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

GB/Z 29619.3-2013

**Digital data communication for measurement and control --
Fieldbus for use in industrial control systems -- Type 8:
INTERBUS specification -- Part 3: Data Link service definition
(English Translation)**

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Foreword

GB/Z 29619 "Measurement and Control Digital Data Communications Industrial Control Systems Fieldbus Type 8. INTERBUS Specification" Former divided into the following six sections.

- Part 1. Overview;
- Part 2. Physical layer specification and service definition;
- Part 3. Data Link Service Definition;
- Part 4. Data link protocol specification;
- Part 5. Application layer service definition;
- Part 6. Application layer protocol specification.

This section GB/Z 29619 Part 3.

This section drafted in accordance with the rules given GB/T 1.1-2009 and GB/T 20000.2-2009.

GB/Z 29619 modified using IEC 61158:2003 "Measurement and Control Digital Data Communications Industrial Control Systems Fieldbus" Part of the content, no adjustment in the technical content, the structure is divided into 6 parts to meet the needs of different users to use alone.

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

a) According to the actual use of our country, in accordance with the provisions of GB/T 1.1-2009, the original text was edited editorial changes the content of surgery is exactly the same

b) reference to the original text of other international standards have been adopted or modified as our standard, this part of our standard number instead Corresponding to the international standard number, the rest have not been the same or modified to use as our standard international advanced standards, are in this section Direct reference.

This part is proposed by China Machinery Industry Federation.

This part of the National Industrial Process Measurement and Control Standardization Technical Committee (SAC/TC124) centralized.

This part of the drafting unit. Machinery Industry Instrumentation Technology and Economy Institute, Tsinghua University, Southwest University, Beijing Iron and Steel Design and Research General Hospital, Shanghai Automation Instrumentation Co., Ltd., Shanghai Institute of Industrial Automation Instrumentation, Nanjing Phoenix Contact Electric Co., Ltd.

Introduction

INTERBUS is a digital serial communication system used in control systems (such as programmable logic controllers) and industrial sensors and actuators Communication between field devices. These devices include simple limit switches and valves, as well as measurement sensors, measurement transmitters and actuators, and also can include sophisticated high-tech control systems such as controllers that control drive, torque, and process.

This section describes the data link service (DL-service), which is closely related to other parts of GB/Z 29619. GB/Z 29619 Defined by the "three-layer" reference model of a fieldbus based on a partially open system interconnection basic reference model. Two reference modes for ease of management Type will be broken down into a series of standard interconnection standards layer.

Data Link Protocol (see GB/Z 29619.4) The use of the physical layer (see GB/Z 29619.2) services to provide data link services. Headquarters the INTERBUS technical specification defines data link service features that can be directly used by higher level protocols. Close between layers See Figure 1.

1 Figure, data link layer and other layers of the relationship

The term "service" refers to the abstraction provided by a layer of the OSI basic reference model for its immediately preceding layer. because this, data link services in this standard is a conceptual architecture services, it is not directly related to the management and implementation.

Measurement and control of digital data communications industrial control systems with the fieldbus type 8.INTERBUS specification Part 3. Data Link Service Definition

1 Scope

This section GB/Z 29619 in an abstract way to define the external visual services provided by the INTERBUS data link layer, it by Help

- a) Service primitive actions and events;
- b) primitive actions and event-related parameters and the format they use;
- c) the relationship between actions and events and their effective order.

The purpose of this section is to define the services provided by the following two items.

- 1) INTERBUS application layer at the interface between the application layer and the data link layer;
- 2) System management at the interface between the data link layer and the system management of the fieldbus reference model.

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version applies to this article Pieces. For undated references, the latest edition (including all amendments) applies to this document.

GB/T 9387.1-1998 Information technology - Open Systems Interconnection basic reference model Part 1. Basic model (idtISO /IEC 7498-1:1994) GB/T 9387.3-2008 Information technology - Open Systems Interconnection Basic Reference Model Part 3. Naming and addressing (ISO/IEC 7498-3:1997, IDT) GB/T 17547-1998 Information technology - Open Systems Interconnection Data Link Service Definition (idtISO /IEC 8886:1996) GB/T 17967-2000 Information Technology Open Systems Interconnection basic reference model OSI service definition convention (idtISO /IEC 10731:1994) GB/Z 29619.4 Measurement and control of digital data communications Fieldbus type for industrial control systems 8. INTERBUS specification Part 4. Data Link Protocol Specification (GB/Z 29619.4-2013, IEC 61158:2003, MOD)