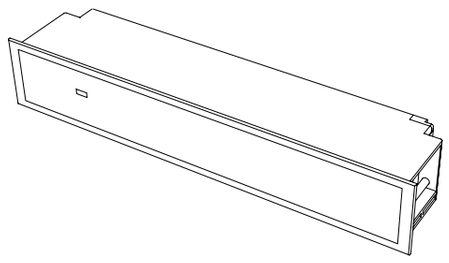
OPTEX

English

PROSAFE MIRAGE

CE



5911751 2006.2

MANUFACTURER' S STATEMENT

Read this Operation Manual carefully before use, to ensure proper operation of this Optex sensor.
Failure to read this Operation Manual may cause improper sensor operation and may result in serious injury or death.
This product is a non-contact activating switch intended for mounting in the header or the ceiling of an automatic door.
Do not use it for any other applications; otherwise proper operation and safety cannot be guaranteed.
Cautions:

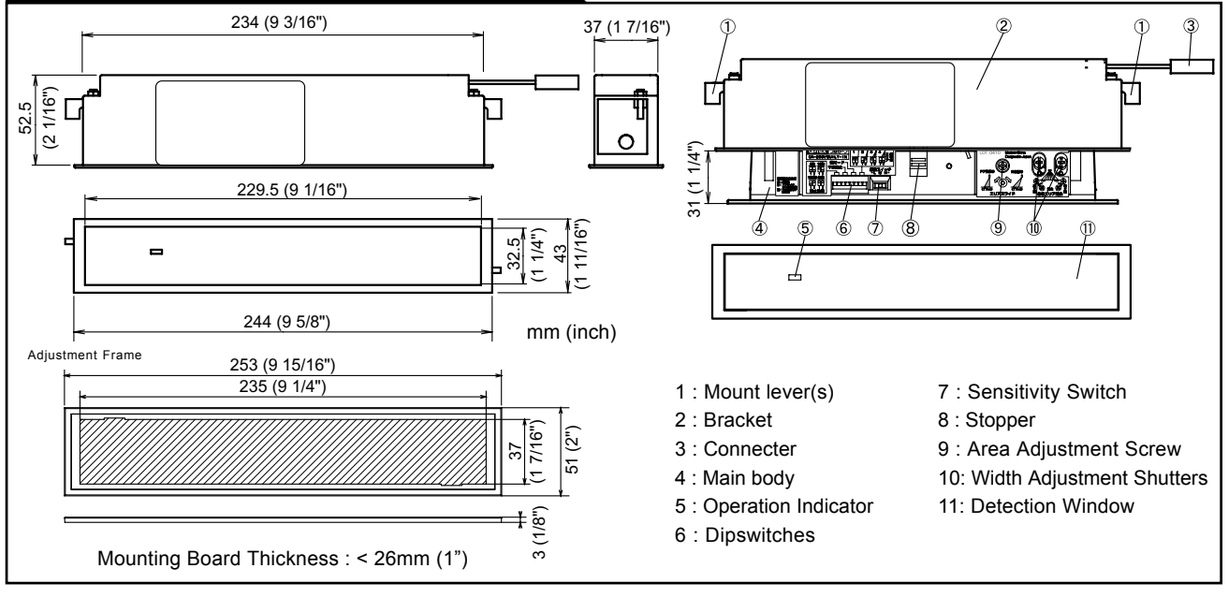
1. Follow the instructions (especially **Note**) in this Operation Manual when installing and adjusting the sensor.
2. When setting the sensor's area pattern, make sure there is no traffic around the installation site.
3. Before turning the power on, check the wiring to prevent damage or malfunction of equipment that is connected to the sensor.
4. Do not wash, disassemble, rebuild or repair the sensor by yourself; otherwise it may cause electric shock or breakdown of the sensor.
5. Only use the sensor as specified in the supplied instructions.
6. Be sure to install the sensor in accordance with the local laws and standards of your country.
7. Before leaving the jobsite, be sure that this sensor is operating properly and instruct the building owner/operator on proper operation of the door and this sensor.

SPECIFICATIONS

Model	: MIRAGE
Cover color type	: Black
Mounting Height	: 3.0m (9'10") Max.
Detection Area	: See "Detection Area"
Detection Method	: Active Infrared Reflection Method
Detection Angle Adjustments	: ±4° adjustable by 1° every one click (Deep / Shallow)
Detection Width Adjustments	: 4 type selectable with Adjustment Shutters (Not angle adjustment)
Power Supply	: 12 to 30V AC / DC
Current Draw	: 200mA Max. (At 12V AC)
Operation Indicator	: Green / Stand-by Red / 1st Row Detection Active Orange / Other Row Detection Active
Output	: "Form C" relay 50V 0.3A Max. (Resistance Load)
Relay Hold Time	: 0.5 sec.
Response Time	: < 0.3 sec.
Operating Temperature	: -20°C to +55°C (-4°F to +131°F)
Weight	: 260g (9.2oz)
Accessories	: 1 Cable 3m (9'10") 1 Operation Manual 1 Area Adjustment Tool 1 Adjustment Frame

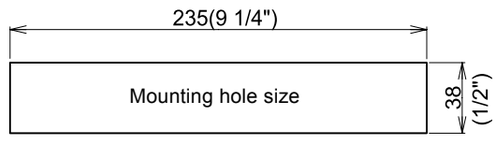
* The specifications herein are subject to change without prior notice due to improvements.

OUTER DIMENSIONS



INSTALLATION

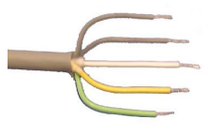
1



Drill the mounting hole either under the header or ceiling.

Note
Be sure that the mounting position is within the value of those in "SPECIFICATION".

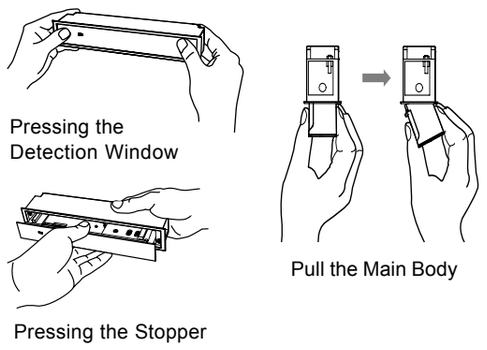
2 The cable is arranged to connect to the door controller properly as shown below.



Grey, Grey } Power Supply 12 to 30V AC / DC
White : COM.
Yellow : N.O.
Green : N.C.

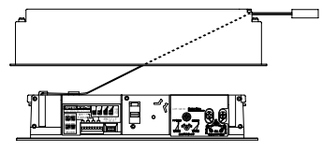
Note
Connect the cable when main power is turned off.

3

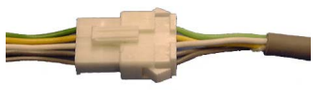


By pressing the Detection Window as shown, the Main Body appears. Then remove the Main Body from the Bracket by pressing the Stopper (OUTER DIMENSIONS 8).

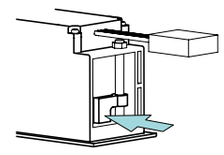
4 **Note**
The cable between the Main Body and the Bracket cannot be removed.
Do not pull the cable strongly, otherwise it may be damaged.



5 Plug the Connector for the sensor to that for the cable.

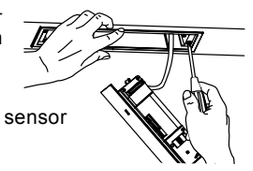


6 Fold the Mounting Levers inside.
Point the arrow sign inside of the bracket to the doorside, then insert the bracket into the mounting hole.

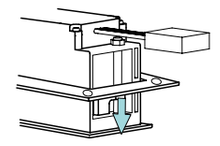


7 Fix the Bracket in the mounting hole with the screws on both sides.

Note
Be sure to fix firmly, otherwise the sensor may fall off resulting in injures.



8 When the mounting holes are exposed, use the adjustment frame.

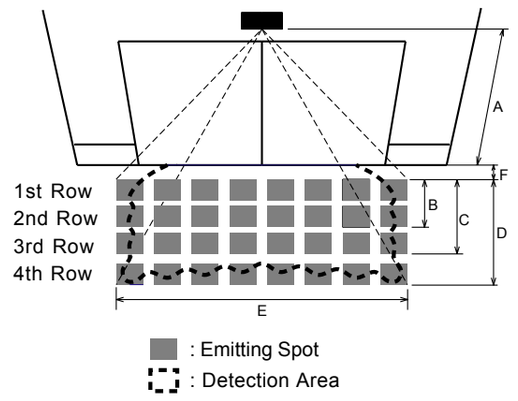


9 Place the Main Body on the Bracket referring to the "ADJUSTMENT".
Supply power to the sensor. Adjust the detection area and set the various Switches.

Note
Make sure that you connect the cable correctly to the Control Unit of the door before turning the power on.

DETECTION AREA

Detection Areas are shown in the figure below.



Provided Detection Row type	1st	2nd	3rd	4th
Presence Detection	○	○	×	×
Motion Detection	○	○	○	○

After adjustment , turn the power off and on again, be sure to walk-test all of detection areas.

* The values of the chart blow is of the Emitting Spots , but not of the Detection Area.

The actual Detection Area may become smaller depending on the ambiance light and the color / material of object and the floor as well as the entry speed of object.

[m]

A	2.00	2.20	2.50	2.70	3.00
B	0.42	0.47	0.53	0.57	0.64
C	0.85	0.94	1.07	1.15	1.28
D	1.50	1.65	1.88	2.03	2.25
E	2.07	2.28	2.59	2.80	3.11
F	0.21	0.23	0.26	0.28	0.31

[feet , inch]

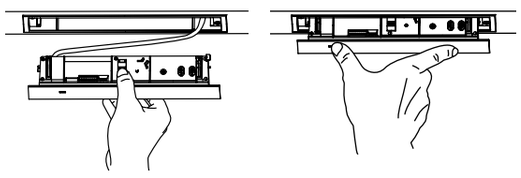
A	6' 6 3/4"	7' 2 5/8"	8' 2 7/16"	8' 10 5/16"	9' 10 1/8"
B	1' 4 11/16"	1' 6 3/8"	1' 8 7/8"	1' 10 1/2"	2' 1"
C	2' 9 5/8"	3' 15/16"	3' 6"	3' 9 3/8"	4' 2 3/8"
D	4' 11 1/8"	5' 5 1/16"	6' 1 7/8"	6' 7 13/16"	7' 4 11/16"
E	6' 9 5/8"	7' 5 3/4"	8' 6"	9' 2 3/16"	10' 2 3/8"
F	8 1/8"	8 15/16"	10 3/16"	11"	1' 3/16

ADJUSTMENT

1 **Fixing and removing the Main Body**

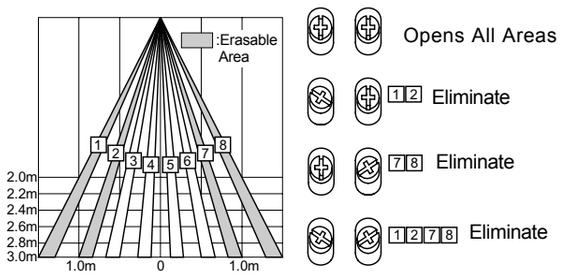
Place the Main Body in the Bracket, Paying attention to direction of the sensor.
Main body can be fixed in the Bracket when pushing the Detection Window fully.
Main Body (Setting part) appears when pushing the Detection Window again.

After adjustment, Check the operation when the Main Body is placed in the Bracket.



2 **Adjusting the Pattern Width**

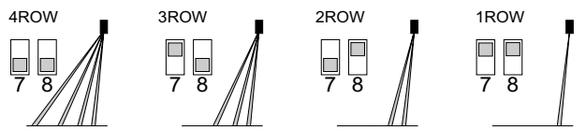
Setting the Width adjustment shutters



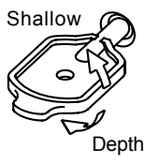
Note Setting the pattern for exact door opening may give a slow response to side approaching traffic.

3 **Adjusting the Pattern Depth**

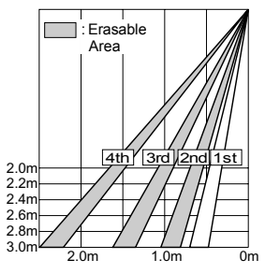
Setting the Row with the Dipswitch 7 & 8.



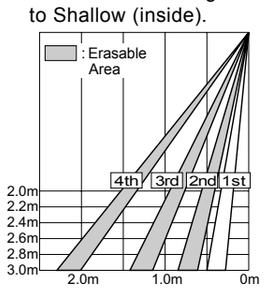
Adjusting the Depth Angle between -4° to 4° (1° per click).



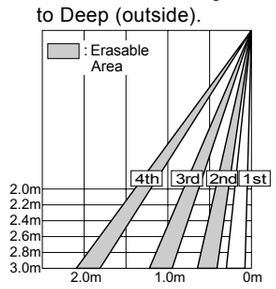
Pattern when Standard



Pattern when changed -4° to Shallow (inside).

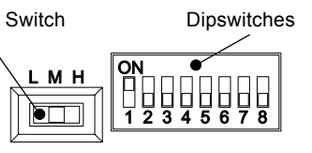


Pattern when changed 4° to Deep (outside).



Note Set the pattern for actual traffic. It may cause slow activation for the traffic from the front, when the Row is eliminated.

4 **Setting of Sensitivity Switch and Dipswitches**



Setting the Sensitivity

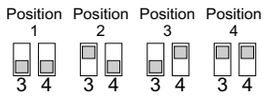
Normally set to "M".
"H" increases the sensitivity and "L" lowers the sensitivity.

Setting the Presence timer

1st Row and 2nd Row from door provide the presence detection.
(1) Select the presence detection time.
(2) Turn the power off and on again. Otherwise it may leave door open for the duration of the presence time set.
(3) After making sure that the door closes, wait for 10 seconds before entering the detection area to set the Presence timer.

Setting the Frequency Function (interference Prevention)

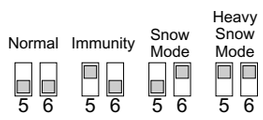
Four different frequencies can be set by adjusting the Dipswitch 3 and 4.



Note When two or more sensors are installed close to each other, it is possible that they interfere. When that happens, change the Frequency.

Setting the Snow mode

Set the Dipswitch 5 and 6 to snow mode , if the sensor is used in a region with snow or a lot of insects.



CHECKING

Check the operation according to the chart below.

Entry motion (image)	Power OFF	Outside the Detection area	Entry into 3rd or 4th Row	Entry into 2nd Row	Entry into 1st Row	Outside the Detection area
Sensor status	Power OFF	Stand-by	Motion Detecion Active	Motion or Presence Detection Active		Stand-by
Operation indicator	OFF	Green	Orange		Red	Green
Output	Yellow Green White	Yellow Green White	Yellow Green White			Yellow Green White

Note The door may open once after the power is switched on.

Inform the following items to the building owner/operator

1. When turning the power on, always walk-test the sensor pattern 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

Trouble	Possible Cause	Solution
Does not operate	Power supply is not adequate.	Adjust to stated voltage.
	Connection Failure.	Check the wiring and the connector.
Dose not operate consistently	Dirty detection window.	Wipe the detection window with a damp cloth (Do not use any cleaner or solvent).
	Sensitivity is Low.	Set the Sensitivity Switch "H".
Operates by itself (Ghosting)	There is an object that moves or emits light in the detection area. (Ex. plant, illumination etc...)	Remove the object.
	Vibration of the header.	Secure the header. Or set the Sensitivity Switch "L".
	Sensitivity is high.	Set the Sensitivity Switch "L".
	Waterdrops on detection window.	Install in a place keeping the waterdrops off. OR use a rain-cover (Optional).
	Detection area has interfered the area of another sensor.	Set the different frequency position each other.
	The detection 1st row spots are overlapping with the door / header.	Adjust the detection area to deep (outside).
	There is an reflected object in the detection area. Solar light reflects.	Remove the object.
	There was a puddle left by rain or snow. The floor has gotten wet.	This sensor is equipped with the anti-malfunction. However, pay attention when installing as malfunction may occur under the left conditions.
	The exhaust of the car and the fog penetrate into the detection area.	
Door stay open or closed	Presence timer is Infinity. There was an abrupt condition change in the detection area.	Turn the power off and on again.

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.

OPTEX

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