



***Easyswitch  
Wireless  
PIR Detector  
Installation  
Handbook***

***Type: ESD30***

*Issue 2*

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## Introduction

The ESD30 is a battery powered wireless Passive Infra Red Detector (PIR) designed to meet the newest and most demanding requirements of the CCTV market. This detector will transmit every time it detects movement whilst tagging the transmission with day/night and time information.

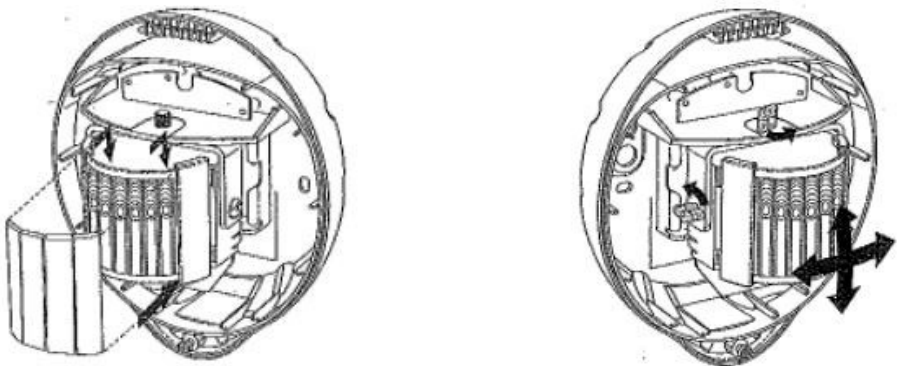
Detection range is 30 metres out x 70° across. Internal curtains can occlude the detection area to 10° and lower creep zones may be masked so that the detection pattern may be tailored precisely to the area to be covered and overspill avoided.

Inside the PIR is a powerful microprocessor which uses logic to determine the validity of an activation. By combining this technology with the specially designed pet immune Fresnel lens, nuisance alarms are all but eradicated.

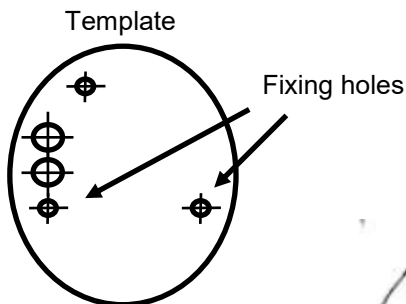
### Multi beam alignment masking

The multifunction lens produces 7 long range beams and 7 medium to short range curtain beams. Movement across the beams produces the best response and range, whilst movement towards the detector will be less responsive. The unit detects the change in heat and movement in the beam pattern, therefore items such as trees, shrubs, ponds, boiler flues and animals should be considered when positioning the detector.

The detector is fitted with two sliding shutters to reduce the detection angle. An additional set of shutters is provided should the beam pattern need to be reduced further, e.g. if the minimum detection angle of 10° is required.



## Mounting the unit



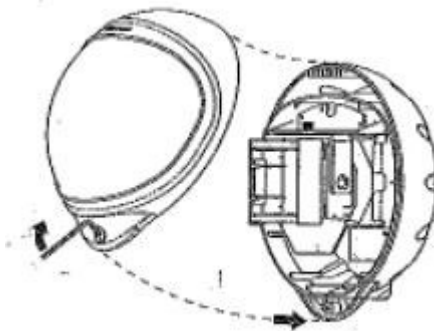
Choose a flat surface facing approximately in the direction to be monitored.

Using the template drill the wall to accept two fixing screws

Remove the front cover using the hex key provided and hinging the lid upwards.

### **IMPORTANT.**

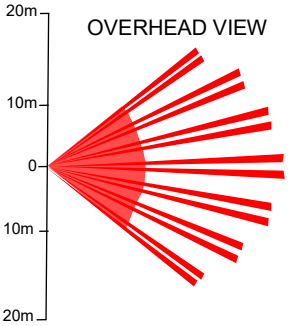
Use waterproofing silicon rubber over the screw heads.



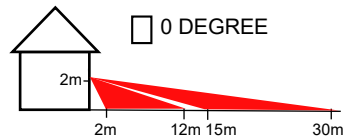
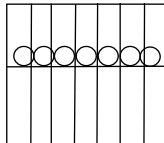
The mounting height for this detector can be up to 6 metres. The diagrams below show some examples of range versus height.

For pet immunity, mask off the lower beams as shown using adhesive masking or insulation tape. For curtain coverage mask off the long range beams.

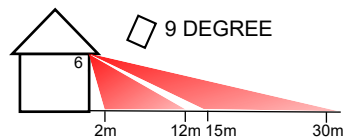
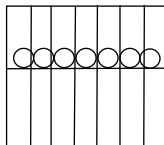
Tilt the detector module according to the table below.



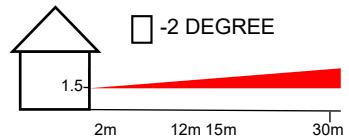
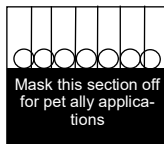
**MULTIBEAM— OPTIMUM**  
**HEIGHT** 2 METRES  
**RANGE** Maximum  
**MODULE TILT** 0 DEGREE



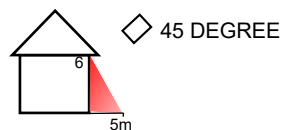
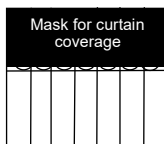
**MULTIBEAM**  
**HEIGHT** 6 METRES  
**RANGE** Maximum  
**MODULE TILT** 9 DEGREE



**PET IMMUNITY**  
**HEIGHT** 1.5 METRES  
**RANGE** Maximum  
**MODULE TILT** -2 DEGREE

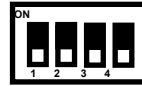


**CURTAIN COVERAGE**  
**HEIGHT** 6 METRES  
**RANGE** Maximum  
**MODULE TILT** 45 DEGREE



## Switch setting table

The 4 switches have the following functions.



PIR detection range	Switch 1
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ON	30 metres
OFF	20 metres

Pulse counting	Switch 2
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ON	4 pulses
OFF	2 pulses

Red night LED	Switch 3
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ON	ON
OFF	OFF

Walk test	Switch 4
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ON	ON
OFF	OFF

### PIR detection range

Detection range can be increased or decreased from 20 metres to 30 metres as preferred.

Increasing the range will also increase the risk of false detection and should only be used in quiet stable locations.

Where the PIR can detect passing vehicles or pedestrians, it is useful to decrease the sensitivity which will shorten the detection range.

An alternative solution is to angle the lens down which will keep the same sensitivity but will be physically limited in range.

Use the lens mask where detection overspill is likely to be a problem

### Pulse count

The normal pulse count setting is 2 but may be increased up to 4 for environments where there is a lot of incidental movement of foliage. Increasing this setting will affect range. A combination of low sensitivity and high pulse counting will give the shortest range but have the maximum immunity to nuisance alarms.

### Red night LED

Switch this feature on for a night time only super bright red LED which gives a clear indication that the PIR has detected movement. Ideal for warning intruders to stay away.

### Walk test

Switch this on for a super bright red LED which will assist when walk testing the area to be covered. This feature operates both day and night.

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## Pairing the ESD30 to the receiver

All Easyswitch receivers will pair in the same way and so the following instructions are common to all.

1. Power up the receiver and press the learn button. The learn LED will light for a few seconds during which time a transmission must be made from the ESD30.
2. With the receiver in learn mode, connect the batteries to the ESD30 and the receiver's learn LED will flash three times to show that it has paired with the ESD30.

Alternatively, you can pair a receiver with an ESD30 that is already operating by putting the receiver into learn mode and then walking in front of the ESD30 which will make it transmit. The only problem with this method is if you have more than one ESD30 as you cannot be sure which one has transmitted and it is possible to pair to the wrong one.

To flush the memory of the receiver, press and hold the learn button for ten seconds until the red led turns off.

For individual receiver information please see the operating installation guide for that particular product.

## Walk testing

1. Using a pointed tool such as a pencil tip or a cocktail stick, select switch 4 to ON (up).
2. Adjust the lens gimbal to face the direction of desired detection coverage. The lens may be angled up or down accordingly and the shutters can occlude part of the lens that is not required.
3. Always loosely re-fit the front cover before beginning the walk test to avoid air currents giving false detections.
4. Each time detection occurs, the high brightness red LED will light. Stand still and wait for the LED to turn off. Continue to stay motionless for a few seconds after the LED turn off before continuing to test. NB: If the red LED fails to light again it is because you or something else is still being detected. Ensure the cover is fitted and stand very still between detections.
5. You can increase or decrease the sensitivity using switch 1 and also increase the pulse counting using switch 2.
6. When you are satisfied with the area coverage, select switch 4 to off.

## Light sensor adjustment

With the red adjuster turned full anti-clockwise, the receiver will operate both day and night.

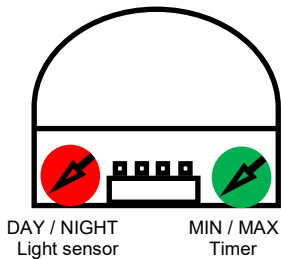
Turn the adjuster fully clockwise for night time only operation.

NB: The audible plug in bleeper accessory (ESB1) will operate both day and night regardless of the ESD30 light setting position.

## Timer adjustment

The timer will adjust from ten seconds to ten minutes approximately but this depends on the type of receiver used.

Minimum time is when the adjuster is fully anti-clockwise



## Choice of battery and fitting information

The ESD30 can be powered from either 4 x AA 1.5 volt alkaline batteries or 1 x PP3 9 volt alkaline battery.

The AA holder is Velcroed in place and can be removed by gently pulling forward.

To fit a PP3 battery, unclip and remove the AA battery holder.

4 x AA batteries have more power than a PP3 and will give the longest battery duration.

The following example of battery life using AA batteries

- a) 10 Detections + Transmissions per day, no LED activation => about 48 months life
- b) 100 Detections + Transmissions per day, no LED activation => about 28 months life
- c) 10 Detections + Transmissions + LED activations per day => about 40 months life
- d) 100 Detections + Transmissions + LED activations per day => about 6 months life

# ESD 30 Technical specifications

Battery	4 x AA or 1 x PP3 Alkaline
Battery life	2 to 3 years
Detection type	Passive Infrared Dual element pyro
Detection range	Programmable between 20 and 30 metres
Mounting height	Variable up to 6 metres optimum height 3 metres
Coverage	10-70°
Adjustment	180° pan + 90° tilt
Pulse count	2 or 4
Walk test facility. Day or night	High intensity LED
Night time red LED glow	High intensity LED
Temperature range	-10 to +60°C
Weather rating	IP55
Enclosure	Durable ABS UV stabilised housing
Weight	300grams
Dimensions	141 x 165.5 x 109mm

## Regulatory information

Supplier: Luminite Electronics Ltd, 2a Bellevue Road, London N11 3ER.

Weee Directive 2002/95/EC (Weee directive) Products marked with this symbol cannot be disposed of as unsorted municipal waste in the European Union. For proper recycling, return this product to your local supplier upon the purchase of equivalent new equipment or dispose of it at a designated collection point. For more information see: [www.recyclethis.info](http://www.recyclethis.info)

RoHs Directive: 2002/95/EC RoHs Compliant. Hereby Luminite declares that this device does not contain lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls (PBB) or polybrominated diphenyl ethers (PBDE) in more than one percent specified by EU directive 2002/95/EC, except exemptions stated in EU directive 2002/95/EU annex.

CE Directive 2004/108/EC (CE Directive): Herby, Luminite declares that this product is in compliance with the CE essential requirements and other relevant provisions of Directive 2004/108/EV.

## MADE IN ENGLAND

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