



Royal Elegance Technologies Pvt Ltd.

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 minimum calibration value file from Neoway file system.
- Read the maximum calibration value file from Neoway file system
- Read the moisture level & sending message to the user mobile number about moisture level.
- After sending message, the module enter 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 then again sending message to the user mobile number about battery voltage information.
- The complete time taken by the Initialization process is 12 to 16 sec.
- After the exit from sleep mode, the time taken by the module to read the moisture level and send the message is 4 to 5 sec.
- If user wants to calibrate minimum level and maximum level by pressing calibration button
- If user press the calibration button once, the minimum level is read by sensor and sends message to user (Message body: "LOW Level value is calibrated Set HIGH Level").



Royal Elegance Technologies Pvt Ltd.

- Then user press the calibration button for maximum level calibration. maximum level is read by sensor and sends message to user (Message body: "HIGH Level value is calibrated ***RESTART Device**#"").

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.

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.



Royal Elegance Technologies Pvt Ltd.

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 **CSPD** 1 > two_digit_no < 99

CSPH 1 > two_digit_no < 60