

## ABSTRACT

*A data logger that is implemented in a tool with the aim of monitoring and recording data is a technology needed for monitoring and recording the accuracy of data in an industry or company. The design of this tool can provide changes for many aspects. Manually monitoring the use of electricity in a company or industry is no longer efficient, in addition to that, another supporting aspect is that companies can more accurately record usage until charging their electricity tokens.*

*The design of the data logger on the three-phase kWh meter uses a three-phase digital power meter that supports the RS485 pin as a communication method for sending data serially to the cloud server on the blynk app. Existing data is sent to the cloud blynk app and can be seen by a computer using a local server-based node-red, where the controller used is ESP 32.*

*Based on the test results, the system on Node Red can display data that matches that of the power meter with an error percentage of 0.5% - 1% through black box testing. With a maximum delay of 2 seconds, either the closest distance is 5 meters or the farthest distance is 15 meters. All data is successfully exported to an .xls format file every hour.*

**keywords :** *Data logger, Modbus, Rs485, cloud storage, Internet of Things(IoT).*