

ICS 29.260.20
CCS K 35



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

GB/T 46692.2-2025

**Gas detectors for workplace atmospheres - Part 2: Selection,
installation, use and maintenance of detectors for toxic gases**

工作场所环境用气体探测器 第2部分：有毒气体探测器的选型、安装、使用和维护

(English Translation)

Issued on: October 31, 2025

Implemented on: May 1, 2026

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.

This document is Part 2 of GB/T 46692 "Gas Detectors for Workplace Atmospheres". GB/T 46692 has the following publications.

part.

---Part 1: Performance Requirements for Toxic Gas Detectors;

---Part 2: Selection, installation, use and maintenance of toxic gas detectors.

This document is modified to adopt IEC 62990-2:2021 "Workplace environment - Part 2: Gas detectors - Detection of toxic gases and vapors".

The selection, installation, use and maintenance of the equipment.

The technical differences between this document and IEC 62990-2:2021, and the reasons therefor, are as follows.

---IEC 62990-1 (see Chapters 3, 6, and 9) has been replaced with the normatively referenced GB/T 46692.1 to adapt to my country's national standards.

Improve technical conditions and increase operability.

The following editorial changes have been made to this document.

---To align with existing standards, this document has been renamed "Gas Detectors for Workplace Environments - Part 2: Toxic Gases".

Selection, installation, use and maintenance of gas detectors;

---Source information for terms 3.6 "Occupational Exposure Limits" and 3.31 "Expanded Uncertainty" has been removed;

---The international documents cited in the document have been replaced with Chinese documents, and the references have been modified.

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 Electrical Equipment Industry Association.

This document is under the jurisdiction of the National Technical Committee on Standardization of Explosion-proof Electrical Equipment (SAC/TC9).

Introduction

Toxic gases may be used when the accumulation of a mixture of toxic gases or vapors could pose a hazard or adverse effect on life or health.

Gas detectors reduce danger by detecting the presence of toxic gases or vapors and issuing appropriate audible and visual alarms. Gas detectors can also be used for starting...

Active preventative measures (such as equipment shutdown and personnel evacuation) are necessary. However, in areas where toxic gases or vapors may be present, relying solely on detector performance is insufficient.

It can ensure the safety of life and property. This includes the correct selection, installation, calibration, and regular maintenance of the detector, as well as understanding the limitations of the detection technology.

The solution has a significant impact on the required level of safety. Only through comprehensive and reliable management can the goal of safety be achieved.

GB/T 46692 aims to establish performance requirements for various toxic gas detectors and provide application guidelines, adopting a section-based approach.

The standard format includes the following two parts.

---Part 1: Performance Requirements for Toxic Gas Detectors. The purpose is to specify the general requirements and test methods for toxic gas detectors.

---Part 2: Selection, Installation, Use, and Maintenance of Toxic Gas Detectors. The purpose is to provide guidance on the selection, installation, use, and maintenance of toxic gas detectors.

Guidelines for installation, use, and maintenance.

In terms of gas detector standards, IEC has successively formulated IEC 60079-29 "Explosive Atmospheres" for combustible gas detectors.

The document pertains to the detection of toxic gases and IEC 62990, "Gas detectors for workplace environments." IEC 60079-29 within this document is already...

This will be converted to GB/T 20936 (all parts). The newly developed GB/T 46692 converts IEC 62990 into a Chinese national standard.