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**Electricity metering data exchange – the DLMS/COSEM suite –
Part 8-4: Communication profiles for narrow-band OFDM PLC PRIME
neighbourhood networks**

**Échange des données de comptage de l'électricité – la suite DLMS/COSEM –
Partie 8-4: Profils de communication pour réseaux de voisinage OFDM PLC
PRIME à bande étroite**



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CONTENTS

FOREWORD.....	5
INTRODUCTION.....	7
1 Scope.....	8
2 Normative references	8
3 Terms, definitions and abbreviated terms	10
3.1 Terms and definitions.....	10
3.2 Abbreviated terms.....	10
4 Targeted communication environments.....	12
5 Use of the communication layers for this profile.....	13
5.1 Information related to the use of the standard specifying the lower layers.....	13
5.2 The structure of the communication profiles	13
5.2.1 Overview	13
5.2.2 The IEC 61334-4-32 profile.....	14
5.2.3 The TCP-UDP/IPv4 profile.....	14
5.2.4 The TCP-UDP/IPv6 profile.....	14
5.3 Lower protocol layers and their use.....	14
5.3.1 General	14
5.3.2 Physical layer	14
5.3.3 MAC layer.....	15
5.4 Service mapping and convergence layers	17
5.4.1 Overview	17
5.4.2 The IEC 61334-4-32 LLC SCS.....	17
5.4.3 The IPv4 SCS.....	19
5.4.4 The IPv6 SCS.....	21
5.5 Registration and connection management.....	22
5.5.1 Overview	22
5.5.2 IEC 61334-4-32 profile.....	22
5.5.3 TCP-UDP/IPv4 profile.....	27
5.5.4 TCP-UDP/IPv6 profile.....	40
6 Identification and addressing schemes	55
6.1 IEC 61334-4-32 profile addressing.....	55
6.1.1 Overview.....	55
6.1.2 MAC address.....	56
6.1.3 IEC 61334-4-32 SCS addresses	56
6.1.4 LLC addresses	56
6.2 TCP-UDP/IPv4 profile addressing	57
6.3 TCP-UDP/IPv6 profile addressing	57
7 Specific consideration for the application layer services	57
7.1 Overview.....	57
7.2 Application Association (AA) establishment and release: ACSE services	57
7.2.1 AA establishment: IEC 61334-4-32 profile.....	57
7.2.2 AA establishment: IP based profile	58
7.2.3 Application association release.....	59
7.3 xDLMS services	59
7.4 Security mechanisms	59
7.4.1 DLMS/COSEM security.....	59

7.4.2	Lower layers security	59
7.5	Transferring long application messages	59
7.6	Media access, bandwidth and timing considerations	60
7.7	Other considerations	60
8	Communication configuration and management	60
9	The COSEM application process	60
10	Additional considerations for the use of this profile	60
Annex A (informative)	Examples	61
A.1	Data exchange between two IP communication peers	61
A.2	Joining a multicast group	63
A.3	PRIME encoding examples	63
Annex B (normative)	New COSEM interfaces classes and OBIS codes	76
Annex C (informative)	IEC 61334-4-32 profile: Error cases during connection establishment	77
Annex D (normative)	Convergence layer constants	78
Bibliography	79
Figure 1	– Communication architecture	12
Figure 2	– OFDM PLC PRIME communication profile architecture	14
Figure 3	– IEC 61334-4-32 SSCS services	18
Figure 4	– MSC for Data services in the case of logical name referencing	19
Figure 5	– IEC 61334-4-32 SSCS	22
Figure 6	– MSC for IEC 61334-4-32 SSCS services	26
Figure 7	– IPv4 SSCS services	28
Figure A.1	– MSC of IPv4 SSCS services	62
Figure A.2	– Joining MSC IPv4 profile	63
Figure C.1	– Error cases during connection establishment	77
Table 1	– Result values for SSCS services	25
Table 2	– AR_REGISTER_S message format	36
Table 3	– AR_REGISTER_B message format	36
Table 4	– AR_UNREGISTER_S message format	36
Table 5	– AR_MCAST_REG_S message format	36
Table 6	– AR_MCAST_REG_B message format	37
Table 7	– AR_MCAST_UNREG_S message format	37
Table 8	– AR_MCAST_UNREG_B message format	37
Table 9	– AR_LOOKUP_S message format	38
Table 10	– AR_LOOKUP_B message format	38
Table 11	– IPv4 packet format without header compression negotiated	38
Table 12	– IPv4 packet format with VJ header compression	39
Table 13	– Connection data sent by the initiator	39
Table 14	– Connection data sent by the responder	40
Table 15	– IPv6 SSCS table entry	44
Table 16	– Mapping IPv6 precedence to PRIME MAC priority	45

Table 17 – AR_REGISTERv6_S message format.....	51
Table 18 – AR_REGISTERv6_B message format.....	51
Table 19 – AR_UNREGISTERv6_S message format.....	51
Table 20 – AR_UNREGISTERv6_B message format.....	52
Table 21 – AR_LOOKUPv6_S message format.....	52
Table 22 – AR_LOOKUPv6_B message format.....	52
Table 23 – AR_MCAST_REGv6_S message format.....	53
Table 24 – AR_MCAST_REGv6_B message format.....	53
Table 25 – AR_MCAST_UNREGv6_B message format.....	53
Table 26 – IPv6 Packet format without negotiated header compression.....	54
Table 27 – UDP/IPv6 Packet format with LOWPAN_IPHC header compression and LOWPAN_NHC.....	54
Table 28 – IPv6 Packet format with LOWPAN_IPHC negotiated header compression.....	54
Table 29 – IPv6 Connection signalling data sent by the initiator.....	55
Table 30 – IPv6 Connection signalling data sent by the responder.....	55
Table 31 – Client service access point values.....	57
Table 32 – Server service access point values.....	57
Table 33 – Application associations and data exchange in the IEC 61334-4-32 profile.....	58
Table D.1 – TYPE value assignment.....	78

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**ELECTRICITY METERING DATA EXCHANGE –
THE DLMS/COSEM SUITE –****Part 8-4: Communication profiles for narrow-band
OFDM PLC PRIME neighbourhood networks**

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PRIME Alliance
2-12, Avenue de la Renaissance
1000, Brussels/ (BE)
www.prime-alliance.org.com

International Standard IEC 62056-8-4 has been prepared by IEC technical committee 13:
Electrical energy measurement and control.

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

CDV	Report on voting
13/1749/CDV	13/1763/RVC

Full information on the voting for the approval of this International Standard can be found in the report on voting indicated in the above table.

This document has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all 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.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under "<http://webstore.iec.ch>" in the data related to the specific document. At this date, the document will be

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INTRODUCTION

As defined in IEC 62056-1-0, the IEC 62056 DLMS/COSEM suite provides specific communication profile standards for communication media relevant for smart metering.

Such communication profile standards specify how the COSEM data model and the DLMS/COSEM application layer can be used on the lower, communication media-specific protocol layers.

Communication profile standards refer to communication standards that are part of the IEC 62056 DLMS/COSEM suite or to any other open communication standard.

This International Standard specifies DLMS/COSEM communication profiles using Recommendation ITU-T G.9904:2012 *Narrow-band orthogonal frequency division multiplexing power line communication transceivers for PRIME networks*. It applies for devices installed on the neighbourhood network.

It follows the rules defined in IEC 62056-5-3:2017, Annex A, and in IEC 62056-1-0 and the IEC TS 62056-1-1 recommendations for its structure.

The communication profile specified in this document is based on the results of the European OPEN Meter project, Topic Energy 2008.7.1.1, Project no.: 226269, www.openmeter.com, and has been prepared by the PRIME Alliance Technical Working Group, www.prime-alliance.org.

ELECTRICITY METERING DATA EXCHANGE – THE DLMS/COSEM SUITE –

Part 8-4: Communication profiles for narrow-band OFDM PLC PRIME neighbourhood networks

1 Scope

This part of IEC 62056 specifies DLMS/COSEM communication profiles for narrow band OFDM power line carrier PRIME neighbourhood networks using the modulation as specified in Recommendation ITU-T G.9904:2012.

Three communication profiles are specified:

- a profile using the IEC 61334-4-32 LLC layer;
- a profile using TCP-UDP/IPv4;
- a profile using TCP-UDP/IPv6.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 61334-4-32:1996, *Distribution automation using distribution line carrier systems – Part 4: Data communication protocols – Section 3.2: Data link layer – Logical link control (LLC)*

IEC 61334-4-511:2000, *Distribution automation using distribution line carrier systems – Part 4-511: Data communication protocols – Systems management – CIASE protocol*

IEC 62056-1-0, *Electricity metering data exchange – The DLMS/COSEM suite – Part 1-0: Smart metering standardization framework*

IEC TS 62056-1-1, *Electricity metering data exchange – The DLMS/COSEM suite – Part 1-1: Template for DLMS/COSEM communication profile standards*

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

IEC 62056-5-3:2017, *Electricity metering data exchange – The DLMS/COSEM suite – Part 5-3: DLMS/COSEM application layer*

IEC 62056-6-1, *Electricity metering data exchange – The DLMS/COSEM suite – Part 6-1: Object identification system (OBIS)*

IEC 62056-6-2:2017, *Electricity metering data exchange – The DLMS/COSEM suite – Part 6-2: COSEM interface classes*

IEC 62056-9-7:2013, *Electricity metering data exchange – The DLMS/COSEM suite – Part 9-7: Communication profile for TCP-UDP/IP networks*