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

**GB/T 20818.11-2026**

Replacing GB/T 20818.11-2018

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**Industrial-process measurement and control - Data structures and elements in  
process equipment catalogues - Part 11: List of properties (LOPs) of measuring  
equipment for electronic data exchange - Generic structures**

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11部分：测量设备电  
子数据交换用属性列表（LOPs）通用结构

**(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 11 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: Valve Body Assembly Electronic Data Interchange Attribute Lists (LOPs) General Structure;

---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 replaces GB/T 20818.11-2018 "Data Structures and Elements in the Catalogue of Process Equipment for Measurement and Control in Industrial Processes".

Part 11: General Structure of Attribute Lists (LOPs) for Electronic Data Interchange of Measuring Equipment, consistent with GB/T 20818.11-2018.

Compared to previous versions, aside from structural adjustments and editorial changes, the main technical changes are as follows.

---The definition of the term "switch" has been changed (see 3.1.11, 2018 version 3.1.11);

---The definition of the term "(aspect)" has been changed (see 3.2.1, 2018 version 3.2.1);

---The source of the term "category" has been changed (see 3.2.2, 2018 version 3.2.2);

---Change the "'Automation Equipment' field" to the "'Process Automation (IEC 61987 Series)' field" (see 4.3.5, 2018 version).

4.3.5);

---The content of the environmental design conditions overview has been revised (see 5.4.3.1, 2018 version 5.4.3.1);

---Change "Signal Characteristics" to "Alarm Signal" (see 6.5.3.2.4, version 6.5.3.2.4 of

2018);

---Change "Output Signal Processing" to "Output Signal Processing (Optional)" (see 6.6.2.1, 2018 version of 6.6.2.1);

---Change "The output signal processing block should indicate the possibility of modifying the output signal provided by the measuring device" to "'Output signal processing block should indicate the possibility of modifying the output signal provided by the measuring device'...

The 'processor' block is optional; if used, it should indicate the possibility of modifying the output signal provided by the measuring device (see 6.6.2.3, 2018 edition).

(6.6.2.3)

---Change "Signal Characteristics" to "Alarm Signal" (see 6.6.2.4, 2018 version of 6.6.2.4);

---Added the performance variable "Flow Rate" (see 6.8.3.1);

---The reference conditions for performance variables have been added (see 6.8.3.2);

---The classification scheme for process measurement devices has been changed and some definitions have been modified (see Table A.1, Table A.1 in the 2018 version).

This document adopts the equivalent of IEC 61987-11:2016 "Data structures and elements in the catalogue of process equipment for measurement and control of industrial processes".

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

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 and Control (SAC/TC124).

## 0.1 Overview

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.