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Communication networks and systems for power utility automation – Part 7-410: Basic communication structure – Hydroelectric power plants – Communication for monitoring and control

Réseaux et systèmes de communication pour l'automatisation des systèmes électriques – Partie 7-410: Structure de communication de base – Centrales hydroélectriques – Communication pour le contrôle-commande

IEC 61850-7-410:2012-10+AMD1:2015-11 CSV(en-fr)

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COMMUNICATION NETWORKS AND SYSTEMS FOR POWER UTILITY AUTOMATION –

Part 7-410: Basic communication structure – Hydroelectric power plants – Communication for monitoring and control

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This Consolidated version of IEC 61850-7-410 bears the edition number 2.1. It consists of the second edition (2012-10) [documents 57/1274/FDIS and 57/1289/RVD] and its amendment 1 (2015-11) [documents 57/1607/FDIS and 57/1633/RVD]. The technical content is identical to the base edition and its amendment.

In this Redline version, a vertical line in the margin shows where the technical content is modified by amendment 1. Additions are in green text, deletions are in strikethrough red text. A separate Final version with all changes accepted is available in this publication.

International Standard IEC 61850-7-410 has been prepared by technical committee 57: Power systems management and associated information exchange.

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

a) The logical nodes in IEC 61850-7-410:2007 that were not specific to hydropower plants have been transferred to IEC 61850-7-4:2010 and have been removed from this edition of IEC 61850-7-410.

b) The definitions of logical nodes in this edition of IEC 61850-7-410 have been updated using the format introduced in IEC 61850-7-4:2010.

c) Most of the modelling examples and background information that was included in IEC 61850-7-410:2007 has been transferred to IEC/TR 61850-7-510.

d) However, this edition of IEC 61850-7-410 includes additional general-purpose logical nodes that were not included in IEC 61850-7-4:2010, but are required in order to represent the complete control and monitoring system of a hydropower plant.

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

A list of all the 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 committee has decided that the contents of the base publication and its amendment 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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- replaced by a revised edition, or
- amended.

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COMMUNICATION NETWORKS AND SYSTEMS FOR POWER UTILITY AUTOMATION –

Part 7-410: Basic communication structure – Hydroelectric power plants – Communication for monitoring and control

1 Scope

This part of IEC 61850 specifies the additional common data classes, logical nodes and data objects required for the use of IEC 61850 in a hydropower plant.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. 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*

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

IEC 61850-7-3:2010, *Communication networks and systems for power utility automation – Part 7-3: Basic communication structure for substations and feeder equipment – Common data classes*

IEC 61850-7-4:2010, *Communication networks and systems for power utility automation – Part 7-4: Basic communication structure – Compatible logical node classes and data object classes*

3 Terms and definitions

For the purpose of this document, the terms and definitions given in IEC 61850-2 apply.

4 Abbreviated terms

The terms listed in Table 1 are used to build concatenated Data Object Names in this document. IEC 61850-7-410 inherits all the abbreviated terms described in Clause 4 of IEC 61850-7-4:2010.

NOTE Data Object Names in the logical nodes representing PSS filter functions follow names in IEEE 421.5 as closely as possible. These names are not included in Table 1.