ELECTRICITY USAGE MONITORING SYSTEM

P.Padmavathi[1]

[1]Department of Electronics and communication engineering,

Murugappa Polytechnic college, Chennai-62.

E-mail id: padmavathympt@gmail.com

Abstract

The main objective of the project isto control and prevent the wastage of Electricity in Industries By using ARDUINO. Electricity has become part of our life, without it we can say we cannot survive nowadays. Government distributes electricity to the public and charge based on the usage of electricity.

Keywords: Electricity, Automation, monitoring.

1. Introduction

Government need to arrangement a transformer of certain kilovolts relies upon the phase allocation of each house [1]. Houses furnished with three phase consumes more power so bigger kilovolt transformer should be arrangement for that particular region [2]. At the point when houses furnished with single phase begins to consume more power transformer cannot circulate the power to other homes consistently which cause the transformer to detonate [3]. To prevent the misfortunes to the government on account of this the project is proposed. Since there should be a more astute approach to monitor consumption of each home the Electricity Board [4, 5].

Most sensors work in light of the fact that a current-carrying wire delivers an attractive field.Current sensing resistors are utilized when current is straightforwardly estimated in the circuit. Lobby Effect - Hall impact sensors consist of a center, Hall impact gadget and sign conditioning circuitry. A flow sensor is a gadget that distinguishes electric flow in a wire, and produces a sign proportional to that flow. The created sign could be simple voltage or current or even a digital yield. The figure 1 shows the outline of framework.

2. Methodology:

Most sensors work on the grounds that a current-conveying wire creates a magnetic field. Current detecting resistors are utilized when current is straightforwardly estimated in the circuit. Hall Effect - Hall effect sensors comprise of a center, Hall effect gadget and signal molding hardware. A current sensor is a gadget that recognizes electric current in a wire, and creates a sign relative to that current. The created sign

could be simple voltage or current or even a computerized yield.

Arduino is an open source computer equipment and programming organization project and client local area that plans and produces single-board microcontrollers and microcontroller packs for building computerized gadgets and intelligent articles that can detect and control objects in the actual world.

LCD (Liquid Crystal Display) screen is an electronic display module and fine a wide scope of use. A 16x2 LCD display is essential module and is very generally utilized in different gadget and circuits. These modules are liked more than seven segments and other multi segments LEDs. The reasons being: LCDs are prudent; effectively programmable; have no impediment of displaying unique and even custom characters (dissimilar to in seven segments, etc. A 16x2 LCD implies it as display 16 characters for every line and these are 2 such lines. In this LCD each character is displayed in 5x7 pixel framework. This LCD has two registers, to be specific, order and information. The order register stores the order guidance provide for the LCD

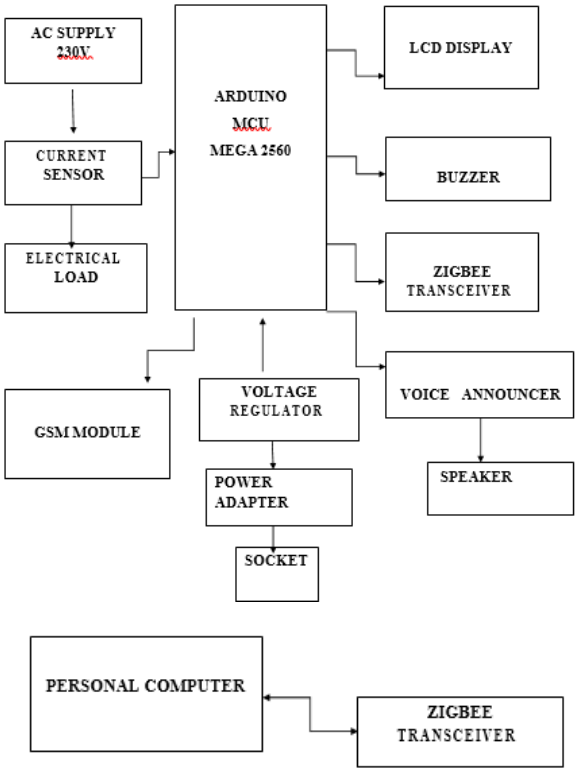

Figure 1: Overview of electricity monitoring system

GSM/GPRS module is used to establish communication between a computer and

aGSM-GPRS system. Global System for Mobile communication (GSM) is an architecture used for mobile communication in most of the countries. Global Packet Radio Service (GPRS) is an extension of GSM that enables higher data transmission rate.

Zigbee is an open global standard for wireless technology designed to use low-power digital radio signals for personal area networks. Zigbee operates on the IEEE 802.15.4 specification and is used to create networks that require a low data transfer rate, energy efficiency and secure networking. The proposed project of Power Management in System in Industries it want to use in all industries, colleges,homes,..etc.. Because the industries are using high power machines they need a high current.so the project will minimize the wastage of current. We need to set a limitation of current to a industries, colleges, homes etc for this high usage of current some villages not able to got their current. only 4 hours they got current.so this project will reduce the wastage of current.

3. Conclusion

Consequently the power wastage and power robbery and utilizing of high current can be watched by this system.This system is extremely helpful to save current now days and there is absence of current in our general public and we can ready to save current by this system

Reference

1. www.arduino.com
2. www.wikipedia.com
3. www.microship.com
4. www.circuitstoday.com
5. www.Electronics4u.com