

**TIMEGUARD®**

# 360° Flush Mount Ceiling PIR Light Controller

Model: PDFM1500N



Installation & Operating Instructions

# 1. General Information

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

**Note:** Timeguard reserve the right to alter these instructions at any time. Up to date instructions will always be available for download at [www.timeguard.com](http://www.timeguard.com)

## 2. Safety

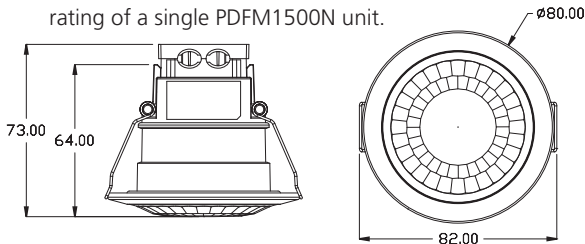
- Before installation or maintenance, ensure the mains supply to the PIR is switched off and the circuit supply fuses are removed or the circuit breaker turned off.
- It is recommended that a qualified electrician is consulted or used for the installation of this PIR and install in accordance with the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

## 3. Technical Specifications

- Mains Supply: 230V AC 50Hz
- This PIR is of Class II Construction and must not be earthed
- IP Rating: IP44
- Operating Temperature: -20° to 40°C
- Ceiling Hole Cut Out: 66mm
- Sensitivity Adjustment: 6m - 12m Distance

- PIR Switching Capacity: Incandescent: 2000W, Fluorescent, 600W, CFL 150W, LED 600W Fan (Max) 250W
- Motion Detection Range: Up to 12 metres diameter (6m Radius) at a 3m mounting height
- Presence Detection Range: Up to 6 metres diameter (3m Radius) at a 3m mounting height
- Detection Angle: 360°
- Time ON Adjustment: 1 minute - 30 minutes
- (LUX) level adjustment: 2 - 1000
- Manual Override: Yes (Pulse)
- Standby Power: <0.5W
- Dimensions: Diameter 80, Depth 73mm
- Multiple PIR Sensor Switching:

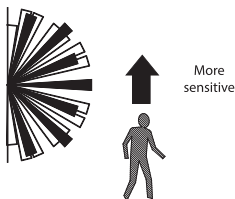
A maximum of 8 PDFM1500N PIR sensors can be wired in parallel, to enable any detector to turn ON all the lights connected. (The total load must not exceed the lamp rating of a single PDFM1500N unit.



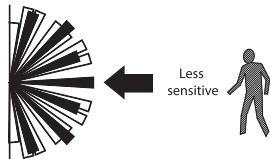
## 4. Selecting a location

- The PIR has a number of detection zones at various horizontal and vertical angles as shown below.

**The detection zones are a representation of the subjects walking path and not of the detection angle.**



**Effective Approach Path  
(ACROSS)**



**Ineffective Approach Path  
(TOWARDS)**

3

- A moving human body or object needs to cross one of these zones to activate the sensor. The optimum height for this is a 3m mounting height. Careful positioning of the PIR is required to ensure the best performance from the PIR and the appointed approach path.
- Avoid positioning the PIR near any sources of heat in and around the detection area such as extractor fans, tumble dryers or boiler exhausts etc. This would also include other light sources such as security lights.

- Reflective surfaces (i.e. pools of water, white painted walls, overhanging branches and other types of foliage) may cause false activation under heightened weather conditions.
- During extreme weather conditions the PIR may exhibit unusual behaviour. Once normal weather resumes, the PIR will carry out normal operations.

## 5. Installation

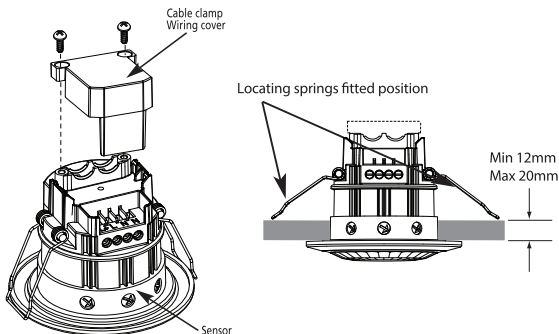
- Ensure the mains supply is switched off and the circuit supply fuses are removed or the circuit breaker turned off.
- An isolating switch should be installed to enable the power to be switched ON and OFF for maintenance purposes.
- Mark the position of the 66mm diameter locating hole centre, taking care to avoid ceiling joists and other obstructions within the 66mm diameter.
- Drill a pilot hole to take the centre shaft of the hole cutter.
- Use the hole cutter to cut the required hole.
- Pass the 230V 50Hz mains supply and load cables through the hole and prepare for termination.
- Terminate the cables into the terminal block ensuring correct polarity is observed and that all bare conductors are sleeved (See section 6. Connection Diagram).

- When wiring is complete, fit the cable clamp wiring cover to the sensor unit with the 2 screws provided (See the below diagram).
- The adjustment knobs located beneath the sensor head are factory set to "Walk Test Mode". Double check they are set as follows;

**TIME:** Fully anti-clockwise, **LUX:** Fully Clockwise,  
**SENS:** Fully clockwise

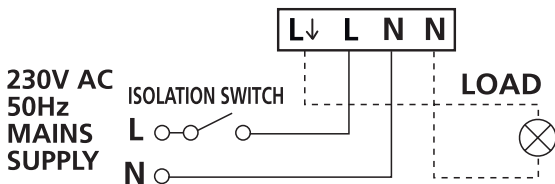
Note: make sure the Lux and Time controls are located at the bottom of the product.

- Fit the sensor to the wall and secure it with the two fixing screws provided.



## 6. Connection Diagram

- Connect cables to the terminal block as follows;



230V AC 50Hz Mains Supply

Live (Brown or Red) to L

Neutral (Blue or Black) to N

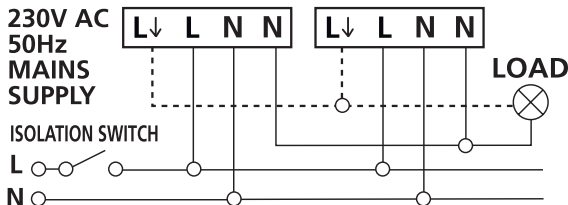
Load

Switch Live (Brown or Red) to L↓

Neutral (Blue or Black) to N

**If the load connected to the PIR is of Class I construction, maintain the earth continuity of the circuit.**

### Parallel Wiring Connection Diagram



# 7. Setting Up

## Walk Test Procedure

- Turn the power to the unit ON. The lamp will immediately illuminate as the unit goes through its “warm-up” period. After approximately 1 minute the lamp will extinguish. This indicates the unit is wired correctly and the unit is in Test Mode.
- Try to remain outside the detection area during the warm-up period.
- The unit will now operate during daytime as well as at night, illuminating the lamp for approx. 2 seconds each time. This allows testing to be carried out to establish whether the sensor is covering the required area.
- Walk across the location the sensor is fitted, to establish the detection area.
- The sensor will detect you approximately up to 12 metres in diameter at mounting height of 3m.
- As you cross a detection “zone” the lamp will illuminate. Now stand still until the lamp extinguishes (this should take approx. 2 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

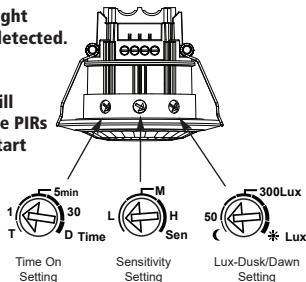
- When walk tests are done, adjust for automatic operation.
- The TIME setting controls how long the unit remains on following activation and after all motion ceases.
- Use a thin flat blade screwdriver to make adjustments.
- The Time control knob at fully anti-clockwise is Test Mode, slightly adjust to above the T is minimum time approx. 1 min, whilst the maximum time is approx. 30 minutes indicated by the 30 position on the dial. Fully clockwise is dusk till dawn indicated by "D", meaning the light will remain on at night and switch off in the morning, providing that significant natural light is visible by the PIR.
- Set the control to the desired setting between these limits.
- The DUSK (LUX) control determines the level of darkness required for the unit to start operating. The setting is best achieved by the procedure below;
  1. Set the DUSK control knob fully anti clockwise.
  2. When the ambient light level reaches the level of darkness at which you wish the lamp to become operative (i.e. at dusk) SLOWLY rotate the control in a clockwise direction until a point is reached where the lamp illuminates.
  3. 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. when it is very dark). Adjust the control slightly clockwise.
- Continue to adjust until the unit operates as desired.
- Once the unit is set up as desired, adjust the sensitivity level as to your requirements via the sensitivity adjustment dial. Ensure the levels are enough for adequate detection, subject to your installation location.
- Once you are happy with all the settings, ease the unit back into position under spring pressure.

**Note: The red LED indication light will flash when movement is detected. Otherwise it will remain off.**

**The red LED indication light will flash every 1 second during the PIRs warm up period or after a restart from a loss of power.**

**While the manual override is active the LED indication will remain off until back in auto mode.**



## Manual Override Function

- To activate the manual override, turn the connected light switch OFF then ON within 1.5 seconds. This can only be done after dusk. The PIR will remain switched on for up to 6 hours or until dawn if this comes first.

## 8. Troubleshooting Guide

Problem	Cause/Solution
False activation. (Luminaire switches on for no apparent reason)	Heat sources as described in section 4.
	Reflective surfaces described in section 4.
	Moving pedestrians, cars or animals in the area. Check the detection area.
	Nearby electromagnetic disturbance from a neighbouring circuit (CCTV interference).
Luminaire remains switched on	Continuous false activation resetting the delay time when an object is detected.
Luminaire switches on during daylight hours	Shadow casting over the PIR sensor
	Clouds creating a dark presence.
	Ensure the luminaire receives adequate daylight from all angles (not covered).

If you experience problems, do not immediately  
return the unit to the store.

Telephone the Timeguard Customer Helpline:

HELPLINE  
**01582 544 548**

or email [helpline@timeguard.com](mailto:helpline@timeguard.com)

Qualified Customer Support Coordinators will be online  
to assist in resolving your query.



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