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

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Field device integration - Part 12: PROFINET

现场设备集成 第12部分：PROFINET

(English Translation)

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References

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 12 of GB/T 41771 "Field Device Integration". GB/T 41771 has already published the following parts.

---Part 1: Overview;

---Part 2: Client;

---Part 3: Servers;

---Part 4: Package;

---Part 5: Information Model;

---Part 6: Technology Mapping;

---Part 7: Communication Equipment;

---Part 9: Industry Standards Foundation Fieldbus H1;

---Part 10: Industry Standards Foundation Fieldbus HSE;

---Part 11: PROFIBUS (Industry Standards)

---Part 12: PROFINET;

---Part 13: Industry Standards for HART and WirelessHART.

This document is equivalent to IEC 62769-103-4:2023 Field Device Integration (FDI) Part 103-4.PROFINET.

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

---To align with existing standards, the standard name has been changed to "Field Device Integration Part 12: PROFINET".

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 Machinery Industry Federation.

This document is under the jurisdiction of the National Technical Committee on Standardization of Industrial Process Measurement, Control and Automation (SAC/TC124).

Introduction

The field device integration series of standards are important technical standards guiding industrial process measurement and control activities. GB/T 41771 aims to...

The established guidelines for equipment integration will consist of 15 parts.

---Part 1: Overview. The purpose is to define and provide an overview of the field equipment integration specifications.

---Part 2: Client-Side. This section specifies the requirements for integrating clients into field devices.

---Part 3: Servers. This section specifies the requirements for integrating servers into field devices.

---Part 4: Packages. The purpose is to build a field device integration package model, providing a way to integrate devices, network components, and communication servers.

To obtain all the elements required by the system.

---Part 5: Information Model. The purpose is to define the topology of an automation system, used to describe the equipment and communication of that system.

Trust network connection.

---Part 6: Technology Mapping. The purpose is to define the technology mapping for the concepts described in field device integration.

---Part 7: Communication Equipment. The purpose is to define the elements that enable communication capabilities.

---Part 8: Industry-Specific General Protocols. The purpose is to define the communication servers, gateways, and devices described in the field equipment integration package.

Detailed information on the required general protocol.

---Part 9: Industry Standards Foundation Fieldbus H1. The purpose is to define the field device integration communication of the H1 fieldbus technology.

Industry rules.

---Part 10: Industry Standards Foundation Fieldbus HSE. The purpose is to define the field device integration of HSE fieldbus technology.

Telecommunications industry regulations.

---Part 11: PROFIBUS Standards. The purpose is to define standard practices for field device integrated communication using PROFIBUS technology.

---Part 12: PROFINET. The purpose is to define the field device integration communication standards for PROFINET technology.

---Part 13: Industry Standards for HART and WirelessHART. The purpose is to define HART and WirelessHART technologies.

The field equipment integrated communication industry standard.

---Part 14: Industry Standards for Modbus-RTU. The purpose is to define the field device integrated communication specifications for Modbus-RTU technology.

Industry rules.

---Part 15: Industry Standard ISA100. The purpose is to define the industry standard for field device integrated communication using ISA100 technology.

Field device integration, Part 12: PROFINET

1 Scope

This document specifies IEC 62769 for IEC 61784-2_CP3/4, IEC 61784-2_CP3/5 and IEC 61784-2_CP3/6.

Field Device Integration (FDI) standards of PROFINET.

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are not included.

For references to documents, only the version corresponding to that date applies to this document; for undated references, the latest version (including all amendments) applies.

This document.

IEC 61158-5-10 Industrial Communication Network Fieldbus Specification Part 5-10. Application Layer Service Definition Type (10 yuan) definition-Type 10 elements) Note. GB/T 25105.1-2025 Industrial Communication Network Fieldbus Specification Type 10. PROFINET IO Specification Part 1: Application Layer Services Definition (IEC 61158-5-10:2023, IDT) IEC 61784-2 Industrial communication networks - Part 2: Real-time