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# NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

# 中华人民共和国国家标准

GB 4715-2005

Replace GB 4715-1993

# Smoke Detectors—Point Detectors Using Scattered Light, Transmitted Light or Ionization 点型感烟火灾探测器

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#### Foreword

Chapters 3, 4, 5 and 6 of this standard are compulsory provisions and others are voluntary one.

This standard refers to ISO 7240- 7: 2003 (E) "Fire Detection and Alarm Systems-Part 7: Point-type Smoke Detectors Using Scattered Light, Transmitted Light or Ionization" and EN54-7 "Fire Detection and Alarm Systems-Part 7: Point Detectors Using Scattered Light, Transmitted Light or Ionization".

This standard replaces GB 4715-1993 "Technical Requirements and Test Methods for Point Type Smoke Fire Detectors", and the major variations compared with GB 4715-1993 are as below:

- 1. This standard ushers in international advanced requirement in technical requirements aspect, revises response threshold of smoke detector-point detectors using scattered light, transmitted light or ionization, consistency of response threshold, requirements for responsivity and environmental flexility / tolerance under test fire condition, which makes it concord with the international standard.
- 2. This standard adopts electromagnetic compatibility (EMC) international standard of the latest edition, and selects proper rigor hierarchy, for the convenience of catching up with the international standard.
- 3. This standard adds requirements for test rules and operating instruction that conduce to the large scale production of the products.

This standard will replace GB 4715-1993 since the implementation date.

Appendices A、B、C、E、F、G、H、I and J of this standard are normative.

Appendix D of this standard is informative,

This standard was proposed by The Ministry of Public Security of the People's Republic of China.

This standard is under the jurisdiction of No. 6 Sub-Technical Committee of National Firefighting Technique Committee for Standardization.

Major drafting organization of this standard is: Shenyang Fire Research Institute.

Other drafting organizations of this standard include: the Chinese People's Armed Police Forces Academy, Liaoning Fire Department and Xi'an System Sensor Electronics, Ltd.

Chief Drafting Staffs of this standard are: SongXiwei, DingHongjun, ZhangYingqiong, YangShun, LiNing, MaLi and LiuMeihua etc.

Issuing conditions on all previous editions of this standard are:

——GB 4715—1984;

——GB 4715—1993.

# Smoke Detectors—Point Detectors Using Scattered Light, Transmitted Light or Ionization

#### 1 Scope

This standard specifies general requirements, requirement and test method, test rules and marking for smoke detector-point detectors using scattered light, transmitted light or ionization ("smoke detector" for short).

This standard is applicable to point detector using scattered light and transmitted light operating principle installed in general industry and civilian construction, and point detector—using ionization operating principle. Point detectors installed in other environments or using other operating principles shall not have special technical requirements specified otherwise by relevant standard, but also shall comply with those specified in this standard.

#### 2 Normative references

The following documents contain provisions which, through reference in this text, constitute provisions of this standard. For dated reference, subsequent amendments to, or revisions of any of these publications do not apply. And standards are subject to revision, and parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. For undated references, the latest edition of the normative document referred to applies. For undated references, the latest edition of the normative document referred to applies.

GB 9969.1 General Principles for Preparation of Instructions for Use of Industrial Products

GB 12978 Rules for Test of Fire Electronic Products

GB 16838 Environmental Test Methods and Severities for Fire Electronic Products

GB/T 17626.2-1998 Electromagnetic Compatibility-Testing and Measurement Techniques-Electrostatic Discharge Immunity Test (idt IEC 61000-4-2: 1995)

GB/T 17626.3-1998 Electromagnetic Compatibility-Testing and Measurement Techniques-Radiated, Radio-Frequency, Electromagnetic Field Immunity Test (idt IEC 61000-4-3 1995)

GB/T 17626.4-1998 Electromagnetic Compatibility-Testing and Measurement Techniques-Electrical Fast Transient/Burst Immunity Test (idt IEC 61000-4-4: 1995)

GB/T 17626.5-1998 Electromagnetic Compatibility-Testing and Measurement Techniques-Surge Immunity Test (idt IEC 61000-4-5: 1995)

GB/T 17626.6-1998 Electromagnetic Compatibility-Testing and Measurement Techniques-Immunity to Conducted Disturbances, Induced by Radio-Frequency Fields (idt IEC 61000-4-6: 1996)



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