INSTALLATION & OPERATION GUIDE

Strand

Vision.net

Ceiling Occupancy Sensor

Models: 63059CM / 63059HB

Strand Lighting - Dallas
10911 Petal Street
Dallas, TX 75238
Tel: 214-647-7880
Fax: 214-647-8031

Strand Lighting - New York
267 5th Ave, 4th Floor
New York, NY 10016
Tel: 212-213-8219
Fax: 212-532-2593

Strand Lighting - Asia Limited
Room 6-10, 20/F Delta House 3 On Yiu Street
Shatin, N.T. Hong Kong
Tel: + 852 2757 3033
Fax: + 852 2757 1767

Strand Selecon - Auckland
19-21 Kawana Street
Northcote, Auckland 0627
New Zealand
Tel: +64 9 481 0100
Fax: +64 9 481 0101

Strand Lighting - Europe
Marssteden 152
Enschede 7547 TD
The Netherlands
Tel: +31 53 4500424
Fax: +31 53 4500425

Website:
www.strandlighting.com

Document Number: 2-450207-010
Version as of: October 14, 2010

Vision.net Ceiling Occupancy Sensor Installation & Operation Guide

Important Safeguards

When using electrical equipment, basic safety precautions should always be followed including the following:

a. **READ AND FOLLOW ALL SAFETY INSTRUCTIONS**.
b. Do not use outdoors.
c. Do not mount near gas or electric heaters.
d. Equipment should be mounted in locations and at heights where it will not readily be subjected to tampering by unauthorized personnel.
e. The use of accessory equipment not recommended by the manufacturer may cause an unsafe condition.
f. Do not use this equipment for other than intended use.
g. Refer service to qualified personnel.

SAVE THESE INSTRUCTIONS.

WARNING: You must have access to a main circuit breaker or other power disconnect device before installing any wiring. Be sure that power is disconnected by removing fuses or turning the main circuit breaker off before installation. Installing the device with power on may expose you to dangerous voltage and damage the device. A qualified electrician must perform this installation.

WARNING: Refer to National Electrical Code® and local codes for cable specifications. Failure to use proper cable can result in damage to equipment or danger to persons.

CAUTION: Wire openings MUST have fittings or lining to protect wires/cables from damage. Use 90° C copper wire only!

TABLE OF CONTENTS

PREFACE

About this Guide

The document provides programming and installation instructions for the following Vision.net products:

- 63059CM - Vision.net Ceiling Occupancy Sensor
- 63059HB - Vision.net High Bay Ceiling Occupancy Sensor

Please read all instructions before installing or using this product. *Retain this guide for future reference*.

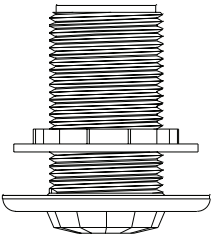
IMPORTANT INFORMATION. PLEASE READ!

This unit is intended for installation in accordance with the National Electric Code® and local regulations. It is also intended for permanent installation in indoor applications only. Before any electrical work is performed, disconnect power at the circuit breaker or remove the fuse to avoid shock or damage to the control. It is recommended that a qualified electrician perform this installation.

Description

Vision.net Ceiling Occupancy Sensors (63059CM, 63059HB)

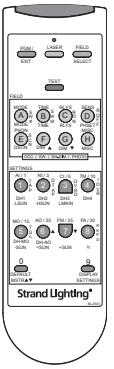
The Vision.net Low-Voltage Ceiling Occupancy Sensor is a multiple technology, occupancy-sensing low-voltage device that is designed for use with a Vision.net architectural control system. Each sensor may be programmed to act as a Vision.net button (like Preset, Preset/Off, Toggle, Smart, Console) providing the ability to execute any Vision.net command across the architectural control network.



Sensor

Vision.net Programmer Remote (63063)

The Vision.net Programmer Remote is an optional accessory which provides quick and easy access to the full range of Occupancy Sensor features.



Remote

INSTALLATION

Mounting

The Ceiling Occupancy Sensor may be mounted in a junction box or directly to the ceiling depending on local code. The unit must have an unobstructed view of the area to be monitored. If the unit is subject to "false triggering" from activity beyond the desired area of coverage, a portion of the lens may be masked to achieve the desired response. Simply install the Field of View Customizing Template (provided).

To install:

Step 1. Check for any obstructions located behind the desired mounting location.

Step 2. Drill 1-1/2" hole in the desired mounting location.

Step 3. Place Ceiling Occupancy Sensor through the hole and secure with supplied washer and locknut.

Step 4. The lens may be removed to install the Field of View Customizing Template. Simply rotate the lens cover slightly counter-clockwise and remove.

Step 5. Trim the template for the desired effect and install on interior of the lens. (Careful placement of the template is necessary to ensure proper function.)

Step 6. Replace lens cover and verify that the unit is securely mounted.

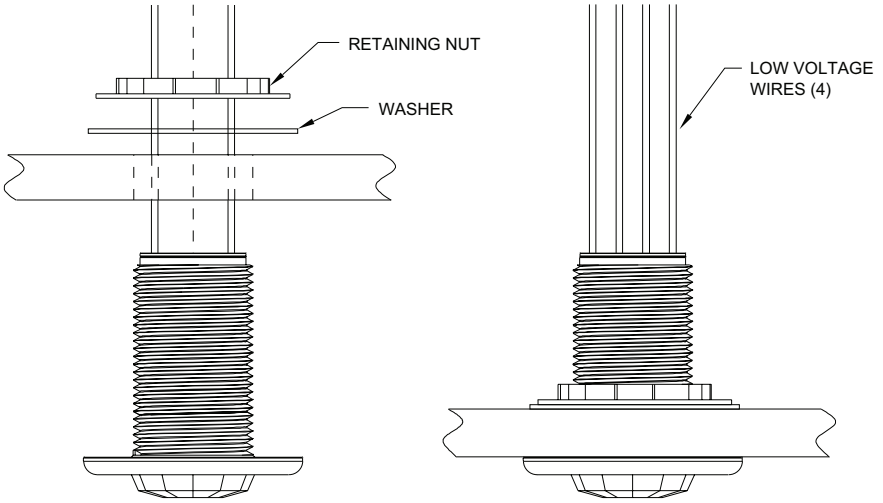


Figure 1: Installing Ceiling Occupancy Sensor

Wiring

Ceiling Occupancy Sensors should be connected to an AV Interface Board (63065) or to the sensor port of a Vision.net control station.

To connect wiring:

Step 1. If conduit is required by local code, route low voltage wiring into adjacent junction box and secure with included 1/2" nipple.

Step 2. Connect low voltage network to AV Interface Board with (4) #18 AWG wires according to the wiring diagram below.

Note: Up to eight (8) Occupancy Sensors may be linked in parallel.

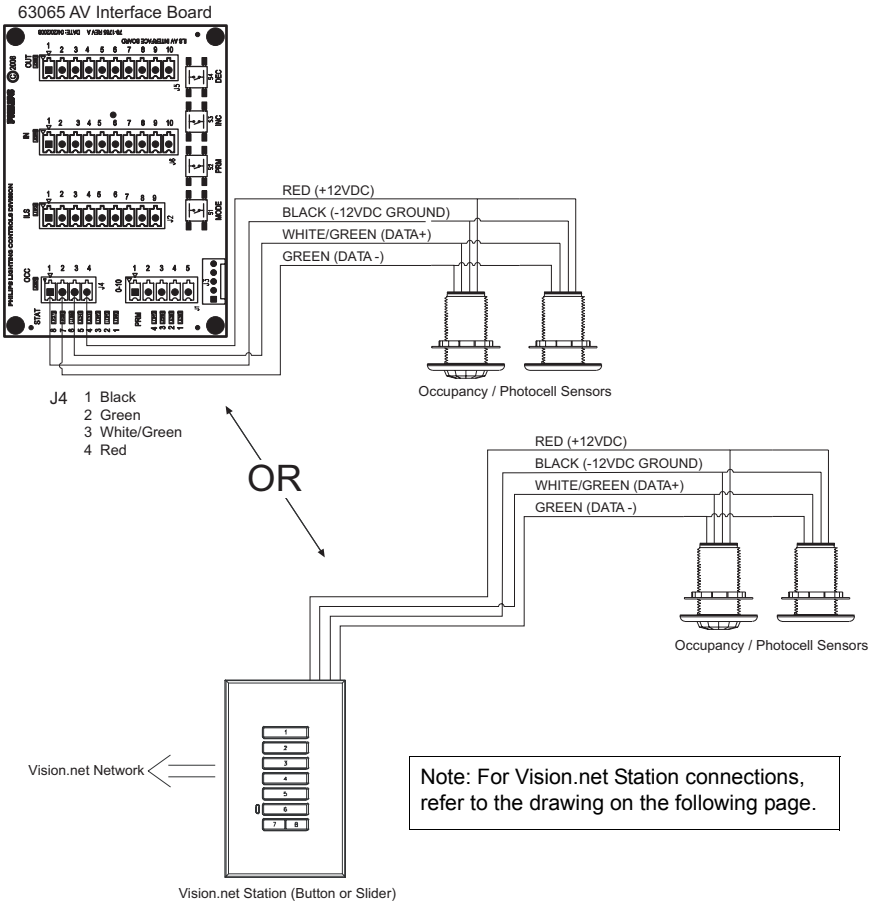


Figure 2: Connecting Low Voltage Wiring

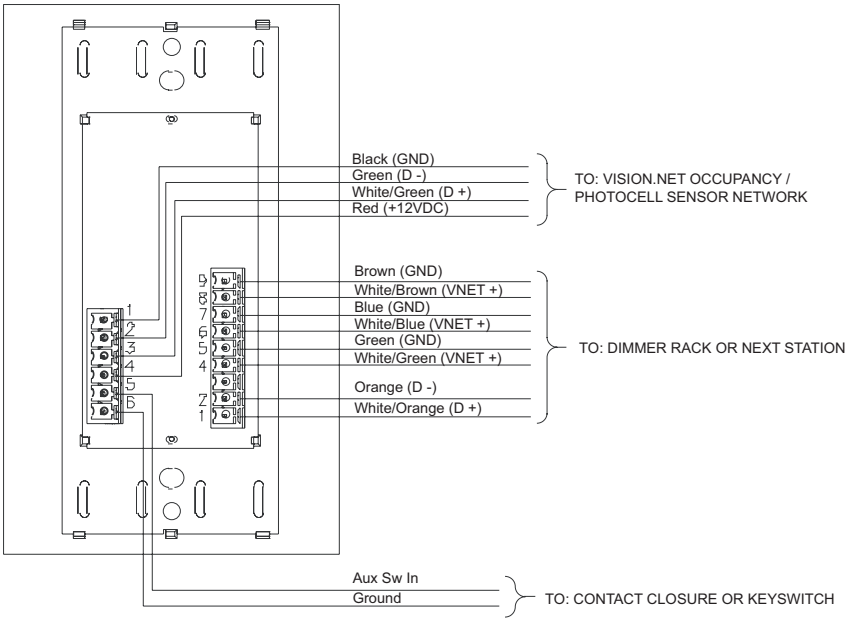


Figure 3: Vision.net Station Connections

SENSOR PROGRAMMING WITH VISION.NET DESIGNER SOFTWARE

Ceiling Occupancy sensors may be programmed with Strand Lighting's Vision.net Designer software, as part of a Vision.net architectural controls system. This software (and its manual) may be downloaded from www.strandlighting.com.

SENSOR PROGRAMMING WITH REMOTE

A Vision.net Occupancy Sensor Remote Programmer (optional accessory) can be used to program the unit(s). Please note that configuration changes made with the Remote Programmer will not be saved in the Vision.net Designer software configuration file.

To enter Programming Mode:

Step 1. Aim the remote at the Ceiling Occupancy Sensor and press the PGM (Program) button. All affected sensors will blink red.

Step 2. You may now select which sensor you would like to program by "laser painting" it with the remote laser. Press and Hold the LASER button and allow the Laser beam "hit" the sensor you want to select. Once the signal is received, the sensor will illuminate green and is ready to receive commands.

To change sensor parameters, first select the "field" that you would like to change. Programming fields include: Mode, Time, A/V Interface, Sensitivity, and Photocell Sensitivity. The following sections will explain each mode.

To change the selected device(s) to be programmed:

To select devices for programming, use the FIELD/SELECT button or individually select them using the LASER button. The FIELD/SELECT feature allows selection of devices to be programmed (singular occupancy, all occupancy, switches, or dimmers/photocells). The devices always starts in Single Occupancy Mode.

Step 1. Enter Programming Mode. (Refer to previous section.)

Step 2. Press FIELD/SELECT button to toggle through modes:

Blue = Single Occupancy Sensor
Blue/Red = All Occupancy Sensors on network
Red or Green = *reserved for future use*

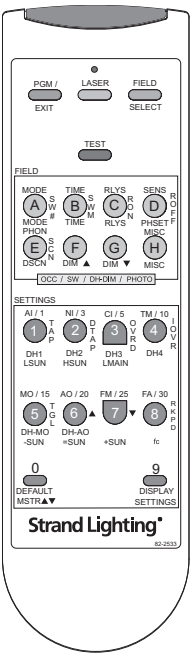


Figure 4: Remote Layout

Note: When the sensor is blue or blue/red, additional occupancy sensors may be selected or removed by "laser painting" them with the laser (LASER button).

PROGRAMMING CEILING OCCUPANCY SENSOR

Ceiling Occupancy Sensor programming is the same for both single, multiple and all sensors on the network. Programming selections will affect all illuminated sensors.

Mode

The MODE field allows access to intelligence level, Automatic or Manual On, and reset to factory default.

The Occupancy Sensor time-off delay can operate in four different modes. The default is Fixed Time Mode, which means the fixed time delay (as set by the user) is always used. The other three modes allow the sensor to automatically adjust to the space and occupancy patterns, differing in how aggressive the sensor is with saving energy. Conservative Mode will automatically adjust the time-off between 5 to 30 minutes. Normal Mode will automatically adjust the time-off between 3 and 15 minutes for enhanced energy savings. Aggressive Mode will automatically adjust the time-off delay between 1 minute and 3 minutes for maximum energy savings.

The Occupancy Sensor can be configured to operate in either a Manual On or Automatic On Mode. In Manual On Mode, the lights will only turn on when a designated switch activates the relay. The lights will turn off automatically when vacancy is detected for the time delay period. In the Automatic On Mode, the lights will automatically turn on as soon as occupancy is detected. The lights will turn off when either the designated switch deactivates the relay or automatically when vacancy is detected for the time delay

To change the mode of the sensor:

Step 1. Enter Programming Mode (refer to page 7.)

Step 2. Press MODE button.

Step 3. Select intelligence level:

Button 1	Aggressive Intelligence	
Button 2	Normal Intelligence	
Button 3	Conservative Intelligence	
Button 4	Fixed Timing	* Factory Default

Step 4. Select activation mode:

Button 5	Manual ON	
Button 6	Automatic ON	* Factory Default
Button 7	Factory Default Manual ON	Press and hold for 3 or more seconds to factory default *all* settings.
Button 8	Factory Default Automatic ON	
Button 0	Factory Default	* Fixed Timing & Automatic

Exit programming by pressing the PGM (Program) button or continue with programming by selecting another field.

Time

The TIME field allows selection of the time-out period after the sensor no longer detects occupancy. Periods may be selected from 1 to 30 minutes.

Note: Increasing the time delay will lower the possibility of a false Off trigger, but will also lower the energy savings.

To change the time of the sensor:

Step 1. Enter Programming Mode (refer to page 7.)

Step 2. Press TIME button.

Step 3. Select time-out period by pressing the appropriate button.

Exit programming by pressing the PGM (Program) button or continue with programming by selecting another field.

Button 1	1 Minute	
Button 2	3 Minutes	
Button 3	5 Minutes	
Button 4	10 Minutes	
Button 5	15 Minutes	* Factory Default
Button 6	20 Minutes	
Button 7	25 Minutes	
Button 8	30 Minutes	
Button 0	Factory Default	* 15 minutes

Relays Select

The RLYS (Relays) Select Button is used to program which Relays are controlled by the Occupancy Sensor (when used with Contact Relay Packs). One or more Relays can be programmed into the Sensor. The factory default is All Relays (1-8). The Sensor can also be used to trigger a specific button on a connected keypad. When used with a Button Station, the Relay programmed into the Sensor will define which button on the keypad to activate. Detected motion will trigger the button 'Press On' action. The end of motion timeout will trigger the button "Release" action. When All Relays are selected (factory default), the connected keypad will trigger only Button 1. Only single Relay selects are allowed when triggering keypads.

To change the relay/button selection of the sensor:

Step 1. Enter Programming Mode (refer to page 7.)

Step 2. Press RLYS button.

Step 3. Select the button to be controlled by the sensor.

Button 1	Relay/Button #1	* Factory Default
Button 2	Relay/Button #2	* Factory Default
Button 3	Relay/Button #3	* Factory Default
Button 4	Relay/Button #4	* Factory Default
Button 5	Relay/Button #5	* Factory Default
Button 6	Relay/Button #6	* Factory Default
Button 7	Relay/Button #7	* Factory Default
Button 8	Relay/Button #8	* Factory Default
Button 0	Factory Default	* Current mode only

Exit programming by pressing the PGM (Program) button or continue with programming by selecting another field.

Sensitivity

Part of the superior performance of the Ceiling Occupancy Sensor involves the increased sensitivity of the sensor system. The three settings are Low, Medium, and High. Each application may be slightly different and the preferences of each user might be different. The default setting (Medium) will be adequate for most situations. The settings are described as follows:

Low: Lowest level of detection setting - when less detection is required - occupants are close to the sensor or movements within the space are more pronounced. This level may result in lights turning off with reduced activity.

Medium (default): Default setting - medium level of detection to fit most applications.

High: Highest level of detection - movements and activity within the space are less pronounced. This level increases the possibility of false triggering.

To change the sensitivity selection of the sensor:

Step 1. Enter Programming Mode (refer to page 7.)

Step 2. Press SENS button.

Step 3. Select the desired level of sensitivity.

Button 1	Low	
Button 2	Medium	* Factory Default
Button 3	High	
Button 0	Factory Default	* Medium

Exit programming by pressing the PGM (Program) button or continue with programming by selecting another field.

Photocell Sensitivity

There is a photo eye (photocell) in the sensor which can prevent the sensor from automatically turning on the lights if the light level in the room is already higher than a set level. This feature can be enabled or disabled - with the factory default being disabled.

The PHOTOCELL SENSITIVITY field allows selection of the internal photocells sensitivity levels, as well as disable.

To change the sensitivity selection of the photocell:

Step 1. Enter Programming Mode (refer to page 7.)

Step 2. Press PHON button.

Step 3. Select the desired level of sensitivity.

Button 1	Low Ambient	
Button 2	Low-Medium Ambient	
Button 3	Medium-Low Ambient	
Button 4	Medium Ambient	
Button 5	Medium-High Ambient	
Button 6	High-Medium Ambient	
Button 7	High Ambient	
Button 8	Disabled	* Factory Default
Button 0	Factory Default	* Disabled

To let the unit "capture" the present room ambient, press and hold button 8 for 3-4 seconds. The unit will turn off the lights, take a snapshot of the current room ambient, and then turn the lights back on.

Exit programming by pressing the PGM (Program) button or continue with programming by selecting another field.

Miscellaneous

The MISC field allows the audible buzzer and/or the complete occupancy sensor to be enabled or disabled.

To activate/deactivate the audible buzzer or entire occupancy sensor:

Step 1. Enter Programming Mode (refer to page 7.)

Step 2. Press MISC button.

Step 3. Select desired parameters:

Button 1	Enable Buzzer	* Factory Default
Button 2	Disable Buzzer	
Button 7	Enable Sensor	* Factory Default
Button 8	Disable Sensor	
Button 0	Factory Default	* Enable buzzer & sensor

Test

The Test feature allows testing of the system without having to wait extended periods of time for the loads to time out.

While in Test Mode, the timer functions at a rate of 1 second per 1 minute of decay. For example, a 30-minute time-out period would become a 30-second time-out period. There is a 10 second minimum.

During testing, the sensor will blink RED to indicate it is in the Test Mode, BLUE when it detects motion, and GREEN when it is timing out.

To enter Test Mode:

Step 1. Enter Programming Mode (refer to page 7.)

Step 2. Press TEST button. All sensors in Test Mode will blink red.

Step 3. Confirm all sensors, relays and switches are working properly.

Step 4. Press TEST button again to exit Test Mode.

Note: You may alternate between Test Mode and Programming Mode by simply pressing the TEST button anytime during the process.

Display

The Display feature allows the programmer to visually and audibly verify the programmed feature parameters.

To enter Display Mode:

Step 1. Enter Programming Mode (refer to page 7.)

Step 2. Select the field you wish to verify.

Step 3. Press DISPLAY SETTINGS button.

Step 4. Tap the button for each available setting for the chosen field. The sensor will blink RED indicating that the setting is not programmed for the sensor, or BLUE, indicating that the setting is programmed to the sensor.

Step 5. Press DISPLAY SETTINGS button again to exit.

Example: To see the time-out period of a sensor: Press TIME, then DISPLAY SETTINGS. Toggle through the time selections until the sensor blinks BLUE to indicate the programmed time-out period.

MANUAL CONFIGURATION

Using Programming Switches

There are two programming switches (buttons) on the Ceiling Occupancy Sensor which can be used to Display and Modify the Sensor's Settings. Programming Switch 2, the "Field" Button (turns on the Blue LED when pressed) is used to select the Field you wish to display or modify. Programming Switch 1, the "Setting" Button (turns on the Green LED when pressed) is used to set the value of the selected Field. By using both buttons, the Sensor can be manually configured for most applications.

To enter Manual Programming Mode:

Step 1. Unscrew Lens Cover on Ceiling Sensor to access manual programming buttons.

Step 2. Press and hold the Field Button for 3 seconds. After 3 seconds the Red LED will turn on indicating the unit is in the Manual Programming Mode. Release the button.

To exit Manual Programming Mode:

There are three ways to exit the Programming Mode.

- Keep tapping the Field Button until Ceiling Sensor exits Programming Mode.
- Hold the Field Button for 3 seconds.
- Stop tapping the buttons. The Ceiling Sensor will exit the Programming Mode 1 minute after the last button press.

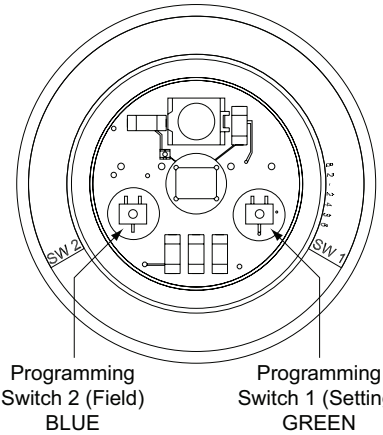


Figure 5: Manual Programming Buttons

LED Display

When in the Programming Mode, the LEDs display the following information:

- Red LED – Always On.
- Blue LED – Blinks 1 to 6 times to indicate the Field being displayed or set (see Field/ Setting Table on next page).
- Green LED – Blinks 1 to 9 times to indicate the present setting of the Field (see Field/ Setting Table on next page).

Field/Setting Table:

Blue Blinks - Field	Green Blinks - Setting
1 - Mode	1 - Aggressive Intelligence 2 - Normal Intelligence 3 - Conservative Intelligence 4- Fixed Timing*
2 - Manual/Automatic	1 - Manual, 2 - Automatic*
3 - Time	1 - 1 min, 2 - 3 min, 3 - 5 min, 4 - 10 min 5 - 15 min*, 6 - 20 min, 7 - 25 min, 8 - 30 min
5 - Sensitivity	1 - Low, 2 - Medium*, 3 - High
6 - Photocell On Sensitivity	1 - Low, ...7 High, 8 - Disabled*

* Factory Default

To set a Field:

Step 1. After entering the Programming Mode, the Field LED (Blue) will blink one time (Mode Set), display the present setting (Green blinks), and then repeat the pattern.

Step 2. Each press of the Field Button will select the next Field.

Step 3. Pressing the button after the last field will exit the Programming Mode.

Step 4. Once the Field is selected (proper number of Blue blinks), press the Setting Button one or more times to change the Field setting. Verify by observing the number of blinks.

Step 5. You can select the factory default by pressing and holding the Setting Button for 3 seconds.

Notes:

Each tap of the Setting Button will advance the setting by one. Example: Three taps sets the Field setting to 3 (taps must be less then 2 seconds apart).

After 2 or more seconds following the last tap, the Setting Button will reset back to 1 with the next tap. Example: Three taps, delay of 2 or more seconds, and then two taps will set the Field setting to 2.

To set Factory Default for All Fields:

When entering the Programming Mode, instead of holding the Field Button for 3 seconds, hold it for 10 seconds. After 10 seconds the Sensor will reset the Fields back to Factory Default, buzz long, and exit the Programming Mode.

TROUBLESHOOTING GUIDE

The following troubleshooting guide addresses common issues.

Symptom	Cause	Correction
Lights do not come on either manually or automatically.	Lamp(s) are burned out or missing.	Replace lamp(s) in fixture(s).
	Circuit breaker if Off.	Turn On circuit breaker.
Lights do not come on automatically.	Sensor is in Manual Mode.	Use Manual Mode if local or installation requires.
		Reconfigure sensor to Automatic Mode, if allowed.
Lights are On all the time.	Sensor sensitivity setting not appropriate.	Lower sensor sensitivity.
	Wire connections are faulty.	Recheck all wire connections. IMPORTANT! Turn off circuit breaker before servicing.
	Shorted or damaged device.	Replace sensor with new unit.
Remote does not turn on lights.	Wire connections are faulty.	Recheck all wire connections. IMPORTANT! Turn off circuit breaker before servicing.
Occupancy outside the desired space triggers sensor.	Non-ideal placement or no mask is being used.	Use proper masking to mask unwanted areas.
	Sensor sensitivity setting not appropriate.	Lower sensitivity setting.
No audible warnings before lights turn off.	Audible warning is disabled.	Enable audible warning tones.
Lights turn off, even though room is occupied.	Insufficient movement, frequency or amount.	Increase Time Out or increase sensor sensitivity.
Lights remain on too long when room is unoccupied.	Time Off delay too long.	Decrease Time Off delay or set Logic/Timer Mode accordingly.

NOTES

Strand Lighting
Dallas
10911 Petal Street
Dallas, TX 75238
Tel: 214-647-7880
Fax: 214-647-8031

Strand Lighting
New York
267 5th Ave, 4th Floor
New York, NY 10016
Tel: 212-213-8219
Fax: 212-532-2593

Strand Lighting Asia Limited
Room 6-10,
20/F Delta House 3 On Yiu Street
Shatin, N.T. Hong Kong
Tel: + 852 2757 3033
Fax: + 852 2757 1767

Strand Selecon
Auckland
19-21 Kawana Street
Northcote, Auckland 0627
New Zealand
Tel: +64 9 481 0100
Fax: +64 9 481 0101

Strand Lighting
Europe
Marssteden 152
Enschede 7547 TD
The Netherlands
Tel: +31 53 4500424
Fax: +31 53 4500425

www.strandlighting.com

Part No. 2-450207-010