

## INTISARI

Sistem jaringan listrik yang digunakan di Indonesia ialah jaringan listrik tiga fase yang disalurkan oleh produsen listrik yaitu PLN ke konsumen listrik yakni rumah tangga dan industry. Kualitas pasokan energi listrik sangat penting untuk diketahui karena kualitas energi listrik dapat mempengaruhi kinerja dan usia pakai dari beban atau peralatan yang digunakan. Adapun faktor-faktor yang mempengaruhi energi listrik tersebut diantaranya adalah arus dan tegangan. Piranti *monitoring* arus dan tegangan jaringan listrik tiga fase berbasis *internet of things* merupakan piranti yang dapat merekam data arus dan tegangan selama *monitoring* dilakukan dan dapat menampilkan hasil *monitoring* dari jarak jauh melalui web sehingga akan lebih efektif dan efisien. Dalam pembuatan system *monitoring* ini digunakan sensor arus TA12-100 dan sensor tegangan ZMPT101B untuk mengetahui besar arus dan tegangan yang bersumber dari *power supply* tiga fase. Piranti ini menggunakan NodeMCU sebagai komunikasi antara Arduino dan web *server*. Selanjutnya data tertampil pada Processing IDE sebagai *interface*. Didapatkan nilai hasil pengukuran sensor arus dan tegangan dengan nilai error masih dalam batas toleransi masing-masing sensor. Data pengukuran arus dan tegangan dapat dipantau melalui Processing IDE secara *real time*.

**Kata kunci :** *monitoring, internet of things, sensor arus, sensor tegangan*

## ABSTRACT

*The electricity network system used in Indonesia is a three-phase electricity network that is distributed by electricity producers, namely PLN to electricity consumers, that is households and industries. The quality of the supply of electrical energy is very important to know that the quality of electrical energy can affect their performance and the age of use of a burden or equipment used. The factors that influence electrical energy include current and voltage. The three-phase electricity network voltage and current monitoring tool based on the internet of things is a device that can record current and voltage data during monitoring and can display monitoring results remotely through the web so that it will be more effective and efficient. The monitoring of current and voltage electric networks the three phases based internet of things is the software can record current and voltage data during monitoring and can display monitoring remotely via web so that is more effective and efficient. In making this monitoring system used TA12-100 current sensor and ZMPT101B voltage sensor to determine the amount of current and voltage sourced from the three-phase power supply. This tool uses NodeMCU as a communication between Arduino and a web server. Then the data displayed in the Processing IDE as an interface. Obtained values of measurement current and voltage sensors with error values are still within the tolerance of each sensor. Current and voltage measurement data can be monitored from Processing IDE in real time.*

**Keywords :** *monitoring, internet of things, current sensor, voltage sensor*