

# Fire alarm using IOT

Fire detection systems are the most critical element of any building design these days. In recent days, fire incidents are commonly reported. This might be due to the negligence of people in many cases. Consider a few examples, in places like fuel filling stations, crackers shops, houses, and mainly in workplaces, etc. There are nearly thousands of fire accidents reported in a year. By taking all these into consideration, in this paper, an automatic fire detection using a fire sensor is introduced.

The existing fire detection system detects the fire by using a fire sensor, but our proposed system is different from that. The existing systems are with fire alarms and alerts by raising alarm when the fire was detected. The proposed system contains the IoT based fire alarm system at work places. This proposed system sends the blynk notifications to the user mobile.

In this project, we are interfaced flame sensor and Buzzer to the PIC microcontroller. When the flame was detected by the sensor these data is process to the microcontroller. Then microcontroller will active the Buzzer for alerts and also send the blynk notification to the user mobile.

## **The major features of this project are:**

- To design and develop a flame detection and alert system using a PIC microcontroller.
- To activate a buzzer automatically to provide an immediate local alert when fire is detected.
- To send instant fire alert notifications to the user's mobile phone using the Blynk IoT platform.
- To enhance safety by enabling remote monitoring and timely warning of fire hazards.

## **The major building blocks of this project are:**

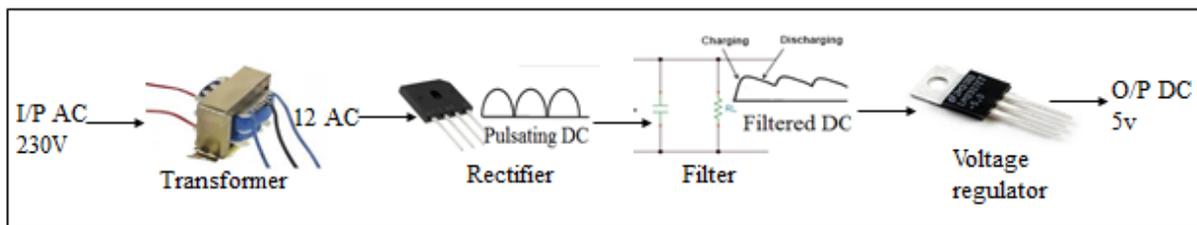
1. Regulated power supply.
2. PIC Microcontrollers.

3. Wi-Fi module.
4. FIRE sensor.
5. Buzzer.
6. Reset.
7. Crystal oscillators.
8. LED indicators.

### Software's used:

1. PIC-C compiler for Embedded C programming.
2. PIC kit 2 programmer for dumping code into Micro controller.
3. Express SCH for Circuit design.

### Regulated Power Supply:



### Block diagram:

## BLOCK DIAGRAM: Fire alarm Using IOT

