

# HIGH/LOW/OFF PIR FIXTURE INTEGRATED OUTDOOR PHOTO/MOTION SENSOR

## FSP-2X1 SERIES

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-201

FSP-211

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



## 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.

## 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'.

## 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
- 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

PROJECT

LOCATION/  
TYPE

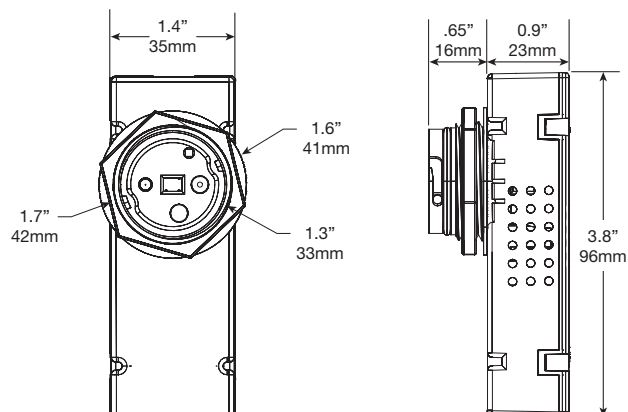
## SPECIFICATIONS

- 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
  - @347V 0-1200W ballast, LED driver; (FSP-221 only)
  - @480V 0-1200W ballast; (FSP-221 only)
- Wiring Terminals (FSP-201, FSP-211 only)
  - Line Voltage: FSP-201, 14-18AWG; FSP-211, 16-18AWG
  - 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

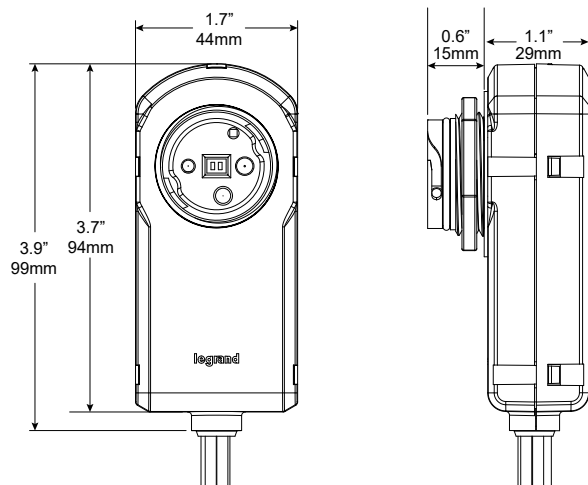
## DIMENSIONS & MOUNTING

### Sensor Dimensions

#### FSP-201/FSP-211



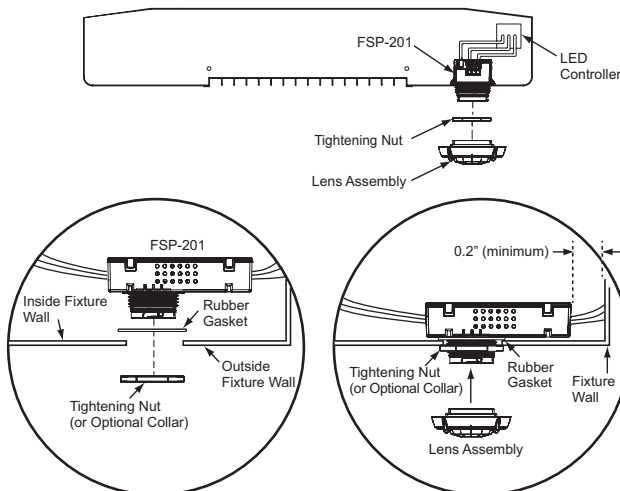
#### FSP-221



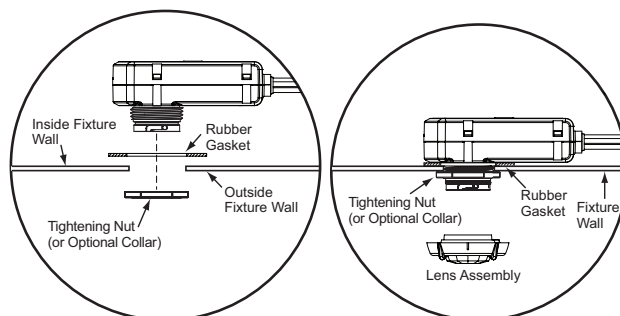
### Sensor Mounting

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

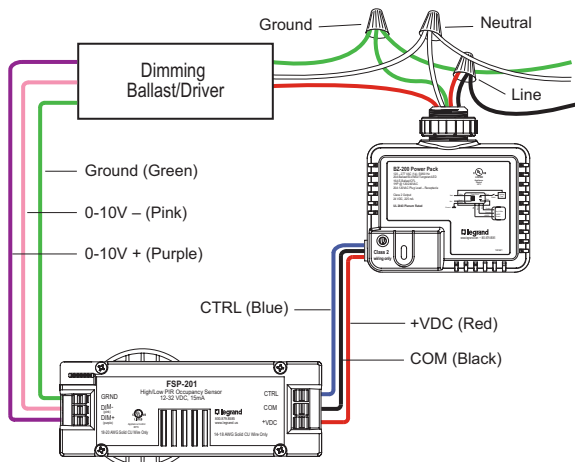


#### FSP-221



## WIRING

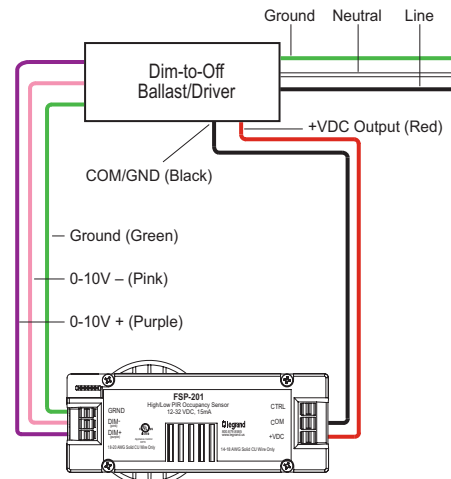
## FSP-201 Wiring with Power Pack



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

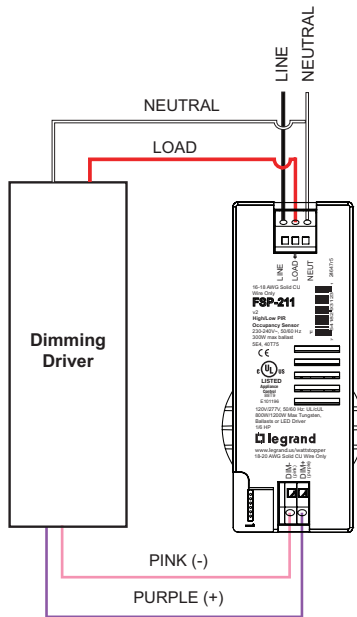
**NOTE:** Per UL, the 0-10V negative dimming wire color has been changed from gray to pink.

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

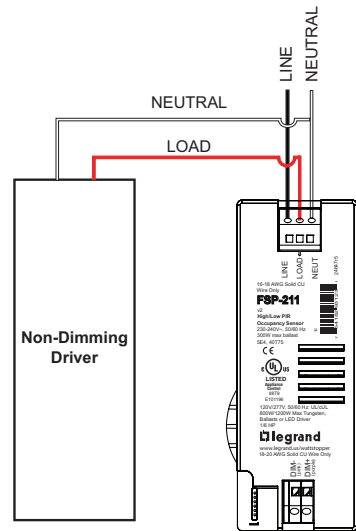


A power pack is not required when the driver or ballast includes a low voltage power supply and on/off control capability.

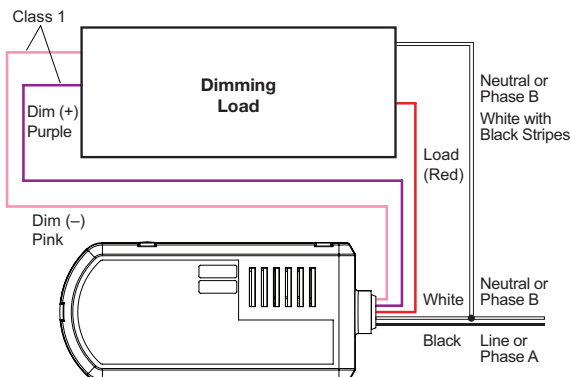
## FSP-211 Dimming Wiring



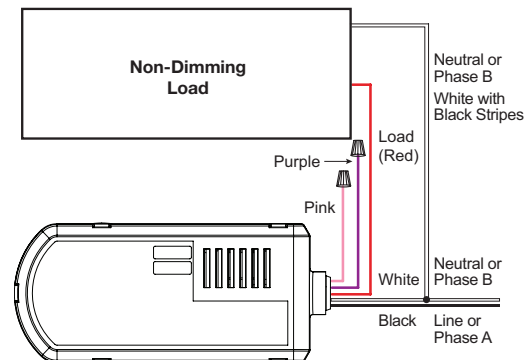
## FSP-211 Non-Dimming Wiring
























## FSP-221 Dimming Wiring



## FSP-221 Non-Dimming Wiring



## ORDERING INFORMATION

Catalog #		Color	Description	Voltage
	FSP-201	White	Fixture mount PIR motion sensor	12-32 VDC
	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	Bronze		
	FSP-L2-G	Grey		
	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	Bronze		
	FSP-L3-G	Grey		
	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	Bronze		
	FSP-L7-G	Grey		
	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-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	

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