

ICS 25.040
CCS N 10



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

GB/T 41771.11-2025

Field device integration - Part 11: Profiles - PROFIBUS

现场设备集成 第11部分：行规 PROFIBUS

(English Translation)

Issued on: October 31, 2025

Implemented on: May 1, 2026

Issued by: State Administration for Market Regulation

Table of Contents

Preface	
Introduction	
1 Scope	
2 Normative References	
3 Terms, Definitions, and Abbreviations	
3.1 Terms and Definitions	
3.2 Abbreviations	
4 Agreement	
4.1 EDDL Syntax	
4.2 XML Syntax	
4.3 Uppercase	
5 PROFIBUS Rules	
5.1 General Rules	
5.2 Table of Contents Rules	
5.3 Associate the package with the device	
5.4 Information Model Mapping	
5.5 Method	
Appendix A (Normative) Topology Scan Result Pattern	
A.1 General Rule	
A.2 TargetNamespace	
A.3 Network	
A.4 Profibus Network T	
A.7 Profibus Address T	
Appendix B (Normative) Transfer Service Parameters	
B.1 General Rule	
B.2 Target Namespace	
B.3 sendData	
B.4 receiveData	
B.5 TransferSendDataT	
B.6 TransferResultDataT	
B.7 OperationT	
Appendix C (Informative) Mapping to PADIM	

C.1 Overview

C.2 Mapping Table

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 11 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 H;
- 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 62769-103-1:2023 Field Device Integration (FDI) Part 103-1. Industry Standard PROFIBUS.

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 11: Industry Standard PROFIBUS".

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 the basic concepts such as the architecture of field device integration.

---Part 2: Client. The purpose is to define the device access services, host services, and user interface for integrating client devices into field equipment.

Requirements related to plugins and user interface descriptions.

---Part 3: Servers. The purpose is to define the information model, OPCUA services, communication, and other aspects of the integrated server for field devices.

Relevant requirements.

---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 11: PROFIBUS

1 Scope

This document specifies the IEC 61784-1_CP3/1 (PROFIBUS-DP) and IEC 61784-1_CP3/2 (PROFIBUS-PA) standards.

FDI industry practice.

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.

works-Profiles-Part 1: Fieldbusprofiles) IEC 61804 (all parts) Enterprise system equipment and integration - Functions of the description language for process control and electronic equipment (EDDL) Note. GB/T 21099 (all parts) Function blocks (FB) and electronic device description language (EDDL) for equipment and integrated process control in enterprise systems.

[IEC 61804 (all parts)] Part 100: Devices interface) Note. GB/T 41771.2-2022 Field device integration - Part 2: Clients (IEC 62769-2:2021, IDT) FDI Packages Note. GB/T 41771.4-2022 Field device integration - Part 4: Packages (IEC 62769-4:2021, IDT)