

ABSTRACT

The Internet of Things is one of the technological principles used to control devices via the internet network. Internet of Things has been widely used in everyday life to make it easier for users to control the device over long distances. One example of developing the Internet of Things is controlling electrical devices through a smartphone application in a home. This smartphone application will display the use of electrical power in home electrical appliances that has been used in daily activity.

Control of this application is done by sending data between the controlled devices and smartphone applications through the internet network. The application will display the use of voltage, current, power, and power factors used by the device. This process is supported by the component nodeMCU which functions as a controller to turn on or to turn off the electrical equipment as well as transmit power data obtained from the ACS712 current sensor and ZMPT101B voltage sensor to the database server. The stored data is displayed through the user's smartphone.

From 30 times testing to compare the results of reading power from the sensor with an existing measuring instrument. This system has a low error rate of 3.13% on switch 1 and 3.41% on switch 2. This measurement also has a high level of precision for voltage sensors of 1.97% and 1.41% and for sensors current of 0.03%

Keywords : Internet of Things, Android, Nodemcu, House Electrical Appliances Controlling and Monitoring System