Addressable Fire Alarm Control Panel

User Manual

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Preface EN 54 Information

Address Fire Alarm Control Panel (FACP) complies with the requirements of EN 54-2 1997+A1: 2006. In addition to the basic requirements of these standards, the panel conforms to the following optional requirements.

Option		EN 54-2 Clause
Indications	Fault signals from point	8.3
	Total loss of power supply	8.4
	Alarm counter	7.13
Controls	Delays to outputs	7.11
	Dependency on more than one alarm signal	7.12
	Disablement of each address point	9.5
	Test condition	10
Outputs	Fire alarm device(s)	7.8
	Fire alarm routing equipment	7.9
	Automatic fire protection equipment	7.10
	Standardized I/O interface	11

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Content

Chapter 1 Product Introduction 1
1.1 Product Description 1
1.2 Main Features 1
1.3 Appearance of Front Board 2
1.3.1 Key Board Description 2
1.3.2 Zone Button Board Description 6
1.4 Internal Structure Introduction 6
1.4.1 Internal Structural Components Description 6
1.4.2 Power Area Component Description 8
1.4.3 Internal Wiring 9
1.4.4 Jumper Cap Functions and Usage Instructions 10
Chapter 2 Wiring and Installation 13
2.1 Wiring 13
2.1.1 Wiring Requirements 13
2.1.2 Wiring Settings 14
2.2 Installation 19
2.2.1 Installation Precautions 19
2.2.2 Unpacking and Check 20
2.2.3 Wall-Mount FACP Installation 20
Chapter 3 Debugging and Use 23
3.1 Debugging 23
3.1.1 Preparation before Debugging 23
3.1.2 Power on and Test 23
3.1.3 Trial 25
3.2 Normal Use 25
Chapter 4 Basic Operation 26
4.1 Operation/shutdown Description 26
4.2 User Interface De scription 26
4.3 Operation Permission Description 28
4.4 Shortcut Description 29
4.5 Change Printer Paper 31
Chapter 5 Status Interface 32
5.1 Fire Status Interface 32
5.2 Active Interface 33
5.3 Fault Interface 35
5.4 Disable Interface 37
5.5 Test Interface 39
5.6 Feedback Interface 40
Chapter 6 View 42
6.1 View Loop Status 42
6.2 View Environment Curve 43
6.3 View Point Status 44

6.4 View Component Status 45
6.5 View Historical Event 46
6.6 View Local Information 47
Chapter 7 Operation 49
7.1 Disable 49
7.2 Enable 55
7.3 Manual ACT/STOP 56
7.4 Test 58
Chapter 8 Settings 60
8.1 System Settings 60
8.2 Main/Sub Server Connection Settings 61
8.3 Network Function Settings 61
8.4 Screen Settings 61
8.5 Project Information Settings 61
8.6 Point Settings 61
8.7 Password Settings 62
8.8 Printer Settings 62
8.9 Delay Settings 62
8.10 Local Output Settings 62
Chapter 9 Programming 65
9.1 Zone Configuration 65
9.2 Zone Button Configuration 66
9.3 Zone & Address Configuration 66
9.4 Loop Mode Configuration 68
9.5 Loop Point Configuration 68
9.6 Routing Setup 69
9.7 Day/Night Mode Configuration 70
9.8 Type A Dependency Mode 70
9.9 Type B Dependency Mode 71
9.10 Linkage Formula 72
9.11 Formula Help 74
Chapter 10 Debug 75
10.1 Loop Registration 75
10.2 Duplicate Address Handling 76
10.3 Address Configuration 76
10.4 Fault Detection Configuration 77
10.5 USB Configuration & Upgrade 78
10.6 System Point Maintenance 80
10.7 Custom Point Name 81
10.8 Debugging Mode 81
10.9 Buzzer Output Disable 82
10.10 Restart 82
10.11 Restore Default Parameters 82
10.12 Restore Factory Settings 82

Chapter 11 Maintenance Management 83
11.1 Daily Maintenance Management 83
11.2 Professional Maintenance Management 84
Appendix A Simple Fault Handling Methods 86
Appendix B Emergency Handling Methods and Requirements 88
Appendix C Point Code Table 89
Appendix D Power Calculation Table 92
Appendix E Key-to-Symbol Mapping 96
Appendix F Abbreviation 97
Appendix G Specification 100
Appendix H Dimension 102
Appendix I Packing List 103

Chapter 1 Product Introduction

1.1 Product Description

This product is suitable for fire detection and security alarm. It can match various peripherals such as smoke detector, heat detector, sounder strobe and manual call point to form a protection system. Once an alarm (manual alarm) is detected, it can be immediately sent to the platform.

1.2 Main Features

- Maximum 2 loops, 500 points loading capacity.
- Features a ring-loop design where a single point of failure does not affect system operation. The maximum transmission distance exceeds 1500 meters (RVS 2*1.5 mm^2 twisted pair cable is recommended).
- Equipped with a color LCD and a new UI design for an enhanced interactive experience.
- Supports Ethernet networking, allowing remote access and programming via a personal computer with the CPT tool. Also compatible with the HIK-Central Professional platform for unified visual management.
- Supports custom programming logic and offers rich interfaces including programmable relay output, CAN, RS-485, 100M Ethernet, USB, and external power supply, significantly expanding the product's application scenarios.
- Supports remote diagnosis and firmware upgrades. The system features self-diagnosis, self-error-correction, and self-recovery functions to ensure operational reliability and reduce on-site maintenance costs.
- Includes a built-in mini thermal printer for real-time printing of various system information.
- Features a USB port for connecting external USB drives, providing a more convenient method for on-site debugging and maintenance.
- Supports wide-range AC 110~220V power input and utilizes a main/backup power management system for higher battery efficiency and ensured system stability.

1.3 Appearance of Front Board

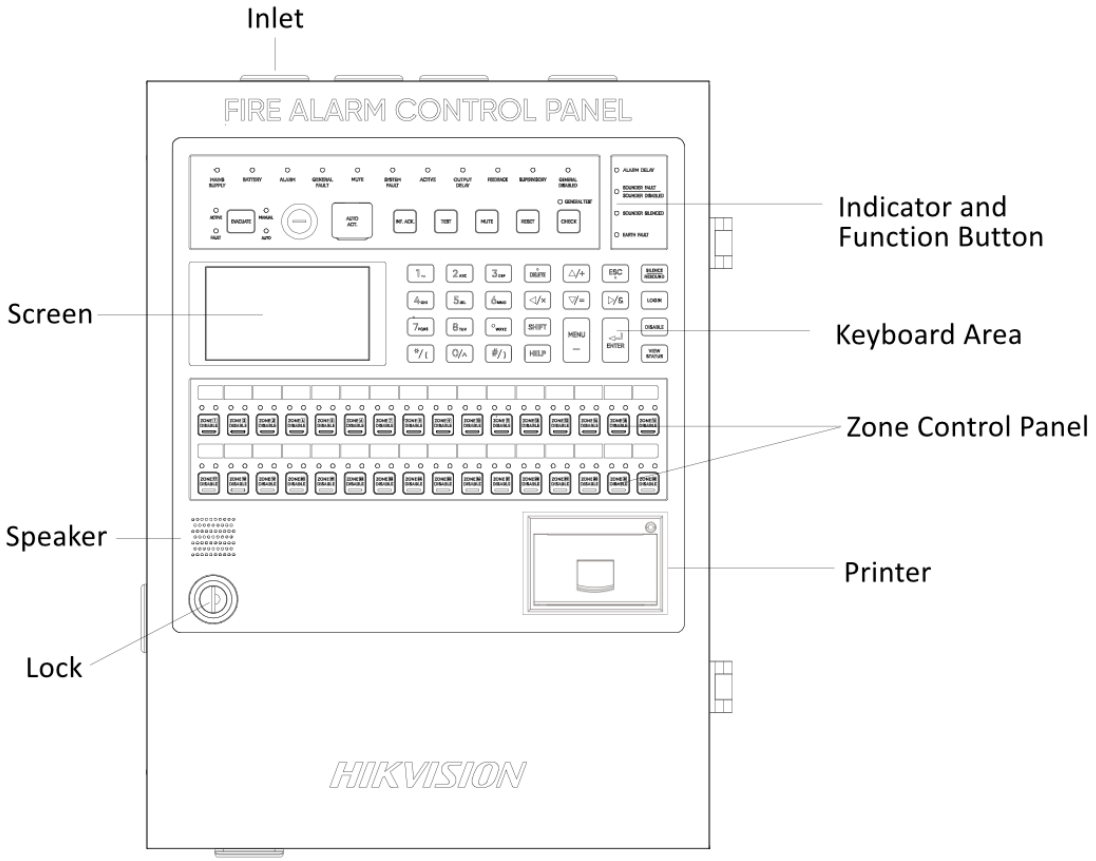


Figure1-1 HF-A102 and HF-A101 Appearance of Front Board

Note

The product images in this manual are all schematic diagrams, please refer to the actual product.

1.3.1 Key Board Description

The key board mainly includes indicator lights and function buttons, display screen and keyboard

area.

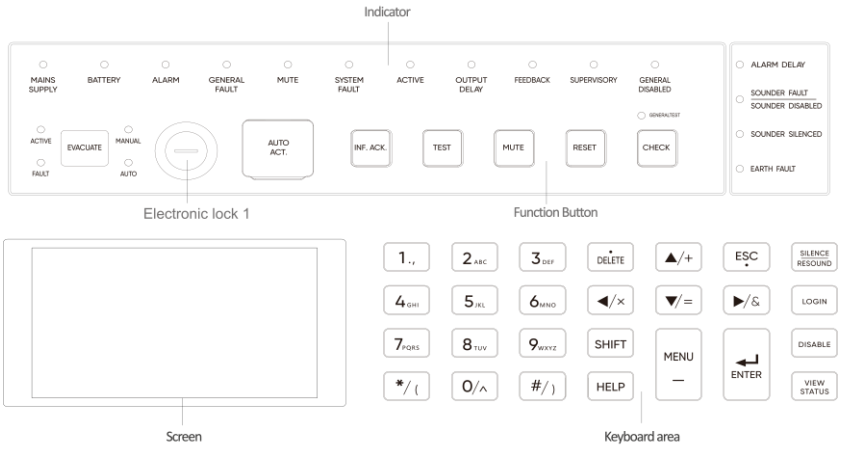


Figure1-2 Key Board

Indicator Description

Table 1-1 Indicator Description

Indicator	Color	Status Description
MAINS SUPPLY	Green	Always on during main power supply.
BATTERY	Green	Always on during backup power supply.
ALARM	Red	Always on when there is fire alarm signal input, flashes when there is early warning.
GENERAL FAULT	Yellow	Always on when there is fault signal input.
MUTE	Yellow	Always on when speaker are muted by the **MUTE** button.
SYSTEM FAULT	Yellow	When there is an abnormality in the main control program and the system cannot run normally, it stays on.
ACTIVE	Red	Always on when successfully active and flashes when waiting for feedback signal.
OUTPUT DELAY	Yellow	Always on when there is delay signal input.
FEEDBACK	Yellow	Always on when there is feedback signal input.
SUPERVISORY	Red	Always on when there is supervision signal input.
GENERAL DISABLED	Yellow	Always on when one or more device/zone are disabled.

Indicator	Color	Status Description
ALARM DELAY	Red	Always on when there is alarm delay signal input.
SOUNDER FAULT/ SOUNDER DISABLED	Yellow	Flashes when there is fault signal input; Always on when there is disabling signal input.
SOUNDER SILENCED	Yellow	Always on when there is silence signal input.
EARTH FAULT	Yellow	Always on when there is earth fault signal input.

Function Button Description

Table 1-2 Function Button Description

Button	Function Description
EVACUATE	Press the button and enter the password, the FACP will enter evacuate status, all the sounder strobe and bell will be active.
Electronic Lock 1	Convert FACP to “Manual”/“Auto” status. ● When E-lock 1 is switched to Manual status, you should press the active button manually to active the point according to the linkage formula. ● When E-lock 1 is switched to Auto, the point can be active automatically according to linkage formula when fire alarm occurs.
INF.ACK.	When fire alarm occurs, the fire alarm display page will identify the alarm. Press the button to confirm it.
TEST	Press the button and enter the password. The device will self-check if the points and sound are normal. When testing, the system will display red-green-blue on the LCD. The indicator light will be all on, and the sound of linkage, fire alarm, fault, and supervisory will be sounded once, and the system will return to the pre-test status.
MUTE	When fire alarm, linkage, and fault events occur in the system, the FACP will generate corresponding sound signal. Press the button to clear the current sound signal. When FACP is in the anti-voicing status, if there is a new event, FACP will send the corresponding audio signal again.
RESET	Press the button and enter the password to reset the fire alarm point (detector, alarm, input module, etc.), linked output module, and fire alarm relay to normal operation.

Button	Function Description
CHECK	Press the button and enter the password to obtain the quantity of each type of points.

Keyboard Description

Table 1 -3 Button Description

Button	Description
Keypad 0~9	Used for entering numbers, letters, etc.
Direction Button	Upper, lower, left, and right direction buttons for moving cursor.
*	Character input. Special uses are indicated in the interface **HELP**.
#	Character input. Special uses are indicated in the interface **HELP**.
Delete	Clear input.
SHIFT	Switch between different types of information.
HELP	Show Help information.
MENU	Enter main menu.
ESC	Back to upper-level menu.
ENTER	Go to the next level menu.
SILENCED/RESOUND	The FACP is equipped with a shared button for Silence and Resound: pressing once silences the current audible and visual alarms, and pressing again causes the alarm outputs to resound.
LOGIN	User permission login.
DISABLE	Shortcut to the disable setting page.
VIEW STATUS	Shortcut to the status page.

Speaker Status Description

Table 1-4 Speaker Status Description

FACP Status	Speaker Status
Fire Alarm/Pre-alarm	Simulated Alarm Sound
Auto ACT/Active/Feedback	Simulated Supervisory Sound
Fault/Disable	Simulated Fault Sound

Note

Priority of audible status when FACP is in multiple status: Fire Alarm > Auto ACT/Active/Feedback > Fault/Disable.

1.3.2 Zone Button Board Description

Zone button board is used for zone control of points. The following diagram contains 16 × 2 zones. Each zone consists of one disable button, two status indicators.

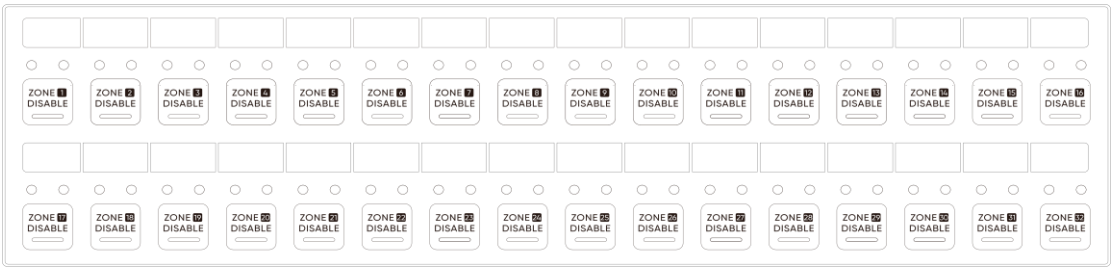


Figure1-3 Zone Button Board

1.4 Internal Structure Introduction

1.4.1 Internal Structural Components Description

The internal structural components of FACP mainly consist of the main board, core board, loop control board, loop board, power board, battery and other components.

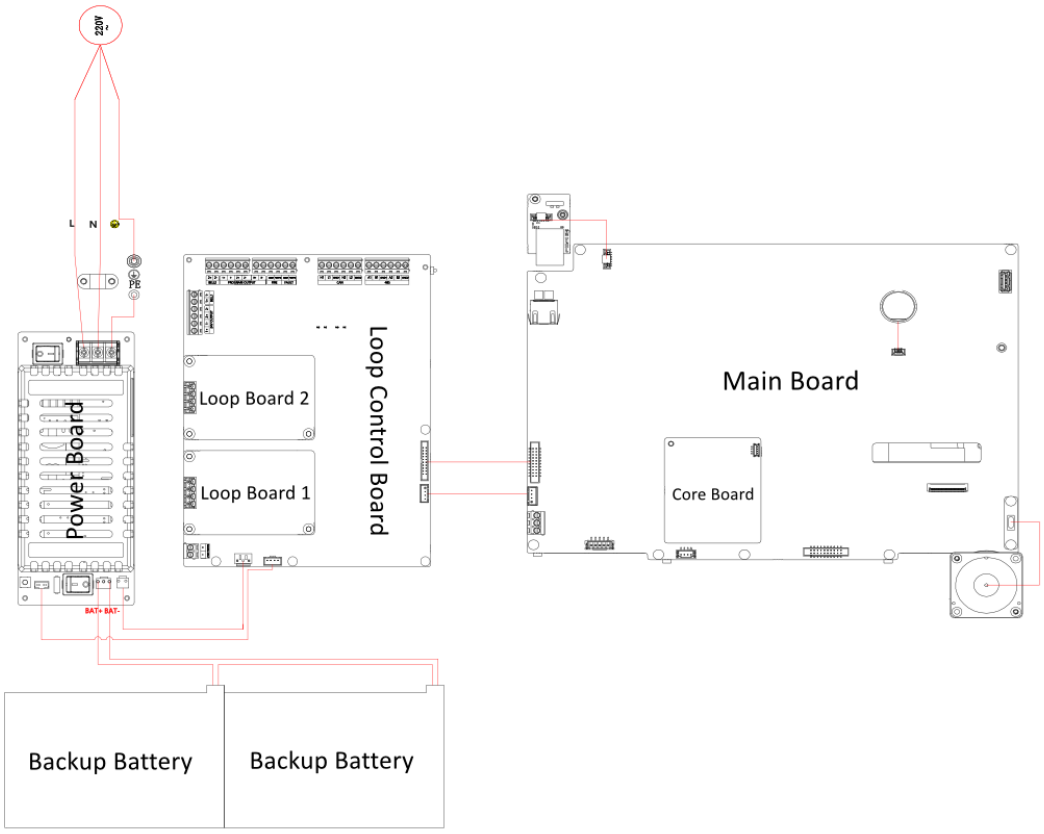


Figure 1-4 Internal Structural Components

Table 1-5 Internal Structural Components Description

Components	Description
Network Interface	Connect FACP to Ethernet and transmit data with the platform.
Loop Control Board	Include RS485, CAN, 24 V out, zone interface, fire alarm relay out, fault relay out, bell out, external power input interface and custom output interface.
USB Interface	Insert U disk for upgrade, import and export.
24V Input Interface	If FACP's built-in power supply and battery are not needed, you can choose to connect a 24V power supply through this interface. When using an external power supply, try to turn off FACP's built-in power supply.
Battery	Mains supply connection, battery connection and change, switch of main power and battery.
Power Board	

1.4.2 Power Area Component Description

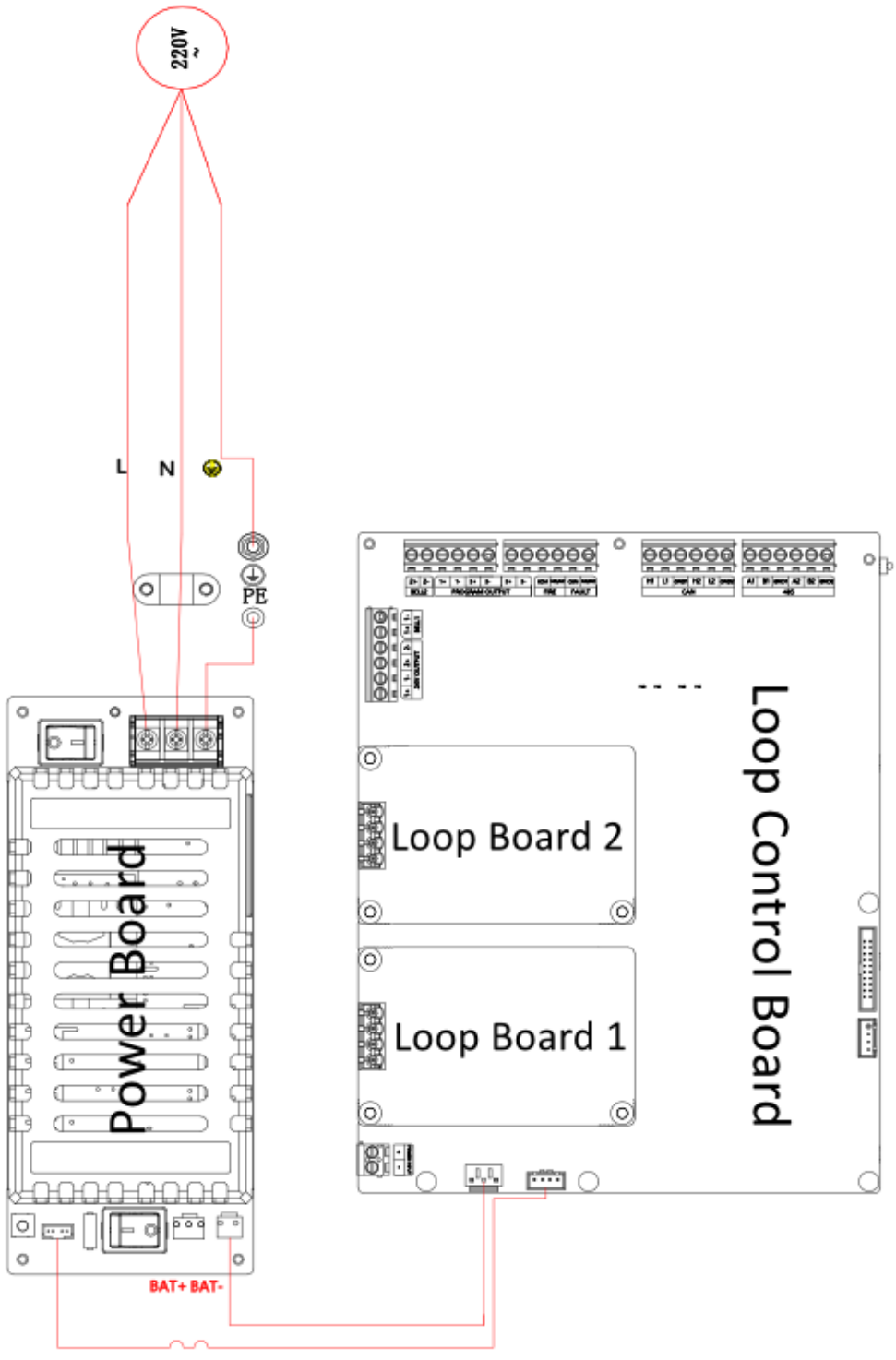


Figure 1-5 Power Supply Area Component

Table 1-6 Power Supply Area Component Description

Part	Description
Battery	Connect backup power supply. Two backup power supply (7000mAh

Part	Description
	/12 V (2 pcs)). Refer to **2.1.2 Backup power Supply Wiring Description** for the backup power connection.
Power Board	Access AC 110 V ~ 240V / 50 Hz ~ 60 Hz fire power supply
Main Power Switch	When the “-” terminal is pressed, the main power will be enabled. When the “O” terminal is pressed, the main power will be disabled
Backup Power Switch	When using backup power only, long press the switch to enable the backup power. Note Use this function with care. When the battery is used up, the battery cannot be charged

1.4.3 Internal Wiring

The internal wiring diagram is as follows:

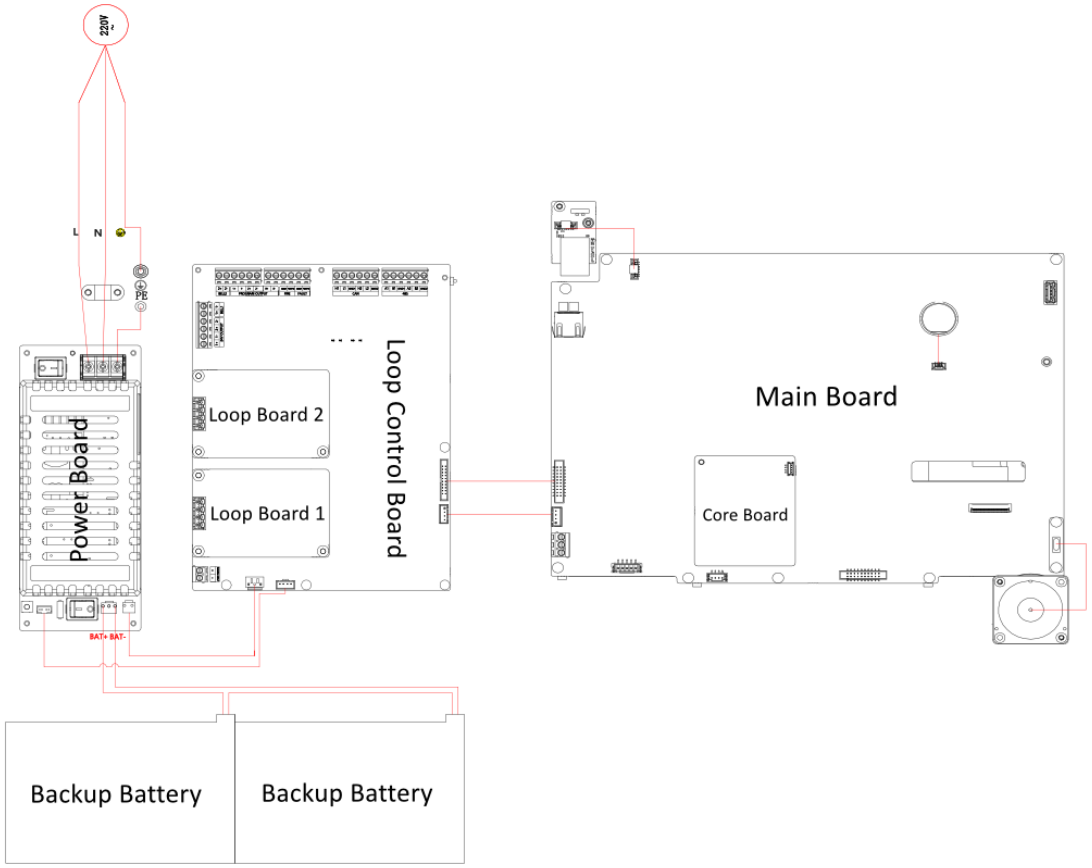


Figure 1-6 Internal Wiring Diagram

1.4.4 Jumper Cap Functions and Usage Instructions

1. Programmable Output

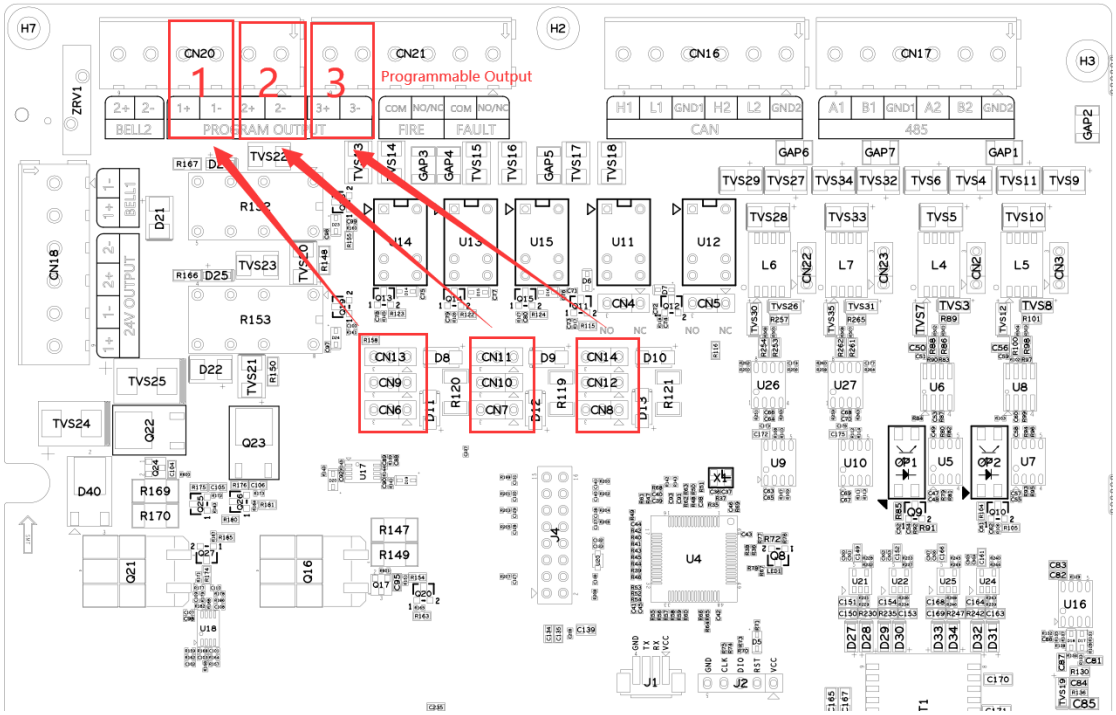


Figure 1-7 Programmable Output

- Jumper cap configuration:

The three outputs have identical functions and identical jumper cap configurations, with active and passive modes available. In active mode, the maximum output is 24V, 0.1A upon activation; in passive mode, a switch signal is output upon activation, and the normally open/normally closed mode can be configured via jumper caps.

- Active mode: upper and lower jumpers to the right, middle jumper to the left



Figure 1-8 Active Mode

- Passive mode: upper and lower jumpers to the left; for normally open, middle jumper to the left; for normally closed, middle jumper to the right

Normally open:



Normally closed:



Figure 1-9 Passive Mode

2. Fire Alarm and Fault Output

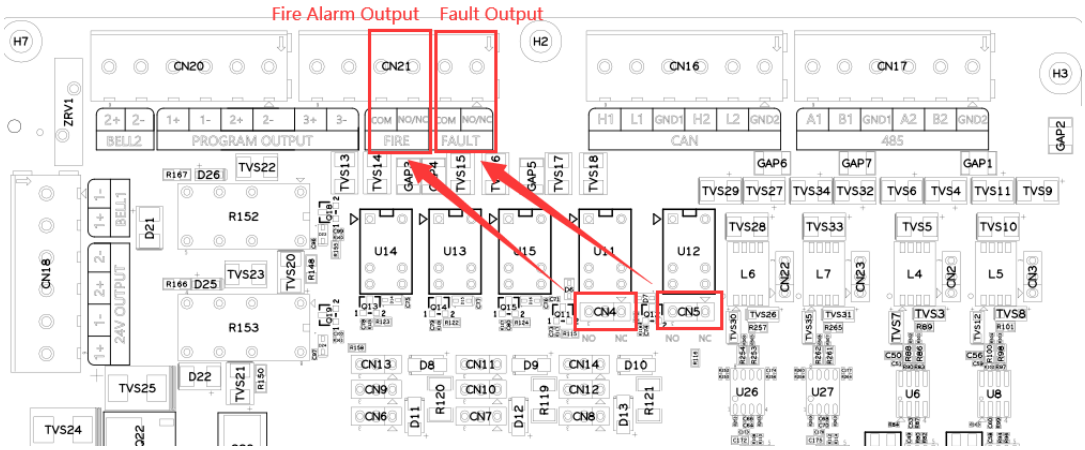


Figure 1-10 Fire Alarm and Fault Output

- Jumper cap configuration:

Both the fire alarm and fault outputs provide a switch signal to the external circuit upon activation, and the normally open/normally closed mode can be configured via jumper caps.

Normally open: jumper to the left



Normally closed: jumper to the right



Figure 1-11 Jumper Cap of Fire Alarm and Fault Output

3. 485 and CAN Terminal Resistor Configuration

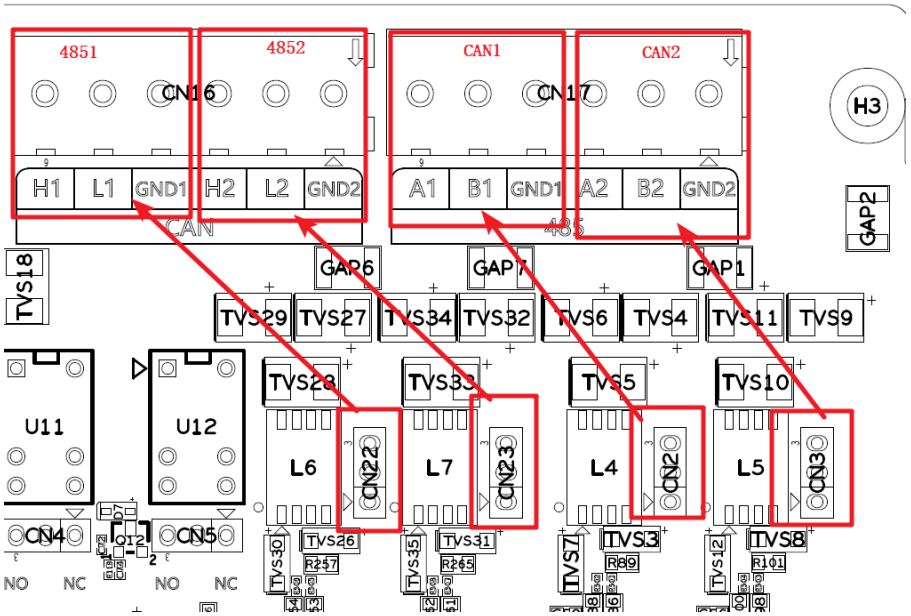


Figure 1-12 485 and CAN Terminal Resistor Configuration

- Jumper cap configuration:

Each 485 interface and CAN interface can be configured with a 120Ω terminal resistor via jumper

caps.

With 120Ω: Without 120Ω:



Figure 1-13 Jumper Cap of 485 and CAN Terminal Resistor Configuration

4. Ground Fault Detection Function Enable/Disable

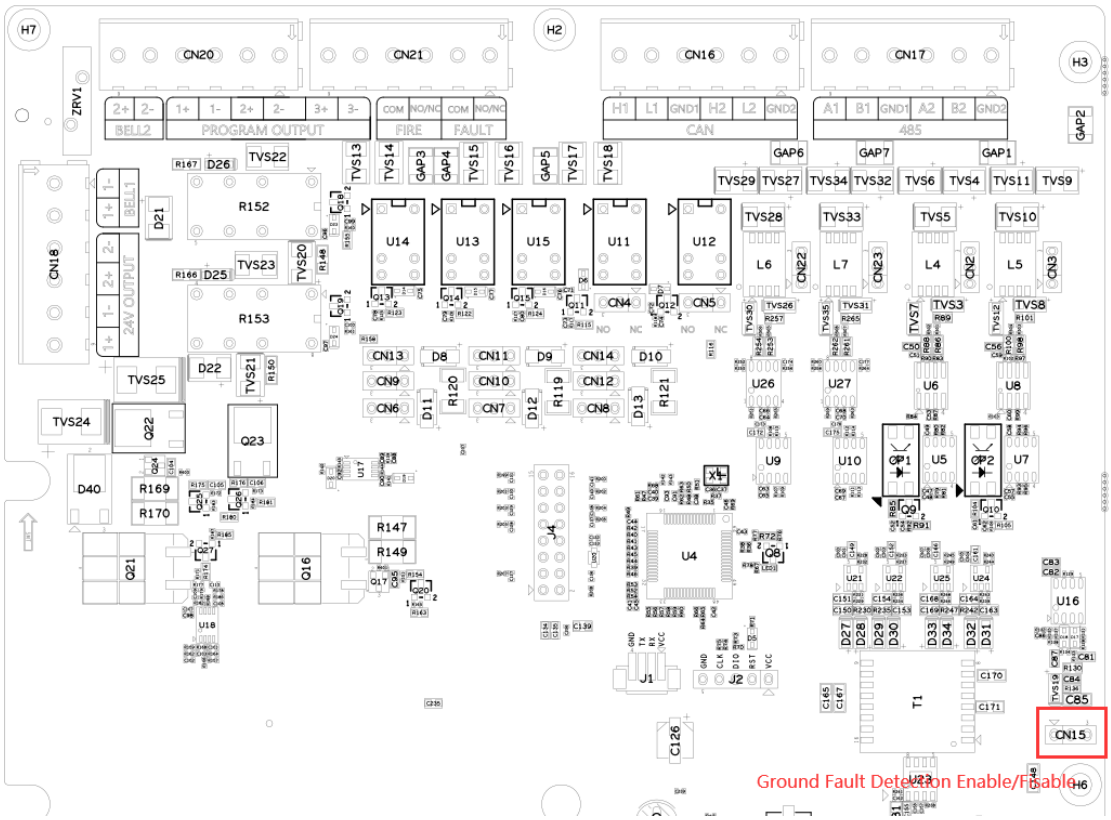


Figure 1-14 Ground Fault Detection Function Enable/Disable

- Jumper cap configuration:

The ground fault detection function can be enabled or disabled via jumper caps.

Enabled: Disabled:



Figure 1-15 Jumper Cap of Ground Fault Detection Function Enable/Disable

---

⚠Danger

Enable this function for troubleshooting ground fault. After troubleshooting is complete, disable this function. It is not recommended to keep this function on all the time.

Chapter 2 Wiring and Installation

2.1 Wiring

2.1.1 Wiring Requirements

Danger

Electric shock risk. Disconnect all power sources during wiring, installation, and repair.

Please follow the following wiring requirements for device wiring:

Cable and Wiring Requirements

- Wiring should comply with the construction drawing and relevant regulations.
- Wires with different voltages and types should not be co-managed.
- The circuit bus can use fire-retardant twisted pair. In consideration of route construction requirements, it is recommended that user should use a twisted-link engineering wire with a section area ≥ 1.5 mm².
- Bus voltage is 27.5V. The voltage between the fire protection bus L+ and the fire protection bus L- should be greater than 18 V.
- It is recommended to use bus or fishbone structure for wiring, and try to avoid multi-level branch and one point.
- When wiring, it is recommended to set the same wire color and permanent ID at the point terminal for subsequent maintenance.
- RS-485 bus recommends the use of RVS2 × 1.5 mm² twisted pair with a communication distance of less than 500 m.

Grounding Requirements

Make sure the device is grounded and the ground resistance value meets the following requirements: Grounding wire: Use a 4 ㎜² copper wire with a grounding resistance of less than 4 Ω.

2.1.2 Wiring Settings

⚠Danger

- The cable connection mode should be connected according to the electrical method of the sales area.
- The connection should be operated by a professional. Disconnect all the power sources before wiring.
- During power connection, the protective ground of the device should be connected to the protective ground of the building device.

Terminal Wiring Description

Loop Board Description

Loop board connects addressable smoke detector, heat detector, manual call point, sounder strobe and other point devices. Each loop can be connected to a maximum of 250 addressable points. The circuit supports two modes, loop circuit (class A) and radial circuit (class B).

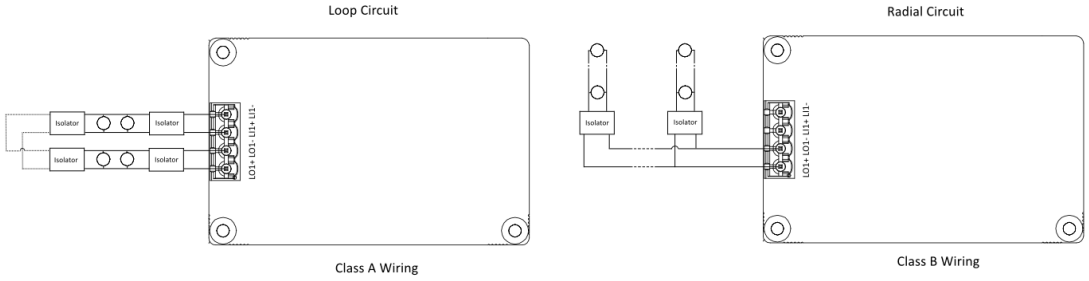


Figure2-1 Terminal Wiring

Table 2-1 Bus Terminal Definition Table

Terminal ID	Terminal Description
LOOP IN+/IN-	● For class A, use the interface form of LOOP IN and LOOP OUT; ● For class B, use the interface LOOP OUT only;
LOOP OUT-/OUT-	

Note

When loop mode is ring loop (Class A), all point devices in the loop are connected, forming a closed circuit. When the system detects a short circuit or open circuit fault, the fault point is automatically isolated, and the unaffected point devices can continue to operate normally.

Loop Control Terminal Description

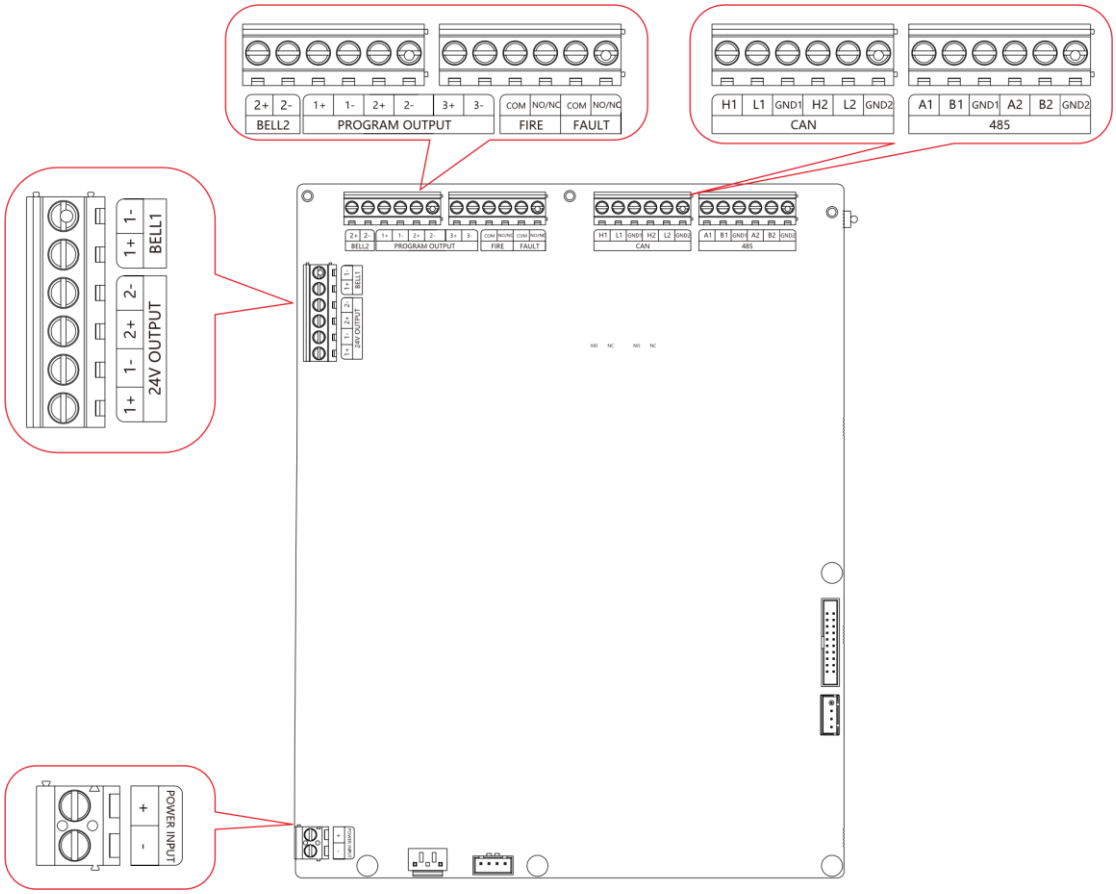


Figure 2-2 Loop Control Terminal

Table 2-2 Main Control Terminal Definition Table

Terminal ID		Terminal Description
24V OUTPUT 1/OUTPUT 2	+	Output 24V; maximum current is 2A. Note The 24V output and the BELL output share a combined current capacity of 3A; the maximum current limit for each individual 24V output and the BELL output is 2A.
	–	

Terminal ID		Terminal Description
BELL1/BELL2	+	Reserve two fire alarm output lines. Each bell interface has a maximum output current of 2A. The fire alarm output interface needs to be able to detect wires and determine if they are open circuited, short-circuited, or normal.
	-	
PROGRAM OUTPUT1/OUTPUT 2/OUTPUT3	+	Freely programmable relay output, which can be used to control whether to output the active signal. There are two modes. The electrical specification for passive mode is 30 V, 1A max. The electrical specification for active mode is 24V-27.5V, 0.1A. Passive mode and active mode are selected via jumpers.
	-	
FIRE	COM	Fire alarm relay output interface. The relay is normally closed when FACP receives fire alarm signal. Fault relay output interface. The relay is normally closed when FACP is in normal operation, and opens when a fault condition is detected. Note COM is common point, NO is normally open contact, and the contact capacity is DC 30V, 1 A. The NO/NC relay output can be configured with a jumper cap.
	NO	
FAULT	COM	
	NO	
CAN1/CAN2	H	CAN interface is equipped with a built-in 120Ω resistor, and you can use a jumper cap to configure whether to connect this resistor.
	L	
	GND	
485	GND1	RS-485 grounding terminal.
	GND2	
	A1	RS-485_1 interface, which connects device supporting RS-485 communication. It is equipped with a built-in 120Ω resistor, and you can use a jumper cap to configure whether to connect this resistor.
	B1	
	A2	RS-485_2 interface, which supports RS-485 communication. It is equipped with a built-in 120Ω resistor, and you can use a jumper cap to
	B2	

Terminal ID		Terminal Description
		configure whether to connect this resistor.

Backup Power Supply Wiring Description

Install and connect backup power supply according to the following pattern.

Note

When power is only used on backup power supply, please disconnect the backup power after the end of use and charge the battery immediately. Battery cannot be charged when the backup battery is used up.

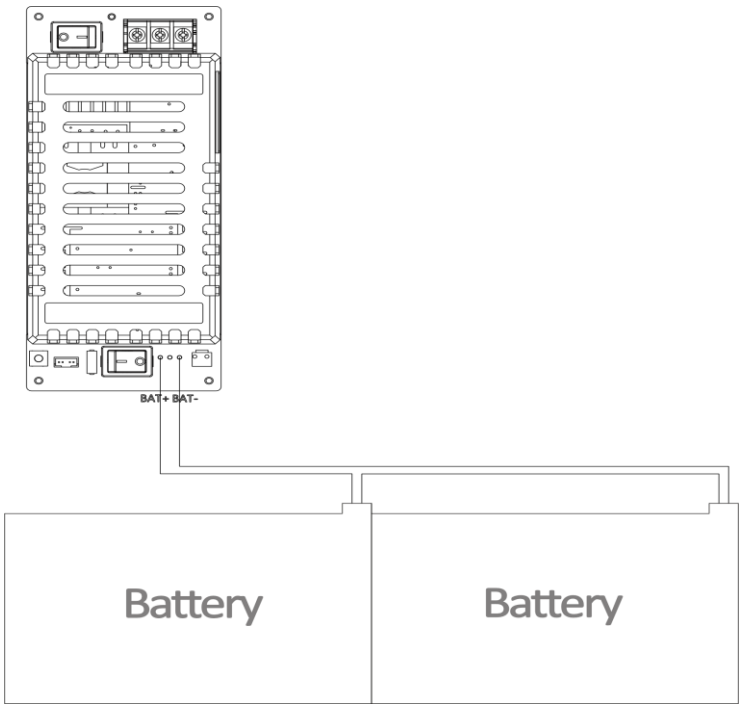


Figure 2-3 Backup Power Wiring

Main Power Supply Wiring Description

Connect the fire protection power supply (AC 110 V~240 V) to the power terminal. Connect L to the live wire, N to the neutral wire, and PE to the protective earth. Use a flame-retardant 3-core insulated cable with a voltage rating above 500 V and a conductor cross-section of 0.75 mm^2.

Note

- The protective ground of the device should be connected to the protective ground of the building device.
- The external wire connected to the hazardous live terminal should be installed by a trained person.

Connect the live wire and associated terminal using a screwdriver. The ground wire terminal must be secured to the designated mounting hole using a screwdriver or a suitable pen tool.

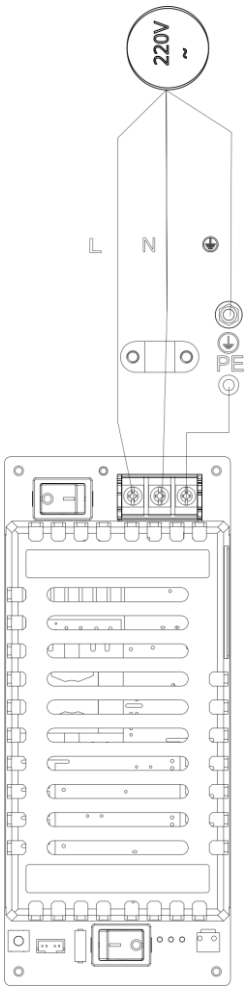


Figure 2-4 Main Power Terminal

Wiring Typology

The wiring between FACP and point devices is shown in the figure below:

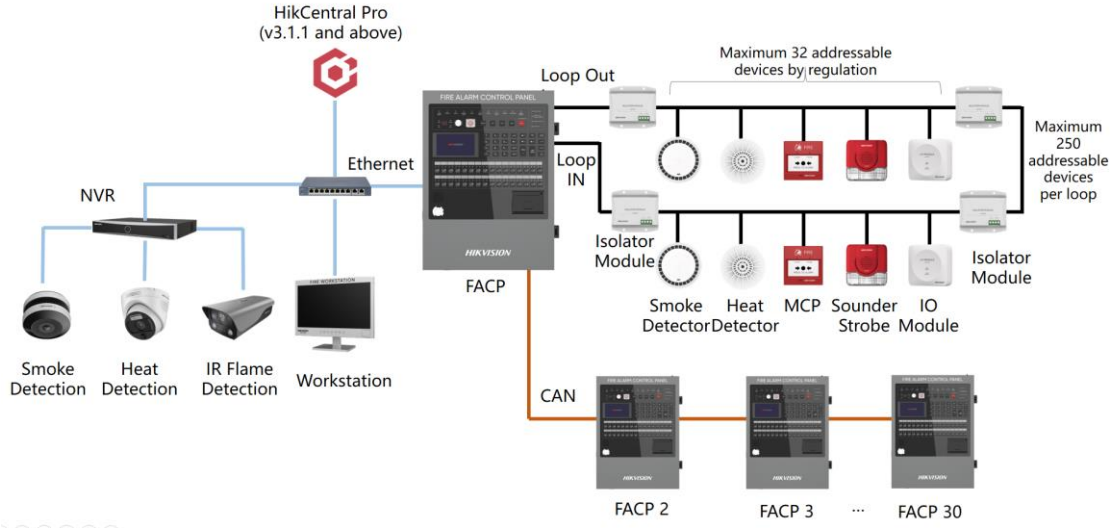
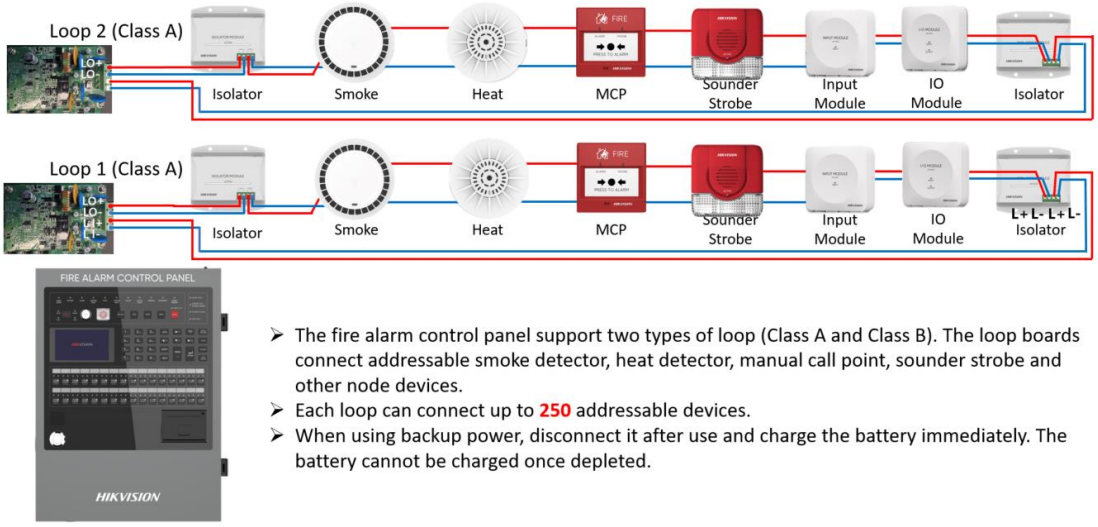


Figure 2-5 Wiring Typology 1



- The fire alarm control panel support two types of loop (Class A and Class B). The loop boards connect addressable smoke detector, heat detector, manual call point, sounder strobe and other node devices.
- Each loop can connect up to **250** addressable devices.
- When using backup power, disconnect it after use and charge the battery immediately. The battery cannot be charged once depleted.

Figure 2-6 Wiring Typology 2

2.2 Installation

2.2.1 Installation Precautions

Danger

Electric shock risk. Disconnect all power sources during wiring, installation, and repair.

Note

- To avoid explosion, only use the specified replacement battery model. Backup battery: 7000 mA*h / 12V (2 units). Please follow the disposal instructions provided in this manual for used batteries.
- The wall should be of a certain thickness and be able to withstand at least 4 times the total weight of the device and installation accessories.
- FACP receives main power from AC 110V~240V supply.
- Carry out test to check whether all parts are successfully inspected.
- FACP supports wall-mounted installation. It should be installed in the fire control room or place where people are on duty. Keep away from the environment with electromagnetic interference.
- The design should be strictly implemented in accordance with relevant provisions and regulations, and connect the device correctly according to the construction drawing.
- During the system debugging process, please do not remove the dust cover of the device in advance to avoid false alarms during the debugging process.

2.2.2 Unpacking and Check

After FACP is delivered, unpack the box and check the following items.

- Check if device components, tools, accessories, backup parts, manuals, and other technical documents are complete according to the packing list.
- Check if the device appearance, component, etc. are rusted or damaged.

Note

After unpacking, the backup parts, accessories, tools, etc. that do not need to be installed should be properly packed and kept, and handed over together to prevent loss. Detailed inspection records should be made. Photograph the damage or rust if there is any.

2.2.3 Wall-Mount FACP Installation

Steps

1. Use the key to open the front panel of FACP.
2. Install backup battery.
    1) Put the backup battery into the bottom of FACP.

2) Use 2 M4 locking screws to fix the battery bar to make sure the backup battery is safely fixed.

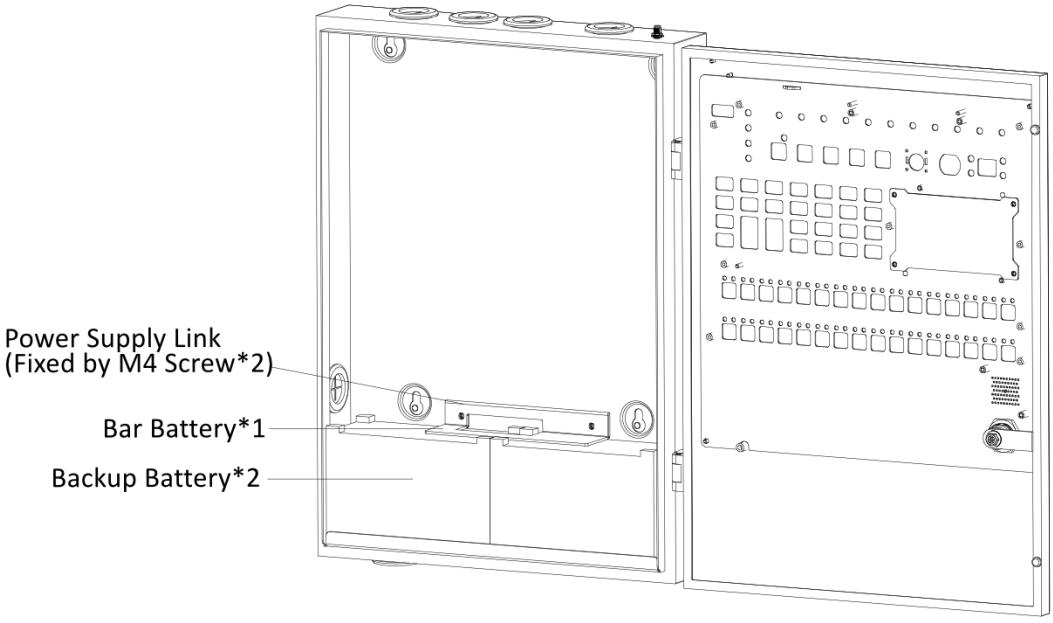


Figure 2-7 Power Backup Installation

3) Provide backup power connection. See **2.1.2 Backup Power Supply Wiring Description** for details.

3. Draw 4 holes on the wall according to the size below.

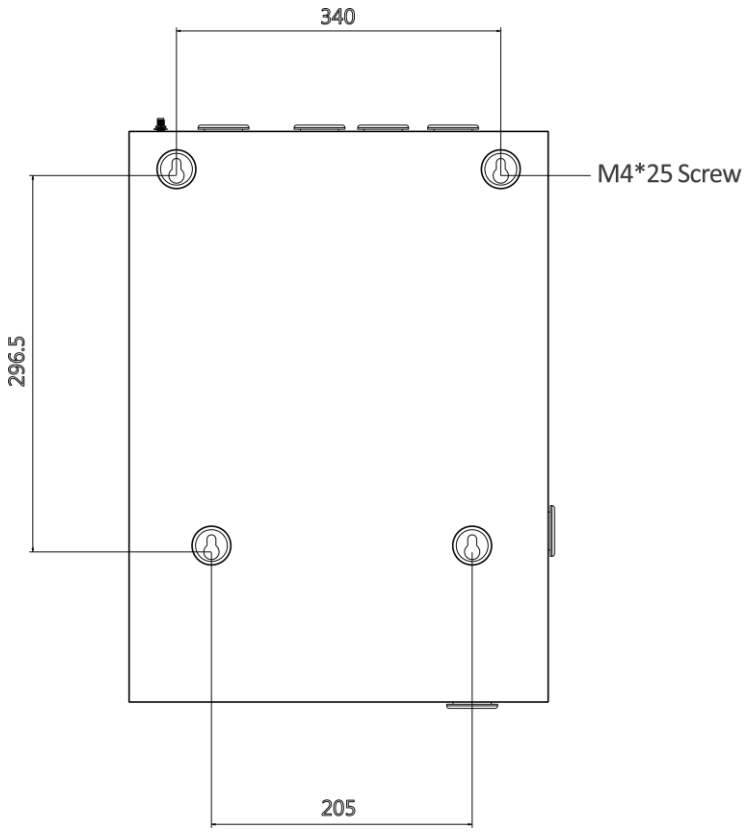


Figure 2-8 Installation Dimension

4. Use 4 expansion bolts (M6 × 68) to secure FACP to the wall.
5. Connect external wiring and main power cable. See **Terminal Wiring Description** and **Main Power Supply Wiring Description** for details.
6. Close the front panel of FACP and lock the panel lock to install.

Chapter 3 Debugging and Use

3.1 Debugging

After connecting and installing, the device should be debugged to check device status.

3.1.1 Preparation before Debugging

Before debugging the device, please check if device installation and wiring are in compliance with the requirements according to the following list.

- Check if system installation meets design requirements according to system design drawing.
- Check system route status, handle wrong line, open line, short circuit, etc., and make sure the route is normal.
- Check if the system line-to-ground insulation resistance and system grounding meet the requirements of the Fire Alarm System Construction and Acceptance Standard. The line-to-ground insulation resistance should be no less than 20 MΩ. The ground resistance of special grounding time pair should be no more than 4 Ω. The ground resistance of joint grounding time pair should be no more than 1 Ω.
- Check if the device is powered on by stand-alone device, and the device can be debugged after normal operation.

3.1.2 Power on and Test

Steps

1. Mark the detector and module number on the drawing, and code the detector and modules by drawing through the electronic encoding device.
2. After confirming that the route meets requirements, connect the bus to the correct circuit board terminal.
3. Turn on the main power of FACP first, and then power on the standby power for power-up operation.
4. Enter menu interface with programming password (initial programming password is 123456), enter Debug → Loop Registration, and register bus device to FACP. See **Loop Registration** for details.

Note

After registration is complete, the system may report faults or alarms. Troubleshoot and resolve any external issues, such as loop faults, detector faults, and module faults. Once all faults are cleared, proceed with subsequent operations.

Table 3-1 Table of Common Faults and Handling Methods

Common Faults	Reason	Solution
All addresses reported failure.	The circuit bus is not connected to FACP and bus line is disconnected, or the ribbon cable between the loop board and the mainboard is loose.	Check bus line connection.
Some addresses reported failure.	Code error, line disconnection, or device damage.	Check if the bus connection of the fault address is correct. Check if the code of the fault address is correct.
Fire alarm or linkage action at certain addresses.	a) Input module: The input terminal may be connected incorrectly or short-circuited. b) Input/output module: The device may already be activated on site. c) Manual call point: The alarm button may be in fire alarm status or damaged. d) Fire detector: The detector may be damaged.	a) Check if the feedback input wiring of the module is correct. b) Check if the device on site is activated, and reset it if necessary. c) Check if the detector or manual call point is in fire alarm status. d) Replace any damaged devices.

5. Disconnect the external 24 V power cable, manually activate the module to control external devices, check the resistance between the 24 V power cables, and make sure the cables are not short-circuited. Check the electrical resistance of the 24V power cables to the ground, and make sure the electrical resistance meets the requirements.

Note

As the number of I/O modules increases, the insulation resistance between wires will gradually decrease. It is sometimes required to activate the modules in batches, by layer, or by device type to check the insulation resistance between wires. Reset the system after testing a batch, and then proceed to test the next batch. When checking the line-to-ground insulation resistance, a 500V DC megohmmeter should be used.

6. Enable zone and go to the zone configuration. See **8.1 Zone Configuration** for reference.
7. Sort the address code table. See **Programming** for programming method.

8. Perform test on the alarm points of detector, manual call point, input module, etc. to make sure each point meets the alarm requirements. The device that does not alarm and error alarm should be handled and tested again. If the position and device is incorrect, edit it to ensure consistency.
9. Connect the 24-V power cable, set FACP to “Manual” status, and start all linked devices one by one. Make sure the device is started according to standard requirements, and make sure the device position is consistent with that of the drawing. If the device cannot be started or the problem persists, edit it until the system is all normal.
10. Set FACP to “Auto” status, and test the alarm points (smoke detector, heat detector, manual call point, etc) according to the acceptance method. Check if the linkage of controlled devices meets linkage control requirements, and edit the exception until all are correct.

3.1.3 Trial

After the debug system is finished, the system should be powered on for trial running for 120 hours.

Note

Construction is not allowed during trial running to ensure system security.

3.2 Normal Use

The system can only be used normally after acceptance.

- Before the system is put into service, technical support personnel should work with the user for training, so that the user can use the system normally, and have basic emergency handling capability.
- After the acceptance is completed, the user shall complete the signature of all product and engineering materials. Archive engineering materials properly.
- Daily maintenance and professional maintenance management should be carried out according to maintenance management during normal use.

Chapter 4 Basic Operation

4.1 Operation/shutdown Description

Power on

Steps

1. Turn on the main power switch.
2. Turn on the backup power switch.

Result Description

After power-on, the system initializes automatically. Once initialization completes, the active procedure ends, and the system enters standby mode.

Shutdown

Steps

1. Turn off the backup power switch.
2. Turn off the main power switch.

Note

- To ensure complete discharge of the capacitor, wait 10 seconds before powering on the system.
- Turn off the main and backup power of external device before disconnecting fire protection power supply.

4.2 User Interface De scription

The user interface is divided into two parts, the status bar and the main display area. There are three display interfaces in the main display area: standby interface, information display interface, and menu interface.

Main Display Area Description

Table 4-1 Interface Description

Interface	Description	Entry Mode
Standby	When there is no event, the device	If it is in the main menu, press **ESC**

Interface	Description	Entry Mode
Interface	will be in standby interface by default.	button to enter the standby page.
Information Display Screen	Display fire alarm, active, fault, disable, zone test and feedback event records, with a shortcut key to view more.	When there is an event, this interface will be displayed. When you are in main menu, press **ESC** button to return to the information display interface. When the fire alarm/active/feedback event occurs, the interface will be redirected automatically.
Menu Interface	Include device configuration items such as viewing, operation, settings, programming, and debugging.	In the standby page or information display page, press **MENU** button in the keyboard area, enter operation password or programming password in the display screen, and press **ENTER** to enter the menu interface.

Note

- To avoid security risks, please change the initial password after initial login to prevent unauthorized login to your device or other adverse consequences. See **7.7 Change Password** for details.
- Default Initial L2 Password: 000000.
- Default Initial L3 Password: 123456.
- If the password is forgotten, the password can be restored through SADP.



Figure 4-1 Standby Interface

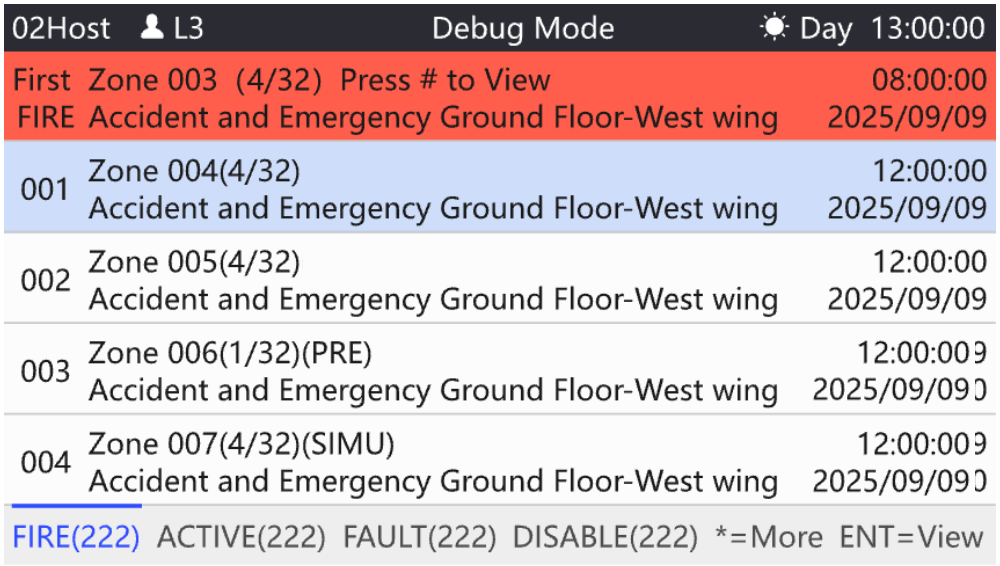


Figure 4-2 Information Display Screen

Status Bar

Status Bar: Located at the top of the interface, it shows FACP status, main/sub, device time, etc.

4.3 Operation Permission Description

Three types of operation permission: L1, L2 and L3.

- Permission Level 1 (L1): User cannot enter the menu interface, but can mute, check alarm, fault information, and other operations that do not require password.
- Permission Level 2 (L2): User can enter the menu interface with L2 password to view,

operate, and have all the permissions that does not require L3 password.

- Permission Level 3 (L3): Except for operation permission, user can enter the programming and debugging in the main menu.

Note

- The default initial operation password is 000000, and the default initial programming password is 123456.
- L3 user can change the L2 and L3 password. L2 user can only change L2 password.

Note

To improve the security of product network usage, please change the password every 3 months. If the device is used in high security risk environment, it is recommended to update it every month or every week.

- The operation password can be entered in the main menu page. See **7.7 Change Password** for details.
- You can enter the main menu interface to edit the programming password. See **7.7 Change Password** for details.

4.4 Shortcut Description

Test

Test is used to check if device display and sound are normal during daily maintenance. Press the **TEST** button and enter password.
Test status: The screen turns red-green-blue, and the indicator light is all on. FACP emits 6 types of sound, and then return to the status before test.

Mute

The function of muting the alarm.
When there are fire alarm, linkage, and fault events in the system, FACP will emit the alarm sound. You can press the **MUTE** button to clear the alarm sound in the indicator and shortcut area.

Note

After the alarm is muted, FACP will emit the sound of new fire alarm, fault, linkage, etc.

Reset

The reset function will restore the fire alarm device (detector, input module, etc.) and other devices that can be linked, such as input and output module, broadcast module, and sounder strobe.

Note

- After resetting, the system will report the fault (such as main power, backup power, disk, and communication module) detected by the system.
- For device that cannot be reset by FACP (such as manual call point), it will be reported again after resetting. The device should be manually reset first, and then be reset by FACP.

Steps

1. In the indicator and shortcut button area, press **RESET** button.
2. View screen and enter password via keyboard.
3. Press **ENTER** on the keyboard to reset, or press **ESC** to cancel.

EVACUATE

This will active all sounders and bells in the system.

Steps

1. Press the **EVACUATE** button.
2. Under L1 permission, you need to enter password first. Under L2/L3 permission, the confirmation directly pops up.
3. Press **ENTER** on the keyboard to active the system fire alarm device, or press **ESC** to cancel the operation.
   If the **ACTIVE** indicator on the left side is solid red, it indicates that the sounder strobe and bell is activated.
   If the **FAULT** indicator on the left side is solid yellow, it indicates that there is sounder strobe or bell in fault status.

Result Description

After you active the fire alarm device the interface will be redirected to the information display interface active item to display all the fire alarm information.

Note

- When the function is enabled, all alarm devices in the system will be enabled, not affected by other functions, including the Silence state.
- Password is needed every time an evacuation operation is performed.

Set Manual/Auto Status

Switch FACP status “MANUAL”/ “AUTO” via E-lock 1.

- Auto Status: When fire alarm occurs, the system will automatically enable the linkage device according to the preset linkage formula.
- Manual Status: When fire alarm occurs, you need to check the fire alarm information, and switch to “Auto” status to enable the linkage device according to the preset linkage formula.

Manual indicator light indicates FACP is in manual status. Auto indicator light indicates FACP is in auto status.

AUTO ACT.

Press **AUTO ACT.** button to active fire protection facility according to the linkage formula. This function is usually used when FACP is in “manual” status.

CHECK

Press **CHECK** button to view the total number of device types, status, etc.

4.5 Change Printer Paper

When changing the paper, open the printer panel, place the thermal side of the paper in the printer box, pull a block of the paper from the printer exit (make sure the thermal side is up), and press to close the printer panel.

⚠Note

- Before closing the printer panel, please adjust the printing paper position to avoid deviation.
- Dragging and dragging paper is not allowed. Otherwise, the printhead will be damaged or the printhead will be peeled off.

Chapter 5 Status Interface

5.1 Fire Status Interface

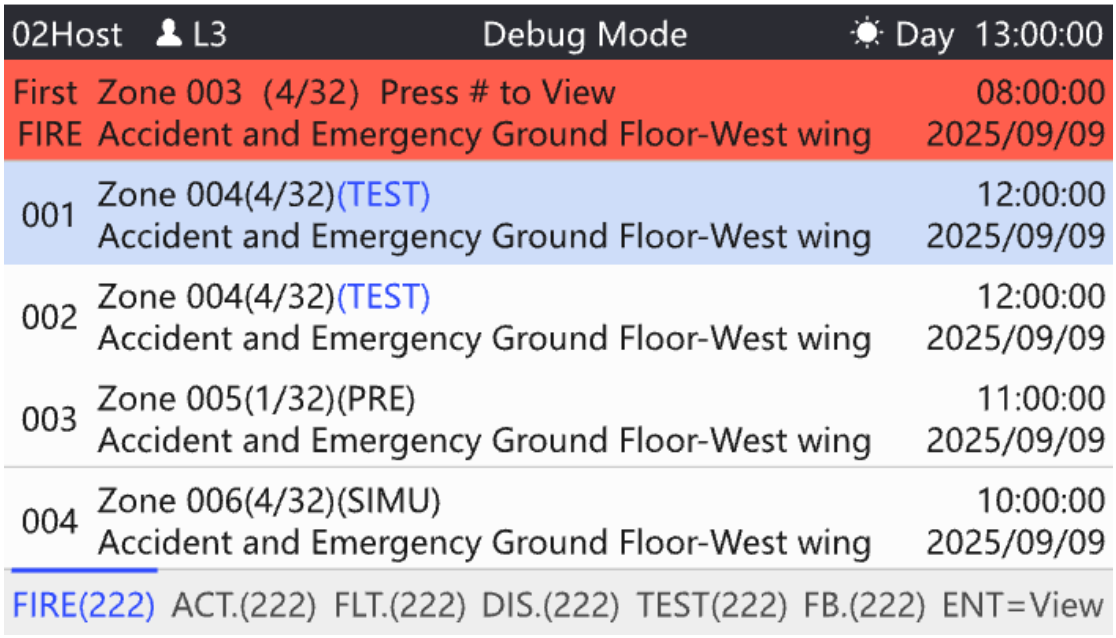


Figure 5-1 Fire Status Interface

Display

- First alarm is always at the top, with others arranged by time order (newest alarms are at the front).
- First alarm is selected by default.
- List Information: sequence number, zone number, zone location, event type, number of alarm points, and time.

Operation

- Press the left/right keys to switch the event.
- Press the up/down keys to switch the selected list item.
- Press ENTER to view fire details.

Fire Status Details

Display

- Sequence number, fire alarm type, device type, physical location of the fire alarm point, fire alarm point, and time.

Operation

- The number of fire alarms is displayed in the bottom left corner.
- The list has no focus function. Use the up/down buttons or left/right buttons to flip pages directly (commonly used).

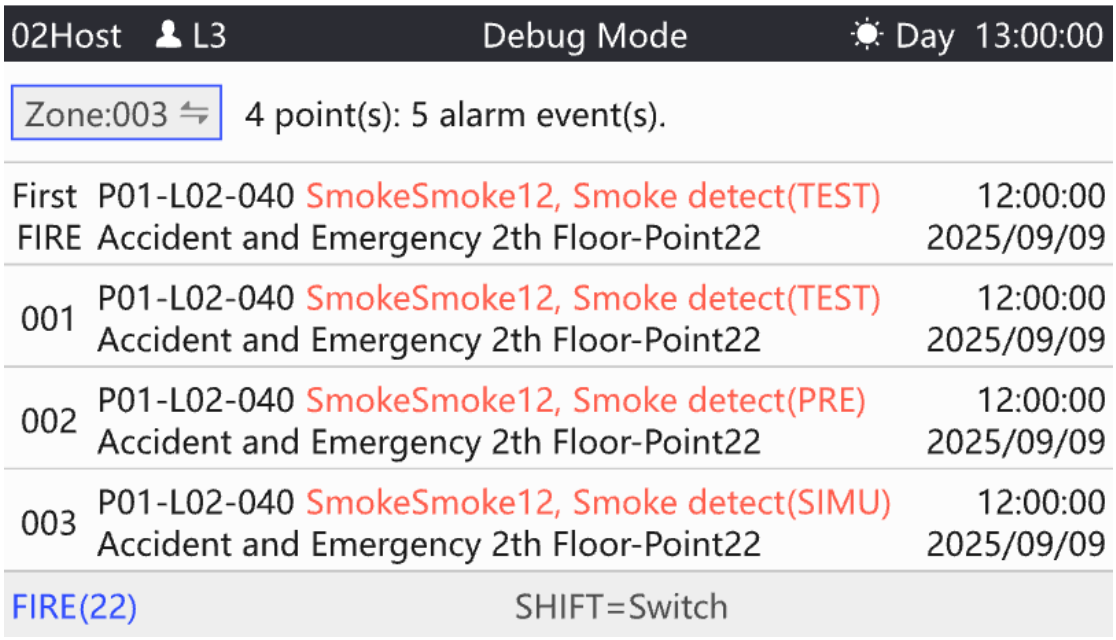


Figure 5-2 Fire Status Details

5.2 Active Interface

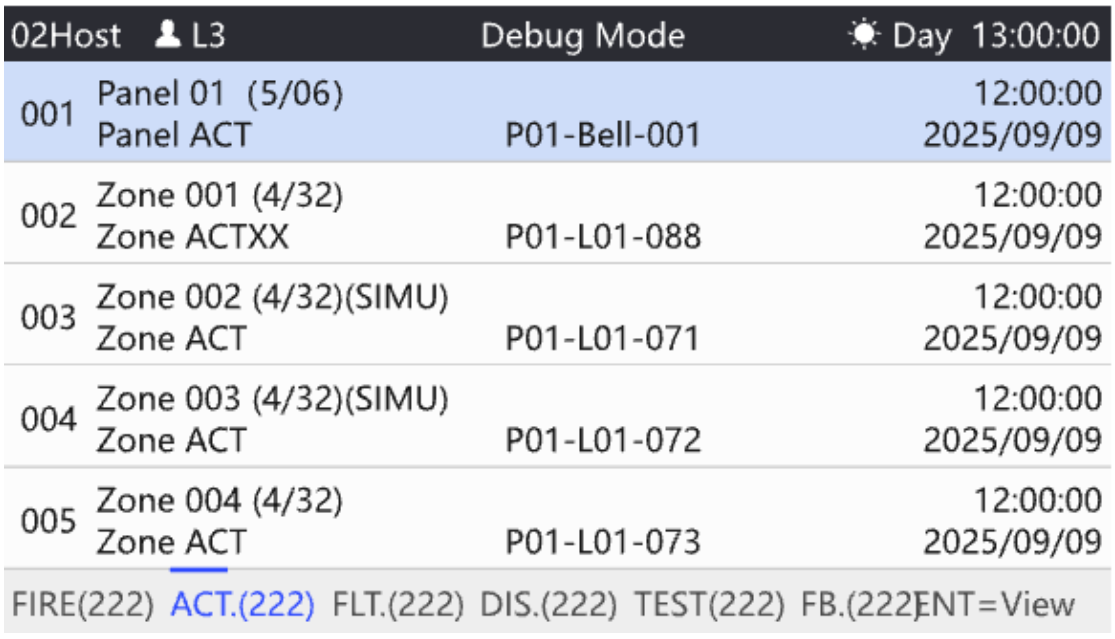


Figure 5-3 Active Status Interface

Display

- List Information: sequence number, latest active point, number of active points, active event, and latest active time.

Active Status Details (By Panel)

Display

- Sequence number, active point, device type, physical location of the active point, and time.

- If it is test/simulation, TEST/SIMU will be displayed.
- A password is required to operate the device. The password can be used only once, and the login permission stays the same (applies to all the following).

Operation

- Panel is selected by default. Press **SHIFT** to switch to Zone.
- Press # to exit the filter and focus on list items. After that, press **#** to exit list focus and return to the filter.
- Move the selection to one device; press * and enter the password to stop the device.

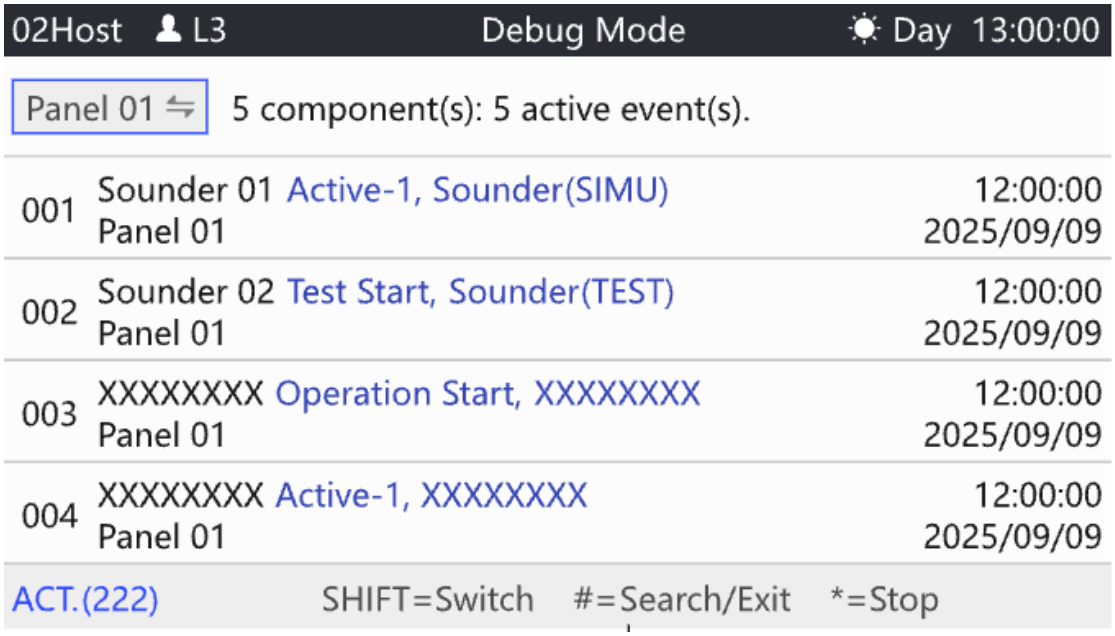


Figure 5-4 Active Status Details (By Panel)

Active Status Details (By Zone)

Display

- Sequence number, active point, device type, physical location of the active point, and time.
- If it is test/simulation, TEST/SIMU will be displayed.

Operation

- Zone is selected by default. Press **SHIFT** to switch to Panel.
- Press # to exit the filter and focus on list items. After that, press **#** to exit list focus and return to the filter (applies to all the following).
- Move the selection to one device; press * and enter the password to stop the device.

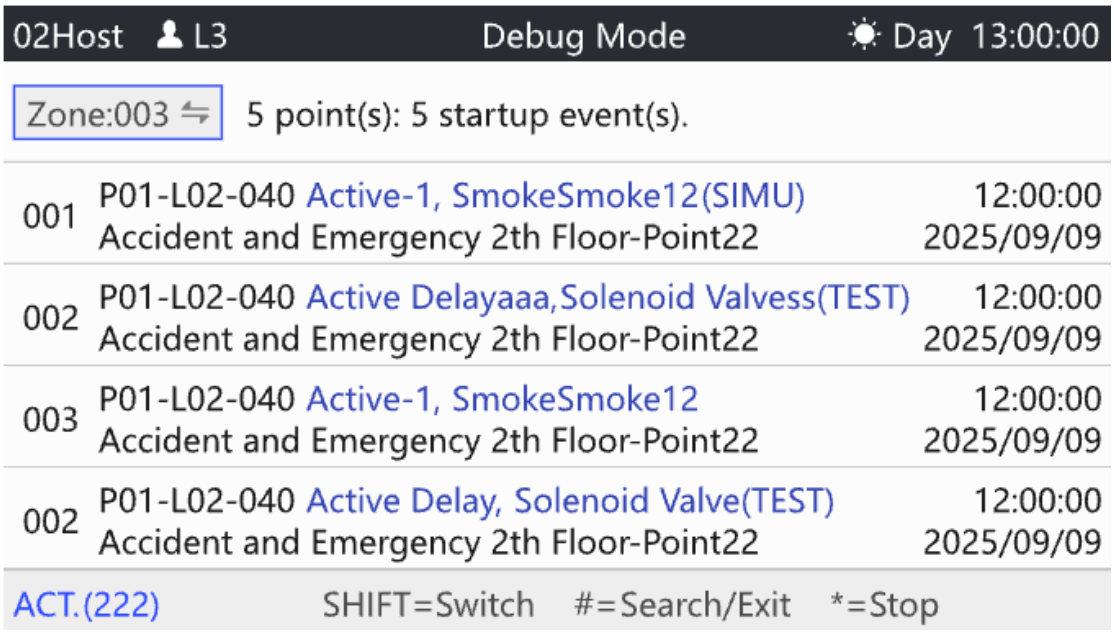


Figure 5-5 Active Status Details (By Zone)

5.3 Fault Interface

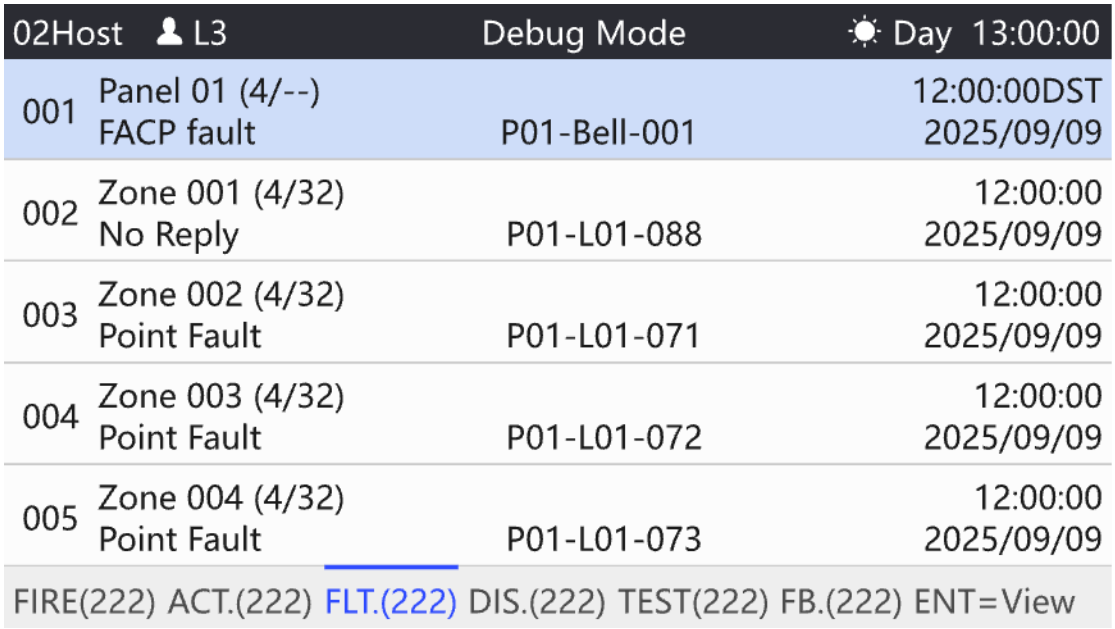


Figure 5-6 Fault Interface

Display

- Sequence number, fault point, number of fault points, fault type, physical location of the fault point, and time.

Fault Status Details (By Panel)

Display

- Sequence number, fault point, fault type, device type, physical location of the fault point, and time.

Operation

- Panel is selected by default. Press **SHIFT** to switch to Zone.
- Press **#** to exit the filter and focus on list items. After that, press **#** to exit list focus and return to the filter.
- Press ***** to disable the point. Only output interface points can be disabled.

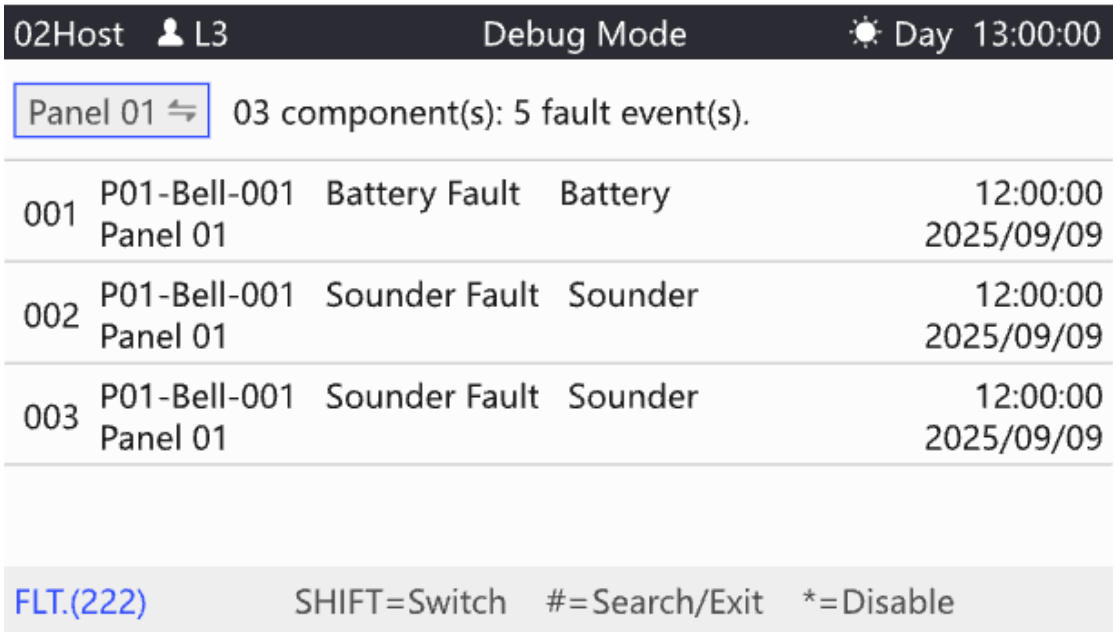


Figure 5-7 Fault Status Details (By Panel)

Fault Status Details (By Zone)

Display

- Sequence number, fault point, fault type, device type, physical location of the fault point, and time.

Operation

- Zone is selected by default. Press **SHIFT** to switch to Panel.
- Press **#** to exit the filter and focus on list items. After that, press **#** to exit list focus and return to the filter.
- Press ***** to disable the point.

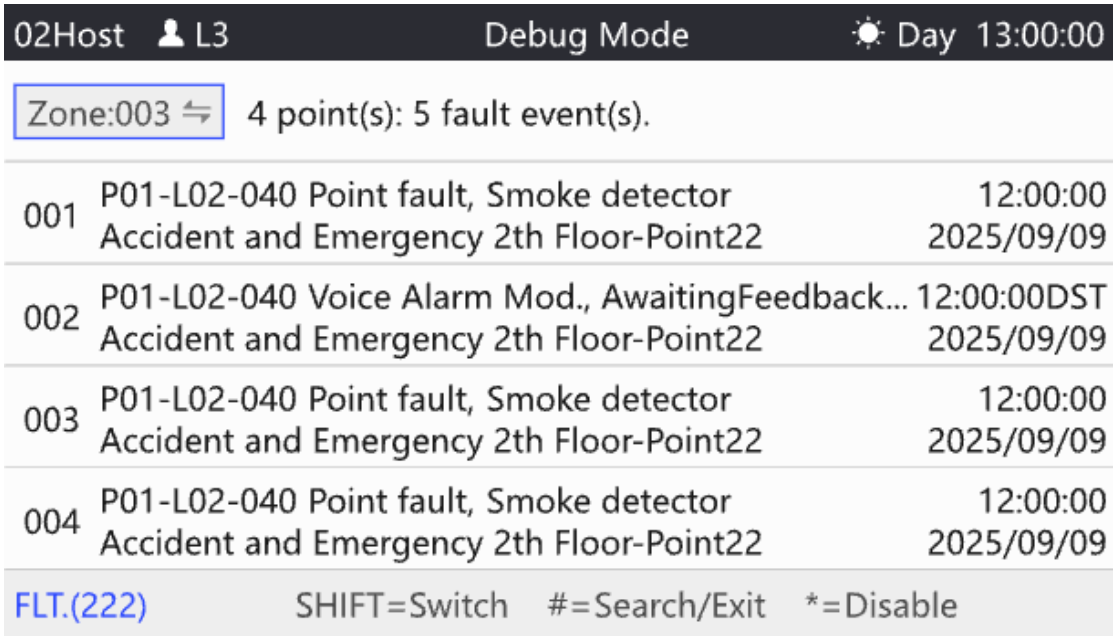


Figure 5-8 Fault Status Details (By Zone)

5.4 Disable Interface

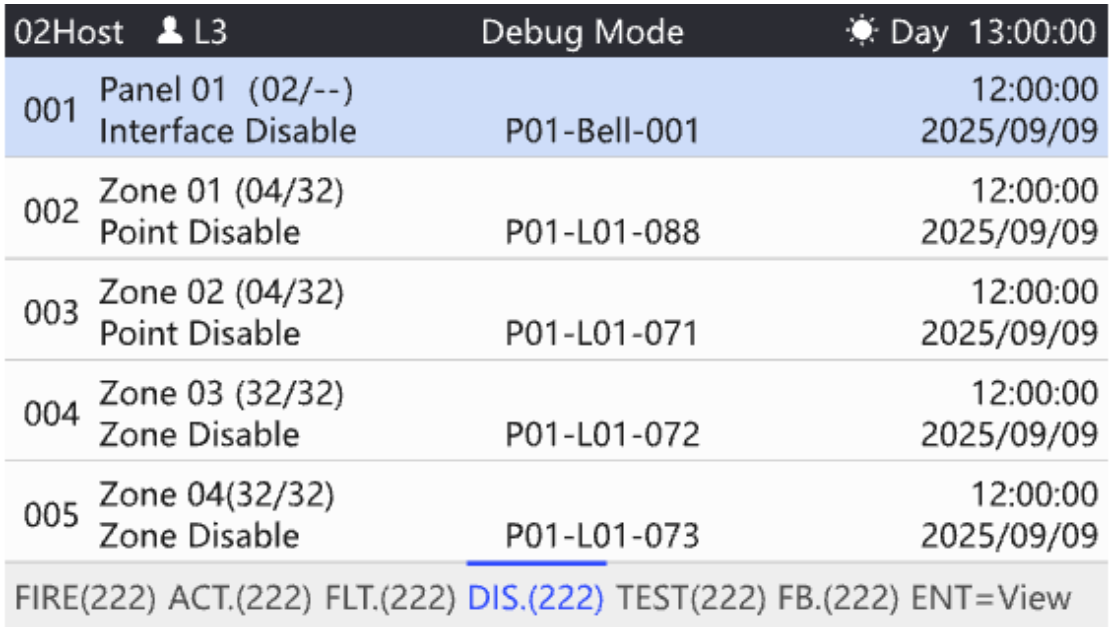


Figure 5-9 Disable Interface

Display

- Sequence number, disabled point, number of disabled points, physical location of the disabled point, and time.

Disable Status Details (By Panel)

Display

- Sequence number, disabled point, device type, physical location of the disabled point, and

time.

Operation

- Panel is selected by default. Press **SHIFT** to switch to Zone.
- Press **#** to exit the filter and focus on list items. After that, press **#** to exit list focus and return to the filter.
- Press ***** and enter the password to enable the point.

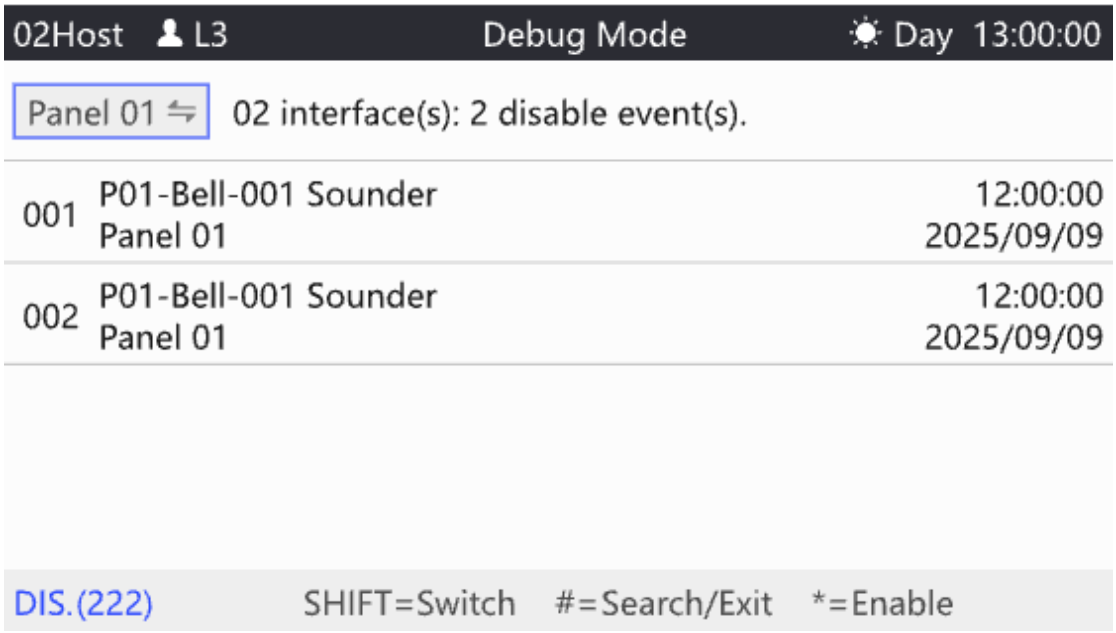


Figure 5-10 Disable Status Details (By Panel)

Disable Status Details (By Zone)

Display

- Sequence number, disabled point, device type, physical location of the disabled point, and time.

Operation

- Zone is selected by default. Press **SHIFT** to switch to Panel.
- Press **#** to exit the filter and focus on list items. After that, press **#** to exit list focus and return to the filter.
- Press ***** and enter the password to enable the point.

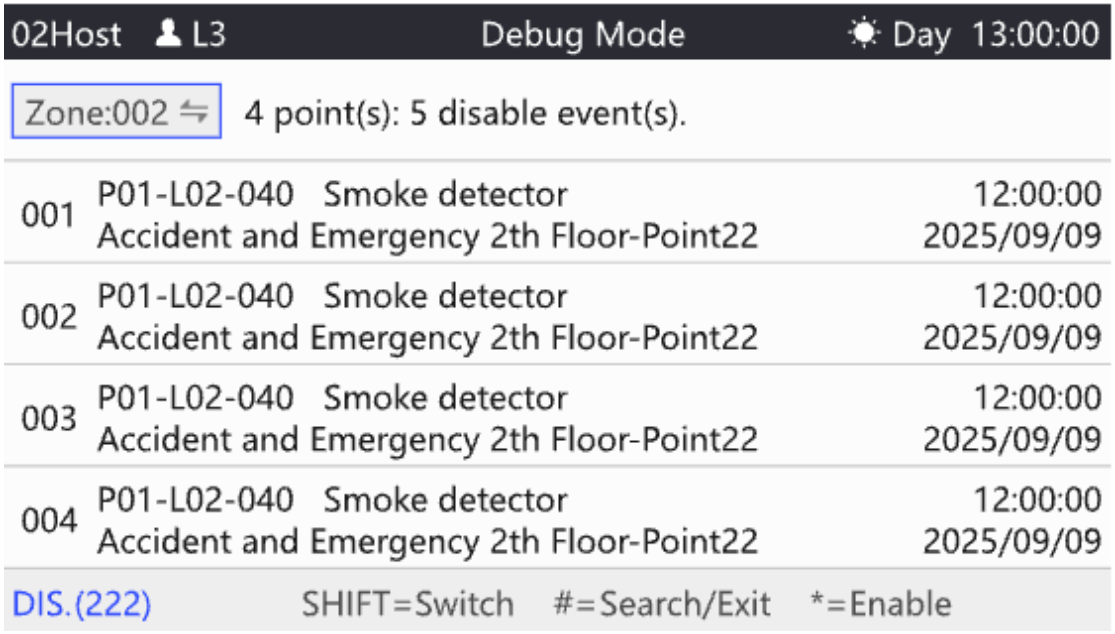


Figure 5-11 Disable Status Details (By Zone)

5.5 Test Interface

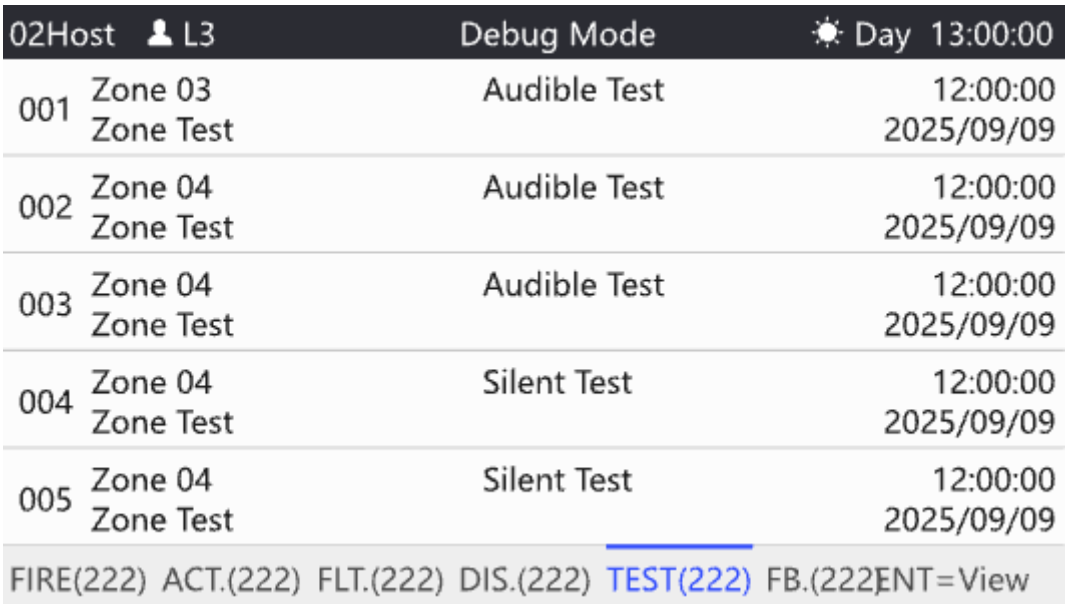


Figure 5-12 Test Status Interface

Display

- Sequence number, test point, test type, physical location of the test point, and time.

Operation

- Press **SHIFT** to switch searching by panel/zone.
- Press **#** to exit the filter and focus on list items. After that, press **#** to exit list focus and return to the filter.
- Press * to cancel test.

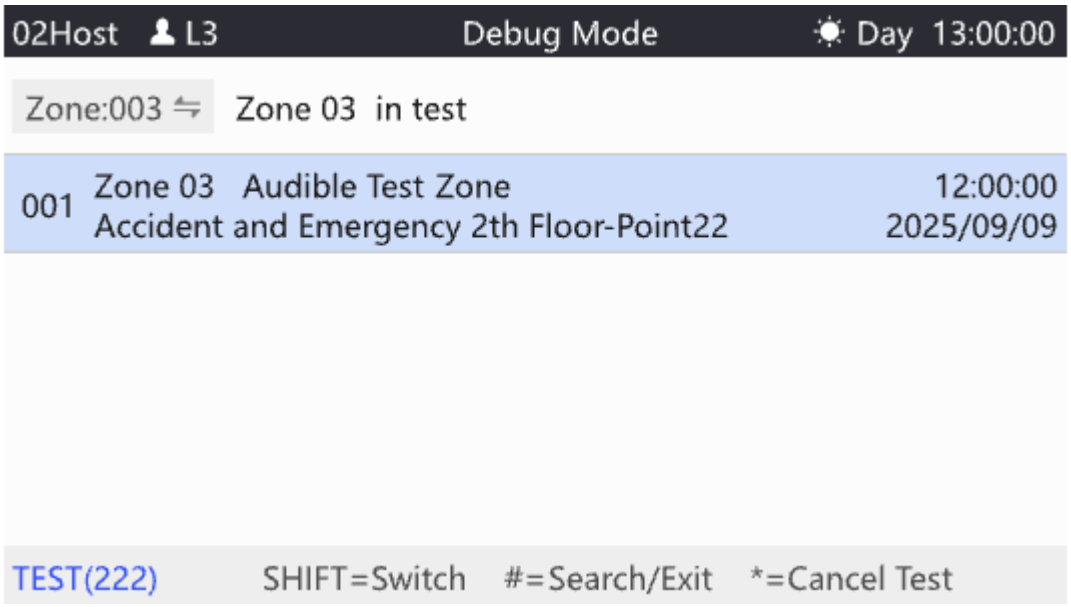


Figure 5-13 Test Status Details

5.6 Feedback Interface

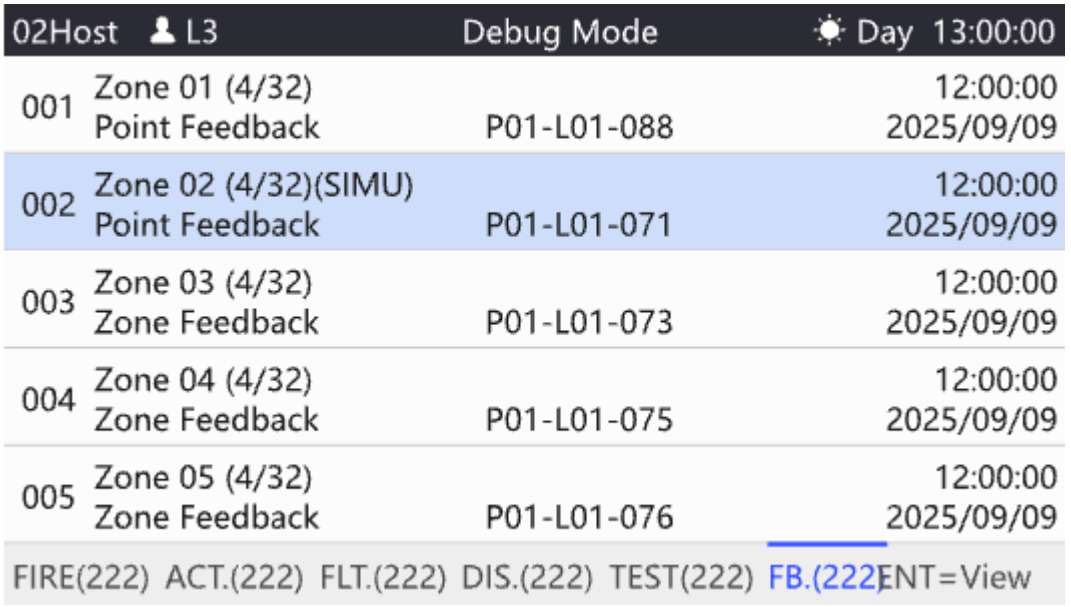


Figure 5-14 Feedback Status Interface

Display

- Sequence number, feedback point, number of the feedback points, location of the feedback, and time.
- If it is simulation feedback, SIMU will be displayed.

Operation

- Press **SHIFT** to switch searching by panel/zone.

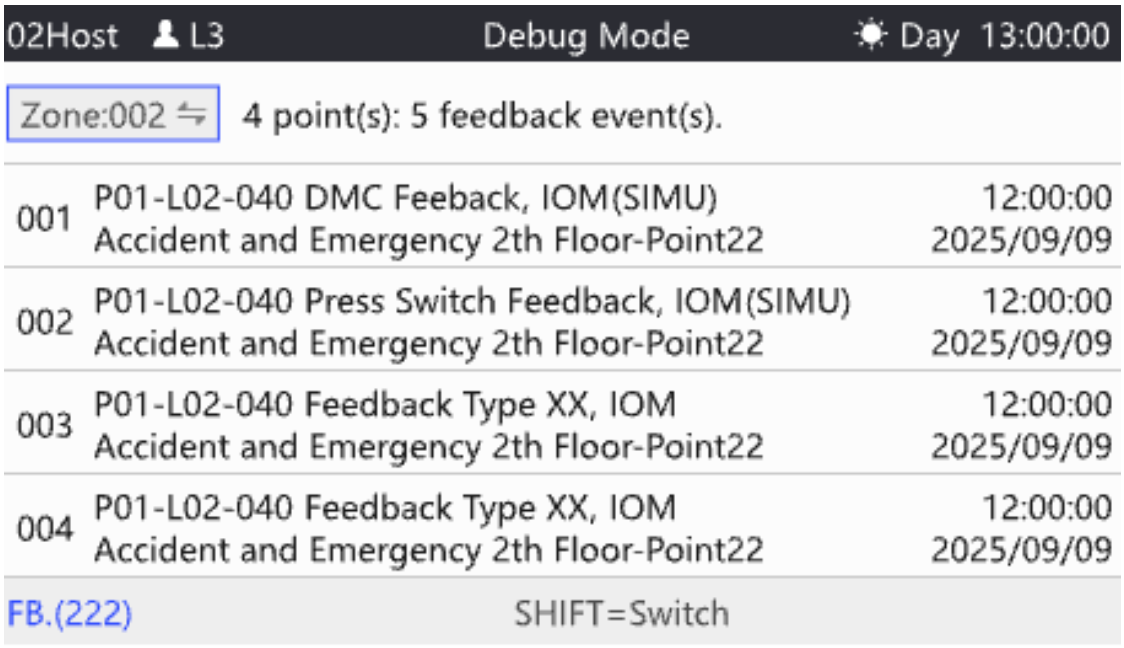


Figure 5-15 Feedback Status Details

Chapter 6 View

You can view loop status, environmental curve, point status, component status, historical events, and local information. Go to menu page, move the cursor to **View** item, and press **ENTER** button, or press **1** button, and enter operation password to enter the page.

6.1 View Loop Status

Check the working status of the bus device on each address of the system loop. You can view the number of addresses in the loop that are in fire status, active status, fault status, disable status, and feedback status.

Prerequisite

Registered bus device to FACP. See **Loop Registration** for registration method.

Steps

1. Move the cursor to **Loop Status**, press **ENTER** button, and enter the password.

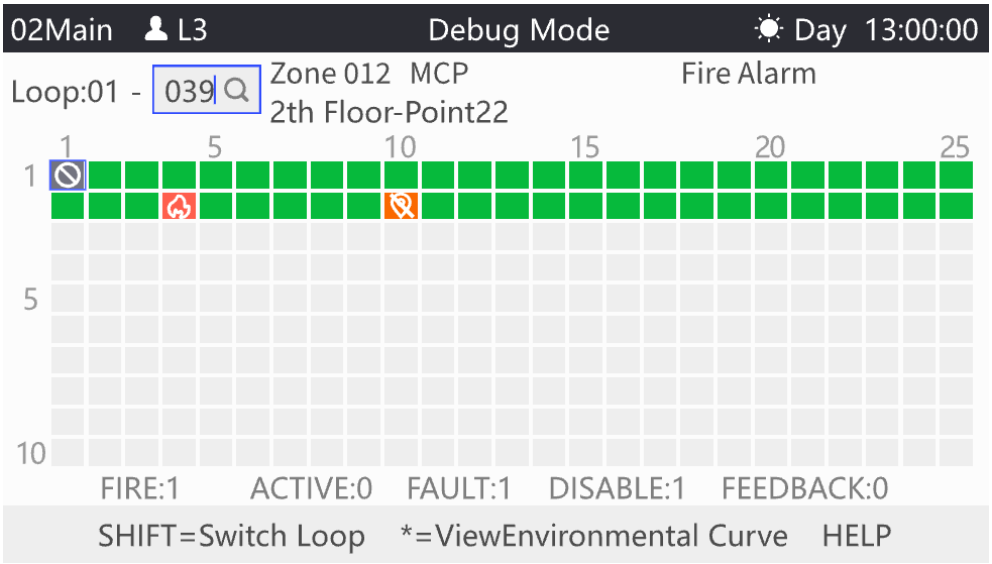


Figure 6-1 View Loop Status

Table 6-1 Icon Definition

Icon	Definition
	Normal
	Unused
	Fire Alarm
	Fault

Icon	Definition
	Active
	Feedback
	Disabled
	Test
	Short Circuit (SC)
	Address Loss
	Open Circuit (OC)
	Duplicate

2. Press **SHIFT** button to switch loop. Move the cursor to view the status overview of the corresponding loop bus.
- The interface displays the bus device overview, device loop address and actual location information of the current yellow cursor on all addresses in the current loop.
- The interface displays the number of devices in fire alarm, active, fault, disabled, and feedback status in the current loop at the bottom of the interface.

3. Enter the loop address of the bus device in the address to check the device type icon and device actual location of the address in the loop.
4. Optional Operation: Press **HELP** to view the icon definition.

6.2 View Environment Curve

Check the working status of devices in the system loop. You can view the environment curves of temperature detectors and smoke detectors in the loop.

Prerequisite

Register bus device to FACP. See **Loop Registration** for registration method.

Steps

1. Move the cursor to **Environmental Curve**. Press **ENTER** button to view the environmental curve.

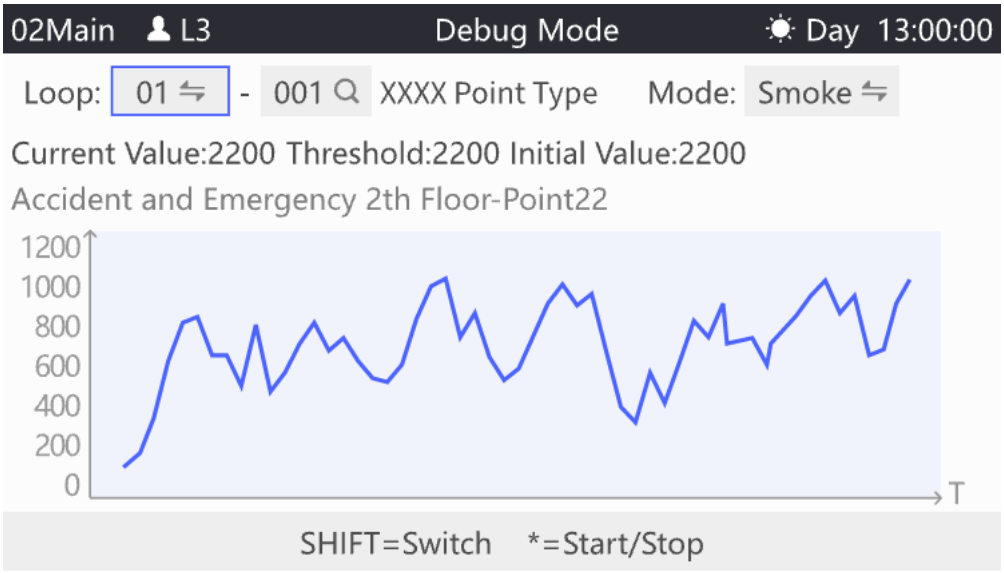


Figure 6-2 View Environment Curve

2. Move the cursor to **Loop**, and press **SHIFT** to switch loop. Move the cursor to Address, and enter address number.
3. Press * to start/stop displaying environment curve.

Note

- When environmental curve is not supported, the upper right corner will display “Not Available”.
- When the input type is combined smoke and heat detector, move the cursor to **Mode** to switch the smoke curve or the temperature curve.
- The column for point device types that do not support viewing of environmental curves will display the red text "Not available" and the vertical axis will show "Current value".

6.3 View Point Status

View the components in each circuit in the on/offline state and duplicate code state.

Steps

1. Move the cursor to **Point Status**. Press **ENTER** button to view point online/offline status.

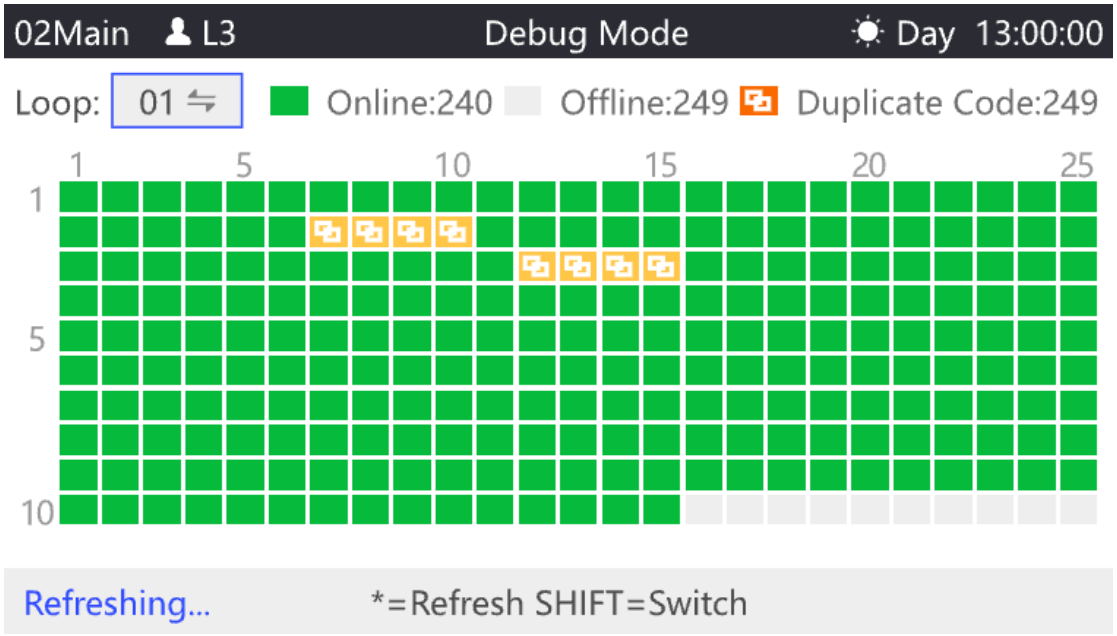


Figure 6-3 View Point Status

2. Move the cursor to **Loop**, and switch the loop which you want to view. The interface displays the quantity of online point, offline point and duplicate code.
3. Press * to refresh the component status.

6.4 View Component Status

View battery status and board status.

Steps

1. Move the cursor to **Component Status.** Press **ENTER** button.

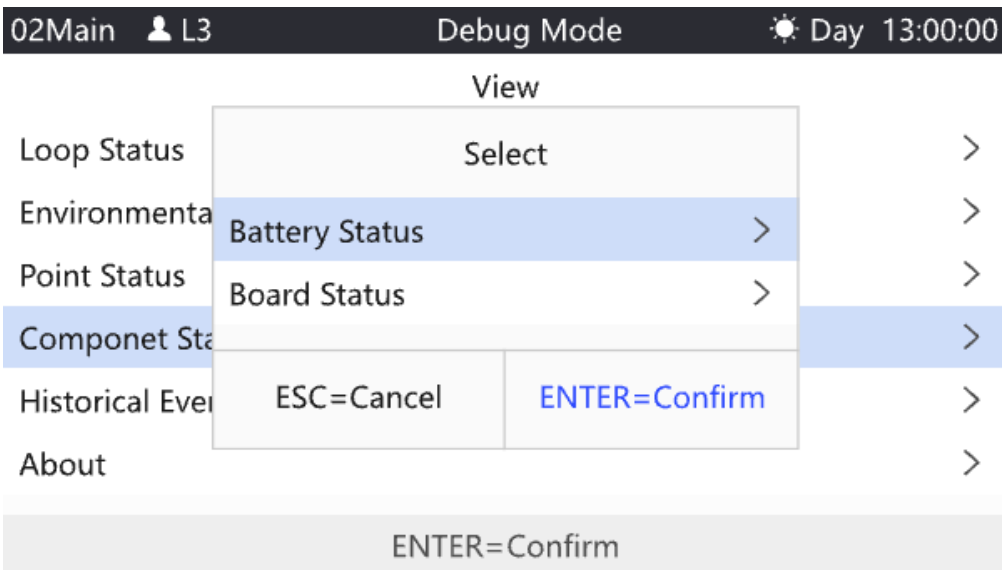


Figure 6-4 View Component Status

2. Select **Battery Status/Board Status** to view the details.

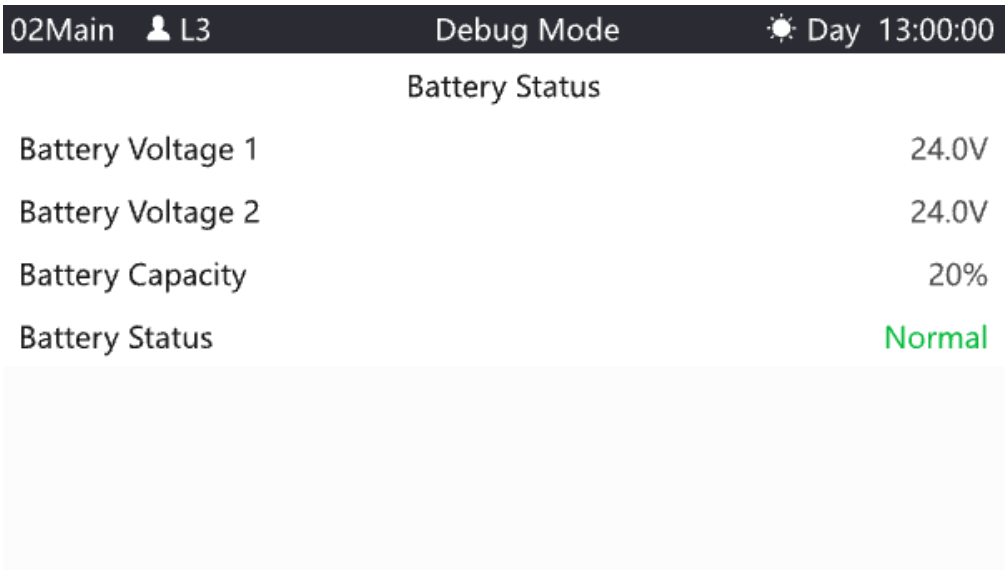


Figure 6-5 View Battery Status

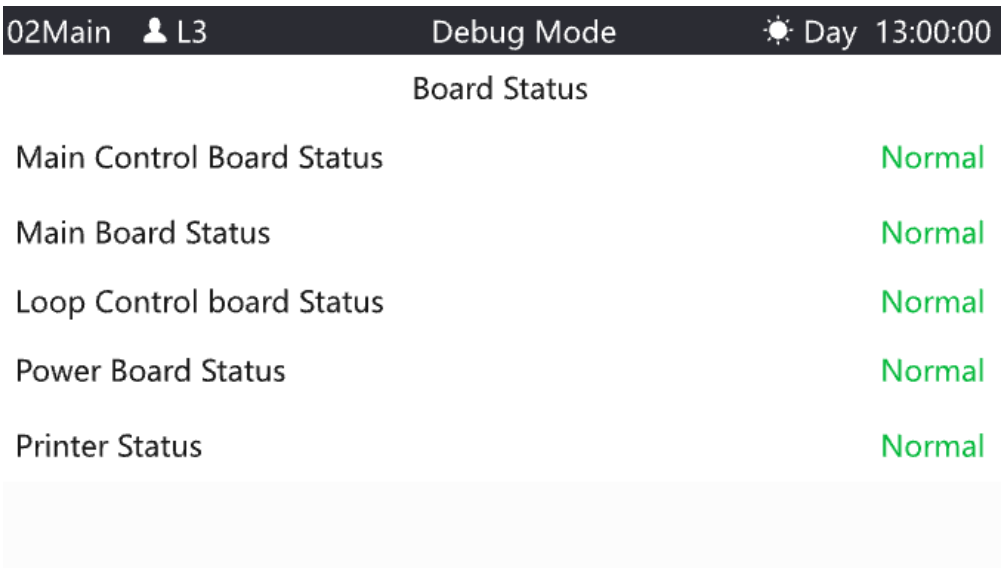


Figure 6-6 View Board Status

6.5 View Historical Event

View fire alarm historical events, linkage historical events, test historical events and all historical events.

Steps

1. Move the cursor to **Historical Event**. Press **ENTER** button to enter the page.

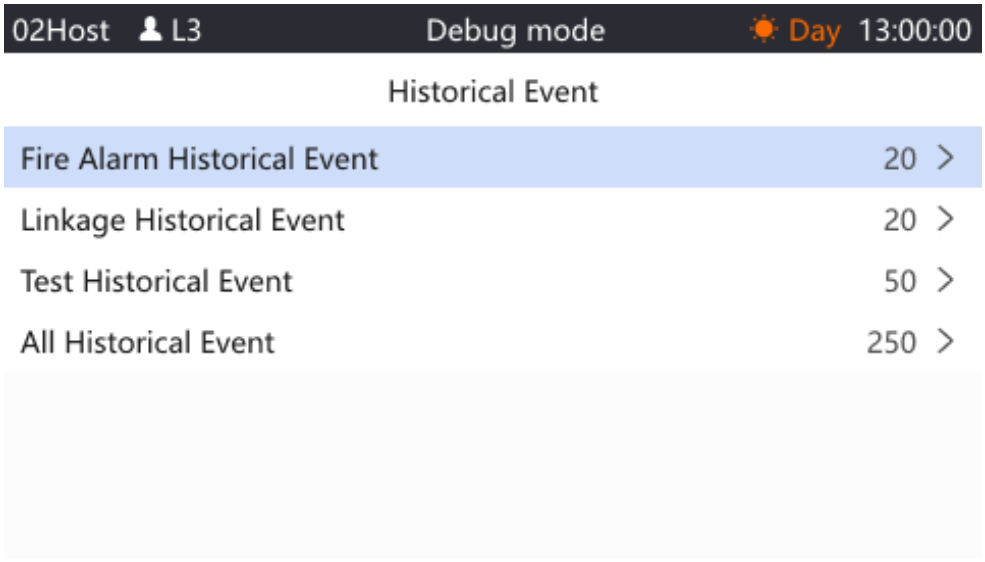


Figure 6-7 View Historical Event

2. Move the cursor to historical event, linkage historical event, test historical event and all historical events to view the corresponding type of historical event.

   Fire Alarm Historical Event

   Record all fire alarm signals received by FACP, including device information and fire alarm time.

   Linkage Historical Event

   Record all linkage events of FACP.

   Test Historical Event

   Record all test events of FACP.

   All Historical Events

   Record the operation of enabling, resetting, testing, fire alarm, fault, and active of FACP.
3. View historical event record.

6.6 View Local Information

Check FACP software version, device model, serial No., etc.

Steps

1. Move the cursor to **About**.
2. Press **ENTER** button to check the information of the device.

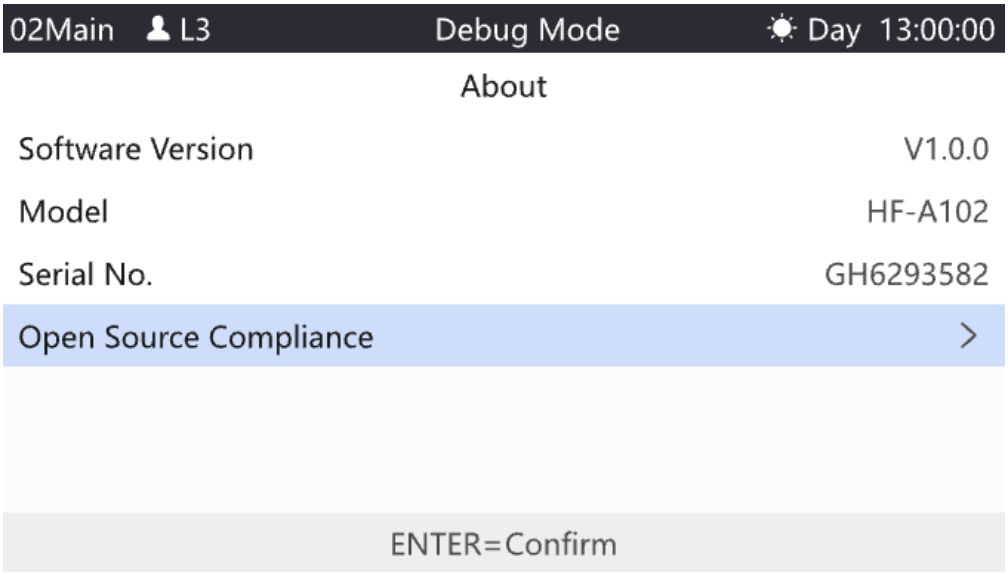


Figure 6-8 View Local Information

Chapter 7 Operation

Go to menu page, move the cursor to **Operation** menu item, and press **ENTER** button, or press **2** button, and enter operation password to enter the page.

7.1 Disable

When the device is disabled, the device cannot respond to fire alarm and cannot be linked. The Disable/Enable operation method is described below.

Note

- The power-on, power-off and reset operations will not deactivate the disabling.
- You can go to **Operation** →**Disable**→ **Address Disable** to check all the disabled points.
- Main FACP can remotely enable/disable devices, and it can also delete devices from the device list.

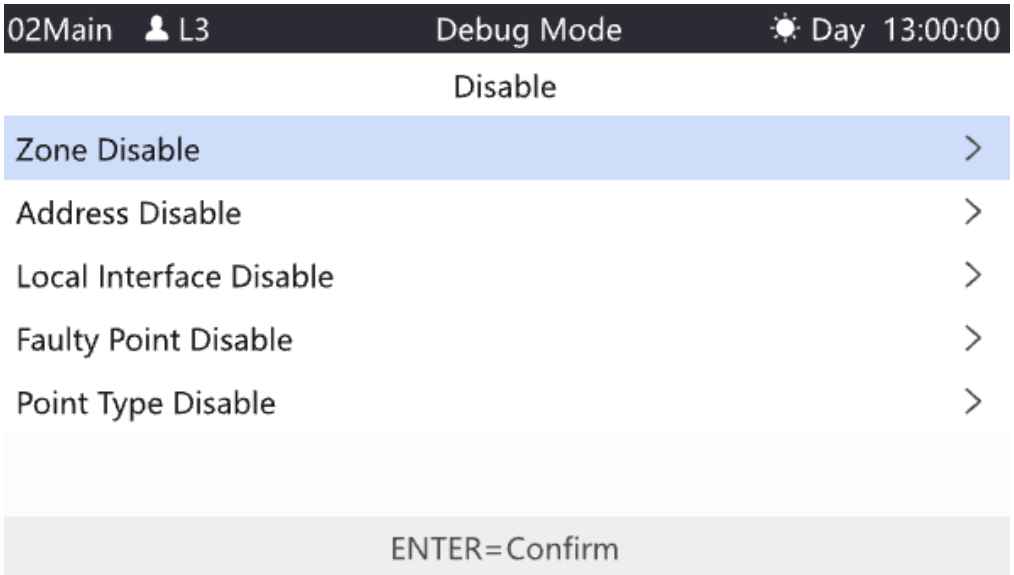


Figure 7-1 Disable

Zone Disable

Operate the zone disable/enable.

Steps

1. Move the cursor to **Zone Disable**, press **ENTER** button, and enter the password.
2. Press # to search zone number; press 0 to enable the zone; press 1 to disable the zone.

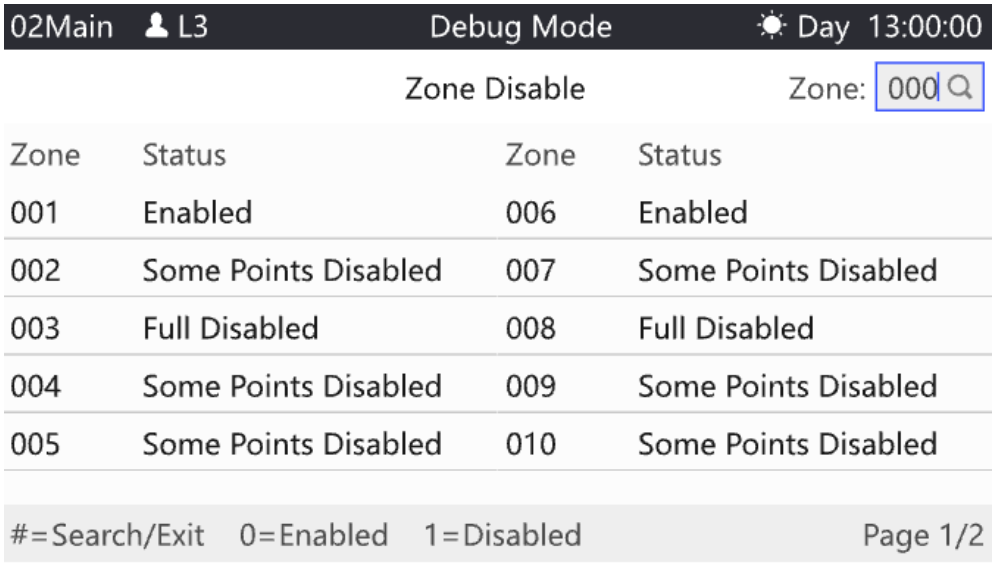


Figure 7-2 Search Zone Number

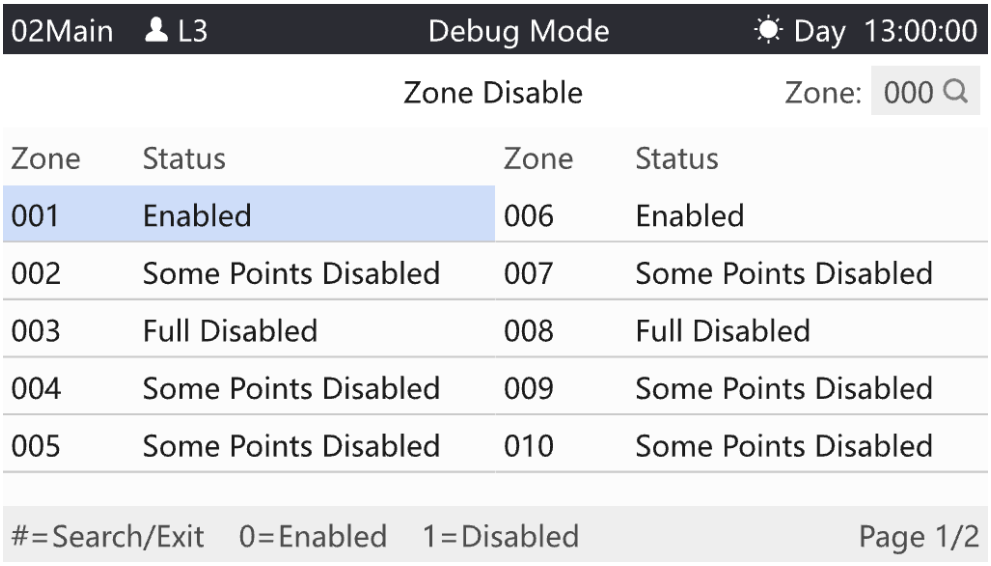


Figure 7-3 Zone Disable

Address Disable

Operate the point disable/enable by address.

Steps

1. Move the cursor to **Address Disable**, press **ENTER** button and enter the password.
2. Press **#** and press **SHIFT** to shift loop number; move the cursor to Address to search address number; press 0 to enable point; press 1 to disable point.

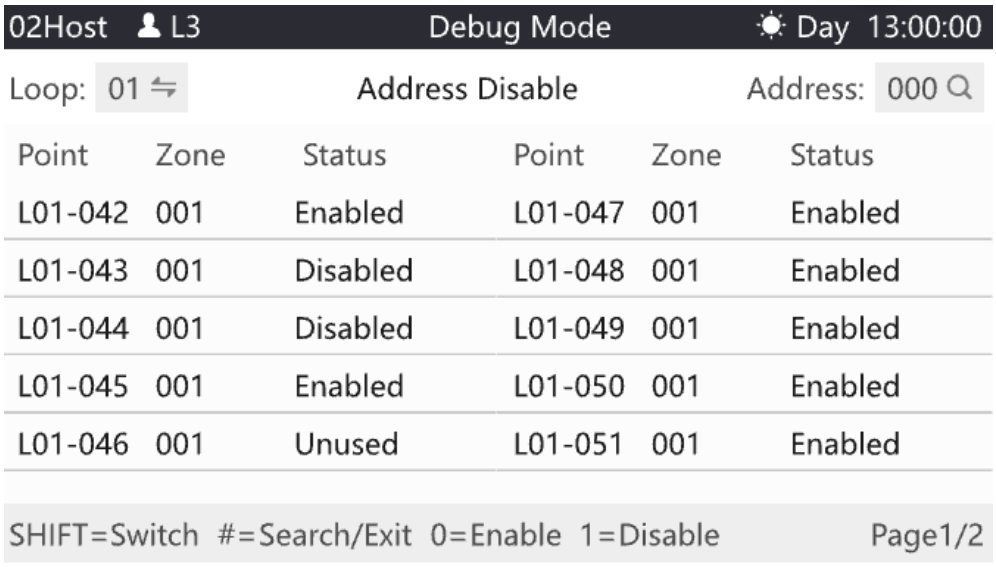


Figure 7-4 Address Disable

Local Interface Disable

Operate the local interface disable/enable.

Steps

1. Move the cursor to **Local Interface Disable**, press **ENTER** button, and enter the password.
2. Move the cursor to the interface; press **0** to enable the interface; press **1** to disable the

interface.

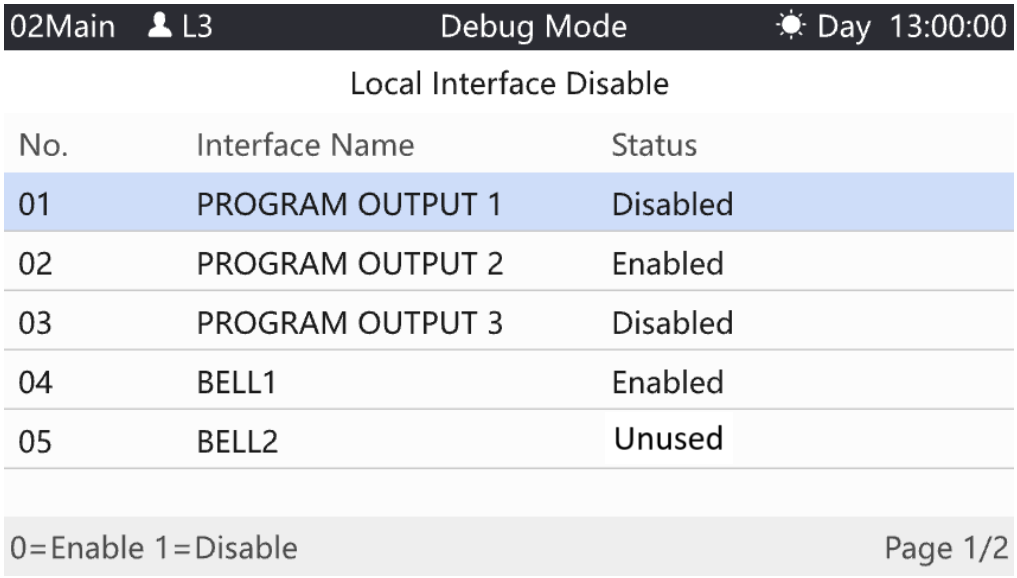


Figure 7-5 Local Interface Disable

Faulty Point Disable

Operate the fault point disable/enable by panel or zone.

Steps

1. Move the cursor to **Faulty Point Disable**, press **ENTER** button, and enter the password.
2. Move the cursor to the fault event, and press **ENTER**.

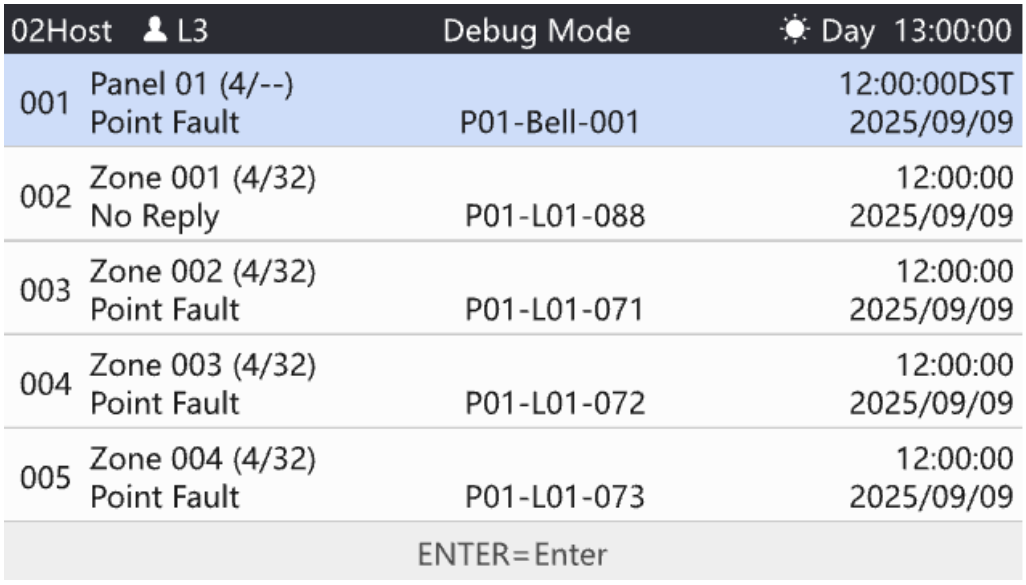


Figure 7-6 Enter Fault Event

3. In the upper left corner, press **SHIFT** to switch disable method (panel or zone).
4. Move the cursor to the event; press ***** to disable the event.

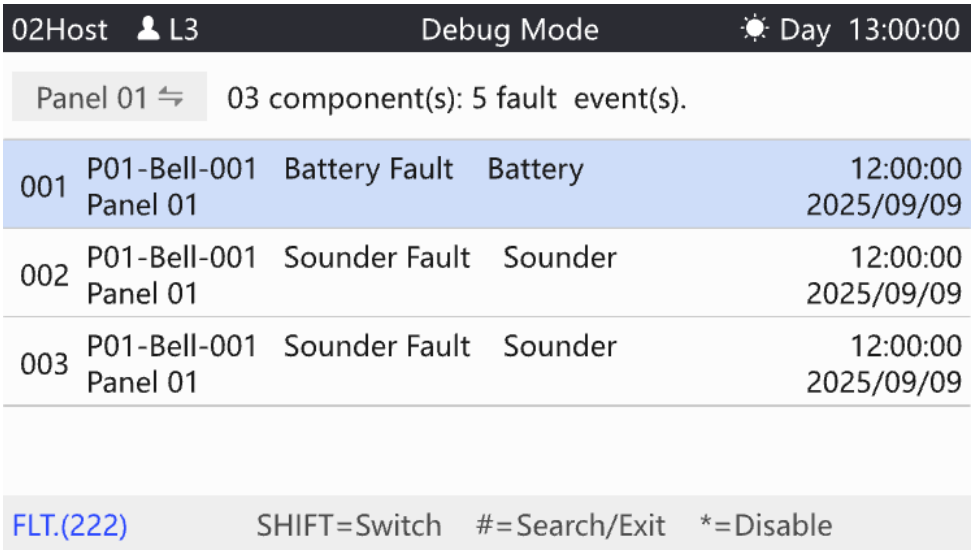


Figure 7-7 Disable by Panel

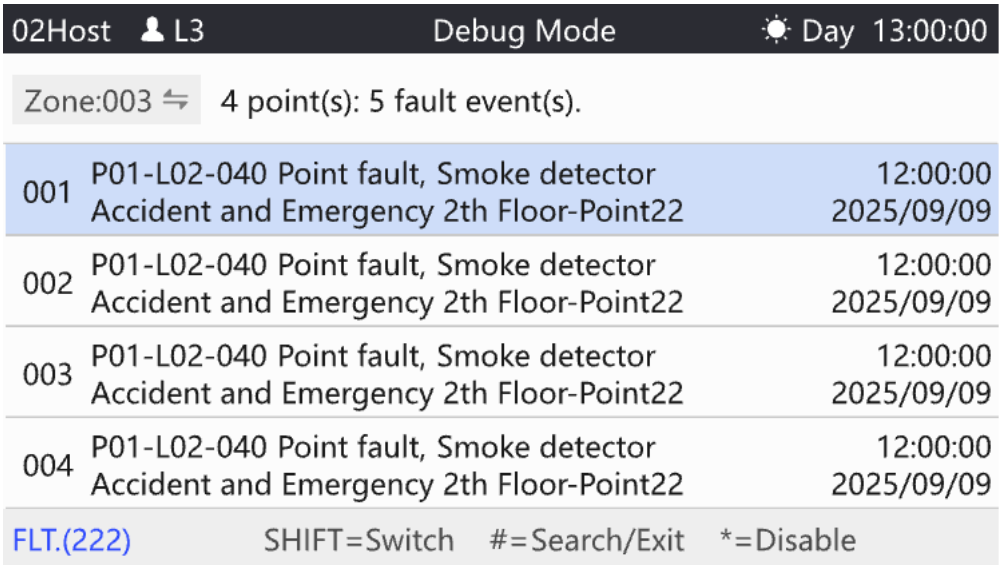


Figure 7-8 Disable by Zone

Note

- For events that are disabled, there will be an icon in the upper right corner.
- In disable by panel mode, only output device fault can be disabled.

Point Type Disable

Operate the point type disable/enable by type code.

Steps

1. Move the cursor to **Point Type Disable**, press **ENTER** button, and enter the password.
2. Press **#** to search point code; press **0** to enable all; press **1** to disable all. Press **HELP** to view point code.

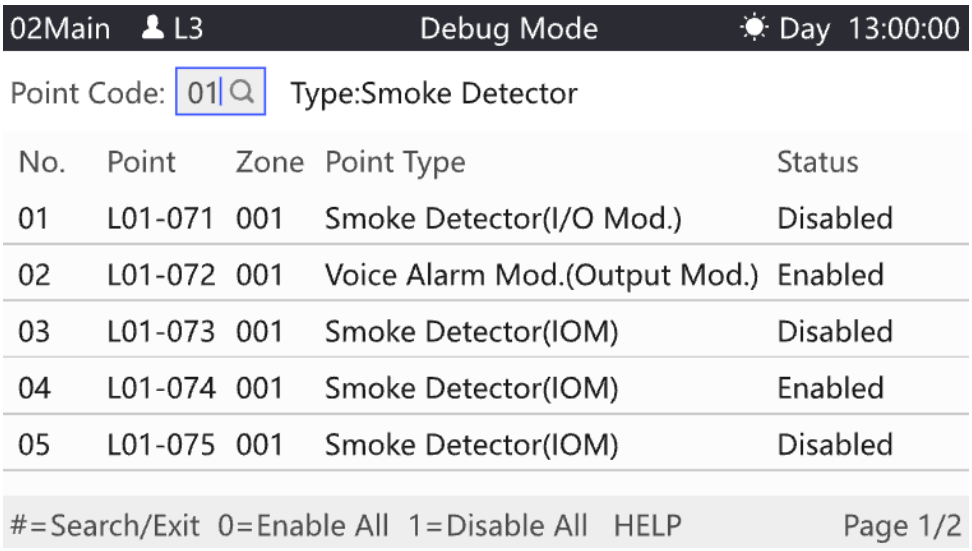


Figure 7-9 Point Type Disable

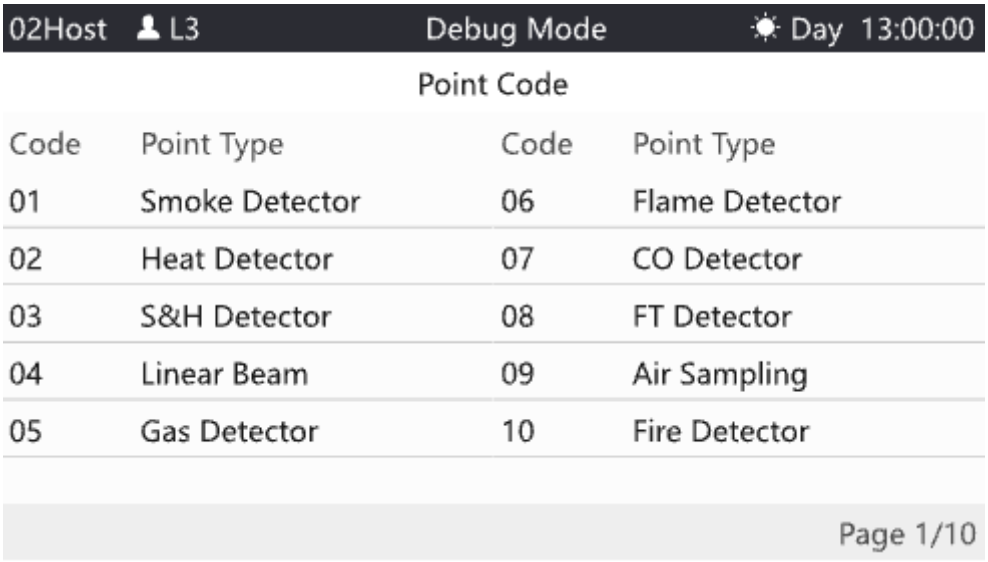


Figure 7-10 Point Code

7.2 Enable

Operate the enable by panel or zone.

Steps

1. Move the cursor to **Enable**. Press ENTER to enter the settings.
2. In the upper left corner, press **SHIFT** to switch enable method (panel or zone).
3. Move the cursor to the event; press ***** to enable the event.

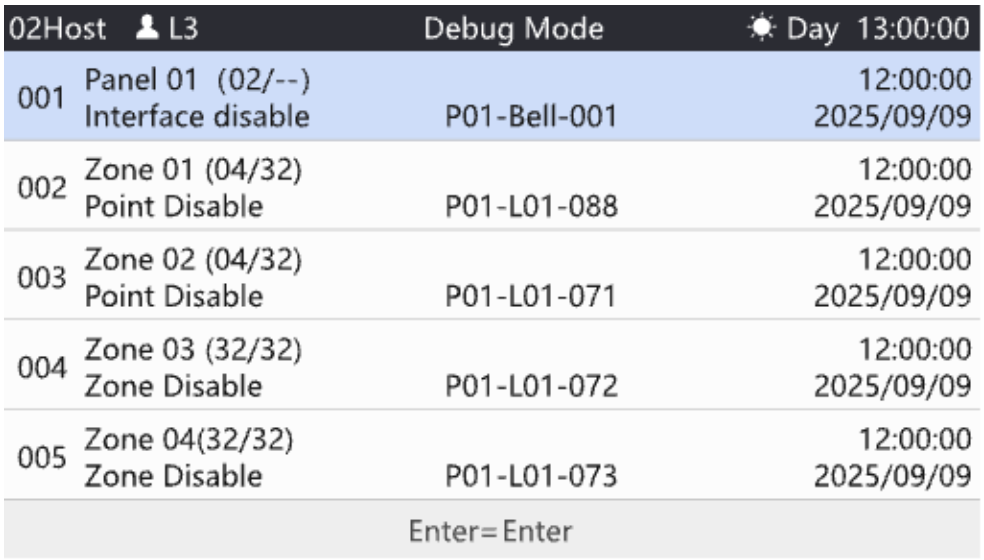


Figure 7-11 Enable

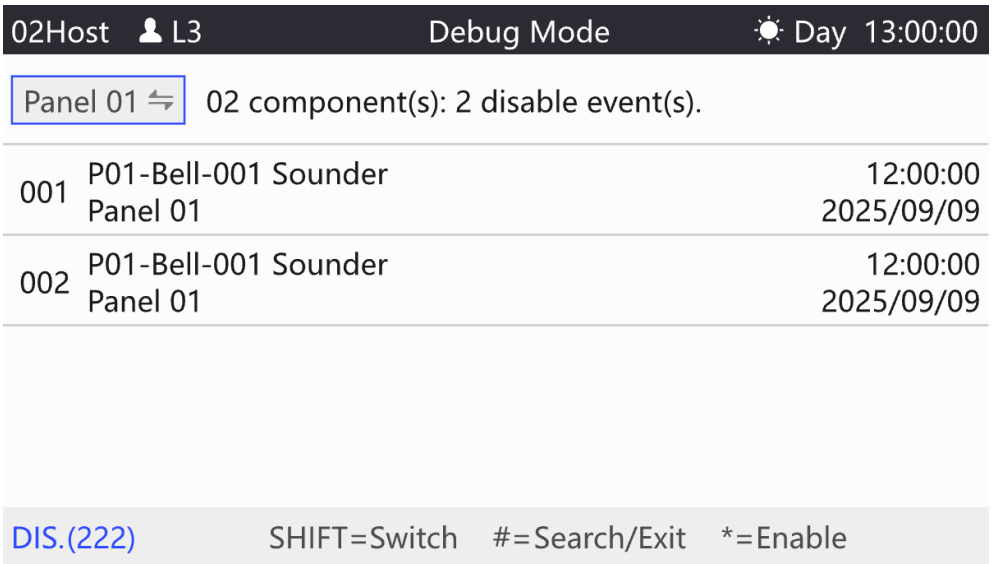


Figure 7-12 Enable (By Panel)

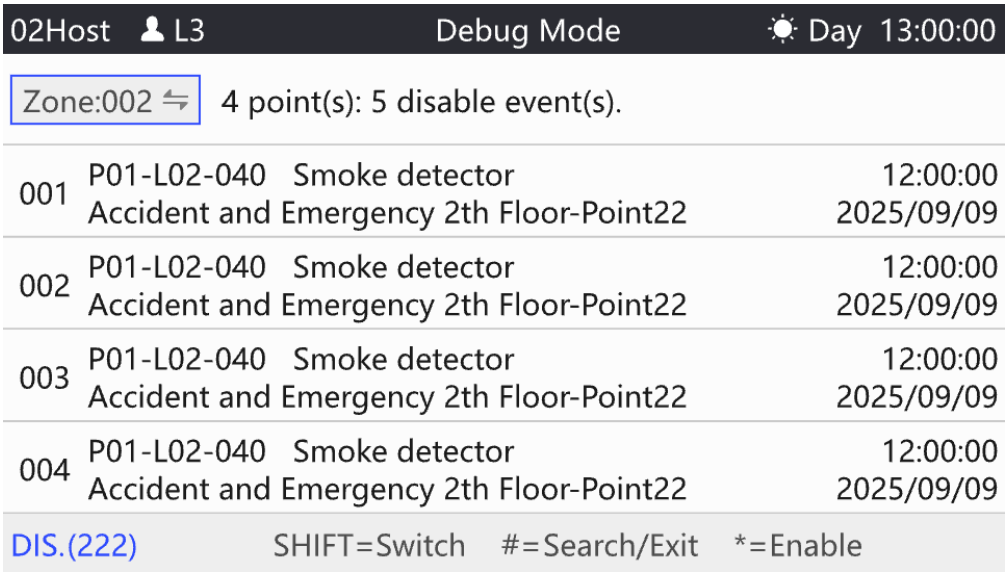


Figure 7-13 Enable (By Zone)

7.3 Manual ACT/STOP

This function can manually active and stop single or all bus points.

Point ACT/STOP

Active and stop the point.

Steps

1. Move the cursor to **Point ACT/STOP**, press **ENTER** button, and enter the password.
2. Move the cursor to the point. Press **SHIFT** to switch loop number; press **#** to search address number; press **0** to stop the point; press **1** to active the point.

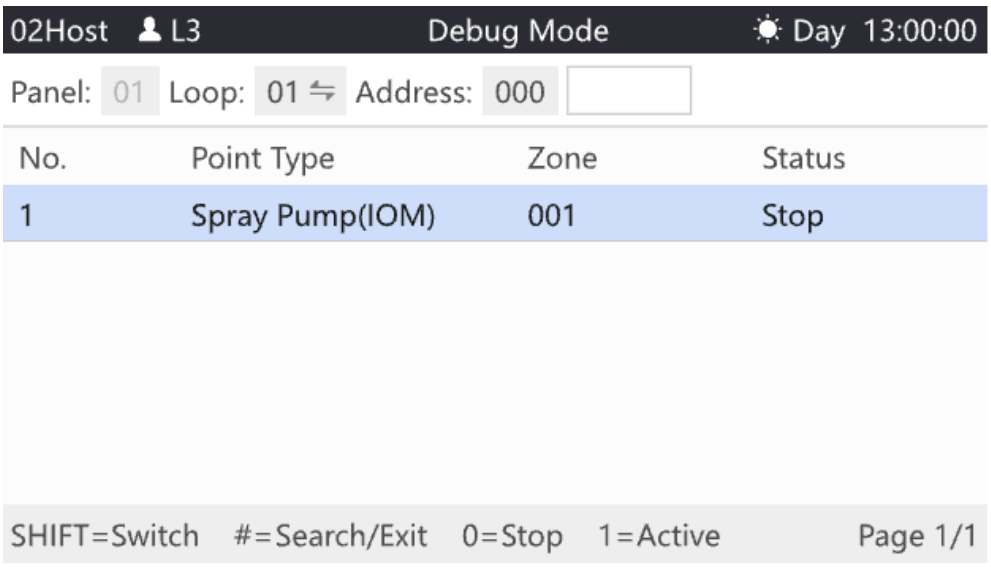


Figure 7-14 Point ACT/STOP

Local Interface ACT/STOP

Active and stop the local interface.

Steps

1. Move the cursor to **Local Interface ACT/STOP**, press **ENTER** button, and enter the password.
2. Move the cursor to the interface. Press **0** to stop the interface; press **1** to active the interface.

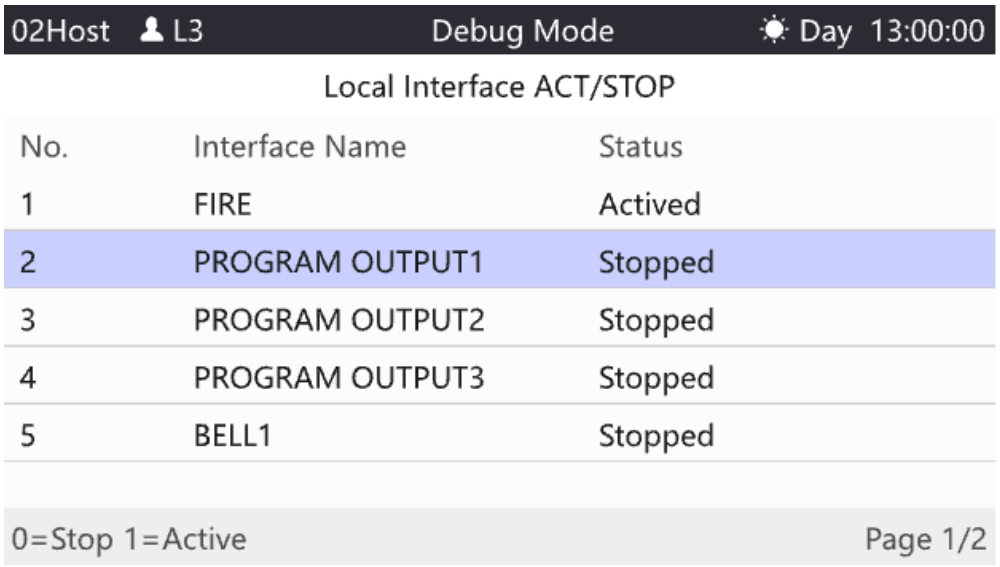


Figure 7-15 Local Interface ACT/STOP

Note

See **Appendix C Point Code Table** for the corresponding relationship between device code number and device type.

7.4 Test

Operate point event simulation and zone test.

Simulate Point Event

Simulate point event, supporting fire alarm, active and feedback.

Steps

1. Move the cursor to **Simulate Point Event**, press **ENTER** button, and enter the password.
2. Press **SHIFT** to switch loop number; press **#** to search address number.
3. Move the cursor to the point, and press **SHIFT** to switch simulate event.
4. Press ***** to start simulation.

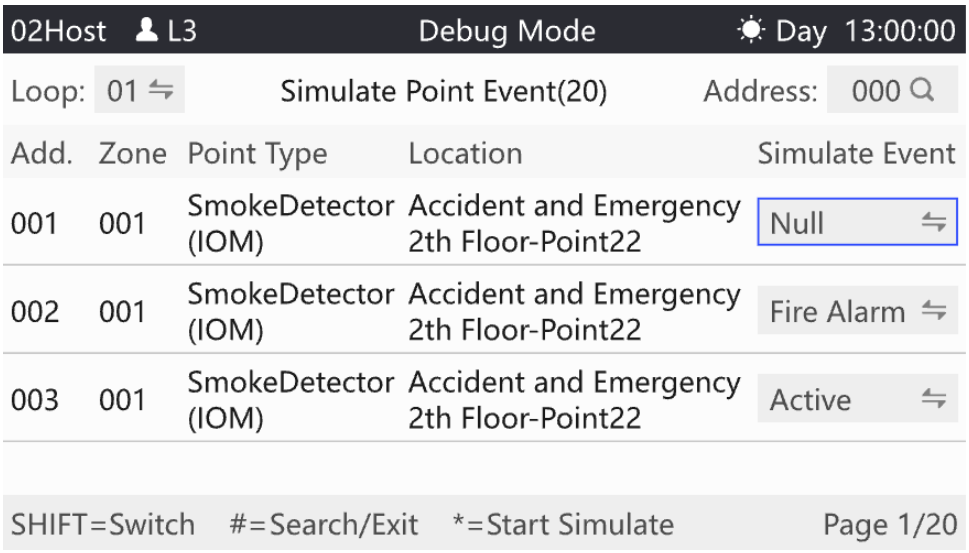


Figure 7-16 Simulate Point Event

Note

This function is only available in debug mode.

Zone Test

Support zone test, fire alarm auto-reset time setting (1~10s), local audible/visual alert duration

configuration (1~5s), and test window time (30min).

Steps

1. Move the cursor to **Zone Test**, press **ENTER** button, and enter the password. Press **ENETR** again.
2. Press **#** to search zone number; press **1** to operate audible test; press **2** to operate silent test; press **0** to cancel test.

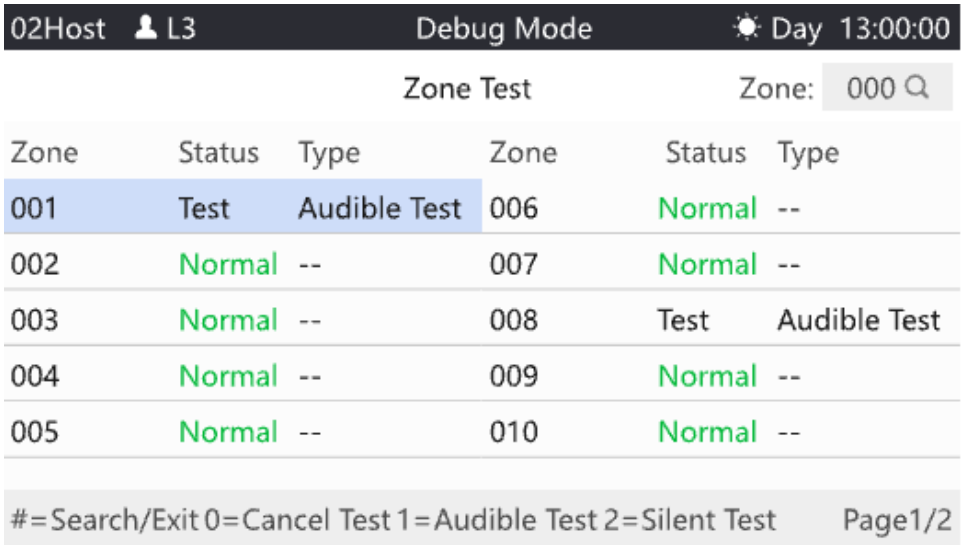


Figure 7-17 Zone Test

Chapter 8 Settings

Go to menu page, move the cursor to **Settings** menu item, and press **ENTER** button, or press **3** button, and enter operation password to enter the page.

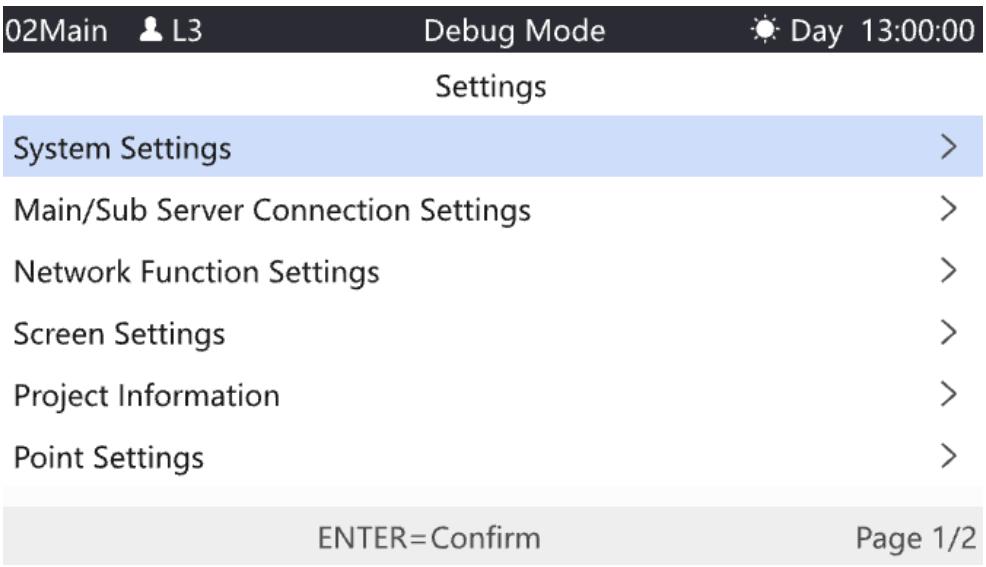


Figure 8-1 Settings Page 1

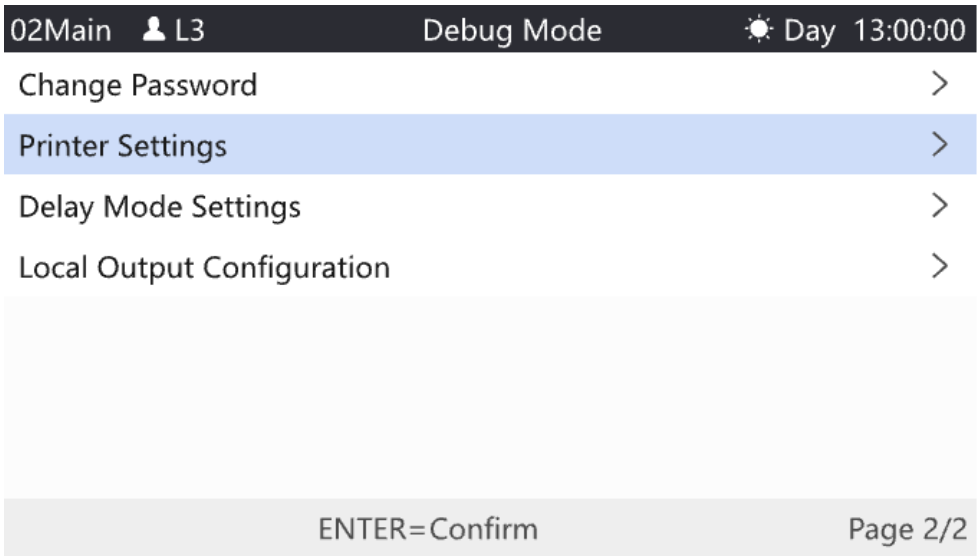


Figure 8-2 Settings Page 2

8.1 System Settings

Move the cursor to **System Settings**, press **ENTER** button, and enter the password. This include time settings, RS-485 settings, and CAN port settings.

Time Settings

You can select time zone, configure time, and enable DST. Press **SHIFT** to configure time bias;

press ***** to save.

RS-485 Settings

Press **SHIFT** to change access protocol; press ***** to save.

CAN Port Settings

Move the cursor and press SHIFT to change access protocol/baud rate; press ***** to save.

8.2 Main/Sub Server Connection Settings

Move the cursor to **Main/Sub Server Connection Settings**, press **ENTER** button, and enter the password. You can switch main/sub server, configure local receiving, and view communication status (including registering FACP).

8.3 Network Function Settings

Move the cursor to **Network Function Settings**, press **ENTER** button, and enter the password. You can configure network interface settings (including editing IP address, net mask, and etc), enable/disable HikCentral Professional network settings, and enable/disable Work Station network settings.

8.4 Screen Settings

Move the cursor to **Screen Settings**, press **ENTER** button, and enter the password. You can enable/disable auto screen-off. Supporting editing auto screen-off time (30~3600)s.

8.5 Project Information Settings

Move the cursor to **Project Information**, press **ENTER** button, and enter the password. You can configure project name and configure phone number. Press * to save.

8.6 Point Settings

Move the cursor to **Point Settings**, press **ENTER** button, and enter the password. You can configure sensitivity for a specific point. Move the cursor and press SHIFT to configure sensitivity. Press * to apply sensitivity.

Note

Only smoke detector supports sensitivity adjustment.

8.7 Password Settings

Move the cursor to **Change Password**, press **ENTER** button, and enter the password. You can change L2 and L3 password, configure auto logout time (5~30 min), and view operation permission. Press ENTER to save.

8.8 Printer Settings

Move the cursor to **Printer Settings**, press **ENTER** button, and enter the password. You can enable/disable the printing of event. Move the cursor and press SHIFT to configure printing. Press * to save.

8.9 Delay Settings

Move the cursor to **Delay Settings**, press **ENTER** button, and enter the password. You can enable/disable delay mode and configure delay output time (1~600s). Press * to save.

8.10 Local Output Settings

Move the cursor to **Local Output Configuration**, press **ENTER** button, and enter the password. You can configure fire output, program output, bell, and 24V output. Support enable/disable output, configure output mode, enable/disable delay mode, configure delay output time, enable/disable resound mode, and enable/disable bell mode. Press * to save.

- FIRE OUTPUT: Used to connect fire detection devices, outputting fire alarm signals.
- PROGRAM OUTPUT: Used to connect relays or other external devices, allowing flexible control of different channels based on system configuration.
- BELL OUTPUT: Used to connect audible alarm devices such as bells, outputting alarm bell signals.
- 24V OUTPUT: Provides power supply for external components such as sensors and relays.

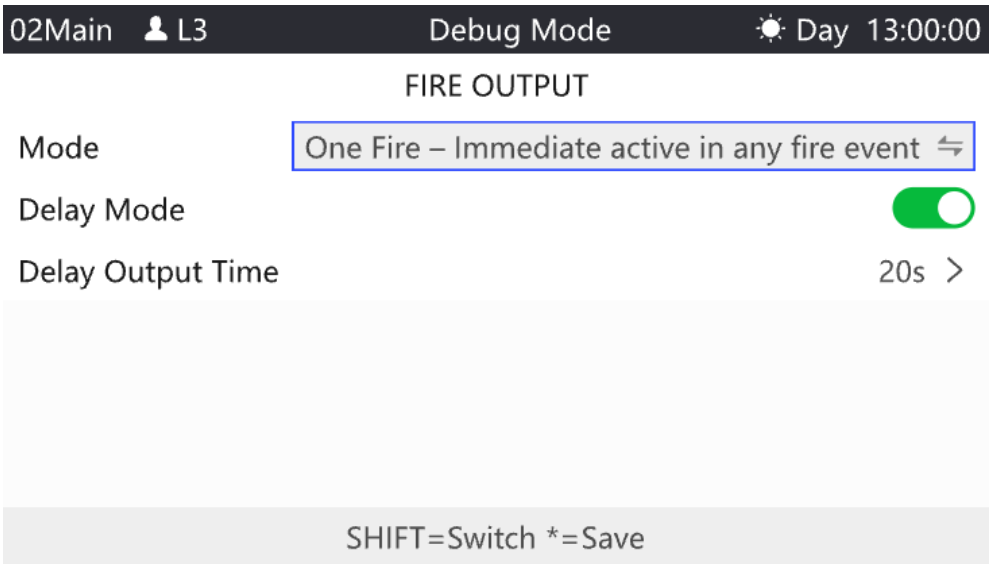


Figure 8-3 Fire Output

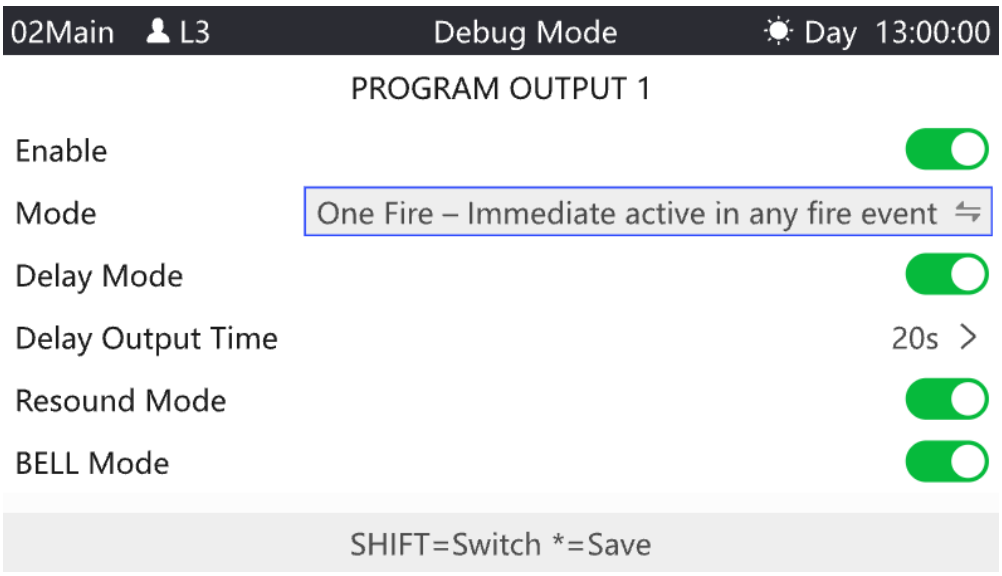


Figure 8-4 Program Output

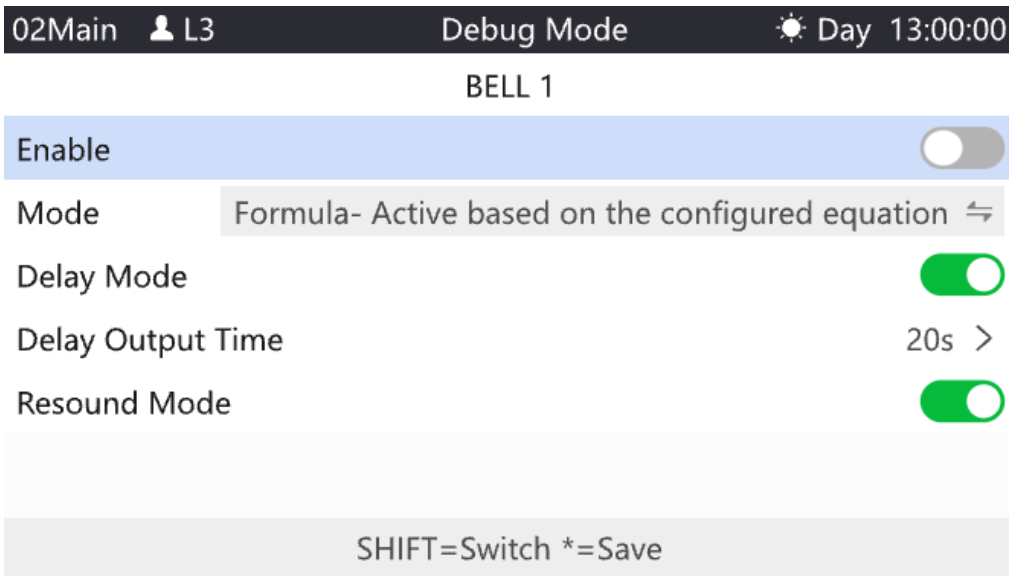


Figure 8-5 Bell

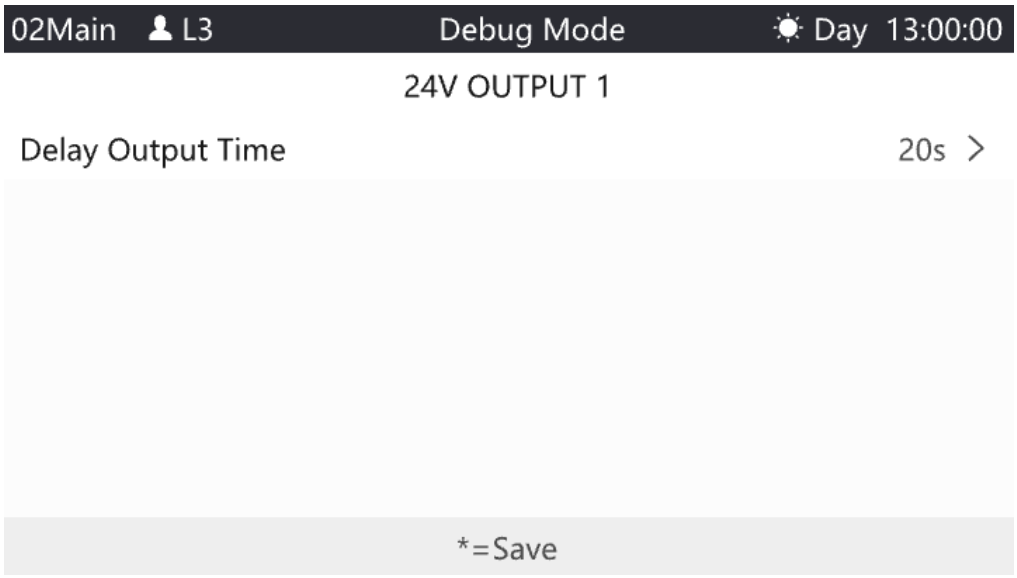


Figure 8-6 24V Output

Chapter 9 Programming

Go to menu page, move the cursor to **Programming** menu item, and press **ENTER** button, or press **4** button, and enter operation password to enter the page.

9.1 Zone Configuration

Move the cursor to **Zone Configuration**, press **ENTER** button, and enter the password.

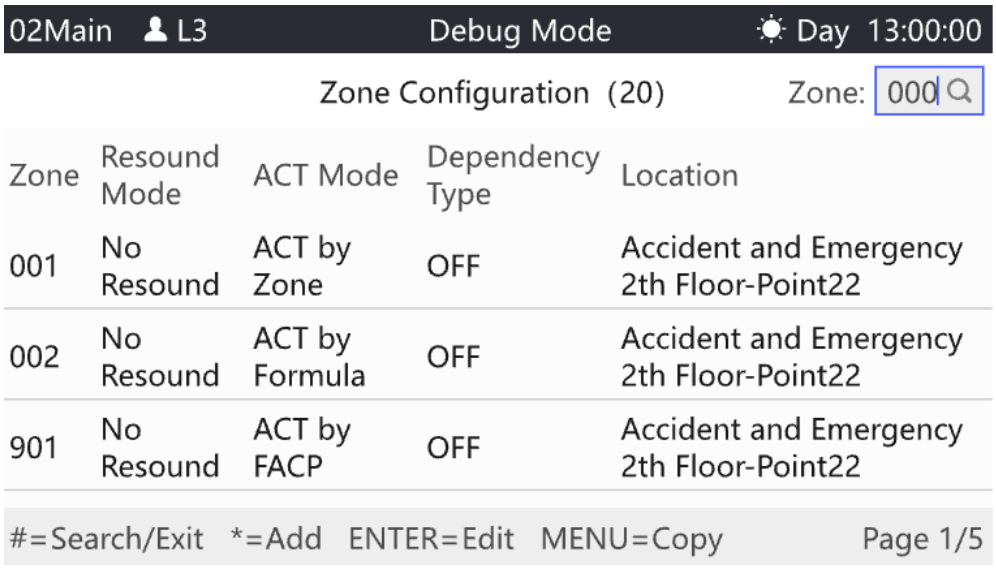


Figure 9-1 Zone Configuration

Add Zone

Press ***** to add zone. You can configure zone number, resound mode, ACT mode, dependency mode and location.

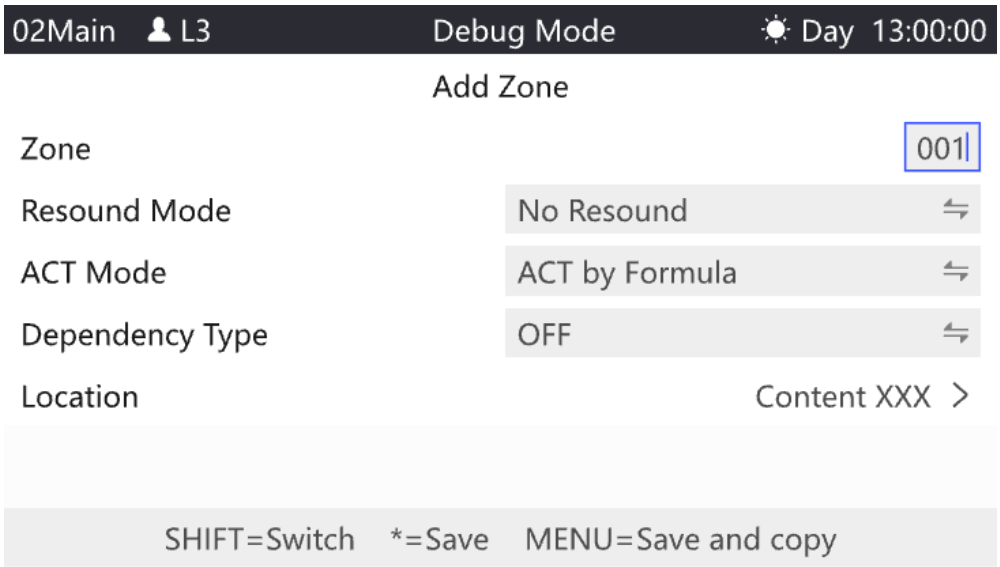


Figure 9-2 Add Zone

Other Operations

Press **#** to search zone number; press ENTER to edit zone; press MENU to copy the current zone.

9.2 Zone Button Configuration

Move the cursor to **Zone Button Configuration**, press **ENTER** button, and enter the password.

After zone is added, buttons will be automatically assigned to it. You can reassign in this page. Move the cursor and enter the zone number to edit. Press ***** to save. Support configuring up to 32 buttons.

9.3 Zone & Address Configuration

Move the cursor to **Zone & Address Configuration**, press **ENTER** button, and enter the password.

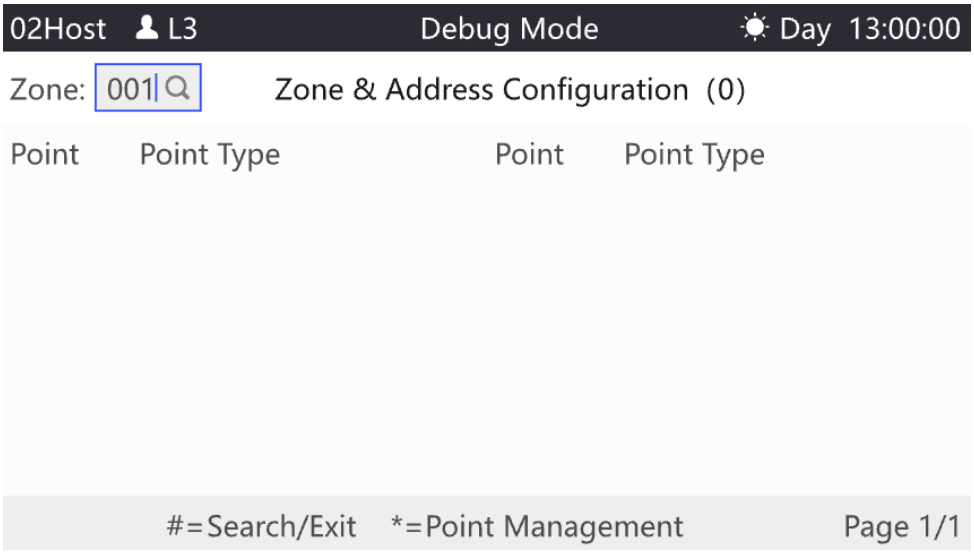


Figure 9-3 Zone & Address Configuration

Steps

1. Press **#** to search zone number.
2. Press ***** to enter Point Management page. Select loop number, and enter the address number. Press ENTER to add point, or press **#** to delete the point from the zone. After

operation, press * to save.

If added, point information will be displayed.

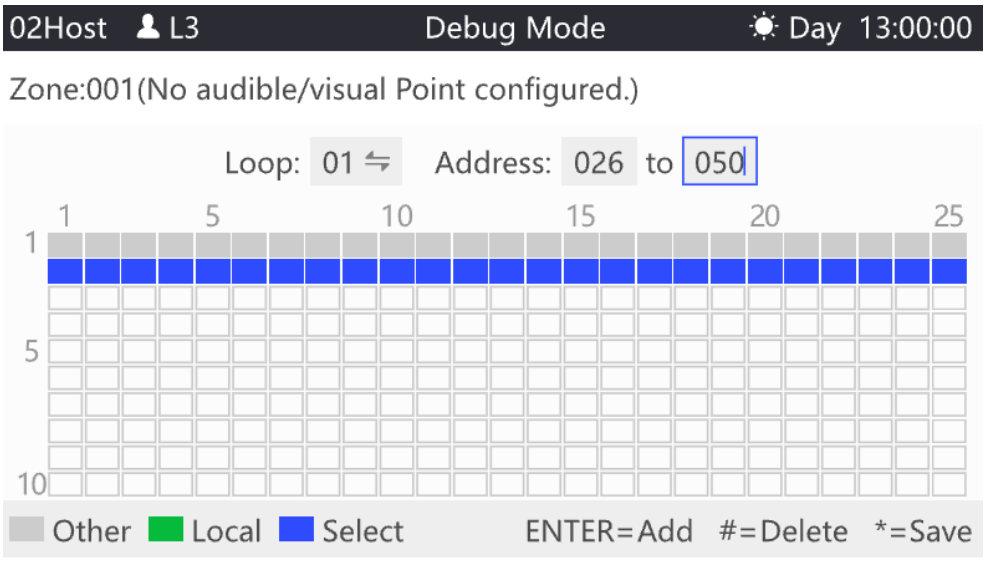


Figure 9-4 Select Address

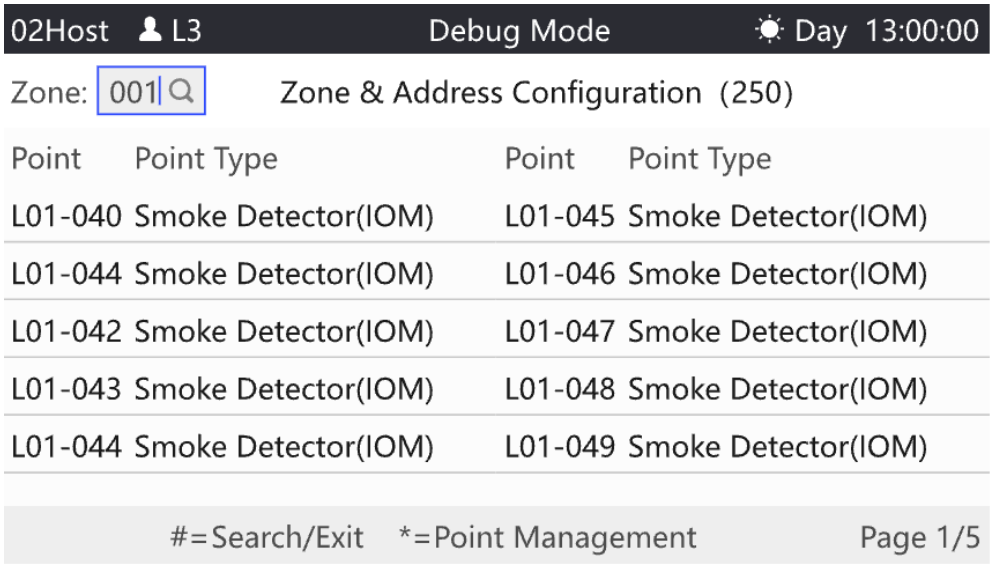


Figure 9-5 Address Displayed

Note

Adding or deleting disabled nodes are not supported.

9.4 Loop Mode Configuration

Move the cursor to **Loop Mode Configuration**, press **ENTER** button, and enter the password.

Steps

1. Move the cursor and press **SHIFT** to switch work mode for the loop.
2. Move the cursor and press **SHIFT** to enable/disable the loop.
3. Press ***** to save.

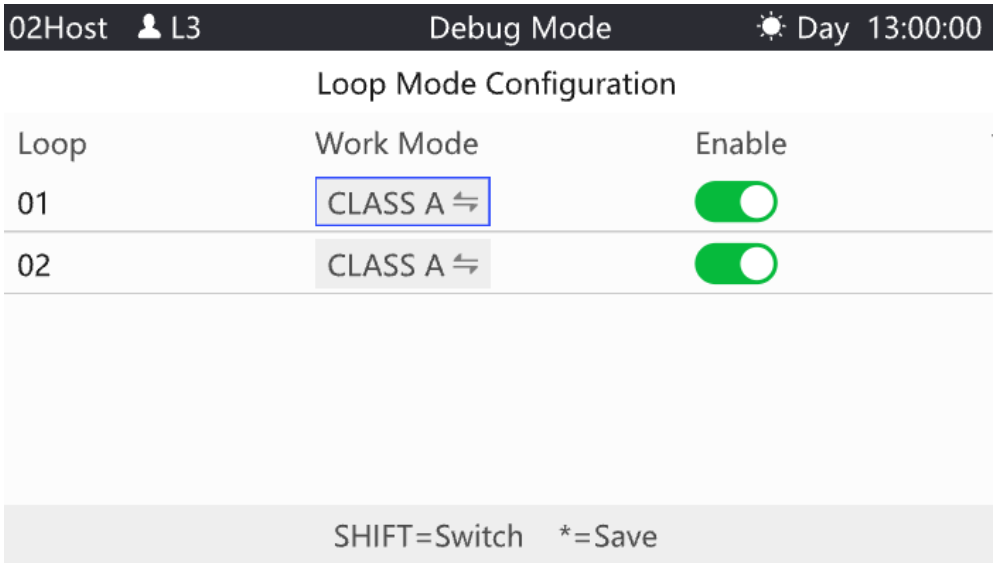


Figure 9-6 Loop Mode Configuration

9.5 Loop Point Configuration

Move the cursor to **Loop Point Configuration**, press **ENTER** button, and enter the password.

Steps

1. Press **#** and press **SHIFT** to switch loop number; move the cursor to search address number.

Loop points will be displayed.

2. Move the cursor to point and press **ENTER** to view point details and edit information.

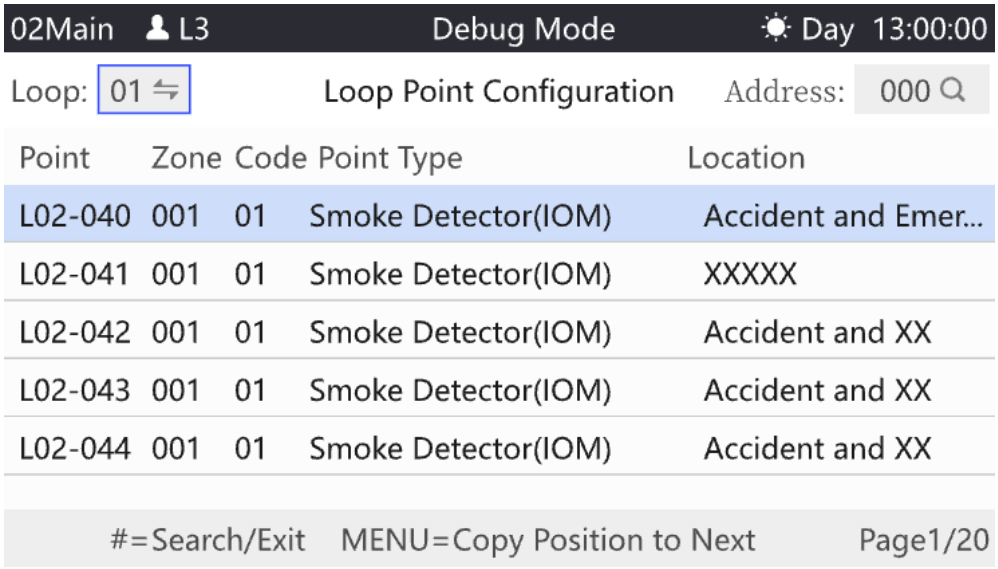


Figure 9-7 Loop Point Configuration

Other Operations

Press MENU to copy the current location.

9.6 Routing Setup

Move the cursor to **Routing Setup**, press **ENTER** button, and enter the password.

Steps

1. Move the cursor to each routing and edit.
2. Press * to save.

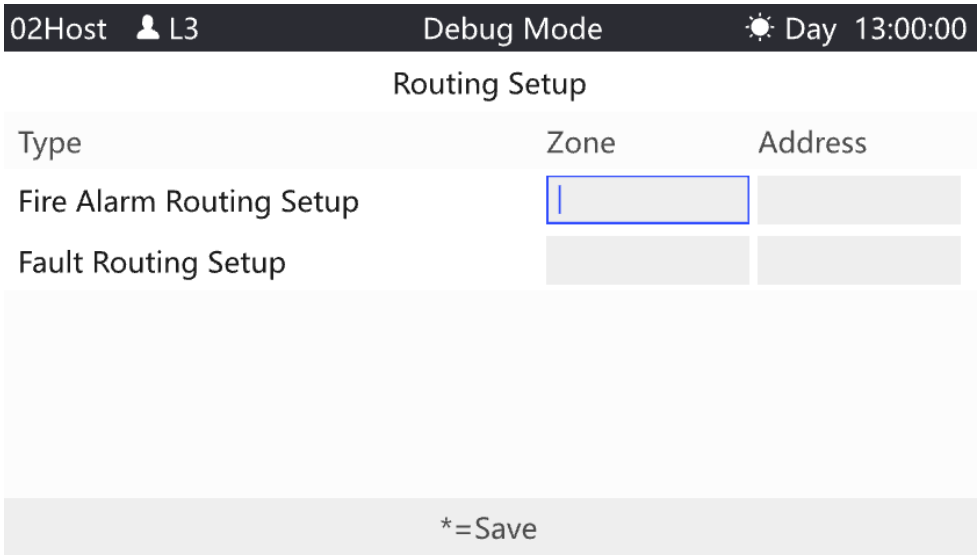


Figure 9-8 Routing Setup

9.7 Day/Night Mode Configuration

Move the cursor to **Day/Night Mode Configuration**, press **ENTER** button, and enter the password.

Steps

1. Press **SHIFT** to enable/disable day/night mode. You can edit daytime period.
2. Press ***** to save.

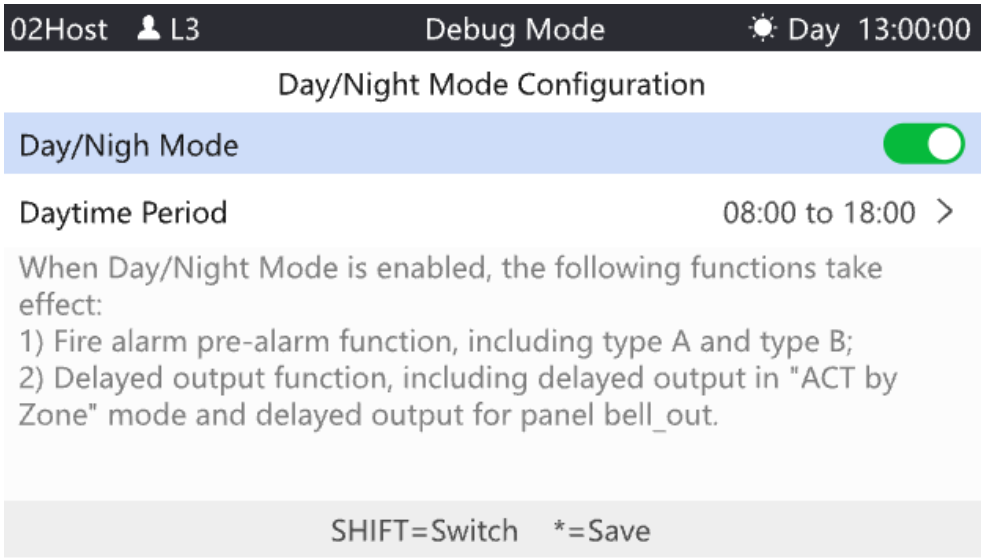


Figure 9-9 Day/Night Mode Configuration

9.8 Type A Dependency Mode

In type A mode, the alarm delay process is divided into pre-alarm stage and alarm verification stage. When day/night mode is enabled, alarm delay is only valid during daylight time.

Move the cursor to **Type A Dependency Mode**, press **ENTER** button, and enter the password.

Steps

1. Press **SHIFT** to enable/disable type A dependency mode. When it is enabled, you can edit

pre-alarm point time range (1~60s) and alarm verification stage time range (1s~30min).

Note

The minimum value of the time range in alarm verification stage is the maximum value of the time range of the pre-alarm point.

2. Press * to save.

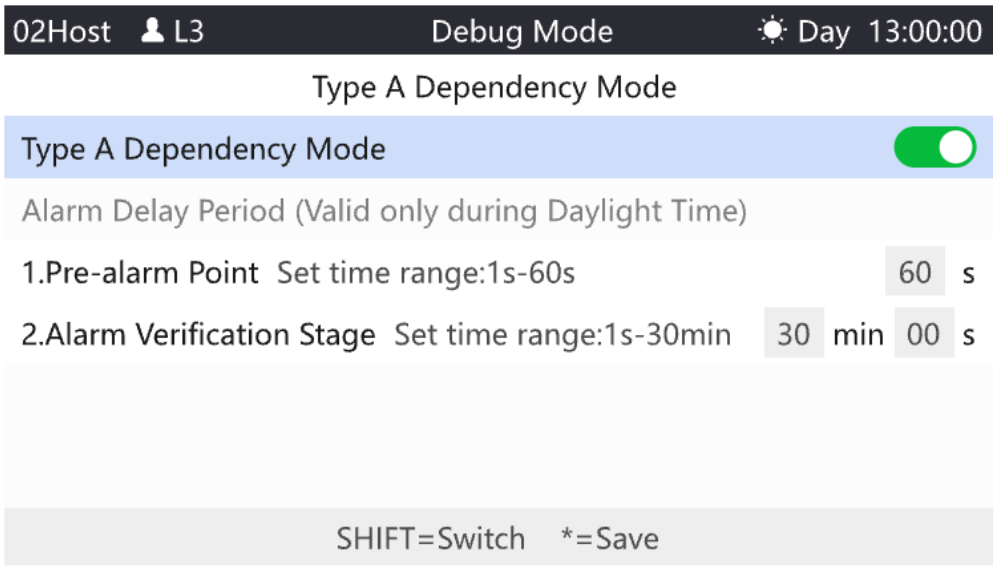


Figure 9-10 Type A Dependency Mode

9.9 Type B Dependency Mode

In type B mode, the alarm delay process consists of only one stage. When day/night mode is enabled, alarm delay is only valid during daylight time.

Move the cursor to **Type B Dependency Mode**, press **ENTER** button, and enter the password.

Steps

1. Press **SHIFT** to enable/disable type B dependency mode. When it is enabled, you can edit

pre-alarm point time range (5~600min).

2. Press * to save.

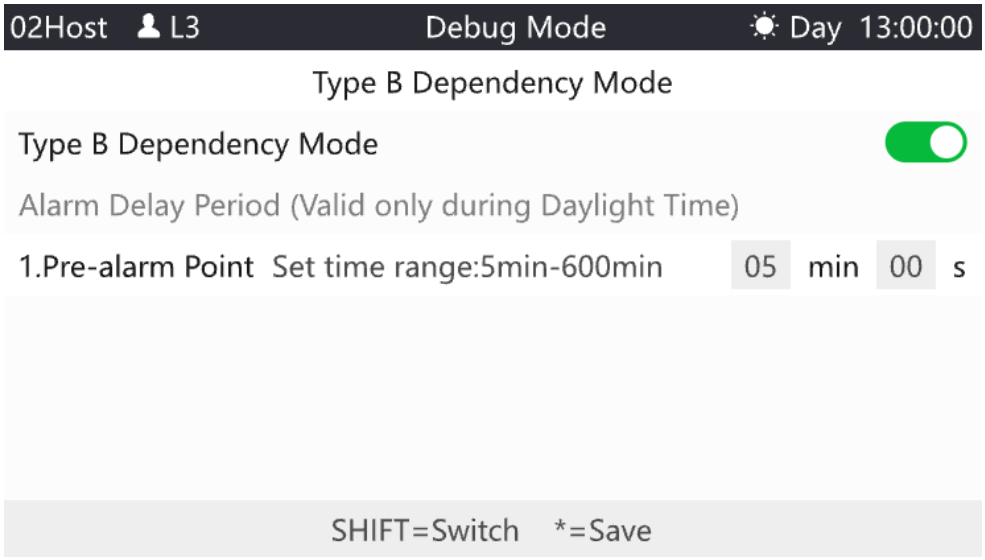


Figure 9-11 Type B Dependency Mode

9.10 Linkage Formula

Move the cursor to **Linkage Formula**, press **ENTER** button, and enter the password.

Add Formula

Press * to add linkage formula. You can add up to 100 formulas.

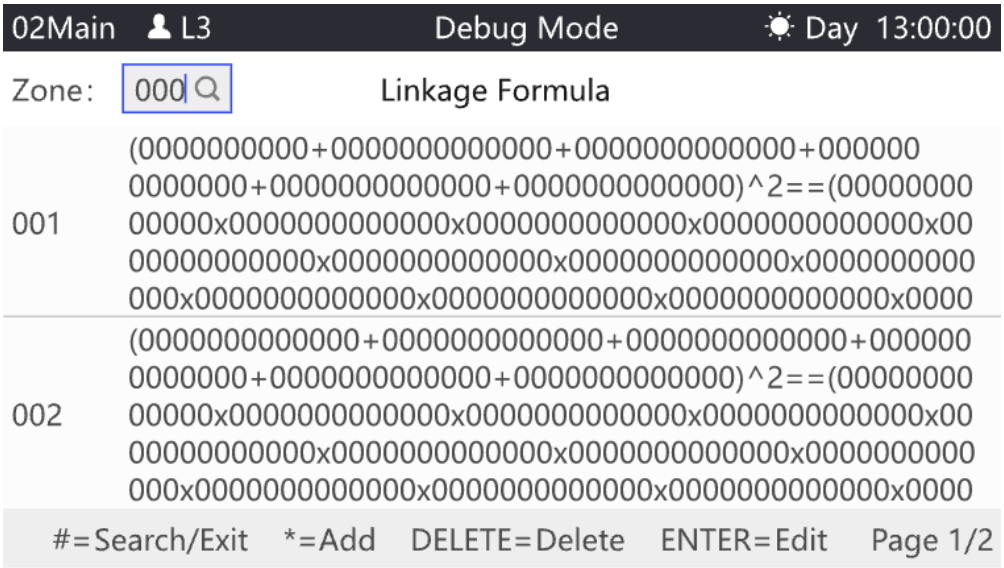


Figure 9-12 Linkage Formula

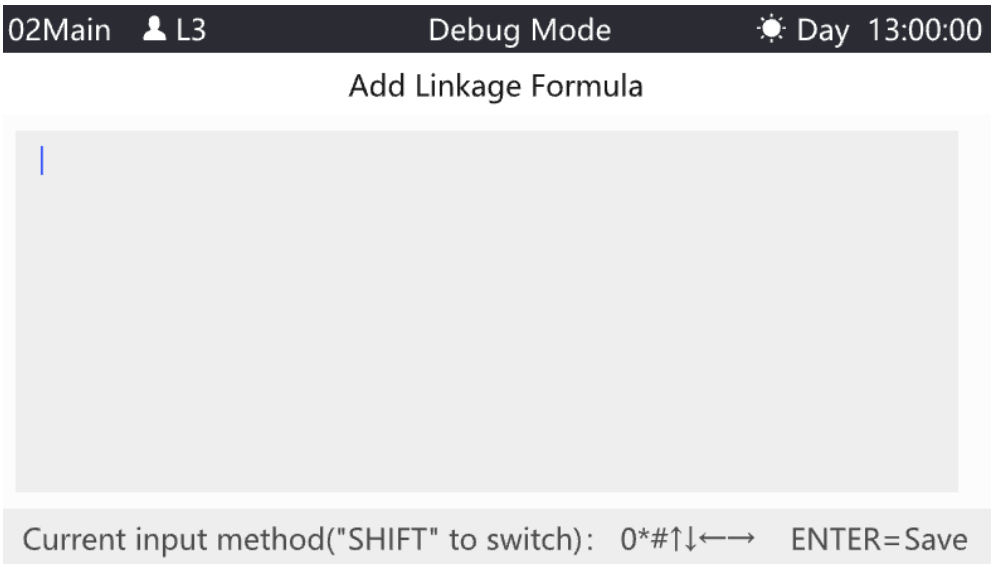


Figure 9-13 Add Formula

Linkage Formula Configuration Rule

- Linkage Formula Description

  The linkage formula adopts the logic of quadratic code programming, and a complete linkage formula consists of conditional items, logical relations and active items.

  1) Condition item: An alarm input that triggers linkage is composed of 6-digit bit code + 2-digit device type code + 2-digit event type code.
  2) Active item: A linked alarm output consists of 6-digit bit code + 2-digit device type code + 3-digit delay time.

- Linkage Formula Definition

Programming Parameters		Definition	Input Method
logical relation AND x OR + MULTI ()^2 ()^3 START =	x	Indicates **and** related programming, the front and rear items need to be activated after the fire alarm is reported at the same time. The priority is higher than the logical relation symbol " +" , and the lowercase x is used to represent the Multiplication sign ×	【F5】key input x
	+	Indicates **or** relational programming, start after at least one of the preceding and following items has a fire alarm.	【F6】key input +
	=	Indicates **start**	【F8】key input =
	()^2	It means that any **two** items in the brackets will start after the fire alarm. This logical relational symbol is only applicable to two-point alarm and cannot be reused with other relational symbols.	【F9】key input (【F10】key input) 【F7】Key input ^
	()^3	Indicates that any of the **three** items in the brackets will start after the fire alarm is reported. This logical relational symbol is only applicable to three-point alarm and cannot be reused with other relational symbols.	
address parameter 0123456789 *#	**	Building / floor / fire zone / smoke zone / address can be set to "**", which means any buildings / all floors / all fire zones / all smoke zones / all address.	keyboard input *
	##	Building / floor / fire zone / smoke zone can be set to " ##" , which means that it is also the same building / floor / fire zone / smoke zone	Keyboard input #
	&&	Floor / fire zone / smoke zone can be set to " &&" , which means that it is also the adjacent floor (upper, this, lower) / fire zone / smoke zone	Keyboard input &
device status aaa bbb yy ZZ	fire alarm	Indicates that the device has detected a fire alarm.	number 33
	start up	Indicates to start the device.	number 49
	feedback	Indicates the feedback signal.	number 50
	time delay	Indicates that the device will start after the set delay time has elapsed.	Setting range 000-600 seconds

Figure 9-14 Linkage Formula Definition

Note

- Support entering: 0123456789∗=∧()#+x
- Support up to 6 condition items and 12 active items in a single formula.

Other Operations

Press **#** to search zone number; press **DELETE** to delete formula; press **ENTER** to edit the formula.

9.11 Formula Help

Move the cursor to **Formula Help**, press **ENTER** button, and enter the password. You can view code of each interface.

Chapter 10 Debug

Go to menu page, move the cursor to **Debug** menu item, and press **ENTER** button, or press **5** button, and enter operation password to enter the page.

10.1 Loop Registration

Move the cursor to **Loop Registration**, press **ENTER** button, and enter the password.

Steps

1. Press **SHIFT** to switch loop number.
2. Press ***** to start registering. You can press **#** to view registration details.

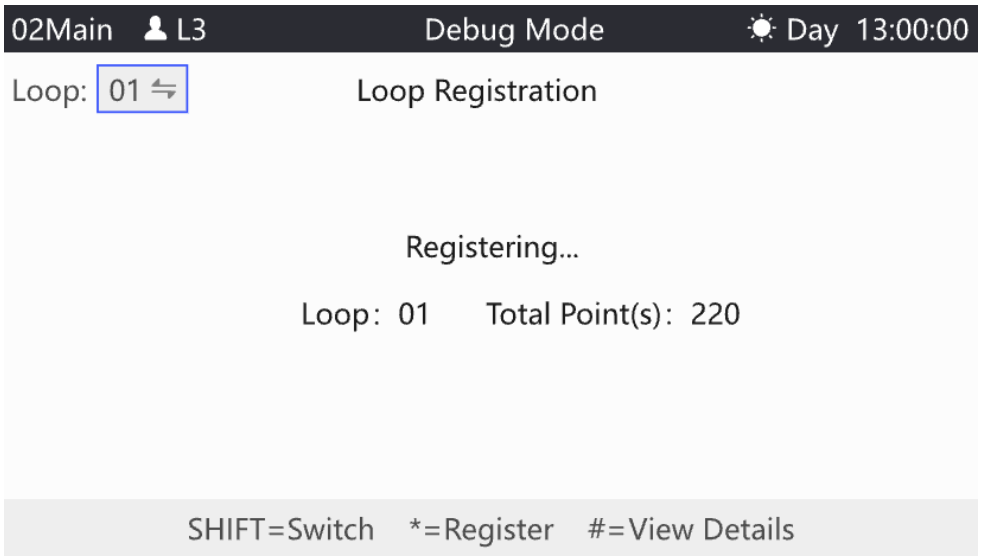


Figure 10-1 Loop Registration

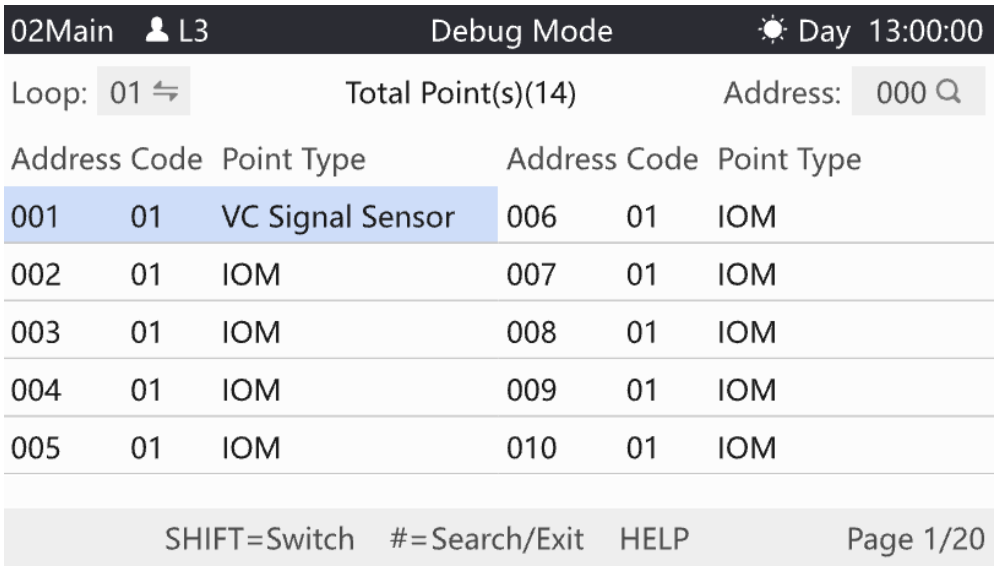


Figure 10-2 Registration Details

10.2 Duplicate Address Handling

Move the cursor to **Duplicate Address Handling**, press **ENTER** button, and enter the password.. Points with duplicated address will be displayed.

Steps

1. Move the cursor and press **ENTER** to edit.
2. Press **ENTER** to confirm editing.

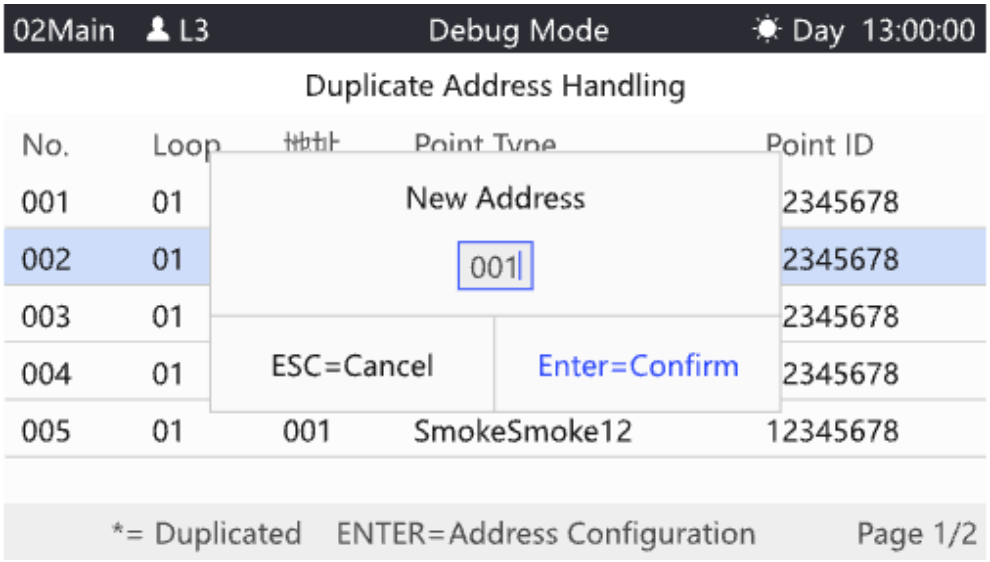


Figure 10-3 Duplicate Address Handling

10.3 Address Configuration

Move the cursor to **Address Configuration**, press **ENTER** button, and enter the password. You

can set new address for points.

Steps

1. Move the cursor, enter loop number/address, and enter new address.
2. Press * to save.

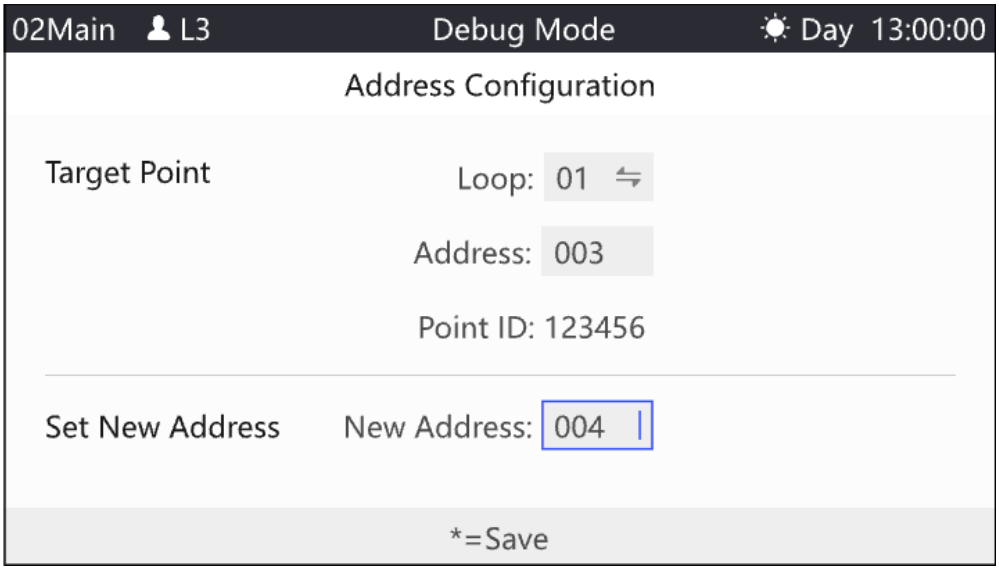


Figure 10-4 Address Configuration

10.4 Fault Detection Configuration

Move the cursor to **Fault Detection Configuration**, press **ENTER** button, and enter the password.

Steps

1. Move the cursor and enter **SHIFT** to enable/disable fault detection.
2. Press * to save.

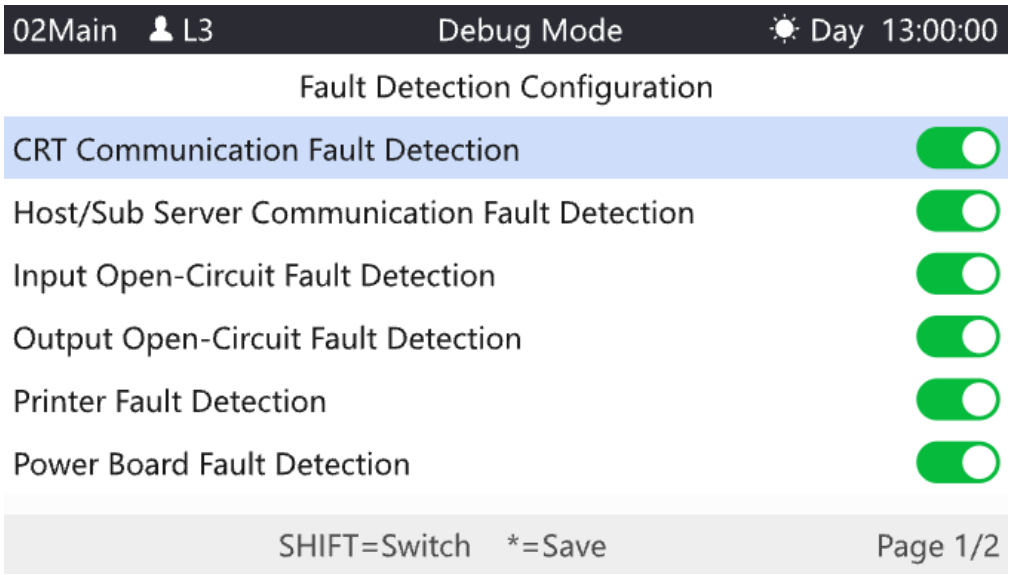


Figure 10-5 Fault Detection Configuration

10.5 USB Configuration & Upgrade

Move the cursor to **USB Configuration & Upgrade**, press **ENTER** button, and enter the password.

Prerequisite: USB is inserted.

Import Data

Move the cursor to **Import Data**, press **ENTER**, and select the file to import. You need to enter password.

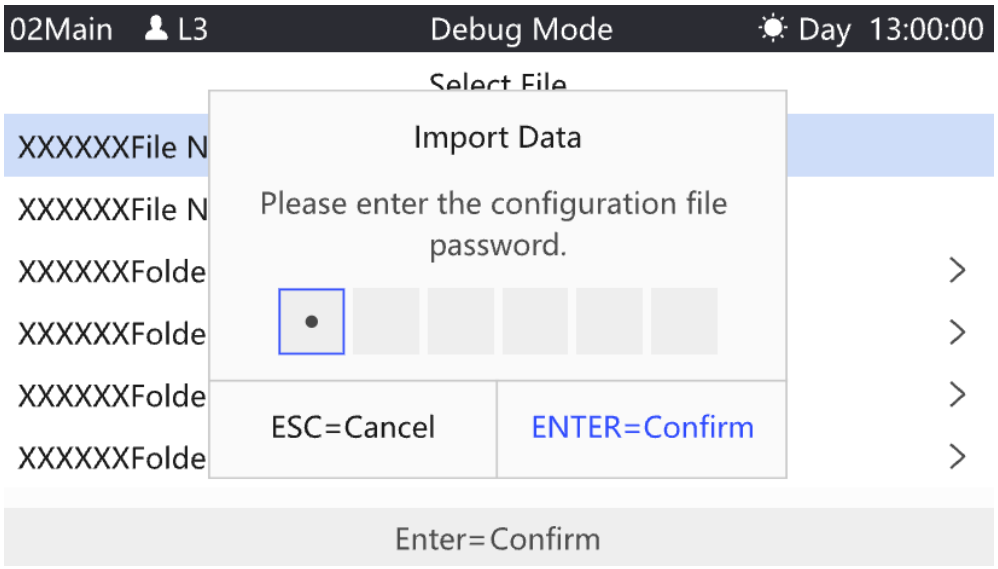


Figure 10-6 Import Data

Export Data

Move the cursor to **Export Data**, press **ENTER**, and enter password to export file.

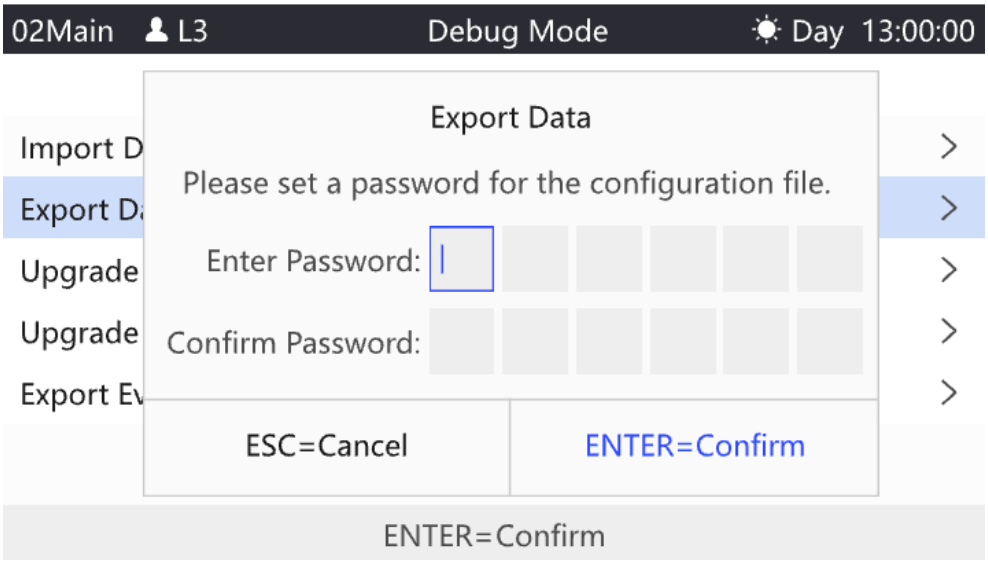


Figure 10-7 Export Data

Upgrade FACP

Move the cursor to **Upgrade FACP**, press **ENTER**, and select the file to import.

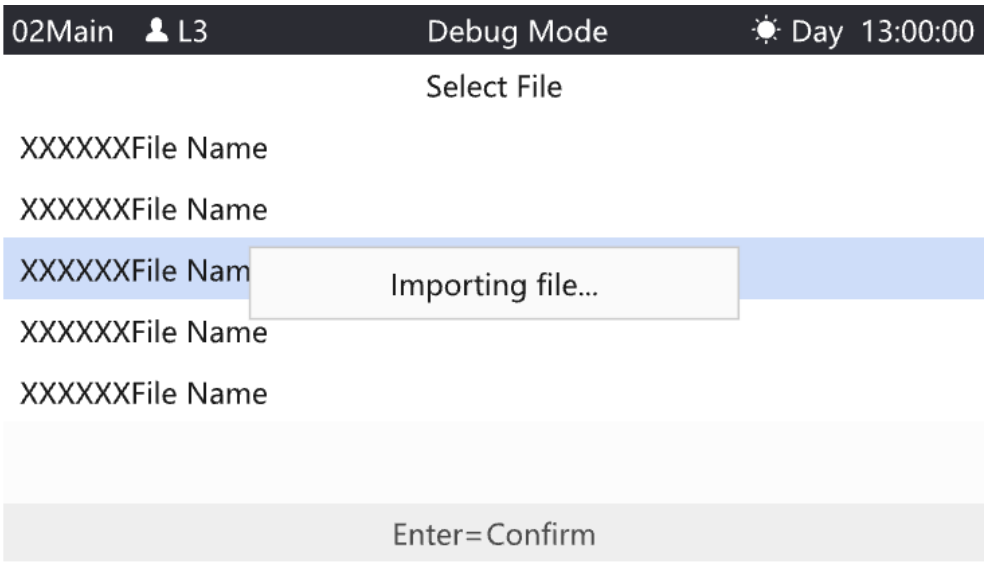


Figure 10-8 Upgrade FACP

Upgrade Point Component

Steps

1. Move the cursor to **Upgrade Point Component**, press **ENTER** button, and enter the password. Press * to get version. The version number will be displayed on the upper right corner.
2. Move the cursor to enter code and switch loop.
3. Move the cursor to component. Press 1 to upgrade the current component; press 2 to upgrade all; press 3 to select file.
4. After selecting the file, press **ENTER** to confirm.

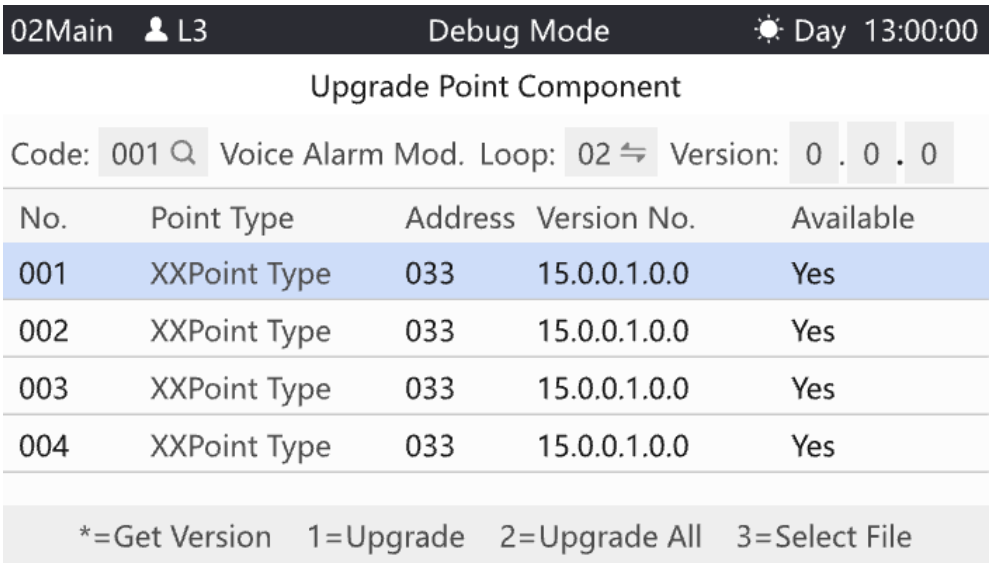


Figure 10-9 Upgrade Point Component

Export Event

Move the cursor to **Export Event** and press **ENTER** to export the file.

10.6 System Point Maintenance

Move the cursor to **System Point Maintenance**, press **ENTER** button, and enter the password. Device already maintained will be displayed.

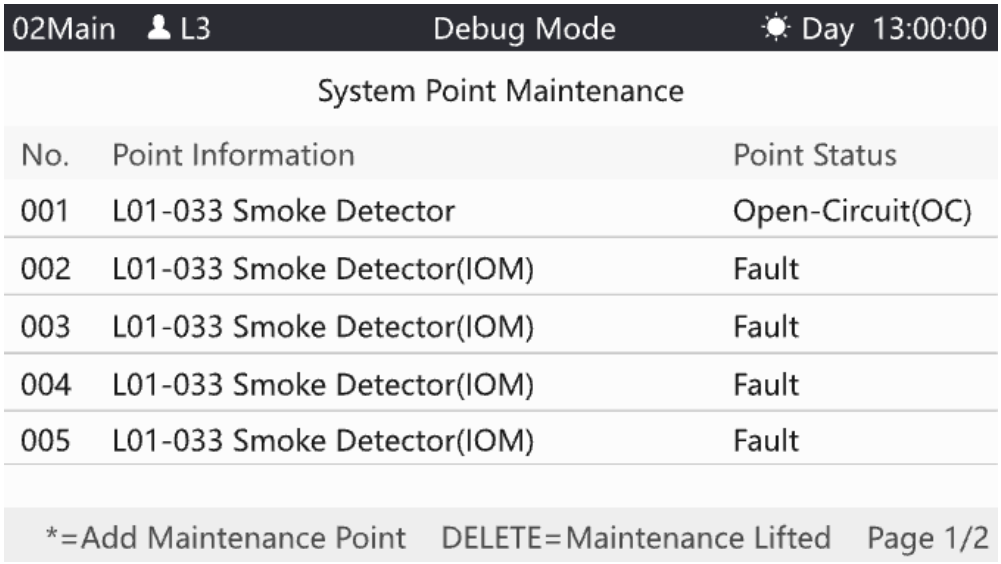


Figure 10-10 System Point Maintenance

Add Maintenance Point

Press ***** to add maintenance point. You can select loop and address.

Lift Maintenance

Move the cursor to point and press DELETE to lift maintenance.

Note

Nodes in maintenance status or in other abnormal status will not be displayed on the main interface.

10.7 Custom Point Name

Move the cursor to **Custom Point Name**, press **ENTER** button, and enter the password.

Steps

1. Move the cursor to point and press ENTER to change the point name.
2. Press ***** to save.

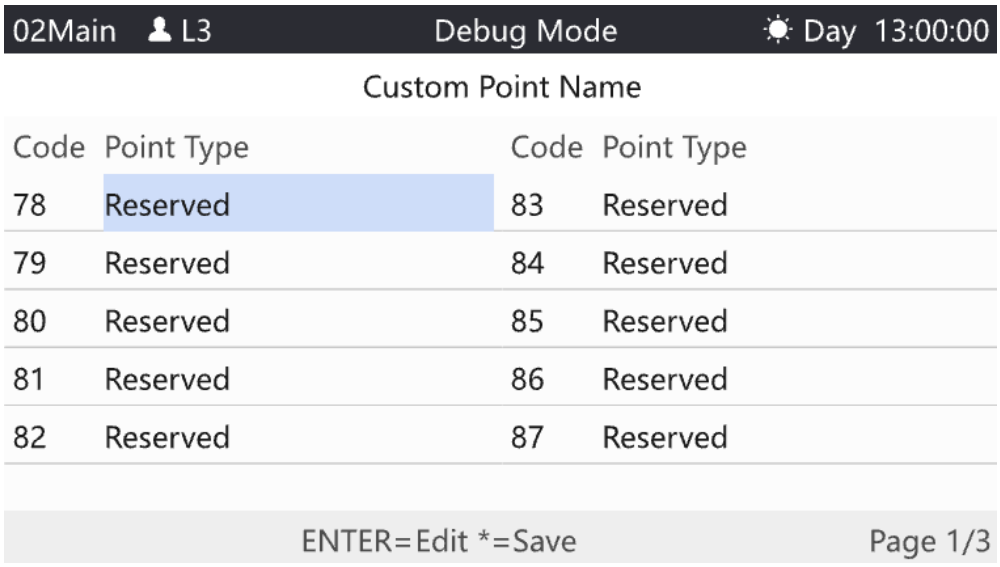


Figure 10-11 Custom Point Name

10.8 Debugging Mode

Move the cursor to **Debugging Mode** and press **SHIFT** to enable/disable the mode.

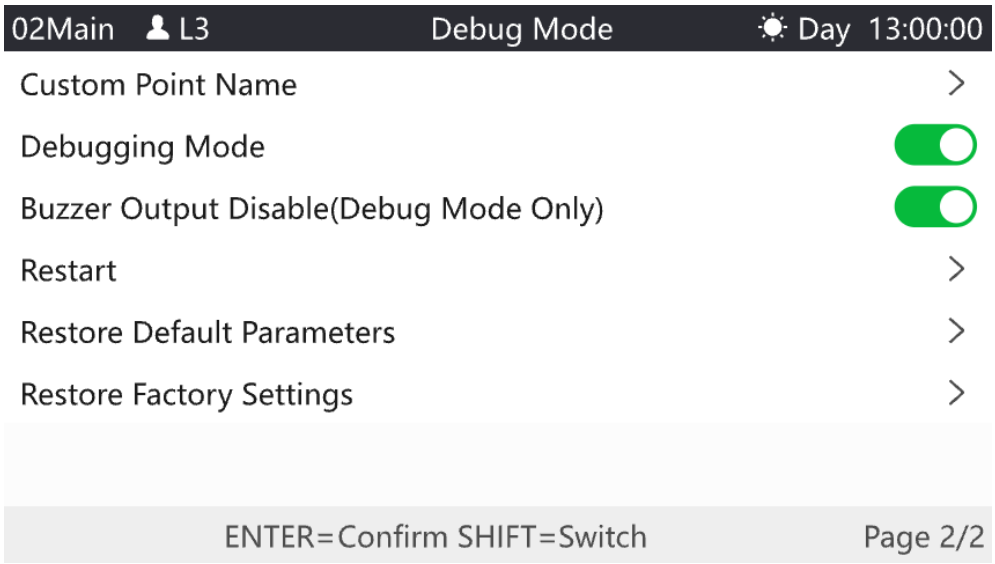


Figure 10-12 Debugging Mode

10.9 Buzzer Output Disable

Move the cursor to **Buzzer Output Disable** and press **SHIFT** to enable/disable the function.

Note

The function is only available in debug mode. When debug mode is disabled, the function will be disabled automatically.

10.10 Restart

Move the cursor to **Restart**, press **ENTER** button, and enter the password to restart FACP.

10.11 Restore Default Parameters

Move the cursor to **Restore Default Parameters**, press **ENTER** button, and enter the password. Data except log, fire alarm events, IP information, user account and rtc time will be cleared.

10.12 Restore Factory Settings

Move the cursor to **Restore Factory Settings**, press **ENTER** button, and enter the password. All data will be cleared.

Chapter 11 Maintenance Management

11.1 Daily Maintenance Management

In view of the specialty and importance of fire protection products, the system should be managed for daily maintenance in order to ensure the long-term, stable and reliable operation of the system.

Please perform daily maintenance on the product according to the following requirements:

- Daily maintenance management personnel should be fire protection device management personnel or fire protection shift personnel. The management personnel should be trained and assessed to operate and use the system proficiently, have a good understanding of the basic principles of the system, and have certain emergency handling skills.
- Check and record system running status and event records on a daily or weekly basis. When an individual device in the system fails, you should find the cause of failure and solve it as soon as possible. If there is a large area of failure, you should shut down the device and check to avoid the problem.
- Under normal circumstances, it is recommended to keep the system running normally. When alarming, the system should be handled immediately by management personnel or on duty personnel. When the system needs to be automatically operated, the user shall be responsible for the loss of device actions caused by fire alarm or non-device exception during the operation.
- Changing or deleting parameters in the main FACP or computer is not allowed.
- When the system is available, the user should not shut down the system for a long time. If the system needs to be closed, patrol should be strengthened to avoid unexpected loss caused by fire alarm.
- The device should be shut down every 1 month. After checking, the device should be restarted. Shutdown Order: Turn off standby power first and then off main power. Start main power first and then power on standby power. Check content: The chassis has imported foreign matter, the power supply is overheated, the grounding is good, etc.
- Check the route every 1 to 3 months to make sure the insulation resistance of the route and the earth meets the requirements of the national standard. Check if the shield layer of the shield line should be well grounded.
- The main standby power conversion test will be conducted every 2 to 3 months to make sure the main standby power conversion of the system is normal.
- Check alarm test every 3 months for alarm device (such as detector, manual call point, etc.) to ensure alarm performance.
- Dusting treatment is conducted every 6 to 12 months. Do not damage the circuit or route during dusting. Do not damage the circuit boards.
- Check the chassis grounding every 6 to 12 months to make sure the ground wire is connected to the ground wire.
- If power is not disabled for a long time, the battery should be maintained regularly to extend its service life. The maintenance frequency should be determined according to the

temperature and humidity of the environment. The temperature or humidity should be maintained every 2 to 4 months. Maintenance Method: Disable main power supply and power supply with backup power. The main power supply can be restored to main power supply after failure occurs when standby power supply is reported or device is reported.

Note

When power is only used on backup power supply, please disconnect the backup power after the end of use. Battery cannot be charged when the backup battery is used up.

- When the standby power is failed or is shut down automatically, the standby power should be disabled as soon as possible. The service life of the backup battery is about 3 to 5 years. If the battery discharge time is seriously insufficient, or the battery is out of service, the battery should be replaced in time, and the old and new batteries should not be used together. If the battery is damaged due to long-term failure, or the battery needs to be charged again, the battery should be charged using a dedicated charging device.

Danger

Incorrect battery model will cause explosion. Please handle the replaced battery properly.

- The lead acid storage battery should be charged in time if it has been standing for more than 1 month. The lead acid storage battery should be powered separately for more than 24 hours.
- You cannot unplug the speaker during system running.
- If the system fails frequently during normal operation, please contact our technical service personnel in time to avoid adverse consequences.
- When the system is running normally, detailed records should be made of system display and output when the problem persists. Please contact maintenance unit or technical service personnel of the company.

11.2 Professional Maintenance Management

In order to ensure the long-term stable operation of the system, professional maintenance and repair of the system are required to prevent the possibility of failure.
Please follow the requirements below to manage maintenance:

- The unit with professional maintenance should be qualified for the maintenance of fire safety products.
- The user shall enter to a professional maintenance responsibility guarantee contract with the maintenance unit, so that the professional maintenance unit can perform professional maintenance functions, and can assume professional maintenance responsibilities of safety products. Make sure that the user does not suffer from quality accident caused by maintenance and management issues.
- Every 6 to 12 months.

- Professional maintenance should contain all the contents of daily maintenance management.
- Professional maintenance units should assist users in formulating various daily safety management systems and emergency handling protocols.
- Check the implementation status of daily maintenance management. If routine maintenance management is not in place, please issue a written rectification report and supervise implementation.
- Please check the engineering documents of the user and keep them properly for calling in emergency.
- Check duty record and system event record to get a good understanding of system running status, and determine the measures to be taken for professional maintenance according to the inspection result.
- Check and record all external routes and device control routes to ensure that the line's insulated impedance meets the requirements of national standards.
- Check and record the appearance of all the devices and engineering routes in the system, including the rusting status of the route connection, the solid connection status, and the damaged route to eliminate the hazards of engineering.
- Measure and record the voltage of system power supply, bus, and other lines to ensure reliable operation.
- Check and record the heat levels of the circuit boards in operation. If there is overheating, measures should be taken to ensure the stable operation of the system.
- Check the grounding of all ground lines in the system to make sure the requirements of national standards are met.
- Check the environment of all devices in the system to make sure the device can work in normal environment.
- Solve other issues that occurred in system running.
- Check alarm device according to the sampling level to repair the device whose alarm performance is degraded or which cannot be alarmed, and maintain, wash, or replace the alarm device to make sure the alarm device is running normally.
- Check the operation and daily management status of important devices controlled by system, and meet standard and safety requirements.
- If possible, you should work with the user to test the system to a certain degree of simulated alarm and fire drill, test the system's operation in fire or emergency conditions, and test the emergency response capability of the user in emergency situations.
- In the process of professional maintenance, if problem persists or is difficult to solve, please contact technical service personnel of the company.
- After professional maintenance is completed, a written professional maintenance report should be issued, comprehensively describing system running status and maintenance handling status, and suggesting solutions, preventive measures, and daily maintenance management.

Appendix A Simple Fault Handling Methods

Fault Type	Handling Methods
Power Fault	Main power fault: Check if the fire power supply is normal; Check if the main power switch is turned on; Check if the fuse is blown (replace if it is). Backup power failure: Check if the backup power switch is turned on; Check if the battery voltage normal; Check if the backup fuse blown out (replace if it is) ⚠Danger Please use the correct model of fuse for replacement, otherwise there will be risk of electric shock or fire.
No Display on the Display Screen	Check if the AC power supply is normal, if the switch is turned on, and if the fuse is blown (if yes, replace it). If there are no such issues, check if there is voltage at the switch power terminal (indicating normal power supply) and if all connections are in good condition. If the display screen still shows problems, please contact our company's technical support personnel.
No Sound from the Sounder	If there is no corresponding sound when reporting a fault, action, or fire alarm, you can check if the speaker wiring is broken or if the connection is good.
Press Button Fault	If the key input is abnormal, you can check whether the pin connection between the core board and the key board is loose, misaligned, or has poor contact.
Bell Output Short Circuit/Open Circuit	When this fault occurs, first check the physical line connection. After ensuring that the wiring is secure and there are no disconnections, you can press Reset button to restore the port to normal.
Loop Short Circuit/Open Circuit	When this fault occurs, first check the physical line connection. After ensuring that the wiring is secure and there are no disconnections, you can press Reset button to restore the port to normal.
Point Address Lost	When this fault occurs, first check the physical line connection. After ensuring that the wiring is secure and there are no disconnections, you can press Reset button to restore the port to normal.

Fault Type	Handling Methods
24V Output Fault	When this fault occurs, first check the physical line connection. After ensuring that the wiring is secure and there are no disconnections, you can press Reset button to restore the port to normal.
Incorrect Device Time	Please refer to **Time Settings** for debugging and timing.
Individual Devices Reporting Faults	Find the location of the fault according to the fire protection completion diagram. Check if the equipment is lost, if the bus voltage is normal, and if the equipment is intact.
Bus device is unstable.	Use exclusion method to confirm if the following reasons are present: FACP bus failure, external wiring being too long, poor contact of wiring connectors, wiring that does not comply with specifications, or unstable equipment reporting faults.
The printer does not print.	Check if the printer is out of paper. If it is out of paper, you can replace the printing paper; Check if printing is set up.
Ground Fault	Check if the line thrown out by the host is connected to earth (PE) or the chassis.
Power Communication Fault	Check if the power and communication cables are properly connected. If they are properly connected and the fault persists, the power board is damaged.
Loop Board Fault	Check if the board is properly connected. If it is properly connected and the fault persists, the loop board is damaged.

Note

- When wiring, wiring inspection, fuse replacement, and other operations are required, they must be carried out in a power-off environment.
- If there are other faults that cannot be ruled out, please call our company's technical support personnel.

Appendix B Emergency Handling Methods and Requirements

Due to the special nature of fire safety products, when the device is damaged, the management personnel or on duty personnel have basic emergency handling capability.
The basic principle of emergency handling is that in case of problem or accident, emergency measures should be taken to avoid loss or expansion. Basic requirements:

- Emergency handling operation procedures should be developed. Fire protection management personnel or on duty personnel should remember the password of the system and be familiar with the basic operation method of the product for emergency handling. Important items such as chassis key should be placed in the location easily accessible by the administrator or on duty personnel to avoid delay in emergency handling.
- Through training and assessment, the management personnel or on duty personnel have basic emergency handling skills.
- If system control has important settings (devices will be damaged if action is taken), the on-duty person should be strengthened to strengthen management and control. In general, it is recommended to turn off power to ensure device security.
- If fire alarm or fault is found during system operation, it should be verified in a timely manner.
- If system operation is abnormal for some reason, the system should be checked and verified immediately to make sure no other loss is caused. If the loss is caused, measures should be taken to avoid expanding the loss. If no further loss is caused, the problem or accident should be recorded in detail: Display content, indicator status, active output, 24V power supply voltage, etc., and protect the site. Please notify the company technical service personnel immediately. If the user has camera, the user can capture pictures or pictures of FACP for analysis by technical service personnel.
- When the project is renovated or under operating conditions, measures should be taken to ensure system safety and avoid product damage, performance degradation, or other possible losses. Specific measures include: Avoid the impact, damage, or degradation of detectors, modules, and other devices. Avoid short circuit, poor insulation, or line power, and avoid the adverse effects or losses of water (moisture), electricity (electromagnetic interference or charge), gas (corrosive gas), dust (dust or smoke), temperature (high temperature or low temperature) or other conditions in construction.

Appendix C Point Code Table

Point Code	Description	Point Code	Description
1	Smoke Detector	50	Fire Alarm Bell
2	Heat Detector	51	Voice Alarm
3	Smoke & Heat Detector (S&H Detector)	52	Press Switch
4	Linear Beam	53	Flow Indicator
5	Gas Detector	54	Signal Butterfly Valve
6	Flame Detector	55	Flow Switch
7	CO Detector	56	Liquid Level Gauge
8	Fiber Temperature Detector (FT Detector)	57	Solenoid Valve
9	Air Sampling	58	Exhaust Valve
10	Fire Detector	59	Spray Pump
11	Manual Call Point (MCP)	60	Fire Hydrant Pump
12	Hydrant Manual Call Point (HManual Call Point)	61	Pressure Maintaining Pump
13	Sounder Strobe	62	70 Degree Normal Open Fire Damper (70°C N-O Fire Damper)
14	Input Module	63	280 Degree Normal Open Fire Damper (280°C N-O Fire Damper)
15	Output Module	64	70 Degree Normal Close Fire Damper (70°C N-C Fire Damper)
16	I/O Module (IOM)	65	280 Degree Normal Close Fire Damper (280°C N-C Fire Damper)
17	Dual Control Module	66	Positive Pressure Air-Outlet (PP Air-Outlet)

Point Code	Description	Point Code	Description
18	Voice Alarm Module	67	Smoke Vent
19	Relay Module	68	Positive Pressure Fan
20	Isolator Module	69	Smoke Exhaust Fan
21	Repeater Panel	70	Air Feed Fan
22	Linkage Power	71	Power Cutting
23	Gas Release Alarm	72	Emergency Lighting
24	Abort Switch	73	Rolling Shutter Half-Lowered
25	Manual Release	74	Rolling Shutter Fully Lowered
26	Home FACP	75	Roller Shutter
27	Door Closer	76	Elevator Forced Landing
28	Door Magnetic Contact	77	Access Control
29	Fire Door Monitor Module	78	Reserved
30	Combination Electrical Fire Detector (CEFD)	79~99	Reserved
31	Voltage/Current Signal Sensor		
32	Voltage Signal Sensor		
33	Zone Fire Suppression Actuation Device		
34	Energy Storage Composite Detector		
35	Bus Gateway		
36	Repeater		

Point Code	Description	Point Code	Description
37~49	Reserved		

Appendix D Power Calculation Table

Function	Peripheral Type	Max. Consumption Current (mA) at 27.5 V	Power Supply Current Consumption (mA) when Powered by Battery.			Note
			Inspection	Alarm	Quantity	
Two-Bus	01-Photoelectric Detector	1.2	0.18	1.2	120	Maximum current consumption shall be calculated at 30% of the alarm device's rated current.
	02-Heat Detector	0.7	0.16	0.7	44	
	11-Manual Call Point	0.25	0.13	0.25	30	
	13-Sounder Strobe	7.25	0.15	7.25	16	
	14-Input Module	0.29	0.3	0.29	16	
	16-Input/Output Module (Passive)	8.51	0.3	8.51	16	
	Isolator Module	3	3	3	8	
FACP	24V Output	2000	0	0	1	24 V+ Bell = 3 A No 24V output when powered by battery.
	Bell Control and Output	1000	0	1000	1	
	Active Relay Control and Output	107	0	0	3	No output when powered by battery.
	Fire Alarm Relay Control	7	0	7	1	
	Fault Relay Control	7	7	7	1	

Function	Peripheral Type	Max. Consumption Current (mA) at 27.5 V	Power Supply Current Consumption (mA) when Powered by Battery.			Note
			Inspection	Alarm	Quantity	
	Display Screen (Backlight + Control)	25	15	15	1	Screen off to save power when powered by battery.
	LED Light (Other 112 + Multiline 24)	96	32	48	1	During inspection, 1/3 of the LED are lit; during alarm, 1/2 of the LED are lit.
	Buzzer	2	2	2	1	
	Speaker	21	2	21	1	The fault sound is silenced in inspection mode but not during in fire alarm mode.
	Printer	287	14	28	1	In inspection mode, printing is occasional only and the maximum current consumption is 0.05 A; in fire alarm mode, fire alarm messages are printed and the maximum current

Function	Peripheral Type	Max. Consumption Current (mA) at 27.5 V	Power Supply Current Consumption (mA) when Powered by Battery.			Note
			Inspection	Alarm	Quantity	
						consumption is 0.1 A.
	USB	20	20	20	1	
	Ethernet	8	8	8	1	
	CAN	7	7	7	2	
	485	8.5	8.5	8.5	2	
	Bluetooth & Wi-Fi	7	0	0	1	Wireless function disabled when powered by battery.
	Loop Management Processor 1	6	6	6	1	
	Main Control Board Processor 2	6	6	6	1	
	Core Board Processor 3 (MCU + RAM + Flash) + Core	20	20	20	1	
	Pb Battery Charging	300	0	0	1	A full recharge from empty takes just 8 hours at 0.3 times the 1 A maximum charging current.
Max. Power (W)	127.24525					

Function	Peripheral Type	Max. Consumption Current (mA) at 27.5 V	Power Supply Current Consumption (mA) when Powered by Battery.			Note
			Inspection	Alarm	Quantity	
Battery (AH)	6.235925					

Appendix E Key-to-Symbol Mapping

In symbol mode, the characters represented by the keys are as follows. All of the following are half-width symbols.

Keypad	**Mapping**
0	(Space)
1	, . ? !
2	; : " |
3	\ / ' =
4	+ - ( )
5	[ ] { }
6	< > `
7	~ # $
8	% @ &
9	^ * _

Appendix F Abbreviation

Abbreviation	Full Name
ACK	Acknowledge
ACT	Active
ADDR-CFT	Address Conflict
CAN	FACP Area Network
COMM.	Communication
Config	Configuration
CONN.	Connection
CPT	Communication Protocol
DNS	Domain Name System
DTU	Data Transfer Unit
EC	External Connection
EVA	Emergency Voice Alarm
EVAC	Evacuation
FACP	Fire Alarm Control Panel
FAS	Fire Alarm System
FB	Feedback
FD	Fault Detection
FP	Fire Protection Platform
FPE	Fire Protection Equipment
FS	File System
H	Heat

Abbreviation	Full Name
HCP	Hikvision Control Platform
HF-CAN	Hikfire CAN
HF-TWB	Hikfire Two-wire Bus
HL	High Limit
INFO	Information
IP	Internet Protocol
L1	Level 1
L2	Level 2
L3	Level 3
LAN	Local Area Network
LL	Low Limit
MCP	Manual Call Point
NC	Normally Closed
NO	Normally Open
OC	Open Circuit
Param	Parameter
PB	Power Board
PRE	Pre-alarm
Prgm	Programming
PW	Password
Q-code	Secondary Code
QTY	Quantity
RS-485	Recommended Standard 485

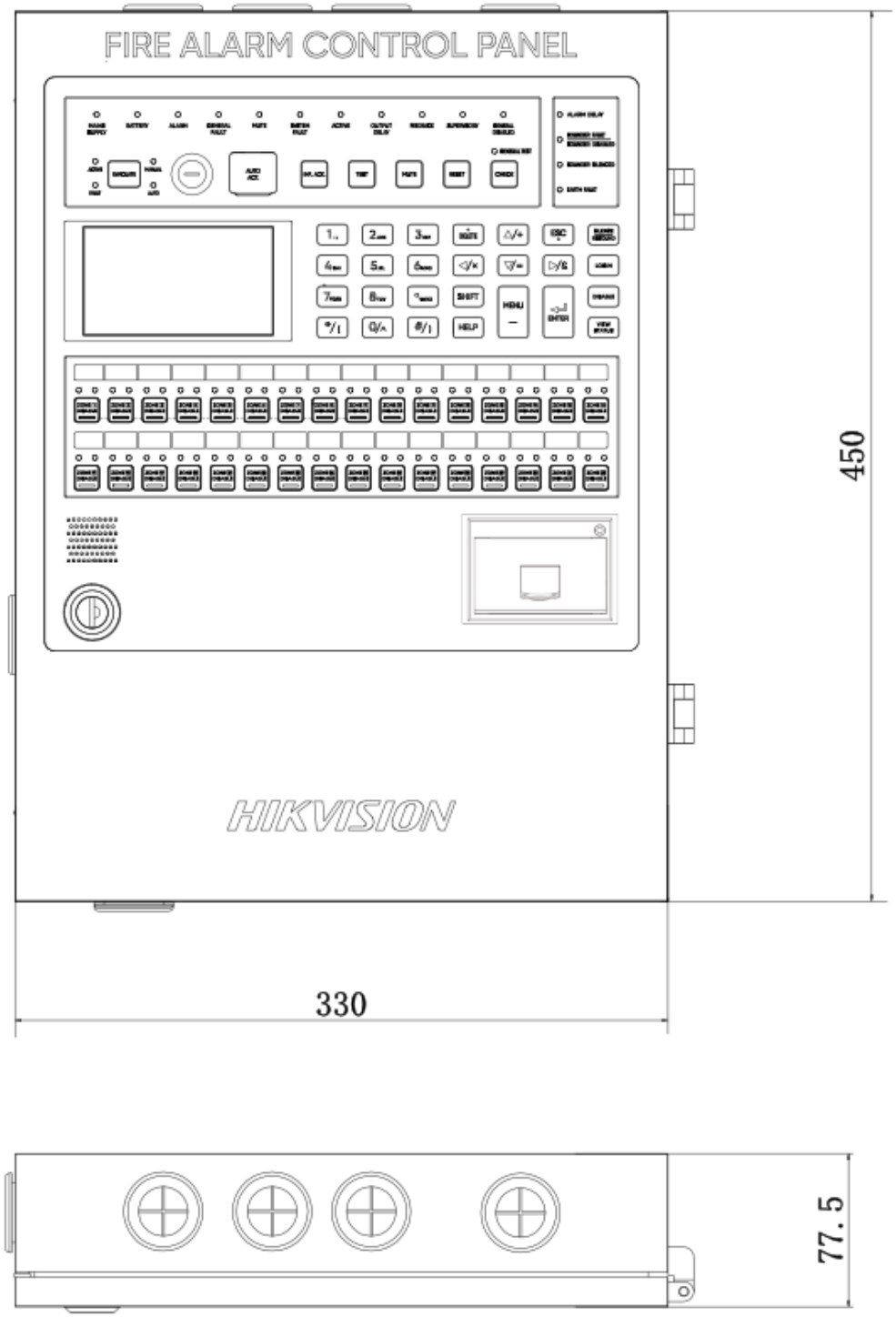
Abbreviation	Full Name
RST	Restore
S	Smoke
SC	Short Circuit
SIMU	Simulation
SS	Sounder Strobe
VAC	Voice Alarm Control
WIFI	Wireless Fidelity
WS	Work Station

Appendix G Specification

Item	Specification
Name	Addressable Fire Alarm Control Panel
Model	HF-A102 / HF-A101
Standard	EN 54-2: 1997 + A1:2006 EN 54-4: 1997 + A1: 2002 + A2: 2006
LED Specification	Color Display, resolution: 1024 × 600 px
Main Power	110 V ~ 240V / 50 Hz ~ 60 Hz / 130W
Battery Power	Equipped with two 7000 mA*h / 12 V sealed lead-acid batteries
Communication Distance	RVS 2*1.5 mm² flame retardant wire, max distance: 1500m
Alarm Sound Pressure	75dB @1m
IP Rating	IP 30
24V Output	2 ways, 22V-27.5V/2A (combined maximum output current for 2 channels)
Fire Bell Output	2 ways, 27.5V/2A (combined maximum output current for 2 channels)
Program Output	3 ways
Fire Alarm Relay Out	1 way
Fault Relay out	1 way
CAN interface	2 ways, optional baud rates: 10K, 20K and 100Kbps
RS-485 interface	2 ways, baud rate:19200

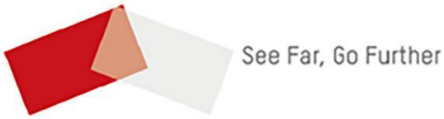
Item	Specification
Ethernet Interface	1 way
USB Interface	1 way
External Power Input Interface	24~27.5V, 5A
Backup Fuse	250 V 10A
Dimension	W 330 mm × H 450 mm × D 77.5 mm
Shell Material	Metal
Working Environment	Temp.: -10 °C ~ 55 °C Humidity: 5% ~95% (non-condensing)
Rated capacity	HF-A102: 2 loops, up to 250 addressable points in one loop; HF-A101: 1 loop only, up to 250 addressable points in the loop.
PSE	Model: HF-A1-PSE Type: Rechargeable lead-acid battery Life: 3 years Rated voltage: 12V Rated capacity: 7000 mAh Final voltage: 10.5V Max charging current: 2.16A Ri max. (maximum internal resistance): 5Ω Max discharging current: 2.1A max Output: DC 27.5 V I max.a : 3.7A I max.b : 4.7A I min: 130mA Battery output: DC 24V, 2.1A max

Appendix H Dimension



Appendix I Packing List

Item	Amount	Specification
Addressable Fire Alarm Control Panel	1	
User Manual	1	
Printer Paper	2	
Chassis Key	2	
Manual/Auto Selector Key Lock	2	
6.8 KΩ Resistance	2	Connect to the wiring terminal and insert the interface board



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