



SLOVENSKI STANDARD

SIST EN 61334-4-511:2002

01-april-2002

[Not translated]

Distribution automation using distribution line carrier systems -- Part 4-511: Data communication protocols - Systems management - CIASE protocol

Verteilungsautomatisierung mit Hilfe von Trägersystemen auf Verteilungsleitungen -- Teil 4-511: Datenkommunikationsprotokolle - Systemverwaltung - CIASE Protokoll

iTeh STANDARD PREVIEW

Automatisation de la distribution à l'aide de systèmes de communication à courants porteurs -- Partie 4-511: Protocoles de communication de données - Administration de systèmes - Protocole CIASE

[SIST EN 61334-4-511:2002](https://standards.iteh.ai/catalog/standards/sist/f70fa5b2-9b2f-44a7-b267-a6e88621e207/sist-en-61334-4-511-2002)

[https://standards.iteh.ai/catalog/standards/sist/f70fa5b2-9b2f-44a7-b267-](https://standards.iteh.ai/catalog/standards/sist/f70fa5b2-9b2f-44a7-b267-a6e88621e207/sist-en-61334-4-511-2002)

[a6e88621e207/sist-en-61334-4-511-2002](https://standards.iteh.ai/catalog/standards/sist/f70fa5b2-9b2f-44a7-b267-a6e88621e207/sist-en-61334-4-511-2002)

Ta slovenski standard je istoveten z: EN 61334-4-511:2000

ICS:

33.040.40	Podatkovna komunikacijska omrežja	Data communication networks
33.200	Daljinsko krmiljenje, daljinske meritve (telemetrija)	Telecontrol. Telemetry

SIST EN 61334-4-511:2002

en

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[SIST EN 61334-4-511:2002](#)

<https://standards.iteh.ai/catalog/standards/sist/f70fa5b2-9b2f-44a7-b267-a6e88621e207/sist-en-61334-4-511-2002>

EUROPEAN STANDARD

EN 61334-4-511

NORME EUROPÉENNE

EUROPÄISCHE NORM

November 2000

ICS 33.040.40; 33.200

English version

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

Automatisation de la distribution
à l'aide de systèmes de communication
à courants porteurs
Partie 4-511: Protocoles de
communication de données -
Administration de systèmes -
Protocole CIASE
(CEI 61334-4-511:2000)

Verteilungsautomatisierung
mit Hilfe von Trägersystemen
auf Verteilungsleitungen
Teil 4-511:
Datenkommunikationsprotokolle -
Systemverwaltung -
CIASE Protokoll
(IEC 61334-4-511:2000)

This European Standard was approved by CENELEC on 2000-08-01. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

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.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

CENELEC

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

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

Foreword

The text of document 57/446/FDIS, future edition 1 of IEC 61334-4-511, 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 61334-4-511 on 2000-08-01.

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) 2001-05-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2003-08-01

Annexes designated "normative" are part of the body of the standard.
Annexes designated "informative" are given for information only.
In this standard, annex ZA is normative and annexes A, B and C are informative.
Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 61334-4-511:2000 was approved by CENELEC as a European Standard without any modification.

(standards.iteh.ai)

[SIST EN 61334-4-511:2002](https://standards.iteh.ai/catalog/standards/sist/f70fa5b2-9b2f-44a7-b267-a6e88621e207/sist-en-61334-4-511-2002)

<https://standards.iteh.ai/catalog/standards/sist/f70fa5b2-9b2f-44a7-b267-a6e88621e207/sist-en-61334-4-511-2002>

Annex ZA (normative)

Normative references to international publications with their corresponding European publications

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

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 61334-4-1	1996	Distribution automation using distribution line carrier systems Part 4: Data communication protocols -- Section 1: Reference model of the communication system	EN 61334-4-1	1996
IEC 61334-4-32	1996	Part 4: Data communication protocols -- Section 32: Data link layer - Logical link control (LLC)	EN 61334-4-32	1996
IEC 61334-4-41	1996	Part 4: Data communication protocols -- Section 41: Application protocols - Distribution line message specification	EN 61334-4-41	1996
IEC 61334-4-42	1996	Part 4: Data communication protocols -- Section 42: Application protocols - Application layer	EN 61334-4-42	1996
IEC 61334-4-512	1)	Part 4-512: Data Communication Protocols - Systems management using profile 61334-5-1-MIB	-	-
IEC 61334-5-1	1996	Part 5: Lower layer profiles -- Section 1: Spread Frequency Shift Keying (S-FSK) profile	-	-
ISO/IEC 7498	Series	Information processing systems - Open systems interconnection - Basic reference model	-	-
ISO/IEC 7498-1	1994	Information technology - Open systems interconnection - Basic reference model: The basic model	EN ISO/IEC 7498-1	1995
ISO/IEC 7498-3	1997	Part 3: Naming and addressing	-	-
ISO/IEC 7498-4	1989	Part 4: Management framework	-	-

1) In preparation

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
ISO/IEC/TR 8509	1987	Information processing systems - Open systems interconnection - Service conventions	-	-
ISO/IEC 9545	1994	Information technology - Open Systems Interconnection - Application Layer structure	-	-

iTeh STANDARD PREVIEW (standards.iteh.ai)

[SIST EN 61334-4-511:2002](#)

<https://standards.iteh.ai/catalog/standards/sist/f70fa5b2-9b2f-44a7-b267-a6e88621e207/sist-en-61334-4-511-2002>

**NORME
INTERNATIONALE
INTERNATIONAL
STANDARD**

**CEI
IEC**

61334-4-511

Première édition
First edition
2000-04

**Automatisation de la distribution à l'aide de
systèmes de communication à courants porteurs –**

**Partie 4-511:
Protocoles de communication de données –
Administration de systèmes – Protocole CIASE**

(standards.iteh.ai)

**Distribution automation using distribution line
carrier systems –**

<https://standards.iteh.ai/catalog/standards/sist/f70fa5b2-9b2f-44a7-b267-a6e88621e207/sist-en-61334-4-511-2002>

**Part 4-511:
Data communication protocols –
Systems management – CIASE protocol**

© IEC 2000 Droits de reproduction réservés — Copyright - all rights reserved

Aucune partie de cette publication ne peut être reproduite ni utilisée sous quelque forme que ce soit et par aucun procédé, électronique ou mécanique, y compris la photocopie et les microfilms, sans l'accord écrit de l'éditeur.

No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from the publisher.

International Electrotechnical Commission
Telefax: +41 22 919 0300

3, rue de Varembe Geneva, Switzerland
e-mail: inmail@iec.ch IEC web site <http://www.iec.ch>



Commission Electrotechnique Internationale
International Electrotechnical Commission
Международная Электротехническая Комиссия

CODE PRIX
PRICE CODE

V

Pour prix, voir catalogue en vigueur
For price, see current catalogue

CONTENTS

	Page
FOREWORD	7
INTRODUCTION	9
Clause	
1 Scope	11
2 Normative references	11
3 Definitions	13
4 Abbreviations	17
5 Service argument description	19
6 Systems management overview.....	21
6.1 OSI standards.....	21
6.2 DCP systems management concepts.....	21
6.2.1 MIB.....	23
6.2.2 Alarm	23
6.2.3 Client SMAE.....	23
6.3 Use of DLMS services in management services.....	23
6.4 Management VDE	23
6.4.1 Service Conformance Block.....	25
6.4.2 Mandatory DLMS Objects.....	25
6.5 Specifications of types	27
7 Configuration Initiation Application Service Element.....	27
7.1 Discover service.....	27
7.1.1 Purpose	27
7.1.2 Structure	29
7.1.3 Arguments	29
7.1.4 Service procedure	31
7.2 Register service	37
7.2.1 Purpose	37
7.2.2 Structure	37
7.2.3 Arguments	37
7.2.4 Service Procedure.....	39
7.3 CIASE protocol	39
7.3.1 Abstract and transfer syntax	39
7.3.2 Mapping to underlying services.....	39
7.3.3 CI-PDU description.....	41
7.4 CIASE state tables	43
7.4.1 Notations used in state tables.....	43
7.4.2 States description.....	49
7.4.3 Local state variables.....	49
7.4.4 Event functions description.....	51
7.4.5 Actions description	53
Annex A (informative) Vocabulary and operating rules.....	59
Annex B (informative) Examples of CIASE protocol use	63
Annex C (informative) Example of CIASE Td calculation	65

	Page
Figure 1 – The Systems Management Application Process	21
Table 1 – The Discover service	29
Table 2 – The Register service	37
Table 3 – The Client CIASE state table	45
Table 4 – The Server CIASE state table	47

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[SIST EN 61334-4-511:2002](https://standards.iteh.ai/catalog/standards/sist/f70fa5b2-9b2f-44a7-b267-a6e88621e207/sist-en-61334-4-511-2002)

<https://standards.iteh.ai/catalog/standards/sist/f70fa5b2-9b2f-44a7-b267-a6e88621e207/sist-en-61334-4-511-2002>

INTERNATIONAL ELECTROTECHNICAL COMMISSION

**DISTRIBUTION AUTOMATION USING
DISTRIBUTION LINE CARRIER SYSTEMS –****Part 4-511: Data communication protocols –
Systems management – CIASE protocol**

FOREWORD

- 1) The IEC (International Electrotechnical Commission) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of the IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, the IEC publishes International Standards. Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. The IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
- 2) The formal decisions or agreements of the IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested National Committees.
- 3) The documents produced have the form of recommendations for international use and are published in the form of standards, technical specifications, technical reports or guides and they are accepted by the National Committees in that sense.
- 4) In order to promote international unification, IEC National Committees undertake to apply IEC International Standards transparently to the maximum extent possible in their national and regional standards. Any divergence between the IEC Standard and the corresponding national or regional standard shall be clearly indicated in the latter.
- 5) The IEC provides no marking procedure to indicate its approval and cannot be rendered responsible for any equipment declared to be in conformity with one of its standards.
- 6) Attention is drawn to the possibility that some of the elements of this International Standard may be the subject of patent rights. The IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 61334-4-511 has been prepared by IEC technical committee 57: Power system control and associated communications.

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

FDIS	Report on voting
57/446/FDIS	57/460/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.

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

Annexes A, B and C are for information only.

The committee has decided that the contents of this publication will remain unchanged until 2004. At this date, the publication will be

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

INTRODUCTION

The description of the DCP systems management given in this part of IEC 61334 is developed in the following clauses:

Clause 1 defines the scope of this International Standard.

Clause 2 lists related ISO/IEC standards.

Clause 3 defines the terms used in this standard.

Clause 4 defines the abbreviations used in this standard.

Clause 5 specifies the conventions taken for the description of the primitives.

Clause 6 introduces general concepts related to DCP systems management.

Clause 7 specifies the Configuration Initiation Application Service Element (CIASE).

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[SIST EN 61334-4-511:2002](https://standards.iteh.ai/catalog/standards/sist/f70fa5b2-9b2f-44a7-b267-a6e88621e207/sist-en-61334-4-511-2002)

<https://standards.iteh.ai/catalog/standards/sist/f70fa5b2-9b2f-44a7-b267-a6e88621e207/sist-en-61334-4-511-2002>

DISTRIBUTION AUTOMATION USING DISTRIBUTION LINE CARRIER SYSTEMS –

Part 4-511: Data communication protocols – Systems management – CIASE protocol

1 Scope

This part of IEC 61334 specifies the DCP management requirements. It describes the management services in an abstract way as well as the underlying protocol.

It defines terminology and describes concepts for DCP systems management, describes DCP systems management activities and facilities, and specifies DCP services and protocol.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of IEC 61334. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this part of IEC 61334 are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of IEC and ISO maintain registers of currently valid International Standards.

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 61334-4-512, — *Distribution automation using distribution line carrier systems – Part 4-512: Data communication protocols – Systems management using profile 61334-5-1-MIB*¹⁾

IEC 61334-5-1:1996, *Distribution automation using distribution line carrier systems – Part 5: Lower layer profiles – Section 1: The spread frequency shift keying (S-FSK) profile*

1) Under consideration.