

ABSTRACT

Electric scooters are increasingly popular as an environmentally friendly transportation alternative. Monitoring electric power on electric scooters is still a challenge. Monitoring the electric power of this electric scooter using voltage and current sensors and the Blynk application has been developed to increase efficiency and understanding of the performance of electric scooters. The ACS712 DC voltage sensor and current sensor are integrated on the electric scooter to measure and monitor the power consumed. The data obtained from the two sensors is processed by the ESP32 microcontroller and sent wirelessly via the Blynk application. After the two sensors have read the data on the two sensors, the process is entered into the Blynk application to make it easier to control the power on the electric scooter. A system like this increases the efficiency of battery use so that the battery is not easily damaged. This research on monitoring electric power on electric scooters displays several current and voltage sensor values on the electric scooter which are connected in a prototype to the Blynk application to make it easier to control the electric power used. Results obtained from research monitoring electric power on electric scooters running in real time. This system has been successful so well that it can display energy consumption data every 30 seconds and uses 2 speed references of 10Km/hour and 20Km/hour in real time. The calculation of the average power at a speed of 10Km/hour is 6490.27W and a speed of 20Km/hour is 9256.0W. The average current calculation at a speed of 10Km/hour is 1.269A and 20Km/hour is 0.3930A. Calculation of the average voltage at a speed of 10Km/hour is 295.12V and a speed of 20Km/hour is 296.38V with a time range of 1 to 30 seconds respectively.

Keywords : Blynk, Current Sensor ACS712, Voltage Sensor, Electric Scooter.