# Fire Alarm Control Panel

# AH-03312 Family

## Operating Manual

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System Description

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## AH-03312 System Characteristics

1. CE approved.
2. Model range from 1 to 32 zones.
3. Each zone has a separate disable function.
4. Panel door protection design for 32L cabinet.
5. Protective key switch disables all the panel switches for 4L and 8L cabinets.
6. AC power supply has EMI. (Electromagnetic Interference)
7. Protection against voltage spikes up to 2.5KV.
8. Fire Alarm NO, NC, COM and Fault NO, NC, COM Output contact points.
9. Double sets of sounder contacts.
10. Automatic telephone dialer feature.
11. Fire Relay Output contacts and Fault Relay Output contacts.
12. Fire/Fault Relay Output to each Zone. (Option)
13. Extinguishing facility. (Option)
14. LCD screen 24 by 2. (Option)
15. Long-term or temporary silencing feature.
16. Sounder short circuit or disconnection detection.
17. PCB disconnected detection. (Used on panels monitoring more than 8 zones.)
18. Microprocessor-base design.
19. Digital Signal Design.
20. Switch membrane provides longer service and is waterproof, dust resistant and easy to clean.

**AH-03312-4L**

① Alarm
② Fault

⑤ Power Normal  ⑧ AC Fault
㉕ Power Fault  ⑨ Battery Fault
③ Disable  ⑫ Sounder Fault

ⓜ ON / OFF
Keyboard Enable

Alarm Silence ⓑ
Buzzer Mute ⓒ
Test ⓓ
Reset ⓕ

⑮ Alarm
⑯ Fault / Disable
ⓖ Zone

1  2  3  4

1. Fire Alarm Indicator
2. Fault Indicator
3. Zone Disable Indicator
5. Power Normal Indicator
8. AC Fault Indicator
9. Battery Fault Indicator
12. Sounder Fault Indicator
15. Zone Alarm Indicator
16. Zone Fault/Disable Indicator
25. Power Fault Indicator

B. Alarm Silence Switch
C. Buzzer Mute Switch
D. Test Switch
F. Reset Switch
G. Zone Disable Switch
M. Keyboard Enable Switch

Info. Display

AH-03312-8L
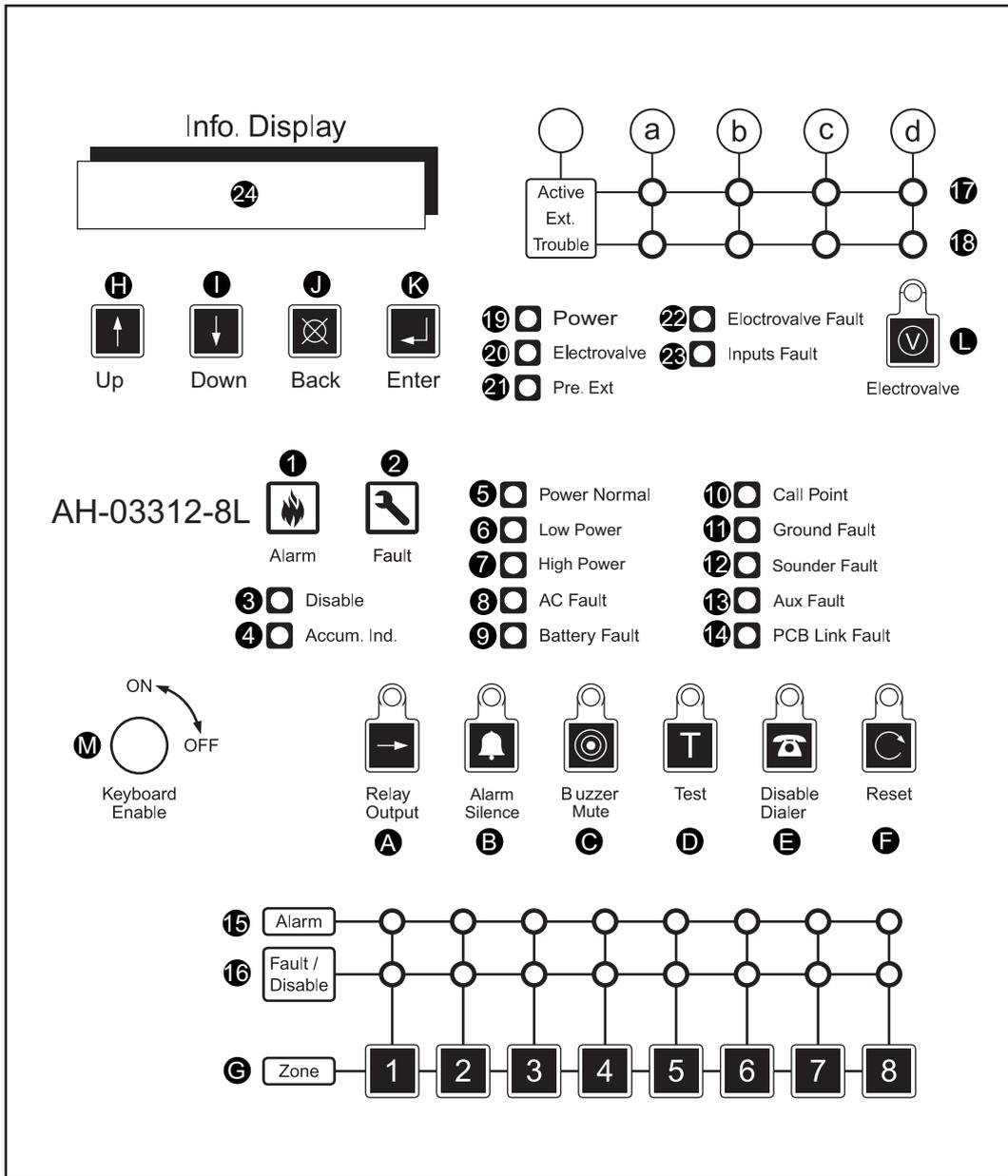
| | | |
|---|---|---|
| 1. Fire Alarm Indicator | 13. Aux Fault Indicator | A. Relay Output Switch |
| 2. Fault Indicator | 14. PCB Link Fault Indicator | B. Alarm Silence Switch |
| 3. Zone Disable Indicator | 15. Zone Alarm Indicator | C. Buzzer Mute Switch |
| 4. Accumulation Indicator | 16. Zone Fault/Disable Indicator | D. Test Switch |
| 5. Power Normal Indicator | 17. Ext. Zone Active Indicator | E. Disable Dialer Switch |
| 6. Low Power Indicator | 18. Ext. Zone Trouble Indicator | F. Reset Switch |
| 7. High Power Indicator | 19. Power Indicator | G. Zone Disable Switch |
| 8. AC Fault Indicator | 20. Electrovalve Indicator | H. Up Switch |
| 9. Battery Fault Indicator | 21. Pre. Ext. Indicator | I. Down Switch |
| 10. Manual Call Point Indicator | 22. Electrovalve Fault Indicator | J. Back Switch |
| 11. Ground Fault Indicator | 23. Inputs Fault Indicator | K. Enter Switch |
| 12. Sounder Fault Indicator | 24. Information Display | L. Electrovalve Disable Switch |
| | | M. Keyboard Enable Switch |

AH-03312-32L

Info. Display

| No. | Indicator | No. | Indicator | Switch | |
|-----|-----------|-----|-----------|--------|--|
| 1 | Alarm | 10 | Call Point | A | Relay Output |
| 2 | Fault | 11 | Ground Fault | B | Alarm Silence |
| 3 | Disable | 12 | Sounder Fault | C | Buzzer Mute |
| 4 | Accum. Ind. | 13 | Aux Fault | D | Test |
| 5 | Power Normal | 14 | PCB Link Fault | E | Disable Dialer |
| 6 | Low Power | | | F | Reset |
| 7 | High Power | | | | |
| 8 | AC Fault | | | | |
| 9 | Battery Fault | | | | |

1. Fire Alarm Indicator

2. Fault Indicator

3. Zone Disable Indicator

4. Accumulation Indicator

5. Power Normal Indicator

6. Low Power Indicator

7. High Power Indicator

8. AC Fault Indicator

9. Battery Fault Indicator

10. Manual Call Point Indicator

11. Ground Fault Indicator

12. Sounder Fault Indicator

13. Aux Fault Indicator

14. PCB Link Fault Indicator

15. Zone Alarm Indicator

16. Zone Fault/Disable Indicator

17. Ext. Zone Active Indicator

18. Ext. Zone Trouble Indicator

19. Power Indicator

20. Electrovalve Indicator

21. Pre. Ext. Indicator

22. Electrovalve Fault Indicator

23. Inputs Fault Indicator

24. Informaiton Display

A. Relay Output Switch

B. Alarm Silence Switch

C. Buzzer Mute Switch

D. Test Switch

E. Disable Dialer Switch

F. Reset Switch

G. Zone Disable Switch

H. Up Switch

I . Down Switch

J. Back Switch

K. Enter Switch

L. Electrovalve Disable Switch

## Indicators

1. Fire Alarm Indicator:  A red light indicates the Fire Alarm Control Panel has received a fire signal.
2. Fault Indicator: A yellow light indicates a fault in the fire alarm system.
3. Zone Disable Indicator: A yellow light indicates a zone has been disable.
4. Accumulation Indicator: When the Fire  Alarm Control  Panel  is turned on, it  will scan the circuit boards. The number of times the yellow light  flashes indicates  the  number of circuit boards being  scanned. The buzzer  will  sound twice  to indicate  the scan is complete. (Used on panels monitoring more than 8 zones.)
5. Power Normal Indicator: A  green  light  indicates  the  Fire Alarm Control Panel  is  in normal condition.
6. Low Power Indicator: A  yellow  light  indicates  the  AC  or  DC power supply  is  15% lower than the required voltage.
7. High Power Indicator: A  yellow  light  indicates  the  AC  or  DC power supply  is  15% higher than the required voltage.
8. AC Fault Indicator: A yellow light indicates a break in the AC power supply.
9. Battery Fault Indicator: A  yellow  light indicates  short  circuit or  wire-break in the Fire Alarm Control Panel's battery wires.
10. Manual Call Point Indicator: A  red  light  indicates  the  Fire  Alarm  Control  Panel  is receiving a signal from a manual call point. (Option)
11. Ground Fault Indicator: A yellow  light  indicates a short circuit to the casing or ground.
12. Sounder Fault Indicator:  A  yellow  light  indicates a  short circuit or  wire-break  to the sounder.
13. Aux Fault Indicator: A yellow light indicates a malfunction in  the DC24V power supply to outside devices.
14. PCB Link Fault Indicator: A yellow  light indicates a circuit board has become disconn-ected.
15. Zone Alarm Indicator: A red  light  indicates the Fire Alarm Control Panel has received a fire signal from this zone. The red light goes off after resetting the control panel.
16. Zone Fault/ Disable Indicator: A steady yellow light indicates the Fire Alarm Control. Panel has received  a signal that a  zone has  short circuit or disconnection. The yellow light goes off after the zone is well connected. A flashing yellow light  indicates a  zone has been disable.
17. Ext. Zone Active Indicator:  A  red  light  indicates  the system has confirmed an alarm condition.
18. Ext. Zone Trouble Indicator: A  yellow  light indicates  short circuit or  disconnection  in an extinguishing zone.
19. Power Indicator: A  green  light  indicates a  normal power status  for the extinguishing function.
20. Electrovalve Indicator: When the checking is complete, the red light indicates  the  gas is being released.
21. Pre. Ext. Indicator: A red light indicates the checking count down is in progress.
22. Electrovalve Fault Indicator: A  yellow  light  indicates  disconnection  or  short  circuit. (Option)
23. Input Fault Indicator: A yellow light indicates a faulty connection to an external device.
24. Informational Display: It provides a read-out of system conditions.
25. Power Fault Indicator: A yellow light indicates the AC or DC power supply is 15% lower or higher than the required voltage.

## Switches

(A) Relay Output Switch: If there is an alarm or a fault in the system, pressing this switch will disable the fire and fault relay output and the indicator will go on. Pressing the switch again will restore the relay output and the indicator will go out.

(B) Alarm Silence Switch: If there is an alarm or a fault in the system, pressing this switch will disable the relay output to the bells and the indicator will go on. When a new signal is received, the bell function will be restored. If the switch is pressed again, the bell function will be restored and the indicator will go out. If the switch is pressed for more than 2 seconds, the indicator will flash and the bells will remain disabled despite any new signals. (Used on panels monitoring more than 8 zones.)

(C) Buzzer Mute Switch: If there is an alarm or fault in the system, pressing this switch will disable the buzzer and the indicator will go on. When a new signal is received, the buzzer function will be restored. If the switch is pressed again, the buzzer function will be restored and the indicator will go out. If the switch is pressed for more than 2 seconds, the indicator will flash and the buzzer will remain disabled despite any new signals. (Used on panels monitoring more than 8 zones.)

(D) Test Switch: Use it to check that the indicators and buzzer are in a normal status. After pressing it, all the indicators will shine and the buzzer will sound. After five seconds, the fire alarm control panel will automatically return to pre-test condition. If a new fire alarm signal is received during test mode, the test mode will be interrupted and the fire alarm control panel will respond to the signal.

(E) Disable Dialer Switch: Pressing this switch during a fire alarm condition will disable the automatic dialer. The indicator will shine. Pressing this switch a second time will enable the dialer and the indicator will go out.

(F) Reset Switch: Pressing this switch resets the panel.

(G) Zone Disable Switch: When the Zone Disable Switch is press, the Zone Alarm Indicator goes out and Zone Fault/ Disable Indicator flashes yellow. When the Zone Disable Switch is pressed again, the Zone Alarm Indicator shines red and Zone Fault/ Disable Indicator goes out.

(H) Up Switch: Pressing this switch shows the previous item on the page. It can also be used to change the time and passwords by increasing the value progressively.

(I) Down Switch: Pressing this switch shows the next item on the page. It can also be used to change the time and passwords by decreasing the value progressively.

(J) Back Switch: Pressing this switch shows the previous page of the display. When changing the time and passwords, pressing this switch will shift control to the previous decimal place.

(K) Enter Switch: Pressing this switch shows the next page of the display. When changing the time and passwords, pressing this switch will shift control to the next decimal place.

(L) Electrovalve Disable Switch: During the countdown, pressing this switch disables the electrovalve and the indicator shines red.

(M) Keyboard Enable Switch: When the switch is turned on, the keyboard is enabled.

## AH-03312-4L

**Zone**

Z1 + − 4.7kΩ
Z2 + − 4.7kΩ
Z3 + − 4.7kΩ
Z4 + − 220Ω 4.7kΩ

**Sounder** SND1 + − 24V DC 4.7kΩ

**Indicating Lamp** Reset + − 24V DC

**Fire Relay Output Contacts** Fire C B A — To Relay Output Device

**AC Power** AC — AC

First Level

**Relay Output**

E1 + −
E2 + −
E3 + −
E4 + −

To Relay Output Device

**Sounder** SND2 + − 24V DC 4.7kΩ

**24V DC Output** Aux + − To Gas Detector

**Fault Relay Output Contacts** Fault C B A — To Relay Output Device

Second Level

## AH-03312-8L



**Zone**
- Z1 + / −
- Z2 + / −  4.7kΩ
- Z3 + / −
- Z7 + / −  4.7kΩ
- Z8 + / −  4.7kΩ

Z1: S, 4.7kΩ
Z3: S, 220Ω, P, 4.7kΩ

**Spare Contacts** — TRA + / −

**Fault Relay Output Contacts** — Fault C / B / A → To Relay Output Device

**Fire Relay Output Contacts** — Fire C / B / A → To Relay Output Device

**Dialer Relay Output** — DIAL → To Dialer Relay Output Device

**Sounder**
- SND2 + / −  4.7kΩ
- SND1 + / −  B B B  4.7kΩ  24V DC

**24V DC Output** — AUX + / − → To Annunciator

**Indicating Lamp (reset)** — 24V + / −  24V DC

## AH-03312-32L



**Zone**

- Z1 + / − — 4.7kΩ (with S detector)
- Z2 + / − — 4.7kΩ
- Z3 + / − — 4.7kΩ / 220Ω / P
- Z7 + / − — 4.7kΩ
- Z8 + / − — 4.7kΩ

**Spare Contacts** — TRA + / −

**Fault Relay Output Contacts** — Fault C / B / A — To Relay Output Device

**Fire Relay Output Contacts** — Fire C / B / A — To Relay Output Device

**Dialer Relay Output** — DIAL — To Dialer Relay Output Device

**Sounder**
- SND2 + / − — 4.7kΩ
- SND1 + / − — 24V DC — B B B — 4.7kΩ

**24V DC Output** — AUX + / − — To Annunciator

**Indicating Lamp (reset)** — 24V + / − — 24V DC

(1) Zone Wiring:

A.



Wiring Diagram A. Recommended connection. The maximum number of smoke detectors to be connected is 30 for each zone ( not including the mechanic-type heat detectors).

B.
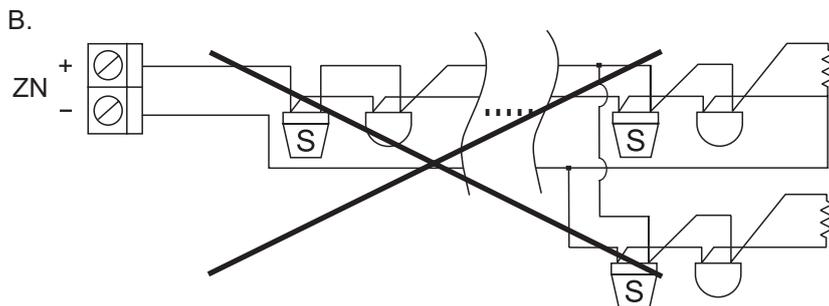


Wiring Diagram B. Improperly connected. Do not connect a detector or a end of line resistor in parallel with another detector.

C.
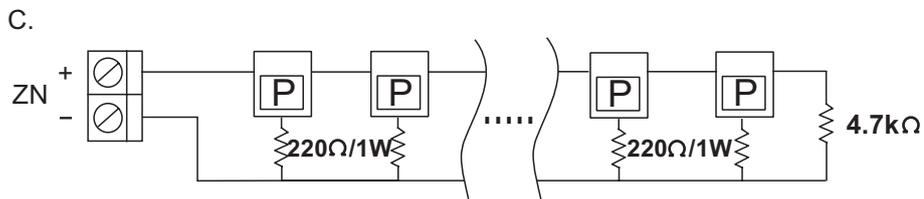


Wiring Diagram C. When connecting a manual call point to a zone, please connect a 220 ohm resistor and install the 4.7K ohm end of line resistor.

(2) Area Bell Wiring:
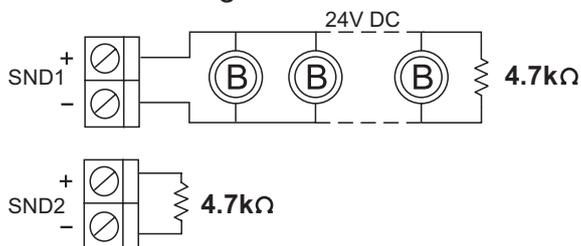


Fire alarm control panel is equipped with two set of Area Bells contacts. When connecting one set of bell contacts, be sure to connect the end of line resistor to avoid bell malfunction.
Install the 4.7K ohm resistor across the unused bell contacts as well.

(3) 24V DC Output Wiring:
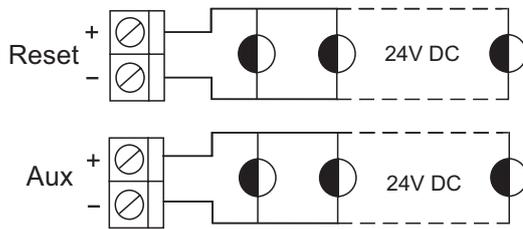


The contacts marked "24V" are controlled by the reset switch but the contacts marked "AUX" are not. When connecting the indicating lamp to the contacts, connect the red wire to the "+" and the black wire to the "-" contact.

(4) Dialer Relay Output Wiring:
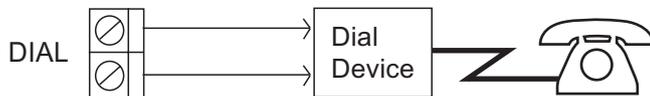


This contacts are NO and COM. When there is a fire alram, the signal will go through the telephone line.

(5) Fire/Fault Relay Output Contacts:

A.



To Relay Output Device

B.



To Relay Output Device
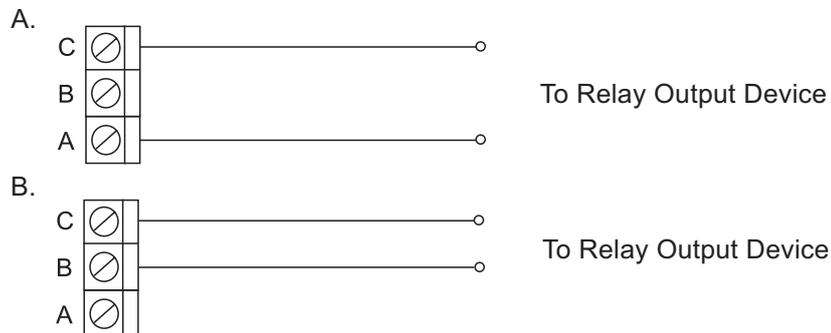
In picture A shows N.O. connection
In picture B shows N.C. connection.

(6) Fire/Fault Relay Output to Each Zone (Option) :

$E_1$ +/o  ⊘ ————————————————o  To Relay Output Device
-/c  ⊘ ————————————————o

$E_2$ +/o  ⊘
-/c  ⊘

LED  2KΩ /0.5W

24VDC OUTPUT

$E_N$ +/o  ⊘ ————————————→
-/c  ⊘      "-"      ————————→  To Relay Output Device
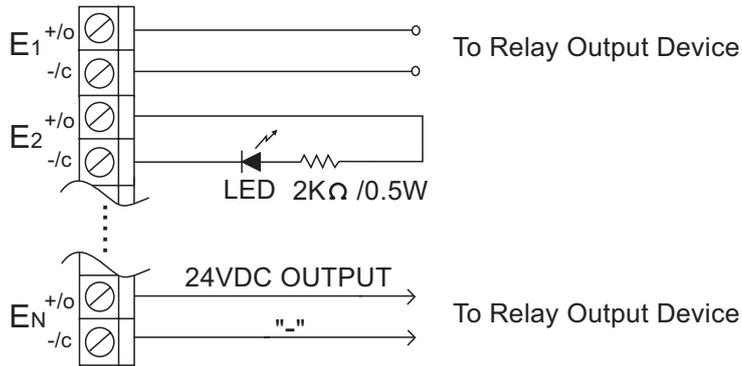
$E_1$:Voltage Free contacts.

JN  1  2  3   Note:N equals zone number
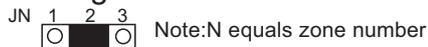
$E_2$:Connect a black wire from the "-" contact to the side of the LED.
Then connect a red wire from the "+" contact to a 2K ohms resistor and
connect the 2K ohms resistor to the "+" side of the LED.

JN  1  2  3   Note:N equals zone number

$E_N$:Connect a red wire from the "+" contact to the "+" side of the device.
Connect a black wire from the "-" contact to the "-" side of the device.

JN  1  2  3   Note:N equals zone number
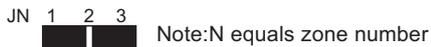
*Above 3 wiring methods could be used separately or mixed.

(7) Gas Relay (Option ):

OUT  + ⊘ ————————————→  Gas Release
     − ⊘ ————————————→  Equipment

Connect  "+ OUT" contact with a red wire to the "+"  side of the gas release
control device and connect the  "- OUT" contact with a black wire to the  "-"
side of the gas release control device.

(8) Stop Gas Release (Option):
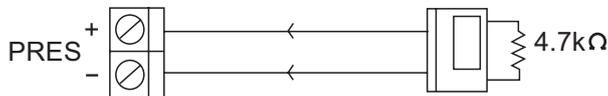
PRES  + ⊘ ←————————
      − ⊘ ←————————  ⟩ 4.7kΩ

Connect  "+ PRES"  contact with a red wire to the  "+"  side of the stop gas
release device and connect the "- PRES" contact with a black wire to the "-"
side of the stop gas release device.  Please install the  4.7K  ohm  end of
line resistor.

(9) Annunciator Wiring (Used on panels monitoring more than 8 zone):
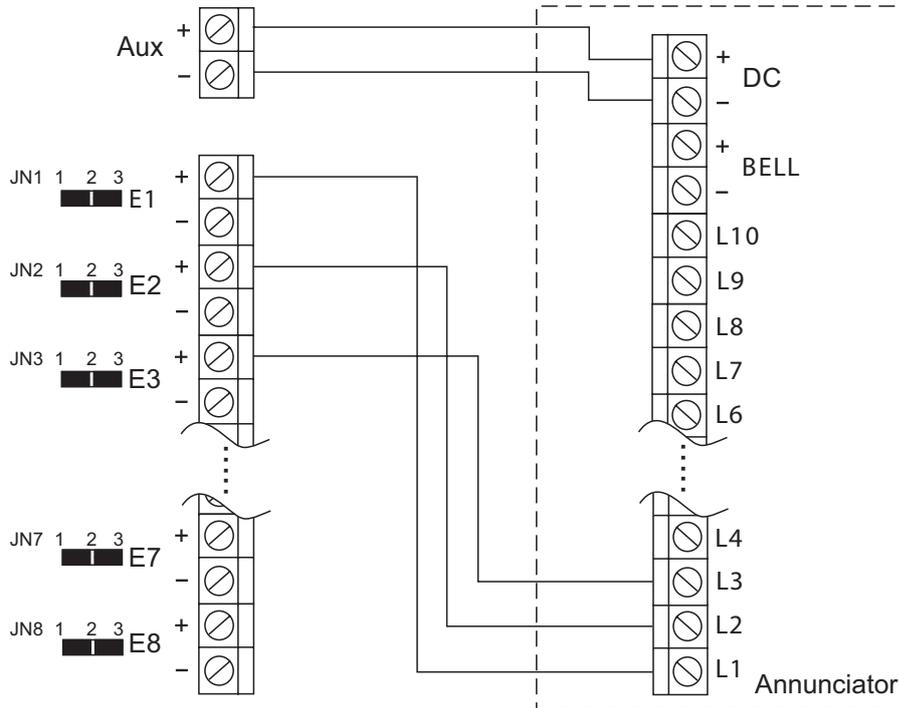


Connect panel's "+ AUX" contact to annunciator's "+ DC" contact.
Connect panel's "- AUX" contact to annunciator's "- DC" contact.
Connect panel's "+ E1" contact to annunciator's "L1" contact ...and so on.

(10) AC Power Connection:
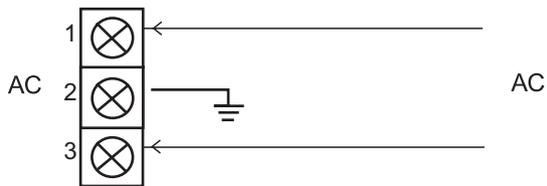


Connect the AC power supply wires to contacts 1 and 3.
Connect the ground wire to contact 2.

## Operating Instructions

(1) Fire Surveillance: Ensure the AC power source is within -/+ 15% of the nominal value. After installation of fire alarm control panel and connected devices is complete, please connect to the power source. The "Power Normal" indicator on the control panel will shine and the system will begin to monitor the building.

(2) Fire Alarm: When a detector in any zone is activated or a manual call point is pressed, a fire signal is sent. Both the "Fire Alarm" indicator and the "Zone Alarm" indicator will light up and the buzzer and area bell will sound.

   a.To silence the buzzer: Pressing the "◎ Buzzer Mute" switch will disable the buzzer and the indicator will go on. When a new signal is received, the buzzer function will be restored. If the switch is pressed again, the buzzer function will be restored and the indicator will go out. If the switch is pressed for more than 2 seconds, the indicator will flash and the buzzer will remain disabled despite any new signals until the switch is pressed again. (Used on panels monitoring more than 8 zones.)

   b.To silence the area bell: Pressing the "🔔 Alarm Silence" switch will disable the relay output to the bells and the indicator will go on. When a new signal is received, the bell function will be restored. If the switch is pressed again, the bell function will be restored and the indicator will go out. If the switch is pressed for more than 2 seconds the indicator will flash and the bells will remain disabled despite any new signals until the switch is pressed again. (Used on panels monitoring more than 8 zones.)

(3) Test: Pressing the "T Test" switch, all the indicators will shine and the buzzer will sound. After five seconds, the fire alarm control panel will automatically return to pretest condition. If a new fire alarm signal is received during test mode, the test mode will be interrupted and the fire alarm control panel will respond to the signal.

(4) Stop Relay Output: If there is an alarm or a fault in the system, pressing this "→ Relay Output" switch will disable the relay output and the indicator will go on. Pressing the switch again will restore the relay output and the indicator will go out. (Used on panels monitoring more than 8 zones.)

(5) Disable Dialer Relay Output: Pressing this "☎ Disable Dialer" switch during a fire alarm condition will disable the automatic dialer. The indicator will shine. Pressing this switch a second time will enable the dialer and the indicator will go out. (Used on panels monitoring more than 8 zones.)

(6) Reset: After a fire alarm, the Alarm indicator and zone Alarm indicator will remain lit. To reset the panel press this "C Reset" switch. The reset indicator will light up and after a 5-second delay, the system will be restored to surveillance status.

(7) Fault Alarm: The panel has a zone fault disable function. If a zone has a fault or disconnection, the Fault and the zone Fault/ Disable indicators will light up. After the fault has been repaired, the indicators will go out.

To silence the buzzer: Pressing the "◎ Buzzer Mute" switch will disable the buzzer and the indicator will go on. When a new signal is received, the buzzer function will be restored. If the switch is pressed again, the buzzer function will be restored and the indicator will go out. If the switch is pressed for more than 2 seconds, the indicator will flash and the buzzer will remain disabled despite any new signals until the switch is pressed again. (Used on panels monitoring more than 8 zones.)

(8) Standby Power: This control panel is equipped with a backup battery. When the AC power is interrupted, the battery will supply power. The buzzer will sound and the AC Fault and Fault indicators will light up.

(9) Zone Disable: If you would like to disable the zone relay output when there is a fire, press the relevant " [1] " switch to disable the zone. The relevant Fault/ Disable indicator will flash and the Disable indictor will light up.

  * Example: First Zone [1]

(10) Informational Function Screen (Option):

| | |
|---|---|
| 1. Alarm=000  Fault=000<br>   2004/07/21   16:38.58 | Fire Alarm Control Panel surveillance status. |
| 2. Alarm=001  Fault=002<br>   2004/07/21   16:38.58 | When the control panel receives a fire alarm signal, the screen shows the total number of alarms. |
| 3. Alarm=001  Fault=002<br>   2004/07/21   16:38.58 | When the control panel receives a fault signal, the screen shows the total number of faults. |
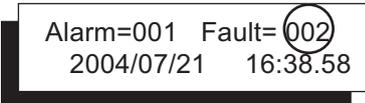
a.Check  Alarm Data:
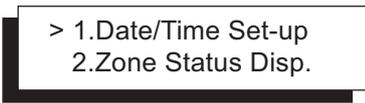
| | |
|---|---|
| 1. > 1.Date/Time Set-up<br>     2.Zone Status Disp. | Press the "◩ Enter" switch to see more details on each item. |
| 2.   1.Date/Time Set-up<br>   > 2.Zone Status Disp. | Press the" ▮ Down" to select the next item and press the"◩ Enter"switch to see the details. |
| 3. 0001  0008 Zone  Alarm<br>   2004/07/21    16:38.58 | The number in the upper  left-hand  corner is the sequence  of  the signal.  For example, "0001"  is  the first signal.  The number in the upper  middle  screen  shows  the zone number.  The upper  right-hand corner shows the  type  of  signal, Alarm  or  Fault. The lower screen displays the time and date of the event. |
| 4. 0002  0001 Zone  Fault<br>   2004/07/21    16:38.58 | Press the "▮ Down" switch  to  check  the next  event. Press  "⊠ Back " to return  to  the selection list. |
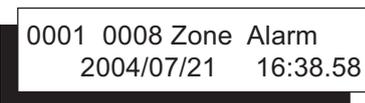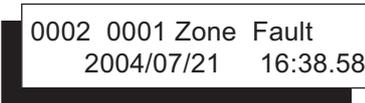
b.Set-Up Date/Time :

1.
```
> 1.Date/Time Set-up
   2.Zone Status Disp.
```
Move the cursor to item 1-Date/Time Set-up. Press the " ⏎ Enter " switch to open the Date/Time Set-up.

2.
```
2004/07/21  16:40.56
^           Edit Year
```
The lower right screen shows the editing item (Edit Year). Press " ↑ Up" switch to raise the value of the digit. Press " ↓ Down" switch to lower the value of the digit.

3.
```
2004/07/21  16:40.56
    ^        Edit Month
```
After setting the year, press the " ⏎ Enter" switch to edit month.
Use the " ⊠ Back" switch to move to a previous digit.
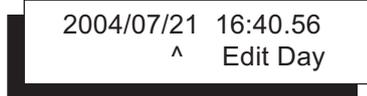
4.
```
2004/07/21  16:40.56
        ^    Edit Day
```
After setting the month, press the " ⏎ Enter" switch to edit day. Use the " ⊠ Back" switch to move to a previous digit.
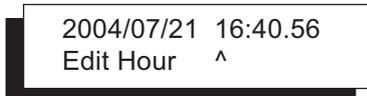
5.
```
2004/07/21  16:40.56
Edit Hour   ^
```
After setting the day, press the " ⏎ Enter" switch to edit hour.
Use the " ⊠ Back" switch to move to a previous digit.
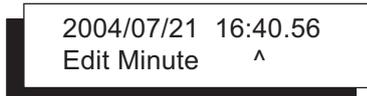
6.
```
2004/07/21  16:40.56
Edit Minute    ^
```
After setting the hour, press the " ⏎ Enter" switch to edit minute.
Use the " ⊠ Back" switch to move to a previous digit.
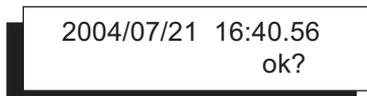
7.
```
2004/07/21  16:40.56
            ok?
```
Press " ⏎ Enter" to complete the date and time setup. Use the " ⊠ Back"switch to move to a previous digit.
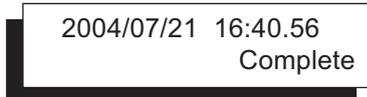
8.
```
2004/07/21  16:40.56
            Complete
```
After setup is completed, the display returns to the selection list.

c.Check Memory Data:
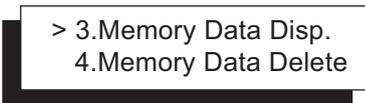
1.
```
> 3.Memory Data Disp.
   4.Memory Data Delete
```
Press the ” ⬇ Down” switch to move to item 3 - Memory Data Disp. Press ” ⏎ Enter ” swtich to open the Memory Data Disp.
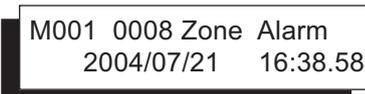
2.
```
M001  0008 Zone  Alarm
      2004/07/21    16:38.58
```
In the upper left - hand corner is the nubmer of the event. ( M001 ~ 255 ) The highest number shows the most recent event. The upper middle screen shows the zonenumber. The upper right-hand shows the type of signal.The lower screen displays the time and date of the event.
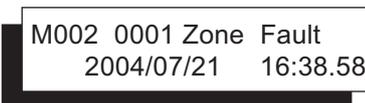
3.
```
M002  0001 Zone  Fault
      2004/07/21    16:38.58
```
Press ” ⬆ Up ” switch to check the previous event.
Press the ” ⬇ Down ” switch to check the next event.
Press ” ⊠ Back ” to return to the selection list.

d. Delete Memory Data:
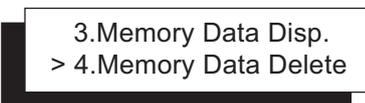
1.
```
   3.Memory Data Disp.
> 4.Memory Data Delete
```
Press the ” ⬇ Down” switch to move the cursor to item 4-Memory Data Delete. Press the ” ⏎ Enter“ switch to open the Memory Data Delete.
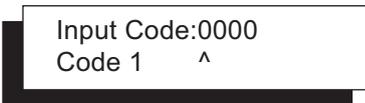
2.
```
Input Code:0000
Code 1     ^
```
To delete the memory, input a 4 digit code,starting with the left digit (code1). Press ” ⬆ Up ” switch to raise the value of the digit. Press ” ⬇ Down” switch to lower the value of the digit.
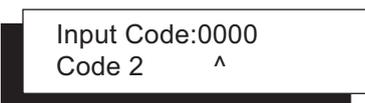
3.
```
Input Code:0000
Code 2       ^
```
Press ” ⏎ Enter” switch to move the cursor to the next digit. Use the ” ⊠ Back ” switch to move to a previous digit.

4.
```
Input Code:0000
                ok?
```
After the code is finished, press " ⏎ Enter" switch to delete the memory. Use the " ⊠ Back" switch to return to the 4th digit (code 4).

5.
```
Input Code:0000
   Data Deleting . . . .
```
After deleting, the display returns to the the selection list.

e.Security Code Reset:

1.
```
> 5.Security Code Set
  6.Backlight Timer
```
Press the " ↓ Down" switch to move the cursor to item 5-Security Code Set.
Press the " ⏎ Enter" switch to open the Security Code Set.

2.
```
Input Login Code:0000
Input Code 1      ^
```
To reset the security code, input the 4 digit original security code, starting with the left digit (code1). Press " ↑ Up " switch to raise the value of the digit. Press " ↓ Down" switch to lower the value of the digit.

3.
```
Input Login Code:0000
                ok?
```
Press " ⏎ Enter " switch to move the cursor to the next digit. Use the " ⊠ Back" switch to move to a previous digit.

4.
```
Input Set Code:0000
Input Code 1     ^
```
Input a new 4-digit security code.

5.
```
Input Set Code:0000
              ok?
```
After the code is finished, press " ⏎ Enter" switch to complete the code setting.
Use the " ⊠ Back" switch to return to the 4th digit (code 4).

6.
```
Input Set Code:0000
           Complete
```
After setting up, the display returns to the selection list.

f.Set Backinglight Timer:

1.

```
     5.Security Code Set
  >  6.Backlight Timer
```

Press the "[↓] Down" switch to move to item 6 Backlight Timer. Press "[↵] Enter" switch to open the Backlight Timer.

2.
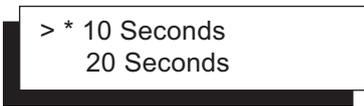
```
  > * 10 Seconds
      20 Seconds
```

Use the "[↑] Up" or "[↓] Down" switch to move the cursor to the selection you prefer. To make the selection, press "[↵] Enter" switch. Press the "[✕] Back" switch to return to the selection list.

## Installation Location

Please refer to your own national fire alarm system standard to carry out installation.

## Maintenance Instructions

(1)  Normal Status:

a. In normal operating status, the Power Normal indicator will shine.

b. When AC power fails, the backup battery supplies power. The Fault and AC Fault indictors will shine and the buzzer will sound. The system can continue monitoring for 72 hours and sound an alarm for 30 minutes.

(2)  Maintenance:

If the equipment is installed in a public place, maintenance and testing will disturb people. Be sure to inform them beforehand. If the equipment is found to be faulty, it must be fixed and maintained regularly. Check the current at the power supply of the fire alarm system, the voltage of the backup battery and discharge time of the backup battery. Press the Test switch to check that all the indicators shine and buzzer sounds. Check to see whether any detectors are defective and check whether manual call points are defective or have a broken glass shield. Check the whole wiring system for faults. Check for any ground faults at the AC input contacts. Applying 250V AC should produce a 20 M ohms resistance.

## Trouble Shooting

(1)  Examine Indicators: This system is composed of several devices and it will be affected by defective and improper use of detectors, wiring, bells, and manual call points.

a. Use a multi-meter to test the voltage at the AC input contacts.

b. Check that the Power Normal indicator shines.

c. See whether any fuses are burned out.

d. Check that the external devices and wiring are normal.

(2)  Fuse Function: The fuses in the panel have a special protective function, so do not use unspecified or poor quality products. Faulty external wiring and poor quality products will make fuses burn out.

a. AC: Normal power 220V AC fuse (2A).

b. BATT: Backup battery fuse (2A).

c. SND1 and SND2: Bell fuse (Auto-reset).

d. AUX: Output fuse (Auto-reset).

e. 24 V DC: DC power output fuse (Auto-reset).

(3)  Reasons for Burned Out Fuses and Inspection Notes:

a. AC power fuse burn out: Check whether the applied power is over the specified value and if the specification is correct. (Using a fuse lower than specified will make the fuse burn out)

b. Backup battery fuse burn out: Check whether the polarity of the contacts is right.

(4)  False Bell Alarm: The improper wiring can make the bell sound when no alarm signal is given. Please remove the external wiring and then use a multi-meter to test the bell's contacts which shouldn't give 24V DC reading. If it meets the mentioned requirement, please check the external wiring.

(5) Zone Abnormal Status ( Zone Fault/Disable Indicator ON ): According to the statistic, most zone faults are due to incorrect wiring. Some other reasons for fault are improper use and misconnection to contacts.

   Inspection Notes are as below:

   a. Check the unused zones to see if the end of line resistors have fallen off.

   b. Disconnect the zone wiring and connect a 4.7K ohms resistor across the contacts. The fault signal should disappear.

   c. If above conditions are met, the control panel is in normal condition. The fault signal is being caused by an external wiring fault. After repairing the external wiring, you may connect the wiring to the control panel again.

   d. Check whether the external wiring is short circuited or disconnected, detectors have fallen off or loosened or are detective, and the end of line resistor in detectors have fallen off or was not installed.

   e. Use a multi-meter to check that the resistance across the L(Z+) and LC(Z-) contacts is about 4.7K ohms.

   f. Disconnect the wires leading to the contacts L and LC. Check the voltage across the two wire is 0 volts.

(6) Zone Alarm and Alarm Indicators ON: Inspection notes:

   a. Disconnect the faulty zone and check the resistance across the L and LC wires is about 4.7K ohms.

   b. Disconnect the faulty zone, the Zone Alarm indicator will go out and the Zone Fault/Disable indicator will light up. If you would like to make the Zone Faulty indicator go off, you should install the end of line resistor across the L(Z+) and LC(Z-) contacts of the Zone. After repairing the wiring, please reconnect the external wiring.

# Housing Specifications

## AH-03312-4L

250 mm

180 mm

100 mm

320 mm

## AH-03312-8L

340 mm

270 mm

130 mm

308 mm

370 mm

# Housing  Specifications

AH-03312-32L

400 mm

330 mm

145 mm

475 mm

550 mm
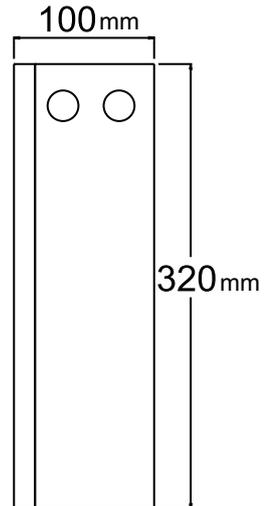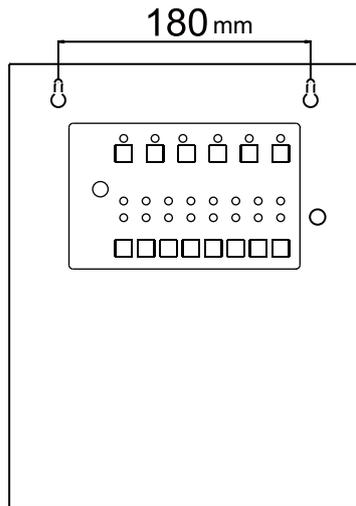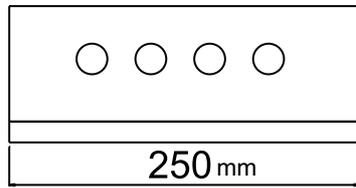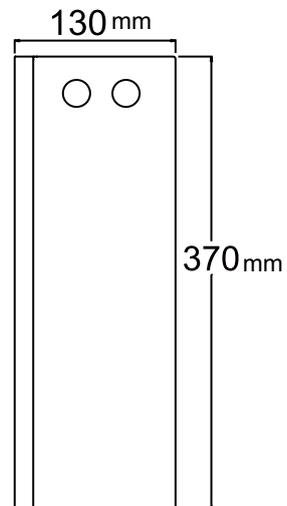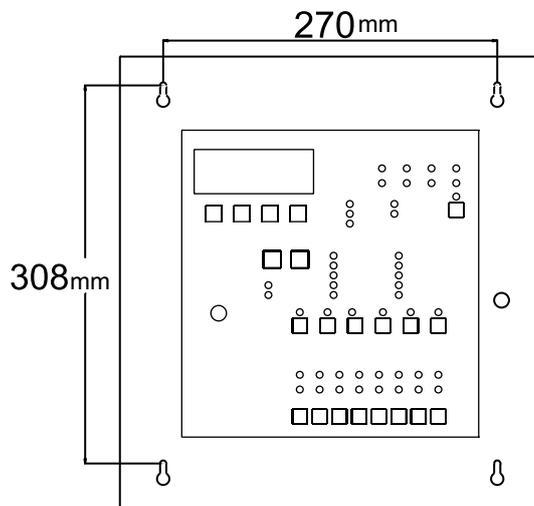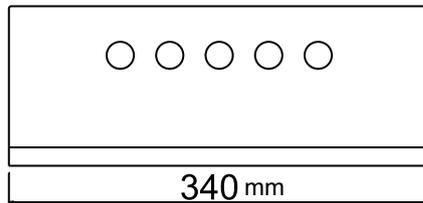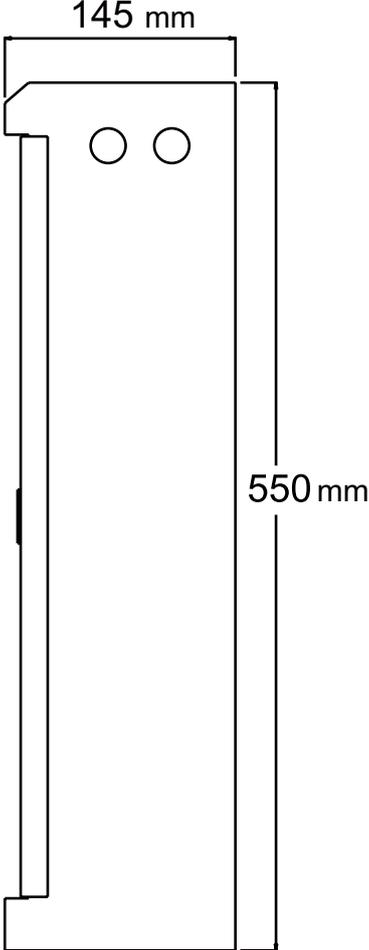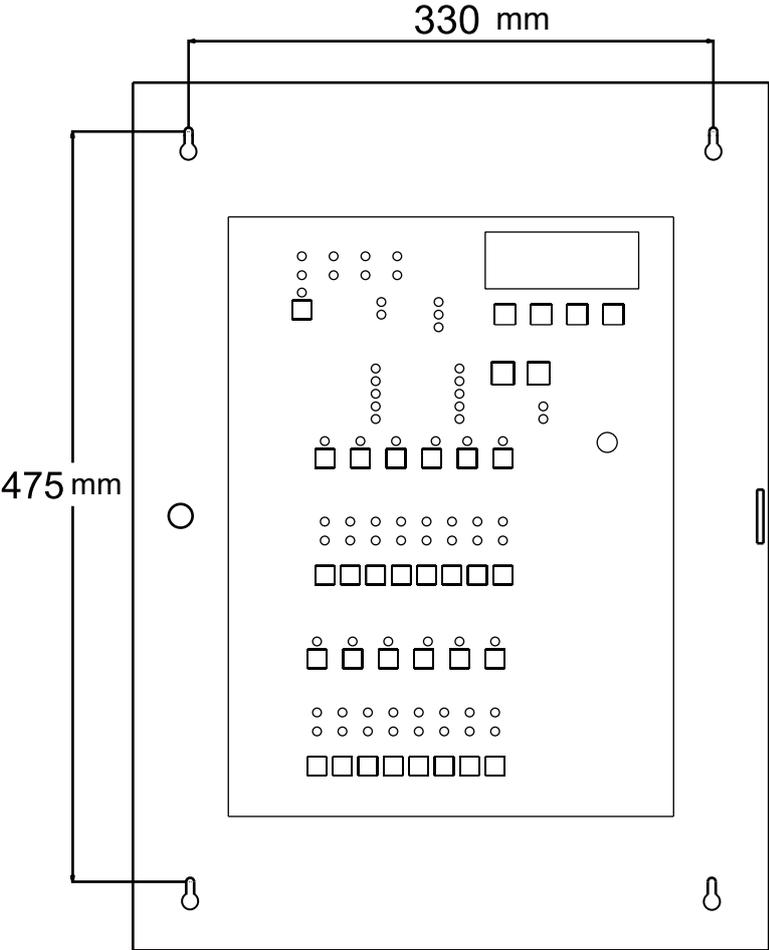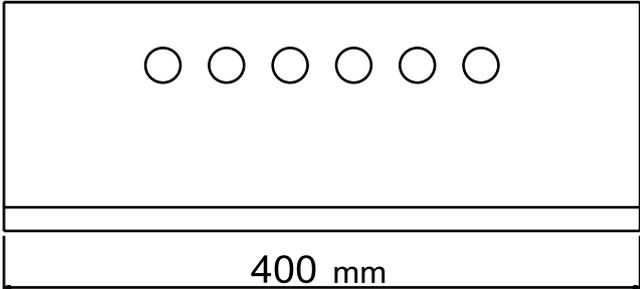
## General Specifications

Main Power Source
     Input Voltage... . . . . . . . . . . . . . . . . . . . . . . . . . . . .  220V$\pm$15%
     Frequency . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .  50Hz
     Fuse. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .  2A
       *Voltage and frequency varies in different regions.

Standby Power
     Battery Consumption . . . . . 4L/ 8L/ 32L:24V/4Ah/7Ah/12Ah
     Charge Voltage. . . . . . . . . . . . . . . . . . . . . . . . . . . . 27V/1.2Ah
     Fuse. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .  2A

Single Loop
     Voltage. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 20V
     Terminal Resistor . . . . . . . . . . . . . . . . . . . . . . . . . . . .  4.7K$\Omega$
     Maximum sensor's connection (Smoke  Detector). . . . . . 30
     Manual Call Point Resistance. . . . . . . . . . . . . . .  220$\Omega$/1W

Area Sounder Output
     Voltage. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .  20-30 V
     Maximum Supply Current. . . . . . . depending on transformer
     Terminal Resistor . . . . . . . . . . . . . . . . . . . . . . . . . . .  4.7K$\Omega$
     Fuse . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .  2A

Relay Output
     Maximum Voltage  . . . . . . . . . . . . . . . . . .  AC 250V/DC 30V
     Maximum Supply Current . . . . . . . . . . . . . .  2A(Auto-reset)

AUX Output Voltage
     Voltage. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .  20-30 V
     Maximum Supply Current. . . . . .   depending on transformer
     Fuse . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .  2A(Auto-reset)

24V DC Output Voltage
     Voltage. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .  20-30 V
     Maximum Supply Current. . . . . .   depending on transformer
     Fuse. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .  2A(Auto-reset)

Connecting Cable
     Cable's Semi-Diameter . . . . . . . . . . . . . . . . . .  1.5$^{2}$mm max
     Maximum Supply Current. . . . . . . . . . . . . . . . . . . . . . . .  2A

Ambient Temperature
     Operating Temperature. . . . . . . . . . . . . . . . . . . .  -7$^{\circ}$C-45$^{\circ}$C
     Storage Temperature . . . . . . . . . . . . . . . . . . . .  -10$^{\circ}$C-70$^{\circ}$C

# AH-03312 Fire Alarm Control Panel