

摘 要

在改革开放之前，我国的防盗门锁使用率非常低，使用的人群主要占少数。在改革开放后我国的防盗门锁产量以及使用量逐年上升，到 2000 年后我国的防盗门锁使用量已经达到数千万。海量信息存储卡的优势在于，它不仅作为一个关键，而且还包含了许多个人信息，特别是为金融行业识别行业的特点，以及多功能卡（如录入、锁定、存储、支付等）给持卡人带来方便。使用这种电子防盗锁时，你要小心保管好卡（即钥匙），特别是丢失的，必须尽快取消该卡的授权。

本系统由单片机系统（主要是单片机最小系统）、矩阵键盘、LCD1602 显示和报警系统等组成，除上述基本的密码锁功能外，依据实际的情况还可以添加遥控功能。本系统成本低廉，功能实用。用单片机作为控制器设计一个模拟家庭指纹密码锁，通过指纹射频模块来接受指纹判定是否能开锁成功。利用键盘模块来实现修改密码和开锁的结果。意义在于在设计的过程中，熟悉并掌握单片机的结构和使用方法，了解射频模块传感器的内部结构以及工作过程，将二者有机地结合起来，实现要求的结果。

关键词：单片机；矩阵键盘；LCD1602；密码锁

Abstract

In the day-to-day living and working in the residential sector and the safety precautions, units of paper files, financial statements, and some personal information to the preservation of more than locking the solution to the problem. If the use of traditional mechanical key to unlock, people often need to carry more keys, a very inconvenient to use, and after the loss of key security that is greatly reduced. With anti-theft alarm function instead of the password is less electronic lock, security, poor mechanical lock is an inevitable trend. With the continuous development of science and technology, in the daily lives of people on insurance safety devices increasingly demanding. To meet the requirements of the use of locks to increase their security, with a password instead of the password key lock came into being. Password lock is safe, low cost, low power consumption, easy to operate, Remember the password to unlock it , and other advantages.

At present the use of electronic locks are mostly based on microprocessor, main devices MCU, the encoder and decoder built into software.

SCM system from the system (Mainly AT89S51 microcontroller minimum system) , 4×4 Matrix keyboard, LCD display and alarm system, With the settings, modify the six user password, Ultra alarm, Ultra Lock, Password error alarm and other functions(P0 port to control the design of the LCD display, Password correctly display password ok! Password error display password error! For more than three times to enter the error automatically lock. The P1 port control keyboard matrix containing the number keys 0-9 and A-F function keys). In addition to the above basic password lock feature, based on the actual situation can also add a remote control functions. The system cost-effective, practical function. The system cost-effective, practical function

Keywords: Single chip microcomputer; Matrix keyboard; LCD1602;
password lock

目 录

摘要	I
Abstract	II
第 1 章 绪论	2
1.1 课题背景	2
1.2 研究课题的目的及意义	2
1.3 课题研究内容及技术指标	3
第 2 章 方案的论证与设计	4
2.1 系统方案论证	4
2.2 各模块选择分析	4
2.2.1 电源模块论证	5
2.2.2 论证	5
2.2.3 论证	错误!未定义书签。
2.2.4 论证	错误!未定义书签。
2.2.5 显示电路论证	错误!未定义书签。
2.3 最终方案的确定	5
2.4 方框图的设计	5
本章小结	6
第 3 章 单元电路设计	7
3.1 主控制器	7
3.1.1 复位电路设计	8
3.1.2 时钟电路设计	8
3.2	8
3.2.1	错误!未定义书签。
3.2.2	错误!未定义书签。
3.2.3 电路设计	错误!未定义书签。
3.3	9

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