

ABSTRACT

kWh meter is an electronic device used to measure the use of electricity consumption. There are 2 types of kWh meters currently available, namely analog kWh meters and digital kWh meters. Of the two types of kWh meters the difference is only in the calculation of energy consumption technology. Analog still uses a dish for energy calculation, and digital uses digital display data.

In the construction of the kWh meter in this study, an integration tool of digital power meter (kWh meter) was made with the internet network using a microcontroller and IoT module. By connecting the kWh meter device with IoT, the measurement data can be easily monitored remotely. To monitor the data, a web application was made to monitor the data on electricity consumption. It is expected that with this monitor system users can manage electricity consumption better in accordance with needs.

In the measurement accuracy testing, the accuracy value obtained with a multimeter of 99.19% was obtained in the 1P Voltage parameter, and for the results of the throughput test the best value was obtained 100% with a delivery time span every 5 minutes.

Keyword: kWh meter, IoT, monitoring, power meter, microcontroller.