

## **ABSTRACT**

### **PROTOTYPE DESIGN OF CURRENT DETECTOR DEVICE VIA SHORT MESSAGE SERVICE (SMS) AUTOMATICALLY BASED MICROCONTROLLER**

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Transformer is a very important device in electric power distributions. The increase of load on the transformer can cause the value of the rising current. It caused by overcurrent that was not detected. It could have been avoided if the user know the transformer has reached electric current that is not allowed.

The purpose of this final project is to create a device that is able to read AC current value, and then send the information value of the electric current on the object to be measured in a short message service automatically to the destination phone number. This device uses a current transformer for AC current measurement, signal conditioning to convert AC voltage to DC voltage, microcontroller as the main controller, and GSM modem as SMS sender.

The result of creating this device is to provide information about the value of the AC electric current from a distance via a short message service automatically to the destination phone number when the electric current value of the object being measured has exceeded a predetermined limit.

Key words : Electric Current, Current Transformer, GSM Modem, Short Message Service (SMS).