

ABSTRACT

As we know, plants need water for their growth. If the soil is waterless then it would be infertile, and just the opposite. In order to, we need to keep the soil temperature and humidity for certain condition. Watering plants manually sometimes is still hard for farmer. So, automatically watering system which is can be monitored from personal computer to make farmer's activity easier is made.

In this automatically watering system, the first thing to do is knowing the value of temperature and soil humidity around the soil using ATmega 8535 microcontroller which will equals control signal in actuator and transmitting the results of temperature measurement to personal computer with a serial RS-232 protocol and displaying the measurement results with Visual Basic. If the results of temperature and humidity measurements less than the normal, then this tool will automatically pour water into the soil.

Overall performance of the tools automatic watering system has demonstrated result in accordance with a design that is able to drain water pump to land and the values of temperature and humidity can be monitored from personal computer in visual basic program.

Keywords: temperature, humidity, ATmega 8535, SHT11, Visual Basic.