HIGH/LOW/OFF PIR FIXTURE INTEGRATED OUTDOOR PHOTO/ MOTION SENSOR | FSP-2X1

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

FSP-211

FSP-201

FSP-221

Adjustable via handheld wireless configuration tool

IP66 rated with choice of lenses for wet and outdoor locations, and mounting heights from 8 ft. to 40 ft.

Adjustable time delay and cut off delay

Controls 0-10V dim-to-off LED drivers or ballasts

PEP eco PASS PORT®*

RoHS

Description

The FSP-2x1 sensors provide multi-level control based on motion and/or daylight contribution. They control 0-10 VDC LED drivers or dimming ballasts, as well as non-dimming ballasts and, with an FSP-Lx Lens, are rated for wet and cold locations. All control parameters are adjustable via a wireless configuration tool capable of storing and transmitting sensor profiles. The FSP-2x1 family is available in three different voltage configurations adding flexibility to your fixture design or project.

Operation

Typically, the sensor ramps lighting On to the selected High mode level when motion is detected and the ambient light level is below the hold off setpoint. After the sensor stops detecting movement and the time delay elapses, lights fade to the Low mode level. If there is no motion during the subsequent cut off time delay, the lights will turn Off. For dusk to dawn control, the integral photocell can switch the lights On and Off based on the ambient light level so that lighting remains on overnight even without motion detection.

Features

- Provides line voltage On/Off switching (FSP-211 and FSP-221)
- Works with 0-10V dimming ballasts or LED drivers
- High and low modes fully adjustable from 0 to 10V
- Time delay from 5 to 30 minutes
- Optional cut off delay
- Adjustable ramp up and fade down times
- Optional daylighting setpoints feature automatic calibration, or permit manual adjustment

Wireless Handheld Configuration Tool

Initial setup and subsequent sensor adjustments are made using a Wireless Handheld Configuration Tool (FSIR-100). This tool enables adjustment of parameters including high and low modes, sensitivity, time delay, cut off and more. The FSIR-100 is also used to initiate automatic calibration of the FSP-2x1B ambient light level setpoint. The setpoint is used to hold the controlled lighting off or at a low level when there is sufficient daylight. The wireless tool stores up to six sensor parameter profiles to speed configuration of multiple sensors.

Applications

The slim, low-profile design of the FSP-2x1 series is designed for installation inside the bottom of a light fixture body. When fully assembled and installed in an IP66-rated fixture, the sensor, and FSP-Lx lenses are IP66 outdoor rated. The sensor is ideal for areas such as parking facilities, gas stations, pedestrian pathways, and warehouses. A choice of four lenses ensures complete coverage for mounting heights up to 40'.

- Configuration tool stores six sensor profiles for quick setup and adjustment of multiple sensors
- Polycarbonate construction; flame retardant, UV resistant, impact resistant, recyclable
- UL244A and UL508; IP66 rated (when fully assembled and installed) for use in wet locations
- This product meets the materials restrictions of RoHS
- BAA/TAA-compliant models available

*PEP designation applies to FSP-211 only

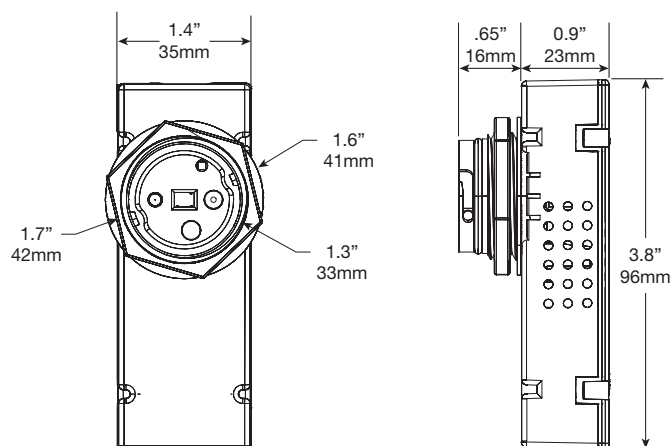| PROJECT		LOCATION/ TYPE	

Specifications

- Input voltage:
  - FSP-201, 12–32VDC
  - FSP-211, 120/277VAC, 230–240VAC (single phase); 50/60Hz
  - FSP-221, 100–347VAC (single phase) or 208/230/480VAC (phase-to-phase); 50/60Hz
- Load ratings (FSP-211, FSP-221):
  - @120VAC 0–800W tungsten, ballast, LED driver; 1/6hp motor
  - @230-240V 0–300W ballast, LED driver
  - @277VAC 0–1200W ballast, LED driver; 1/6hp motor
  - @347/480V 0–1200W ballast, LED driver; (FSP-321 only)
- Wiring Terminals (FSP-201, FSP-211 only)
  - Line Voltage: 14-18AWG
  - Low Voltage (for 0-10V Dimming): 18-20AWG
- Lead Length (FSP-221 only): 36" (91.44cm)
- Relay life rating: 200,000 cycles (120/277 VAC); 50,000 cycles (230 VAC)
- High mode: 0-10 V; default 10 V

- Low mode: Off, 0-9.8 V; default 1 V
- Time delay: 30 sec., 5-30 min.; default 5 min.
- Cut off delay: none, 1–60 min. 1-5 hrs.; default 1 hr.
- Sensitivity/service mode: low, med, max; on-fix, off-fix; default max
- Hold off setpoint: disable, 1–250 fc, auto; default disabled
- Photocell On/Off: 1–250 fc; default disabled
- Ramp up time: none, disable, 1–60 sec.; default disabled
- Fade down time: none, disable, 1–60 sec.; default disabled
- Operating temperature: -40 to 167°F (-40 to 75°C)
- Operating Humidity: 20–90%
- Weight: FSP-201, 2.12 oz (60 g); FSP-211, 2.8 oz (80 g); FSP-221, 5.5 oz (155 g)
- Collar Dimensions
  - Collar: 1.30" diameter (33.0mm)
  - Collar: height   0.64" (16.3mm)
- IP66, UL and cUL (E101196)
- TUV and CE compliant (FSP-201, FSP-211 only)
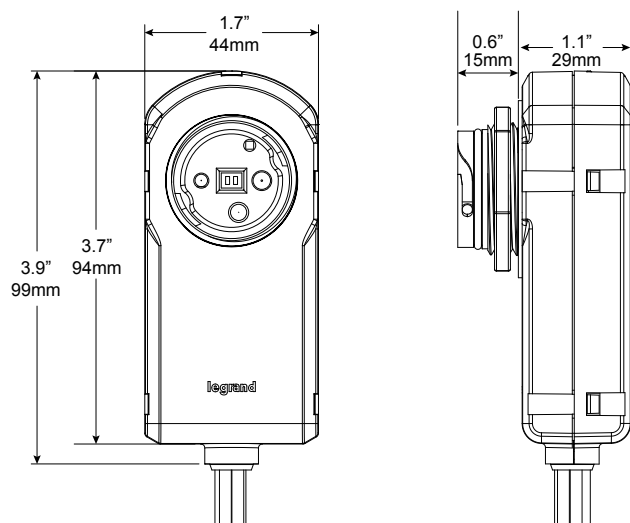- Five year warranty

Dimensions & Mounting
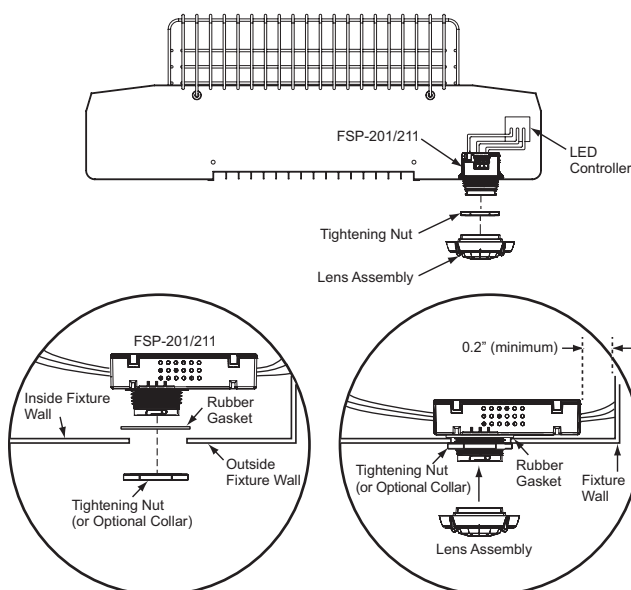
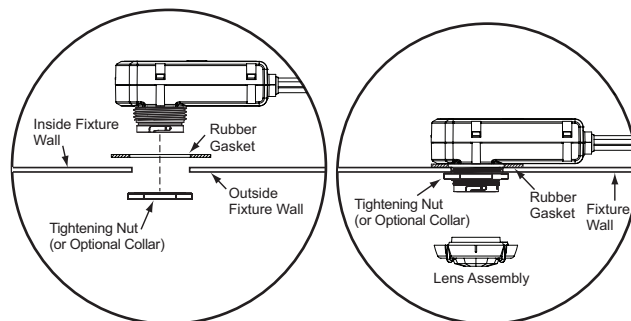### Sensor Dimensions

FSP-201/FSP-211

FSP-221

Sensor Mounting

An optional collar can be installed in place of the tightening nut on the FSP-2x1 An optional shroud with integrated lens can be installed instead of the collar and a regular lens. The shroud blocks high-angle light coming from the fixture, to improve photocell performance.
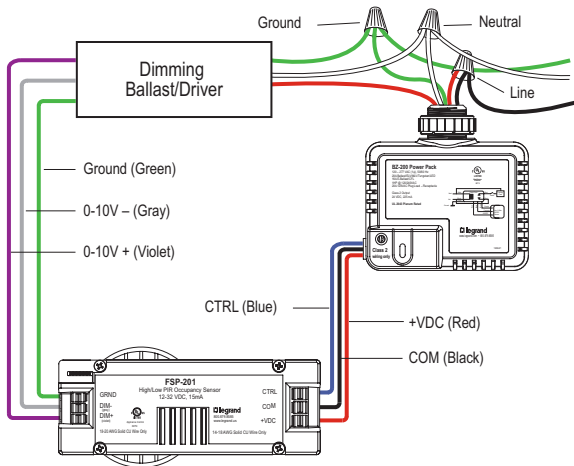
FSP-201/FSP-211

FSP-221

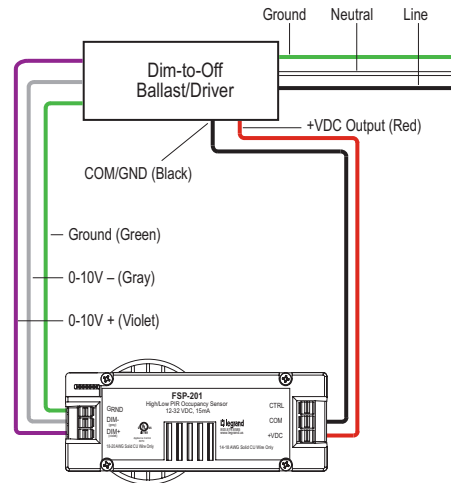The FSP-2x1 accommodates fixture wall thickness up to 0.125" (3.18mm)

Wiring

FSP-201 Wiring with Power Pack

Ground — Neutral — Line

Dimming Ballast/Driver

BZ-200 Power Pack

- Ground (Green)
- 0-10V – (Gray)
- 0-10V + (Violet)
- CTRL (Blue)
- +VDC (Red)
- COM (Black)

FSP-201
High/Low PIR Occupancy Sensor
12-32 VDC, 15mA
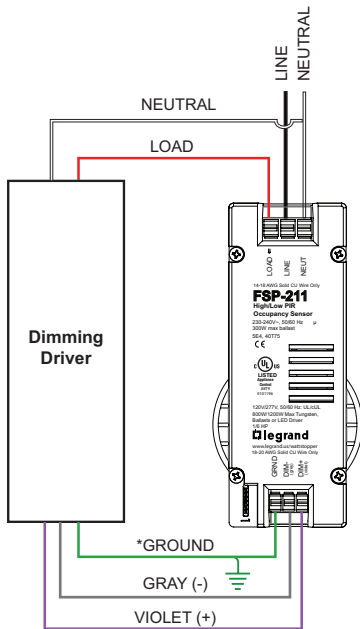
GRND | CTRL
DIM– | COM
DIM+ | +VDC

When used with traditional ballast, a power pack provides operating power to the FSP-201 and on/off control for the load.

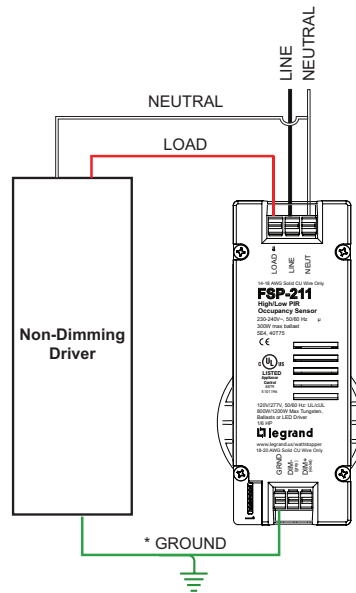## FSP-201 Wiring with Dim-to-Off Driver with Aux Input

Ground   Neutral   Line

Dim-to-Off Ballast/Driver

+VDC Output (Red)

COM/GND (Black)

- Ground (Green)
- 0-10V – (Gray)
- 0-10V + (Violet)

FSP-201
High/Low PIR Occupancy Sensor
12-32 VDC, 15mA

GRND | CTRL
DIM– | COM
DIM+ | +VDC

A power pack is not required when the driver or ballast includes a low voltage power supply and on/off control capability.
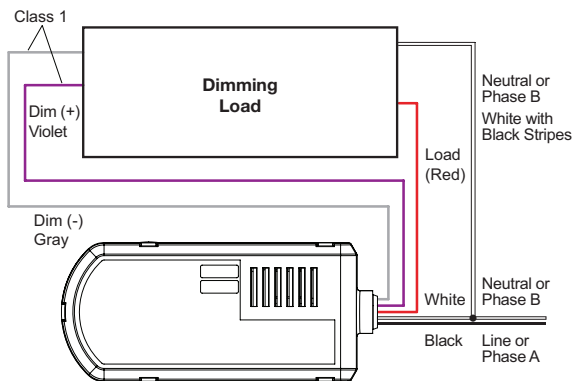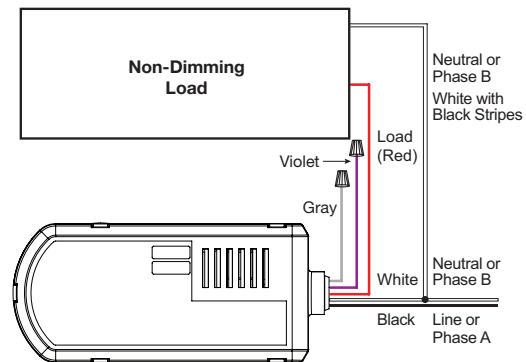
FSP-211 Dimming Wiring

LINE   NEUTRAL

NEUTRAL
LOAD

Dimming Driver

FSP-211
High/Low PIR
Occupancy Sensor
230-240V~, 50/60 Hz
300W max ballast
SE4, 40T75

*GROUND
GRAY (-)
VIOLET (+)

* The FSP-211 must be properly grounded.

FSP-211 Non-Dimming Wiring

LINE   NEUTRAL

NEUTRAL
LOAD

Non-Dimming Driver

FSP-211
High/Low PIR
Occupancy Sensor
230-240V~, 50/60 Hz
300W max ballast
SE4, 40T75

* GROUND

FSP-221 Dimming Wiring

Class 1

Dimming Load

Dim (+) Violet

Dim (-) Gray

Neutral or Phase B
White with Black Stripes

Load (Red)

White — Neutral or Phase B

Black — Line or Phase A

FSP-221 Non-Dimming Wiring

Non-Dimming Load

Neutral or Phase B
White with Black Stripes

Violet

Load (Red)

Gray

White — Neutral or Phase B

Black — Line or Phase A

Ordering Information

Catalog #		Color	Description	Input Voltage
☐	FSP-201	White	Fixture mount PIR motion sensor	12–32VDC
☐	FSP-201-U	White	Fixture mount PIR motion sensor, BAA/TAA compliant*	
☐	FSP-211	White	Fixture mount PIR motion sensor	120/277VAC, 50/60Hz or 230VAC, 50Hz
☐	FSP-211-U	White	Fixture mount PIR motion sensor, BAA/TAA compliant*	
☐	FSP-221	White	Fixture mount PIR motion sensor	100–347VAC (single phase) or 208/230/480VAC(phase-to-phase); 50/60Hz
☐	FSP-L2	White	360° lens, maximum coverage 48' diameter from 8' height	
☐	FSP-L2-B	Black		
☐	FSP-L2-BR	Brown		
☐	FSP-L2-G	Gray		
☐	FSP-L2-S	White	360° lens, maximum coverage 48' diameter from 8' height, with shroud; Minimizes high-angle light contribution to photocell	
☐	FSP-L3	White	360° lens, maximum coverage 40' diameter from 20' height	
☐	FSP-L3-B	Black		
☐	FSP-L3-BR	Brown		
☐	FSP-L3-G	Gray		
☐	FSP-L3-S	White	360° lens, maximum coverage 40' diameter from 20' height, with shroud; Minimizes high-angle light contribution to photocell	
☐	FSP-L7	White	360° lens, maximum coverage 100' diameter from 40' height	
☐	FSP-L7-B	Black		
☐	FSP-L7-BR	Brown		
☐	FSP-L7-G	Gray		
☐	FSP-L7-S	White	360° lens, maximum coverage 100' diameter from 40' height, with shroud; Minimizes high-angle light contribution to photocell	
☐	FSP-C1-W	White	Small collar, for use with FSP-L2 and FSP-L3 lenses (Optional aesthetic collar to transition from fixture housing to lens) Note: Not used with lenses that include shroud	
☐	FSP-C1-B	Black		
☐	FSP-C1-BR	Brown		
☐	FSP-C1-G	Gray		
☐	FSP-C2-W	White	Large collar, for use with FSP-L7 lens (Optional aesthetic collar to transition from fixture housing to lens) Note: Not used with lens that includes shroud	
☐	FSP-C2-B	Black		
☐	FSP-C2-BR	Brown		
☐	FSP-C2-G	Gray		

Note: Unless used with a driver or ballast with a low voltage power supply, the FSP-201 requires a Wattstopper power pack (ordered separately) to operate.
FSP-Lx series lens required for operation; order lens separately.
FSIR-100 required for configuration; order separately.

*Product is compliant with Buy American Act and Trade Agreement Act