ABSTRACT

Inverter is an electronic circuit that converts the voltage from DC (direct current) into AC waveforms (alternating current) that the amplitude and frequency can be adjusted as needed . However, the use of power electronics components on the inverter in the power system would lead to a new problem , namely the harmonic disturbances . So it takes an inverter device that has high efficiency in order to minimize wasted power .

Insulated Gate Bipolar Transistor (IGBT) is an electronic circuit that has a high switching speed , and high input impedance so as not to overload the circuit and the controller has a high efficiency making it suitable for use in inverter circuits . Therefore , in this final project has designed a three- phase inverter using Insulated Gate Bipolar Transistor (IGBT) as switches inverter and ATMEGA88 microcontroller for generating PWM signal (Pulse Width Modulation) .

The results obtained from this final project design is a three- phase inverter using IGBT as switch PWM on load 3 lamps with results output voltage of 200 volts , a current of 2 amperes , with an efficiency of 60 % - 65 %

Keywords : Inverter Three Phase , IGBT , PWM , ATMEGA88