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

GB/T 17215.662-2018

Replacing GB/T 19882.32-2007

**Electricity metering data exchange -- The DLMS/COSEM suite --
Part 62: COSEM interface classes**

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Foreword

GB/T 17215 "AC measuring equipment" is divided into several parts, GB/T 17215.6 "Electrical measurement data exchange DLMS/COSEM

Components are divided into the following sections.

- Part 10. Intelligent Measurement Standardization Framework;
- Part 11. DLMS/COSEM communication configuration standard template;
- Part 31. Local area network use based on twisted pair carrier signals;
- Part 46. Data link layer using HDLC protocol;
- Part 47. DLMS/COSEM transmission layer based on IP network;
- Part 53. DLMS/COSEM application layer;
- Part 61. Object Identification System (OBIS);
- Part 62. COSEM interface class;
- Part 73. Wired and wireless M-Bus communication configurations for local and community networks;
- Part 76. HDLC-based connection-oriented three-layer communication configuration;
- Part 91. Communication configuration using the WEB service to access the COSEM server via CAS;
- Part 97. Communication configuration based on TCP-UDP/IP network.

This part is the 62nd part of GB/T 17215.6.

This part is drafted in accordance with the rules given in GB/T 1.1-2009.

This part replaces GB/T 19882.32-2007 "Automatic Meter Reading System Part 3-2. Application Layer Data Exchange Protocol Interface Class",

See Appendix NA for major technical changes compared to GB/T 19882.32-2007.

This section uses the translation method equivalent to IEC 62056-6-2:2017 "Electrical Measurement Data Exchange DLMS/COSEM Component Section 6-2

Part. COSEM Interface Class.

The documents of our country that have a consistent correspondence with the international documents referenced in this part are as follows.

---GB/T 12406-2008 Code representing currency and funds (ISO 4217:2001, IDT);

--- GB/T 19897.1-2005 Automatic meter reading system low-level communication protocol - Part 1. Direct local data exchange (IEC 62056-21:2002, MOD).

This section has made the following editorial changes.

--- The standard name was changed from part 6-2 to part 62;

--- Increase the main technical changes in Appendix NA (informative appendix) and each version.

Introduction

The third edition of IEC 62056-6-2 has been prepared by IEC TC13WG14, IEC TC13WG14 for the DLMS User Association and its

Type D contact partners have made significant contributions.

This version complies with the DLMSUA Blue Book version 12.2. The main new feature is the "Arraymanager" IC, "Compactdata" IC

1st edition, 1st edition of "GSMdiagnostic" IC, "LTEmonitoring" IC, "NTPsetup" IC, HS-PLC setting IC and phase

Off the new OBIS code.

Object modeling and data identification

Business needs of energy market participants (usually in a liberalized, competitive environment) and effective management of natural resources and

Driven by the will of consumers, utility meters have become part of a comprehensive metering, control and billing system. The meter is no longer

A simple data logging device, but relying on communication capabilities. System integration ease, interoperability and data security are important

Required requirements.

COSEM, a companion specification for energy metering, that responds to these by using

the instrument as part of a complex measurement and control system

challenge. The meter needs to be able to transfer measurements from the metering point to the business layer that uses them. It also needs to be able to provide letters to consumers

Interest, manage consumption, and ultimately be able to generate locally.

COSEM uses object modeling technology to model all the functions of the meter without having to assume which features need support, such as

The above requirements are achieved by how to implement these functions and how to transfer data. The formal specification of the COSEM interface class constitutes

The main part of COSEM.

In order to process and manage information, all data items need to be uniquely identified in a manner that is independent of the manufacturer. OBIS (object identification system)

The definition of the system is another important part of COSEM. It is based on DIN 43863-3:1997 "Electrical Energy Meter Part 3. as

Rate metering device (EDIS) energy data identification system for electric energy meter attached equipment. The OBIS code set has been greatly expanded over the years to

New needs.

COSEM models utility meters as server applications (see 4.7) used by client applications, through COSEM

Controlled access to the object retrieves meter data in the client application, provides control information to the meter, and triggers known actions within the meter.

The client acts as a third-party agent, the business process of the energy market participants.

The standardized COSEM interface classes form an extensible library. Manufacturers use the elements of the library to design to meet various requirements

product.

The server provides a way to retrieve the supported functionality, the instantiated COSEM object. These objects can be organized into logical devices

Connect with the app and provide specific access to various clients.

The concept of a standardized interface library provides diversity for different users and manufacturers while ensuring interoperability.

The International Electrotechnical Commission (IEC) draws attention to the fact that compliance with this document may involve the use of patents relating to image transmission procedures.

The IEC has no position on the evidence, validity and scope of the patent.

The holder of the patent has assured the IEC that he/she is willing to offer free or reasonable and non-discriminatory terms to applicants around the world.

And conditional negotiation licenses. In this regard, the patent holder's statement has been registered with the IEC . Information can be obtained from Itron, Inc.,

Obtained by LibertyLake, Washington, USA.

1 Scope

This part of GB/T 17215.6 specifies a meter model as seen from the communication interface. Define an object using an object-oriented approach

Use components to model the instrument from simple functions to very complex functions in the form of interface classes.

Appendix A ~ Appendix F (both informative) provides additional information related to some interface classes.

2 Normative references

The following documents are indispensable for the application of this document. 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 15629.2-2008 Information technology systems - Telecommunications and information exchange - Particular requirements for local and metropolitan area networks

Part 2. Logical Link Control (ISO /IEC 8802-2.1998, IDT)

GB/T 17215.631-2018 Electrical measurement data exchange DLMS/COSEM components - Part 31. s.

LAN use of signals (IEC 62056-3-1.2013, IDT)

Note. This version is referenced in the interface class "IEC Twisted Pair (1) Settings" (class_id. 24, version. 1).

GB/T 17215.646-2018 Electrical measurement data exchange DLMS/COSEM components - Part 46. Based on HDLC

Data link layer (IEC 62056-4-6.2002, IDT)

GB/T 17215.653-2018 Electrical measurement data exchange DLMS/COSEM components Part 53. DLMS/COSEM