AUTOMATIC SOLUTIONS

QUICK START INSTRUCTIONS

MD99 LOOP DETECTOR

An inductive loop vehicle detector system consists of three components: a loop, loop extension cable and a detector. When installing an inductive loop system the smallest detail can mean the difference between reliable detection and an intermittent detection of vehicles. Therefore, attention to detail when installing an inductive loop vehicle detection system is absolutely critical.

ORDER OF INSTALLATION

1. Plan site and size of loop
2. Cut loop
3. Install cable loops
4. Install cable runs back to loop detector
5. Seal loop and return run
6. Connect Loop Detector
7. Test and adjust.

PLAN SITE AND SIZE OF LOOP

Planning the position and size of your loop is largely site and purpose dependent but there are some basic guidelines that should be followed. The position of the loop is determined by its intended use. For example if the loop is to be used as an exit or egress device then it needs to be positioned generally about two to three metres from the exit at a point that all vehicles must pass over. If however the loop is being used as a safety device then it will generally straddle the area of concern either in direct line with a gate or below a boom. Size is another issue all together. A good size tends to be a rectangle of 1500mm x 600mm. Larger sizes are possible but at reduced performance and it would generally be wiser to install two or more loop detectors being careful to be sure they are on different frequencies.

CUT THE LOOP

Loops can be cut into concrete and/or asphalt or bitumen. Cut a 5-8 mm wide slot. Slot to be 30-40 mm deep. Standard loop size is 1.5 X 0.6 metres with 4 turns. The sensing loop should be rectangular in shape with 45-degree crosscut at the corners. This reduces the chance of damaging the cable. See diagram below:
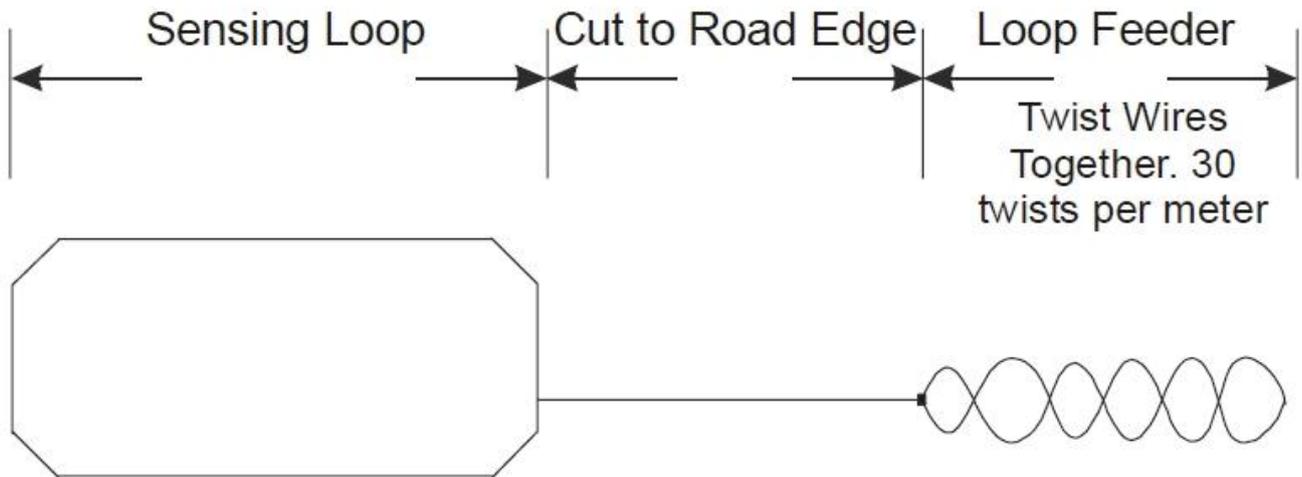
INSTALL CABLE LOOPS

Lay four turns of loop cable one on top of the other into pre-cut slot. Loop cable is available from all Automatic Solutions branches – part number "LOOPCABLE". Do not use other cable as performance may be reduced or nonexistent.

INSTALL CABLE RUNS BACK TO LOOP DETECTOR

The access wires from the loop to MD-99 should be twisted. If distance between loop and MD-99 is more than 50m, shielded wire should be used. If the loop feeder is more than 50 metres using normal twisted wire sensitivity will be reduced.

SEAL THE LOOP AND RETURN RUN

Cover and seal wire with sealant (flexible or other).

CONNECT THE LOOP DETECTOR FOR EGRESS

- Connect the two ends of the loop to the two terminals on the top left corner marked "LOOP".
- Connect one side of a twin core cable from "C" (bottom right) terminal to your control board common.
- Connect the other side of a twin core cable "NO" "PULSE" (third terminal up from bottom right).
- Connect power to the top right terminals. Acceptable power is 12-24 volts DC or 16 to 24 volts AC. With DC power pay attention to polarity with top right being positive and second from top right being negative. For interference free operation every MD-99 should have its own transformer.
- Turn on dip switches 3 and 6. Leave all others off.

CONNECT THE LOOP DETECTOR FOR SAFETY

- Connect the two ends of the loop to the two terminals on the top left corner marked "LOOP".
- Connect one side of a twin core cable from "C" (bottom right) terminal to your control board common.
- Connect the other side of a twin core cable "NC" "PRES" (third terminal up from bottom right).
- Connect power to the top right terminals. Acceptable power is 12-24 volts DC or 16 to 24 volts AC. With DC power pay attention to polarity with top right being positive and second from top right being negative. For interference free operation every MD-99 should have its own transformer.
- Turn on dip switch 6. Leave all others off.

TEST AND ADJUST

The metal detector has a red and green LED. 5 seconds after power is applied the unit will beep once and the red status led will flash. The unit will beep for the first 10 activations.

The red status LED will flash once for pulse detect mode (dipswitch 3 on) and stay on during the detection time for presence detect mode (dipswitch 3 off).

The green status LED indicates a fault. Short or open circuit in the loop will make the green led flash and on power up will cause the buzzer to sound continuously. An intermittent fault will make the led stay on.

SELF INSTALL - NEED TECHNICAL ASSISTANCE?

OPTION 1: DIRECT WITH THE SERVICE DESK – QUICKEST AND MOST EFFECTIVE METHOD

Submit your enquiry direct with the service desk at – service@automaticsolutions.com.au
The service desk has the most experienced staff in Australia to help with your problem but they need your help.

- **Describe your problem in detail and as clearly as possible. Don't forget to include a telephone number.**
- **Be certain to detail which model or models of you are working with.**
- **Send photos of the installation – they love photos. The people at the service desk are good but they are even better when they can see the installation. Send photos of the overall scene so they can see the entire installation. Also send photos of the wiring to the control board and any other part of the installation you think is relevant.**
- **Send video if appropriate. Smartphone's these days take remarkably good video in small file sizes which can be emailed in a moment. If your problem needs a video to show the issue please feel free to send it.**

NOTE: THIS IS BY FAR THE FASTEST AND MOST SUCCESFUL WAY TO SOLVE YOUR PROBLEM
PHOTOS AND VIDEOS ARE THE NEXT BEST THING TO BEING THERE

OPTION 2: LODGE YOUR ENQUIRY LOCALLY - SLOWER BUT CAN STILL BE EFFECTIVE

Make contact with the store of purchase. Branch staffs are typically not technicians and dependent on their length of service will have varying degrees of technical knowledge. If they cannot help however they will certainly either source help locally from their technicians or make contact with the service technicians on your behalf.

OPTION 3: SERVICE CALL WITH AUTOMATIC SOLUTIONS TECHNICIAN – SLOWEST METHOD

If you fall within the local branch service area it may be possible to book a local technician to look at your installation. Wait times will vary dependent on local workloads. The cost is a service fee which includes the first half hour and the hourly rate thereafter. If any Automatic Solutions provided parts are found to be defective and within warranty these will be provided free of charge.
(NOTE: If you suspect that any parts are defective and within warranty you may wish to consider option 4)

A note on this option: If you decide on this option you will be asked to sign an "authorisation to proceed" which will provide legal authority and payment security. This form has three options available of which only the first two are available to you. The third option is for warranty repairs only for full install customers. Self install customers requiring warranty only service need to refer to option four below.
IMPORTANT: IN SHORT THIS OPTION WILL INCUR CHARGES

OPTION 4: RETURN THE PRODUCT IF BELIEVED TO BE FAULTY

As a self install customer who has purchased product if you believe the product to be faulty rather than an installation or site problem you have the option of returning the product for evaluation and to exercise your right to a replacement, repair or refund as applicable. All returned product is forwarded immediately to the service technicians for evaluation and response. There are two main methods available to return product –

- **Direct to the service centre – this is the quickest method as it cuts out the branch delay**
- **Via the branch of purchase – slower because of the delay at the branch**

When choosing this option you need to complete a product return form. This form gives you all the information on procedure involved and where to send to. These are available at the branch of purchase, can be emailed to you (contact your branch), or available here - http://automaticsolutions.com.au/page/warranty.php