D-TECT 50 AM

GJD359 Anti-Masking 50m Quad PIR Detector

Detect.Illuminate.Deter

PACKAGE CONTENTS

- 1 x D-TECT 50 AM
- 1 x Drilling template for fixing holes
- 3 x 31.75mm wall plugs
- 3 x 31.75mm screws
- 1 x Tamper cup
- 2 x Tamper feet
- 1 x Installation manual
- 1 x 5m wide Fresnel lens (Lens 2, Fig.12)

INTRODUCTION

The D-TECT 50 AM is an outdoor motion detector and alarm trigger that uses two independent passive infra-red detectors, both of which must trigger to cause the detector to signal an alarm. Utilising quad PIR technology, the D-TECT 50 AM delivers precise, reliable presence detection and will alarm if tampered by masking.

The integral dual axis tilt sensor allows 180° of pan and 45° tilt. This increases the speed of the outdoor installation and provides incredibly accurate aiming of the detection pattern. The electronics module is acrylic coated for additional component stability. It is encased in a vandal-resistant high impact zinc alloy housing with a UV stabilised translucent front cover ensuring the sensor is impervious to and unaffected by weather conditions. Additionally the combination of precision electronics, digital white light filter and double shielding eliminates false alarms from the sun and other visible light sources.

The D-TECT 50 AM design gives a neat and professional appearance with no visible indication of the orientation of the detector head, and totally hides the wiring.

QUICK INSTALLATION GUIDE

Apply supply voltage to the unit, the amber led flashes 10 times, then the blue LED flashes 3 times.

The detector takes approximately 2-3 minutes to settle. The walk test led is factory set to OFF. Pressing the program button once will enable the walk test LED for 5 minutes.

THE FRONT COVER MUST BE FITTED WHEN WALK TESTING

FACTORY SETTINGS ARE:

1	RANGE 50 METRES
2	PULSE COUNT 1
3	LED OFF

When enabled the D-TECT 50 AM has two LED indicators.

Blue - Alarm output, both PIRs and microwave detection
Amber - Anti-Mask detection

ANTI-MASKING CIRCUIT

The cover must be fitted before applying power to the detector.

During the first 10 seconds after power has been connected, the amber LED flashes and the anti-masking circuit starts to self calibrate. The amber LED indicates when the detector is covered, but the relay contacts do not operate until the unit has been covered for 60 seconds.

SEQUENCE FOR CORRECT OPERATION

1. Make connections and replace cover.
2. Apply 12 volts power. Amber LED Flashes 10 times - self calibration completed.
3. Cover detector for 60 seconds. When anti-mask detection is continuous for 60 seconds the normally closed relay will open until anti-mask detection is cleared.

MOUNTING THE UNIT

During installation the electronics must be protected against water, as trapped moisture can affect or damage the unit.

1. Using the template provided drill the wall to accept the two fixing screws, the cable entry and the tamper cup (if used). See fig 1 and 2.

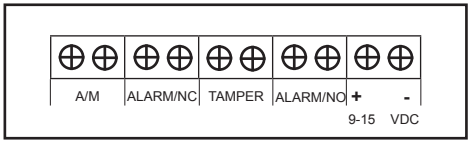
Note: We recommend using the tamper cup on uneven wall surfaces.

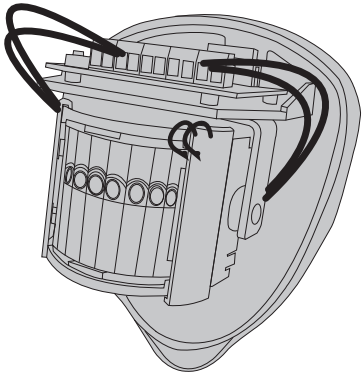
2. Remove the cover assembly by loosening the locking screw. The cover hinges from the top and lifts out of the location slot. See fig 3.

3. Feed standard 8 core alarm cable into the cable entry; bare the wires and connect to the terminal block as shown in fig 7. Screw the unit to the wall ensuring that the tamper pin is correctly located and that the tamper microswitch is closed. See fig 4 and 5. To aid installation, two spare tamper feet are provided. One is 1mm longer and the other is 2mm longer than the tamper foot originally fitted. The tamper foot is a push fit and can be removed by carefully pulling it from the pin. See fig 2.

4. When the detector has been aligned to suit the installation, replace the front cover and lock as shown. See fig 6.

CONNECTING THE UNIT





BEAM ALIGNMENT
PIR circuitry detects changes in heat and movement in the beam pattern. Objects such as trees, shrubs, ponds, flues, and animals should be considered when positioning the detector.

Note: The PIR sensor is more sensitive to movement across the beams, and less sensitive to movement directly towards or away from the beams.

When coverage exceeds the desired detection area, adjust the module as required to avoid unwanted detection.

Optimum mounting height for the detector with Lens1 (Fig. 11) is 3m. Heights above 3m could result in a significant reduction in the range of detection and the target will have to move a greater distance within the field of view to alarm.

Mounting height for the narrow width Lens2 is maximum 2.6m.

Figures 7/8 show side and top down views of the 10m wide (Lens1) pattern. Figures 9/10 show the 5m wide (Lens2) pattern.

PROGRAMMING
The user can individually program a number of configurable settings as illustrated in the programming chart. Factory settings are shown as shaded boxes. Changes to the existing settings can easily be made.

To reset the factory settings simply remove power from the detector, press and hold the program button (see fig 14) whilst temporarily applying power to the detector: either before installation, with a PP3 battery, or by applying 12 volts to the unit on site. The Amber LED will flash 10 times, the blue LED will flash 3 times then the blue LED will flash rapidly then release the program button.

PROGRAMMING CHART

OPTIONS			SETTING		
			1	2	3
	1	Range (m)	25	40	50
	2	Pulse Count	1	2	
	3	LED	OFF	ON	

EXAMPLE
To change the LED setting from OFF to ON.

1. Press the program button three times and release the button.
2. Wait until the indicator goes off.
3. The indicator will now flash once.
4. Press the program button twice and release the button.
5. The indicator flashes twice showing that the option has been stored and the detector returns to normal operation.

WALK TEST
The range of the detector increase without the front protective cover. Therefore the front cover must be fitted to establish the correct beam pattern alignment and when testing the outputs. Use the programming chart to adjust the range as necessary and pan and tilt the lens module over the field of view to obtain the correct coverage area.

When the 'program' button is pressed momentarily the blue indicator lights and pulse count '1' is automatically selected. The unit can then be aligned. The blue indicator will light on the D-TECT 50 AM every time a detection takes place. This test mode will automatically cancel five minutes after last detection. Alternatively, remove the power and then re-apply.

Note: When you conduct a walk test, make sure that the front cover is in place. Do not conduct walk tests with the cover removed.

OPTION DEFINITIONS

PULSE COUNT
This is the number of times the unit has to detect on both of its sensors before signalling an output.

LED MONITOR
LED Off - LED disabled.
LED on - LEDs signal a detection.

ACCESSORIES
GJD is able to supply the following accessories to aid installations:

PMB1 Pole mount bracket
GJD380 D-TECT walk tester

Detection Area	Programmable between 25m & 50m	
Coverage	13 degrees detection angle, 50m x 10m coverage max. Two Fresnel lenses giving up to 50m x 5m or 50m x 10m (Standard)	
Adjustment	180° pan + 90° tiltt	
Customised Optics	Double silicon shielded quad element eliminates 50,000 Lux of white light	
Outputs	Silent solid state magnetically immune	
Alarm N/O	N/OPEN	Volt free relay signal contact 24VAC/DC @ 50mA with an integral 25R series resistor Alarm time 5 seconds
Alarm N/C	N/CLOSED	Volt free relay signal contact 24VAC/DC @ 50mA with an integral 25R series resistor Alarm time 5 seconds
AM	N/CLOSED	Volt free relay signal contact 24VAC/DC @ 50mA with an integral 25R series resistor Alarm time 5 seconds
Tamper	N/CLOSED	Cover and rear tamper switches
Power Input	9 to 15 VDC	
Current	15mA (12V nominal)	
Pulse Count	1 - 2	
Temp Compensation	Digital sensitivity adjustment	
Control	Digital microprocessor - non volatile memory	
Walk Test	Output test mode with LED indication	
Operating Temp	-20ºC to +55º C Conformally coated electronics for increased stability	
Housing	High impact zinc alloy	
Protection Rating	IP65	
Dimensions	145 x 120 x 115 mm	
Weight	750grams NET, 880 grams GROSS	
Mounting Height	Variable - maximum height 3 metres	
Cable <200m	Utilising all three outputs (incl. tamper) - 8 core 7/0.2mm	
Cable <500m	Utilising all three outputs (incl. tamper) - 8 core 16/0.2mm	
Certifications	CE UKCA	

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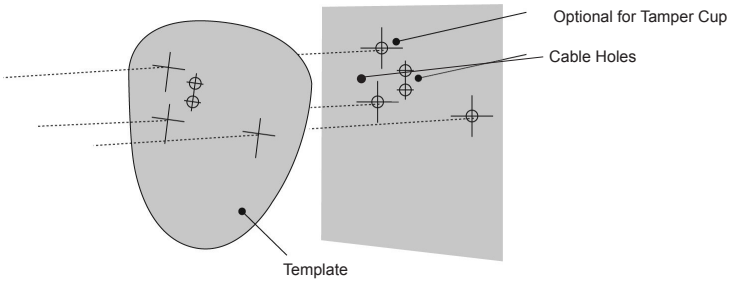

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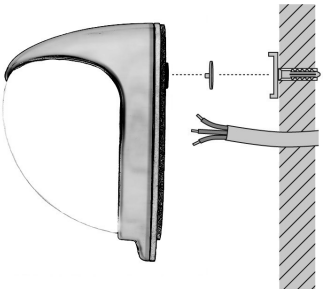

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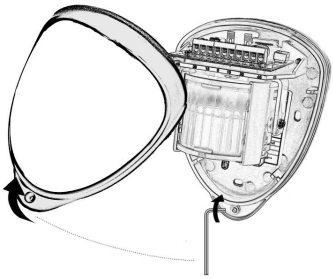

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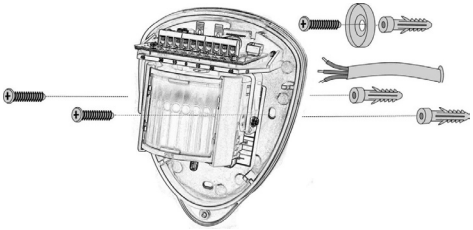

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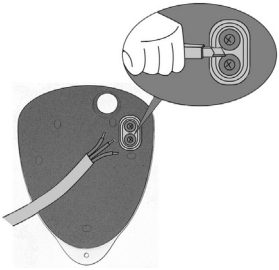

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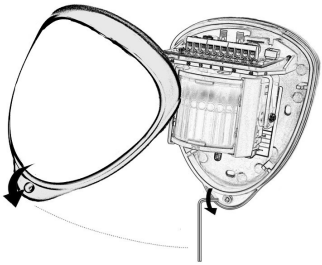

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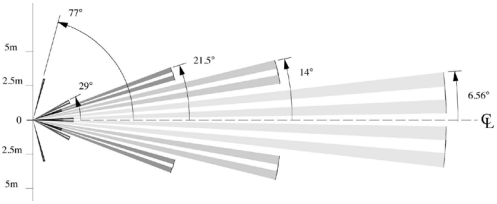

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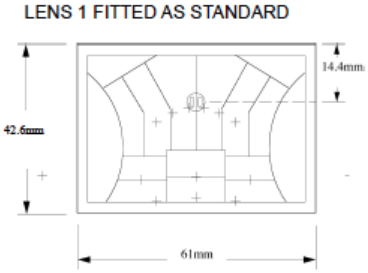

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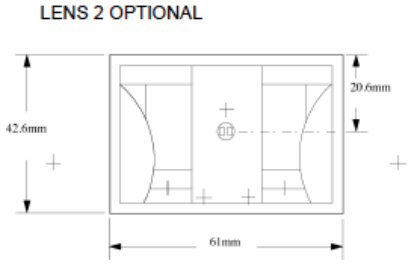

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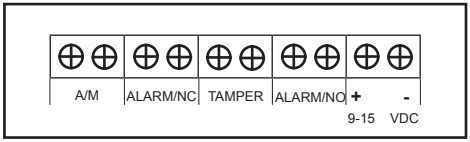

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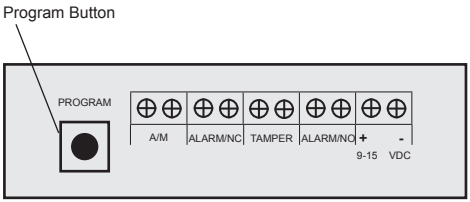

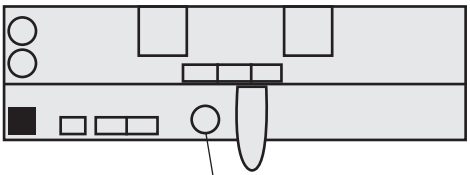

ENGINEER NOTES

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