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

GB/T 29618.5215-2018

**Field device tool (FDT) interface specification -- Part 5215:
Communication implementation for common language
infrastructure -- IEC 61784 CPF 15**

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3.1 Terms and definitions

Foreword

GB/T 29618 "Field Device Tool (FDT) Interface Specification" is temporarily divided into the following parts.

--- Part 1. Overview and guidelines;

--- Part 2. Concepts and detailed descriptions;

--- Part 301. Communication profile integration FF fieldbus specification;

--- Part 302. Communication Profile Integration General Industrial Agreement;

--- Part 306. Communication profile integration INTERBUS fieldbus specification;

--- Part 309. Communication profile integration of addressable remote sensor high-speed channel;

--- Part 315. Communication profile integration MODBUS fieldbus specification;

--- Part 41. Object model profile integration common object model;

--- Part 42. Object model profile integration common language infrastructure;

--- Part 515. General object model communication implementation MODBUS fieldbus specification;

--- Part 511. Communication of the general object model to implement the FF fieldbus specification;

--- Part 512. Common object model communication implementation of general industrial protocols;

--- Part 516. Communication of the universal object model to implement the INTERBUS fieldbus specification;

--- Part 519. Communication implementation of the generic object model IEC 61784CPF9;

- Part 5115. Communication implementation of the general object model IEC 61784CPF15;
- Part 521. Communication of the common language infrastructure to implement the FF fieldbus specification;
- Part 522. Common language infrastructure communication implementation of general industrial protocols;
- Part 5231. Communication implementation of common language infrastructure IEC 61784CP3/1 and CP3/2;
- Part 5232. Communication implementation of common language infrastructure IEC 61784CP3/4, CP3/5 and CP3/6;
- Part 529. Communication implementation of the common language infrastructure IEC 61784CPF9;
- Part 5215. Communication implementation of the common language infrastructure IEC 61784CPF15;
- Part 61. Device Type Manager Style Guide for the Common Object Model;
- Part 62. Field Device Tool (FDT) Style Guide.

This part is part 5215 of GB/T 29618.

This part is drafted in accordance with the rules given in GB/T 1.1-2009.

This part uses the translation method equivalent to IEC /T R62453-52-150..2017 "Field Device Tool (FDT) Interface Specification No. 52-

Part 150. Communication Implementation of the Common Language Infrastructure IEC 61784CPF15.

The documents of our country that have a consistent correspondence with the international documents referenced in this part are as follows.

--- GB/T 29618.315-2013 Field Device Tool (FDT) Interface Specification Part 315. Communication Profile Integration

MODBUS Fieldbus Specification (IEC 62453-315..2009, IDT)

This section has made the following editorial changes.

--- Modified the standard name.

This part was proposed by the China Machinery Industry Federation.

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

This section drafted by. Southwest University, Mechanical Industry Instrumentation Institute of Integrated Technology and Economy, Schneider Electric (China) Co., Ltd., Shanghai Automation Instrument Co., Ltd., Heyouxin (Shanghai) Automation System Trading Co., Ltd., Suzhou Meiming Software Co., Ltd., Rockwell Automation (China) Co., Ltd., Chongqing Sichuan Instrument Automation Co., Ltd., Zhejiang University.

Introduction

This section is an interface specification that specifies the functionality in the client/server architecture for developers of FDT (Field Device Tools) components.

Control and data access. This section is for the development of servers and the need for seamless interoperability between multi-vendor clients, while developing standards

Interface analysis and design process.

Some other tasks that need to be performed to integrate the fieldbus into the control system. In addition to fieldbus or device specific tools, there must be

Integrate these tools into higher-level system-wide planning or engineering tools. In particular, for a wide range of heterogeneous control systems

The use in the process, typically in the process industry, is very important for the well-defined definition of all the easy-to-use engineering interfaces involved.

DTM (Device Type Manager, DeviceTypeManager) is a software component of a specific device, which will be

The DTM software is provided to the user along with the device. The DTM is integrated into the engineering tool via the FDT interface defined in this section. The episode

The method is open to all types of fieldbus, so it can be used to integrate different kinds of devices into heterogeneous control systems.

Claim.

The position of this part in the structure of GB/T 29618 is shown in Figure 1.

Figure 1 This part of GB/T 29618

Field Device Tool (FDT) Interface Specification

Part 5115. Common Language Infrastructure

Communication implementation of IEC 61784CPF15

1 Scope

This part of GB/T 29618 provides integration of Modbus1) into a CLI-based implementation of the FDT interface specification.

Information in (GB/T 29618.42).

This section specifies the implementation of communications and other services based on IEC 62453-315.

This section does not contain the FDT specification and does not modify it.

2 Normative references

The following documents are indispensable for the application of this document. For dated references, only dated versions apply to this article.

Pieces. For undated references, the latest edition (including all amendments) applies to this document.

GB/T 15969.3-2017 Programmable controllers Part 3. Programming languages (IEC 61131-3:2013, IDT)

GB/T 29618.1-2017 Field Device Tool (FDT) Interface Specification Part 1. Overview and Guidelines (IEC 62453-1.

2016, IDT)

GB/T 29618.2-2017 Field device tool (FDT) interface specification Part 2. Concepts and detailed description (IEC 62453-2.

2016, IDT)

GB/T 29618.42-2017 Field Device Tool (FDT) Interface Specification Part 42. Object Model Profiles

Basic structure (IEC /T R62453-42:2016, IDT)

IEC 61158-5-15:2010 Industrial Communication Network Fieldbus Specification Part 5-15. Application Layer Service Definition Type 15

Elements (Industrialcommunication networks-Fieldbusspecifications-Part 5-15. Applicationlayer

servedefinition-Type15elements)

IEC 61784-1:2014 Industrial Communication Network Profiles Part 1. Fieldbus Profiles (Industrialcommunication

networks-Profiles-Part 1. Fieldbusprofiles)

IEC 62453-315:2009 Field Device Tool (FDT) Interface Specification Part 315. Communication Protocol Integration IEC 61784