EH405 LED Floodlight with PIR Motion Detector

General Introduction

The EH405 LED Floodlight with PIR Motion Detector is a U-Net 4.0 enabled device and is fully compatible with any U-Net enabled network. The device can be set up in a U-Net network to communicate directly and report directly to a U-Net gateway. It features a PIR detector to detect motion through movement of heat sources and a lux sensor for determining brightness of its surroundings.

Product Overview

Its great compatibility with our U-Net family security products makes it suitable for smart home cloud based platforms such as HomeSys. The lux level and the timer set by knobs will be ignoring. It features a PIR motion detector to detect movement in a protected area.
This device can also be used as a basic motion sensor for indoor security application.

This motion detector is primarily designed for outdoor lighting control application. It features a PIR motion detector to detect movement in a protected area and a lux sensor for determining brightness of its surroundings. It comes with a built in timer to set the duration for light turn on. The lux level and the timer can be set through knobs on the device itself. If the PIR detects motion when lux level falls below a preset setting, the device will turn on the LED lighting (or indirectly through gateway) and then later turns it off when its timer has elapsed.
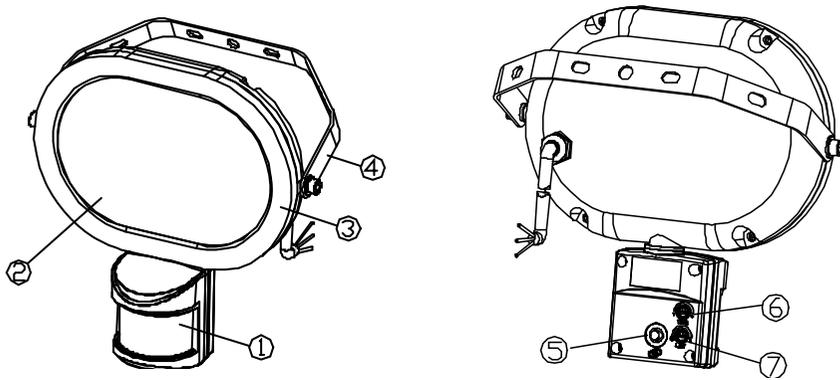
| ① PIR Detector(Red LED inside)	⑤ Learn Button
② Toughened glass lens	⑥ Time off Knob
③ Floodlight housing	⑦ Lux Knob
④ Mounting bracket	

Binding with HomeSys

1 Log into the HomeSys account from web browser.

2 Select "System" then "Add a Device".
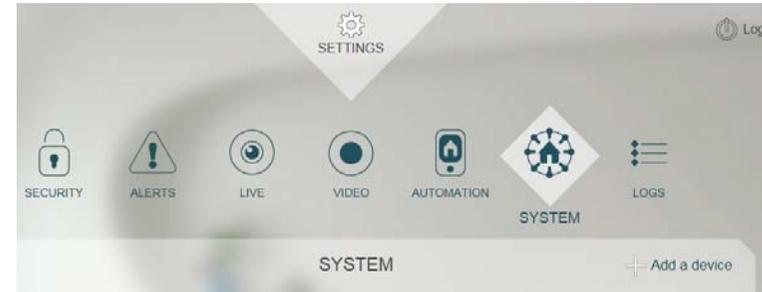
3 Select "Security Light".

4　The following screen will appear. Connect the AC Mains power to the EH405,

Installation must be performed by skill technicians who are informed about the standards and technical requirements of the appliance and its proper installation.

WARNING: Before proceeding with the installation, **TURN OFF THE AC MAINS POWER AT THE CIRCUIT BREAKER OR FUSE BOX TO AVOID ELECTRICAL SHOCK.**
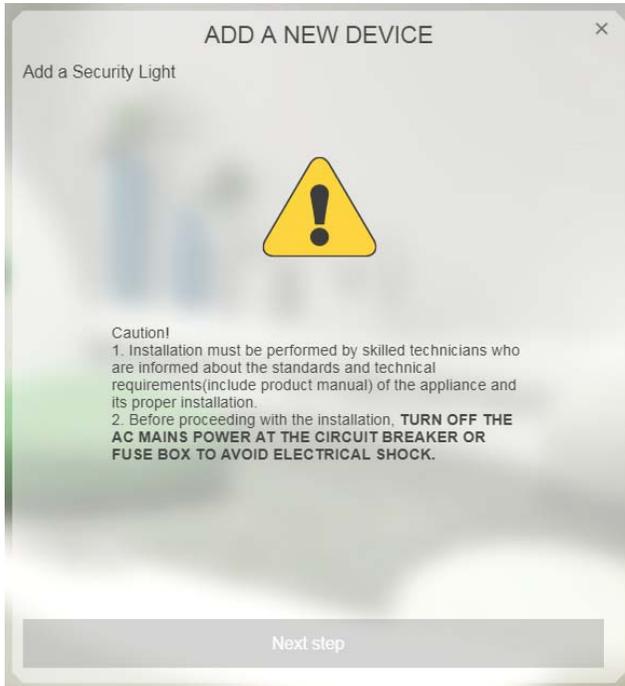
Wire up the unit to a cable plug using a wiring fitting as shown below.

Follow exactly the wire colors as below:
- BROWN (Live) wire to the mains live connection.
- BLUE (Neutral) wire to the mains neutral connection.
- GREEN/YELLOW wire to the mains earth cable.
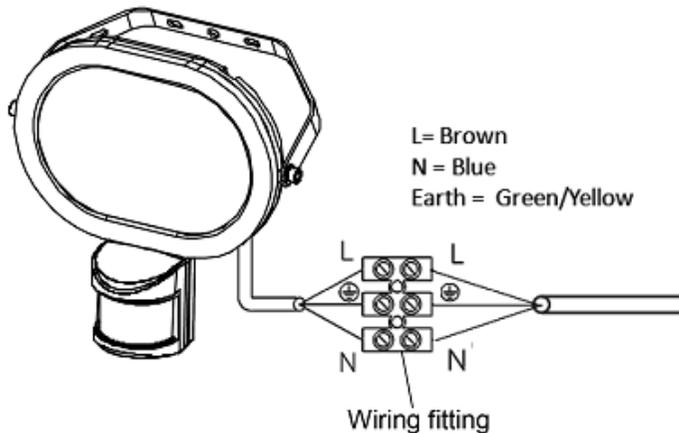
5　The following screen will appear, this means the gateway start to bind. Please press the binding button for 4s then release. The LED will start blinking. This means the EH405 is entering binding mode too.

6　The screen will show if the process is successful or unsuccessful.

7　Time-out will occur if the binding process was unsuccessful.

If the process was unsuccessful, please follow the binding steps and try again.
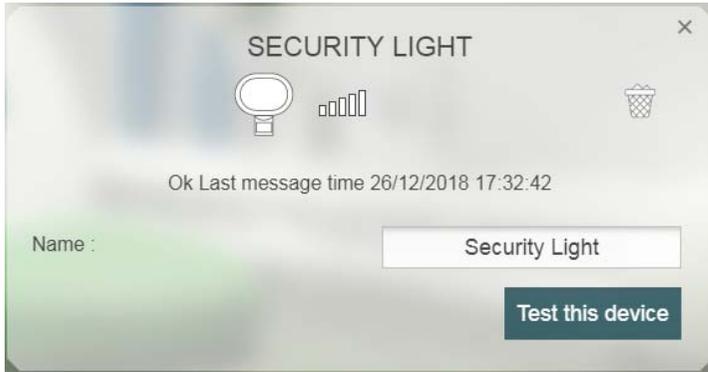
Testing

Warm-Up
It will take approximately 5 seconds to warm up the Detector after the power on. During this period the LED Lighting will ON. When the LED Lighting turns OFF, it implies warm-up procedure is complete and the detector is ready for detection.

Testing

1.　Go to SECURITY, and set it to DISARM.

2. Go to SYSTEM, and select the Security Light, then press the "Test this device" icon.

SECURITY LIGHT ✕

Ok Last message time 26/12/2018 17:32:42

Name : Security Light

Test this device

3. Please walk within the PIR sensor detection range.

DEVICE TEST ✕

Security Light

Please walk within the Security Light PIR sensor detection range.

4. If the test is successful the screen will show below.

DEVICE TEST ✕

Security Light

Your device was tested successfully !
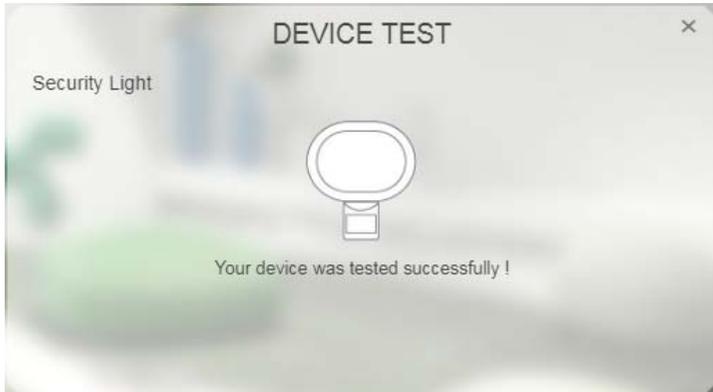
5. If the test is unsuccessful, please check the troubleshooting section.

## Mounting the Unit

Choosing the location

The recommended location for the floodlight is outside the house under the eaves or other shaded areas where it is not directly exposed to sunlight.

- Do not aim its PIR detector facing a window or direct sunlight, otherwise poor triggering response may occur..

- Avoid aiming the PIR Detector at pools, heating vents, air conditioners or objects that may change temperature.

- Avoid aiming the PIR Detector at trees or shrubs or where the movement of pets or animals may be detected

- Where possible, mount the unit so that the path of an intruder would cut across the fan pattern rather than directly towards the detector.

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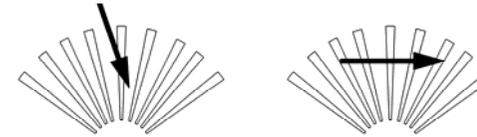
PIR less sensitive   PIR more sensitive

For the best results, mount the floodlight onto normal brickwork 1.8~2.0m above the ground. At this height, the unit will detect movement within its 110 degrees fan-shaped detection pattern up to 8m depending on adjustment. .

Top view

Side view
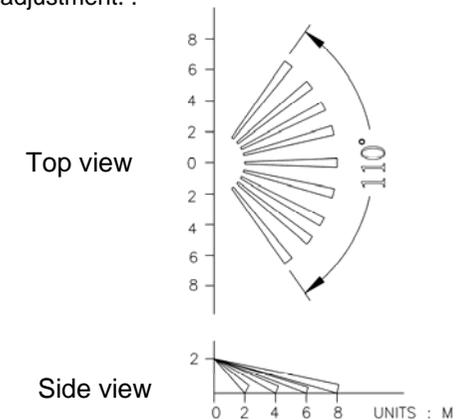
SAFETY PRECAUTION

- DO NOT install when it is raining.
- Isolate the power supply before installation.
- Ensure that local Wiring and Building regulations are complied with.
- The unit is supplied with a pre-wired supply cable this must be used and must not be removed.
- Ensure that the power supply is protected by a 6amp circuit breaker or 5amp fuse.
- Ensure minimum distance of 2.0m away from lighted objects.
- The unit must be installed vertically with the PIR at the bottom of the unit.
- The unit can be corner mounted if preferred.
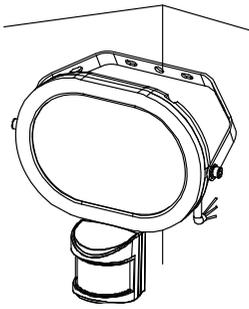
Installation & Wiring instructions

1. Use the mounting bracket to mark the position of the mounting holes.

2. Drill the holes and insert suitable wall plugs
3. Fix the mounting bracket to the wall using suitable screws.
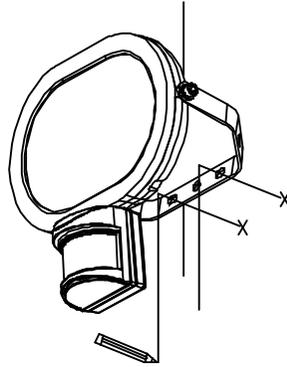
Wiring instructions

WARNING: Isolate the mains power supply to prevent electrical shock.

4. It is recommended to add an internal single pole wall switch to allow easy control of the unit.

L
AC POWER
N

L   L

N   N
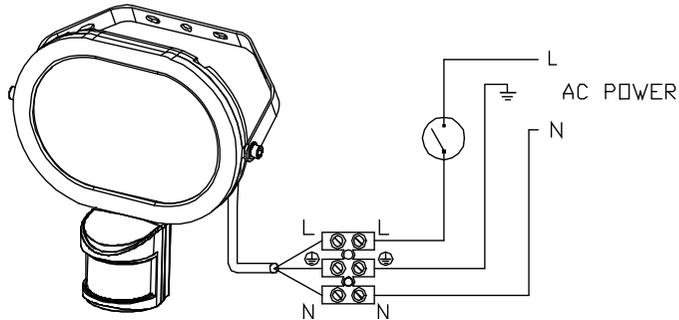
5. Connect the mains power supply to the pre-wired cable provided with the fitting as shown above. If the connection is made outdoors a suitable waterproof IP box must be used to make the connections.

   Follow exactly the wire colors as below:
   - BROWN (Live) wire to the mains live connection via a wall switch
   - BLUE (Neutral) wire to the mains neutral connection.
   - GREEN/YELLOW wire to a suitable earth point. The unit must be earthed.

Note: Do not remove the pre-wired supply cable. This will invalidate the warranty.

Time and Lux adjustment

You can set desired Time period and Lux level through:
The following section describes the steps for manual setting.

(1) Time adjustment
   Time-off knob controls how long the floodlight will stay on after the motion is detected. Turn the TIME control knob towards the + sign to increase how long the floodlight stays on (up to about 12 minutes) or towards the T to decrease (down to about 5 seconds). The recommended setting for Time control is approximately midpoint of the scale (approximately 5 minutes).

TIME
About 5 seconds

TIME
About 12 minutes

(2) Lux adjustment
   The LUX adjustment sets the brightness level threshold that will activate the motion sensor. The Lux control can be adjusted between T (always triggered regardless of light level) and the moon symbol (triggered on only during hours of darkness). The adjustable Lux range is about 30 - 200 Lux.

LUX
Always ON

LUX
During hours of darkness

1. To set the lux level, turn the Time-off knob to "T" for maximum response.
2. Turn the LUX control knob to the "moon" (dusk) position.
3. Wait until the ambient light level reaches the level of darkness at which you wish the floodlight to activate.
4. Slowly rotate the Lux knob anti-clockwise while keep creating motion during the process until the floodlight turns on. At this position the light will operate at approximately the same level of darkness each evening.
5. Set the Time-off knob back to the desired preset time.
6. When completed, tighten the two Allen screws on the side of the floodlight body to secure its position

Manual Binding
With the battery inserted, press and hold the Learn button for 3 or more seconds, and the detector LED will start to flash 30 seconds, implying that it has entered ID code learning mode.

Reset to Factory Settings
1. Press and hold the Learn button for 3 or more seconds, and the detector LED will start to flash.
2. Press and hold the Learn button for 6 or more seconds within 30 seconds until the LED turns off. The device is now reset back to factory mode

Troubleshooting

Table below lists typical problems encountered:

Symptom	Possible Cause	Recommendation
Floodlight does not turn on for 5 seconds after power is connected.	Power is not connected properly.	Check if wall switch is on. Confirm wiring is correct. Check supply breaker / fuse.
Cannot carry out binding and association	Floodlight already paired to another gateway.	Perform a factory reset.
Floodlight flashes on and off		The unit's lux sensor is being triggered off by reflected light
Gateway cannot communicate with the unit	Out of range.	Relocate the unit closer to the gateway.
Floodlight remains on	PIR detector triggered by unknown heat source.	1. Check time setting 2. Cover its PIR Detector with black insulating tape. If after the timer expires and the floodlight turns off this indicates that the PIR Detector can see a moving heat source e.g: radiator, heater, boiler outlet, open window, open exterior door or moving branches or bushes retaining heat from the daytime period.

Specifications

Power Requirement	220~240V, 50/60 Hz AC
Power Cable Requirement	H05RN-F, 3 Core, 1.0mm²
Lighting Load	20W, LED sealed unit not replaceable
Color Temperature (K)	5000 K Cool White
CRI	>70
Lumen (Lm)	1500 lm +/- 5%
Beam angle	> 90°
Light Tilting Angle	Floodlight body: Vertical 0° to 30° forward tilt recommended
Mounting Height	Recommended 1.8 ~ 2.0m on Normal Brick Wall
PIR Detection area	Min. range 8m, min. angle of 100° (@1.9m height, 25°C ambient temperature)
PIR Swivel Angle	Up to 30° Leftward, Up to 30° Rightward
Lux Adjustment	Approximately 30 ~ 200 Lux
Timer Adjustment	Approximately 5 seconds ~ 12 minutes
Protection Class	Class 1 – Must be earthed
Working Temperature	-20°C - +40°C
Dimension (H x W x D)	20 cm x 19.6 cm x 8.8 cm
Weight	0.8 kg
Protection Degree	IP54-Weather Proof
Frequency Range	EU: 868.30 MHz

Specifications are subject to change without notice

WARNING:
Do not dispose of electrical appliances as unsorted municipal waste, use separate collection facilities.

Contact your local government for information regarding the collection systems available.

If electrical appliances are disposed of in landfills or dumps, hazardous substances can leak into the groundwater and get into the food chain, damaging your health and well-being.

When replacing old appliances with new ones, the retailer is legally obligated to take back your old appliance for disposal at least for free of charge.

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