

# MX25

GJD102 Quad PIR Movement Detector



## Package Contents

Package Contains:

- 1 x MX25
- 1 x Allen Key
- 2 x 27mm wall plugs
- 2 x 27mm screws
- 3 x Tamper Feet
- 1 x Tamper Cup
- 1 x Installation manual

## Introduction

The MX25 is an attractively styled, 25 metre Passive Infra-red (PIR) detector, with advanced features such as dual tamper switches for case and wall-mount tamper detection, sensor mounted white-light filter and zone blanking using vertical curtain shutters and horizontal masking for precise area coverage.

## Quick Installation

1. Mount and connect the detector following the instructions given later in this manual.
2. Configure programming switches as required referring to instructions given later in this manual.
3. Apply supply voltage to the unit. The blue detection LED flashes three times.
4. Wait approximately 2 to 3 minutes to allow the detector to settle.

**Note: The front cover must be fitted when walk testing.**

The default settings are:

- Range: 25 meters
- Pulse count: 1 (always set to 1 during walk rest)
- Detection LED: On (recommend for set up process)

## Mounting The Unit

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

1. Drill the wall to accept the two fixing screws, the cable entry, and the tamper cup (if used).  
**Note: We recommend using the tamper cup on uneven wall surfaces.**
2. Remove the cover assembly by loosening the locking screw using the allen key provided. The cover hinges from the top and lifts out of the location slot.
3. Feed the cables into the cable entry and Screw the unit to the wall ensuring that the tamper pin is correctly located and that the tamper microswitch is closed.  
Three spare tamper feet of different lengths are provided to aid installation. The tamper foot is a push fit and can be removed by carefully pulling it from the pin.
4. Connect the cables to the screw-terminal block on the back of the detector PCB (see Figure 1).

5. When the detector is aligned, connected, and programmed to suit the installation, replace the front cover and lock in place.

## Multibeam Alignment & Masking

The multifunction lens fitted to MX25 produces 5 long range beams and 5 medium to short range curtain PIR beams (see Figure 2). The PIR circuitry detects changes 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.

**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 shutters to reduce the detection angle.

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 as shown in Figure 2. Always replace the lens the correct way up to ensure exact 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 Configurations For Maximum Range

| Configuration       | Mounting Height (Metres) | Tilt (°) | Max. Range (Metres) | Reference    |
|---------------------|--------------------------|----------|---------------------|--------------|
| Multibeam (Optimum) | 3                        | 5        | 25                  | Figure 3     |
| Pet Immunity *      | 1.5                      | -5       | 25                  | Figure 4 & 5 |

\* Black area should be masked for pet alley applications up to 25 metres (see figure 5).

Figure 6 shows the pattern for the maximum range in the optimum position (see Figure 10).

Figures 7 and 8 illustrates alignment recommendations for when the detector is mounted close to a wall.

The alignment shown in Figure 7 is not recommended. If the detector module is orientated at an angle of 90° to the perimeter, the mounting wall may cut off short and medium range beams. The long range beam will still detect an intruder, however the wall can cause false alarms when heated by sunlight.

Figure 8 shows the recommended alignment. The detector module is orientated at a 55° angle to the perimeter. As a result, short and medium range beams are parallel to the perimeter, but the detection range along the perimeter is reduced.

## Programming

To change any of the MX25 settings, change the configuration of the programming switches (see Figure 9) as required. switch 1 controls detection LED state, switch 2 controls Pulse Count, and switches 3 and 4 control range.

Example: To change the range to 15 metres:

1. Set switch 3 to Off (down position).
2. Set switch 4 to On (up position).

### Programming Chart

| Option         | Switch Configuration                         | Reference |
|----------------|--|-----------|
| LED ON         | Switch 1: On (Up)                            | Figure 10 |
| LED OFF        | Switch 1: Off (Down)                         | Figure 11 |
| Pulse Count 1  | Switch 2: Off (Down)                         | Figure 12 |
| Pulse Count 2  | Switch 2: On (Up)                            | Figure 13 |
| 10 Metre Range | Switch 3: Off (Down)<br>Switch 4: Off (Down) | Figure 14 |
| 15 Metre Range | Switch 3: Off (Down)<br>Switch 4: On (Up)    | Figure 15 |
| 20 Metre Range | Switch 3: On (Up)<br>Switch 4: Off (Down)    | Figure 16 |
| 25 Metre Range | Switch 3: On (Up)<br>Switch 4: On (Up)       | Figure 17 |

Shaded settings are factory defaults

## Programming Options Definitions

### Pulse Count

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

### LED

LED Off – LED disabled.

LED On – LED signals a detection.

## Walk Test

**Note: It is recommended that the detection LED be enabled during walk test to aid in set up. The detection LED lights each time the MX25 detects your presence.**

**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. Use programming chart to adjust the range as necessary. Pan and tilt the lens module over the field of view to obtain the correct coverage area.

## Specifications

|                          |  |
|--------------------------|--|
| <b>Detection Area</b>    | Programmable between 10 & 25 metres.   |
| <b>Coverage</b>          | 90 degrees detection angle, 25m x 25m coverage max.  |
| <b>Adjustment</b>        | 180 degree pan + 90 degree tilt.   |
| <b>Fresnel Lens</b>      | 10 zones for each Pyro pair, which can be masked with curtain sliders and special masking tape (supplied).                     |
| <b>Customised Optics</b> | Double silicon shielded quad element eliminates 50,000 Lux of white light.   |
| <b>Outputs</b>           | Silent solid state magnetically immune.  |
| <b>No. 1</b>             | <b>N / OPEN</b><br>Volt free relay signal contact<br>24VAC/DC @ 50mA with an integral 25Ω resistor.<br>Alarm time 5 seconds.   |
| <b>No. 2</b>             | <b>N / CLOSED</b><br>Volt free relay signal contact<br>24VAC/DC @ 50mA with an integral 25Ω resistor.<br>Alarm time 5 seconds. |
| <b>T</b>                 | <b>Tamper</b><br>Volt free, normally open switch output<br>12VDC @ 25mA.   |
| <b>Tamper Switches</b>   | Front and rear tamper switches; case open and removal from wall.   |
| <b>Pulse Count</b>       | 1 - 2.   |
| <b>Power Input</b>       | 9 to 15 VDC.   |
| <b>Current</b>           | 8mA (12V nominal).   |
| <b>Operating Temp.</b>   | -20 to +55 Centigrade<br>Conformal coated electronics for increased stability.   |
| <b>Housing</b>           | High impact ABS.   |
| <b>Protection Rating</b> | IP 55.   |
| <b>Dimensions</b>        | 84 x 106 x 72 mm.  |
| <b>Mounting Height</b>   | Variable – optimum height 3 metres.  |
| <b>CE Mark</b>           |   |

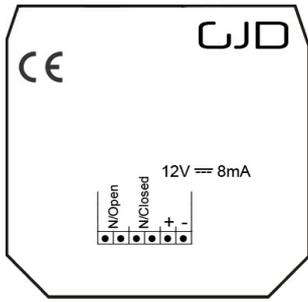
GJD reserve the right to amend specifications without prior notice

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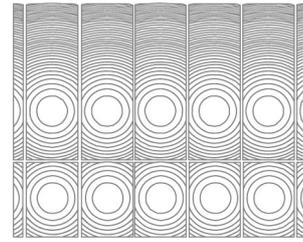
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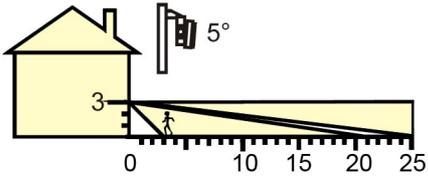
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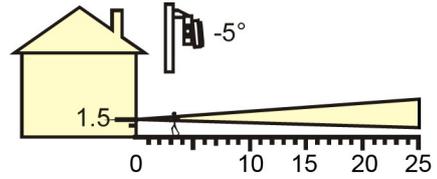
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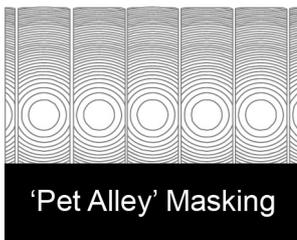
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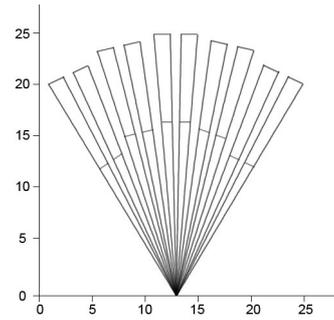
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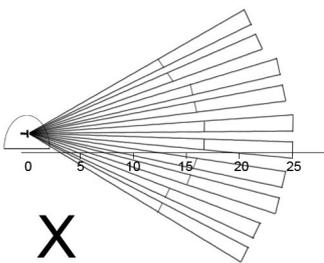
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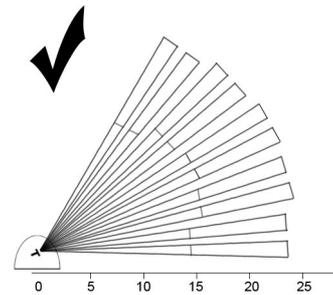
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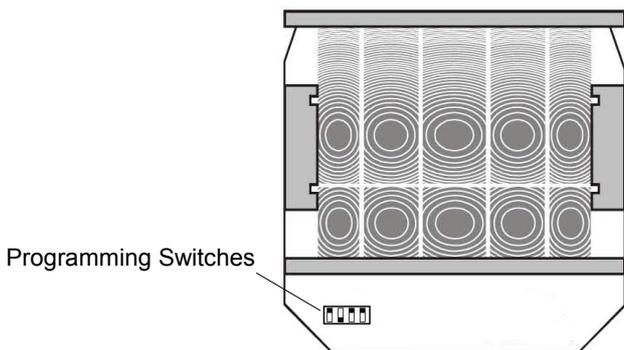
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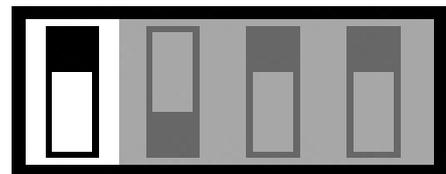
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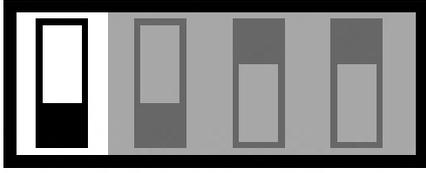
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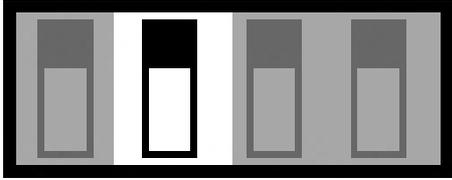


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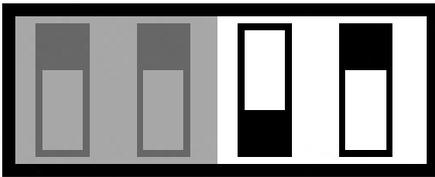
Led Off

13



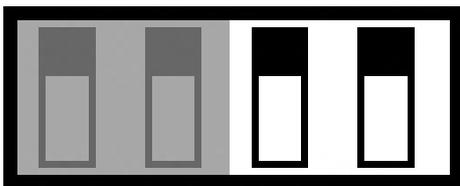
Pulse Count 2

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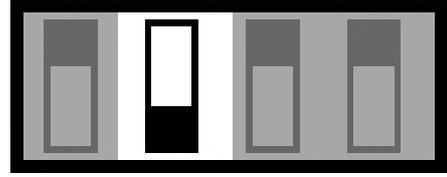
Range 15 Metres

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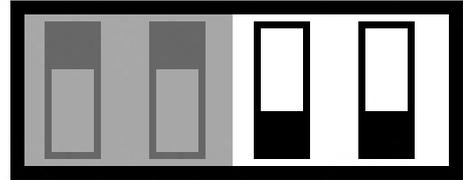
Range 25 Metres

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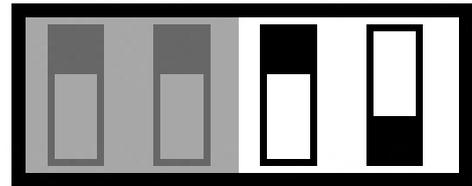
Pulse Count 1

14



Range 10 Metres

16



Range 20 Metres