

ICS 25.040
CCS N 10



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

GB/T 29618.309-2025

Replacing GB/T 29618.309-2013

**Field device tool (FDT) interface specification - Part 309:
Communication profile integration - IEC 61784 CPF 9**

现场设备工具（FDT）接口规范 第309部分：通信行规集成 IEC 61784 CPF 9
(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, Abbreviations, and Conventions	
3.1 Terms and Definitions	
3.2 Abbreviations	
3.3 Agreement	
3.3.1 Naming and referencing data types	
3.3.2 Required vocabulary list	
3.3.3 UML Usage	
4 Bus type	
5 Instance and Device Data Access	
5.1 Overview	
5.2 Process Channel Objects Provided by DTM	
5.3 DTM Service for Accessing Instance and Device Data	
6 Agreement-Specific Behaviors	
6.1 Overview	
6.2 Burst Mode Subscription	
6.3 Use of Device Addressing Information	
6.4 Extended Command Number	
6.5 Handling of Communication Failures and Timeouts	
6.6 Handling Delayed Responses	
6.7 Topology with Hybrid HART Protocol	
6.7.1 Overview	
6.7.2 Only supports the behavior of DTMs with "Extended_HART"	
6.7.3 Support for DTM behavior of "Extended_HART" and "HART_Basic"	
6.7.4 DTM Behaviors Requiring "Extended_HART" or "HART_Basic"	
6.8 Nested communication with multiple gateways	
6.9 Communication and Network Structure in Wireless HART	
6.9.1 Overview	
6.9.2 Network Topology	

7	Protocol-Specific Uses of General Data Types
8	Protocol-Specific Public Data Types
9	Network Management Data Types
9.1	Overview
9.2	Addressing Modes
9.3	Address Information
9.4	Additional Address Information for the "Extended_HART" Protocol
10	Communication data types
10.1	Overview
10.2	Protocol-Specific Addressing Information
10.3	Data Type Definition
11	Channel Parameter Data Types
12	Equipment Identification
12.1	Handling Protocol-Specific String Data Types
12.2	Scan address range
12.3	Support for extended manufacturer and device type codes
12.4	Device type identifier data type of protocol "HART_Basic"
12.5	Data type of the generic device type identifier for the "Extended_HART" protocol
12.6	Topology Scan Data Type
12.7	Scanning and Recognizing Data Types of "HART_Basic"
12.8	Scanning the identifier data type of the "Extended_HART" protocol
12.9	Device Type Identifier Data Type --- Provided by DTM
	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 309 of GB/T 29618, "Field Device Tool (FDT) Interface Specification". GB/T 29618 has been published.

The following section.

---Part 1: Overview and Guidelines;

---Part 2: Concepts and Detailed Description;

- Part 301: Communication Standards Integration with FF Fieldbus Specification;
- Part 302: Communication Industry Standards Integration of Common Industrial Protocols;
- Part 306: Communication Standards Integration with INTERBUS Fieldbus Specification;
- Part 309: Communication Industry Standard Integration IEC 61784CPF9;
- Part 315: Communication Standards Integration with MODBUS Fieldbus Specification;
- Part 41: Object Model Rules for Integrating a Common Object Model;
- Part 42: Object Model Rules Integration Common Language Infrastructure;
- Part 5110: Communication implementation of the generic object model IEC 61784CPF1;
- Part 5120: Communication implementation of the generic object model IEC 61784CPF2;
- Part 515: Communication Implementation of the Common Object Model in the MODBUS Fieldbus Specification;
- Part 5215: Communication implementation of the universal language infrastructure IEC 61784CPF15;
- Part 5231: Communication implementation of the universal language infrastructure IEC 61784 CP3/1 and CP3/2;
- Part 5232: Communication implementation of the universal language infrastructure IEC 61784 CP3/4, CP3/5 and CP3/6;
- Part 529: Communication implementation of the universal language infrastructure IEC 61784CPF9;
- Part 61: Style Guide for Device Type Manager in the Common Object Model;
- Part 62: Field Equipment and Tooling (FDT) Style Guide.

This document supersedes GB/T 29618.309-2013 "Field Device Tool (FDT) Interface Specification Part 309: Communication Integration".

"High-Speed Channel for Addressable Remote Sensors" differs from GB/T 29618.309-2013 in that, aside from structural adjustments and editorial changes, the main technical differences are...

The changes are as follows.

- Added the following abbreviations. "C8PSK", "DR", "EDD", "FSK", and "HART" (see 3.2);
- A vocabulary list has been added (see 3.3.2);
- Added "Unique Identifier for the IEC 61784CPF9 Protocol" (see Chapter 4);
- Added an overview of access to instance and device data (see 5.1);

---Added "Process Channel Objects Provided by DTM" (see 5.2);

---The overview of the protocol-specific behaviors section has been revised (see 6.1, 2013 version 6.1);

---Added features such as the use of device addressing information in protocol-specific behavior sections, extended command numbers, handling of communication failures and timeouts, and delays.

Handling delayed responses, topologies with hybrid HART protocols, nested communication with multiple gateways, and wireless network systems.

The communication and network architecture in [the context of the text] (see Chapter 6);

---Added an overview of network management data types, addressing modes, address information, and additional information about the "Extended_HART" protocol.

Address information (see Chapter 9);

---Added protocol-specific addressing information and data type definitions to the communication data type section (see Chapter 10);

---Added a scanning address range for device identifiers, and a description table of the address ranges for device identifiers (see 12.2);

---Added support for extended manufacturer and device type codes in the device identification section, and device type with the "HART_Basic" protocol.

Identifying data types, the general device type of the "Extended_HART" protocol, and scanning "Extended_ the HART protocol identifies data types (see Chapter 12);

---The table "Simple Communication Data Types" has been modified, and the following data types have been added. addressingMode, ipAddress, ipProtocolVersion, longAddressByte1, longAddressByte2, longAddressByte3, longAddressByte4,

---The table "Structured Communication Data Types" has been modified, and the data type "ExConnectRequest" has been added (see Table 8).

Table 8 (2013 edition).

This document is equivalent to IEC 62453-309:2022 "Field Device Tool (FDT) Interface Specification Part 309: Communication Integration".

IEC 61784CPF9.

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.

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