

INTERNATIONAL STANDARD

IEC
62056-61

Second edition
2006-11

Electricity metering – Data exchange for meter reading, tariff and load control

Part 61: Object identification system (OBIS)

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**ELECTRICITY METERING – DATA EXCHANGE
FOR METER READING, TARIFF AND LOAD CONTROL –****Part 61: Object identification system (OBIS)**

FOREWORD

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The International Electrotechnical Commission (IEC) draws attention to the fact that it is claimed that compliance with this International Standard may involve the use of a maintenance service concerning the stack of protocols on which the present standard IEC 62056-61 is based.

The IEC takes no position concerning the evidence, validity and scope of this maintenance service.

The provider of the maintenance service has assured the IEC that he is willing to provide services under reasonable and non-discriminatory terms and conditions with applicants throughout the world. In this respect, the statement of the provider of the maintenance service is registered with the IEC. Information – see also 5.1 – may be obtained from:

DLMS¹ User Association
Geneva / Switzerland
www.dlms.ch

International Standard IEC 62056-61 has been prepared by IEC technical committee 13: Equipment for electrical energy measurement and load control.

¹ Device Language Message Specification

This second edition cancels and replaces the first edition published in 2002 and constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

- some parts of the “Manufacturer specific” ranges have been changed to “Reserved” to open code space for future standard code purposes;
- “Utility specific” ranges have been allocated;
- “Consortia specific” codes similar to “Country specific” codes have been introduced;
- a table explaining the rules for “Manufacturer specific”, “Country specific” and “Consortia specific” codes has been added;
- new time integral types of quantities have been added, some definitions have been clarified;
- new OBIS codes to identify transformer and line loss quantities, voltage dips, power failures, statuses, etc. have been added;
- some list objects and profiles may be now abstract or electricity related;
- a second billing period counter mechanism has been added and the description of handling value group F has been amended.

The text of this standard is based on the following documents:

FDIS	Report on voting
13/1388/FDIS	13/1395/RVD

Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

The committee has decided that the contents of this publication will remain unchanged until the maintenance result date indicated on the IEC web site under "<http://webstore.iec.ch>" in the data related to the specific publication. At this date, the publication will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

A bilingual version of the publication may be issued at a later date.

INTRODUCTION

The competitive electricity market requires an ever-increasing amount of timely information concerning the usage of electrical energy. Recent technology developments enable to build intelligent static metering equipment, which is capable of capturing, processing and communicating this information to all parties involved.

For further analysis of this information, for the purposes of billing, load, customer and contract management, it is necessary to uniquely identify all data in a manufacturer independent way, collected manually or automatically, via local or remote data exchange.

The definition of identification codes is based on DIN 43863-3:1997.

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ELECTRICITY METERING – DATA EXCHANGE FOR METER READING, TARIFF AND LOAD CONTROL –

Part 61: Object identification system (OBIS)

1 Scope

The Object Identification System (OBIS) defines the identification codes (ID-codes), for commonly used data items in electricity metering equipment. This part of IEC 62056 specifies the overall structure of the identification system and the mapping of all data items to their identification codes.

OBIS provides a unique identifier for all data within the metering equipment, including not only measurement values, but also abstract values used for configuration or obtaining information about the behaviour of the metering equipment. The ID codes defined in this standard are used for the identification of

- logical names of the various instances of the interface classes, or objects, as defined in IEC 62056-62;
- data transmitted through communication lines, see Clause 11,
- data displayed on the metering equipment, see Clause A.2

This standard applies to all types of electricity metering equipment, such as fully integrated meters, modular meters, tariff attachments, data concentrators, etc.

To cover metering equipment measuring energy types other than electricity, combined metering equipment measuring more than one type of energy or metering equipment with several physical measurement channels, the concepts of medium and channels are introduced. This allows meter data originating from different sources to be identified. While this standard fully defines the structure of the identification system for other media, the mapping of non-electrical energy related data items to ID codes needs to be completed separately.

NOTE EN 13757-1 defines identifiers for metering equipment other than electricity: heat cost allocators, cooling, heating, gas, cold water and hot water.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 60050-300:2001, *International Electrotechnical Vocabulary (IEV) – Electrical and electronic measurements and measuring instruments – Part 311: General terms relating to measurements – Part 312: General terms relating to electrical measurements – Part 313: Types of electrical measuring instrument – Part 314: Specific terms according to the type of instrument*

IEC 61000-2-8:2002, *Electromagnetic compatibility (EMC) – Part 2-8: Environment – Voltage dips and short interruptions on public electric power supply systems with statistical measurement results*

IEC 62051:1999, *Electricity metering – Glossary of terms*

IEC 62051-1:2004, *Electricity metering – Glossary of terms – Part 1: Terms related to data exchange with metering equipment using DLMS/COSEM*

IEC 62053-23:2003, *Electricity metering equipment (a.c.) – Particular requirements – Part 23: Static meters for reactive energy (classes 2 and 3)*

IEC 62056-21:2002, *Electricity metering – Data exchange for meter reading, tariff and load control – Part 21: Direct local data exchange*

IEC 62056-62 Ed. 2:2006, *Electricity metering – Data exchange for meter reading, tariff and load control – Part 62: Interface classes*