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Industrial-process measurement and control - Data structures and elements in process equipment catalogues - Part 16: Lists of properties(LOPs)for density 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16部分：密度测量设备电子数据交换用属性列表(LOPs)

(English Translation)

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Preview: page 1 of 5 shown, 14 in the full document. Complete English PDF, instant download:
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Table of Contents

Introduction
1 Scope
2 Normative references
3 Terms and Definitions
4 General
4.1 Overview
4.2 Description of OLOP and DLOP
4.3 Example of DLOP block usage
Appendix A (normative) OLOP 9 for density measuring equipment
Appendix B (Normative) DLOP 10 for density measuring equipment
B:1 Density transmitter (general)
B:2 Buoyancy density transmitter
B:3 Refractive index density transmitter
B:4 Vibrating tube density transmitter
B:5 Radiation density transmitter
B:6 Vibrating fork/rod density transmitter
B:7 Ultrasonic density transmitter
B:8 Microwave density transmitter

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 16 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:

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

---Part 10: Basic principles of lists of properties (LOPs) for electronic data exchange for industrial process measurement and control;

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

Preview: page 2 of 5 shown, 14 in the full document. Complete English PDF, instant download:
https://chinastandards.org/standards/gb-t-20818-16-2023

---Part 12: List of attributes (LOPs) for electronic data exchange of flow measurement equipment;

---Part 13: List of properties (LOP) for electronic data exchange of pressure measuring equipment;

---Part 14: List of attributes for electronic data exchange of temperature measuring equipment (LOP);

---Part 15: List of attributes (LOPs) for electronic data exchange of level measuring equipment;

---Part 16: List of properties (LOPs) for electronic data exchange of density measuring equipment;

---Part 21: General structure of attribute list (LOP) for automatic valve electronic data exchange;

---Part 22: Valve body assembly attribute list (LOPs) for electronic data exchange:

This document is equivalent to the data structure and elements in IEC 61987-16:2016 "Industrial Process Measurement and Control Process Equipment Catalog" Part 16: List of properties (LOPs) for electronic data exchange of density measuring equipment:

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Introduction

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 the GB/T 20818 series of standards are specially

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https://chinastandards.org/standards/gb-t-20818-16-2023

formulated to deal with Description of equipment and standardization of exchanged information:

The GB/T 20818 series of standards proposes a standardization method that helps suppliers and users of measurement equipment optimize internal and Workflow between companies: Depending on the job or functional role in the process, engineering companies are considered either users or suppliers: This method passes the attribute the performance block specifies process control equipment: These attribute blocks are combined into attribute lists, each of which describes a specific device (device) type:

This family of standards includes attributes that can be used for querying or proposing, as well as details needed to integrate the device into a computer system to perform other tasks:

Detailed attributes: The GB/T 20818 series of standards is intended to consist of the following parts:

---Part 1: Measuring equipment with analog and digital outputs: Designed for specification of process measurement equipment with analog and digital outputs the purpose of defining a general structure and product feature set is to provide guidance for the formulation of standards for different types of process measurement equipment:

---Part 10: Basic principles of lists of properties (LOPs) for electronic data exchange for industrial process measurement and control: intended to stipulate the basic principles of Operational Attribute List (OLOP) for electronic data exchange of measuring equipment and the data model of OLOP are provided:

---Part 11: Common structure of attribute lists (LOPs) for electronic data exchange of measuring equipment: Designed to specify electronic measuring equipment Describes the general structure of a Device List of Properties (DLOP) for data exchange, and provides several important details:

---Part 12: List of properties (LOPs) for electronic data exchange of flow measurement equipment: Designed to specify electronic Operation attribute list (OLOP) and device attribute list (DLOP) are used for data exchange:

---Part 13: List of properties (LOP) for electronic data exchange of pressure measuring equipment: Designed to specify electronic numbers for pressure measuring equipment Operation attribute list (OLOP) and device attribute list (DLOP) are used for data exchange:

---Part 14: List of properties (LOP) for electronic data exchange of temperature measuring equipment: Designed to specify electronic numbers for temperature measuring equipment Operation attribute list (OLOP) and device attribute list (DLOP) are used for data exchange:

---Part 15: List of properties (LOPs) for electronic data exchange of level measuring equipment: Aims to specify electronic Operation attribute list (OLOP) and device attribute

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list (DLOP) are used for data exchange:

---Part 16: List of properties (LOPs) for electronic data exchange of density measuring equipment: Designed to specify electronic Operation attribute list (OLOP) and device attribute list (DLOP) are used for data exchange:

---Part 21: General structure of attribute list (LOP) for automatic valve electronic data exchange: Designed to provide for electronic data exchange for automatic valves Use the common structure of the Operational Attribute List (OLOP) and the Device Attribute List (DLOP) instead:

---Part 22: Common structure of property lists (LOPs) for valve body assembly electronic data exchange: Designed to specify electronics for valve body assemblies A common structure for operation attribute lists (OLOPs) and device attribute lists (DLOPs) for data exchange:

This document relates to density measurement equipment: It provides a set of operating properties lists (OLOPs) for all types of density transmitters: this group OLOP can be used to request various quotes: This document also provides a Device List of Properties (DLOP) for various types of density transmitters:

These DLOPs can be issued in different ways in the computer systems of equipment manufacturers and suppliers, CAE systems or EPC systems:

play a role: The OLOPs and DLOPs provided in this document comply with the regulations of GB/T 20818.10 and IEC 61987-11:

Industrial process measurement and control Data structures and elements in the process equipment catalog Part 16: Density measuring equipment electronics Lists of properties (LOPs) for data exchange

1 Scope

This document specifies:

---Operating Attribute List (OLOP) used to describe the set of requirements and operating parameters for density measurement equipment;

---Device Property List (DLOP) used to describe different density measurement device types:

The structure of OLOP and DLOP conforms to the general structure defined in IEC 61987-11 and conforms to GB/T 20818.10-2017 Define the basic principles for building LOP:

In addition to OLOP, other aspects required in the different electronic data exchange processes described in GB/T 20818.10-2017 will Published in IEC 61987-92:

Preview: page 5 of 5 shown, 14 in the full document. Complete English PDF, instant download:
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