

GSM Based Automatic Energy Meter Reading

The purpose of this project is to remote monitoring and control of the Domestic Energy meter. This system enables the Electricity Department to read the meter readings regularly without the person visiting each house. This can be achieved by the use of Microcontroller unit that continuously monitors and records the Energy Meter readings in its permanent (non-volatile) memory location. This system also makes use of a GSM modem for remote monitoring and control of Energy Meter.

The Microcontroller based system continuously records the readings and the live meter reading can be sent to the Electricity department on request. This system also can be used to disconnect the power supply to the house in case of non-payment of electricity bills. A dedicated GSM modem with SIM card is required for each energy meter.

The major building blocks of this project are:

1. Microcontroller based control system with regulated power supply.
2. GSM Modem for remote communication
3. Electromagnetic Relay and Relay Driver for Power Supply Control.
4. Digital Energy Meter.
5. LCD Display to display the meter readings.

Features:

1. Provides user friendly remote energy meter monitoring.
2. Supports controlling of meter.
3. Can be controlled any where in the world.
4. Non-volatile memory based energy-reading storing.
5. Auto disconnect feature.

Applications:

1. Electricity departments.
2. Household Energy meter monitoring.
3. Railway electrical systems.
4. Industrial Energy remote monitoring.
5. Remote controlling systems.

Block Diagram:

Mobile technology based(GSM) remote monitoring and control of digital energy meter.

