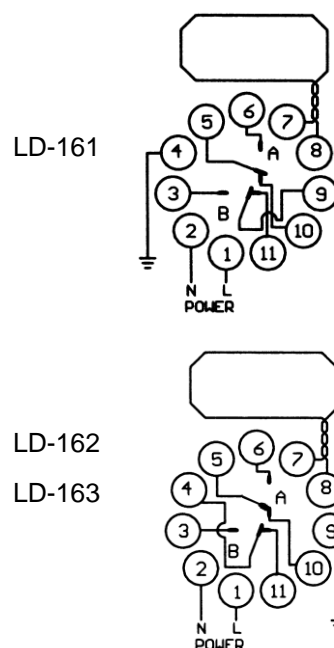


PSM LD16x vehicle loop detector installation guide

1. Pin connections

	MODEL NO.		
PIN	161	162	163
1	110 VAC, LINE	230 VAV, LINE	12~24 VADC
1	110 VAC, NEUTRAL	230 VAC, NEUTRAL	12~24 VADC
3	Output B Relay (N.O.)	Output B Relay (N.O.)	
4	Chassis Ground	Output B Relay (COM.)	
5	Output A Relay (COM.)	Output A Relay (COM.)	
6	Output A Relay (N.O.)	Output A Relay (N.O.)	
7	Loop	Loop	
8	Loop	Loop	
9	Output B Relay (COM.)	Chassis Ground	
10	Output A Relay (N.C.)	Output A Relay (N.C.)	
11	Output B Relay (N.C.)	Output B Relay (N.C.)	

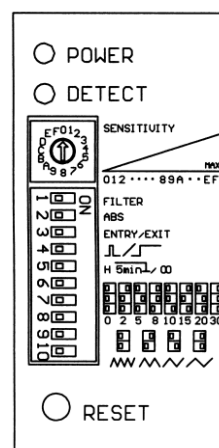


2. Front panel LED and switch

- (1) POWER : POWER RED LED→On= Power applied to detector. ; Off = No power or fuse is bad.
- (2) DETECT : DETECT GREEN LED→On = Vehicle being detected ; Blinking = Loop Failure.
- (3) SWITCH 1(SENSITIVITY) : Selections of sensitivity are from 0 to 9 and A to F where 0 stands for the lowest sensitive and F is the highest sensitive.

Unit : $-\Delta L/L \times 100\%$

SENSITIVITY LEVELS							
LEVEL 0	2.56	LEVEL 4	0.48	LEVEL 8	0.12	LEVEL C	0.030
LEVEL 1	1.28	LEVEL 5	0.32	LEVEL 9	0.08	LEVEL D	0.020
LEVEL 2	0.96	LEVEL 6	0.24	LEVEL A	0.06	LEVEL E	0.015
LEVEL 3	0.64	LEVEL 7	0.16	LEVEL B	0.04	LEVEL F	0.010



- (4) SWITCH 2(DIP SWITCH) :

1. DIP 1 & DIP 2 FUNCTION :

DIP NO.	DIP MODE	FUNCTION
DIP 1	<input type="checkbox"/> ON	2 seconds delay for the relay. It will be no output for a vehicle with a speed that is faster than 8 Km/Hr.
DIP 2	<input type="checkbox"/> ON	Increase detector's sensitivity to avoid the failed detection. Especially in the case of trailer or trucks.


































2. DIP 3 & DIP 4 — OUTPUT B MODE :

DIP NO.	DIP 3	DIP 4	OUTPUT B MODE	DETECT
DIP MODE	OFF <input type="checkbox"/>	OFF <input type="checkbox"/>	Pulse on entry	Output B mode
	<input type="checkbox"/> ON	OFF <input type="checkbox"/>	Pulse on exit	Output B mode
	OFF <input type="checkbox"/>	<input type="checkbox"/> ON	Presence mode	Output B mode
	<input type="checkbox"/> ON	<input type="checkbox"/> ON	Output B will set to the presence mode when the loop failed.	









3. DIP 5 FUNCTION :

DIP NO.	DIP 5	PRESENCE MODE
DIP MODE	<input type="checkbox"/> ON	Continuous detect output is maintained as long as the vehicle remains on the loop.
	OFF <input type="checkbox"/>	Hold time of 5 minutes for any vehicle detected.

4. DIP 6 & DIP 7 & DIP 8 — CONTROLS OUTPUT A EXTEND TIME :

DIP NO.	DIP 6	DIP 7	DIP 8	EXTEND	DETECT 
DIP MODE	OFF 	OFF 	OFF 	No extend	Output A 
	 ON	OFF 	OFF 	2 seconds	Output A 
	OFF 	 ON	OFF 	5 seconds	Output A 
	 ON	 ON	OFF 	8 seconds	Output A 
	OFF 	OFF 	 ON	10 seconds	Output A 
	 ON	OFF 	 ON	15 seconds	Output A 
	OFF 	 ON	 ON	20 seconds	Output A 
	 ON	 ON	 ON	30 seconds	Output A 

5. DIP9 & DIP10 — FREQUENCY SELECTION(40K to 80KHz) :

DIP NO.	DIP 9	DIP 10	FREQUENCY RANG
DIP MODE	OFF 	OFF 	High frequency
	 ON	OFF 	Medium-High frequency.
	OFF 	 ON	Medium frequency.
	 ON	 ON	Low frequency.

* When more than two loops are used, please set up different frequencies in order to eliminate the crosstalk.

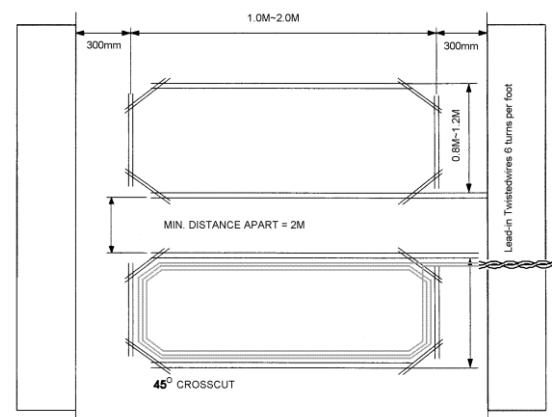
(4) RESET Button

RESET button can reset the detector. RESET is needed whenever a frequency is changed.

3. Installation Information

- (1) Teflon loop is recommended and the maximum length could reach 500 meter.
- (2) Loops should have 3 to 5 rotaries; the remains of the cable need to have a helix every 15 cm.
- (3) Typical saw cut loop installation :

PERIMETER (M)	NO. OF TURNS
3 ~ 4 M	6
4 ~ 6 M	5
6 ~ 10 M	4
10 ~ 20 M	3
20M ~ UP	2



- (4) The more rotaries of a loop, the lower of the frequency.
- (5) The appropriate way of the rotation of a loop is 1.0 to 2.0M in length and 0.8 to 1.2M in width.
- (6) The loop should be installed in an area where has no electric overhead door near by.
- (7) Any vehicle with a speed of no more than 120Km/Hr will be detected.
- (8) The specification for both outputs is 110VAC/10A.
- (9) Appropriate way to correct a failed detector:

- Press "RESET" button.
- Check the DETECT and POWER LED :
If POWER RED LED is dark, check AC power source and fuse (0.5A, inside of the detector).
If DETECT GREEN LED is blinking, the loop may have a short circuit.
If DETECT GREEN LED is blinking very slowly, loop does not have enough rotaries.
If DETECT GREEN LED is blinking very rapidly, loop has too many rotaries.
- When loop has not enough rotaries (frequency will also be too high), change DIP switch to low frequency.
- When loop has too many rotaries (frequency will also be too low), increase the loop rotaries.

