ABSTRACT

In the current era, technology is developing rapidly in various scientific fields. Humans continue competing to develop and research the latest technology to facilitate human life. The use of electrical equipment in households is generally large, each electronic device uses different power. And this often happens so that in using electrical equipment, tools are needed to monitor the use of electric power, so that the use of electric power in this household is in accordance with the power required. Because it is designed a tool that can monitor the consumption of electric power, the results can be displayed on the LCD 20X4 and can be informed via the internet. The purpose of this study is to design a monitoring system of electrical power in households to simplify and monitor the use of electric power. The method used in data collection is quantitative methods. By collecting some of the components needed in this study, such as current sensors, voltage sensors, wemos d1 mini, and Arduino nano. The system that is built is based on IoT, and can be monitored via the internet in the form of graphic display on a private server. The results showed that the error value on the voltage sensor was 0.02%, the current sensor was 0.01%, and the value on the power was 0.22%. It can be concluded that the tool has a fairly small error and can work properly.

Keywords: Power monitoring, ACS712 current sensor, ZMPT101b voltage sensor, Internet Ofthings