



# SLOVENSKI STANDARD

## SIST EN 60870-5-3:1997

01-avgust-1997

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### Telecontrol equipment and systems - Part 5: Transmission protocols - Section 3: General structure of application data (IEC 870-5-3:1992)

Telecontrol equipment and systems -- Part 5: Transmission protocols - Section 3:  
General structure of application data

Fernwirkeinrichtungen und Fernwirkssysteme -- Teil 5: Übertragungsprotokol -  
Hauptabschnitt 3: Allgemeine Struktur der Anwendungsdaten

Equipement et systèmes de téléconduite -- Partie 5: Protocoles de transmission -  
Section 3: Structure générale des données d'application

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Ta slovenski standard je istoveten z: **EN 60870-5-3:1992**

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33.200 Daljinsko krmiljenje, daljinske Telecontrol. Telemetering  
meritve (telemetrija)

**SIST EN 60870-5-3:1997**

**en**

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EUROPEAN STANDARD

EN 60870-5-3

NORME EUROPEENNE

EUROPÄISCHE NORM

October 1992

UDC 621.398

Descriptors: Teleprocessing, telecontrol, data transmission, information, open system interconnection, data, protocol, application layer, data structure

## ENGLISH VERSION

Telecontrol equipment and systems  
Part 5: Transmission protocols  
Section 3: General structure of application data  
(IEC 870-5-3:1992)

Matériels et systèmes de  
téléconduite

Partie 5: Protocoles de  
transmission

Section 3: Structure générale  
des données d'application  
(CEI 870-5-3:1992)

Fernwirkeinrichtungen und  
Fernwirksysteme

Teil 5: Übertragungsprotokoll

Hauptabschnitt 3: Allgemeine  
Struktur der Anwendungsdaten

(IEC 870-5-3:1992)

SIST EN 60870-5-3:1997

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This European Standard was approved by CENELEC on 1992-06-16. 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, 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(CO)61, as prepared by IEC Technical Committee N° 57: Telecontrol, teleprotection and associated telecommunications for electric power systems, was submitted to the IEC-CENELEC parallel vote in October 1991.

The reference document was approved by CENELEC as EN 60870-5-3 on 16 June 1992.

The following dates were fixed:

- latest date of publication of  
an identical national standard (dop) 1993-09-01
- latest date of withdrawal of  
conflicting national standards (dow) 1993-09-01

Annexes designated "normative" are part of the body of the standard. In this standard, annex ZA is normative.

## **iTeh STANDARD PREVIEW**

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The text of the International Standard IEC 870-5-3:1992 was approved by CENELEC as a European Standard without any modification.

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7e107adceb12/sist-en-60870-5-3-1997

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## ANNEX ZA (normative)

OTHER INTERNATIONAL PUBLICATIONS QUOTED IN THIS STANDARD  
WITH THE REFERENCES OF THE RELEVANT EUROPEAN PUBLICATIONS

When the international publication has been modified by CENELEC common modifications, indicated by (mod), the relevant EN/HD applies.

IEC Publication	Date	Title	EN/HD	Date
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50(371)	1984	International Electrotechnical Vocabulary (IEV) Chapter 371: Telecontrol	-	-
870-1-1	1988	Telecontrol equipment and systems Part 1: General considerations Section One: General principles	-	-
870-5-1	1990	Part 5: Transmission protocols Section One: Transmission frame formats	-	-
870-5-2	1992	Part 5: Transmission protocols Section 2: Link transmission procedures	-	-
870-5-4	-	Part 5: Transmission protocols Section 4: Definition and coding of application information elements (in preparation)	-	-
870-5-5	-	Part 5: Transmission protocols Section 5: Basic application functions (under consideration)	-	-
870-6	-	Part 6: Telecontrol protocols compatible with ISO and CCITT standards (under consideration)	-	-
Other publications				
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ISO 7498:1984 - Information processing systems - Open systems interconnection Basic reference model				
ISO/IEC 8824:1990 - Information technology - Open systems interconnection Specification of abstract syntax notation one (ASN.1)				
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NORME  
INTERNATIONALE  
INTERNATIONAL  
STANDARD

CEI  
IEC  
870-5-3

Première édition  
First edition  
1992-09

**Matériels et systèmes de téléconduite**

**Partie 5:**

Protocoles de transmission

Section 3: Structure générale des données

d'application

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**Telecontrol equipment and systems**

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**Part 5:**

Transmission protocols

Section 3: General structure of application data

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Commission Electrotechnique Internationale  
International Electrotechnical Commission  
Международная Электротехническая Комиссия

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## CONTENTS

	Page
FOREWORD .....	5
INTRODUCTION .....	7
Clause	
1 Scope and object .....	9
2 Normative references .....	11
3 Definitions .....	11
4 Relation to the ISO reference model .....	13
5 Structure of application data .....	15
5.1 APPLICATION SERVICE DATA UNIT .....	21
5.1.1 DATA UNIT IDENTIFIER .....	21
5.1.2 INFORMATION OBJECTS .....	23
5.1.3 Identification of INFORMATION OBJECTS .....	27
5.1.4 INFORMATION OBJECTS address schemes .....	29
5.1.5 SETS OF INFORMATION ELEMENTS .....	29
6 Guideline for constructing APPLICATION SERVICE DATA UNITS .....	31
6.1 First step: selection of field elements of DATA UNIT IDENTIFIER .....	33
6.2 Second step: Definition of lengths of field elements of DATA UNIT IDENTIFIER .....	33
6.3 Third step: Definition of data types of DATA UNIT IDENTIFIER .....	35
6.4 Fourth step: Definition of INFORMATION OBJECTS .....	37
6.5 Fifth step: Assignment of INFORMATION OBJECTS to TYPE IDENTIFICATION and definition of semantics .....	41



## INTERNATIONAL ELECTROTECHNICAL COMMISSION

## TELECONTROL EQUIPMENT AND SYSTEMS

Part 5: Transmission protocols  
Section 3: General structure of application data

## FOREWORD

- 1) The formal decisions or agreements of the IEC on technical matters, prepared by Technical Committees on which all the National Committees having a special interest therein are represented, express, as nearly as possible, an international consensus of opinion on the subjects dealt with.
- 2) They have the form of recommendations for international use and they are accepted by the National Committees in that sense.
- 3) In order to promote international unification, the IEC expresses the wish that all National Committees should adopt the text of the IEC recommendation for their national rules in so far as national conditions will permit. Any divergence between the IEC recommendation and the corresponding national rules should, as far as possible, be clearly indicated in the latter.

This section of International Standard IEC 870-5 has been prepared by IEC Technical Committee No. 57: Telecontrol, teleprotection and associated telecommunications for electric power systems.

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

SIST EN 60870-5-3:1997  
<https://standards.itec.org/catalog/standards/sist/2b0c5010-bce9-4adb-8269-7e107adceb12/sist-en-60870-5-3-1997>

DIS	Report on Voting
57(CO)61	57(CO)66

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

## INTRODUCTION

This section of IEC 870-5 specifies generic standard structures for the application data field in telecontrol transmission frames.

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## TELECONTROL EQUIPMENT AND SYSTEMS

### Part 5: Transmission protocols Section 3: General structure of application data

#### 1 Scope and object

This section of IEC 870-5 applies to telecontrol equipment and systems with coded bit serial data transmission for monitoring and controlling geographically widespread processes.

This section specifies rules for structuring application data units in transmission frames of telecontrol systems. These rules are presented as generic standards that may be used to support a great variety of present and future telecontrol applications. The layout is designed to limit the organizational overhead for standard data acquisition and supervisory control tasks to a necessary minimum with possible extensions for special tasks. From this point of view, it is appropriate to admit application specific or system specific choices of data presentation, of address structures and of chaining mechanisms for information objects in a frame. The corresponding arrangements can be, in most cases, assumed to be known by the communicating stations and thus need not burden the transmission frame.

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This section describes the general structure of application data without specifying details about information fields and their contents. It describes basic rules to specify application data units.

Definitions and coding specifications of individual information elements that are frequently used in telecontrol applications are defined in IEC 870-5-4.

Compatibility between devices of different suppliers can only be reached by defining complete application profiles.

A complete application profile consists of:

- the specification of the physical interface;
- a subset of IEC 870-5-1;
- a subset of IEC 870-5-2;
- the specification of the application data units, based on both, IEC 870-5-3 and IEC 870-5-4;
- the specification of the application functions based on IEC 870-5-5.