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**NATIONAL STANDARD OF THE  
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**Electricity metering data exchange - The DLMS/COSEM suite -  
Part 82: Mesh communication profile for neighbourhood  
networks**

电测量数据交换 DLMS/COSEM组件 第82部分：社区网络Mesh通信配置  
**(English Translation)**

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## Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part 1: Structure and drafting rules for standardization documents" Drafting.

This document is part 82 of GB/T (Z) 17215.6 "DLMS/COSEM component for electrical measurement data exchange".

The following parts have been published.

- Part 10: Standardized framework for intelligent measurement;
- Part 11: Template for DLMS/COSEM communication configuration standard;
- Part 31: Use of local area networks based on twisted pair carrier signals;
- Part 46: Data link layer using HDLC protocol;
- Part 47: DLMS/COSEM transport layer based on IP networks;
- Part 51: Application layer protocol;
- Part 52: Communication protocol management distribution line message specification (DLMS) server;
- Part 53: DLMS/COSEM application layer;
- Part 61: Object Identification System (OBIS);
- Part 62: COSEM interface class;
- Part 69: Common Information Model Message Set (IEC 61968-9) and DLMS/COSEM (IEC 62056) data model and coordination Mapping between proposals;
- Part 73: Wired and wireless M-Bus communication configurations for local and community networks;
- Part 75: Local data transmission configuration for local network (LN);
- Part 76: Connection-oriented layer 3 communication configuration based on HDLC;
- Part 82: Community Network Mesh Communication Configuration;
- Part 86: Community network high-speed PLC ISO /IEC 12139-1 configuration;
- Part 91: Communication using Web services to access DLMS/COSEM servers via

## COSEM Access Service (CAS)

--- Part 97: Communication configuration based on TCP-UDP/IP network.

This document is equivalent to IEC TS62056-8-20:2016 "Electrical measurement data exchange DLMS/COSEM components Part 8-20

The file type is adjusted from IEC technical specifications to my country's national standardization guidance technology..

The following minimal editorial changes have been made to this.

--- To coordinate with the existing standard, the name of the standard is changed to "Electrical Measurement Data Exchange DLMS/COSEM Components Part 82.

Community Network Mesh Communication Configuration";

--- The original text does not have the introduction to informative Appendix A. The introduction to Appendix A is added in 5.5.3.1.

## Introduction

At present, energy conservation, emission reduction, low carbon, environmental protection and the establishment of a sustainable society have become a global consensus. management system to promote efficient and scientific use of energy. On this basis, IEC /TC57 (power system management and related information exchange), TC13 (Electric Energy Measurement and Control) and EN/TC294 (Instrument Communication Systems) jointly established the DLMS/COSEM Energy Measurement System Transmission System.

The electrical energy part is completed by IEC 62056 (all parts), and the non-electrical energy part is completed by EN 13757 (all parts).

In order to establish a global unified and open interoperability, countries around the world have successively converted IEC 62056 into their own national standards.

GB/T 17215 "Alternating Current Measuring Equipment" is divided into several parts, GB/T 17215.6 "Electrical Measurement Data Exchange DLMS/COSEM Group The document is planned to consist of 27 parts.

--- Part 10: Intelligent measurement standardization framework. The purpose is to understand the relevant aspects of this series of standards architecture, interoperability, information security, etc. information.

--- Part 11: Template for DLMS/COSEM communication configuration standard. The purpose is to establish the communication configuration standard to follow template.

--- Part 31: Use of local area networks based on twisted pair carrier signals. The purpose is to use local area networks using twisted pair carrier signals to comply with specifications.

--- Part 41: Data exchange using wide area networks. Public switched telephone network (PSTN) with LINK protocol.

--- Part 42: Physical layer service process for connection-oriented asynchronous data exchange. The purpose is to establish the physical layer service process for asynchronous data exchange.

The layer connection process should follow the specifications.

--- Part 46: Data link layer using HDLC protocol. The purpose is to use the HDLC asynchronous communication protocol suite to follow the data Link layer specifications.

--- Part 47: DLMS/COSEM transport layer based on IP network.

--- Part 51: Application layer protocol. The purpose is to provide the transport layer and metering equipment communication architecture described in DL/T 790.441 Application layer.

--- Part 52: Communication protocol management distribution line message specification (DLMS) server. The purpose is to provide IEC 62056-31, The protocol management DLMS server of IEC 62056-41 and IEC 62056-51 is consistent with and different from DL/T 790.441.

--- Part 53: DLMS/COSEM application layer. The purpose is to give the application of DLMS/COSEM client and server Layer structure, services and protocols.

--- Part 58: Smart Message Language (SML). The purpose is to give an XML-based grammar for constructing SML for use in TCP/IP Internet language.

--- Part 61: Object Identification System (OBIS). The purpose is to specify unique identifiers for data in electrical measuring equipment.

--- Part 62: COSEM interface class. The purpose is to specify the instrument model and build the instrument function in the form of interface class.

--- Part 69: Common Information Model Message Set (IEC 61968-9) and DLMS/COSEM (IEC 62056) data model and coordination The purpose is to provide the mapping between CIM and DLMS/COSEM required for information exchange with the master ERP.

--- Part 73: Wired and wireless M-Bus communication configuration for local and community networks. The purpose is to use wired and wireless M-bus The model follows the specification.

--- Part 75: Local data transmission configuration for local network (LN). The purpose is to use the specifications followed by the local network mode.

--- Part 76: Connection-oriented layer 3 communication configuration based on HDLC.

--- Part 82: Community Network Mesh Communication Configuration. The purpose is to use