Non-Contact Safety Door Switch
SG-P SERIES

NEW  Compatible with Up to Control Category 4, PLe and SIL3

Non-Contact Safety Door Switch
SG-P SERIES

At-a-Glance Confirmation of Open / Close Conditions of All Equipment Doors

For frame-less doors
Compact type
SG-P1010-□ / SG-P2010-□

For framed doors
Visible type
SG-P1020-□ / SG-P2020-□

* Control category varies depending on external circuit configurations and wirings.
Large and Bright Indicators Show the **Open** / **Close** Conditions of All Equipment Doors.

When one of the safety switches connected in series enters a non-detection state, the indicators of all other safety switches flash in green to notify the operator.

The indicator of the safety switch on the **open door** lights in bright red.

The indicator of the safety switch on the **closed door** flashes to notify the unsafe condition.

The indicators of the safety switches on all other closed doors that are interlocked with the open door flash in green to notify the unsafe condition.

The indicator of the safety switch on the open door lights in bright red so that the operator can recognize at a glance which equipment door is open.
Two Types to Choose from

For doors with aluminum frames

**Visible type**

Indicator lights in red when the door is open.

For doors without aluminum frames

**Compact type**

Indicator lights in red when the door is open.

Bright indicator ensures high visibility.

Indicators are located on both sides to allow visual confirmation even from the back side of the equipment.
Flashing Function Notifies Unsafe Condition

When a door is intentionally kept open, the indicator of the safety switch on that door changes to **red** and the indicators of the safety switches on all other doors flash in **green**. The operator can recognize immediately the equipment status and which door is open.

**Before** Conventional system

When one of the doors was kept open, the indicators of all other interlocked safety switches turned off so there was no way of knowing which door was open without checking each door.

When the safety switch was installed on the inner side of the door, the indicator of the safety switch was not visible from the outside of the equipment area in some cases.

**Industry’s First After** SG-P series

*As of September 2020, in-company survey*

The indicator of the safety switch on the open door changes to red and the indicators on all other doors flash in green. The operator can recognize immediately the equipment status and which door is open.
**Actuator with Industry’s First* “Indicator Light Pass-through System”**

The visible type actuator allows the light from the switch body to pass through so that the indicator light is visible from the actuator side. This ensures high visibility of the safety switches installed on doors with aluminum frames.

* Industry’s first safety door switches with this function as of October 2020, in-company survey.

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**Master-Slave (Standard / Sub) System for Reduced Wiring Serial Connection of Up to 30 Units without Dedicated Controller**

The SG-P series standard units, which are used as master units, can output safety signals all at once (OSSD1 / OSSD2). The sub units used as slave units minimize the wiring for a cascade connection. There is no need to purchase a dedicated controller. The presently used safety controller / circuit can be connected directly. Up to 30 units can be connected, thus contributing to wire-saving.

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**No Cumbersome Manual Pairing Necessary before Installation**

* High-code models (SG-P20-□-□, SG-P20-□-□) only

During the initial setting, bring the switch body close to the actuator and turn on the power to let the safety switch detect the actuator for 3 seconds. This simple procedure completes the pairing. In a cascade connection, pairing can be achieved all at once by simply turning on the power. This reduces the man-hours required for starting up the equipment.

* Low-code models (SG-P10-□-□, SG-P10-□-□) do not require pairing.

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**Before** Magnetic switch or other conventional system

![Before Diagram](image)

**After** SG-P series

![After Diagram](image)

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**Before** Conventional system

Each switch unit must be paired with one actuator during installation, and they must be managed as a set.

**After** SG-P series

Any safety switch unit can be paired with a selected actuator for initial pairing.
**Helps Prevent Intentional Deactivation of Safety Function**

The ISO 14119:2013* international standard stipulates a design requirement that deactivations of safety functions shall be minimized.

Export of equipment sometimes requires to meet this standard. The SG-P series products are available with two different coding levels: High-code models and Low-code models. The High-code models are compatible with ISO 14119* coding level (high level coded actuators) and prevent intentional deactivation of their safety function.

* ISO 14119: Safety of machinery – Interlocking devices associated with guards – Principles for design and selection

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**Installation example**

The SG-P series offers visible type and compact type safety door switch models for installation on various types of doors. The visible type and compact type models can be used together and interlocked so that the most suitable models can be selected according to the types of equipment doors. Even if there are many equipment doors, up to 30 units can be connected in series and the standard unit used as a master unit can output safety signals from all doors at once.

- **Visible type**
- **Compact type**

**Lifting door for laser marker**

**Sliding door on electronic parts inspection machine**

**Maintenance doors on large equipment**
**Maintenance Actuators SG-PK-M Series (Sold separately)**

**Simple and Easy Maintenance!**

One-touch Installation and Easy Construction of Maintenance Mode

Mounting the maintenance actuator to the SG-P unit enables the control output function for the maintenance mode. The following two types of maintenance actuators are available:

- Overall maintenance type (SG-PK-M1)
- Individual maintenance type (SG-PK-M2)

### <Overall maintenance type (SG-PK-M1)>
All doors can be opened and closed. This product type can be used for equipment startups.

#### Installation of overall maintenance type actuator
- OSSD1: ON
- OSSD2: OFF

- Be sure to evaluate the control output correctly.
- Can be used only with the standard switch body.
- The indicators on the switch bodies in series connection change to the maintenance mode.
- The indicators on the switch bodies in series connection change in color.
- All doors with the switch bodies in series connection can be opened and closed. Take care not to allow unauthorized persons to open or close the doors.

### <Individual maintenance type (SG-PK-M2)>
Only specific doors can be opened and closed. This product type can enhance the safety of maintenance work.

#### Installation of individual maintenance type actuator
- OSSD1: OFF
- OSSD2: ON

- Be sure to evaluate the control output correctly.
- Can be used with the standard or sub switch body.
- Can be installed to multiple switch bodies for simultaneous use.
- Only the switch bodies installed with this product type can be individually changed to the maintenance mode.
- The indicators on the switch bodies in series connection change in color.

**Large and Bright Indicator for the Notification of Maintenance Mode Status to Workers**

When the SG-P unit is mounted with the maintenance actuator, the large indicator lights in yellow. The workers can readily recognize that the equipment is in maintenance.

- **In normal use**
  - Green
- **When installed with maintenance actuator**
  - Red
  - Yellow

* Compact type unit is shown above as an example.

### Overall maintenance mode output

<table>
<thead>
<tr>
<th>Sub</th>
<th>Sub</th>
<th>Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maintenance mode</td>
<td>Maintenance mode</td>
<td>Maintenance mode</td>
</tr>
</tbody>
</table>

### Individual maintenance mode output

<table>
<thead>
<tr>
<th>Sub</th>
<th>Sub</th>
<th>Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal mode</td>
<td>Normal mode</td>
<td>Normal mode</td>
</tr>
</tbody>
</table>

* Compact type unit is shown above as an example.
Introduction to Safety Devices

Safety control unit
SF-C21
- No programming knowledge is required. Operation is as simple as selecting a desired logic from the preset logics.
- OFF delay time can be set.
- Logic can be customized according to applications.

* Exclusively for PNP semiconductor inputs or contact inputs.
* Cannot be used together with the SF-C21 in the case SG-PK-M series maintenance actuators are used.

Safety door switch with solenoid interlock
SG-B1 series
- Ultra-slim safety door switch with solenoid interlock
- Equipped with 5 built-in contact points

Safety door switch
SG-A1 series
- World’s slimmest-class* safety door switch
- Equipped with three built-in contact points
- All models are a cable pull-through type.
- Actuator is selectable according to door shape and application.

* As of April 2017, in-company survey.

Ultra-slim safety light curtain
SF4C series
- Ultra-slim 13 mm 0.512 in light curtain with wide coverage
- Helps decrease safety distances and facility sizes
- Large, versatile app indicator
Example of System Configuration

Application-based customization is easy

Easy to create a reliable safety circuit
Use our “Configurator SF-C” software to build your own safety circuits of connected devices, control logic, output modes, etc. No programming skills required!

Circuits are configured in three easy steps!

Easy setting from a PC!
PRODUCT CONFIGURATION

Model No.

- SG-P 10 10 - M -P

- OSSD output (OSSD1, OSSD2) (Note)
- P: PNP output
- N: NPN output

Notes: Provided only on the SG-P□□□□-M standard unit.

Installation method
- 10: Compact type
- 20: Visible type

Product type

Select either the Compact type or Visible type depending on how the door opens or how it is installed. Mount the switch body of this device on a machine unit or on a guard and mount the actuator on the door of a movable member.

Compact type

Indicator
Switch body
Actuator

<Standard>
- SG-P1010-M-P
- SG-P1010-M-N
- SG-P2010-M-P
- SG-P2010-M-N

<Sub>
- SG-P1010-S
- SG-P2010-S

Visible type

Switch body
Indicator
Actuator

<Standard>
- SG-P1020-M-P
- SG-P1020-M-N
- SG-P2020-M-P
- SG-P2020-M-N

<Sub>
- SG-P1020-S
- SG-P2020-S

Notes: 1) Sub units cannot be used alone. When using a single unit, use a standard unit. When using multiple units in series connection, combine a standard unit with sub units.

2) The switch body must be connected to a power supply unit and a safety device such as a safety controller. Power supply unit and safety controller must be purchased separately.

ORDER GUIDE

<table>
<thead>
<tr>
<th>Coding level</th>
<th>Type (Note)</th>
<th>Model No.</th>
<th>Control output (OSSD1, OSSD2)</th>
<th>Cable length</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low code</td>
<td>Compact type Standard</td>
<td>SG-P1010-M-P</td>
<td>PNP open-collector transistor, 2 outputs</td>
<td>5 m 16.404 ft</td>
</tr>
<tr>
<td></td>
<td>Sub</td>
<td>SG-P1010-M-N</td>
<td>NPN open-collector transistor, 2 outputs</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>Visible type Standard</td>
<td>SG-P1020-M-P</td>
<td>PNP open-collector transistor, 2 outputs</td>
<td>5 m 16.404 ft</td>
</tr>
<tr>
<td></td>
<td>Sub</td>
<td>SG-P1020-M-N</td>
<td>NPN open-collector transistor, 2 outputs</td>
<td>—</td>
</tr>
<tr>
<td>High code</td>
<td>Compact type Standard</td>
<td>SG-P2010-M-P</td>
<td>PNP open-collector transistor, 2 outputs</td>
<td>5 m 16.404 ft</td>
</tr>
<tr>
<td></td>
<td>Sub</td>
<td>SG-P2010-M-N</td>
<td>NPN open-collector transistor, 2 outputs</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>Visible type Standard</td>
<td>SG-P2020-M-P</td>
<td>PNP open-collector transistor, 2 outputs</td>
<td>5 m 16.404 ft</td>
</tr>
<tr>
<td></td>
<td>Sub</td>
<td>SG-P2020-M-N</td>
<td>NPN open-collector transistor, 2 outputs</td>
<td>—</td>
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</tbody>
</table>

Note: Sub units cannot be used alone. When using a single unit, use a standard unit. When using multiple units in series connection, combine a standard unit with sub units.

OPTIONS

<table>
<thead>
<tr>
<th>Type</th>
<th>Model No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maintenance actuator</td>
<td></td>
</tr>
<tr>
<td>Overall maintenance type</td>
<td>SG-PK-M1</td>
</tr>
<tr>
<td>Individual maintenance type</td>
<td>SG-PK-M2</td>
</tr>
</tbody>
</table>
### SPECIFICATIONS

<table>
<thead>
<tr>
<th>Item</th>
<th>Type (Note 2)</th>
<th>Standard / PNP output</th>
<th>Standard / NPN output</th>
<th>Sub</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model No</td>
<td>SG-P□-M-P</td>
<td>SG-P□-M-N</td>
<td>SG-P□-S</td>
<td></td>
</tr>
</tbody>
</table>

**Applicable standards and certifications**

- **International standards**: ISO 13849-1 (Category 4, PLe), IEC 61508-1 to 7 (SIL3), IEC 62081 (SIL3), IEC 60947-5-3, ISO 14119
- **Japan**: JIS B 9705-1, JIS C 0508 1 to 7, JIS B 9961, JIS C 8201-5-2, JIS B 9710
- **Europe**: EN ISO 13849-1 (Category 4, PLe), EN ISO 14119, EN 60947-5-3, EN 300 330; EN IEC 63000, EN 301 489-1
- **North America**: CAN/CSA C22.2 No.14, UL508

**Applicable standards and certifications**

- **CE Marking** (Machinery Directive, RE Directive, RoHS Directive), TÜV SÜD certification, TÜV SÜD NRTL certification (U.S.A., Canada), the U.S.’s radio regulations (FCC), Canada’s radio regulations (ICES-003, RSS-310), Singapore’s radio regulations (IMDA)

**Operating distance**

- **Front / Side**: 5 mm 0.197 in, Sara (ON → OFF): 15 mm 0.591 in

**Power supply voltage**

- 24V DC ±10 % Ripple P-P 10 % or less

**Current consumption**

- 30 mA or less
- 20 mA or less

**Control output**

- (OSSD1, OSSD2) (Note 3)
- PNP open-collector transistor 2 outputs
- NPN open-collector transistor 2 outputs
- Maximum source current: 100 mA
- Maximum sink current: 100 mA
- Applied voltage: Same as the power supply voltage (PNP output: between control output and 0 V; NPN output: between control output and +V)
- Residual voltage: 2 V or less (source current and sink current: 100 mA) (excluding voltage drop due to cable)
- Leakage current: 0.2 mA or less (including power OFF state)
- Maximum load capacity: 0.47 μF
- Load wiring resistance: 3 Q or less

**Operation mode**

- (Output operation)
- • When the actuator is detected (safe state): ON
- • When the actuator is not detected (unsafe state or lockout state): OFF
- • When the switch body (sub) does not detect actuator (series connection): OFF

**Protection circuit**

- (Short-circuit protection)
- Incorporated

**Response time**

- • For single unit: ON→OFF 100 ms or less, OFF→ON 100 ms or less
- • For multiple units: Time for single unit + 5 ms × (number of connected units - 1)

**Check input and output**

- Dedicated communication line between the switch body (standard) and the switch body (sub) (Note 4)
- “*It is not for external input and output. (voltage range 0 V to 5 V DC)”

**Number of units connected in series**

- 30 units or less (standard 1 unit, sub 29 units)

**Pollution degree**

- 3

**Environmental resistance**

- Protection: IP65 (IEC)
- Ambient temperature: -10 to +55 °C +14 to +131 °F (No dew condensation or icing allowed), Storage: -25 to +65 °C -13 to +149 °F
- Ambient humidity: 30 to 95 % RH, Storage: 30 to 95 % RH
- Voltage withstandability: 1,000 V AC for one minute between all supply terminals connected together and enclosure
- Insulation resistance: 20 MΩ or more, with 500 V DC megger between all supply terminals connected together and enclosure
- Vibration resistance: 10 to 20 Hz, 1 mm double amplitude, 2 hours each in X, Y, and Z directions
- Shock resistance: 300 m/s² (approx. 30 G), 3 times each in X, Y, and Z direction

**Material**

- Switch body: PBT, PC, SUS (stainless steel), EPDM
- Actuator: PBT, PC (Only visible type)

**Cable**

- 6-core cable (5 m 16.404 ft long)
- 4-core cable (3 m 9.843 ft long)

**Weight**

- Compact type: Switch body (standard): 180 g approx., Switch body (sub): 110 g approx., Actuator: 10 g approx.
- Visible type: Switch body (standard): 180 g approx., Switch body (sub): 120 g approx., Actuator: 20 g approx.

**Gross weight**

- Compact type: SG-P□-10-M-P: 260 g approx., SG-P□-10-S: 190 g approx.
- Visible type: SG-P□-20-M-P: 270 g approx., SG-P□-20-S: 210 g approx.

**Notes:**

1) Where measurement conditions have not been specified precisely, the conditions used were ambient temperature +23°C +73°F.
2) Sub units cannot be used alone. When using a single unit, use a standard unit.
3) Provided only on the standard unit.
4) When using the device as a single unit, connect the check input with the check output.

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### SENSING CHARACTERISTICS (TYPICAL)

*Be sure to confirm proper operation in the actual installation environment.*

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**SG-P□-10-M-P, SG-P□-10-S**

**Sensing field**

- **Compact type**
  - Sensing field

**SG-P□-20-M-P, SG-P□-20-S**

**Sensing field**

- **Visible type**
**Using only one unit**

### <PNP output type / SG-P□-M-P>

<table>
<thead>
<tr>
<th>Standard</th>
<th>SG-P□-M-P</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(Brown) +V</td>
</tr>
<tr>
<td></td>
<td>(Black) OSSD1</td>
</tr>
<tr>
<td></td>
<td>(White) OSSD2</td>
</tr>
<tr>
<td></td>
<td>(Pink) Check input</td>
</tr>
<tr>
<td></td>
<td>(Gray) Check output</td>
</tr>
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<td></td>
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</table>

**Safetiy controller (Note 2)**

**Power supply unit (Note 2)**

### <PNP output type / SG-P□-M-N>

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</tr>
</tbody>
</table>

**Safetiy controller (Note 2)**

**Power supply unit (Note 2)**

**Notes:**
1) Connect the check input line (pink) with the check output line (gray).
2) The switch body must be connected to a power supply unit and a safety device such as a safety controller. Power supply unit and safety controller must be purchased separately.

### Maximum cable length

The cable connected between the switch body and power supply unit must not exceed 20 m, 65.617 ft.

**Using multiple units in series connection**

One standard unit (SG-P□-M-P / SG-P□-M-N) can be connected with up to 29 SG-P□-S sub units in series.

### <PNP output type / SG-P□-M-P>

<table>
<thead>
<tr>
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</tr>
</tbody>
</table>

**Sub unit SG-P□-S 1st unit**

**Sub unit SG-P□-S 29th unit**

**Notes:**
1) For connecting multiple units in series connection connect the check output line (gray) with the check input line (pink) of the SG-P□-S sub unit connected next. Connect the check output line (gray) of the SG-P□-S sub unit connected at the end with the check input line (pink) of the standard unit (SG-P□-M-P / SG-P□-M-N) placed at the beginning.
2) The switch body must be connected to a power supply unit and a safety device such as a safety controller. Power supply unit and safety controller must be purchased separately.

### Total / maximum cable length of check input / output cables

<table>
<thead>
<tr>
<th>Standard</th>
<th>SG-P□-M-P</th>
</tr>
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<tbody>
<tr>
<td></td>
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</tr>
</tbody>
</table>

**Maximum cable length:**
- 20 m, 65.617 ft or less

**Total cable length:**
- 100 m, 328.084 ft or less

### Total / maximum cable length of power cables and OSSD cables

<table>
<thead>
<tr>
<th>Standard</th>
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</tr>
</thead>
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<tr>
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</tr>
</tbody>
</table>

**Power supply unit**

**Safetiy controller**

**Maximum cable length:**
- 20 m, 65.617 ft or less

**Total cable length:**
- 100 m, 328.084 ft or less

The total length of the cables connected from the SG-P□-M-P standard unit to the last SG-P□-S sub unit (farthest from the standard unit) must not exceed 100 m, 328.084 ft. The cable connected from each switch body to the adjacent switch body must not exceed 20 m, 65.617 ft.

**• Sub unit SG-P□-S cannot be used alone.**
PRECAUTIONS FOR PROPER USE

- This catalog is a guide to select a suitable product. Be sure to read instruction manual attached to the product prior to its use.

The customer is responsible for ensuring the safety of the entire system and the compliance with the standards applicable in the country / region of use.

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 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.

This product has been developed / produced for industrial use only.

This is an extremely low power radio device and complies with the Japanese Radio Act. There is no need to obtain a radio station license to use the product in Japan.

Do not use this product near equipment that emits strong electromagnetic waves.

If the power supply used for this device is shared by other devices, the device may be affected by noise emitted from other devices. Do not share the power supply used for this device with other devices.

The switch body of this product must be connected to a power supply unit and a safety device such as a safety controller. Power supply unit and safety controller must be purchased separately.

The power supply unit used for this device must satisfy the following requirements.
- The power supply unit must be certified for use in your region.
- The power supply unit must have reinforced insulation or double insulation between the primary circuit and secondary circuit.
- The power supply unit must comply with Class 2 defined by UL508 or satisfy the output characteristics requirements of the limited voltage and current circuit.
- The power supply unit must have an output holding time of 20 ms or more.
- If surges occur, take countermeasures such as connecting a surge absorber to the source of the surges.

Mounting

- Do not install the switch body of this device on a movable door.
- Mount the switch body carefully so that it does not come in contact with the movable door.
- Mount the switch body in a location where it cannot be reached or it is hidden so that it cannot be easily disabled. Or, mount the switch body in such a way that it cannot be removed with ordinary tools.

Correct mounting orientation

Incorrect mounting orientation

Mutual Interference

When multiple devices are installed next to one another, mutual interference may occur and cause malfunctioning. When using them next to one another, provide a distance between one another as shown below.

Part description

Switch body

<Compact type> <Visible type>

<table>
<thead>
<tr>
<th>No.</th>
<th>Name</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Indicator</td>
<td>Lights yellow (Simultaneously light green and red) (Note)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>After the power supply is turned ON, during self-diagnosis</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Alternately blinking red to yellow (lights red, blinking green) (Note)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>When an unpaired actuator is detected (only when using high-code models SG-P20□-□)</td>
</tr>
<tr>
<td>2</td>
<td>Actuator detection surface</td>
<td>When the actuator is brought near to the surface, the switch body detects the actuator.</td>
</tr>
<tr>
<td>3</td>
<td>Mounting hole</td>
<td>Use M4 screws (length: 20 mm 0.787 in or more), flat washers and spring washers (not supplied with the product) to install the switch body to the equipment body or guard. The screws should be tightened with a torque of 1.2 N·m.</td>
</tr>
</tbody>
</table>

Actuator

<Compact type> <Visible type>

<table>
<thead>
<tr>
<th>No.</th>
<th>Name</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Switch body detection surface</td>
<td>When the actuator is brought near to the switch body, the switch body detects the actuator.</td>
</tr>
<tr>
<td>2</td>
<td>Mounting hole</td>
<td>Use M4 screws (length: 20 mm 0.787 in or more), flat washers and spring washers (not supplied with the product) to install the actuator to the door. The screws should be tightened with a torque of 1.2 N·m.</td>
</tr>
<tr>
<td>3</td>
<td>Transmission part</td>
<td>The light of the indicator is transmitted through the part.</td>
</tr>
</tbody>
</table>

Note: When you look at a lit LED on a visible type model through the actuator, the LED may sometimes appear green in some part and red in other part.

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Refer to the instruction manual for details. The instruction manual can be downloaded from our website.
About maintenance actuators (optional)

Using a maintenance actuator incorrectly can lead to an accident. Be sure to understand the operation of the system when using a maintenance actuator to use maintenance actuators correctly.

By directly mounting the maintenance actuator to the switch body while the door is open, it is possible to distinguish accidental opening of the door. Two types of maintenance actuators are available: overall maintenance type (SG-PK-M1) and individual maintenance type (SG-PK-M2 (Note)).

Note: In the case of the individual maintenance type SG-PK-M2, multiple units can be installed and used simultaneously.

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**Installation**

**Installation on compact type unit**

< Installation on top surface >< Installation on bottom surface >

**Installation on visible type unit**

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**Output operation and indicator operation**

Operation differs between the overall maintenance type (SG-PK-M1) and individual maintenance type (SG-PK-M2). The output operation and indicator operation of the switch body when used with each maintenance actuator is as follows

**When using overall maintenance type actuator (SG-PK-M1)**

The SG-PK-M1 can only be used on standard switch bodies.

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**When using individual maintenance type actuator (SG-PK-M2)**

The SG-PK-M2 can be used for standard and sub switch bodies.

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Refer to the instruction manual for details. The instruction manual can be downloaded from our website.
The CAD data can be downloaded from our website.

### DIMENSIONS (Unit: mm in)

**SG-P□10-M □ SG-P□10-S**  
**Compact type**

**Switch body**

**Actuator (accessory)**

**SG-P□20-M □ SG-P□20-S**  
**Visible type**

**Switch body**

**Actuator (accessory)**

**SG-PK-M1 □ SG-PK-M2**  
**Maintenance actuator (optional)**

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