

ABSTRACT

Micro hydro power plants are built in hilly areas that have flowing water sources with adequate water capacity and height. The greater the water flow capacity and height, the greater the electrical energy and the amount of electricity produced. With such conditions, it is better to create a monitoring system using an LCD so that it can monitor the data of the power plant itself. By utilizing the INA219 sensor which is connected by an arduino mega with an additional lora RFM95 module and a 915Mhz frequency antenna as a connecting component to send and receive values from sensors that are obstacles in hilly areas. The received data can be displayed via the LCD so that users can monitor the data remotely from the MHP. From the test results for the values read by the sensor, which are then sent and received by lora and appear on the LCD, the data is correct and in accordance with what is displayed on the serial monitor. From the lora side, based on the NLOS receiver test in the first place, the safe distance for monitoring MHP data is 150 meters with a success percentage of 100%. In second place, the safe distance for monitoring MHP data is 300 meters with a success percentage of 100%.

Keywords: Micro hydro power plant, LCD monitoring, arduino, lora module.