
Komunikacijska omrežja in sistemi v postajah - 9-2. del: Preslikave posebne komunikacijske storitve (SCSM) - Vzorčne/odčitane vrednosti po ISO/IEC 8802-3

Communication networks and systems for power utility automation - Part 9-2: Specific communication service mapping (SCSM) - Sampled values over ISO/IEC 8802-3

Kommunikationsnetze und -systeme für die Automatisierung in der elektrischen Energieversorgung - Teil 9-2: Spezifische Abbildung von Kommunikationsdiensten (SCSM) - Abgetastete Werte über ISO/IEC 8802-3

Réseaux et systèmes de communication pour l'automatisation des systèmes électriques - Partie 9-2: Mise en correspondance des services de communication spécifiques (SCSM) - Valeurs échantillonnées sur l'ISO/IEC 8802-3

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English version

**Communication networks and systems for power utility automation -
Part 9-2: Specific communication service mapping (SCSM) -
Sampled values over ISO/IEC 8802-3
(IEC 61850-9-2:2011)**

Réseaux et systèmes de communication
pour l'automatisation des systèmes
électriques -
Partie 9-2: Mise en correspondance des
services de communication spécifiques
(SCSM) -
Valeurs échantillonnées
sur l'ISO/CEI 8802-3
(CEI 61850-9-2:2011)

Kommunikationsnetze und -systeme für
die Automatisierung in der elektrischen
Energieversorgung -
Teil 9-2: Spezifische Abbildung von
Kommunikationsdiensten (SCSM) -
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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 57/1133/FDIS, future edition 2 of IEC 61850-9-2, 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 61850-9-2:2011.

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) 2012-07-27
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2014-10-27

This document supersedes EN 61850-9-2:2004.

EN 61850-9-2:2011 includes the following significant technical changes with respect to EN 61850-9-2:2004:

- addition of an optional Link redundancy layer (Tables 3 to 6);
- redefinition of "reserved" fields in link layer (5.3.3.4);
- evolution of USVCB and MSVCB components (Tables 9, 10, 12);
- evolution of encoding for the transmission of the sampled value buffer (Table 14).

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Endorsement notice

The text of the International Standard IEC 61850-9-2:2011 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 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 60874-10-1	-	Connectors for optical fibres and cables - Part 10-1: Detail specification for fibre optic connector type BFOC/2,5 terminated to multimode fibre type A1	-	-
IEC 60874-10-2	-	Connectors for optical fibres and cables - Part 10-2: Detail specification for fibre optic connector type BFOC/2,5 terminated to single-mode fibre type B1	-	-
IEC 60874-10-3	-	Connectors for optical fibres and cables - Part 10-3: Detail specification for fibre optic adaptor type BFOC/2,5 for single and multimode fibre	-	-
IEC/TR 61850-1	-	Communication networks and systems in substations - Part 1: Introduction and overview	-	-
IEC/TS 61850-2	-	Communication networks and systems in substations - Part 2: Glossary	-	-
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	-	Communication networks and systems for power utility automation - Part 7-1: Basic communication structure - 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 communication service interface (ACSI)	EN 61850-7-2	-
IEC 61850-7-3	-	Communication networks and systems for power utility automation - Part 7-3: Basic communication structure - Common data classes	EN 61850-7-3	-
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	-

<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/TS 62351-6	-	Power systems management and associated information exchange - Data and communications security - Part 6: Security for IEC 61850	-	-
IEC 62439-3 + A1	2010 201X ¹⁾	Industrial communication networks - High availability automation networks - Part 3: Parallel Redundancy Protocol (PRP) and High availability Seamless Redundancy (HSR)	EN 62439-3 + A1	2010 201X ¹⁾
ISO/IEC 7498-1	1994	Information technology - Open Systems Interconnection - Basic Reference Model: The Basic Model	-	-
ISO/IEC 8326	1996	Information technology - Open systems Interconnection - Session service definition	-	-
ISO/IEC 8327-1	1996	Information technology - Open Systems Interconnection - Connection-oriented Session protocol: Protocol specification	-	-
ISO/IEC 8649	1996	Information technology - Open systems interconnection - Service definition for the Association Control Service Element (ACSE)	-	-
ISO/IEC 8650-1	1996	Information technology - Open systems interconnection - Connection-oriented protocol for the association control service element: Protocol specification	-	-
ISO/IEC 8802-3	2000	Information technology - Telecommunications and information exchange between systems - Local and metropolitan area networks - Specific requirements - Part 3: Carrier sense multiple access with collision detection (CSMA/CD) access method and physical layer specifications	-	-
ISO/IEC 8822	1994	Information technology - Open Systems Interconnection - Presentation service definition	-	-
ISO/IEC 8823-1	1994	Information technology - Open Systems Interconnection - Connection-oriented presentation protocol: Protocol specification	-	-
ISO/IEC 8824-1	2008	Information technology - Abstract Syntax Notation One (ASN.1): Specification of basic notation	-	-
ISO/IEC 8825-1	-	Information technology - ASN.1 encoding rules: Specification of Basic Encoding Rules (BER), Canonical Encoding Rules (CER) and Distinguished Encoding Rules (DER)	-	-

¹⁾ To be published.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
ISO 9506-1	2003	Industrial automation systems - Manufacturing - Message Specification - Part 1: Service definition	-	-
ISO 9506-2	2003	Industrial automation systems - Manufacturing Message Specification - Part 2: Protocol specification	-	-
IEEE 754	1985	Binary Floating-Point Arithmetic (R1990)	-	-
IEEE 802.1Q	1998	IEEE Standard for Local and Metropolitan Area Networks: Virtual Bridged Local Area Networks	-	-
IETF RFC 791	-	Internet Protocol - DARPA Internet Program Protocol Specification	-	-
IETF RFC 792	-	Internet Control Message Protocol	-	-
IETF RFC 793	-	Transmission Control Protocol - DARPA Internet Program Protocol Specification	-	-
IETF RFC 826	-	Ethernet Address Resolution Protocol	-	-
IETF RFC 894	-	Standard for the Transmission of IP Datagrams over Ethernet Networks	-	-
IETF RFC 919	-	Broadcasting Internet Datagrams	-	-
IETF RFC 1006	-	ISO transport services on top of TCP: Version 3	-	-
IETF RFC 1112	-	Host Extensions for IP Multicasting	-	-

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Part 9-2: Specific communication service mapping (SCSM) – Sampled values
over ISO/IEC 8802-3**

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Partie 9-2: Mise en correspondance des services de communication spécifiques
(SCSM) – Valeurs échantillonnées sur ISO/CEI 8802-3**

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CONTENTS

FOREWORD.....	4
INTRODUCTION.....	6
1 Scope.....	7
2 Normative references.....	7
3 Terms and definitions	9
4 Abbreviations.....	9
5 Communication stack.....	10
5.1 Overview of the protocol usage.....	10
5.2 Client/server services and communication profiles	11
5.2.1 Client/server services	11
5.2.2 A-Profile	12
5.2.3 TCP/IP T-Profile	13
5.3 SV service and communication profile	13
5.3.1 SV mapping overview	13
5.3.2 A-Profile	14
5.3.3 T-Profile	14
5.4 Restrictions	17
6 Mapping of IEC 61850-7-2 and IEC 61850-7-3 data attributes	17
7 Mapping of IEC 61850-7-2 classes and services	17
7.1 Classes of SV data sets	17
7.2 Definition of SV data sets	17
8 Mapping of the model for the transmission of sampled values	18
8.1 Overview	18
8.2 Mapping of the multicast sampled value control block class and services	18
8.2.1 Multicast sampled value control block definition	18
8.2.2 MSV Services.....	19
8.3 Mapping of the unicast sampled value control block class and services	20
8.3.1 Unicast sampled value control block definition.....	20
8.3.2 USV Services	21
8.4 Mapping of the update of the sampled value buffer.....	21
8.5 Additional definitions for the transmission of sampled values.....	21
8.5.1 Application layer functionality	21
8.5.2 Presentation layer functionality.....	22
8.6 Definitions for basic data types – Presentation layer functionality	24
9 Conformance.....	24
9.1 Notation.....	24
9.2 PICS	24
9.2.1 Profile conformance.....	24
9.2.2 SV Services	25
10 Substation configuration language (SCL).....	25
11 SCSM specific address element definitions	26
Annex A (informative) ISO/IEC 8802-3 frame format and ASN.1 basic encoding rules.....	27
Annex B (informative) Multicast address selection	32

Figure 1 – OSI reference model and profiles.....	11
Figure 2 – Structure of the tag header	15
Figure 3 – Reserved 1	16
Figure 4 – Concatenation of several ASDU's into one frame	22
Figure A.1 – ISO/IEC 8802-3 frame format – No link redundancy	27
Figure A.2 – ISO/IEC 8802-3 frame format – Link redundancy: HSR	28
Figure A.3 – ISO/IEC 8802-3 frame format – Link redundancy: PRP	29
Figure A.4 – Basic encoding rules format	30
Figure A.5 – Format of the tag octets	30
Figure A.6 – Example for an ASN.1 coded APDU frame structure	31
Table 1 – Service requiring client/server communication profile	12
Table 2 – Service and protocols for client/server communication A-Profile	12
Table 3 – Service and protocols for peer TCP/IP T-Profile	13
Table 4 – Service requiring SV communication profile	13
Table 5 – Service and protocols for SV communication A-Profile	14
Table 6 – SV T-Profile	14
Table 7 – Default Virtual LAN IDs and priorities.....	15
Table 8 – Assigned Ethertype values	16
Table 9 – MMS TypeDescription definition for MSVCB MMS structure.....	18
Table 10 – DstAddress structure	19
Table 11 – Mapping of multicast sampled value services.....	19
Table 12 – MMS TypeDescription definition for USVCB MMS structure	20
Table 13 – Mapping of unicast sampled value services	21
Table 14 – Encoding for the transmission of the sampled value buffer	22
Table 15 – Encoding for the basic data types.....	24
Table 16 – PICS for A-Profile support.....	25
Table 17 – PICS for T-Profile support.....	25
Table 18 – SV conformance statement.....	25
Table 19 – Definitions for SV SCL.....	26
Table B.1 – Recommended multicast addressing example.....	32

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**COMMUNICATION NETWORKS AND SYSTEMS
FOR POWER UTILITY AUTOMATION –**
**Part 9-2: Specific communication service mapping (SCSM) –
Sampled values over ISO/IEC 8802-3**

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International Standard IEC 61850-9-2 has been prepared by IEC technical committee 57: Power systems management and associated information exchange.

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

FDIS	Report on voting
57/1133/FDIS	57/1161/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 second edition cancels and replaces the first edition published in 2004 and constitutes a technical revision.

Main changes with respect to the first edition are:

- addition of an optional Link redundancy layer (Tables 3 to 6);
- redefinition of “reserved” fields in link layer (5.3.3.4);
- evolution of USVCB and MSVCB components (Tables 9, 10, 12);
- evolution of encoding for the transmission of the sampled value buffer (Table 14).

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

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 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,
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