

ICS 13.220.10

CCS C84



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

GB 5135.14-2011

Automatic sprinkler systems - Part 14: Preaction devices

自动喷水灭火系统 第14部分：预作用装置

Issued on: July 19, 2011

Implemented on: May 1, 2012

**Issued by: General Administration of Quality Supervision, Inspection and
Quarantine of the People's Republic of China;
Standardization Administration of China**

Table of Contents

1	Scope	
2	Normative references	
3	Terms and Definitions	
4	Model preparation	
5	Requirements	
5.1	Device	
5.1.1	Device component	
5.1.3	Flag	
5.1.5	Start operating requirements	
5.2	Pre-action alarm valve Basic parameters	5.2.1
5.2.2	Materials	
5.2.3	Structure and dimensions	
5.2.4	Rigid non-metallic materials Rigid non-metallic parts	
5.2.8	Pre-action alarm valve function	
5.2.8.6	When the pre-action alarm valve alarm port according to the provisions of	
5.4	Control Panel	
5.5	Solenoid valve	
5.5.2	Reliability Solenoid valve according to the method specified in	
5.5.5	Seal Solenoid valve according to the method specified in	
5.7.2	Sealing Performance According to the method specified in	
5.7.3	Surge Performance	
6	Test methods	

Foreword

This part of Chapter 4, Chapter 5, except

5.2.3.4 outside and Chapter 7 are mandatory, the rest are recommended. GB 5135 "automatic sprinkler system" has been divided into 21 sections.

--- Part 1. Sprinklers;

--- Part 2. Wet alarm valves, retard, water alarm;

--- Part 3. spray nozzle;

- Part 4. Dry alarm valve;
- Part 5. deluge alarm valve;
- Part 6. General Valve;
- Part 7. flow indicator;
- Part 8. Accelerator;
- Part 9. Early Suppression Fast Response (ESFR) sprinklers;
- Part 10. Pressure Switch;
- Part 11. grooved pipe fittings;
- Part 12. Extending coverage product sprinklers;

1 Scope

GB 5135.14-2011 is the Chinese national standard on automatic sprinkler systems - part 14: preaction devices, in the field of environment and health protection, safety. It carries no /T suffix, which in the Chinese system means compliance is mandatory: a product or a practice within its scope has to meet it to be lawfully made, sold or carried out in China. It was issued on 19 July 2011 by the General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China; Standardization Administration of China, and has been in force since 1 May 2012. Classification: ICS 13.220.10, CCS C84. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

GB 5135 of the provisions of this part of the preparation of model pre-action sprinkler systems means, requirements, test methods, inspection rules, marking Chi, packaging, transportation, storage and so on. This section applies to automatic sprinkler system preaction device.

2 Normative references

The following documents contain provisions which, through reference in this Part of GB 5135 constitute provisions of this section. For dated references, All subsequent amendments (not including errata content) or revisions do not apply to this section, however, encourage the agreement on this section Whether the parties can study the latest versions of these documents. For undated reference documents, the latest versions apply to this section.

GB/T 191 Packaging - Pictorial signs (GB/T 191-2008, ISO 780.1997, MOD)

GB/T 3098.1 Mechanical properties of fasteners Bolts, screws and studs (GB/T 3098.1-2000, idt ISO 898-1.1999)

GB/T 3098.2 Mechanical properties of fasteners - Nuts - Coarse thread (GB/T 3098.2-2000, idt ISO 898-2.1992)

GB/T 3098.3 Mechanical properties of fasteners set screws (GB/T 3098.3-2000, idt ISO 898-5.1998)

GB/T 3287 malleable cast iron pipe fittings Part 10

GB 5135.10 sprinkler systems. pressure switch Part 11

GB 5135.11 sprinkler system. grooved pipe fittings

GB/T 9112 steel pipe flanges with type parameters

GB/T 9969 General Instructions industrial products

GB/T 17241.6 whole cast iron pipe flanges

GB 50084 sprinkler system design specifications Performance requirements and test methods GA30.1-2002 fixed fire water supply equipment - Part 1. Fire pressure water supply equipment GA61-2002 fixed fire extinguishing system drive, control devices General

3 Terms and Definitions

The following terms and definitions apply to this part of GB 5135.

3.1 Preaction means preaction devices By the pre-action alarm valve, control panel, air pressure and air supply means to maintain the device composed by an electric, pneumatic, mechanical or other means Be open, so that water can flow into the sprinkler system in one direction at the same time means a one-way valve block alarm.

3.2 Pre-action alarm valve preaction alarm valve Composed by a pre-action alarm valve (single valve or combination valve) and piping accessories alarm valve.

3.3 Valves should wait state ready condition of valve Pre-action alarm valve clapper assembly is mounted in the piping system in the closed position, the valve supply side filled with steady pressure water system Side by a predetermined pressure is filled with air, without water flow through the pre-action alarm valve state.

3.4 Rated working pressure rated working pressure In the pre-action alarm valve should wait state or operating state maximum allowable working pressure.

3.5 Means working conditions work condition of devices Pre-action means the operating members of the working position, the control panel of the control, monitoring, should be in normal working condition.

4 Model preparation

Products marked by the code structure, nominal diameter and nominal working pressure components. ZSFY Pre-action sprinkler systems means Nominal Diameter (mm) Rated working pressure (MPa) Example. ZSFY100-

1.2 represents nominal 100mm, rated working pressure of the pre-action means 1.2MPa diameter.

5.1.1 Device component

5.1.1.1 Pre-action device is a pre-action alarm valve, control panel, pressure support system, air supply system and piping accessories and other components composition.

5.1.1.2 means the components installed in the correct position, reasonable overall layout, ease of operation, inspection and maintenance.

5.1.2 Appearance Pre-action means the constituent parts should be no obvious processing defect or mechanical damage, the outer surface of the parts should be corrosion, rust treatment, the coating Layer coating should be complete and uniform.

5.1.3 Flag

5.1.3.1 Pre-action alarm valve should be obvious position clear, permanent labeling the following.

- a) Product name and model specifications;
- b) production unit name or trademark;
- c) rated working pressure;
- d) the production date and product number;
- e) the implementation of the standard code;
- f) pre-action alarm direction of flow manifold installation.

5.1.3.2 control panel should be obvious position clear, permanent labeling the following.

- a) Product name and model specifications;
- b) the operating voltage and current;
- c) standby power working time;
- d) Operating ambient temperature;
- e) production unit name or trademark.

5.1.4 means working status Pre-action means working position each operating member, the