

ICS 59.120.01
CCS W 90



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

GB/T 43018.3-2025

**Interconnection and interoperation for textile equipment - Part
3: Chemical fiber**

纺织装备互联互通与互操作 第3部分：化纤

Issued on: February 28, 2025

Implemented on: September 1, 2025

**Issued by: State Administration for Market Regulation;
Standardization Administration of the PRC**

Table of Contents

Preface	III
Introduction	IV
1 Scope	1
2 Normative references	1
3 Terms and Definitions	1
4 Abbreviations	1
5 Architecture	2
5.1 System Architecture	2
5.2 Information Exchange	2
6 Basic Requirements	2
6.1 Device interface and protocol	2
6.2 Network	3
6.3 System Performance	3
6.4 Information Security	3
7 Information Model	3
8 Data dictionary	4
8.1 Data dictionary entry structure	4
8.2 Data dictionary index number encoding structure	5
8.3 Chemical Fiber Equipment Data Dictionary	6
Reference	45

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 for standardization documents" Drafting.

This document is part 3 of GB/T 43018 "Interconnection and interoperability of textile equipment". GB/T 43018 has published the following part.

- Part 1: General technical requirements;
- Part 2: Spinning;
- Part 3: Man-made fibers;

- Part 4: Knitting;

- Part 5: Nonwovens.

Please note that some of the contents of this document may involve patents. The issuing organization of this document does not assume the responsibility for identifying patents.

This document was proposed by the China National Textile and Apparel Council.

This document is under the jurisdiction of the National Technical Committee for Standardization of Textile Machinery and Accessories (SAC/TC215).

This document was drafted by: China Textile Machinery Association, China Textile Science Research Institute Co., Ltd., Hengtian Heavy Industries Co., Ltd., Xinfeng Ming Group Co., Ltd., Handan Hongda Chemical Fiber Machinery Co., Ltd., Shaoyang Textile Machinery Co., Ltd., Beijing Institute of Technology Co., Ltd., Tongkun Group Co., Ltd., Wuxi Hongyuan Electromechanical Technology Co., Ltd., Fujian Baihong Polyfiber Technology Industry Co., Ltd.

Co., Ltd., Jiangsu Hengli Chemical Fiber Co., Ltd., Donghua University, Fujian Yongrong Jinjiang Co., Ltd., Changzhou Xinchuang Intelligent Technology Co., Ltd.

Company, Shandong Guangtai Environmental Protection Technology Co., Ltd., China Unicom (Zhejiang) Industrial Internet Co., Ltd., China Chemical Fiber Industry Association, Wuxi Textile Machinery Quality Supervision and Inspection Center.

The main drafters of this document are: Ye He, Hou Xi, Li Jie, Li Ruixia, Wu Zhaohui, Zhang Junyang, Li Zhiyong, Guo Jianzhong, Lin Jian, Xu Bo, Cui Cheng, Cui Zhijing, Wang Yong, Cai Miao, Sun Bin, He Xiaoming, Shen Bo, Lü Jiabin, Feng Pei, Ren Jie, Zhang Qiang, Guo Zhenxing, Li Feiyang, Zhong Yunjie, Zhang Xuefeng, Sun Yanlin, Ji Yu, Ni Fengjun, Zhu Chengqian, Ye Jingping, Jiang Xiuming, Fu Chongxian, Zhang Xiaohui, Liu Shihai, Xu Wanli, Gao Yucheng, Yu Zihao, With Shanshan, Song Guangmin, Liu Haishui, and Yuan Lei.

Introduction

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 machines, spinning machines, 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 provide interconnection and interoperability architecture, information Model and data dictionary requirements.
- Part 5: Nonwovens. The purpose is to provide an interconnection and interoperability architecture and information model for nonwoven equipment such as web forming and fixed webs.
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 a framework for the interconnection and interoperability of continuous and intermittent dyeing and finishing equipment, information models and The data dictionary makes the request.
- Part 8: Evaluation and testing. The purpose is to evaluate and test the interconnection and interoperability of various segments of textile equipment. Require.

Interconnection and interoperability of textile equipment Part 3: Man-made fibers

1 Scope

This document specifies the architecture, basic requirements, information model and data dictionary for the interconnection and interoperability of chemical fiber equipment.

This document is applicable to polyester polymerization equipment, polyester filament equipment, polyester staple fiber equipment, spandex filament equipment, viscose staple fiber equipment, and in-plant equipment.

Development, design, production of interconnected and interoperable systems for chemical fiber equipment such as flow equipment, and construction and Transformation.

2 Normative references

GB/T 3100

GB/T 33863.3-2017

GB/T 33863.5-2017

GB/T 43018.1-2023

3 Terms and definitions

The terms and definitions defined in GB/T 43018.1-2023 apply to this document.

4 Abbreviations

The following abbreviations apply to this document.

DCS. Distributed Control System DTM. Device Type Manager EDD. Electronic Device Description FDT. Field Device Tool GSD. Generic Station Description HTTP. HyperText Transfer Protocol IPC. Industrial Personal Computer OPCUA. Open Platform Communication Unified Architecture PLC. Programmable Logic Controller SCADA. Supervisory Control and Data Acquisition SMTP. Simple Mail Transfer Protocol SOAP. Simple Object Access Protocol TCP/IP. Transmission Control Protocol/Internet Protocol