

TEL: +27 21 448 6774  
FAX: +27 21 447 7794

G&C Electronics – CK 89/31531/23  
E-mail : [etsystems@icon.co.za](mailto:etsystems@icon.co.za)  
Internet: [www.et.co.za](http://www.et.co.za)

15 Nelson Road  
Observatory  
Cape Town  
7925



P.O. Box 34524  
Groote Schuur  
Cape Town  
7937

Take Control Of Your World !

# LOOP METAL DETECTOR (MD-99)

## TECHNICAL SPECIFICATIONS

Temperature range	0° - 60°
Size	100 x 50 x 25 mm
Power supply requirements	12 - 24V DC « 40mA 16-24V AC@ 50mA
Loop setup time	5 seconds
Cable feed length	50m Max. Normal operation 100m With reduced sensitivity

## FEATURES

- SECURITY MODE: WHERE LOOP DETECTOR IS CONTROLLED BY THE INTERCOM.
- OPEN CIRCUIT AND SHORT CIRCUIT DETECTION WITH LED AND BEEPER FAULTINDICATION.
- SENSITIVITY BOOST MODE FOR HIGH BED TRUCKS AND TRAILERS.
- AUDIBLE BEEPER FOR SETTING UP LOOP DETECTOR.
- LOOP FREQUENCY SELECTION
- PULSE OR PRESENCE OUTPUT

## INSTALLATION GUIDE

### 1. OPERATIONAL REQUIREMENTS

#### Crosstalk

Two loop sensors installed next to each other can cause interference crosstalk and false detects. This can be eliminated or reduced by selecting different frequencies (dipswitch 1 OFF=HIGH, ON=LOW) and not having a spacing of less than 1 meter between loops.

#### Reinforcing

Reinforced steel below the loop sensor can reduce sensitivity. In this case, one or two additional turns of wire should be added to the loop.

## 2. INSTALLATION

### Loop wire

- It is recommended to use silicon insulated wire with diameter 1.5 mm and should have no joints along its length.
- The sensing loop should have 4 turns of wire.
- The sensing loop feeder should be twisted at least 30 twists per meter and run separately from other wires and be short as possible.

### Loop installation

- Slots cut into the road should be 3 - 4cm deep.
- The sensing loop should be rectangular in shape with the longest side covering the road width.
- A 45 ° crosscut should be made at the corners of the rectangle, reducing the chance of damaging the cable.
- After the wire has been seated into the bottom of the slots, the slots and wire must be sealed in tight so they cannot move with silicon or bitumen seal.
- Select functions on 9 way dipswitch as required.

## 3. LOOP DE TECTOR SETUP

- Select functions on **9 way dipswitch** as required.
- Apply power: after 5 seconds the unit will beep once and red status led will flash.
- The unit will beep for the first 10 detections.
- The **red** status led will flash once for pulse detect mode (dipswitch 2 on) and stay on during the detection time for presence detect mode (dipswitch 2 off).
- **RESET** (dipswitch 9 on) will reset the electronics and audible cycle.
- **BOOST DETECT** selected (dipswitch 4 on), activates when a truck is detected by the loop which increases its sensitivity to detect high off the ground trailers.

## 4. SECURITY MODE. (*Dipswitch 2 on*)

This is operated by opening a normally, closed (N/C) contact across **OV** and **SECURITY BUTTON** and enabled by an intercom button:

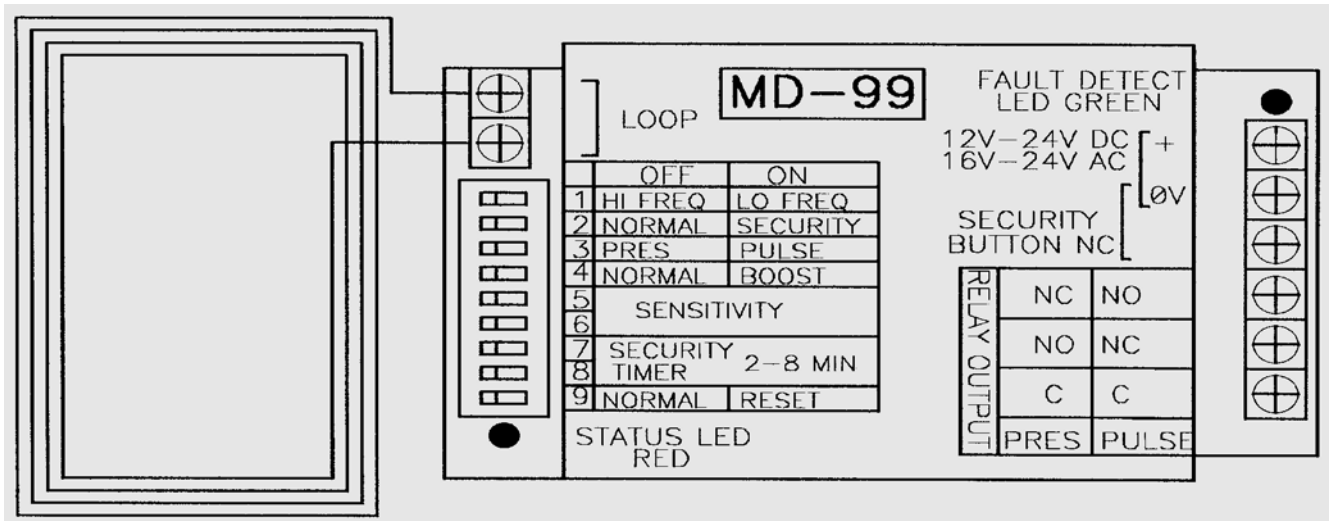
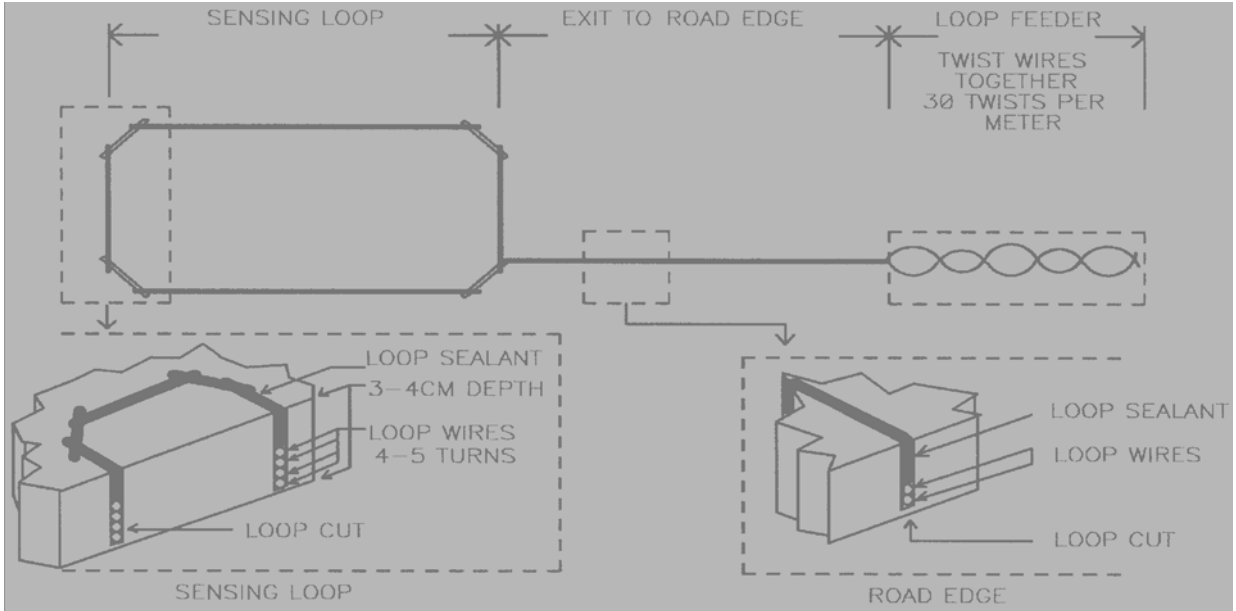
- **pressed less than 3 sec**, to activate the loop detector for a selected time (dipswitch 7 & 8) to allow a visitor's vehicle out.
- **pressed for more than 3 sec**, to activate the relay output to open a gate to allow a visitor's vehicle in.

## 5. FA UL T INDICA TION (*Green led*)

### *Short or open circuit*

- A **permanent fault** will make the **led flash** and on **power up** will cause the **buzzer to sound** continuously.
- An **intermittent** fault will make the **led stay on**.

**Standard loop 1.2 meters x 0.6 meters**  
**4 to 5 turns**  
**Nominal slot width: 4mm**  
**Nominal slot depth: 30mm**



SENSITIVITY SETTING		
5	6	SENSITIVITY
OFF	OFF	LOW
ON	OFF	MED LOW
OFF	ON	MED HIGH
ON	ON	HIGH

SECURITY TIMER		
7	8	TIME
OFF	OFF	2 MIN
ON	OFF	4 MIN
OFF	ON	6 MIN
ON	ON	6 MIN