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

GB/T 20818.243-2025

**Industrial-process measurement and control - Data structures and elements in
process equipment catalogues - Part 243: Lists of properties (LOPs) of flow
modification accessories for electronic data exchange**

工业过程测量和控制 过程设备目录中的数据结构和元素 第243部分：流量调节配
件电子数据交换用属性列表（LOPs）

(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 243 of GB/T 20818 "Data Structures and Elements in the Catalogue of Process Equipment for Measurement and Control of Industrial Processes".

GB/T 20818 has published the following parts.

---Part 1: Measuring devices with analog and digital outputs;

---Part 10: Basic Principles of Attribute Lists (LOPs) for Electronic Data Interchange in Industrial Process Measurement and Control;

---Part 11: General Structure of Attribute Lists (LOPs) for Electronic Data Interchange of Measuring Equipment;

---Part 12: Attribute Lists (LOPs) for Electronic Data Interchange of Flow Measurement

Equipment;

---Part 13: Attribute List (LOP) for Electronic Data Interchange of Pressure Measurement Equipment;

---Part 14: Attribute List (LOP) for Electronic Data Interchange of Temperature Measurement Equipment;

---Part 15: Attribute Lists (LOPs) for Electronic Data Interchange of Level Measurement Equipment;

---Part 16: List of Attributes (LOPs) for Electronic Data Interchange of Density Measurement Equipment;

---Part 21: General Structure of Attribute Lists (LOPs) for Electronic Data Interchange of Automatic Valves;

---Part 22: Attribute Lists (LOPs) for Electronic Data Interchange of Valve Body Assembly;

---Part 92: Attribute Lists (LOPs) for Electronic Data Interchange of Measuring Equipment; LOPs aspect;

---Part 242: Attribute Lists (LOPs) for Electronic Data Interchange of Valve/Actuator Accessories;

---Part 243: Attribute Lists (LOPs) for Electronic Data Interchange of Flow Control Accessories this document adopts IEC 61987-24-3:2017 "Data structures and elements in the catalogue of process equipment for measurement and control of industrial processes".

Part 24-3.Attribute Lists (LOPs) for Electronic Data Interchange of Flow Control Accessories.

The following minimal editorial changes have been made to this document.

---In accordance with the numbering structure of my country's national standards, the standard name has been revised to "Catalogue of Industrial Process Measurement and Control Equipment".

Data Structures and Elements, Part 243: Attribute Lists (LOPs) for Electronic Data Interchange of Flow Regulation Accessories;

---Since IEC 61360-4 has been repealed, all its contents have been incorporated into the IEC Common Data Dictionary, and the normative reference document IEC 61360-4 has been included.

Corrected to IEC Common Data Dictionary;

---The material code "1.4401" from the German DIN standard in Table 1 has been changed to the corresponding material code in my country.

"06Cr17Ni12Mo2".

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

Only when the information exchanged and its purpose are clearly defined can the company, business systems, engineering tools, internal data systems, and...

Only then can the exchange of product data between future control systems (electrical, measurement, and control technologies) proceed smoothly.

In the past, users would make various requests to suppliers or manufacturers when purchasing equipment, and suppliers would describe the equipment according to their requirements.

They have their own file formats, typically using different terminology, structures, and media (paper, databases, CDs, electronic catalogs, etc.). This situation differs from the norm.

Similar to certain situations in the planning and development process, equipment information is often used in many different information technology systems.

There are many types of equipment, each with different attributes (including equipment attributes and operational attributes, etc.). This allows for a comprehensive record of equipment planning and ordering processes.

In addition to providing all necessary information during the later stages of use, and to ensure that all relevant parties pay attention to these factors, GB/T 20818 "Industrial Process Measurement" was specifically formulated.

The "Data Structures and Elements in the Catalog of Control Process Equipment" aims to describe different devices and standardize the exchange of information.

GB/T 20818 proposes a standardized approach that helps suppliers and users of measuring equipment optimize internal and inter-company processes.

The workflow. Based on the work or functional role in the process, the engineering company is considered either a user or a supplier. This method is specified through attribute blocks.

Process control equipment. These attribute blocks are combined into attribute lists, where each list describes a specific type of equipment (device). This series the standard includes attributes that can be used for querying or proposing, as well as detailed attributes required

to integrate devices into computer systems to perform other tasks.

Sexuality. GB/T 20818 is proposed to consist of the following parts.

---Part 1: Measuring Devices with Analog and Digital Outputs. Designed to specify process measuring devices with analog and digital outputs.

The purpose of defining a set of general structures and product characteristics is to provide guidance for the development of standards for different types of process measurement equipment.

---Part 10: Basic Principles of Attribute Lists (LOPs) for Electronic Data Interchange in Industrial Process Measurement and Control. Designed to regulate...

The basic principles of Operational Attribute List (OLOP) for Electronic Data Interchange of Measuring Equipment are defined, and OLOP data is provided.

Model.

---Part 11: General Structure of Attribute Lists (LOPs) for Electronic Data Interchange of Measuring Equipment. This aims to specify the electronic...

The general structure of the Sub-Data Exchange Device Attribute List (DLOP) is provided, along with several important detailed descriptions.

---Part 12: List of Attributes (LOPs) for Electronic Data Interchange of Flow Measurement Equipment. This aims to specify electronic data interchange attributes for flow measurement equipment.

Operational Attribute List (OLOP) and Device Attribute List (DLOP) for data exchange.

---Part 13: Attribute List (LOP) for Electronic Data Interchange of Pressure Measurement Equipment. This aims to specify the electronic data interchange requirements for pressure measurement equipment.

According to the Operational Attribute List (OLOP) and Device Attribute List (DLOP).

---Part 14: Attribute List (LOP) for Electronic Data Interchange of Temperature Measurement Equipment. This aims to specify the electronic data interchange requirements for temperature measurement equipment.

According to the Operational Attribute List (OLOP) and Device Attribute List (DLOP).

---Part 15: List of Attributes (LOPs) for Electronic Data Interchange of Level Measurement Equipment. This aims to specify the electronic data interchange (EDI) requirements for level measurement equipment.

Operational Attribute List (OLOP) and Device Attribute List (DLOP) for data exchange.

---Part 16: List of Attributes (LOPs) for Electronic Data Interchange of Density Measurement