



# Swing Door Door Mounting Sensor

CE 5913001 2008.3

## MANUFACTURER'S STATEMENT

For ease of installation and proper operation read thru this manual (especially **WARNING**, **CAUTION**, **NOTE**) prior to installing and adjusting the sensor system. Failure to read and follow the instructions in this manual may cause improper sensor operation resulting in serious injury or death. This product is a non-contact activating switch intended for door mounted of an automatic door. Do not use it for any other applications; otherwise proper operation and safety cannot be guaranteed.

|                |   |
|----------------|---|
| <b>WARNING</b> | Disregard of warning may cause the improper use causing death or serious injury of person.    |
| <b>CAUTION</b> | Disregard of caution may cause the improper use causing injury of person or damage to object. |
| <b>NOTE</b>    | Special attention for the setting and adjustment of section of this symbol is required.       |

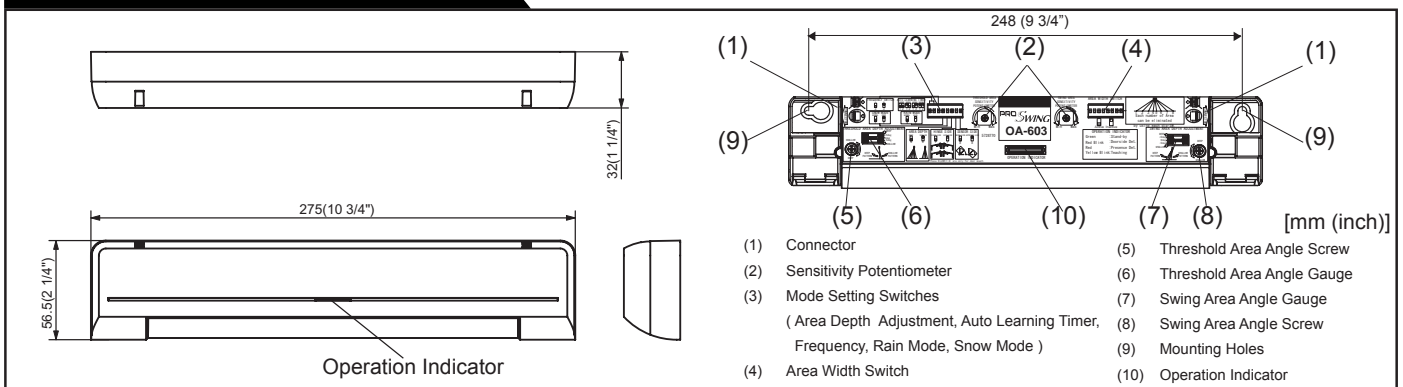
1. Set door speeds and verify proper operation of door manufacturer's equipment prior to applying power to the sensor system.
2. Do not install the sensor where it might be directly sprayed with rainwater.
3. Verify proper wiring prior to applying power to the sensor system to prevent damage to equipment.
4. When setting the sensor's area pattern, make sure there is no traffic around the installation site.
5. Do not attempt to rebuild or repair sensor heads or control unit. Contact an address in this manual for replacement products.
6. Only use the sensor as specified in the supplied instructions.
7. Walk test the installation to verify operation is in compliance with all local laws, codes and standards of your country.
8. Upon completion of installation and adjustments, instruct the owner/operator on proper operation of the door and sensor system. Identify any switches/breakers that will place the door out of service when unsafe or improper operation is identified.

## SPECIFICATIONS

|                     |   |                       |   |
|---------------------|---|-----------------------|---|
| Model               | : OA-603  | Current Draw          | : 120mA Max   |
| Cover color type    | : Black , Silver  | Response Time         | : < 0.3 second  |
| Mounting Height     | : 2.0m (6'7") to 2.5m (8'2")  | Operating Temperature | : -20°C to +55°C (-4°F to +131°F)   |
| Detection Area      | : See the chart in "ADJUSTMENT".  | Weight                | : 230g (8.2oz.)   |
| Detection Method    | : Active Infrared Reflection<br>(Presence Detection Type)   | Accessories           | : 1 Sensor Cable 0.2m(7")<br>9 Mounting screws<br>1 Operation Manual<br>3 Mounting Template |
| Detection Angle     | : Threshold Area ±5° (Inside & outside)   |                       |   |
| Adjustments         | : Swing Area ±5° (Inside & Outside)   |                       |   |
| Operation Indicator | : Green : Stand-by<br>Blinking Red : Threshold Area Detection Active<br>Red : Swing Area Detection Active<br>Blinking Yellow : Learning |                       |   |

Insure proper setting of Mode switch #8 indicating Approach side or Swing side sensor.

## OUTER DIMENSIONS



# INSTALLATION

## Top View

Simultaneous Pair Shown in Diagram

Single Swing Sensor Settings:

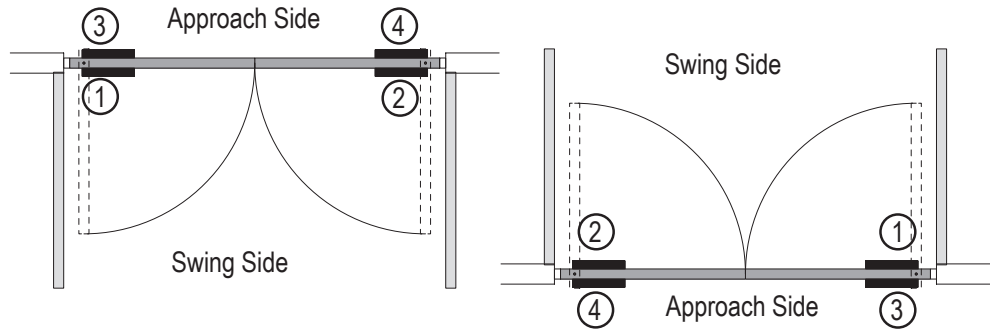
RH swing = 1 & 3

LH swing = 2 & 4

Double Egress Sensor Settings:

Both RH swings = 1 & 3 both door leaves

Both LH swings = 2 & 4 both door leaves



## Sensor Setting

Please refer to the following for the setting of the DipSwitch.

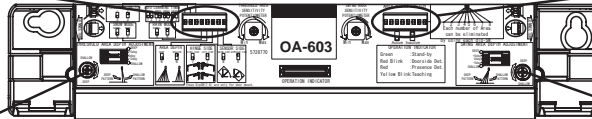
MODE SETTING SW  
(LEFT DIPSWITCH)

AREA WIDTH SW  
(RIGHT DIPSWITCH)

Set +5degrees



Threshold Area  
Angle Screw



Set +5degrees



Swing Area  
Angle Screw

Adjust both angle screws (threshold and swing) **CLOCKWISE** to achieve **maximum angle for all door mount sensor**. The screws will continue to turn even though maximum angle is reached as indicated by the angle gauges.

**! WARNING** Insure proper setting of Mode switch #8 indicating Approach side or Swing side sensor.

## DipSwitch Setting1

①

| MODE SETTING SW<br>(LEFT DIPSWITCH) | AREA WIDTH SW<br>(RIGHT DIPSWITCH) | DOOR SIZE |
|-------------------------------------|------------------------------------|-----------|
|                                     |                                    | 36 inch   |
|                                     |                                    | 42 inch   |
|                                     |                                    | 48 inch   |

## DipSwitch Setting2

②

| MODE SETTING SW<br>(LEFT DIPSWITCH) | AREA WIDTH SW<br>(RIGHT DIPSWITCH) | DOOR SIZE |
|-------------------------------------|------------------------------------|-----------|
|                                     |                                    | 36 inch   |
|                                     |                                    | 42 inch   |
|                                     |                                    | 48 inch   |

## DipSwitch Setting3

③

| MODE SETTING SW<br>(LEFT DIPSWITCH) | AREA WIDTH SW<br>(RIGHT DIPSWITCH) | DOOR SIZE |
|-------------------------------------|------------------------------------|-----------|
|                                     |                                    | 36 inch   |
|                                     |                                    | 42 inch   |
|                                     |                                    | 48 inch   |

## DipSwitch Setting4

④

| MODE SETTING SW<br>(LEFT DIPSWITCH) | AREA WIDTH SW<br>(RIGHT DIPSWITCH) | DOOR SIZE |
|-------------------------------------|------------------------------------|-----------|
|                                     |                                    | 36 inch   |
|                                     |                                    | 42 inch   |
|                                     |                                    | 48 inch   |

## Step 1

1. Determine which side of door (swing or non-swing) door loop is too be installed. Align template to pivot edge of door accordingly. Affix template. Template height can be between 6'-7" to 8'-2" from floor to top of template.

**NOTE** When templates are aligned properly the 3/8" pass thru hole ("A" on template) will be aligned with each other on both sides of door.



2. On side of door the door loop is to be installed, drill two 1/8"(3.2mm) holes for position sensor mounting plate as indicated by template (one side of door leaf only).

3. Drill four sensor mounting holes (two on each side of door leaf, 1/8" or 3.2 mm) as indicated by templates.

4. Drill 3/8" holes for pass thru cable as indicated on templates.

**NOTE** Hole "A" on approach side template should be perfectly in line with hole "A" on swing side template.



## Step 2

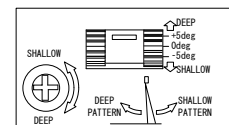
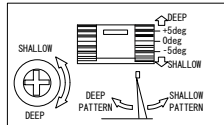
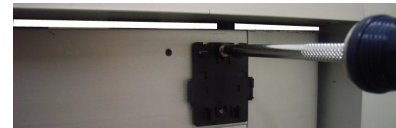
1. On the side of the door where the door loop is to be installed take a 603 sensor head and adjust the left and right dipswitch settings as indicated by the corresponding template. Verify Threshold and Swing angle adjustments are set to Deep (+5 degrees).

**NOTE** EACH TEMPLATE LOCATION WILL HAVE DIFFERENT DIPSWITCH SETTINGS.

2. Remove the template and attach the sensor head loosely to the door leaf with two of the nine supplied screws.
3. Align the position sensor mounting plate with the appropriate mounting holes and securely fasten to the door leaf with two mounting screws.
4. Go back and tighten the screws securing the 603 sensor head to the door.
5. On the opposite side of the door leaf, take a 603 sensor head and set the left and right dipswitch settings as indicated by the corresponding template. Verify Threshold and Swing angle adjustments are set to Deep (+5 degrees).

**NOTE**

These settings are optimal for most applications. However, operating conditions, environmental conditions and traffic flow may require changes to these settings. For in depth explanations of adjustments and dipswitch settings refer to the adjustment section (page 1-5) of this manual.



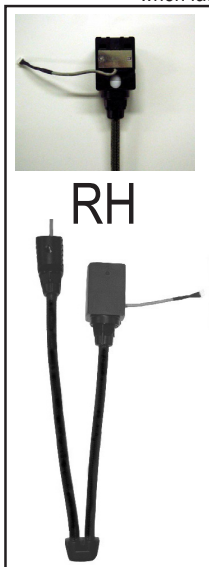
## Step 3

1. To attach the position sensor/door loop to the base plate, route the sensor connector wire and change the direction of the wiring cover based on hinge location when facing the door (LH or RH see pictures below).

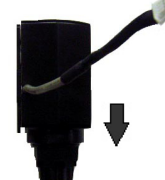
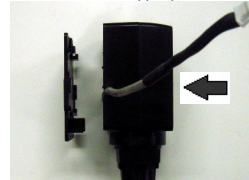
2. To attach to base plate locate the position sensor slightly high and to the side of the plate. Slide in horizontally and then down vertically.

Push it from the upper part a little.

Slide it from the upper part downward.

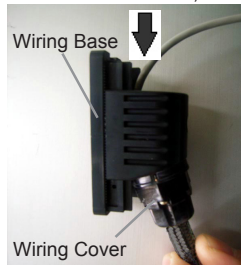


Wiring Cover



## Step 4

1. To properly locate the door jamb wiring base, slide the wiring cover on to the wiring base and center it from top to bottom.
2. Hold wiring base on jamb rotate door from closed to full open. Ensure no excessive stretching or binding of the loop occurs (may need to move base up or down to achieve.) Mark top of wiring base to align mounting template later.



Making top of Wiring Base



## Setp 5

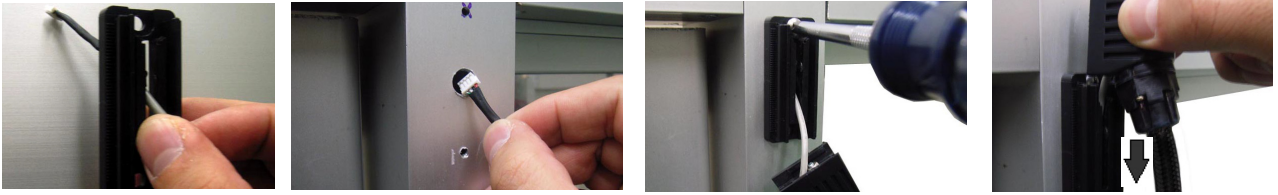
1. Align and affix top of template with mark achieved in step 4..
2. Drill two 1/8" (3.2mm) mounting holes. Drill 3/8" (10mm) hole if routing cable thru jamb for concealed wiring (3/8" hole not required for surface wiring applications).



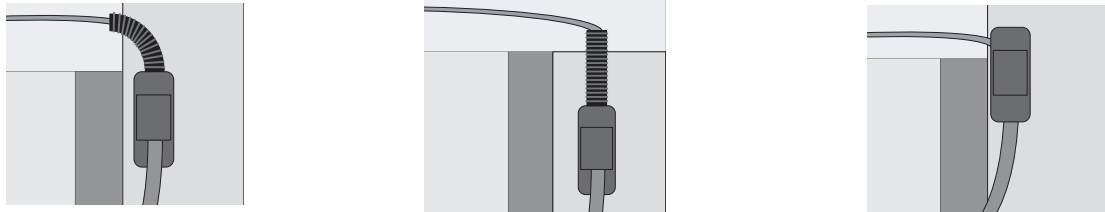


## Step 6

1. For concealed wiring feed the connector thru the wiring base and then the 3/8" cable hole and into the header. For surface wiring (see note below) do not route wire thru the wiring base.
2. Properly position and securely fasten the wiring base to the jamb (small screw located on side of wiring base indicates bottom of base).
3. Feed the remainder of the cable thru the base and into the header then slide the wiring cover onto the wiring base from the top down.



**NOTE** Examples of surface wiring. Supplied flexible wire shroud is cut to fit on site.



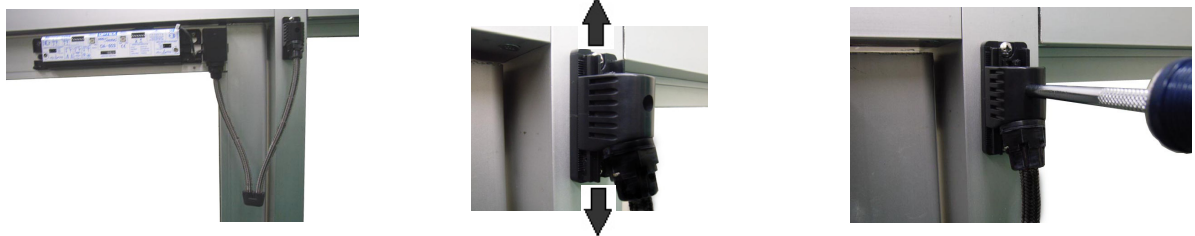
## Step 7

1. Temporarily position the wiring cover on the center of the base vertically.



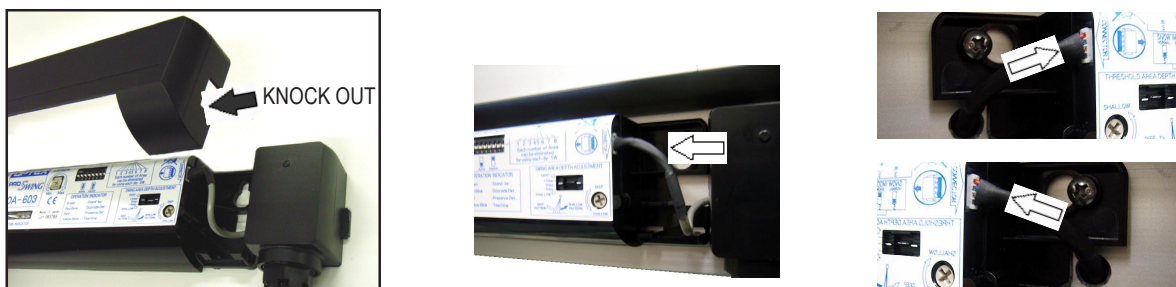
## Step 8

1. Open and close the door leaf to determine the best location for the wiring cover on the base plate. On applications where the loop is mounted on the swing side, make sure the loop does not touch the door panel throughout the door travel.
2. Once the ideal position is determined, turn the screw in the back of the cover clockwise to secure the cover in place.



## Step 9

1. Remove knockouts for OA 603 sensor cover on loop side only!
2. Connect the cable from position sensor to the OA-603.
3. Connect pass thru cable to both OA-603 sensor heads.



## Step 10

Complete wiring of OC-904 and perform initial setup. Refer to OC-904 instruction manual and Wiring Matrix for wiring details. Refer to Elite manual (page 1-6) for initial setup details. Once complete return to step 11.

## Step 11

Place the cover on the top then fit it on.

How to remove the cover

Hold the top and remove the cover.



Insert the flathead screw driver and push it down as shown in the picture.



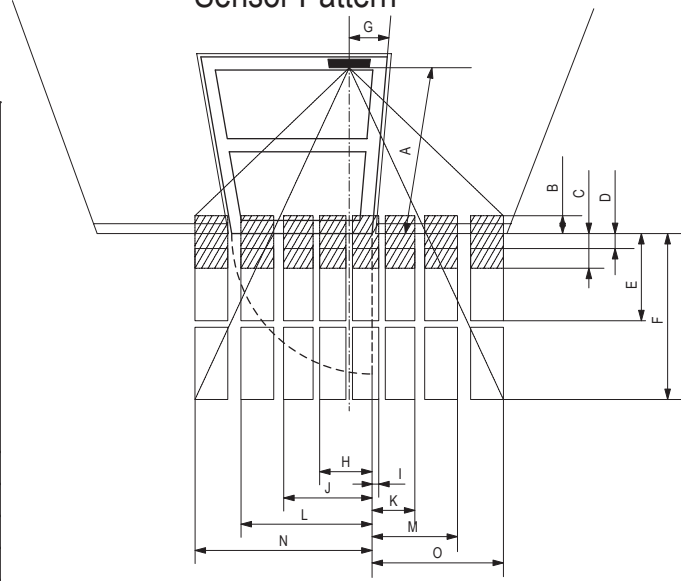
**NOTE** If desired, sensor covers can be left off until initial setup and final adjustments are performed.

# ADJUSTMENTS

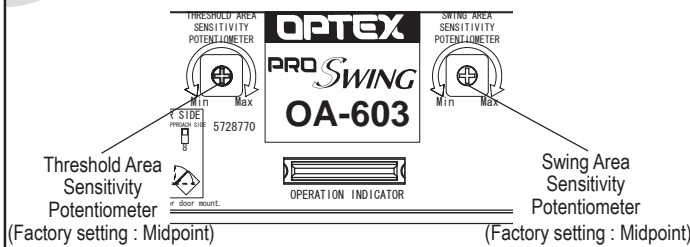
The sensor pattern shown is when the Swing & Threshold area depth adjustments are set to 5 degrees. When the sensor system performs an initial setup to its operating environment detection areas may vary slightly from this chart.

|   |              |             |
|---|--------------|-------------|
| A | 2000 (6'7")  | 2300 (7'6") |
| B | 186 (7")     | 214 (8")    |
| C | 360 (1'2")   | 414 (1'4")  |
| D | 152 (6")     | 175 (7")    |
| E | 840 (2'9")   | 966 (3'2")  |
| F | 1650 (5'5")  | 1898 (6'2") |
| G | 252 (10")    |             |
| H | 593 (1'11")  | 645 (2'1")  |
| I | 89 (3")      | 141 (6")    |
| J | 911 (3')     | 1010 (3'4") |
| K | 407 (1'4")   | 506 (1'8")  |
| L | 1275 (4'2")  | 1428 (4'8") |
| M | 770 (2'6")   | 924 (3')    |
| N | 1684 (5'6")  | 1900 (6'3") |
| O | 1180 (3'10") | 1395 (4'7") |

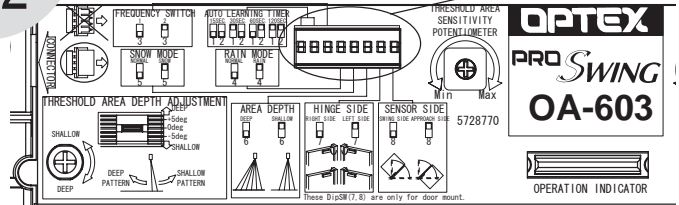
## Sensor Pattern



## 1 Adjusting the Sensitivity



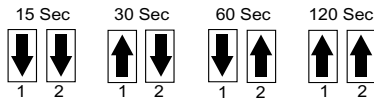
## 2 Mode Dipswitch Settings (Left Bank)



- 1,2: Auto Learning Timer
- 3: Frequency
- 4: Rain Mode
- 5: Snow Mode

### 2-1 Setting the Auto Learning Timer

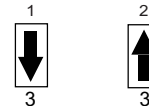
- (1) Select the Auto re-learning time.
  - (2) Turn the power on.
  - (3) Wait for 15 seconds to complete the initial setting.
- (Factory setting : 30sec)



**NOTE** Prior to initial set up set learn time to 30seconds or longer.

### 2-2 Setting the Frequency Function (Interference Prevention)

Two different frequencies can be set by adjusting Dipswitches 3. When two or more sensors are mounted close to each other, they may interfere. When that happens, change Frequency.



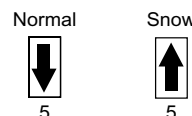
### 2-3 Setting the Rain Mode

Set this switch to Rain if the sensor is used in a region with a lot of rain.



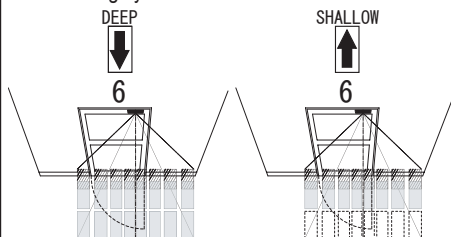
### 2-4 Setting the Snow Mode

Set this switch to Snow if the sensor is used in a region with snow or a lot of insects.



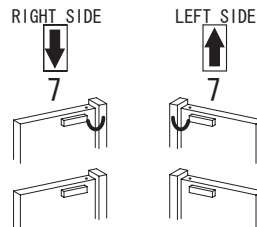
### 2-5 Setting the Area Depth

Change this switch to SHALLOW if false detections occur from cross traffic/side traffic/or close by objects. In SHALLOW Mode the shallow pattern is applied only during the opening and closing cycles.



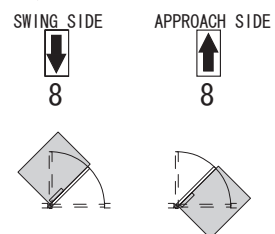
### 2-6 Setting the Hinge Side

When facing the OA-603 sensor head, if the hinge is to the right of the sensor set dipswitch to "RIGHT SIDE". If hinge is to the left of the sensor set the dipswitch to "LEFT SIDE".



### 2-7 Setting the Sensor Side

If you install the OA-603 sensor head on swing side, choose 'SWING SIDE', if non-swing side, choose 'APPROACH SIDE'.



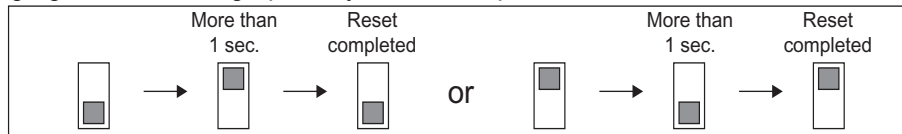
**CAUTION** Sensor system does not operate when these Dipswitches are set the same on both sides of door.

## Auto learning function

This sensor has the function to fit floor condition changes **automatically**. Therefore, even if objects are put in the detection area, sensor will learn the changes gradually and set back to normal operations automatically after several detections.

## How to initiate a setup

When changing sensor settings, put any OA-603 DipSW to ON/OFF for more than 1 second.



## CHECKING

### Setup Process

This sequence must occur when power is applied for the first time or when initiating setup.

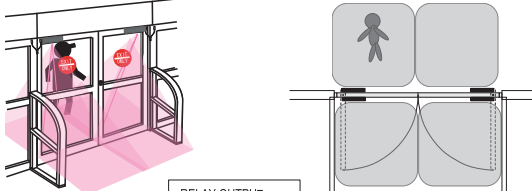
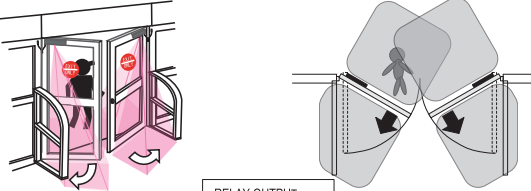
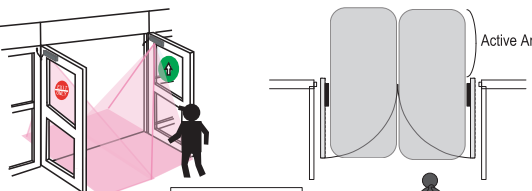
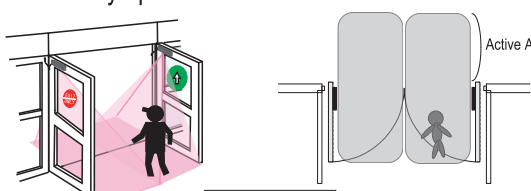
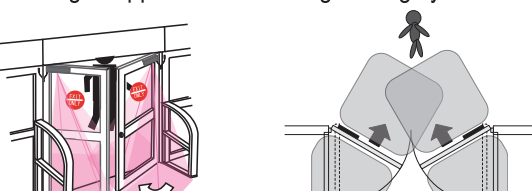
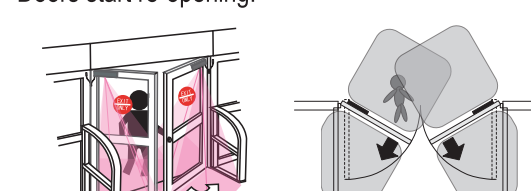
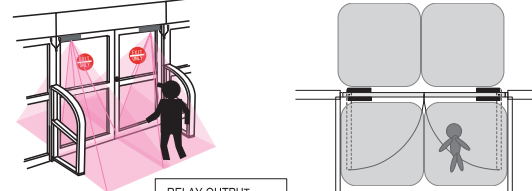
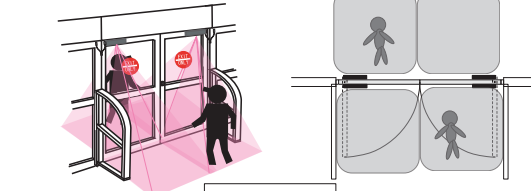
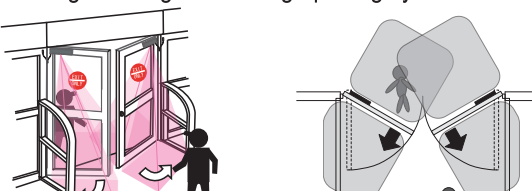
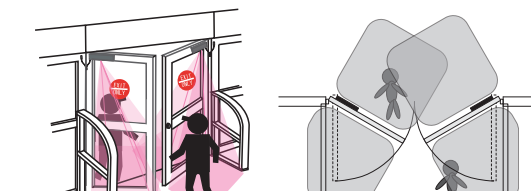
| Door Status   | Sensor Status  | Operation Indicator                  |  | OC-904 Operation Indicator          |
|---|--|--------------------------------------|--|-------------------------------------|
|   |  | Swing Side                           | Approach Side  |                                     |
|   | Initial Setup door closed                            | Yellow Blinking<br>↓<br>Solid Yellow | Yellow Blinking<br>↓<br>Aproximately 8sec.   | Blinking Green<br>↓<br>Solid Green  |
| <br><small>Do not enter the detection area, until indicator turn to solid yellow.</small> | Waiting for next learning                            | Solid Yellow                         | Solid Yellow   | Solid Green                         |
|   | Activate door to learn opening cycle                 | Blinking Yellow                      | Solid Orange   | Blinking Green                      |
|   | Learning Full Opened Cycle                           | Blinking Yellow                      | Solid Orange<br>↓<br>Blinking Red<br>↓<br>Blinking Yellow<br>↓<br>Aproximately 8sec. | Blinking Green<br>↓<br>Solid Orange |
|   | Learning Closing Cycle                               | Blinking Yellow                      | Blinking Yellow  | Solid Orange                        |
|   | Setup complete approximately 3sec. after full closed | Solid Green (See Note)               | Solid Green (See Note)   | Solid Green                         |

**NOTE** At full closed if setup does not complete in less than 5 seconds initiate setup again.

# CHECKING

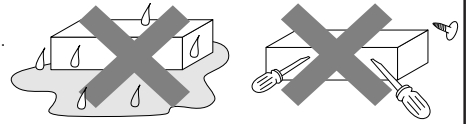
## Operation Check

Before leaving the site, check five items in the right table.

|  |              |                |              |             |   |              |               |              |             |
|--|--------------|----------------|--------------|-------------|---|--------------|---------------|--------------|-------------|
| <p>Entering to approach side at full closed position.</p>  <table border="1" data-bbox="349 504 479 609"> <tr><td>RELAY OUTPUT</td></tr> <tr><td>ACTIVATE : ON</td></tr> <tr><td>SAFETY : OFF</td></tr> <tr><td>STALL : OFF</td></tr> </table>  | RELAY OUTPUT | ACTIVATE : ON  | SAFETY : OFF | STALL : OFF | <p>Doors open.</p>  <table border="1" data-bbox="1031 504 1161 609"> <tr><td>RELAY OUTPUT</td></tr> <tr><td>ACTIVATE : ON</td></tr> <tr><td>SAFETY : OFF</td></tr> <tr><td>STALL : OFF</td></tr> </table>   | RELAY OUTPUT | ACTIVATE : ON | SAFETY : OFF | STALL : OFF |
| RELAY OUTPUT   |              |                |              |             |   |              |               |              |             |
| ACTIVATE : ON  |              |                |              |             |   |              |               |              |             |
| SAFETY : OFF   |              |                |              |             |   |              |               |              |             |
| STALL : OFF  |              |                |              |             |   |              |               |              |             |
| RELAY OUTPUT   |              |                |              |             |   |              |               |              |             |
| ACTIVATE : ON  |              |                |              |             |   |              |               |              |             |
| SAFETY : OFF   |              |                |              |             |   |              |               |              |             |
| STALL : OFF  |              |                |              |             |   |              |               |              |             |
| <p>Entering to the door at full open position.</p>  <table border="1" data-bbox="349 840 479 945"> <tr><td>RELAY OUTPUT</td></tr> <tr><td>ACTIVATE : ON</td></tr> <tr><td>SAFETY : OFF</td></tr> <tr><td>STALL : OFF</td></tr> </table>         | RELAY OUTPUT | ACTIVATE : ON  | SAFETY : OFF | STALL : OFF | <p>Doors stay opened.</p>  <table border="1" data-bbox="1031 840 1161 945"> <tr><td>RELAY OUTPUT</td></tr> <tr><td>ACTIVATE : ON</td></tr> <tr><td>SAFETY : OFF</td></tr> <tr><td>STALL : OFF</td></tr> </table>  | RELAY OUTPUT | ACTIVATE : ON | SAFETY : OFF | STALL : OFF |
| RELAY OUTPUT   |              |                |              |             |   |              |               |              |             |
| ACTIVATE : ON  |              |                |              |             |   |              |               |              |             |
| SAFETY : OFF   |              |                |              |             |   |              |               |              |             |
| STALL : OFF  |              |                |              |             |   |              |               |              |             |
| RELAY OUTPUT   |              |                |              |             |   |              |               |              |             |
| ACTIVATE : ON  |              |                |              |             |   |              |               |              |             |
| SAFETY : OFF   |              |                |              |             |   |              |               |              |             |
| STALL : OFF  |              |                |              |             |   |              |               |              |             |
| <p>Entering to approach side during closing cycle.</p>  <table border="1" data-bbox="349 1176 479 1323"> <tr><td>RELAY OUTPUT</td></tr> <tr><td>ACTIVATE : OFF</td></tr> <tr><td>SAFETY : OFF</td></tr> <tr><td>STALL : OFF</td></tr> </table> | RELAY OUTPUT | ACTIVATE : OFF | SAFETY : OFF | STALL : OFF | <p>Doors start re-opening.</p>  <table border="1" data-bbox="1031 1176 1161 1323"> <tr><td>RELAY OUTPUT</td></tr> <tr><td>ACTIVATE : ON</td></tr> <tr><td>SAFETY : OFF</td></tr> <tr><td>STALL : OFF</td></tr> </table>  | RELAY OUTPUT | ACTIVATE : ON | SAFETY : OFF | STALL : OFF |
| RELAY OUTPUT   |              |                |              |             |   |              |               |              |             |
| ACTIVATE : OFF   |              |                |              |             |   |              |               |              |             |
| SAFETY : OFF   |              |                |              |             |   |              |               |              |             |
| STALL : OFF  |              |                |              |             |   |              |               |              |             |
| RELAY OUTPUT   |              |                |              |             |   |              |               |              |             |
| ACTIVATE : ON  |              |                |              |             |   |              |               |              |             |
| SAFETY : OFF   |              |                |              |             |   |              |               |              |             |
| STALL : OFF  |              |                |              |             |   |              |               |              |             |
| <p>Entering to swing side at full closed position.</p>  <table border="1" data-bbox="349 1554 479 1648"> <tr><td>RELAY OUTPUT</td></tr> <tr><td>ACTIVATE : OFF</td></tr> <tr><td>SAFETY : ON</td></tr> <tr><td>STALL : ON</td></tr> </table>  | RELAY OUTPUT | ACTIVATE : OFF | SAFETY : ON  | STALL : ON  | <p>Doors do not open.</p>  <table border="1" data-bbox="1031 1554 1161 1648"> <tr><td>RELAY OUTPUT</td></tr> <tr><td>ACTIVATE : ON</td></tr> <tr><td>SAFETY : ON</td></tr> <tr><td>STALL : ON</td></tr> </table>  | RELAY OUTPUT | ACTIVATE : ON | SAFETY : ON  | STALL : ON  |
| RELAY OUTPUT   |              |                |              |             |   |              |               |              |             |
| ACTIVATE : OFF   |              |                |              |             |   |              |               |              |             |
| SAFETY : ON  |              |                |              |             |   |              |               |              |             |
| STALL : ON   |              |                |              |             |   |              |               |              |             |
| RELAY OUTPUT   |              |                |              |             |   |              |               |              |             |
| ACTIVATE : ON  |              |                |              |             |   |              |               |              |             |
| SAFETY : ON  |              |                |              |             |   |              |               |              |             |
| STALL : ON   |              |                |              |             |   |              |               |              |             |
| <p>Entering to swing side during opening cycle.</p>  <table border="1" data-bbox="349 1879 479 2016"> <tr><td>RELAY OUTPUT</td></tr> <tr><td>ACTIVATE : ON</td></tr> <tr><td>SAFETY : OFF</td></tr> <tr><td>STALL : OFF</td></tr> </table>    | RELAY OUTPUT | ACTIVATE : ON  | SAFETY : OFF | STALL : OFF | <p>Doors stall.</p>  <table border="1" data-bbox="1031 1879 1161 2016"> <tr><td>RELAY OUTPUT</td></tr> <tr><td>ACTIVATE : ON</td></tr> <tr><td>SAFETY : ON</td></tr> <tr><td>STALL : ON</td></tr> </table> <p><b>NOTE</b><br/>Once the door reverses, swing side door will be active again.</p> | RELAY OUTPUT | ACTIVATE : ON | SAFETY : ON  | STALL : ON  |
| RELAY OUTPUT   |              |                |              |             |   |              |               |              |             |
| ACTIVATE : ON  |              |                |              |             |   |              |               |              |             |
| SAFETY : OFF   |              |                |              |             |   |              |               |              |             |
| STALL : OFF  |              |                |              |             |   |              |               |              |             |
| RELAY OUTPUT   |              |                |              |             |   |              |               |              |             |
| ACTIVATE : ON  |              |                |              |             |   |              |               |              |             |
| SAFETY : ON  |              |                |              |             |   |              |               |              |             |
| STALL : ON   |              |                |              |             |   |              |               |              |             |

Advise the building owner/operator of the following items

1. When turning the power on, stay clear of detection area for a minimum of 10 seconds then walk test detection area to ensure proper operation.
2. Always keep the detection window clean. If dirty, wipe the window with a damp cloth ( Do not use any cleaner or solvent ).
3. Do not wash the sensor with water.
4. Do not disassemble, rebuild or repair the sensor yourself; otherwise electric shock may occur.
5. Contact your installer or the sales engineer if you want to change the settings.
6. Do not place an object that moves or emits light in the detection area.(ex. Plant, illumination etc..)
7. Do not paint the Detection Window.



## TROUBLE SHOOTING

| Symptom  | Possible cause   | Solution  |   |
|--|--|---|---|
| CANNOT INITIATE SETUP<br><br>Moving dipswitch on OA-603 does not result in OA-603 LED fast flash yellow. | OC-904C no LED indication  | Improper power supply<br>Bad connection on Orange and Brown wires of OC-904                                       | Correct power problem<br>Repair bad connection  |
|  | OC-904C LED double orange flashing & no LED indication on OA-603   | Bad connection at OC-904  | Reset 4 pin connector from Loop assy to OC-904  |
|  |  | Bad connection from loop assy To OA-603 sensor head   | Reset 4 pin connector from loop assy to OA-603 sensor head  |
|  |  | Bad connection with 7" pass thru cable  | Reset connection of 7" cable to both OA-603 sensor heads  |
|  |  | Bad 7" cable  | Replace as necessary  |
|  | OC-904 LED double orange flashing & erratic LED on OA-603 sensors  | Switches 7 & 8 of left dipswitches on OA-603 sensors set wrong  | Correct dipswitch settings see pg 1-2   |
|  | WILL NOT COMPLETE INITIAL SETUP  | OC-904 dipswitches set wrong  | Check Connection Matrix for proper dipswitch settings   |
| Poor or improper connection of yellow wires from OC-904 to door control                                  |  | Check Connection Matrix for proper connection of yellow wires   |   |
| Improper voltage on red & black wire of OC-904   |  | Ensure positive voltage on red wire at hold open and 0 voltage at closed position                                 |   |
| INTERMITTENT RECYCLE (ghosting) OR INTERMITTENT STALLING   | After initial setup door ghosts several times on first activation  | Happens on 15% of installations<br>If stops after first activation, system is OK                                  |   |
|  | OA-603 sensor head not mounted flush on door   | Head may be resting on top of loop mounting bracket<br>Reposition head flush on panel                             |   |
|  | Improper threshold or swing area angle adjustment  | Set threshold and swing area angles at +5 degrees (deep)  |   |
|  | Improper voltage on red & black wire of OC-904   | Ensure positive voltage on red wire at hold open and 0 voltage at closed position                                 |   |
|  | Stalling caused by traffic just outside of swing path or objects near guide rails                        | Set switch 6 on left bank dipswitch of OA-603 on/up (shallow)<br>Note: moving the dipswitch will initiate a setup |   |
|  | Area width dipswitches set wrong (right bank dipswitches on OA-603)                                      | Verify proper settings (page 1-2)   |   |
|  | Inconsistent data from position sensor/loop assy   | Position the loop assy so loop center coupler does not rest on door at any point of door travel                   |   |
| NO ACTIVATION AND/OR NO REACTIVATION ON CLOSING CYCLE  | OC-904 yellow wires poor or improper connection to door control or on/off/hold switch                    | Verify proper connection and output of yellow wires.<br>(see Elite Connection Matrix)                             |   |
|  | OC-904 dipswitches set improperly  | Verify proper settings(see Elite Connection Matrix)   |   |
|  | On knowing act applications poor or improper connection of purple wires from OC-904 to activation device | Verify good and proper connection (see OC-904 install manual)   |   |
| NO SAFETY ON SWING SIDE AT FULL CLOSED   | OA -603 sensor detects (solid or flashing red LED) but door opens anyway                                 | Poor or improper connection of Blue wires from OC-904 to door control<br>OC-904 dipswitches set improperly        | Verify good and proper connection of blue wires<br>(see Elite Connection matrix)<br>Verify proper settings (see Elite Connection Matrix)  |
|  | OA-603 no detection (solid green LED)  | Area width dipswitches set wrong (right bank dipswitches on OA-603)   | Verify proper settings (page 1-2)   |
| NO STALL ON SWING SIDE WHILE DOOR IS OPENING   | OA -603 sensor detects (solid or flashing red LED) but door does not slow or stop                        | Poor or improper connection of green wires from OC-904 to door control<br>OC-904 dipswitches set improperly       | Verify good and proper connection of Green wires<br>(see Elite Connection matrix)<br>Verify proper settings (see Elite Connection Matrix) |
|  | OA-603 no detection (solid green LED)  | Area width dipswitches set wrong (right bank dipswitches on OA-603)   | Verify proper settings (page 1-2)   |
| DOOR REMAINS OPEN  | OC-904 dipswitches set improperly  | Verify proper settings (see Elite Connection Matrix)  |   |
|  | On knowing act applications poor or improper connection of purple wires from OC-904 to activation device | Verify good and proper connection (see OC-904 install manual)   |   |
|  | Improper wiring of door equipment on/off/hold switch   | Verify proper wiring of on/off/hold switch  |   |

## Warning Indication (OA-603 Sensor head)

| Mode                | Self Monitoring Function                          | Life cycle Notification                          | Signal Saturation   | Communication Error   | Setting Error   |
|---------------------|---|--|---|---|---|
| Operation Indicator | Fast Green Blinking<br>                           | Twice Green Blinking<br>                         | Slow Green Blinking<br>   | Twice Orange Blinking<br>   | Fast Orange Blinking<br>  |
| Explanation         | The sensor is reaching the end of its life cycle. | The relay is reaching the end of its life cycle. | Either the mounting position is too low or the detection area includes the wall or another object. OA-603 threshold angle may be set to less than +5 degrees deep. Refer to "ADJUSTMENT". | The sensor cable is connected, but unstable communication. A sensor cable may be disconnected or OA-603 mode switches 7 & 8 may be set wrong. Refer to "ADJUSTMENT" | When all the area width switches are inactive. Refer to "ADJUSTMENT". |

Contact your installer or the sales engineer if:  
 - you need to change the settings or replace the sensor.  
 - the trouble still persists after checking and remedying as described above.

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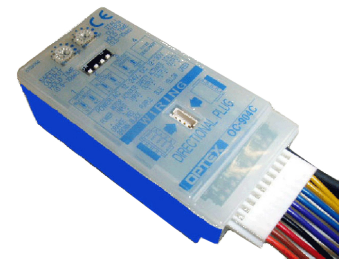


OPTEX CO.,LTD. (ISO 9001 Certified by LRQA)  
 5-8-12 ogoto Otsu,  
 520-0101 Japan  
 TEL.: +81 (0)77-579-8700  
 FAX : +81 (0)77-579-7030  
 WEBSITE: www.optex.co.jp

Optex Technologies, Inc.  
 3882 Del Amo Blvd., Suite 604,  
 Torrance, CA 90503-2184, USA  
 TEL: +1 (310) 214-8644  
 FAX: +1 (310) 214-8655  
 TOLL-FREE: +1 (800) 877-6656  
 WEBSITE: www.optexentrances.com

Secumatic b.v.  
 Tiber 2, 2491 DH The Hague, P.O. Box 24009  
 2490 AA The Hague The Netherlands  
 TEL.: +31 (0)70 419 41 00  
 FAX : +31 (0)70 317 73 21  
 E-MAIL: info@secumatic.nl  
 WEBSITE: www.secumatic.nl





## MANUFACTURER'S STATEMENT

For ease of installation and proper operation read thru this manual (especially **WARNING**, **CAUTION**, **NOTE**) prior to installing and adjusting the sensor system. Failure to read and follow the instructions in this manual may cause improper sensor operation resulting in serious injury or death. This product is a non-contact activating switch intended for door mounted of an automatic door.

Do not use it for any other applications; otherwise proper operation and safety cannot be guaranteed.

|                |   |
|----------------|---|
| <b>WARNING</b> | Disregard of warning may cause the improper use causing death or serious injury of person.    |
| <b>CAUTION</b> | Disregard of caution may cause the improper use causing injury of person or damage to object. |
| <b>NOTE</b>    | Special attention for the setting and adjustment of section of this symbol is required.       |

1. Set door speeds and verify proper operation of door manufacturer's equipment prior to applying power to the sensor system.
2. Do not install the sensor where it might be directly sprayed with rainwater.
3. Verify proper wiring prior to applying power to the sensor system to prevent damage to equipment.
4. When setting the sensor's area pattern, make sure there is no traffic around the installation site.
5. Do not attempt to rebuild or repair sensor heads or control unit. Contact an address in this manual for replacement products.
6. Only use the sensor as specified in the supplied instructions.
7. Walk test the installation to verify operation is in compliance with all local laws, codes and standards of your country.
8. Upon completion of installation and adjustments, instruct the owner/operator on proper operation of the door and sensor system. Identify any switches/breakers that will place the door out of service when unsafe or improper operation is identified.

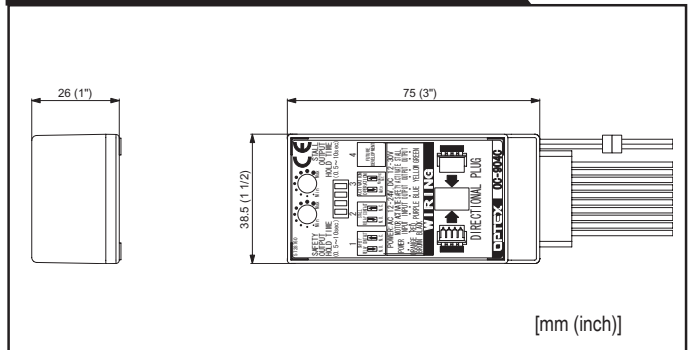
## SPECIFICATIONS

|   |  |
|---|--|
| Power Supply                              | 12 - 24V AC, 12 - 30V DC   |
| Current Draw                              | 500mA max.*  |
| Output                                    | Activate Output : Form A Relay 50V, 0.1A(Resistance Load)<br>Safety Output : Form C Relay 50V, 0.1A (Resistance Load)<br>Stall Output : Form C Relay 50V, 0.1A (Resistance Load) |
| Relay Hold Time(Safety&Stall Output only) | 0.5 to 10s   |
| Response Time                             | < 0.3s   |
| Operation Indicator                       | Green: Standby<br>Red: Door Opening<br>Orange: Lockout   |
| Operating Temperature                     | -20 - +55degrees (-4F - +131Fdegrees)  |
| Weight                                    | 50g (1.8oz.)   |
| Accessories                               | 1 Two sided tape<br>2 T-tap connector  |

\*When a unit of the 2 OA-603 and 1 OC-904C used.

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

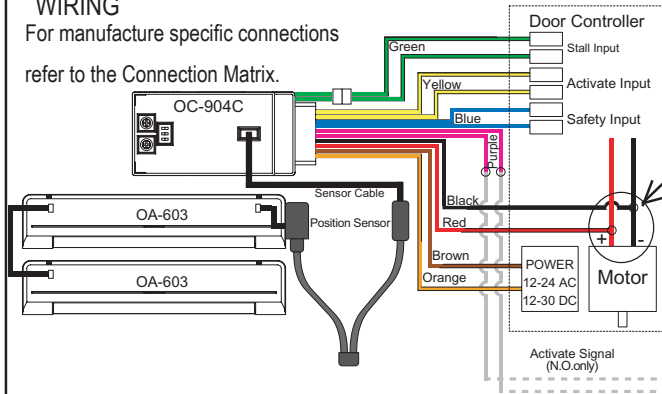
## OUTER DIMENSIONS



## INSTALLATION

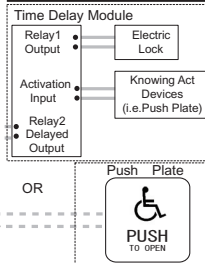
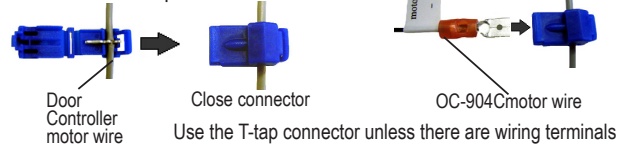
### WIRING

For manufacture specific connections refer to the Connection Matrix.

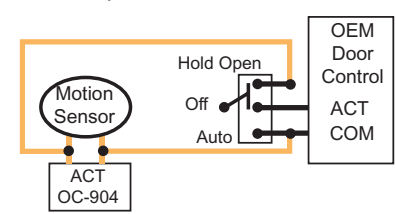


**NOTE** For Knowing Act application, Connect purple wire to Activate output from push button.

### How to use T-tap connector

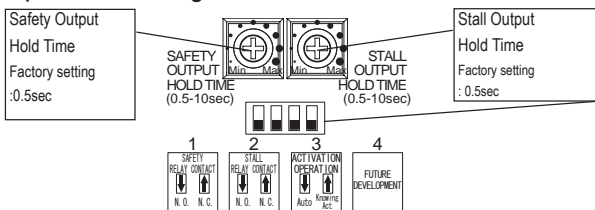


### Standard Optional On / Off / Hold Switch



## ADJUSTMENT

### Dipswitch Settings



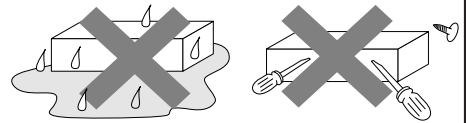
- 1 SAFETY RELAY CONTACT (factory setting:NO)  
Choose the Relay Contact.
- 2 STALL RELAY CONTACT (factory setting:NO)  
Choose the Relay Contact.
- 3 ACTIVATION OPERATION (factory setting:Auto)  
If uses push button for activate,select the knowing act.
- 4 FUTURE DEVELOPMENT(NOT USED)

**NOTE** The approach side sensor will be inactive on full-closed position with this function.



**Advise the building owner/operator of the following items**

1. When turning the power on, stay clear of detection area for a minimum of 10 seconds then walk test detection area to ensure proper operation.
2. Always keep the detection window clean. If dirty, wipe the window with a damp cloth ( Do not use any cleaner or solvent ).
3. Do not wash the sensor with water.
4. Do not disassemble, rebuild or repair the sensor yourself, otherwise electric shock may occur.
5. Contact your installer or the sales engineer if you want to change the settings.
6. Do not place an object that moves or emits light in the detection area.(ex. Plant, illumination etc..)
7. Do not paint the Detection Window.



**TROUBLESHOOTING**

| Symptom  |  | Possible cause   | Solution  |
|--|--|--|---|
| CANNOT INITIATE SETUP<br><br>Moving dipswitch on OA-603 does not result in OA-603 LED fast flash yellow. | OC-904C no LED indication  | Improper power supply<br>Bad connection on Orange and Brown wires of OC-904  | Correct power problem<br>Repair bad connection  |
|  | OC-904C LED double orange flashing & no LED indication on OA-603                 | Bad connection at OC-904   | Reseat 4 pin connector from Loop assy to OC-904   |
|  |  | Bad connection from loop assy To OA-603 sensor head  | Reseat 4 pin connector from loop assy to OA-603 sensor head   |
|  |  | Bad connection with 7" pass thru cable   | Reseat connection of 7" cable to both OA-603 sensor heads   |
| OC-904 LED double orange flashing & erratic LED on OA-603 sensors  | Bad 7" cable<br>Switches 7 & 8 of left dipswitches on OA-603 sensors set wrong   | Replace as necessary<br>Correct dipswitch settings see pg 1-2  |   |
| WILL NOT COMPLETE INITIAL SETUP  |  | OC-904 dipswitches set wrong<br>Poor or improper connection of yellow wires from OC-904 to door control<br>Improper voltage on red & black wire of OC-904  | Check Connection Matrix for proper dipswitch settings<br>Check Connection Matrix for proper connection of yellow wires<br>Ensure positive voltage on red wire at hold open and 0 voltage at closed position   |
| INTERMITTENT RECYCLE (ghosting) OR INTERMITTENT STALLING   |  | After initial setup door ghosts several times on first activation<br>OA-603 sensor head not mounted flush on door<br>Improper threshold or swing area angle adjustment<br>Improper voltage on red & black wire of OC-904<br>Stalling caused by traffic just outside of swing path or objects near guide rails<br>Area width dipswitches set wrong (right bank dipswitches on OA-603)<br>Inconsistent data from position sensor/loop assy | Happens on 15% of installations<br>If stops after first activation, system is OK<br>Head may be resting on top of loop mounting bracket<br>Reposition head flush on panel<br>Set threshold and swing area angles at +5 degrees (deep)<br>Ensure positive voltage on red wire at hold open and 0 voltage at closed position<br>Set switch 6 on left bank dipswitch of OA-603 on/up (shallow)<br>Note: moving the dipswitch will initiate a setup<br>Verify proper settings (page 1-2)<br>Position the loop assy so loop center coupler does not rest on door at any point of door travel |
| NO ACTIVATION AND/OR NO REACTIVATION ON CLOSING CYCLE  |  | OC-904 yellow wires poor or improper connection to door control or on/off/hold switch<br>OC-904 dipswitches set improperly<br>On knowing act applications poor or improper connection of purple wires from OC-904 to activation device   | Verify proper connection and output of yellow wires. (see Elite Connection Matrix)<br>Verify proper settings(see Elite Connection Matrix)<br>Verify good and proper connection (see OC-904 install manual)  |
| NO SAFETY ON SWING SIDE AT FULL CLOSED   | OA-603 sensor detects (solid or flashing red LED) but door opens anyway          | Poor or improper connection of Blue wires from OC-904 to door control<br>OC-904 dipswitches set improperly   | Verify good and proper connection of blue wires (see Elite Connection Matrix)<br>Verify proper settings (see Elite Connection Matrix)   |
|  | OA-603 no detection (solid green LED)  | Area width dipswitches set wrong (right bank dipswitches on OA-603)  | Verify proper settings (page 1-2)   |
| NO STALL ON SWING SIDE WHILE DOOR IS OPENING   | OA-603 sensor detects (solid or flashing red LED) but door does not slow or stop | Poor or improper connection of green wires from OC-904 to door control<br>OC-904 dipswitches set improperly  | Verify good and proper connection of Green wires (see Elite Connection matrix)<br>Verify proper settings (see Elite Connection Matrix)  |
|  | OA-603 no detection (solid green LED)  | Area width dipswitches set wrong (right bank dipswitches on OA-603)  | Verify proper settings (page 1-2)   |
| DOOR REMAINS OPEN  |  | OC-904 dipswitches set improperly<br>On knowing act applications poor or improper connection of purple wires from OC-904 to activation device<br>Improper wiring of door equipment on/off/hold switch  | Verify proper settings (see Elite Connection Matrix)<br>Verify good and proper connection (see OC-904 install manual)<br>Verify proper wiring of on/off/hold switch   |

**Warning Indication (OC-904C Controller)**

| Mode                | Life cycle Notification                          | Communication Error   |
|---------------------|--|---|
| Operation Indicator | Twice Green Blinking<br>                         | Twice Orange Blinking<br>   |
| Explanation         | The relay is reaching the end of its life cycle. | The sensor cable is connected, but unstable communication. A sensor cable may be disconnected or OA-603 mode switches 7 & 8 may be set wrong. Refer to "ADJUSTMENT" |

Contact your installer or the sales engineer if:  
 - you need to change the settings or replace the sensor.  
 - the trouble still persists after checking and remedying as described above.

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OPTEX CO.,LTD. (ISO 9001 Certified by LRQA)  
 5-8-12 ogoto Otsu,  
 520-0101 Japan  
 TEL.: +81 (0)77-579-8700  
 FAX : +81 (0)77-579-7030  
 WEBSITE: www.optex.co.jp

Optex Technologies, Inc.  
 3882 Del Amo Blvd., Suite 604,  
 Torrance, CA 90503-2184, USA  
 TEL: +1 (310) 214-8644  
 FAX: +1 (310) 214-8655  
 TOLL-FREE: +1 (800) 877-6656  
 WEBSITE: www.optexentrances.com

Secumatic b.v.  
 Tiber 2 . 2491 DH The Hague , P.O. Box 24009  
 2490 AA The Hague The Netherlands  
 TEL.: +31 (0)70 419 41 00  
 FAX : +31 (0)70 317 73 21  
 E-MAIL: info@secumatic.nl  
 WEBSITE: www.secumatic.nl