ABSTRACT

DESIGN OF TELEMETRY SYSTEMS FOR MEASURING VOLTAGE AND ELECTRIC CURRENT WITH COMPUTER DISPLAY BASED ATMEGA 328P

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Technology of computers development progressed very fast, The function of the computer is to measurement monitoring, like monitoring the measurement of voltage and current electricity. The process of monitoring not always near to the object, with using wireless networks , the process of monitoring can be solve far from the center of processing result.

The system can measure the voltage and electrical current wirelessly, The result of measuring voltage and an electric current can show in real time on computers use software interface LABVIEW as a result viewer of measuring voltage and current. The sensor that using was CT sensor (Current Transformers) as a current sensor , voltage transformer as voltage sensors , microcontroller atmega 328p as data processor and KYL200U as a wireless transceiver module.

The results of the measurement of voltage and current of electricity compared with digital multimeter has a results of testing which average percent error of 0.82 % to the measurement of voltage, the measurement of the current load resistive 7.8 % , Inductive load 6.4 %, and capacitive load 9.34 %. Then the testing of maximum distance module KYL200U communicate with the default settings (baudrate 9600bps, frequency 433mhz) not in a line of sight as far as ±126 meters, and in line of sight as far as ±465 meters.

Key Word: Voltage, Current, KYL200U, *Current Transformer*, Monitoring, LABVIEW