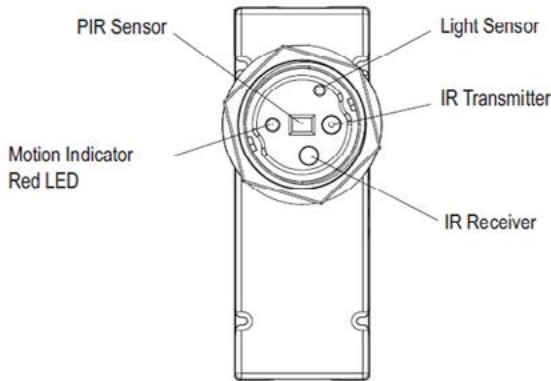


**PIR OCCUPANCY SENSOR**  
**FSP-211**



**PRODUCT DESCRIPTION:**

The FSP-211 is a motion sensor that dims lighting from high to low based on movement. This slim, low-profile sensor is designed for installation inside the bottom of a light fixture body. The PIR lens module connects to the FSP-211 through a 1.30" diameter hole in the bottom of the fixture.

The sensors use passive infrared (PIR) sensing technology that reacts to changes in infrared energy (moving body heat) within the coverage area. Once the sensor stops detecting movement and the time delay elapses lights will go from high to low mode and eventually to an OFF position if it is desired. Sensors must directly "see" motion of a person or moving object to detect them, so careful consideration must be given to sensor luminaire placement and lens selection. Avoid placing the sensor where obstructions may block the sensor's line of sight.

**FEATURES:**

- Fully adjustable high and low dimmed light levels; optional dusk to dawn control
- Designed for LED fixtures; rated for extreme temperatures and up to 200,000 on/off cycles
- Hold off setpoint with automatic calibration option for convenience and added energy savings
- Adjustable via handheld wireless configuration tool
- IP66 rated with choice of lenses for wet and outdoor locations, and mounting heights from 8' to 40'

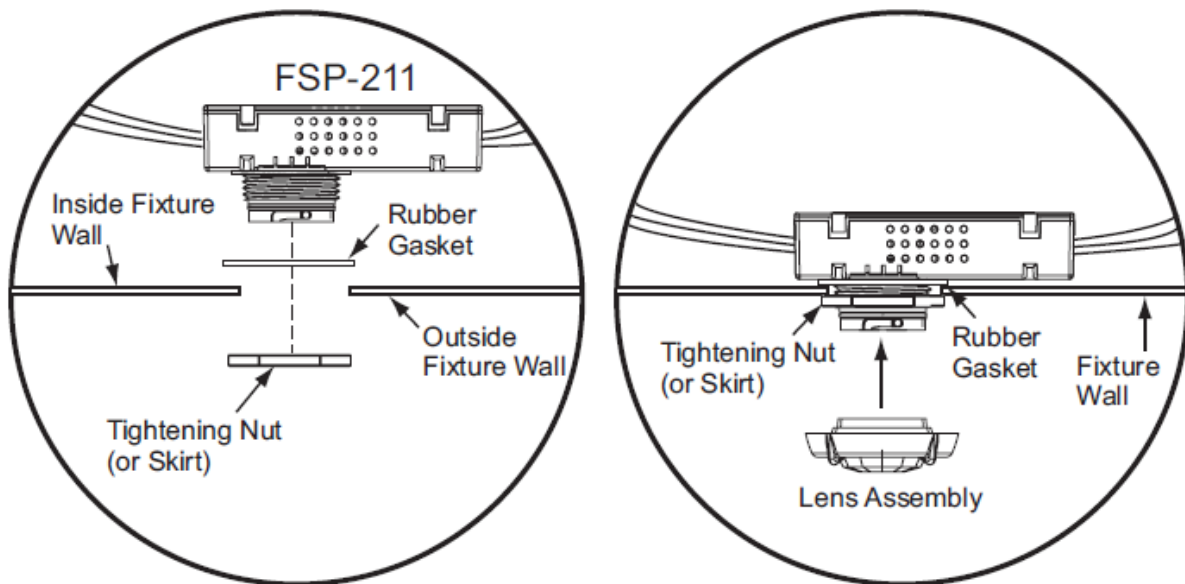
ITEM NUMBER	ORDER CODE	ITEM DESCRIPTION
FSP-211	102183	LINE VOLTAGE 120/277V HIGH/LOW/OFF PIR FIXTURE INTEGRATED OUTDOOR OCCUPANCY/DAYLIGHT SENSOR
FSP-L3	102186	360DEG LENS, MAX COVERAGE 40FT DIAMETER @ 20FT MOUNTING HEIGHT, WHITE (FOR USE WITH FSP-211 SENSORS)
FSP-L4	102187	360DEG LENS, MAX COVERAGE 60FT DIAMETER @ 40FT MOUNTING HEIGHT, WHITE (FOR USE WITH FSP-211 SENSORS)
FSP-L7	102188	360DEG LENS, MAX COVERAGE 100FT DIAMETER @ 40FT MOUNTING HEIGHT, WHITE (FOR USE WITH FSP-211 SENSORS)
FSIR-100	102184	REMOTE HANDHELD CONFIGURATION TOOL (FOR USE WITH FSP-211 SENSORS)

**SPECIFICATION:**

SPECIFICATION		FSP-211	
SPECIFICATION	DETAILS		
VOLTAGE	120V/277V, 50/60Hz	UL/UL LISTED	
	230-240V, 50/60Hz	SINGLE PHASE: TUV, CE	
MAX LOAD RATINGS	@120V	800W	
	@277V	1200W	
	@230-240V	300W	
WIRING TERMINALS	LINE VOLTAGE	14AWG-18AWG	
	LOW VOLTAGE	18AWG-20AWG	
OPERATING TEMPERATURE	-40°F (-40°C) to 167°F (75°C)		
DIMENSIONS	COLLAR	1.30" DIA	
	COLLAR HEIGHT	0.64"	
	BODY	1.38" x 3.8" x 0.9"	
WEIGHT	2.8 OZ		
COVERAGE	FSP-L2 LENS @ 8FT	up to 44' DIA	
	FSP-L3 LENS @20FT	up to 40' DIA	
	FSP-L4 LENS @40FT	up to 40' DIA	
	FSP-L7 LENS @40FT	up to 100' DIA	
ADJUSTMENTS AND FEATURES	HIGH MODE	0V-10V	
	LOW MODE	0V-9.8V, OFF	
	TIME DELAY	30 SEC, 1 MIN-30MIN	
	CUT OFF	DISABLE, 1MIN-59MIN, 1HR-5HR	
	PHOTOCELL SETPOINT	1-250FC	
FACTORY DEFAULTS	HIGH MODE	10V	
	LOW MODE	1V	
	TIME DELAY	5 MIN	
	CUT OFF	1 HR	
	SENSITIVITY	MAX	

## INSTALLATION:

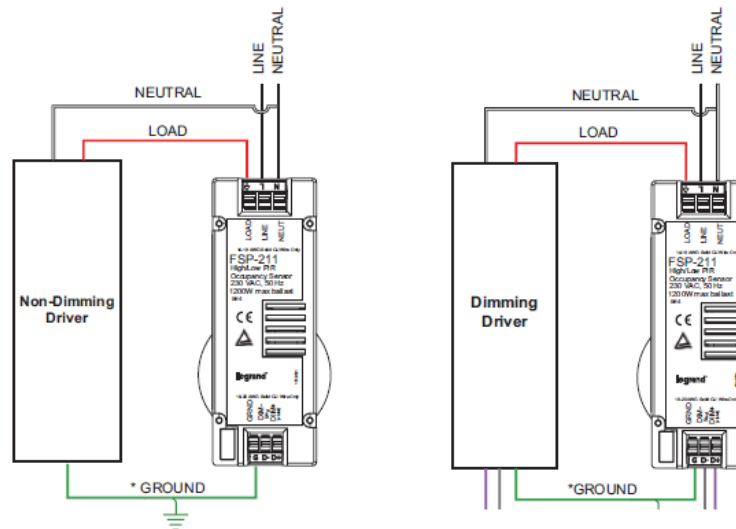
1. Determine an appropriate mounting location inside the light fixture minimizing the electric light contribution to the sensor's photocell. Allow a minimum distance of 0.2" (5.1mm) from the wiring end of the sensor to the wall of the fixture.
2. Drill a hole 1.30" (33.0mm) in diameter through the sheet metal in the bottom of the fixture.
3. Add the rubber gasket to the threaded collar, and install the sensor face down, parallel to the mounting surface. Ensure the rubber gasket touches the inside surface of the fixture. Install the plastic nut securely against the fixture to a torque of 25-30 in-lbs to ensure IP rating is maintained.
4. Align the locking features between the sensor and lens module and push the lens module forward until the o-ring seals firmly. Turn the lens module clockwise to ensure it locks in place.
5. Connect wires as shown in wiring diagram.
- 6. Restore power from the circuit breaker



**NOTE:** The Outside Fixture Wall thickness should be no greater than 0.125" (3.18mm) for optimal sensor mounting and security.

## WIRING:

**NOTE:** The FSP-211 must be grounded to ensure signal integrity, not for safety ground.



**OUTDOORS—USE AT THE EXPOSED SENSOR COLLAR PART ONLY WHEN INSTALLED AT THE SPECIFIC LOCATION PER INSTALLATION INSTRUCTIONS WITH A LISTED OUTDOOR ENCLOSURE.**

## SEQUENCE OF OPERATION

**Dimming:** When motion is detected within the sensor's coverage area, the sensor sends a signal to ramp the load up to the selectable High Mode level unless the ambient light level is higher than the selected setpoint. When no motion is detected for the duration of the time delay setting (factory preset at 5 minutes), the lights will go to the selectable Low Mode level based on the signal from the sensor. If desired, a cut off time delay (factory preset at 1 hour) will trigger to eventually turn the lights OFF.

**Non-dimming:** When motion is detected within the sensor's coverage area, the sensor sends a signal to turn the load ON unless the ambient light level is higher than the selected setpoint. When no motion is detected for the duration of the time delay setting (factory preset at 5 minutes), the lights will go OFF based on the signal from the sensor.

**Dusk to dawn control:** When photocell on/off is enabled, and the ambient light falls below the photocell setpoint, the sensor ramps the load up to the selectable High Mode level. If no motion is detected for the duration of the time delay setting (factory preset at 5 minutes), the lights will go to the selectable Low Mode level. If the cut off time delay is disabled, the load will remain on, at High or Low level, based on motion detection, until the ambient light increases above the photocell setpoint.

## OPTIONAL REMOTE CONTROL CONFIGURATION TOOL

The configuration process establishes the appropriate parameters for the FSP-211 operation. This is done through the FSIR-100 configuration tool. If no configuration steps are taken, the sensor will use its default parameter values.

The FSIR-100 Wireless IR Configuration Tool is a handheld tool for changing defaults and testing of FSP-211. It provides wireless access to the FSP-211 sensors for parameter changes and testing.

The FSIR-100 display shows menus and prompts to lead you through each process. The navigation pad provides a simple way to navigate through the customization fields.

Within a certain mounting height of the sensor, the FSIR-100 allows modification of the system without requiring ladders or tools; simply with a touch of a few buttons.

The FSIR-100 IR transceiver allows bi-directional communication between the FSP-211 and the FSIR-100 configuration tool. Simple menu screens let you see the current status of the sensor and make changes. It can change FSP-211 sensor parameters such as high/low mode, sensitivity, time delay, cut off, and more. With the FSIR-100 you can also establish and store FSP-211 parameter profiles.

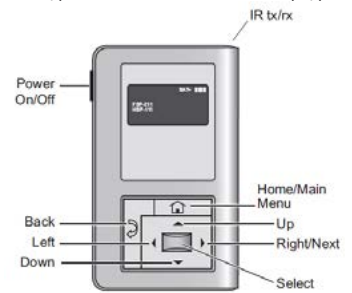
## BATTERIES

The FSIR-100 operates on three standard 1.5V AAA Alkaline batteries or three rechargeable AAA NiMH batteries. The battery status displays in the upper right corner of the display. Three bars next to BAT= indicates a full battery charge. A warning appears on the display when the battery level falls below a minimum acceptable level. To conserve battery power, the FSIR-100 automatically shuts off 10 minutes after the last key press.

- If communication is not successful, (if possible) move closer to the sensor.
- If still not successful, there may be too much IR interference from other sources. Programming the unit at night when there is no daylight available may be the only way to communicate with the sensor.

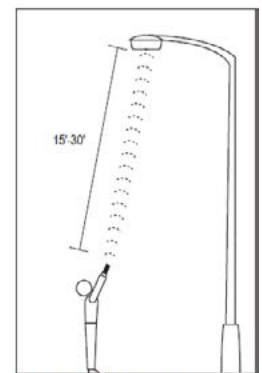
## NAVIGATION

Navigate from one field to another using (up) or (down) arrow keys. The active field is indicated by flashing (alternates) between yellow text on black background and black text on yellow background. Once active, use the Select button to move to a menu or function within the active field. Value fields are used to adjust parameter settings. They are shown in "less-than/greater-than" symbols: <value>. Once active, change them using (left) and (right) arrow keys. The right key increments and the left key decrements a value. Selections wrap-around if you continue to press the key beyond maximum or minimum values. Moving away from the value field overwrites the original value. The Home button takes you to the main menu. The Back button can be thought of as an undo function. It takes you back one screen. Changes that were in process prior to pressing the key are lost.



## IR COMMUNICATION

IR communication can be affected by the mounting height of the sensor and high ambient lighting such as direct daylight or electric light such as floodlights, and some halogen, fluorescent lamps, LED's. When trying to communicate with the FSP-211, be sure to be positioned under the sensor without any obstructions. Every time the commissioning tool establishes communication with the FSP-211, the controlled load will cycle.



\* Distance may vary depending on the lighting environment

## TROUBLESHOOTING

### Lights will not go to High Mode:

- Check all wire connections and verify the load and the ground wires are tightly secured.
- Make sure that the sensor is not obstructed.
- Check light level parameter, to find out the amount of light that the sensor is detecting. Cover the sensor lens to simulate darkness in the room. If the lights come ON, the setpoint needs to be adjusted. If set for minimum, more than 1 fc at the sensor of ambient light will cause the lights to be held OFF. See the new settings section for instructions.

### Lights will not go into Low Mode:

- The time delay can be set from a minimum of 30 seconds to a maximum of 30 minutes. Ensure that the time delay is set to the desired delay and that there is no movement within the sensor's view for that time period.
- To quickly test the unit operation, enable test mode and move out of the sensor's view. Lights should fade to low mode after 5 seconds.

### Lights will not turn OFF:

- Cut Off time may be set to "None."
- Ensure that the Cut Off is set to the desired time and that there is no movement within the sensor's view for that time period when the lights are in Low Mode.
- To quickly test the unit operation, enable test mode and move out of the sensor's view. Lights should fade to low mode after 5 seconds, and the OFF (if cut off is enabled) after 10 sec.

### Lights do not turn ON:

- Check for blinking red LED. If the LED blinks with long pulses, as opposed to short pulses, the sensor has reached its Hold Off setpoint or Photocell Light Level setpoint.

### Lights suddenly turn off and will not come back on:

- Check for blinking red LED. If the LED blinks with long pulses, as opposed to short pulses, the sensor has reached its Hold Off setpoint or Photocell Light Level setpoint.