

ICS 25.040

CCS N 10



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

GB/T 20818.21-2020

**Industrial-process measurement and control - Data structures and elements in
process equipment catalogues - Part 21: Lists of properties (LOP) for automated
valves for electronic data exchange - Generic structures**

Issued on: September 29, 2020

Implemented on: April 1, 2021

**Issued by: State Administration for Market Regulation, China National
Standardization Administration**

Table of Contents

1 Scope	1
2 Normative references	1
3 Terms and definitions	2
4 Overview	2
4.1 Category Framework	2
4.2 OLOP and DLOP	3
4.3 Base attributes and polymorphism	4
5 List of Operational Attributes (OLOP)	4
5.1 General block structure	4
5.2 Baseline conditions	6
5.3 Process Case	6
5.4 Operating conditions for equipment design	7
5.5 Process equipment	8
5.6 Physical location	9
6 List of device attributes (DLOP)	9
6.1 Basic structure	9
6.2 Identification	11
6.3 Application	12
6.4 < device group> parameter	12
6.5 Function and system design	12
6.6 Input	12
6.7 Output	13
6.8 Digital communication	14
6.9 Performance	15
6.10 Rated operating conditions	16
6.11 Mechanical and electrical structure	18
6.12 Operability	18
6.13 Power supply	19
6.14 Certification and accreditation	19
6.15 Component identification	19
7 Compound equipment	19
8 Other aspects	19

Appendix A (Informative Appendix) Equipment Type Dictionary---Classification of Final Control Components	20
Reference	23

Foreword

GB/T 20818 "Data Structure and Elements in the Catalog of Industrial Process Measurement and Control Process Equipment" is currently divided into the following 6 parts.

- Part 1.Measuring equipment with analog and digital output;
- Part 10.Basic Principles of Attribute Lists (LOPs) for Industrial Process Measurement and Control Electronic Data Exchange;
- Part 11.General structure of attribute lists (LOPs) for electronic data exchange of measuring equipment;
- Part 12.Attribute List (LOP) for Electronic Data Exchange of Flow Measuring Equipment;
- Part 13.Attribute List (LOP) for Electronic Data Exchange of Pressure Measuring Equipment;
- Part 21.General structure of attribute list (LOP) for automatic valve electronic data exchange.

This part is Part 21 of GB/T 20818.

This section was drafted in accordance with the rules given in GB/T 1.1-2009.

The translation method used in this part is equivalent to the data structure in the IEC 61987-21.2015 "Industrial Process Measurement and Control Process Equipment Catalog" Structures and elements-Part 21.Attribute List (LOP) General Structure for Automatic Valve Electronic Data Exchange".

The Chinese documents that have a consistent correspondence with the international documents cited in this section are as follows.

- GB/T 17213.1-2015 Industrial process control valve Part 1.Control valve terminology and general rules (IEC 60534-1.2005, IDT);
- GB/T 18272.5-2000 Evaluation of system characteristics in industrial process measurement and control system evaluation Part 5.System Credibility assessment (IEC 61069-5.1994, IDT);

---GB/T 20438.6-2017 Functional safety of electrical/electronic/programmable electronic safety-related systems Part 6.

Application guidelines of GB/T 20438.2 and GB/T 20438.3 (IEC 61508-6:2010, IDT);

---GB/T 20818.10-2017 Industrial process measurement and control data structure and elements in the process equipment catalog No. 10

Part. Basic Principles of Attribute Lists (LOPs) for Industrial Process Measurement and Control Electronic Data Exchange (IEC 61987-10.

2009, IDT);

---GB/T 20818.11-2018 Data structure and elements in the catalog of industrial process measurement and control process equipment No. 11

Part. General structure of attribute lists (LOPs) for electronic data interchange of measuring equipment (IEC 61987-11:2012, IDT).

This part was proposed by China Machinery Industry Federation.

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

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0.1 Overview

Only when the information of both parties is exchanged and the use of the information is clearly stated, can the company, business system, and engineering tools be able to proceed smoothly.

And the product data exchange between control systems (electrical, measurement and control technology).

Customers will put forward various requirements for control equipment, and at this time they require suppliers and manufacturers to choose appropriate equipment. In the past, suppliers would

Describe the device according to its own file format, usually using different terms, structures and media (paper, database, CD-ROM, electronic catalog, etc.). This

This situation is very similar to some situations in the planning and development process, that is, equipment information is often used in many different information technology systems.

Reference.

Any method, if it can record all the necessary information of the equipment during planning, ordering and use, and enable it to be used for further

The treatment of these factors can provide all relevant parties with the possibility of paying attention to these elements. The prerequisite for this method is the object description and information exchange

standardization.

The GB/T 20818 series of standards proposes a standardized method that helps suppliers and users of measurement equipment to optimize internal and

Work flow between companies. Depending on the role in the process, the engineering company can be considered a user or supplier.

This method specifies process control equipment through attribute blocks. These attribute blocks are combined into attribute lists, where each list describes a specific

The type of equipment (device). The attributes included in this series of standards can be used to query or set equipment in computer systems and other task systems.

Into the required program or detailed performance.