ABSTRACT

Tract Home a part of Low Voltage Network which directly supply the low voltage power to the consumer. In Indonesia, operation voltage of tract home is 220 volts. Tract Home serves to deliver electricity from JTR to APP (Measuring Tool and Border). Shrinkage allowable voltage is +5% and -10% of the normal voltage 220V. Voltage changes due to changes in customer load current and fuse cut out when broken, neutral Low Voltage Network broke cause phase voltage fluctuates.

Based on this is made monitoring system current and voltage at tract home to monitor current changes and voltage changes according to the extent permitted by PLN. Design includes current and voltage sensors are mounted at tract home network in the Low Voltage Network (JTR) for later processing by the microcontroller to transmit data when a load current and voltage change on systems using modem router TP-LINK will be accepted by the server.

Current and voltage monitoring is able to measure the voltage with a linear movement with the percentage of error is not more than 1% and the percentage error measure currents up to 7%. As well as with the successful delivery of 100% wifi when network conditions are not passed range of wifi signal. On the computer side there is a database that can store measurement results tool, and when the voltage and current measurement exceeds a predetermined range, the alarm will turn on.

Key Word: Tract Home, Current, Voltage
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