

User Manual

Wireless Smoke Detector (Chemiresistors) ZA01A

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1. Introduction

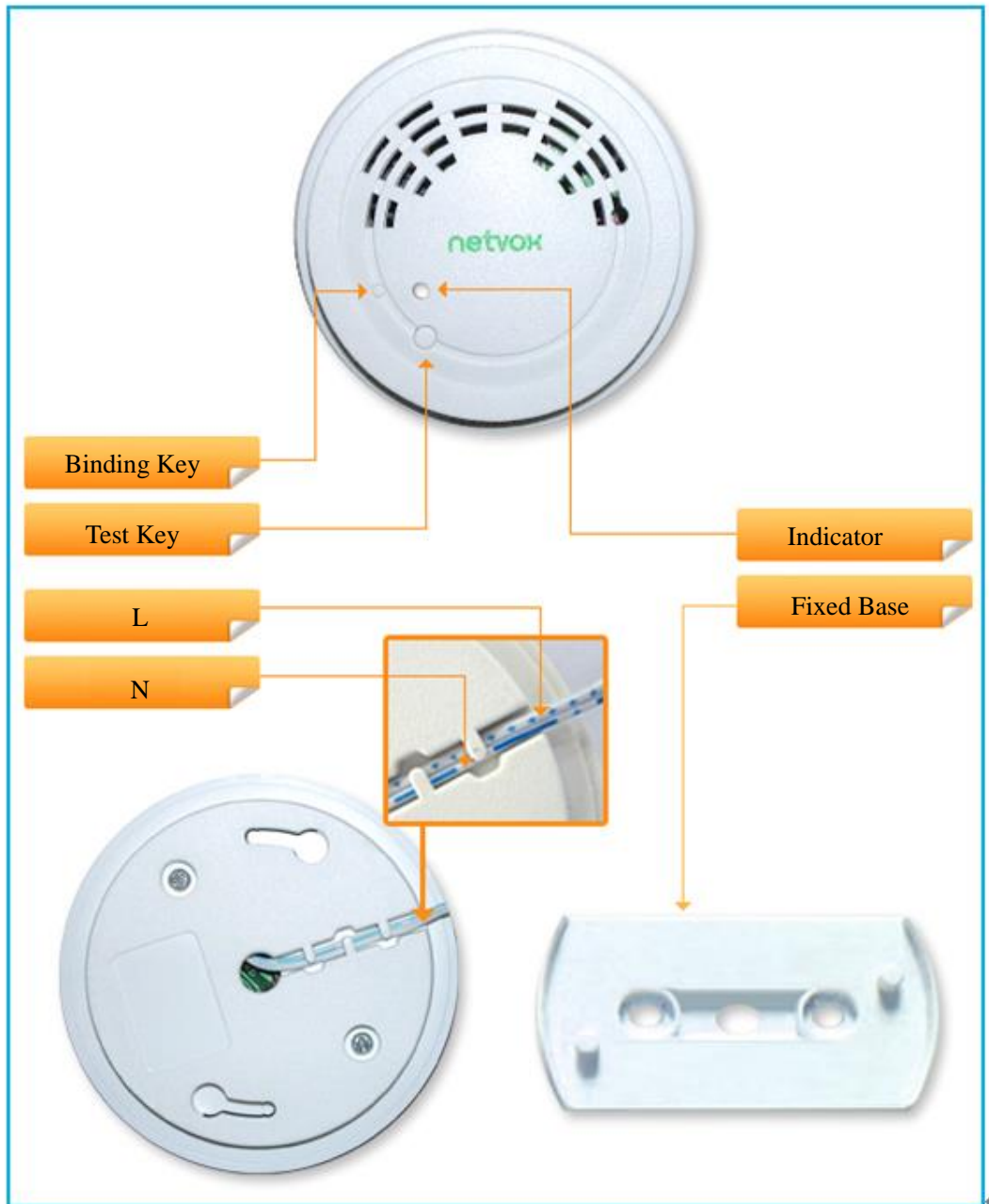
Netvox ZA01A, a ZigBee air pollution sensor, acts as a Router Device in ZigBee network and allows other devices to join the network as its sub-devices.

ZA01A is a device for detecting harmful gases in the home and the environment, and acts as a security device in the network. It is suitable for detecting ammonia, sulfide, ethanol, benzene vapor, smoke, etc. When the concentration of gases in the air exceeds the set limit, the device emits an alarm sound and sends the information about status changing to the enrolled CIE device at the same time. CIE will send a command to make the alarm device in the network sound an alarm to remind the user to ensure the user's safety.

What is ZigBee?

ZigBee is a short range wireless transmission technology based on IEEE802.15.4 standard and supports multiple network topologies such as point-to-point, point-to-multipoint, and mesh networks. It is defined for a general-purpose, cost-effective, low-power-consumption, low-data-rate, and easy-to-install wireless solution for industrial control, embedded sensing, medical data collection, smoke and intruder warning, building automation and home automation, etc.

2. Appearance



3. Specification

- Fully compatible with IEEE 802.15.4
- Utilizes 2.4GHz ISM band, up to 16 channels
- Power supply 100~240VAC, 50/60Hz
- Up to 210 meters wireless transmission range (Depending on the specific environment)
- Easy installation and configuration

4. Setting up ZA01A

4-1. Power On

Connect the device with a 100~240VAC 50/60Hz power supply at the source interface, and the red indicator will be on.

4-2. Join the ZigBee Network

In order to make ZA01A communicate with other devices on the Zigbee network, ZA01A must be joined to the network first.

- Step1. Enable the permit-join function (valid for 60 seconds) of a coordinator or a router (please refer to the user manual of the coordinator or the router to enable the permit-join feature).
- Step2. Turn on ZA01A. It will start to search and join the network.
- Step3. The indicator will stay **green** after it is joined successfully. Otherwise, the indicator stays **red**.

4-3. Enroll in the ZigBee Security System

After ZA01A successfully joins to the network, ZA01A will automatically match with CIE device, and register itself to the CIE. The enrollment has these 3 situations:

- A. There is no CIE device or no compatible CIE device in the network → the indicator flashes **red twice**.
- B. There is a compatible CIE device in the network, but it is failed to enroll → the indicator flashes **red 4 times**.
- C. The enrollment is completed → the indicator flashes **red 6 times**.

NOTE: If the device has successfully registered to CIE, the red LED will flash 6 times when it is powered on every time.

4-4. Permit-Join

To allow other devices to join the ZigBee network, users could enable and disable the Permit-Join feature by the following steps:

- A. Press the *Binding Key* to enable the Permit-Join feature. The default time is 60 seconds.
- B. During the default time, press the *Binding Key* again to disable the Permit-Join feature.

4-5. Alarm Test

To test the alarm feature of ZA01A, press the *Test Key* **once**.

- A. ZA01A does not join a network and is not enrolled → it will issue alarm sound for 5 seconds. The indicator flashes **5 times**.
- B. ZA01A joins the network and is enrolled → it sends notification to the CIE device and issues alarm sound. The indicator keeps flashing.
- C. ZA01A joins the network but is not enrolled → it will issue alarm sound for 5 seconds and the indicator flashes **5 times**. Then, it sends the enrollment request. After the enrollment is successful, it will issue an alarm sound.

4-6. Air Command Alarm

When ZA01A receives the fire alarm from CIE, the device will turn on the buzzer and the indicator will flash alternately.

When the device receives the stop command of fire alarm, it will return to the normal state.

4-7. Triggered Alarm

When the concentration of the detectable gases in the air exceeds the set limit, the device emits an alarm sound and the indicator flashes alternately until the concentration drops below the limit. It will also send the alarm to CIE which it is enrolled to or to the other device which is bound with Cluster ID (0x0500). ZA01A can work as a temperature sensor. It alarms when the temperature is higher than 60°C.

- Detecting range: 10-1000ppm (theoretical value)
- The sensing feature is ready after ZA01A is powered on for 5 minutes.
- When using for **the first time**, ZA01A will reach the best sensitivity after it is powered on for 48 hours.

4-8. Announce

Press and hold the *Test Key* for 3 seconds the indicator flashes once.

4-9. Reboot

Press and hold the *Test Key* for 10 seconds and the indicator flashes once.

4-10. Restore to Factory Setting

To restore it to factory setting, please follow the steps:

- Step1. Press and hold both *Binding Key* & *Test Key* for 5 seconds. The indicator will flash **red once**, please release both keys at this time.
- Step2. After releasing both keys, the indicator will flash **20 times** meaning restore completed.
- Step3. If the indicator stays **red** after restoring, it means device does not join in the network.

5. Home Automation Clusters for ZA01A

A cluster is a set of related attributes and commands which are grouped together to provide a specific function. A simple example of a cluster would be the On/Off cluster which defines how an on/off switch behaves. This table lists the clusters which are supported by ZA01A.

1.End Point(s) : 0x01

2.Device ID : HA IAS ZONE (0x0402)

3.EndPoint Cluster ID

Cluster ID for ZA01A	
Server side	Client side
EP 0X0A (Device ID: 0x0402)	
Basic(0x0000)	<i>None</i>
Identify(0x0003)	
Commission (0x0015)	
IAS Zone(0x0500)	
Diagnostics Information(0x0B05)	

This lists the attributes of the basic information.

Identifier	Name	Type	Range	Access	Default	Mandatory / Optional
0x0000	ZCLVersion	Unsigned 8-bit integer	0x00 – 0xff	Read only	0x03	M
0x0001	ApplicationVersion	Unsigned 8-bit integer	0x00 – 0xff	Read only	0x1F	O
0x0002	StackVersion	Unsigned 8-bit integer	0x00 – 0xff	Read only	0x33	O
0x0003	HWVersion	Unsigned 8-bit integer	0x00 – 0xff	Read only	0x29	O
0x0004	ManufacturerName	Character string	0 – 17 bytes	Read only	netvox	O
0x0005	ModelIdentifier	Character string	0 – 17bytes	Read only	ZA01AE3R	O
0x0006	DateCode	Character string	0 – 17 bytes	Read only	2014.05.09	O

Identifier	Name	Type	Range	Access	Default	Mandatory / Optional
0x0007	PowerSource	8-bit Enumeration	0x00 – 0xff	Read only	0x04	M
0x0010	LocationDescription	Character string	0 – 17 bytes	Read/write		O
0x0011	PhysicalEnvironment	8-bit Enumeration	0x00 –0xff	Read/write	0x00	O
0x0012	DeviceEnabled	Boolean	0x00 –0 0x01	Read/write	0x01	M

6. Related Netvox Device

1. Z602A : Alarm with notification



2. Z203: Coordinator with CIE



7. Important Maintenance Instruction

Kindly pay attention to the following in order to achieve the best maintenance of the product:

- Keep the equipment dry. Rain, moisture and various liquids or water may contain minerals that can corrode electronic circuits. In case the device is wet, please dry it completely.
- Do not use or store in dusty or dirty areas. This way can damage its detachable parts and electronic components.
- Do not store in excessive heat place. High temperatures can shorten the life of electronic devices, destroy batteries, and deform or melt some plastic parts.
- Do not store in excessive cold place. Otherwise, when the temperature rises to normal temperature, moisture will form inside which will destroy the board.
- Do not throw, knock or shake the device. Treating equipment roughly can destroy internal circuit boards and delicate structures.
- Do not wash with strong chemicals, detergents or strong detergents.
- Do not paint the device. Smudges can make debris block detachable parts up and affect normal operation.
- Do not throw the battery into the fire to prevent the battery from exploding. Damaged batteries may also explode.

All the above suggestions apply equally to your device, batteries and accessories.

If any device is not operating properly.

Please take it to the nearest authorized service facility for repairing.

User Manual

Wireless Methane Gas Detector ZA01B

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1. Introduction

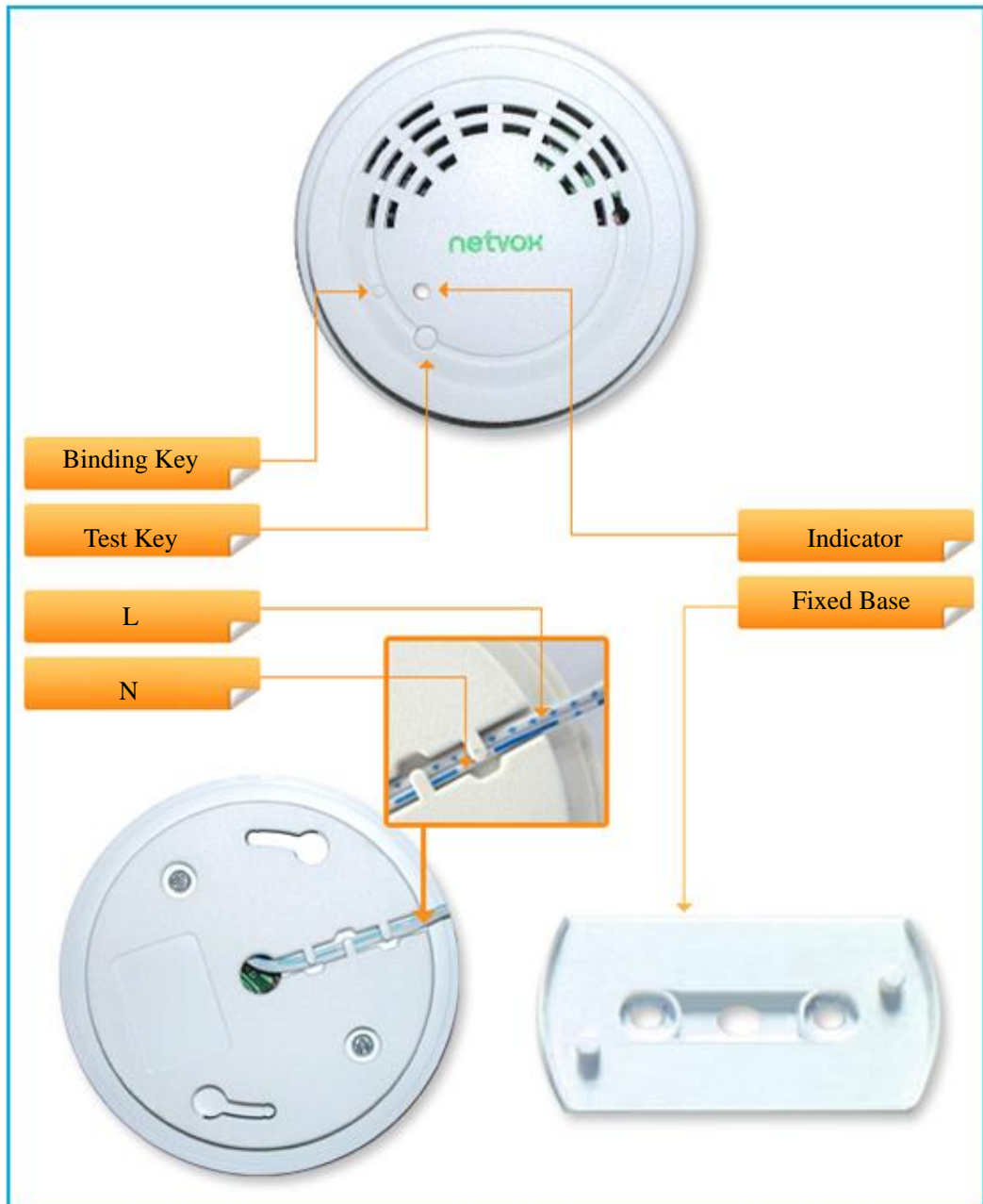
Netvox ZA01B, a gas detector with heat sensor, acts as a Router Device in ZigBee network and allows other devices to join the network as its sub-devices.

ZA01B is a gas detector which acts as a security device in the network. When the concentration of gas in the air exceeds the set limit, the device emits an alarm sound and sends the information about status changing to the enrolled CIE device at the same time. CIE will send a command to make the alarm device in the network sound an alarm to remind the user and ensure the user's safety.

What is ZigBee?

ZigBee is a short range wireless transmission technology based on IEEE802.15.4 standard and supports multiple network topologies such as point-to-point, point-to-multipoint, and mesh networks. It is defined for a general-purpose, cost-effective, low-power-consumption, low-data-rate, and easy-to-install wireless solution for industrial control, embedded sensing, medical data collection, smoke and intruder warning, building automation and home automation, etc.

2. Appearance



3. Specification

- Fully compatible with IEEE 802.15.4
- Utilizes 2.4GHz ISM band, up to 16 channels
- Power supply: 100~240VAC, 50/60Hz
- Up to 210 meters wireless transmission range (Depending on the specific environment)
- Easy installation and configuration

4. Setting up ZA01B

4-1. Power On

Connect the device with a 100~240VAC 50/60HZ power supply at the source interface, and the red indicator will be on.

4-2. Join the ZigBee Network

In order to make ZA01B communicate with other devices on the Zigbee network, ZA01B must be joined to the network first.

Step1. Enable the permit-join function (valid for 60 seconds) of a coordinator or a router (please refer to the user manual of the coordinator or the router to enable the permit-join feature).

Step2. Turn on ZA01B. It will start to search and join the network.

Step3. The indicator will stay **green** after it is joined successfully. Otherwise, the indicator will stay **red**.

4-3. Enroll in the ZigBee Security System

After ZA01B successfully joins to the network, ZA01B will automatically match with CIE device, and register itself to the CIE. The enrollment has these 3 situations:

- A. There is no CIE device or no compatible CIE device in the network → the indicator flashes **red twice**.
- B. There is a compatible CIE device in the network, but it is failed to enroll → the indicator flashes **red 4 times**.
- C. The enrollment is completed → the indicator flashes **red 6 times**.

NOTE: If the device has successfully registered to CIE, the red LED will flash 6 times when it is powered on every time.

4-4. Permit-Join

To allow other devices to join the ZigBee network, users could enable and disable the Permit-Join feature by the following steps:

- A. Press the *Binding Key* to enable the Permit-Join feature. The default time is 60 seconds.
- B. During the default time, press the *Binding Key* again to disable the Permit-Join feature.

4-5. Alarm Test

To test the alarm feature of ZA01B, press the *Test Key* **once**.

- A. ZA01B does not join a network and is not enrolled → it will issue alarm sound for 5 seconds. The indicator flashes **5 times**.
- B. ZA01B joins the network and is enrolled → it sends notification to the CIE device and issues alarm sound. The indicator keeps flashing.
- C. ZA01B joins the network but is not enrolled → it will issue alarm sound for 5 seconds and the indicator flashes **5 times**. Then, it sends the enrollment request. After the enrollment is successful, it will issue an alarm sound.

4-6. Air Command Alarm

When ZA01B receives the fire alarm from CIE, the device will turn on the buzzer and the indicator will flash alternately.

When the device receives the stop command of fire alarm, it will return to the normal state.

4-7. Triggered Alarm

When the concentration of the detectable gases in the air exceeds the set limit, the device emits an alarm sound and the indicator flashes alternately until the concentration drops below the limit. It will also send the alarm to CIE which it is enrolled to or to the other device which is bound with Cluster ID (0x0500). ZA01B can work as a temperature sensor. It alarms when the temperature is higher than 60°C.

- The sensing feature is ready after ZA01B is powered on for 5 minutes.
- When using for **the first time**, ZA01B will reach the best sensitivity after it is powered on for 48 hours.
- Detecting range:1500-7500ppm.
- The default setting (potentiometer in the middle): The concentration limit is 3000ppm.
Adjust the potentiometer clockwise to the end: The concentration limit is 1500ppm.
Adjust the potentiometer counterclockwise to the end: The concentration limit is 7500ppm.

4-8. Announce

Press and hold the *Test Key* for 3 seconds the indicator flashes once.

4-9. Reboot

Press and hold the *Test Key* for 10 seconds and the indicator flashes once.

4-10. Restore to Factory Setting

To restore it to factory setting, please follow the steps:

Step1. Press and hold both *Binding Key* & *Test Key* for 5 seconds. The indicator will flash **red once**, please release both keys at this time.

Step2. After releasing both keys, the indicator will flash **20 times** meaning restore completed.

Step3. If the indicator stays **red** after restoring, it means device does not join in the network.

5. Home Automation Clusters for ZA01B

A cluster is a set of related attributes and commands which are grouped together to provide a specific function. A simple example of a cluster would be the On/Off cluster which defines how an on/off switch behaves. This table lists the clusters which are supported by ZA01B.

1. End Point(s) : 0x01
2. Device ID : IAS Zone (0x0402)
3. EndPoint Cluster ID

Cluster ID for ZA01B	
Server side	Client side
EP: 0x01 (Device ID: 0x0402)	
Basic(0x0000)	
Identify(0x0003)	
IAS Zone(0x0500)	
Commissioning(0x0015)	

This lists the attributes of the basic information.

Identifier	Name	Type	Range	Access	Default	Mandatory / Optional
0x0000	ZCLVersion	Unsigned 8-bit integer	0x00 – 0xff	Read only	0x03	M
0x0001	ApplicationVersion	Unsigned 8-bit integer	0x00 – 0xff	Read only	0x1F	O
0x0002	StackVersion	Unsigned 8-bit integer	0x00 – 0xff	Read only	0x33	O
0x0003	HWVersion	Unsigned 8-bit integer	0x00 – 0xff	Read only	0x29	O
0x0004	ManufacturerName	Character string	0 – 17 bytes	Read only	netvox	O
0x0005	ModelIdentifier	Character string	0 – 17bytes	Read only	ZA01BE3R	O
0x0006	DateCode	Character string	0 – 17 bytes	Read only	2015.11.23	O
0x0007	PowerSource	8-bit Enumeration	0x00 – 0xff	Read only	0x01	M

Identifier	Name	Type	Range	Access	Default	Mandatory / Optional
0x0010	LocationDescription	Character string	0 – 17 bytes	Read/write		O
0x0011	PhysicalEnvironment	8-bit Enumeration	0x00 –0xff	Read/write	0x00	O
0x0012	DeviceEnabled	Boolean	0x00 –0 0x01	Read/write	0x01	M

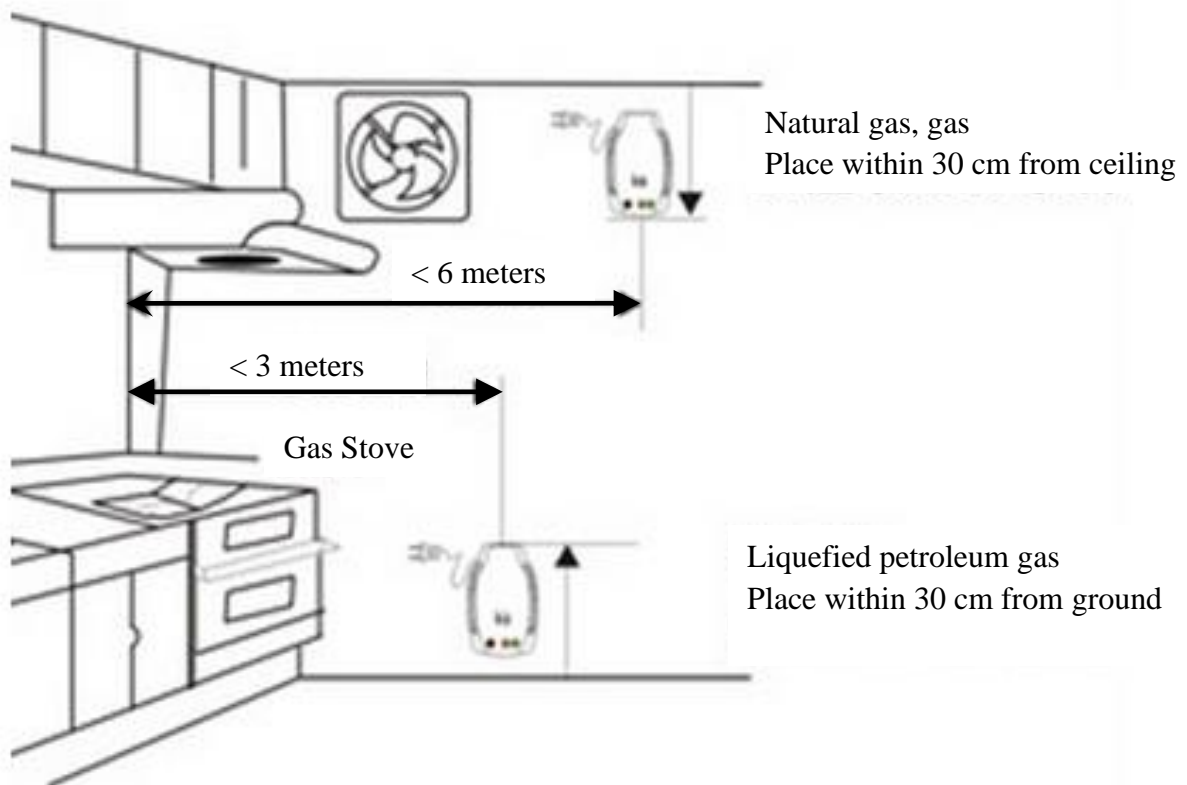
6. Related Netvox Device

1. Z602A: Alarm with notification

2. Z203: Coordinator with CIE



7. Installation



8. Important Maintenance Instruction

Kindly pay attention to the following in order to achieve the best maintenance of the product:

- Keep the equipment dry. Rain, moisture and various liquids or water may contain minerals that can corrode electronic circuits. In case the device is wet, please dry it completely.
- Do not use or store in dusty or dirty areas. This way can damage its detachable parts and electronic components.
- Do not store in excessive heat place. High temperatures can shorten the life of electronic devices, destroy batteries, and deform or melt some plastic parts.
- Do not store in excessive cold place. Otherwise, when the temperature rises to normal temperature, moisture will form inside which will destroy the board.
- Do not throw, knock or shake the device. Treating equipment roughly can destroy internal circuit boards and delicate structures.
- Do not wash with strong chemicals, detergents or strong detergents.
- Do not paint the device. Smudges can make debris block detachable parts up and affect normal operation.
- Do not throw the battery into the fire to prevent the battery from exploding. Damaged batteries may also explode.

All the above suggestions apply equally to your device, batteries and accessories.

If any device is not operating properly.

Please take it to the nearest authorized service facility for repairing.

User Manual

Wireless CO Detector ZA01C

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1. Introduction

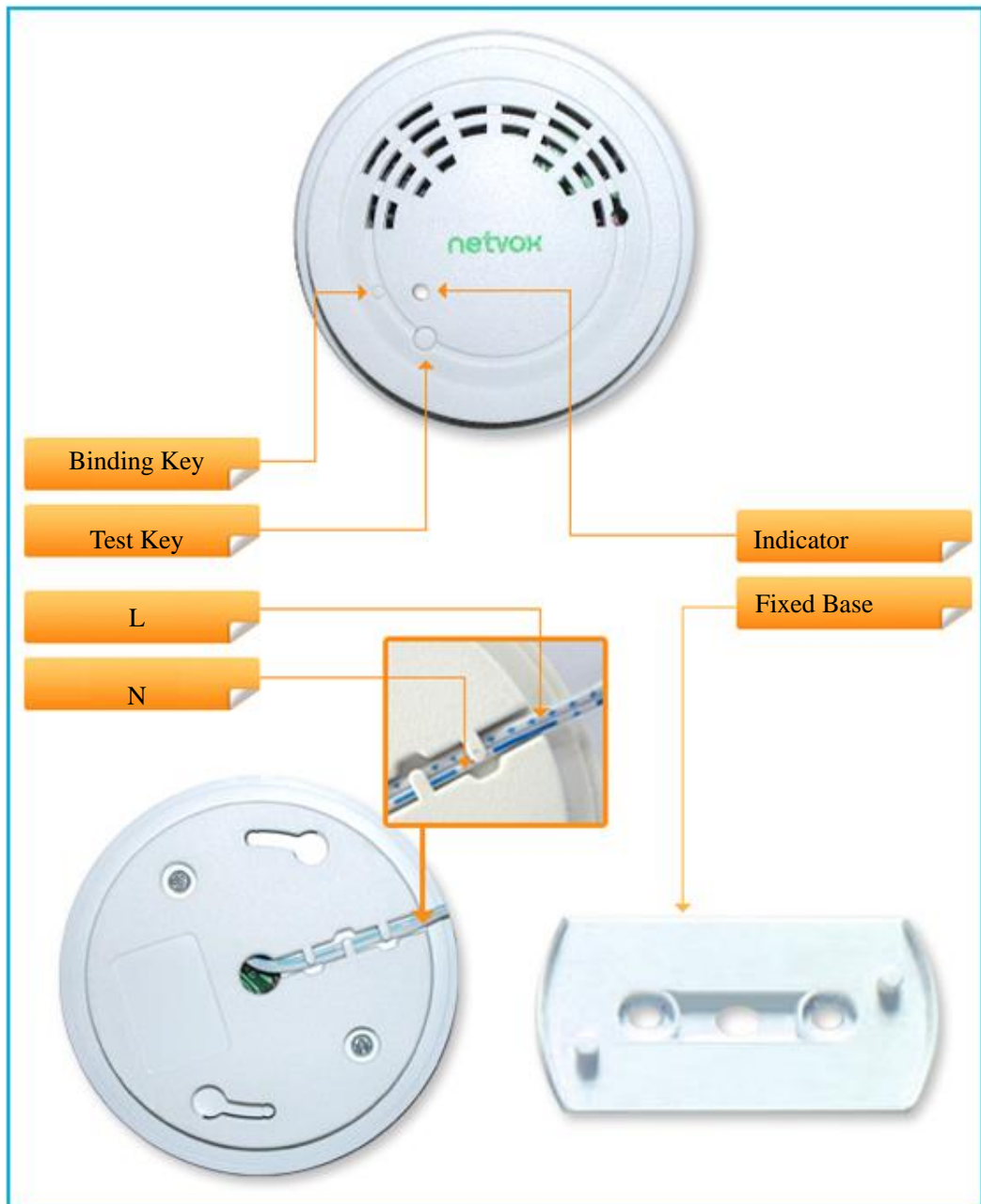
Netvox ZA01C, a CO detector with heat sensor, acts as a Router Device in ZigBee network and allows other devices to join the network as its sub-devices.

ZA01C is a CO detector which acts as a security device in the network. When the concentration of CO in the air exceeds the set limit, the device emits an alarm sound and sends the information about status changing to the enrolled CIE device at the same time. CIE will send a command to make the alarm device in the network sound an alarm to remind the user and ensure the user's safety.

What is ZigBee?

ZigBee is a short range wireless transmission technology based on IEEE802.15.4 standard and supports multiple network topologies such as point-to-point, point-to-multipoint, and mesh networks. It is defined for a general-purpose, cost-effective, low-power-consumption, low-data-rate, and easy-to-install wireless solution for industrial control, embedded sensing, medical data collection, smoke and intruder warning, building automation and home automation, etc.

2. Appearance



3. Specification

- Fully IEEE 802.15.4 compliant
- Utilizes 2.4GHz ISM band; up to 16 channels
- Power supply: 100~240VAC; 50/60Hz
- Up to 210 meters wireless transmission range in non-obstacle space

4. Setting up ZA01C

4-1. Power On

Connect the device with a 100~240VAC 50/60HZ power supply at the source interface, and the red indicator will be on.

4-2. Join the ZigBee Network

In order to make ZA01C communicate with other devices on the Zigbee network, ZA01C must be joined to the network first.

- Step1. Enable the permit-join function (valid for 60 seconds) of a coordinator or a router (please refer to the user manual of the coordinator or the router to enable the permit-join feature).
- Step2. Turn on ZA01C. It will start to search and join the network.
- Step3. The indicator will stay **green** after it is joined successfully. Otherwise, the indicator will stay **red**.

4.3. Enroll in the ZigBee Security System

After ZA01C successfully joins to the network, ZA01C will automatically match with CIE device, and register itself to the CIE. The enrollment has these 3 situations:

- A. There is no CIE device or no compatible CIE device in the network → the indicator flashes **red twice**.
- B. There is a compatible CIE device in the network, but it is failed to enroll → the indicator flashes **red 4 times**.
- C. The enrollment is completed → the indicator flashes **red 6 times**.

NOTE: If the device has successfully registered to CIE, the red LED will flash 6 times when it is powered on every time.

4-4. Permit-Join

To allow other devices to join the ZigBee network, users could enable and disable the Permit-Join feature by the following steps:

- A. Press the *Binding Key* to enable the Permit-Join feature. The default time is 60 seconds.
- B. During the default time, press the *Binding Key* again to disable the Permit-Join feature.

4-5. Alarm Test

To test the alarm feature of ZA01C, press the *Test Key* **once**.

- A. ZA01C does not join a network and is not enrolled → it will issue alarm sound for 5 seconds. The indicator flashes **5 times**.
- B. ZA01C joins the network and is enrolled → it sends notification to the CIE device and issues alarm sound. The indicator keeps flashing.
- C. ZA01C joins the network but is not enrolled → it will issue alarm sound for 5 seconds and the indicator flashes **5 times**. Then, it sends the enrollment request. After the enrollment is successful, it will issue an alarm sound.

4-6. Air Command Alarm

When ZA01C receives the fire alarm from CIE, the device will turn on the buzzer and the indicator will flash alternately.

When the device receives the stop command of fire alarm, it will return to the normal state.

4-7. Triggered Alarm

When the concentration of the detectable gases in the air exceeds the set limit, the device emits an alarm sound and the indicator flashes alternately until the concentration drops below the limit. It will also send the alarm to CIE which it is enrolled to or to the other device which is bound with Cluster ID (0x0500). ZA01C can work as a temperature sensor. It alarms when the temperature is higher than 60°C.

- The sensing feature is ready after ZA01C is powered on for 30 minutes.
- After ZA01C is powered on for 48 hours, it will reach the best sensitivity.

4-8. Reboot

Press and hold the *Test Key* for 10 seconds and the indicator flashes once.

4-9. Announce

Press and hold the *Test Key* for 3 seconds the indicator flashes once.

4-10. Restore to Factory Setting

To restore it to factory setting, please follow the steps:

Step1. Press and hold both *Binding Key* & *Test Key* for 5 seconds. The indicator will flash **red once**, please release both keys at this time.

Step2. After releasing both keys, the indicator will flash **20 times** meaning restore completed.

Step3. If the indicator stays **red** after restoring, it means device does not join in the network.

5. Home Automation Clusters for ZA01C

A cluster is a set of related attributes and commands which are grouped together to provide a specific function. A simple example of a cluster would be the On/Off cluster which defines how an on/off switch behaves. This table lists the clusters which are supported by ZA01C.

1. End Point(s) : 0x01
2. Device ID : IAS Zone (0x0402)
3. EndPoint Cluster ID

Cluster ID for ZA01C	
Server side	Client side
EP: 0x01 (Device ID: 0x0402)	
Basic(0x0000)	
Identify(0x0003)	
IAS Zone(0x0500)	

This lists the attributes of the basic information.

Identifier	Name	Type	Range	Access	Default	Mandatory / Optional
0x0000	<i>ZCLVersion</i>	Unsigned 8-bit integer	0x00 – 0xff	Read only	-----	M
0x0001	<i>ApplicationVersion</i>	Unsigned 8-bit integer	0x00 – 0xff	Read only	-----	O
0x0002	<i>StackVersion</i>	Unsigned 8-bit integer	0x00 – 0xff	Read only	-----	O
0x0003	<i>HWVersion</i>	Unsigned 8-bit integer	0x00 – 0xff	Read only	-----	O
0x0004	<i>ManufacturerName</i>	Character string	0 – 32 bytes	Read only	netvox	O
0x0005	<i>ModelIdentifier</i>	Character string	0 – 32 bytes	Read only	-----	O

0x0006	<i>DateCode</i>	Character string	0 – 16 bytes	Read only	-----	O
0x0007	<i>PowerSource</i>	8-bit Enumeration	0x00 – 0xff	Read only	0x04	M
0x0010	<i>LocationDescription</i>	Character string	0 – 16 bytes	Read/write	-----	O
0x0011	<i>PhysicalEnvironment</i>	8-bit Enumeration	0x00 – 0xff	Read/write	-----	O
0x0012	<i>DeviceEnabled</i>	Boolean	0x00 – 0x01	Read/write	0x01	O

6. Related Netvox Device

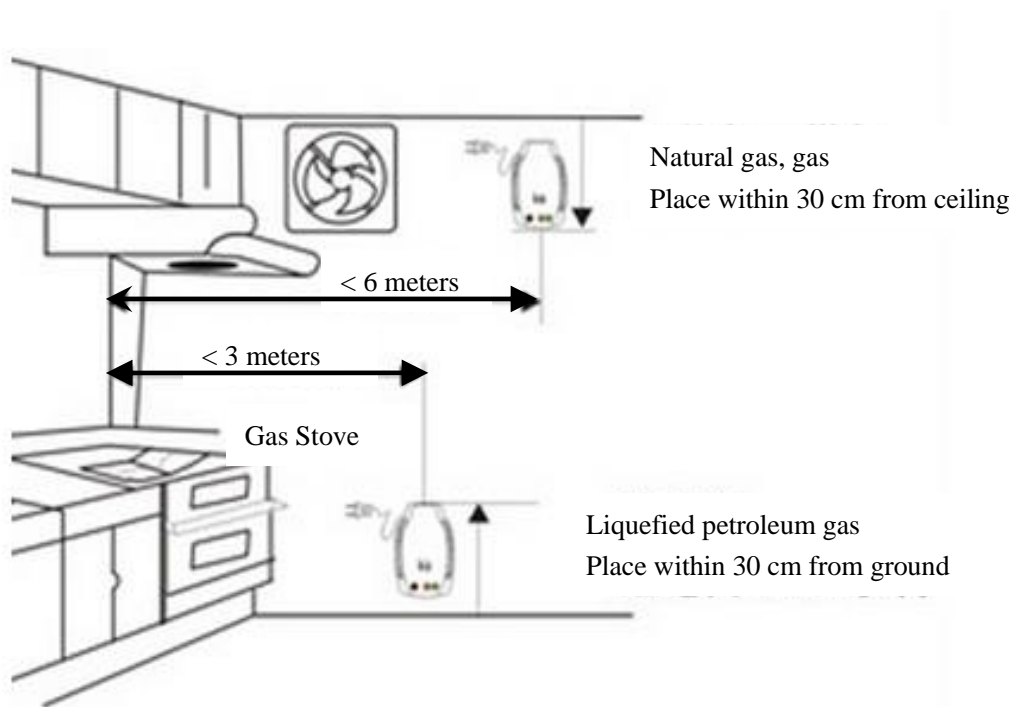
1. Z602A : Alarm with notification



2.Z203: Coordinator with CIE



7. Installation



8. Important Maintenance Instruction

Kindly pay attention to the following in order to achieve the best maintenance of the product:

- Keep the equipment dry. Rain, moisture and various liquids or water may contain minerals that can corrode electronic circuits. In case the device is wet, please dry it completely.
- Do not use or store in dusty or dirty areas. This way can damage its detachable parts and electronic components.
- Do not store in excessive heat place. High temperatures can shorten the life of electronic devices, destroy batteries, and deform or melt some plastic parts.
- Do not store in excessive cold place. Otherwise, when the temperature rises to normal temperature, moisture will form inside which will destroy the board.
- Do not throw, knock or shake the device. Treating equipment roughly can destroy internal circuit boards and delicate structures.
- Do not wash with strong chemicals, detergents or strong detergents.
- Do not paint the device. Smudges can make debris block detachable parts up and affect normal operation.
- Do not throw the battery into the fire to prevent the battery from exploding.
Damaged batteries may also explode.

All the above suggestions apply equally to your device, batteries and accessories.

If any device is not operating properly.

Please take it to the nearest authorized service facility for repairing.

User Manual

Wireless Liquefied Petroleum Gas Detector ZA01D

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1. Introduction

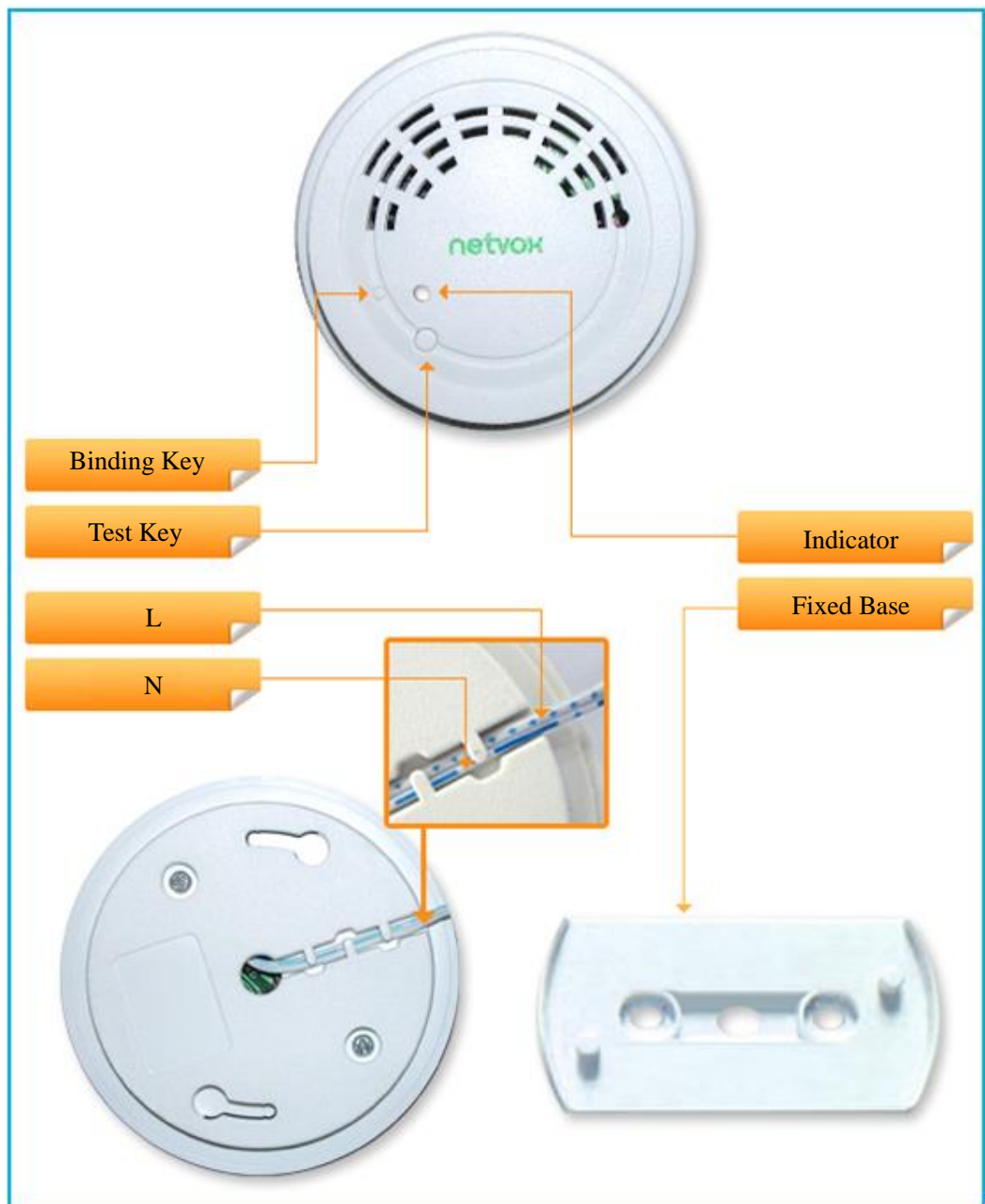
Netvox ZA01D, a liquefied gas detector with heat sensor, acts as a Router Device in ZigBee network and allows other devices to join the network as its sub-devices.

ZA01D is a liquefied gas detector which acts as a security device in the network. When the concentration of liquefied gas in the air exceeds the set limit, the device emits an alarm sound and sends the information about status changing to the enrolled CIE device at the same time. CIE will send a command to make the alarm device in the network sound an alarm to remind the user and ensure the user's safety.

What is ZigBee?

ZigBee is a short range wireless transmission technology based on IEEE802.15.4 standard and supports multiple network topologies such as point-to-point, point-to-multipoint, and mesh networks. It is defined for a general-purpose, cost-effective, low-power-consumption, low-data-rate, and easy-to-install wireless solution for industrial control, embedded sensing, medical data collection, smoke and intruder warning, building automation and home automation, etc.

2. Appearance



3. Specification

- Fully IEEE 802.15.4 compliant
- Utilizes 2.4GHz ISM band; up to 16 channels
- Power supply: 100~240VAC; 50/60Hz
- Up to 210 meters wireless transmission range in non-obstacle space
- Easy installation and configuration

4. Setting up ZA01D

4-1. Power On

Connect the device with a 100~240VAC 50/60Hz power supply at the source interface, and the red indicator will be on.

4-2. Join the ZigBee Network

In order to make ZA01D communicate with other devices on the Zigbee network, ZA01D must be joined to the network first.

- Step1. Enable the permit-join function (valid for 60 seconds) of a coordinator or a router (please refer to the user manual of the coordinator or the router to enable the permit-join feature).
- Step2. Turn on ZA01D. It will start to search and join the network.
- Step3. The indicator will stay **green** after it is joined successfully. Otherwise, the indicator will stay **red**.

4-3. Enroll in the ZigBee Security System

After ZA01D successfully joins to the network, ZA01D will automatically match with CIE device, and register itself to the CIE. The enrollment has these 3 situations:

- A. There is no CIE device or no compatible CIE device in the network → the indicator flashes **red twice**.
- B. There is a compatible CIE device in the network, but it is failed to enroll → the indicator flashes **red 4 times**.
- C. The enrollment is completed → the indicator flashes **red 6 times**.

NOTE: If the device has successfully registered to CIE, the red LED will flash 6 times when it is powered on every time.

4-4. Permit-Join

To allow other devices to join the ZigBee network, users could enable and disable the Permit-Join feature by the following steps:

- A. Press the *Binding Key* to enable the Permit-Join feature. The default time is 60 seconds.
- B. During the default time, press the *Binding Key* again to disable the Permit-Join feature.

4-5. Alarm Test

To test the alarm feature of ZA01D, press the *Test Key* **once**.

- A. ZA01D does not join a network and is not enrolled → it will issue alarm sound for 5 seconds. The indicator flashes **5 times**.
- B. ZA01D joins the network and is enrolled → it sends notification to the CIE device and issues alarm sound. The indicator keeps flashing.
- C. ZA01D joins the network but is not enrolled → it will issue alarm sound for 5 seconds and the indicator flashes **5 times**. Then, it sends the enrollment request. After the enrollment is successful, it will issue an alarm sound.

4-6. Air Command Alarm

When ZA01D receives the fire alarm from CIE, the device will turn on the buzzer and the indicator will flash alternately.

When the device receives the stop command of fire alarm, it will return to the normal state.

4-7. Triggered Alarm

When the concentration of the detectable gases in the air exceeds the set limit, the device emits an alarm sound and the indicator flashes alternately until the concentration drops below the limit. It will also send the alarm to CIE which it is enrolled to or to the other device which is bound with Cluster ID (0x0500). ZA01D can work as a temperature sensor. It alarms when the temperature is higher than 60°C.

- Detecting range: 600-6000ppm.
- The sensing feature is ready after ZA01D is powered on for 5 minutes.
- When using for **the first time**, ZA01D will reach the best sensitivity after it is powered on for 48 hours.
- The default setting (potentiometer in the middle): The concentration limit is 3000ppm.
Adjust the potentiometer clockwise to the end: The concentration limit is 600ppm.
Adjust the potentiometer counterclockwise to the end: The concentration limit is 6000ppm.

4-8. Announce

Press and hold the *Test Key* for 3 seconds the indicator flashes once.

4-9. Reboot

Press and hold the *Test Key* for 10 seconds and the indicator flashes once.

4-10. Restore to Factory Setting

To restore it to factory setting, please follow the steps:

- Step1. Press and hold both *Binding Key & Test Key* for 5 seconds. The indicator will flash **red once**, please release both keys at this time.
- Step2. After releasing both keys, the indicator will flash **20 times** meaning restore completed.
- Step3. If the indicator stays **red** after restoring, it means device does not join in the network.

5. Home Automation Clusters for ZA01D

A cluster is a set of related attributes and commands which are grouped together to provide a specific function. A simple example of a cluster would be the On/Off cluster which defines how an on/off switch behaves. This table lists the clusters which are supported by ZA01D.

1. End Point(s) : 0x01
2. Device ID : IAS Zone (0x0402)
3. EndPoint Cluster ID

Cluster ID for ZA01D	
Server side	Client side
EP: 0x01 (Device ID: 0x0402)	
Basic(0x0000)	
Identify(0x0003)	
IAS Zone(0x0500)	
Commissioning(0x0015)	

This lists the attributes of the basic information.

Identifier	Name	Type	Range	Access	Default	Mandatory / Optional
0x0000	<i>ZCLVersion</i>	Unsigned 8-bit integer	0x00 – 0xff	Read only	-----	M
0x0001	<i>ApplicationVersion</i>	Unsigned 8-bit integer	0x00 – 0xff	Read only	-----	O
0x0002	<i>StackVersion</i>	Unsigned 8-bit integer	0x00 – 0xff	Read only	-----	O

0x0003	<i>HWVersion</i>	Unsigned 8-bit integer	0x00 – 0xff	Read only	-----	O
0x0004	<i>ManufacturerName</i>	Character string	0 – 32 bytes	Read only	netvox	O
0x0005	<i>ModelIdentifier</i>	Character string	0 – 32 bytes	Read only	-----	O
0x0006	<i>DateCode</i>	Character string	0 – 16 bytes	Read only	-----	O
0x0007	<i>PowerSource</i>	8-bit Enumeration	0x00 – 0xff	Read only	0x04	M
0x0010	<i>LocationDescription</i>	Character string	0 – 16 bytes	Read/write	-----	O
0x0011	<i>PhysicalEnvironment</i>	8-bit Enumeration	0x00 – 0xff	Read/write	-----	O
0x0012	<i>DeviceEnabled</i>	Boolean	0x00 – 0x01	Read/write	0x01	O

7. Related Netvox Device

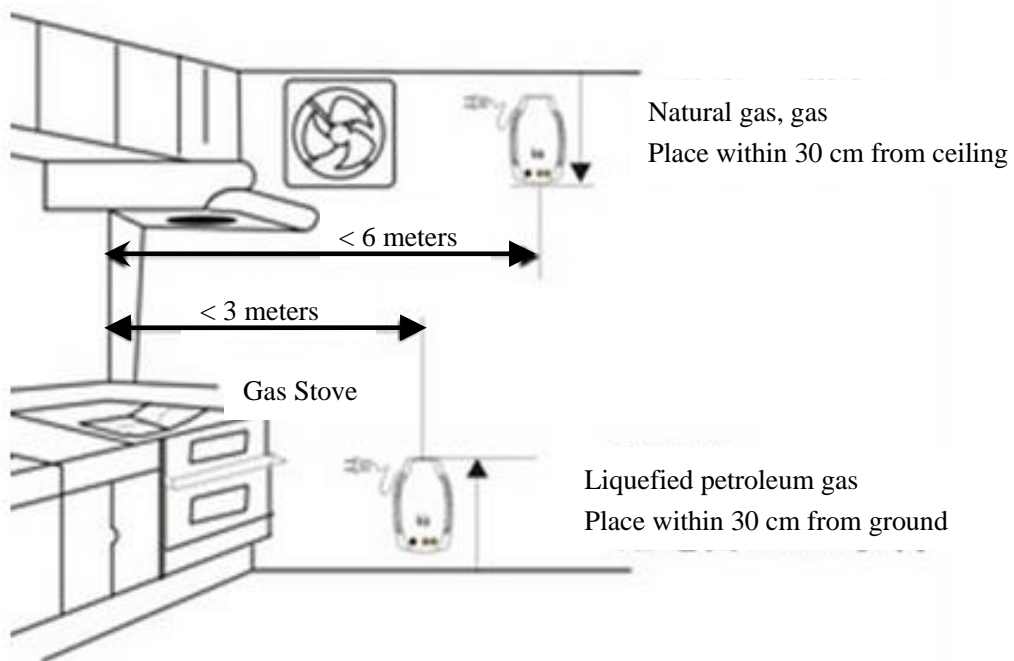
1. Z602A: Alarm with notification



2. Z203: Coordinator with CIE



8. Installation



9. Important Maintenance Instruction

Kindly pay attention to the following in order to achieve the best maintenance of the product:

- Keep the equipment dry. Rain, moisture and various liquids or water may contain minerals that can corrode electronic circuits. In case the device is wet, please dry it completely.
- Do not use or store in dusty or dirty areas. This way can damage its detachable parts and electronic components.
- Do not store in excessive heat place. High temperatures can shorten the life of electronic devices, destroy batteries, and deform or melt some plastic parts.
- Do not store in excessive cold place. Otherwise, when the temperature rises to normal temperature, moisture will form inside which will destroy the board.
- Do not throw, knock or shake the device. Treating equipment roughly can destroy internal circuit boards and delicate structures.
- Do not wash with strong chemicals, detergents or strong detergents.
- Do not paint the device. Smudges can make debris block detachable parts up and affect normal operation.
- Do not throw the battery into the fire to prevent the battery from exploding.
Damaged batteries may also explode.

All the above suggestions apply equally to your device, batteries and accessories.

If any device is not operating properly.

Please take it to the nearest authorized service facility for repairing.