INDUSTRIAL SECURITY SYSTEM

ABSTRACT

Security is primary concern for everyone. There are many ways to provide security at homes or in industries. This Project describes a design of effective security alarm system that can monitor an industry by using various sensors for communication.

The project is designed and implemented in such a way that we interface various sensors such as smoke, fire and IR sensors to the microcontroller. The microcontroller continuously checks the status of the sensors. If anyone of the sensor activated by person or by fire or by smoke it displays the status data on the LCD and a buzzer interfaces to the controller serves the purpose of the alarm. So the people can alert by warning and can take further action.

This project uses regulated 5V, 500mA power supply. 7805 three terminal voltage regulator is used for voltage regulation. Full wave bridge rectifier is used to rectify the ac output of secondary of 230/12V step down transformer.

APPLICATIONS

- ➢ Industrial applications
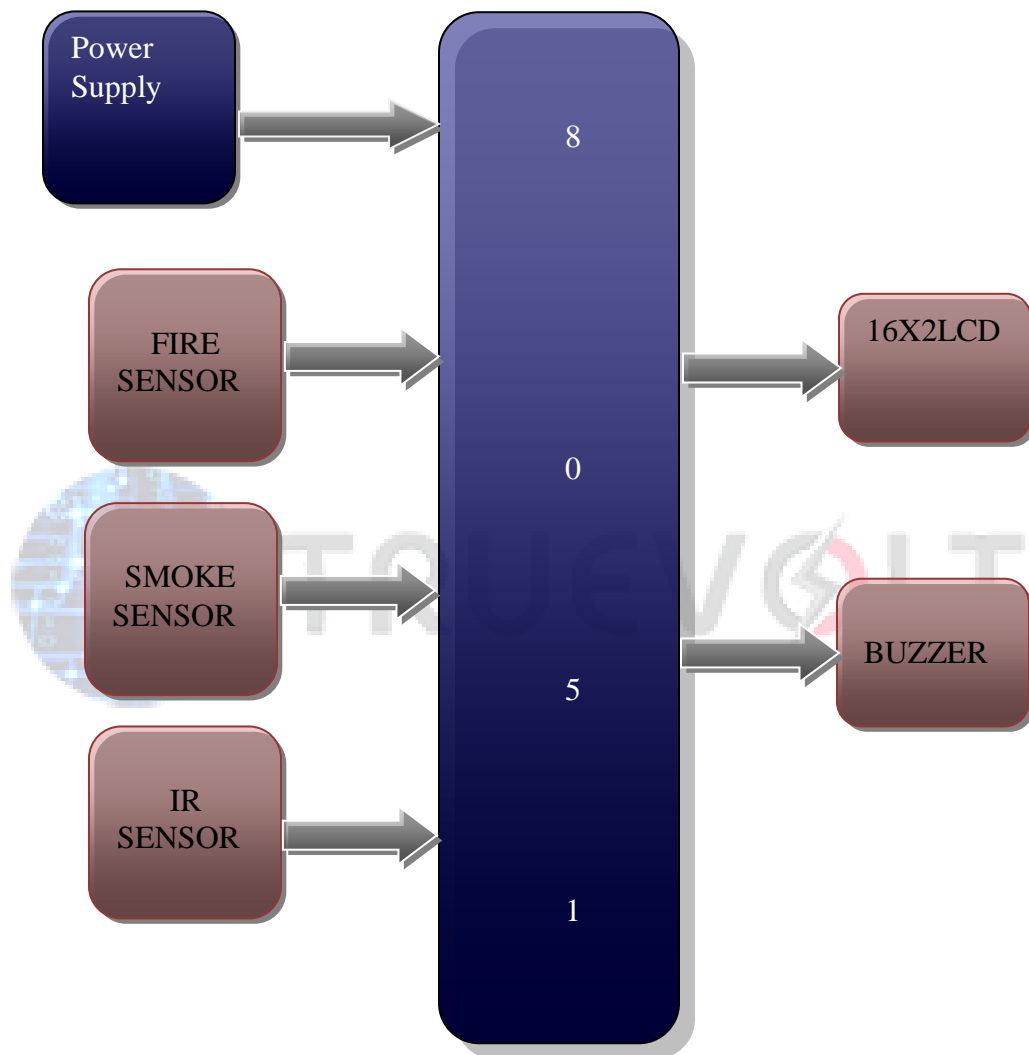- ➢ Household applications

BLOCK DIAGRAM:

```
┌──────────┐
│  Power   │────────▶┌──────────┐
│  Supply  │         │          │
└──────────┘         │    8     │
                     │          │
┌──────────┐         │          │
│  FIRE    │────────▶│          │────────▶┌──────────┐
│  SENSOR  │         │    0     │         │ 16X2LCD  │
└──────────┘         │          │         └──────────┘
                     │          │
┌──────────┐         │          │
│  SMOKE   │────────▶│          │
│  SENSOR  │         │    5     │────────▶┌──────────┐
└──────────┘         │          │         │ BUZZER   │
                     │          │         └──────────┘
┌──────────┐         │          │
│   IR     │────────▶│    1     │
│  SENSOR  │         │          │
└──────────┘         └──────────┘
```

POWER SUPPLY BLOCKDIAGRAM:

```
┌───────────┐   ┌───────────┐   ┌────────┐   ┌───────────┐   ┌────────┐
│ Step down │──▶│  Bridge   │──▶│ Filter │──▶│ Regulator │──▶│ Output │
│Transformer│   │ Rectifier │   │        │   │           │   │        │
└───────────┘   └───────────┘   └────────┘   └───────────┘   └────────┘
```