

DESIGN BY ROOM TEMPERATURE gauge LM35 TEMPERATURE SENSOR USING AT89S51 MICROCONTROLLER

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Abstraction :

In writing that I make with the title "Temperature Measuring Equipment Design Room With LM35 Temperature Sensor Using a Microcontroller AT89S51" 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 the one thing that is very important in industrial activity, because it is a small part of a process control. Regarding the importance of system, so the temperature data acquisition system design that is capable of monitoring the temperature of a plant. The data will be a physical property measured temperature so as to be processed and displayed in the form of electrical systems used LM35 temperature sensor that is able to convert these quantities with the increase of $10\text{mV} / ^\circ\text{C}$.

To be able to design the system was first carried out the process of changing the temperature into an analog voltage using a temperature sensor LM35. 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 the temperature of the plant unit $^\circ\text{C}$ on a Seven Segment From system design, acquisition of temperature data showed that this system has the ability to measure the temperature of 25°C to 100°C by the error mean Average temperatures for the appointment of 0.266°C .

Bibliography : 5 books (1991-2002)