User Manual

Model   SEC3016C

Conventional
Fire Alarm Control Panel
EN 54-2&4

SANJIANG

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C O N T E N T S

1 About This Manual

This manual contains all the information necessary for the end user to operate the SEC3016C Fire Alarm Control Panel with detailed functional descriptions. Other information about installation and commissioning are described in the separate Installation and Commissioning Manual.

2 Symbolic Agreement

Symbol	Explain
⚠ Danger	➢ Hazards represent a high-grade risk of death or serious injury if not avoided.
⚠ Warning	➢ Indicates hazards with intermediate-grade risk that may cause death or serious injury if not avoided.
⚠ Caution	➢ Indicates hazards with low-grade risk that may lead to minor or moderate harm if not avoided.
Notice	➢ For transmitting device or environmental safety warning information. If not avoided, it may cause the device ➢ Damage, data loss, reduced equipment performance, or other unpredictable results. ➢ The "Notice" does not involve personal injury.
✎ TIPs	➢ Supplementary description of the key information in the main text. ➢ "TIPs" is not a safety warning information, and does not involve personal, equipment and environmental injury information.

3 Product Introduction

(1) Overview

The SEC3016C conventional fire alarm control panel is designed in accordance with European standards EN 54-2 and EN 54-4 and has up to 16 detection zones. The panel is simple to install, easy to operate and easy to maintain, suitable for various usage scenarios.

(2) Features

- Up to 16 Zones
- One Man Test function
- Disablement facility for zones & sounders
- Space for up to 7Ah batteries
- Sounder delay option
- Up to 4 sounder circuits
- Two sounder circuits can be configured as Aux 24V supplies (Except for Zone 2 version)

- Supports Repeater communication interface
- Meets all requirements of EN 54-2 & 4

4 Indications and Controls
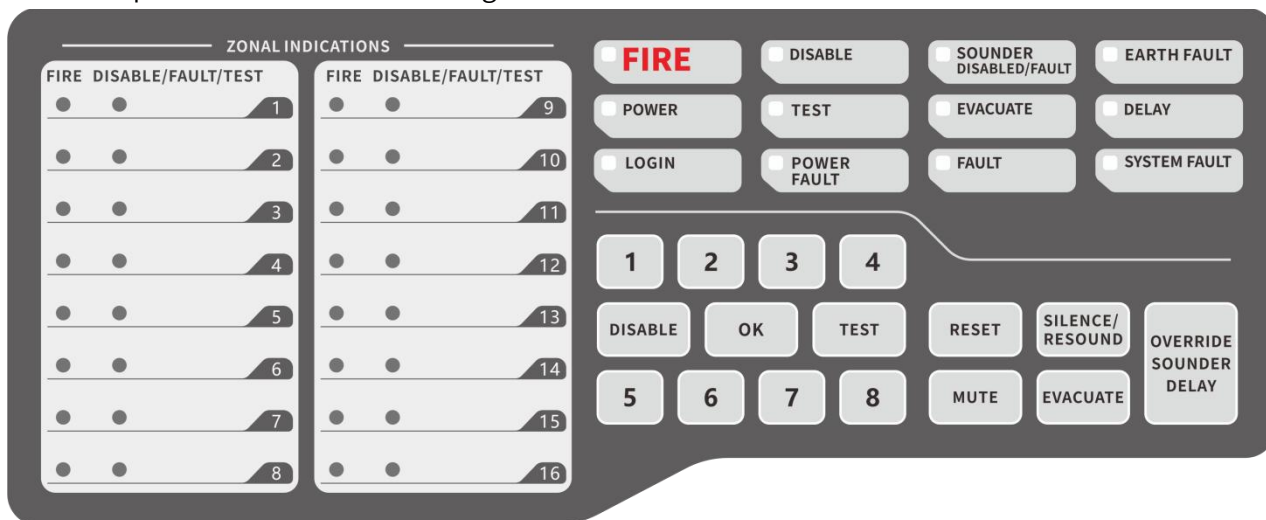
(1)   The front panel of the FACP is as in Figure 1

Figure 1

(2)   **General Status LEDs**

LED	Colour	Function
FIRE	Red	It illuminates steadily when the FACP in fire condition.
POWER	Green	It illuminates steadily when the FACP is powered up.
LOGIN	Yellow	It illuminates steadily whe the system is logged in access level 2, and flash in access level 3.
DISABLE	Yellow	It illuminates steadily if any zone or sounder output is disabled.
TEST	Yellow	It illuminates steadily when a zone is in test condition.
POWER FAULT	Yellow	It illuminates steadily or short flashes when the power supply is in fault condition(including mains, batteries, charger and internal resistance, see later in the manual for specific LED status descriptions).
SOUNDER DISABLED/FAULT	Yellow	It flashes when Sounder output is in fault condition, and it illuminates steadily when Sounder output is disabled.
EVACUATE	Yellow	It illuminates steadily when the EVACUATE funtion is on.
FAULT	Yellow	It illuminates steadily when the FACP is in fault condition.
EARTH FAULT	Yellow	It illuminates steadily when there is ground fault.

DELAY	Yellow	It illuminates steadily when the system delay enabled and it flashes when there is any output delayed.
SYSTEM FAULT	Yellow	It illuminates steadily when a system fault(CPU failure) has occurred. The system enters safe state at the moment.

(3) **Zone Status LEDs**

LED	Colour	Function
FIRE	Red	It illuminates steadily when the zone is in fire condition.
DISABLED/FAULT/TEST	Green	It flashes when the zone in fault or test condition. And it illuminates steadily when the zone is disabled.

(4) **Control Buttons**

Button	Function
1~8	Numeric buttons for setting the disable zone, delay time, and entering the login password.
OK	OK button.
DISABLE	It is used to disable a zone or sounder outputs.
TEST	It is used to test LEDs or zone test.
RESET	For resetting the panel，it is valid at access level 2 or 3
MUTE	Press this key to mute the buzzer of the panel.
SILENCE/RESOUND	In the fire alarm state, press this button to slience all sounders; press this button again to restart the sounders. This button is valid for access level 2 or 3.
EVACUATE	It is used to start all sounders for evacuation, and valid at access level 2 or 3.
OVERRIDE SOUNDER DELAY	For override the sounder delay, and for fast on or off delay.

5 Panel Operation

The system classifies users into three access levels according to their operating privileges.

Access Level	Description
Level 1	Default system status, no password required. Ability to mute the panel and manually override delay at this access level.
Level 2	Access level 2 requires a password to enter, which is a fixed 4 number (1256). Operations such as silence, disable settiing，zone test and evacuation are available at this access level.
Level 3	Access Level 3 requires a login based on Access Level 2, and also requires a password, which is a fixed 4 number (password: 1257). Under this

access level, in addition to having all the operating privileges under access level 2, you can also perform delay setting.

5.1 Login Operation

(1) Login to access level 2: Under access level 1, enter the password (1256) and press [OK]. At this point, the "LOGIN" [LOGIN] LED will light up, indicating that you have entered access level 2.

(2) Login to access level 3: Under access level 2, enter the password (1257) and press [OK]. At this point, the "LOGIN" LED will change to a blinking state, indicating that you have entered access level 3.

(3) To log out of Access Level 2 or 3, press the [OK] button three times in a row, and also the panel will automatically log out after 5 minutes of inactivity.

6 Panel Test

The panel test function is used to check whether the LEDs and buzzer can work normally. Under access level 2, press the [TEST] button, the LEDs on the panel will all light up, and the buzzer will recall the fire alarm tone and fault tone in turn, after a period of time the panel automatically exits the test and returns to normal operation.

6.1 The Fire Condition

6.1.1 Indications of Fire Alarm

(1) When the SEC3016C Fire Alarm Panel is set into alarm by a Detector or Manual Call Point located in a zone, that it will Light the general Fire LED [FIRE] and appropriate Zone Fire LED(s) on the front panel, Sound Internal buzzer, and start the sounder outputs (provided there is no Delay set on the sounders), simultaneous active the fire relay.

⚠ Caution If a zone has been disabled, it cannot be triggered into Alarm. This should be remembered when disabling part of the system. (See Disabling zones or sounders later in this manual).

6.1.2 Sounder Silence and Resound

(1) The Alarm Sounders can be silenced by pressing the [SILENCE/RESOUND] button under access level 2.

Then the Alarm Sounders will stop but the light(s) for the Zone(s) in Alarm and the red General Fire light will stay lit. The fire relay will remain active. (The Panels internal buzzer can also be silenced by pressing the [MUTE] button under access level 1). If the [SILENCE/RESOUND] button is pressed again at this point, the silenced sounder will be restart again.

(2)　When the sounders are silenced, the panel will automatically restart the sounder outputs if a fire occurs in another zone.

6.1.3 Evacuate

(1)　When manual building evacuation is required in an emergency, the evacuation function can be activated by pressing the **EVACUATE** button at access level 2, at which time all sounders will be started.

> **Notice**　If the sounders are disabled, pressing the [EVACUATE] button will have no effect.

6.2 The Fault Condition

6.2.1 Different Types of Fault

(1)　The fire alarm control panel monitors itself and the wiring connected to it for any faults. If a fault occurs, the panel will activate the internal buzzer and illuminate the general fault LED and the fault LED associated with the specific fault, and the fault relay will also activate.

(2)　Zone Fault

When a wiring fault exists in the zone, the specific type of fault can be recognized by the status of the zone **DISABLE/FAULT/TEST** LED:

Fault type	Status of the ZONE LED
Short circuit fault	Flashes continuously.
Open circuit fault	Flashes 3 times and then goes out for 4 seconds, then cycles.

It should be noted that any alarms raised on the fault zone(s) may not be recognised by the fire alarm panel until the fault conditions have been cleared. When the zone fault is cleared, the zone fault LED will return to normal condition.

(3)　Power supply fault

Faults in the power supply can be identified by the status of the Power fault LED [POWER FAULT] to determine the specific type of fault:

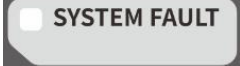| Fault type	Status of the POWER FAULT LED

Mians fault	Flashes 1 time and then goes out for 4 seconds, then repeats.
Battery not present or Battery terminal short	Short flashes 2 times and then goes out for 4 seconds, then repeats.
Battery low voltage	Short flashes 3 times and then goes out for 4 seconds, then repeats.
Battery internal resistance too high	Short flashes 4 times and then goes out for 4 seconds, then repeats.
Charger fault	Short flashes 5 times and then goes out for 4 seconds, then repeats.

(4)   Sounder fault

When a wiring fault exists in the sounder output, the sounder LED **SOUNDER DISABLED/FAULT** will flash; when the fault condition is cleared, the sounder LED will return to the off state. It should be noted that when there is a sounder fault , the sounders will not be activated even if a fire alarm occurs.

(5)   System fault

The **STSTEM FAULT** LED **SYSTEM FAULT** is illuminated when a micro-processor in the panel fails or memory becomes corrupted. In the event of a system failure, the system will enter a safe state to avoid undesired results. In this safe state, the system fault LED, general fault LED, fault internal buzzer, and fault relay will remain activated.

The system fault condition can be cleared by resetting the panel, but if it still occurs after the panel has been reset, it indicates that processor or memory damage has really occurred and a professional needs to be contacted for repair.

(6)   Earth fault

The **EARTH FAULT** LED is constant when the panel detects an earth fault (short circuit to earth) on the wiring of active outputs.

6.3 Disablement

6.3.1 To disable a zone or sounder output

(1)   Enter the password (1256) and press **OK** to login acess level 2.

(2)   Hold the **DISABLE** button for 3 seconds, at this time the general disable LED **DISABLE** flashes, enter the disable setting mode.

(3)   Type the number of the zone you want to disable, the **DISABLE/FAULT/TEST** LED of the corresponding zone will falshes; If the zone number is greater than 8, use the combination of numeric keys, the combination rule is "N+8", for example, zone 9, press the numeric keys 1 and 8 in turn, and so on. Then press the **OK** button, the selected zone is disabled and the

DISABLE/FAULT/TEST LED of its corresponding zone changes to a constant lit state.

> **Notice**   If you want to disable a zone that has in fire condition, you need to reset the panel to remove the fire condition of the corresponding zone after the disable operation.

(4) If you want to disable the sounders, press the [SILENCE/RESOUND] button (sounders can only be disabled all at once) and the [SOUNDER DISABLED/FAULT] LED flashes. Then press the **OK** button, the sounders are disabled and the LED changes to a constant lit state.

(5) Finally exit the disable setting mode, Hold the [DISABLE] button for 3 seconds, and the general disable LED [DISABLE] becomes normally illuminated.

(6) Showing all the Disabled Zones:

1. Enter the password (1256) and press [OK] to login acess level 2.

2. Press [DISABLE] button, the corresponding **DISABLE/FAULT/TEST** LED of the blocked zone will light up for 5s and then turn off.

6.3.2 To enable a Zone or Sounder Output

(1) Enter the password (1256) and press [OK] to login acess level 2.

(2) Hold the [DISABLE] button for 3 seconds, at this time the general disable LED [DISABLE] flashes, enter the disable setting mode.

(3) Type the number of the zone to be re-enabled and the **DISABLE/FAULT/TEST** LED of the corresponding zone will flash, then press the **OK** button, the selected zone is re-enabled and the **DISABLE/FAULT/TEST** LED of its corresponding zone will go out.

(4) If you want To re-enable sound and light, press the button, the indicator flashes, then press the OK button, then sound and light is re-enabled.

(5) Finally exit the disable setting mode, Hold the [DISABLE] button for 3 seconds, and the disable LED [DISABLE] goes out.
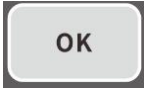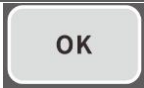
6.4 Sounder delay

The sounder can be set up to a maximum of 10 minutes delay, the delay setting is effective for all

sounder outputs, and the delay can not be set up individually.

6.4.1 Delay Setting

(1) Enter the password (1256) and press [OK] to login acess level 2, then enter the password (1257) again and press [OK] to login to access Level 3.

(2) Hold the [DISABLE] button for 3 seconds, at this time the delay LED [DELAY] flashes, enter the disable setting mode.

(3) Type in the number of minutes you require the delay to be:
- 0 minutes type nothing.
- 1-8 minutes type the corresponding number with the keypad.
- 9 minutes type 18.
- 10 minutes type 28.

[TIPs]   The panel will flash a confirmation of the selected delay by corresponding numbered zone LED.

(4) Press [OK] , the zone LEDs corresponding to the number of delay minutes will be permanently illuminated.

(5) Hold the [OVERRIDE SOUNDER DELAY] button for 3 seconds, exit the delay setting mode, and the delay LED [DELAY] becomes normally illuminated.

(6) Press [OK] 3 times to exit access level 3.

(7) If you want to cancel the delay, just set the delay time to 0 minutes.

(8) At access level 2, the delay can be quickly turned on/off by pressing the [OVERRIDE SOUNDER DELAY] button.

6.4.2 Delay Indication and Override

(1) When delay is set, the delay LED on the panel will light up. When there is a fire alarm, the delay LED will becomes flashes, indicating that the delay is in progress, at this time the sounder will not activate. At the end of the time delay, the delay LED will goes out and the sounder will activate. After the panel is reset, the delay LED will light up again.

(2)
In fire alarm condition, Pressing the [OVERRIDE SOUNDER DELAY] button will override the delay at any time and

results in the sounders being turned on immediately.

(3) Zone 1 is never delayed, It is used to connect manual call points(MCP). If more than one "MCP zone" is needed, the 16 zone on the panel can also be set as non-delayed by setting configuration the SW1 dip switch 1 on main board to the "ON" position.
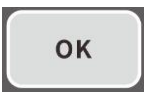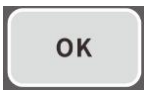
6.5 Zone Test

To assist with commissioning and routine maintenance checks, a non-latching "One Man Test" feature is available.

When a detector or manual call point is triggered on any zone in test, the sound and light will activate for approximately 5 seconds and then stop. The zone fire LED on the panel will not light up.

If a fire alarm occurs on a zone not set for testing, the alarm will be processed in the normal way.

At this point The testing of the zone in test will be temporarily suspended until the panel is reset and restored.

The panel cannot be in test mode if the user needs to make other settings (e.g. disable).

6.5.1 To setting Zone in Test Condition

(1) Enter the password (1256) and press [OK] to login acess level 2.

(2) Hold the [TEST] button for 3 seconds, the test LED [TEST] flashes, enter the zone test setting mode.

(3) Type the number of the zone you want to test, the **DISABLE/FAULT/TEST** LED of the corresponding zone will falshe, Then press [OK] botton; If the zone number is greater than 8, use the combination of numeric keys, the combination rule is "N+8", press the number keys in sequence and then press the OK button, the selected zone enters the test mode and the **DISABLE/FAULT/TEST** LED of its corresponding zone changes to a constant lit state.

(4) Only one zone at a time can be setting into test condition, the other zones can be fully functional and report fire alarms. To set another zone into test condition, press the zone number in setting mode and press [OK] .

(5) Finally exit the zone test setting mode, Hold the [TEST] button for 3 seconds, and the test

LED **TEST** becomes normally illuminated, indicating that zone setup mode has been exited. In addition, the panel will automatically exit the zone test setting mode after 5 minutes of no operation.

After exiting the zone test setting mode, the corresponding zone LED of the zone in test changes to a short flash 5 times and then goes out for 4 seconds, and keeps cycling.

(6)   If you want to exit the zone test condition, after entering the zone test setting mode, first press **OK** , then hold the **TEST** button for 3 seconds, that is to exit the zone test condition. At this time, the test LED **TEST** goes out.

⚠️ **Caution** When the panel has completed commissioning and routine maintenance, it is important to exit the zone test condition, Otherwise fire and fault alarm in the zone in test cannot be reported.

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