LC10-1(Single Loop) and LC10-2 (Double Loop) Detector

DIP SWITCH SETTINGS:

Frequency:

Loop frequency is set using 1 and 2 Switch.

Switch 1	Switch 2	Frequency
OFF	OFF	Basic frequency
ON	OFF	f - %10
OFF	ON	f - %15
ON	ON	f - %20

After setting the frequency with switches 1 and 2, switch 3 and switch 4 should be “OFF”.

However, the point to note here is that after the switches 3 and 4 are turned “OFF”, they must be brought back to their old sensitivity setting positions. (See automatic adjustment)

SENSITIVITY:

Sensitivity is adjusted according to the table below by using 3rd and 4th switches for Loop 1 - 5th and 6th switches for Loop 2.

Switch 3 or 5	Switch 4 or 6	Sensitivity
OFF	ON	Low
ON	OFF	Medium
ON	ON	High

When the switch position is "OFF", "OFF", there is no loop evaluation..

Working mode:

Using the 7th and 8th switches, the operating mode is set according to the table below.

Switch 7	Switch 8	Result
OFF	-	Output indicating whether the loop is full
ON	-	Direction detection *
-	ON	Increased sensitivity (Boost)

* Output signal may change according to the placement order of the loops.

If loop 1 is positioned before loop 2, only the output signal for loop 1 is received. For Loop 2, the output signal keeps its position until it is emptied in both loops.

If loop 2 is positioned before loop 1, only the output signal for loop 2 is received. The output signal for Loop 1 keeps its position until it is emptied in both loops.

Increased sensitivity (Boost) is a feature used to detect high body vehicles. For example, HGVs (trucks, etc.).

Auto Adjust:

Automatic adjustment is activated when the operating voltage is applied to the device. The output relay is switched like "loop not full (no vehicle)". The setting takes 2 seconds and then the device is ready for operation.

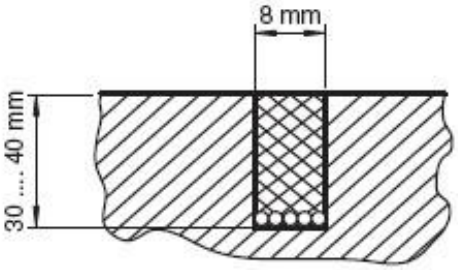
Automatic adjustment is activated when the 3 and 4 switches (for Loop 1) and the 5 and 6 switches (for Loop 2) are turned to the "OFF" position, and then these switches are set to the desired sensitivity adjustment mode. The setting can also be made separately for loop 1 and loop 2.

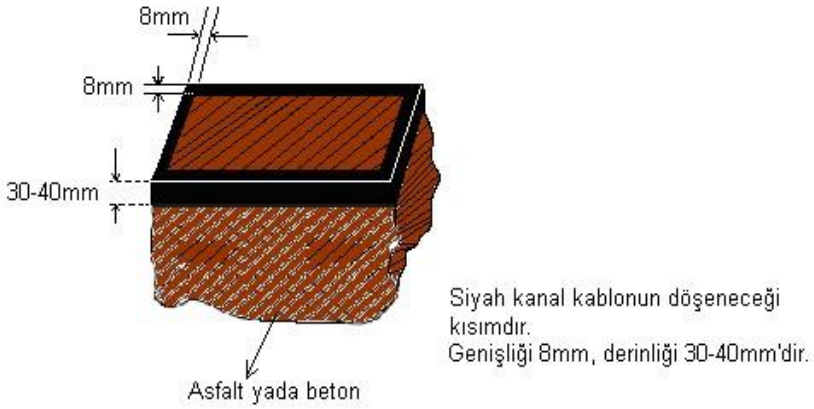
LOOP LAYING:

Installation of 1.5mm² copper wire (NYAF) on asphalt or concrete floor

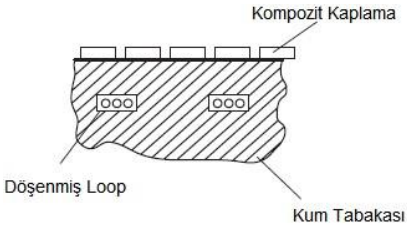
The bore should be approximately 8mm wide and 30-40mm deep, and the pitting should be free of deposits. In addition, the "loop" should be mounted and fixed as deep as possible and the cavity should be filled back with artificial resin or bitumen.

After the cable is laid spirally, it is transported to the point to be connected by twisting at least 20 times per meter and the maximum length of the cable should be 150m.





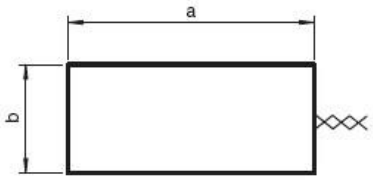
When transporting the cable by twisting, it is recommended to place it in a plastic pipe or plastic conduit.



Loop helix number:

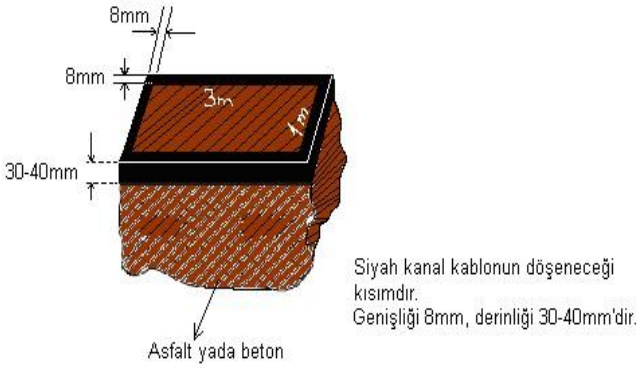
The loop is made up of several coils of copper wires. The number of spirals varies according to the size of the loop and is calculated from the loop perimeter.

Loop circumference U : U=2a+2b



Örnek :

If a = 3m b = 1m; For U = 2x3 + 2x1 = 8m and 8m loop perimeter from the table below, it is determined that the loop helix number = 4



Loop çevresi	Sarmal sayısı
2 - 4 metre	6
4 - 7 metre	5
8 - 12 metre	4
13 - 25 metre	3

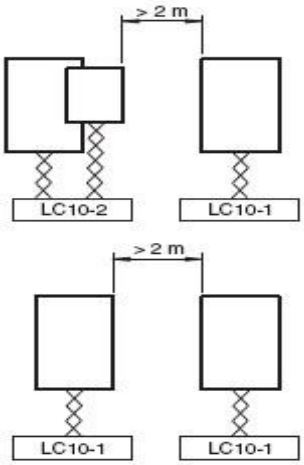
Adjacent loops with the same perimeter must be 1 different from each other in terms of the number of spirals. In this way, loops are prevented from working at the same operating frequency.

Loop interaction:

a-Interaction of adjacent loops:

Loops connected to different loop detectors must have a minimum distance of 2m from each other and must operate at different frequencies.

Loops connected to double detectors can also reduce this distance. However, the important thing is that these loops are operated at different operating frequencies.

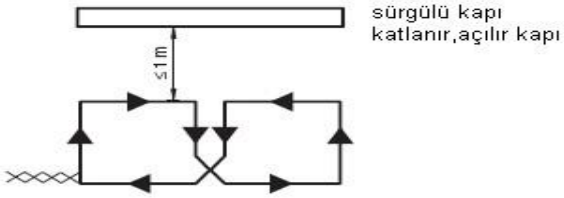


b-Metal interaction:

Loop detector has automatic compensation against fixed metal structures, e.g. steel beams, pipes, no interference except that the effect is reducing sensitivity.

However, moving metal structures such as revolving door, swing door, should be kept away from the loop detector at an effective distance (> 1m) to prevent the loop detector from triggering during movement.

If there is a door near the loop detector and the distance is 1m or less, then the loop flooring should be as follows in order to avoid any interaction between the loop and the door.



Technical Data:

Product Code LC10-2-D 230 VAC
Working Voltage AC 220 V / 50 Hz.
Number of Channels 2Relay output
Operating temperature -20° C ~ +70° C
Loop Frequency 20….120KHZ
Switchable Voltage and Current 250V AC _ 6A
Loop İnductivity 100…1000 uH
Calibration Time 2 sec
Cable Length Max. 150 Meter
Dimensions 75 x 38 x 95 mm.