AUTOMATIC PLANT WATERING SYSTEM

ABSTRACT

Security is a prime concern in our day-today life. Everyone wants to be as much secure as possible. An access control for doors forms a vital link in a security chain. The microcontroller based digital lock for Doors is an access control system that allows only authorized persons to access a restricted area. The system is fully controlled by the 8 bit microcontroller AT89S52 which has a 8Kbytes of ROM for the program memory. The password is stored in the EPROM so that we can change it at any time. The system has a Keypad by which the password can be entered through it. When the entered password equals with the password stored in the memory then the motor gets activated so that the door is opened. If we entered a wrong password a buzzer is switched on and error is indicated. The user is required to entered the code again ater some delay

Working:

The step-down transformer converts the 230V ac to 12V AC. The output of the transformer is connected to bridge rectifier. It converts 12V ac to pulsating DC voltage. It is rectified with the help of capacitor filter so that ripples are removed and smooth DC voltage is obtained at the output. Microcontroller requires constant Dc voltage of +5Volts for its proper functioning. It is obtained using a positive constant voltage regulator 78XX.it provides constant voltage output irrespective of voltage variations at the input or load current.

There are 4 keys which are connected to the microcontroller ports. The microcontroller continuously scans the keys. When the user enters the key code the system compares the user’s input with the code stored in the memory. If there is a match it opens the door. The door opening is realized using a motor connected to the door. In case of error in code entry the access is denied and an audio indication of 3 beeps are generated. The user can enter the code again only after some delay.

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

BLOCK DIAGRAM



