

## MD99 METAL LOOP DETECTOR

**Please note: The MD99 must be reset (Dipswitch 9) every time a setting change is made to the dipswitches!**  
**On initial power up the detector will also reset. This will take a couple of seconds. The buzzer will beep when ready.**

Temperature range	0° - 60°
Size	100 x 50 x 25mm
Power Supply requirements	12 - 24Vdc @ 40mA 16 - 24Vac @ 50mA
Detector reset time	5 seconds
Sensing loop position	Normal sensitivity - ≤ 50m Reduced sensitivity - 50 ≤ 100m

### Outline of the dipswitch setting options:-

#### Dipswitch 1 – Freq. (Frequency):-

- This setting is used in cases where two or more loop detectors and sensing loops have been installed. (The sensing loops and detectors should be positioned at least 1m apart).
- Set one detector to HI frequency and the other set to LOW frequency to minimize the effects of crosstalk between the two systems.

**OFF** = Low frequency  
**ON** = High frequency

#### Dipswitch 2 - Security mode (Only available in pulse mode):-

- With this dipswitch active, the user must first activate the detector before it will operate for a vehicle passing through the sensing area.
- Install a normally closed push button across the 0V terminal and the security button terminal.
- When pressed momentarily the loop detector will be in normal mode for the time frame setup on Dipswitches 7 and 8.
- If the security push button is held for ≥ 3sec. the relay will activate. (Only one push button necessary on Intercom).

**OFF** = No security mode active (dipswitch 7 and 8 not in use)  
**ON** = Security mode active (Time is determined by dipswitch 7 and 8)

#### Dipswitch 3 – Relay output type:-

This setting determines how the relay responds to a vehicle standing still within the sensing loop area.

**ON = Pulse mode.** Relay will activate for 1 sec only. To re-activate the vehicle must leave the sensing area and re-enter.  
**OFF = Permanent Presence mode.** Relay will remain active for as long as a vehicle is within the loop sensing area.



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### **Dipswitch 4 - Boost mode:-**

This mode is used when the height of the undercarriage of the vehicle increases as it passes over the sensing loop. For example a vehicle towing a trailer where the trailer under carriage is higher than the motor vehicle chassis or in the case of a truck with a lower engine block up front and a higher chassis below the load box.

The detector will remain active for as long as the metal work moves over the sensing loop.

- OFF** = No boost active  
**ON** = Boost mode active

### **Dipswitch 5 and 6 – Sensitivity level setting:-**

Adjusting this setting will vary how much metal is necessary in the sensing area before the detector will activate the relay.

Dipswitch 5	Dipswitch 6	Sensing level
Off	Off	Low (Most amount of metal)
On	Off	Low - Medium
Off	On	Medium - High
On	On	High (Least amount of metal)

### **Dipswitch 7 and 8 – Security timer (Dipswitch 2 and 3 must be on to use this function):-**

This setting determines how long the detector will remain active after the security push button has been momentarily pressed.

Dipswitch 7	Dipswitch 8	Time out
Off	Off	2 Minutes
On	Off	4 Minutes
Off	On	6 Minutes
On	On	8 Minutes

### **Dipswitch 9 – Reset:-**

**Please note: The MD99 must be reset every time a setting change is made to the dipswitches!**

To reset the detector switch dipswitch 9 on for approximately 2 seconds and then off again. The detector then goes through the setup routine for a few seconds and beeps once when ready. This will also occur on initial power up.



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## LED INDICATIONS.

### FAULT LED (Red) = SENSING LOOP FAULT INDICATOR:-

- OFF** = No fault. Sensing loop is in working condition.  
**FLASH** = Sensing loop is short circuited or open circuit. Fault is still present.  
**ON** = Sensing loop was short circuited or open circuited but is no longer. (Intermittent fault) The detector has not been reset since the fault occurred.

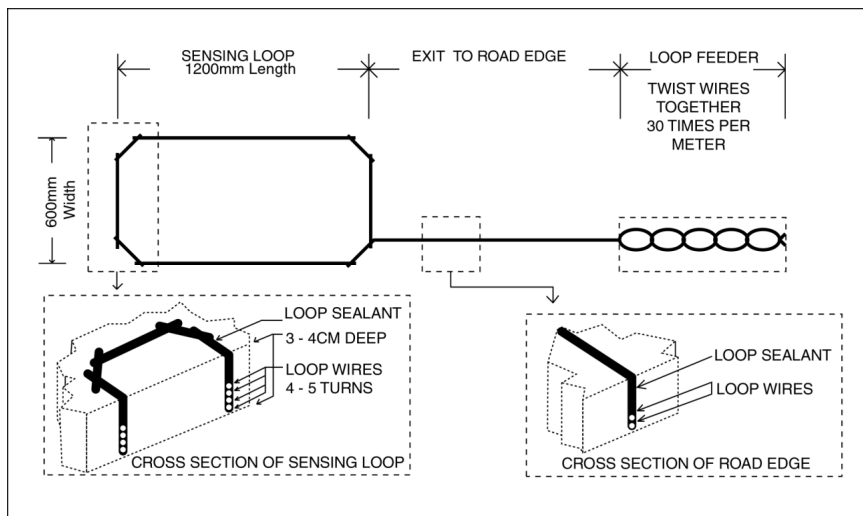
### STATUS LED (Green) = DETECTOR STATUS INDICATOR:-

- STEADY FLASH** = Standing by and ready to detect a vehicle.  
**ON** = Vehicle detected in sensing loop area. (Presence mode)

## BUZZER INDICATIONS:-

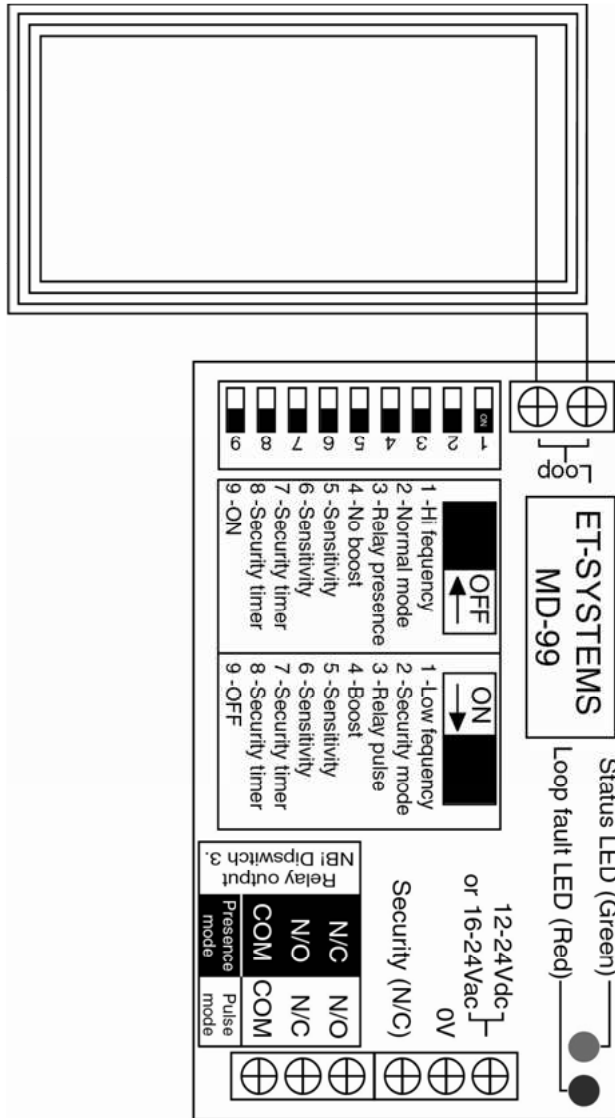
The buzzer will sound so long as a vehicle is detected in the sensing loop range for the first ten detections after a reset or power-up. This will assist in testing the system on installation.

## Preparing the sensing loop.



- Use **1.5mm multi-stranded panel flex with silicone insulation** for your sensing loop.
- The sensing loop wire must be one continuous run with **NO JOINS** along its length.
- In cases where re-enforced steel is present below the sensing loop add one or two additional turns to prevent the effect of reduced sensitivity caused by the steel.
- The sensing loop **Feeder** (Feeder = section of wire between the detector and sensing loop) must be twisted together at least 30 times per meter and be as short as possible.
- To seal your slot use either silicone or better yet bitumen.

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