

ABSTRACT

HELMA FATURRAHMAH, *Prototype Energy Detection Power 1 Phase-Based Automatic Meter Reading (AMR) For Monitoring electric power (Case Study On Laboratory PLC)*. Instructure Drs. Irzan Zakir, M.Pd and Syufrijal, M.T.

This research was carried out aiming for the control and monitoring of electricity usage at home. With the use of Wavecom Fastrack Modem M1206B programmed microcontroller system is able to provide information / data regarding the use of current, voltage and power the home. The design of this prototype using a system of Microcontroller ATmega8 programmed in the application software Code Vision AVR. ATmega8 which became the nerve center of the detector system. With the input and output of the flow of the ACS712 current sensor and voltage of the voltage sensor 220.

The method used in this research is the method of experimental research laboratories, namely to create and test program is connected to the AVR Wavecom Fastrack Modem M1206B which serves as the sender and recipient data remotely. So as to facilitate control using a mobile phone.

In the sending and receiving of data information using SMS Gateway system that can be used even with a far-field conditions. Research is not only carried out in the Laboratory of Programmable Logic Controller (PLC) but also in the experiments simple installation on 4 lamps with different power of 100 Watt, 60 Watt and 15 Watt. From the test results of current and voltage sensors as well as Automatic Meter Reading system (AMR) produces some data.

The conclusion of this study is the Automatic Meter Reading System can provide electric power energy consumption data. So homeowners can control the electrical energy consumption of the condition remotely.

Keyword : Microcontroller ATMEGA8, ACS712 current sensor, Software CodeVision (AVR).