ABSTRACT

Soil moisture is a key factor for plants to grow. There are several types of plants that are not resistant to high humidity levels. One example of a plant that is not resistant to high humidity is a cactus plant. This cactus does not require high water levels. From this sparked an idea to create a tool that can measure the moisture level of the soil. This idea continues to evolve as a cornerstone for the final task.

In this final project will be designed gauge soil moisture levels. This tool works with a moisture sensor that is implanted in the soil which becomes the object of measurement. These sensors are expected to get more accurate results. Detection results of these sensors will be processed in arduino. If the results do not match then the process will not continue next ketahap. If the results match then the arduino will send the process to wavecom sms gateway via serial TTL to RS232. Arduino obtain electrical power from the adapter. Wavecom sms gateway will send the message and will be received at the receiver (here put on mobile phones).

Expectation of this great task is the tool to work optimally and working with low error. Hopefully with this tool can determine the level of humidity. Results obtained from this major task is the measurement of the moisture sensor when a depth of 2 cm, in bits indicate 659 bits and 3:22 voltage v has a percentage of 64.4%.

Keyword :Moisture Sensor, Arduino, Wavecom SMS Gateway, Adaptor, TTL to Serial RS232.