SMART LOOP DETECTOR

CP-SLD

MANUAL

Specifications

Power	12～240 VAC／VDC
Standby current	AC 100 mA Max. DC 80 mA Max.
Detection current	AC 125 mA Max. DC 100 mA Max.
Senstivity	15 Levels, 0～F
Loop frequency	4 settings (Low, Med～Low, Med～Hi, Hi)
Loop inductance	20～2000 uH
Grounded loop	transformer isolated
Output on time adjustment	0～30 sec., relay A
Output transient adjustment	Presence or pulse on entry, presence or pulse on exit. Relay B
Surge protection	Loop circuitry protected by surge suppressors
Detect output	SPDT relay-Pulse mode → 1A/30VDC SPDT relay-Delay mode → 1A/30VDC
Power indicator	Green LED
Loop fault indicator	Yellow LED
Detect indicator	Red LED
External reset	Low to reset
Operating environment	-4°F～131°F (-20℃～55℃) 0～95% relative numidity
Weight	115 g
Dimensions	91(L) x 42(W) x 79(H) mm

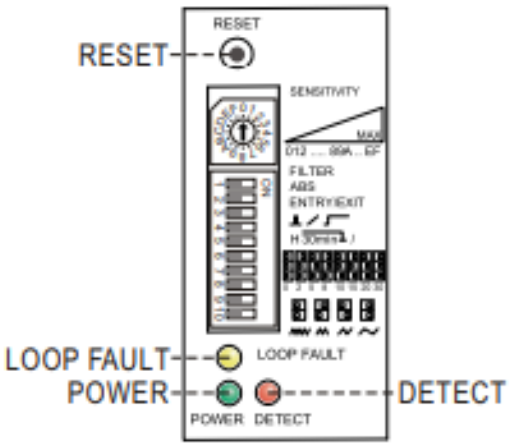
Front panel LED and switch

(1) POWER: Power Green LED→ON= Power applied to detector.
OFF = No power or fuse is bad.

(2) DETECT: Detect Red LED→ON = Vehicle being detected.

(3) LOOP FAULT: Fault Yellow LED →Blinking= Loop Failure.

(The yellow LED is blinking slowly reveals the loop inductance to be too low,and the yellow LED is blinking fast reveals loop inductance to be too high or the loop to be open.)



(4) SW1(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.

SENSITIVITY LEVELS					Unit：$-\triangle L/L \times 100\%$		
LEVEL 0	2.56	**LEVEL 4**	0.48	**LEVEL 8**	0.12	**LEVEL C**	0.03
LEVEL 1	1.28	**LEVEL 5**	0.32	**LEVEL 9**	0.08	**LEVEL D**	0.02
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**	0.01

(5) SW2(DIP SWITCH)：

1. DIP 1 & DIP 2 FUNCTION：

DIP NO.	DIP MODE	FUNCTION
DIP 1	□■ 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	□■ 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 ■□	OFF ■□	Pulse on entry	Output B mode
	□■ ON	OFF ■□	Pulse on exit	Output B mode
	OFF ■□	□■ ON	Presence mode	Output B mode
	□■ ON	□■ 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	□■ ON	Continuous detect output is maintained as long as the vehicle remains on the loop.
	OFF ■□	Normal mode. Self-tuning to clear false positve. Hold time of 30 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 sec.	Output A
	OFF ■□	□■ ON	OFF ■□	5 sec.	Output A
	□■ ON	□■ ON	OFF ■□	8 sec.	Output A
	OFF ■□	OFF ■□	□■ ON	10 sec.	Output A
	□■ ON	OFF ■□	□■ ON	15 sec.	Output A
	OFF ■□	□■ ON	□■ ON	20 sec.	Output A
	□■ ON	□■ ON	□■ ON	30 sec.	Output A

5. DIP 9 & DIP 10 --- FREQUENCY SELECTION(20K to 80KHz)：

DIP NO.	DIP 9	DIP 10	FREQUENCCY RANGE
DIP MODE	OFF ■□	OFF ■□	High frequency (Hi)
	□■ ON	OFF ■□	Medium-High frequency (Med-Hi)
	OFF ■□	□■ ON	Medium frequency (Med-Low)
	□■ ON	□■ ON	Low frequency. (Low)

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

(6) RESET Button：

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

(7) Typical saw cut loop installation：

PERIMETER (M)	NUMBER OF TURNS
3～4M	6
6～10M	4
20～UP	2

PERIMETER (M)	NUMBER OF TURNS
4～6M	5
10～20M	3

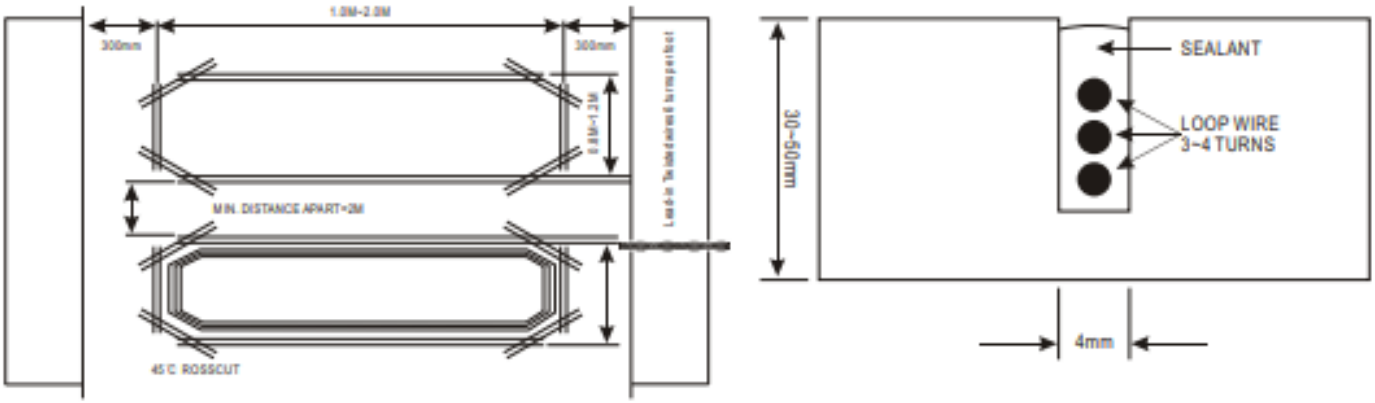
(8) Teflon loop is recommended and the maximum length could 150 meter.

(9) The loop should be installed in an area where has no electric reach overhead door near by.

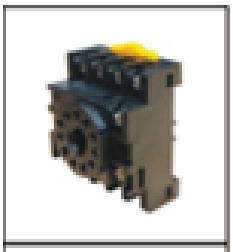
(10) Any vehicle with a speed of no more than 120Km/Hr will be detected.

(11) Loop Failure Memory:

The detector can indicate a prior loop failure even if the failure.
This is displayed on the yellow LED (steady on). Any reset will memory failure.

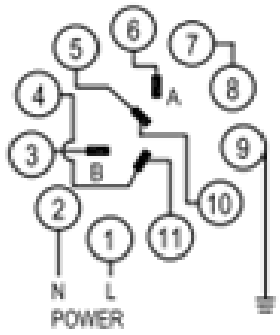


Type of wiring Connection Output



Z Type
Block Connector

PIN Connections



SLD-12240B

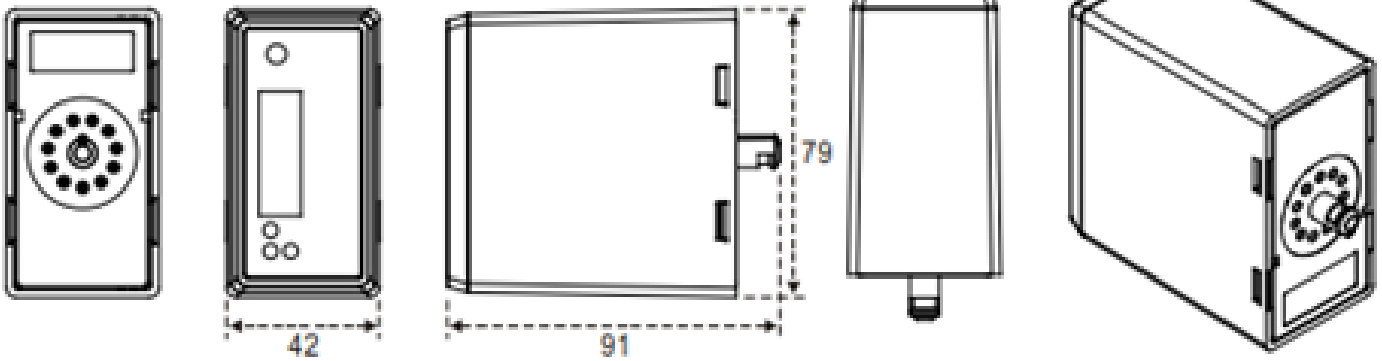
Ground: B (PIN 9)

(X Type) Wiring Harness Connections:

ITEM	COLOR	PIN No.	Connection Notes (SLD-12240A)	Connection Notes (SLD-12240B)
WIRE 1	Black	PIN 1	Power, non-polarity	Power, non-polarity
WIRE 2	White	PIN 2	Power, non-polarity	Power, non-polarity
WIRE 3	Red	PIN 3	Relay B - NO	Relay B - NO
WIRE 4	Purple	PIN 4	Relay B- COM	Ground
WIRE 5	Blue	PIN 5	Relay A - COM	Relay A - COM
WIRE 6	Yellow	PIN 6	Relay A- NO	Relay A- NO
WIRE 7	Brown	PIN 7	Loop	Loop
WIRE 8	Grey	PIN 8	Loop	Loop
WIRE 9	Pink	PIN 9	Ground	Relay B- COM
WIRE 10	Orange	PIN 10	Relay A- NC	Relay A- NC
WIRE 11	Green	PIN 11	Relay B- NC	Relay B- NC

Schematic diagrams

unit: mm



Back View Front View Side View Upper View 3D Side View