



MOVEMENT SENSED AUTOMATIC DOOR

OPENING SYSTEM

ABSTRACT

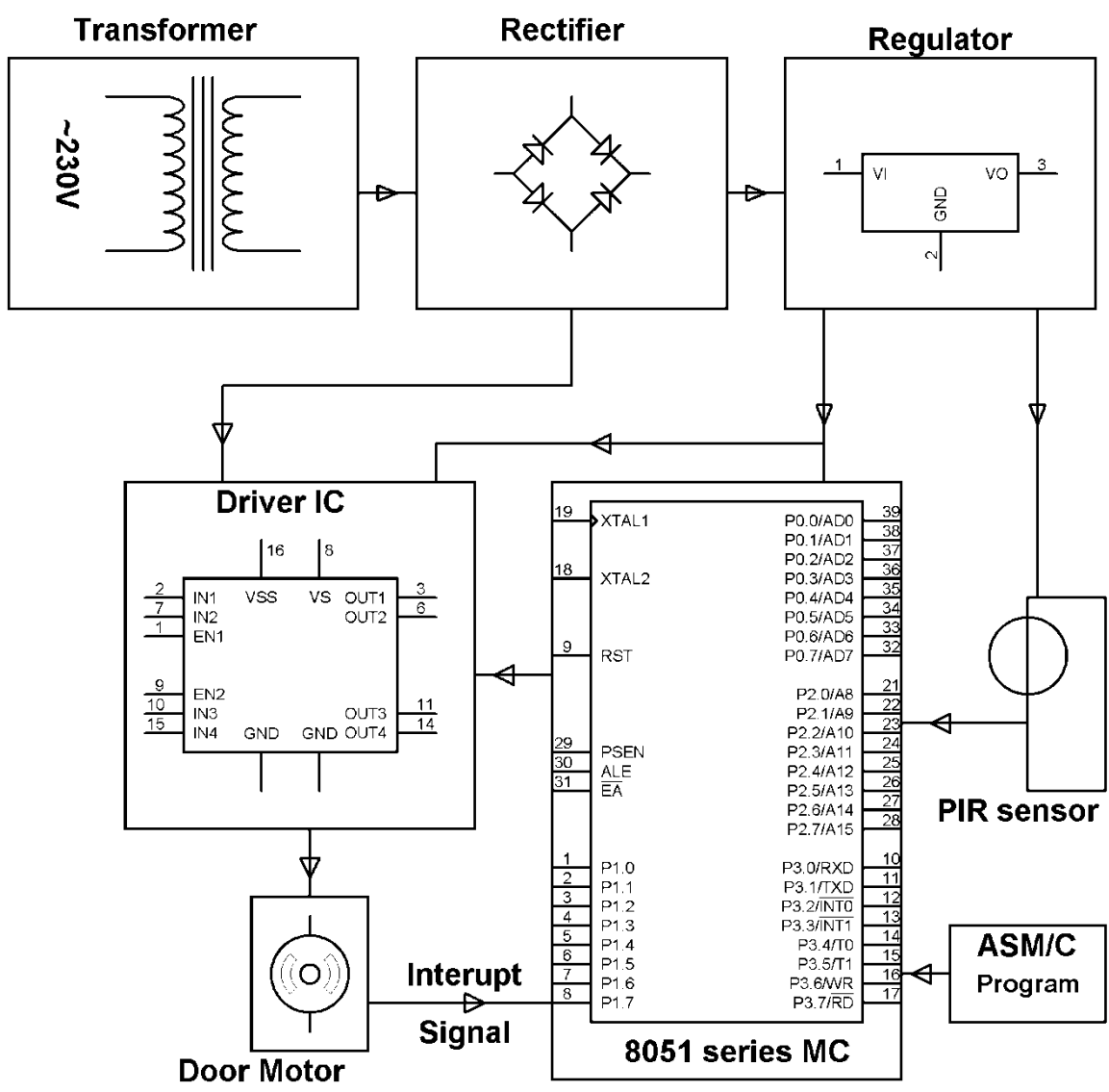
The project is designed for automatic door opening system using PIR sensor.

Opening and closing of doors is always a tedious job, especially in places like shopping malls, hotels and theatres where a person is always required to open the door for visitors.

This project proposes a system of automatic opening and closing of door by sensing any body movement near the door. This is achieved with help of a PIR (Passive Infrared) sensor. A live body generally emits infrared energy which is sensed by the PIR sensor from a considerable distance. This sensing signal is fed to a microcontroller to operate a door motor through motor driver IC. When a body approaches within the operating range of the sensor, it sends a logical command to open the door. The door automatically closes with a fixed time delay. If there is no further movement within the PIR operating range. Interrupt signals are used through limit switches to avoid locked rotor condition of the motor.



BLOCK DIAGRAM



HARDWARE REQUIREMENTS:

- 8051 series Microcontroller, Transformer, PIR sensor, Motor with sliding door, Motor Driver IC, Diodes, Resistors, Capacitors, Crystal, Transistor.

SOFTWARE REQUIREMENTS:

- Keil Compiler
- Language: Embedded C or Assembly.

