

ABSTRACT

Electricity is a human need that is commonly used every day, ranging from households to industry. In buildings usually use three phases of electricity sourced from PLN which is very important for operational purposes. If in the use of electricity three phases are not used efficiently it will cause inconsistent costs every month so that it can lead to wasteful costs. Therefore, it takes a tool that can monitor the use of three phases of electricity that can be monitored online through Antares and applications on smartphones.

This final task is to design a prototype for three-phase electrical power monitoring in the building by using the Raspberry Pi as a data processing center to read the power meter, store in internal storage and send data to Antares as a server. Data that is successfully sent to Antares will be monitored directly through the application on a smartphone.

As a result of this final task, the power meter managed to read the voltage with an accuracy rate of up to 99.93% and 97.06% to read the electric current. Data successfully read by the Raspberry Pi such as voltage, current, power, active energy, reactive energy, power factor and frequency are automatically stored in internal storage with an average size of 184.82 bytes per 1 row and 23 columns. The data that was successfully sent by the internet to Antares is then displayed on a smartphone application that is 100% successful and in accordance with the data on Antares.

Keywords: Power Meter, Raspberry Pi, three phases of electricity, Antares