

HFLUM2-120



English

Installation Instructions

**Fixture Integrated
Sensor Module**

Français

Consignes d'installation

**Fixture Integrated
Sensor Module**

Español

Instrucciones de Instalación

**Fixture Integrated
Sensor Module**



FCC ID - W8J8303

IC - 8529A-8303



Made in
Romania

⚠ WARNING ⚠

- Turn power off at the circuit breaker before installing the sensor
- Sensor module must be installed and used in accordance with appropriate electrical codes and regulations
- Installation by a qualified electrician is recommended

HFLUM2 Installation Overview

■ In this package

- One HFLUM2-120
- Installation Instructions

■ Needed for installation

- Two mounting screws

Applications

- Wide variety of interior spaces including offices, conference rooms, classrooms

Intended uses

- For indoor use only
- Sensor mounts inside a lighting fixture

■ Usage considerations

- When fluorescent lamps are new or at cold temperatures, the sensor may detect gas moving inside the lamps. In this case, switch the lights OFF and reduce the reach setting.
- Use only high quality brand-name lamps.
- Fixture configurations can vary considerably. Since metal surfaces reflect high-frequency signals, the detection pattern may vary from the standard published coverages or reach. Each fixture design must be tested for proper coverage accuracy.
- Consider the interaction between various OEM components such as ballast and lamp types. All components should be tested for complete compatibility as a system.

Product Overview



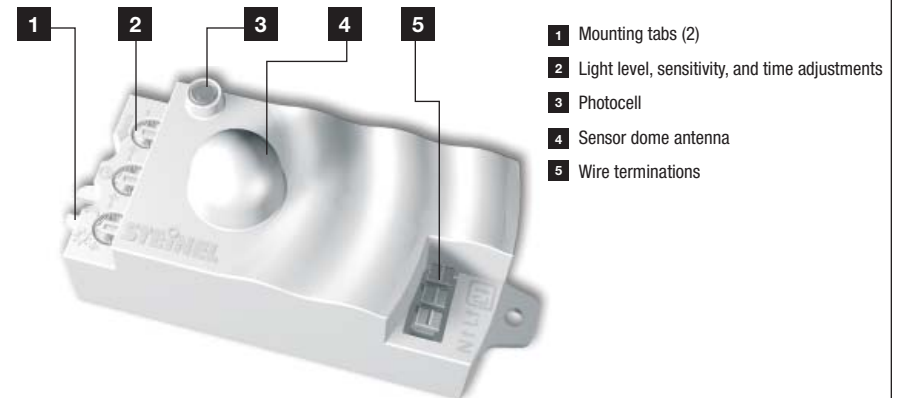
■ Product description

The HFLUM2-120 is a line voltage occupancy sensor module that installs in a fixture, adding energy saving lighting control in each fixture location. The sensor uses STEINEL's High Frequency (HF) technology to turn lighting on and off based on occupancy. Also, it holds lights off when sufficient daylight is present.

The HFLUM2-120 emits high frequency electromagnetic waves (5.8 GHz). Movement in the controlled area causes a change in the echo, resulting in detection. HF sensors detect motion through many materials, including panes of glass or through the lens of a fixture, enabling the sensor to be hidden from view.

■ Specifications

Voltage	120 VAC, 60 Hz	HF system	5.8 GHz
Load rating	0-600 watt incandescent 0-150 watt ballast, max 2 ballast, max 50 uF	Environment	Rated IP20
		Coverage	360°, 3.3 to 26 foot reach
Transmitter power	1mW	Dimensions	4.2 x 1.7 x 1.8 in 107 x 42 x 44.5 mm
Power consumption	< 0.5W	5 year warranty	
Time delay	30 sec to 30 min	UL and CUL Listed, RoHS Compliant	
Light level	.2 - 200 footcandles 2 - 2000 lux		



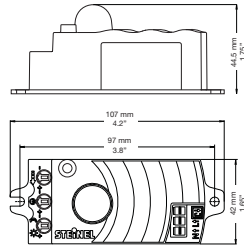
Mounting

■ **Mounting guidelines**

- The sensor module is intended to be installed within a luminaire. Its dome antenna must face the desired area of detection (the fixture’s area of illumination).
- The dome antenna must have an unobstructed view of the detection area. The high frequency signal is not obstructed by materials such as polycarbonate, plastic or glass. Metal will obstruct the high frequency signal.
- Suitable for wall and ceiling applications.
- For indoor use only
- For optimal coverage, the dome antenna must project beyond the lamps and should not be blocked by any metal.
- Pay attention to luminaire materials (interference, reflections, attenuation).

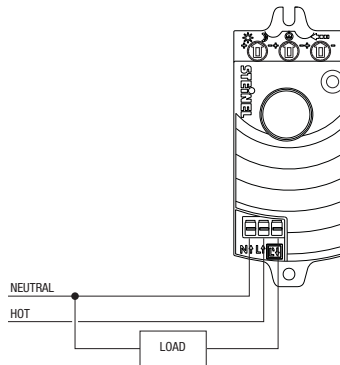
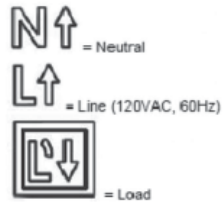
■ **Mounting**

- Mounting screw holes are 3.8 inches (97 mm) apart.



Wiring

There are three terminals for streamlined wiring.



Operation

The HFLUM2-120 operates by turning lights on automatically when occupancy is detected and off when the space is left vacant and the time delay has elapsed.

■ **Light level function**

The light level feature keeps lighting off during daylight hours, regardless of occupancy.

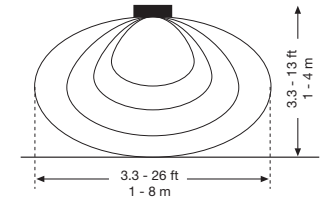
■ **Surge protection**

Every sensor contains built in surge protection. This feature will reset the unit automatically after: power surges, power outages, and power shortages. Surge protection protects the sensor if it is miswired as well. If miswired, shut off power, correct the wiring, and the sensor will then operate correctly.

Setup & Commissioning

■ **Coverage size**

The HFLUM2-120 coverage is 360° and its reach ranges from 3.3 to 26 feet (see next page for reach/sensitivity adjustment). Actual coverage may vary depending on luminaire configuration and environmental conditions.



■ **Lamp seasoning**

Some florescent lamp manufacturers recommend seasoning or “burning in” lamps. To meet this recommendation, the following seasoning procedure should be carried out for new fluorescent lamps.

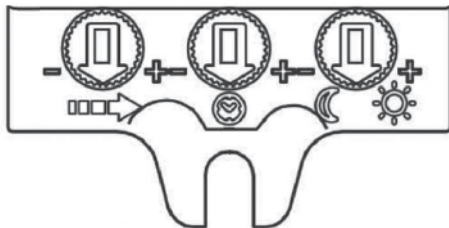
- Connect luminaire, switch ON for at least one minute
- Switch power supply OFF/ON twice (main or light switch within 0.5 – 1 sec)
- Alternatively, you can start the seasoning process by using the potentiometers. Turn all 3 setting controls fully clockwise, then turn

the middle setting control (time) fully counter-clockwise and fully clockwise again (within 10 sec)

- The seasoning process is confirmed by switching the light OFF and back ON again twice
- The light is now left ON for 100 hours without sensor function. Do not disconnect the light from the main power supply during this period.
- The luminaire automatically returns to sensor mode after 96 hours

Setup & Commissioning (cont'd)

Time delay: 30 second to 30 minutes



Sensitivity (middle): adjusts coverage reach from approx 3.3 feet to 26 feet

Light level: .2 (night) to 200 (day) footcandles

■ Test mode

- Ensure that the sensor is in test mode.
 - set time delay to minimum setting of 30 seconds
 - set light level to maximum ("day" setting, light level function overridden)
 - set sensitivity to minimum
- Turn power ON at the circuit breaker (lights will turn ON). After a warm up period of up to one minute, lights will turn OFF if the sensor does not detect motion.
- Walk in view of sensor, lights should turn ON. Be still for 30 seconds and lights should turn OFF.

After setup and commissioning tests are complete, adjust the time delay, reach and light level settings to fit the application needs.

■ Light level

The light level feature allows lighting to remain OFF during daylight, regardless of occupancy. Daytime operation is at 200 footcandles (factory setting). Nighttime operation is at .2 footcandles.

The adjusting screw turned fully clockwise means daylight operation at approx. 200

fc (factory setting). Turning fully counter-clockwise means nighttime operation at .2 fc. When adjusting the detection zone and for the performance test in daylight, the adjusting screw must be turned fully clockwise.

■ Time delay

Time delay is the period of time lights remain on after the last detection. Adjustment ranges from 30 sec (factory setting) to 30 min.

The adjusting screw turned fully counter-clockwise means the shortest time and fully clockwise means the longest. The time delay is restarted by any movement detected before this time elapses. The shortest time setting is recommended when adjusting the detection zone and for the performance test.

Note: Every time the light switches off, it takes approximately two seconds for the sensor to start detecting movement again.

■ Reach/sensitivity

The sensor's reach setting can be adjusted. Turning the adjustment screw fully counter-clockwise selects minimum reach (about 3.3 feet) and fully clockwise selects maximum reach (about 26 feet).

Troubleshooting

no power at the sensor	<ul style="list-style-type: none"> breaker has tripped; light switch is in OFF position short circuit 	<ul style="list-style-type: none"> reset breaker, turn light switch to ON position, check wiring with voltage tester check for proper wiring connections
lights do not switch ON	<ul style="list-style-type: none"> light level setting is in nighttime mode during daytime operation lamp burned out power is off detection zone not correctly adjusted 	<ul style="list-style-type: none"> adjust light level setting replace lamp turn power on at circuit breaker readjust
lights do not switch OFF	<ul style="list-style-type: none"> sensor is detecting movement outside of desired coverage area 	<ul style="list-style-type: none"> reduce sensitivity
lights switch ON without obvious movement	<ul style="list-style-type: none"> sensor is detecting movement outside of desired coverage area 	<ul style="list-style-type: none"> reduce sensitivity

Warranty

STEINEL America warrants its products against defects in material or workmanship for a period of **five** years. STEINEL will replace or repair the item provided that it has not been altered or subjected to abuse, accident, improper installation or improper use. There are no obligations

or liabilities on the part of STEINEL 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 reinstatement.

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This device complies with Part 15 of the FCC Rules. Operation is subject to the following conditions:

- this device may not cause harmful interference
- this device must accept any interference received including interference that may cause undesired operation
- Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment