**NAME OF PROJECT:** SOIL MOISTURE SENSOR

**Hardware’s used:**

1. Neoway N10 GSM module

2. Battery

**Working:**

* After the pressing the reset button, Module get turned ON

(Red LED will glow).

* If the signal strength is greater than 15 and less than 30 dB.

(Green LED will glow).

* Read the authorized mobile number file from Neoway file system
* Read the destination mobile number file from Neoway file system
* Read the number of SMS per day file from Neoway file system
* Read the moisture level & battery voltage percentage and sending message to the user mobile number.
* After sending message, the module enters to sleep mode (for example 10 minute) in this time all the timers and tasks are temporarily stopped.
* After exit from sleep mode (i.e., after 10 minute) the module checks the signal strength, read the moisture level & battery voltage percentage then again sending message to the user mobile number.
* The complete time taken by the Initialization process is 16 to 20 sec.
* After the exit from sleep mode, the time taken by the module to read the moisture level and send the message is 10 sec.
* While sending message continuously blink RED LED.

**Battery:** Type: Li-poly battery, 3.7v, 1000mAh

* The battery voltage of 3.3v is 0% and 4.1v is 100%
* If the battery voltage less than 3.5v (approximately 30%), the module sends the battery low alert message to user mobile number and also continuously blink RED LED.

**Destination number change:**

* Message destination number can be change by sending a message from authorized user.
* That number also copied to destination mobile number file in Neoway file system.

**Change number send per day:**

* How many numbers of messages is required to send per day, it can also change by sending a message from authorized user.
* That number also copied to the number of SMS per day file in Neoway file system.

**Authorization number change:**

* Authorization number can be change by sending a message from authorized user (included +91 with Mobile number).
* That number also copied to the authorized mobile number file in Neoway file system.

**Note:** It is impossible to change data in destination mobile number file, number of SMS per day file and authorized mobile number file by the unauthorized user.

**MESSAGE COMMANDS TO DATA:**

|  |  |
| --- | --- |
| **PARAMETERS** | **MESSAGE COMMANDS** |
| To change destination mobile number | **CDMN<space><mobile\_no>** |
| To change number of SMS per day | **CSPD<space><two\_digit\_no>** |
| To change authorization mobile number | **CAMN<space><+91mobile\_no>** |
| To change number of SMS per Hour | **CSPH<space><two\_digit\_no>** |

Note:

For example, **CSPD 1 > two\_digit\_no < 99**

**CSPH 1 > two\_digit\_no < 60**