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

GB/T 20818.13-2023

**Industrial-process measurement and control - Data structures and
elements in process equipment catalogues - Part 13: Lists of properties
(LOP) for pressure measuring equipment 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13部分：压力测量设备电子数据交换用属性列表（LOP）

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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 13 of GB/T 20818 "Data structures and elements in catalogs of industrial process measurement and control process equipment". GB/T 20818 has released the following parts.

1. Measuring equipment with analog and digital outputs;

10. Basic principles of List of Properties (LOPs) for electronic data exchange for industrial process measurement and control;

11. General structure of attribute lists (LOPs) for electronic data exchange of measuring equipment;

12. List of attributes (LOPs) for electronic data exchange of flow measurement equipment;

13. List of properties (LOP) for electronic data exchange of pressure measuring equipment;

14. List of attributes for electronic data exchange of temperature measuring equipment (LOP);

15. List of attributes (LOPs) for electronic data exchange of level measuring equipment;

21. General structure of attribute list (LOP) for electronic data exchange of automatic valves.

This document is equivalent to the data structure and elements in IEC 61987-13:2016

"Industrial Process Measurement and Control Process Equipment Catalog" Part

13. List of properties (LOP) for electronic data exchange of pressure measuring equipment. This document has made the following minimal editorial changes.

---Change "IEC 61360-1 (all parts)" in Chapter 2 to "IEC 61360 (all parts)". Please note that some content in this document may be subject to patents. The publisher of this document assumes no responsibility for identifying patents. This document is proposed by China Machinery Industry Federation. This document is under the jurisdiction of the National Industrial Process Measurement Control and Automation Standardization Technical Committee (SAC/TC124). This document was drafted by: Southwest University, Chongqing Wei'an Instrument Manufacturing Co., Ltd., Machinery Industry Instrument Comprehensive Technology and Economics Research Institute, Hanwei Technology Group Co., Ltd., Shenzhen Ertai Technology Co., Ltd., Shanghai Modulus Automation Technology Co., Ltd., Jiangsu Xin Hui Measurement and Control Technology Co., Ltd., Luzhou Vocational and Technical College, Chongqing Zhierxin Technology Co., Ltd., Anhui Tiankang (Group) Co., Ltd., En Deshaus (China) Automation Co., Ltd., Xiamen Anton Electronics Co., Ltd., Xiamen Yuhao Software Co., Ltd., Shenzhen Wanxun Automation Co., Ltd. Co., Ltd., Zhejiang Chint Zhongzi Control Engineering Co., Ltd., Chongqing Chongke Physical and Chemical Measurement Center Co., Ltd., Xi'an Dongfeng Mechanical and Electrical Co., Ltd. Co., Ltd., Shenzhen Te'an Electronics Co., Ltd., Chongqing Silian Measurement and Control Technology Co., Ltd., Beijing Kunlun Coast Technology Co., Ltd., Zhongtuo Hekong (Quzhou) Technology Co., Ltd., Beijing Brady Instrument Co., Ltd., Beijing Jingyi Group Co., Ltd., Anhui Automation Instrument Meter Co., Ltd., Shanghai Lige Instrument Co., Ltd., Xi'an Huaheng Instrument Manufacturing Co., Ltd., Dandong Tongbo Electrical Appliance (Group) Co., Ltd., Shanghai Enbang Automation Instrument Co., Ltd., Beibei District Kemeng Instrument Co., Ltd., Zhejiang Construction Investment Group Co., Ltd., Daqing Oil Tian Automation Instrument Co., Ltd., Chongqing Xin'an Network Security Level Evaluation Co., Ltd., Chongqing Mingkong Instrument Co., Ltd., Suowu Electric Equipment (Shanghai) Co., Ltd., Anhui Wankong Automation Instrument Co., Ltd., Jiangsu Weilang Electronic Technology Co., Ltd., Shenzhen Jinkaibo Automatic Chemical Testing Co., Ltd., Quzhou Meiqu Automation Instrument Co., Ltd., Wuhan University of Technology. The main drafters of this document. Zhou Xuelian, Tang Tian, Wang Shuo, Wu Chuanwei, Zheng Yanzhe, Han Hengchao, Wang Yuxiang, Liu Jingcheng, Li Renqiong, Hua Qiguo, Pan Shuai, Xiao Guozhuan, Zhou Yu, Chen Zewen, Huang Yongzhong, Zheng Xu, Huang Dong, Hu Tao, Zhan Hang, Xu Changhong, Zhang Xiaoping, Zheng Yiqun, Chen Haidong, Gao Jidong, Wang Li, Ke Youxi, Chen Wenxian, Zhou Weidong, Zhang Yiding, Zhang Peng, Yan Legang, Chen Weiguo, Chen Tao, Wu Long, Qiu Jiang, Zhang Nan, Yang Qihong, Qian Shouqin, Zheng Rucai, Zheng Chenggong, Chang Haichao, Liu Feng, Zhang Geng, Huang Qiaoli, Qi Qian.

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

and Product data exchange between future control systems (electrical, measurement and control technology) can then proceed smoothly. In the past, users would make various requirements to suppliers or manufacturers when purchasing equipment, and suppliers would describe these equipment according to their Their own file formats, often using different terminology, structures and carriers (paper, databases, CD-ROMs, electronic catalogs, etc.). This situation and regulations Similar to some situations in the planning and development process, device information is often used in many different information technology systems. There are many types of equipment, each with different attributes (including equipment attributes and operating attributes, etc.). In order to record the equipment at one time, it is important to plan and order the equipment. As well as all necessary information in the later use process, all relevant parties should pay attention to these elements, and GB/T 20818 "Industrial Process Measurement" is specially formulated. and data structures and elements in the control process equipment catalog to describe different equipment and standardize the exchange of information. GB/T 20818 proposes a standardized approach that helps suppliers and users of measurement equipment optimize their performance within and between companies. workflow. Depending on the job or functional role in the process, engineering companies may be considered users or suppliers. This method specifies the Customized process control equipment. These attribute blocks are combined into attribute lists, each of which describes a specific device (device) type. GB/T 20818 includes attributes that can be used for queries or proposals as well as those needed to integrate the device into a computer system to perform other tasks. Detailed properties. GB/T 20818 is intended to consist of the following parts.

1.Measuring equipment with analog and digital outputs. Specifies communication for process measurement equipment with analog and digital outputs Using a collection of structures and product characteristics, the purpose is to provide guidance for the formulation of standards for different types of process measurement equipment.

1 Scope

GB/T 20818.13-2023 is Part 13 of the Chinese series on data structures in process equipment catalogues, and gives the lists of properties for pressure measuring equipment. Pressure transmitters are the most numerous instrument in a plant and the one whose specification has the most parameters that sound alike - measuring range, span, turndown, working range and rangeability all mean something specific, and a supplier's accuracy figure is stated against one of them. The standard therefore defines the terms before the property list. It sets the terminology relating to the measuring range and to performance, the general requirements, and the description of the object and device lists of properties, with the property list for pressure measuring equipment itself. It took effect on 1 March 2024.

This document specifies.

---Operating attribute list (OLOP) for describing the operating parameters of pressure measuring equipment and a set of requirements for pressure measuring equipment;

---Device Properties List (DLOP) used to describe different pressure measurement device types. The structure of OLOP and DLOP conforms to the general structure defined in IEC 61987-11 and conforms to the structure defined in IEC 61987-

10 Basic principles of LOP structure. In addition to OLOP, other aspects required in the different electronic data exchange processes described in IEC 61987-10 have been Published in 61987-92. The attribute library and block library used by LOP in this document are listed in Appendix C and Appendix D respectively.

2 Normative reference documents

The contents of the following documents constitute essential provisions of this document through normative references in the text. Among them, the dated quotations For undated referenced documents, only the version corresponding to that date applies to this document; for undated referenced documents, the latest version (including all amendments) applies to this document.

GB/T 20818.10-2017 Industrial process measurement and control data structures and elements in process equipment catalogs Part

10 Sub. List of Properties (LOPs) Basic Principles for Electronic Data Exchange for Industrial Process Measurement and Control (IEC 61987-10.2009, IDT)

GB/T 20818.11-2018 Data structures and elements in industrial process measurement and control process equipment catalogs Part 11. List of properties (LOPs) for electronic data exchange of measuring equipment General structure (IEC 61987-11.2012, IDT)

GB/T 17564.1-2011 Standard data element types and related classification schemas for electrical projects Part

3 Maintenance and validation procedures (eqv IEC 61360-3.1995)

GB/T 17564.4-2009 Standard data element types and related classification patterns for electrical components Part 4: IEC standard data element types and component category benchmark set (IEC 61360-4.2005, IDT)

GB/T 17564.6-2021 Standard data element types and related classification schemas for electrical components Part 6: IEC Public Data Dictionary (IEC CDD) Quality Guide (IEC 61360-6.2016, IDT)