360º FLUSH MOUNT CEILING PIR LIGHT CONTROLLER

Cat No. SLFM360

TIME GUARD LIMITED

INSTALLATION & OPERATING INSTRUCTIONS

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Introduction

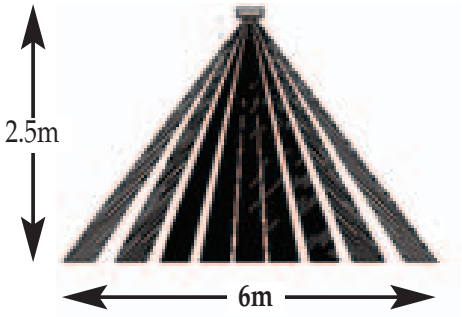
The SLFM360 utilises passive infrared technology to detect heat radiation of moving human bodies.Upon detection, the attached lighting load will illuminate for a user-determined time period. An integral daylight sensor ensures all day or night-only operation.

Important Information: Light Pollution and Considerate Lighting

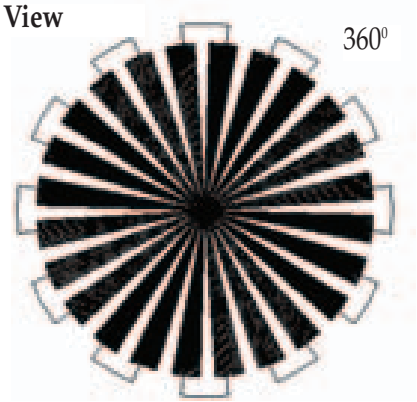
Please be aware of the annoyance over-lighting an area can cause to your immediate neighbours. Light pollution caused by incorrectly installing a unit or over-lighting an area can be limited by carefully considering the location and position of your unit before installation. The light spread on all halogen 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.

A Side View



Top View



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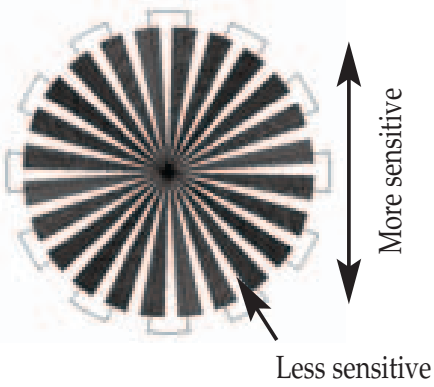
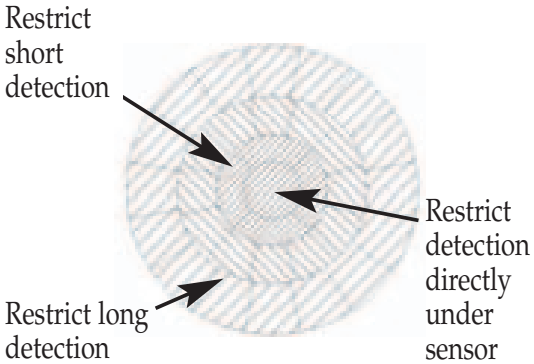


C Lens Mask



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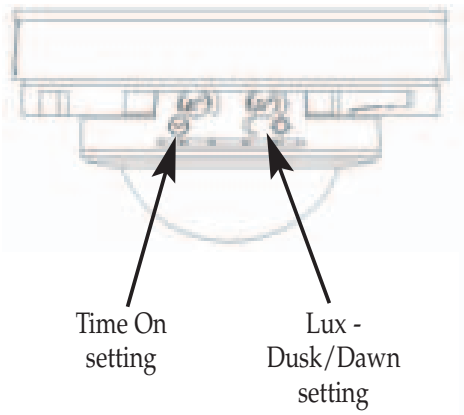

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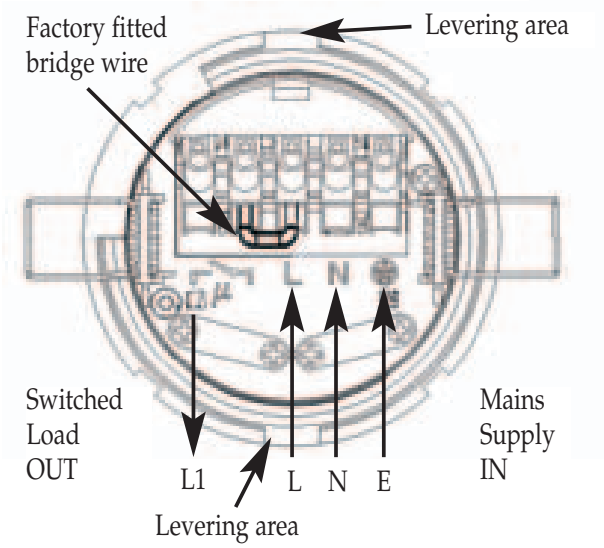
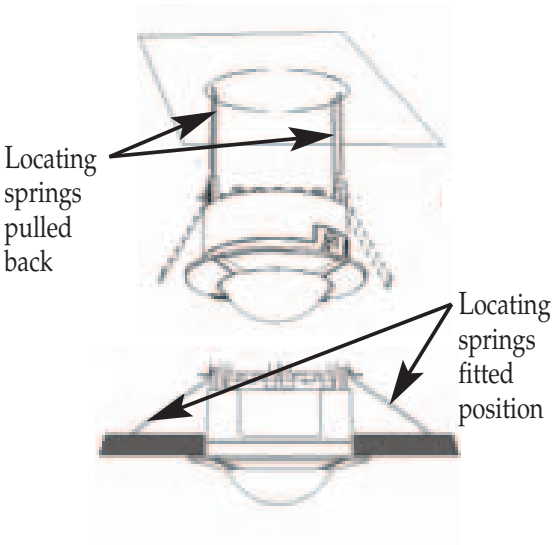


In the above illustration:
- 4 core cable may be used
- there is no external junction box
- A bridge is provided, prewired to bridge across live supply from AC mains to the output load via the contacts



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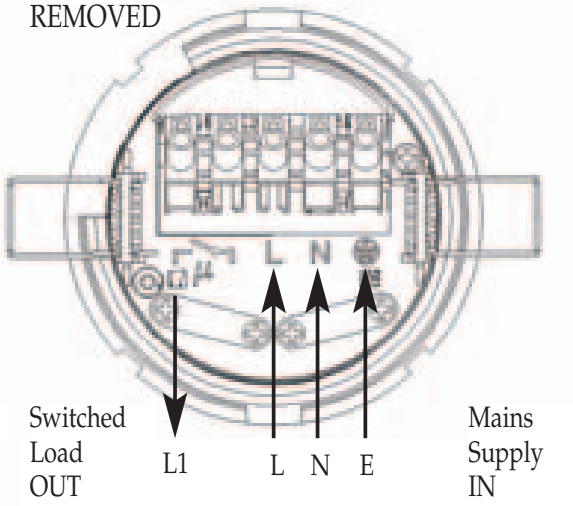
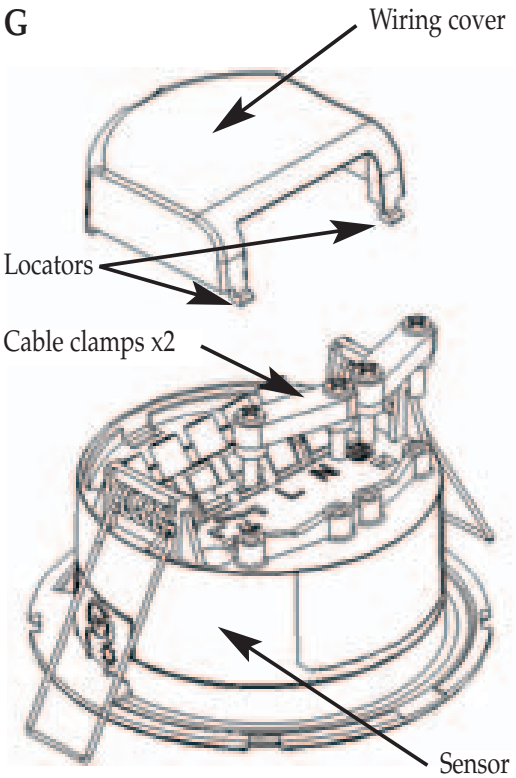


In the above illustration:
- the L1 L2 terminals are used to control a DC load or if the load uses a different phase or voltage supply from the AC mains in.
- factory fitted bridge must be removed to isolate L1 & L2 terminals from AC mains in.

G



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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 1 x lens mask sticker.

Tools and parts needed

- 3 core flexible cable.
- Electric/hand-held drill & bits.
- 75mm or 3 inch diameter hole cutter.
- Terminal or Electricians screwdriver.
- Small philips screwdriver.
- Wire cutters.
- Suitable mains interconnect cable.

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

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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 isolating switch should be installed to switch the power to the unit ON & OFF. This allows the sensor to be easily switched

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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 locators opposite the catch (see diagram G).

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

Connection

THERE ARE 2 POSSIBLE CONNECTION SCENARIOS

1. 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).

2. 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.

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Please note that the function of L1 and L2 can be viewed as a simple unconnected 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 positions:

TIME -Fully anti-clockwise.

DUSK - Fully clockwise.

Push back the locating springs (diagram E) and feed the unit into the ceiling void via the 75mm hole. The locating springs will now fold back and hold the SLFM360 in place.

Setting up

Walk Test Procedure

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 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 metre diameter circle from the centre of the sensor location with a 2.5m ceiling.

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 confirm the detection pattern.

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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 adjusted for automatic operation :

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

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 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

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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, 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.

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Troubleshooting guide

Problem	Solution
• **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.
• **PIR keeps activating for no reason (at random).**	Turn off at the isolation switch. Turn back on again after 30 seconds. Leave for approximately 18 minutes. If light activates, check area for false activation from heat, wind or reflective source.
• **PIR sensor will not operate at all.**	Check that the power is switched ON at the power supply or isolation 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).
• **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.
• **Unit activates during the daytime**	Adjust the DUSK Control setting anti-clockwise to lower the level of ambient light required for activation.

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Technical specifications

Detection Range:	Up to 6 metres diameter (3m Radius) at mounting height of 2.5m
Detection Angle:	360º
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:	Internal use only
Conforms to Directives:	73/23/EEC and 89/336/EEC

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3 Year Guarantee

In the unlikely event of this product becoming faulty due to defective material or manufacture within 3 years of the date of purchase, please return it to your supplier in the first year with proof of purchase and it will be replaced free of charge. For the second and third years or any difficulty in the first year telephone the helpline on **020 8450 0515.**

THREE YEAR
3
GUARANTEE

HELPLINE
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