**MAINTENANCE**

Read the operation manual carefully before use to ensure proper operation of this product. Failure to read this operation manual may cause improper operation and may result in serious injury or death of a person. The meanings of the symbols are as follows:

- **WARNING**: Danger of electric shock, death, cutting, burn, or other injury may result from improper use.
- **CAUTION**: Danger of injury, death, cutting, burn, etc.
- **NOTE**: Special attention is required to the section of this symbol.

**NOTE**

1. This product is a non-contact switch intended for header mount use on industrial doors. It is not designed for use in a wet environment, and is not suitable for use in an environment with high humidity or condensation.
2. When setting the sensor’s detection area, make sure that there is no traffic around the installation site. Failure to do so may result in false detection.
3. Before turning on the power, check the wiring to prevent damage or malfunction of the equipment connected to the product. A damaged wire may cause a fire or electrical shock.
4. Only use the product as specified in the operation manual provided.
5. Be sure to install and adjust the sensor in accordance with the local laws and standards of the country in which the product is installed.
6. Before leaving the installation site, make sure that the product is operating properly and that the equipment is properly connected to the power source.
7. The product settings can only be changed by an authorized service engineer. When changing the settings, be sure to follow the manufacturer’s instructions to ensure proper operation.

**DANGER OF ELECTRIC SHOCK, DEATH, CUTTING, BURN, OR OTHER INJURY**

- Do not wash, disassemble, rebuild, or repair the sensor; otherwise it may cause electric shock or breakdown of the equipment.
- Do not handle the sensor with wet hands.
- Do not use the sensor without the cover. When using the sensor, check the sensor’s operation regularly and replace it if necessary.

**SPECIFICATIONS**

- **Model**: OA-4500S(E)
- **Application**: When 3rd, 4th or 5th row detects, N.C./N.O. selectable.
- **Color**: Black
- **Mounting height**: 2.5mm (2") to 4,500 (14")
- **Detection area**: 1st to 3rd row, 4th to 6th row
- **Detection method**: Active infrared reflection method (Multi-refection detection)
- **Output**: 50V 0.3A MAX (Resistance load)
- **Output current**: 0.03A
- **Response time**: 0.2s
- **Response time range**: 100ms to 10s
- **Operating temperature**: -20°C to 50°C
- **Operating humidity**: 90%
- **Power consumption**: 1.2A (max. AC)
- **Power consumption**: -2A (max. DC)
- **Power supply**: 12V to 24VAC/DC 10% (50/60Hz)
- **Power consumption**: 1.2A (max. AC)
- **Weight**: 300g (11.3oz)
- **Accessories**: 3 cables 4m (13')
- **Mounting screws**: 2
- **Mounting manual**: 1
- **Operation manual**: 1

**ADJUSTMENTS**

**Area depth angle adjustment**

Make sure that the detection area does not overlap with the door or other objects. Failure to do so may result in false detection or malfunction of the system.

**1.1 Independent adjustments**

1st to 3rd rows:

Use the area adjustment tool [A] as shown below to change the area depth angle for the 1st to 3rd rows.

- **Shallow**
- **Deep**

**4th and 6th rows**:

Use the area adjustment tool [B] as shown below to change the area depth angle for the 4th and 6th rows.

- **Shallow**
- **Deep**

**1.2 Simultaneous adjustments**

Use the area adjustment tool [C] as shown below to change the area depth angle for all rows.

- **Shallow**
- **Deep**
### 2. Area width adjustment

<table>
<thead>
<tr>
<th>With adjustment screws (left)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st to 3rd rows</td>
</tr>
</tbody>
</table>

### 3. Dipswitch settings

- **1.2 Sensitivity**
- **1.3 Presence detection timer**
- **1.4 Activation output**
- **1.5 Frequency**
- **1.6 Safety output**
- **1.7 Row adjustment**
- **1.8 Simultaneous output**
- **1.9 Door cancel function**
- **1.10 On delay**
- **1.11 Automatic infinite presence detection**

### 3-1. Setting the sensitivity

Recommended sensitivity setting in accordance with the following mounting height:

<table>
<thead>
<tr>
<th>Low</th>
<th>Medium</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>25mm</td>
<td>25mm</td>
<td>25mm</td>
</tr>
<tr>
<td>(2.5°)</td>
<td>(2.5°)</td>
<td>(2.5°)</td>
</tr>
</tbody>
</table>

**NOTE**
Adjust the sensitivity to suit each installation site.

### 3-2. Setting the presence detection timer

Presence detection timer can be selected by dipswitches 3 and 4.

<table>
<thead>
<tr>
<th>3</th>
<th>4</th>
<th><strong>Setting 1</strong></th>
<th><strong>Setting 2</strong></th>
<th><strong>Setting 3</strong></th>
<th><strong>Setting 4</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>10 sec</td>
<td>20 sec</td>
<td>30 sec</td>
<td>60 sec</td>
</tr>
</tbody>
</table>

**NOTE**
To enable the presence detection, do not enter the detection area for 10 seconds after setting the timer.

### 3-3. Setting the frequency

When using more than one sensor close to each other, set a different frequency for each sensor by dipswitches 5 and 6.

### 3-4. Setting the row adjustment

Set the rows with dipswitches 7 and 8.

**NOTE**
When “2” is selected, the activation output is disabled.

### 3-5. Setting the door cancel function

If the sensor does not detect for 10 sec, the 1st row will be disabled when door cancel function is “ON”.

**TROUBLESHOOTING**

1. **Door open when a person enters the detection area.**
2. **When opening the door, the sensor output is not activated.**
3. **Sensor is not activated even when a person enters the detection area.**
4. **Sensor output is not activated when a person leaves the detection area.**

### 3-6. Setting the On delay 2sec

To avoid unnecessary operations due to passing object/person, set dipswitch 9 “ON”. The sensor only activates when a person or object stays in the detection area for more than 2 seconds.

**WARNING**
Risk of getting caught.

### 3-7. Setting the automatic infinite presence detection

If people or objects enter more than two spots area, this function automatically resets the presence detection timer to infinity to increase safety and avoid unwanted door opening due to sudden change in door condition.

**NOTE**
When dipswitch 11 is set to “ON” the automatic infinite presence detection has priority over this function.

### 3-8. Setting the outputs

The activation and safety outputs can be selected separately (N.C. or N.O. by dipswitch 13 and 14).

<table>
<thead>
<tr>
<th><strong>Activation output</strong></th>
<th><strong>Safety output</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>N.C.</td>
<td>N.O.</td>
</tr>
</tbody>
</table>

The output timing from “Activation output” and “Safety output” can be changed by dipswitch 15.

With dipswitch 15 set to “ON” the output timing will be the same, with dipswitch 15 set to “OFF” the output timing will be different. See CHECKING.