

**360° SURFACE MOUNT
CEILING PIR LIGHT
CONTROLLER**





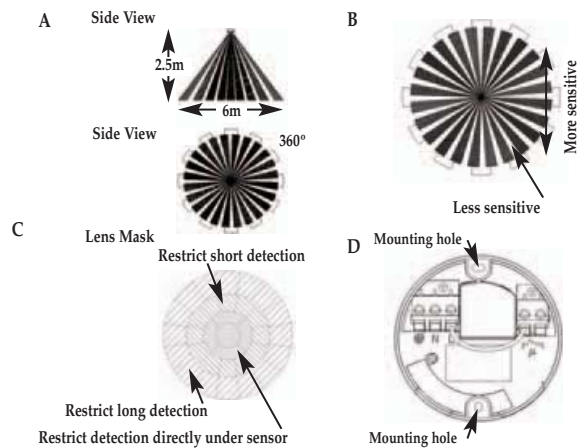
Introduction

The SLW360 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.

Important Information: Light Pollution and considerate Lighting

Please be aware of the annoyance over-lighting an area can cause to your immediate neighbours. Light pollution caused by incorrectly installing a unit or over-lighting an area can be limited by carefully considering the location and position of your unit before installation. The light spread on all halogen floodlights can be reduced by angling the floodlight downwards on the mounting bracket. This will also concentrate the light on your property and limit the potential inconvenience of the light shining into your neighbours windows etc.

Please see Selecting a Location for information on choosing the optimum location for any security light controlled by this unit.

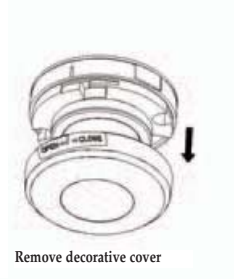




E Twist cover anti-clock wise

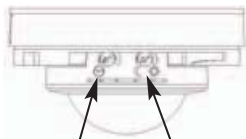


Align marks on moulding



Remove decorative cover

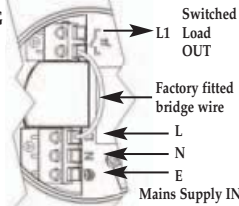
F



Time On setting

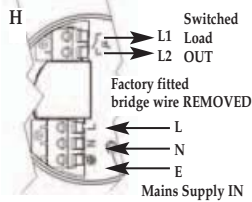
Lux - Dusk/Dawn setting

G



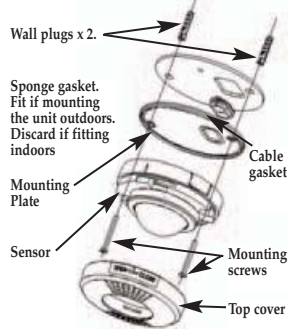
In the above illustration:
 - 4 core cable may be used
 - there is no external junction box
 - A bridge is provided, prewired to bridge across live supply from AC mains to the output load

H



In the above illustration:
 - the L1 L2 terminals are used to control a DC load or if the load uses a different phase or voltage supply from the AC mains in.
 - factory fitted bridge must be removed to isolate L1 & L2 terminals from AC mains in.

I Ceiling mount assembly method.





Parts included

- PIR Sensor unit.
- Instruction manual. Please keep safe for future reference.
- Accessory Pack. Includes 2 x wall plugs, 2 x wall fixing screws, 1 x lens mask sticker.
- 1 x outdoor mounting sealing gasket.
- 1 x incoming/outgoing wire gasket.

Tools and parts needed

- 3 core flexible cable.
- Electric/hand-held drill & bits.
- Terminal or Electricians screwdriver.
- Large slotted/philips screwdriver.
- Wire cutters suitable mains interconnect cable.

This product is suitable for indoor or outdoor use. Connected load must not exceed maximum 2000W filament/incandescent or 500W fluorescent/low energy lighting.

Do not attempt to install during wet weather, if you are suffering from nausea or dizzy spells or on medication with similar side effects. If in any doubt, consult a qualified electrician.

Not suitable for use with discharge lighting.

Selecting a location

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

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.

Careful positioning of the sensor will be required to ensure optimum performance. See diagram A detailing detection range and direction.



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 (ie 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.

Installation

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 competent person in accordance with IEE Wiring Regulations (BS7671)

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. It is suggested that 3-core round flexible cable of 1 sq. mm gauge is used. 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.

Remove the top cover of the sensor by twisting the top cover anticlockwise until the arrows shown on diagram E are aligned. The top cover can now be removed from the sensor body.

Mark the position of the fitting holes. See diagram G. Drill the holes. Insert the rawl plugs into the holes.



PIERCE & PASS THE INCOMING AND OUTGOING CABLE THROUGH THE GROMMET BEFORE SECURING CEILING MOUNTING PLATE TO CEILING.

It is recommended that the grommet is pierced with a screwdriver to ensure a better seal.

Connection

THERE ARE 2 POSSIBLE CONNECTION SCENARIOS

1. Standard connection. See Diagram G.

The factory fitted “bridge” wire must not be removed.

Connect the 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 cable or incoming cable from the lighting load to the L1 terminal block on the unit as follows (see connection diagram G)

SWITCHED LIVE L1

2. Switching DC loads or loads which use a different phase or voltage supply from the AC mains. See Diagram H. **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, it is recommended that the ceiling mounting plate is fitted to the sensor body and fixed to the ceiling as follows:-



See diagram "I" for ceiling mounting assembly method. Fit the sensor assembly to the ceiling, if mounting outdoors, it is essential that the sponge gasket is placed between the ceiling mounting plate and the sensor itself to ensure a good seal is maintained.

If mounting the unit indoors, the gasket is not required and can be discarded.

Insert fixing screws through the sensor assembly into the wall plugs and secure.

Do not overtighten, if using a power screwdriver ensure it is set to a low torque setting so as not to damage the unit.

Set the unit up as follows, before refitting the decorative cover.

Setting up

Walk Test Procedure

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

TIME - Fully anti-clockwise

DUSK - Fully clockwise

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 the best position for the sensor.

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 metre diameter circle from the centre of the sensor location.

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.

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 D). 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 adjusted for automatic operation :

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. 18 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. 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 (ie. when it is quite light), adjust the control slightly anti-clockwise. If the unit starts to operate too late (ie. dusk), adjust the control slightly clockwise.

Continue to adjust until the unit operates as desired.

Once the unit is set up as desired, refit the top cover by aligning the arrows shown on diagram E and twisting clockwise until cover is secure.

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 internal wall switch or circuit breaker.

Switch the internal wall 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 internal wall switch off and then back on again within 1 second.



Troubleshooting guide

Problem	Solution
<ul style="list-style-type: none">• Lamp stays ON all the time at night.	Cover PIR lens with a thick cloth. If the light turns out, check detection area for heat or reflective source. If the light stays on, check wiring. See Section 3.
<ul style="list-style-type: none">• PIR keeps activating for no reason (at random).	Turn off at the internal wall switch. Leave for 30 seconds and turn on again. Leave for at least 18 minutes. If light activates, check area for false activation from heat, wind or reflective source.
<ul style="list-style-type: none">• PIR sensor will not operate at all.	Check that the power is switched ON at the power supply or internal wall switch. Turn OFF the power to the unit and check the wiring connections. Check the lamp. If the lamp has failed, replace. Ensure that the lamp is seated correctly in the lampholder. Please note that the unit will not detect through glass. (e.g. in a glazed porch).
<ul style="list-style-type: none">• The PIR sensor will not operate at night.	The level of ambient light in the area may be too bright to allow operation at the current DUSK setting. During the hours of darkness, adjust the DUSK control slowly clockwise until the lamp illuminates. Refer to previous section for more details.
<ul style="list-style-type: none">• Unit activates during the daytime	Adjust the DUSK Control setting anti-clockwise to lower the level of ambient light required for activation.
<ul style="list-style-type: none">• PIR coverage is poor/ sporadic	Unit may be poorly located. See previous section - 'Selecting A Location' and re-locate the unit.



Problem	Solution
<ul style="list-style-type: none">• Detection range varies from day to day	PIR detectors are influenced by climatic conditions. The colder the ambient temperature, the more effective the sensor will be. You may need to make seasonal adjustments to the detector head position to ensure trouble-free operation all year round.

Technical specifications

Detection Range:	Up to 6 metres diameter (3m Radius) at mounting height of 2.5m
Detection Angle:	360°
Power Supply:	230 V AC ~ 50Hz
Maximum Switchable Load:	2000W (e.g.20 x 100W GLS) Incandescent/filament or 500W Fluorescent/low energy lighting Not suitable for discharge lighting. 75W Fan
Time On Adjustment:	5 seconds - 18 minutes
Dusk Level Adjustment:	Day & night or night only operation
Environmental Protection:	IP44 (suitable for outdoor use)
Conforms to Directives:	73/23/EEC and 89/336/EEC