netvox

Wireless Ceiling Motion Detector with On/Off Switch

Wireless Ceiling Motion Detector with On/Off Switch

Manual

Firmware:V3.0

Hardware:V1.4

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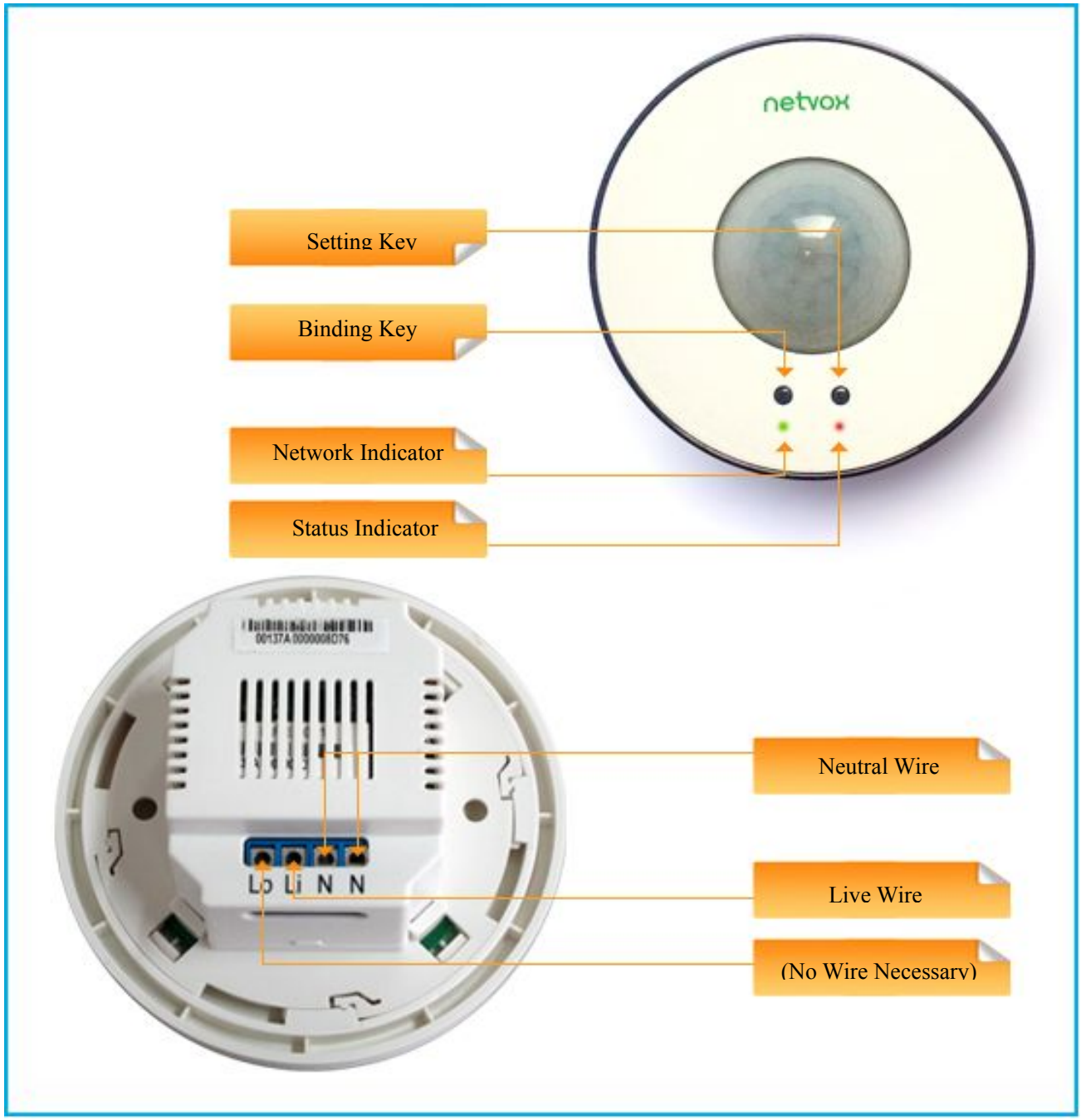
1. Appearance



2. Introduction

Z817D is a ceiling-mount motion detector based on ZigBee wireless technology. Through infrared acquisition, it reports status change information to a target device. When Z817D detects the presence of human beings or animals, it reports the message to the network. Z817D also features On/Off switch. When Z817D detects the movement, for example, it reports a light on message.

3. Specification

- Fully IEEE 802.15.4 compliant
- Utilizes 2.4GHz ISM band; up to 16 channels
- Power supply: AC100-240V 50/60HZ
- Up to 70 meters wireless transmission range in non-obstacle space
- Easy installation and configuration

4. Installation

4.1 Join the network

To allow Z817D to function, it must first join to a ZigBee network.:
(1) Enable permit-join function of router or coordinator in the same channel with Z817D
(2) Power on device (AC 100-240V 50/60HZ); network indicator flashes once. Z817D will search network and send join request.
(3) Join completely: network indicator stays on.

4.2 End device bind

Device can bind device with **on off cluster** in server side.
(1) While joining in the network, sending bind request to binding device (refer to device operation manual)
(2) Press and hold "binding key" for 3 seconds to send binding request.
(3) Network indicator flashes 5 times slowly, otherwise, it flashes 10 times.

4.3 PIR Control

While PIR detection is on, any PIR event triggers the sensor. Z817D will then detect PIR status once per second according to attribute: 0x0011PIRUnoccupiedToOccupiedDelay，default 1 second. When Z817D reaches the limit numbers of detection (attribute: 0x0012 PIRUnoccupiedToOccupiedThreshold, default 1 time), Z817D will set status into "occupied" (attribute 0x0000 Occupancy) and red indicator flashes once. Otherwise, Z817D will return to PIR detection status.

In the mean time, users are able to process customized operation by programming or configurating according to IRDetectionTime （ IRDetectionTime >= IRDisableTime ， default 2 minutes which is editable by

programming/commanding）.

1)、IRDetectionTime: 1~0xFFFF

While Z817D setted to be “occupied”, Z817D will go through IRDetectionTime process. If status is still “occupied”, Z817D will delay IRDetectionTime again till there is no more PIR event and IRDetectionTime is due. “Occupied” status will change to “Unoccpied ”. And Z817D will report to bind device the “Occupancy” status according to report time setting.

2)、IRDetectionTime: 0

After Z817D is setted “Occupied” and sending alert to bind device during delay time（attribute: 0x0010 PIROccupiedToUnoccupiedDelay). If Z817D still detects “Occupied”, it will extend delay time (attribute: 0x0010 PIROccupiedToUnoccupiedDelay) till there is no PIR event. “Occupied” status will change to “Unoccpied ”. And Z817D will report to bind device the “Occupancy” status according to report time setting.

Note:

1.During the time of “PIRUnoccupiedToOccupiedDelay”, PIR detects once per second, make sure PIRUnoccupiedToOccupiedDelay >= PIRUnoccupiedToOccupiedThreshold.

2. Once IRDetectionTime<PIROccupiedToUnoccupiedDelay，it will automatically default to IRDetectionTime=PIROccupiedToUnoccupiedDelay

3. PIROccupiedToUnoccupiedDelay must >= 5 seconds.

4.4 Permit join

Z817D as a router in the network has feature of permitting other device to join the network. After joining in the network, press shortly binding key to permit-join (60 seconds). Network indicator flashes once per second for 60 times. Press shortly again to close permit-join function, the indicator stop flashing.

4.5 Restore to Factory Setting

Before joining in a new network, device has to be restored to factory setting.

(1) Press and hold binding key for 15 seconds and the network indicator flashes 3 times at the 3rd, 10th, 15th.

(2) Release and press shortly any key, network indicator will flash quickly to find new network.

(3) Press and hold binding key and power on device in the same time. The network indicator flashes quickly to Show factory setting completely.

(4) Restart the device to join new network.

5. Home automation ZigBee description

1.End Point(s)：0x01:
2.Device ID：HA On/Off Switch（0x0000）
3.Cluster ID which EndPoint supports

Cluster ID for Z817D	
Server side	**Client side**
EP 0x01 (Device ID: HA On/Off Switch（0x0000）)	
Basic（0x0000）	*None*
Identify (0x0003)	
Commission（0x0015）	On/Off (0x0006)
Occupancy Sensing（0x0406）	
Diagnostics(0x0B05)	

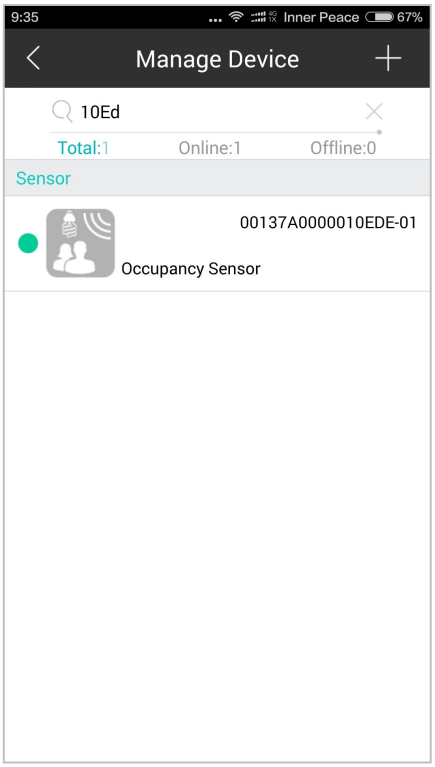
Attribute that each cluster ID supports：
（1）Attributes of the Basic Device Information attribute set

Identifier	Name	Type	Range	Access	Default	Mandatory / Optional
0x0000	*ZCLVersion*	8-bit Unsigned integer	0x00 –0xff	Read only	0x03	M
0x0001	*ApplicationVersion*	8-bit Unsigned integer	0x00 –0xff	Read only	0x1E	O
0x0002	*StackVersion*	8-bit Unsigned integer	0x00 –0xff	Read only	0x35	O
0x0003	*HWVersion*	8-bit Unsigned integer	0x00 –0xff	Read only	0x0E	O
0x0004	*ManufacturerName*	Character string	0 – 32 Bytes	Read only	netvox	O
0x0005	*ModelIdentifier*	Character string	0 – 32bytes	Read only	Z817DE3R	O
0x0006	*DateCode*	Character string	0 – 16 bytes	Read only	20151112	O

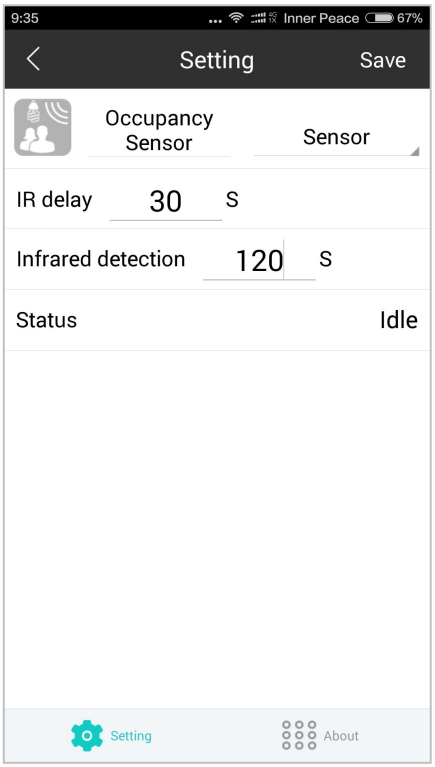
Identifier	Name	Type	Range	Access	Default	Mandatory / Optional
0x0007	*PowerSource*	8-bit Enumeration	0x00 –0xff	Read only	0x01	M

6. Netvox App Control

1. Add device to App control system. EP information will show up in management interface.



2. Select EP to setting page：



Identity time：indicator flashing time while identifying device.

IR delay：after sensor is triggered by PIR event, device goes to PIROccupiedToUnoccupiedDelay，minimum

5 seconds.（refer to chapter 4.3 PIR Control）

Infrared detection：after sensor is triggered by PIR event，device goes to IRDetectionTime > =IRDisableTime.（refer to chapter 4.3 PIR Control）

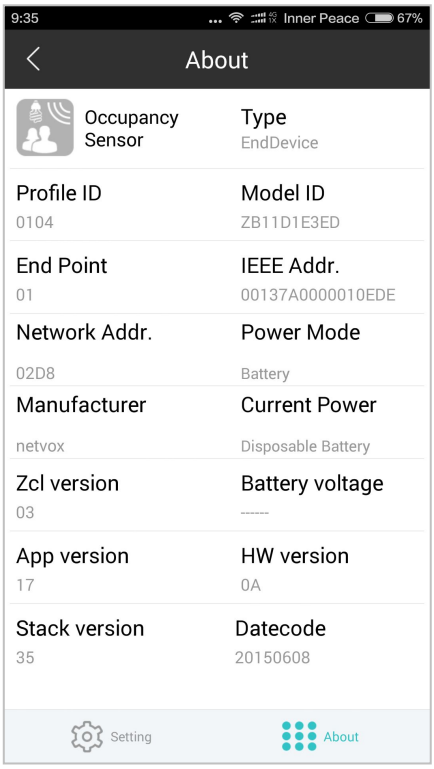
After editing IR delay and infrared detection, click “Save”.

3. Click device bind to enter control interface， select On/off Switch, click “Bind” on the right hand side.

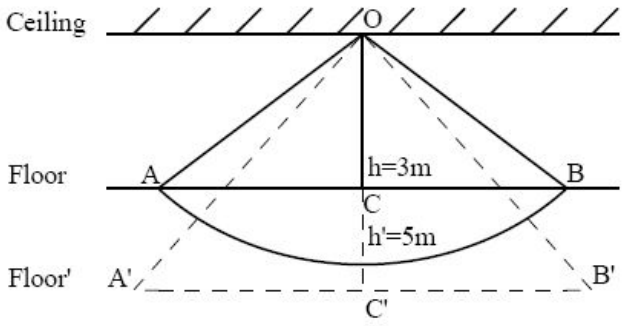
Bind device is normally On/off Switch in this case.

4. Unbind device, press and hold the bind device column. Click “Unbind” to unbind device. Refresh the page (move the finger up to down on the screen); device will not show in new page.

5. Select “About” to check device information:



7. IR Coverage Range

<table>
<tr><td>Sensing angle</td><td>115°</td></tr>
<tr><td>Sensing area</td><td>
<table>
<tr><td>OC (Height)</td><td>3m</td><td>5m</td></tr>
<tr><td>AB (Length)</td><td>9m</td><td>10m</td></tr>
</table>


</td></tr>
<tr><td>Sensitivity</td><td>• Z817D has the worst sensing sensitivity for vertical movement, like O→C.
• Z817D has the best sensitivity for horizontal movement, like A→B.</td></tr>
<tr><td>Installation Considerations</td><td>• Do not aim the passive infrared sensor to a heat or cold source.
• The sensor should not face open door/windows as sunlight will affect its operation.
• The sensor must be mounted on a vibration-free surface.</td></tr>
</table>

8. Important Maintenance Instructions

- In cases of accidental liquid spills to a device, please leave the device dry properly before storing or using.
- Do not use or store the device in dusty or dirty areas.
- Do not use or store the device in extremely hot temperatures. High temperatures may damage the device or battery.
- Do not use or store the device in extremely cold temperatures. When the device warms to its normal temperature, moisture can form inside the device and damage the device or battery.
- Do not drop, knock, or shake the device. Rough handling would break it.
- Do not use strong chemicals or washing to clean the device.
- Do not paint the device. Paint would cause improper operation.

Handle your device, battery, and accessories with care. The suggestions above help you keep your device operational. For damaged device, please contact the authorized service center in your area.