

Panasonic® QUICK INSTRUCTION MANUAL

Non-Contact Safety Door Switch Maintenance Actuator SG-PK-M□ Series

CMJE-SGPKM No.0077-18V

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.

This document briefly summarizes installation and operation of the product. When using the product, refer to the **SG-P Series Instruction Manual** in addition to this manual. The **SG-P Series Instruction Manual** can be downloaded from our website (<https://panasonic.net/id/pidsx/global>).

Use this product together with the Non-contact Safety Door Switch **SG-P Series**. When using the **SG-P Series**, refer to the **SG-P Series Quick Instruction Manual** and **SG-P Series Instruction Manual**.

1 SAFETY CAUTIONS (Always observe)

This section explains important rules that must be observed to prevent personal injury and property damage.

- The hazards that may occur if the product is used incorrectly are described and classified by level of harm.

⚠WARNING Risk of death or serious injury.

⚠CAUTION Risk of minor injury or property damage.

⚠WARNING

- Machine designer, installer, employer and operator
 - The machine designer, installer, employer and operator are solely responsible to ensure that all applicable legal requirements relating to the installation and the use of this device in any application are satisfied and all instructions for installation and maintenance contained in the instruction manual are followed.
 - Whether this device functions as intended to and systems including this device comply with safety regulations depends on the appropriateness of the application, installation, maintenance and operation. The machine designer, installer, employer and operator are solely responsible for these items.
- Engineer
 - The engineer would be a person who is appropriately educated, has widespread knowledge and experience, and can solve various problems which may arise during work, such as a machine designer, installer or employer etc.
- Operator
 - The operator should read this instruction manual thoroughly, understand its contents, and perform operations following the procedures described in this manual for the correct operation of this device.
 - In case this device does not perform properly, the operator should report this to the person in charge and stop the machine operation immediately. The machine must not be operated until correct performance of this device has been confirmed.
- Environment
 - This device is suitable for indoor use only.
 - Do not use this device in an explosion-proof area.
 - Do not install this device in the following places:
 - 1) Areas with high humidity where condensation is likely to occur
 - 2) Areas exposed to corrosive or explosive gases
 - 3) Areas exposed to contact with water
 - 4) Areas exposed to too much steam or dust
 - Do not use this device near equipment that emits strong electromagnetic waves.
- Machine in which this device is installed
 - Do not install this device with a machine whose operation cannot be stopped immediately in the middle of an operation cycle by an emergency stop equipment.
- Maintenance
 - When replacement parts are required, always use only genuine supplied replacement parts. Using substitute parts from another manufacturer may cause the device not to detect objects, resulting in death or serious injury.
 - The periodical inspection of this device must be performed by an engineer having the special knowledge.
 - Clean this device with a clean cloth. Do not use any volatile chemicals.
- Other precautions
 - Never modify this device. Modification may cause the device not to detect objects, resulting in death or serious injury.

⚠CAUTION

Specifications

- This product has been developed / produced for industrial use only.
- Do not use this product outside the range of the specifications. Risk of an accident and product damage. There is also a risk of a noticeable reduction of service life.
- Use this device by installing suitable protection equipment as a countermeasure for failure, damage, or malfunction of this device.
- Before using this device, check whether the device performs properly with the functions and capabilities as per the design specifications.
- Note that this device may be damaged if it is subject to a strong shock (if it is dropped onto the floor, for example).
- Do not use the device near an apparatus that generates magnetic fields. Otherwise, the operating distance may be affected.
- Do not apply an excessive shock to the safety switch when opening or closing the door.
- Use of this device under the following conditions or environments is not presupposed. Please consult us if there is no other choice but to use this device in such an environment.
 - 1) Operating this device under conditions or environments not described in this manual.
 - 2) Using this device in the following fields: nuclear power control, railroad, aircraft, auto mobiles, combustion facilities, medical systems, aerospace development, etc.
- When the apparatus that uses this device is to be used for enforcing protection of a person from any danger occurring around the area where machines are operated, the user should satisfy the regulations established by national or regional security committees (Occupational Safety and Health Administration: OSHA, the European Committee for Standardization, etc.). Contact the relative organization(s) for details.

Other precautions

- Never attempt to disassemble, repair, or modify the product.
- When this device becomes inoperable or unnecessary, dispose of the product properly as industrial waste by abiding by the applicable law in the country.

2 CONTENTS OF PACKAGE

- Actuator body: 1 unit
- Quick Instruction Manual (English / Japanese, Chinese): 1 volume each

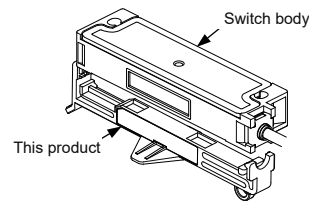
3 PRODUCT CONFIGURATION

Installing this product directly on the switch body enables a distinction from an abnormal door open state.

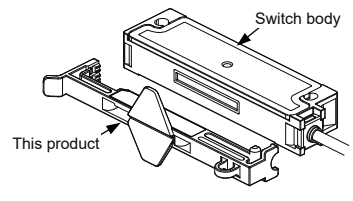
This product is available in two types: one is a collective maintenance type (**SG-PK-M1**) and the other is an individual maintenance type [**SG-PK-M2** (Note)].

Note: Multiple units of the individual maintenance type (**SG-PK-M2**) can be installed at the same time.

<When installing on the compact type (bottom)>



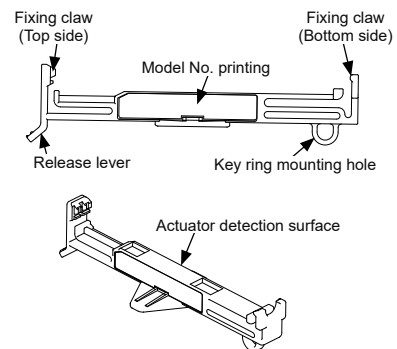
<When installing on the visible type>



- The collective maintenance type (**SG-PK-M1**) can be installed only on the switch body (standard).
- The individual maintenance type (**SG-PK-M2**) can be installed on either the switch body (standard) or switch body (sub).
- When using this product, it is not possible to use the redundant input monitoring (dual channel monitoring) with the **SG-P Series OSSD1** and **OSSD2** using the safety controllers, etc.
- When using the maintenance actuator, make sure that the normal actuator is not detected at the same time.
- Use the product with a system that distinguishes between the normal mode and maintenance mode.

4 NAME OF PARTS

For details of the switch body, refer to the **SG-P Series Quick Instruction Manual** and **SG-P Series Instruction Manual**.



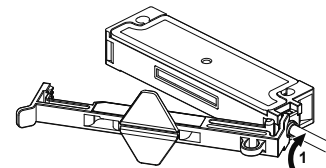
5 MOUNTING AND REMOVAL

The procedures to mount this product on the switch body or to remove it from the switch body are as follows.

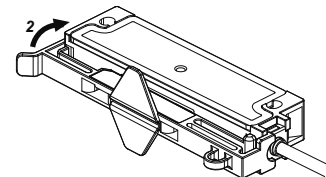
Visible type

- Mounting procedure

1. Fit the fixing claw (bottom side) from the front side of the switch body along the root of the cable.



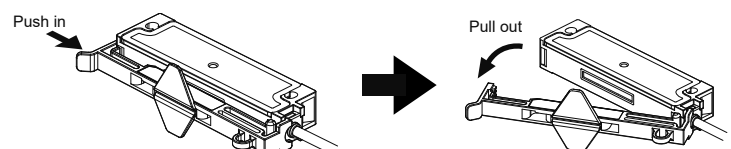
2. Push in the fixing claw (top side) to secure it on the switch body.



- Removal procedure

When removing this product from the switch body, push in the release lever located right below the fixing claw (top side) to lift the fixing claw.

While the fixing claw is lifted, pull out the product to remove it from the switch body.



Note: Do not hold and pull any part of the product other than the release lever when removing it from the switch body. Doing so will cause a failure or damage.

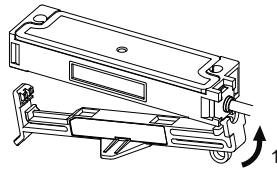
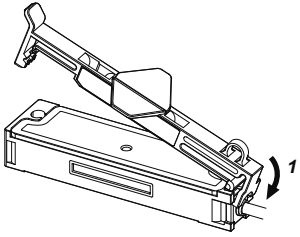
Compact type

• Mounting procedure

1. Fit the fixing claw (bottom side) from the top side or bottom side of the switch body along the root of the cable.

<When installing on the top side>

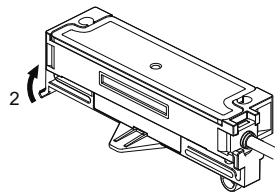
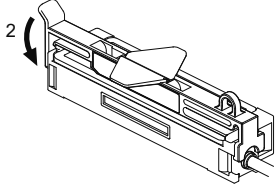
<When installing on the bottom side>



2. Push in the fixing claw (top side) to secure it on the switch body.

<When installing on the top side>

<When installing on the bottom side>



• Removal procedure

The procedure for removing the maintenance actuator from the compact type is the same as that for removing the maintenance actuator from the visible type.

6 OUTPUT OPERATION AND INDICATOR OPERATION

When this product is installed on the switch body, the switch body outputs and the indicators operate as follows. This enables a distinction from an abnormal door open state.

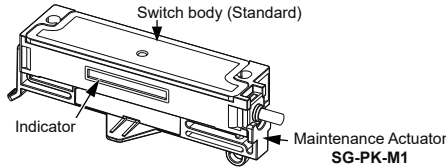
Their operations for the collective maintenance type (SG-PK-M1) are different from those for the individual maintenance type (SG-PK-M2).

The operations of the switch body outputs and the indicators for each maintenance actuator are as described below.

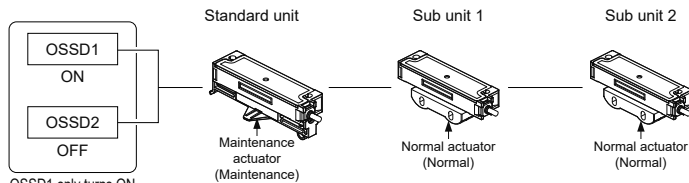
⚠ WARNING

- If the maintenance actuator is not used correctly, it will cause an accident. When using the maintenance actuator, understand its operations well and use it correctly.

- When using the collective maintenance type



<Example: When connecting 3 units>



OSSD1 only turns ON

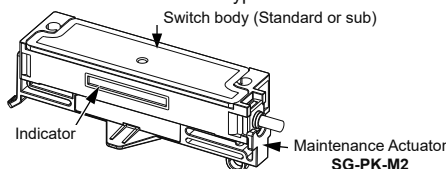
Note: When using the collective maintenance type, the individual maintenance type (SG-PK-M2) cannot be used.

Type	Standard			Sub unit 1			Sub unit 2			OSSD1	OSSD2
	Actuator	Detection state	Indicator	Actuator	Detection state	Indicator	Actuator	Detection state	Indicator		
Collective maintenance	Maintenance	Detected	Yellow	Normal	Detected	Yellow	Normal	Detected	Yellow	ON	OFF
		Detected	Yellow		Detected	Yellow		Not detected	Red	ON	OFF
		Detected	Yellow		Not detected	Red		Detected	Yellow	ON	OFF
		Not detected	Red		Detected	Blinking in green		Detected	Blinking in green	OFF	OFF
		Detected	Blinking in yellow / red		Detected	Blinking in yellow / red		Detected	Blinking in yellow / red	OFF	OFF
After 12 hours (Note 1)											

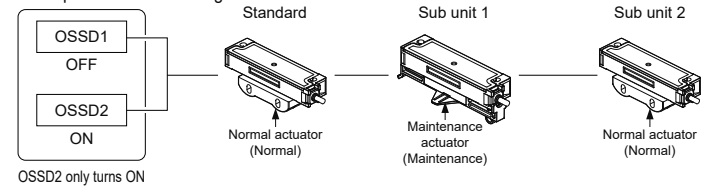
Notes: 1) The maintenance actuator is valid for the maximum of 12 hours consecutively. After 12 hours, the OSSD1 turns OFF and the switch body indicator blinks (in yellow / red). When using the maintenance actuator again, install it again.

2) The indicator on the switch body blinks in yellow / red to indicate two different modes. For details, refer to the SG-P Series Instruction Manual.

- When using the individual maintenance type



<Example: When connecting 3 units with the maintenance actuator installed on the sub unit 1>



OSSD2 only turns ON

Type	Standard			Sub unit 1			Sub unit 2			OSSD1	OSSD2
	Actuator	Detection state	Indicator	Actuator	Detection state	Indicator	Actuator	Detection state	Indicator		
Individual maintenance	Normal	Detected	Yellow	Maintenance	Detected	Yellow	Normal	Detected	Yellow	OFF	ON
		Not detected	Red		Detected	Blinking in yellow / red		Detected	Blinking in yellow / red	OFF	OFF
		Detected	Blinking in green		Not detected	Red		Detected	Blinking in green	OFF	OFF
		Detected	Blinking in yellow / red		Detected	Blinking in yellow / red		Detected	Blinking in yellow / red	OFF	OFF
		Detected	Blinking in yellow / red		Detected	Blinking in yellow / red		Detected	Blinking in yellow / red	OFF	OFF
After 12 hours (Note)											

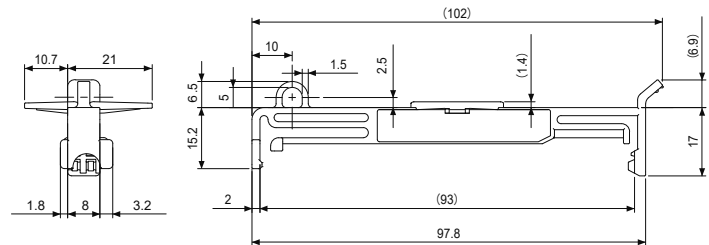
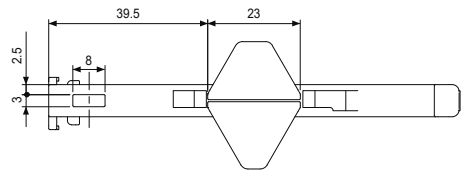
Note: The maintenance actuator is valid for the maximum of 12 hours consecutively. After 12 hours, the OSSD2 turns OFF and the switch body indicator blinks (in yellow / red). When using the maintenance actuator again, install it again.

7 SPECIFICATIONS

Type	Collective maintenance type	Individual maintenance type
Model No.	SG-PK-M1	SG-PK-M2
Ambient temperature	0 to +40°C (No condensation) (storage: -25 to +65°C)	
Ambient humidity	35 to 85% RH (storage: 35 to 85% RH)	
Vibration resistance	Durability: 10 to 55 Hz Double amplitude: 1 mm 2 hours each in X, Y, and Z directions	
Shock resistance	Durability: 300 m/s ² (approx. 30 g) 3 times each in X, Y, and Z directions	
Material	POM (polyacetal)	
Weight	7 g	

8 DIMENSIONS

Unit : mm



Panasonic Corporation

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<https://panasonic.net/id/pidsx/global>

Please visit our website for inquiries and about our sales network.

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