

CHLORIDE UK[®]

COMPACT SERIES

1/2/4 ZONE(S) CONVENTIONAL
FIRE ALARM CONTROL PANEL



INSTALLATION MANUAL

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1 Introduction

CHLORIDE UK COMPACT conventional fire alarm control panel supports 1, 2 and 4 zone(s). Each zone can contain maximum of 25 numbers of detectors and 25 numbers of manual call point. (The zones monitoring current should be less than 4.5mA). For Sounder output, it supports 1 and 2 group(s) with each group 450mA, at maximum of 900mA for a panel. All zones and Sounder of the fire alarm panel can be disabled. All input and output devices are monitored by the control panel, and the control panel will automatically disconnect when the zones or sounders are short. The control panel can provide 24VDC / 300mA power for products that require an additional 24V power supply. The detailed status indicators clearly show the working status of the control panel and provide the first fire alarm and subsequent fire alarm functions. After the control panel sends a fire alarm signal, it can provide up to 120 seconds delay time to confirm whether there is a real fire alarm. In addition, the control panel also provides the mains-lost silence function. After configure the mains-lost silence mode, the control panel will no longer send a fault sound signal to remind the user when the main power is lost.

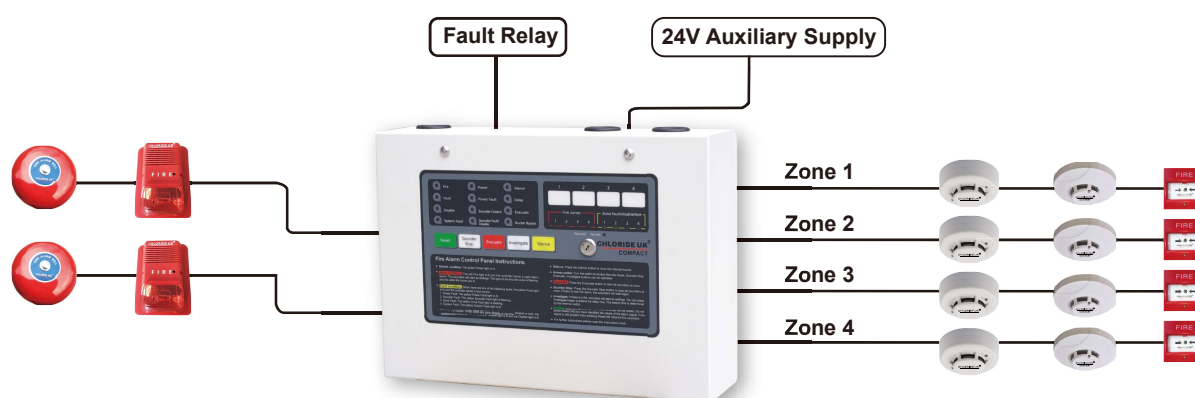


Figure 1: Fire alarm System

2 Technical Specification

Main power	AC100V~240V 50Hz/60Hz
Battery	24V DC (2 x 12V 3.3AH SLA battery)
Maximum charging current	600mA
Zone voltage	26V±2V
Number of zones	1,2,4
Zone and sounder end of line resistors	3.9KΩ,1W
Zone monitoring current	< 4.5mA
Zone alarm current	>20mA
Zone short current	>110mA
Sounder alarm output	1×450mA/2×450mA@24V DC Nominal
Auxiliary supply	300mA/24V
One set of fault relay contacts	Rated at 0.5A SELV
Operate temperature	-5°C~40°C
Humidity	≤95%RH
Dimensions	290 x 87.5 x 211.5mm
weight	2.1kg (without battery)

3 Work state

Indicator	Color	State
General fire indicator	Red	It is lit when there is a fire detected in the zone, and at the same time the control panel sends a rapid fire alarm sound.
Power indicator	Green	It is lit when the control panel is powered.
Silence indicator	Yellow	It is lit after pressing the silence button in alarm or fault state.
Total fault indicator	Yellow	It is lit if there is any fault detected by the control panel, and at the same time the control panel sends a fault sound.
Power fault indicator	Yellow	It is lit if there is main power fault, or battery fault , or charging fault or 24V output fault, and at the same time the control panel sends a fault sound.
Delay indicator	Red	It is lit when there is a fire detected in the zone and the sounder is configured as delay mode.
Disable indicator	Yellow	It is lit when there is zone disable or sounder disable.
Sounder output indicator	Red	It is lit when the sounder is started.
Evacuate indicator	Red	It is lit after pressing the evacuate button, and the sounder will start immediately.
System fault indicator	Yellow	It is lit when the internal control chip cannot work normally and the control panel sends a fault sound.
Sounder fault / disable indicator	Yellow	It is flashing if there is a sounder fault and at the same time the control panel sends a fault sound. It is lit if the sounder is disabled.
Buzzer bypass indicator	Yellow	It is lit after pressing the internal buzzer bypass button.
Zone fire indicator	Red	When there is a fire alarm in the zone, the indicator of the first fire zone is flashing, and latter fire zone indicator is lit.
Zone fault / disable indicator	Yellow	When there is a fault in the zone(short or open),the fault/disable indicator of the corresponding zone is flashing, and the control panel sends a fault sound. If the zone is disable , the fault/disable indicator of the corresponding zone is lit.
Access indicator	Green	When the access switch on the control panel is turned on, the indicator is lit. In this mode, the control panel can be “reset”, “evacuate”, “self-test”, and “sounder stop”.

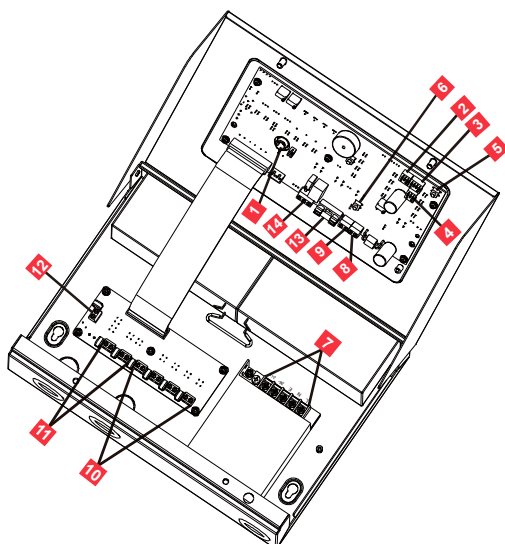
4 Operation instructions

Button	Instructions
Reset button	Pressing the button and the control panel reset.
Sounder stop button	Pressing the button and the sounder will stop immediately.
Evacuate button	Pressing the button and the sounder will start immediately.
Investigate button	When the control panel sends a fire alarm signal, the sounder will start as configured. You can increase the delay time by pressing the investigate button. The delay time is determined by the dial switch inside the control panel.
Silence button	When the control panel sends an alarm or fault signal, pressing the silence button and the internal buzzer is silenced. When there is a new fire alarm or fault signal, the control panel automatically exits the silence mode.
Access switch	In the general mode, only the silence button on the control panel can be operated, and the other buttons cannot be operated. In access mode, all buttons can be operated.
Sounder disable switch	You can configure the switch to disable the sounder.
Zone disable switch	You can configure the switch to disable the zone
Sounder delay switch	The dial switch is binary, which can increase the delay time by 30S / 60S / 90S / 120S.
Buzzer bypass button	After the control panel is powered on, press the internal buzzer bypass button, and the buzzer bypass indicator of the control panel is lit. The control panel will not send a fault sound signal when main power is lost.
Battery button	Press this button when the main power is lost and the control panel cannot be powered by the battery normally.

Note

To prevent false operation, the control panel filters the short time of button operation. The time of pressing the button should be more than 0.5s.

5 Internal structure diagram



- | | |
|-------------------------|-------------------------------|
| 1 Access Switch | 8 24V-in |
| 2 Sounder disable | 9 Battery |
| 3 Zone disable | 10 Zones |
| 4 Sounder delay | 11 Sounders |
| 5 Buzzer bypass | 12 Auxiliary supply (24V-OUT) |
| 6 Battery on | 13 Fuse |
| 7 Mains (L N E 24- 24+) | 14 Fault contacts |

Figure 2: Internal structure diagram

6 Wiring diagram

6.1 Zone wiring diagram

The control panel comes in 1/2/4 zones. A maximum of 50 devices (ie detectors and manual call points) can be fitted to each zone.

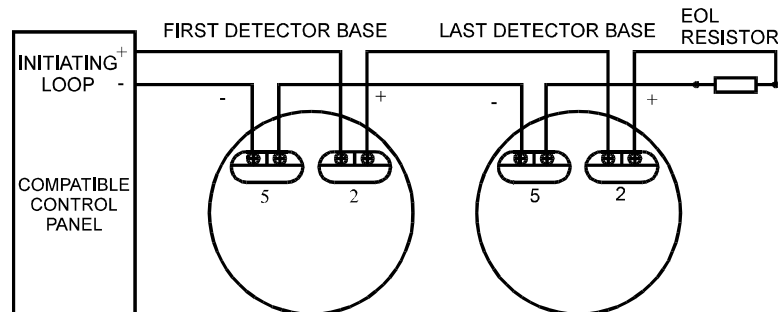


Figure 3: AH388-2 Zone wiring diagram

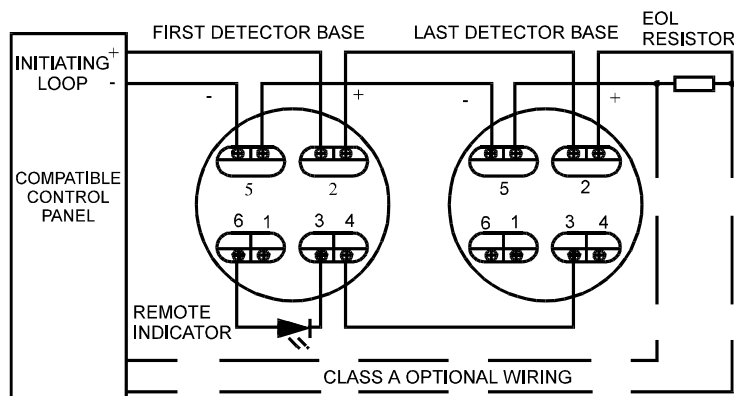


Figure 4: AH388-2 with led Zone wiring diagram

6.2 Sounder wiring diagram

Each group of sounders output circuits capable of supplying 450mA

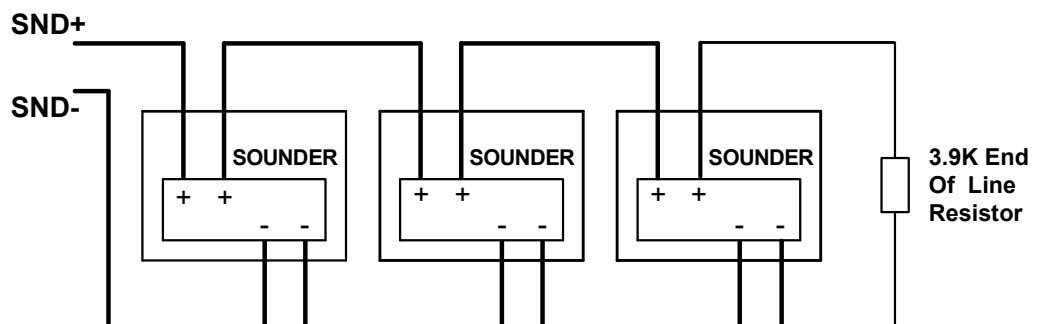


Figure 5: Sounder wiring diagram

6.3 Auxiliary supply (24V- OUT)

The control panel can provide 24VDC / 300mA power for products that require an additional 24V power supply. There will be a short circuit fault if the current is more than 300mA.

6.4 Fault output

Voltage free changeover contacts. This output is energised in the quiescent condition. In a fault condition, the output relay turns off, to ensure failsafe operation even in the event of total power loss. That is, the normally open contact will be closed when there is no fault, and open when there is a fault. This should be taken into account when any device is connected to the fault relay.

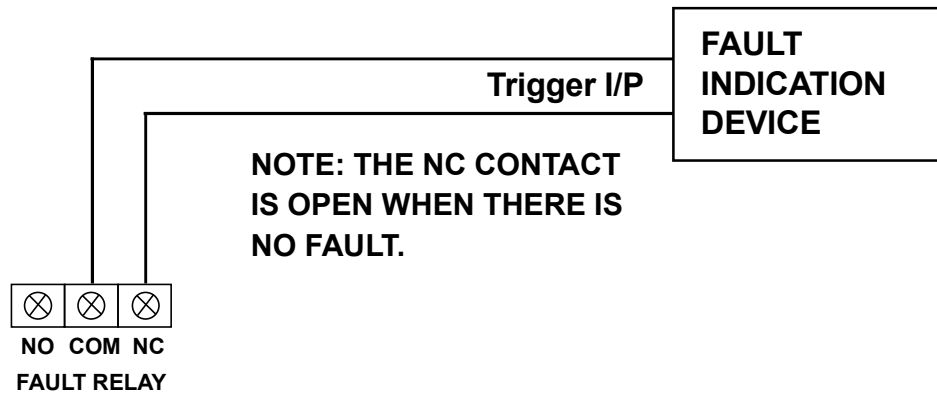


Figure 6: Fault output

7 Install your control panel

Install the control panel on the wall:

- Select the suitable mounting position according to the three mounting holes on the back of the control panel.
- Fix the control panel with suitable screws according to the wall installation environment.
- Clean up the residue generated during the installation after the control panel is fixed.

8 Connecting mains and the battery power

8.1 Connecting the mains

The main supply of the control panel is AC100V~240V 50Hz/60Hz. It is recommended to use a three-strand copper core wire of 1mm² to 2.5mm². The neutral line, live line and earth line are marked on the switching mode power supply. Please be careful when wiring. It is recommended to apply power to the control panel before connecting the devices, check whether the control panel is working properly, and to familiar with the operation of the control panel.

8.2 Connecting the batteries

Although there are many size of suitable battery, the sizes we usually recommend are 12V 3.3AH. Because the enclosure of the control panel has been designed to hold this size battery. First connect the batteries in parallel, connect the first battery cathode(-) to the another battery anode(+), and then connect the first battery anode(+) to the control panel internal battery terminal anode (+), and the another cathode(-) to the control panel internal battery terminal cathode(-).

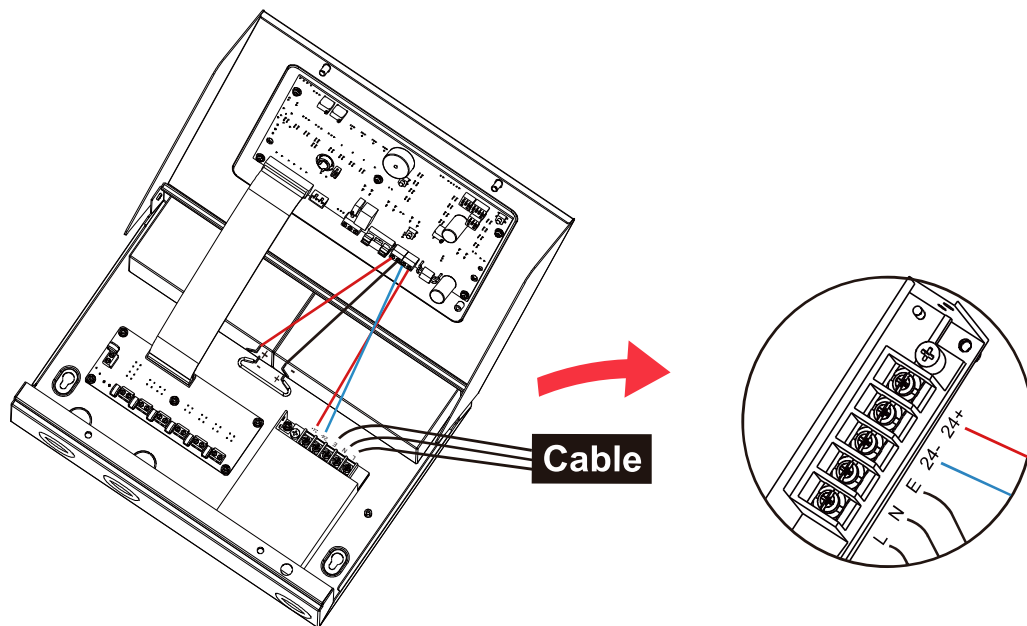


Figure 7: Connecting mains and the battery power

9 Configuring the control panel

Configuring the control panel before using it. See 9.5 configuration table for details.

9.1 Sounder start immediately

When the control panel receives the fire signal, sounder will start immediately.

9.2 Deciding to use a delay

A delay of up to 120s from the fire alarm panel being triggered, to its alarm sounder outputs being activated, can be programmed into the panel by the engineer. This is a particularly useful feature for schools, nightclubs and other public places where the nuisance and panic caused by a false alarm must be avoided.

When an alarm occurs on any zone, it is processed as normal. However, the activation of the sounders is postponed until the delay period has expired, thus allowing the cause of the alarm to be investigated by the User. If the alarm is false the alarm can be cancelled.

9.3 Using mains-lost silence function

After the control panel is powered on, press the buzzer bypass button inside the control panel, and the control panel will enter the mains-lost silence mode. In this mode, if the main power is lost, the control panel will not send a fault sound. Press the buzzer bypass button again to exit the mains-lost silence mode.

9.4 Using zone and sounder disable function

During commissioning and routine maintenance inspection, all zones and sounders can be disabled.

When the zone is disabled, the control panel will not respond to any fault or fire alarm signal in the disabled zone. This function can be used during regular maintenance or when the user needs the system to continue running but does not need any false positives in the area.

9.5 Configuration table

Configuration	Switch setting	Description	Dial switch
Sounder delay		No delay	
		Delay 15s, press investigate button to extend 30s	
		Delay 15s, press investigate button to extend 60s	
		Delay 15s, press investigate button to extend 90s	
		Delay 15s, press investigate button to extend 120s	
Zone disable		No zone disable	
		zone 1 is disabled	
		zone 2 is disabled	
		zone 3 is disabled	
		zone 4 is disabled	
		All zones are disabled	
Sounder disable		No sounder disable	
		Sounder 1 is disabled	
		Sounder 2 is disabled	
		All sounders are disabled	

Note

After the configuration is complete, pressing the reset button to enable these configurations.

10 Troubleshooting

10.1 Power fault

10.1.1 Main power fault

- Check the main power is present.
- Check the AC power connections are secure.

10.1.2 Battery power fault

- Check the battery power connections are secure.
- Check the battery voltage, replace if necessary.
- Check the fuse.

10.1.3 Auxiliary supply fault

- Check the auxiliary supply output current is lower than 300mA.

10.2 Zone fault

Open and short circuit faults will be indicated by zones fault/disable LED flashing. The panel will send a fault sound and the general fault LED will be lit.

10.2.1 Suggested action

- Check that the correct end of line resistor has been fitted.
- Disconnect the wiring for the zone showing-fault, and refit the end of line resistor at that zone terminal in the panel. If the fault condition for that zone clears, this confirms there is a wiring fault.

10.3 Sounder fault

The sounder faults are also non-latching faults. Open and short circuit faults will be indicated by sounder fault/disable LED flashing. The panel will send a fault sound and the general fault LED will be lit.

If there is a sounder fault, indicating that there are short or open circuits. The suggested action is the same as the zone fault suggested action.

10.4 System fault

A system fault refers to a fault that occurs when the MCU is not operating normally. You can try to reset the panel by pressing the reset button. If it still does not work normally, please contact your supplier.

Routine testing

Please test your panel at least once a month. Turn on the access switch, pressing the silence and reset buttons of the panel at the same time, check whether all the indicators and internal buzzer of the panel are working properly.

Note

Fire alarm systems are composed and assembled of different devices and subsystems, such as control panels, sounders, smoke detectors, heat detectors, manual call points, extinguishing activation devices, and devices intended to alert to fire or smoke.

Using this system does not ensure protection or prevention of fire or smoke damages, but proper use of the system may reduce fire or smoke damages.

Proper system configuration design, including all of its components and infrastructure, as well as proper installation according to the manufacturers' instructions and the applicable standards – are a conditioned precedent for the proper and efficient function of the system.

The designer and installer should have the appropriate skills and qualifications for performing said installation and all damages or losses resulting from improper design and installation lie with the designer and installer alone. All loss or damage caused by improper action shall lie with the originator of said improper action. The manufacturer shall not be liable for any fire or fire damages caused by fire in location where fire systems are installed and results of direct or indirect fire damage that may be caused to any persons, property or third parties.