

DuraLoop installation instructions

The DuraLoop free exit loop detector is designed to be used as an automatic triggering mechanism to open a gate to allow motor vehicles to exit. The general operation method is as follows:

A slot is cut into the driveway, then a cable is laid inside the slot, this cable is laid in three turns (layers). Each end of the cable is then connected to the controller card, this section of cable is called the feeder cable.

The detector works by sensing (detecting) a vehicle as it drives over the loop. The vehicle causes a magnetic field change as it drives over the loop which is then sent as a trigger to the gate motor, causing the gate to open.

It is strongly recommended that infra-red safety beams are used and that the gate motor is set to **multi-user mode/condominium mode**. This will avoid accidental closure of the gate while a vehicle is in the way.

The loop

A loop must be cut into the driveway using a masonry cutting disc, so as to allow the cable to be slotted into it. The slot should have a width of approximately 4 mm and a depth of between 30 and 50 mm. It is important to note that the corners of the slot must be cut at 45 degrees to avoid the cable breaking due to tension.

The loop should be rectangular in shape with a circumference of between 5 and 10 m, the two long sides must be parallel to the gate. These sides should be 1 meter apart. The edges of the loop should be no more than 300mm from the edge of the driveway.

A slot must also be cut from the corner nearest the control card to the edge of the driveway to allow for the feeder cable to reach the control card.

The cable used should be a single continuous length of multi-strand copper cable. The cable is laid in a continuous loop inside the slot. Three layers or turns of cable should be used.

It is very important to ensure that there is enough feeder cable left outside the loop to reach the control card. The loop slot must be filled after the cable has been laid in order to waterproof the system. A good quality sealer should be used for this purpose.

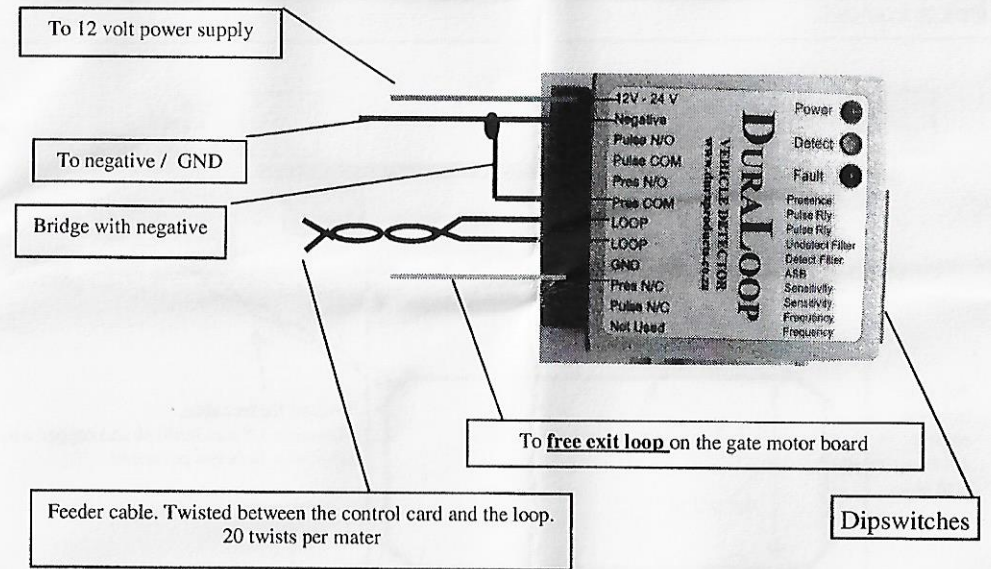
The feeder cable

The feeder cable is the same cable as the loop, the difference being that it is not part of the actual detection system. The feeder cable **must** be twisted between the loop and the control card.

The **minimum number of twists is 20 twists per meter**. The feeder cable should not exceed 100m in length as a long feeder cable will decrease the optimum operation of the system.

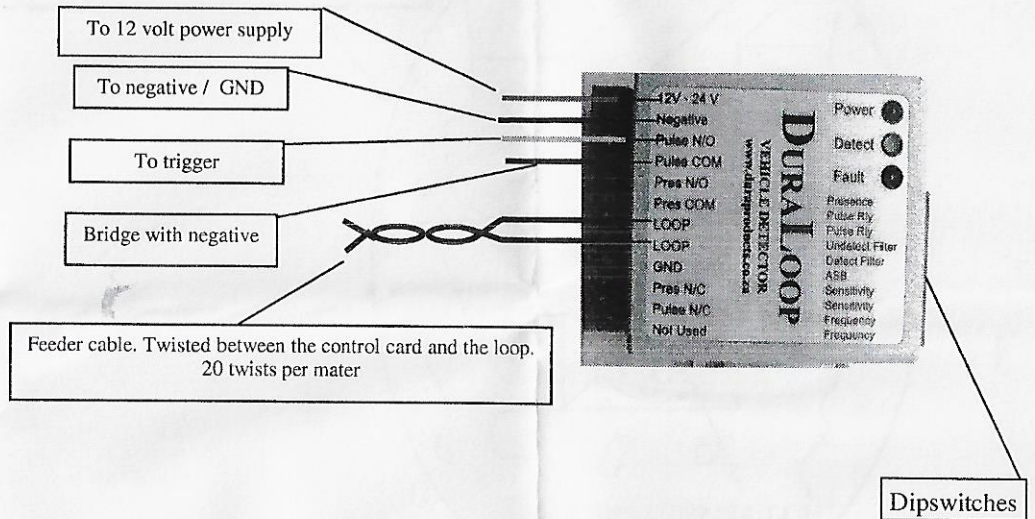
Wiring diagram for use with the SA 098 (double magnet) type motor.

This type of motor has a dedicated free exit loop out-put on the P.C. Board

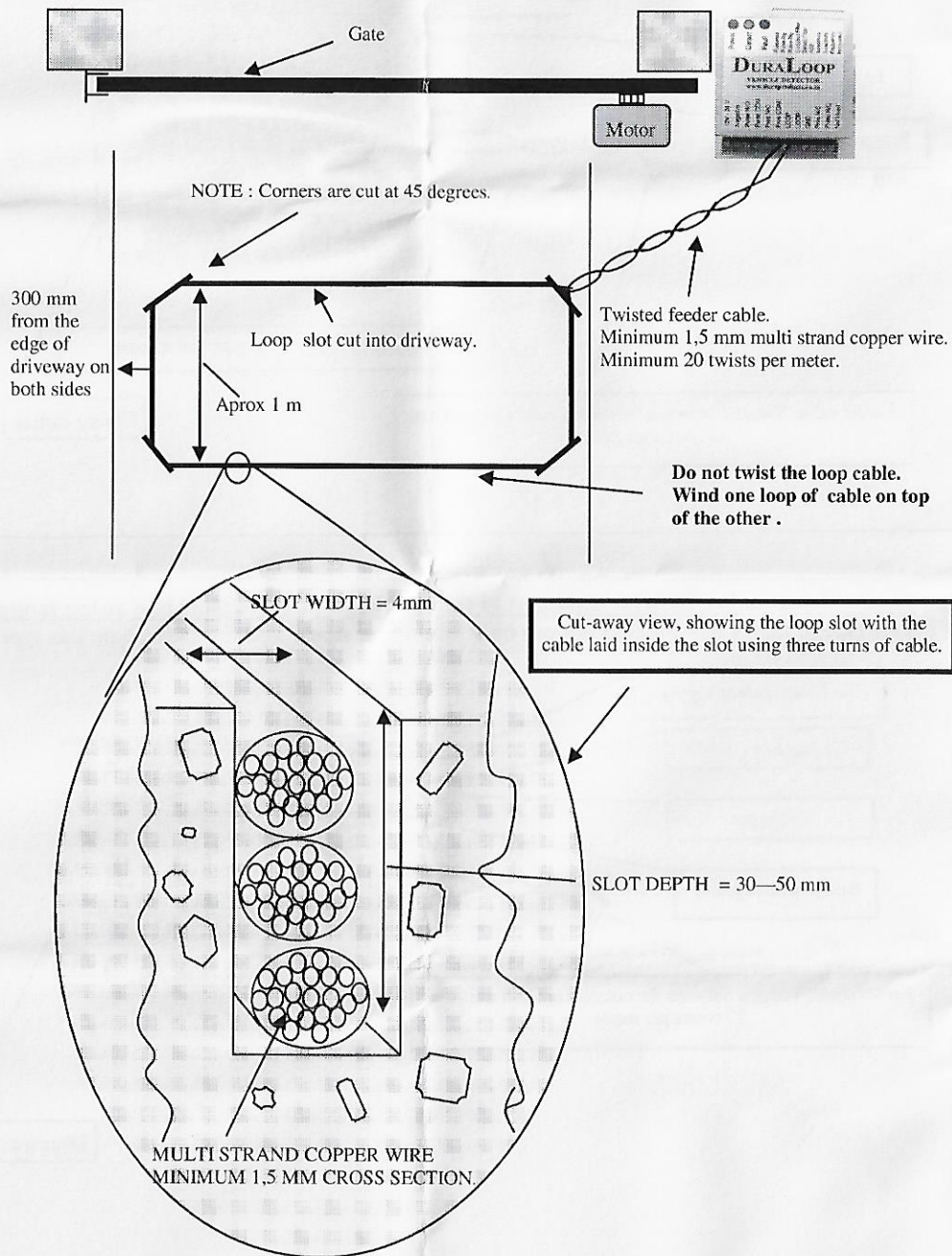


Wiring diagram for use with standard M type software single magnet and swing motors

This type of motor has a trigger out-put only. Multi-user mode must be selected on this type.



Top view of the general layout, showing the loop slot cut into the driveway and the cable laid in the slot using three turns of cable.



Dipswitch settings

There are ten dipswitches on the loop control card. These dipswitches can be changed in order to select the required function/ setting.

Number 1 and 2— are for frequency setting. The frequency should not be changed unless there are two loops within close proximity of each other. The settings are as follows:

- | | | |
|-----|-----|-----------------|
| 1 | 2 | |
| Off | Off | = high (normal) |
| Off | On | = med high |
| On | Off | = med low |
| On | On | = low. |

Number 3 and 4— are for adjusting the sensitivity of the system. **Note if the sensitivity is set to high the gate may open unintentionally.**

- | | | |
|-----|-----|---------------------|
| 3 | 4 | |
| Off | Off | = high |
| Off | On | = med high (normal) |
| On | Off | = med low |
| On | On | = low |

Number 5— is automatic sensitivity boost. This will make the detector automatically go into high sensitivity when a vehicle crosses the loop.

- | | |
|-----|------------|
| 5 | |
| Off | = disabled |
| On | = enabled |

Number 6— is a filter mode, this allows a two second delay of the trigger when a vehicle crosses the loop. This is to allow unwanted objects to pass over the loop without detection. E.g. a wheel barrow.

- | | |
|-----|---------------------|
| 6 | |
| Off | = disabled (normal) |
| On | = enabled |

Number 7— this is set for pulse on detect or pulse off detect.

- | | |
|-----|----------------------------|
| 7 | |
| Off | = pulse on detect (normal) |
| On | = pulse off detect |

Number 8— 9 pulse on detect

- | | | |
|------------|-----|----------------------------|
| 8 and 9 | Off | = pulse on detect (normal) |
| 8 On 9 off | | = pulse on un-detect. |

Number 10—presence

- | | |
|-----|-----------|
| Off | = normal. |
|-----|-----------|