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

GB/Z 29619.5-2013

**Digital data communication for measurement and control -- Fieldbus for
use in industrial control systems -- Type8: INTERBUS specification --
Part 5: Application Layer 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 6 parts.

- 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 5.

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 the international standards are the same or modify the use of our standard with our national standard number instead of the corresponding international Standard number, the rest have not been the same or modified to use as our standard international advanced standards, are referenced in this section.

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.

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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 INTERBUS application service (ALservice), also involves other parts of GB/Z 29619, these in the "base it is defined in the "three-layer" fieldbus reference model of the Open Systems Interconnection Reference Model.

Application layer service is based on the application layer protocol (see GB/Z 29619.6-2013) to use the data link layer or by any other direct low Layer protocol used, this section defines the application layer service features, this feature can be used by any direct high-level protocols. Between different layers the relationship shown in Figure 1.

1 Figure, the relationship between the application layer and other layers

Note: System management called by GB/Z 29619 has limitations with management protocols.

Measurement and control of digital data communications industrial control systems with the fieldbus type 8.INTERBUS specification Part 5. Application layer definition of service

1 Scope

GB/Z 29619 provisions of this part of the INTERBUS Fieldbus Application Layer (FAL) structure and service, which is related with the OSI Basic Reference the test model (GB/T 9387.3-2008) and the OSI application layer structure (GB/T 17176-1997) are consistent.

Application layer services and protocols are provided by the application entity (AE) in the application process. AE is a set of object-oriented application services Element (ASE) and Management AE's Layer Management Entity (LME). ASE provides communication services and relies on a set of related application process pairs Like (APO) class to operate. One of the ASEs is the Management ASE, which provides a common set of management services for instances of the AL class.

This section specifies the interaction between remote applications, with the help of.

--- Users through the FAL service, define the application of resources (objects) used by the abstract model;

--- each application layer service-related primitives (fieldbus application layer and its user interaction);

- Parameters associated with each primitive;
- Effective order for each service primitives and their relationship to each other.

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 (idt ISO/IEC 7498-3:1997) GB/T 15695-2008 Information Technology - Open Systems Interconnection Represents Service Definition (idtISO 8822.1994) GB/T 16262-1996 Information Processing Systems Open Systems Interconnection Abstract Syntax Notation One (ASN.1) Specification (idtISO 8824.1990) GB/T 17176-1997 information technology open system interconnection application layer structure (idtISO /IEC 9545:1994) GB/T 17967-2000 Information Technology Open Systems Interconnection basic reference model OSI service definition convention (idtISO /IEC 10731:1994) Measurement and control of digital data communications - Fieldbus type 8 for industrial control systems.

INTERBUS Specification Part 3. Data Link Service Definition Measurement and control of digital data communications - Fieldbus type 8 for industrial control systems.

INTERBUS Specification Part 4. Data Link Protocol Specification Measurement and control of digital data communications - Fieldbus type 8 for industrial control systems.

INTERBUS specification Part 6. Application layer protocol specification

3 Terms and definitions

The following terms and definitions apply to this document.