

# SLOVENSKI STANDARD

## SIST EN 61850-7-3:2011

01-maj-2011

Nadomešča:

SIST EN 61850-7-3:2004

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**Komunikacijska omrežja in sistemi za avtomatizacijo porabe električne energije - 7-3. del: Osnovna komunikacijska struktura - Skupni podatkovni razredi (IEC 61850-7-3:2010)**

Communication networks and systems for power utility automation - Part 7-3: Basic communication structure - Common data classes (IEC 61850-7-3:2010)

### iTeh STANDARD PREVIEW

Kommunikationsnetze und -systeme für die Automatisierung in der elektrischen Energieversorgung - Teil 7-3: Grundlegende Kommunikationsstruktur - Gemeinsame Datenklassen (IEC 61850-7-3:2010)

[SIST EN 61850-7-3:2011](https://standards.iteh.ai/catalog/standards/sist/c1ace23e-bc42-4446-bf92-00543b240/sist-en-61850-7-3-2011)

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Réseaux et systèmes de communication pour l'automatisation des systèmes électriques - Partie 7-3: Structure de communication de base - Classes de données communes (CEI 61850-7-3:2010)

**Ta slovenski standard je istoveten z: EN 61850-7-3:2011**

#### **ICS:**

29.240.30	Krmilna oprema za elektroenergetske sisteme	Control equipment for electric power systems
33.200	Daljinsko krmiljenje, daljinske meritve (telemetrija)	Telecontrol. Telemetry

**SIST EN 61850-7-3:2011**

**en**

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EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**EN 61850-7-3**

February 2011

ICS 33.200

Supersedes EN 61850-7-3:2003

English version

**Communication networks and systems for power utility automation -  
Part 7-3: Basic communication structure -  
Common data classes  
(IEC 61850-7-3:2010)**

Réseaux et systèmes de communication  
pour l'automatisation des systèmes  
électriques -  
Partie 7-3: Structure de communication de  
base -  
Classes de données communes  
(CEI 61850-7-3:2010)

Kommunikationsnetze und -systeme für  
die Automatisierung in der elektrischen  
Energieversorgung -  
Teil 7-3: Grundlegende  
Kommunikationsstruktur -  
Gemeinsame Datenklassen  
(IEC 61850-7-3:2010)

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This European Standard was approved by CENELEC on 2011-01-20. 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, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

**CENELEC**

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

**Management Centre: Avenue Marnix 17, B - 1000 Brussels**

## Foreword

The text of document 57/1087/FDIS, future edition 2 of IEC 61850-7-3, prepared by IEC TC 57, Power systems management and associated information exchange, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 61850-7-3 on 2010-12-07.

This European Standard supersedes EN 61850-7-3:2003.

Compared to EN 61850-7-3:2003, this edition:

- defines new common data classes used for new standards defining object models for other domains based on EN 61850 and for the representation of statistical and historical data;
- provides clarifications and corrections to EN 61850-7-3:2003.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN and CENELEC shall not be held responsible for identifying any or all such patent rights.

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) 2011-09-07
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2013-12-07

Annex ZA has been added by CENELEC.

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**Endorsement notice**

The text of the International Standard IEC 61850-7-3:2010 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standards indicated:

- IEC 61850-8 series    NOTE    Harmonized in EN 61850-8 series (not modified).
- IEC 61850-9 series    NOTE    Harmonized EN 61850-9 series (not modified).

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## Annex ZA (normative)

### Normative references to international publications with their corresponding European publications

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.

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/TS 61850-2	-	Communication networks and systems in substations - Part 2: Glossary	-	-
IEC 61850-7-1	-	Communication networks and systems in substations - Part 7-1: Basic communication structure for substation and feeder equipment - Principles and models	EN 61850-7-1	-
IEC 61850-7-2	-	Communication networks and systems for power utility automation - Part 7-2: Basic information and communication structure - Abstract	EN 61850-7-2	-
IEC 61850-7-4	-	Communication networks and systems for power utility automation - Part 7-4: Basic communication structure - Compatible logical node classes and data object classes	EN 61850-7-4	-
ISO 4217	-	Codes for the representation of currencies and funds	-	-
IEEE C37.118	2005	IEEE Standard for Synchrophasors for Power Systems	-	-

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IEC 61850-7-3

Edition 2.0 2010-12

# INTERNATIONAL STANDARD

## NORME INTERNATIONALE



**Communication networks and systems for power utility automation –  
Part 7-3: Basic communication structure – Common data classes**

**Réseaux et systèmes de communication pour l'automatisation des systèmes  
électriques –  
Partie 7-3: Structure de communication de base – Classes de données  
communes**

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## CONTENTS

FOREWORD.....	6
INTRODUCTION .....	8
1 Scope.....	9
2 Normative references.....	9
3 Terms and definitions.....	10
4 Abbreviated terms .....	10
5 Conditions for attribute inclusion .....	10
6 Constructed attribute classes.....	11
6.1 General.....	11
6.2 Quality .....	11
6.2.1 Overview.....	11
6.2.2 Validity.....	12
6.2.3 Detail quality .....	13
6.2.4 Source.....	14
6.2.5 Test.....	14
6.2.6 Frozen by operator.....	14
6.2.7 Quality in the client server context.....	15
6.2.8 Relation between quality identifiers.....	16
6.3 Analogue value.....	18
6.4 Configuration of analogue value .....	18
6.5 Range configuration .....	19
6.6 Step position with transient indication.....	19
6.7 Pulse configuration.....	20
6.8 Originator.....	20
6.9 Unit definition .....	21
6.10 Vector definition.....	21
6.11 Point definition.....	22
6.12 CtlModels definition.....	22
6.13 SboClasses definition.....	22
6.14 Cell.....	22
6.15 CalendarTime definition .....	23
7 Common data class specifications.....	25
7.1 General.....	25
7.2 Name spaces.....	25
7.3 Common data class specifications for status information.....	25
7.3.1 Application of services.....	25
7.3.2 Single point status (SPS) .....	26
7.3.3 Double point status (DPS).....	27
7.3.4 Integer status (INS).....	27
7.3.5 Enumerated status (ENS).....	28
7.3.6 Protection activation information (ACT) .....	28
7.3.7 Directional protection activation information (ACD).....	29
7.3.8 Security violation counting (SEC).....	30
7.3.9 Binary counter reading (BCR).....	30
7.3.10 Histogram (HST).....	31



7.3.11	Visible string status (VSS).....	31
7.4	Common data class specifications for measurand information.....	32
7.4.1	Application of services.....	32
7.4.2	Measured value (MV) .....	33
7.4.3	Complex measured value (CMV).....	34
7.4.4	Sampled value (SAV) .....	35
7.4.5	Phase to ground/neutral related measured values of a three-phase system (WYE).....	36
7.4.6	Phase to phase related measured values of a three-phase system (DEL).....	37
7.4.7	Sequence (SEQ) .....	38
7.4.8	Harmonic value (HMV).....	39
7.4.9	Harmonic value for WYE (HWYE) .....	40
7.4.10	Harmonic value for DEL (HDEL) .....	41
7.5	Common data class specifications for controls .....	42
7.5.1	Application of services.....	42
7.5.2	Controllable single point (SPC).....	43
7.5.3	Controllable double point (DPC) .....	44
7.5.4	Controllable integer status (INC).....	45
7.5.5	Controllable enumerated status (ENC) .....	46
7.5.6	Binary controlled step position information (BSC).....	47
7.5.7	Integer controlled step position information (ISC).....	48
7.5.8	Controllable analogue process value (APC).....	49
7.5.9	Binary controlled analog process value (BAC).....	50
7.6	Common data class specifications for status settings.....	51
7.6.1	Application of services.....	51
7.6.2	Single point setting (SPG).....	51
7.6.3	Integer status setting (ING) .....	52
7.6.4	Enumerated status setting (ENG).....	52
7.6.5	Object reference setting (ORG) .....	53
7.6.6	Time setting group (TSG).....	53
7.6.7	Currency setting group (CUG) .....	54
7.6.8	Visible string setting (VSG) .....	54
7.7	Common data class specifications for analogue settings .....	55
7.7.1	Application of services.....	55
7.7.2	Analogue setting (ASG) .....	56
7.7.3	Setting curve (CURVE).....	57
7.7.4	Curve shape setting (CSG) .....	58
7.8	Common data class specifications for description information.....	59
7.8.1	Application of services.....	59
7.8.2	Device name plate (DPL) .....	60
7.8.3	Logical node name plate (LPL) .....	61
7.8.4	Curve shape description (CSD).....	62
8	Data attribute semantic .....	63
Annex A	(normative) Value range for units and multiplier .....	78
Annex B	(informative) Functional constraints .....	81
Annex C	(normative) Tracking of configuration revisions.....	83
Annex D	(normative) SCL enumerations .....	84

Bibliography.....	90
Figure 1 – Quality identifiers in a single client-server relationship.....	15
Figure 2 – Quality identifiers in a multiple client-server relationship.....	15
Figure 3 – Interaction of substitution and validity.....	17
Figure 4 – Configuration of command output pulse.....	20
Figure 5 – Cell definition.....	23
Figure 6 – Two-dimensional curve represented by CSG.....	58
Figure 7 – Two-dimensional shape created by multiple CSG.....	59
Table 1 – Conditions for presence of attributes.....	10
Table 2 – Quality.....	12
Table 3 – Relation of the detailed quality identifiers with invalid or questionable quality.....	13
Table 4 – Analogue value.....	18
Table 5 – Configuration of analogue value.....	18
Table 6 – Range configuration.....	19
Table 7 – Step position with transient indication.....	19
Table 8 – Pulse configuration.....	20
Table 9 – Originator.....	21
Table 10 – Values for orCat.....	21
Table 11 – Unit.....	21
Table 12 – Vector.....	21
Table 13 – Point.....	22
Table 14 – Cell.....	23
Table 15 – CalendarTime.....	24
Table 16 – Semantic interpretation of calendar time settings.....	24
Table 17 – Name space attributes.....	25
Table 18 – Basic status information template.....	26
Table 19 – Single point status common data class definition.....	26
Table 20 – Double point status common data class specification.....	27
Table 21 – Integer status common data class specification.....	27
Table 22 – Enumerated status common data class specification.....	28
Table 23 – Protection activation information common data class specification.....	28
Table 24 – Directional protection activation information common data class specification.....	29
Table 25 – Security violation counting common data class specification.....	30
Table 26 – Binary counter reading common data class specification.....	30
Table 27 – Histogram common data class specification.....	31
Table 28 – Visible string status common data class definition.....	31
Table 29 – Basic measurand information template.....	32
Table 30 – Measured value.....	33
Table 31 – Complex measured value.....	34
Table 32 – Sampled value.....	35

Table 33 – WYE .....	36
Table 34 – Delta .....	37
Table 35 – Sequence .....	38
Table 36 – Harmonic value .....	39
Table 37 – Harmonic values for WYE .....	40
Table 38 – Harmonic values for delta .....	41
Table 39 – Basic controllable status information template .....	42
Table 40 – Controllable single point .....	43
Table 41 – Controllable double point .....	44
Table 42 – Controllable integer status .....	45
Table 43 – Controllable enumerated status .....	46
Table 44 – Binary controlled step position information .....	47
Table 45 – Integer controlled step position information .....	48
Table 46 – Controllable analogue process value .....	49
Table 47 – Binary controlled analog process value .....	50
Table 48 – Basic status setting template .....	51
Table 49 – Single point setting .....	51
Table 50 – Integer status setting .....	52
Table 51 – Enumerated status setting .....	52
Table 52 – Object reference setting common data class specification .....	53
Table 53 – Time setting group common data class specification .....	53
Table 54 – Currency setting group common data class specification .....	54
Table 55 – Visible string setting group common data class specification .....	54
Table 56 – Basic analogue setting template .....	55
Table 57 – Analogue setting .....	56
Table 58 – Setting curve .....	57
Table 59 – Curve shape setting .....	58
Table 60 – Basic description information template .....	59
Table 61 – Device name plate common data class specification .....	60
Table 62 – Logical node name plate common data class specification .....	61
Table 63 – Curve shape description common data class specification .....	62
Table 64 – Semantics of data attributes and data .....	63
Table A.1 – SI units: base units .....	78
Table A.2 – SI units: derived units .....	78
Table A.3 – SI units: extended units .....	79
Table A.4 – SI units: industry specific units .....	79
Table A.5 – Multiplier .....	80
Table B.1 – Functional constraints .....	82

## INTERNATIONAL ELECTROTECHNICAL COMMISSION

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**COMMUNICATION NETWORKS AND  
SYSTEMS FOR POWER UTILITY AUTOMATION –**
**Part 7-3: Basic communication structure –  
Common data classes**

## FOREWORD

- 1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of 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, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). 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. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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International Standard IEC 61850-7-3 has been prepared by IEC technical committee 57: Power systems management and associated information exchange.

This second edition cancels and replaces the first edition, published in 2003.

Compared to the first edition, this second edition:

- defines new common data classes used for new standards defining object models for other domains based on IEC 61850 and for the representation of statistical and historical data,
- provides clarifications and corrections to the first edition of IEC 61850-7-3.

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

FDIS	RVD
57/1087/FDIS	57/1095/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 2.

A list of all parts in the IEC 61850 series, published under the general title: *Communication networks and systems for power utility automation*, can be found on the IEC website.

The general title of the series was *Communication networks and systems in substations*. To address the extension of the scope of IEC 61850, it has been changed to *Communication networks and systems for power utility automation*.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC web site under "http://webstore.iec.ch" in the data related to the specific publication. At this date, the publication will be

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

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**IMPORTANT – The colour inside logo on the cover page of this publication indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this document using a colour printer.**

## INTRODUCTION

This document is part of a set of specifications, which details layered substation communication architecture. This architecture has been chosen to provide abstract definitions of classes and services such that the specifications are independent of specific protocol stacks and objects. The mapping of these abstract classes and services to communication stacks is outside the scope of IEC 61850-7-x and may be found in IEC 61850-8-x (station bus) and IEC 61850-9-x (process bus).

IEC 61850-7-1 gives an overview of this communication architecture. This part of IEC 61850 defines constructed attributed classes and common data classes related to applications in the power system using IEC 61850 modeling concepts like substations, hydro power or distributed energy resources. These common data classes are used in IEC 61850-7-4 to define compatible dataObject classes. The SubDataObjects, DataAttributes or SubAttributes of the instances of dataObject are accessed using services defined in IEC 61850-7-2.

This part of IEC 61850 is used to specify the abstract common data class and constructed attribute class definitions. These abstract definitions are mapped into concrete object definitions that are to be used for a particular protocol (for example MMS, ISO 9506 series).

Note that there are common data classes used for service tracking, that are defined in IEC 61850-7-2.

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## COMMUNICATION NETWORKS AND SYSTEMS FOR POWER UTILITY AUTOMATION –

### Part 7-3: Basic communication structure – Common data classes

#### 1 Scope

This part of IEC 61850 specifies constructed attribute classes and common data classes related to substation applications. In particular, it specifies:

- common data classes for status information,
- common data classes for measured information,
- common data classes for control,
- common data classes for status settings,
- common data classes for analogue settings and
- attribute types used in these common data classes.

This International Standard is applicable to the description of device models and functions of substations and feeder equipment.

This International Standard may also be applied, for example, to describe device models and functions for:

- substation to substation information exchange,
- substation to control centre information exchange,
- power plant to control centre information exchange,
- information exchange for distributed generation, or
- information exchange for metering.

#### 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/TS 61850-2, *Communication networks and systems in substations – Part 2: Glossary*

IEC 61850-7-1, *Communication networks and systems for power utility automation – Part 7-1: Basic communication structure – Principles and models*<sup>1</sup>

IEC 61850-7-2, *Communication networks and systems for power utility automation – Part 7-2: Basic information and communication structure – Abstract communication service interface (ACSI)*

IEC 61850-7-4, *Communication networks and systems for power utility automation – Part 7-4: Basic communication structure – Compatible logical node classes and data object classes*

<sup>1</sup> To be published.