



Wattstopper® PLUS

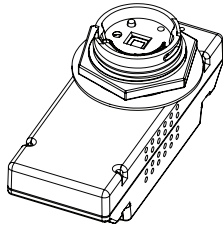
Wireless Luminaire-Level Controller with 0–10V Dimming, Motion Sensor, and Photocell

Installation Instructions • Instructions d'Installation • Instrucciones de Instalación

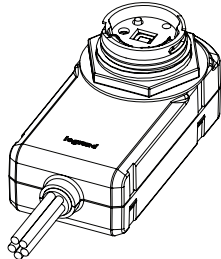
No: 34093 – 02/26 rev. 3

Catalog Numbers • Les Numéros de Catalogue • Los Números de Catálogo: FSP-611, FSP-611-S, FSP-611-D FSP-621, FSP-621-S, FSP-621-D

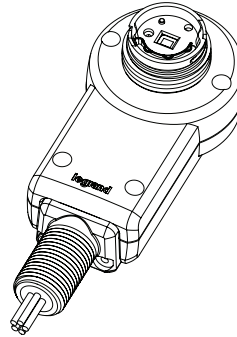
Country of Origin: Made in China • Pays d'origine: Fabriqué en Chine • País de origen: Hecho en China



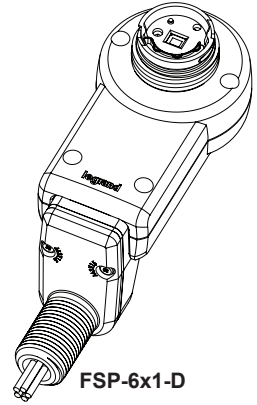
FSP-611



FSP-621



FSP-6x1-S



FSP-6x1-D

DESCRIPTION

The FSP-600 Series are wireless 0–10V control modules with integrated occupancy and daylight sensors, designed for use with the Wattstopper PLUS control system. Available in multiple voltage and mounting configurations, they support a wide range of interior and exterior applications. Compatible with all FSP-Lx lenses (sold separately).

SPECIFICATIONS

FSP-611 models

Voltage	120/277VAC, 50/60Hz or 230VAC, 50Hz
Load Ratings	
@ 120V	0–800W Tungsten, Ballasts or LED Driver
@ 277V	0–1200W Ballast or LED Driver
@ 230–240V	0–300W Ballast or LED Driver
Motor @ 120V/277V	1/6 HP
Wiring Terminals (FSP-611)	
Line Voltage	Line, Neutral, Load, 16AWG–18AWG
Low Voltage	Dim +, Dim –, 18AWG–20AWG
Use Solid Copper Conductor	
Wiring (FSP-611-S, FSP-611-D)	18AWG
Length	12" (30.5cm) from nipple
Line Voltage	Line, Neutral, Load
Low Voltage	Dim + (purple), Dim – (pink)
Weight	FSP-611, 2.8 oz (80 g)
	FSP-611-S, 7.4 oz (210 g)
	FSP-611-D, 8.1 oz (230 g)

FSP-621 models

Voltage	100–347VAC (single phase) or 208/230/480VAC (phase-to-phase), 50/60Hz
Load Ratings	
@ 120V	0–800W Tungsten, Ballasts or LED Driver
@ 277/347/480V	0–1200W Ballast or LED Driver
@ 230–240V	0–300W Ballast or LED Driver
Motor @ 120V/277V	1/6 HP
Wiring	18AWG
Length	12" (30.5cm) from nipple
Line Voltage	Line, Neutral, Load
Low Voltage	Dim + (purple), Dim – (pink)
Weight	FSP-621, 5.5 oz (155 g)
	FSP-621-S, 7.4 oz (210 g)
	FSP-621-D, 8.1 oz (230 g)

All Models

- Wireless (2.4Ghz) Range...500ft (150m) line-of-sight to other repeater devices 100ft (30m) in parking garage applications.
- Device acts as a repeater when in range of 3 or more repeater devices, expanding wireless system communication range.
- Operating Temperature ...-40°F (-40°C) to 140°F (60°C)
- Operating Humidity... 20 - 90%
- Tightening Nut Torque ...25–30 in-lbs
- Coverage
 - FSP-L2 Lens @ 8' height ...up to 44' diameter
 - FSP-L3 Lens @ 20' height ...up to 40' diameter
 - FSP-L7 Lens @ 40' height ...up to 100' diameter

OPEN DEVICE For Installation in the Listed Enclosure per Installation Instructions.

Certifications:

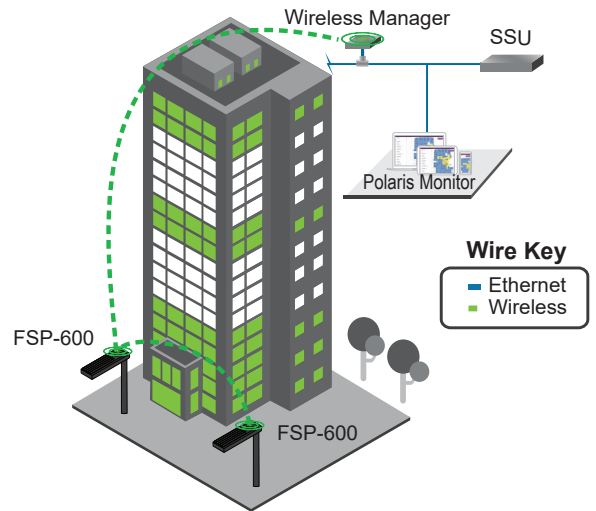
- UL/cUL listed under UL916 (E207852) ; Complementary Listed to Emergency Lighting Equipment (UL924)
- CE
- FCC part 15 Class A
- RoHS
- FSP-6x1-S and FSP-6x1-D IP66 rated (when fully assembled and installed) for use in wet locations;
- FSP-6x1 IP66 rated (when fully assembled and installed with FSP-Lx lens into an IP66 or greater rated enclosure)

OPERATION

FSP-600 controllers are compatible with the wireless Wattstopper PLUS wireless control system. The FSP-600 and other nearby wireless devices communicate to a PLUS Wireless Manager which connects via Ethernet wiring to the site's System Support Unit ("SSU"). Other wired and wireless area managers are also connected to the SSU to form a complete control system.

Once connected, Polaris Config is then used to create the sequence of operations of each device, including any FSP-600 controllers. As intelligent PLUS devices, the list of parameters available for adjustment covers a wide array of applications. Parameters are available for customizing the operation of connected load(s), occupancy sensing, daylight harvesting operation, establishment of grouped control, schedules, and other advanced behaviors.

After configuration, Polaris Monitor provides a graphical, floor plan-based interface for facility managers to monitor their entire connected system, including any FSP-600 devices. Prior to being configured, devices operate as on-only to assist with construction activities. The device will also perform a short dim cycle test for the first 10 times the device is powered up (or until commissioned). For more information, see section "End-of-line Testing". Whenever powered, a red LED will blink occasionally upon occupancy detection which may be used to validate occupancy detection coverage and sensing operation.



IMPORTANT SAFEGUARDS

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

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

SAVE THESE INSTRUCTIONS

If any emergency circuits are fed or controlled by this device, it must be located electronically where fed from a UPS, generator, or other guaranteed source of power during emergency and power outage situations.

SAUVEGARDES IMPORTANTES

Lorsque vous utilisez un équipement électrique, des précautions de sécurité de base doivent toujours être respectées, y compris les suivantes:

- LIRE ET SUIVRE TOUTES LES CONSIGNES DE SÉCURITÉ.
- Ne pas utiliser à l'extérieur.
- Ne pas monter à proximité de radiateurs à gaz ou électriques.
- L'équipement doit être monté dans des endroits et à des hauteurs où il ne sera pas facilement manipulé par du personnel non autorisé.
- L'utilisation d'accessoires non recommandés par le fabricant peut entraîner une situation dangereuse.
- N'utilisez pas cet appareil à d'autres fins que celles prévues.
- L'installation doit être effectuée par du personnel de service qualifié.

CONSERVEZ CES INSTRUCTIONS

Si des circuits d'urgence sont alimentés ou contrôlés par cet appareil, celui-ci doit être situé électroniquement à un endroit alimenté par un onduleur, un générateur ou une autre source d'alimentation garantie en cas d'urgence ou de panne de courant.

CAUTION

WATTSTOPPER RECOMMENDS ADDING A 20KA SURGE SUPPRESSOR TO PROTECT THE FIXTURE, DRIVER AND FSP SENSOR.

WARNING

TURN THE POWER OFF AT THE CIRCUIT BREAKER BEFORE INSTALLING THE SENSOR.

ATTENTION

WATTSTOPPER RECOMMANDE D'AJOUTER UN PARASURTENSEUR DE 20 KA POUR PROTÉGER LE LUMINAIRE, LE DRIVER ET LE CAPTEUR FSP.

AVERTISSEMENT : COUPER LE COURANT AU DISJONCTEUR PRINCIPAL AVANT D'INSTALLER LE CÂBLAGE.

LENS OPTIONS

Several lenses are available for use with the FSP-600 series sensors. Lenses provide reliable coverage at mounting heights ranging from 8 to 40 feet, making them suitable for applications such as offices, warehouses, and outdoor environments. Density and range of the coverage is determined by the type of lens and mounting height. A lens with shroud option is also available. The shroud blocks light coming from the fixture, to prevent interference with the photocell function of the sensor. Lens modules are IP66-rated when combined with an FSP-600 sensor mounted to an IP66-rated outdoor rated fixture. See the FSP-Lx Coverage Guide for more information.

INSTALLATION

There are three mounting configurations available for FSP-600 sensors:

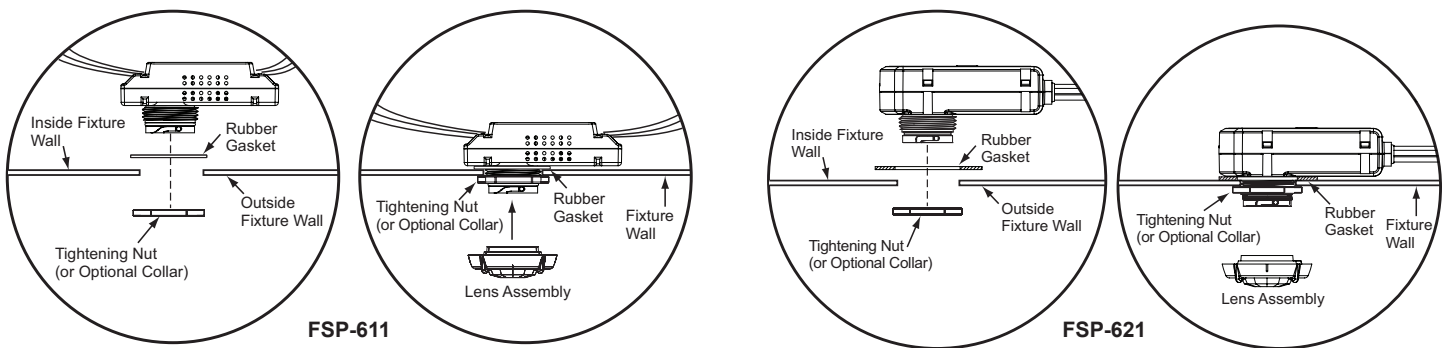
- The FSP-611 and FSP-621 mount inside the fixture.
- The FSP-6x1-S and FSP-6x1-D mount to a fixture or an enclosure with a 1/2" knockout.
- The "-S" features a straight nipple while the "-D" features a drop nipple.

Mounting Inside the Fixture

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 1.31" (33.3mm) 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 tightening nut securely against the fixture to a torque of 25-30 in-lbs to ensure IP rating is maintained.

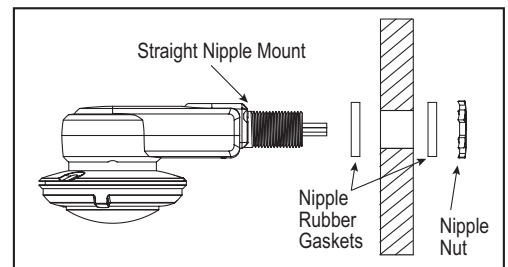
NOTE: An optional collar can be installed in place of the tightening nut on the FSP-6x1 (sold separately). The FSP-C1-W is used with the L2 and L3 lenses. The FSP-C2-W is used with the L7 lens.

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



Mounting to a Fixture/Enclosure – Straight Nipple

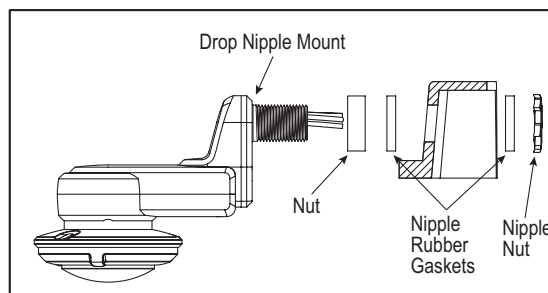
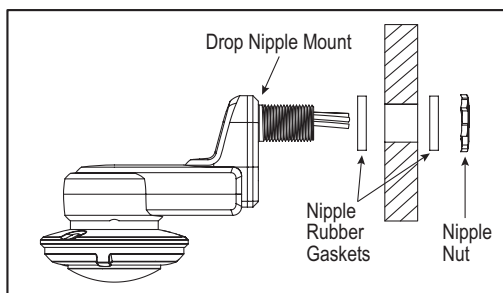
1. Determine an appropriate mounting location minimizing the electric light contribution to the sensor's photocell.
2. If there is no knockout, drill a hole 0.875" (22mm) in diameter through the sheet metal in the fixture or enclosure.
3. Add the rubber gasket to the nipple, and install the sensor face down. Ensure the rubber gasket touches the surface of the fixture. Install the nipple nut securely against the fixture to a torque of 25–30 in-lbs to ensure IP rating is maintained.



FSP-6x1-S

Mounting to a Pole or Fixture – Drop Nipple

1. Determine an appropriate mounting location on the pole.
2. Drill a hole 0.875" (22mm) in diameter through the pole.
3. Add the rubber gasket to the nipple, and install the sensor face down. Ensure the rubber gasket touches the surface of the fixture. If needed, add the nut between the sensor body and the rubber gasket to ensure a secure fit. Install the nipple nut securely against the fixture to a torque of 25–30 in-lbs to ensure IP rating is maintained.



FSP-6x1-D

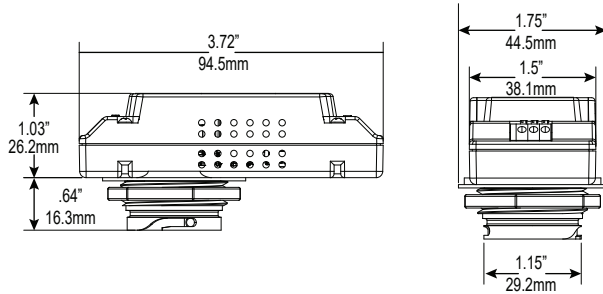
Completing the Installation

1. 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.
2. Connect wires as shown in wiring diagram.
3. Restore power from the circuit breaker.

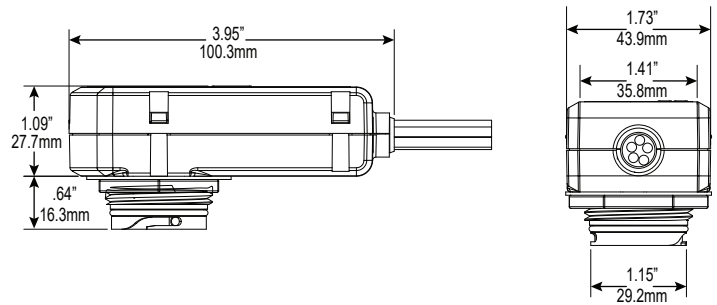
NOTE: The IP66 rating for this unit is based on proper installation as indicated above. However, as Fixture housings may vary in thickness, material, and hole dimensions to accommodate this unit, all precautions to maintain IP66 should be considered with the combination and installation of the unit to the Fixture Housing. This includes installation to an IP66 rated Fixture Housing and use of suitable outdoor rated silicone seals or accessories.

DIMENSIONS

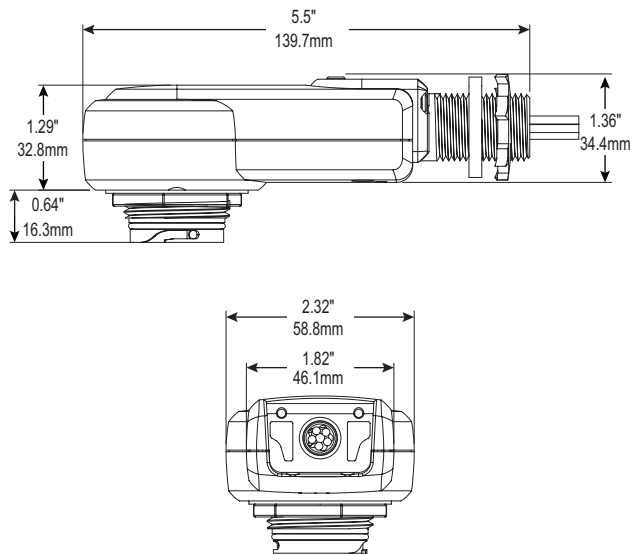
FSP-611



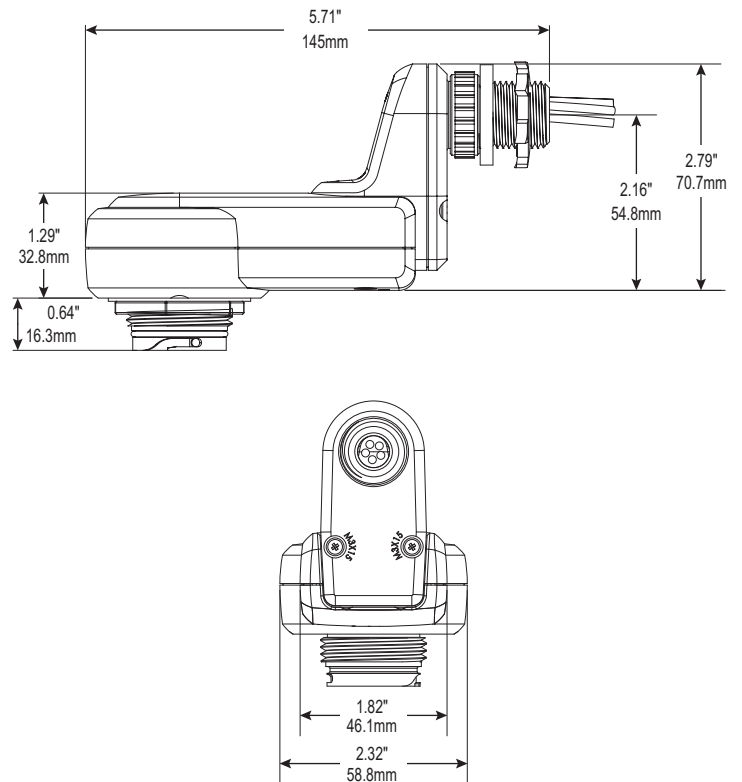
FSP-621



FSP-6x1-S

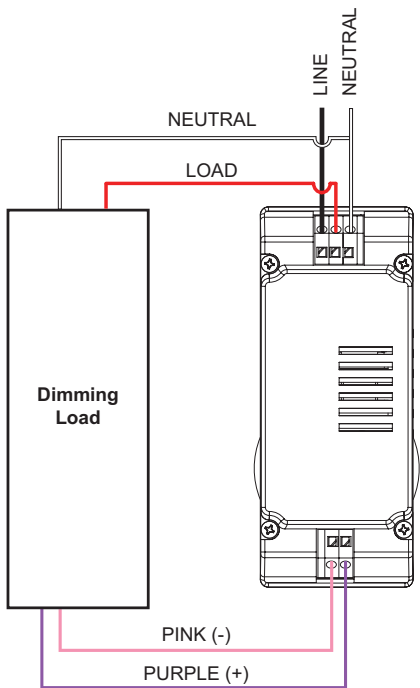


FSP-6x1-D

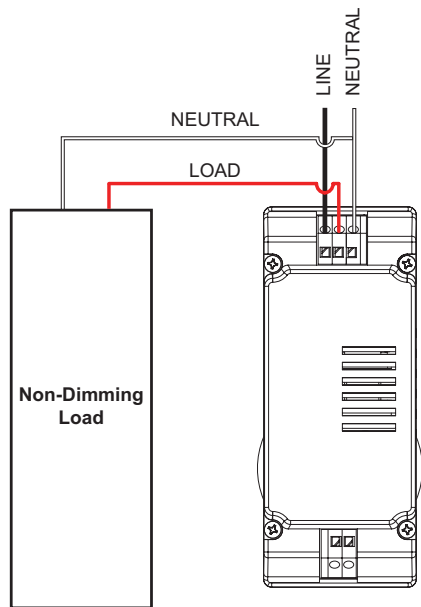


WIRING

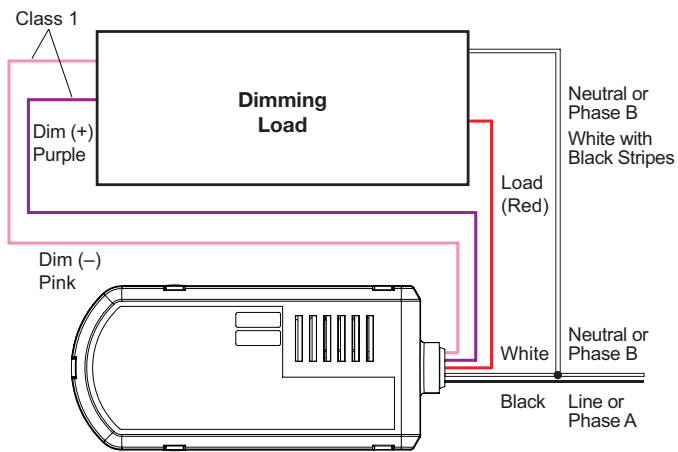
FSP-611 Dimming



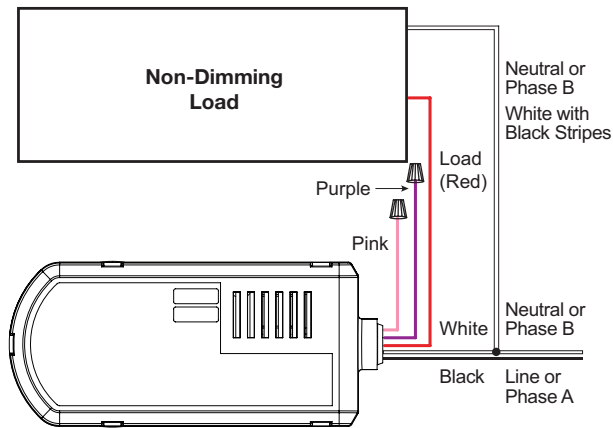
FSP-611 Non-Dimming



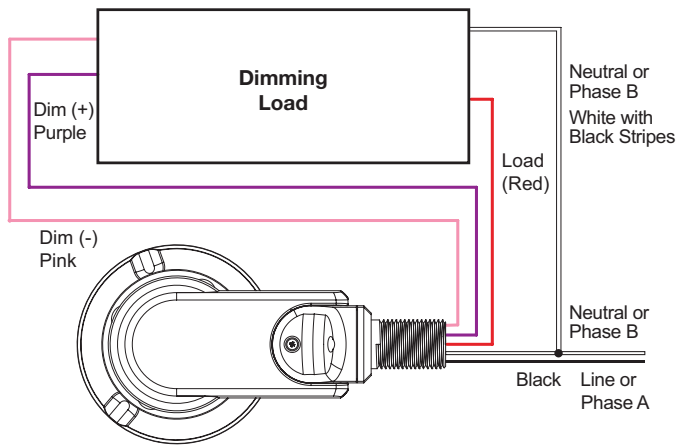
FSP-621 Dimming



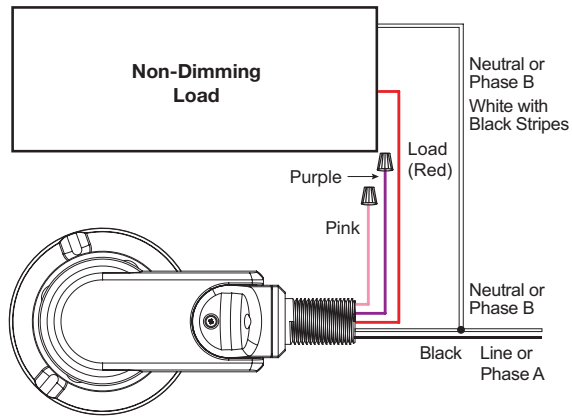
FSP-621 Non-Dimming



FSP-6x1-S/ FSP-6x1-D Dimming



FSP-6x1-S/ FSP-6x1-D Non-Dimming

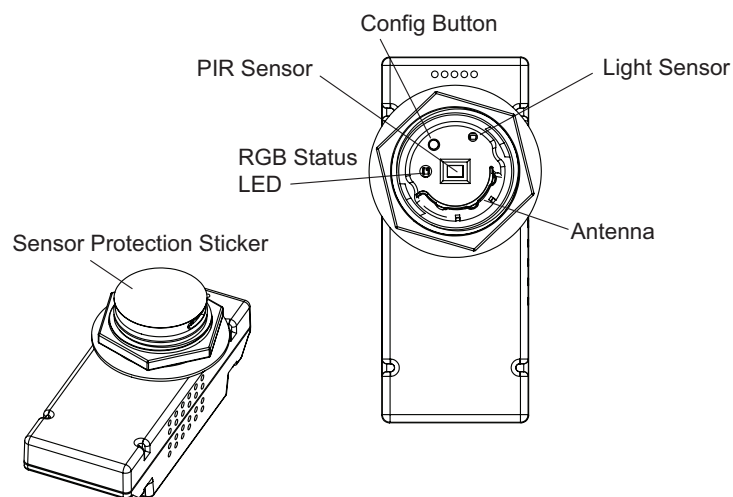


STATUS LED AND CONFIG BUTTON FUNCTIONALITY

All FSP-600 series models include an RGB Status LED and a Config Button (example FSP-611 shown right). The Status LED is used to indicate various device events, most commonly occupancy detection which is signaled by a short red pulse.

The Config Button may be used to reset the FSP-600 to factory defaults (including resetting the End-of-line Testing count). To do so, tap the Config Button 10 times. The Status LED will flash blue each tap except for the 10th tap which will flash red. After a brief wait period, the device will perform a factory reset and the Status LED will flash a red/green/blue pattern to indicate reboot.

Additionally, to toggle the relay and turn the load ON or OFF, briefly press the Config Button.



NOTE: Remove Sticker before use

END-OF-LINE TESTING

To facilitate OEMs conducting operation tests at the end of the manufacturing line with control modules installed, an end-of-line testing routine is pre-programmed into the device that confirms wiring and wireless communications. When the luminaire is powered, the fixture turns ON and reaches its full output. The sensor module then cycles through the entire dimming range starting from 100% output to OFF two times. This confirms that the module is receiving power and is able to communicate with the driver.

This end-of-line testing routine repeats whenever power is removed and reapplied to the device, for the first 10 times the device is powered. Afterwards, the luminaire simply powers on to 100%. If additional wiring testing is needed, the Wiring Test Tool (EN-WTT-ZB) can be used to execute the end-of-line test sequence (available until the device is commissioned into a Wattstopper PLUS system), also confirming wireless communications. See the Wiring Test Tool user guide for more information. Finally, the FSP-600 may also be factory reset as described above which includes resetting the End-of-line test count.

FCC REGULATORY STATEMENT

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

RF Exposure Warning

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. A minimum separation distance of 20 cm between this device and the user's body must be maintained at all times. Any changes or modifications not expressly approved by The Watt Stopper Inc. could void the user's authority to operate the equipment.

IC Caution:

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions:

- (1) This device may not cause interference, and
- (2) This device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes:

- (1) l'appareil ne doit pas produire de brouillage, et
- (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

RF exposure warning

This equipment complies with IC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

Cet équipement est conforme aux limites d'exposition aux radiations de la IC définies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé à une distance minimale de 20 cm entre le radiateur et votre corps.



This product bears the selective sorting symbol for Waste electrical and electronic equipment (WEEE). This means that this product must be handled pursuant to European directive 2012/19/EU in order to be recycled or dismantled to minimize its impact on the environment. User has the choice to give his product to a competent recycling organization or to the retailer when he buys a new electrical or electronic equipment.

WARRANTY INFORMATION

Wattstopper warrants its products to be free of defects in materials and workmanship for a period of five (5) years. There are no obligations or liabilities on the part of Wattstopper for consequential damages arising out of, or in connection with, the use or performance of this product or other indirect damages with respect to loss of property, revenue or profit, or cost of removal, installation or reinstallation.

INFORMATIONS RELATIVES À LA GARANTIE

Wattstopper garantit que ses produits sont exempts de défauts de matériaux et de fabrication pour une période de cinq (5) ans. Wattstopper ne peut être tenu responsable de tout dommage consécutif causé par ou lié à l'utilisation ou à la performance de ce produit ou tout autre dommage indirect lié à la perte de propriété, de revenus, ou de profits, ou aux coûts d'enlèvement, d'installation ou de réinstallation.

INFORMACIÓN DE LA GARANTÍA

Wattstopper garantiza que sus productos están libres de defectos en materiales y mano de obra por un período de cinco (5) años. No existen obligaciones ni responsabilidades por parte de Wattstopper por daños consecuentes que se deriven o estén relacionados con el uso o el rendimiento de este producto u otros daños indirectos con respecto a la pérdida de propiedad, renta o ganancias, o al costo de extracción, instalación o reinstalación.