

16. Acquisition of Soil parameters and Data Logging using Advance microcontroller

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ABSTRACT

In India precision agriculture is the developing direction of modern agriculture. How to acquire information about the soil parameter is the key problem of precision agriculture. For accurate measurement for analysis of pH , Electrical conductivity (EC) and Temperature data is required for a multiple of applications ranging from the agricultural sector to clinical and scientific laboratories. In many of these applications an inexpensive portable unit is needed. This paper describes a low cost and low power pH, Electrical conductivity(EC)&Temperature sensing and data logging system using an AVR microcontroller with pH, EC & Temperature sensor. Accurate measurement and analysis of pH, Electrical conductivity (EC)&Temperature data is required for a multiple of applications ranging from the agricultural sector to clinical& scientific laboratories. In many of these applications an inexpensive portable unit is needed. This paper describes the sensor data acquisition and data logging system including details of its construction, capabilities and applications.

Key Words- Introduction, Data acquisition, Data logging, Software Design, Conclusion.