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***ZigBee™-Gas/Water Keeper***

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**User Manual**  
**Gas or Water Keeper**  
**Model: ZA10**

20130122  
FW V1.4  
HW V1.5

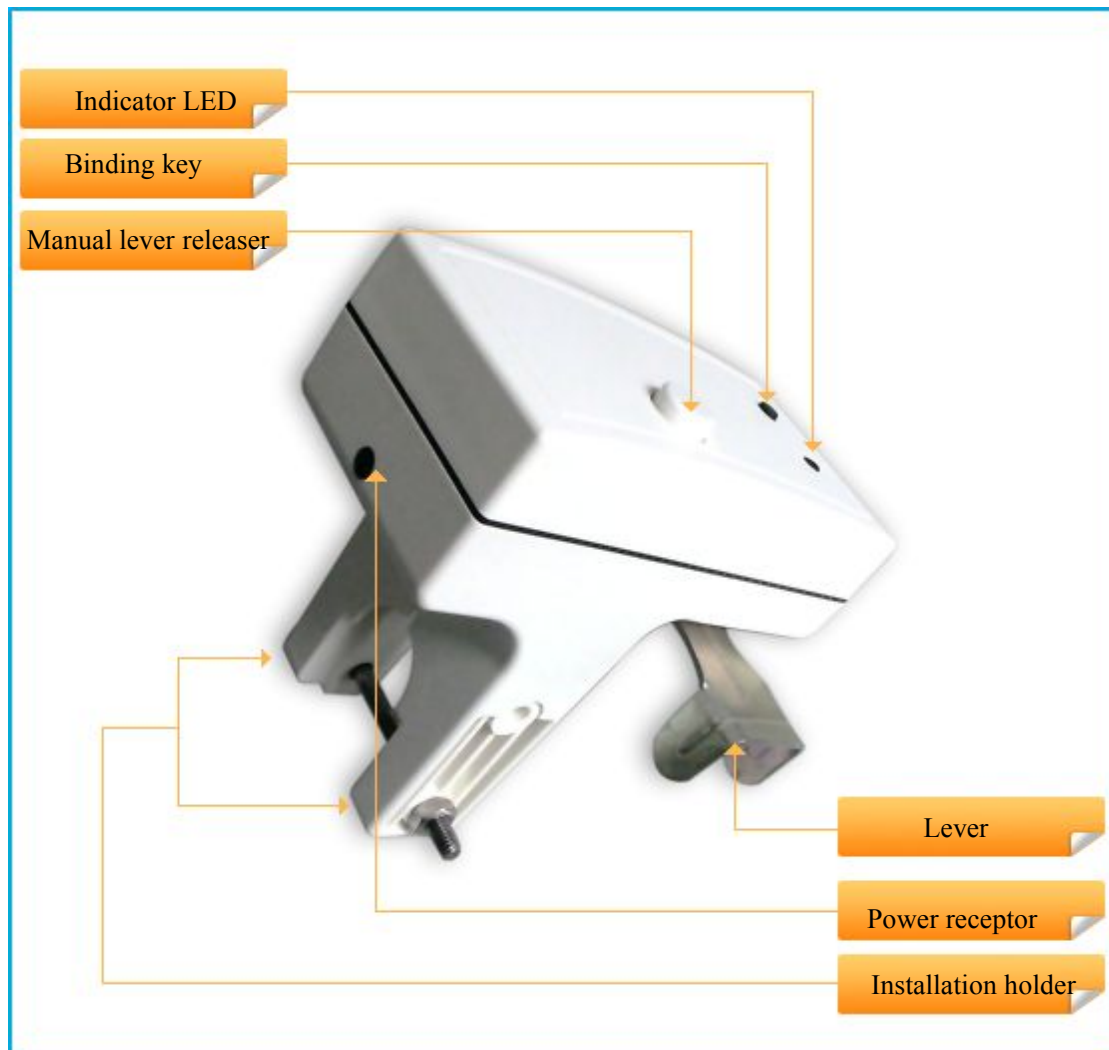
# Gas / Water Keeper

ZA10

## Other Netvox related devices

Switch controller:

- Simple controller Z501 *series*
- Multiple/Scene controller Z503
- Smoke detector ZA01A/B/C/D



## Introduction

ZA10 is a **router device** in a network which permits other devices to join the network. ZA10 has two build-in features, depends on the configuration, the user may configure it as **a gas keeper** or **a water keeper**.

As a **gas keeper**, the device is a controllable device which receive signal from a zone device i.e. a smoke alarm to change the position of the lever.

As a **water keeper**, the device can be controlled wirelessly from a paired remote controller. ZA10 is equipped with a manual override lever releaser and the enclosure is water proof.

ZA10's operating pressure is 7 kgf. Valve rotation angle is 90°.

### What is ZigBee?

ZigBee is a short range wireless transmission technology which defined for a minimum complexity, low power consumption, low data rate, cost effective wireless solution. ZigBee lies in between wireless markup technology and Bluetooth. ZigBee is based on IEEE806.15.4 standard, the mutual co-ordination between thousands of sensors to exchange data. Sensor to sensor or node-to-node communication is achieved through relays of control data between devices with only a fraction of energy use which denoted for highly transmission efficiency.

*Note: Wireless communication, in some real use cases, can be limited by the signal blockage. Please consult your service provider or place of purchase.*

# Setting up ZA10 and network

## **Setting Up Summary**

- (1) Configure the device to either as a gas or a water keeper
- (2) Power up the device and network association
- (3) Bind the device with other device where applicable (i.e. bind with an on/off remote or with a smoke detector).
- (4) How to use.

## Step 1: Configure the device to either as a gas or a water keeper

ZA10 can only either be a gas keeper type or a water keeper type device. Before you move on to [Step 2](#), you will need to go through the [Restore to Factory Setting](#) section to configure the type of device you want -[a gas keeper](#) or [a water keeper](#)

The difference between the two device types is that if it is a gas keeper it will receive fire alert message from the paired smoke detector of the security network to turn down the leaver. If it is a water keeper it will receive on or off instruction from a remote controller by the user.

## Step 2: Power up the device and network association

To allow ZA10 to function, it must first join to a ZigBee network either through a coordinator or a router device. When it is given power it will automatically start searching for an existed network. So before you give power to ZA10 make sure it is within the wireless coverage distance (~70 meters or less) and make sure **first** you have the **permit-join feature enabled** either on a coordinator or a router device from the network so that ZA10 can detect and automatically join to the network through it;

*\*On how to enable permit-join please refer to the router or coordinator device user manual*

### **Operation:**

Step 1: First make sure you have opened up permit-join function (valid for 60 seconds) on a coordinator or a router device in the network.

Step 2: Now plug in the power supplied provided to power on the ZA10 device to let it

search for the network within reach.

Step 3: if join successful the indicator will stay solid light, otherwise the indicator is unlit.

### Step 3: Device pairing as a gas keeper or a water keeper (Binding)

After the device has successfully joined to the network, the next step is to pair the device with other device so that the paired device can control the keeper as required.

User may configure ZA10 as either **a gas keeper** or **a water keeper**. Configuration is described in [Restore to factory setting](#) in the manual.

As a **gas keeper**, ZA10 is a controllable device which receive command signal from a zone device i.e. upon receive a smoke alarm, it changes the position of the lever. [So pair ZA10 with a smoke/gas detector.](#)

As a **water keeper**, the device can be controlled wirelessly from a paired remote controller. [So pair ZA10 with an On/Off remote controller.](#)

The pairing operation is the same for both types, except for the types of device to pair with.

#### Operation:

1. [On the ZA10, hold press the binding key for 3 seconds to send bind request to the air.](#)
2. Likewise, do the same on the other device to exchange pairing request. (refer to its user manual for device pairing procedure)

When binding is unsuccessful the indicator will give 10 fast flashes. If successful it will give 5 slow flashes.

## How to use

There are several ways to control the lever on ZA10.

*If ZA10 is configured as a water keeper:*

- ZA10 lever can be open or close through the remote controller.
- Through the use of application software like Netvox ZiG-BUTLER installed on a computer/server, open or close instructions can be sent to and the device status can be read and displayed.
- On the fire event, the paired device sends command to water keeper and brings the lever to ON position.
- Manually release the lever lock button by pushing it inwards to release the lever so you can move the lever either up or down.

*If ZA10 is configured as a gas keeper:*

- On the fire event, the paired device sends command to gas keeper and brings the lever to down position.
- Manually release the lever lock button by pushing it inwards to release the lever so you can move the lever either up or down.

**NOTE:** When the Manual Lever Releaser Button (lever lock button) keeps inwards as the figure below, please slightly move the lever to release the button.



## Permit to join

ZA10 is featured to be a router in the network. It permits other devices to join the network. By default the router device ZA10 does not allow permit-to-join function in normal operation to protect the network from unexpected or unauthorized join attempt. You will need to open up the permit-join on ZA10 to allow new devices (a router or an end device) to join.

### Operation:

1. **Short press the binding key once (less than 3 seconds).**
2. The permit join is now enabled for 60 seconds and the indicator light will flash 60 times.
3. ZA10 waits the new device to join in automatically. Please note that the maximum waiting time to join is 60 seconds. Repeat the process if you missed the 60 seconds period. Within the 60 seconds, short press the binding key when you want to disable the permit-join function.

## Restore to factory setting

ZA10 is capable of storing and saving includes network routing information. If you wish to remove ZA10 from the network and join to a new network, you would need to clear the setting by simply reset the device to restore to the factory setting.

### Operation:

**Step 1.** First remove the power from the device

**Step 2.** Hold on to the binding key. While doing so, power up the device again to give power, until the **indicator light flashes quickly** then release the key. If you want the keeper to be a gas keeper then go to Step 4 instead of 3 because [by default ZA10 is a gas keeper](#). But to program the keeper as water keeper then go to Step 3.

**Step 3. To configure ZA10 as water keeper**, while the indicator is flashing quickly from Step 2, **short press the binding key once. This will configure it to become a water keeper. Now go to Step 4.**

(To make the device as a gas keeper, you should skip this step and go to step 5)

**Step 4.** Now the device is restored to the factory setting. Now power cycles the device to put the device into network search mode.

**(Note: by default ZA10 is a gas keeper)**

## Clusters of Home Automation for ZA10

Home Automation device feature is defined by the endpoint which contains functional clusters. Table 1 lists clusters for the endpoint of ZA10

Table 1: clusters for the endpoint of ZA10

Server side	Client side
<b>EP 0X01 (Device ID: On/Off Output (0x0002))</b>	
Basic(0x0000)	<i>None</i>
Identify(0x0003)	
Groups(0x0004)	
Scenes(0x0005)	
On/Off(0x0006)	
Commissiong (0x0015)	

Attributes of the Basic Device Information attribute set

Identifier	Name	Type	Range	Access	Default	Mandatory / Optional
0x0000	<i>ZCLVersion</i>	Unsigned 8-bit integer	0x00 – 0xff	Read only	0X03	M
0x0001	<i>ApplicationVersion</i>	Unsigned 8-bit integer	0x00 – 0xff	Read only	0X0E	O
0x0002	<i>StackVersion</i>	Unsigned 8-bit integer	0x00 – 0xff	Read only	0X2E	O
0x0003	<i>HWVersion</i>	Unsigned 8-bit integer	0x00 – 0xff	Read only	0X0F	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	ZA10EOR	O



0x0006	<i>DateCode</i>	Character string	0 – 16 bytes	Read only	20130122	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	0x00	O

## Important Maintenance Instructions

As the device is not water proof it is recommended to keep the device in a dry place. Liquid and heavy moisture contains minerals that may oxidize the electronic circuitry. In case of liquid spill, please leave the device to completely dry before storing or using.

- Do not use or store the device in a dusty area. Dust may cause electronic parts to destroy.
- Do not use or store the device in an over heated place. Store in a hotter temperature than the suggested maximum temperature may shorten the life span of the device; and may damage the battery and causing the housing to deform.
- Do not use or store the device in a very cold place than the suggested minimum temperature. The water can be condensed inside the device when moving to an area that is higher in temperature. This can severely damage the PCB board and circuitry. This may shorten the life span of the device; damage the battery and cause the housing to deform.
- Do not throw or strongly vibrate the device. This may damage connectivity of the electronic parts and other sensitive components on the PCB board.
- Do not use any strong chemical or washing to cleanse the device.
- Do not use any coloring materials on any removable parts which may cause poor connections and may keep the device from function properly.

All the above applies to the purchased products, battery and other packaged items. If any unusable or damaged items are found please return the product to your nearest authorized repairing center.