

ICS 25.040.30

CCS J 28



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

GB/T 46355-2025

General specification for bookshelf inventory robots

图书盘点机器人通用技术条件

Issued on: October 5, 2025

Implemented on: May 1, 2026

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

Table of Contents

1.Scope	1
2 Normative References	1
3.Terms and Definitions	2
5.Technical Requirements	3
5.1 Appearance and Structural Requirements	3
5.2 Usage Scenarios Requirements	3
5.3 Functional Requirements	3
5.4 Performance Requirements	5
5.5 Safety Requirements	6
5.6 Working Environment Requirements	7
6.1 Appearance and structural inspection	7
6.2 Functional Testing	8
6.3 Performance Tests	9
6.4 Safety Test	11
6.5 Climate and Environmental Adaptability Test	12
7.Inspection Rule	12
7.1 Inspection Classification	12
7.2 Factory Inspection	12
7.3 Type Testing	14
8.Marking, packaging, instructions for use, transportation and storage	14
8.1 Mark	14
8.2 Packaging	14
8.3 Instruction Manual	15
8.4 Transportation	15
15 References	16

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. Please note that some content in this document may involve patents. The issuing organization of this

document assumes no responsibility for identifying patents. This document was proposed by the China Machinery Industry Federation. This document was prepared by the National Technical Committee on Standardization of Robotics (SAC/TC591) and the National Technical Committee on Standardization of Libraries (SAC/TC591). TC389) is jointly under the jurisdiction of the State. This document was drafted by: Nanjing University, Shenyang Institute of Automation, Chinese Academy of Sciences, and Beijing Institute of Mechanical Industry Automation Co., Ltd. National Library of China, Jinling Institute of Technology, Shenzhen Library, Jiangsu Provincial Institute of Quality and Standardization, Jiangsu TuKe Robotics Co., Ltd., China China Machinery Industry Federation. The main drafters of this document are. Chen Lijun, Wang Xia, Liu Lianqing, Yang Shuping, Sun Xun, Li Zhihai, Gao Jing, Liu Ying, Chen Pan, Liu Zhe, and Liu Jue. Shao Bo, Shen Kuilin, Zhang Yangyang. General technical requirements for book inventory robots

1 Scope

GB/T 46355-2025 is the Chinese national standard covering the robot that reads the RFID tags along a library's shelves at night - the navigation between stacks, the read rate and the accuracy of the shelf position it reports, the misshelved and missing detection, and the safety around a machine working in a public building. First edition, in force from 1 May 2026. Issued on 5 October 2025, it has been in force since 1 May 2026.

This document specifies the technical requirements, inspection rules, marking, packaging, transportation, and storage of book inventory robots, and describes the corresponding tests. method. This document applies to the design, production, and application of book inventory robots.

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are not included. For references to documents, only the version corresponding to that date applies to this document; for undated references, the latest version (including all amendments) applies. This document.

GB/T 191 Pictorial Symbols for Packaging and Storage

GB/T 2423.1-2008 Environmental testing of electrical and electronic products - Part

3 Emissions from Equipment in Habitat Environments

GB/T 36530-2018 Safety requirements for robots and robot-equipped personal assistant robots

GB/T 37242-2018 Test Methods for Robot Noise

GB/T 37283-2019 General Standard for Electromagnetic Compatibility of Service Robots.
Immunity Requirements and Limits

GB/T 37284-2019 General Standard for Electromagnetic Compatibility of Service Robots.
Emission Requirements and Limits

GB/T 38124-2019 Service Robot Performance Test Methods

GB/T 38260-2019 Functional Safety Assessment of Service Robots

GB/T 39785-2021 Methods for Mechanical Safety Assessment and Testing of Service
Robots

GB/T 40013-2021 Electrical safety requirements and test methods for service robots

GB/T 41527-2022 General Safety Requirements for Service Robots for Home and Similar
Purposes

GB/T 45502-2025 General Requirements for Information Security of Service Robots
JGJ38-2015 Code for Design of Library Buildings