**MANUFACTURER’S STATEMENT**

Read this operation manual carefully before use. Use to ensure proper operation of the product. Failing 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**
- Disregard of warning may cause the improper operation causing death or serious injury of a person.

**CAUTION**
- Disregard of caution may cause the improper operation causing injury of a person or damage to objects.

**NOTE**
- Special attention is required to the section of this symbol.

**NOTE**
1. This product is a non-contact switch intended for door or window mount to use on industrial doors.
2. Do not use for any other applications.
3. When setting the sensor’s detection area, make sure that there is no traffic around the installation site.
4. Before turning the power ON, check the wiring to prevent damage or malfunction of equipment connected to the product.
5. Only use the product as specified in the operation manual provided.
6. 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.
7. Before leaving the installation site, make sure that the product is operating properly and instruct the building superintendent or operator of the door and the product.

**SPECIFICATIONS**

- **Model:** OA-4500S(E)
- **Activation output:** When 3rd, 4th or 5th row detected, N.C./N.O. selectable
- **Color:** Black
- **Mounting height:** 2.5m(8.2’’) to 4.5m(14.8’’)
- **Detection area:** See DETECTION AREA
- **Detection method:** Active infrared reflection method (All presence detection)
- **Depth adjustment:** 1st to 3rd rows: -180 to +180
- **Output hold time:** Approx. 0.2sec
- **Response time:** 0.2sec
- **Operation temperature:** -20°C to +55°C(4°F to 131°F)
- **Operating humidity:** < 80%
- **Power consumption:** 2.2VA(≤ 4VA at AC)
- **IP rating:** IP55
- **Operation indicator:** Green / Standby
- **Weight:** 300g(11.3oz)
- **Red / 1st row detection:** Cables: 4m(13’’)
- **Greens / 2nd to 5th row detects:** 2 Mouning screws
- **1st Mode:** 1 Mounting hole
- **2nd Mode:** 1 Operation manual
- **3rd Mode:** 1 Area adjustment tool

**OUTER DIMENSIONS AND PART NAMES**

**DETECTION AREA**

- **Emitting ends:** 
- **Detection Area:** 
- **Values of the chart are based on the following depth angle adjustment settings, 4th and 5th rows:**

**INSTALLATION**

1. Attach the mounting template to the desired mounting position.
2. Drill two mounting holes ø5.4mm (Ø1/4’’) on the header.
3. Pass the cable through the header, drill a hole ø6mm (Ø5/16’’) in the side of the header.
4. Wire the cables to the door controller as shown below.

**WARNING**
- Do not wash, disassemble, refurbish or repair the sensor, otherwise it may cause electric shock or breakdown of the equipment.

**NOTE**
- The following conditions are suitable for sensor installation:
  1. Dry, well-ventilated area
  2. No strong reflective objects in the area.
  3. The detection area may be smaller depending on the ambient light, size / height of the object, or the influence of the object.

**ADJUSTMENTS**

**Area angle depth adjustment**

1. **1-1 Individual adjustment**
   - Select the depth angle adjustment screw number to be adjusted.
   - Use the area adjustment tool [A] as shown below to change the area depth angle for the selected rows.

2. **1-2 Simultaneous adjustments**
   - Use the area adjustment tool [B] as shown below to change the area depth angle for all rows.
ADJUSTMENTS

2 Area width adjustment

With adjustment screws (left)

With adjustment screws (right)

1st to 3rd rows

4th and 5th rows

Front view

[millimeters/inches]

3 Dipswitch settings

1.2 Sensitivity

1.3 Presence detection timer

1.4 Presence area

1.5 Activation output

1.6 Safety output

1.7 Row adjustment

1.8 Door cancel function

1.9 Simultaneous output

1.10 On delay

1.11 Automatic infinite presence detection

NOTE: When adjusting the width adjustment screws, make sure to turn them until they click otherwise proper operation may not be obtained.

NOTE: The sensitivity cannot be eliminated separately, neither can the presence area.

3-1 Setting the sensitivity

Recommended sensitivity setting in accordance with the following mounting height:

Low: 2.5mm(0.1") to 3.5mm(0.14")

Mid: 3.0mm(0.12") to 4.0mm(0.16")

High: 3.5mm(0.14") to 4.5mm(0.18")

Super-high: 4.0mm(0.16") to 5.0mm(0.20")

3-2 Setting the presence detection timer

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

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.

3-5 Setting the door cancel function

When dipswitch 9 is "ON" the sensor is less influenced by the door movement, i.e. caused by wind.

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

(1st row will be enabled again when there is detection at other rows.)

WARNING: Risk of getting caught.

3-6 Setting the On delay 2sec.

To avoid unnecessary operations due to passing objects/persons, set dipswitch 10 "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 2 spots area, this function automatically sets the presence detection timer to infinity to increase safety and avoid unwanted door opening due to sudden change in Non-door.

3-8 Setting the presence area

With dipswitch 12 "1st & 2nd", presence detection timer for 1st and 2nd rows belong to dipswitch 3 and 4.

Presence detection timer for 3rd to 5th row automatically becomes 2 sec.

With dipswitch 12 "1st to 5th", presence detection timer will be same as all detection area, not by combining dipswitch 3 and 4.

NOTE: When dipswitch 11 is set to "ON" the automatic infinite presence detection has priority over this function.

3-9 Setting the outputs

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

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 different, see CHECKING.


CHECKING

Check the operating according to the chart below:

Status

Power OFF

Power ON

Entry into 1st row

Entry into 2nd row

Entry into 3rd row

Entry into 4th row

Entry into 5th row

Outside of detection area

Outside of detection area

Outside of detection area

Outside of detection area

Outside of detection area

NOTE: When turning the power on, always walk back to the detection area to ensure the proper operation.

Alarm display Refer to the TROUBLESHOOTING below when the alarm occurs.

INFORM BUILDING OWNER / OPERATOR OF THE FOLLOWING ITEMS

WARNING:

1. Keep the detection window clean. If dirty, wipe the window with a damp cloth (Do not use any cleaner / solvent).

2. Do not clean the sensor with water.

3. Do not disassemble, rework or repair the sensor yourself; otherwise electric shock may occur.

4. When the operation indicator is表示green (green), contact your installer or service engineer.

3. Always contact your installer or service engineer when changing the settings.

5. Do not paint the detection window.

NOTE:

1. During initial operation, always walk back to the detection area to ensure the proper operation.

2. Do not place any objects that move or are bright in the detection area.

3. Do not touch any objects that move or are bright in the activation area (e.g. people, illumination, etc.)

TROUBLESHOOTING

Door Operation

Operation indicator

Possible causes

Possible countermeasures

Door does not open when a person enters the detection area.

None

Wrong power supply voltage.

Set the rated voltage.

Wrong wiring or connection failure.

Check the wire and connector.

Unusual.

Check ADJUSTMENTS 3-1.

Sensitivity is too low.

Set the sensitivity higher.

Unusual.

Check ADJUSTMENTS 3-1.

Door opens when no one is in the detection area (Shoaling).

Unusual.

Check ADJUSTMENTS 3-3.

Operates properly

Proper

Power timer is "OFF" and suddenly changes in the detection area.

Check ADJUSTMENTS 3-2 & 3-7.

If the problem still persists, hard-reset the sensor. (Turn off the power and then turn on again.)

Check the product and connector.

Check ADJUSTMENTS 3-7.

Proper

Wrong wiring or connection failure.

Check ADJUSTMENTS 3-5.

The automatic infinite presence detection is "ON" and the objects or people enter more than two spots area.

Check ADJUSTMENTS 3-7.

Proper

Wrong wiring or connection failure.

Check ADJUSTMENTS 3-5.

Directly activates the sensor.

Check the sensor and connector.

Check ADJUSTMENTS 3-5.

If the problem still persists, hard-reset the sensor. (Turn off the power and then turn on again.)

Check the product and connector.