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## Elmätare – Datakommunikation för avläsning av elmätare och för styrning av tariff och belastning – Del 3-1: Lokala nät (LAN) med tvinnad parkabel

*Electricity metering data exchange –  
The DLMS/COSEM suite –  
Part 3 -1: Use of local area networks on twisted pair with carrier signalling*

Som svensk standard gäller europastandarden EN 62056-3-1:2014. Den svenska standarden innehåller den officiella engelska språkversionen av EN 62056-3-1:2014.

### Nationellt förord

Europastandarden EN 62056-3-1:2014

består av:

- **europastandardens ikraftsättningsdokument**, utarbetat inom CENELEC
- **IEC 62056-3-1, First edition, 2013 - Electricity metering data exchange - The DLMS/COSEM suite - Part 3 -1: Use of local area networks on twisted pair with carrier signalling**

utarbetad inom International Electrotechnical Commission, IEC.

Tidigare fastställd svensk standard SS-EN 62056-3-1, utgåva 1, 2000, gäller ej fr o m 2016-09-24.

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### **SEK Svensk Elstandard**

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English version

**Electricity metering data exchange - The DLMS/COSEM suite -  
Part 3-1: Use of local area networks on twisted pair with carrier signalling  
(IEC 62056-3-1:2013)**

Échange des données de comptage de  
l'électricité -  
La suite DLMS/COSEM -  
Partie 3-1: Utilisation des réseaux locaux  
sur paire torsadée avec signal de  
porteuse  
(CEI 62056-3-1:2013)

Datenkommunikation der elektrischen  
Energiesmessung -  
DLMS/COSEM -  
Teil 3-1: Nutzung lokaler Netzwerke mit  
Trägerfrequenz-Signalübertragung auf  
verdrehen Zweidrahtleitungen  
(IEC 62056-3-1:2013)

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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.

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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**

## Foreword

The text of document 13/1546/FDIS, future edition 1 of IEC 62056-3-1, 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 62056-3-1:2014.

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) 2014-09-07
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2016-09-24

This document supersedes EN 62056-31:2000.

EN 62056-3-1:2014 includes the following significant technical changes with respect to EN 62056-31:2000:

- addition of a profile which makes use of the EN 62056 DLMS/COSEM Application layer and COSEM object model;
- review of the data link layer which is split into two parts:
  - a pure Data Link layer;
  - a "Support Manager" entity managing the communication media;
- ability to negotiate the communication speed, bringing baud rate up to 9 600 bauds.

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 62056-3-1:2013 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 62056-6-1:2013	NOTE	Harmonized as EN 62056-6-1:2013 (not modified).
IEC 62056-6-2:2013	NOTE	Harmonized as EN 62056-6-2:2013 (not modified).

## 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.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
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 62056-51	1998	Electricity metering - Data exchange for meter reading, tariff and load control - Part 51: Application layer protocols	-	-
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
ISO/IEC 8482	1993	Information technology - Telecommunications and information exchange between systems - Twisted pair multipoint interconnections	-	-
EIA 485	-	Electrical characteristics of generators and receivers for use in balanced digital multipoint systems	-	-

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

### Part 3-1: Use of local area networks on twisted pair with carrier signalling

#### 1 Scope

This part of IEC 62056 describes three profiles for local bus data exchange with stations either energized or not. For non-energized stations, the bus supplies energy for data exchange.

Three different profiles are supported:

- base profile: this three-layer profile provides remote communication services;  
NOTE This first profile has been published in IEC 61142:1993 and became known as the Euridis standard.
- profile with DLMS: this profile allows using DLMS services as specified in IEC 61334-4-41;  
NOTE This second profile has been published in IEC 62056-31 Ed. 1.0:1999;
- profile with DLMS/COSEM: this profile allows using the DLMS/COSEM Application layer and the COSEM object model as specified in IEC 62056-5-3 Ed. 1.0:— and in IEC 62056-6-2 Ed. 1.0:— respectively.

The three profiles use the same physical layer and they are fully compatible, meaning that devices implementing any of these profiles can be operated on the same bus.

The transmission medium is twisted pair using carrier signalling and it is known as the Euridis Bus.

#### 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 61334-4-41:1996, *Distribution automation using distribution line carrier systems – Part 4: Data communication protocol – Section 41: Application protocols – Distribution line message specification*

IEC 62056-51:1998 *Electricity Metering – Data exchange for meter reading, tariff and load control – Part 51: Application Layer Protocols*

IEC 62056-5-3 Ed. 1.0:—, *Electricity metering data exchange – The DLMS/COSEM suite – Part 5-3: DLMS/COSEM application layer*

ISO/IEC 8482:1993, *Information technology – Telecommunications and information exchange between systems – Twisted pair multipoint interconnections*

EIA 485 – *Standard for Electrical Characteristics of Generators and Receivers for Use in Balanced Digital Multipoint Systems*