ABSTRACT

Technological developments are increasing as security time evolves. Gas leaks have a fairly high risk because of the type of gas fuel that does not have a color and the type of flammable gas. Late handling will cause a fire. This can be done by giving a warning when a gas leak occurs. To avoid such leaks can be done by providing warnings in the form of sounds. So by using two MQ-2 sensors that will be placed somewhere close to the LPG gas source that will later be connected to NodeMCU, which will be detected using MQ-2 sensors to one and two. So if gas is detected leaking then the buzzer will sound and the level of gas leak can be seen through Antares. The ADC value obtained in the study was to use an experiment of one MQ-2 sensor with the highest value obtained 657, the lowest result was 356. Two MQ-2 sensors in the presence of gas detected the highest levels with an ADC value of 696 and a low of 408. In experiments using one sensor and two MQ-2 sensors have obtained the standard deviation value of each experiment. With one sensor MQ-2 gets a value of 0.99 and the result of two sensors with a value of 1.38. In the experiment, the sensor's ADC value was also measured using distance, from a distance of 1 cm to a distance of 30 cm. The highest ADC value is at a distance of 1 cm of 762 and the lowest value is at a distance of 30 cm with a value of 350. The ADC value limit set on the device is 500, if the detected ADC value starts from 500 to less than 500 then the buzzer does not sound, if the ADC value is more than 500 then the buzzer will sound and send data to Antares.

Keywords: *MQ-2 Sensor, Microcontroller, Gas Leakage, Buzzer.*