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# HEAT PROTECTION SYSTEM WITH THERMOSTAT

## ABSTRACT

This project is aimed to design a system to control the heating element in an industry to maintain constant temperature.

This project is designed on 8051 micro controller, the application of this projects falls in industrial thermal sections, where there is a need to automatically turn ON/OFF the heating element like heating coils or furnace, in this project we are using a thermostat to check the temperature value of the heating specimen. When the heat is more than the thermostat trips down automatically. The tripping down of the thermostat is considered as high temperature and a relay is triggered respectively, the relay drives the power for the heating element, when the element cools down then the thermostat automatically gets backs to its default position, and respectively the relay will turn ON and the heating element also in chain. An LCD is interfaced to the micro controller to display the status of the system. A buzzer is also connected to the system to indicate the high temperature condition.

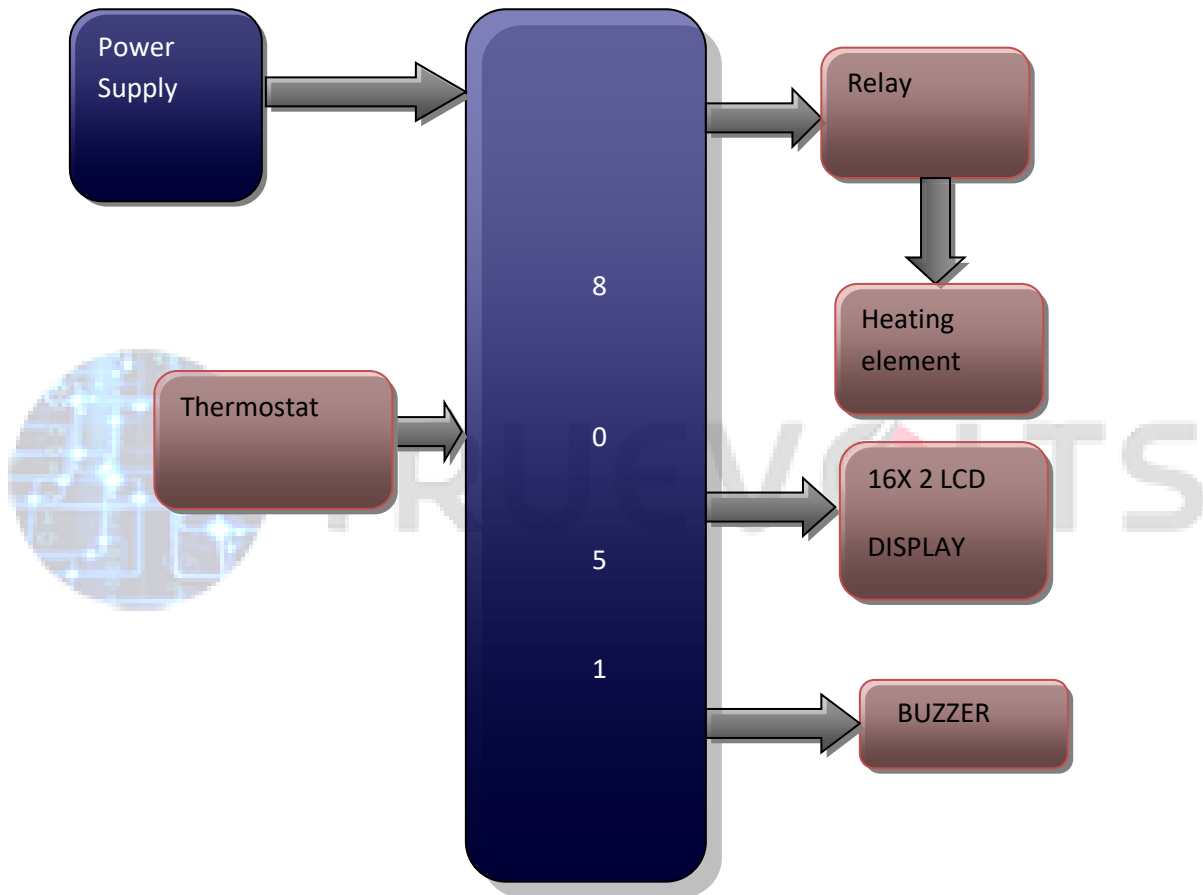
This project uses regulated 5V, 500mA power supply. Unregulated 12V DC is used for geared motor. 7805 three terminal voltage regulator is used for voltage regulation. Full wave bridge rectifier is used to rectify the ac output of secondary of 230/12V step down transformer.

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**APPLICATIONS:**

Automatic temperature control systems

**BLOCK DIAGRAM:**



**POWER SUPPLY BLOCK DIAGRAM**



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A1, 2<sup>nd</sup> FLOOR, EUREKA COURT, KS BAKERY BUILDING, OPP. R.S.BROTHERS LANE, AMEERPET,  
HYDERABAD, TELANGANA-500073.

Call: +91 9908665239

email: [info@truevolts.com](mailto:info@truevolts.com)

Website: [www.truevolts.com](http://www.truevolts.com)