

DESIGN TOOL ROOM TEMPERATURE MEASUREMENT WITH TEMPERATURE SENSOR USING LM35 AT89S51 MICROCONTROLLER

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Abstract:

In writing that I make with the title "Room Temperature Measuring Equipment Design With LM35 Temperature Sensor Using AT89S51 MICROCONTROLLER " about design for temperature data acquisition system that uses the basic components of an ADC, temperature sensor, microcontroller AT89S51 and Seven Segment as a viewer facility. Temperature data acquisition system into something that is very important in industrial activity, because it is a small part of a process control. With regard to the importance of the system, hence the temperature data acquisition system design that is capable of temperature monitoring activity of a plant. The data to be measured is a physical property so as to be processed temperature and displayed in the form of electrical systems used LM35 temperature sensor that is able to convert these quantities with increasing $10\text{mV}/^{\circ}\text{C}$. To be able to design the system was first carried out the process of changing the temperature into an analog voltage using a LM35 temperature sensor. after going through the process was strengthened by the signal conditioning, analog voltage converted into digital data using the ADC 0804. Digital data obtained is then processed by the Microcontroller AT89S51 and displayed, so we get some information about $^{\circ}\text{C}$ units of the plant temperature on a Seven Segment of the temperature data acquisition system design is obtained that this system has the ability to measure the temperature from 25°C to 100°C with average errors Average temperatures for the appointment of 0.266°C .

Bibliography: 9, (1990 - 2002)