

# Wireless Controlled Distribution Transformer Load Management System

Naveen R S, Nifasath M, Ruban J, Surendhiran S  
Department of Electronics and  
Communication Engineering,  
Knowledge Institute of Technology,  
Salem, Tamilnadu

Arun A  
Assistant Professor,  
Department of Electronics and  
Communication Engineering,  
Knowledge Institute of Technology,  
Salem, Tamilnadu.

**Abstract:-** The aim of this application is to reduce the manual effort needed to manage transactions in a company. Vehicle Management System has three types of monitoring. Goods loading, goods height and persons in goods garage. Notification will send through wireless network to Users. Application provides an interface to users to view the details like the Trans Vehicle details, goods loading and height of goods, Details in Daily Reports

**Keywords:** Load cell Sensor ,IR Sensor,PIR Sensor,LCD display,IOT Module.

## INTRODUCTION:

Intelligent Transportation Systems (ITS) is the use of Information Technology (IT), sensors and communications technologies for surface transport applications - though road transport applications vastly predominate. Road and other infrastructure building is expensive and environmentally unfriendly; we can make better use of the civil infrastructure by using a broad range of electronic technologies, making transportation systems safe, efficient, reliable and environmentally friendly, without implementing new physical infrastructure. ITS cuts across person movement in goods garage area. and also it will not start the engine. It will permit Let us assume that the transformer is working properly and there is a positive potential, at once it will reach permitted conditions Every details has through IOT App.

Level for all been received point A and a negative potential at point B. the positive potential at point A will forward bias D3 and reverse bias D4. A load cell is a type of transducer, specifically a force transducer. It converts a force such as tension, compression, pressure, or torque into an electrical signal that can be measured and standardized. As the force applied to the load cell increases, the electrical signal changes proportionally. The most common types of load cell used are hydraulic, pneumatic, and strain gauge.

disciplines such as transportation, engineering, telecommunications, computer science, finance, electronic commerce and automotive manufacturing. Use of wireless/radio mobile communications and satellite positioning systems are particularly important.

## PROPOSED SYSTEM:

Our proposed system provides effective monitoring and protection of power transformer by measuring its oil level, oil quality, temperature and operating voltage without involving human intervention.. In this project we are going to monitor the goods using sensors and wireless network. Here we are going to monitor goods loading and height management using sensors node. In this load. If the load exceeds limited means it will alert through buzzer and IOT. IR sensor is used to measure the Arduino mega controller is used to control all the sensors. Here load cell is used to monitor. When four diodes are connected the circuit is called as bridge rectifier. The input to the circuit is applied to the diagonally opposite corners of the network, and the output is taken from the good height and PIR sensor is used to check from the remaining two corners.

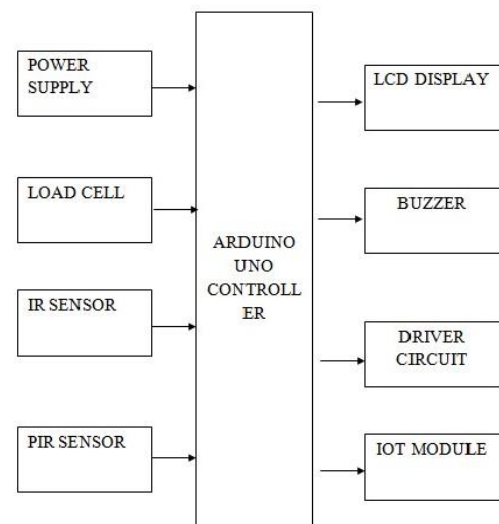
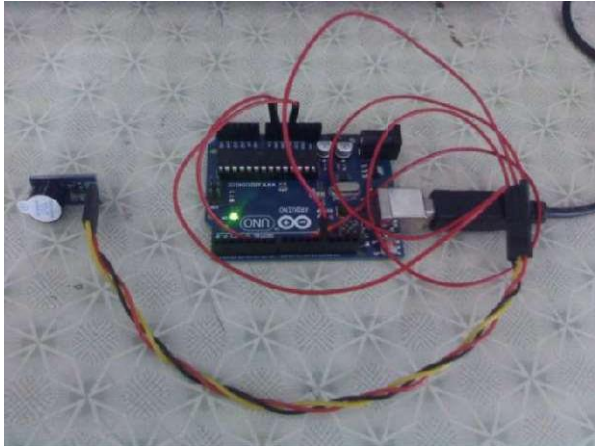


Fig (1) Block Diagram of Monitoring system

**WORKING:**

The potential transformer will step down the power supply voltage (0-230V) to (0-6V) level. Then the secondary of the potential transformer will be connected to the precision rectifier,



Fig(2) Circuit

**RESULT:**

The sample sketch above is a blink which is which is constructed with the help of op-amp. The advantages of using precision rectifier are it will give peak voltage output as DC, rest of the circuits will give only RMS output..

also applicable for LEDs. The output is the turning on and off of the buzzer every other second. The picture below shows the setup of your module and Arduino.

**CONCLUSION:**

The goods monitoring system provides a proper notification system about the good level (load capacity, load height and persons in load place) in the vehicle and also buzzer is used to alert. The driver can make a false statement about the goods level to the owner and can gain extra money. This scenario can be changed by the notification system. The system helps the owner to have the knowledge of goods level in vehicle and the person of the vehicle load area at regular interval of time. It helps to know the honesty of the driver to the owner and also can save the money. This project goods monitoring system in vehicle represents the notification to the mobile numbers. The proposed goods monitoring system can track the load level in the vehicle and also the alert the information of the vehicle and sends the notification to the owner. This made the project more user-friendly and reliable. The proposed method can be highly beneficial for the automotive industry.

**REFERENCES:**

- [1] Albert Alexe, R.Ezhilarasie, "Cloud Computing Based Vehicle Tracking Information Systems", ISSN : 2229- 4333 (Print) ISSN: 0976-8491 (Online) IJCST Vol. 2, Issue 1, March 2011.
- [2] Jaun Zambada, Ricardo Quintero, Ramon Isijara, Ricardo Galeana, Luis Santillan, "An IoT based scholar bus monitoring system", IEEE 2015
- [3] Hoang Dat Pham; Drieberg, M.; Chi Cuong Nguyen, "Development of vehicle tracking system using GPS and GSM modem," Open Systems (ICOS), 2013 IEEE Conference on, vol., no., pp.89,94, 2-4 Dec. 2013.
- [4] Anand. T. M, Banupriya. K, M. Deebika, and A. Anusiya, Intelligent Transportation Systems using IoT Service for Vehicular Data Cloud, International Journal for Innovative Research in Science & Technology, Vol.2, No. 02, pp. 80-86, 2015
- [5] Jyothi kiran. M, Ravi teja. S. Vehicle Health Monitoring Systems.. International Journal of Engineering Research and Applications Vol. 2, Issue5, September-October 2012, pp.1162-1167.
- [6] Lee. S, G. Tewolde and J. Kwon, "Design and implementation of vehicle tracking system using GPS/GSM/GPRS technology and smartphone application," 2014 IEEE World Forum on Internet of Things (WF-IoT), Seoul, 2014.