

FIRE ALARM AND GAS EXTINGUISHING SYSTEM INSTRUCTION

Gas fire extinguishing control system is mainly composed of gas fire extinguishing controller, fire detectors, manual /automatic switch, emergency start/stop button, sound/light alarm, gas spraying indicator light, etc.

Among them, Generally, smoke detectors and heat detectors are used as fire detectors.

Manual alarm button or other types of fire detectors can also be used in special cases.

Gas extinguishing controller linkage control gas fire extinguishing equipment, linkage control fan, Air valve fire valve, Ventilation and air conditioning, Automatic doors and Windows and other equipment. And receive feedback signals.

For CO₂ fire extinguishing systems, It can also receive weightlessness alarm signals and Send weightlessness alarm.

Gas extinguishing system shall be controlled by a dedicated gas extinguishing controller.

The gas extinguishing controller is used for linkage control

There are two main types of gas extinguishing systems.

One type is with fire detection and alarm function. This kind of controller can connect fire detectors and all kinds of linkage control modules. It is equipped with automatic fire alarm and gas extinguishing fire control function. It can form a separate system. In case of fire, gas extinguishing controller will receive fire detectors or fire alarm signal from manual alarm button and send linkage control command. Achieve gas fire control function.

Another type is without fire detection and alarm function. This type of gas extinguishing controller only has single gas fire control function. It must be used in conjunction with fire alarm controller. The fire detector is connected to the fire alarm controller. In case of fire, The fire alarm controller receives the fire detector Or manual alarm button fire alarm signal. It sends instructions to the gas fire control unit. Then the gas fire control unit linkage controls related components to achieve the gas fire control function.

Fire detector with high sensitivity should be used in the protection area. The detector can alarm early to put out the fire early.

For protection zone, two different types of fire detectors should be selected. Smoke fire detectors and heat detector are usually used.

At special places, Other types of fire detectors or manual alarm button can also be used.

All kinds of detectors shall meet the specification requirements

The protected area was calculated separately and cross layout.

Sound and light fire alarm should be set inside the protected area. When first fire alarm signal received, it activate the sound and light fire alarm inside the protection zone. Warning personnel to evacuate.

At the outside of the zone exit, Sound and light fire alarms should also be provided.

After fire alarm is confirmed, it activates the sound and light fire alarm outside the protection zone.

The upper part of the outlet of the protection zone shall be equipped with a gas release indicator light

Gas extinguishing controller receives the feedback signal from the signal feedback device and activates the gas release indicator, warn personnel not to enter.

The pipe network gas extinguishing system has automatic control, manual control and mechanical emergency operation, total three starting modes.

Fire extinguishing device with prefabricated gas fire extinguishing system is set up in the protected area. People must evacuate in case of fire.

So the prefabricated gas fire extinguishing system only has automatic control and manual control, two starting mode.

Automatic control of gas extinguishing controller

Under automatic control status, there are two ways to control gas fire extinguishing.

Method 1: Smoke and heat compound alarm linkage

This is the most common control way. In the gas fire protection zone, smoke detectors and heat detector are generally used. When a detector triggers an alarm, the sound and light fire alarm in the protection zone is activated. When another different type of fire detector triggers alarm, the fire alarm information is confirmed. The sound and light fire alarm outside the protection zone is activated. At the same time, the linkage control signal is issued.

Fire extinguishing activation command will be issued after 0-30 seconds delay. Fire extinguishing device is activated.

In some special places, Other types of fire detectors may be required. It could be a manual alarm button or sort the different detectors.

Refer to the above smoke heat compound linkage

Method 2: Linkage of two independent fire alarm signals

In some special cases, you can have two independent fire detector alarm signal to confirm the fire alarm. Such as a fire detector with a manual alarm button compound signals to confirm the fire alarm.

When the first fire alarm signal goes out, it activate the sound and light fire alarm in the protection zone. When another fire alarm signal goes out, it confirms the fire alarm information. Then it activates the sound and light fire alarm outside the protection zone.

At the same time, the linkage control signal is issued. Fire extinguishing activation command will be issued after 0-30 seconds delay. Then it activates fire extinguishing device.

Manual control of gas extinguishing

Regardless of whether the system is at automatic control state or manual control state, manual control of gas extinguishing is always effective.

Manual control is performed through the emergency start-stop button.

Emergency start/stop buttons must be installed at the exit of the protection zone. On the control panel of the gas extinguishing controller, there's also an emergency start/stop button.

Emergency start stop button includes emergency start button and emergency stop button. After pressing the emergency start button, the gas extinguishing controller sends out linkage control signal.

Fire extinguishing activation command will be issued after 0-30 seconds delay activating fire extinguishing device.

The emergency stop button has the highest priority. Press the emergency stop button to terminate the fire extinguishing process.

Please also note that the fire activation order is irreversible.

Emergency stop button only works before the fire activation order is issued.

Mechanical emergency operation for gas fire extinguishing

Mechanical emergency operation means through manual operation to drive the electromagnetic drive device of the gas flat group to start.

Fire extinguishing

When the system fails automatically and manually, make sure the zone is cleared without personnel.

The safety pin of the drive gas flat group electromagnetic drive device in the corresponding protection zone can be pulled open. Press the start button on the upper part of the electromagnetic drive.

Direct start it.

In the absence of gas drive flat group or electromagnetic drive device manual failure. You can also manually open the selection valve. And then manually open the fire extinguishing agent flat group container valve. Start the fire extinguishing.

Conversion between manual control and automatic control

The switch between manual and automatic control can be implemented on the host of gas fire control. Some protection areas shall have manual and automatic switching devices outside the fenced areas.

When personnel enter the protection zone, it shall be possible to convert the fire extinguishing system to manual control.

When the personnel leave, it should be able to revert to automatic control.

Just to be safe

For a protected area where people are working, manual controls are always recommended.

When there is more than one prefabricated fire extinguishing device of the same type as 1 in the protection zone. They must be able to start at the same time. The action response time difference shall not be greater than two seconds.

A place with a fire control room

Information about fire control system in each protection zone should be transmitted to the fire control room.

Information to be transmitted to the fire control room includes the fire information, fire fighting action, manual and automatic conversion, and system equipment fault information, etc.

The setting position of the gas extinguishing controller

The gas extinguishing controller can be installed in the fire control room.

For ease of operation, it can also be set up in the duty room of the floor in the protection zone.

For no duty room with pipe network fire extinguishing system, you can consider setting in the bottle storage room.

For prefabricated fire extinguishing system without duty room, you can consider set in an easy to operate position outside the protected area.