

STN	Komunikačné siete a systémy automatizácie elektrických staníc Časť 7-2: Základné informácie a komunikačná štruktúra Abstraktné rozhranie komunikačnej služby (ACSI) Zmena A1	STN EN 61850-7-2/A1 33 4850
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Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 08/20

STN EN 61850-7-2 z júna 2011 sa bez tejto zmeny A1 môže používať do 16. 3. 2023.

Obsahuje: EN 61850-7-2:2010/A1:2020, IEC 61850-7-2:2010/AMD1:2020

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EUROPEAN STANDARD

EN 61850-7-2:2010/A1

NORME EUROPÉENNE

EUROPÄISCHE NORM

April 2020

ICS 33.200

English Version

Communication networks and systems for power utility
automation - Part 7-2: Basic information and communication
structure - Abstract communication service interface (ACSI)
(IEC 61850-7-2:2010/A1:2020)

Réseaux et systèmes de communication pour
l'automatisation des systèmes électriques - Partie 7-2:
Informations de base et structure de communication -
Interface abstraite pour les services de communication
(ACSI)
(IEC 61850-7-2:2010/A1:2020)

Kommunikationsnetze und -systeme für die
Automatisierung in der elektrischen Energieversorgung -
Teil 7-2: Grundlegende Informations- und
Kommunikationsstruktur - Abstrakte Schnittstelle für
Kommunikationsdienste (ACSI)
(IEC 61850-7-2:2010/A1:2020)

This amendment A1 modifies the European Standard EN 61850-7-2:2010; it was approved by CENELEC on 2020-03-16. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this amendment 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 CEN-CENELEC Management Centre or to any CENELEC member.

This amendment 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 CEN-CENELEC Management Centre has the same status as the official versions.

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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

EN 61850-7-2:2010/A1:2020 (E)**European foreword**

The text of document 57/2100/FDIS, future IEC 61850-7-2/A1, prepared by IEC/TC 57 "Power systems management and associated information exchange" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 61850-7-2:2010/A1:2020.

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2020-12-16
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2023-03-16

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This document has been prepared under a mandate given to CENELEC by the European Commission and the European Free Trade Association.

Endorsement notice

The text of the International Standard IEC 61850-7-2:2010/A1:2020 was approved by CENELEC as a European Standard without any modification.

Annex ZA (normative)

Normative references to international publications with their corresponding European publications

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 1 Where an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: www.cenelec.eu.

Replace the references to IEC 61850-6, IEC 61850-7-1, IEC 61850-7-3 and IEC 61850-7-4 with the following references:

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 61850-6	-	Communication networks and systems for power utility automation - Part 6: Configuration description language for communication in electrical substations related to IEDs	EN 61850-6	-
IEC 61850-7-1	2020	Communication networks and systems for power utility automation - Part 7-1: Basic communication structure - Principles and models	-	-
IEC 61850-7-3	2020	Communication networks and systems for power utility automation - Part 7-3: Basic communication structure - Common data classes	-	-
IEC 61850-7-4	2020	Communication networks and systems for power utility automation - Part 7-4: Basic communication structure - Compatible logical node classes and data object classes	-	-

Delete the following references:

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 61850-8-1	-	Communication networks and systems for power utility automation - Part 8-1: Specific communication service mapping (SCSM) - Mappings to MMS (ISO 9506-1 and ISO 9506-2) and to ISO/IEC 8802-3	EN 61850-8-1	-
IEC 61850-9-2	-	Communication networks and systems for power utility automation - Part 9-2: Specific communication service mapping (SCSM) - Sampled values over ISO/IEC 8802-3	EN 61850-9-2	-
ISO 9506	-	Industrial automation systems - Manufacturing Message Specification	-	-



IEC 61850-7-2

Edition 2.0 2020-02

INTERNATIONAL STANDARD

NORME INTERNATIONALE



AMENDMENT 1
AMENDEMENT 1

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

**Réseaux et systèmes de communication pour l'automatisation des systèmes
électriques –
Partie 7-2: Informations de base et structure de communication – Interface
abstraite pour les services de communication (ACSI)**



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IEC Central Office
 3, rue de Varembe
 CH-1211 Geneva 20
 Switzerland

Tel.: +41 22 919 02 11
info@iec.ch
www.iec.ch

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IEC 61850-7-2

Edition 2.0 2020-02

INTERNATIONAL STANDARD

NORME INTERNATIONALE



AMENDMENT 1
AMENDEMENT 1

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

**Réseaux et systèmes de communication pour l'automatisation des systèmes
électriques –
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FOREWORD

This amendment has been prepared by IEC technical committee 57: Power systems management and associated information exchange.

Future standards in this series will carry the new general title as cited above. Titles of existing standards in this series will be updated at the time of the next edition.

This edition includes the following significant technical changes with respect to the previous edition:

- a) class diagrams have been updated;
- b) data types have been gathered in one document and harmonized with IEC 61850-6:2007B;
- c) errors and typos have been corrected;
- d) CDCs for service tracking have been moved to IEC 61850-7-3:2007B to gather all CDCs in one document;
- e) several terms have been harmonized with those in the other parts;
- f) definition and explanation of values for each attribute were moved into the class definition tables;
- g) definition and explanation of values for each service parameter were move to service parameter definition tables;
- h) harmonization of the namingscheme for Enumeration and CodedEnum types to <EnumTitle>Kind resp. <CodedEnumTitle>Kind – fully backward compatible as the value of the literal have not changed;
- i) deprecation of the USVCB model.

Compared to the second edition, this first amendment of the second edition:

- provides clarifications and corrections to the second edition of IEC 61850-7-2, based on the tissues = { 728, 730, 778, 780, 783, 786, 813, 820, 850, 852, 858, 860, 861, 869, 875, 876, 943, 970, 1038, 1050, 1061, 1062, 1071, 1091, 1092, 1116, 1122, 1127, 1145, 1154, 1194, 1202, 1232, 1242, 1252, 1276, 1283, 1307, 1308, 1319, 1338, 1341, 1356, 1377, 1386, 1428, 1432, 1433, 1435, 1439, 1455, 1569, 1589, 1622, 1630, 1650, 1652 }.

Content in some parts of Clause 6, some UML diagrams, as well as Annex B are automatically generated from the UML model.

Contrary to usual IEC practice, for ease of use in this case, all tables and figures (including those which have been added since Edition 2) have been numbered consecutively in the amendment and the consolidated version.

This IEC standard includes Code Components i.e. components that are intended to be directly processed by a computer. Such content is any text found between the markers <CODE BEGINS> and <CODE ENDS>, or otherwise is clearly labeled in this standard as a Code Component.

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

FDIS	Report on voting
57/2100/FDIS	57/2131/RVD

Full information on the voting for the approval of this amendment can be found in the report on voting indicated in the above table.

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This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

In this document, the following print types are used:

- **bold** is used to highlight defined terms,
- **Tahoma bold** is used where the difference between a capital i (I) and a small L (l) is important to see.
- Table numbering with additional characters 'N' (e.g. Table 16N) are tables following the Ed 2.1 numbering.

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

The committee has decided that the contents of this amendment and the base publication will remain unchanged until the stability date indicated on the IEC website 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.

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 definitions which details a layered utility communication architecture. This architecture has been chosen to provide abstract definitions of classes and services such that the definitions are independent of specific protocol stacks, implementations, and operating systems.

The IEC 61850 series is intended to provide interoperability between a variety of devices. Communication between these devices is achieved by the definition of a hierarchical class model (for example, logical device, logical node, data, data set, report control, or log) and services provided by these classes (for example, get, set, report, define, delete) in IEC 61850-7-x.

This document defines the abstract communication service interface (ACSI) for use in the utility application domain, which requires real-time cooperation of intelligent electronic devices. The ACSI has been defined so as to be independent of the underlying communication systems. Specific communication service mappings¹ (SCSM) are specified in IEC 61850-8-x and IEC 61850-9-x.

This document defines the abstract communication service interface in terms of

- a hierarchical class model of all information that can be accessed via a communication network,
- services that operate on these classes, and
- parameters associated with each service.

The ACSI description technique abstracts away from all the different approaches to implement the cooperation of the various devices.

This document does not provide comprehensive tutorial material. It is recommended that IEC 61850-5 and IEC 61850-7-1 be read first in conjunction with IEC 61850-7-2 and IEC 61850-7-3.

NOTE 1 Refer to International Electrotechnical Vocabulary, IEC 60050, for general glossary definitions.

NOTE 2 Abstraction in ACSI has two meanings. First, only those aspects of a real device (for example, a breaker) or a real function that are visible and accessible over a communication network are modelled. This abstraction leads to the hierarchical class models and their behaviour defined in IEC 61850-7-2, IEC 61850-7-3, and IEC 61850-7-4. Second, the ACSI abstracts from the aspect of concrete definitions on how the devices exchange information; only a conceptual cooperation is defined. The concrete information exchange is defined in the SCSMs.

NOTE 3 Examples use names of classes (for example XCBR for a class of a logical node) defined in IEC 61850-7-4 and IEC 61850-7-3. The normative names are defined in IEC 61850-7-4 and IEC 61850-7-3 only.

¹ The ACSI is independent of the specific mapping. Mappings to standard application layers or middle ware technologies are possible.

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Some restructuring of the document was done between Edition 2 and Edition 2.1. The following table provides a cross reference.

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8.3.2.2.2	Request		<i>moved to 8.3.2.2</i>
8.3.2.2.2.1	ServerAccessPointReference		<i>moved to 8.3.2.2</i>
8.3.2.2.2.2	AuthenticationParameter		<i>moved to 8.3.2.2</i>
8.3.2.2.3	Response+		<i>moved to 8.3.2.2</i>
8.3.2.2.4	Result		<i>moved to 8.3.2.2</i>
8.3.2.2.5	Response-		<i>moved to 8.3.2.2</i>
8.3.2.3	Abort	8.3.2.3	Abort
8.3.2.3.1	Abort parameter		<i>moved to 8.3.2.3</i>
8.3.2.3.2	Request		<i>moved to 8.3.2.3</i>
8.3.2.3.2.1	AssociationId		<i>moved to 8.3.2.3</i>
8.3.2.3.2.2	Reason		<i>moved to 8.3.2.3</i>
8.3.2.3.3	Indication		<i>moved to 8.3.2.3</i>
8.3.2.3.3.1	AssociationId		<i>moved to 8.3.2.3</i>
8.3.2.3.3.2	Reason		<i>moved to 8.3.2.3</i>
8.3.2.4	Release	8.3.2.4	Release
8.3.2.4.1	Release parameter		<i>moved to 8.3.2.4</i>
8.3.2.4.2	Request		<i>moved to 8.3.2.4</i>
8.3.2.4.3	Response+		<i>moved to 8.3.2.4</i>

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Clause/ Subclause number	Name	Clause/ Subclause number	Name
8.3.2.4.3.1	AssociationId		<i>moved to 8.3.2.4</i>
8.3.2.4.3.2	Result		<i>moved to 8.3.2.4</i>
8.3.2.4.4	Response-		<i>moved to 8.3.2.4</i>
8.4	MULTICAST-APPLICATION-ASSOCIATION (MCAA) class	8.4	MULTICAST-APPLICATION-ASSOCIATION (MCAA) class
8.4.1	MULTICAST-APPLICATION-ASSOCIATION (MCAA) class definition	8.4.1	MULTICAST-APPLICATION-ASSOCIATION (MCAA) class definition
8.4.2	MULTICAST-Application-association (MCAA) class attributes		<i>moved to 8.4.1</i>
8.4.2.1	AuthenticationParameter		<i>moved to 8.4.1</i>
9	GenLogicalDeviceClass model	9	GenLogicalDeviceClass model
9.1	GenLogicalDeviceClass definition	9.1	GenLogicalDeviceClass definition
9.1.1	GenLogicalDeviceClass syntax		<i>moved to 9.1</i>
9.1.2	GenLogicalDeviceClass attributes		<i>moved to 9.1</i>
9.1.2.1	LDName – logical device name		<i>moved to 9.1</i>
9.1.2.2	LogicalNode [1..n]		<i>moved to 9.1</i>
9.2	GenLogicalDeviceClass services	9.2	GenLogicalDeviceClass services
9.2.1	GetLogicalDeviceDirectory	9.2.1	GetLogicalDeviceDirectory
9.2.1.1	GetLogicalDeviceDirectory parameter table		<i>moved to 9.2.1</i>
9.2.1.2	Request		<i>moved to 9.2.1</i>
9.2.1.2.1	LDname – logical device object name		<i>moved to 9.2.1</i>
9.2.1.3	Response+		<i>moved to 9.2.1</i>
9.2.1.4	Response-		<i>moved to 9.2.1</i>
10	GenLogicalNodeClass model	10	GenLogicalNodeClass model
10.1	GenLogicalNodeClass definition	10.1	GenLogicalNodeClass definition
10.1.1	GenLogicalNodeClass diagram	10.1.1	GenLogicalNodeClass diagram
10.1.2	GenLogicalNodeClass syntax	10.1.2	GenLogicalNodeClass attributes
10.1.3	GenLogicalNodeClass attributes		<i>moved to 10.1.2</i>
10.1.3.1	LNName – Logical node name		<i>moved to 10.1.2</i>
10.1.3.2	LNRef – Logical node ObjectReference		<i>moved to 10.1.2</i>
10.1.3.3	DataObject [1..n]		<i>moved to 10.1.2</i>
10.1.3.4	DataSet [0..n]		<i>moved to 10.1.2</i>
10.1.3.5	BufferedReportControlBlock [0..n]		<i>moved to 10.1.2</i>
10.1.3.6	UnbufferedReportControlBlock [0..n]		<i>moved to 10.1.2</i>
10.1.3.7	Log [0..n]		<i>moved to 10.1.2</i>
10.1.3.8	LogControlBlock [0..n]		<i>moved to 10.1.2</i>
10.1.3.9	SettingGroupControlBlock [0..1]		<i>moved to 10.1.2</i>

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Clause/ Subclause number	Name	Clause/ Subclause number	Name
10.1.3.10	GOOSEControlBlock [0..n]		<i>moved to 10.1.2</i>
10.1.3.11	MulticastSampledValueControlBlock [0..n]		<i>moved to 10.1.2</i>
10.1.3.12	UnicastSampledValueControlBlock [0..n]		<i>moved to 10.1.2</i>
10.2	GenLogicalNodeClass services	10.2	GenLogicalNodeClass services
10.2.1	Overview	10.2.1	Overview
10.2.2	GetLogicalNodeDirectory	10.2.2	GetLogicalNodeDirectory
10.2.2.1	GetLogicalNodeDirectory parameter table		<i>moved to 10.2.2</i>
10.2.2.2	Request		<i>moved to 10.2.2</i>
10.2.2.2.1	LNReference		<i>moved to 10.2.2</i>
10.2.2.2.2	ACSIClass		<i>moved to 10.2.2</i>
10.2.2.3	Response+		<i>moved to 10.2.2</i>
10.2.2.4	Response-		<i>moved to 10.2.2</i>
10.2.3	GetAllDataValues	10.2.3	GetAllDataValues
10.2.3.1	GetAllDataValues parameter table		<i>moved to 10.2.3</i>
10.2.3.2	Request		<i>moved to 10.2.3</i>
10.2.3.2.1	LNReference		<i>moved to 10.2.3</i>
10.2.3.2.2	FunctionalConstraint [0..1]		<i>moved to 10.2.3</i>
10.2.3.3	Response+		<i>moved to 10.2.3</i>
10.2.3.3.1	DataAttributeReference [1..n]		<i>moved to 10.2.3</i>
10.2.3.3.2	DataAttributeValue [1..n]		<i>moved to 10.2.3</i>
10.2.3.4	Response-		<i>moved to 10.2.3</i>
11	Generic data object class model	11	Generic data object class model
11.1	GenDataObjectClass diagram	11.1	GenDataObjectClass diagram
11.2	GenDataObjectClass syntax	11.2	GenDataObjectClass syntax
11.3	GenDataObjectClass attributes		<i>moved to 11.2</i>
11.3.1	DataObjectName		<i>moved to 11.2</i>
11.3.2	DataObjectRef – data object reference		<i>moved to 11.2</i>
11.3.3	m/o/c		<i>moved to 11.2</i>
11.3.4	DataObjectType		<i>moved to 11.2</i>
11.4	GenDataObjectClass services	11.3	GenDataObjectClass services
11.4.1	General definitions and overview	11.3.1	General definitions and overview
11.4.2	GetDataValues	11.3.2	GetDataValues
11.4.2.1	GetDataValues parameter table		<i>moved to 11.3.2</i>
11.4.2.2	Request		<i>moved to 11.3.2</i>
11.4.2.3	Response+		<i>moved to 11.3.2</i>
11.4.2.4	Response-		<i>moved to 11.3.2</i>
11.4.3	SetDataValues	11.3.3	SetDataValues
11.4.3.1	SetDataValues parameter table		<i>moved to 11.3.3</i>

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Clause/ Subclause number	Name	Clause/ Subclause number	Name
11.4.3.2	Request		<i>moved to 11.3.3</i>
11.4.3.2.1	Reference		<i>moved to 11.3.3</i>
11.4.3.2.2	DataAttributeValue [1..n]		<i>moved to 11.3.3</i>
11.4.3.3	Response+		<i>moved to 11.3.3</i>
11.4.3.4	Response-		<i>moved to 11.3.3</i>
11.4.4	GetDataDirectory	11.3.4	GetDataDirectory
11.4.4.1	GetDataDirectory parameter table		<i>moved to 11.3.4</i>
11.4.4.2	Request		<i>moved to 11.3.4</i>
11.4.4.2.1	DataObjectReference – data object reference		<i>moved to 11.3.4</i>
11.4.4.3	Response+		<i>moved to 11.3.4</i>
11.4.4.4	Response-		<i>moved to 11.3.4</i>
11.4.5	GetDataDefinition	11.3.5	GetDataDefinition
11.4.5.1	GetDataDefinition parameter table		<i>moved to 11.3.5</i>
11.4.5.2	Request		<i>moved to 11.3.5</i>
11.4.5.3	Response+		<i>moved to 11.3.5</i>
11.4.5.4	Response-		<i>moved to 11.3.5</i>
12	Generic common data class model	12	Generic common data class model
12.1	General	12.1	General
12.2	GenCommonDataClass	12.2	GenCommonDataClass
12.2.1	GenCommonDataClass diagram	12.2.1	GenCommonDataClass diagram
12.2.2	GenCommonDataClass syntax	12.2.2	GenCommonDataClass syntax
12.2.3	GenCommonDataClass attributes		<i>moved to 12.2.2</i>
12.2.3.1	CDC-ID – Common data class identifier		<i>moved to 12.2.2</i>
12.2.3.2	SubDataObjectClass [0..n]		<i>moved to 12.2.2</i>
12.2.3.3	DataAttribute [0..n]		<i>moved to 12.2.2</i>
12.3	GenDataAttributeClass	12.3	GenDataAttributeClass
12.3.1	GenDataAttributeClass diagram	12.3.1	GenDataAttributeClass diagram
12.3.2	GenDataAttributeClass syntax	12.3.2	GenDataAttributeClass syntax
12.3.3	GenDataAttributeClass attributes	12.3.3	Details of some GenDataAttributeClass attributes
12.3.3.1	DataAttributeName		<i>moved to 12.2.3</i>
12.3.3.2	FunctionalConstraint (FC)		<i>moved to 12.2.3</i>
12.3.3.2.1	General	12.3.3.1	Functionally constrained data and data attributes
12.3.3.2.2	Functional constrained data (FCD)	12.3.3.1.1	Functional constrained data (FCD)
12.3.3.2.3	Functional constrained data attribute (FCDA)	12.3.3.1.2	Functional constrained data attribute (FCDA)
12.3.3.3	TrgOp [0..2] – trigger option	12.3.3.2	Trigger option
12.3.3.4	M/O/C		<i>moved to 12.3.2</i>
12.3.3.5	Type		<i>moved to 12.3.2</i>
12.4	GenConstructedAttributeClass	12.4	GenConstructedAttributeClass

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Clause/ Subclause number	Name	Clause/ Subclause number	Name
12.4.1	GenConstructedAttributeClass diagram	12.4.1	GenConstructedAttributeClass diagram
12.4.2	GenConstructedAttributeClass syntax	12.4.2	GenConstructedAttributeClass syntax
12.4.3	GenConstructedAttributeClass attributes		<i>moved to 12.4.2</i>
12.4.3.1	DAT-ID – Data attribute class identifier		<i>moved to 12.4.2</i>
12.4.3.2	SubDataAttribute [1..n]		<i>moved to 12.4.2</i>
12.5	GenSubDataAttributeClass	12.5	GenSubDataAttributeClass
12.5.1	SubDataAttributeClass diagram	12.5.1	SubDataAttributeClass diagram
12.5.2	SubDataAttributeClass syntax	12.5.2	SubDataAttributeClass syntax
12.5.3	GenSubDataAttributeClass attributes		<i>moved to 12.5.2</i>
12.5.3.1	SubDataAttributeName		<i>moved to 12.5.2</i>
12.5.3.2	m/o/c		<i>moved to 12.5.2</i>
12.5.3.3	Type		<i>moved to 12.5.2</i>
12.6	Referencing data objects and their components	12.6	Referencing data objects and their components
12.6.1	General	12.6.1	General
12.6.2	Reference syntax	12.6.2	Reference syntax
12.6.3	Base types and their relation	12.6.3	Base types and their relation
12.6.4	Example of using references	12.6.4	Example of using references
13	DATA-SET class model	13	DATA-SET class model
13.1	General	13.1	General
13.2	DATA-SET class definition	13.2	DATA-SET class definition
13.2.1	DATA-SET class syntax	13.2.1	DATA-SET class syntax
13.2.2	DATA-SET class attributes	13.2.2	DATA-SET class attributes
13.2.2.1	DSName	13.2.2.1	DSName
13.2.2.2	DSRef	13.2.2.2	DSRef
13.2.2.3	DSMemberRef [1..n] – data set member reference	13.2.2.3	DSMemberRef [1..n] – data set member reference
13.3	DATA-SET class services	13.3	DATA-SET class services
13.3.1	Overview	13.3.1	Overview
13.3.2	GetDataSetValues	13.3.2	GetDataSetValues
13.3.2.1	GetDataSetValues parameter table		<i>moved to 13.3.2</i>
13.3.2.2	Request		<i>moved to 13.3.2</i>
13.3.2.3	Response+		<i>moved to 13.3.2</i>
13.3.2.4	Response-		<i>moved to 13.3.2</i>
13.3.3	DataSetValues		<i>moved to 13.3.2</i>
13.3.3.1	DataSetValues parameter table	13.3.3	DataSetValues
13.3.3.2	Request		<i>moved to 13.3.3</i>
13.3.3.2.1	DataSetReference – data set ObjectReference		<i>moved to 13.3.3</i>

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Clause/ Subclause number	Name	Clause/ Subclause number	Name
13.3.3.2.2	DataAttributeValue [1..n]		<i>moved to 13.3.3</i>
13.3.3.3	Response+		<i>moved to 13.3.3</i>
13.3.3.4	Result		<i>moved to 13.3.3</i>
13.3.3.5	Response-		<i>moved to 13.3.3</i>
13.3.4	CreateDataSet	13.3.4	CreateDataSet
13.3.4.1	CreateDataSet parameter table		<i>moved to 13.3.4</i>
13.3.4.2	Request		<i>moved to 13.3.4</i>
13.3.4.2.1	DataSetReference – data set ObjectReference		<i>moved to 13.3.4</i>
13.3.4.2.2	DSMemberRef [1..n] – data set member ObjectReference		<i>moved to 13.3.4</i>
13.3.4.3	Response+		<i>moved to 13.3.4</i>
13.3.4.4	Response-		<i>moved to 13.3.4</i>
13.3.5	DeleteDataSet	13.3.5	DeleteDataSet
13.3.5.1	DeleteDataSet parameter table		<i>moved to 13.3.5</i>
13.3.5.2	Request		<i>moved to 13.3.5</i>
13.3.5.2.1	DataSetReference – data set ObjectReference		<i>moved to 13.3.5</i>
13.3.5.3	Response+		<i>moved to 13.3.5</i>
13.3.5.4	Response-		<i>moved to 13.3.5</i>
13.3.6	GetDataSetDirectory	13.3.6	GetDataSetDirectory
13.3.6.1	GetDataSetDirectory parameter table		<i>moved to 13.3.6</i>
13.3.6.2	Request		<i>moved to 13.3.6</i>
13.3.6.3	Response+		<i>moved to 13.3.6</i>
13.3.6.4	Response-		<i>moved to 13.3.6</i>
14	Service tracking	14	Service tracking
14.1	General	14.1	General service tracking
14.2	Common service tracking (CST)		
		14.2	Control block service tracking
		14.3	Control service tracking
15	Modelling of control block classes	15	Modelling of control block classes
15.1	General	15.1	General
15.2	Control block class models	15.2	Control block class models
15.2.1	Control block attributes		<i>moved to 15.2</i>
15.2.1.1	CBName		<i>moved to 15.2</i>
15.2.1.2	CBRef		<i>moved to 15.2</i>
15.2.1.3	Attribute 1 to Attribute n		<i>moved to 15.2</i>
15.2.2	Control block services		<i>moved to 15.2</i>
15.2.3	Attribute type		<i>moved to 15.2</i>
15.3	Control block tracking services		
15.3.1	General		<i>moved to 14.2</i>

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Clause/ Subclause number	Name	Clause/ Subclause number	Name
15.3.2	Common data classes for control block service tracking		
15.3.2.1	General		<i>moved to IEC 61850-7-3</i>
15.3.2.2	Tracking of service for buffered reporting – Buffered report tracking service (BTS)		<i>moved to IEC 61850-7-3</i>
15.3.2.2.1	ServiceType = SetBRCBValues		<i>moved to IEC 61850-7-3</i>
15.3.2.2.2	ServiceType = InternalChange		<i>moved to IEC 61850-7-3</i>
15.3.2.2.3	ServiceType = Report		<i>moved to IEC 61850-7-3</i>
15.3.2.2.4	ServiceType = GetBRCBValues		<i>moved to IEC 61850-7-3</i>
15.3.2.3	Tracking of service for unbuffered reporting – Unbuffered report tracking service (UTS)		<i>moved to IEC 61850-7-3</i>
15.3.2.3.1	ServiceType = SetURCBValues		<i>moved to IEC 61850-7-3</i>
15.3.2.3.2	ServiceType = InternalChange		<i>moved to IEC 61850-7-3</i>
15.3.2.3.3	ServiceType = Report		<i>moved to IEC 61850-7-3</i>
15.3.2.3.4	ServiceType = GetURCBValues		<i>moved to IEC 61850-7-3</i>
15.3.2.4	Tracking of service for log control block – Log control block tracking service (LTS)		<i>moved to IEC 61850-7-3</i>
15.3.2.4.1	ServiceType = SetLCBValues		<i>moved to IEC 61850-7-3</i>
15.3.2.4.2	ServiceType = GetLCBValues		<i>moved to IEC 61850-7-3</i>
15.3.2.5	Tracking of service for log – Log tracking service (OTS)		<i>deprecated</i>
15.3.2.5.1	ServiceType = QueryLogByTime		<i>deprecated</i>
15.3.2.5.2	ServiceType = QueryLogAfter		<i>deprecated</i>
15.3.2.5.3	ServiceType = GetLogStatusValues		<i>deprecated</i>
15.3.2.6	Tracking of service for GOOSE control block – GOOSE control block tracking service (GTS)		<i>moved to IEC 61850-7-3</i>
15.3.2.6.1	ServiceType = SendGOOSEMessage		<i>moved to IEC 61850-7-3</i>
15.3.2.6.2	ServiceType = GetGoReference		<i>moved to IEC 61850-7-3</i>
15.3.2.6.3	ServiceType = GetGOOSEElementNumber		<i>moved to IEC 61850-7-3</i>
15.3.2.6.4	ServiceType = GetGoCBValues		<i>moved to IEC 61850-7-3</i>
15.3.2.6.5	ServiceType = SetGoCBValues		<i>moved to IEC 61850-7-3</i>
15.3.2.7	Tracking of service for MSVCB control block – MSVCB tracking service (MTS)		<i>moved to IEC 61850-7-3</i>
15.3.2.7.1	ServiceType = SendMSVMessage		<i>moved to IEC 61850-7-3</i>
15.3.2.7.2	ServiceType = GetMSVCBValues		<i>moved to IEC 61850-7-3</i>
15.3.2.7.3	ServiceType = SetMSVCBValues		<i>moved to IEC 61850-7-3</i>
15.3.2.8	Tracking of service for USVCB control block – USVCB tracking service (NTS)		<i>moved to IEC 61850-7-3</i>

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Clause/ Subclause number	Name	Clause/ Subclause number	Name
15.3.2.8.1	ServiceType = SendUSVMessage		<i>moved to IEC 61850-7-3</i>
15.3.2.8.2	ServiceType = GetUSVCBValues		<i>moved to IEC 61850-7-3</i>
15.3.2.8.3	ServiceType = SetUSVCBValues		<i>moved to IEC 61850-7-3</i>
15.3.2.9	Tracking of service for SGCB – SGCB tracking service (STS)		<i>moved to IEC 61850-7-3</i>
15.3.2.9.1	ServiceType = SelectActiveSG		<i>moved to IEC 61850-7-3</i>
15.3.2.9.2	ServiceType = SelectEditSG		<i>moved to IEC 61850-7-3</i>
15.3.2.9.3	ServiceType = SetEditSGValue		<i>moved to IEC 61850-7-3</i>
15.3.2.9.4	ServiceType = ConfirmEditSGValues		<i>moved to IEC 61850-7-3</i>
15.3.2.9.5	ServiceType = GetEditSGValue		<i>moved to IEC 61850-7-3</i>
15.3.2.9.6	ServiceType = GetSGCBValues		<i>moved to IEC 61850-7-3</i>
16	SETTING-GROUP-CONTROL- BLOCK class model	16	SETTING-GROUP-CONTROL-BLOCK class model
16.1	General	16.1	General
16.2	SGCB class definition	16.2	SGCB class definition
16.2.1	SGCB class syntax		<i>moved to 16.2</i>
16.2.2	SGCB class attributes		<i>moved to 16.2</i>
16.2.2.1	SGCBName – setting group control name		<i>moved to 16.2</i>
16.2.2.2	SGCBRef – setting group control ObjectReference		<i>moved to 16.2</i>
16.2.2.3	NumOfSG – number of setting groups		<i>moved to 16.2</i>
16.2.2.4	ActSG – active setting group		<i>moved to 16.2</i>
16.2.2.5	EditSG – edit setting group		<i>moved to 16.2</i>
16.2.2.6	CnfEdit – confirm editing		<i>moved to 16.2</i>
16.2.2.7	LActTm – last activation time		<i>moved to 16.2</i>
16.2.2.8	ResvTms – reservation of SettingGroup in seconds		<i>moved to 16.2</i>
16.3	SGCB class services	16.3	SGCB class services
16.3.1	Overview	16.3.1	Overview
16.3.2	SelectActiveSG	16.3.2	SelectActiveSG
16.3.2.1	SelectActiveSG parameter table		<i>moved to 16.3.2</i>
16.3.2.2	Request		<i>moved to 16.3.2</i>
16.3.2.2.1	SGCBReference		<i>moved to 16.3.2</i>
16.3.2.2.2	SettingGroupNumber		<i>moved to 16.3.2</i>
16.3.2.3	Response+		<i>moved to 16.3.2</i>
16.3.2.4	Response-		<i>moved to 16.3.2</i>
16.3.3	SelectEditSG	16.3.3	SelectEditSG
16.3.3.1	SelectEditSG parameter table		<i>moved to 16.3.3</i>
16.3.3.2	Request		<i>moved to 16.3.3</i>
16.3.3.2.1	SGCBReference		<i>moved to 16.3.3</i>

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Clause/ Subclause number	Name	Clause/ Subclause number	Name
16.3.3.2.2	SettingGroupName		<i>moved to 16.3.3</i>
16.3.3.3	Response+		<i>moved to 16.3.3</i>
16.3.3.4	Response-		<i>moved to 16.3.3</i>
16.3.4	SetEditSGValue	16.3.4	SetEditSGValue
16.3.4.1	SetEditSGValue parameter table		<i>moved to 16.3.4</i>
16.3.4.2	Request		<i>moved to 16.3.4</i>
16.3.4.2.1	Reference		<i>moved to 16.3.4</i>
16.3.4.2.2	DataAttributeValue [1..n]		<i>moved to 16.3.4</i>
16.3.4.3	Response+		<i>moved to 16.3.4</i>
16.3.4.4	Response-		<i>moved to 16.3.4</i>
16.3.5	ConfirmEditSGValues	16.3.5	ConfirmEditSGValues
16.3.5.1	ConfirmEditSGValues parameter table		<i>moved to 16.3.5</i>
16.3.5.2	Request		<i>moved to 16.3.5</i>
16.3.5.3	Response+		<i>moved to 16.3.5</i>
16.3.5.4	Response-		<i>moved to 16.3.5</i>
16.3.6	GetEditSGValue	16.3.6	GetEditSGValue
16.3.6.1	GetEditSGValue parameter table		<i>moved to 16.3.6</i>
16.3.6.2	Request		<i>moved to 16.3.6</i>
16.3.6.3	Response+		<i>moved to 16.3.6</i>
16.3.6.4	Response-		<i>moved to 16.3.6</i>
16.3.7	GetSGCBValues	16.3.7	GetSGCBValues
16.3.7.1	GetSGCBValues parameter table		<i>moved to 16.3.7</i>
16.3.7.2	Request		<i>moved to 16.3.7</i>
16.3.7.3	Response+		<i>moved to 16.3.7</i>
16.3.7.3.1	NumberOfSettingGroup – number of setting group controls		<i>moved to 16.3.7</i>
16.3.7.3.2	ActiveSettingGroup – active setting group		<i>moved to 16.3.7</i>
16.3.7.3.3	EditSettingGroup – edit setting group		<i>moved to 16.3.7</i>
16.3.7.3.4	LastActivateTime – last time of activation of a setting group		<i>moved to 16.3.7</i>
16.3.7.4	Response-		<i>moved to 16.3.7</i>
17	REPORT-CONTROL-BLOCK and LOG-CONTROL-BLOCK class models	17	REPORT-CONTROL-BLOCK and LOG-CONTROL-BLOCK class models
17.1	Overview	17.1	Overview
17.2	REPORT-CONTROL-BLOCK class model	17.2	REPORT-CONTROL-BLOCK class model
17.2.1	Basic concepts	17.2.1	Basic concepts
17.2.2	BUFFERED-REPORT-CONTROL-BLOCK (BRCB) class definition	17.2.2	BUFFERED-REPORT-CONTROL-BLOCK (BRCB) class definition
17.2.2.1	BRCB class Syntax	17.2.2.1	BRCB class syntax

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Clause/ Subclause number	Name	Clause/ Subclause number	Name
17.2.2.2	BRCBName – buffered report control name	17.2.2.2	BRCBName – buffered report control name
17.2.2.3	BRCBRef – buffered report control ObjectReference	17.2.2.3	BRCBRef – buffered report control ObjectReference
17.2.2.4	RptID – report identifier	17.2.2.4	RptID – report identifier
17.2.2.5	RptEna – report enable	17.2.2.5	RptEna – report enable
17.2.2.6	DatSet – Data set reference	17.2.2.6	DatSet – Data set reference
17.2.2.7	ConfRev – configuration revision	17.2.2.7	ConfRev – configuration revision
17.2.2.8	OptFlds – optional fields to include in report	17.2.2.8	OptFlds – optional fields to include in report
17.2.2.9	BufTm – buffer time	17.2.2.9	BufTm – buffer time
17.2.2.10	SqNum – sequence number	17.2.2.10	SqNum – sequence number
17.2.2.11	TrgOps – trigger options	17.2.2.11	TrgOps – trigger options
17.2.2.12	IntgPd – integrity period	17.2.2.12	IntgPd – integrity period
17.2.2.13	GI – general-interrogation	17.2.2.13	GI – general-interrogation
17.2.2.14	PurgeBuf – purge buffer	17.2.2.14	PurgeBuf – purge buffer
17.2.2.15	EntryID – entry identifier	17.2.2.15	EntryID – entry identifier
17.2.2.16	TimeOfEntry – time of entry	17.2.2.16	TimeOfEntry – time of entry
17.2.2.17	ResvTms – reservation time	17.2.2.17	ResvTms – reservation time
17.2.2.18	Owner – the owner of the control block instance	17.2.2.18	Owner – the owner of the control block instance
17.2.3	BRCB class services	17.2.3	BRCB class services
17.2.3.1	Overview	17.2.3.1	Overview
17.2.3.2	Report	17.2.3.2	Report
17.2.3.2.1	Report parameter table	17.2.3.2.1	Report parameter table
17.2.3.2.2	Request		<i>moved to 17.2.3.2.1</i>
17.2.3.2.2.1	ReportFormat Syntax	17.2.3.2.2	ReportFormat Syntax
17.2.3.2.2.2	RptID – report ID		<i>moved to 17.2.3.2.2</i>
17.2.3.2.2.3	OptFlds – optional fields to include in report		<i>moved to 17.2.3.2.2</i>
17.2.3.2.2.4	SqNum – sequence number		<i>moved to 17.2.3.2.2</i>
17.2.3.2.2.5	SubSqNum – subsequence number		<i>moved to 17.2.3.2.2</i>
17.2.3.2.2.6	MoreSegmentsFollow – more report segments follow		<i>moved to 17.2.3.2.2</i>
17.2.3.2.2.7	DatSet – data set reference		<i>moved to 17.2.3.2.2</i>
17.2.3.2.2.8	BufOvfl – possible information loss		<i>moved to 17.2.3.2.2</i>
17.2.3.2.2.9	Entry		<i>moved to 17.2.3.2.2</i>
17.2.3.2.3	Procedures for report generation	17.2.3.2.3	Procedures for report generation
17.2.3.2.3.1	Overview	17.2.3.2.3.1	Overview
17.2.3.2.3.2	Data-change, quality-change, and data-update	17.2.3.2.3.2	Data-change, quality-change, and data-update
17.2.3.2.3.3	Integrity	17.2.3.2.3.3	Integrity
17.2.3.2.3.4	GI (general interrogation)	17.2.3.2.3.4	GI (general interrogation)
17.2.3.2.3.5	Time sequence order of reports	17.2.3.2.3.5	Time sequence order of reports

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Clause/ Subclause number	Name	Clause/ Subclause number	Name
17.2.3.2.3.6	Buffering events	17.2.3.2.3.6	Buffering events
17.2.3.3	GetBRCBValues	17.2.3.3	GetBRCBValues
17.2.3.3.1	GetBRCBValues parameter table		<i>moved to 17.2.3.3</i>
17.2.3.3.2	Request		<i>moved to 17.2.3.3</i>
17.2.3.3.2.1	BRCBReference		<i>moved to 17.2.3.3</i>
17.2.3.3.3	Response+		<i>moved to 17.2.3.3</i>
17.2.3.3.3.1	ReportIdentifier		<i>moved to 17.2.3.3</i>
17.2.3.3.3.2	ReportEnable		<i>moved to 17.2.3.3</i>
17.2.3.3.3.3	DataSetReference		<i>moved to 17.2.3.3</i>
17.2.3.3.3.4	ConfigurationRevision		<i>moved to 17.2.3.3</i>
17.2.3.3.3.5	OptionalFields		<i>moved to 17.2.3.3</i>
17.2.3.3.3.6	BufferTime		<i>moved to 17.2.3.3</i>
17.2.3.3.3.7	SequenceNumber		<i>moved to 17.2.3.3</i>
17.2.3.3.3.8	TriggerOptionsEnabled		<i>moved to 17.2.3.3</i>
17.2.3.3.3.9	IntegrityPeriod		<i>moved to 17.2.3.3</i>
17.2.3.3.3.10	GeneralInterrogation		<i>moved to 17.2.3.3</i>
17.2.3.3.3.11	PurgeBuf		<i>moved to 17.2.3.3</i>
17.2.3.3.3.12	EntryIdentifier		<i>moved to 17.2.3.3</i>
17.2.3.3.3.13	TimeOfEntry		<i>moved to 17.2.3.3</i>
17.2.3.3.3.14	ReserveTimeSecond [0..1]		<i>moved to 17.2.3.3</i>
17.2.3.3.4	Response-		<i>moved to 17.2.3.3</i>
17.2.3.4	SetBRCBValues	17.2.3.4	SetBRCBValues
17.2.3.4.1	SetBRCBValues parameter table		<i>moved to 17.2.3.4</i>
17.2.3.4.2	Request		<i>moved to 17.2.3.4</i>
17.2.3.4.2.1	BRCBReference		<i>moved to 17.2.3.4</i>
17.2.3.4.2.2	ReportIdentifier [0..1]		<i>moved to 17.2.3.4</i>
17.2.3.4.2.3	ReportEnable [0..1]		<i>moved to 17.2.3.4</i>
17.2.3.4.2.4	DataSetReference [0..1]		<i>moved to 17.2.3.4</i>
17.2.3.4.2.5	OptionalFields [0..1]		<i>moved to 17.2.3.4</i>
17.2.3.4.2.6	BufferTime [0..1]		<i>moved to 17.2.3.4</i>
17.2.3.4.2.7	TriggerOptionsEnabled [0..1]		<i>moved to 17.2.3.4</i>
17.2.3.4.2.8	IntegrityPeriod [0..1]		<i>moved to 17.2.3.4</i>
17.2.3.4.2.9	GeneralInterrogation [0..1]		<i>moved to 17.2.3.4</i>
17.2.3.4.2.10	PurgeBuffer [0..1]		<i>moved to 17.2.3.4</i>
17.2.3.4.2.11	EntryIdentifier[0..1]		<i>moved to 17.2.3.4</i>
17.2.3.4.2.12	ReserveTimeSecond[0..1]		<i>moved to 17.2.3.4</i>
17.2.3.4.3	Response+		<i>moved to 17.2.3.4</i>

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Clause/ Subclause number	Name	Clause/ Subclause number	Name
17.2.3.4.4	Response-		<i>moved to 17.2.3.4</i>
17.2.4	UNBUFFERED-REPORT-CONTROL-BLOCK (URCB) class definition	17.2.4	UNBUFFERED-REPORT-CONTROL-BLOCK (URCB) class definition
17.2.4.1	URCB class syntax	17.2.4.1	URCB class syntax
17.2.4.2	URCBName – unbuffered report control name	17.2.4.2	URCBName – unbuffered report control name
17.2.4.3	URCBRef – unbuffered report control ObjectReference	17.2.4.3	URCBRef – unbuffered report control ObjectReference
17.2.4.4	RptEna – report enable	17.2.4.4	RptEna – report enable
17.2.4.5	Resv – reserve URCB	17.2.4.5	SqNum – sequence number
17.2.5	URCB class services	17.2.5	URCB class services
17.2.5.1	Overview	17.2.5.1	Overview
17.2.5.2	Report	17.2.5.2	Report
17.2.5.3	GetURCBValues	17.2.5.3	GetURCBValues
17.2.5.4	SetURCBValues	17.2.5.4	SetURCBValues
17.3	LOG-CONTROL-BLOCK class model	17.3	LOG-CONTROL-BLOCK class model
17.3.1	General	17.3.1	General
17.3.1.1	Basic concepts	17.3.1.1	Basic concepts
17.3.1.2	The log buffer concept	17.3.1.2	The log buffer concept
17.3.2	LCB class definition	17.3.2	LCB class definition
17.3.2.1	LCB class syntax		<i>moved to 17.3.2</i>
17.3.2.2	LCB class attributes		<i>moved to 17.3.2</i>
17.3.2.2.1	LCBName – log control name		<i>moved to 17.3.2</i>
17.3.2.2.2	LCBRef – log control ObjectReference		<i>moved to 17.3.2</i>
17.3.2.2.3	LogEna – log enable		<i>moved to 17.3.2</i>
17.3.2.2.4	DatSet – data set reference		<i>moved to 17.3.2</i>
17.3.2.3	OptFlds – optional fields to include in log		<i>moved to 17.3.2</i>
17.3.2.3.1	BufTm – buffer time		<i>moved to 17.3.2</i>
17.3.2.3.2	TrgOps – trigger options		<i>moved to 17.3.2</i>
17.3.2.3.3	IntgPd – integrity period		<i>moved to 17.3.2</i>
17.3.2.3.4	LogRef – log reference		<i>moved to 17.3.2</i>
17.3.2.4	LCB services – Overview	17.3.3	LCB services
		17.3.3.1	Overview
17.3.2.5	GetLCBValues	17.3.3.2	GetLCBValues
17.3.2.5.1	Request		<i>moved to 17.3.3.2</i>
17.3.2.5.1.1	LCBReference		<i>moved to 17.3.3.2</i>
17.3.2.5.2	Response+		<i>moved to 17.3.3.2</i>
17.3.2.5.2.1	LogEnable		<i>moved to 17.3.3.2</i>
17.3.2.5.2.2	DataSetReference		<i>moved to 17.3.3.2</i>
17.3.2.5.2.3	TriggerOptions		<i>moved to 17.3.3.2</i>

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Clause/ Subclause number	Name	Clause/ Subclause number	Name
17.3.2.5.2.4	IntegrityPeriod		<i>moved to 17.3.3.2</i>
17.3.2.5.2.5	LogReference		<i>moved to 17.3.3.2</i>
17.3.2.5.2.6	OptionalFields [0..1]		<i>moved to 17.3.3.2</i>
17.3.2.5.2.7	BufferTime [0..1]		<i>moved to 17.3.3.2</i>
17.3.2.5.3	Response-		<i>moved to 17.3.3.2</i>
17.3.2.6	SetLCBValues	17.3.3.3	SetLCBValues
17.3.2.6.1	Request		<i>moved to 17.3.3.3</i>
17.3.2.6.1.1	LCBReference		<i>moved to 17.3.3.3</i>
17.3.2.6.1.2	LogEnable [0..1]		<i>moved to 17.3.3.3</i>
17.3.2.6.1.3	DataSetReference [0..1]		<i>moved to 17.3.3.3</i>
17.3.2.6.1.4	OptionalFields [0..1]		<i>moved to 17.3.3.3</i>
17.3.2.6.1.5	IntegrityPeriod [0..1]		<i>moved to 17.3.3.3</i>
17.3.2.6.1.6	LogReference [0..1]		<i>moved to 17.3.3.3</i>
17.3.2.6.1.7	TriggerOptionsEnabled [0..1]		<i>moved to 17.3.3.3</i>
17.3.2.6.1.8	BufferTime [0..1]		<i>moved to 17.3.3.3</i>
17.3.2.6.2	Response+		<i>moved to 17.3.3.3</i>
17.3.2.6.3	Response-		<i>moved to 17.3.3.3</i>
17.3.3	LOG class definition	17.3.4	LOG class definition
17.3.3.1	LOG class syntax		<i>moved to 17.3.4</i>
17.3.3.2	LOG class attributes		<i>moved to 17.3.4</i>
17.3.3.2.1	LogName – log name		<i>moved to 17.3.4</i>
17.3.3.2.2	LogRef – log reference		<i>moved to 17.3.4</i>
17.3.3.2.3	OldEntrTm – oldest log entry time of LOG		<i>moved to 17.3.4</i>
17.3.3.2.4	NewEntrTm – newest log entry time of LOG		<i>moved to 17.3.4</i>
17.3.3.2.5	OldEntr – oldest log entry sequence number		<i>moved to 17.3.4</i>
17.3.3.2.6	NewEntr – newest log entry sequence number		<i>moved to 17.3.4</i>
17.3.3.2.7	Entry [1..n]		<i>moved to 17.3.4</i>
17.3.3.2.7.1	TimeOfEntry – time of log entry		<i>moved to 17.3.4</i>
17.3.3.2.7.2	EntryID – entry identifier		<i>moved to 17.3.4</i>
17.3.3.2.7.3	EntryData [1..n] – Data of Entry		<i>moved to 17.3.4</i>
17.3.4	Reason code for log entries	17.3.5	Reason code for log entries
17.3.4.1	Overview	17.3.5.1	Overview
17.3.4.2	Reason code data-change, quality-change, or data-update	17.3.5.2	Reason code data-change, quality-change, or data-update
17.3.4.3	Reason code integrity	17.3.5.3	Reason code integrity
17.3.4.4	Reason code application-trigger	17.3.5.4	Reason code application-trigger
17.3.5	LOG services	17.3.6	LOG services
17.3.5.1	Overview	17.3.6.1	Overview
17.3.5.2	QueryLogByTime	17.3.6.2	QueryLogByTime
17.3.5.2.1	QueryLogByTime parameter table		<i>moved to 17.3.6.2</i>

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Clause/ Subclause number	Name	Clause/ Subclause number	Name
17.3.5.2.2	Request		<i>moved to 17.3.6.2</i>
17.3.5.2.2.1	LogReference		<i>moved to 17.3.6.2</i>
17.3.5.2.2.2	RangeStartTime [0..1]		<i>moved to 17.3.6.2</i>
17.3.5.2.2.3	RangeStopTime [0..1]		<i>moved to 17.3.6.2</i>
17.3.5.2.3	Response+		<i>moved to 17.3.6.2</i>
17.3.5.2.4	Response-		<i>moved to 17.3.6.2</i>
17.3.5.3	QueryLogAfter	17.3.6.3	QueryLogAfter
17.3.5.3.1	QueryLogAfter parameter table		<i>moved to 17.3.6.3</i>
17.3.5.3.2	Request		<i>moved to 17.3.6.3</i>
17.3.5.3.2.1	LogReference		<i>moved to 17.3.6.3</i>
17.3.5.3.2.2	RangeStartTime		<i>moved to 17.3.6.3</i>
17.3.5.3.2.3	Entry		<i>moved to 17.3.6.3</i>
17.3.5.3.3	Response+		<i>moved to 17.3.6.3</i>
17.3.5.3.3.1	ListOfLogEntries		<i>moved to 17.3.6.3</i>
17.3.5.3.4	Response-		<i>moved to 17.3.6.3</i>
17.3.5.4	GetLogStatusValues	17.3.6.4	GetLogStatusValues
17.3.5.4.1	Request		<i>moved to 17.3.6.4</i>
17.3.5.4.1.1	LogReference		<i>moved to 17.3.6.4</i>
17.3.5.4.2	Response+		<i>moved to 17.3.6.4</i>
17.3.5.4.2.1	OldestEntryTime		<i>moved to 17.3.6.4</i>
17.3.5.4.2.2	NewestEntryTime		<i>moved to 17.3.6.4</i>
17.3.5.4.2.3	OldestEntry		<i>moved to 17.3.6.4</i>
17.3.5.4.2.4	NewestEntry		<i>moved to 17.3.6.4</i>
17.3.5.4.3	Response-		<i>moved to 17.3.6.4</i>
18	Generic substation event class model (GSE)	18	Generic substation event class model (GSE)
18.1	Overview	18.1	Overview
18.2	GOOSE-CONTROL-BLOCK (GoCB) class	18.2	GOOSE-CONTROL-BLOCK (GoCB) class
18.2.1	GoCB definition	18.2.1	GoCB definition
18.2.1.1	GoCBName – GOOSE control block name		<i>moved to 18.2.1</i>
18.2.1.2	GoCBRef – GOOSE control block reference		<i>moved to 18.2.1</i>
18.2.1.3	GoEna – GOOSE enable		<i>moved to 18.2.1</i>
18.2.1.4	GoID – GOOSE identifier		<i>moved to 18.2.1</i>
18.2.1.5	DatSet – data set reference		<i>moved to 18.2.1</i>
18.2.1.6	ConfRev – configuration revision		<i>moved to 18.2.1</i>
18.2.1.7	NdsCom – needs commissioning		<i>moved to 18.2.1</i>
18.2.1.8	DstAddress		<i>moved to 18.2.1</i>
18.2.2	GOOSE service definitions	18.2.2	GOOSE service definitions
18.2.2.1	Overview	18.2.2.1	Overview

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Clause/ Subclause number	Name	Clause/ Subclause number	Name
18.2.2.2	SendGOOSEMessage	18.2.2.2	SendGOOSEMessage
18.2.2.2.1	SendGOOSEMessage parameter table		<i>moved to 18.2.2.2</i>
18.2.2.2.2	Request		<i>moved to 18.2.2.2</i>
18.2.2.3	GetGoReference	18.2.2.3	GetGoReference
18.2.2.3.1	GetGoReference parameter table		<i>moved to 18.2.2.3</i>
18.2.2.3.2	Request		<i>moved to 18.2.2.3</i>
18.2.2.3.2.1	GoCBReference		<i>moved to 18.2.2.3</i>
18.2.2.3.2.2	MemberOffset [1..n]		<i>moved to 18.2.2.3</i>
18.2.2.3.3	Response+		<i>moved to 18.2.2.3</i>
18.2.2.3.3.1	GoCBReference		<i>moved to 18.2.2.3</i>
18.2.2.3.3.2	ConfigurationRevision		<i>moved to 18.2.2.3</i>
18.2.2.3.3.3	DatSet		<i>moved to 18.2.2.3</i>
18.2.2.3.3.4	MemberReference [1..n]		<i>moved to 18.2.2.3</i>
18.2.2.3.4	Response-		<i>moved to 18.2.2.3</i>
18.2.2.4	GetGOOSEElementNumber	18.2.2.4	GetGOOSEElementNumber
18.2.2.4.1	GetGOOSEElementNumber parameter table		<i>moved to 18.2.2.4</i>
18.2.2.4.2	Request		<i>moved to 18.2.2.4</i>
18.2.2.4.2.1	GoCBReference		<i>moved to 18.2.2.4</i>
18.2.2.4.2.2	MemberReference [1..n]		<i>moved to 18.2.2.4</i>
18.2.2.4.3	Response+		<i>moved to 18.2.2.4</i>
18.2.2.4.3.1	GoCBReference		<i>moved to 18.2.2.4</i>
18.2.2.4.3.2	ConfigurationRevision		<i>moved to 18.2.2.4</i>
18.2.2.4.3.3	DatSet		<i>moved to 18.2.2.4</i>
18.2.2.4.3.4	MemberOffset [1..n]		<i>moved to 18.2.2.4</i>
18.2.2.4.4	Response-		<i>moved to 18.2.2.4</i>
18.2.2.5	GetGoCBValues	18.2.2.5	GetGoCBValues
18.2.2.5.1	Request		<i>moved to 18.2.2.5</i>
18.2.2.5.1.1	GoCBReference		<i>moved to 18.2.2.5</i>
18.2.2.5.2	Response+		<i>moved to 18.2.2.5</i>
18.2.2.5.2.1	GoEnable		<i>moved to 18.2.2.5</i>
18.2.2.5.2.2	GOOSEID		<i>moved to 18.2.2.5</i>
18.2.2.5.2.3	DataSetReference		<i>moved to 18.2.2.5</i>
18.2.2.5.2.4	ConfigurationRevision		<i>moved to 18.2.2.5</i>
18.2.2.5.2.5	NeedsCommissioning		<i>moved to 18.2.2.5</i>
18.2.2.5.2.6	DestinationAddress [0..1]		<i>moved to 18.2.2.5</i>
18.2.2.5.3	Response-		<i>moved to 18.2.2.5</i>
18.2.2.6	SetGoCBValues	18.2.2.6	SetGoCBValues
18.2.2.6.1	Request		<i>moved to 18.2.2.6</i>
18.2.2.6.1.1	GoCBReference		<i>moved to 18.2.2.6</i>
18.2.2.6.1.2	GoEnable [0..1]		<i>moved to 18.2.2.6</i>

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18.2.2.6.1.3	GOOSEID [0..1]		<i>moved to 18.2.2.6</i>
18.2.2.6.1.4	DataSetReference [0..1]		<i>moved to 18.2.2.6</i>
18.2.2.6.2	Response+		<i>moved to 18.2.2.6</i>
18.2.2.6.3	Response-		<i>moved to 18.2.2.6</i>
18.2.3	Generic object oriented substation event (GOOSE) message	18.2.3	Generic object oriented substation event (GOOSE) message
18.2.3.1	GOOSE message syntax		<i>moved to 18.2.3</i>
18.2.3.2	DatSet – data set		<i>moved to 18.2.3</i>
18.2.3.3	GoID – application identifier		<i>moved to 18.2.3</i>
18.2.3.4	GoCBRef – GOOSE control block reference		<i>moved to 18.2.3</i>
18.2.3.5	T – time stamp		<i>moved to 18.2.3</i>
18.2.3.6	StNum – state number		<i>moved to 18.2.3</i>
18.2.3.7	SqNum – sequence number		<i>moved to 18.2.3</i>
18.2.3.8	Simulation – Simulation		<i>moved to 18.2.3</i>
18.2.3.9	ConfRev – configuration revision		<i>moved to 18.2.3</i>
18.2.3.10	NdsCom – needs commissioning		<i>moved to 18.2.3</i>
18.2.3.11	GOOSEData [1..n]		<i>moved to 18.2.3</i>
19	Transmission of sampled value class model	19	Transmission of sampled value class model
19.1	Overview	19.1	Overview
19.2	Transmission of sampled values using multicast	19.2	Transmission of sampled values using multicast
		19.2.1	General
19.2.1	MSVCB class definition	19.2.2	MSVCB class definition
19.2.1.1	MsvCBName – multicast sampled value control name		<i>moved to 19.2.2</i>
19.2.1.2	MsvCBRef – multicast sampled value control reference		<i>moved to 19.2.2</i>
19.2.1.3	SvEna – sampled value enable		<i>moved to 19.2.2</i>
19.2.1.4	MsvID – multicast sampled value identifier		<i>moved to 19.2.2</i>
19.2.1.5	DatSet		<i>moved to 19.2.2</i>
19.2.1.6	ConfRev – configuration revision		<i>moved to 19.2.2</i>
19.2.1.7	SmpMod		<i>moved to 19.2.2</i>
19.2.1.8	SmpRate		<i>moved to 19.2.2</i>
19.2.1.9	OptFlds – optional fields to include in SV message		<i>moved to 19.2.2</i>
19.2.1.10	DstAddress		<i>moved to 19.2.2</i>
19.2.2	Multicast sampled value class services	19.2.3	MSVCB class services
19.2.2.1	Overview	19.2.3.1	Overview
19.2.2.2	SendMSVMessage	19.2.3.2	SendMSVMessage
19.2.2.2.1	SendMSVMessage parameter		<i>moved to 19.2.3.2</i>

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19.2.2.2.2	Request		<i>moved to 19.2.3.2</i>
19.2.2.2.2.1	MSV message		<i>moved to 19.2.3.2</i>
19.2.2.3	GetMSVCBValues	19.2.3.3	GetMSVCBValues
19.2.2.3.1	Request		<i>moved to 19.2.3.3</i>
19.2.2.3.1.1	MsvCBReference		<i>moved to 19.2.3.3</i>
19.2.2.3.2	Response+		<i>moved to 19.2.3.3</i>
19.2.2.3.2.1	SvEnable		<i>moved to 19.2.3.3</i>
19.2.2.3.2.2	MulticastSampleValueID		<i>moved to 19.2.3.3</i>
19.2.2.3.2.3	DataSetReference		<i>moved to 19.2.3.3</i>
19.2.2.3.2.4	ConfigurationRevision		<i>moved to 19.2.3.3</i>
19.2.2.3.2.5	SampleMode [0..1]		<i>moved to 19.2.3.3</i>
19.2.2.3.2.6	SampleRate		<i>moved to 19.2.3.3</i>
19.2.2.3.2.7	OptionalFields		<i>moved to 19.2.3.3</i>
19.2.2.3.2.8	DestinationAddress [0..1]		<i>moved to 19.2.3.3</i>
19.2.2.3.3	Response-		<i>moved to 19.2.3.3</i>
19.2.2.4	SetMSVCBValues	19.2.3.4	SetMSVCBValues
19.2.2.4.1	Request		<i>moved to 19.2.3.4</i>
19.2.2.4.1.1	MsvCBReference		<i>moved to 19.2.3.4</i>
19.2.2.4.1.2	SvEnable [0..1]		<i>moved to 19.2.3.4</i>
19.2.2.4.1.3	MulticastSampleValueID [0..1]		<i>moved to 19.2.3.4</i>
19.2.2.4.1.4	DataSetReference [0..1]		<i>moved to 19.2.3.4</i>
19.2.2.4.1.5	SampleMode [0..1]		<i>moved to 19.2.3.4</i>
19.2.2.4.1.6	SampleRate [0..1]		<i>moved to 19.2.3.4</i>
19.2.2.4.1.7	OptionalFields [0..1]		<i>moved to 19.2.3.4</i>
19.2.2.4.2	Response+		<i>moved to 19.2.3.4</i>
19.2.2.4.3	Response-		<i>moved to 19.2.3.4</i>
		19.2.3.5	GetMsvReference
		19.2.3.6	GetMSVElementNumber
19.3	Transmission of sampled values using unicast	19.3	Transmission of sampled values using unicast
		19.3.1	General
19.3.1	USVCB class definition	19.3.2	USVCB class definition
19.3.1.1	UsvCBName – unicast sampled value control name		<i>moved to 19.3.2</i>
19.3.1.2	UsvCBRef – unicast sampled value control reference		<i>moved to 19.3.2</i>
19.3.1.3	SvEna – sampled value enable		<i>moved to 19.3.2</i>
19.3.1.4	Resv – reserve USVCB		<i>moved to 19.3.2</i>
19.3.1.5	UsvID		<i>moved to 19.3.2</i>
19.3.1.6	DatSet		<i>moved to 19.3.2</i>
19.3.1.7	ConfRev – configuration revision		<i>moved to 19.3.2</i>
19.3.1.8	SmpMod		<i>moved to 19.3.2</i>

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19.3.1.9	SmpRate		<i>moved to 19.3.2</i>
19.3.1.10	OptFlds – optional fields to include in SV message		<i>moved to 19.3.2</i>
19.3.1.11	DstAddress		<i>moved to 19.3.2</i>
19.3.2	Unicast sampled value services	19.3.3	USVCB services
19.3.2.1	Overview	19.3.3.1	Overview
19.3.2.2	SendUSVMessage	19.3.3.2	SendUSVMessage
19.3.2.2.1	SendUSVMessage parameter table		<i>moved to 19.3.3.2</i>
19.3.2.2.2	Request		<i>moved to 19.3.3.2</i>
19.3.2.3	GetUSVCBValues	19.3.3.3	GetUSVCBValues
19.3.2.3.1	Request		<i>moved to 19.3.3.3</i>
19.3.2.3.2	Response+		<i>moved to 19.3.3.3</i>
19.3.2.3.2.1	SvEnable		<i>moved to 19.3.3.3</i>
19.3.2.3.2.2	CBReserved		<i>moved to 19.3.3.3</i>
19.3.2.3.2.3	UnicastSampleValueID		<i>moved to 19.3.3.3</i>
19.3.2.3.2.4	DataSetReference		<i>moved to 19.3.3.3</i>
19.3.2.3.2.5	ConfigurationRevision		<i>moved to 19.3.3.3</i>
19.3.2.3.2.6	SampleMode [0..1]		<i>moved to 19.3.3.3</i>
19.3.2.3.2.7	SampleRate		<i>moved to 19.3.3.3</i>
19.3.2.3.2.8	OptionalFieds [0..1]		<i>moved to 19.3.3.3</i>
19.3.2.3.2.9	DestinationAddress [0..1]		<i>moved to 19.3.3.3</i>
19.3.2.3.3	Response-		<i>moved to 19.3.3.3</i>
19.3.2.4	SetUSVCBValues	19.3.3.4	SetUSVCBValues
19.3.2.4.1	Request		<i>moved to 19.3.3.4</i>
19.3.2.4.1.1	UsvCBReference		<i>moved to 19.3.3.4</i>
19.3.2.4.1.2	SvEnable [0..1]		<i>moved to 19.3.3.4</i>
19.3.2.4.1.3	CBReserved [0..1]		<i>moved to 19.3.3.4</i>
19.3.2.4.1.4	UnicastSampleValueID [0..1]		<i>moved to 19.3.3.4</i>
19.3.2.4.1.5	DataSetReference [0..1]		<i>moved to 19.3.3.4</i>
19.3.2.4.1.6	SampleMode [0..1]		<i>moved to 19.3.3.4</i>
19.3.2.4.1.7	SampleRate [0..1]		<i>moved to 19.3.3.4</i>
19.3.2.4.1.8	OptionalFieds [0..1]		<i>moved to 19.3.3.4</i>
19.3.2.4.2	Response+		<i>moved to 19.3.3.4</i>
19.3.2.4.3	Response-		<i>moved to 19.3.3.4</i>
19.4	Sampled value format	19.4	Sampled value format
19.4.1	MsvID or UsvID		<i>moved to 19.4</i>
19.4.2	OptFlds		<i>moved to 19.4</i>
19.4.3	DatSet		<i>moved to 19.4</i>
19.4.4	Sample [1..n]		<i>moved to 19.4</i>
19.4.5	SmpCnt		<i>moved to 19.4</i>
19.4.6	RefrTm		<i>moved to 19.4</i>
19.4.7	ConfRev		<i>moved to 19.4</i>

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19.4.8	SmpSynch		<i>moved to 19.4</i>
19.4.9	SmpRate		<i>moved to 19.4</i>
19.4.10	SmpMod		<i>moved to 19.4</i>
19.4.11	Simulation		<i>moved to 19.4</i>
20	CONTROL class model	20	CONTROL class model
20.1	Introduction	20.1	Introduction
20.2	Control with normal security	20.2	Control with normal security
20.2.1	Direct control with normal security	20.2.1	Direct control with normal security
20.2.2	SBO control with normal security	20.2.2	SBO control with normal security
20.3	Control with enhanced security	20.3	Control with enhanced security
20.3.1	Introduction	20.3.1	Introduction
20.3.2	Direct control with enhanced security	20.3.2	Direct control with enhanced security
20.3.3	SBO control with enhanced security	20.3.3	SBO control with enhanced security
20.4	Time-activated operate	20.4	Time-activated operate
20.5	CONTROL class service definitions	20.5	CONTROL class service definitions
20.5.1	Overview	20.5.1	Overview
20.5.2	Service parameter definition	20.5.2	Service parameter definition
20.5.2.1	ControlObjectReference		<i>moved to 20.5.2</i>
20.5.2.2	ctlVal		<i>moved to 20.5.2</i>
20.5.2.3	origin		<i>moved to 20.5.2</i>
20.5.2.4	ctlNum		<i>moved to 20.5.2</i>
20.5.2.5	T – control time-stamp		<i>moved to 20.5.2</i>
20.5.2.6	Test – test status		<i>moved to 20.5.2</i>
20.5.2.7	Check – Check condition		<i>moved to 20.5.2</i>
20.5.2.8	operTm – Operate time		<i>moved to 20.5.2</i>
20.5.2.9	AddCause – additional cause diagnosis		<i>moved to 20.5.2</i>
20.5.3	Service specification	20.5.3	Service specification
20.5.3.1	General	20.5.3.1	General
20.5.3.2	Select (Sel)	20.5.3.2	Select (Sel)
20.5.3.3	SelectWithValue (SelVal)	20.5.3.3	SelectWithValue (SelVal)
20.5.3.4	Cancel (Cancel)	20.5.3.4	Cancel (Cancel)
20.5.3.5	Operate (Oper)	20.5.3.5	Operate (Oper)
20.5.3.6	CommandTermination (CmdTerm)	20.5.3.6	CommandTermination (CmdTerm)
20.5.3.7	TimeActivatedOperate (TimOper)	20.5.3.7	TimeActivatedOperate (TimOper)
20.5.3.8	TimeActivatedOperateTermination (TimOperTermination)	20.5.3.8	TimeActivatedOperateTermination (TimOperTermination)
20.6	Tracking of control services		
20.6.1	General		<i>moved to 14.3</i>
20.6.2	Control service tracking (CTS)		<i>moved to IEC 61850-7-3</i>

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21	Time and time-synchronization model	21	Time and time-synchronization model
21.1	General	21.1	General
21.2	External information	21.2	Information requirements
22	Naming conventions	22	Naming conventions
22.1	Class naming and class specializations	22.1	Class naming and class specializations
22.2	Referencing an instance of a class	22.2	Referencing an instance of a class
22.3	Scope	22.3	Scope
23	File transfer model	23	File transfer model
23.1	File class	23.1	File class
23.1.1	FileName		<i>moved to 23.1</i>
23.1.2	FileSize		<i>moved to 23.1</i>
23.1.3	LastModified		<i>moved to 23.1</i>
23.2	File services	23.2	File services
		23.2.1	Overview
23.2.1	GetFile	23.2.2	GetFile
23.2.1.1	GetFile parameter		<i>moved to 23.2.2</i>
23.2.1.2	Request		<i>moved to 23.2.2</i>
23.2.1.3	Response+		<i>moved to 23.2.2</i>
23.2.1.4	Response-		<i>moved to 23.2.2</i>
23.2.2	SetFile	23.2.3	SetFile
23.2.2.1	SetFile parameter		<i>moved to 23.2.3</i>
23.2.2.2	Request		<i>moved to 23.2.3</i>
23.2.2.2.1	FileName		<i>moved to 23.2.3</i>
23.2.2.2.2	File-Data		<i>moved to 23.2.3</i>
23.2.2.3	Response+		<i>moved to 23.2.3</i>
23.2.2.4	Response-		<i>moved to 23.2.3</i>
23.2.3	DeleteFile	23.2.4	DeleteFile
23.2.3.1	DeleteFile parameter		<i>moved to 23.2.4</i>
23.2.3.2	Request		<i>moved to 23.2.4</i>
23.2.3.2.1	FileName		<i>moved to 23.2.4</i>
23.2.3.3	Response+		<i>moved to 23.2.4</i>
23.2.3.4	Response-		<i>moved to 23.2.4</i>
23.2.4	GetFileAttributeValues	23.2.5	GetFileAttributeValues
23.2.4.1	GetFileAttributeValues parameter		<i>moved to 23.2.5</i>
23.2.4.2	Request		<i>moved to 23.2.5</i>
23.2.4.3	Response+		<i>moved to 23.2.5</i>
23.2.4.3.1	FileName		<i>moved to 23.2.5</i>
23.2.4.3.2	FileSize		<i>moved to 23.2.5</i>

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23.2.4.3.3	LastModified		<i>moved to 23.2.5</i>
23.2.4.4	Response-		<i>moved to 23.2.5</i>
Annex A (normative)	ACSI conformance statement	Annex A (normative)	ACSI conformance statement
A.1	General	A.1	General
A.2	ACSI basic conformance statement	A.2	ACSI basic conformance statement
A.3	ACSI models conformance statement	A.3	ACSI models conformance statement
A.4	ACSI service conformance statement	A.4	ACSI service conformance statement
		Annex B (normative)	SCL enumerations
Annex B (normative)	Formal definition of IEC 61850-7- 2 Common Data Classes		<i>moved to IEC 61850-7-3</i>
B.1	Introduction		
B.2	Formal CDC definition		
Annex C (informative)	Generic substation state event (GSSE) control block (GsCB)	Annex C (informative)	Generic substation state event (GSSE) control block (GsCB)
		Annex D (normative)	Clarification on usage of quality
		D.1	Relation of the detailed quality identifiers with invalid or questionable quality
		D.2	Quality in the client server
		D.3	Relation between quality identifier
		Annex E (normative)	Clarification on RCB reservation
		E.1	General
		E.2	Buffered Report Control Block
		E.2.1	Instantiation of the buffered report control block from the SCL definition
		E.2.2	Reservation of a BRCB
		E.2.3	Un-reservation of a BRCB
		E.2.4	End of association and BRCB reservation scheme
		E.3	Unbuffered Report Control Block
		E.3.1	Instantiation of the unbuffered report control block from the SCL definition
		E.3.2	Reservation of a URCB
		E.3.3	Un-reservation of a URCB
		E.3.4	End of association and URCB reservation scheme

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Table 1	ACSI model classes with related services	Table 2	ACSI model classes with related services
Table 2	BasicTypes		<i>move to IEC 61850-7-3</i>
		Table 3	Conditions for presence of elements within a context
Table 3	ObjectName type		<i>moved to 6.2.3.3</i>
Table 4	ObjectReference type		<i>moved to 6.2.3.4</i>
Table 5	ServiceError type	Table 19	Literals of ServiceStatusKind
Table 6	PACKED-LIST type		<i>move to stereotype packed list in types instances of PACKED-LIST</i>
		Table 6	Type definition overview
		Table 7	Use of IEC 61850-6 bType
Table 7	TimeStamp type	Table 8	Attributes of Timestamp
Table 8	TimeQuality definition	Table 9	Attributes of TimeQuality
Table 9	TimeAccuracy		<i>moved to 6.2.3.8</i>
		Table 10	Attributes of Quality
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Table 10	TriggerConditions type	Table 12	Attributes of TriggerConditions
		Table 13	Attributes of RCBReportOptions
		Table 14	Attributes of LCBLogEntryOptions
		Table 15	Attributes of SVMMessageOptions
		Table 17	Attributes of Originator
		Table 20	Literals of OriginatorCategoryKind
		Table 22	Literals of SamplingModeKind
		Table 23	Literals of StepControlKind
		Table 24	Literals of DpStatusKind
		Table 25	Literals of SourceKind
		Table 26	Literals of ValidityKind
Table 11	ReasonForInclusion	Table 27	Attributes of ReasonForInclusionInReport
		Table 28	Attributes of ReasonForInclusionInLog
		Table 29	Literals of ACSIClassKind
Table 12	GenServerClass definition	Table 30	GenServerClass definition
		Table 31	GetServerDirectory service parameters
Table 13	TWO-PARTY-APPLICATION-ASSOCIATION (TPAA) class definition	Table 32	TWO-PARTY-APPLICATION-ASSOCIATION (TPAA) class definition
		Table 33	two-party-application-association services
		Table 34	Associate service parameters
		Table 35	Abort service parameters
		Table 36	Release service parameters
Table 14	MULTICAST-APPLICATION-ASSOCIATION (MCAA) class definition	Table 37	MULTICAST-APPLICATION-ASSOCIATION (MCAA) class definition
Table 15	GenLogicalDeviceClass (GenLD) class definition	Table 38	GenLogicalDeviceClass (GenLD) class definition
		Table 39	GetLogicalDeviceDirectory service parameters

Table number	Table name	Table number	Table name
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1 Scope

Add the following new Subclause 1.1.

1.1 General

Move the existing content of Clause 1 to new Subclause 1.1 and add the following new subclauses 1.2 and 1.3:

1.2 Namespace name and version

This new clause is mandatory for any IEC 61850 namespace (as defined by the part 7-1 of IEC 61850 Edition 2).

The parameters which identify this new release of this namespace are:

- Namespace version: 2007
- Namespace revision: B
- Namespace name: “IEC 61850-7-2:2007B”
- Namespace release: 3
- Namespace release date: 2019-10-02

The table below provides an overview of all published versions of this namespace.

Edition	Publication date	Webstore	Namespace
Edition 1.0	2003-05	IEC 61850-7-2:2003	IEC 61850-7-2:2003
Edition 2.0	2010-10	IEC 61850-7-2:2010	IEC 61850-7-2:2007
Amendment 1 of Edition 2.0	2020-02	IEC 61850-7-2:2010/AMD1:2020	IEC 61850-7-2:2007B
Edition 2.1	2020-02	IEC 61850-7-2:2010+AMD1:2020 CSV	IEC 61850-7-2:2007B

1.3 Code Component distribution

Replace the existing text of Subclause 1.3 with the following new text:

The Code Component will be available in light and full version:

- Full version will contain definition of the whole Basic Types defined in this standard with the documentation associated and access will be restricted to purchaser of this part
- Light version will not contain the documentation but will contain the whole definition of the Basic Types as per full version, and this light version will be freely accessible on the IEC website for download, but the usage remains under the licensing conditions.

The link for downloading the light version of this code component is:

http://www.iec.ch/public/TC57/supportdocuments/IEC_61850-7-2.NSD.2007B3.light.zip

The Code Components for IEC 61850 data models (like basic types, presence conditions, ... definition in this IEC standard) are available as the file format NSD defined by standard IEC 61850-7-7.

The Code Component(s) included in this IEC standard are potentially subject to maintenance works and user shall select the latest release in the repository located at:

<http://www.iec.ch/TC57/supportdocuments>

The latest version/release of the document will be found by selecting the file IEC_61850-7-2.NSD.{VersionStateInfo}.light.zip with the filed VersionStateInfo of the highest value.

Each Code Component is a ZIP package containing the electronic representation of the Code Component itself, with a file describing the content of the package (IECManifest.xml).

The IECManifest contains different sections giving information on:

- The copyright notice
- The identification of the code component
- The publication related to the code component
- The list of the electronic files which compose the code component
- An optional list of history files to track changes during the evolution process of the code component

The life cycle of a code component is not restricted to the life cycle of the related publication. The publication life cycle goes through two stages, Version (corresponding to an edition) and Revision (corresponding to an amendment). A third publication stage (Release) allows publication of Code Component without need to publish an amendment.

This is useful when InterOp Tissues need to be fixed. Then a new release of the Code Component will be released, which supersedes the previous release, and distributed through the IEC TC57 web site.

2 Normative references

Replace existing references to IEC 61850-6, IEC 61850-7-1, IEC 61850-7-3 and IEC 61850-7-4 with the following new references:

IEC 61850-6, *Communication networks and systems for power utility automation - Part 6: Configuration description language for communication in electrical substations related to IEDs*

IEC 61850-7-1:2020, *Communication networks and systems for power utility automation - Part 7-1: Basic communication structure - Principles and models*

IEC 61850-7-3:2020, *Communication networks and systems for power utility automation - Part 7-3: Basic communication structure - Common data classes*

IEC 61850-7-4:2020, *Communication networks and systems for power utility automation - Part 7-4: Basic communication structure - Compatible logical node classes and data object classes*

Remove references to IEC 61850-8-1, IEC 61850-9-2 and ISO 9506.

koniec náhľadu – text ďalej pokračuje v platenej verzii STN