

2300W PIR Light Controller

Installation & operating Instructions



1. General Information

These instructions should be read carefully and retained for further reference and maintenance.

2. Safety

- Before installation or maintenance, ensure the mains supply to the PIR sensor is switched off and the circuit supply fuses are removed or the circuit breaker turned off.
- It is recommended that a qualified electrician is consulted or used for the installation of this PIR sensor and install in accordance with the current IEE wiring and Building Regulations.
- Check that the total load on the circuit including when this PIR sensor is fitted does not exceed the rating of the circuit cable, fuse or circuit breaker.

3. Technical Specifications

- This PIR is of Class I construction and should be earthed
- 230V AC 50 Hz
 - Motion Detection Range: Up to 12m at 2.5m mounting height
- Detection Angle: 180°
- Maximum Switching Load: 2300W Halogen Lighting 500W
Fluorescent Lighting 250W LED Lighting
(PF \geq 0.9) • Not suitable for use with Discharge Lighting
- Time ON 5 seconds to 15 minutes
- Adjustment: minutes
- Dusk Level Day & Night or Night time
- Adjustment: only operation
- Operating
- Temperature: -20°C to +40°C
- IP55 Rated suitable for restricted external applications
- CE Compliant

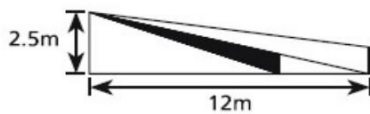
4. Introduction

The SLB/W2300 utilises passive infrared technology to detect heat radiation of moving human bodies. Upon detection, the attached lighting load will illuminate for a user-determined period of time. An integral daylight sensor ensures all day or night-only operation

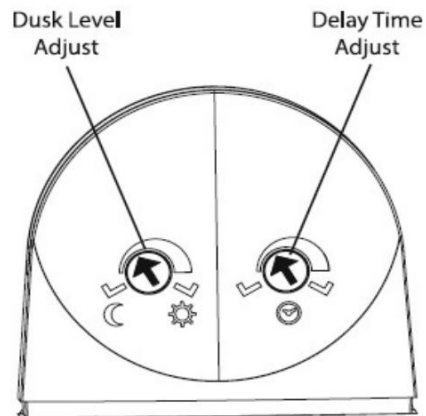
TOP VIEW



SIDE VIEW

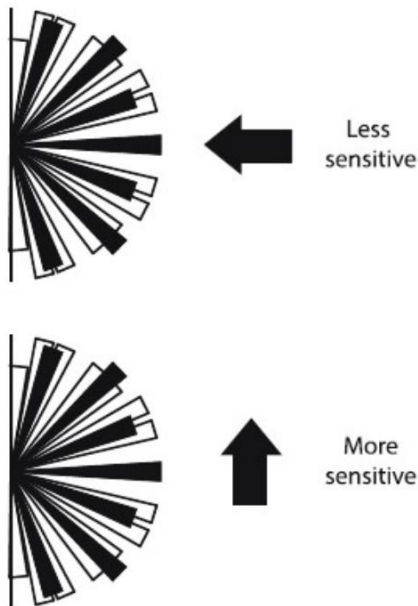


A

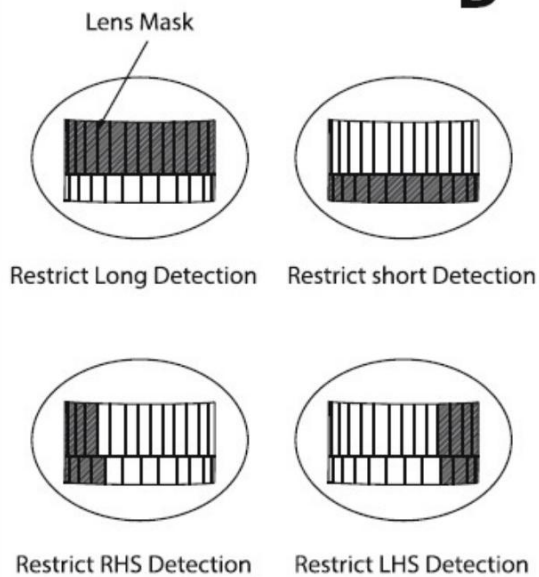


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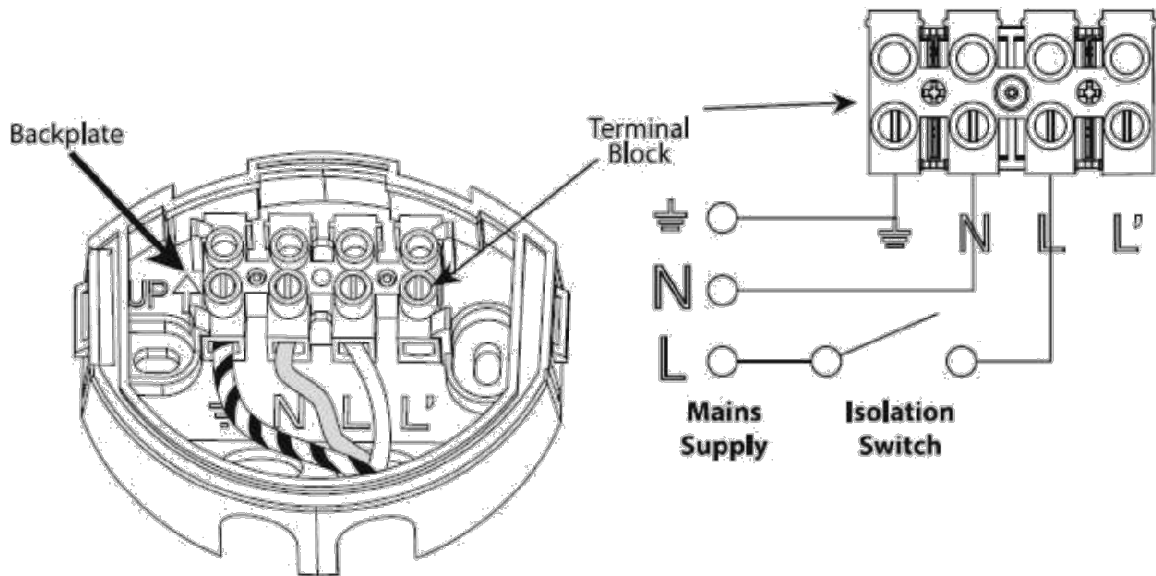


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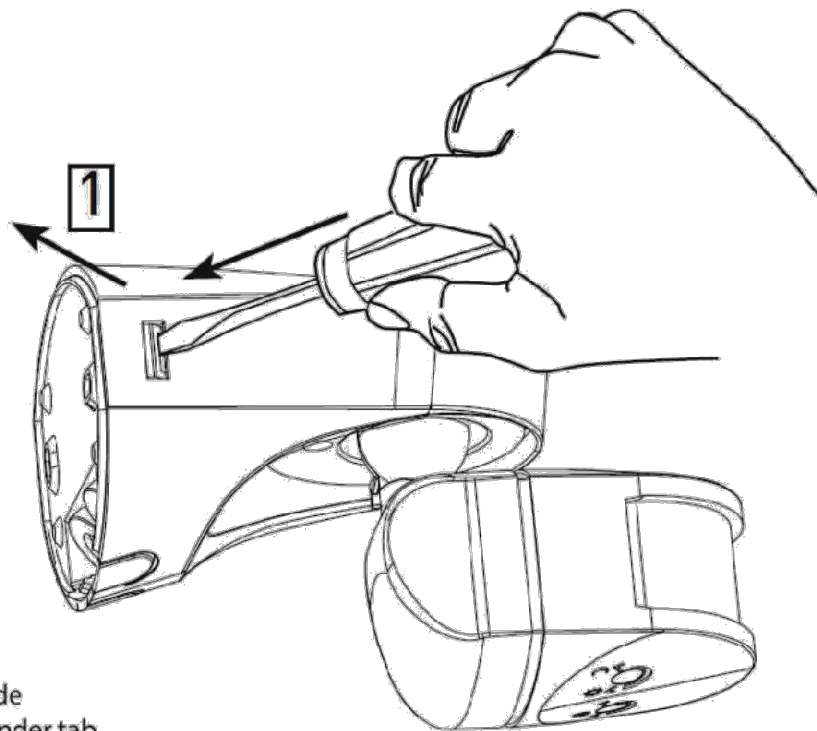


CONNECTION DIAGRAM

E



F



Step 1
Insert flat blade
screwdriver under tab
and lever in direction **1**

5. Selecting a Location


- The motion detector has 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 3 metres.
- 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 (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.

6. Installation

- An isolating switch should be installed to the switch the power **ON & OFF**. This allows the sensor to be easily switched **OFF** when not required for maintenance purposes.
- Remove the back plate from the PIR sensor (see diagram F).
- Mark the position of the fitting holes. Drill the holes. Insert the rawl plugs into the holes.
- Pass the supply cable through the cable entry point on the back plate, ensuring the grommet(s) is used to maintain the IP rating of the PIR sensor.
- Fix the back plate to the wall. Take care not to over-tighten the screws to prevent damage to the back plate. If using a power screwdriver, use the lowest torque setting
- Terminate the cable into the terminal block ensuring correct polarity is observed and that all bare conductors are sleeved see below details on connection

7. Connection

Connect the mains supply cable to the terminal block on the back plate as follows (see connection diagram E):

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

Connect the cable from the lighting load to the terminal block on the backplate as follows;

EARTH (Green/Yellow)	
NEUTRAL (Blue) N	N
SWITCH LIVE (Brown) L1	L ¹

Ensure all connections are secure.

Line the unit up with the back plate, apply pressure to both sides of the unit until both catches click into place to ensure a weatherproof seal.

8. Setting Up

Walk Test Procedure

- The sensor will rotate from left to right, and tilt up or down.

Adjust the sensor to point in the required direction and angle down to limit forward range as required.

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

TIME – Fully anti-clockwise

DUSK – Fully clockwise.

- Turn the power to the unit on. The lamp will illuminate for approximately 35 seconds. This indicates the unit is wired correctly. The unit is in Automatic Mode when the light turns off.
- If the detection area is too small for your requirements, try angling the sensor head up. This will increase the detection area. Angling the head downwards will reduce the detection area should a smaller coverage be required.

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. (See diagram C, the time adjustment knob is indicated by the 'Clock' symbol).

- The minimum time (fully anti-clockwise) is approx. 5 seconds, whilst the maximum time (fully clockwise) is approximately 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 (see diagram C). The DUSK adjustment knob is indicated by the 'Moon' and 'Sun' symbols).
- Set the light threshold to maximum (fully clockwise/Sun end), then turn the control anti-clockwise about three quarters of the way round to the Moon end. This will give operation after DUSK approximately.
- For a more accurate setting of the DUSK control turn it fully anti-clockwise (Moon end) and leave for at least 20 seconds for the unit to settle.
- When the ambient light level reaches that required for DUSK, adjust the DUSK control a small amount clockwise pausing to try to get the unit to detect and turn the lights under control ON by moving a hand slowly backwards and forwards across the front of the detector lens for around 5 seconds.
- Continue to turn the control small amounts in a clockwise direction, stopping after each adjustment to try to get the unit to detect as above.
- Eventually detection will occur and the DUSK level is now set as required.

9. 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).
- The top section of the lens covers long range detection, the bottom covers short range. Similarly, the left and right lens sections cover the left and right detection area respectively.
- Mask the sensor to suit your installation.

10. 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 time (only) by using the internal wall switch or circuit breaker. Switch the internal wall switch once (OFF/ON) within 1.5 seconds.
- The unit will now illuminate continuously for 6 hours or until it is switched back into Auto Mode.
- To return to Auto Mode, switch the internal wall switch OFF and then back ON again within 1.5 seconds.
- The unit will return to its Auto Mode and will operate as set up after the walk test procedure.

11. Accessing Terminals After Installation

- This may be necessary to add further lighting for instance and the following procedure for removing the unit from its backplate should be followed: -
- Insert a flat blade screwdriver in the catch at the sides of the unit and lever it outwards (as indicated in diagram F, Step 1).
- The terminals are now accessible. If adding lighting, ensure the unit's rating is not exceeded.

12. Troubleshooting Guide

Problem

- Lamp stays ON all the time night and day.
- Lamp stays ON all the time at night, or PIR keeps activating at random for no apparent reason.

Solution

Check wiring connections.

Wires to L and L¹ terminals may be transposed.

The unit may be suffering from false activation. Cover the sensor lens completely with black pvc tape. This will prevent the sensor from 'seeing' anything. If the unit now switches off after the set time duration and does not re-activate, this indicated that the problem was caused by false activation. The problem may be solved by slightly adjusting the direction/angle of the sensor head (see section 8. Setting up). If however, the unit continues to remain ON or to operate randomly then the unit is faulty and should be replaced.

You may not be allowing the unit time to complete its warm-up period. Stand well out of the detection range and wait (the warm-up period should never exceed 5 minutes).

Occasionally, winds may activate the sensor.

even the slightest movement can result in a false detection.

- PIR sensor will not operate at all.

Check that the power is switched ON at the circuit breaker/internal wall switch.

Turn OFF the power to the unit and check the wiring connections as per the diagram (see 7. Connection).

Ensure no connections are loose.

Check the bulb (if it's replaceable).

If the bulb has failed, replace (do not hold the bulb directly with fingers, use a tissue or clean dry cloth). Ensure the bulb is seated correctly in the bulb holder.

- PIR sensor will not operate at night.
- Unit activates during the daytime
- PIR coverage is poor/sporadic
- Detection range varies from day to day.

Refer to section 8. Setting Up for DUSK control adjustment.

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Unit may be poorly located. See Section 5. Selecting a Location and re-locate the unit.

PIR sensors 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 sensor head position to ensure trouble-free operation all year round.