

Abstract

Electrical power measurements are usually carried out automatically using a kWh meter installed in front of the house, the results of which can only be seen by the homeowner only occasionally, which in fact only provides the entire electricity usage directly. This paper is made to discuss the real-time electrical measurement system using the PZEM-004T electrical sensor which receives electrical input then connects to the Esp 8266 Node-MCU which is forwarded to the server and reports the electricity usage by the tool into a database and processed by fuzzy to displayed in the android application which contains the use of electric power that must be paid also provides recommendations on the use of electrical devices that have exceeded the appropriate usage limit based on the fuzzy system that has been created. Based on the results of experiments 1 and 2, the Fuzzy logic method that has been made has functioned according to the defined rules. This can be seen from the results in experiments 1 and 2, with examples of over conditions, when the use of ironing power is 358.51 Wh for 223 minutes which is included in the category of moderate electricity use with medium time and not Over, when the use of Charger power is 28.68 Wh with time of 730 minutes which is included in the category of using small electric power for a long time.

Keywords: kWh, Sensor arus PZEM-004T, NodeMcu Esp 8266, Fuzzy