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

GB/T 19769.4-2022

Function blocks - Part 4: Rules for compliance profiles

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foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for Standardization Work Part 1. Structure and Drafting Rules of Standardization Documents" drafted.

This document is part 4 of GB/T 19769. GB/T 19769 has released the following parts.

- GB/T 19769.1 Function Block Part 1. Structure;
- GB/T 19769.2 Function Block Part 2. Requirements for Software Tools;
- GB/T 19769.3 Industrial Process Measurement and Control Systems - Part 3. Guidance Information;
- GB/T 19769.4 Function Block Part 4. Rules for Conformance Profiles.

This document replaces GB/T 19769.4-2015 "Function Block Part 4. Guidelines for Conformance Profiles", and GB/T 19769.4-2015

In contrast, except for structural adjustments and editorial changes, the main technical changes are as follows.

- "Here < yyy > indicates the scope of applicability of this profile" and added "such as 'feasibility demonstration'" (see 4.1, 4.1 of the.2015 edition);
- Deleted "General Provisions" in Table 1 (see Table 1, Table 1 of the.2015 edition);
- "The type of application proposed by the conformance profile" is changed to "the intended use of the conformance profile" [see 4.2.1a), .2015 edition 4.2.1a)];
- "Chapter 3 of the Conformance Profile should follow ISO /IEC Guidelines Part 2.6.3.1 of.2011" added "and Appendix D" (See 4.2.3, 4.2.3 of the.2015 edition);
- "Note. The syntax of the input and output of events and data of the communication function block can be, but is not required to be used to meet the requirements of this

article." More

Changed to text (see 4.4, 4.4 of the.2015 edition);

--- "In order to obtain the configurability of software tools to equipment, Chapter 4 of the conformance profile shall specify what equipment and software tools are to achieve.

method (if any). This may include one or more configurability classes about the device. " to "Consistent Profile's

Clause 6 shall specify the means by which devices and software tools achieve configurability. This may include one or more device configurable classes of definition. " (see 4.5, 4.5 of the.2015 edition);

--- "Chapter 5 of the conformance profile shall define the tests to be performed" is changed to "Chapter 7 of the conformance profile shall specify the tests to be performed

try (if any)" (see 4.6, 4.6 of the.2015 edition);

--- "Object" removed all "access_path_name" lines; changed "READ" and "WRITE" lines; added

Added "RESET" line; deleted footnotes b and c (see Table B.1,.2015 edition of Table B.1).

This document is identical to IEC 61499-4.2013 "Function Block Part 4.Rules for Conformance Profiles".

Please note that some content of this document may be patented. The issuing agency of this document assumes no responsibility for identifying patents.

Introduction

GB/T 19769 consists of the following parts.

---GB/T 19769.1, including the following.

- * general requirements, including scope, normative references, definitions and reference models;

- * Rules for declaring function block types and rules for the behavior of instances of that type;

- * Rules for the use of function blocks in configuring a distributed industrial process measurement and control system (IPMCS);

- * Rules for the use of function blocks in meeting the communication requirements of distributed IPMCS;

- * In the distributed IPMCS, when managing applications, resources and equipment, the rules for the use of function blocks.

---GB/T 19769.2, defines the software tool requirements to support the following system engineering tasks.

- * Specification of function block types;
- * Functional specification of resource types and device types;
- * Specification, analysis and verification of distributed IPMCS;
- * Configuration, implementation, operation and maintenance of distributed IPMCS;
- * Information exchange between software tools.

--- GB/T 19769.3, the purpose is to promote understanding and acceptance, promote the general and domain-specific applicability of IPMCS structure, promote

Advanced software tools meet the needs of other parts by providing.

- * FAQs about GB/T 19769 (all parts);
- * An example of using GB/T 19769.1 to solve problems commonly encountered in control and automation engineering.

The IEC standard adopted in this part has been withdrawn, but subsequent IEC editions may be updated in the future, so this part will follow the IEC edition

Revised in this update.

--- GB/T 19769.4, specifies the characteristics of GB/T 19769.1 and GB/T 19769.2 to be implemented in order to promote

The following attributes of systems, equipment and software tools of GB/T 19769.

- * Interoperability of equipment from multiple vendors;
- * portability between software tools provided by multiple vendors;
- * Configurability of multiple vendor software for equipment from different manufacturers.

Function Blocks Part 4.Rules for Conformance Profiles

1 Scope

This document specifies the rules for the development of a conforming profile that specifies what IEC 61499-1 and IEC 61499-2 are to achieve

characteristics to exploit the following properties of systems, equipment and software tools based on IEC 61499 (all parts).

- Interoperability of equipment from multiple vendors;
- software portability between software tools from multiple vendors;

---Multiple vendor software tools, configurability to devices from multiple vendors.

These properties are illustrated in Figure 1.

Note 1. The sensor/actuator link indicated in Figure 1

The contents of the following documents constitute essential provisions of this document through normative references in the text. Among them, dated citations

documents, only the version corresponding to that date applies to this document; for undated references, the latest edition (including all amendments) applies to

this document.

GB/T 19769.2-2022 Function blocks Part 2. Requirements for software tools (IEC 61499-2:2012, IDT)