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INTERNATIONAL STANDARD

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Electricity metering data exchange – The DLMS/COSEM suite – Part 7-3: Wired and wireless M-Bus communication profiles for local and neighbourhood networks

IEC 62056-7-3:2017-03(en)

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ELECTRICITY METERING DATA EXCHANGE – THE DLMS/COSEM SUITE –

Part 7-3: Wired and wireless M-Bus communication profiles for local and neighbourhood networks

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DLMS[1] User Association
Zug/Switzerland
www.dlms.com

International Standard IEC 62056-7-3 has been prepared by IEC technical committee 13: Electrical energy measurement and control.

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

FDIS	Report on voting
13/1729/FDIS	13/1731/RVD

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.

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1 Device Language Message Specification.

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 for wired and wireless M-Bus networks using the lower layers specified in the EN 13757 series.

It follows the rules defined in IEC 62056-5-3, Annex A.

The DLMS/COSEM wired and wireless M-Bus communication profiles for local and neighbourhood networks may be used for smart energy data exchange with meters as well as with simple consumer displays and home automation systems.

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ELECTRICITY METERING DATA EXCHANGE – THE DLMS/COSEM SUITE –

Part 7-3: Wired and wireless M-Bus communication profiles for local and neighbourhood networks

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1 Scope

This International Standard specifies DLMS/COSEM wired and wireless M-Bus communication profiles for local and neighbourhood networks.

Setting up and managing the M-Bus communication channels of M-Bus devices, the M-Bus network, registering slave devices and – when required – repeaters is out of the scope of this International Standard.

The scope of this communication profile standard is restricted to aspects concerning the use of communication protocols in conjunction with the COSEM data model and the DLMS/COSEM application layer. Data structures specific to a communication protocol are out of the scope of this standard. Any project-specific definitions of data structures and data contents may be provided in project-specific companion specifications.

Annex A (informative) provides information on M-Bus frame structures, addressing schemes and an encoding example.

Annex B (normative) points to COSEM interface classes to set up and manage the wired and wireless M-Bus communication channel.

Annex C (informative) provides MSCs for representative instances of communication.

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 62056-5-3:2016, *Electricity metering data exchange – The DLMS/COSEM suite – Part 5-3: DLMS/COSEM application layer*

IEC 62056-6-1:2015, *Electricity metering data exchange – The DLMS/COSEM suite – Part 6-1: Object identification system (OBIS)*

IEC 62056-6-2:2016, *Electricity metering data exchange – The DLMS/COSEM suite – Part 6-2: COSEM interface classes*

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

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2 Under preparation. Stage at the time of publication: IEC/CDV 62056-6-2:2016.

EN 13757-1, *Communication system for meters – Part 1: Data exchange*

EN 13757-2:2004, *Communication system for and remote reading of meters – Part 2: Physical and link layer*

EN 13757-3:2013, *Communication systems for and remote reading of meters – Part 3: Dedicated application layer*

EN 13757-4:2013, *Communication systems for meters and remote reading of meters – Part 4: Wireless meter readout (Radio meter reading for operation in SRD bands)*

3 Terms, definitions and abbreviated terms

3.1 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC 62056-5-3, IEC 62056-6-1, IEC 62056-6-2 and in the EN 13757 series apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at http://www.electropedia.org/
- ISO Online browsing platform: available at http://www.iso.org/obp

3.2 Abbreviated terms

The following M-Bus specific abbreviated terms are used in this standard.

Abbrev.	Term	Standard domain
ACC	Access number field	M-Bus
ALA	Application Layer Address	M-Bus
CFG	Configuration byte	M-Bus
CI_{ELL}	CI field introducing the extended link layer (wireless M-Bus)	M-Bus
CI Field	Control Information field	M-Bus
CI_{TL}	CI field introducing the transport layer	M-Bus
DTSAP	Destination Transport Service Access Point	Telecontrol
ELL	Extended Link Layer	M-Bus
ELLA	Extended Link Layer Address	M-Bus
FIN (bit)	Final bit	Telecontrol
FT1.2	Data integrity format class FT1.2	Telecontrol
FT3	Data integrity format class FT3	Telecontrol
LLA	Link Layer Address	M-Bus
MSC	Message Sequence Chart	General
STS	Status byte	M-Bus
STSAP	Source Transport Service Access Point	Telecontrol
TL	Transport layer	M-Bus
wM-Bus	Wireless M-Bus	M-Bus

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