

## ***ABSTRACT***

*Lifetime of a lamp is a thing that is not easy to predict. Malfunction can occur anytime without we know, especially related to the lamp that is lighting the streets. A wide range of possible malfunction can occur in a lamp, for example, due to the age of the lamp that is old indeed, excess charge of the electric current, and the quality of the lamp that is not so good. Therefore a Prototype Street Light Monitoring System is created, which can provide a warning condition owned by the lamps. Prototype Street Light Monitoring System that is being created will be based on Microcontroller ATmega 328P. The sistem will give a warning to the user if a malfunction occurs against the lamp, and showing line chart for helping in monitoring process. As the actuator, will be using Relay Module, for the sensor will be using Current Transformers (CT) sensor and Light Dependant Resistor (LDR) sensor. The presence of a WiFi module allows devices to communicate with each other with the microcontroller via serial communication so that the warning may be sent to smartphones with wireless connection. From the result of the experiment, prototype system for monitoring the condition of the lamp can send warning to user's smartphones if there's malfunction occurs, and showing line chart.*

***Keywords: Malfunction Detection of Lamp, Microcontroller ESP8266 12-E, Light Dependant Resistor, Relay Module, MQTT, Current Transformers, Wireless.***