

Selection and requirements of fire alarm control system

According to the requirements of the code, the fire alarm control system can be divided into regional alarm system, centralized alarm system and control center alarm system.

I. The regional alarm system is applicable to the protected objects that only need to link the audible and visual alarm, and do not need to link other automatic fire fighting equipment.

The regional fire alarm system can set fire alarm controller.



The design of the regional fire alarm system shall comply with the following requirements:

1. The system shall consist of fire detector, manual fire alarm button, fire audible and visual alarm and fire alarm controller.
2. The system may include a graphic display device in the fire control room and an fire alarm displayer to indicate the fire floor.
3. The fire control room can not be set up for the regional fire alarm system, but the fire alarm controller should be set up in the place with people on duty.
4. When the system is equipped with the graphic display device in the fire control room, the graphic display device performs the functions of remote information transmission and remote query.
5. If no graphic display device is set in the system, fire alarm transmission device should be set. Similar functions are performed by fire alarm transmission equipment.

II. The centralized fire alarm system is applicable to the protected objects that need to be linked with other fire fighting equipment in addition to the sound and light alarm.

The centralized fire alarm system needs to adopt the connected fire alarm controller.

A centralized fire alarm system can be connected to multiple regional fire alarm systems.



The centralized fire alarm system shall be equipped with fire control room and graphic display device.

And shall comply with the following provisions:

1. The system shall consist of fire detector, manual fire alarm button, fire audible and visual alarm, fire emergency broadcast, special telephone for fire fighting, graphic display device in fire control room, fire alarm controller, fire linkage controller, etc.
2. The fire alarm controller, fire linkage controller, graphic display device of fire control room, control device of fire emergency broadcast, telephone switchboard for fire control and other fire equipment in the system should be installed in the fire control room.
3. The graphical display device of the fire control room shall perform the function of remote information transmission and remote query.

There is no separate alarm linkage controller in practice. All of them are connected fire alarm controllers with linkage function.

In the fire control room as shown in the figure, the fire alarm controller, the control device of fire emergency broadcast, the switchboard for fire fighting, and the graphic display device of the fire control room are all assembled in the fire control cabinet of the piano table type.

III. Control center alarm system is generally suitable for building groups or large volume of protection objects.

Usually there are the following situations:

1. The building complex may be equipped with two or more fire control rooms.
2. Products of different enterprises or different series of products of the same enterprise are used in the phased construction of the architectural complex, and multiple systems are networked in the phased construction.
3. In the large-scale system, due to the system capacity limit, multiple centralized control of the

connected fire alarm controller is set. This is quite common.

The design of the control center alarm system should not only meet the functions of the centralized control system.

The following requirements should also be met:

1. When there are two or more fire control rooms, a main fire control room shall be determined. The main fire control room shall be able to display all fire alarm signals and linkage control status signals, and it shall be able to control important fire equipment.

Fire fighting equipment in each fire control room can transmit and display status information to each other, but they should not control each other.

2. When there is only one fire control room with multiple centrally controlled fire alarm controllers, the master controller shall be set in the fire control room, which shall be able to display all fire alarm signals and linkage control status signals, and shall be able to control all linkage devices.



The direct manual control device of the fire pump, smoke control and smoke exhaust fan and other important equipment should be set up in the fire control room together with the main controller.