

## **ABSTRACT**

Technological developments in the manufacture of measuring instruments is now widely done quickly. Various designs can be applied to a measuring instrument which aims at to shorten measurement time. In this research, microcontroller based measuring instrument was developed to measure the voltage and current of voltage sensor and ACS712 current sensor.

This final project realizes a measuring instrument that can be used to calculate the incoming voltages and currents and display them on a 16 x 2 LCD. To manage the change process using Arduinouno microcontroller.

The results of this research are designed to be able to make measurements to shorten the measurement time of voltage and current. This research is designed with 4 stages consisting of theoretical calculation phase, the stage of stringing the components to be measured, the measurement stage and the comparison stage. On the measurement of voltage values obtained voltage value 9 V and current value of 0.75mA If the resource is less than 9 volts, it will use the control of resources from laptop or pc.

Keywords: Microcontroller, voltage, current, measurement