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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 21564.3-2008

**Message formats and protocols for serial data interfaces in
alarm transmission systems -- Part 3: Common data link layer
protocol**

报警传输系统串行数据接口的信息格式和协议 第3部分：公用数据链路层协议
(English Translation)

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Foreword

GB/T 21564 "for serial data interfaces in alarm transmission systems of information formats and protocols" is divided into five parts.

- Part 1. General;
- Part 2. Common application layer protocol;
- Part 3. Common data link layer protocol;
- Part 4. Public transport layer protocol;
- Part 5. data interfaces.

This section GB/T 21564 Part 3.

The partial modification adopts the International Electrotechnical Commission IEC 60839-7-3:2001 (in English).

For ease of use, this section made the following changes.

- On the "restart time" to increase the annotation, easy to understand and use;
- For "Master Slave Initialization" Note added, suggesting that it plays a major role model;
- Remove the original IEC foreword, an increase of introduction.

This section of Appendix A normative appendix.

This part of the National Security Alarm System Standardization Technical Committee

(SAC/TC100) and proposed centralized.

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Introduction

Serial data communication is the main variety of communication model manifestations.

This section is based on the earlier point RS-232 and RS-485 communication model multipoint serial communication bus model developed of. Therefore, broadband applications and wireless transmission is currently being widely used not been detailed presentation, only in some links and comments given prompt.

Although the communication rate model This section gives slower, but the data transfer control theory and modern types of broadband applications and wireless applications Use is the same, so this part has a very good guide for alarm product designers, planners user alarm systems and alarm systems, etc.

The role and significance of the demonstration.

By the ITU-TV. 24 and ITU-TV. 28 provisions of the common interface, it is currently familiar EIA-RS232 interface, which is suitable for synchronous and asynchronous serial binary data exchange system, the interconnection between data terminal equipment serial interface protocol is an unbalanced Duplex digital baseband communication interface. The interface is mainly applied to low transmission rate, transmission distance close to the case.

By the ISO/IEC 8482:1993 specified interfaces, it is currently familiar EIA-RS485 interface, which is also applicable for synchronous and Asynchronous serial binary data exchange system, the interconnection between data terminal equipment serial interface protocol. But it is a balanced (differential Type) half duplex digital baseband communication interface. The interface can support more distant communication, and may support time division multiplexed bus type communication between machines Communications.

By the ITU-TV. Interface 23 definition, is a similar serial communication interface specification EIA-RS232 duplex digital modulation band access mouth. It can be used on more distant point to point communication telephone system.

In this section, the originator of the communication is defined alarm host, alarm responder communication is defined as a slave. It differs from the alarm system Concepts. Alarm systems, alarms and alarm from the host machine is mainly from a management point of view to illustrate the significance of its existence. As part of this be sure to distinguish between the two users the appropriate concept similarities and differences. in the alarm system, a warning alarm from the machine either as a host of the respondents from Alarm transmission system from the machine, but it also can be connected to the lower bus

alarms and alarm from the machine to the next level and become an alarm transmission systems Host. Other concepts have a similar situation, please pay attention to discrimination in order to avoid confusion.

As one of the important technical indicators alarm system --- alarm response time is clearly defined in other related standards. This section is no longer Make this new definition, but it is recommended users to understand the alarm event to occur between the terminal device receives and displays information about alarms, or Local people's duty to obtain the time interval between the alarm as an alarm response time test basis. Since the transmission of alarm transmission systems Lose one alarm response time delay is an important aspect, so this part of the recommendation of the user of this part of the transmission system can transmit alarm Force given proper assessment to ensure the realization of the final system specifications.

Serial data communication There are many ways, such as wired and wireless (local area private network, WLAN, public -GSM, CDMA, etc.) mode, low-speed and High-speed (xDSL) mode, low to high interference immunity (CANBUS) way, one-way communication and two-way communication (CANBUS, LON-WORKS and Ethernet) mode and so on. This part digital baseband communications mode at low speed and anti-jamming hardware model to a master Machine with one or more machines from a simple query response between the protocols described algorithm based alarm transmission systems serial data communications. this agreement it supports point-to-multipoint operation. It does not support multi-point operation between, but simple router to support host-slave to slave Information transfer between.

Alarm transmission system for serial data interfaces Message formats and protocols Part 3. Common data link layer protocol

1 Scope

This section GB/T 21564 specifies the alarm when the transmission network transmission system does not provide a standard protocol, the standard serial data the data link layer information structure, format and transmission interface should be used, so you can ensure compatibility between different vendors' equipment.

This section applies to the transmission of alarm messages sent to and/additional information from intrusion, fire, access control and alarm system of social Transmission, and to/from the transmission of information to other similar systems.

The only part of a serial data communication, for example, to a host with one or more machines from a simple query response algorithm between the groups Description foundation. The protocol supports point-to-multipoint operation. It does not support multi-point operation between the host but supports a simple route the transmission of information from the machine to a slave.

This agreement comply with the recommendations of the OSI layer protocol to allow flexibility in the physical layer applications.

2 Normative references

The following documents contain provisions which, through reference GB/T 21564 in this section constitute provisions of this section. For dated reference documents Member, all subsequent amendments (not including errata content) or revisions do not apply to this section, however, encouraged to reach under this section Parties to research agreement to use the latest versions of these documents. For undated reference documents, the latest versions apply to this section.

GB/T 21564.1-2008 serial data interfaces in alarm transmission systems of information formats and protocols - Part 1. General (IEC 60839-7-1:2001, MOD) General requirements for systems (IEC 60839-5-1.. GA/T 600.1-2006 requirements for alarm transmission systems - Part 1 1991, IDT)

3 Terms and Definitions

Terms and definitions GB/T 21564.1 established in this section apply to GB/T 21564 of.

4 Abbreviations

GB/T 21564.1 established abbreviations apply to this part of the GB/T 21564 of.

5 Overview

The basic protocol is used in the query response, the host only one. When there are multiple slave host the order of queries each slave.

Format the information to be transmitted into one or more data links of data blocks, transferred to a specified destination.

Each data link transmission data block must be clearly identified before the data block in the data transmission link next.

6 Data Link data block

Data link transmission information structure will be the following.