# MULTISPAN

## COLOUR MARK SENSOR
### CMS 5X

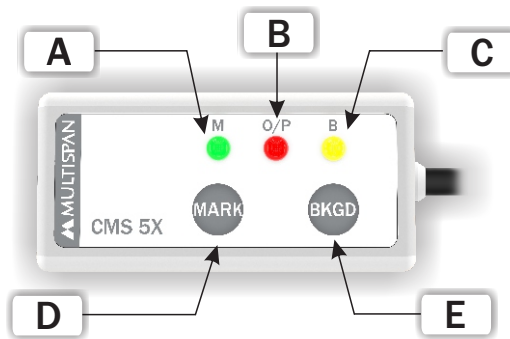| | |
|---|---|
| Min. Mark Output Delay | 20 ms |
| Operating Temp. | -10 to 50 C |
| Storage Temp. | -20 to 70 C |
| Operating Distance | 10 to 15 mm |
| Minimum Spot Diameter | 5 mm |
| Emission type | RED (630 nm)<br>GREEN (520 nm)<br>BLUE (465 nm) |
| Ambient Light Rejection | Yes |
| Vibration | 0.5 mm amplitude,<br>10 to 55 Hz Frequency |
| Housing Material | ABS |
| Lens Material | Glass |
| Connection | Shielded 4 Wire Cable |

## FEATURES

- Ultra fast response
- Unmatched accuracy with multi-color sensing
- Compact & sleek design
- Standard mounting for easy installation
- Ambient light noise rejection for better colour recognition
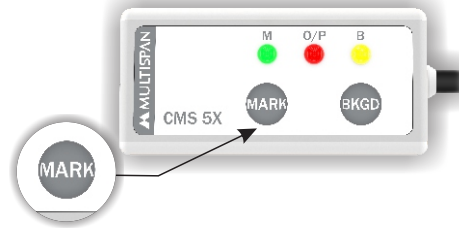- Scratch resistance lens for dusty applications

## Technical Specification

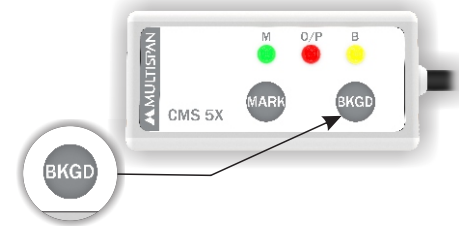| Model | CMS 5X |
|---|---|
| Power Supply | 12 - 24V DC |
| Current Consumption | 35 mA max.@ 24 V DC |
| Output | NPN/PNP Output |
| Output Current | 25 mA max |
| Response Time | 2 Milisecond |
| Indications | LED 1 : Mark LED(Green)<br>LED 2 : Output LED(Red)<br>LED 3 : Background LED (Yellow) |
| Push Buttons | Button 1 : Mark Button<br>Button 2 : Background Button |

## User Interface



A - **Mark LED:** LED blinks When mark teaching is in process

B - **Output LED:** LED turns "ON" When mark is recognised

C - **Background LED:** LED Blinks when background teaching is in process

D - **Mark teach key:** Press for 3 sec. to teach the mark colour to CMS

E - **Background teach key:** Press for 3 sec. to the background colour to CMS
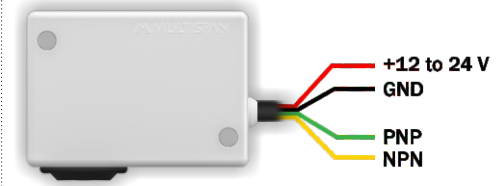
## Mark Teaching



- 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.
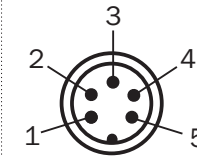
## Background Teaching



- 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".
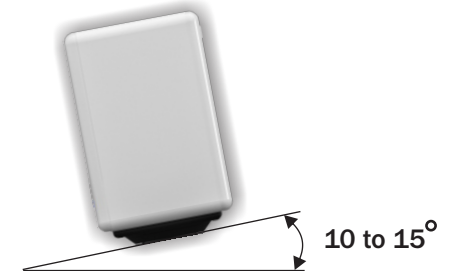
## Electrical Connection & Pinout



+12 to 24 V
GND
PNP
NPN

Pinout:



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

## Sensing Glossy Surface



10 to 15°

- 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.
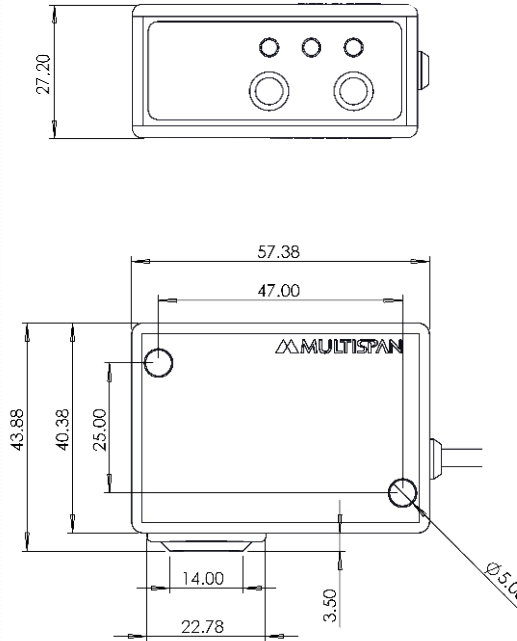
## Precautions For Proper Wiring

- 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.

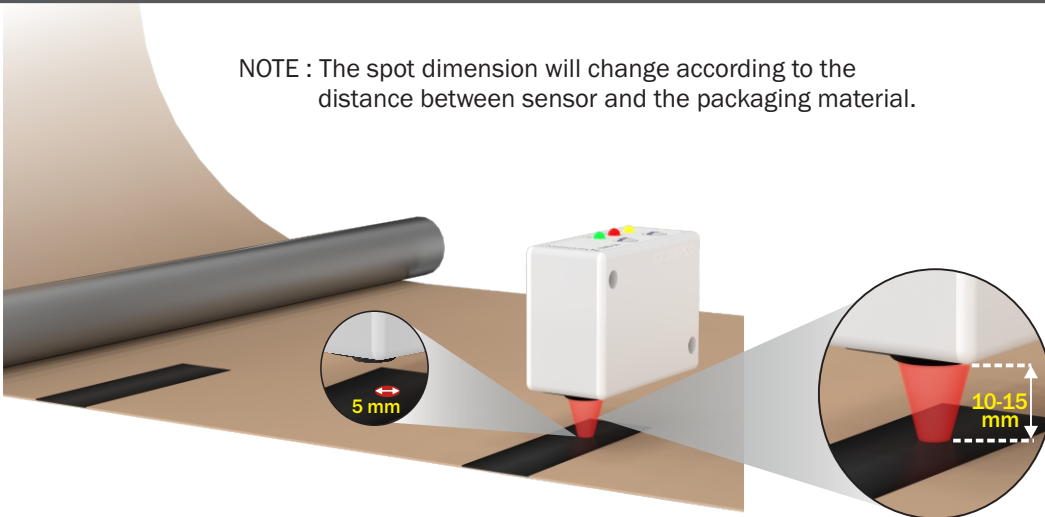- Never disassemble or modify the sensor otherwise the warranty will be void.

## Dimension



27.20

57.38
47.00
43.88
40.38
25.00
14.00
22.78
3.50
Ø5.00

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All Dimensions are in mm(Millimeter)

## Spot Characteristics

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



5 mm

10-15 mm

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:+91-7227057546 or Email At service@gmail.com

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