

ABSTRACT

This project purpose to make a device to improve power factor to improve efficiency of electrical power by keeping the desired power factor by using hardwares microcontroller such as AVR ATmega 8535, current sensor ACS712 20 Ampere, minimum system circuit of microcontroller AVR ATmega 8535, LCD 16x2 and GSM Icomsat. This device is able to measure and showing electrical power of home appliances and use GSM notification based system. Current sensor ACS712 with maximum output 20 A that flow to the load and provide output from AC voltage to DC voltage. This AVR ATmega 8535 microcontroller only convert current sensor output voltage to be digital data in order can be treated and direct showed to LCD. Microcontroller minimum sensor circuit AVR ATmega 8535 and this appearance of LCD 16X2 will be processed by the program and uploaded to microcontroller AVR ATmega 8535. This GSM Icomsat also will be reprocessed by the program and connection between microcontroller minimum system and GSM, so that appear a short message or sms from the hardware and it is direct appeared to cellular (HP).

Key words: ATmega 8535, ACS712, Minimum System, GSM Icomsat, Voltage, Power