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

GB/T 43018.4-2025

**Interconnection and interoperation for textile equipment - Part
4: Knitting**

纺织装备互联互通与互操作 第4部分：针织

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Table of Contents

- 1 Scope
- 2 Normative references
- 3 Address Space Model
- 4 Abbreviations
- 5 Information Model

Foreword

GB/T 43018 "Interconnection and Interoperability of Textile Equipment" is currently planned to be divided into 8 parts. -- Part

1.General technical requirements. The purpose is to define the overall architecture, communication protocols, information Requirements are put forward for security, common information model, data dictionary and mapping rules of information model. -- Part

2.Spinning. The purpose is to analyze the spinning and carding machines, drawing frames, slinging and winding machines, combing machines, roving frames, spinning frames, automatic winding machines, Interconnection and interoperability of short-fiber spinning equipment such as cone spinning machines, rotor spinning machines, air jet spinning machines, cone yarn conveying and packaging systems Requirements for work architecture, information model and data dictionary. -- Part

3.Chemical Fibers. The purpose is to The interconnection and interoperability architecture, information model and data dictionary of chemical fiber equipment such as rubber staple fiber equipment and in-plant logistics equipment are proposed. Require. -- Part

4.Knitting. The purpose is to describe the interconnection and interoperability architecture, information Requirements for information models and data dictionaries. -- Part

5.Nonwovens. The purpose is to provide the interconnection and interoperability architecture and information model for nonwoven equipment such as web forming and fixed web. and data dictionary requirements. -- Part

6.Weaving. The purpose is to propose the interconnection and interoperability architecture, information model and data dictionary of weaving equipment. Require. -- Part

7.Dyeing and finishing. The purpose is to provide an interconnection and interoperability architecture and information model for continuous and intermittent dyeing and finishing equipment. and data dictionary requirements. -- Part

8.Evaluation and testing. The purpose is to evaluate and test the interconnection and interoperability of various segments of textile equipment. Make a request. Interconnection and interoperability of textile equipment Part

1 Scope

GB/T 43018.4-2025 is the fourth part of the Chinese standard on interconnection and interoperation for textile equipment, and it covers knitting machinery. A knitting mill runs circular and flat machines from several makers, each with its own protocol and its own idea of what a production record contains, and joining them to a single production system has until now been a bespoke project every time. This part defines the common ground for knitting: the information model of a knitting machine and of the objects it reports, the machine state, the pattern or programme, the yarn feed, the needle and cylinder data, the production count, the stop causes and the quality events, together with the communication interfaces and services, the data formats, and the requirements on interoperation between machine, cell controller and the plant systems above them. For a knitting machine builder, a mill modernising its plant or an integrator in China, this is the interface the parties are expected to meet at.

This document specifies the interconnection and interoperability architecture, basic requirements, information model, and data dictionary requirements for knitting equipment. This document is applicable to guiding the design and integration of interconnection and interoperability systems for knitting equipment such as flat knitting machines, circular knitting machines, and warp knitting machines.

2 Normative references

The contents of the following documents constitute the essential clauses of this document through normative references in this document. For referenced documents without a date, only the version corresponding to that date applies to this document; for referenced documents without a date, the latest version (including all amendments) applies to This document.

GB/T 3100 International System of Units and Its Application

GB/T 33863.3-2017 OPC Unified Architecture Part

3 Address Space Model

GB/T 33863.5-2017 OPC Unified Architecture Part

4 Abbreviations

The following abbreviations apply to this document. FTP. File Transfer Protocol HTTP. Hyper

Text Transfer Protocol HTTPS. Hypertext Transfer Protocol Secure IPC. Industrial Personal Computer IPv

5 Information Model

GB/T 36324 Information security technology Industrial control system information security classification specification

GB/T 43018.1-2023 Interoperability and interoperability of textile equipment Part