

# Real Time Based Power Fluctuation Recorder Using Printer Interface

R.Sushmitha, R.Nithya, T. Santhosh kumar, S. Sathiesh kumar, Dr. R.Manivasagam

**Abstract:** Propelled Electronics which is directing in all of the fields and conveying all fields with your pleasant errand. Here we develop a circuit by using Digital equipment which will examine the voltage and current of single stage system and besides measure the temperature. The structure here structure is imperative one in all power board and a wide scope of businesses. Due to the differences in electrical link the voltage and stream must be recorded to keep up the whole electric power plant. From the recorded understanding we can plot the diagram. We can without quite a bit of a stretch get answer for any issues on account of voltage change and current from the plotted outline.

**Index Terms:** voltage measurement, potential transformer, current transformer, current sensor,

## 1 INTRODUCTION

The structure here structure is crucial one in all power board and a wide scope of ventures. In view of the fluctuations in electrical link the voltage and stream must be recorded to keep up the whole electric power plant. From the recorded understanding we can plot the chart. We can without a lot of a stretch get answer for any issues in perspective on voltage change and current from the plotted diagram. All of the sorts of information parameters will be first changed over into voltage level by using authentic transducers. By then these voltages are given to the basic data stick of little scale controller circuit. Here we are using PIC 16F877A scaled down scale controller. The PIC 16F877A is permit control, prevalent shows CMOS 8-bit microcontroller with 8K bytes of Flash Programmable and Erasable Read Only Memory (PEROM) [1].

## 2. LITERATURE SURVEY

Brumsickle, we. Divan, D.M., Luck jiff, G.A., etAl 'Operational experience with power quality andReliability monitoring system'. Roger C.dugan, Mark F.McGrangham, Surya Santos andH.Wayne Beaty,'Electrical Power SystemQuality'. Roy Choudhury D, Shail Jain, 'LinearIntegrated Circuit'. New Age InternationalDelhi,2000.<http://extremeelectronics.co.in/microcontroller-pic-16f877a-interfacing-lm35-temperature-sensor-with-pic-microcontroller/>

Voltage estimation is the potential yield is a fed to voltage estimation. This yield is related with The microcontroller. Current estimation yield is supported to current estimation circuit. This yield is Associated with the microcontroller. The temperature Estimation is the LM35 is a planned sensor That can be used to evaluate temperature with an Electrical yield in respect to the temperature Microcontroller is the PIC 16F877 is a low power Elite 8-bit microcomputer with 4K Bytes of Flash Programmable and Erasable Read Just Memory (PEROM). Opto coupler which Consolidates high voltage and low voltage. The Relay which trips the heap if the esteem surpasses the Set? Esteem. LCD show is interfaced with the small scale Controller to show the messages like power Vacillation level and so on. It has 2 lines and 16 sections Dab grid type show. The PNP-64 is an 'Attachment and Play' type 2 Inch Thermal board printer module. In These printer readings through PIC microcontroller [2].

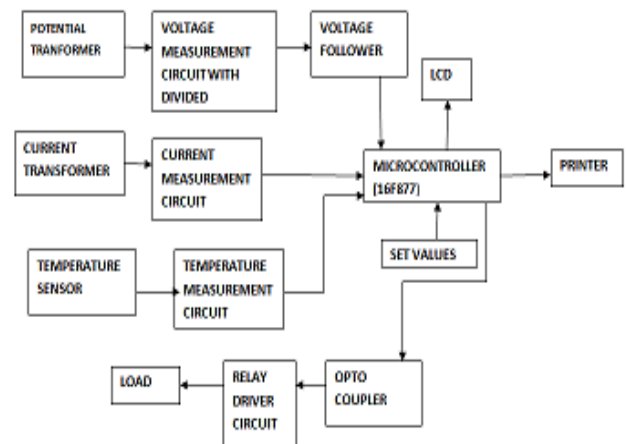


fig 1 Block diagram

- R.Sushmitha, Assistant Professor in EEE Department of K. Ramakrishnan College of Engineering, Tiruchirappalli, Tamilnadu, India. Email: [sushmithachandran@gmail.com](mailto:sushmithachandran@gmail.com)
- Co author name is R.Nithya, Assistant Professor in EEE Department of K. Ramakrishnan College of Engineering, Tiruchirappalli, Tamilnadu, India. Email: [nithya.jothi21@gmail.com](mailto:nithya.jothi21@gmail.com)
- Co author name is T.Santhosh Kumar, PG scholar in EEE Department of K. Ramakrishnan College of Engineering, Tiruchirappalli, Email: [santhoshkumargani1234@gmail.com](mailto:santhoshkumargani1234@gmail.com)
- Co author name is S.Sathiesh Kumar, PG scholar in EEE Department of K. Ramakrishnan College of Engineering, Tiruchirappalli, Email: [engineersathieshkumar@gmail.com](mailto:engineersathieshkumar@gmail.com).
- Co author name is Dr.R.Manivasagam, Associate Professor in EEE Department of K. Ramakrishnan College of Engineering, Tiruchirappalli, Tamilnadu, India. Email: [manivasagamn3@gmail.com](mailto:manivasagamn3@gmail.com)

### 3.1 CURRENT MEASUREMENT:

A stream transformer is used for estimation of electric stream.



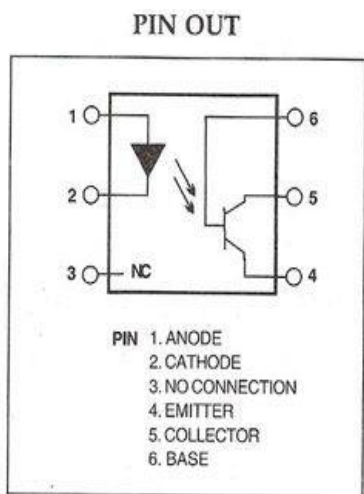


fig 4 pin diagram of MCT 2E

Opto coupler not simply isolates the high voltage information side and the microcontroller yet what's more prevents mischief to the microcontroller as a result of the line voltage transistor [7].

**APPLICATIONS:**

- Utility/economy isolator
- AC line / propelled method of reasoning isolator
- Digital method of reasoning isolator [8]

**7 RTC:**

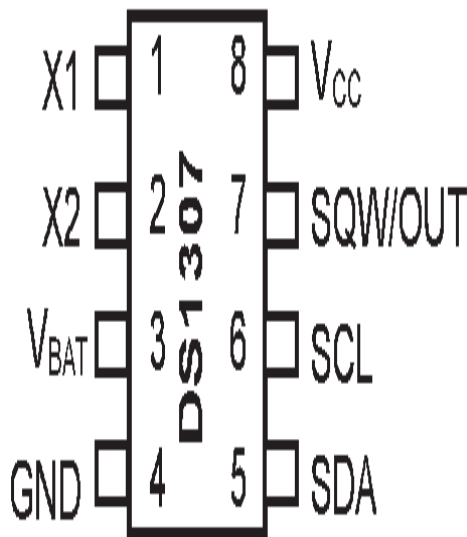


fig 5 RTC pin diagram

- Vcc - Primary Power Supply
- X1 - 32 kHz Crystal Association
- X2 - 768 kHz crystal Association
- Vbat -3V Battery Input
- GND - Ground
- SDA – sequential Information
- SCL - sequential Clock
- SQW/OUT -Square Wave/ Output Driver

**8 PNP -64PANEL PRINTER:**



fig 6 printer

The PNP-64 is a Plug and Play type 2 inch Thermal board printer module which enables the OEM customers to avoid issues like mounting system paper move making control board. Highlights of,

- Compact size
- Silent printing
- Easy paper Loading
- Easy board Mounting
- Low commotion

**9 ADVANTAGES:**

1. We confirming the whole power systems from power changes by perceiving the fault earlier it happens.
2. Sensitive and definite for assessing the changes.
3. Power Quality has been kept up [9].

**10 APPLICATION:**

1. TNEB
2. Power Plant
3. Cement Industries
4. Sugar Factories  
Textile Company

**11 CONCLUSION:**

The undertaking on "Consistent BASED POWER FLUCTUATION RECORDER USING INTERFACE" is working fine getting the parameter imagined in the midst of the connected stage. Presently multi day in mechanical part we use graphical techniques for investigating the power instabilities in the structure for improving the idea of intensity. It is difficult to research the issue because of slight assortments in these strategies.

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