TIMEGUARD LIMITED

# 500W “C” Class Halogen Floodlight with 240º PIR Control

Model: MLBPRO500C (Black)
Model: MLWPRO500C (White)

Installation & Operating Instructions

# 1 Introduction

Thank you for choosing the MLB/WPRO500C. It is our new generation of sensor light technology, providing benefits in better performance and a quick and easy installation compared with other sensor lights on the market. It is integrated with years of experience and broad expertise in manufacturing sensor detectors and sensor lights for professional use.

The MLB/WPRO500C has the following outstanding features and superior functions that will meet most of your needs.

- Fully adjustable floodlight left or right 45º, up 50º and down 35º.
- Floodlight fixed by hand, no tools needed.
- Aluminium alloy light weight body: Heavy duty and durable.
- Polycarbonate material sensor, giving good weatherproof performance.
- Additional three 500W halogen floodlights can be connected.
- High quality professional bulb sockets for no more contact problems.
- Plug-in terminal block for quick and easy wire free connection and convenient replacement of the light bulb.
- Adjustable lens giving a 240º outer zone from 3 to 16m and a 360º inner zone giving comprehensive coverage within a 3m radius circle.
- Multi-segmented lens shields included for blocking zones within a detection area. Each segment blocking a detection angle of 10º.
- Rotatable sensor head from left 60º to right 60º to reposition detection zone.
- Environmental protection: IP44.
- Three user friendly adjustments for LUX, TIME and METER (range restriction).
- Wall and corner mounting brackets supplied.
- Energy saving integral photocell allows automatic operation at night only.



# 2 Contents in Package

| Article | Quantity | Note |
|---|---|---|
| MLB/WPRO500C | 1 | See Fig. 1a |
| Instructions | 1 | |
| Accessories | | See Fig. 1b |

## Motion Sensor Light

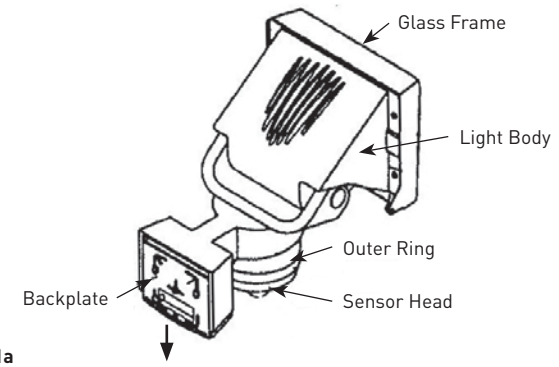



**Fig. 1a**

## Accessories

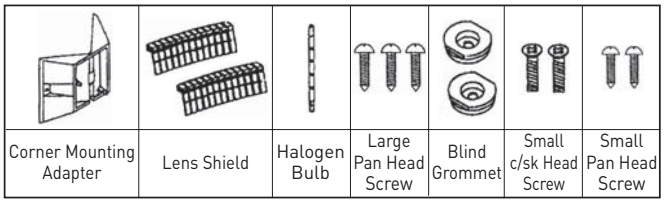



**Fig. 1b**

## 3 PIR Coverage

The MLB/WPRO500C should be installed within the height range 2.0m to 2.5m. (See Fig. 2).

The unit has an adjustable lens with two detection zones.

- The outer zone covers an angle of 240º to a distance of approx. 3m to 16m at an installation height of 2.3m. (See Fig. 3).
- The inner zone covers an angle of 360º which allows detection immediately behind the MLB/WPRO500C. (See Fig.4).
- Fig. 4 also shows the variation of sensitivity with angle of approach for a person moving within the detection area.

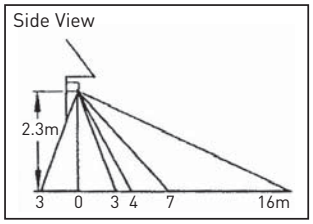



**Fig. 2**

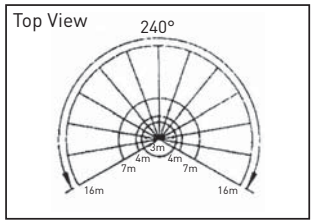



**Fig. 3**

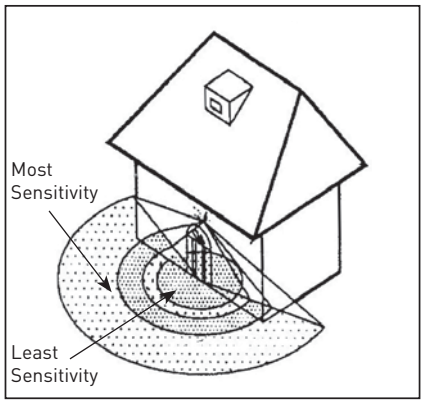



**Fig. 4**

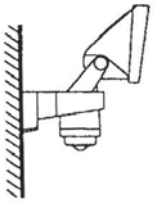
## 4 Installation

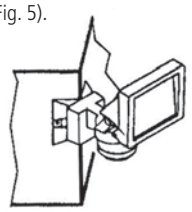
Installation shouild only be carried out by a competent person.

**Switch Off the Mains Power Supply Before Installation**

The MLB/WPRO500C can be either wall mounted or corner mounted with an adapter included with the product. (See Fig. 5).

Wall Mount
Fig. 5a





Corner Mount
Fig. 5b

Corner Mounting Adapter
(See section B)

**Fig. 5**

## A Installation Procedure

a. Read the instruction manual before installing the MLB/WPRO500C.

b. Make sure the mains power supply has been disconnected.

c. Decide the best location to install the unit bearing in mind the most sensitive direction of movement shown in Fig. 4.

Then ensure that the top of the floodlight is no closer than 200mm to the surface above it and it is no closer than 500mm to the surface at the side of it. (See Fig. 6).

Also ensure that any surface directly illuminated by the floodlight is at least 1m away from the front glass. (See Fig. 8).

Do not mount the unit base on a horizontal surface such as a soffit, (See Fig. 7) or on an inflammable surface such as wood or plastic.

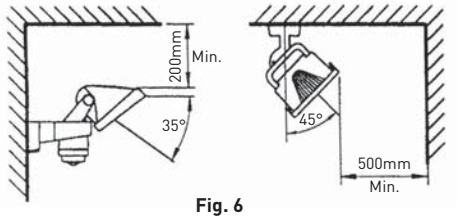



**Fig. 6**

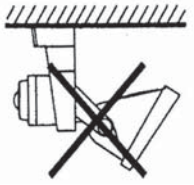


**Fig. 7**

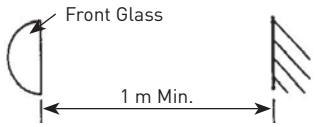



**Fig. 8**

**d. Install bulb:**

1. Remove the lamp cover screws retaining front glass frame (See Fig. 9) and swing the glass frame away from the floodlight cover.
2. Check that the bulb and fitting contacts are all clean, ensuring that you **hold the bulb with a clean dry cloth during this and subsequent procedures.**
3. Locate one of the bulb contacts onto one of the fitting contacts and push back the contact spring at the other end inserting the bulb contact into its fitting contact. check that the bulb contacts at each end are properly located and that there is reasonable pressure on the bulb contacts. (See Fig. 10).
4. Tighten the floodlight cover screws firmly to ensure weatherproof rating.

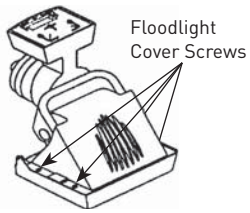



**Fig. 9**

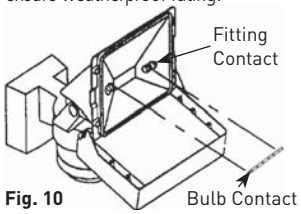



**Fig. 10**

**e. Make backplate holes and cable up:**

Decide which of the four 20mm dia. cable entry holes on the back plate you wish to use (there are 2 rear entry and 2 bottom entry).

if you wish to use additional lighting a second entry point will be required (a manual override switch can be accommodated by a single entry of 4 core cable). Firstly cut undersize holes as required in the blind grommets supplied. This way sealing against moisture influx is maintained. Then score around the outside edge of the circular groove marking the hole with a sharp knife and gently tap out the centre. Do the same to the second entry point if necessary and fit the grommet(s) supplied and push the cable(s) in to give sufficient length to make a connection for all the cable wires.

**f. Fix backplate:**

Fix the backplate onto the wall with the large pan head screws supplied using wall plugs if necessary (See Fig. 11) remembering the cable entry holes are on the bottom. connect cable wires as necessary. (See Fig. 12).



Backplate

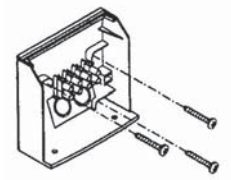
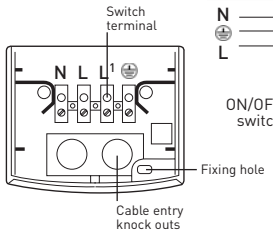
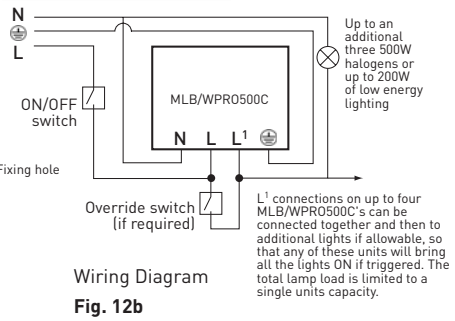


**Fig. 11**




Backplate Connections

**Fig. 12a**




Wiring Diagram

**Fig. 12b**



**g.** Insert the sensor light onto the backplate (See Fig. 13). Then fix with the two small c/sk head screws supplied. (See Fig.14).

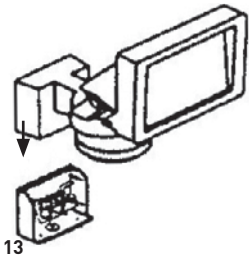


**Fig. 13**

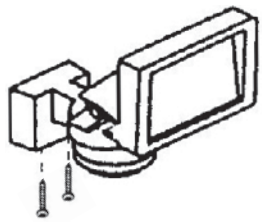


**Fig. 14**

**Cautions in use:**

- If the floodlight glass is cracked, replace it immediately before further use.
- The surface of the floodlight cover and glass get extremely hot when the lamp has been on for some time. Do not touch and keep combustible materials away.
- Additional lighting of up to three 500W class C floodlights or 1.5kW of other approved filament lighting may be connected. (See Fig 12).

## B Installation of Corner Mounting Adapter (Option)

**a.** Make hole(s) in the wall plate as required and insert grommets.

**b.** Make hole(s) if any in the corner mounting adapter (none will be required if only the bottom entry hole(s) are in use on the backplate).

**c.** Fix the backplate to the corner mounting adapter using the 3 large pan head screws supplied (used to fix the backplate to the wall when the adapter is not in use).

**d.** Proceed as for (Ae) above, finally fixing the corner mounting adapter and backplate assembly onto the corner using the 2 pan head screws supplied and wall plugs if necessary. The holes used are on the outside edges of the corner mounting adapter. (See Fig.15).

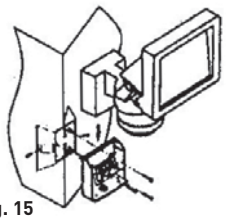


**Fig. 15**



## C To Avoid Nuisance Triggering

Your motion sensor may be activated by animals, light reflective surfaces, heat sources, or movement of objects. The following guidelines will help you avoid nuisance triggering.

- Do not aim the sensor toward lights of any kind. (See Fig. 16, 17). Aim the sensor and light in a different direction.

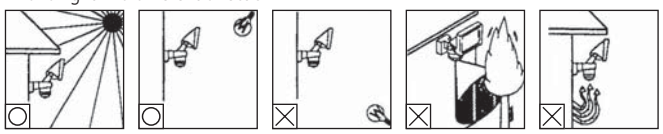


**Fig. 16** **Fig. 17** **Fig. 18** **Fig. 19**

- Avoid aiming the sensor towards objects which may move in the wind, such as bushes. (See Fig. 18).
- Avoid mounting the sensor near heat sources, such as heating vents, air conditioners, dryer vents or lights. (See Fig. 19).
- Avoid directing the sensor toward areas or objects whose surfaces are highly reflective such as pools or are subject to rapid temperature change.

## D The Adjustments of MLB/WPRO500C:

**a. Adjustment of the sensor head**

The bottom part of the sensor head can be horizontally rotated 60º to right or left. (As shown in Fig. 20).

**b. Adjustment of the floodlight**

You can adjust horizontally right or left 45º. (See Fig. 21).

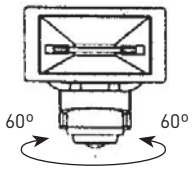



**Fig. 20**

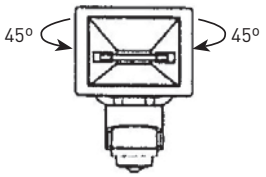



**Fig. 21**

Following the adjustment procedure below, you can adjust the floodlight vertically up 50º and down 35º. (See Fig. 22).

1. Loosen plastic light head screw by hand (See Fig. 23).
2. Adjust floodlight to the desired elevation.
3. Tighten the plastic light head screw firmly.

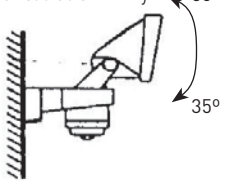



**Fig. 22**

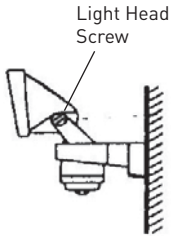



**Fig. 23**

**c. The Adjustment of LUX, METER and TIME**

The MLB/WPRO500C has three adjustable knobs, LUX, METER and TIME on the underside of the sensor head.

- The LUX knob can be set to allow the MLB/WPRO500C to operate at any light level between full daylight and almost complete darkness.
- The METER knob reduces the forward PIR range from around 16m to around 3m.
- The TIME knob can adjust the time (a period between 6 seconds and approximately 12 minutes) for the light to remain "ON" after the last detection.

# 5 Function and Operation
## A Lens Shield - function

The lens shield contains 13 segments each of which can be broken in half. Each segment can block 10° detection angle within the field of view by pressing it onto the outer ring of the sensor head. (See Fig. 25). The segments only work on the outer 240° zone. The inner 3m radius zone is unaffected.

- **How to use:**

1. Take the outer ring off the sensor head. (See Fig. 24).
2. Decide on the detecting zone (or zones) that you want to be reduced or blocked.
3. Insert the lens shield segments into the slot of the outer ring as following illustration (See Fig. 25). Then put the outer ring back into position on the sensor head. The example shown will have blocked a 30°detection angle within the outer 240° zone.
4. By breaking the outer section of a segment or group of segments the range at that position in the outer zone will be reduced from 16m to 7m and not 3m.



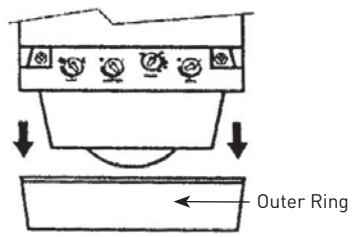



**Fig. 24**

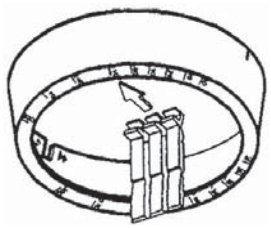


**Fig. 25**

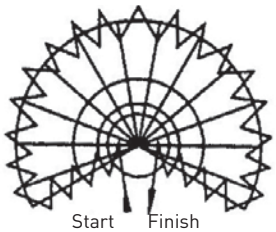



**Fig. 26**
Walk Test

## B Walk Test

The MLB/WPRO500C will start working automatically approx. 3 minutes after the power is switched ON.

Set the TIME knob to "6 sec.", the LUX knob to "☾☼" and the METER knob to "+" (Factory Presets).

You can start the "Walk Test" in any ambient light level and the light will go on for about 6 seconds after each detection. While the light is ON and for 2 seconds afterwards the person carrying out the walk must remain stationary before continuing on the path shown in Fig. 25.

- **How to adjust your desired detecting area(s):**

1. Follow Fig. 25 and start the Walk Test across the detection zones to check that the light under control comes on when entering or leaving a zone. Repeat it and adjust the METER knob or sensor head until you are satisfied with the detection area.
2. To eliminate unrequired detection zones you need to use the lens shield (see 5A Lens Shield - function).

**Notes:**

- When using the lens shield or adjusting the knobs, be careful not to damage the lens.
- Conditions below may cause reduction in sensitivity of the sensor.

a. On very foggy nights, sensitivity may be less due to moisture on the lens.
b. On very hot days, sensitivity may be less due to the temperature of the human body being close to the temperature of the surroundings.
c. On very cold days little heat will be emitted from the body with heavy clothing and head covering. This may reduce the sensitivity of the sensor.
d. Soap or polish may damage the sensor lens and can cause reduced sensitivity. Clean with a soft damp cloth only.

## C Setting of LUX, METER and TIME Knobs for Automatic Operation **(See Fig. 27).**

When Walk Tests are complete, the unit can be set up for Automatic mode.

The TIME setting controls how long the unit remains illuminated following activation and after all motion ceases.

The minimum time (fully anti-clockwise) is approx. 6 seconds, whilst the maximum time (fully clockwise) is approx. 12 minutes. 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 DUSK adjustment knob is indicated by the "Moon" and "Sun" legends. We suggest an initial DUSK setting of between 2/3 and 3/4 of the way round from the "Sun" towards the "Moon" setting.

The METER control will allow you to set the detection distance from 3 meters up to a maximum of about 16 meters.

Adjust the METER knob as necessary to reduce the coverage until it meets the users preference.

**Note:** Up to a radius of approx. 3m from the floodlight sensor there is 360° detection coverage which is not adjustable..

- A small flat blade screwdriver is applicable for all the above knobs.

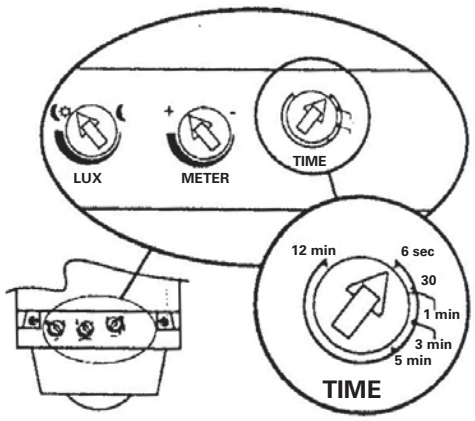



**Fig. 27**



## 6 Troubleshooting

Each MLB/WPRO500C has undergone rigorous testing under ISO9002 quality control procedures before it leaves the factory. Malfunctions are most often due to incorrect installation or adjustment of the unit. If you are experiencing problems, please check the following first.

| Problem | Possible Solution |
|---|---|
| **Lights do not turn ON** | 1. Check if all wiring connections are correct.<br>2. Turn off power for at least 10 seconds, then on again.<br>3. Check if all light fixtures are working properly, and the power is connected correctly to the MLB/WPRO500C.<br>4. Check if the bulb is seated firmly with good contacts.<br>5. Check if the LUX knob is adjusted to the desired light level.<br>6. Check if the detection angle is right and aimed at the desired area. |
| **Lights do not turn OFF** | 1. Set the TIME knob to minimum and check again.<br>2. Make sure that the unit is not installed looking towards objects which may move in the wind, such as bushes and that the unit is mounted securely.<br>3. Stay away from the detection zone to avoid activating.<br>4. Make sure that the unit is not looking toward any areas or objects which have surfaces that are highly reflective or are subject to rapid temperature change, such as pools, air conditioners or heating vents.<br>5. Check if all wiring connections are correct, or if the main power supply has been inadvertently connected to the L1 (Switched Live) terminal. |
| **Lights go ON and OFF quickly** | 1. Check if there are any white or reflective surfaces in the detection area and adjust the sensor to a different direction or adjust the lens shield.<br>2. The sensor is more sensitive in winter. Please check again when the temperature gets back to normal. |
| **Light turn ON in a storm** | Rain, snow and storm can create big temperature changes that activate the sensor. False triggering can be minimised by installing the sensor in a protected location or to minimise the detection distance using the meter control. |

## 7 Technical Specifications

| | |
|---|---|
| **Input Voltage:** | 230V ~ 50Hz. |
| **Load:** | 400W class C halogen light plus additional loads, three 400W class C halogen lights or fluorescent loads up to 200W can be connected. |
| **Power Consumption:** | Less than 1W. (Quiescent) |
| **Detection Angle:** | 10º ~ 240º adjustable for the outer zone detecting range from 3 to 16m.<br><br>360º for the inner zone detection range within a radius of approx. 3m. |
| **Light ON Time:** | Adjustable from about 6 seconds to 12 minutes. |
| **METER (range restriction):** | Adjustable 3 ~ 16m. |
| **LUX:** | Adjustable "ambient light level" control. |
| **Adjustable Angle Sensor Head:**<br>**Floodlight:** | Left or right 60º.<br>Left or right 45º.<br>Up 50º and down 35º. |
| **Environmental Protection:** | IP44. |
| **Operating Temperature:** | -25ºC ~ +45ºC. |
| **Temperature Compensation:** | On a very cold or hot day, the MLB/WPRO500C can automatically adjust "detecting sensitivity" to reduce the change of detection distance caused by the ambient temperature change. |



### *5 Year Guarantee*

In the unlikely event of this product becoming faulty due to defective material or manufacture within 5 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 to 5 or any difficulty in the first year telephone the helpline on 020 8450 0515.

HELPLINE

**020 8450 0515**

or email helpline@timeguard.com

For a product brochure please contact:

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