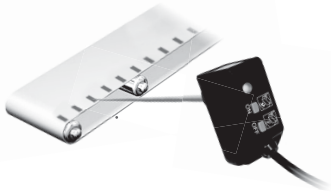




Cat. No. FP-CME-A22

FP-CME COLOR MARK SENSOR



INSTRUCTION SHEET

Thank you for selecting INNO for your requirement.

This sheet describes the procedure and precautions required for installing and operating the product.

Kindly read this sheet before operating or installing the product. Store the sheet for future reference.

CAUTION FOR SAFETY

- ① Please keep this sheet for review before use of unit.
- ① Please observe the following:

⚠ WARNING
Serious injury may occur if instructions are not followed

⚠ CAUTION
Product failure or injury can occur if instructions are not followed

⚠ WARNING

- This is not a safety product and is not to be used with machinery that requires use of safety control.
- Do not disassemble or modify this unit. It may lead to electric shock/ fire.

Do not connect sensor to AC power supply.
RISK OF EXPLOSION!



⚠ CAUTION

- This unit shall not be used outdoors.
- Do not use unit in places where there is flammable/ explosive gas.
- Please observe the rated specifications in Instruction Sheet.
- Do not use this unit beyond rated power and do not supply AC power at DC power type; do not connect without load.
- Please check the polarity of power and wrong wiring.
- Do not use this unit in places where there is vibration or impact.
- Do not use water or oil based detergent for cleaning the unit.
- Do not use excessive force to tighten the unit to the mounting plate and do not hammer the unit.
- Please process it as industrial waste and dispose responsibly.

- A Warmup period of minimum 200 m sec is required on powerup.
- Do not use the sensor in direct sunlight.

SPECIFICATIONS

*For details on Customized/ Special Models contact Seller

Type	FP-CME-10P-2M	FP-CME-10N-2M	FP-CME-10P-M12C	FP-CME-10N-M12C
Sensing Distance	10mm ±3mm			
Response Time	Mark Mode	45 μ Sec or less		
	Color Mode	150 μ Sec or less		
Light Source	Mark Mode	1 Color (Selectable by Teaching)		
	Color Mode	3 Color - RGB LED (Automatic Selection)		
Light Wavelength	Red: 640 nm; Green: 525 nm; Blue: 470 nm			
Sensitivity Adjustment	Pushbutton Teach with fine adjust buttons			
Supply Voltage	10 - 30 VDC (Ripple Max 10%)			
Current Consumption	max. 35 mA			
Connection	2 Meter Cable		M12 Connector	
Control Output	NPN or PNP open collector output (depending on model)			
Control Output Rating	Load Voltage: max. 30 VDC; Load Current: max 100mA; Residual Voltage: NPN- max 1 V, PNP- min (-2.5 V)			
Teach	Mark Mode: 2 Point Teach; Color Mode: 1 Point Teach			
Operation Indication	Output Indication - Orange			
Short-circuit Protection	Incorporated (Auto reset)			
Insulation Resistance	20 M Ω at 500 VDC			
Ambient Temperature	-10° ~ 55°C (non- freezing; non- condensing)			
Ambient Humidity	35 ~ 90% RH (non- condensing)			
Protection Class	IP67			
Weight	approx. 110 g			
Material	Housing: PBT ; Button: Silicone rubber			

OUTPUT MODES

	Color Mode	Mark Mode
Light ON	Output is active when matched	Output is active for high reflection
Dark ON	Output is active when un-matched	Output is active for low reflection

When 2 point teach, the 1st selected color will be ON

Represented by:

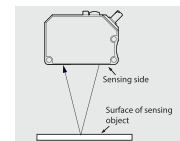
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Email: info@intechchennai.com



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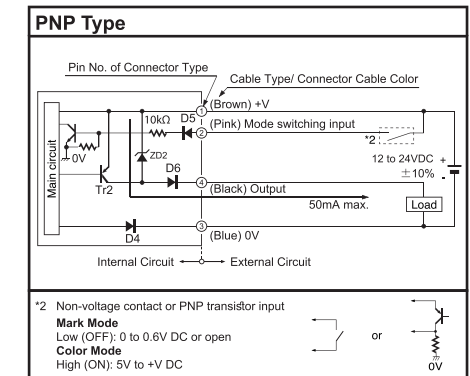
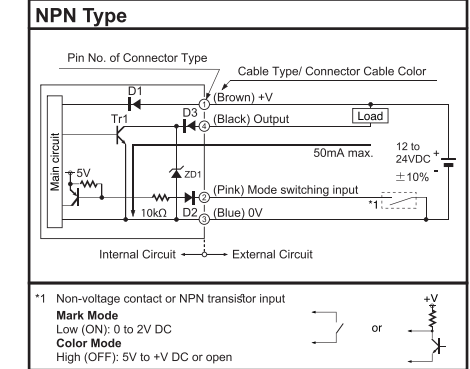
MOUNTING AND ADJUSTMENTS

Make sure that the sensing side of the sensor is parallel with the surface of the sensing object. Normally, do not incline the sensor towards the sensing object. The sensor is to be placed at least 10mm away from any glossy or reflective surface.



For detection of Glossy Objects, mount the sensor at an angle of 5° to 15°, as shown in the Fig. (a). This will improve the mark detection capability

OUTPUT CIRCUIT DIAGRAM

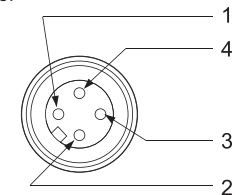


Symbols:

- D1, D2, D3, D4, D5, D6 : Reverse supply polarity protection diode
- ZD1, ZD2 : Surge absorption zener diode
- Tr1 : NPN output transistor
- Tr2 : PNP output transistor

CONNECTION DIAGRAM

◆ Connector



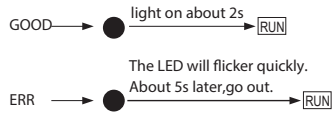
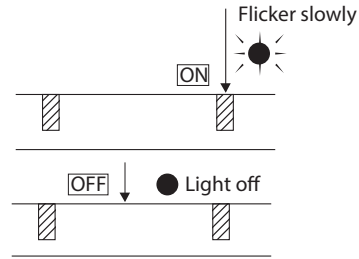
Connector Pin No.	Description
①	+V
②	Mode Switch Input
③	0 V
④	Output

TEACHING

Before performing the Teaching, be sure to confirm the setting of mark mode or color mode.

In case of 2-point teaching of mark mode

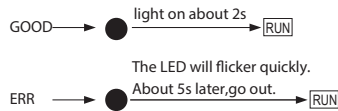
- Press "ON key" when facing the measured color. Then the LED will flicker slowly.
- Press "OFF key" when facing the background. Then the LED will go out.
- The threshold value is set at the mid-value between the step 1 and 2.
In case stable sensing is possible : Good.
In case stable sensing is impossible : ERR.



Note: When the system is in the state of ERR, please run Teaching again, otherwise the system will use the last results of teaching.

In case of 1-point teaching of color mode

- After aligning the beam spot to the mark to be detected. Press "ON key".
- In case stable sensing is possible :Good.
In case stable sensing is impossible :ERR.

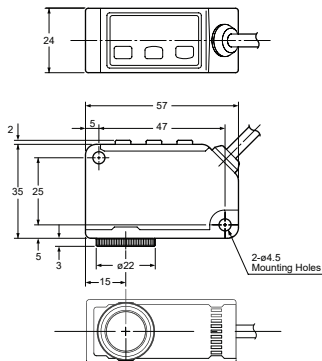


Note: When the system is in the state of ERR, please run Adjust Mode again, otherwise the system will use the last results of adjusting.

DIMENSIONS

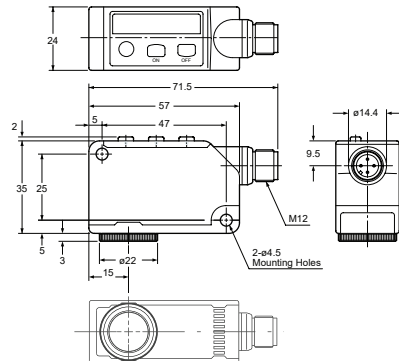
Cable Type

- ◆ FP-CME-10P-2M
- ◆ FP-CME-10N-2M

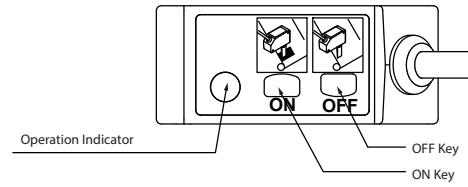


Connector Type

- ◆ FP-CME-10P-M12C
- ◆ FP-CME-10N-M12C



NOMENCLATURE



Represented by:

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INSTALLATION NOTES

