

ABSTRACT

Lamp monitoring on PJU has not been done much related to the amount of voltage and electric current needed by the lamp. Power Line Carrier (PLC) network is an infrastructure for network communication using power cables. The research methods carried out are in the form of design, implementation, data analysis. In this study, the Moving Average Filter (MAF) method was used in data analysis. The purpose of this study is to test the current sensor using the Moving Average Filter on the Power Line Carrier and measure the performance of the current 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. Overall the system can run well according to the experiments carried out. The value of the electric current reading can be seen that the reading without using MAF has an average error value of 0.61%, then when using MAF 5 the percentage of error drops to 0.53% and MAF 10 produces the best value with an average error of 0.52%. This shows that the use of a MAF filter for the reading of the electric current value on the ZMCT103C sensor can reduce the error of the voltage value reading by 0.08% when using MAF 5 and 0.09% when using MAF 10. 3. Judging from the use of MAF 5 and MAF 10, it is actually not much different in some electrical load tests, it's just that overall the use of MAF can reduce the percentage of error current readings by the ZMCT103C sensor.

Keywords : *PLC, Public Street Lighting, Current Sensor, Moving Average Filter*