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Electricity metering – Data exchange for meter reading, tariff and load control –

Part 42: Physical layer services and procedures for connection-oriented asynchronous data exchange

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

ELECTRICITY METERING – DATA EXCHANGE FOR METER READING, TARIFF AND LOAD CONTROL –

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FOREWORD

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DLMS[1] User Association
Geneva / Switzerland
www.dlms.ch

International Standard IEC 62056-42 has been prepared by IEC technical committee 13: Equipment for electrical energy measurement and load control.

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

FDIS	Report on voting
13/1266/FDIS	13/1272/RVD

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

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1 Device Language Message Specification.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 3.

Annexes A and B are for information only.

The committee has decided that the contents of this publication will remain unchanged until 2006. At this date, the publication will be

- reconfirmed;
- withdrawn;
- replaced by a revised edition, or
- amended.

A bilingual version of this publication may be issued at a later date.

ELECTRICITY METERING – DATA EXCHANGE FOR METER READING, TARIFF AND LOAD CONTROL –

Part 42: Physical layer services and procedures for connection-oriented asynchronous data exchange

1 Scope

This part of IEC 62056 specifies the physical layer services and protocols within the Companion Specification for Energy Metering (COSEM) three-layer connection oriented profile for asynchronous data communication. The document does not specify physical layer signals and mechanical aspects. Local, implementation-specific issues are also not specified.

In annex A, an example of how this physical layer can be used for data exchange through the Public Switched Telephone Network (PSTN) using intelligent Hayes modems is given.

The use of the physical layer for the purposes of direct local data exchange using an optical port or a current loop physical interface is specified in IEC 62056-21.

Annex B gives an explanation of the role of data models and protocols in electricity meter data exchange.

2 Normative references

The following referenced documents are indispensable for the application 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 60050-300:2001, *International Electrotechnical Vocabulary –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 62056-21, *Electricity metering – Data exchange for meter reading, tariff and load control – Part 21: Direct local data exchange* [1]

IEC 62056-46, *Electricity metering – Data exchange for meter reading, tariff and load control – Part 46: Data link layer using HDLC protocol* [1]

IEC 62056-53, *Electricity metering – Data exchange for meter reading, tariff and load control – Part 53: COSEM application layer* [1]

IEC 62056-61, *Electricity metering – Data exchange for meter reading, tariff and load control – Part 61: OBIS Object identification system* [1]

IEC 62056-62, *Electricity metering – Data exchange for meter reading, tariff and load control – Part 62: Interface objects* [1]

NEMA C12.21:1999, *Protocol Specification for Telephone Modem Communication*

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[1] To be published.