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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 42151.92-2025

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

电力自动化通信网络和系统 第9-2部分: 特定通信服务映射 (SCSM) 基于ISO/IEC 8802-3的采样值

(English Translation)

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Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part 1: Structure and Drafting Rules of Standardization Documents".

Drafting.

This document is Part 9-2 of GB/T 42151 "Communication Networks and Systems for Power Automation". GB/T 42151 has published the following...

part.

---Part 3: General Requirements;

---Part 4: Systems and Project Management;

---Part 5: Communication Requirements for Functional and Device Models;

---Part 6: A Description Language for Communication Configuration of Power Automation Systems Related to Intelligent Electronic Devices;

---Part 7-1. Basic Communication Structure Principles and Models;

---Part 7-2. Basic Information and Communication Structure Abstract Communication Service Interface (ACSI);

---Part 7-7. Machine-processable format of relevant IEC 61850 data models for tools;

---Part 8-1. Specific Communication Service Mapping (SCSM) Mapping to MMS (ISO 9506-1 and ISO 9506-2) and ISO/IEC 8802-3;

---Part 9-2. Specific Communication Service Mapping (SCSM) based on sampled values from ISO/IEC 8802-3.

This document is equivalent to IEC 61850-9-2:2020 "Electric power automation communication networks and systems - Part 9-2. Specific communication services".

Sampling (SCSM) based on ISO/IEC 8802-3 sampling values.

The following minimal editorial changes have been made to this document.

---Based on the actual citations in the text, Chapter 2 has added ISO 9506 (all parts);

---Based on the actual citations in the text, ISO 9506-2:2003, IEEE 754.1985, and IEEE 802.1Q.1998 in Chapter 2 have been changed to no date reference;

---The text does not reference ISO/IEC 8326:1996, ISO/IEC 8327-1:1996, ISO/IEC 8649:1996, ISO/IEC 8650-1:1996, ISO/IEC 8822:1994, ISO/IEC 8823-1:1994, RFC791, RFC792, RFC793, RFC826, RFC894, RFC919, RFC1006, RFC1112, and RFC2460 have been moved from Chapter 2 to the References section.

---References have been added.

Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents.

This document was proposed by the China Electricity Council.

This document is under the jurisdiction of the National Technical Committee on Standardization of Power System Management and Information Exchange (SAC/TC82).

Introduction

GB/T 42151, "Communication Networks and Systems for Power Automation," aims to provide interoperability for all devices in power automation systems.

It consists of the following parts.

---Part 1: Overview. This section aims to provide an overview of the series of standards.

---Part 2: Terminology. This section aims to list the terms and definitions used in this series of standards.

---Part 3: General Requirements. This section aims to introduce the general requirements for communication networks, with a focus on quality requirements.

---Part 4: Systems and Project Management. The purpose is to describe the requirements for systems and project management processes, as well as the requirements for

engineering and testing.

Requirements for specialized support tools.

---Part 5: Communication Requirements for Functional and Device Models. The purpose is to specify the communication requirements for each function of the power automation system.

---Part 6: A description language for communication configuration of power automation systems associated with intelligent electronic devices. The purpose is to achieve some degree of compatibility.

Description of the ability to exchange information between intelligent electronic devices, and the exchange of power automation systems between tools provided by different manufacturers.

describe.

---Part 7: Basic Communication Structure of Power Automation Systems. The purpose is to define a hierarchical class model and the communication methods provided by these classes.

The service enables communication between devices.

---Part 8: Specific Communication Service Mapping (SCSM). The purpose is to provide services within the substation control layer and bay layer, as well as between the control layer and...

Communication mapping between interval layers.

---Part 9: Specific Communication Service Mapping (SCSM). The purpose is to provide services within the substation bay layer and process layer, as well as between the bay layer and...

Communication mapping between process layers.

---Part 10: Conformance Testing. The purpose is to specify the standard techniques for implementing conformance testing and the methods to be used when proposing performance parameters.

Specific measurement techniques.

This document is Part 9-2 of GB/T 42151 "Electric Power Automation Communication Networks and Systems", which defines communication networks and systems based on ISO/IEC 8802-3.

Transmitted Sampled Values Specific Communication Service Mapping (SCSM) This Specific Communication Service Mapping provides a complete sampled value model mapping.