

机房气体灭火系统产品 使用手册

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GQQ 型 FM200 七氟丙烷无管网自动灭火系统

GQQ HFC-227ea Automatic Fire Extinguishing System without Pipe Network



一、系统简介

1 System Introduction

七氟丙烷（HFC-227ea、FM-200）是无色、无味、不导电、无二次污染的气体，具有清洁、低毒、电绝缘性好，灭火效率高的特点，特别是它对臭氧层无破坏，在大气中的残留时间比较短，其环保性能明显优于卤代烷，是目前为止研究开发比较成功的一种洁净气体灭火剂，被认为是替代卤代烷 1301、1211 的最理想的产品之一。

Heptafluoropropane (HFC-227ea, FM-200) is a gas which is colourless, tasteless, non-conducting and also without secondary pollution. The gas has the characteristics of cleanness, low toxicity, good electric insulativity and high firefighting efficiency. Especially, it is harmless to the ozone layer and its residence time in the air is short. Its environmental function is obviously better than that of the haloalkane. It is a relatively successful clean gas fire extinguishing agent and it is identified as one of the optimal products which can replace the haloalkane 1301, 1211.

GQQ 型七氟丙烷无管网自动灭火装置。它是一种不安装管网、轻便可移动的气体灭火消防设备。符合《柜式气体灭火装置性能要求和试验方法》及 ISO14520-9《气体灭火系统-物理性能和系统设计》系统设计及产品标准规范的要求，本系统

装置设计先进、性能可靠，极其适用于保护面积小于 500m²，容积小于 1600m³，管网无法安装，维护困难的保护对象的火灾防护。

GQQ type Heptafluoropropane without pipe network self-extinguishing device is a kind of gas fire extinguishing equipment which needs not the pipe network and has the light and removable characters. It conforms to the requirements of system design and the product standard of the *Performance Requirements and Test Method of Cabinet Gas Extinguishing Equipment* and the ISO14520-9 *Gas Fire Extinguishing System-Physical Performance and System Design*. This system device has the advanced design, reliable performance and also it is especially fitting for the fire hazard protection of the protection target whose protection zone is less than 500m² and the cubage less than 1600m³, the pipe network can't be installed and is hard to be maintained.

GQQ 型七氟丙烷无管网灭火系统由箱式气体灭火装置与火灾探测器、气体灭火报警控制器等组成，也具有自动、电气手动和机械应急手动三种控制方式。其中箱式气体灭火装置由箱体、储存瓶组、连接管、喷嘴等组成。

The GQQ type Heptafluoropropane without pipe network fire extinguishing system is composed by the box-type gas fire extinguishing device and the fire hazard detector, gas fire extinguishing alarming controller, etc. and has three control modes like the automation, electric manual operation and the machinery emergency manual operation. The box-type gas fire extinguishing device is composed by the box, cylinder group, connecting line and the nozzle, etc.

适于扑救下列一些火灾类型 It fits for the following types of fire hazard.	不得用于扑救下列物质的火灾 It can't put off the fire hazards of following substances.
(1) 电气火灾; (1) Electrical Fire (2) 液体表面火灾或可熔化的固体火灾; (2) Liquid Surface or the Meltable Solid Fire Hazard (3) 固体表面火灾; (3) Solid Surface Fire Hazard (4) 灭火前可切断气源的气体火灾。 (4) Cutting Gas Source Fire Hazard	(1) 含氧化剂的化学制品及混合物，如硝化纤维、硝酸钠等； (1) Oxidant Contained chemicals and Mixture, like the Nitrocellulose and Sodium Nitrate, etc. (2) 活泼金属，如钾、钠、镁、钛、锆、铀等； (2) (2) Active Metal like the Potassium (K), Sodium, Magnesium(Mg), Titanium(Ti), Zirconium and the Uranium, etc. (3) 金属氢化物，如氢化钾、氢化钠等； (3) (3) Metal Hydride like the Potassium Hydride and the Sodium Hydride, etc. (4) 能自行分解的化学物质，如过氧化氢、联胺等。 (4) Spontaneous Decomposition Chemical Substance like the Hydrogen Peroxide and Diamine, etc.

典型的防护设施:

Typical Protection Facilities:

适用于电子计算机房、数据处理中心、电信通讯设施、过程控制中心、昂贵的医疗设施、贵重的工业设备、图书馆、博物馆及艺术管、洁净室、消声室、应急电力设施、易燃液体存储区等，也可用于生产作业火灾危险场所，象喷漆生产线、电器老化间、轧制机、印刷机、油开关、油浸变压器、浸渍槽、熔化槽、大型发电机、烘干设备、水泥生产流程中的煤粉仓，以及船舶机舱、货舱等。

It can be used in the computer room, data processing centre, telecom communication facilities, process control center, expensive medical facilities and industrial plant, library, museum, art gallery, clean room, anechoic chamber, urgency electrical facilities and flammable liquid storing zone, etc. It also can be used in the fire risk places of the production operation like the paint spraying line, electrical equipment burn-in room, roll mill, printing machine, oil switch, oil immersed transformer, dipping tank, melting tank, high-rating generator, drying plant, pulverized coal bunker in the cement production flow, marine engine room and cargo hold, etc.

技术参数：Technical Parameters

产品型号 Product Model	GQQ70/2.5	GQQ90/2.5	GQQ120/2.5	GQQ150/2.5
公称工作压力(MPa) Nominal Operating Pressure(MPa)	2.5	2.5	2.5	2.5
喷射时间(s) Spraying Time(s)	≤8	≤8	≤8	≤8
充装密度(Kg/m ³) Filling Density(Kg/m ³)	≤1120	≤1120	≤1120	≤1120
储存容器容积(L) Storage Container Cubage(L)	70	90	120	150
工作温度范围 Operating Temperature Range	0℃~50℃	0℃~50℃	0℃~50℃	0℃~50℃
单个喷嘴的保护半径(m) Single Nozzle Protection Radius(m)	≤7	≤7	≤7	≤7
喷嘴的保护高度(m) Nozzle Protection Height(m)	0.3—5	0.3—5	0.3—5	0.3—5
系统灭火技术方式 System Fire Extinguishing Technique Method	全淹没 Total Flooding	全淹没 Total Flooding	全淹没 Total Flooding	全淹没 Total Flooding
系统启动电源 System Start Power Source	24V, 1A	24V, 1A	24V, 1A	24V, 1A
安全泄放装置动作压(MPa) Safe Relief Devices Motion Pressure(MPa)	5.0±0.25	5.0±0.25	5.0±0.25	5.0±0.25
外型尺寸(mm) Overall Dimensions(mm)	550×550×1800	550×550×1800	550×550×2000	600×600×2000
注：针对具体的保护对象，本厂能为用户提供无管网装置的多瓶组合，并根据用户要求进行定做，如对地板下、吊顶上的火灾保护。				

Remarks: Our factory can supply non-pipe network device cylinder group aiming at the specific protection targets and customize it according to the requirements of the users, like the fire hazard protection under the floor board and over the ceiling.

二、控制逻辑

2. Control Logic

本系统主要有电器自动、电器手动、机械应急手动三种控制方式，控制过程参见控制流程图三。

This system mainly has three control modes like the electrical equipment automation, electrical equipment manual operation and machinery emergency manual operation. The control process should refer to the control flow diagram 3.

(1) 电器自动方式：本灭火控制器配有感烟火灾探测器和定温式感温火灾探测器。控制器上有控制方式选择锁，当将其置于“自动”位置时，灭火控制器处于自动控制状态。当只有一种探测器发出火灾信号时，控制器即发出火警声光信号，通知有异常情况发生，而不启动灭火装置释放灭火剂。如确需启动灭火装置灭火时，可按下“紧急启动按钮”，即可启动灭火装置释放灭火剂，实施灭火。当两种探测器同时发出火灾信号时，控制器发出火灾声、光信号，通知有火灾发生，有关人员应撤离现场，并发出联动指令，关闭风机、防火阀等联动设备，经过一段时间延时后，即发出灭火指令，打开电磁阀，启动气体打开容器阀，释放灭火剂，实施灭火；如在报警过程中发现不需要启动灭火装置，可按下保护区外的或控制操作面板上的“紧急停止按钮”，即可终止控制灭火指令的发生，不启动灭火装置，释放灭火剂，实施灭火。

(1) Mode of electrical equipment automation: This fire extinguishing controller is equipped with the smoke fire hazard detector and the constant temperature type heat fire detector. If you put the control mode selective lock of the controller onto the automatic place, the fire extinguishing controller is on the automatic controlling state. When there is only one detector sending out the fire signals, the controller will send out the fire alarming acousto-optic signal to notice there is an abnormal case without starting the fire extinguishing device releasing the fire extinguishing agent. If you need to start the fire extinguishing device to put out the fire, you can press the Emergency Starting Button to starting the fire extinguishing device to release the fire extinguishing agent. When the two detectors send out the fire extinguishing signals at the same time, the controller sending out the fire hazard noise and the light signals to notice there is a fire hazard, the relevant people should leave the field. The linkage order is sent out, after that, the linkage equipments like the draught fan and the fire valve. After a period of delaying, the electromagnetic valve is opened and the start gas opens the container valve to release the fire extinguishing agent to put out the fire. If you find that you needn't to start the fire extinguishing device, you can press the emergency stop button out of the protection zone or on the operating control panel to stop the fire extinguishing order and stop the start of the fire extinguishing device releasing the fire extinguishing agent and putting out the fire.

(2) 电器手动：将控制器上的控制方式选择锁置于“手动”位置时，灭火控制器处于手动控制状态。这时，当火灾探测器发出火警信号时，控制器即发出火灾声、光报警信号，而不启动灭火装置，需经人员观察，确认火灾已发生时，可按下保护区外或控制器操作面板上的“紧急启动按钮”，即可启动灭火装置，释放灭火剂，实施灭火。但报警信号仍存在。

(2) Electrical Equipment Manual Operation: When you put the control mode to the manual operation position, the fire extinguishing control panel is on the manual control state. At the same time, when you hear the alarming signal from the fire hazard detector and the fire hazard signal and light alarming signal from the controller but the fire extinguishing device is not started, you should check and see to ensure there is a true fire hazard, then you can press the emergency start button out of the protection zone or on the controller operating panel, then you can start the fire extinguishing device and release the fire extinguishing agent to put out the fire. But the fire alarming signal is still existed.

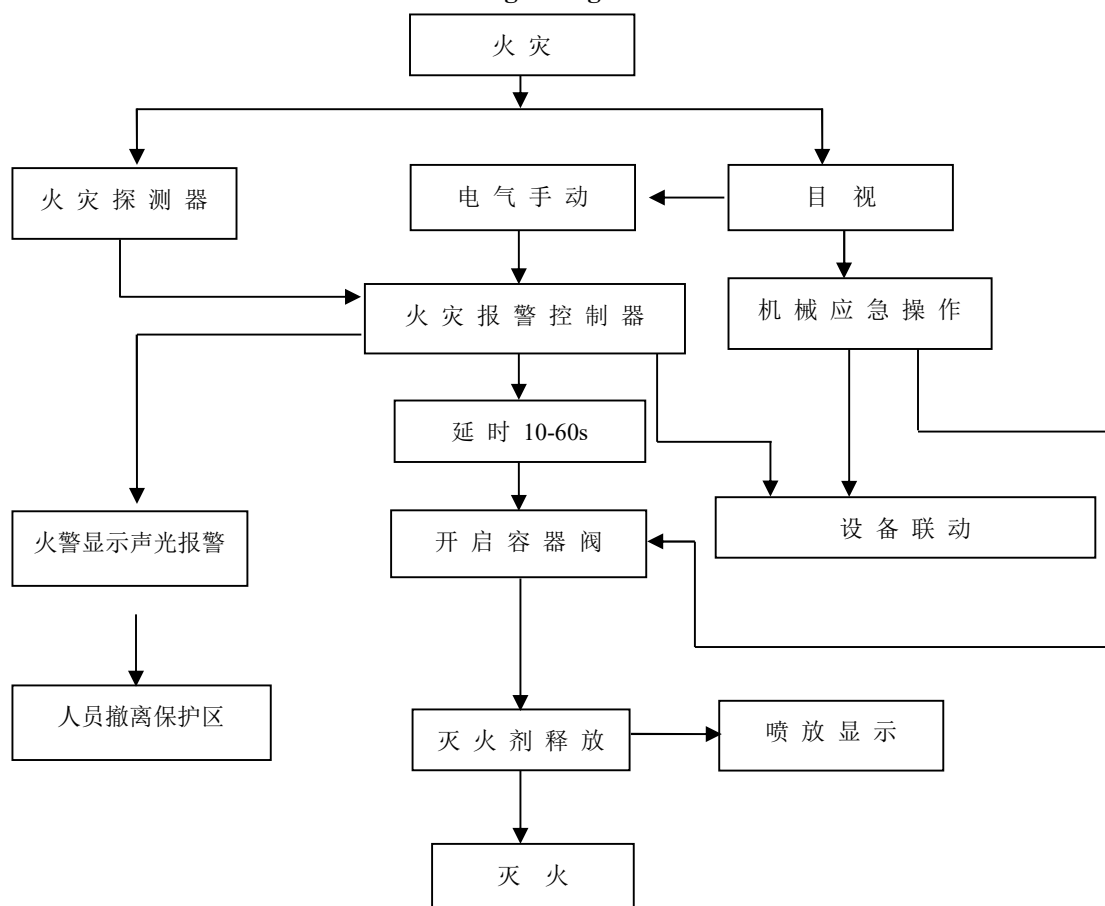
无论装置处于自动或手动状态，按下任何紧急启动按钮，都可启动灭火装置，释放灭火剂，实施灭火。同时控制器立即进入灭火报警状态。

You can start the fire extinguishing device releasing the fire extinguishing agent to put out the fire by pressing each emergency start button no matter what conditions like the automatic or the manual operation the device is on.

(3) 机械应急手动方式：用于控制器失效时，当职守人员判断为火灾时，应立即通知现场所有人员撤离现场，在确定所有人员撤离现场后，方可按以下步骤实施应急机械启动；①手动关闭联动设备并切断电源。②拔出手柄上的保险销，拍击储瓶组上的手柄，即刻实施灭火。

(3) Mechanical Emergency Manual Operation Mode: When the controller is out of function, and the people who are on duty judge there is a fire hazard, he should immediately notice all the people on the field leave the field, and do the following procedures to implement the mechanical start after the people leaving the field. ① You should shut the linkage equipment and cut off the electrical source manually. ② You should pull out the safety stopper on the hand shank and press the hand shank of the cylinder group to put out the fire.

控制逻辑图
Control Logic Diagram



火灾 Fire Hazard	火灾探测器 Fire Hazard Detector	电气手动 Electric Manual Operation
目视 Visual Contact	火灾报警控制器 Fire Hazard Alarming Controller	机械应急操作 Mechanical Emergency Operation
火警显示声光报警 Fire Hazard Indicating Acousto-optic Alarming	延时 10-60s Delay 10-60s	设备联动 Equipment Linkage
人员撤离保护区 People Leaving from the Protection Zone	开启容器阀 Open Container Valve	灭火剂 Fire Extinguishing Agent
释放 Fire Extinguishing Agent Releasing	喷放显示 Spraying Indication	灭火 Fire Extinguishing

三、灭火瓶组瓶头阀

3. Bottle Valve of the Fire Extinguishing Cylinder Group

四、七氟丙烷气体灭火系统设计参数

4 Design Parameters of the Heptafluoropropane Gas Fire Extinguishing System

《气体灭火系统设计规范》GB50370-2005

Design Specifications of Gas Fire Extinguishing System GB50370-2005

4.1 防护区灭火设计用量或惰化设计用量，应按下式计算：

4.1 The design quantity or inerting design quantity in the protection zone should be calculated as the following fomula:

$$W = K \frac{V \cdot C_1}{S (100 - C_1)}$$

式中

W —— 灭火设计用量或惰化设计用量(kg);

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In the Formula

- C_1 —— Fire Extinguishing Design Quantity and Inerting Design Quantity(kg)
 灭火设计浓度或惰化设计浓度(%);
 Fire Extinguishing Design Density and Inerting Design Density(%)
- S —— 灭火剂过热蒸汽在 101KPa 大气压和防护区最低环境温度下的比容
 (m^3/kg);
 Superheated steam of the fire extinguishing agent specific volume is
 (m^3/kg) under the 101KPa barometric pressure and lowest temperature in
 the protection zone.
- V —— 防护区的净容积(m^3);
 Net Cubage of the Protection Zone(m^3)
- K —— 海拔高度修正系数, 可按本规范附录 B 的规定取值。
 Sea level altitude correction factor can refer to the appendix B in this
 specification.

4.2 图书、档案、票据和文物资料库等防护区, 灭火设计浓度宜采用 10%。

4.2 You'd better take the designed fire extinguishing density as 10% in the data bank of the books, archives, bills and the cultural relics, etc.

4.3 油浸变压器室、带油开关的配电室和自备发电机房等防护区, 灭火设计浓度宜采用 9%。

4.3 You'd better take the designed fire extinguishing density as 9% in the protection zones like the oil immersed transformer room, oil switch house and the self-provided generator room, etc.

4.4 通讯机房和电子计算机房等防护区, 灭火设计浓度宜采用 8%。

4.4 You'd better take the designed fire extinguishing density as 8% in the protection zones like the communication room and the computer room, etc.

4.5 防护区实际应用的浓度不应大于灭火设计浓度的 1.1 倍。

4.5 The real density in the protection zone should not larger than 1.1 times of the designed fire extinguishing density.

4.6 在通讯机房和电子计算机房等防护区, 设计喷放时间不应大于 8s; 在其它防护区, 设计喷放时间不应大于 10s。

4.6 The designed spraying time should not larger than 8s in the protection zones like the communication computer room and the computer room, etc. In other protection zones, the designed spraying time should not larger than 10s.

4.7 七氟丙烷灭火浓度

表 A-1

4.7 Heptafluoropropane Fire Extinguishing Density

List 1

可燃物 Inflammable Matter	灭火浓度(%) Fire Extinguishing Density (%)	可燃物 Inflammable Matter	灭火浓度(%) Fire Extinguishing Density (%)
甲烷 Methane	6.2	异丙醇 Isopropanol	7.3
乙烷 Ethane	7.5	丁醇 Butanol	7.1
丙烷 Propane	6.3	甲乙酮 Methyl Ethyl Ketone	6.7
庚烷 Heptane	5.8	甲基异丁酮 Methyl Isobutyl Ketone	6.6
正庚烷 N-heptane	6.5	丙酮 Acetone	6.5
硝基甲烷 Nitromethane	10.1	环戊酮 Cyclopentanone	6.7
甲苯 Methylbenzene	5.1	四氢呋喃 Tetrahydrofuran	7.2

二甲苯 Dimethylbenzene	5.3	吗啉 Morpholine	7.3
乙腈 Acetonitrile	3.7	汽油(无铅,7.8%乙醇) Gasoline (Unleaded, 7.8% Alcohol)	6.5
乙基醋酸酯 Ethyl Acetate	5.6	航空燃料汽油 Aviation Fuel Gasoline	6.7
丁基醋酸酯 Butyl acetate	6.6	2号柴油 No.2 Diesel	6.7
甲醇 Carbinol	9.9	喷气式发动机燃料(-4) Jet Fuel(-4)	6.6
乙醇 Alcohol	7.6	喷气式发动机燃料(-5) Jet Fuel(-5)	6.6
乙二醇 Glycol	7.8	变压器油 Transformer Oil	6.9

4.8 七氟丙烷惰化浓度

表 A-2

4.8 Heptafluoropropane Inerting Density

List 2

可燃物 Inflammable Matter	惰化浓度(%) Inerting Concentration(%)
甲烷 Methane	8.0
二氯甲烷 Dichloromethane	3.5
1.1- 二氟乙烷 1.1-Difluoroethane	8.6
1- 氯-1.1-二氟乙烷 1-Chlorine-1.1- Difluoroethane	2.6
丙烷 Propane	11.6
1- 丁烷 1-Butane	11.3
戊烷 Pentane	11.6
乙烯氧化物 Ethylene Oxide	13.6

五、自动报警灭火控制部分主要技术参数:

5. Major Technique Parameters of the Automatic Alarming Fire Extinguishing Control:

1、保护区基本输入口配置: 感烟、感温火灾探测器总线接入, 紧急启动停止按钮 1 个, 压力开关动作信号 1 路。

1. Basic Input Port of the Protection Zone Configuration: General Line Input of the Smoke and Temperature Sensor Fire Hazard Detector, 1 Emergency Starting Stop Button, One Pressure Switch Motion Signal

2、保护区基本输出口配置: 主启动气瓶电磁阀 1 个, 声光报警器 1 个, 放气指示灯 1 个, 有源、无源触点输出各 1 个

2. Basic Output Port of the Protection Zone Configuration: One Major Start Gas Cylinder Magnetic Valve, One Audible and Visual Alarm, One Deflate Indicator Light, One Active Contacting Output and One Positive Contacting Output

3、线制: 除探测器外所有接入和输出采用 N+1 线制, 即+24V 电源加 N 条信号线。每路布线长度≤2000 米, 控制输出采用多线制, 操作可靠性高。

3. Wiring System: Except the detector, all the inputs and the outputs should take the N+1 wire system which is +24V power supply adding N lines. Each line should be≤2000m, and the control output should takes the

multi-wire system and the reliability of the operation is high.

4、联动触点：控制器有一个常开/常闭无源触点，一个有源触点。可选择在火警发生时或满足灭火条件下发出联动指令信号，可关闭空调、放火阀等联动设备。

4. Linkage Contacting Point: On the controller, there is a open/shut positive contacting point and one active contacting point. You can send the linkage order signals under the condition of the alarming or the fire extinguishing, and shut the linkage equipments like air-condition and the fire valve, etc.

5、电源：控制系统配有主机工作电源和备用工作电源，当主电源断电时，备用电源自动接如工作，当主电源通电后，又可自动转入主电源供电。同时对备用电源进行充电。

5. Power Supply: The control system is equipped with the main engine working power supply and the reserved power supply. When the main engine working power supply shuts, the reserved power supply will continue to do the work. After the main engine power supply has the energy, it can transfer to the main engine power supply automatically. At the same time, the reserved power supply will charge.

主电工作电源：控制器电源+5V/2A，探测器接口电源+24V/1A，联动输出电源+24V/4A

Main Working Power Supply: Controller Power Supply +5V/2A, Detector Port Power Supply +24V/1A, Linkage Output Power Supply +24V/4A

备用工作电源：密封式蓄电池 DC 12V/6.5AH 两节，在主电源掉电时能维持主机正常监视工作 8 小时以上，并能满足喷放气体对功率的要求。

Reserved Working Power Supply: Two sealed DC 12V/6.5AH storage batteries, they can monitor the main engine working for over 8 hours when the main supply is cut off and can satisfy the power requirements of the gas blowing.

6、功耗：监控状态 $\leq 5W$ ；报警状态 $\leq 15W$ （不包含驱动电磁阀输出功率）。

6. Power Dissipation: Monitor State $\leq 5W$, Alarming State $\leq 15W$ (not containing the drive electromagnetic valve output power.)

7、驱动电源：电磁阀驱动装置的额定工作电压为+24V，在+24V $\pm 15\%$ 条件下能正常工作。

7. Drive Power Supply: The rated operational voltage of the electromagnetic valve drive device is +24V and it can't work normally under the condition of the +24V $\pm 15\%$.

8、使用条件：环境温度 0°C~+40°C，相对湿度 $\leq 92\%$ （40 $\pm 2^\circ\text{C}$ ）

8. Using Condition: Ambient Temperature 0°C~+40°C, Relative Humidity $\leq 92\%$ (40 $\pm 2^\circ\text{C}$) .

六、安装、调试及使用

6. Installation, Debugging and Use

1. 检查启动器是否动作。

1 You should check if the starter is moved.

2. 根据说明书中的说明和工程方案，将火灾探测器、手动控制盒、声光报警器及联动设备等外围设备与气

体灭火控制器连接好，系统安装完毕后，检查线路连接是否正确，并按电气说明书设置和调试有关功能。

2.You should connect the peripheral equipments and the gas fire extinguishing control fire detector, manual control box, audible and visual alarm and the linkage equipment, etc. After the installation, you should check if the line connection is right as well as set and debug the relevant functions according to the explanation and project scheme in the specification.

3. 调试完毕后，将系统复位，并处于正常开通状态。

3You should replace the system and make it in the normal condition after the debugging.

4. 在安装调试过程中，必须严格按照《气体灭火系统施工及验收规范》GB50263-97 的规定执行。

4You must conform to the regulations of *Gas Fire Extinguishing System Construction and Acceptance Specification* GB50263-97 in the process of the installation and debugging.

七、注意事项

7. Announcements

1.灭火系统喷射前，所有人员必须在延时期内撤离火情现场，灭火完毕后，必须首先启动风机，将废气排除后，工作人员方可进入现场。

1. All the people should leave the fire field in the delay time before the spraying of the fire system. After the fire extinguishing, you must start the draught fan and exhaust the waste gas before the workers enter the field.

2.本装置的安装场所应符合下列要求：

2. The installation field of this device should conform to the following requirements:

(1) 环境温度为 0~50°C，并保持干燥和通风良好。

(1) You should keep the environment dry and draughty and the temperature should be 0~50°C.

(2) 空气中不应含有易爆、导电尘埃及腐蚀部件的有害物质，否则必须加以保护，系统不得受到震动和冲击。

(2)There should not be some the explosive, electric conducting substances and the harmful substances of the corrosive parts in the air. If not, you must do some protection to that, and the system should not be shocked and impacted.

3.系统安装、调试的人员，应熟悉本系统的基本结构、工作原理、性能和动作的程序，以及各阀件的基本结构和工作状态。

3. The installation and debugging personnel should be familiar with the basic structure, operating principle, performance and the procedures of the function, as well as the basic structure and the work state.

4.灭火系统喷射灭火剂前，所有工作人员必须在延时时间内撤离火情现场；灭火完毕后，必须首先启动风机，待废气排出后，工作人员方可进入现场。

4. All the workers should leave the fire field in the delay time before the extinguishing agent spray of the fire extinguishing. After the extinguishing, you must start the draught fan. After the exhaust of the waste gas, the

workers should enter the field.

5. 储气瓶应避免接近热源。运输过程中，应轻装轻卸，严禁碰撞、卧置或倒置。

5. The cylinder should avoid approaching the heat source. In the process of the transportation, you should load and unload lightly and avoid the collision, horizontal placement and upside down.

6. 更换新的安全膜片必须由我公司供应，不得使用未经试验的膜片代用。

6. The newly changed safety diaphragm should be supplied by our company and you should not use the untested diaphragm for the substitution at will.

7. 拆装过程中应避免碰伤表面而影响外观。

7. In the process of the dismounting, you should avoid the surface damaging to influence the appearance.

8. 无关人员切莫乱摸乱动本系统装置的部件，以免发生以外。

8. The unrelated people should not touch the device parts of this system to avoid the accident.



气体灭火泄压装置

标准尺寸：400mm*400mm、400mm*800mm

火灾报警系统设备：



J-EI8068 手自动转换开关

产品概况：

J-EI8068 手自动转换开关采用依爱两线制技术，专用于气体灭火系统，是一种安装在现场的转化装置，可以根据现场情况切换气体分区控制系统的手动与自动状态。电子编码唯一 ID，工程安装布线简单。

总线工作电压：DC24V 脉动电压；

工作电流：<0.6mA

适用温度：-10℃~50℃；

湿度：≤95%RH

外形尺寸：86x86x45mm

线制：两总线（无极性）

总线长度：≤1500米（截面积 1.0mm² 铜质双绞线）



J-EI8067 气体释放警报器

产品概况：

J-EI8067 气体释放警报器采用依爱两线制技术，专用于气体灭火系统，是一种安装在现场的警报提示装置。电子编码唯一 ID，工程安装布线简单。根据编程控制逻辑接收控制器的启动命令，周期性闪烁显示，提示人员不要进入。

总线工作电压：DC24V 脉动电压；

工作电流：<35mA

适用温度：-10℃~50℃；

湿度：≤95%RH

外形尺寸：300×120×26mm

线制：两总线（无极性）

总线长度：≤1500米（截面积 1.0mm² 铜质双绞线）

监视电流：<0.4mA



J-EI8066 紧急启停按钮

产品概况：

J-EI8066 紧急启停按钮专用于气体灭火系统，是一种安装在现场的启停装置，手动紧急控制气体灭火设备，具有指示灯很直观的显示按键状态（红色，启动按键指示灯；绿色，停止按键指示灯）。电子编码，唯一ID，控制器在线编地址或编码器设地址，自动登录，安装调试方便。

总线工作电压：DC24V 脉动电压

线制：两总线（无极性）

适用温度：-10℃~50℃

湿度：两总线（无极性）

动作电流：<1.2mA

监视电流：<0.4mA

总线长度：≤ 1500 米（截面积 1.0mm² 铜质双绞线）



J-EI6084 火灾声光报警器

产品概况： J-EI6084 型火灾声光报警器是一种安装在现场的非编码声光报警设备，满足 GA385-2002 的要求，一般由输出模块控制其工作，亦可由气体灭火控制器直接控制。声光报警器启动时发出强烈的周期闪光及变调火警声，以提醒现场人员注意。

使用环境温度：-10℃~55℃；相对湿度：≤95%RH（不凝露）

电源电压：DC24V±1015%

动作电流：≤75mA（平均值）

报警声压级：距正前方 3m 处≥ 75dB（A 计权）；变调周期：1.5s~2.5s

基本闪光频率：60~90 次/分

线制：电源（无极性）

外形尺寸：直径 100mm、高 55.5mm（不含底座）

重量：104g±5%（不含底座）

外壳防护等级：IP30



JB-QB-EIN70 气体灭火控制器

产品概况： JB-QB-EIN70 型气体灭火控制器主要用于各种有管网或无管网式二氧化碳、七氟丙烷、三氟甲烷、IG-541、SDE 等气体灭火系统。产品同时满足 GB4717 和 GB16806，可同时挂接地址编码感烟、感温火灾探测器，亦可通过中继模块挂接非编码火灾探测器进行火灾报警。控制器通过内部区控接线板控制气体灭火设备及有关警报装置。可广泛适用于计算机房、资料室、配电室、变电室、通讯机房等场所。

交流输入电压：220V±1015%， 50Hz±1%

交流输入功率：≤100W

直流备电：DC24V/5Ah, 全密封免维护蓄电池

使用环境温度：0℃ ~ 40℃；相对湿度：≤95%RH（不凝露）

容量：4 区（可选）；回路容量≤160 点

24V 电源最大输出电流：2A（瞬态输出可达 3A）

总线长度：≤1500 米

外形尺寸：500mm×340mm×111mm



阻燃电线

规格：ZR-RVS2*1.5



金属线管 KBG 管 Φ20mm



接线盒标准尺寸:86mm*86mm

自吸过滤式防毒面具半面罩

依据: GB 2890-2009



消防防毒面具

产品名称: 自吸过滤式防毒面具半面罩

产品型号: HG-500

产品规格: 宝蓝灰硅胶

机房气体灭火设备-简易操作手册

▲系统简介：

机房内安装 1 个感烟火灾探测器、1 个感温火灾探测器，主机（1 台气体灭火控制器）及 1 个紧急启停按钮安装在机房外墙上，气体喷洒运行指示灯安装在机房外门头上方，报警信号输出设备为 1 个声光报警器在机房外门头上方，1 个警铃在机房内门头上方；

▲工作原理：

机房内感烟、感温探测值超过设定判据时→探测器 CPU 通过总线向主机返回报警信号→主机自动启动→声光报警器发出报警信号→喷洒延时时间 30 秒→30 秒后机房内气体钢瓶内电磁阀击穿钢瓶喷洒口→气体喷洒，门口喷洒指示灯亮起；

▲主机的启动方式：

- 1、手动启动，可通过主机按键启动，进行现场启动，30 秒延时结束，即可喷洒，30 秒内可停止启动，（主机上启动按钮失灵情况下，可以敲碎最右侧圆形玻璃面板按下直接无延时启动）。
- 2、通过紧急启停按钮启动，按下启动面板，30 秒延时结束，即可喷洒。30 秒内可停止启动。通过复位钥匙复位。
- 3、通过主机自动状态启动，主机收到烟感和温感同时报警时，主机自动启动，30 秒延时结束，即可喷洒，30 秒内可停止启动。

注：操作密码为 123

▲系统测试：

*系统测试前，必须将钢瓶柜内已安装的喷洒启动电磁阀从钢瓶上取下，防止误操作造成误喷。

*测试完成后，必须将测试前取下的电磁阀重新安装到钢瓶上，否则机房发生火情也不会喷洒。

1、首先测试主机自动状态启动方式，主机正常运行情况下，按“菜单”按钮输入密码 328564 进入操作系统，按下主机面板上“自动”按钮，再按“确认”，选择全部自动，看到主机区控板上自动灯亮起，主机即在自动状态。用烟雾和高温工具（烟枪、温枪）使机房内一个烟感和一个温感同时报火警，这时声光报警和主机都会发出警报声，并且区控板会开始 30 秒倒计时，倒计时结束前都可以按停止按钮进行停止喷洒，30 秒结束后主机会启动电磁阀喷洒气体。（测试时可以看取下来的电磁阀上面的继电器灯是否亮起，常亮说明正常），测试完成后主机复位。

2、测试紧急启停按钮，按下紧急启停按钮的面板，启动灯亮起，这时声光报警和主机都会发出警报声，并且区控板会开始 30 秒倒计时，倒计时结束前都可以按停止按钮进行停止喷洒，30 秒结束后主机会启动电磁阀喷洒气体。（测试时可以看取下来的电磁阀上面的继电器灯是否亮起，常亮说明正常），测试完成后主机复位。

3、主机面板上启动按钮（最右侧圆形玻璃）敲碎后的这种启动方式是没有 30 秒延时的，是直接瞬间启动；

4、在钢瓶内短接（喷洒）反馈线，主机响起警报声、门头上放气勿入灯亮，表示反馈正常。

▲维护与保养：

- 1、定期的自检主机，按主机自检按键；至少每 3 个月进行 1 次系统测试，确保系统处于正常状态。
- 2、确保主备电同时打开（主机箱内，用主机钥匙开启主机检修门），确保电池寿命。
- 3、请妥善保存好友爱消防气体灭火控制系统安装使用说明书。

