

## U-shaped Micro-photosensor

PM-□25 / □45 / □65

MJECK-PM45 No.0063-35V

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.

### ⚠ 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

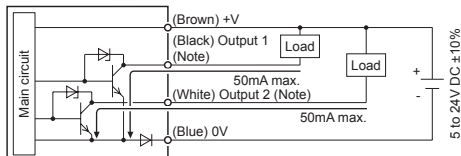
- This product complies with the following standards / regulations.

<EU Directive>  
EMC Directive

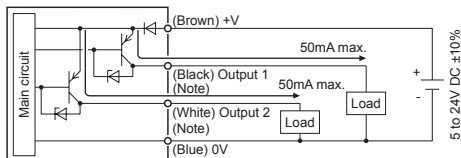


## 2 I/O CIRCUIT DIAGRAM

### NPN output type



### PNP output type



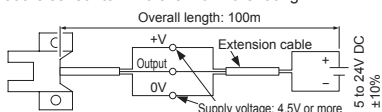
Note: Ensure to insulate the unused output wire.

### <Output operation>

	Color code	Output operation
Output 1	Black	Light-ON
Output 2	White	Dark-ON

## 3 CAUTIONS

- This product has been developed / produced for industrial use only.
- Since the sensor is intended for use inside machines, no special countermeasures have been taken against extraneous light. Please take care that extraneous light is not directly incident on the beam receiving section.
- If the sensor is used in a place having excessive dust, periodically clean the emitting and receiving sections with a dry, soft cloth.
- Cable extension is possible up to an overall length of 100m with a 0.3mm<sup>2</sup>, or more, cable. However, since a voltage drop shall occur due to the cable extension, ensure that the power supply voltage at the end of the cable attached to the sensor or at the sensor terminals is within the rating.



But, when the overall cable length, including the cable attached to the sensor, is as given below, there is no need to confirm the voltage.

Wire conductor cross-section area	Overall cable length
0.08 to 0.1mm <sup>2</sup>	Up to 5m
0.2mm <sup>2</sup>	Up to 10m
0.3mm <sup>2</sup>	Up to 20m

- The extension of a power supply line and the output line of less than 10m is acceptable in case using this product as conforming to S-mark.
- If there is a large surge generating equipment, such as, motor, solenoid, electromagnetic valve, etc., in the vicinity of the micro-photosensor, use a surge absorber on that equipment. Further, do not run the sensor cables along power lines and use a capacitor between +V and 0V, if required. Use the sensor after confirming that the surge has been eliminated.
- Observe the conditions shown in the table below when installing the product.

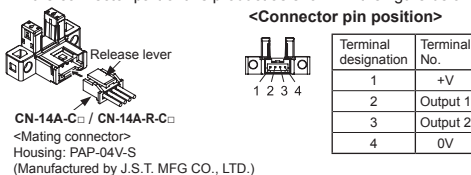
	PM-□45 / PM-□65	PM-□25	
Screw	M3	M2	M3
Tightening torque	0.5N·m	0.15N·m	0.5N·m
Spring washer	1pc	1pc	1pc
Plain washer	ø6mm (small diameter type)	ø4.3mm (small diameter type)	ø6mm (small diameter type)

- Do not use during the initial transient time (50ms) after the power supply is switched on.
- In case the PM-25 series is used at an ambient temperature of +50 °C, or more, make sure to mount it on a metal body.
- The cable of PM-□25-R is a flexible cable usable on a moving base. When the sensor is mounted on a moving base, fix the sensor cable joint so that stress is not applied to it.
- Take care that the flexibility of the PM-□25-R cable is lost if the ambient temperature is near -10°C.
- When storing PM-□25-R, make sure that the cable does not come into contact with the sensing section or operation indicator section.

## 4 WIRING (PM-□65)

### Connection method

- Insert the cable with connector CN-14A-C□ / CN-14A-R-C□ in the connector part of this product as shown in the figure below.



CN-14A-C□ / CN-14A-R-C□

<Mating connector>  
Housing: PAP-04V-S  
(Manufactured by J.S.T. MFG CO., LTD.)

### Disconnection method

- Pressing the release lever attached to the cable with connector, pull out the connector.

Note: Do not pull by holding the cable without pressing the release lever, as this can cause cable break or connector break.

## 5 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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