

ABSTRACT

Along with the development of the technological era, it is developing more rapidly, so that the creators of supporting equipment to support sophisticated tools are increasingly diverse, such as measuring vibration, temperature, and many others. Therefore a system is needed that can monitor vibration and temperature in the event of an explosion then the values of vibration and temperature will be displayed or monitored to measure pressure or vibration data. The working system of this tool is used to measure and monitor the condition of the human body when pressure or vibration occurs based on the Accelerometer MPU-6050 sensor to measure pressure or vibration and the MLX90614 sensor to measure temperature values. Then the data obtained will be processed by the ESP32 microcontroller. Vibration and temperature data whose values have been read will be uploaded via the web. The results of this test with the MPU-6050 Accelerometer sensor received a sensor value below 17 m/s² and had a temperature test value with the MLX90614 sensor >40°C which was declared unsafe because the safe temperature for humans was at 36°C-37°C.

Keywords: Vibration, Temperature, ESP32 Microcontroller.