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

EESTI STANDARDIKESKUS
ESTONIAN CENTRE FOR STANDARDISATION

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 62056-6-1:2013 sisaldab Euroopa standardi EN 62056-6-1:2013 ingliskeelset teksti.	This Estonian standard EVS-EN 62056-6-1:2013 consists of the English text of the European standard EN 62056-6-1:2013.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 23.08.2013.	Date of Availability of the European standard is 23.08.2013.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

ICS 35.100, 91.140.50

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 62056-6-1

August 2013

ICS 17.220; 35.110; 91.140.50

Supersedes EN 62056-61:2007

English version

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

(IEC 62056-6-1:2013)

Echange des données de comptage de l'électricité - La suite DLMS/COSEM - Partie 6-1: Système d'identification des objets (OBIS) (CEI 62056-6-1:2013)

Datenkommunikation der elektrischen Energiemessung - DLMS/COSEM - Teil 6-1: COSEM Object Identification System (OBIS) (IEC 62056-6-1:2013)

This European Standard was approved by CENELEC on 2013-07-04. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

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.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

CENELEC

European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

CEN-CENELEC Management Centre: Avenue Marnix 17, B - 1000 Brussels

Ref. No. EN 62056-6-1:2013 E

Foreword

The text of document 13/1524/FDIS, future edition 1 of IEC 62056-6-1, prepared by IEC/TC 13 "Electrical energy measurement, tariff- and load control" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 62056-6-1:2013.

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)	2014-04-04
• latest date by which the national standards conflicting with the document have to be withdrawn	(dow)	2016-07-04

EN 62056-6-1:2013 cancels and replaces EN 62056-61 published in 2007. It constitutes a technical revision.

The significant technical changes with respect to EN 62056-61 are listed in Annex B.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC [and/or CEN] shall not be held responsible for identifying any or all such patent rights.

Endorsement notice

The text of the International Standard IEC 62056-6-1:2013 was approved by CENELEC as a European Standard without any modification.

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 When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

Publication	Year	Title	EN/HD	Year
IEC/TR 62051	1999	Electricity metering - Glossary of terms	-	-
IEC/TR 62051-1 + corr. June	2004 2005	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)	EN 62053-23	2003
IEC 62056-6-2	2013	Electricity metering data exchange - The DLMS/COSEM suite - Part 6-2: COSEM interface classes	EN 62056-6-2	2013
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

CONTENTS

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.

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.*

ELECTRICITY METERING DATA EXCHANGE – THE DLMS/COSEM SUITE –

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 standard are used for the identification of:

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

This standard 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 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 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.

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)*

---

2 To be published simultaneously with this part of IEC 62056.

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

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

NOTE See also the Bibliography.

3 Terms, definitions and abbreviations

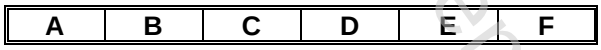
For the purposes of this document, the terms and definitions given in IEC/TR 62051 and IEC/TR 62051-1 and the following apply.

COSEM	Companion Specification for Energy Metering
COSEM object	An instance of a COSEM interface class
DLMS	Device Language Message Specification
DLMS UA	DLMS User Association
GSM	Global System for Mobile Communications
IC	Interface Class
IEC	International Electrotechnical Commission
ISO	International Organization for Standardization
OBIS	OBject Identification System
VZ	Billing period counter

4 OBIS code structure

4.1 General

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



IEC 1091/13

Figure 1 – OBIS code structure

4.2 Value group A

Value group A is used to identify the media (energy type) to which the metering is related. Non-media related information is handled as abstract data.

4.3 Value group B

Value group B is generally used to identify the measurement channel number, i.e. the number of the input of a metering equipment having several inputs for the measurement of energy of the same or different types (for example in data concentrators, registration units). Data from different sources can thus be identified.

Value group B may also be used to identify the communication channel, and in some cases for other purposes.

The definitions for this value group are independent from the value group A.