

ARLEC

MAL615 (Series 5)

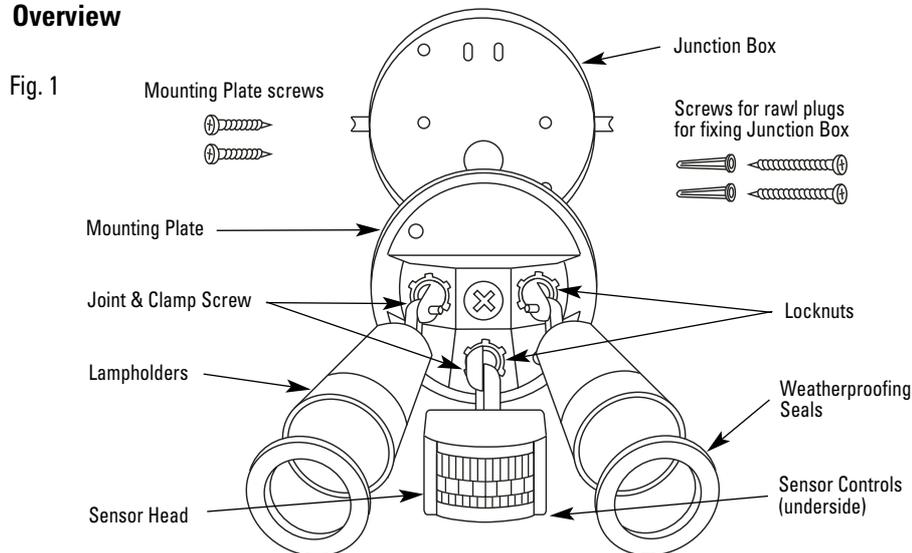
Compact Security FloodLight

Installation and Operation Instructions

Introduction

The Arlec MAL615 Movement Activated Sensor Light is a compact sensor light unit. It controls two PAR38, 150W floodlight bulbs for wide area illumination. The MAL615 can be used to provide lighting for security and general purposes in a variety of locations around the home or workplace.

Overview



IMPORTANT: Loosen all lock nuts and screws on sensor and lamp holders before making any adjustments.

NOTE: Always face control knobs on sensor downwards to ensure correct operation

Location of unit

To achieve best results for exterior use, your Movement Activated Floodlight should be securely mounted to a wall or eaves in close proximity (max 300mm) to an existing bayonet style light fitting. For ideal operation the sensor head should be located approx 2.5m above the area where movement is to be sensed. This will provide the best scanning sensitivity and detection area.

- Although this product is weatherproof it is preferable to mount your Floodlight in a sheltered or semi-sheltered location.
- To avoid damage to unit - do not aim the sensor towards the sun.
- To avoid nuisance triggering, the sensor should be directed away from heat sources such as BBQ's, air conditioners, other outside lighting, flue vents and moving cars.

Important! Please read these instructions carefully.

- Do not aim towards reflective surfaces such as smooth white walls or swimming pools etc.
- The scanning specifications (15m at 120° scan) may vary slightly depending on the mounting height and location. (Refer Fig. 2) The detection range of the unit may also alter with temperature change.
- Before selecting a place to install the Floodlight, you should note that movement across the scan area is more effective than movement directly toward or away from the sensor. (Refer Fig. 3A). If movement is made walking directly towards or away from the sensor and not across, the apparent detection range will be substantially reduced (Refer Fig. 3B).
- Avoid locating your Floodlight in close proximity to fluorescent light fittings or ceiling fans on the same electrical circuit. RFI interference may cause the Floodlight to switch on inadvertently.

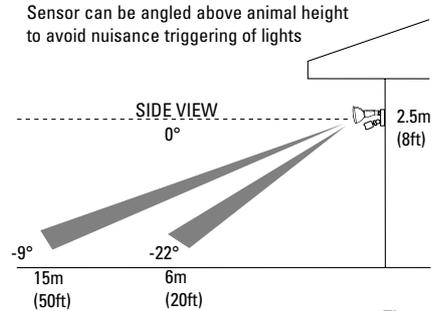


Fig. 2

Installation and wiring must be performed by a licensed electrician.

The light must be wired to its own light switch. Do not interconnect with other lights on the same switch.

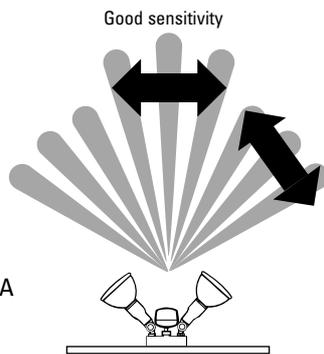


Fig. 3A

Arrows indicate movement of heat source

TOP VIEW

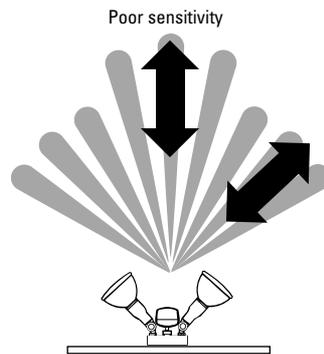


Fig. 3B

Installation

Wall Mounting

Place the junction box over the position for mounting and mark the screw holes. Use the two mounting holes on the inside surface of the junction box, and ensure the 'UP' marking points upwards. Drill suitable holes, then feed the supply cable through the rubber seal on the rear of the junction box. Before fixing the junction box in place, seal any hole in the wall through which the supply cable passes so as to weatherproof it. Now fit screws to fix junction box to the surface, again ensuring the 'UP' marking is pointing upwards.

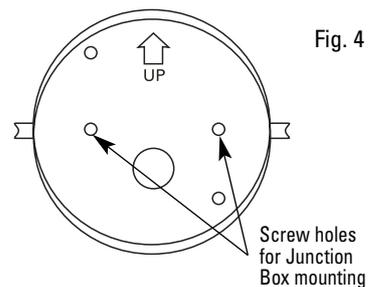


Fig. 4

Eave Mounting

Use a similar procedure to wall mounting, but the 'UP' marking should point towards the outside of the eave. We suggest 2 x spring toggle screws (not supplied) be used to mount your Floodlight under eaves. Take care not to damage or pierce concealed wiring with mounting screws, particularly when mounting under eaves.

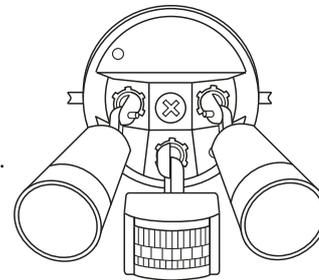
Wiring

Your Floodlight must be wired to its own switch. For installation/maintenance purposes the electrical supply must be isolated at the switchboard by removing the fuse or switching the circuit breaker OFF. Simply isolating the electrical supply at the wall switch is not sufficient isolation to prevent an electrical shock.

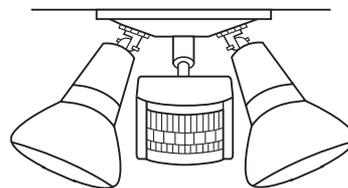
The terminal block wired to the rear of the security light must be wired to the switched active and neutral of the lighting circuit to which it is being connected. Connect in accordance with the wire colours, red to active, black to neutral. An earth/ground connection is not necessary on this product.

If an earth wire is provided in the supply cable, ensure that it is taped or tied in such a fashion that it will not work loose and contact any connection inside the junction box or rear of the Floodlight. Now press the terminal block onto plastic pins in junction box, then fit the Floodlight mounting base onto the junction box using screws provided.

Ensure that the mounting base is in the correct direction so that the sensor head controls will face downwards (See Fig. 5 and 6), and that the rubber seal on the rear of the mounting plate is correctly positioned.



Wall mount Fig. 5



Eave mount Fig. 6

Setting Up

Do not overtighten or use excessive force when adjusting sensor head or lampholders.

Loosen lock nuts or elbow/joint screws to make adjustment.

- A. Adjust the direction of the sensor arm and lampholders to suit the desired detection area. Loosen lock nuts and elbow screws on lampholder before making any adjustments. Do not use excessive force when making adjustments to lampholders (See Fig. 7).
- B. Angle sensor slightly downward towards the detection area. The sensor joint should be rotated to adjust the sensor to face the required detection area. If necessary, loosen sensor arm joint clamp screw.
- C. Angle lampholders from mounting surface and direct them approximately downwards away from sensor head.
- D. Fit PAR38 globes and weatherproofing rubber seals- do not overtighten.
- E. Ensure that globes are positioned 40mm or more from the sensor head or mounting surface as shown in (Fig. 8). The globes become very hot and must not be touching or too close to sensor head.
- F. After fitting globes, tighten elbow screws and lock nuts- do not overtighten.

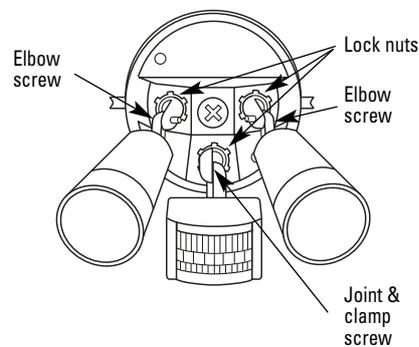


Fig. 7

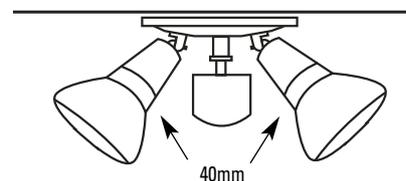


Fig. 8

Operation

Understanding the controls

Time - Time "ON" adjustment

The time "ON" control adjusts the time that the lights will remain on after the unit has sensed movement. To increase time, turn the knob clockwise. To decrease, turn knob anti-clockwise.

Lux - Light level adjustment

The "Lux" control adjusts at what level of light the unit starts sensing at dusk. This control can be also used for testing the unit during daylight hours. To test unit, or operate during the day, turn control knob all the way anti-clockwise. Once unit has been tested the "Lux" control should be set to approx half way, and adjusted later if required.

Sens - Sensitivity adjustment

The Sensitivity control adjusts the level of sensitivity of the infrared Sensor. This controls the amount of movement that is required to switch the lights on. With the knob set to minimum (anti-clockwise), the unit will only detect large amounts of movement. It is recommended that in most situations the unit be operated with the "Sens" control set to half.

Setting the controls

1. Turn the "LUX" or light control to minimum, turn the wall switch ON and wait for half a minute for the control circuit to stabilise. At this stage ensure that the time control is set to "minimum". The Floodlights will now switch on and remain on for about 10 seconds.
2. Turn the "SENS" control to minimum.
3. Direct the sensor toward the desired area to be scanned by adjusting the elbow joint and ball joint on the sensor arm. Loosen lock nuts and screws before attempting to adjust sensor arms.

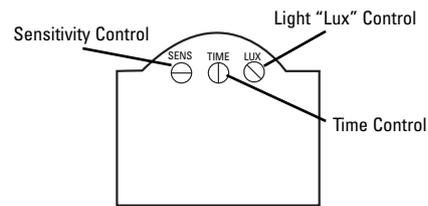


Fig. 9

Fig. 10



NOTE: Always tilt sensor unit head below horizontal for weatherproofing.

4. Have another person move across the centre of the area to be scanned and slowly adjust the "SENS" control toward maximum until the unit senses the presence of the moving person, causing the Floodlights to switch on.
5. Adjust time control to required setting.
6. To set the light level at which the Floodlight automatically switches "ON" at night, turn the "LUX" or light control from minimum to maximum. If the Floodlight is required to switch on earlier, e.g. dusk, simply wait for the desired light level, then slowly turn the "LUX" or light control towards minimum while someone walks across the centre of the area to be detected. When the Floodlight switches "ON" release the "LUX" or light control knob. You may need to make further adjustments to achieve your ideal light level setting.

IMPORTANT: When adjusting lamp holders, ensure that PAR38 lamps are not touching or in close proximity to sensing unit or connecting lead. Heat from the PAR38 lamps may distort the sensor unit or damage the lead. Allow 40mm minimum between sensor and PAR38 lamps.

Manual Operation (Automatic Override)

To override the automatic mode, the light must be switched ON in the "Automatic" mode. Now switch your wall switch OFF and back ON within two seconds. Your Floodlight will now stay on continuously, just like a normal light. This override function can be selected during daytime or night time.

To return your Floodlight to the "Automatic" mode, switch your wall switch OFF for at least ten seconds, then switch it on again. To switch your Floodlight off completely, switch your wall switch OFF.

Automatic Mode

Turn your wall switch OFF for at least five seconds and then turn the wall switch back ON. This will put the Floodlight into "Automatic" mode. The unit will then start sensing after dusk. The Floodlights will switch ON and automatically switch OFF after the pre-set time elapses and then only operate again when heat movement is detected.

Trouble Shooting and User Guide

PROBLEM	POSSIBLE CAUSE	SUGGESTED REMEDY
Light does not switch ON when there is movement in the detection area.	1. No mains voltage.	Check all connections, and fuses/switches.
	2. Globe(s) faulty or missing.	Check. Replace
	3. Nearby lighting is too bright.	Redirect sensor or relocate unit.
	4. Controls set incorrectly.	Readjust sensor angle and/or sensitivity
	5. Sensor positioned in wrong direction.	Redirect sensor and/or sensitivity
Light switches ON for no apparent reason	1. Heat from globe activating sensor.	Adjust lamp holders to allow a minimum gap of 40mm between PAR38 globe and sensor head.
	2. Heat sources such as aircon. vents, heater flues, barbecues, other outside lighting, moving cars are activating sensor.	Adjust direction of sensor head away from these sources.
	3. Animals/birds e.g. possums or domestic animals.	Probably unavoidable but redirecting sensor may help
	4. Interference from on/off switching of electric fans or lights on the same circuit as your Floodlight. (This problem does not always occur but a faulty switch or noisy fluorescent light may cause the Floodlight to switch on.)	Should the false triggering become troublesome, consider: (A) Replacing a faulty switch. (B) Replacing noisy fluorescent tubes and/or starters. (C) Connecting the Floodlight to a separate circuit. (In most cases where one or more of the above suggestions have been carried out, false triggering has been reduced.)
	5. Reflection from swimming pool or reflective surface.	Redirect sensor.
	6. Interference from power surges, mobile phones, CB's, Taxis, etc.	Try reducing sensitivity.
Light remains ON.	1. Wall switch is in override "ON" mode.	Switch light OFF for at least 10 seconds, then return to ON position.
	2. Time adjustment is set too long	Reduce time by turning ON TIME control anticlockwise.
Lights switch ON during daylight hours.	Daylight sensor switch is set to "OFF" position.	Turn light level control clockwise.
When setting controls in daylight, the detection distance becomes shorter.	Interference by sunlight.	Re-test at night.

NOTE: All passive infrared detectors are more sensitive in cold weather than warm weather and more sensitive at night than daytime.

IMPORTANT: Be careful of electrical shock. Always remember that the lights may not switch on during daylight or the lights may be in the automatic off mode. never touch live areas unless fuse is removed or circuit breaker is in off position at the switchboard main.

Specifications

Detection Range	15 metres at 120° scan
Time Adjustment	5 seconds to 8 minutes (approx.)
Detection Circuitry	Passive controlled infra red motion sensor
Power Required	230-240 volt, 50Hz, 4 watt consumption (sensor head only)
Maximum Load	2 x 150 watt PAR38
Weatherproof Rating	IP43

Maintenance

To avoid dust build-up and ensure proper functioning of the Arlec Floodlight wipe the sensor lens lightly with a damp cloth every 3 months. Do not use solvents or abrasive cleaners on any part of your Floodlight.

Reducing Detection Area

To reduce the 120° wide-angle detection area, stick PVC electrical tape on the left, right or both sides of sensor lens. This will reduce 120° detection in extremities of area to be scanned. After adding PVC tape, further adjustment to sensor direction may be necessary.

Arlec Guarantee

Arlec guarantees this product against defects of materials and workmanship for a period of 1 year from the date of purchase provided that the product is used in accordance with Arlec's recommendations and within such voltage and current limits as are specified by Arlec in relation to the product. Arlec will at its own option make good, replace with the same or similar product, or provide credit for any product manufactured or supplied by it, which proves to be defective within the limits set out above provided that no repairs, alterations or modifications to the product have been undertaken or attempted, other than by the company or its authorised agents. Should the purchaser wish to make a claim under the guarantee, the product should be returned pre-paid to the place of purchase. This guarantee is in addition to and does not take away from any rights available to the consumer under the Trade Practices Act and the State consumer protection legislation.

Proof of Purchase

Please retain your purchase receipt for all warranty claims.

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For all Sales enquiries
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