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GB/T 20818.12-2020

Industrial-process measurement and control - Data structures and elements in process equipment catalogues - Part 12: Lists of properties (LOPs) for flow measuring equipment for electronic data exchange

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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 Lists (LOPs) for Electronic Data Exchange of Flow Measuring Equipment;

---Part 13.Attribute Lists (LOPs) 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 12 of GB/T 20818.

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

This part uses the redrafting method to modify the data in the IEC 61987-12.2016 "Industrial Process Measurement and Control Process Equipment Catalog"

Data structure and elements. Part 12.Attribute Lists (LOPs) for Electronic Data Exchange of Flow Measuring Equipment.

The technical differences between this part and IEC 61987-12.2016 and the reasons are as follows.

---Regarding normative reference documents, this section has made adjustments with technical differences to adapt to my country's technical conditions and adjustments.

The situation is collectively reflected in Chapter 2 "Normative Reference Documents", and the specific adjustments are as follows.

* GB/T 17564 (all parts) is used instead of IEC 61360 (all parts). The degree of consistency between the parts of the two standards is as follows.

* GB/T 17564.1-2011 Standard Data Element Types and Related Classification Models of Electrical Projects Part 1.Definition

Principles and methods (IEC 61360-1.2009, IDT);

* GB/T 17564.2-2013 Standard Data Element Types and Related Classification Models of Electrical Components Part 2.

EXPRESS dictionary mode (IEC 61360-2.2012, IDT);

* GB/T 17564.3-1999 Standard Data Element Types and Related Classification Models of Electrical Components Part 3.

Maintenance and validation procedures (eqvIEC 61360-3.1995);

* GB/T 17564.4-2009 Standard Data Element Types and Related Classification Models of Electrical Components Part 4.

IEC standard data element type and component category benchmark set (IEC 61360-4.2005, IDT);

---In order to adapt to my country's national conditions and better reflect the core technical content, appendix A, Appendix B, and Appendix C in IEC 61987-12.2016

The link to the attribute list in Appendix D gives the attribute list in table form;

---In order to adapt to my country's technical conditions, B.3, B.4, B.5, B.6, B.7, B.8, B.3, B.4, B.5, B.6, B.7, B.8, and B.3 of Appendix B of IEC 61987-12.2016 have been deleted.

B.10, B.11, B.12, B.13, B.14, B.15, B.16, change B.9 of Appendix B of IEC 61987-12.2016 to B.3.

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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Introduction

Products between companies, business systems, engineering tools, collaborative data systems, and future control systems (electrical, measurement and control technology)

The smooth progress of data exchange depends on the clear definition of the information exchanged and the purpose of the information.

In the past, when users asked suppliers or manufacturers for suitable equipment, they put forward different requirements for measurement and control equipment. Supplier in

When describing these devices, they use their own document solutions, often using different terminology, structures, and carriers (paper files, databases, CDs,

Electronic samples, etc.). In the planning and development process, there are similar situations where equipment information is frequently copied to different information technology departments.

In order to answer the user's inquiry.

Any method that can record all existing information during the plan planning and ordering process and can be used for subsequent processing can be provided to all relevant parties.

Provide a way to focus on these elements. The prerequisite is the standardization of target description and data exchange.

This section focuses on smart flow meters and specifies a list of operational attributes of flow meters, which can be used for various types of quotation requirements, for example.

The device attribute lists of different flow transmitter types provided in this section can be used in different ways.

---Used to install in the computer systems of manufacturers and suppliers;

--- Used in CAE (Computer Aided Engineering) and similar systems of EPC (General Contracting for Engineering) contractors and other engineering companies;

--- Especially used in different workshop maintenance systems of workshop owners.

Industrial process measurement and control

Data structure and elements in the process equipment catalog

Part 12.Electronic data of flow measurement equipment

List of Exchange Attributes (LOPs)

1 Scope

This part of GB/T 20818 stipulates.

* Operational attribute list (OLOP) used to describe the operating parameters of the flow measurement device and a collection of requirements for the flow measurement device;

* A list of device attributes (DLOP) used to describe different types of flow measurement devices.

The structure of OLOP and DLOP conforms to the general structure defined in GB/T 20818.11-2018, and conforms to GB/T 20818.10-