IMS



E3JM-

INSTRUCTION MANUAL

! WARNING

Thank you for selecting IMS product. This sheet primarily describes precautions required in installing and operating the product. Before operating the product, read the sheet thoroughly to acquire sufficient knowledge of the product. For your convenience, keep the sheet at your disposal.

! CAUTION

Failure to follow these instructions may result in serious injury or death: Fail-safe device must be installed when using the unit with machinery that may cause serious injury or substantial economic loss. (e.g. nuclear power control, medical equipment, ships, vehicles, railways, aircraft, combustion apparatus, safety equipment, crime/disaster prevention devices, etc.)

Failure to follow these instructions may result in product damage :

Do not use this unit over rated voltage;

Do not use this unit where there is flammable or explosive gas;

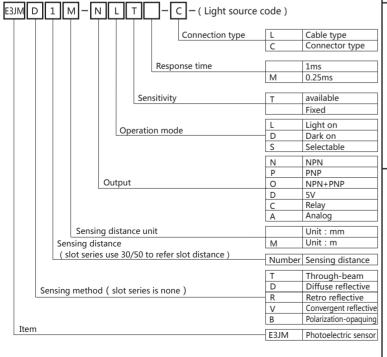
Do not use this unit where there is vibration or impact;

In cleaning the unit, do not use water or an oil-based detergent.

Features

- Sensitivity adjustment
- Mode selection for light on and dark on
- Power supply reverse polarity protection
- Visible bright red light for easy alignment (Retro-reflective)

Ordering information



Specifications

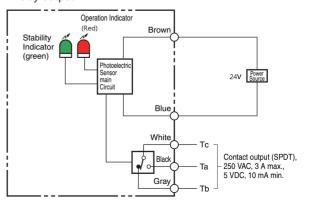
Sensing method		Retro reflective	Diffuse reflective	
Model		E3JM-R4m	E3JM-D1m	
Standard sensing object		Opaque: 75 mm dia.min	Non-glossy white paper 300*300mm	
Sensing distance		4m	1m	
Directional angle		1.5°min.		
Light sour	се	Red LED (624nm)	Infrared LED (840nm)	
Power supply		DC10~30V (including voltage ripple of 10%(p-p)max.)		
Current consumption		Max. 50mA		
Output		NPN/PNP output Relay output SPDT, 250 VAC, 3 A max. (cosφ= 1), 5 VDC, 10 mA min., Light-ON/Dark-ON selectable		
Operation mode		Selectable Light ON or Dark ON by knob		
Indicators		Operation indicator : red , Stability indicator : green		
Circuit protection		Power supply reverse polarity protection		
Life expectancy (relay output)		Mechanical 50,000,000 times min. (switching frequency: 18,000 times/h) Electrical 100,000 times min. (switching frequency: 1,800 times/h)		
Response time		Max. 20ms		
Sensitivity adjustment		One-turn adjuster		
Ambient illumination		Incandescent lamp: Max. 3, 000lx/Sunlight: Max. 11, 000lx		
Ambient temperature		Operation : -25 \sim 55 $^{\circ}$ C/Storage : -40 \sim 70 $^{\circ}$ C (with no icing and condensation)		
Ambient humidity		Operation: 35 ~ 85 %/Storage: 35% ~ 95%(with no condensation)		
Insulation resistance		Min. 20MΩ (500VDC)		
Dielectric strength		1,500 VAC, 50/60 Hz for 1 min		
Vibration resistance		1.5mm amplitude at frequency of 10 to 55Hz in each of X,Y,Z direction for 2 hours		
Shock resistance		500m/s² in X,Y,Z directions for 3 times		
Degree of protection		IEC: IP64		
Connection method		Pre-wired		
Weight		Approx. 150g		
Material	Case	ABS		
	Lens	РММА		
	Knob	POM		
	Cable	PVC		
Accessory	,	Instruction、reflector (Diffuse refle	ective only)	

Operating timing diagram

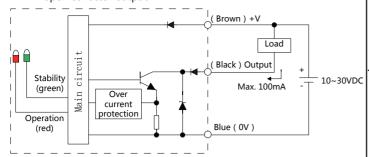
Operation mode	Light ON	Dark ON
Receiver operation	Received light Interrupted light	Received light Interrupted light
Operation indicator (red LED)	ON OFF	ON OFF
Transistor output	ON OFF	ON OFF

Control output circuit diagram

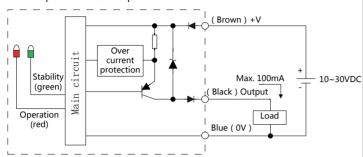
• Relay output



• NPN open collector output

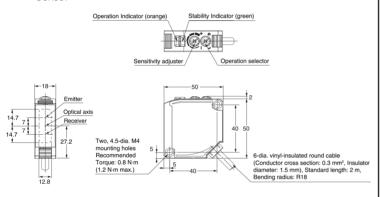


• PNP open collector output

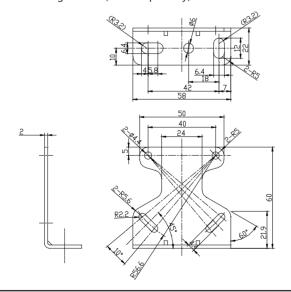


Dimensions

Sensor



• Mounting Bracket (Order separately)



Caution for using

- 1、Please make sure the wiring is correct before power-on.
- 2. Use a visor or a hood so that excessive light (e.g. sunlight, spotlight) does not directly enter into the inclination angle of the sensor.
- When more than 2 sets of Through-beam type sensor are used closely,it might cause interference each other. Be sure to put enough space between them in order to avoid malfunction.
- 4. Sensor can mulfunction due to light entering from adjacent sensor, so sensors must be installed with enough seperated distance.
- 5. If the sensor is installed directly on a flat surface, the reflection off the surface may cause malfunction. Make sure there is enough space between the sensor and the surface.

- If the sensor is wired with a high voltage line or power line, it may cause product damage or malfunction. Use separate wiring or a dedicated conduit.
- Please use short cables for wiring the sensors. Power surge from extended wiring may cause product malfunction;
- 8、When the lens is stained by foreign substances, clean the lens lightly with dry cloth. Do not use chemical or organic solvents.

Main product

- Photoelectric sensor
- Light curtain
- Proximity sensor
- Pressure sensor
- Counting sensor
- Distance sensor
- Liquid level sensor
- Label sensor
- Hall sensor
- Pressure meter
- Counting machine
- Dust sensor

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