D-TECT Universal

GJD630 Wireless Quad PIR

Detect.Illuminate.Deter

PACKAGE CONTENTS

Package Contains:

- 1 x D-TECT Universal
- 1 x Drilling template for fixing holes
- 3 x 31.75mm wall plugs
- 3 x 31.75mm screws
- 2 x Additional sliding curtains
- 2 x Tamper feet
- 1 x Installation manual
- 1 x Self-adhesive lens mask
- 1 x Opening tool
- 1 x Tamper cup

INTRODUCTION

The D-TECT Universal is a battery powered outdoor motion detector 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 Universal PIR delivers precise, reliable presence detection.
The detector is a battery powered device with three independent negative outputs to connect to third party transmitter modules.

QUICK INSTALLATION

1. Mount the detector following the instructions given later in this sheet.
2. Fit the 2 x CR123 3 volt batteries observing the correct polarity. The red LED will flash.
3. Wait approximately 2 to 3 minutes to allow the detector to settle.
4. Press the programming button once to activate walk test mode. The detection LED is now enabled for 5 minutes.

Note: The front cover must be fitted when walk testing.
The default settings are:

- Range: 30 metres
- Pulse count: 1
- Outputs: Negative applied – active

BATTERIES

Only use CR123 3 V Lithium batteries.
Observe correct polarity when fitting.
Battery safety information

- Do not put in a fire
- Do not heat
- Do not charge
- Do not short circuit
- Do not disassemble
- Only fit batteries of the same type and voltage

To preserve battery life the detector has a 2 minute sleep timer after a detection. This is reduced to 6 seconds during walk test.

MOUNTING THE UNIT

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

MOUNTING THE UNIT

WARNING

- NYLON WASHERS PROVIDED MUST BE USED WITH SCREWS
- ENSURE CABLE ENTRY AND SCREW HOLES ARE SEALED WITH WATER BASED SEALANT
- DO NOT USE SILICONE BASED SEALANT

1. Remove the detector from the mounting base by loosening the 5 securing screws. The mounting base is used to accommodate the transmitter module.

Note: The mounting base must always be fitted to ensure water tightness.

2. Screw the mounting base to the wall ensuring that the tamper pin is correctly located. To aid installation, two alternative length tamper feet are provided.
3. Fit transmitter module into mounting base and run cables into detector housing.
4. Secure detector to the mounting base with the 5 screws.
5. Connect the transmitter cables into the terminal block.
6. Fit two CR123 3 volt batteries.

Note: Observe correct polarity

7. When the detector is aligned, connected and programmed to suit the installation, replace and secure the front cover.

CONNECTING THE TRANSMITTER

The transmitter module should be fitted in the mounting base.

There are 3 negative switching outputs and a 3 volt output on the detector.

These are marked – A T B + –
– Common negative. Direct from battery –.
A Negative switching alarm output. Active for 4 seconds with an activation.
T Negative switching tamper output. Active when either tamper switch is open.
B Negative switching low battery output. Active when battery voltage drops below 2.7 volts.
+ 3 Volts output. Direct from battery +.
– Common negative. Direct from battery –.

The three negative outputs can be programmed to be either negative applied when active or negative removed when active. See programming chart.

If the transmitter module is powered from its own battery then connect the common negative on the detector to the common negative on the transmitter module and DO NOT CONNECT THE +

MULTIBEAM ALIGNMENT & MASKING

The multifunction lens fitted to the D-TECT Universal detector produces seven long range beams and seven medium to short range curtain PIR beams. The PIR circuitry detects changes in heat and movement in the beam pattern; therefore items such as trees, shrubs, ponds, boiler flues, air conditioning units 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.

The detector module is fitted with two sliding curtains to reduce the detection angle.

The curtains are fitted to the pan and tilt module as shown in Figure 2. Each section of the detector lens gives a detection pattern of approximately 10 degrees. An additional set of curtains is provided should the beam pattern need to be reduced even further.

When coverage exceeds the desired detection area, adjust the module as required and mask off any beams, either vertically or horizontally, to avoid unwanted detection.

Use portions of the self-adhesive silver mask applied to the rear, smooth side of the lens. Always replace the lens the correct way up to ensure correct beam pattern coverage (top of the lens is marked TOP).

When mounted at heights above 3 metres there could be a significant reduction in the range of detection and the target will have to move a greater distance within the field of view before an alarm is generated.

Masking Configuration For Maximum Range

Configuration	Height (m)	Tilt (°)	Max. Range (m)	Reference
Multibeam, optimum	3	0	30	Figure 3
Pet Immunity	1.5	-2	30	Figure 4

[1]Black area should be masked for pet alley applications up to 30 meters.

Figure 3 shows the beam pattern for the maximum range in the optimum position.

Figure 5 shows the pattern for the minimum range of 10 metres.

PROGRAMMING

The user can individually program a number of configurable settings, as illustrated in the programming chart below using the program button and LED shown in Figure 6.

Programming Chart

Option	Value		
	1	**2**	**3**
1.Range (m)	10	20	30*
2.Pulse Count	1*	2	
3.Active output logic	Removed*	Applied	

*Default Settings

To re-set the default settings remove the batteries, wait 10 seconds, press and hold the program button then re-fit the batteries, the LED will flash rapidly then release the program button.

To change any of the D-TECT Universal settings:

1. Press the programming button to select the option number you want to change. Press once for range, twice for pulse count, and three times for active output logic.
2. Wait until the programming LED turns off (typically 4 seconds).
3. Count the number of times the programming LED flashes to determine the current value for that option.
4. Press the programming button to select the value number for the new setting. Example: To set the range to 30 m press three times.

The programming LED blinks twice to indicate that the new value was set.

Any alterations made to the D-TECT Universal settings are stored in the detector's non volatile memory.

Example: To change the pulse count setting from 1 to 2:

1. Press the programming button two times.
2. Wait until the programming LED turns off.
3. 3.The programming LED flashes once to show that the current value is 1.
4. Press the programming button twice.
5. The programming LED flashes twice showing that the new value has been stored. The detector returns to normal operation.

PROGRAMMING OPTIONS DEFINITIONS

Pulse Count
This is the number of times the unit has to detect on both of the PIR sensors before signalling an alarm output.

Active Output Logic
Applied – When the output is active it will apply negative.
Removed – When the output is active it will remove negative.

WALK TEST

In walk test mode, the detection LED is set to ON. The detection LED lights each time D-TECT Universal detects your presence.

To enter the walk test mode, press the programming button once. The unit can then be aligned. The detection LED lights on D-TECT Universal every time detection takes place.
The test mode ends automatically five minutes after last detection.

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.

The range of the detector increases without the protective front cover. Therefore the front cover must be fitted to establish the correct beam pattern. Pan and tilt the lens module over the field of view to obtain the correct coverage area

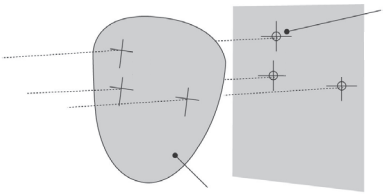
TAMPER PROTECTION

The D-TECT Universal is fitted with two tamper switches to detect the front cover being removed and removal from the fixing surface. The flying lead on the rear of the D-TECT Universal PCB must be plugged into the top PCB for the tamper switches to operate.

SPECIFICATIONS

Detection Range	Programmable: 10 m, 20 m or 30 m
Coverage	10 to 70° detection angle, 30 x 24 m coverage max.
Adjustment	180° pan, 90° tilt
Fresnel Lens	28 zones for each detection element, which can be masked with the curtain sliders
Customised Optics	Double silicon shielded quad element eliminates 50,000 lux of white light
LED	Detector alarm / Programming
Batteries	2X 3 V CR123
Current	20 µA Without transmitter
Outputs	3 x Negative switching max 25 mA.
Pulse Count	1 or 2
Control	Digital microprocessor with non-volatile memory
Walk Test	Output test mode with LED indication
Operating Temp.	−20 to +55°C
Housing	High impact ABS plastic with HDPE cover, UV stabilized
Protection Rating	IP 65
Dimensions	145 x 120 x 155
Weight	363 g net, 575 g gross excluding transmitter and batteries
Mounting Height	Variable - optimum height 3 m for full range
Certifications	CE UKCA

1



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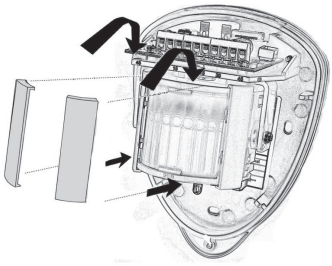

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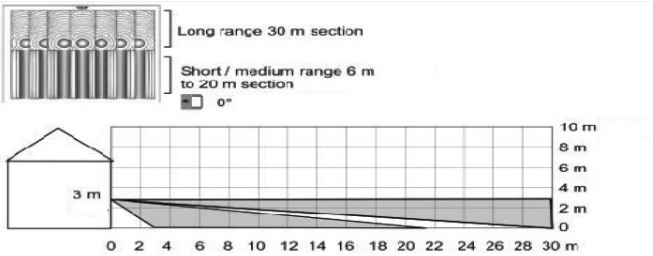
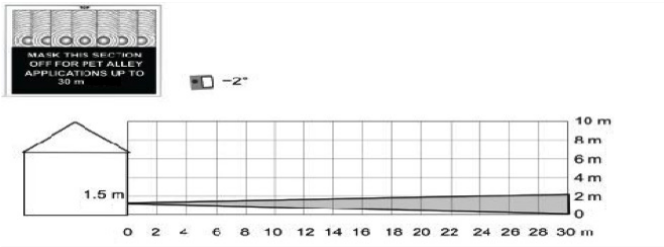
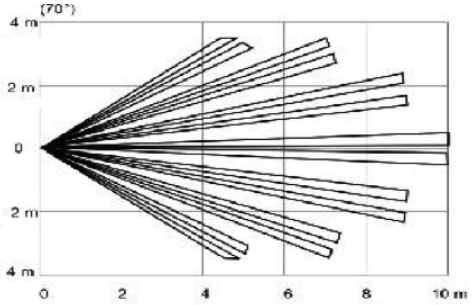

Long range 30 m section
Short / medium range 6 m to 20 m section
0°
10 m
8 m
6 m
4 m
2 m
0
3 m
0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 m

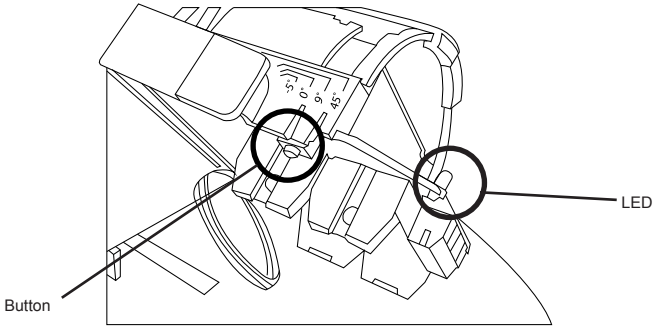
4


MASK THIS SECTION OFF FOR PET ALLEY APPLICATIONS UP TO 30 m
−2°
10 m
8 m
6 m
4 m
2 m
0
1.5 m
0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 m

5


(70°)
4 m
2 m
0
2 m
4 m
0 2 4 6 8 10 m

6



ENGINEER NOTES

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