## OPERATING MANUAL

## Limit Switch Set <br> PARP-MS <br> Mounting bracket set for limit-switch PARP-MS2

- 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 personnel should work with the product.
The product described in this manual has been designed and manufactured for use in general industrial machinery, and must not be used for any other purpose.
Oriental Motor Co., Ltd. is not responsible for any damage caused through failure to observe this warning.

## ■ Overview of the product

The limit switch set is an optional peripheral equipment for use with the linear head to set reciprocating motion or cause the actuator to stop at multiple points.
A mounting bracket set is also available for purchasing and mounting commercially available limit switches.
Also read the instruction manual for the linear head.

## Adopting dog of special shape

The dog is designed with a special shape so that two signals can be output separately for different end-of-moves, or for a end-of-move and an intermediate stopping point. Since the number of limit switches are kept to a minimum, controlling the system becomes easy.


## RoHS Directive

This product does not contain the substances exceeding the restriction values.

## Checking the product

Upon opening the package, 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.

## ■ PARP-MS

- Limit switch..................... 2 pieces | •Limit-switch |
| :--- |
| mounting bracket.......... 1 piece |
| D4MC-5040 |
| (OMRON Corporation) |


## PARP-MS2

Mounting bracket set for purchasing and mounting commercially available limit switches.

- Limit-switch
- Cover $\qquad$ 1 piece
- Dog $\qquad$ 4 pieces
mounting bracket .... 1 piece



## Installation method

## ■ Connecting the limit switch and cable

1. Insert a flat tip screwdriver between the limit switch and terminal protection cover, and raise the screwdriver to remove the terminal protection cover.
2. Affix the cable using the terminal screw (M4).

Applicable cable diameter: $\varnothing 8.5$ to $10.5 \mathrm{~mm}(\varnothing 0.335$ to 0.413 in .)
Tightening torque: 0.78 to $1.18 \mathrm{~N} \cdot \mathrm{~m}$ (111 to $167 \mathrm{oz}-\mathrm{in}$ )
3. Guide the cable into the opening in the terminal protection cover, install the terminal protection cover, and push in the cover until you hear a "click." The terminal protection cover can be installed in either direction.


## Installing the limit switch

1. Slide the dog into the dog mounting groove from the rack end and affix it using the supplied hexagonal socket screws.
Tightening torque: 0.2 to $0.32 \mathrm{~N} \cdot \mathrm{~m}$ ( 29 to 45 oz-in)
2. Insert the limit switch into the mounting bracket and loosely secure the limit switch by capturing the mounting bracket using the supplied hexagonal nuts (2 pcs.).
Refer to step 4 for the positions of the hexagonal nuts to be tightened.
3. Install the mounting bracket to the linear head using the mounting bracket screws already provided on the linear head.
2LSB and 4LSB can be installed on either the right or left side of the linear head.
Tightening torque: $0.9 \mathrm{~N} \cdot \mathrm{~m}$ (128 oz-in)
4. Use the hexagonal nuts securing the limit switch to adjust the height of the limit switch so that the limit switch will actuate at the tapered part of the dog Tightening torque: 2.94 to $4.92 \mathrm{~N} \cdot \mathrm{~m}$ ( 418 to 698 oz-in)

5. Remove the cover screw from the limit-switch mounting bracket, insert the cover onto the limit-switch mounting bracket, and then tighten the cover screw.


## Connection example using limit switches

An example of combining 2LSB10 and 2RK6GN-AW2MJ and PARP-MS is shown below. The moving direction of the rack is as viewed from the motor side. When using a commercially available limit switch, connect it according to the specifications of the purchased switch.


| п. | Motor advance-phase capacitor |
| :---: | :---: |
| - | Relay contact a |
| -Y- | Relay excitation coil |
| $\square$ | Fuse |
| - | Push switch |
| - $-1 \mid$ | Surge-voltage absorption circuit (EPCR1201-2) |
| - | Toggle switch |

SW1: Power supply
SW2: For starting in right direction SW3: For starting in left direction
L1: Left stop signal
L2: Right stop signal
Xa-1: For retention of $X$
Xa-2: For brake operation
Xa-3: For operation in left direction
Ya-1: For retention of $Y$
Ya-2: For brake operation
Ya-3: For operation in right direction

* The contact capacity of each relay and switch must be single-phase $100 \mathrm{~V} / 5 \mathrm{~A}$ or more, or single-phase $250 \mathrm{~V} / 5 \mathrm{~A}$ or more.
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