

## **ABSTRACT**

*Good public street lighting (PJU) plays an important role, especially at night conditions. Street lighting is useful for creating bright road conditions. To make it easier for users to control street lights and monitor lights remotely, equipment is made to control and monitor lights through a Power line Carrier (PLC). Power line carrier (PLC) is a data communication technology that is carried out through electrical cables. The purpose of this study is to test the voltage sensor using a Moving Average Filter (MAF) using a Power line Carrier (PLC). on the control and monitoring system of street lights and measuring the performance of the ZMPT101B voltage sensor using the Moving Average Filter. The system designed has 2 main devices, namely control devices and light sensors, then there are also devices used to monitor using a 16x2 LCD display. The tests carried out produce a voltage value resulting from the ZMPT101B Voltage Sensor which fluctuates, so it is very efficient when using filter MAFFrom the test results the average percentage error of the overall voltage value is when the reading without using MAF has an average error value of 0.38%, then when using MAF 5 the error percentage drops to 0.18% and MAF 10 produces the best value with an average the average error is 0.14%. The use of the MAF 10 filter produces a more stable graph compared to not using the MAF filter.*

**Keywords:** *Public Street Lighting, Power Line Carrier, Voltage Sensor, Moving Average Filter*