

#### SLOVENSKI STANDARD SIST EN 62056-6-1:2018

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SIST EN 62056-6-1:2017

Izmenjevanje podatkov za odbiranje stanja števcev - Sestav DLMS/COSEM - 6-1. del: Sistem za prepoznavanje objektov (OBIS)

Electricity metering data exchange - The DLMS/COSEM suite - Part 6-1: Object Identification System (OBIS)

Datenkommunikation der elektrischen Energiemessung - DLMS/COSEM - Teil 6-1: COSEM Object Identification System (OBIS)

Echange des données de comptages de l'électricité elle suite DLMS/COSEM - Partie 6-1: Système d'identification/des objets (OBIS) tandards/sist/5f831247-5a86-4913-aaef-e895c3fc193c/sist-en-62056-6-1-2018

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91.140.50	Sistemi za oskrbo z elektriko	Electricity supply systems

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EUROPEAN STANDARD NORME EUROPÉENNE EN 62056-6-1

EUROPÄISCHE NORM

December 2017

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Supersedes EN 62056-6-1:2016

#### **English Version**

# Electricity metering data exchange - The DLMS/COSEM suite - Part 6-1: Object Identification System (OBIS) (IEC 62056-6-1:2017)

Échange des données de comptage de l'électricité - La suite DLMS/COSEM - Partie 6-1: Système d'identification des objets (OBIS) (IEC 62056-6-1:2017) Datenkommunikation der elektrischen Energiemessung -DLMS/COSEM - Teil 6-1: COSEM Object Identification System (OBIS) (IEC 62056-6-1:2017)

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Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CENELEC member.

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#### SIST EN 62056-6-1:2018

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CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

#### EN 62056-6-1:2017 (E)

#### **European foreword**

The text of document 13/1745/FDIS, future edition 3 of IEC 62056-6-1, prepared by IEC/TC 13 "Electrical energy measurement and control" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 62056-6-1:2017.

The following dates are fixed:

•	latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement	(dop)	2018-06-13
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 latest date by which the national standards conflicting with the document have to be withdrawn

This document supersedes EN 62056-6-1:2016.

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The text of the International Standard IEC 62056-6-1:2017 was approved by CENELEC as a European Standard without any modification.

EN 62056-6-1:2017 (E)

## Annex ZA (normative)

## Normative references to international publications with their corresponding European publications

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

NOTE 1 When an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: www.cenelec.eu

<u>Publication</u>	<u>Year</u>	<u>Title</u>	EN/HD	<u>Year</u>
IEC 62053-23	2003	Electricity metering equipment (a.c.) - Particular requirements - Part 23: Static meters for reactive energy (classes 2 and 3)		2003
IEC 62056-6-2	2017	Electricity metering data exchange - The DLMS/COSEM suite - Part 6-2: COSEM interface classes	EN 62056-6-2 <sup>1)</sup>	-
IEC 62056-21	2002	Electricity metering - Data exchange for meter reading, tariff and load control - Part 21: Direct local data exchange	EN 62056-21	2002
IEC/TR 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/TR 62051 IEC/TR 62051-1	1999 <b>2004</b> /star	Electricity metering Glossary of terms	_ ef	-

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<sup>1)</sup> At draft stage.

SIST EN 62056-6-1:2018

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IEC 62056-6-1

Edition 3.0 2017-08

## INTERNATIONAL STANDARD

## NORME INTERNATIONALE

Electricity metering data exchange - The DLMS/COSEM suite - Part 6-1: Object Identification System (OBIS)eh.ai)

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#### INTERNATIONAL ELECTROTECHNICAL COMMISSION

### ELECTRICITY METERING DATA EXCHANGE – THE DLMS/COSEM SUITE –

#### Part 6-1: Object Identification System (OBIS)

#### **FOREWORD**

- 1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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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 62056-6-1 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 for applicants throughout the world. In this respect, the statement of the provider of the maintenance service is registered with the IEC. Information may be obtained from:

DLMS User Association Zug/Switzerland www.dlms.com

International Standard IEC 62056-6-1 has been prepared by IEC technical committee 13: Electrical energy measurement and control.

This third edition cancels and replaces the second edition of IEC 62056-6-1, published in 2015. It constitutes a technical revision.

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The main technical changes with respect to the previous edition are listed in Annex B (informative).

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

FDIS	Report on voting	
13/1745/FDIS	13/1748/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.

A list of all the parts in the IEC 62056 series, published under the general title *Electricity* metering data exchange – The DLMS/COSEM suite, can be found on the IEC website.

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

reconfirmed,
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• withdrawn, (standards.iteh.ai)

replaced by a revised edition, oramended.

<u>SIST EN 62056-6-1:2018</u> https://standards.iteh.ai/catalog/standards/sist/5f831247-5a86-4913-aaef-

e895c3fc193c/sist-en-62056-6-1-2018

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#### INTRODUCTION

This third edition of IEC 62056-6-1 has been prepared by IEC TC13 WG14 with a significant contribution of the DLMS User Association, its D-type liaison partner.

This edition is in line with the DLMS UA Blue Book Edition 12.2. This edition specifies new OBIS codes related to new applications and includes some editorial improvements.

#### **Data identification**

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.

To facilitate the analysis of metering information, for the purposes of billing, load, customer and contract management, it is necessary to uniquely identify data items, whether collected manually or automatically, via local or remote data exchange, in a manufacturer-independent way. The definition of identification codes to achieve this – the OBIS codes – is based on DIN 43863-3:1997, Electricity meters – Part 3: Tariff metering device as additional equipment for electricity meters – EDIS – Energy Data Identification System.

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### ELECTRICITY METERING DATA EXCHANGE – THE DLMS/COSEM SUITE –

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#### Part 6-1: Object Identification System (OBIS)

#### 1 Scope

This part of IEC 62056 specifies the overall structure of the OBject Identification System (OBIS) and the mapping of all commonly used data items in metering equipment 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 document are used for the identification of:

- logical names of the various instances of the ICs, or objects, as defined in IEC 62056-6-2;
- · data transmitted through communication lines;
- data displayed on the metering equipment, see Clause A.2.

This document applies to all types of 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 document fully defines the structure of the identification system for other media, the mapping of non-electrical energy related data items to ID codes is completed separately.

NOTE EN 13757-1:2014 defines identifiers for metering equipment other than electricity: heat cost allocators, thermal energy, gas, cold water and hot water.

#### 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 TR 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 TR 62051:1999, Electricity metering – Glossary of terms

IEC TR 62051-1:2004, Electricity metering – Data exchange for meter reading, tariff and load control – 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

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IEC 62056-6-2:2017, Electricity metering data exchange – The DLMS/COSEM suite – Part 6-2: COSEM interface classes.

#### 3 Terms, definitions and abbreviated terms

#### 3.1 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC TR 62051:1999 and IEC TR 62051-1:2004, and the following apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at http://www.electropedia.org/
- ISO Online browsing platform: available at http://www.iso.org/obp

#### 3.2 Abbreviated terms

COSEM Companion Specification for Energy Metering

DLMS Device Language Message Specification EV EW

DLMS UA

GSM

DLMS User Association ards.iteh.ai

Global System for Mobile Communications

IC Interface Class SIST EN 62056-6-1:2018

IEC International Electrotechnical Commission7-5a86-4913-aaef-

ISO International Organization for Standardization

OBIS OBject Identification System

VZ Billing period counter

#### 4 OBIS code structure

#### 4.1 Value groups and their use

OBIS codes identify data items used in energy metering equipment, in a hierarchical structure using six value groups A to F, see Table 1.