

## OA-FLEX LITE



5933110 NOV 2022

## Manufacturer's statement

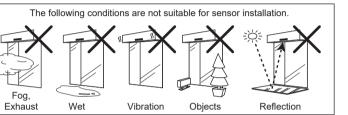
Read this operation manual carefully before use to ensure proper operation of this product.

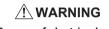
Failure to read this operation manual may cause improper operation and may result in serious injury or death of a person. The meanings of the symbols are as follows.

\*\* WARNING Failure to follow the instructions that accompany this indication and improper handling may result in serious injury or death. Failure to follow the instructions that accompany this indication and improper handling **!** CAUTION may result in injury and/or damage to property. NOTE Pay special attention to sections with this symbol.

## NOTE

- 1. This product is a non-contact switch intended for header mount or wall mount for use on an automatic sliding door. Do not use for any other applications.
- 2. When setting the sensor's detection area, make sure that there is no traffic around the installation site.
- 3. Before turning the power ON, check the wiring to prevent damage or malfunction of equipment connected to the product.
- 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 instruct the building owner/operator on proper operation of the door and the product.
- 7. The product settings can only be changed by an installer or service engineer When changed, the changed settings and the date shall be registered in the maintenance logbook accompanying the door.





### Danger of electric shock

Do not wash, disassemble, rebuild or repair the sensor, otherwise it may cause electric shock or breakdown of the equipment.

#### Charts show the values in the following area angle adjustment settings. Depth: 2° Width : 0° Mounting surface : Emitting spots G. : Emitting spots 1st row (can be eliminated) Motion/Presence 2nd row detection : Detection area 3rd row 4th row Motion detection 5th row **Emitting area** [m(feet,inch) 2.00 (6'7") 2.30 (7'7") 2.50 (8'2") 3.00 (9'10") NOTE В 0.26 (10") 0.30 (1')0.33 (1'1") 0.39 (1'4") The actual detection area may become smaller С 0.53 (1'9") 0.61 (2')0.66 (2'2")0.79 (2'7")depending on the ambient light, the color/material of the object or the floor as well as the entry speed of the D 0.80 (2'8") 0.92 (3') 1.00 (3'3") 1.20 (3'11") obiect. Ε 1.14 (3'9") 1.32 (4'4") 1.43 (4'8") 1.72 (5'8") The sensor may not be activated when the entering 1.53 (5') 1.76 (5'9") 1.91 (6'3") 2.29 (7'6") speed of the object or a person is slower than 50 mm/s or faster than 1500 mm/s. G 0.13 (0'5") 0.15 (0'6") 0.16 (0'6") 0.19 (0'8")1.20 (3'11") Н 0.96 (3'2") 1.10 (3'7")1.44 (4'9")1.55 (5'1") 1.78 (5'10") 1.93 (6'4") 2.32 2.13 (7') 2.45 (8') 2.66 3.20

## **Specifications**

| Model                 | : OA-FLEX LITE   |
|-----------------------|--|
| Cover color           | : Silver/Black   |
| Mounting height       | : 2.0 to 3.0 m (6'7" to 9'10")   |
| Detection area        | : See Detection area   |
| Detection method      | : Active infrared reflection   |
| Area angle adjustment | : Depth : -6° to +10° Width : ±7° (2 clicks with 3.5°every click-Left/Right) |
| Power supply (*1)     | : 12 to 24 VAC ±10 % (50/60 Hz)<br>12 to 30 VDC ±10 %                        |
| Power consumption     | : < 2.0 W (< 5 VA at AC)   |
| Operation indicator   | : See Operation indicator table  |
| Output hold time      | : Approx. 500 ms   |
| Response time         | : < 300 ms   |
| Operating temperature | : -20 to +55°C (-4 to 131°F)   |
| Operating humidity    | : < 80 %(non-condensing)   |
| Noise level           | : < 70 dBA   |
| Output                | : Form C relay 50 V 0.3 A Max. (Resistance load)                             |
| IP rate               | : IP54   |
| Weight                | : 220 g (7.8 oz)   |
| Accessories           | : 1 Quick Guide 2 Mounting screws  |

## Operation indicator table

| Status                  | Operation indicator color | 1000 ms 1000 ms |
|-------------------------|---------------------------|-----------------|
| Stand-by                | Green                     |                 |
| 1st row detection       | Red blinking              |                 |
| 2nd row detection       | Red                       |                 |
| 3rd - 5th row detection | Orange                    |                 |
| Signal saturation       | Slow Green blinking       |                 |
| Sensitivity too low     | Fast Green blinking       |                 |



The specifications herein are subject to change without prior notice due to improvements.

\*1: When using this sensor, the sensor has to be connected to a door system which has the SELV circuit.

[mm (inch)]

\*2 : Overcurrent protection with less than 2A

1 Mounting template 1 Area adjustment tool

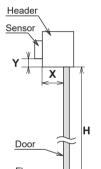
1 Cable 3 m (9'10")(\*2)

# Installation

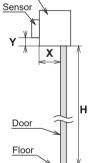
### 1. Mounting

**Detection area** 

- a. Place the mounting template at the desired mounting position.
- (When setting the detection area close to the door, mount the sensor according to the chart below.)
- b. Drill two mounting holes of ø3.4 mm (ø1/8").
- c. To pass the cable through the header, drill a wiring hole of ø8 mm (ø5/16").
- d. Remove the mounting template.
- e. Remove the housing cover. Fix the sensor to the mounting surface with the two mounting screws.



- H: Height from the floor to the bottom of the header
- (The mounting height is "H + Y". Y: Distance between the bottom of the header and the sensor
- X: Distance between the door and the mounting surface



#### Maximum mounting distance (Y) [m (feet,inch)] 2.00 (6'7") 2.30 (7'7") 2.50 (8'2") 3.00 (9'10") 0.14 (6") 0.14 (6") 0.14 (6") 0.05 (2") 0.13 (5") 0.13 (5") 0.13 (5") 0 0.10 (4") 0.11 (4") 0.11 (4") 0.11 (4") 0 0.15 (6") 0.10 (4") 0.10 (4") 0.10 (4") 0 0.20 (8") 0.09 (4") 0.09 (4") 0.09 (4") 0 0.25 (10") 0.07 (3" 0.07 (3" 0.07 (3") 0 0.30 (12") 0.06 (2") 0.06 (2") 0.06 (2")

NOTE

Make sure not to mount the sensor lower than the bottom of header.

#### **!** CAUTION Risk of getting caught

Make sure to affix the mounting template as described in the above chart, otherwise it can be dangerous since there may be no detection area around the threshold. Install the sensor as low as possible on the header

## 2. Wiring

Wire the cable to the door controller.

|        | Grey            | Power |
|--------|-----------------|-------|
|        | Grey            | Power |
| Sensor | White           | COM.  |
|        | Yellow<br>Green | N.O.  |
|        |                 | N.C.  |

## NARNING Danger of electric shock

Before starting the procedure, make sure that the power is turned OFF.

When passing the cable through the hole, do not tear the shield otherwise it may cause electric shock or breakdown of the sensor.

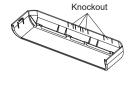
## 3. Turn ON the power

- a. Plug the connector.
- b. Supply power to the sensor. Adjust the detection area and set the dipswitches. (See Adjustments 3. Dipswitch settings)

Make sure to connect the cable correctly to the door controller before turning the power ON. When turning the power ON or after adjusting the settings, do not enter the detection area for more than 10 s in order to enable the presence detection. Do not touch the dipswitches before turning the power ON, otherwise an error occurs.

## 4. Mounting the housing cover

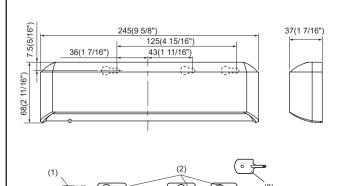
Place the housing cover. If wiring is to be exposed, break the knockout.



## ! WARNING Danger of electric shock

Do not use the sensor without the cover. When using the cable knockout. install the sensor indoors or use the rain cover (Separately available) otherwise electric shock or breakdown of the sensor may occur.

## **Dimensions and part names**

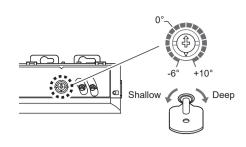


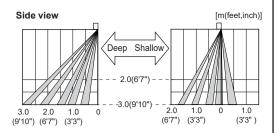
- (1) Connector
- (2) Mounting holes (3) Operation indicator
- (4) Dipswitches
- (5) Area angle adjustment screws (6) Area width adjustment screws
- (7) Detection window
- (8) Area adjustment tool

## **Adjustments**

### 1. Area angle adjustment

## a. Area depth angle adjustment



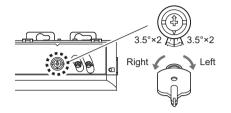


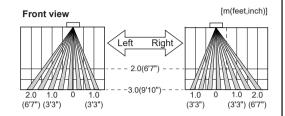


- Make sure that the detection area does not overlap with the door/header, and there is no highly reflecting object near the detection area otherwise ghosting/signal saturation may occur.
- 2. When adjusting the depth angle < 0°, make sure the sensor does not detect the door.

## b. Area width angle adjustment

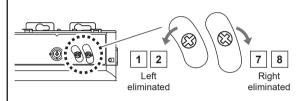
The angle of the detection area can be moved 7° left or right in 2 steps.

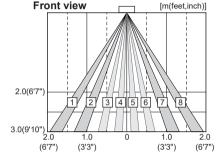




### 2. Area width adjustment

Adjust the detection area width by the adjustment screws.







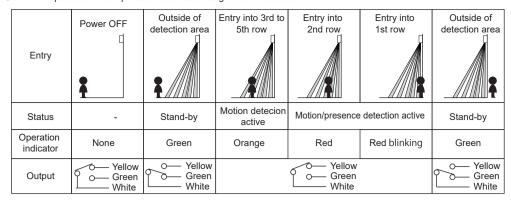
When setting the detection area width make sure to turn the adjustment screws until it clicks. 12 and 8 cannot be eliminated independently.

#### 3. Dipswitch settings

| 3. Dipswitch settings                 |  |  |  |  |  |
|---------------------------------------|--|--|--|--|--|
| Function                              | <b>Setting</b> (☐Factory setting)      | Comment  |  |  |  |
| Sensitivity                           |  | Set the sensitivity according to the mounting height and site conditions. The values below are indicative only.  1 2 Low or Middle : 2.0 m to 2.5 m High : 2.3 m to 2.7 m S-High : 2.5 m to 3.0 m  |  |  |  |
| Presence<br>timer                     |  | When setting the presence timer follow the procedure.  1.Select the presence time. 2.Switch the power ON and OFF to prevent the door remains open for the duration of the choosen presence detection time. 3.To enable the presence detection, do not enter the detection area for 10 s. |  |  |  |
| Frequency                             |  | etting 4 When using more than one sensor close to each other, set the frequency different for each sensor.   |  |  |  |
| Snow mode                             |  | h to "ON" when the sensor is used in a region<br>a lot of insects.   |  |  |  |
| Immunity                              |  | h to "ON" when the sensor operates by itself<br>/hen this switch is set to "ON", the actual detection<br>sur smaller.  |  |  |  |
| Row<br>adjustment                     | 5 rows 4 rows 3 rows 91011 91011 91011 | 2 rows  1 row 91011 91011 Set the depth rows with dipswitches 9, 10, 11. All other possible dipswitch settings will generate 5 rows active.  |  |  |  |
| Presence detection active in all rows | OFF ON When this sw                    | itch is set to "ON", presence detection is active in all rows.   |  |  |  |

## Checking

Check the operation in the operation mode according to the chart below.



NOTE

The door may open once after the power is switched ON.

## Inform building owner/operator of the following items

## **!** WARNING

- 1. Always keep the detection window clean. If dirty, wipe the window with a damp cloth.
- Do not use any cleaner/solvent.
- Do not wash the sensor with water.
- Do not disassemble, rebuild or repair the sensor yourself, otherwise an electric shock may occur.
- 4. When the operation indicator blinks Green, contact your installer or service engineer.
- 5. Always contact your installer or service engineer when changing the settings.
- 6. Do not paint the detection window.

NOTE

- 1. When turning the power ON, always walk-test the detection area to ensure the proper operation.
- 2. Do not place any objects that move or emit light in the detection area. (e.g. plant, illumination, etc.)

| Troubleshooting                                  |                           |  |   |  |  |  |  |
|--|---------------------------|--|---|--|--|--|--|
| Door operation                                   | Operation indicator       | Possible cause   | Possible countermeasures  |  |  |  |  |
|  | None                      | Wrong power supply voltage.                              | Set to the stated voltage.  |  |  |  |  |
|  |                           | Wrong wiring or connection failure.                      | Check the wires and connector.  |  |  |  |  |
| Door does not                                    | Unstable                  | Wrong detection area positioning.                        | Check Adjustments 1, 2, 3.  |  |  |  |  |
| open when a person enters                        |                           | Sensitivity is too low.                                  | Set the sensitivity higher.   |  |  |  |  |
| the detection                                    |                           | Short presence timer.                                    | Set the presence timer longer.  |  |  |  |  |
| area.  |                           | Dirty detection window.                                  | Wipe the detection window with a damp cloth. Do not use any cleaner or solvent.   |  |  |  |  |
|  | Proper                    | Wrong wiring or settings.                                | Check the wires and/or dipswitches.   |  |  |  |  |
|  | Unstable                  | Objects that move or emit light in the detection area.   | Remove the objects.   |  |  |  |  |
|  |                           | The detection area overlaps with that of another sensor. | Check Adjustments 3 dipswitch 5, 6.   |  |  |  |  |
| Door opens when no one is in the detection area. |                           | Waterdrops on the detection window.                      | Use the rain-cover. (Separately available) Or wipe the detection window with a damp cloth. Do not use any cleaner or solvent. Or install in a place keeping the waterdrops off. |  |  |  |  |
| (Ghosting)                                       |                           | The detection area overlaps with the door/header.        | Adjust the detection area to "Deep"(outside).   |  |  |  |  |
|  |                           | Sensitivity is too high.                                 | Set the sensitivity lower.  |  |  |  |  |
|  | Proper                    | Wrong setting of dipswitches.                            | Check Adjustments 3 dipswitch 7, 8, 12.   |  |  |  |  |
|  | Proper                    | Sudden change in the detection area.                     | Check <b>Adjustments 3</b> dipswitch 1 to 4. If the problem still persists, hard-reset the sensor. (Turn the power OFF and ON again)  |  |  |  |  |
| Door remains                                     |                           | Wrong wiring or connection failure.                      | Check the wires and connector.  |  |  |  |  |
| open   | Fast<br>Green<br>blinking | Sensitivity is too low.                                  | Set the sensitivity higher.   |  |  |  |  |
|  |                           | Dirty detection window.                                  | Wipe the detection window with a damp cloth.  Do not use any cleaner or solvent.  |  |  |  |  |
|  |                           | Sensitivity too low or sensor failure.                   | Contact your installer or service engineer.   |  |  |  |  |
| Proper operation                                 | Slow<br>Green<br>blinking | Signal saturation.                                       | Remove highly reflecting objects from the detection area. Or lower the sensitivity. Or change the area depth angle.   |  |  |  |  |

## Contact

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