

### Amplifier Built-in Type Threaded Miniature Photoelectric Sensor EX-30 Series

MJEC-EX30 No.0054-69V

Thank you very much for purchasing Panasonic products. Read this Instruction Manual carefully and thoroughly for the correct and optimum use of this product. Kindly keep this manual in a convenient place for quick reference.

- Please refer to “users manual on our web site (<http://panasonic.net/id/pidsx/global>)” for more details (specification, and operation etc.)
- Access method is “Download” → “Model no.”
- If you could not visit our web site, contact our sales office near your sight.

## WARNING

- Never use this product as a sensing device for personnel protection.
- In case of using sensing devices for personnel protection, use products which meet laws and standards, such as OSHA, ANSI or IEC etc., for personnel protection applicable in each region or country.

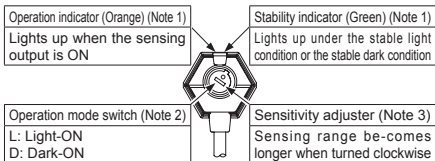
## 1 INTENDED PRODUCTS FOR CE MARKING

- Refer “our web site (<http://panasonic.net/id/pidsx/global>)” for the intended products. The models listed under “SPECIFICATIONS” come with CE Marking. As for all other models, please contact our office.
- Contact for CE



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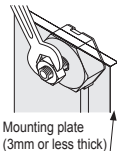
## 2 PART DESCRIPTION



- Notes: 1) Not incorporated on the thru-beam type sensor emitter.  
2) Incorporated on EX-33□. Not incorporated on the receiver for EX-31□, and EX-32□.  
3) Incorporated on the emitter for EX-33□, and EX-32□. Not incorporated on EX-31□.

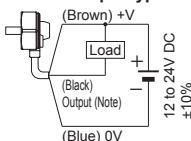
## 3 MOUNTING

- Mount the sensor on a mounting plate 3mm or less thick and Use the enclosed nut and toothed lock washer for mounting.
- When the nut is tightened, hold the the sensor with hand or a spanner etc. and the tightening torque should be 0.6N·m or less. (EX-32□: 1N·m or less) Do not tighten the sensor itself.

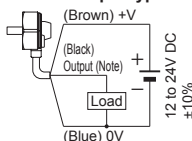


## 4 WIRING DIAGRAMS

### • NPN output type



### • PNP output type

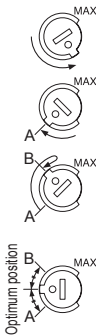


Note: The thru-beam type sensor emitter does not incorporate the output.

## 5 SENSITIVITY ADJUSTMENT

### Step

1. Turn the sensitivity adjuster fully counterclockwise to the minimum sensitivity position, MIN.
2. In the light received condition, turn the sensitivity adjuster slowly clockwise and confirm the point A where the sensor enters the “Light” state operation.
3. In the dark condition, turn the sensitivity adjuster further clockwise until the sensor enters the “Light” state operation and then bring it back to confirm point B where the sensor just returns to the “Dark” state operation.  
(If the sensor does not enter the “Light” state operation even when the sensitivity adjuster is turned fully clockwise, the position is point B.)
4. The position at the middle of points A and B is the optimum sensing position.



## 6 CAUTIONS

- This product has been developed / produced for industrial use only.
- The thin cable 0.1mm<sup>2</sup> is used for this product. Thus, take care that if the cable is pulled with excessive force, it may cause cable break.
- Extension up to total 50m (emitter and receiver each for thru-beam type), or less, is possible with 0.3mm<sup>2</sup>, or more, cable.
- Make sure that stress by forcible bend or pulling is not applied directly to the sensor cable joint.
- Make sure to carry out wiring in the power supply OFF condition.
- Take care that wrong wiring will damage the sensor.
- Verify that the supply voltage variation is within the rating.
- If power is supplied from a commercial switching regulator, ensure that the frame ground (F.G.) terminal of the power supply is connected to an actual ground.
- In case noise generating equipment (switching regulator, inverter motor, etc.) is used in the vicinity of this product, connect the frame ground (F.G.) terminal of the equipment to an actual ground.
- Do not run the wires together with high-voltage lines or power lines or put them in the same raceway. This can cause malfunction due to induction.
- Do not use during the initial transient time (50ms) after the power supply is switched ON.
- Take care that the sensor is not directly exposed to fluorescent lamp from a rapid-starter lamp, a high frequency lighting device or sunlight etc., as it may affect the sensing performance.
- This sensor is suitable for indoor use only.
- Do not use this sensor in places having excessive vapor, dust, etc., or where it may come in contact with corrosive gas, etc.
- Take care that the sensor does not come in contact with oil, grease, organic solvents such as thinner, etc., strong acid, or alkaline.
- This sensor cannot be used in an environment containing inflammable or explosive gases.
- Never disassemble or modify the sensor.
- In case of using the sensor at a place where static electricity is generated, use a metal mounting plate. Also, ensure to ground the mounting plate.

## 7 RoHS DIRECTIVE

- This equipment complies with RoHS (EC and Chinese directive).
- Chinese RoHS indicates inclusion despite regulation value. (Refer Chinese part.)

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