

PC Controlled Industrial Devices with 8-relay board

This aim of the project is to design a new economical solution of industrial devices control system using PC Hyper Terminal. Automation has created a lot of interest in human beings. This project is mainly intended to avoid manual switching of the industrial equipment. Most industries have faced the problem of electrical shocks to its employees while switching ON/OFF the high voltage industrial equipment. This system is capable of controlling and monitoring of 8-industrial electrical equipment like motors, fans etc., through PC.

This system consists of a Microcontroller which is heart of the project. The Microcontroller is programmed by using embedded C language such that it is capable of performing the task of the project.

The PC is interfaced to the Microcontroller through serial port with a line driver IC. Also, 8-electromagnetic relay switches to which electrical devices are to be connected is interfaced to the controller. The Microcontroller takes input from the PC through serial protocol and process this information and switches ON/OFF the appropriate relay. The monitoring on the status of the devices can be seen in the hyper terminal available on general purpose PC.

The features of the project are:

1. Easily switch from one electrical device to another.
2. Simple and reliable
3. Operating through PC.
4. Economical solution.

This project provides learning's of:

1. Interfacing PC with Microcontroller.
2. Interfacing Relay with the Microcontroller.
3. Microcontroller.
4. Conversion of AC supply to DC supply.
5. Interfacing Visual indicators to Microcontroller.

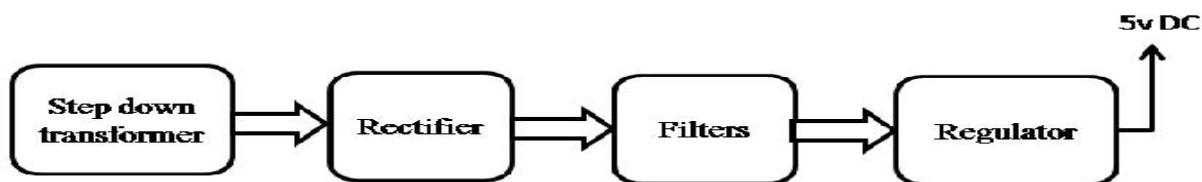
The major building blocks of this project are:

1. Regulated Power Supply.
2. Microcontroller.
3. Reset.
4. MAX 232.
5. Electromagnetic Relay with driver.
6. Crystal oscillator.
7. 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.
4. Proteus for hardware simulation.

Regulated Power Supply:



Block Diagram:

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