

FACULTY OF ELECTRICAL ENGINEERING

UNIVERSITI TEKNOLOGI MARA

PULAU PINANG

FINAL REPORT:

SOLAR CHARGE CONTROLLER WITH SOLAR FAN

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ABSTRACT

This project is about the use of a controller in a typical off-grid solar panel installation. Charging batteries with solar power is great on the environment and for batteries. Charging and maintaining batteries through solar will result in better battery performance and longer battery life. With solar chargers rated 15 watts or more, the use of a controller is recommended. It also comes to no surprise that once a battery reaches maximum charge but the sun keeps shining on the solar panel, causing power to constantly flow to the battery, the battery risks on being overcharged. Thus, solar controllers regulate the voltage output from the solar panel and prevent batteries from being overcharged. There are normally three types of solar charge controller used in a solar panel installation, namely the maximum power point tracker (MPPT), Pulse Width Modulation (PWM) and the conventional controller made up of ICs. This project is the implementation of conventional controller by using the LM358 operational amplifier IC and FQP27P06 P-channel MOSFET.

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