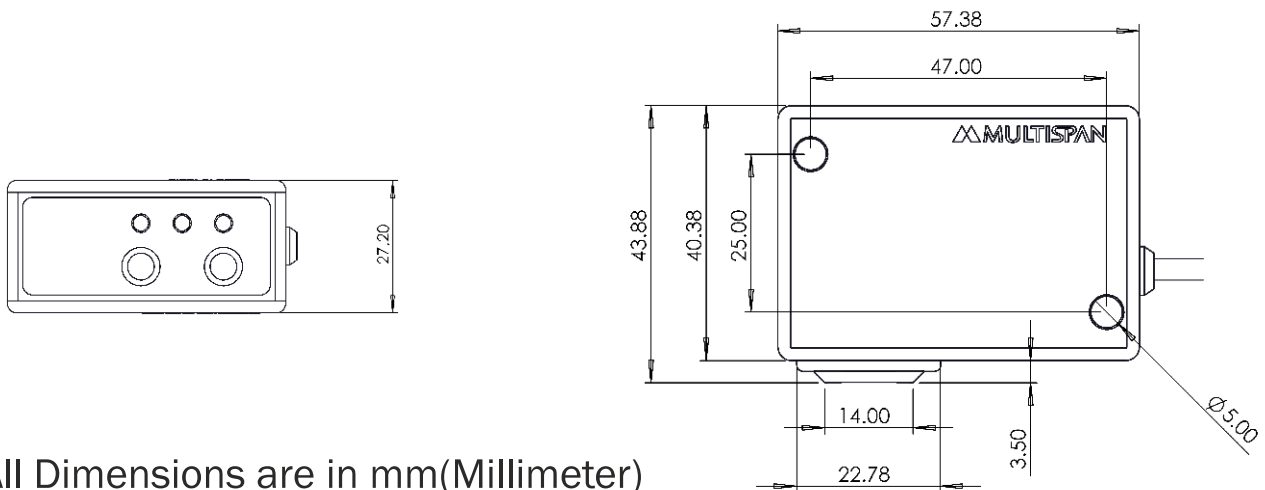
Precautions For Proper Wiring

- 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)

We 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 Mimic Components (0)11-689-5700