SLOVENSKI STANDARD
SIST EN 62056-9-7:2014

01-junij-2014

Izmenjava podatkov meritev električne energije - Niz DLMS/COSEM - 9-7. del: Komunikacijski profil za omrežja TCP-UDP/IP (IEC 62056-9-7:2013)

Electricity metering data exchange - The DLMS/COSEM suite - Part 9-7: Communication profile for TCP-UDP/IP networks

Datenkommunikation der elektrischen Energiemessung - DLMS/COSEM - Teil 9-7: Festlegungen zur Nutzung bei TCP-UDP/IP-Netzen

Echange de données pour le comptage de l'énergie électrique - La suite DLMS/COSEM - Partie 9-7: Profil de communication pour réseaux TCP-UDP/IP

Ta slovenski standard je istoveten z: **EN 62056-9-7:2013**

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 62056-9-7:2014 **en**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 62056-9-7

October 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 9-7: Communication profile for TCP-UDP/IP networks

(IEC 62056-9-7:2013)

Échange des données de comptage de l'électricité - La suite DLMS/COSEM - Partie 9-7: Profil de communication pour réseaux TCP-UDP/IP (CEI 62056-9-7:2013)

Datenkommunikation der elektrischen Energiemessung - DLMS/COSEM - Teil 9-7: Festlegungen zur Nutzung von TCP-UDP/IP-Netzen (IEC 62056-9-7:2013)

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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

Foreword

The text of document 13/1520/FDIS, future edition 1 of IEC 62056-9-7, 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 62056-9-7:2013.

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• latest date by which the national standards conflicting with the document have to be withdrawn	(dow)	2016-05-28

This document supersedes EN 62056-53:2007 (PART).

EN 62056-9-7:2013 includes the following significant technical changes with respect to EN 62056-53:2007:

Note: Whereas IEC 62056-53 Ed. 2.0 contains the specification of the DLMS/COSEM communication profiles, IEC 62056-5-3 Ed.1.0 replacing the earlier edition does not.

- The title of the standard has been aligned with the title of other parts of the revised IEC 62056 series;
- Clause 4, Targeted communication environments has been extended, a functional reference architecture figure has been added;
- Clause 5, The structure of the profile(s) has been extended, the Figure has been generalized and simplified;
- In clause 6, Identification and addressing scheme, the port number assigned by the IANA for DLMS/COSEM has been added;
- In subclause 9.1, Two paragraphs specifying how confirmed and unconfirmed COSEM-OPEN and xDLMS service invocations have been added;
- Subclause 9.6, Transporting long messages, has been amended. It specifies now that for transporting long messages, application layer block transfer can be used (also available now with SN referencing);
- The clause on Multi-drop configurations has been removed.

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 62056-9-7:2013 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standards indicated:

IEC 62056-6-1	NOTE	Harmonised as EN 62056-6-1[1)] (not modified).
IEC 62056-6-2	NOTE	Harmonised as EN 62056-6-2[1)] (not modified).

[1)] at draft stage.

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 [2)]	-	Electricity metering data exchange - The DLMS/COSEM suite - Part 5-3: DLMS/COSEM application layer	EN 62056-5-3 [2)]	-
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

[2)] At draft stage.

IEC 62056-9-7

Edition 1.0 2013-04

INTERNATIONAL STANDARD

NORME INTERNATIONALE

colour inside

Electricity metering data exchange – The DLMS/COSEM suite – Part 9-7: Communication profile for TCP-UDP/IP networks

Échange des données de comptage de l'électricité – La suite DLMS/COSEM – Partie 9-7: Profil de communication pour réseaux TCP-UDP/IP

INTERNATIONAL ELECTROTECHNICAL COMMISSION

COMMISSION ELECTROTECHNIQUE INTERNATIONALE

PRICE CODE
CODE PRIX Q

ICS 17.220; 35.110; 91.140.50

ISBN 978-2-83220-748-2

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ELECTRICITY METERING DATA EXCHANGE – THE DLMS/COSEM SUITE –

Part 9-7: Communication profile for TCP-UDP/IP networks

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 62056-9-7 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[1] User Association
Zug/Switzerland
www.dlms.ch

1 Device Language Message Specification.

International Standard IEC 62056-9-7 has been prepared by IEC technical committee 13: Electrical energy measurement, tariff- and load control.

It is based on IEC 62056-53 Ed.2:2006, *Electricity metering – Data exchange for meter reading, tariff and load control – Part 53: COSEM application layer*, Annex B.3, *The TCP-UDP/IP based communication profiles (COSEM_on_IP)* and introduces the following significant technical changes:

NOTE Whereas IEC 62056-53 Ed. 2.0 contains the specification of the DLMS/COSEM communication profiles, IEC 62056-5-3 Ed.1.0 replacing the earlier edition does not.

- The title of the standard has been aligned with the title of other parts of the revised IEC 62056 series;
- Clause 4, *Targeted communication environments* has been extended, a functional reference architecture figure has been added;
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- Subclause 9.6, *Transporting long messages,* has been amended. It specifies now that for transporting long messages, application layer block transfer can be used (also available now with SN referencing);
- The clause on Multi-drop configurations has been removed.

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

FDIS	Report on voting
13/1520/FDIS	13/1537/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.

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

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 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.

ELECTRICITY METERING DATA EXCHANGE – THE DLMS/COSEM SUITE –

Part 9-7: Communication profile for TCP-UDP/IP networks

1 Scope

This part of IEC 62056 specifies the DLMS/COSEM communication profile for TCP-UDP/IP networks.

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 62056-47:2006, *Electricity metering – Data exchange for meter reading, tariff and load control – Part 47: COSEM transport layer for IPv4 networks*

IEC 62056-5-3:2013, *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

For the purposes of this document, the following terms, definitions and abbreviations apply.

3.1 Terms and definitions

3.1.1
client
a station, asking for services. Normally the master station

3.1.2
server
a station, delivering services. The tariff device (meter) is normally the server, delivering the requested values or executing the requested tasks

3.2 Abbreviations

AA	Application Association
AARE	A-Associate Response – an APDU of the ACSE
AARQ	A-Associate Request – an APDU of the ACSE
ACSE	Association Control Service Element
AL	Application Layer
AP	Application Process
APDU	Application Layer Protocol Data Unit