ABSTRACT

Circuit breaker substation is using 110V DC power supply that comes from the rectifier and assisted by the supply of battery backup. Voltage changes and reduction often dependent on the input of rectifier from a step-down transformer. The minimum voltage required to open circuit breaker contacts is at 70% nominal voltage. Any voltage drop below that value can cause circuit breaker fail so that disruption can open the incoming breaker or more can cause severe damage to the substation transformer.

Based on that problem, backup power supply monitoring system is created as an indicator that is used to supplying the circuit breaker. The monitoring system includes a voltage sensor, a microcontroller, GSM modem, and the computer as a server. Sensors mounted on the output voltage of the battery for later processing by the microcontroller to transmit data when the voltage drop occurs using GSM modem that will be accepted by the server.

The condition of battery that is used as a circuit breaker backup power supply can be seen with circuit breaker backup power supply monitoring system. Monitoring system can be used to measure the voltage of the battery as a backup power supply at the range between 0 - 173V. The monitoring system can receive data from a variety of disorders of different simcard number so that can be used to monitor backup power supply in many substations.

Key Word: Monitoring, Circuit Breaker, Supply, Microcontroller, GSM Modem
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