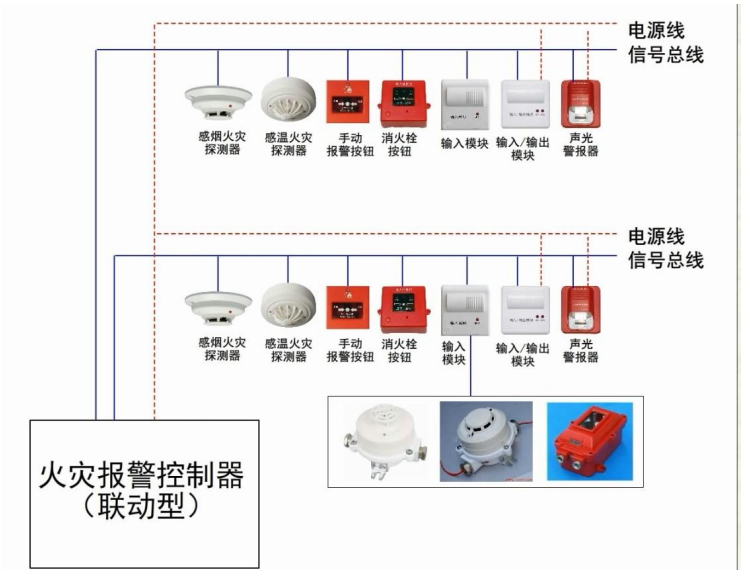
Most fire alarm systems adopt two bus system.

Two bus is a bus technology that combines power supply line and signal line. Two buses save construction and cable costs, greatly facilitating on-site construction and later maintenance.



The wire diameter of the bus must meet the impedance requirements and is usually twisted pair, not parallel line, to prevent external electromagnetic interference and cross-talk between lines.

The total number of fire detectors, manual fire alarm buttons and modules connected to any fire alarm controller and the total number of addresses shall not exceed three thousand two hundred points.

The total number of devices connected to each bus loop shall not exceed two hundred points, and a margin of not less than ten percent of the rated capacity shall be left.

The bus loop of the connected fire alarm controller can simultaneously connect fire trigger devices such as smoke detector, heat detector, manual alarm button, and alarm linkage devices such as sound and light alarm, fire bell, etc.

The total number of alarm linkage devices connected to each bus loop shall not exceed one hundred points, and a margin of not less than ten percent of the rated capacity shall be left. The total number of alarm linkage devices or modules connected to any one fire alarm controller shall not exceed one thousand six hundred.

If there are multiple devices corresponding to one address, the number of devices should be calculated. For example, if multiple non-coding detectors share an address point through an input module, the number of detectors should be counted into the total number.

If a device corresponds to two addresses, the number of the two addresses should be calculated. For example, a double input and output module to control a fire shutter controller, should be

counted by the number of two addresses into the total.

For the fire alarm system of more than three thousand two hundred points, it can be connected by the way of multi-controller network.