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PH Meter using Universal DAQ Module

Abstract

This Project is all about instrumentation design using data acquisition techniques hardware and software. (DAQ) is the process of measuring an electrical or physical phenomenon such as voltage, current, temperature, pressure, or sound with a computer. A DAQ system consists of sensors, measurement hardware, and a computer with programmable software.

DAQ hardware and software shall be design and developed universal. User can perform different operation with single circuit board. It is the process of sampling different signals. Compact DAQ systems provide a customizable solution for engineers to perform electrical and physical measurements either at their bench top or in a distributed architecture.

For this Project, making a device that measure more than one PH values in other way, making a PH meter. A pH meter provides a value as to how acidic or alkaline a liquid is. The basic principle of the pH meter is to measure the concentration of hydrogen ions. Acids dissolve in water forming positively charged hydrogen ions (H⁺). The greater this concentration of hydrogen ions, the stronger the acid, which can measure wide range of values using IC AD7793 and PH Sensor.

Following works will be involved in this project.

1. Study the existing control system DAQ hardware
2. Learning of different tools/ software for the development of PH meter
3. Learning PH sensors and calibration processes.
4. Design and development of data handling method
5. Documentation for the above work

Required Period of work: About 5 months

Project Guide/co-guide: H.J.Dave/ A.K.Sah

Division: Large Cryogenic Plant and Cryosystem (LCPC)

Stream/ Branch: Electronics

Eligibility: Only students of B.E./B.Tech. in Electronics branch can submit their application at following email addresses

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