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

GB/T 32235.2-2024

**Industrial process measurement, control and automation -
Digital factory framework - Part 2: Model elements**

工业过程测量、控制和自动化 数字工厂框架 第2部分：模型元素

(English Translation)

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part 1: Structure and drafting rules for standardization documents" Drafting is required.

This document is Part 2 of GB/T 32235. GB/T 32235 has been published in the following parts.

--Part 1: General requirements;

--Part 2: Model elements.

This document is equivalent to IEC 62832-2:2020 "Industrial process measurement, control and automation digital factory framework Part 2: Model Type Elements.

Introduction

GB/T 32235 provides a framework for establishing and maintaining a digital representation of a production system, including production system elements and this the framework is also used to support the exchange of information about these elements.

The framework aims to reduce interoperability barriers to information exchange for various activities related to production systems. The main advantage of this approach is that all

information related to a production system is described in a standardized way and can be used and modified throughout its life cycle.

The methods defined in GB/T 32235 are kept as general as possible so that they can be applied in multiple industrial fields.

GB/T 32235.1 describes the general principles of the DF reference model and its most important model elements, while this document provides the DF reference model.

Consider technology-independent definitions of all model elements in the model.

This document aims to provide a guide for implementing the DF framework using different technologies (e.g. different dictionary technologies and different engineering data formats).

Annex C provides recommendations for such implementation.

This document provides data type specifications that enable mapping of DF schemas to different dictionaries.

3.3 describes two types of presentation templates, namely, templates for specific data element types `DataElementTypes` and templates for model elements.

Model elements templates. Based on these templates, Chapter 4 defines specific data element types `DataElementTypes`, and Chapter Chapter 5 gives the definition of Model elements using `DataElementTypes`.

To make the framework widely applicable, the requirements for both sets of definitions are kept to a minimum.

If the concepts of the DF framework are applied to provide model elements for different engineering domains, domain-specific data specifications (e.g.

Based on IEC 62656-1).

GB/T 32235 is proposed to consist of three parts.

--Part 1: General requirements. The purpose is to specify the general requirements of the digital factory framework, such as the production system asset model, relationship model, information flow, etc.

Use aspect.

--Part 2: Model elements. The purpose is to specify the data element types, templates, model elements and other related aspects of the digital factory framework.

Require.

-- Part 3: Digital factory application for full life cycle management of production systems. The purpose is to standardize the digital factory application for full life cycle management of production systems.

Digital factory framework rules for cycle information.

Industrial process measurement, control and automation Digital Factory Framework Part 2:
Model Elements

1 Scope

This part specifies the specific requirements for the Digital Factory Framework (DF Framework) model elements. This part defines the information provided by the model elements.

Features, not the format of the information.

Note: For general requirements of main model elements of DF reference model, see GB/T 32235.1.

2 Normative references

The contents of the following documents constitute the essential clauses of this document through normative references in this document.

For referenced documents without a date, only the version corresponding to that date applies to this document; for referenced documents without a date, the latest version (including all amendments) applies to this document.

GB/T 32235.1-2024 Digital factory framework for industrial process measurement, control and automation Part 1: General requirements (IEC 62832-1:2020, IDT) ISO/TS 29002-5 Industrial automation systems and integrated characteristic data exchange Part 5: Authentication schemes (Industrial automation systems and integration-Exchange of characteristic data-Part 5: Identification scheme) ISO/IEC 6523 Information technology - Structure for the identification of organizations and parts of organizations) IETF RFC 3986 Uniform Resource Identifier (URI). Generic Syntax Syntax]

3.1 Terms and Definitions

The terms and definitions defined in GB/T 32235.1-2024 apply to this document.

3.2 Abbreviations

The following abbreviations apply to this document.

CDEL. Collection of Data Elements DER. Data Element Relationship DET. Data Element Type DF. Digital Factory (as a qualifier) DLOP. Device List of Properties IC. Item Code ID. Identifier IRDI. International Registration Data Identifier LOP. List of Properties OLOP. Operational List of Properties