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GSM Based Substation Monitoring And Control System

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Abstract: *The project named 'Substation Monitoring System' proposes an innovative design to develop a system based on a Arduino microcontroller. It is used for monitoring the voltage, current, frequency, and temperature of a distribution transformer in a substation and to protect the system from the rise in mentioned parameters. The objective is to monitor the electrical parameters continuously and hence to guard the burning of the distribution transformer due to the constraints such as overload, over-temperature, and input high voltage. If any of these values increase beyond the limit then the entire unit is shut down by operating an Electromagnetic Relay. This relay is activated as soon as the parameters exceed the predefined threshold values. The relay also works as a circuit breaker to switch off the main power supply. GSM communication is used to continuously send the instantaneous values to the intermediate station. The GSM modem is used to send the real-time electrical parameters in the form of SMS. The system is designed to send SMS alerts to the authorized person whenever the parameters (Voltage, Current, frequency and Temperature) exceed the predefined limits.*

Keywords: Substation Monitoring System

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