

# HIGH/LOW/OFF PIR OUTDOOR MOTION/PHOTO SENSOR IN IP66 ENCLOSURE

## FSP-2X1B

Designed for LED fixtures and rated for extreme temperatures; options for box or pole mounting

Fully adjustable high and low dimmed light levels

Hold off setpoint with automatic calibration option for convenience and added energy savings



FSP-2x1B

w/ Straight Nipple

w/ Drop Nipple

Adjustable via handheld wireless configuration tool

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

Adjustable time delay and cutoff delay



## DESCRIPTION

The FSP-2x1B 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-2x1B family is available in three configurations for mounting inside a fixture, to the outside of a fixture via a 1/2" knockout, or to a pole.

## 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 and 0-10VDC dimming control (FSP-221B)
- Works with 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 shroud with integrated lens to block high-angle light
- Optional daylighting setpoints feature automatic calibration, or permit manual adjustment
- Configuration tool stores six sensor profiles for quick setup and adjustment of multiple sensors (order FSIR-100 separately)
- 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

\*PEP designation applies to FSP-221B only

## 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 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 versatile, wet location-rated FSP-2x1B is designed for installation inside the bottom of a light fixture body, to the outside of a fixture via a 1/2" knockout or to a pole. The sensor is ideal for areas such as parking facilities, gas stations, pedestrian pathways and warehouses. A choice of three lenses ensures complete coverage for mounting heights up to 40'.

PROJECT

LOCATION/  
TYPE

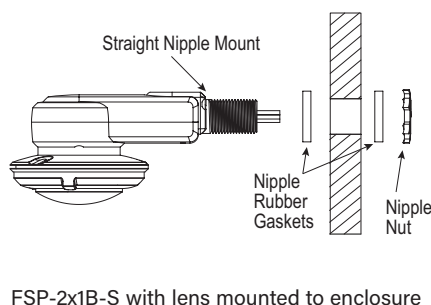
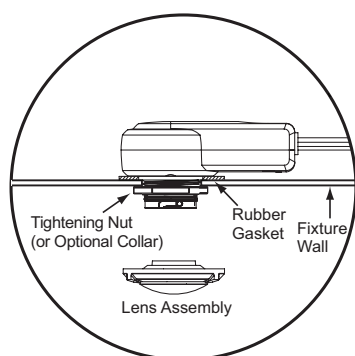
## SPECIFICATIONS

- Input voltage:
  - FSP-201B, 12-32VDC
  - FSP-221B, 100-347VAC (single phase) or 208/230/480VAC (phase-to-phase); 50/60Hz
- Load ratings (FSP-221B):
  - @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; 1/6hp motor
- Relay life rating (FSP-221B): 200,000 cycles (120/277VAC); 50,000 cycles (230VAC)
- High mode: 0-10V; default 10V
- Low mode: Off, 0-9.8V; default 1V
- Time delay: 30 sec., 5-30 min.; default 5 min.
- Cut off delay: none, 1-60 min. 1-5 hrs.; default 1 hr.
- Sensitivity: none, low, med, max; default max
- Setpoint: none, 1-250 fc, auto; default disabled
- Photocell On/Off: 1-250 fc; default disabled
- Ramp up time: none, 1-60 sec.; default none
- Fade down time: none, 1-60 sec.; default none
- Lead length: 30" (76 cm)
- Operating temperature: -40 to 167°F (-40 to 75°C)
- Dimensions: Body, no nipple, 4.13"L x 2.32"W x 1.29"H (105mm x 58.8mm x 32.8mm); -S body 5.5"L x 2.32"W x 1.36"H (139.7mm x 58.8mm x 34.4mm); -D body 5.71"L x 2.32"W x 2.79"H (145mm x 58.8mm x 70.74mm); Collar (all models), 1.3"dia. x 0.64"H (33mm x 16.3mm)
- Weight: FSP-201B, 4.8 oz (136 grams); FSP-221B, 6.7oz (190 grams)
- IP66
- UL and cUL listed (E101196)
- Five year warranty

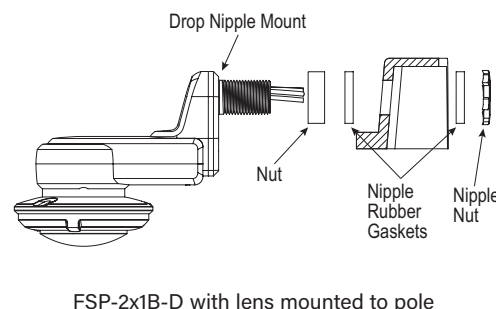
## INSTALLATION AND WIRING

### Sensor Mounting Options

thin Fixture



FSP-2x1B-S with lens mounted to enclosure



FSP-2x1B-D with lens mounted to pole

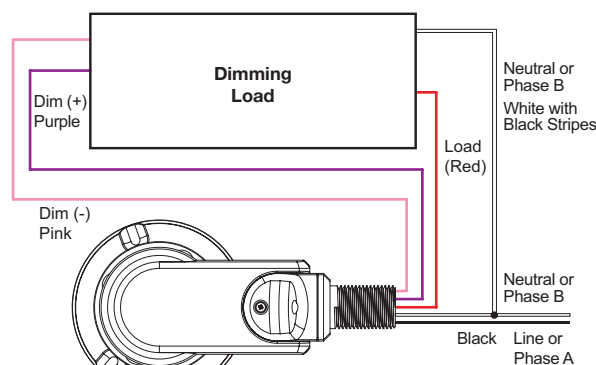
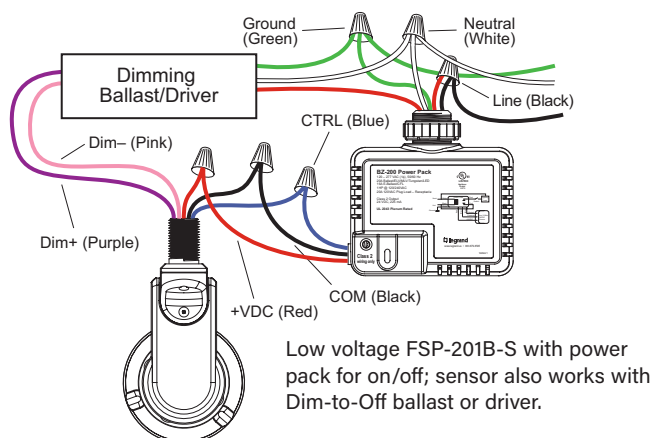
FSP-2x1B fixture mount model with no nipple or lens

An optional collar can be installed in place of the tightening nut on the FSP-2x1B. This collar is included with the FSP-2x1B-S and FSP2x1B-D

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. The shroud does not apply for FSP-2x1B-S and FSP-2x1B-D models.)

### Dimming Wiring Examples

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



Line voltage FSP-221B-S wiring with dimming ballast or LED driver.

## ORDERING INFORMATION

Catalog #	Color	Description	Voltage
<input type="checkbox"/> FSP-201B	White	Fixture mount PIR motion sensor	12-32 VDC
<input type="checkbox"/> FSP-221B	White	Fixture mount PIR motion sensor	100-347VAC (single phase) or 208/230/480VAC (phase-to-phase); 50/60Hz
<input type="checkbox"/> FSP-L2	White	360° lens, maximum coverage 48' diameter from 8' height	
<input type="checkbox"/> FSP-L2-B	Black		
<input type="checkbox"/> FSP-L2-BR	Brown		
<input type="checkbox"/> FSP-L2-G	Grey		
<input type="checkbox"/> FSP-L2-S	White	360° lens, maximum coverage 48' diameter from 8' height, with shroud; Minimizes high-angle light contribution to photocell	
<input type="checkbox"/> FSP-L3	White	360° lens, maximum coverage 40' diameter from 20' height	
<input type="checkbox"/> FSP-L3-B	Black		
<input type="checkbox"/> FSP-L3-BR	Brown		
<input type="checkbox"/> FSP-L3-G	Grey		
<input type="checkbox"/> FSP-L3-S	White	360° lens, maximum coverage 40' diameter from 20' height, with shroud; Minimizes high-angle light contribution to photocell	
<input type="checkbox"/> FSP-L7	White	360° lens, maximum coverage 100' diameter from 40' height	
<input type="checkbox"/> FSP-L7-B	Black		
<input type="checkbox"/> FSP-L7-BR	Brown		
<input type="checkbox"/> FSP-L7-G	Grey		
<input type="checkbox"/> FSP-L7-S	White	360° lens, maximum coverage 100' diameter from 40' height, with shroud; Minimizes high-angle light contribution to photocell	
<input type="checkbox"/> 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	
<input type="checkbox"/> FSP-C1-B	Black		
<input type="checkbox"/> FSP-C1-BR	Brown		
<input type="checkbox"/> FSP-C1-G	Gray		
<input type="checkbox"/> 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	
<input type="checkbox"/> FSP-C2-B	Black		
<input type="checkbox"/> FSP-C2-BR	Brown		
<input type="checkbox"/> 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.

To order -S or -D model sensor, select one option from each column below and combine part numbers (as an example, FSP-201B-S-L2). Available in white only.

Pole or Box Mount Sensor Voltage	Nipple Configuration	Lens Option	Color
<input type="checkbox"/> FSP-201B, 12-32VDC sensor	<input type="checkbox"/> -S, Straight Nipple	<input type="checkbox"/> -L2, 360° lens, max coverage 48'diameter from 8' height	White
<input type="checkbox"/> FSP-221B, 100-347VAC or 208/230/480VAC sensor	<input type="checkbox"/> -D, Drop Nipple	<input type="checkbox"/> -L3, 360° lens, max coverage 40'diameter from 20' height	
		<input type="checkbox"/> -L7, 360° lens, max coverage 100'diameter from 40' height	