ABSTRACT

Controlled adjustable power supply is an automated power supplier device where the output voltage from the device can be programmed from a PC. Voltage and output current can be controlled in accordance with the specifications of the desired voltage 0-30 V DC and maximum current 0-3 A.

This final project has two main objectives, first design the electronic components of the device then the implementation. Arduino Nano microcontroller, LM2576 Module, Digital Potentiometer AD5292, ACS712 current sensor, Voltage Sensor, and Safety Circuit were used. The approved system design is planted on *power supply*, which can approach the desired specifications.

The tests carried out testing the output voltage range, output voltage resolution, and maximum current output. In testing all data obtained provide conclusions shows that the final assignment is completed to fullfill all the specifications.

Keywords: *Controlled PowerSupply*, *DigiPot*, *Switching*