**CONFIGURABLE PASSWORD BASED AUTHENTICATION ACCESS AND SECURITY SYSTEM**

**DESCRIPTION:**

Security is prime concern in our day-to-day life. Everyone wants to be as much as secure as to be possible. An access control systems forms a vital link in a security chain. The micro controller based digital lock presented here is an access control system that allows only authorized persons to access a restricted area. This system is best suitable for corporate offices, ATMs and home security.

The system comprises a small electronic unit with a numeric keypad interfaced to the microcontroller. An authorized person enters a predetermined password using the keypad. If the entered password is correct then relay should be turned ON to access the system and predefined messages will be displayed on LCD.

A buzzer is interfaced to the controller for audio indication. Whenever you pressed a wrong password on the numeric key pad, the system acknowledges the impression by a beep sound. This buzzer is driven by an NPN transistor. 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.

# TECHNICAL SPECIFICATIONS:

**HARDWARE:**

Micro controller : AT89x series

Crystal : 11.0592 MHz

LCD : HD44780

AT keypad

Relay

Buzzer

Power supply

Transformer : 12V step down

Filter : 1000uf/25V

Voltage Regulator : 7805, 7812

**SOFTWARE:**

Keil IDE

UC flash

Proteus

**APPLICATIONS:**

* Industrial applications
* Banks
* ATM centers

**BLOCK DIAGRAM:**

8

0 5

1

Relay

Power Supply

16X2LCD

Keypad

Buzzer

**POWER SUPPLY BLOCKDIAGRAM:**

Step down Transformer

Filter

Regulator

Output

Bridge Rectifier