DEEC
DEPARTAMENTO DE ENGENHARIA ELETROTÉCNICA E DE COMPUTADORES
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PC-Based Instrumentation

Fourth Lab Work : Human body temperature measurement

Introduction

In this lab work we wish to measure the human body temperature. The temperature sensitive element in use is a NTC thermistor with a resistance of 10 kΩ at T=25 degrees Celsius. The data sheet of the thermistor is given. The final thermometer must comply with the following requirements:

1. The total range of body temperature measurement must include the interval with T_{min}=30 ºC and $T_{máx}$=45 ºC. This interval is considered as the human body temperature range.
2. The measurement resolution must be optimized for the best attainable value, and its value must be obtained in the body temperature range.
3. Although the device proposed application is for human body temperature measurement, what is the full range of temperature measurement?

Execution

The execution of this work must use the “arduino uno” platform.