

ABSTRACT

Electricity is something that is very important. Almost every human being in the world today require electricity to help everyday life. Electrical substation is one important part in distributing electricity to homes in Indonesia, but the electrical substation is not always supervised directly by humans. Therefore many cases lately about burning electrical substation / flooded which caused losses to the State Electricity Company (PLN).

Electrical substation monitoring system is a system that consists of several sensors which aims to monitor the state of the electrical substations. The surveillance system consists of several sensors including; temperature sensor, smoke sensor, flood sensor, and the sensor door. All the sensors in the microprocessor and if the result of the processing is sent to the interface in this case using a web-based interface and sent over the GSM network. Expected from this system is the system can show all the results of accurate measurements by sensors and any results are stored in a single database.

The system will provide notification via SMS (Short Message Service) from the main server to indicate abnormal conditions in electrical substations and is expected to prompt immediate action by those responsible in this case is responsible for the substation. Accuracy of each sensors in this systems are temperature sensor = 96,4 %, smoke sensor = 100 %, water level sensor = 100 %, door sensor = 100 % with 86,66 % accuracy sending data to the server.

Keywords: *monitoring systems, microprocessors, hardware, SMS, Sensor*