

## **ABSTRACT**

### **THE TELEMETRY SYSTEM HAS BEEN REALIZED FOR MEASURING THE TEMPERATURE AND HUMIDITY USING SHT11 SENSORS BY UTILIZING THE RF APC220**

**By**

**SITI WAHYUNI**

*The telemetry system has been realized for measuring the temperature and humidity using SHT11 sensors by utilizing the RF APC220. The telemetry system has been controlled by a microcontroller ATmega128 and tested by standard measuring devices such as thermometers and digital hygrometer. The system used solar cells 20 WP and 12V 12Ah battery as a voltage source, so that can be operated in rural areas for 24 hours. Tests conducted in the Pesawaran as highlands and the Tirtaysa beach as lowlands. Then the value of the measurement results displayed on the LCD, and PC and stored in a micro SD. Data is collected for 24 hours with every hour were observed. In this study, the sensor is able to detect the lowest temperature of 20.65°C and the highest temperature of 41.79°C. While the humidity is lowest at 37.36% and the highest was 94.94%.*

**Keyword :** *APC220 radio frequency, humidity, SHT11, temperature.*