

LINKAGE OF GAS FIRE EXTINGUISHING SYSTEM WITH FIRE ALARM

Gas fire extinguishing device and foam fire extinguishing device usually adopt independent fire extinguishing controller. When the fire detector in its protected area is directly connected to the fire extinguishing controller, the alarm linkage control of each stage and the feedback signal of the system shall be immediately fed back to the fire extinguishing linkage controller, and the fire extinguishing linkage controller shall start the alarm linkage control process according to the specification requirements.

After the fire linkage controller receives the feedback signal, is it necessary to activate all the fire audible and visual alarms and fire broadcasting in the building? Is it necessary to turn on the smoke control and exhaust system and the emergency lighting evacuation indicator system?

When receiving confirmation after a fire alarm signal, sound and light alarm should start building all fires, fire emergency broadcasting, should start the fire related area of the exhaust system (such as evacuation aisle, etc.) start the fire smoke of fire zone system, and should press the fire emergency lighting and evacuation indicating system technology standard to start the emergency lighting evacuation indicator system.

Refer to fire alarm and fire fighting diagram and manual at fire alarm.

There are three starting modes of the gas fire extinguishing system: automatic starting, manual electrical starting and mechanical emergency operation.

The automatic start of the gas fire extinguishing system is divided into manned protection area and unmanned protection area

Manned area:

1. In case of fire, the first detector (mostly smoke) in the protection zone sends a signal to the gas fire extinguishing controller, and the gas fire extinguishing controller starts the fire audible and visual alarm in the protection zone, and the gas fire extinguishing controller feeds back the alarm signal to the fire linkage controller. At this time, the sound and light alarm will alert the personnel in the protection area of fire, fire confirmation or emergency escape, but will not start the gas extinguishing device;

2, if no intervention at this time, the fire, the first two detectors (mostly heat) induction after the fire, the protection zone of acousto-optic alarm sounded at once, and now have been able to determine the fire really happened, then the gas fire extinguishing system, ready to start the system into the 30 s delay phase, in the delay phase, researchers continue to escape, And the system will make some preparations for the gas release, such as:

1) Close the air supply (exhaust) fan and air supply (exhaust) valve in the protected area:

2) Stop the ventilation and air conditioning system and close the electric fire valve set in the

protected area;

3) Linkage control the start of the opening closure device in the protection area, including closing the door and window in the protection area;

(In this delay stage, if someone finds that the fire has been extinguished, they can press the "emergency stop button", then the system can still stop immediately, but once the delay time is exceeded and the next control link is entered, the emergency stop will be ineffective.)

3. After the preparation stage of 30S, the closure of the shutdown and the evacuation of the personnel should be completed, then the system controls the gas to spray and implement the fire extinguishing:

Firstly, control and open the head valve of the starting gas cylinder in the corresponding protection area to release the starting gas;

② Start the gas to open the selection valve of the corresponding protection area. After passing the selection valve, open the cylinder valve of the fire extinguishing agent bottle group to release the fire extinguishing agent;

③ Fire extinguishing agent can be opened through the selection valve, spraying into the corresponding protection area; The pressure signal device set on the pipeline is triggered in the process of discharge, and the pressure signal device can feedback signals to the linkage controller, and then control the "exhaust indicator light" outside the protection zone to light up, prompting not to enter the protection zone.

unmanned protection area:

As there is no protection zone, the relative "someone protection zone" control do not need to consider the process of evacuation, therefore in the protection zone of the first a detector signal sensing after the fire, will immediately close the valve, close the door, shut the fan action instruction, (you can see it no matter what kind of control, all want to consider the utilization of the gas discharge, The protected area needs to be closed), when the second detector detects a fire, immediately open the selection valve and other subsequent operations

Manual start

Manual emergency start can be achieved in two ways. One is the "emergency start" button outside the protection zone, and the other is the manual control button on the gas fire control controller. In this state, the detector sends out a fire signal and controls the host to start the indoor and external audible and visual alarms to notify the fire, but does not start the fire extinguishing system. At this time, press the "emergency start" button outside the protection zone or on the controller to start the fire extinguishing system, which will release fire extinguishing agent and implement fire extinguishing.

Mechanical emergency manual start

When the fire alarm control system fails, when both automatic and manual emergency start fail, and when the staff on duty judges it to be a fire, they should immediately inform all the personnel on site to evacuate the site. After all the personnel are confirmed to evacuate the site, mechanical emergency operation can be carried out according to the following steps:

- 1) Manually turn off the linkage device and cut off the power supply;
- 2) Pull out the "mechanical emergency start safety pin" on the electromagnetic drive of the start bottle in the corresponding protection zone, press the mechanical emergency start button, and the electromagnetic drive will open the start bottle to release the start gas and start the gas fire extinguishing system.