

Wireless energy meter monitoring with automatic tariff calculation

The purpose of this project is to remote monitoring and control of the Digital Energy Meter. This system enables the Electricity Department to read the meter readings regularly without the person visiting inside 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 RF transmitter 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 Hand held device on request. The receiver end comprises of RF receiver, which receives the data from the transmitter. The data received at the receiver end is fed to the microcontroller, which is present at the receiving end. The microcontroller at the receiving end is provided with a LCD interfacing and also few control switches for tariff selection. The micro controller automatically takes the responsibility of calculating the bill with the data received from the RF transmitter, which is present with the energy meter, and the tariff provided by the operator and displays the same on the LCD.

The major advantages of this system is making use of RF module which helps for a wireless transmission and the use of tariff buttons makes the device eligible to operate for both domestic billing and industrial billing and therefore there is no requirement to employ a separate device for industrial billing.

The main features of this project are:

1. Wireless Meter Reading transmission.
2. Automatic tariff calculation.
3. High accuracy.

www.mycollegeproject.com

Ph: +91 9490219339, 040-23731030

Ameerpet: A-8, 2nd floor, Eureka court, beside Image hospital, Ameerpet, HYDERABAD 73.

Santoshnagar: Opp: Magna Hypermarket, Santoshnagar X-Roads, HYDERABAD – 59.

4. Instantaneous display on hand held device.

The device provides learning's on the following advancements:

1. RF transmitting.
2. LCD interfacing.
3. Energy meter interfacing.
4. Embedded C programming.
5. PCB design.

The major building blocks of this project are:

1. Microcontroller based control system with regulated power supply.
2. RF transmitter for remote communication.
3. RF receiver for remote communication.
4. Control buttons for tariff selection.
5. Digital Energy Meter.
6. LCD Display to display the meter readings.

Block diagram:

Wireless energy meter monitoring system with automatic tariff calculation

