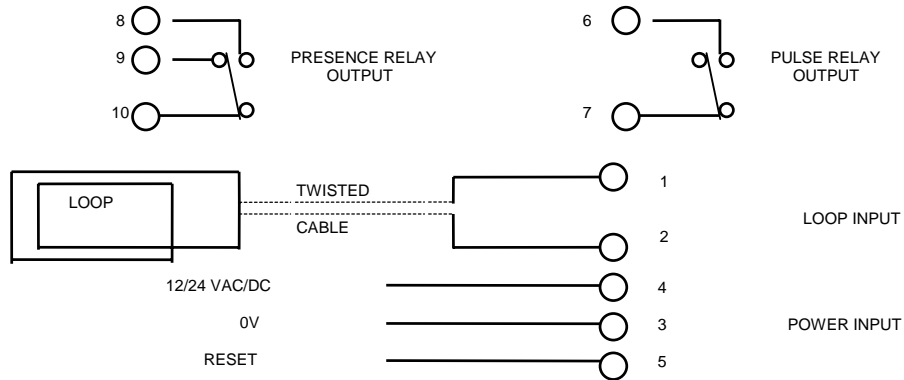
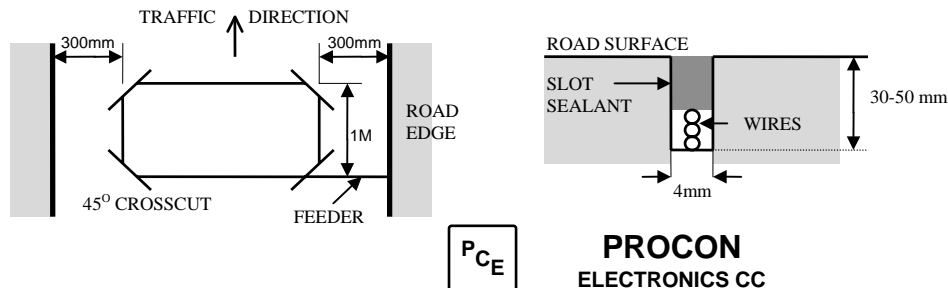


TYPICAL WIRING DIAGRAM:



INSTALLATION GUIDE:

1. The loop and feeder should be made from insulated copper wire with a minimum cross-sectional area of 1.5mm^2 . The feeder should be twisted with at least 20 turns per metre. Joints in the wire are not recommended and must be soldered and made waterproof. Faulty joints could lead to incorrect operation of the detector. Feeders which may pick up electrical noise should use screened cable, with the screen earthed at the detector.
2. The loop should be either square or rectangular in shape with a minimum distance of 1 metre between opposite sides. Normally 3 turns of wire are used in the loop. Large loops with a circumference of greater than 10 metres should use 2 turns while small loops with a circumference of less than 6 metres should use 4 turns. When two loops are used in close proximity to each other it is recommended that 3 turns are used in one and 4 turns in the other to prevent cross-talk.
3. Cross-talk is a term used to describe the interference between two adjacent loops. To avoid incorrect operation of the detector, the loops should be at least 2 metres apart and on different frequency settings.
4. For loop installation, slots should be cut in the road using a masonry cutting tool. A 45° cut should be made across the corners to prevent damage to the wire on the corners. The slot should be about 4mm wide and 30mm to 50mm deep. Remember to extend the slot from one of the corners to the road-side to accommodate the feeder.
5. Best results are obtained when a single length of wire is used with no joints. This may be achieved by running the wire from the detector to the loop, around the loop for 3 turns and then back to the detector. The feeder portion of the wire is then twisted. Remember that twisting the feeder will shorten its length, so ensure a long enough feeder wire is used.
6. After the loop and feeder wires have been placed in the slot, the slot is filled with an epoxy compound or bitumen filler.



LD113 SERIES VEHICLE LOOP DETECTOR

The LD113 is a single channel inductive loop detector. The use of microprocessor based technology enables a large number of functions to be incorporated into a small package. The LD113 is of a single printed circuit board construction and is compatible with other similar single channel detectors on the market. Special features include a switched mode power supply to enable operation over a wide voltage range.

Typical applications in the parking and access control environments are safety loops, arming loops and entry or exit loops. Standard features of the detector are :

- **Reset Switch.**
The reset switch enables the detector to be manually reset during commissioning and testing. This results in the detector re-tuning the sensing loop and becoming ready for vehicle detection.
- **Switch selectable Sensitivity.**
Eight sensitivity settings are available on the switches to allow flexibility in configuration.

1	High	-	0.01%	5	-	0.2%
2		-	0.02%	6	-	0.5%
3		-	0.05%	7	-	1%
4		-	0.1%	8	Low	2%
- **Switch selectable Frequency.**
Two frequency settings are available to prevent cross-talk between adjacent loops.
- **Sensitivity Boost.**
This feature sets the undetect level to maximum sensitivity and is used to prevent loss of detection of high-bed vehicles.
- **Filter Option.**
This option is used to provide a delay between detection of the vehicle and switching of the output relay. This delay is normally used to prevent false detection of small or fast moving objects.
- **Permanent Presence Option.**
This feature ensures detection of the vehicle will be maintained when the vehicle is parked over the loop for extended periods.
- **Pulse Relay Selection.**
The Pulse relay may be configured to energise on detection of a vehicle or when the vehicle leaves the loop.
- **Selectable Pulse Time.**
This feature sets the length of time that the pulse relay will be energised for. 1 Second or 0.2 Second.
- **Selectable Extend Time.**
This feature sets the length of time that the presence output will be extended for. 0 Second or 5 Seconds.
- **Loop Fault Indicator.**
This LED Indicator is illuminated when the loop is either open circuit or short circuit and is used to give a visual indication of a faulty loop.

TECHNICAL DATA

1. **POWER REQUIREMENT:** LD113-1/2 12 - 24 VAC/DC , 100 mA max.
2. **PRESENCE/PULSE RELAY :** 0.5A/220VAC.
3. **INDICATOR:** LED indicators show: Power ,Detect state and Loop Fault.
4. **DETECTOR TUNING RANGE:** 15 - 1500 uH.
5. **PROTECTION:** Loop isolation transformer with Tranzorb and MOV.
6. **CONNECTOR:** Option -1 = 10 Pin Molex female Connector.
Option -2 = Screw Terminals.

SWITCH SETTINGS:

SWITCH SETTINGS		
		ON OFF
10	RESET	ON OFF
7,8,9	SENS 0.02%	- S7/S8/S9
7,8,9	SENS 0.01%	S9 S7/S8
7,8,9	SENS 0.05%	S8 S7/S9
7,8,9	SENS 0.1%	S8/S9 S7
7,8,9	SENS 0.2%	S7 S8/S9
7,8,9	SENS 0.5%	S7/S9 S8
7,8,9	SENS 1%	S7/S8 S9
7,8,9	SENS 2%	S7/S8/S9 -
6	FREQ	LOW HI
5	ASB	ON OFF
4	FILTER	2SEC OFF
3	PERM. PRES	ON OFF
2	PULSE MODE	UNDET DET
1	PULSE TIME	1 SEC 0.2SEC
JP1	EXTEND TIME	5 SEC 0 SEC
JP2	PRES. RELAY MODE	OFF = FAIL SAFE ON = FAIL SECURE

WIRING CONNECTIONS

1	LOOP	TWISTED
2	LOOP	WIRE
3	OV	
4	+ 12/24V AC/DC SUPPLY	
5	RESET	
6	PULSE OUTPUT	N.O.
7	PULSE OUTPUT	COM
8	PRESENCE OUTPUT	N.O.
9	PRESENCE OUTPUT	N.C.
10	PRESENCE OUTPUT	COM

NOTE: To ensure correct operation of the LD113, the circuit board must be securely mounted using the 4 mounting holes located near the corners of the board. It is also important that nothing touches the underside of the circuit board.

