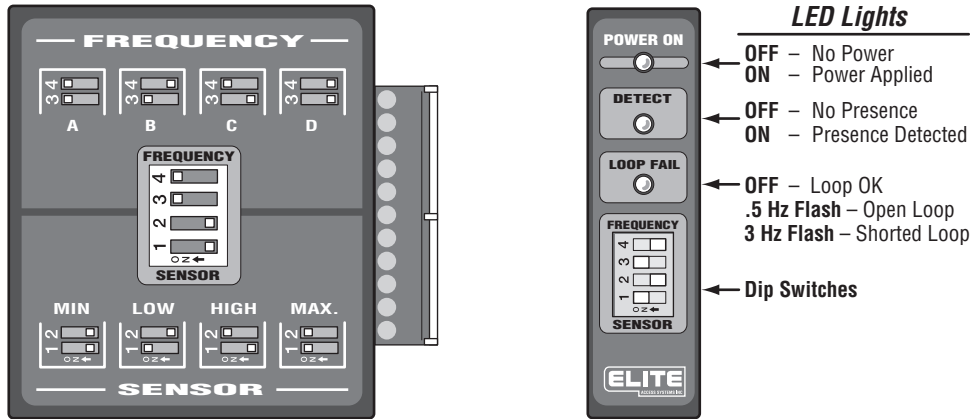


Plug-In Loop Detector

for the OmniControl Board



Dip Switch Functions

Dip Switch 1 & 2 - Sensitivity Level: The sensitivity of the detector is controlled by the setting of switches 1 and 2 on the front edge of the detector. There are four possible sensitivity levels as follows: Use the lowest sensitivity setting that detects the desired vehicles. The default setting is Medium Low.

Note: Changing the sensitivity setting will automatically reset the detector. Changing frequency only will not reset the detector. It is always necessary to reset the detector after changing the frequency setting.

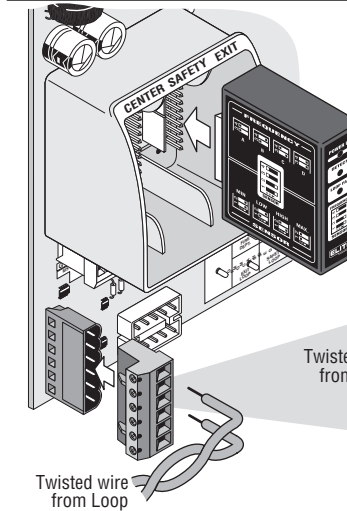
Dip Switch 3 & 4 - Frequency: The operating frequency of the detector is controlled by the setting of switches 3 and 4 on the front edge of the detector. Sometimes when loops are in close proximity to each other, it may be necessary to select different frequencies for each loop to avoid loop interference (commonly called crosstalk). **The actual loop operating frequency is a function of the size of the loop, the number of turns in the loop, the length of the lead-in cable, and the setting of the frequency switches (SW 3 & 4).** Therefore, setting one detector to Low and the other to High may not provide any separation of operating frequency. The most accurate method of setting the operating frequency of multiple detectors is to use a frequency meter connected to the loop to actually read the operating frequency. The detectors frequency should be adjusted so that there is a minimum of **5 kilohertz** of separation between all adjacent loops.

Failed Loop Diagnostics

The **"FAIL"** LED indicates whether or not the loop is within tolerances. If the loop is out of tolerance, the LED indicates whether the loop circuit was shorted (3Hz Flash) or open (.5 Hz Flash). When the detector is detecting a loop failure it will force a call output and the CALL LED will be on. If the loop problem corrects itself, the detector will begin operating normally again and the **Fail** LED will revert back to the **Off** state.



Plug-In Loop Detector Installation



1. Turn the power **OFF** to the gate operator.
2. Plug in the loop detector in the desired slot (i.e. center, safety, exit)
3. Plug in the terminal plug (provided) into terminal J8 receptacle on the bottom left of the Omni board.
4. Bring twisted wires from the loop into the proper terminal on the terminal plug (i.e. center, safety, exit).
5. Turn the power back on.

Caution:
If using more than 1 loop detector, set them to different frequencies. (Refer to Dip Switch 3 & 4)

Loop Installation

1. Mark the loop layout on the pavement. Remove sharp inside corners that can damage the loop wire insulation.
2. Determine the thickness of the pavement to insure that the depth of the cut will not exceed the thickness of the pavement before attempting to cut the loop slots. Set the saw to cut a depth (typically 2" to 2.5") that will insure a minimum of 1" from the top of the loop wires to the pavement surface. The saw width must be larger than the diameter of the loop wire to avoid damage to the wire insulation when placed in the saw cut. Cut the loop, corner angles, and feeder slots. Remove all debris from the saw slot with compressed air. Check that the bottom of the cut is smooth and did not break through the thickness of the pavement.
3. The loop itself must be a continuous length of wire without any breaks or splices. The loop wire can be 14, 16, 18, or 20 gauge stranded wire with either a cross-linked polyethylene (XLPE) or polyester insulation. Wrap the loop wire in the loop slot using a wooden stick or roller to insert the wire to the bottom of the saw slot until the desired number of turns are reached. (**Caution:** do not use a sharp object) Each turn of wire must lay flat on top of the previous turn.
4. The wire must be twisted a minimum of 6 turns per foot from the end of the feeder slot to the detector to minimize noise or interference. If a splice is required in the feeder cable, solder each splice and protect with a moisture proof seal.
5. Apply the sealant. The sealant selected should have good adhering properties with similar contraction and expansion characteristics as the pavement material.

Important

Loop Perimeter	Number of Turns
10 feet - 13 feet	4
14 feet - 26 feet	3
27 feet - 80 feet	2
81 feet and up	1

