Wattstopper®

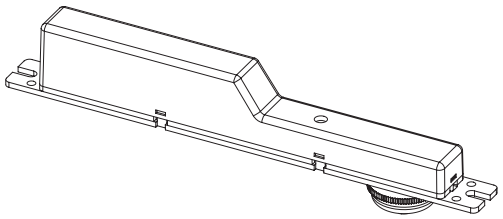
Occupancy Sensor • Line Voltage Fixture Mount

No: 24741 – 06/17 rev. 1

Installation Instructions • Instructions d'Installation • Instrucciones de Instalación

Catalog Numbers • Les Numéros de Catalogue • Números de Catálogo: FS-155 and FS-155-1

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



SPECIFICATIONS

Voltages..... 120 - 277VAC, 60Hz
Load Requirements
@ 120VAC ..... 0-800W ballast or incandescent
@ 277VAC ..... 0-1200W ballast
Time Delay ..... 30 seconds - 30 minutes
Coverage @ 8' height ..... 10' diameter
Operating Temperature .....32° to 131°F (0° to 55°C)
Dimensions
Sensor body..... 7 1/8' x 7/8" x 11/16" (181 x 22 x 17mm)
Threaded Neck Length .....0.35" ((9mm)
Threaded Neck Diameter.....9/16" diameter (14mm)
Lens Collar Diameter
FS-155 ..... 1" (25mm)
FS-155-1 ..... 1.2" (30mm

DESCRIPTION AND OPERATION

The FS-155 and FS-155-1 occupancy sensors turn lighting on and off based on occupancy. These slim, low-profile sensors are designed for installation inside the bottom of a light fixture body. The PIR lens views the coverage area through a 9/16" 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 space is vacant and the time delay elapses (adjustable from 30 seconds to 30 minutes), lights will turn off. Sensors must directly "see" motion of an occupant to detect them, so careful consideration must be given to sensor placement. Avoid placing the sensor where shelving or other obstructions may block the sensor's line of sight.

The FS-155/155-1 operates between 120-277VAC. It is designed for installation in a light fixture. The FS-155/155-1 sensor is equipped with three, six-inch, 18AWG flying leads for connection to the lighting load and electrical system.

NOTE: There is an initial warm-up period. It may take up to a minute before the lights turn on due to a sensor warm-up period required during initial power-up. This occurs during installation or after a lengthy power failure only.

INSTALLATION

WARNING: TURN THE POWER OFF AT THE CIRCUIT BREAKER BEFORE WIRING.

1. Determine an appropriate mounting location inside the light fixture.
2. Cut a 9/16" diameter hole through the sheet metal in the bottom of the fixture.
3. Remove the beauty ring and thumbscrew collar from the FS-155/155-1 lens pipe.
4. Insert the lens through the hole in the bottom of the fixture then put the thumbscrew collar onto the lens pipe. Tighten it securely to the outside of the fixture.
5. Use the holes or mounting slots at both ends of the sensor to secure it to the fixture.
6. Re-tighten the thumbscrew collar, then put the beauty ring onto the lens pipe and tighten it.
7. Connect load and supply wires as shown in Figure 2.
8. Restore power from the circuit breaker.

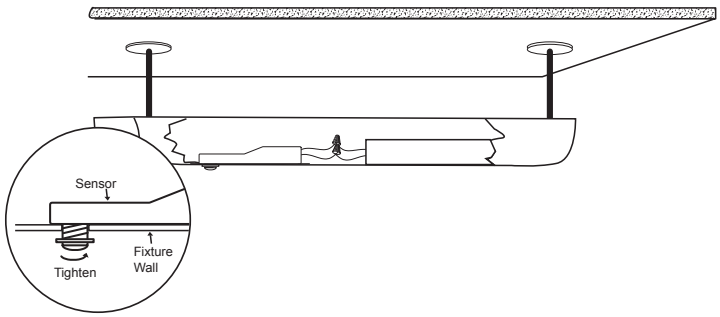


Fig 1: FS-155/155-1 mounting in light fixture

WIRING A SINGLE SENSOR

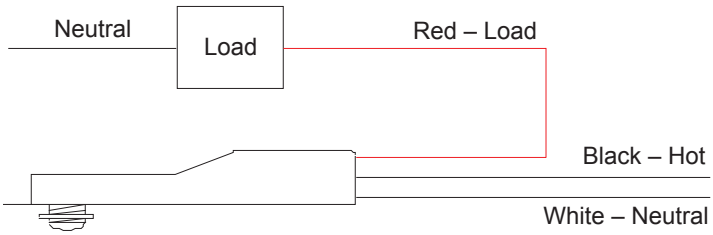


Fig 2: FS-155/155-1 wiring

COVERAGE PATTERNS

FS-155

Density and range of the coverage pattern is determined by mount height. The FS-155 has a multi-cell, multi-tier Fresnel lens with a view of 360°. This lens is designed to detect small motion when mounted within 6' of occupants. When mounted at a height of 8', the coverage area is approximately 10' m diameter, but sensitivity may be diminished.

Coverage shown in the diagrams below is maximum. They represent coverage for full-step walking motion, with no barriers or obstacles.

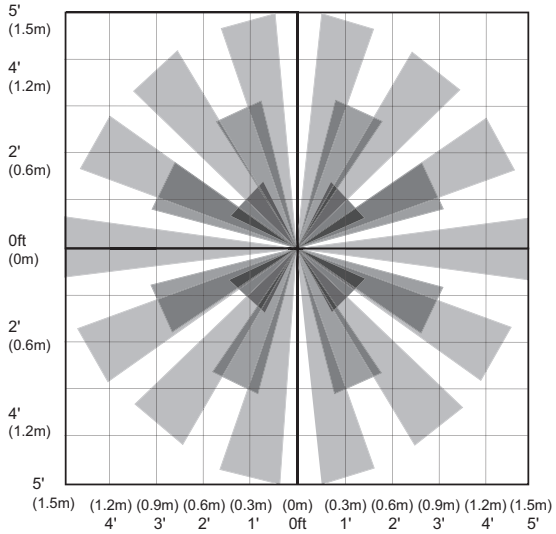


Fig 3: FS-155 coverage pattern, top view from 8' mounting height

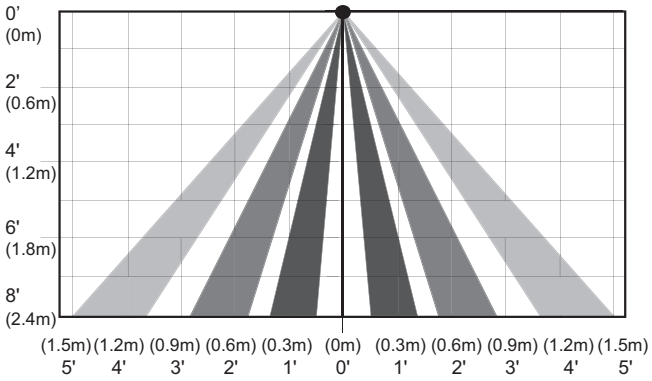


Fig 4: FS-155 coverage pattern, side view

FS-155-1

Density and range of the coverage pattern is determined by mounting height. The FS-155-1 has a multi-cell, multi-tier Fresnel lens with a view of 360°. This lens is designed to detect motion when mounted within 10' of occupants. When mounted at a height of 8', the coverage area is approximately 20' diameter.

Coverage shown in the diagrams below is maximum. They represent coverage for full-step walking motion, with no barriers or obstacles.

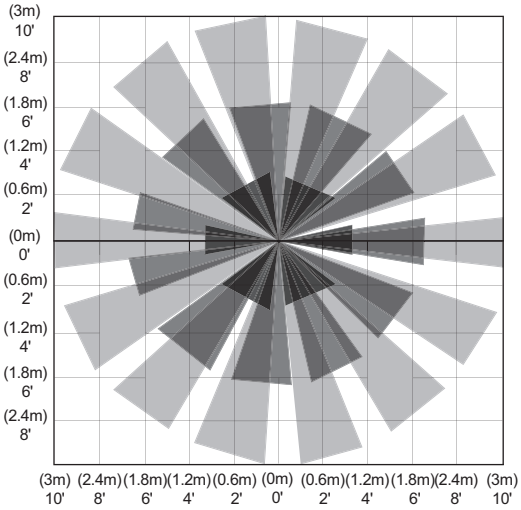


Fig 5: FS-155-1 coverage pattern, top view from 8' mounting height

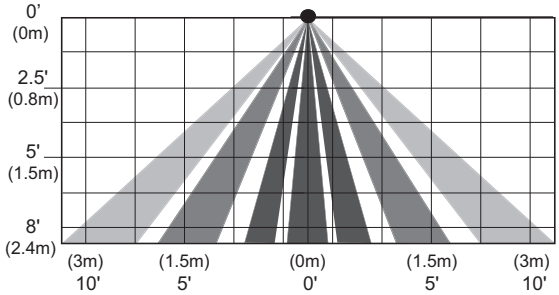


Fig 6: FS-155-1 coverage pattern, side view

SENSOR ADJUSTMENT

CAUTION:
DO NOT OVERTURN TRIMPOT WHEN ADJUSTING THE SENSOR.

The Time Delay adjustment potentiometer is on the top side of the FS-155/155-1. It may be necessary to adjust the sensor before the fixture is fully assembled.

Test Occupancy Sensor

1. Turn the time delay to minimum.
2. Move out of the sensor's view. Lights should turn **OFF** after 30 seconds.
3. Move into the detection area. Lights should turn **ON**.

Test and Adjust Time Delay

1. Adjust the time delay to minimum. Leave the area and let the sensor time out so lights are **OFF**.
2. Enter the space and lights should turn **ON**.
3. Set the time delay to the desired setting. The time delay can be set from 30 seconds to 30 minutes.

TROUBLESHOOTING

Lights will not turn on:

- LED does not flash:
  - Check all wire connections and verify the ground wire is tightly secured.
- LED does flash:
  - Check all wire connections and verify the load wire is tightly secured.
- If lights still do not turn on, call 800.879.8585 for technical support.

Lights will not turn off:

The time delay can be set from 30 seconds to 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 for proper operation, turn the time delay to minimum and move out of the sensor's view. Lights should turn off after 30 seconds.
- If lights still do not turn off, call 800.879.8585 for technical support.

Operation during Power-Up

During the sensor warm-up period, which can last up to a minute after initial power-up (or after a lengthy power outage), the load can be either on or off, depending on the status of the relay before the sensor was powered down. After warm-up, the sensor will open or close the relay to correspond to the occupancy status of the room.

ORDERING INFORMATION

Catalog Number	Description
FS-155	Fixture mount, line voltage occupancy sensor, 12' diam. coverage
FS-155-1	Fixture mount, line voltage occupancy sensor, 18' diam. coverage

All units are White.

WARRANTY INFORMATION

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