

ILNAS

Institut luxembourgeois de la normalisation
de l'accréditation, de la sécurité et qualité
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ILNAS-EN 62056-53:2007

Electricity metering - Data exchange for meter reading, tariff and load control - Part 53: COSEM application layer

Equipements de mesure de l'énergie
électrique - Echange des données pour la
lecture des compteurs, le contrôle des
tarifs et de la charge - Partie 53: Couche

Messung der elektrischen Energie -
Zählerstandsübertragung, Tarif- und
Laststeuerung - Teil 53: COSEM-
Anwendungsschicht

04/2007



National Foreword

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English version

**Electricity metering -
Data exchange for meter reading, tariff and load control -
Part 53: COSEM application layer
(IEC 62056-53:2006)**

Equipements de mesure
de l'énergie électrique -
Echange des données
pour la lecture des compteurs,
le contrôle des tarifs et de la charge -
Partie 53: Couche application COSEM
(CEI 62056-53:2006)

Messung der elektrischen Energie -
Zählerstandsübertragung,
Tarif- und Laststeuerung -
Teil 53: COSEM-Anwendungsschicht
(IEC 62056-53:2006)

This European Standard was approved by CENELEC on 2007-02-01. 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 Central Secretariat 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 Central Secretariat has the same status as the official versions.

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

CENELEC

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

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

Foreword

The text of document 13/1387/FDIS, future edition 2 of IEC 62056-53, prepared by IEC TC 13, Electrical energy measurement, tariff- and load control, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 62056-53 on 2007-02-01.

This European Standard supersedes EN 62056-53:2002.

The main changes with respect to EN 62056-53:2002 are as follows:

- the protocol of the COSEM-RELEASE service has been changed: depending on the communication profile used, these services may rely on the ACSE A_RELEASE services;
- the parsing order of the AARQ APDU has been changed;
- handling of repeated application association requests has been simplified;
- the Service_Class parameter of the COSEM-OPEN service is now linked to the response allowed field of the xDLMS-Initiate.request APDU;
- the Service_Class parameter of COSEM services for data exchange using LN referencing is now linked to bit 6 of the Invoke-Id-And-Priority parameter;
- a new, optional EXCEPTION APDU has been introduced. The server may send back this APDU after an erroneous service request;
- a general part about using the COSEM application layer in various communication profiles has been added;
- the description of using the COSEM Application layer in the 3-layer, connection-oriented, HDLC based communication profile has been amended;
- a new, TCP-UDP/IP based communication profile has been defined.

The following dates were fixed:

- latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2007-11-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2010-02-01

The International Electrotechnical Commission (IEC) and CENELEC draw attention to the fact that it is claimed that compliance with this International Standard / European Standard may involve the use of a maintenance service concerning the stack of protocols on which the present standard IEC 62056-53 / EN 62056-53 is based.

The IEC and CENELEC take 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 may be obtained from:

DLMS ¹⁾ User Association
Geneva / Switzerland
www.dlms.ch

¹⁾ Device Language Message Specification

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 62056-53:2006 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following note has to be added for the standard indicated:

ISO/IEC 7498-1 NOTE Harmonized as EN ISO/IEC 7498-1:1995 (not modified).

Annex ZA (normative)

Normative references to international publications with their corresponding European publications

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.

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

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60050-300	2001	International Electrotechnical Vocabulary - 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 instruments - Part 314: Specific terms according to the type of instrument	-	-
IEC 61334-4-41	1996	Distribution automation using distribution line carrier systems - Part 4: Data communication protocols - Section 41: Application protocols - Distribution line message specification	EN 61334-4-41	1996
IEC 61334-6	2000	Distribution automation using distribution line carrier systems - Part 6: A-XDR encoding rule	EN 61334-6	2000
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 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 62056-42	2002	Electricity metering - Data exchange for meter reading, tariff and load control - Part 42: Physical layer services and procedures for connection-oriented asynchronous data exchange	EN 62056-42	2002
IEC 62056-46 A1	2002 2006	Electricity metering - Data exchange for meter reading, tariff and load control - Part 46: Data link layer using HDLC protocol	EN 62056-46 A1	2002 2007

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 62056-47	2006	Electricity metering - Data exchange for meter reading, tariff and load control - Part 47: COSEM transport layers for IPv4 networks	EN 62056-47	2007
IEC 62056-61	2006	Electricity metering - Data exchange for meter reading, tariff and load control - Part 61: Object identification system (OBIS)	EN 62056-61	2007
IEC 62056-62	2006	Electricity metering - Data exchange for meter reading, tariff and load control - Part 62: Interface classes	EN 62056-62	2007
ISO/IEC 8649	1996	Information technology - Open systems interconnection - Service definition for the Association Control Service Element	-	-
ISO/IEC 8650-1	1996	Information technology - Open systems interconnection - Connection-oriented protocol for the association control service Information technology - ASN.1 encoding rules: Protocol specification	-	-
ISO/IEC 8824	Series	Information technology - Abstract Syntax Notation One (ASN.1)	-	-
ISO/IEC 8825	Series	Information technology - ASN.1 encoding rules	-	-
ISO/IEC 13239	2002	Information technology - Telecommunications - and information exchange between systems - High-level data link control (HDLC) procedures	-	-
STD 0005	1981	Internet Protocol	-	-
STD 0006	1980	User Datagram Protocol	-	-
STD 0007	1981	Transmission Control Protocol	-	-

INTERNATIONAL STANDARD

IEC
62056-53

Second edition
2006-12

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

**Part 53:
COSEM application layer**



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