ABSTRACT

It has been designed and realized a system for monitoring current and voltage multichannel of three phase induction motor with microcontroller ATmega8535. The system able to monitor current and voltage of three phase induction motor with amount more than one on same time. Besides that, the system also able to save the data monitor into Microsoft Access database. The data record can be analyzed to known the running performance of three phase induction motor which monitor.

The system for monitoring current and voltage multichannel of three phase induction motor with microcontroller ATmega8535, used six current sensor series CR 9580-10 with ratio 10A AC/5V DC and two voltage sensor with ratio 400V AC/5V DC. All output of the sensor was put into internal ADC microcontroller ATmega8535 on port PA.0 – PA.7 directly. The data measured of all the sensor will be sent to computer used RS-232 serial communication data protocol. Borland Delphi 7 was an application program which used to display value of data current and voltage on computer. Borland Delphi 7 also can be connected with Microsoft Access database for save all current and voltage data was displayed.

From this research was been obtained that Borland Delphi 7 able to display the value of current and voltage of three phase induction motor which monitor. The data was displayed continuously and auto record to Microsoft Access database with interval auto saving can be set as needed. From the tests used standard measurement equipment digital power meter WT 130 and digital multi meter fluke 289 was obtained that the system had linier correlative coefficient of r = 100%

***Keywords** : Monitoring current and voltage, Multichannel, Three phase induction motor, Microcontroller ATmega8535.*