ABSTRACT

Payment for water at boarding houses is usually paid by the owner of the boarding house on 1 bill. This makes the boarding house owner evenly distribute the payment of water use to the residents of the boarding house even though the use of water for each boarding room is different. Therefore it is necessary to make a smart metering system that is able to calculate the total water usage in each boarding room, calculate the cost of water usage, and display the results on the display so that water payments can be paid according to usage.

The solution to this problem is to create a smart metering system for water calculations using a flow meter sensor to measure water discharge, water volume, and water usage costs. The data is then sent to a cloud server for easy monitoring and data storage. The IoT-based smart metering system for calculating the cost of water use that has been made using the YF-S201 2cm diameter sensor is capable of reading water discharge with an error value below 10% if the minimum water velocity is 50 ml / s. Arduino Uno as a data processor is also able to calculate debit, store volume data, and process data correctly. Adafruit IO as a cloud server can also calculate volume and costs accurately and display it in real-time.

Keywords : Smart metering, sensor flow meter, Server Cloud