JB-QBL-TX3000D

Intelligent Fire Alarm Control Panel
Installation and Operation Manual

Product Safety

To prevent severe injury and loss of life or property, read the instruction carefully before installing the detector to ensure proper and safe operation of the system.

European Union directive

2012/19/EU (WEEE directive): Products marked with this symbol cannot be disposed of as unsorted municipal waste in the European Union. For proper recycling, return this product to your local supplier upon the purchase of equivalent new equipment, or dispose of it at designated collection points.

For more information please visit the website at www.recyclethis.info

Table of Content

I. Chapter 1 General

The JB-QBL-TX3000D F Intelligent Fire Alarm Control Panel (hereinafter referred to as "control panel") is designed as a wall-mounted structure and can also be installed in a cabinet by adding a kit. It adopts a modular design with flexible configuration options, featuring a maximum design capacity of 1 circuit and supporting connectivity for up to 242 bus equipment. It can be used in conjunction with other products manufactured by our company to form a feature-rich alarm linkage control system.

1. LCD display

The control panel is provided with 2.8 inch TFT LCD, clearly and intuitive. Various functions can be achieved by simple operation.

2. Provided with modular switching power supply

Modular switching power supply adopted by control panel has high switching efficiency, and is provided with main power supply and standby power supply change, and accurate charging and discharging management. In addition, over-voltage protection of input, short circuit protection of output, reversing protection and short circuit protection of standby power supply.

3. The equipment offers various communication functions and high expandability.

The control panel is equipped with CAN and RS485 communication interfaces, allowing users to choose different communication modules based on their requirements.

II. Control panel structure and configuration description

1. Appearance diagram

The control panel adopts wall-mounted type structure. The appearance structure diagram is as shown in Fig. 2-1. (Unit: mm)

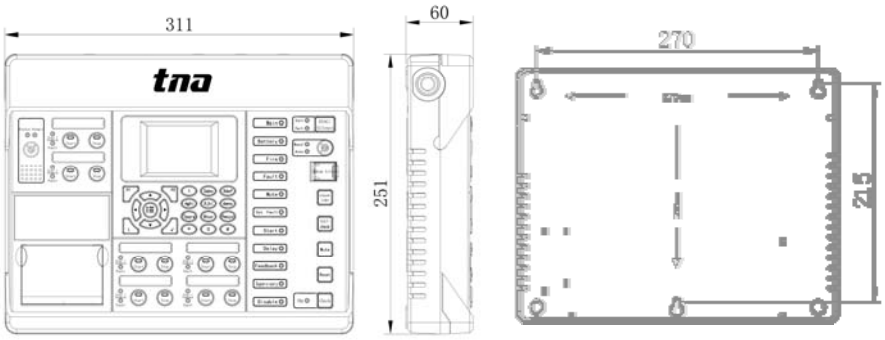


Fig. 2-1 Control Panel appearance structure diagram

2. Main technical parameters

The main technical parameters of the controller are as shown in table 2-1.

Type	JB-QBL-TX3000D
Main power supply	Rated operating voltageAC220V (range 187V ~ 242V), 50Hz, 90W
Maximum operating current	0.5A
Standby power	12.8V 4Ah
Bus voltage	DC24V
Load capacity	Bus current ≤500mA
Maximum capacity	1 loop, maximum 242 bus equipment can be connected
LCD	2.8 inch TFT LCD, 320×240 resolution
Printer	Mini type thermo-sensitive printer
Weight	1.9kg
Outline dimension	311mm×60mm×251mm (L×W×H)
Installation hole distance	Horizontal distance 270mm, vertical distance 215mm
Housing ingress protection	IP30
Operating environment	Temperature: 0℃ ~ +40℃, relative humidity ≤95%RH, without condensation
Executive standard	GB 4717-2005 Fire Alarm Control Panel GB 16806-2006 Fire linkage control system

Table 2-1 Main technical parameters

3. Panel description

The control panel's main panel is divided into seven parts: manual control switches, printer, keypad zone, LCD display zone, wiring flip cover, manual control unit, and standard panel zone, as show in Fig. 2-2 of the main panel diagram.

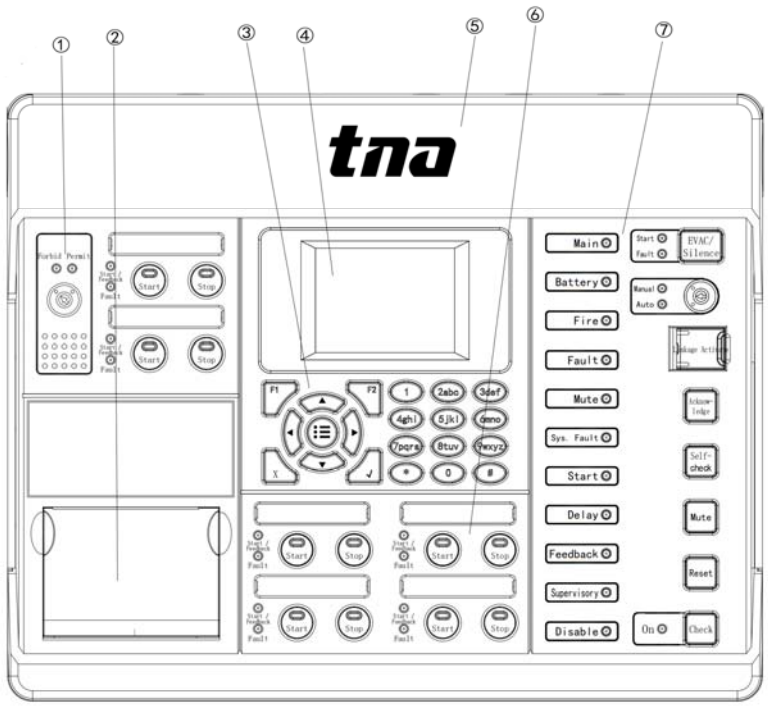


Fig. 2-2

Diagram description: ① manual control switches ② printer ③ key zone ④ LCD display zone ⑤ wiring cover ⑥ manual control unit ⑦ standard panel zone

- **Standard panel indicator light and operating description:**
  - **Main power supply light:** green. When main power supply works normally, this light is normally on; when main power supply has a fault, this light goes off;
  - **Standby power supply light:** green. When standby power supply works normally, this light is normally on; when standby power supply has a fault, this light goes off;
  - **Fire alarm light:** red. When the controller is in fire alarm state or receives a fire alarm message, this light is normally on; after resetting, this light goes off;
  - **Fault alarm light:** yellow. When the controller is in fault state, this light is normally on; after all faults are eliminated or after resetting, this light goes off;
  - **Mute light:** yellow. When the controller sends an alarm, press "mute" key, this light is normally on; if a new alarm occurs or after resetting, this light goes off;
  - **System fault light:** yellow. When the control panel is in system fault state, this light is normally on;
  - **Start light:** red. When the equipment starts, this light is normally on; in 10S, if all of started equipment does not feedback, this light flashes; if all feedback, this light is normally on. After resetting, this light goes off;
  - **Start Delay light:** red. When the equipment is in delay starting state, this light is normally on; after delaying, this light goes off;
  - **Feedback light:** red. When any equipment has feedback, this light is normally on; after feedback stops or after resetting, this light goes off;
  - **Monitoring light:** red. Any equipment is in monitoring state, this light is normally on; after resetting, this light goes off;

- **Shielding light:** yellow. Any equipment is shielded, this light is normally on; all equipment is unshielded, this light goes off;
- **Alarm start light:** red. When alarm starts or the equipment has a fire alarm, this light is normally on; when alarm stops or after resetting, this light goes off;
- **Alarm fault light:** yellow. When alarm or fire output interface has a fault, this light is normally on; after troubleshooting or resetting, this light goes off;
- **Manual mode light:** green. When the system is in manual linkage mode, this light is normally on; other linkage modes, this light goes off
- **Auto mode light:** green. When the system is in auto linkage mode, this light is normally on; other linkage modes, this light goes off
- **Inspection light:** green. When going into inspection interface, this light is normally on; when exiting the inspection interface, this light goes off;
- **Alarm key:** start/stop sound-light alarm of this machine;
- **Manual/auto lock:** Switching between manual and auto state of the control panel;.
- **Linkage Start Key:** When fire alarm information is present and the host is in manual mode, pressing this key will link relevant equipment.
- **Information Confirmation Key:** Provides secondary confirmation for important operations on the control panel.
- **Self-check key:** check if sound devices and indicator lights of the control panel are normal;
- **Mute key:** remove alarm sound of the control panel;
- **Reset key:** reset the control panel to make it restore to normal state;
- **Check key:** go into inspection interface;

◆ **General key description:**

- ⁝☰ **key:** go to main menu interface;
- **Direction key:** switch current focus or input cursor position in the box; left and right direction keys can

  be used as UP and DOWN keys on list page;
- √ **key:** enter current operation;
- **× key:** × current operation or return to the previous menu;
- **Number key:** multi-function keys can be used for function selection, Pinyin input, number input and letter input;
- ***key:** input * character;
- **# key:** input # character;
- **F1 and F2 function keys:** different pages have different functions, refer to Chapter 4;

◆ **Indicator light and key description in manual control zone:**

- **Forbidding indicator light:** green. When master control lock points to " Forbidding ", it is normally on; when it points to "Allowing", it goes off;
- **Allowing indicator light:** green. When master control lock points to "Allowing", it is normally on; when it points to "Forbidding", it goes off;
- **Feedback light:** red. When output port receives feedback signals from all equipment, it is normally on; after feedback stopping or resetting, it goes off;

- **Fault light:** yellow. When output interface has fault, it is normally on; after troubleshooting or resetting, it goes off;
- **Start light:** red. When output interface starts, it is normally on; after stopping or resetting, it goes off;
- **Stop light:** red. When the equipment first starts and then stops, it is normally on; after resetting goes off;
- **Forbidding/allowing lock:** when control lock points to "Forbidding", multi-wire panel keys are invalid; when control lock points to "Allowing", start key and stop key can be directly operated to control active output of direct control unit;
- **Start key:** press starting indicator light to start the controlled equipment;
- **Stop key:** when starting indicator light is on, press STOP key and stop indicator light is on. Starting indicator light goes off, and all controlled equipment stop.

III. Operation

1. Starting up, self-check and shutdown

1.1 Starting up

Open the main power supply switch, standby power supply switch in the control panel, and then the system starts to load various configuration information and initialize after power on, go to starting up guidance interface. After starting up interface is over, go to self-check state, the system carries out starting up process according to current working state.

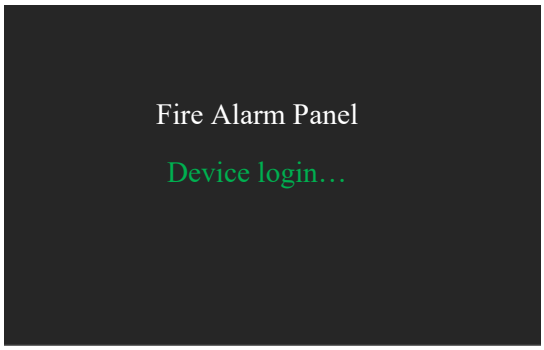


Fig. 3-1 Starting up guidance

◆ **Startup process in debugging status**

When the control panel is in debugging state, the system goes to login selection interface, with 2 options, as shown in Fig. 3-2.

- If there is on operation within 10s or press "F1" key, the system will log in directly.
- Press "F2" key, and the system will go into all registered interface, as shown in Fig. 3-3.

Fig. 3-2 Log in selection

Fig. 3-3 Register all

◆ **Startup process in monitoring state**

When the control panel is in monitoring state, the system will skip login selection interface.

1.2 Self-check

When the control panel is self-checking, all indicator lights on main panel and direct control zone are are flashing. At the same time, the loudspeaker sends the sound like fire fighting truck and ambulance，system self-check will be displayed on the LCD.

After self-check, the system goes into normal monitoring interface in Fig. 3-4. The Logo is on the top of the interface; current operating state of the host is in the middle; current time is on the bottom.

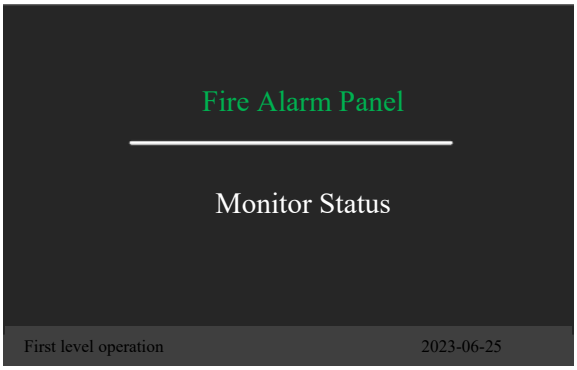


Fig. 3-4

1.3 Shut down

Turn off standby power supply switch, main power supply switch in the control panel, and then the control panel will power off and shut down.

Note:

Because lithium iron phosphate rechargeable battery packs are used in control panels, the battery has tiny self-discharging current and it is necessary to charge periodically for maintenance. If the battery is not used for a long time, it shall be charged for 24 hours every 3 months at least.

If main power supply has a fault, the battery capacity is almost empty from the control panel working to automatic protection of standby power supply. So it is necessary to restore main power supply and charge the battery for 24 hours.

2. Keyboard operation and menu system

2.1 Keyboard introduction

1) There are 12 character keys, 9 menu keys and 13 special function keys on main control panel of the control panel.

2) Character key refers to number or character key used to input data, including: "*", "#", number key(0~9). Number key is also used as shortcut key going into the menu quickly.

3) Menu key refers to the key used by the customer, including "▲","▼","◄","►","F1","F2", "√ ", "×", "☰".

4) Special function key can be used to have access to corresponding menu items quickly or for direct operation irrespective of menu key, including: "Alarm", "Manual/auto lock","Linkage Startup", "Information confirmation","Self-check", "Mute","Reset", "Inspection", "Startup", "Stop" and " Operation state control lock "

2.2 Keyboard input

1) Data input

When inputting data, one cursor on the screen indicates current data input position, press ◄► to move the cursor; there are many data input areas, press ▼▲ to switch data input areas; when inputting data, press required character key. During the course of inputting data, the content can be modified. Move the cursor to corresponding position, and press required character key.

When inputting data, the system will exit from current data input state according to specified time if there is no operation for a long time. The data will not be saved.

2) T9 input method description

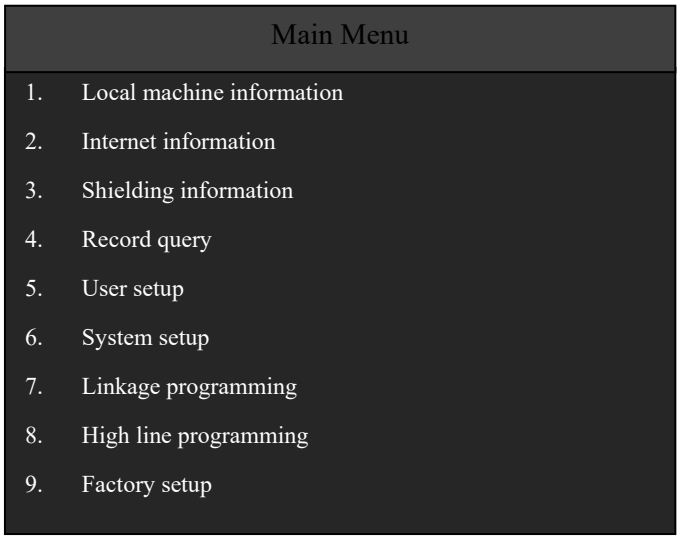
Select number key (2~9) corresponding to each letter according to required English. Each key is only pressed once irrespective of the location on the key. After pressing the key every time, English combination list and character list on LCD will be the most possible and common English combination and characters.

Note: Each level of password is the key to modifying the control panel. The password shall be kept by specially-assigned persons to prevent the control panel from being modified by irrelevant personnel. If disobeying the above regulations leads to control panel fault or alarm failure, our company will not be responsible for it.

2.3 Menu input

The control panel menu structure includes main menu and several sub-menus, which is simple and easy for operation. Press "☰" key to go into main menu interface of the system, as shown in Fig. 3-5.

Fig. 3-5 System Menu



Selection operation of the menu follows two methods:

- In menu interface, use ▲▼ to select menu items, then press "√ " key to go into sub-menu interface of the menu, press "×" key to return to the previous menu.

- In menu interface, use number key to input corresponding number key of the menu directly, i.e., select this menu item and go into sub-menu interface.

For example: in order to inquire control panel ID information, first press "main menu" key to go into main menu interface, the press number key "1" to go into local machine information inquiry interface, press number key"6" to go into control panel ID information interface, as shown in Fig. 3-6.

Fig. 3-6 control panel ID

Main menu includes 9 items in total. Go to the menu according to the above method. Press "×" key to return to the previous menu. If there is no operation for a long time, the control panel will return to the previous page automatically.

3. Local machine information

The control panel local machine information includes six sub-menus, such as "login information", "circuit information", "board card information", "login again", "repeated code detection" and "control panel ID"; main interface as shown in Fig. 3-7.

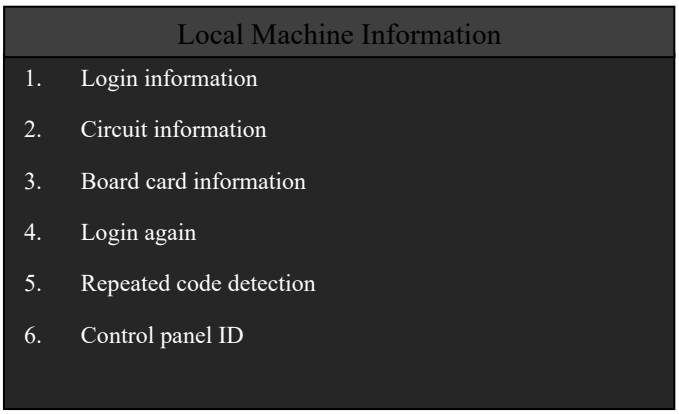


Fig. 3-7 Local machine information

3.1 Login information

When viewing control panel login information, open login statistics information interface by "login information" menu in local machine information menu interface, as shown in Fig. 3-8; use to obtain login information of all types of equipment.

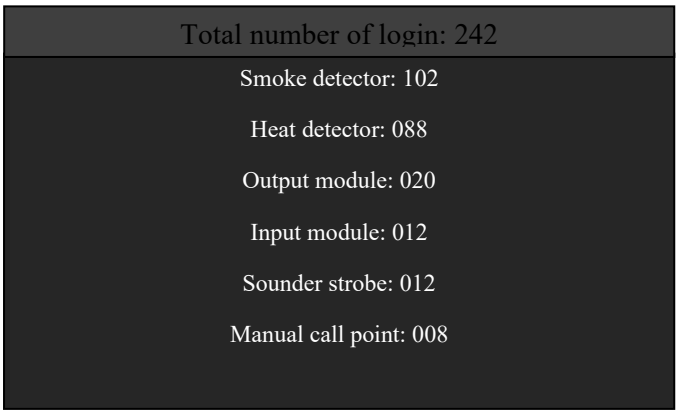


Fig. 3-8 Login information

3.2 Equipment information

View login state and type of 200 current bus equipment of the control panel; if it is not logged in, No Register will be displayed. Logged-in address displays detailed equipment type and name, as shown in Fig. 3-9, use ▲▼ to view all equipment information.

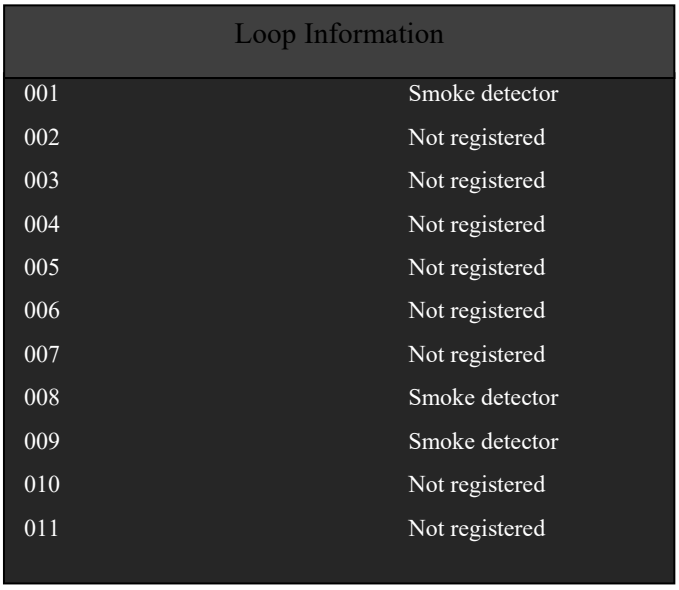


Fig. 3-9 Equipment information

3.3 Board card information

View board card type of control panel expansion board card, as shown in Fig. 3-10.

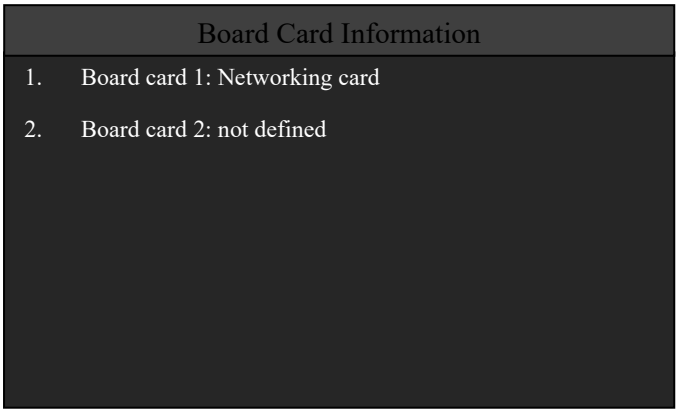


Fig. 3-10 Board card information

3.4 Log in again

This function is to register all bus equipment again. Administrator operation authorization is required. If current operation level is administrator operation level, register directly. Otherwise, it is necessary to input administrator operation password.

After registering, the control panel display interface is as shown in Fig. 3-3. Login statistics information is as shown in Fig. 3-8.

3.5 Duplicate code detection

Checking for duplicate bus equipment addresses involves representing each device with a rectangular bar graph. If there are duplicates, the bar graph corresponding to the duplicated address will increase in height. Devices without registration will not display a bar graph.

3.6 Control panel ID

Select control panel ID information menu to go into ID information interface as shown in Fig. 3-6 to view local machine ID.

4. Networking information

The control panel networking information interface can display the address and type of the control panel networked with local machine directly. When no control panel is networked, networking information interface will display no networking host information, as shown in Fig. 3-11.

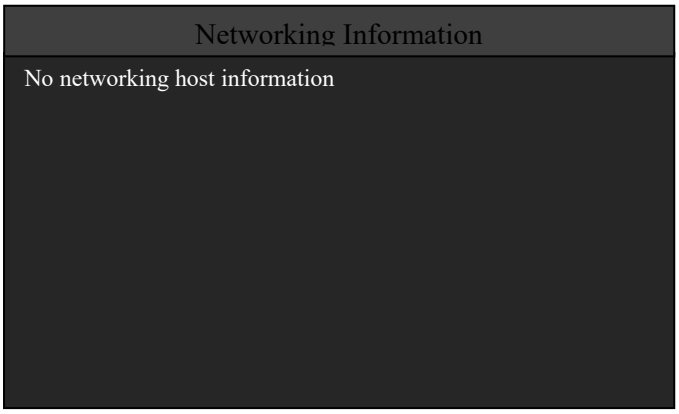


Fig. 3-11 Networking information

5. Shielding information

View information list of shielded equipment. Shielded equipment information includes shielding time, equipment type, quadratic code and installation position of equipment, serial number of current equipment and total number of shielded equipment, as shown in Fig. 3-12.

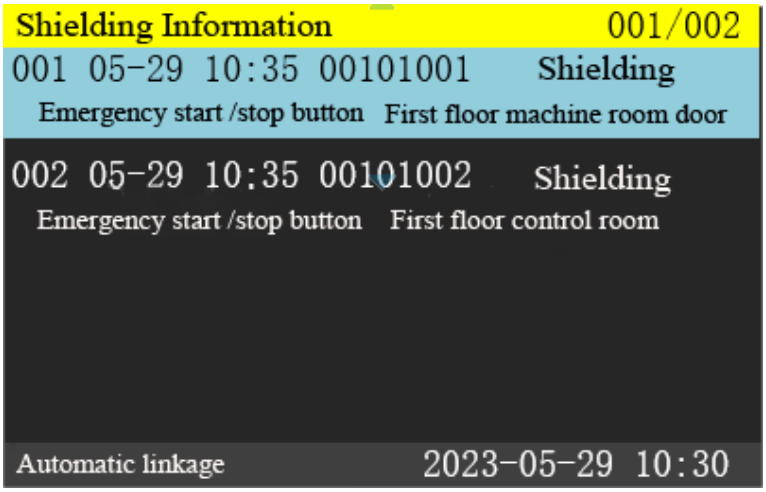


Fig. 3-12 Shielding information

6. History record

The control panel history record includes five sub-menus, such as "fire alarm record ", "linkage record ", "fault record", "other record" and "all recorded"; main interface is as shown in Fig. 3-13.

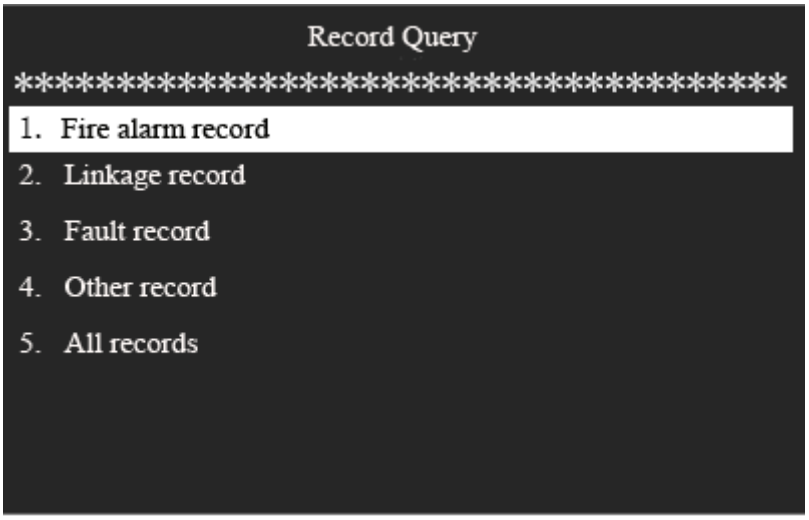


Fig.3-13 History record

The history record interface can display alarm information of all equipment or component connected with local machine, arranged in inverted order according to occurrence time. The interface includes equipment alarm type, serial number of alarm record, total number of alarm records, equipment alarm time, equipment type, quadratic code of equipment and installation position; fire alarm history record interface is as shown in Fig. 3-14.

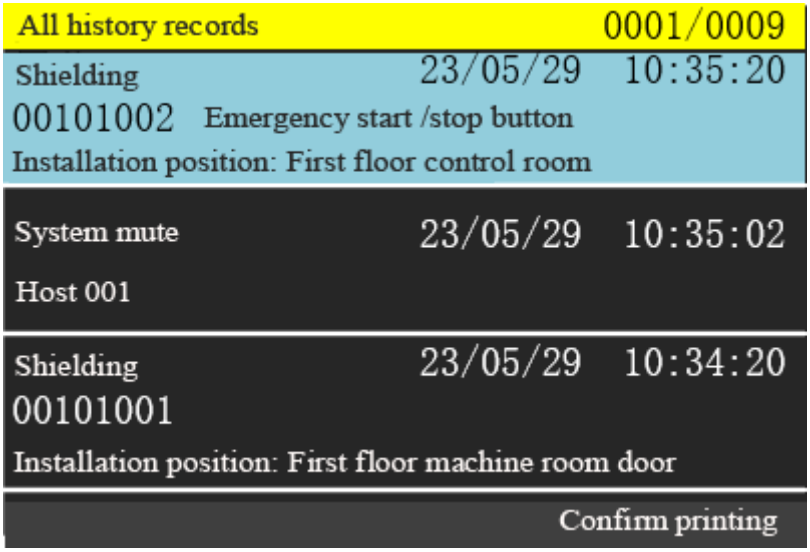


Fig. 3-14 Fire alarm history record

- Fire alarm record includes equipment fire alarm, early warning information and saves the latest 1024 records;
- Linkage record includes start, stop, feedback and feedback restore etc., and saves the latest 1024 records;
- Fault record includes all faults and troubleshooting information, such as main power supply fault, standby power supply fault and communication fault etc., and saves the latest 1024 records;
- Other record includes equipment monitoring, monitoring restore, shielding, shielding ×, reset and mute etc., and saves the latest 1024 records;

- All records include all abnormal state and operation information of the equipment, and save the latest 4096 records;

7. User setup

User setup requires user operation level. If current operation level is user operation level, the operator can go into user setup interface directly. Otherwise, user password shall be input (consult equipment distributor). User setup includes 8 sub-menus, such as "time setup ", "print setup ", "sound setup ", " playing setup ","output setup", "start/stop equipment", "shielding equipment" and "simulating fire alarm". Main interface is as shown in Fig. 3-15.

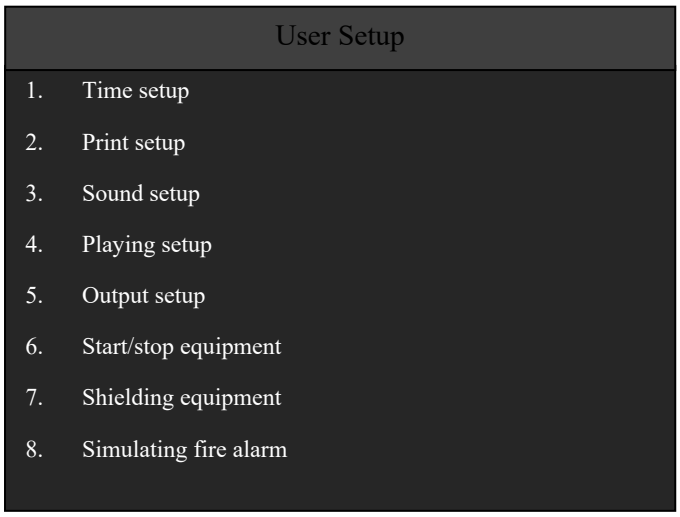


Fig. 3-15 User setup

7.1 Time setup

In user setup interface, press number key 1 or move the cursor to 1, then press "√ "key to go into time setup; time setup can be used to modify current time of control panel; after selecting, open time setup interface, input year, month, day, hour and minute by number key and then press"☰" to save and adjust current time, as shown in Fig. 3-16.

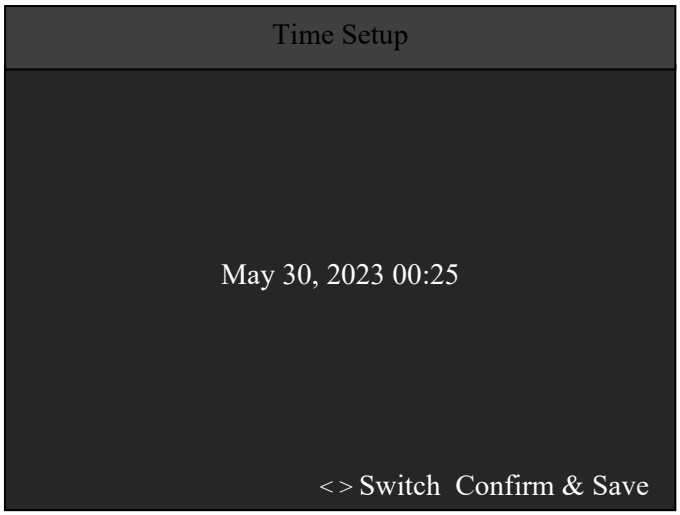


Fig. 3-16 Time setup

7.2 Print setup

In user setup interface, press number key 2 or move the cursor to 2, and then press "√ " key to go into print setup interface as shown in Fig. 3-17. After going into this interface, print setup includes four branches, such as master switch of printer, fire alarm information, linkage information, fault

information and other information. By and keys, select different information, press and keys to switch print switch. After setup, press "√ " to save.

Note: When master switch of the printer is closed, the control panel will not print any information.

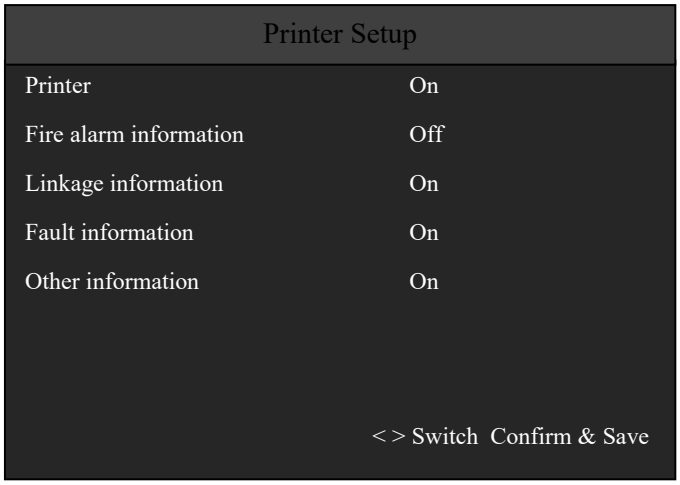


Fig. 3-17 Printer setup

7.3 Sound setup

In user setup interface, press number key 3 or move the cursor to 3, then press "√ " key to go into sound setup interface as shown in Fig. 3-18. After going into this interface, press and keys to switch selected items, press and keys to switch optional items of selected items; after selecting, press "√ "key to save. "key sound" indicates whether pressing key accompanies with sound prompt or not.

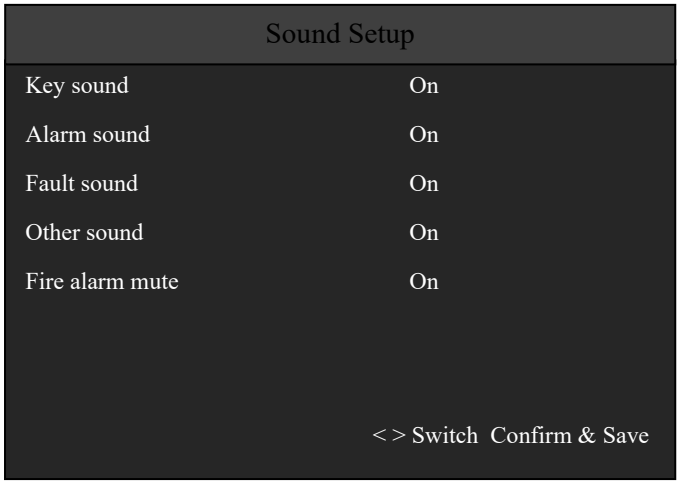


Fig. 3-18 Sound setup

7.4 Playing setup

In user setup interface, press number key 4 or move the cursor to 4, and then press"√ "key to go into broadcast setup interface. Priority setup can be "sound-light priority" or "broadcast priority"; set up sound-light and broadcast playing time according to the requirements; press "√ " key to save, as shown in Fig. 3-19.

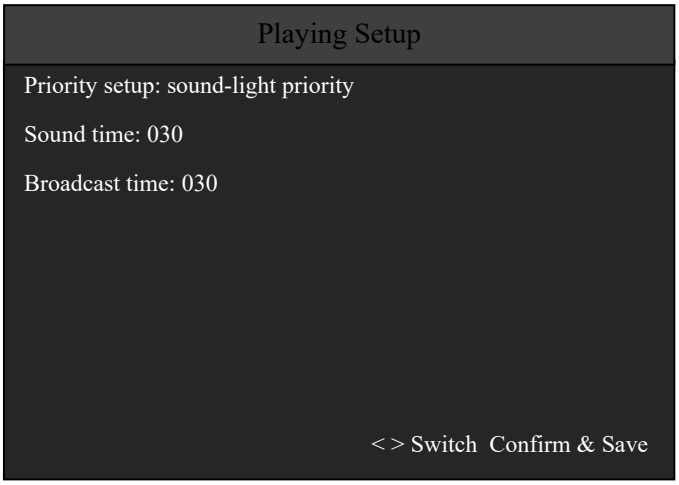


Fig. 3-19 Playing setup

7.5 Output setup

In user setup interface, press number key 5 or move the cursor to 5, and then press"√ "key to go into output setup interface. Output setup can be "fire alarm output", "fault output" or "power supply output", press "√ " key to save, as shown in Fig. 3-20.

When "fire alarm output" is selected, the SG+/SG- ports of the control panel are activated in the presence of fire alarm information. When "fault output" is selected, the ports are activated when

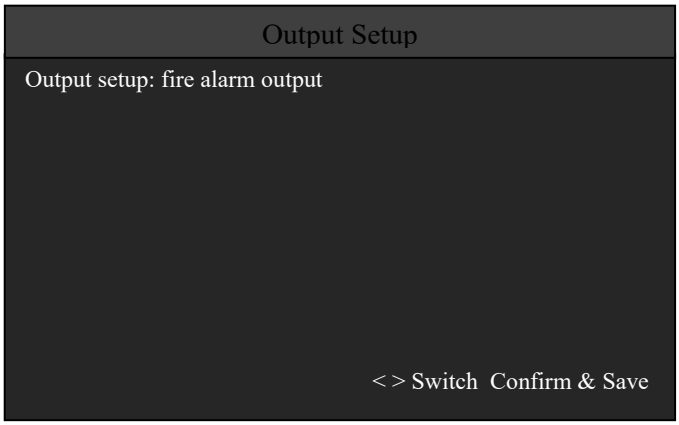


Fig. 3-20 Output setup

fault information is detected by the control panel. Select "power output" results in a continuous output of 24V auxiliary power from the ports.

7.6 Start/stop equipment

In user setup interface, press number key 6 or move the cursor to 6, and press "√ " key to go into start/stop equipment interface. In order to facilitate engineering debugging, the customer can start/stop the equipment according to equipment code, as shown in Fig. 3-21. Press number key to input code of the equipment to be simulated, and then press “F1 key” to start the equipment to be simulated, press “F2 key” to stop the equipment to be simulated. Simulation equipment will link related equipment in automatic linkage mode. Please operate with caution.

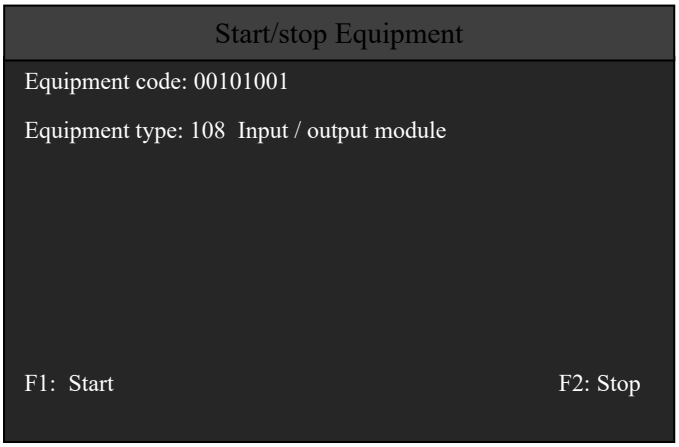


Fig. 3-21 Start/stop equipment

7.7 Shielding equipment

In user setup interface, press number key 7 or move the cursor to 7, and then press "√ " key to go into shielding equipment interface. For equipment shielding and ×ing shielding, refer to 3.7.5 Starting/stopping equipment.

Note: shielding equipment is easy for engineer debugging. The user can shield the equipment according to equipment address number. After shielding, the control panel will not receive and process all information of the equipment at shielding address. Please operate with caution.

7.8 Simulating fire alarm

In user setup interface, press number key 8 or move the cursor to 8, and then press "√ " key to go into simulating fire alarm interface. The user can simulate fire alarm according to address number or quadratic code of equipment, as shown in Fig. 3-22.

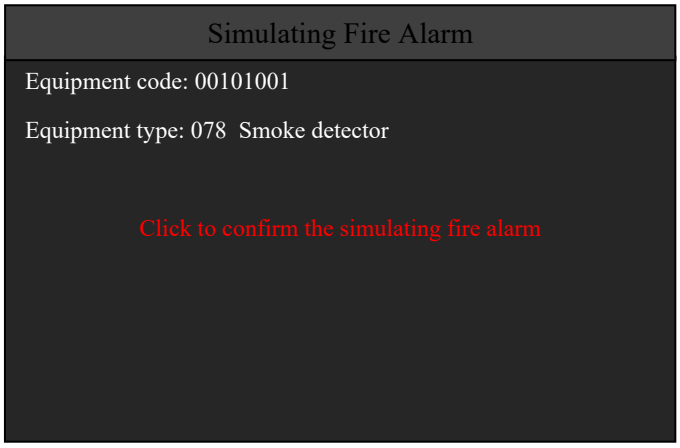


Fig. 3-22 Simulating fire alarm

Note: simulating fire alarm is easy for engineer debugging. Simulating equipment will link related equipment in automatic linkage mode. Please operate with caution.

8. System setup

System setup can be done by administrator operation level. If current operation level is administrator operation level, the operator can go to system setup directly. Otherwise, it is necessary to input administrator password (consult equipment distributor). control panel system setup includes nine sub-menus, such as "network setup", "equipment definition", "multi-wire definition", "fire display panel definition", "password setup", "operation mode", "linkage mode", "manual registration" and "bus protocol ". Main interface is as shown in Fig. 3-23.

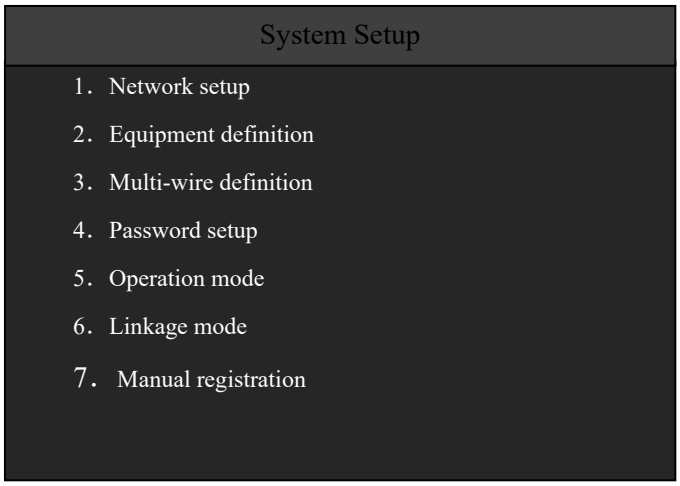


Fig. 3-23 System setup

8.1 Network setup

In system setup interface, press number key 1 or move the cursor to 1, press "√ " key to go into network setup interface. In this interface, set up control panel network address, installation position, network information and network command receiving and sending configuration as shown in Fig. 3-24.

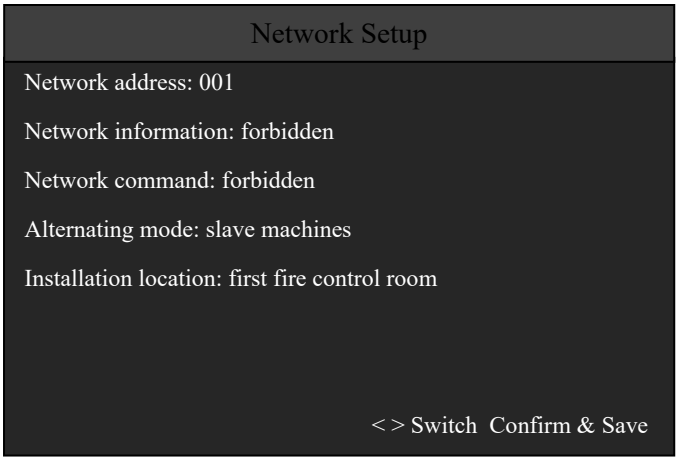


Fig. 3-24 Control panel setup

Among them, network information, network command configuration, alternate mode and other options can be turned on or off by pressing the corresponding functions on the direction buttons.

8.2 Equipment definition

In system setup interface, press number key 2 or move the cursor to 2, and then press "√ " key to go into equipment definition interface. In this interface, define or modify equipment code, equipment type, equipment property and equipment installation position of bus equipment, as shown in Fig. 3-25.

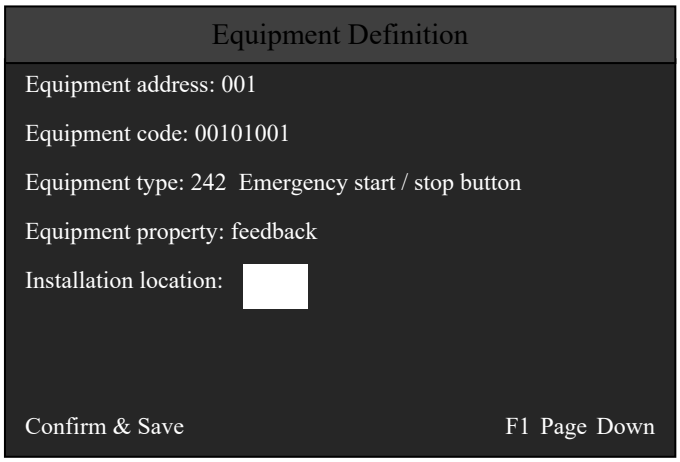


Fig. 3-25 Equipment definition

8.3 Multi-wire definition

In system setup interface, press number key 3 or move the cursor to 3, and then press "√" key to go into multi-wire point definition interface. In this interface, 6-circuit multi-wire point output mode can be set as electrical level output or pulse output (Pulse time is 5 seconds) , and equipment code, equipment type and installation position information of multi-wire point can be defined.

8.4 Password setup

In system setup interface, press number key 5 or move the cursor to 5, and then press "√" to go into password setup interface. In this interface, modify user password and administrator password of the control panel, as shown in Fig. 3-26. Select password type and press direction key to switch user password or administrator password.

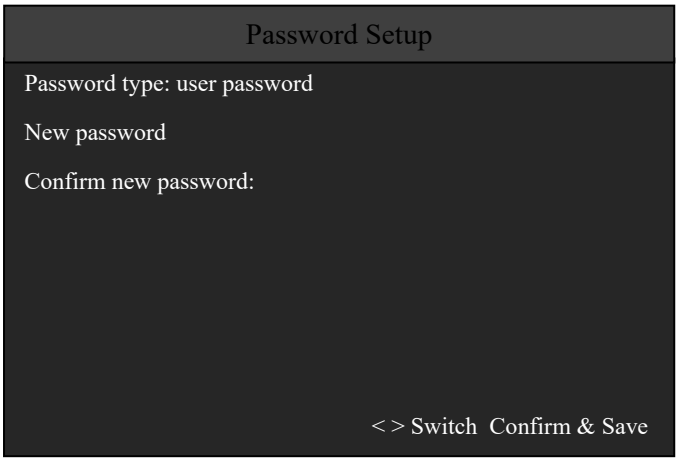


Fig. 3-26 Password setup

8.5 Operating mode

In system setup interface, press number key 6 or move the cursor to 6, and then press "√" key to go into system operating mode interface. In this interface, set current operating mode of the control panel to debugging mode or monitoring mode, as shown in Fig. 3-27.

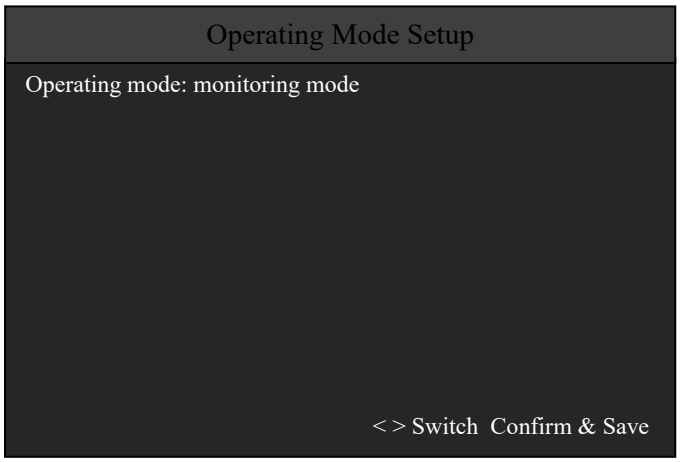


Fig. 3-27 Operating mode setup

8.6 Linkage mode

In system setup interface, press number key 7 or move the cursor to 7, and then press "√ " key to go into linkage mode interface. In this interface, the user can modify local machine linkage mode manually, as shown in Fig. 3-28.

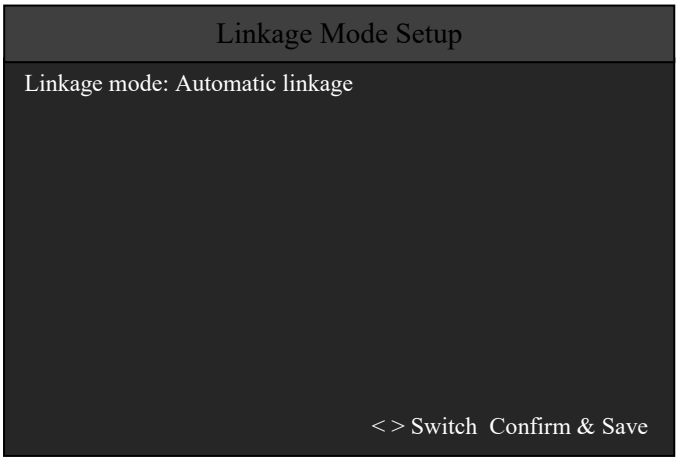


Fig. 3-28 Linkage mode

Automatic linkage mode: linkage equipment executes linkage and start linkage equipment according to manual/auto state of control panel and the configured linkage relationship;

Manual linkage mode: After receiving a fire alarm, the control panel does not execute the relevant linkage automatically; instead, manual startup the linkage equipment is required.

8.7 Modify equipment manually

In system setup interface, press number key 8 or move the cursor to 8 and then press "√ " key to go into manual modifying equipment interface. In this interface, the user can modify registering state of specified address equipment manually, as shown in Fig. 3-29.

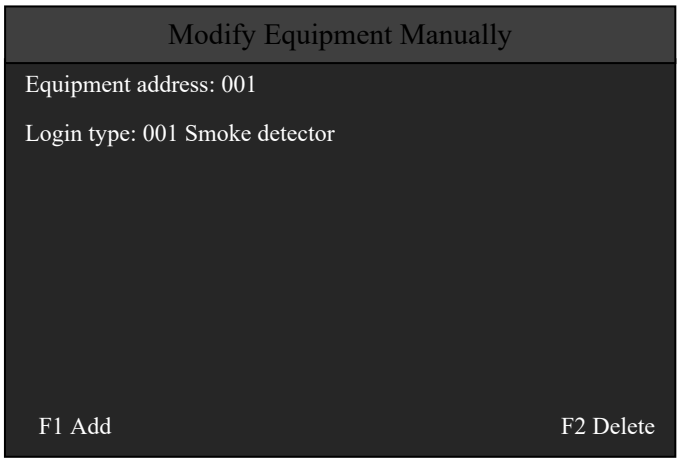


Fig. 3-29 Modify equipment manually

9. Linkage programming

Linkage programming requires administrator operation level. If current operation level is administrator operation level, the operator can go into the interface directly. Otherwise, it is necessary to input administrator password (consult equipment distributor). The control panel linkage programming supports 64 linkage formulas. The operation interface is as shown in Fig. 3-30.

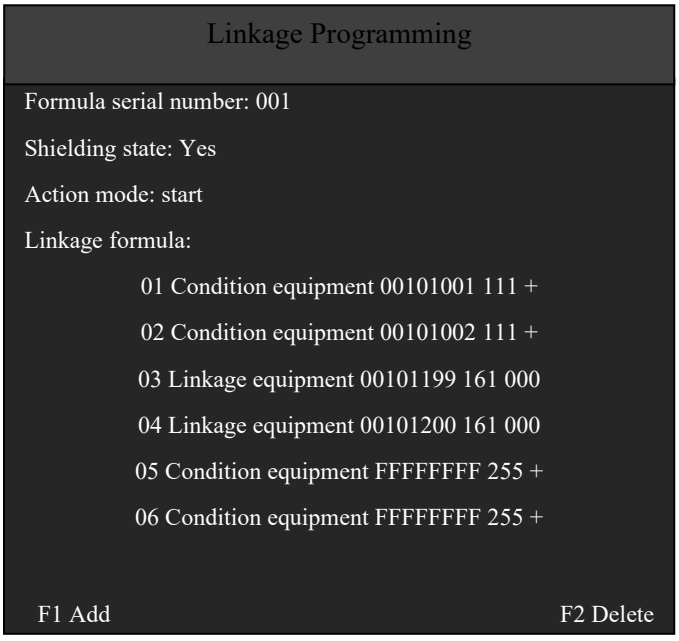


Fig. 3-30 Linkage programming

10. Offline programming

Offline programming requires administrator operation level. If current operation level is administrator operation level, the operator can go into offline programming interface directly. Otherwise, administrator password shall be input (consult equipment distributor). Offline programming interface can either import defined project files by U disk or online download them by offline programming software. Its main interface is as shown in Fig. 3-31.

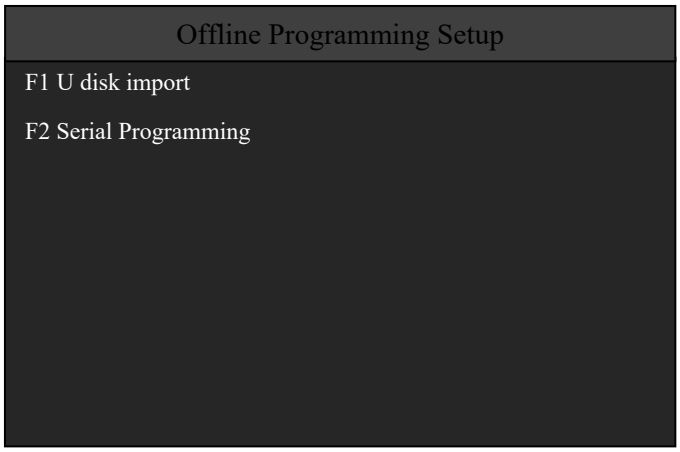


Fig. 3-31 Offline programming

After importing or downloading the project, modifications to the equipment code, type, attributes, and installation location information of existing equipment in the control panel can be made.

11. Factory setup

System setup requires administrator operation level. If current operation level is administrator operation level, the operator can go into system setup interface directly. Otherwise, administrator password shall be input (consult equipment distributor). Main interface is as shown in Fig. 3-32.

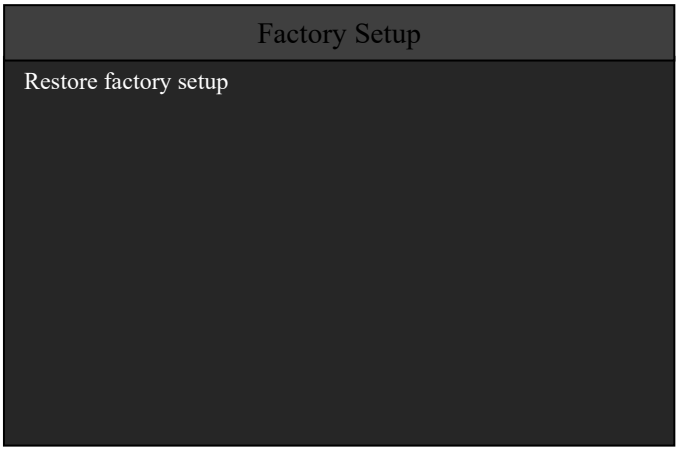


Fig. 3-32 Factory setup

After restoring factory setup, the control panel will clear all user configuration information, including equipment definition, password setup, network address etc. After restoring, register bus equipment again and define related content. Please operate with caution.

IV. Installation and debugging

1. Check

1.1 Unpacking check

- Project configuration check

After the control panel arrives at site, check if packing list of control equipment conforms to project configuration, and check if the control panel package is damaged. If not, unpack and check goods in the container one by one according to packing list, including installation and operation

manual, fuse, spare screws, and control panel key etc. If everything is OK, check if control panel appearance is inclined or damaged. If there is any in-conformity, please contact with customer service department of our company.

- Internal configuration and wiring check of the control panel

According to Chapter 2 in the manual, check internal configuration in the control panel, and check connection among various components and make records, in order to use them in the process of installation and debugging. If fastening screws of internal wire in the control panel is loose or fall off, or connectors are loose, or there is in-conformity or unclear identification, please contact our company.

1.2 Check startup without load

After the control panel arrives at site, first check startup without load **(ensure the control panel is not connected with external wire before startup).**

- Measure AC 220V power line input voltage at site by AC voltage range of the multimeter, ensure AC input voltage is between 187V and 242V.
- Turn on main power supply switch and standby power supply switch in turn, and check self-check process of control panel startup: startup animation shall be on LCD. All indicator lights on gas partition are on and loudspeaker can send self-check sound.
- After completing self-check, the control panel goes into monitoring interface and operation keyboard gives out ticking sound.
- Measure the bus output voltage (17V-25V) with a multimeter and check if it is normal.
- Any abnormal condition shall be handled according to "Common troubleshooting methods" in Chapter 5. If there is any problem, please contact customer service department of our company.
- After checking startup without load, turn off main power supply switch and standby power supply switch.

2. Installation

2.1 Installation method

The control panel shall be installed where one person on duty is assigned and kept away from the equipment with electromagnetic interference. Adopting wall–mounted type installation structure, the installation dimensions is as shown in Fig. 4-1. Three 3 M6 expansion bolts are used to fasten it on the wall. Horizontal spacing between expansion bolts is 270mm, and vertical spacing 215mm.

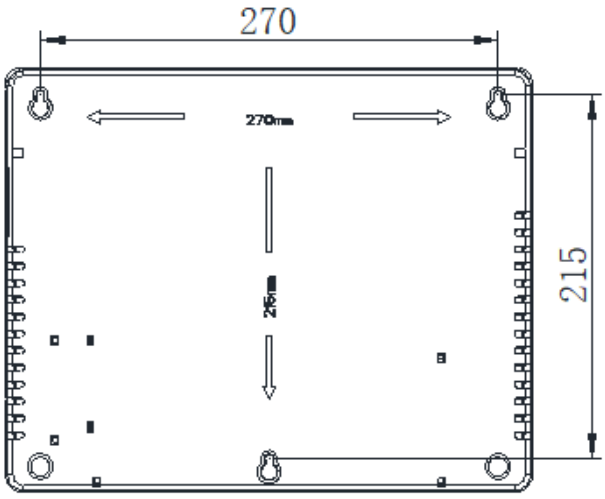


Fig. 4-1 installation dimension

The control panel features knock-out holes for cable outlets in three directions, as shown in Fig. 4-2, ① - Side cable outlet knock-out holes: one on each side, ② Top cable outlet knock-out holes: four in total, ③ Back cable outlet knock-out holes: six in total. Users can select and utilize these based on the specific requirements of the project.

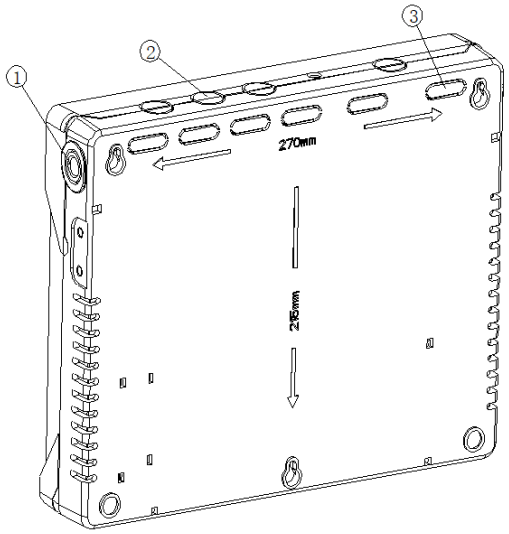


Fig.4-2 cable outlet holes

2.2 Wiring method

Open wiring cover on the top of the control panel to expose wiring terminal. External wiring terminal diagram of the control panel is as shown in Fig. 4-3.

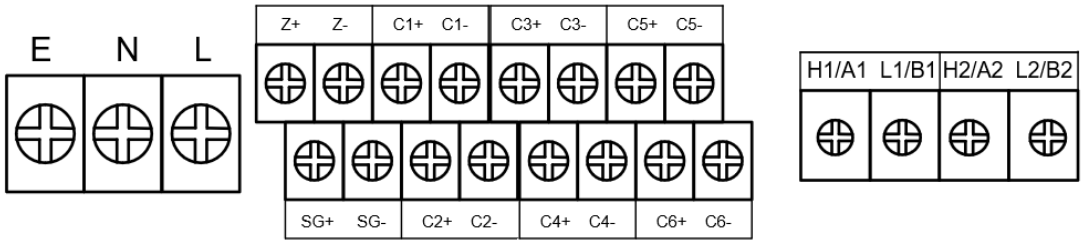


Fig. 4-3 External wiring terminal diagram of the control panel

In which:

- E, N, L: AC 220V input terminal ;
- Z+, Z-：circuit bus output terminal;
- SG+, SG-: sound-light active output terminal, output ability 200mA/24VDC;
- Cn+, Cn-: direct control zone output terminal, n is 1-6.
- H1/A1, L1/B1, H2/A2, L2/B2: External expansion output terminals for connecting CAN network cards and RS485 communication cards

2.3 Wiring requirements

- Circuit bus and networking cable adopts more than 1.5mm2 (NH-RVS).
- Circuit bus, linkage power output wire and communication line shall not go through the same protection pipe with high voltage power line; if they are required to be in the same wiring duct, the baffle shall be used in the wiring duct.

3. Debugging

After wiring, make thorough check and start up for debugging. When debugging, select operating mode as "system debugging mode".

3.1 Preparation before debugging

After the control panel completes testing and everything is OK, connect external equipment and the control panel correctly, after connecting, test it again and fill the result into debugging format for future debugging and following programming and definition.

After wiring, start up for debugging after thorough check. For abnormal condition, refer to Chapter 5 "Fault analysis and troubleshooting" for initial judging and solving.

3.2 Equipment register

Register external equipment again by "Equipment register" menu" in local machine information" in main menu. For detailed operation method, refer to "Login again" in 3.3.4;

Define the equipment after registering, modify quadratic code of the equipment, describe information and equipment parameter. For detailed definition type and operation, refer to related contents in 3.8.2"Equipment definition".

3.3 Registering result viewing

After the equipment is registered successfully, check if login result is correct. For detailed method and interface, refer to equipment information in 3.3.2. Check if coding equipment is registered normally:

a. Unregistered, it was not called because maybe coding is wrong or equipment signal wire has no voltage.

b. Incomplete registration, possibly due to duplicate codes or wiring faults.

3.4 Component setup

For operation, refer to equipment definition in system setup menu, or import directly by U disk and download directly by a serial port.

3.5 Overall debugging

3.5.1 Connect all external equipment wire to the control panel, switch on control panel power supply; after the control panel logs in, "the system is debugging…" will be displayed on LCD.

3.5.2 Equipment shielding and ×ing shielding setup

After the control panel logs in, if there is a detector which sends an alarm (fault or wrong alarm), it is impossible to go on with the next step and it is necessary to shield the detector. For shielding method, see related items in the menu. It is pointed out: if one detector is set to the unshielding state, for example the detector logged in, but now it is not installed (has been removed), the control panel will display the detector fault, unless it will be shielded again or be replaced with a new detector. Otherwise this fault cannot be eliminated.

3.5.3 Main power test

Shut off main power supply switch, and main power supply fault is given within 100 seconds, main power supply working indicator is off.

3.5.4 Standby power test

Shut off standby power supply switch, and standby power supply fault is given within 100 seconds, standby power supply working indicator is off.

3.5.5 Press self-check key on the panel to check lights and sound of the panel.

3.5.6 Select the second item “user setup” in main menu, and select time setup to adjust date and time. Input two digits of year, month and day, and then press "√" to save, press "×" to exit from main menu interface.

3.5.7 Select the first item information viewing in main menu, then select the fourth item "history record "in sub-menu, check if "history record " inquiry function is normal, press "×" key to return to main menu interface.

3.5.8 Linkage Test

a. When linking with a fire alarm (linkage type) control panel, programming of the linkage formula on the fire alarm (linkage type) control panel is required, with a minimum of two conditions for it to be valid.

b. Test and inspect the linkage situation of each device according to the system-defined linkage relationships to ensure stable and reliable system operation.

3.5.9 Simulating fire alarm test

Simulate fire alarm test, i.e., manually "add smoke" or press "alarm button" to test alarm system functions and check if system debugging and running are successful.

Note: when simulating fire alarm, if unnecessary, important linkage equipment, such as elevator, electric switch cabinet, gas generator can not link. If necessary, protection measures shall be taken.

3.5.10. Fill Debugging and Acceptance Record and make test run on the alarm system.

After debugging, set system operating mode to "normal monitoring" mode, and reset complete machine, set operation level to "Level I".

Up to now, system debugging is over. 120-hour test run period starts.

According to General Debugging Manual, fill in Debugging and Acceptance Record. Before filling in, read the description in Debugging and Acceptance Record and filling requirements in General

Debugging Manual in details. Fill in completely and accurately, and then sent it to the company. The company will provide after-sales service according to Debugging and Acceptance Record.

If there is any abnormal condition, please refer to common troubleshooting methods in the rear of debugging manual.

V. User Notice

1. Common fault troubleshooting

Table 5-1 Common fault troubleshooting

No.	Fault phenomenon	Fault reason	Troubleshooting methods
1	No indication or abnormal operation after startup	Power supply is abnormal Main board line connection is poor.	Check if power line is in good state Check if main board connection line is in good state
2	Send standby power supply fault information after startup	The battery is under voltage	Connect the main power supply and charge continuously for more than 12 hours
3	The number of login is not equal to the actual condition	Front-end equipment and the base are in poor contact Front-end equipment address point is repeated Line abnormal	Reinstall the equipment, and make sure the contact is good Check repeated code Check the wiring
4	Logged in, but not send fault information	This address point is shielded The equipment at this address point is damaged	Check if this address point is shielded Replace the equipment at this address point
5	Logged in, but do not send fire alarm	This address point is shielded This address point equipment is damaged	Check if this address point is shielded Replace the equipment at this address point
6	Bus circuit has no output	Bus circuit short circuit	Remove bus circuit cable first; after resetting, check if bus output terminal outputs
7	Printer does not print information	The printer not enabled The printer is out of paper	Go into printing type corresponding to menu setup Replace the paper

2. Important prompt

2.1 Before working, relevant operators must obtain job certificates. Unrelated operators shall not operate or press various buttons and switches.

2.2 Password and case key shall be kept by specially-assigned person. The password shall not be let out.

2.3 It is forbidden to remove the control panel without permission and move it with power on; before wiring, plugging and pulling connectors, power off.

2.4 Wipe the control panel with soft cloth sprayed only by neutral detergent or glass cleaning agent; it is forbidden to use volatile detergent, and do not spray detergent onto the control panel directly.

2.5 When the control panel has bus fault, shut down immediately. After troubleshooting, restart it.

3. Note

3.1 The control panel shall be transported and carried in package. Handle with care to prevent from being damaged in the handling process.

3.2 The control panel shall be stored in package, and kept in ventilated and dry place. Do not expose in the open air.

3.3 After project decoration, unpack and install the control panel.

3.4 Operation environment of the control panel shall be sunscreen, heatproof and damp proof.

3.5 Replacement of fuses and other accessories must ensure replacement with parts of the same specifications.

3.6 The control panel contains a lithium iron phosphate rechargeable battery. In case of battery failure, restore the main power supply promptly and charge the battery for 12 hours. For long periods of inactivity, the battery should be charged for at least 12 hours every 3 months.

3.7 Sealed lithium batteries are used as standby power in the control panel, and it is strictly prohibited to use general charging devices for charging.

VI. Brief introduction of Printer

1. Thermal printing paper specification

Thermal printing paper of the printer is 57mm wide, 40mm OD and 12mm ID.

2. Replace printing paper

Before the printer is delivered, one roll of printing paper is provided. If it is used up, the user can purchase printing paper according to the specification. Then replace printing paper as follows:

- Open front cover of the printer;
- Take out the paper element;
- Keep printing paper with thermal sensitive coating upwards, put it into paper bin, leave 20mm of the paper outside and close front cover.

VII. Please contact

Thank you for selecting JB-QBL-TX3000D Intelligent Fire Alarm Control Panel. Please keep in close contact, and we will provide timely and high quality service to you

VIII. Declaration

This manual functions and operation methods of JB-QBL-TX3000D Intelligent Fire Alarm Control Panel in details. We strive to make the product information the most latest and accurate. But it is impossible to contain all detailed applications or predicted requirements.

The appearance, specifications, and functions of this control panel may be subject to changes or improvements. The manual will be updated accordingly with product upgrades. Any alterations will not be individually notified; the physical product shall be the determining factor. Feel free to contact our company for the latest version, which can be obtained free of charge. For further inquiries, please do not hesitate to reach out to us at any time.

In addition, please follow the items:

1. The total number of connected equipment should comply with the requirements of GB50116, *Design Specification of Automatic Fire Alarm System*, 3.1.5. The total number of equipment connected to the bus circuit should not exceed 200 points, with a reserve capacity of at least 10% of the rated capacity. The total number of equipment connected to the linkage bus circuit should not exceed 100 points, with a reserve capacity of at least 10% of the rated capacity.
2. Bus short-circuit isolators should be installed on the control panel bus, with each isolator protecting no more than 32 fire detectors, manual alarm buttons, modules, and other fire equipment. When the bus crosses fire compartments, a bus short-circuit isolator should be installed at the crossing point.
3. After project acceptance, never add any equipment without permission. If it is necessary to add, please contact with our technicians. At the same time, newly-added equipment requires separate system, which cannot affect normal work of the system.
4. After project acceptance, do not modify internal structure and external line without permission. If necessary, please contact with our technicians.
5. After the second decoration at site, the system where this series of control panels shall be debugged and tested by specially-assigned persons. After qualification, it can be put into use.
6. If accepted project has a fault alarm, please handle with it in time.

Tanda Development Pte. Ltd will not be responsible for any loss or damage caused by disobeying the above items.

Appendix I Equipment type table

Code	Equipment Type	Code	Equipment Type	Code	Equipment Type
1	Fire Alarm Control Panel	31	Fire Power Supply Monitor	61	Fire Detector
2	Mimic Panel	32	Reserve	62～65	Reserve
3～8	Reserve	33	Fire Prevention Roller Shutter	66	Temperature Sensing
9	Repeater Panel	34	Fireproof Door Detector	67	Point Type Temperature Sensing
10	Combustible Gas Control Panel	35～45	Reserve	68	S Point Type Heat Detector
11	Electric Fire Monitoring Equipment	46	Flammable Gas Detector	69	R Point Type Heat Detector
12～19	Reserve	47	Point Type Gas Detector	70	Linear Heat Detector
20	Fire Hydrant System	48	Standalone Gas Detector	71	S Linear Heat Detector
21	Water Spraying Extinguishing System	49	Linear Gas Detector	72	R Linear Heat Detector
22	Gas Extinguishing Control Panel	50～51	Reserve	73	Fibre Heat Detector
23	Foam Extinguishing System	52	Electric Fire Equipment	74～75	Reserve
24	Dry Powder Extinguishing System	53	Residual Current Detector	76	Smoke Detector
25	Smoke Control And Exhaust System	54	Thermometric Electric Detector	77	Ion Smoke Detector
26	Fireproof Door And Roller Shutter	55～56	Reserve	78	Photoelectric Smoke Detector
27	Emergency Broadcast	57	Detection Loop	79	Beam Smoke Detector
28	Fire Telephone System	58	Repeater Panel	80	Aspiration Smoke Detector
29	Emergency Lighting Evacuation	59	Manual Call Point	81～85	Reserve
30	Fire Linkage Power Supply	60	Fire Hydrant Button	86	Multi-Sensor Detector

Code	Equipment Type	Code	Equipment Type	Code	Equipment Type
87	Smoke & Heat Multi-Sensor Detector	118	Electric Control Device	140	Valve Drive Device
88	Photosensitive & Heat Multi-Sensor Detector	119	Reserve	141	Fireproof Door
89	Photosensitive & Smoke Multi-Sensor Detector	120	Module	142	Fireproof Valve
90～95	Reserve	121	Input Module	143	Ventilated Air Conditioner
96	Flame Detector	122	Output Module	144	Foam Liquid Pump
97	Ultraviolet Detector	123	Input & Output Module	145	Pipeline Solenoid Valve
98	Infrared Detector	124	Relay Module	146	Household Smoke Detector
99～104	Reserve	125～126	Reserve	147	Household Heat Detector
105	Photosensitive Detector	127	Fire Hydrant Pump	148	Household Combustible Gas Detector
106	Fireproof Door Closer	128	Water Spraying Mist Pump	149	Household Control Panel
107	Fireproof Door Magnet Switch	129	Water Mist Pump	150	Smoke Prevention Fan
108	Normally Open Monitoring Module	130	Stabilized Pressure Pump	151	Reserve
109	Normally Closed Monitoring Module	131	Fire Water Tank	152	Smoke Exhaust Fire Valve
110	Carbon Monoxide Detector	132～133	Reserve	153	Normally Closed Air Vent
111	Methane Gas Detector	134	Spraying Pump	154	Smoke Vent
112	Propane Gas Detector	135	Water Flow Indicator	155	Electric smoke Barrier
113	Multi-sensor Electric Fire Detector	136	Signal Valve	156	Roller Shutter Control Panel
114	Image Detector	137	Alarm Valve	157	Fireproof Door Monitor
115～116	Reserve	138	Pressure Switch	158	Water Level Control Panel
117	Gas Control Panel	139	Reserve	159	Reserve

Code	Equipment Type	Code	Equipment Type	Code	Equipment Type
160	Alarm Device	183	Broadcast Panel	197	Lighting Power Distribution
161	Sounder Strobe	184	Bus Panel	198	Power Distribution
162	Alarm Bell	185	Loo[Card	199	Air Compressor
163	Electric Door Closer	186	Transmission Module	200	Gas Releasing Alarm
164	Deluge Pump	187～188	Reserve	201～240	Reserve
165	Fire Water Monitor	189	Smoke Ventilator	241	Manual Operation Of Panel
166	Electric Door	190	Blower	242	Emergency Start/Stop Button
167	70 Degree Fire Damper	191	Forced Lowering Of Elevator	243	Valve
168	280 Degree Fire Damper	192	Half Of Roller Shutter Lowers	244	Gas Spraying
169～179	Reserve	193	Full Roller Shutter Lowers	245～253	Reserve
180	Communication Card	194	Solenoid Valve	254	Local Machine Power Supply
181	Output Interface	195	Emergency Lighting	255	Reserve
182	Multi-Wire Panel	196	Spraying Indication		