

## OPERATING MANUAL

### Photomicrosensor set PARP-PS2B PARP-PS4B

Thank you for purchasing an Oriental Motor product.  
This Operating Manual describes product handling procedures and safety precautions.

- Please read it thoroughly to ensure safe operation.
- Always keep the manual where it is readily available.

## Introduction

Only qualified and educated personnel should work with the product.

The product described in this manual has been designed and manufactured to be incorporated in general industrial equipment. Do not use for any other purpose.

Oriental Motor Co., Ltd. is not responsible for any damage caused through failure to observe this warning.

The items under **Note** contain important handling instructions that the user should observe to ensure safe use of the product.

**Note** is described in the related handling items.

- The products do not contain the substances exceeding the restriction values of RoHS Directive (2011/65/EU).

## Overview of the product

- The photomicrosensor set is an accessory product for setting a desired rack stroke or detecting the rack position. Read the operating manual of the applicable product as well before use.

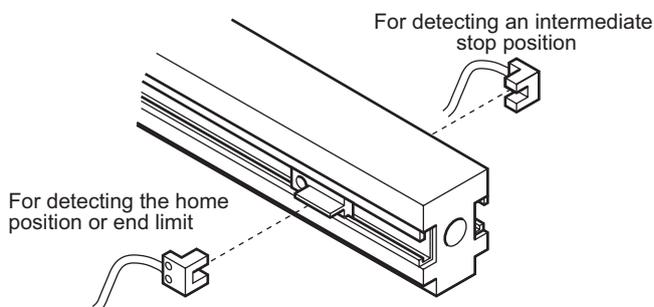
### Applicable product

Photomicrosensor set model	Applicable product model			
	LS linear head	L series	LBE series	LAS series
<b>PARP-PS2B</b>	<b>2LS</b>	<b>LM2</b>	<b>LBE2</b>	<b>LAS2</b>
<b>PARP-PS4B</b>	<b>4LS</b>	<b>LM4</b>	<b>LBE4</b>	<b>LAS4</b>

**Note** Use the photomicrosensor set according to the combination described as above.

- A photomicrosensor can be installed on both the right side and left side of the rack, so a total of two positions can be detected.

One sensor can be used to detect an intermediate stop position, while the other sensor can be used to detect the home position or end limit.

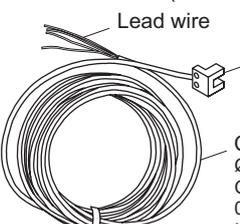
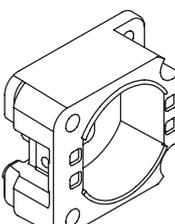


- The supplied shielding plates can be used to set up to four stop positions. When combined with one or more accessory shielding plates (sold separately), five or more stop positions can be set.

## Checking the product

Verify that the items listed below are included.

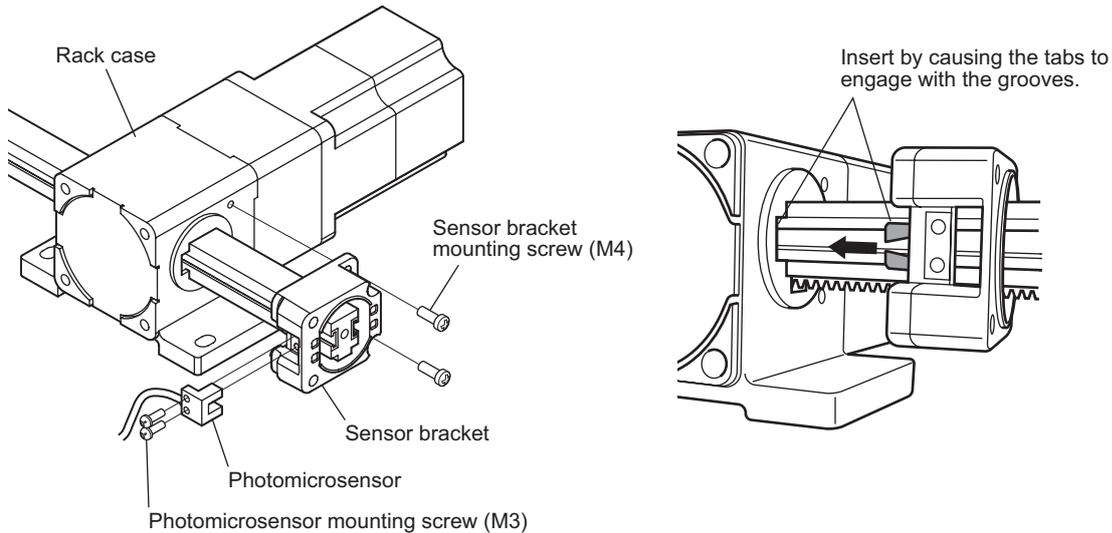
Report any missing or damaged items to the branch or sales office from which you purchased the product.

<input type="checkbox"/> Photomicrosensor [3 m (9.8 ft.)] 2 pieces EE-SX951-R (OMRON Corporation)  Lead wire Sensor Cable Ø2.8 mm 4 cores Conductor cross-sectional area: 0.15 mm <sup>2</sup> Insulator diameter: Ø0.92 mm	<input type="checkbox"/> Sensor bracket 1 piece 	<input type="checkbox"/> Shielding plate 4 pieces  <input type="checkbox"/> Photomicrosensor mounting screw M3×4 pieces 	<input type="checkbox"/> Operating Manual (this document) 1 copy
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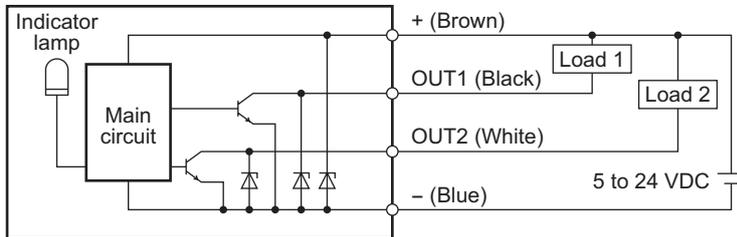
## Installing the photomicrosensor

- Note**
- Do not install the photomicrosensor while the power is supplied. Doing so may damage the sensor.
  - When installing the sensor bracket or shielding plate, be sure to use the supplied screws.
  - Be sure to tighten with the specified torque. Failure to do so may result in damaged parts or malfunction.

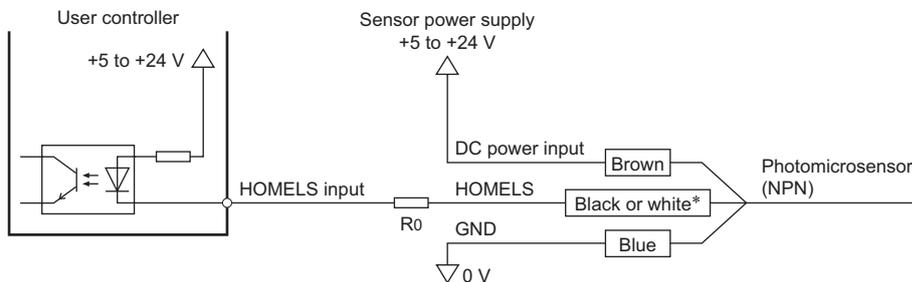
1. Secure the sensor bracket to the rack case using the sensor bracket mounting screws (M4) attached on the rack case of the applicable product in advance.  
Tightening torque: 0.9 N·m (127 oz-in)
2. Secure the photomicrosensor to the sensor bracket using the photomicrosensor mounting screws (M3).  
Tightening torque: 0.54 N·m (76 oz-in) or less



3. Connect the lead wires of the photomicrosensor to the programmable controller, etc.



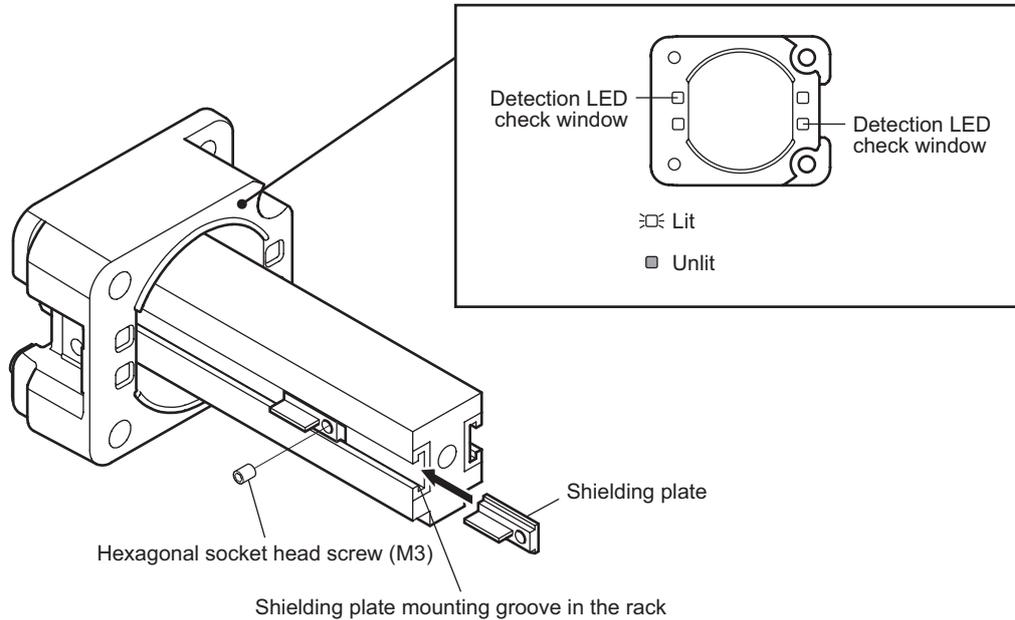
Use a power supply for a voltage of 5 VDC to 24 VDC. Also, the current should be 50 mA or less. If the current exceeds 50 mA, connect an external resistor  $R_0$ .



\* Connect the white lead wire when detecting the sensor output signal in normally open, and the black lead wire when detecting in normally closed.

- Note**
- Wire the cable of photomicrosensor so as not to contact the moving part.
  - Use a common ground for the sensor power supply and user controller power supply. If the two power supplies generate a ground potential difference, the sensor may malfunction.
  - Be sure to insulate the lead wires not in use.
  - Do not wire the polarity of the power supply incorrectly. Doing so may cause an explosion or damage.

4. Turn on the power.
5. Insert each shielding plate through the shielding plate mounting groove.
6. Check the detection light from the detection LED check window in the sensor bracket, and adjust the position of the shielding plate until the detection light is shielded.
7. Secure the shielding plate using the supplied hexagonal socket head screws (M3).  
Tightening torque: 0.2 to 0.32 N·m (28 to 45 oz-in)

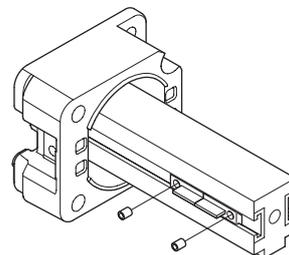


**Note**

- The photomicrosensor is designed and manufactured to be incorporated in equipment. It accordingly has been given no special treatment to withstand ambient disturbance light, so provide a measure to avoid ambient disturbance light when using under an incandescent lamp or in any other location where the sensor may be affected by ambient disturbance light.
- Before using the photomicrosensor, check the mounting points does not come loose as a result of vibration or impact.
- Wire the sensor line separately from the motor cable, power supply cable and other drive cables. Also wire the sensor line away from the drive cables as much as possible.
- The sensor may malfunction due to deposits of dust on the sensor. Clean the sensor periodically.

**■ What to do when the shielding plate is too short**

If the shielding plate slips right through the sensor receiving part after the sensor detection signal is output until the rack stops, place two shielding plates side by side so that it will take a longer time for both sensors to pass through the sensor receiving part.



**Accessory**

**Shielding plate**

Use a desired number of accessory shielding plates if the supplied shielding plates are not enough or when you want to set five or more stop positions.

Model: **LXSP-4**

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