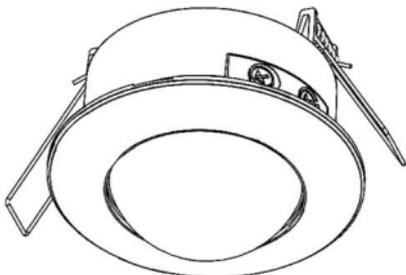


## Smart Sense 360° Sensor

Thank you for purchasing this SIMX PIR Sensor. This sensor is suitable for indoor use, and restricted outdoor applications only. Please read this manual thoroughly before installation and retain for future reference.



Model	Description
LHT0142	Flush Mount PIR 360° Sensor

**Detection range:** Up to 6m diameter (3m radius) at mounting height of 2.5m.

**Detection angle:** 360°

**Power supply:** 230VAC ~ 50 Hz.

**Maximum switchable load:**

2000W Incandescent.

500W Fluorescent.

110W LED.

**Time on adjustment :** 5 secs - 15 mins.

**Dusk level adjustment:** Day and night or night only operation.

**Environment protection:** IP44 (suitable for sheltered outdoor use).

**Warranty:** 3 Years.

### ! IMPORTANT

SIMX strongly recommend that this sensor is installed by a suitably qualified and registered electrician. Please read the entire Installation Instructions and Calibration Settings before installing this product. All electrical work must be carried out in accordance with local and national electrical codes as applicable.

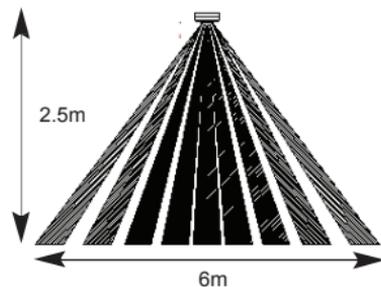
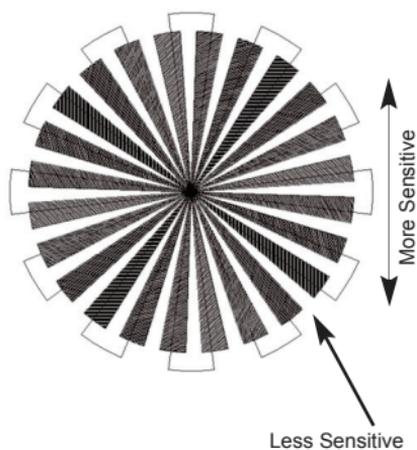
Always switch power off prior to installation.

A means of power isolation must be installed on the circuit for the purpose of safe access for any internal cleaning, recalibration or maintenance.

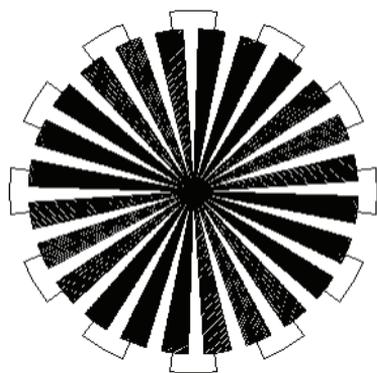
This appliance is not intended for installation or calibration by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience or knowledge, unless they have been given supervision or instruction concerning its use by a person responsible for their safety.

There are no user-serviceable parts in this product.

Any changes or modifications made or attempted to this product without the prior written approval of the manufacturer will void any and all stated warranties. This excludes normal calibration of the Sensor, Time and Lux control setting knobs as described in these installation instructions.

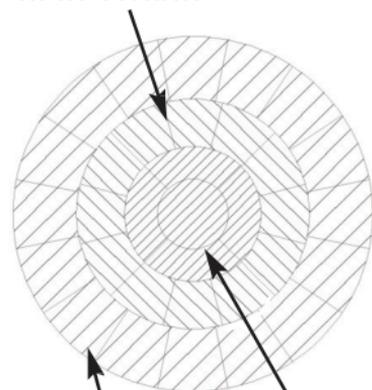
**A**SIDE VIEW**B**TOP VIEW

360°

**C**

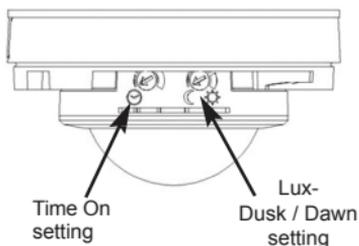
Lens Mask

Restrict short detection

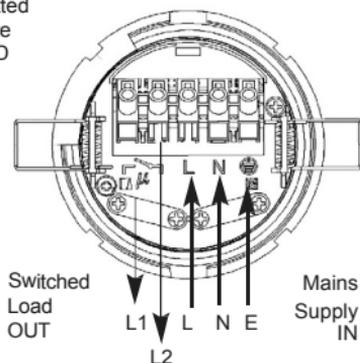
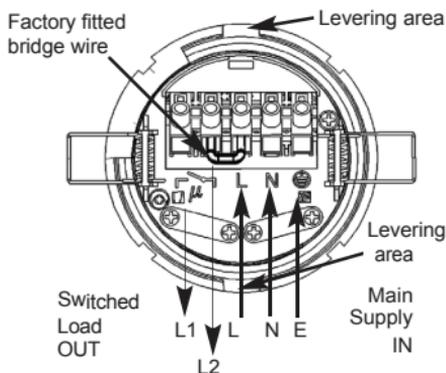


Restrict long detection

Restrict detection directly under sensor

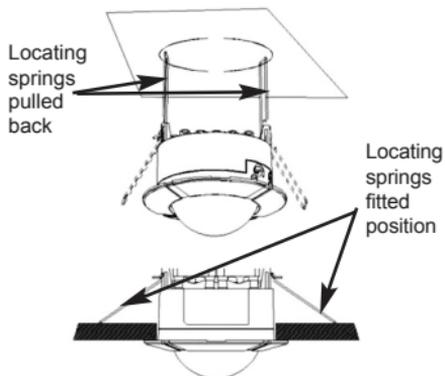
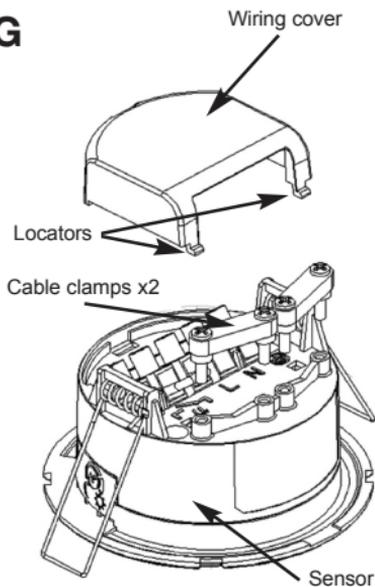
**D****F**

Factory fitted  
bridge wire  
REMOVED

**E**

In the above illustration:

- 4 core cable may be used.
- There is no external junction box.
- A bridge is provided, prewired to bridge across live supply from AC mains to the output load via the contacts.

**G**

## SECTION ONE - GENERAL INFORMATION

The unit utilises passive infrared technology to detect heat radiation of moving human bodies. Upon detection, the attached lighting load will illuminate for a user-determined time period.

An integral daylight sensor ensures day or night-only operation.

### PARTS INCLUDED

- PIR Sensor unit.
- Instruction manual. Please keep safe for future reference.
- Accessory Pack. Includes wiring cover, 2 x cable clamps, 4 x clamp screws and adhesive lens mask.

This product is suitable for indoor or sheltered outdoor use. Connected load must not exceed maximum 2000W incandescent, 500W fluorescent or 110W LED.

This unit can also be used to control inductive load not exceeding 200W.

**CAUTION:** This unit circuit is surge and transient protected to IEC specification. However, if voltage varies significantly from 230 volts, which may occur on circuits with motor loads, the sensor may malfunction.

## SECTION TWO - SELECTING THE LOCATION

Careful positioning of the sensor will be required to ensure optimum performance.

The motion detector has a number of detection zones, at various vertical and horizontal angles as shown (see Diagram A detailing detection range and direction).

A moving human body needs to cross/enter one of these zones to activate the sensor. The best all-round coverage is achieved with the unit mounted at the optimum height of 2.5m.

The sensor is more sensitive to movement ACROSS its field of vision than to movement directly TOWARDS (see Diagram B). Therefore position the unit so that the sensor looks ACROSS the likely approach path.

Avoid positioning the sensor where there are any sources of heat in the detection area (extractor fans, tumble dryer exhausts etc.) including opposite any other light sources such as other security lights.

Reflective surfaces (i.e. pools of water or white-painted walls) and overhanging branches may cause false activation under extreme conditions.

During extreme weather conditions the motion sensor may exhibit unusual behaviour. This does not indicate a fault with the sensor. Once normal weather conditions return, the sensor will resume normal operation.

## SECTION THREE - INSTALLATION

After choosing a suitable location (see previous section) install the unit as follows:

The unit is suitable for connection to a 230 V AC 50Hz electricity supply. An internal switch should be installed to switch the power to the unit ON & OFF. This allows the sensor to be easily switched off when not required or for maintenance purposes and allows it to be conveniently brought into manual override.

Remove the wiring cover from the sensor by depressing the catch on the side and lifting it clear of the twin locator's opposite the catch (see Diagram G).

Mark the position of the 75mm diameter locating hole centre, take care to avoid ceiling joists and other obstructions within the 75mm diameter. Drill a pilot hole to take the centre shaft of a hole cutter, then cut the required hole.

### IMPORTANT

Switch off the electricity at the fuse box by removing the relevant fuse or switching off the circuit breaker before proceeding with the installation. All fittings should be installed by a registered electrician.

### Connection

There Are 2 Possible Connection Scenarios:

- **Standard connection. See Diagram E.**

**The factory fitted "bridge" wire must not be removed.**

Connect the 3 or 4 core mains supply cable to the terminal block on the unit as follows:-

NEUTRAL (Blue)	N
EARTH (Green/Yellow)	
LIVE (Brown)	L

Connect the fourth core (lighting live) of the four core cable (if used) to the L1 terminal block or the second 3 core cable (from the lighting) to L1 (brown), N (blue) and E (Green/Yellow).

SWITCHED LIVE	L1
---------------	----

- **Switching DC loads or loads which use a different phase or voltage supply from the AC mains (see Diagram F). Remove the factory fitted bridge wire.**

Connect the 3 core mains supply cable to the terminal block on the unit as follows:-

NEUTRAL (Blue)	N
EARTH (Green/Yellow)	
LIVE (Brown)	L

Connect the load in series with the load supply between L1 and L2 terminals.

Please note that the function of L1 and L2 can viewed as a simple switch controlled by the PIR sensor electronics.

When wiring is complete, set the two adjustment controls on the side of the unit (Diagram D) to the following position:

**TIME** - Fully anti-clockwise (min. time).

**DUSK** - Fully clockwise (daylight).

Push back the locating spring (Diagram E) and feed the unit into the ceiling void via the 75mm hole. The locating spring will now fold back and hold the unit in place.

It is recommended to keep the top of the sensor clear of any insulation material.

Reconnect the mains power supply to liven the circuit/s.

## SECTION FOUR - OPERATION AND TESTING

### Walk Testing Procedure

Set the two adjustment controls on the underside of the unit (Diagram C) to the following positions:

**TIME** - Fully anti-clockwise (min. time).

**DUSK** - Fully clockwise (daylight).

The unit will now operate during daytime as well as at night, illuminating the lamp for approx. 5 seconds each time. This allows testing to be carried out to establish whether the sensor is covering the required area.

The lamp will immediately illuminate as the unit goes through its “warm-up” period. After approximately 1 - 2 minutes the lamp will extinguish. Try to remain outside the detection area during the warm-up period.

Walk around the sensor to establish the detection area. The sensor will detect within an approximately six metres diameter circle from the centre of the sensor location with 2.5m ceiling height.

As you cross a detection “zone” the lamp will illuminate. Now, stand still until the lamp extinguishes (this should take approx. 5 seconds).

Start moving again. As you cross each “zone” the lamp will illuminate.

Repeat the above, walking at various distances and angles to the unit. This will help you to establish the detection pattern and discover any unwanted detection areas.

### Masking The Sensor Lens

To reduce the sensor coverage, preventing detection in unwanted areas, mask the sensor lens using the lens mask sticker supplied (see Diagram C). For your information, the centre section of the lens covers short range detection, and the outer edge of the lens covers long range. Mask the sensor to suit your installation.

## **Setting Up For Automatic Operation.**

When walk tests are complete, the unit can be switched to automatic operation :

To access the controls use a knife or thin flat blade screwdriver to gently level (see Diagram E) the unit clear of the ceiling. Hold in position against the spring pressure while making adjustment.

The TIME setting controls how long the unit remains illuminated following activation & after all motion ceases. The minimum time (fully anti-clockwise) is approx. 5 seconds, whilst the maximum time (fully clockwise) is approx. 15 minutes. Set the control to the desired setting between these limits.

The DUSK control determines the level of darkness required for the unit to start operating. The setting is best achieved by the procedure below:

**Set the DUSK control knob fully anti-clockwise.** The unit will now start operating at dusk.

If you require the light to activate earlier, wait until the ambient light level reaches the level of darkness at which you wish the lamp to become operative, SLOWLY (a small step at a time) rotate the control in a clockwise direction until a point is reached where the lamp illuminates in response to a hand moving below the unit. Leave the control set at this point.

At this position, the unit should become operative at approximately the same level of darkness each evening. Observe the operation of the unit. If the unit is starting to operate too early (i.e. when it is quite light), adjust the control slightly anti-clockwise. If the unit starts to operate too late (i.e. dusk), adjust the control slightly clockwise.

Continue to adjust until the unit operates as desired.

Once the unit is set up as desired, ease the unit back into position under spring pressure.

## **MANUAL OVERRIDE MODE**

The light can be switched on for longer time periods by use of the Manual Override Mode. This can be activated at night by using the isolation switch.

Switch the isolation switch twice (OFF/ON, OFF/ON) within 2 seconds. The unit will now illuminate continuously until dawn or until it is switched back into Detection Mode.

To return to Detection Mode, switch the isolation switch off and then back on again within 1 second.

## SIMX WARRANTY INFORMATION

This product is guaranteed by SIMX Ltd for 36 MONTHS from the date of purchase against faulty materials or workmanship which affects its designed ability to switch or operate. During this period if the product has a defect of this nature it will be repaired or replaced free of charge by SIMX with the same item, or a similar one of higher specification. ON CONDITION THAT:

The buyer returns it to the seller from whom it was bought, freight paid.

The product has been bought by the user. i.e. a receipt/sales invoice is produced as proof of purchase the product has not been misused or handle carelessly, installed in anyway contrary to the installation instructions, or installed in any unusually exposed or harsh environmental conditions.

This guarantee excludes liability for discolouration of paint or plastic, or any user replaceable parts. It does not confer any rights other than those expressly set out above and does not cover any claims for consequential loss or damage.

Our Goods come with guarantees that cannot be excluded under the Australian and New Zealand Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the Goods repaired or replaced if the Goods fail to be of acceptable quality and the failure does not amount to a major failure.



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