

HFLUM2-WR



English

Installation Instructions

Fixture Integrated Sensor Module

Français

Consignes d'Installation

Fixture Integrated Sensor Module



Contains:
FCC ID - W8J-SIR13
IC - 8529A-SIR13



Made in
Romania



- 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

Package Contents

- One HFLUM2-WR
- Installation Instructions

Installation Overview

■ Needed for installation

- Two mounting screws
- Fixture or listed enclosure

■ 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.

■ Usage considerations Continued

- Consider the interaction between various OEM components such as ballast and lamp types. All components should be tested for complete compatibility as a system.
- The HFLUM2-WR is a UL/CUL Listed open type device that requires installation in a fixture or listed junction box or enclosure.
- When use in indoor locations where the temperature may be less than actual room conditions, such as unheated warehouses or garages the HFLUM2-WR is to be totally enclosed.
- The antenna used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be collocated or operating in conjunction with any other antenna or transmitter within a host device, except as described in accordance with FCC multi-transmitter product procedures.

Product Overview



■ Product description

The HFLUM2-WR 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-WR 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	120/230/277 VAC, 50/60 Hz
Load rating	0-800 Watts @ 120 VAC, 50/60 Hz incandescent, magnetic or electronic ballasts - 1/4 HP 0-1200 Watts @ 230/277 VAC, 50/60 Hz magnetic or electronic ballasts 0-650 Watts @ 120/230/277 VAC, 50/60 Hz LED
Transmitter power	1mW
Power consumption	< 0.5W
Time delay	30 sec to 30 min
Light level	.2 - 200 footcandles; 2 - 2000 lux
HF System	5.8 GHz
Coverage	360°, 3.3 to 26 foot reach
Operating Temp.	-4° F - 185° F, -20° C - 85° C
Dimensions	4.2 x 1.7 x 1.8 in; 107 x 42 x 44.5 mm
5 year warranty	
UL and CUL Listed, RoHS Compliant, FCC and IC Compliant	

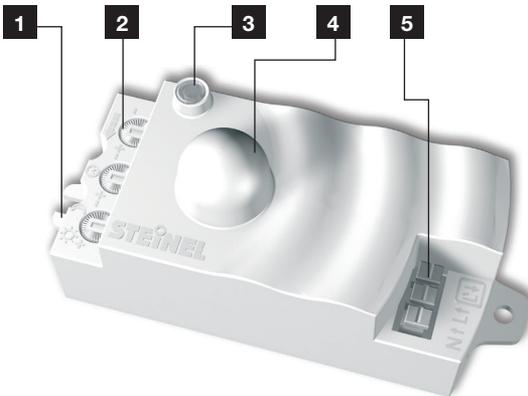
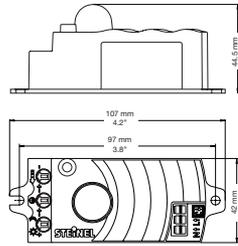
Mounting

■ 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.



- 1 Mounting tabs (2)
- 2 Sensitivity, time, light level adjustments
- 3 Photocell
- 4 Sensor dome antenna
- 5 Wire terminations

Operation

The HFLUM2-WR 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

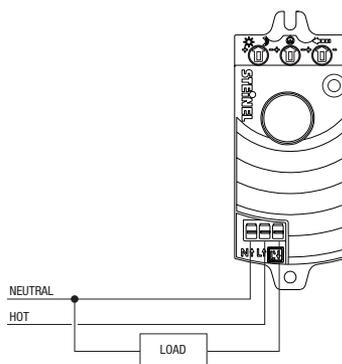
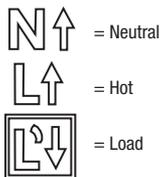
Every sensor contains built in surge protection. This feature will reset the unit automatically after: power surges, power outages, and power shortages. Surge protection protects the sensor if it is miswired as well. If miswired, shut off power, correct the wiring, and the sensor will then operate correctly.

Wiring

There are three terminals for streamlined wiring.

Use only solid (16-20) AWG CU wire.

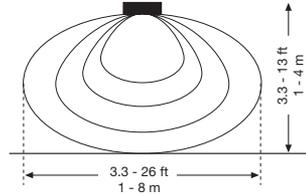
Strip insulation (9-10mm/0.37 inch)



Setup & Commissioning

Coverage size

The HFLUM2-WR 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 four days 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

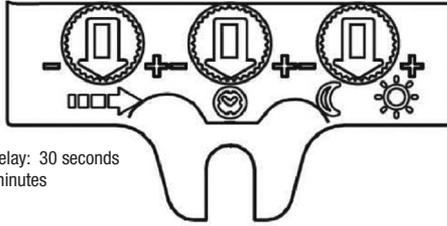
Test mode

- 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 light level, time delay, and reach settings to fit the application needs.

Setup & Commissioning (continued)

Sensitivity: adjusts coverage reach from approx 3.3 feet to 26 feet



Time delay: 30 seconds to 30 minutes

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

■ 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

Malfunction	Cause	Remedy
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 reinstallation.

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NOTICE:

This device complies with Part 15 of the FCC Rules and with RSS-210 of Industry Canada. 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.

NOTICE:

Changes or modifications made to the equipment not expressly approved by Steinel GmbH may void the FCC / IC authorization to operate this equipment.

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Technical changes subject to no prior notification.