

Distribution automation using distribution line carrier systems —

Part 4-512: Data communication protocols — System management using profile 61334-5-1 — Management Information Base (MIB)

The European Standard EN 61334-4-512:2002 has the status of a
British Standard

ICS 33.200

National foreword

This British Standard is the official English language version of EN 61334-4-512:2002. It is identical with IEC 61334-4-512:2001.

The UK participation in its preparation was entrusted to Technical Committee PEL/57, Power system control and associated communications, which has the responsibility to:

- aid enquirers to understand the text;
- present to the responsible international/European committee any enquiries on the interpretation, or proposals for change, and keep the UK interests informed;
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Cross-references

The British Standards which implement international or European publications referred to in this document may be found in the BSI Standards Catalogue under the section entitled “International Standards Correspondence Index”, or by using the “Find” facility of the BSI Standards Electronic Catalogue.

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This British Standard, having been prepared under the direction of the Electrotechnical Sector Policy and Strategy Committee, was published under the authority of the Standards Policy and Strategy Committee on 19 April 2002

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Distribution automation using distribution line carrier systems
Part 4-512: Data communication protocols –
System management using profile 61334-5-1 –
Management Information Base (MIB)
(IEC 61334-4-512:2001)

Automatisation de la distribution
à l'aide de systèmes de
communication à courants porteurs
Partie 4-512: Protocoles de
communication de données -
Administration de systèmes à l'aide
du profil 61334-5-1 - MIB
(Base d'Informations d'Administration)
(CEI 61334-4-512:2001)

Verteilungsautomatisierung mit Hilfe von
Trägersystemen auf Verteilungsleitungen
Teil 4-512: Datenkommunikations-
protokolle –
Systemverwaltung bei Anwendung
des Profils nach IEC 61334-5-1 -
Management-Informationsbasis (MIB)
(IEC 61334-4-512:2001)

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Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CENELEC member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the Central Secretariat has the same status as the official versions.

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CENELEC

European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

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Foreword

The text of document 57/544/FDIS, future edition 1 of IEC 61334-4-512, prepared by IEC TC 57, Power system control and associated communications, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 61334-4-512 on 2002-02-01.

The following dates were fixed:

- latest date by which the EN has to be implemented
at national level by publication of an identical
national standard or by endorsement (dop) 2002-11-01
- latest date by which the national standards conflicting
with the EN have to be withdrawn (dow) 2005-02-01

Annexes designated "normative" are part of the body of the standard.
In this standard, annex ZA is normative.
Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 61334-4-512:2001 was approved by CENELEC as a European Standard without any modification.

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DISTRIBUTION AUTOMATION USING DISTRIBUTION LINE CARRIER SYSTEMS –

Part 4-512: Data communication protocols – System management using profile 61334-5-1 – Management Information Base (MIB)

1 Scope

This part of IEC 61334 specifies the DCP Management Information Base (MIB). This MIB is used for the management of the communication profile defined by the following standards: IEC 61334-5-1 (Physical and MAC sublayer), IEC 61334-4-32 (LLC sublayer), IEC 61334-4-42 (Application protocols), and IEC 61334-4-41 (DLMS).

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 61334-4-1:1996, *Distribution automation using distribution line carrier systems – Part 4: Data communication protocols – Section 1: Reference model of the communication system*

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

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*

IEC 61334-4-42:1996, *Distribution automation using distribution line carrier systems – Part 4: Data communication protocols – Section 42: Application protocols – Application layer*

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

IEC 61334-5-1:2001, *Distribution automation using distribution line carrier systems – Part 5-1: Lower layer profiles – The spread frequency shift keying (S-FSK) profile*

ISO/IEC 7498-1:1994, *Information technology – Open Systems Interconnection – Basic Reference Model – Part 1: The Basic Model*

ISO/IEC 7498-3:1997, *Information technology – Open Systems Interconnection – Basic Reference Model – Part 3: Naming and addressing*

ISO/IEC 7498-4:1989, *Information technology – Open Systems Interconnection – Basic Reference Model – Part 4: Management framework*

ISO/IEC 8509:1987, *Information processing systems – Open Systems Interconnection – Service conventions*

ISO/IEC 9545:1994, *Information technology – Open Systems Interconnection – Application Layer structure*

3 Definitions

For the purpose of this part of IEC 61334, the following terms as defined in ISO/IEC 7498-1, ISO/IEC 7498-3, ISO/IEC 7498-4, ISO/IEC 8509, ISO/IEC 9545, IEC 61334-4-1, IEC 61334-4-41, IEC 61334-4-42 and IEC 61334-4-511 and the additional definition apply.

3.1 ISO/IEC 7498

- a) open system,
- b) application-process,
- c) (N)-layer,
- d) (N)-sublayer,
- e) (N)-service,
- f) (N)-service-access-point,
- g) (N)-protocol,
- h) (N)-protocol-data-unit,
- i) (N)-service-data-unit,
- j) systems-management,
- k) application-entity,
- l) application-service-element,
- m) user-element.

3.2 ISO/IEC 7498-3

- a) (N)-address,
- b) (N)-selector,
- c) (N)-association,
- d) (N)-directory-function,
- e) (N)-entity,
- f) (N)-entity-title,
- g) system-title.

3.3 ISO/IEC 7498-4

- a) Systems management application-entity,
- b) OSI Management,
- c) Management Object,
- d) Management Information Base.

3.4 ISO/IEC 8509

- a) primitive,
- b) request,
- c) indication,
- d) response,
- e) confirm.

3.5 ISO/IEC 9545

- a) application-context.

3.6 IEC 61334-4-1

- a) NEW-address,
- b) AIIISMAE-Title.

3.7 IEC 61334-4-41

- a) client,
- b) server,
- c) Virtual Distribution Equipment (VDE).

3.8 IEC 61334-4-42

- a) application context.

3.9 IEC 61334-4-511

- a) initiator,
- b) active initiator,
- c) new/authorized systems,
- d) manager,
- e) new system,
- f) new system title,
- g) registered system,
- h) reporting system,
- i) system.

3.10

application-identifier

identifies an application in a system. Two applications associated with the same VDE-type attribute cannot have the same application-identifier.

4 Abbreviations

ACSE	Association Control Service Element
ASE	Application Service Element
CIASE	Configuration Initiation ASE
DASE	DLMS Application Service Element
DCP	Data Communication Protocols
DLMS	Distribution Line Message Specification
IEC	International Electrotechnical Commission
ISO	International Organization for Standardization
LLC	Logical Link Control
L-SAP	Link Service Access Point
MAC	Medium Access Control
MIB	Management Information Base
OSI	Open Systems Interconnection
OSIE	Open Systems Interconnection Environment
PDU	Protocol Data Unit
SAP	Service Access Point
SDU	Service Data Unit
SMAE	Systems Management Application Entity
VDE	Virtual Distribution Equipment

The following initials are used to specify the layers or sublayers:

- a) PHY – Physical layer,
- b) DL – Data_Link layer,
- c) MA – MAC sublayer,
- d) L – LLC sublayer,
- e) CI – CIASE sublayer (Application layer).