

## ABSTRACT

*Electric power consumption in Indonesia has increased every year in line with population growth and the national economic sector. One of the factors causing an increase in electricity consumption in Indonesia, one of which is caused by the wasteful lifestyle of people in using electric power. Therefore, it is necessary to save electricity starting from household electricity consumption. as one of the efforts in saving the use of electric power can be done by monitoring the use of electric power. Based on these problems, a tool is needed to monitor (monitor) the use of one of the electronic components in the house so that it is known which electronic device consumes the most electric power so that it is easy to make savings. Making an IoT-based electric power monitoring system is expected to be able to overcome the above problems, with the PZEM-004T electric power sensor which functions to scan electric power & the blynk platform as a monitoring result viewer application. The test parameters in this study are the accuracy of the PZEM-004T sensor in measuring voltage and current. data collection test for water pumps, fans, magic com with the PZEM-004T sensor. Device monitoring uses WiFi as an online communication channel. Based on the test results, the monitoring system is capable of monitoring the voltage, current, power and load of each electronic unit and converting the rupiah value per kWh, then sending data to the LCD and the Blynk platform. In testing the accuracy of the voltage from the PZEM-004T sensor, the average error percentage value is 0.34%. The results of monitoring and estimates of electricity costs can be seen directly on the Blynk application on the Android device.*

*Keywords : Monitoring, NodeMCU, PZEM-004T.*