SLOVENSKI STANDARD
SIST EN 62056-7-6:2013

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Nadomešča:
SIST EN 62056-53:2007

Izmenjava podatkov meritev električne energije - Niz DLMS/COSEM - 7-6. del: 3-plastni, povezovalno naravnan komunikacijski profil na osnovi HDLC (IEC 62056-7-6:2013)

Electricity metering data exchange - the DLMS/COSEM suite - Part 7-6: The 3-layer, connection-oriented HDLC based communication profile (IEC 62056-7-6:2013)

Datenkommunikation der elektrischen Energiemessung - DLMS/COSEM - Teil 7-6: HDLC basiertes 3-Schichten Kommunikations-Protokoll (IEC 62056-7-6:2013)

Echange de données dans les équipements de mesure de l'énergie électrique - suite DLMS/COSEM - Partie 7-6: Profil de communication triple couche, orienté connexion et basé sur HDLC (CEI 62056-7-6:2013)

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ICS:

17.220.20	Merjenje električnih in magnetnih veličin	Measurement of electrical and magnetic quantities
35.100.05	Večslojne uporabniške rešitve	Multilayer applications
91.140.50	Sistemi za oskrbo z elektriko	Electricity supply systems

SIST EN 62056-7-6:2013 **en**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 62056-7-6

September 2013

ICS 17.220; 35.110; 91.140.50

Supersedes EN 62056-53:2007 (partially)

English version

Electricity metering data exchange - The DLMS/COSEM suite - Part 7-6: The 3-layer, connection-oriented HDLC based communication profile

(IEC 62056-7-6:2013)

Echange des données de comptage de l'électricité -
La suite DLMS/COSEM -
Partie 7-6: Profil de communication à 3 couches, orienté connexion et basé sur HDLC
(CEI 62056-7-6:2013)

Datenkommunikation der elektrischen Energiemessung -
DLMS/COSEM -
Teil 7-6: HDLC basiertes 3-Schichten Kommunikations-Protokoll
(IEC 62056-7-6:2013)

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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 62056-7-6:2013 E

Foreword

The text of document 13/1527/FDIS, future edition 1 of IEC 62056-7-6, 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 62056-7-6:2013.

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)	2014-03-20
• latest date by which the national standards conflicting with the document have to be withdrawn	(dow)	2016-06-20

EN 62056-7-6:2013 supersedes partially EN 62056-53:2007.

It is based on EN 62056-53:2007, *Electricity metering – Data exchange for meter reading, tariff and load control – Part 53: COSEM application layer*, Annex B.2 *The 3-layer, connection-oriented, HDLC based communication profile* and introduces the following significant technical changes:

NOTE EN 62056-53:2007 contains the specification of the DMS/COSEM communication profiles whereas the new edition, EN 62056-5-3:2013, which replaces it, does not.

• The title of the standard has been aligned with the title of other parts of the revised EN 62056 series;

• A Figure showing the protocol stack has been added to Clause 5.

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 62056-7-6:2013 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 62056-5-3	2013	Electricity metering data exchange - The DLMS/COSEM suite - Part 5-3: DLMS/COSEM application layer	EN 62056-5-3	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
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

IEC 62056-7-6

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INTERNATIONAL STANDARD

NORME INTERNATIONALE

colour inside

Electricity metering data exchange – The DLMS/COSEM suite – Part 7-6: The 3-layer, connection-oriented HDLC based communication profile

Échange des données de comptage de l'électricité – La suite DLMS/COSEM – Partie 7-6: Profil de communication à 3 couches, orienté connexion et basé sur HDLC

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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 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[1] User Association
Zug/Switzerland
www.dlms.ch

[1] Device Language Message Specification.

International Standard IEC 62056-7-6 has been prepared by Technical Committee 13, Electrical energy measurement, tariff- and load control.

It is based on IEC 62056-53:2006, *Electricity metering – Data exchange for meter reading, tariff and load control – Part 53: COSEM application layer*, Annex B.2 *The 3-layer, connection-oriented, HDLC based communication profile* and introduces the following significant technical changes:

NOTE IEC 62056-53:2006 contains the specification of the DMS/COSEM communication profiles whereas the new edition, IEC 62056-5-3:—[2], which replaces it, does not.

- The title of the standard has been aligned with the title of other parts of the revised IEC 62056 series;
- A Figure showing the protocol stack has been added to Clause 5.

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

FDIS	Report on voting
13/1527/FDIS	13/1545/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.

Future standards in this series will carry the new general title as cited above. Titles of existing standards in this series will be updated at the time of the next edition.

The committee has decided that the contents of this publication will remain unchanged until the stability 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.

IMPORTANT – The 'colour inside' logo on the cover page of this publication indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this document using a colour printer.

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

ELECTRICITY METERING DATA EXCHANGE – THE DLMS/COSEM SUITE –

Part 7-6: The 3-layer, connection-oriented HDLC based communication profile

1 Scope

This part of IEC 62056 specifies the DLMS/COSEM 3-layer, connection-oriented HDLC based communication profile.

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

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*

IEC 62056-46:2002, *Electricity metering – Data exchange for meter reading, tariff and load control – Part 46: Data link layer using HDLC protocol*
Amendment 1:2006

IEC 62056-5-3:—, *Electricity metering data exchange – The DLMS/COSEM suite – Part 5-3: DLMS/COSEM application layer*

NOTE See also the Bibliography.

3 Terms, definitions and abbreviations

AA	Application Association
AARQ	A-Associate Request – an APDU of the ACSE
ACSE	Association Control Service Element
AL	Application Layer
APDU	Application Layer Protocol Data Unit
ASO	Application Service Object
Client	A station, asking for services. In the case of the 3-layer, CO HDLC based profile it is the master station
.cnf	confirm service primitive
CO	Connection-oriented
COSEM	Companion Specification for Energy Metering
DLMS	Device Language Message Specification
DLMS UA	DLMS User Association