

## SPECIFICATION SHEET

### SUBJECT

### ON/OFF SENSOR CONTROL

### CUSTOMER PROJECT

Project: \_\_\_\_\_  
 Type: \_\_\_\_\_  
 Cat. No.: \_\_\_\_\_  
 Qty: \_\_\_\_\_  
 Date: \_\_\_\_\_  
 EEL Rep: \_\_\_\_\_



### ON/OFF SENSOR CONTROL ULT-HC419S

### ACCESSORIES

#### On/Off Sensor Control

|                     |                          |
|---------------------|--------------------------|
| Voltage             | 120-277V                 |
| Detection Angle     | 30° to 150°              |
| Max Mounting Height | 20 ft (6m)               |
| Max Detection Range | 39 ft x 20 ft (12m x 6m) |

|      |                                                                                                       |
|------|-------------------------------------------------------------------------------------------------------|
| Load | Capacitive Load: 400W @ 120V AC / 1000W @ 277V AC<br>Resistive Load: 700W @ 120V AC / 1600W @ 277V AC |
|------|-------------------------------------------------------------------------------------------------------|

|                      |                   |
|----------------------|-------------------|
| Adjustable Hold Time | 15 sec to 30 mins |
|----------------------|-------------------|

|                       |               |
|-----------------------|---------------|
| Operating Temperature | -35°C to 70°C |
|-----------------------|---------------|



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### SPECIFICATION FEATURES

#### Functionality

- On-off
- Microwave motion detection

#### Finish

- White

#### Accessories

- Need Sensor Bracket Cover (sold separately)
- SF/FS-SBC for linear fixtures
- CHB-SBC for CHB/CHBU

#### Compliance

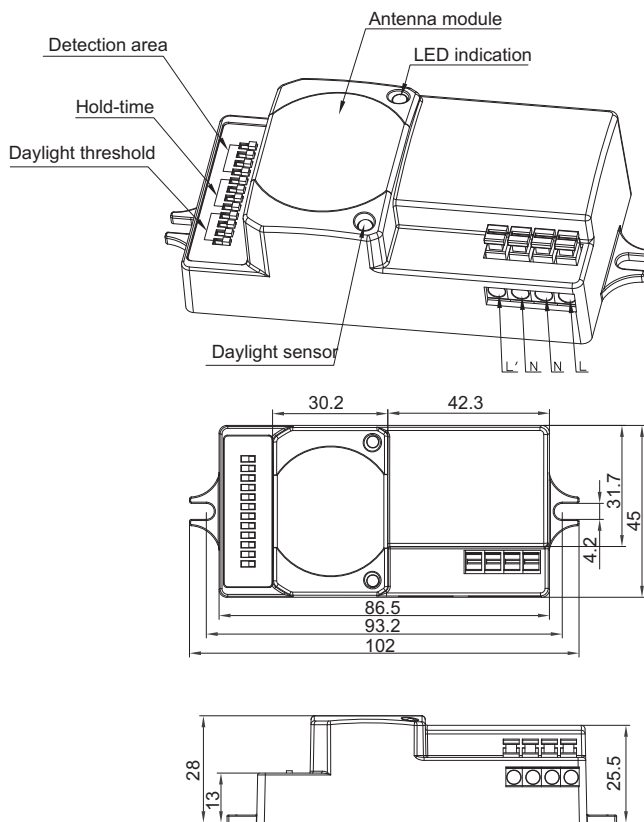
- cULus
- FCC
- IP20

#### Warranty

- 3 years

#### Compatibility

- CHB & CHBU (SBC required)
- SF-II, SF-II C & FS (SBC required)
- SW (SBC required)
- VTHB
- Ordinary VT
- VT24
- SPW4



Dimension  
 mm | 102(L) x 45(W) x 25.5(D)  
 inch | 4(L) x 1.8(W) x 1(D)

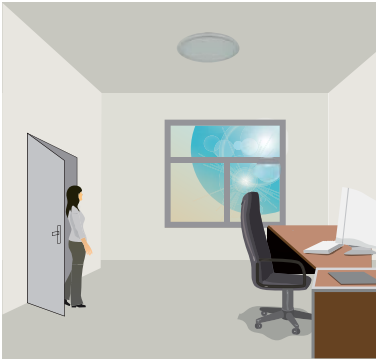
### ORDERING CODE, ENERGY AND PERFORMANCE DATA

| Model No.    | Voltage (V) | Load                                                                                                                | Colour | Certification |
|--------------|-------------|---------------------------------------------------------------------------------------------------------------------|--------|---------------|
| ULT - HC419S | 120-277     | Capacitive Load:<br>400W @ 120V AC<br>1000W @ 277 V AC<br><br>Resistive Load:<br>700W @ 120V AC<br>1600W @ 277V VAC | White  | cULus         |

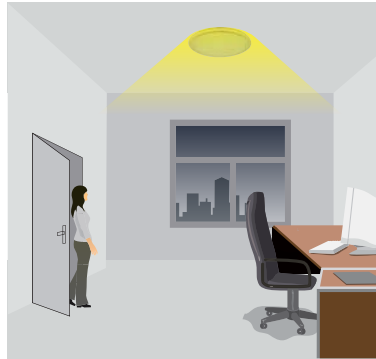
## Function and options

### 1 On/off Function

This On/Off Sensor Control is a motion detection switch. The fixture turns on when the sensor detects motion and turns off with no motion, following the pre-selected hold-time (5s-30mins). The built-in daylight sensor compares available luminance to the pre-set threshold level. The fixture stays off with sufficient natural light.



With sufficient natural light, the light does not switch on when presence is detected.



With insufficient natural light, the sensor switches on the light automatically when a person enters the room.

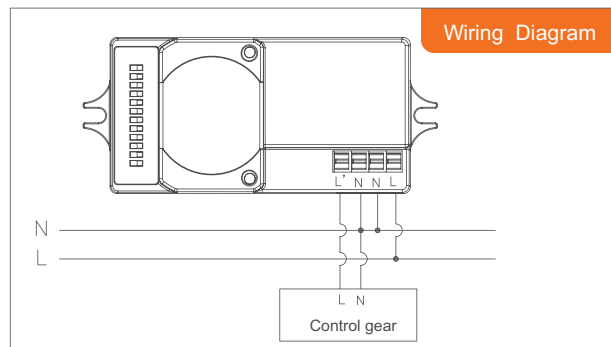


After the hold time, then switches off automatically when no movement is detected.

### 2 100H burn-in mode for fluorescent lamp

With simple operation, rapidly turn off/on the fixture 3 cycles within 3 sec. (the green LED on the sensor flashes and the fixture blinks 3 times to indicate the success of setup), lamp will be 100% on for 100 hours, and then automatically goes to sensor mode after 100 hours. This is crucial to secure the lifetime of fluorescent lamp, when new fixture is installed or old lamp is replaced.

**This 100H burn-in feature can be cancelled by turning off/on the fixture 1 cycle within 1sec.**



### 3 Ambient daylight threshold

With simple operation, rapidly turn off/on the fixture 2 cycles within 2 sec:

1. The green LED on the sensor flashes slowly for 5 seconds, meanwhile the fixture blinks twice.
2. The photodiode measures and remembers the surrounding lux for 1 sec.
3. The fixture and green LED will be on for 10s to indicate successful learning.

This feature enables the fixture to sample luminance at any time to set lux threshold level.

The latest surrounding lux value overwrites previous lux value learned.

Both the settings on DIP switch and the learned ambient lux threshold can overwrite each other. The latest action controls.

### 4 Zero-cross relay operation

Designed in the software, sensor switches on/off the load right at the zero-cross point, to ensure the minimum current passing through the relay contact point and protect the relay for long life.



## 5 Condominium control function

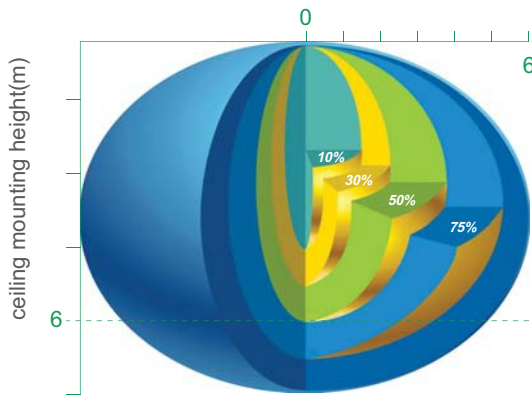
In many cases, several sensors are connected together to control the same fixture or to trigger on each other, the sudden on/off of the lamp tube or the ballast/driver causes huge magnetic pulse, which may mis-trigger the sensor. This sensor has a very advanced software to ignore that interference.

By connecting L' terminal with L' on another sensor, if any of the transmitter fixture (containing sensor) is triggered, all luminaries (including receiver and other transmitter unit in the group) will also light up.

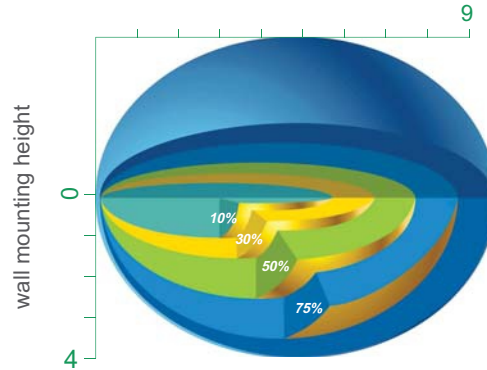
## 6 Loop-in and loop-out

Double L N terminal makes it easy for wire loop-in and loop-out, saves the cost of terminal block and assembly time.

## Detection Pattern



Ceiling mounted detection pattern



Wall mounted detection pattern

## Settings

### 1 Detection area

Detection area can be reduced by selecting the combination on the DIP switches to fit precisely for each specific application.

|     | 1 | 2 | 3 | 4 |      |
|-----|---|---|---|---|------|
| I   | ● | ● | ● | ● | 100% |
| II  | ○ | ● | ● | ● | 75%  |
| III | ● | ○ | ● | ● | 50%  |
| IV  | ● | ● | ○ | ● | 30%  |
| V   | ○ | ○ | ○ | ○ | 10%  |

I – 100%  
II – 75%  
III – 50%  
IV – 30%  
V – 10%

### 2 Hold-time

Hold-time means the time period to keep the lamp on 100%, after all motion has ceased (detection area vacated).

|     | 1 | 2 | 3 | 4 |       |
|-----|---|---|---|---|-------|
| I   | ● | ● | ● | ● | 5s    |
| II  | ○ | ● | ● | ● | 30s   |
| III | ● | ○ | ● | ● | 1min  |
| IV  | ● | ● | ○ | ● | 5min  |
| V   | ● | ● | ● | ○ | 10min |
| VI  | ● | ● | ● | ○ | 20min |
| VII | ○ | ○ | ○ | ○ | 30min |

I – 5s  
II – 30s  
III – 1min  
IV – 5min  
V – 10min  
VI – 20min  
VII – 30min

### 3 Daylight sensor

The daylight threshold can be set on DIP switches, to fit for particular application.

|     | 1 | 2 | 3 | 4 |         |
|-----|---|---|---|---|---------|
| I   | ● | ● | ● | ● | Disable |
| II  | ○ | ● | ● | ● | 50Lux   |
| III | ● | ○ | ● | ● | 30Lux   |
| IV  | ● | ● | ○ | ● | 10Lux   |
| V   | ○ | ○ | ○ | ○ | 2Lux    |

I – Disable  
II – 50Lux  
III – 30Lux  
IV – 10Lux  
V – 2Lux

**Technical Data**

|                       |                                                                                                 |
|-----------------------|-------------------------------------------------------------------------------------------------|
| Operating voltage     | 120-277 V AC 50Hz/60Hz                                                                          |
| Switched power        | Capacitive load: 400W@120 V AC; 1000W@277 V AC<br>Resistive load: 700W@120 V AC; 1600W@277 V AC |
| Standby power         | <1W                                                                                             |
| Warm time             | 20s                                                                                             |
| Detection area        | 10/30/50/75/100%, can be customized                                                             |
| Hold time             | 5s/30s/1min/5min/10min/20min/30min, can be customized                                           |
| Daylight threshold    | 2~50Lux; disable                                                                                |
| Sensor principle      | High Frequency (microwave)                                                                      |
| Microwave frequency   | 5.8GHz+/-75MHz                                                                                  |
| Microwave power       | <0.2mW                                                                                          |
| Detection range       | Max. ( Ø x H): 12m x 6m                                                                         |
| Detection angle       | 30°~150 °                                                                                       |
| Mounting height       | Max.6m                                                                                          |
| Operating temperature | -35°C ~ +70 °C                                                                                  |
| IP rating             | IP20                                                                                            |
| Certificate           | FCC, cULus                                                                                      |

