

ICS 71.040.10
CCS N 53



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

GB/T 48024-2026

**Technical specification for spectroscopic video-based
detection, measurement and early warning systems for
hazardous gases**

(English Translation)

Issued on: August 28, 2026

Implemented on: March 1, 2027

Issued by: State Administration for Market Regulation

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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 is under the jurisdiction of the National Technical Committee on Standardization of Industrial Process Measurement, Control and Automation (SAC/TC124).

1 Scope

This document specifies the composition, classification, requirements, marking, packaging, transportation, storage, and installation of hazardous gas spectral video monitoring and early warning systems.

The corresponding experimental methods are described.

This document applies to the design, manufacture, application, and testing of hazardous gas spectral video monitoring and early warning systems. It covers systems based on spectral video technology.

Other types of measurement, control, and early warning systems should be implemented accordingly.

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 Packaging and Storage Graphic Symbols GB/T 3836.1-2021 Explosive Atmospheres - Part 1: General Requirements for Equipment GB/T 4208-2017 Degrees of protection provided by enclosures (IP code) GB/T 5080.7 Verification Test Scheme for

Failure Rate and Mean Time Between Failures under the Constant Failure Rate Assumption in Equipment Reliability Testing GB/T 12604.9-2021 Nondestructive Testing Terminology. Infrared Thermal Imaging GB/T 13384-2008 General Technical Requirements for Packaging of Mechanical and Electrical Products GB/T 16838-2021 Environmental Testing Methods and Severity Levels for Fire Protection Electronic Products GB/T 17626.2-2018 Electromagnetic compatibility testing and measurement techniques - Electrostatic discharge immunity test GB/T 17626.3-2023 Electromagnetic compatibility testing and measurement techniques - Part 3: Radio frequency electromagnetic field radiated immunity testing GB/T 17626.4-2018 Electromagnetic compatibility testing and measurement techniques - Electrical fast transient/burst immunity test GB/T 17626.5-2019 Electromagnetic compatibility testing and measurement techniques - Surge (impulse) immunity test GB/T 17626.6-2017 Electromagnetic compatibility testing and measurement techniques - Conducted disturbance immunity induced by radio frequency fields GB/T 17626.11-2023 Electromagnetic compatibility testing and measurement techniques - Part 11: Input current for each phase less than or equal to Voltage sag, short interruption and voltage variation immunity test of 16A equipment GB/T 18268.1-2025 Electromagnetic compatibility requirements for electrical equipment for measuring, control and laboratory use - Part 1: General requirements GB/T 28181 Technical requirements for information transmission, exchange and control of public security video surveillance network systems GB/T 34065-2017 Safety requirements for analytical instruments GA/T 1708-2020 Infrared Thermal Imaging Equipment for Security Video Surveillance JJF1187-2008 Thermal Imager Calibration Specification

3 Terms and Definitions

The terms and definitions defined in GB/T 12604.9-2021, as well as the following terms and definitions, apply to this document.