ABSTRACT

Electricity has become a basic necessity for many people. Electric power needs of each person is different as well depending on how much usage. But often times the power consumption in a building not controlled, so that sometimes occur more load (overload) so that current flows will also increase. This will cause more current warming causing damage, short circuiting, and others.

Electric power monitoring system which can know the condition of flow of electric current that flows and also the power used in the building. This monitoring system using current sensor, microcontroller, relays and LCD and push buttons. Current sensor used to detect the current flowing. Microcontroller used to process data sent by the current sensor. In this system, the relay serves to cut off the electricity if there is excess power is used up and reconnects when it began to stabilize. While the LCD is used to display the power used in a room and the currents flowing in the monitored room. And the push button will work to change the power limit threshold when the power usage of energy used to change.

Test results carried out starting from the measurement hardware bloh ie micro blocks, relays, power supply, push buttons, sensors. Results from these tests was stated that the system can work well. That the LCD can display well on the burden of unused power. Both current sensor used for flow above 1 A. Power shown is active power in Watt unit, according to the formula P = VxIxPf where pf is assumed 1.

Keywords : current sensor, push button,relay, microcontroller.