

***DISTRIBUTION TRANSFORMER LOAD IMBALANCE
MONITORING SYSTEM BASED ON
INTERNET of THINGS (IoT)***

Student Name : Muhammad Arash
Student ID Number : 3204171159
Supervisor : Adam, ST., MT

ABSTRACT

Distribution transformer is one of the main components in the electric power distribution system which is always maintained its stability and quality to create an effective and efficient electricity distribution system. However, in its application, distribution transformers often experience load imbalances which will result in power losses.

The purpose of this study is to monitor the transformer and determine the load used on the transformer. So that load balancing can be done to minimize losses caused. The research method uses the Internet of Things Technology (IoT). So that load monitoring can be done remotely anytime and anywhere so that the load measurement obtained is more accurate by predetermined standards. However, displaying the transformer load value on the Blynk smartphone application and using the Wemos D1 R1 WiFi module to read the PZEM-004T current sensor value and connect to the Blynk application.

The testing of the tool was carried out on the distribution transformer sub panel of the State Polytechnic of bengkalis, from the test results obtained the percentage value of the average load imbalance of 29.04% and power losses / losses of 235.36 Watt.

Keyword: *Transformer, Monitoring, Losses, Blynk*