

Electricity metering data exchange - The DLMS/COSEM suite - Part 4-7: DLMS/COSEM transport layer for IP networks

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English Version

Electricity metering data exchange - The DLMS/COSEM suite -  
Part 4-7: DLMS/COSEM transport layer for IP networks  
(IEC 62056-4-7:2015)

Échange des données de comptage de l'électricité - La  
suite DLMS/COSEM - Partie 4-7: Couche transport  
DLMS/COSEM pour réseaux IP  
(IEC 62056-4-7:2015)

Datenkommunikation der elektrischen Energiemessung -  
DLMS/COSEM - Teil 4-7: DLMS/COSEM Transportschicht  
für IP-Netzwerke  
(IEC 62056-4-7:2015)

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Comité Européen de Normalisation Electrotechnique  
Europäisches Komitee für Elektrotechnische Normung

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

## European foreword

The text of document 13/1570/CDV, future edition 1 of IEC 62056-4-7, prepared by IEC/TC 13 "Electrical energy measurement and control" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 62056-4-7:2016.

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- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2019-12-09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 62056-47:2007.

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### Endorsement notice

The text of the International Standard IEC 62056-4-7:2015 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 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](http://www.cenelec.eu)

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60050-300	2001	International Electrotechnical Vocabulary (IEV) - 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/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 62056-5-3	2013	Electricity metering data exchange - The DLMS/COSEM suite - Part 5-3: DLMS/COSEM application layer	EN 62056-5-3	2014 <sup>1)</sup>
IEC 62056-6-2	2013	Electricity metering data exchange - The DLMS/COSEM suite - Part 6-2: COSEM interface classes	EN 62056-6-2	2013 <sup>2)</sup>
IEC 62056-9-7	2013	Electricity metering data exchange - The DLMS/COSEM suite - Part 9-7: Communication profile for TCP-UDP/IP networks	EN 62056-9-7	2013
STD 0006	-	User Datagram Protocol	-	-
STD 0007	-	Transmission Control Protocol	-	-

<sup>1)</sup> Superseded by EN 62056-5-3:2016 (IEC 62056-5-3:2016): DOW = 2019-12-09.

<sup>2)</sup> Superseded by EN 62056-6-2:2016 (IEC 62056-6-2:2016): DOW = 2019-12-09.

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## INTRODUCTION

This standard specifies the DLMS/COSEM transport layer for IP (IPv4 or IPv6) networks. It shall be read together with IEC 62056-9-7:2013, *Electricity metering data exchange – The DLMS/COSEM suite – Part 9-7: Communication profile for TCP-UDP/IP networks*.

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## ELECTRICITY METERING DATA EXCHANGE – THE DLMS/COSEM SUITE –

### Part 4-7: DLMS/COSEM transport layer for IP networks

#### 1 Scope

This part of IEC 62056 specifies a connection-less and a connection oriented transport layer (TL) for DLMS/COSEM communication profiles used on IP networks.

These TLs provide OSI-style services to the service user DLMS/COSEM AL. The connection-less TL is based on the Internet Standard User Datagram Protocol (UDP). The connection-oriented TL is based on the Internet Standard Transmission Control Protocol (TCP).

The DLMS/COSEM TL consists of the UDP or TCP transport layer TCP and an additional sublayer, called wrapper.

Annex A shows how the OSI-style TL services can be converted to and from UDP and TCP function calls.

#### 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 60050-300:2001, *International Electrotechnical Vocabulary (IEV) – 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 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 62056-5-3:2013, *Electricity metering data exchange – The DLMS/COSEM suite – Part 5-3: DLMS/COSEM application layer<sup>1</sup>*

IEC 62056-6-2:2013, *Electricity metering data exchange – The DLMS/COSEM suite – Part 6-2: COSEM interface classes<sup>2</sup>*

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<sup>1</sup> Edition 2 of IEC 62056-5-3 to be published.

<sup>2</sup> Edition 2 of IEC 62056-6-2 to be published.