SLOVENSKI STANDARD
SIST EN 61334-4-61:1998

01-april-2002

[Not translated]

Distribution automation using distribution line carrier systems -- Part 4-61: Data communication protocols - Network layer - Connectionless protocol

Verteilungsautomatisierung mit Hilfe von Trägersystemen auf Verteilungsleitungen -- Teil 4-61: Datenkommunikationsprotokolle - Vermittlungsschicht - Verbindungsloses Protokoll

iTeh STANDARD PREVIEW

Automatisation de la distribution à l'aide de systèmes de communication à courants porteurs -- Partie 4-61: Protocoles de communication de données - Couche réseau - Protocole sans connexion

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Ta slovenski standard je istoveten z: **EN 61334-4-61:1998**

ICS:

29.240.20	Daljnovodi	Power transmission and distribution lines
33.200	Daljinsko krmiljenje, daljinske meritve (telemetrija)	Telecontrol. Telemetering

SIST EN 61334-4-61:1998   **en**

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 61334-4-61

October 1998

ICS 29.240.20; 33.200

Descriptors: Electrical power, distribution automation, distribution line carrier systems, data communication protocols, network layer, connectionless protocol

English version

Distribution automation using distribution line carrier systems
Part 4-61: Data communication protocols - Network layer
Connectionless protocol
(IEC 61334-4-61:1998)

Automatisation de la distribution à
l'aide de systèmes de communication
à courants porteurs
Partie 4-61: Protocoles de
communication de données - Couche
réseau - Protocole sans connexion
(CEI 61334-4-61:1998)

Verteilungsautomatisierung mit
Hilfe von Trägersystemen auf
Verteilungsleitungen
Teil 4-61:
Datenkommunikationsprotokolle
Vermittlungsschicht
Verbindungsloses Protokoll
(IEC 61334-4-61:1998)

This European Standard was approved by CENELEC on 1998-10-01. 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.

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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

Ref. No. EN 61334-4-61:1998 E

Foreword

The text of document 57/356/FDIS, future edition 1 of IEC 61334-4-61, 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 61334-4-61 on 1998-10-01.

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)   1999-07-01

- latest date by which the national standards conflicting
  with the EN have to be withdrawn   (dow)   2001-07-01

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 61334-4-61:1998 was approved by CENELEC as a European Standard without any modification.

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.

Publication	Year	Title	EN/HD	Year
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 61334-4-33	1998	Part 4-33: Data communication protocols Data link layer - Connection oriented protocol	EN 61334-4-33	1998
IEC 61334-4-41	1996	Section 41: Application protocols Distribution line message specification	EN 61334-4-41	1996
IEC 61334-4-42	1996	Section 42: Application protocols Application layer	EN 61334-4-42	1996
ISO/IEC 7498	series	Information technology - Open systems interconnection - Basic reference model	EN ISO/IEC 7498	series

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Automatisation de la distribution à l'aide
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Protocoles de communication de données –
Couche réseau – Protocole sans connexion

Distribution automation using
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Data communication protocols –
Network layer – Connectionless protocol

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International Electrotechnical Commission
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61334-4-61 © IEC:1998 – 3 –

CONTENTS

61334-4-61 © IEC:1998   – 5 –

INTERNATIONAL ELECTROTECHNICAL COMMISSION

DISTRIBUTION AUTOMATION
USING DISTRIBUTION LINE CARRIER SYSTEMS –

Part 4-61: Data communication protocols –
Network layer – Connectionless 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.

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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 61334-4-61 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
57/356/FDIS	57/370/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.

INTRODUCTION

This part of IEC 61334 is closely related to IEC 61334-4-1 that refers to a minimal three-layer architecture as an example of the use of an efficient communication architecture to build a communication system used for low-voltage DLC applications.

Nevertheless, the suggested layered architecture is open to support additional features which are to be implemented in the case of several subnetworks, as MV and LV networks, are used for DLC applications.

The basic three layer communication architecture provides communication among applications which are hosted by stations on one single line carrier link (e.g. an LV section), as in the example represented in figure 1: this set of stations is here defined as a "subnetwork".

Furthermore, two subnetworks may be connected through an internetworking unit which hosts an application acting as gateway in case of communication between a client and a server running on stations that belong to different subnetworks (see figure 2).

Another approach is to define a network layer entity (N) supporting a routing function which provides the necessary address mapping between the two subnetworks (see figure 3).

In the example of figure 3, all the stations have to implement the network layer function: nevertheless, applications running on the same subnetwork may directly use the LLC services using a LSAP different from that assigned to the network layer entity, as defined in the following.

In the general case, a mixed approach may be useful and a number of subnetworks could be crossed by a message (see figure 4 for an application example).

A protocol at the network layer is to be used and the entity, implementing it, is located between the N-user and the LLC layers, as defined in the following architecture model.

IEC   882/98
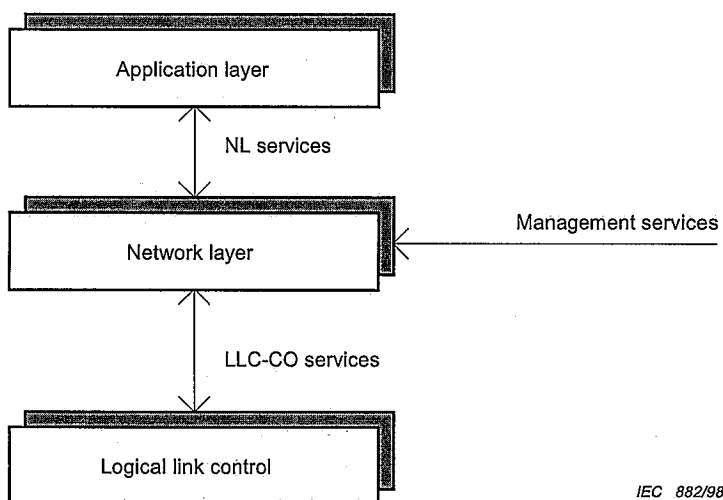
This standard provides the N service definition and the N-protocol specification, with specific reference to the application of figure 4.

Network layer mapping functions to application layer are described in clause 6.