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**NATIONAL STANDARD OF THE
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**Field device integration - Part 7: Communication devices
(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 7 of GB/T 41771 "Field Equipment Integration": GB/T 41771 has published the following parts:

---Part 1: Overview;

---Part 2: Client;

---Part 3: Server;

---Part 4: Package;

---Part 5: Information Model;

---Part 7: Communication equipment:

This document is equivalent to IEC 62769-7:2023 "Field Device Integration (FDI) Part 7: Communication Equipment":

This document has made the following minimal editorial changes:

---Modify the standard name to "Field Device Integration Part 7: Communication Equipment":

Please note that some content in this document may be subject to patents: The publisher of this document assumes no responsibility for identifying patents:

Introduction

The field device integration series standards are important technical standards that guide industrial process measurement and control and other related activities: GB/T 41771 aims to Establish standards applicable to field device integration, which are planned to consist of 15 parts:

---Part 1: Overview: The purpose is to provide the concepts and overview of field device integration specifications:

---Part 2: Client: The purpose is to specify requirements related to field device integration clients:

---Part 3: Server: The purpose is to specify requirements related to field device integration servers:

---Part 4: Package: The purpose is to build a field device integration package model that provides integration of devices, network components and communication servers into all elements required for the system:

---Part 5: Information Model: The purpose is to specify the topology of the automation system and to describe the equipment and communication of the automation system:

Connect Network:

---Part 6: Technology Mapping: The purpose is to specify a technical mapping of the concepts described in field device integration:

---Part 7: Communication equipment: The purpose is to specify the elements that enable communication capabilities:

---Part 8: General protocol for industry regulations: The purpose is to specify the communication servers, gateways and devices required by the field device integration package:

Details of the general protocol:

---Part 9: Profile Foundation Fieldbus H1: The purpose is to specify the integrated communication of field devices with H1 fieldbus technology regulation:

---Part 10: Compliance Foundation Fieldbus HSE: The purpose is to specify the field device integration pass for HSE fieldbus technology:

Believe in the rules:

---Part 11: Industry regulations PROFIBUS: The purpose is to stipulate the communication regulations for field device integration of PROFIBUS technology:

---Part 12: PROFINET regulations: The purpose is to stipulate the communication regulations for field device integration of PROFINET technology:

---Part 13: Profile HART and WirelessHART: Purpose is to specify HART and WirelessHART technology Integrated communication profiles for field devices:

---Part 14: Profile Modbus-RTU: The purpose is to specify the field device integrated communication profile of Modbus-RTU technology:

---Part 15: Industry regulations ISA100: The purpose is to specify the field device integrated communication profile of ISA100 technology:

Field Device Integration Part 7: Communications Equipment

1 Scope

This document specifies the elements known as communications equipment that implement communications capabilities:

The entire field device integration (FDI) architecture is shown in Figure 1: Structural components within the scope of this document are represented in dark colors in the figure:

The FDI packages referred to in this document are limited to communications equipment:
The communication server shown in Figure 1 is an example of a specific communication device:

Figure 1 FDI architecture diagram

2 Normative reference documents

The contents of the following documents constitute essential provisions of this document through normative references in the text: Among them, the dated quotations for undated referenced documents, only the version corresponding to that date applies to this document; for undated referenced documents, the latest version (including all amendments) applies to this document:

IEC 61804-3 Enterprise System Devices and Integration Function Blocks (FBs) for Process Control and Electronic Device Description Language (EDDL)