

ICS 13.320
CCS A 91



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

GB/T 45524-2025

**Public security - Flammable and explosive gas detection and
alarm device**

公共安全 易燃易爆气体探测报警装置

Issued on: April 25, 2025

Implemented on: November 1, 2025

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

Table of Contents

Preface	III
1 Scope	1
2 Normative references	1
3 Terms and Definitions	1
4 Categories	2
5 Technical Requirements	3
6 Test methods	11
7 Inspection Rules	18
8 Logo, packaging	21
9 Random Technical Documents	21
10 Transportation and storage	22
Figure 1 Schematic diagram of the composition of the flammable and explosive gas detection and alarm device	3
Table 1 Types of flammable and explosive gases	5
Table 2 Requirements for detection limits of flammable and explosive gases	6
Table 3 Overload recovery time requirements	6
Table 4 Working temperature and humidity adaptability requirements	8
Table 5 Storage environment adaptability requirements	9
Table 6 Vibration test requirements	9
Table 7 Impact test requirements	10
Table 8 Impact test requirements	10
Table 9 Free fall test requirements	10
Table 10 Inspection items, technical requirements and test methods	19

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.

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 is issued by the Ministry of Public Security of the People's Republic of China.

This document is under the jurisdiction of the National Security Alarm System Standardization Technical Committee (SAC/TC100).

This document was drafted by: The Third Research Institute of the Ministry of Public Security, Fujian Transportation Research Institute Co., Ltd., Fujian Meiyang Automation Technology Co., Ltd., Shanghai Quality and Standardization Research Institute, First Research Institute of the Ministry of Public Security, Anhui Military Industry Group Holding Co., Ltd., Fuzhou University, China Railway Science and Technology Institute of Electronic Computing Technology of Research Institute Group Co., Ltd. and Shanghai Yijie Industrial Safety Equipment Co., Ltd.

The main drafters of this document are: Liu Caixia, Huang Qingcheng, Meng Chen, Shen Xiang, Shao Yichao, Xie Fangyi, Dong Bin, Huang Yantang, Xing Gengli, Li Ruyi, Chen Chong, Yan Yuchong, Lü Xiaojun, Zhang Jie, Li Yufei, Zhang Jing, Chen Muiyi.

Public safety flammable and explosive gas detection and alarm device

1 Scope

This document specifies the classification, technical requirements, inspection rules, marking, packaging, random technical documents, The requirements for transportation and storage are described, and the corresponding test methods are described.

This document applies to the design, manufacture and inspection of flammable and explosive gas detection and alarm devices in the public safety field.

2 Normative references

GB/T 191

GB/T 2423.5

GB/T 2423.10

GB/T 2828.1

GB/T 2829

GB/T 4208-2017

GB 8897.4

GB/T 15211-2013

GB 16796-2022

GB/T 17626.2

GB/T 17626.3

GB/T 17626.4

GB/T 17626.5

GB/T 17626.6

GB/T 17626.11

GB/T 17799.1-2017

GB 17799.3-2023

GB 17914

GB/T 20138-2023

GB 30000.3

GB/T 31101-2023

3 Terms and definitions

The terms and definitions defined in GB 17914, GB 30000.3 and the following apply to this document.