

TIMEGUARD®

360° Surface Mount
Ceiling PIR Light Controller

Model: PDRS1500



Installation & Operating Instructions

1. General Information

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

2. Safety

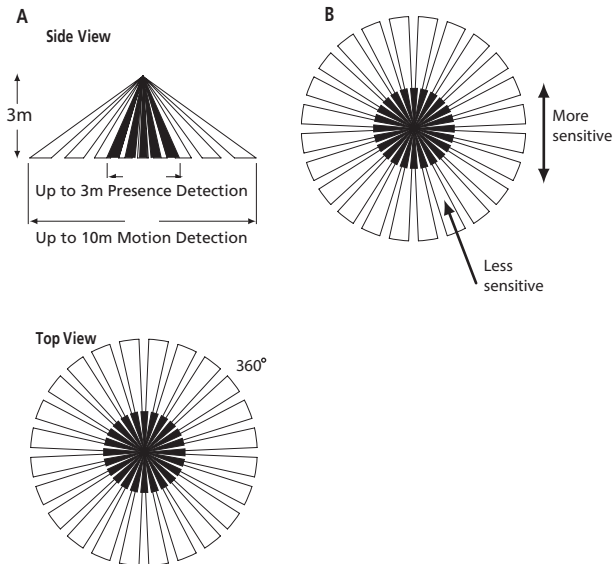
- Before installation or maintenance, ensure the mains supply to the PIR sensor is switched off and the circuit supply fuses are removed or the circuit breaker turned off.
- It is recommended that a qualified electrician is consulted or used for the installation of this PIR sensor and install in accordance 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

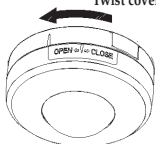
- 230V AC 50 Hz
- This PIR is of Class I Construction and should be earthed
- Motion Detection Range: Up to 10m diameter at a 3m mounting height
- Presence Detection Range: Up to 3m diameter at a 3m mounting height
- Detection Angle: 360°
- Maximum Switching Load:
 - 2300W Halogen Lighting
 - 1500W Fluorescent Lighting
 - 420W LED Lighting
 - 250W Fan
- Time ON Adjustment: 1 minute to 30 minutes
- Dusk Level Adjustment: Day & Night or Night time only operation
- Operating Temperature: -20°C to +40°C
- IP44 Rated suitable for restricted external applications
- CE Approved

4. Introduction

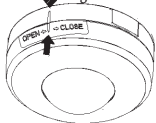
The PDRS1500 utilises passive infrared technology to detect heat radiation of moving human bodies. Upon detection, the attached lighting load will illuminate for a user-determined period of time. An integral daylight sensor ensures all day or night-only operation.



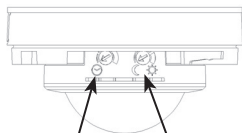
E Twist cover anti-clock wise



Align marks on moulding



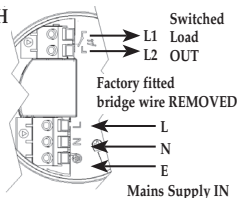
F



Time On
setting

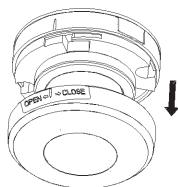
Lux -Dusk/
Dawn
setting

H



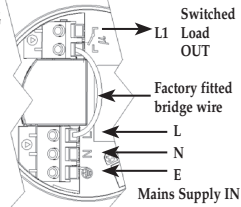
In the above illustration:

- 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.



Remove decorative cover

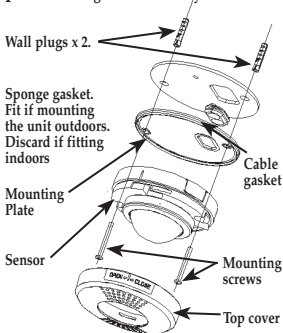
G



In the above illustration:

- Do not remove the pre-installed wire bridge.

I Ceiling mount assembly method.



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 & Connection


- An isolating switch should be installed to switch the power ON & OFF. This allows the sensor to be easily switched OFF when not required for maintenance purposes.
- Remove the top cover of the sensor by twisting the top cover anti-clockwise 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 D). Drill the holes. Insert the rawl plugs into the holes.
- Pass the supply cable through the cable entry point on the foam gasket and then the mounting plate, ensuring the grommet is used to maintain the IP rating of the PIR sensor.
- Terminate the cable into the terminal block ensuring correct polarity is observed and that all bare conductors are sleeved (see below details on connection).

There are 2 possible connection scenarios

Standard connection – 230v Mains Installation (see diagram G)

The factory fitted 'bridge' wire must not be removed.

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

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


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

SWITCHED LIVE L1

Switching DC loads or loads which use a different phase or voltage supply from the AC mains – Voltage free Installation (see diagram H)

Remove the factory fitted 'bridge' wire.

Connect the 3 core 230V 50Hz 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 be views as a simple switch controlled by the PIR sensor electronics.

6

- 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.)
- Insert fixing screws through the sensor assembly into the wall plugs and secure. Do not over-tighten, 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.

7. Setting Up

Walk Test Procedure

- 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.
- 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 minute 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 9m diameter circle from the centre of the sensor location with a 3m 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 after 2 seconds. 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.

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 and after all motion ceases. The Time control knob at fully anti-clockwise is Test Mode, slightly adjust to above the T is minimum time approx.

1 minute, whilst the maximum time (fully clockwise) is approx. 30 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 bright), 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.

8. 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.

9. 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 the wiring.
See section 6. Installation & Connection
- PIR keeps activating for no reason (at random).
Turn off at the isolation switch. Turn back on again after 30 seconds. Leave for approximately 15 minutes.
If the 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.

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 years 2 and 3 or any difficulty in the first year, telephone the helpline on 020 8450 0515.

Note: A proof of purchase is required in all cases. For all eligible replacements (where agreed by Timeguard) the customer is responsible for all shipping/postage charges outside of the UK. All shipping costs are to be paid in advance before a replacement is sent.



If you experience problems, do not immediately return the unit to the store. Telephone the Timeguard Customer Helpline;

HELPLINE
020 8450 0515

or email helpline@timeguard.com

Qualified Customer Support Co-ordinators will be on-line to assist in resolving your query.



A **theben** Group Company

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