Electricity metering data exchange - The DLMS/COSEM suite - Part 5-3: DLMS/COSEM application layer

EESTI STANDARDIKESKUS
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EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 62056-5-3:2016 sisaldab Euroopa standardi EN 62056-5-3:2016 ingliskeelset teksti.	This Estonian standard EVS-EN 62056-5-3:2016 consists of the English text of the European standard EN 62056-5-3:2016.
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 09.12.2016.	Date of Availability of the European standard is 09.12.2016.
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 17.220, 35.110, 91.140.50

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 62056-5-3

December 2016

ICS 17.220; 35.110; 91.140.50

Supersedes EN 62056-5-3:2014

English Version

Electricity metering data exchange - The DLMS/COSEM suite - Part 5-3: DLMS/COSEM application layer (IEC 62056-5-3:2016)

Échange des données de comptage de l'électricité - La suite DLMS/COSEM - Partie 5-3: Couche application DLMS/COSEM
(IEC 62056-5-3:2016)

Datenkommunikation der elektrischen Energiemessung - DLMS/COSEM - Teil 5-3: DLMS/COSEM-Anwendungsschicht
(IEC 62056-5-3:2016)

This European Standard was approved by CENELEC on 2016-04-08. 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.

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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 62056-5-3:2016 E

European foreword

The text of document 13/1648/FDIS, future edition 2 of IEC 62056-5-3, prepared by IEC/TC 13 "Electrical energy measurement and control" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 62056-5-3:2016.

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)	2017-06-09
• latest date by which the national standards conflicting with the document have to be withdrawn	(dow)	2019-12-09

This document supersedes EN 62056-5-3:2014.

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.

This document has been prepared under a mandate given to CENELEC by the European Commission and the European Free Trade Association.

Endorsement notice

The text of the International Standard IEC 62056-5-3:2016 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 61334-4-3:1996	NOTE	Harmonized as EN 61334-4-32:1996 (not modified).
IEC 61334-4-511:2000	NOTE	Harmonized as EN 61334-4-511:2000 (not modified).
IEC 61334-4-512:2001	NOTE	Harmonized as EN 61334-4-512:2002 (not modified).
IEC 61334-5-1:2001	NOTE	Harmonized as EN 61334-5-1:2001 (not modified).
IEC 62056-7-6:2013	NOTE	Harmonized as EN 62056-7-6:2013 (not modified).
IEC 62056-9-7:2013	NOTE	Harmonized as EN 62056-9-7:2013 (not modified).
ISO/IEC 7498-1:1994	NOTE	Harmonized as EN ISO/IEC 7498-1:1994 [1)] (not modified).

[1)] Withdrawn publication.

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

Publication	Year	Title	EN/HD	Year
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 62056-1-0	-	Electricity metering data exchange - The DLMS/COSEM suite - Part 1-0: Smart metering standardisation framework	EN 62056-1-0	-
IEC 62056-6-1	2015	Electricity metering data exchange - The DLMS/COSEM suite - Part 6-1: Object Identification System (OBIS)	EN 62056-6-1	2016
IEC 62056-6-2	2016	Electricity metering data exchange - The DLMS/COSEM suite - Part 6-2: COSEM interface classes	EN 62056-6-2	2016
IEC 62056-8-3	2013	Electricity metering data exchange - The DLMS/COSEM suite - Part 8-3: Communication profile for PLC S-FSK neighbourhood networks	EN 62056-8-3	2013
ISO/IEC 8824-1	2008 [2)]	Information technology - Abstract Syntax Notation One (ASN.1): Specification of basic notation	-	-

[2)] Superseded by ISO/IEC 8824-1:2015.

Publication	Year	Title	EN/HD	Year
ISO/IEC 8825-1	2008 [3)]	Information technology - ASN.1 encoding rules: Specification of Basic Encoding Rules (BER), Canonical Encoding Rules (CER) and Distinguished Encoding Rules (DER)	-	-
ISO/IEC 15953	1999	Information technology - Open Systems Interconnection - Service Definition for the Application Service Object Association Control Service Element	-	-
ISO/IEC 15954	1999	Information technology - Open Systems Interconnection - Connection-mode protocol for the Application Service Object Association Control Service Element	-	-
FIPS PUB 180-4	2012	Secure Hash Standard (SHS)	-	-
FIPS PUB 197	2001	Advanced Encryption Standard (AES)	-	-
NIST SP 800-38D	2007	Recommendation for Block Cipher Modes of Operation: Galois/Counter Mode (GCM) and GMAC	-	-
NIST SP 800-57	2007	Recommendation for key management - Part 1: General	-	-
RFC 1321	1992	The MD5 Message-Digest Algorithm. Edited by R. Rivest (MIT Laboratory for Computer Science and RSA Data Security, Inc.)	-	-
RFC 3394	2002	Advanced Encryption Standard (AES) Key Wrap Algorithm. Edited by J. Schaad (Soaring Hawk Consulting) and R. Housley (RSA Laboratories)	-	-
RFC 4106	-	The Use of Galois/Counter Mode (GCM) in IPsec Encapsulating Security Payload (ESP)	-	-

[3)] Superseded by ISO/IEC 8825-1:2015.

CONTENTS

INTRODUCTION

This second edition of IEC 62056-5-3 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 Green Book Edition 7.0 Amendment 3. The main new features are the DataNotification service, the general protection and the general block transfer mechanisms and the SMS short wrapper.

In 2014, the DLMS UA has published Green Book Edition 8.0 adding several new features regarding functionality, efficiency and security while keeping full backwards compatibility.

The intention of the DLMS UA is to bring also these latest developments to international standardization. Therefore, IEC TC13 WG14 launched a project to bring these new elements also to the IEC 62056 series that will lead to Edition 3.0 of the standard.

Clause 5 and Annex F are based on parts of NIST documents. Reprinted courtesy of the National Institute of Standards and Technology, Technology Administration, U.S. Department of Commerce.