

INTERNATIONAL STANDARD

NORME INTERNATIONALE



AMENDMENT 1 AMENDEMENT 1

Communication networks and systems for power utility automation – Part 5: Communication requirements for functions and device models

**Réseaux et systèmes de communication pour l'automatisation des systèmes
électriques –
Partie 5: Exigences de communication pour les fonctions et les modèles
d'appareils**



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INTERNATIONAL ELECTROTECHNICAL COMMISSION

COMMUNICATION NETWORKS AND SYSTEMS FOR POWER UTILITY AUTOMATION –

Part 5: Communication requirements for functions and device models

AMENDMENT 1

FOREWORD

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Amendment 1 to IEC 61850-5:2013 has been prepared by IEC technical committee 57: Power systems management and associated information exchange.

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

Draft	Report on voting
57/2448/FDIS	57/2467/RVD

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

The language used for the development of this Amendment is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/standardsdev/publications/.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under webstore.iec.ch in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
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FOREWORD

In the FOREWORD, below item 9), replace the first paragraph through the third paragraph including its bullet points with the following new paragraphs:

International Standard IEC 61850-5 Edition 2 and its Amendment 1 has been prepared by IEC technical committee 57: Power systems management and associated information exchange.

DISCLAIMER

This Consolidated version is not an official IEC Standard and has been prepared for user convenience. Only the current versions of the standard and its amendment(s) are to be considered the official documents.

This consolidated version of IEC 61850-5:2013 bears the edition number 2.1. It replaces the second edition (2013-01) and its amendment (2021-XX). The technical content is identical to the base edition and its Amendment.

International Standard IEC 61850-5 has been prepared by IEC technical committee 57: Power systems management and associated information exchange.

The changes, corrections and updates have been made mainly according to the comments received.

The major changes of this consolidated version with regard to Edition 2 are as follows:

- a) extensions of the requirements with some Logical Nodes;
- b) errors and typos have been corrected;
- c) harmonization of all Logical Node descriptions (impact on all Logical Node tables);
- d) re-organization of selected clause structures;
- e) updating of headlines;
- f) re-ordering subclauses in the chapter about performances.

to provide

- ease of reading and understanding of the requirements for the IEC 61850 series
- consistent and updated requirement references for the data model and communication service parts

INTRODUCTION

Delete the existing fourth paragraph of the Introduction. Replace the existing text of the fifth paragraph of the Introduction with the following new text:

The IEC 61850 series shall be long living but allow following the fast changes in communication technology by both its technical approach and its document structure. The IEC 61850 series has been organized so that at least minor changes to one part do not require a significant rewriting of another part. For example, the derived data models in subsequent parts (IEC 61850-7-x) and mappings to dedicated stacks (IEC 61850-8-x and IEC 61850-9-x) based on the communication requirements in IEC 61850-5 will not change the requirements defined in IEC 61850-5. In addition, the general parts, the requirement specification and the modelling parts are independent from any implementation. The implementation needed for the use of the standard is defined in some few dedicated parts referring to main stream communication means thus supporting the long living of the standard and its potential for later technical changes.

Replace the existing text of the sixth paragraph of the Introduction with the following new text:

This consolidated version of IEC 61850-5:2013 and its Amendment 1 defines the communication requirements for functions and device models for power utility automation systems.

Replace the existing text of the seventh paragraph and the Note of the Introduction with the following new text:

The modelling of communication requires the definition of objects (e.g., data objects, data sets, report control, log control) and services accessing the objects (e.g., get, set, report, create, delete). This is defined in IEC 61850-7 with a clear interface to implementation. To use the benefits of communication technology, in this standard no new protocol stacks are defined but a standardized mapping on existing stacks is given in IEC 61850-8 and IEC 61850-9. A System configuration language (IEC 61850-6) for strong formal description of the system usable for software tools and a standardized conformance testing (IEC 61850-10) complement the standard.

NOTE 1 To keep the layered approach of the standard not mixing application and implementation requirements, terms like client, server, data objects, etc. are normally not used in IEC 61850-5 (requirements). In IEC 61850-7 (modelling), -8 and -9 (specific communication service mapping) terms belonging to application requirements like PICOM are normally not used.

NOTE 2 Specific requirements concerning extensions of part 8 are covered in separate technical reports, e.g. IEC TR 61850-80-3.

Figure 1 – Relative position of this part of the standard

Delete existing Figure 1.