User Manual

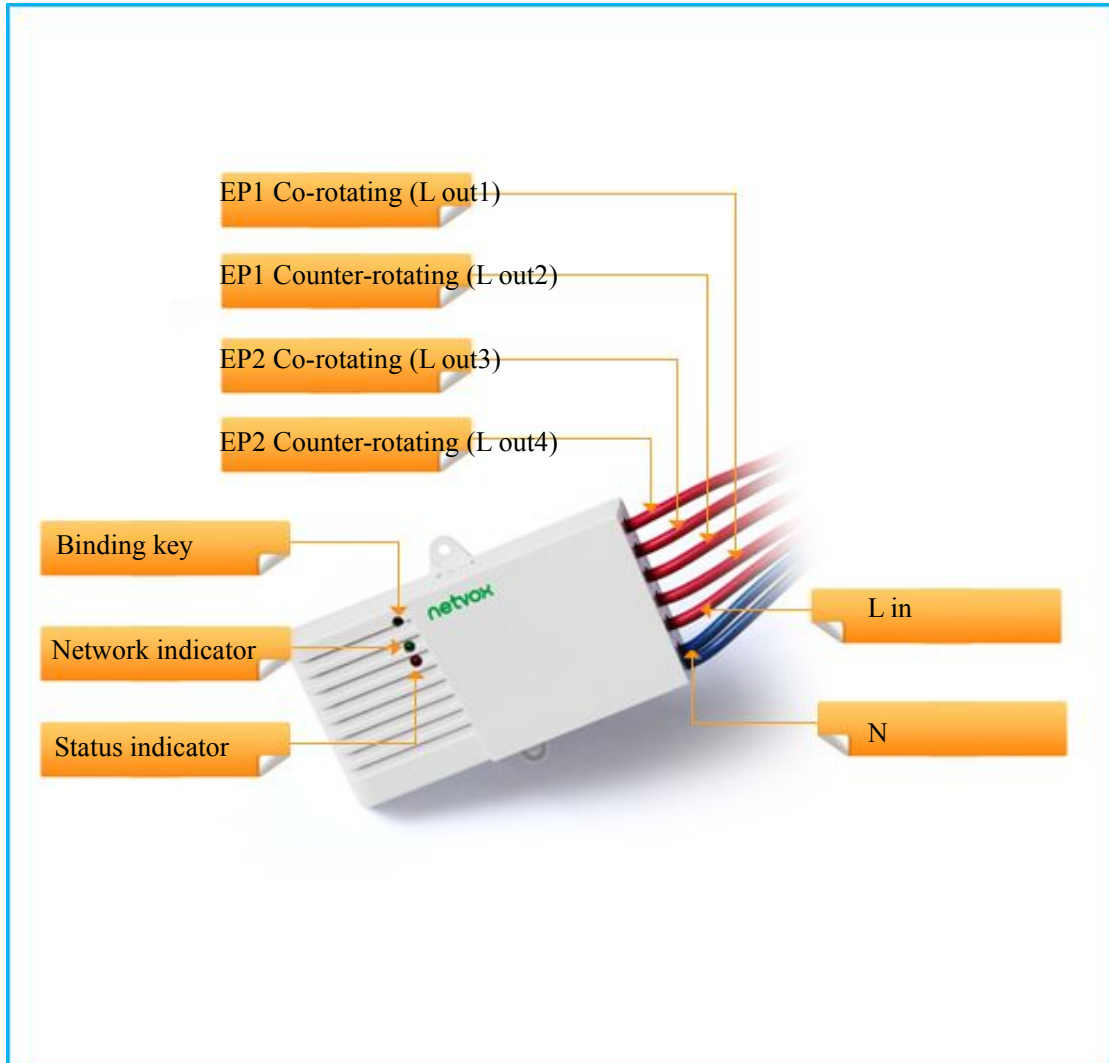## Wireless AC Curtain Controller
Model: Z811B

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1. Introduction

Netvox Z811B, a wireless AC shade, acts as a Router Device in ZigBee network. Z811B can be bound with the On/Off or level controller. After binding, users are able to control Z811B using the controller.

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. Product Appearance

EP1 Co-rotating (L out1)

EP1 Counter-rotating (L out2)

EP2 Co-rotating (L out3)

EP2 Counter-rotating (L out4)
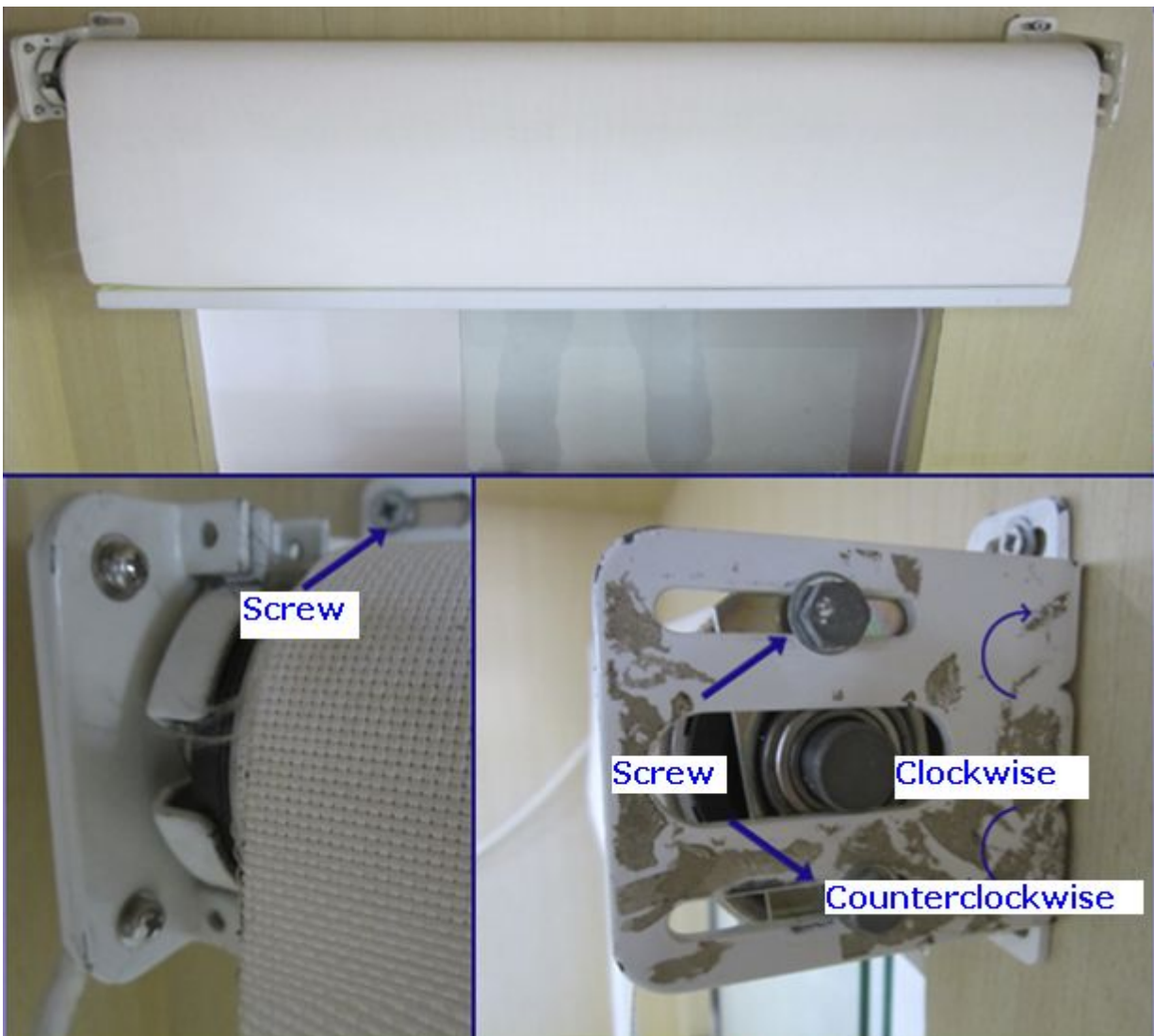
Binding key

Network indicator

Status indicator

netvox

L in

N

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 70 meters wireless transmission range in non-obstacle space

- Easy installation and configuration

4. Installation

- The curtains should be installed using the suitable tools.

- We recommend that the installation should be performed by the professional workers.

- L in connects to the Live wire.

- N connects to the Neutral wire (typically blue color) of the curtain motor.

- EP1 L out1 connects to the Co-rotating line (typically brown color) of the curtain motor.

- EP1 L out2 connects to the Counter-rotating line (typically black color) of the curtain motor.

- EP2 L out3 connects to the Co-rotating line (typically brown color) of the curtain motor.

- EP2 L out4connects to the Counter-rotating line (typically black color) of the curtain motor.

5. Setting up Z811B

5-1. Join the ZigBee Network

After Z811B is powered on, it will search for an existing ZigBee network and send a request to join the network automatically. While Z811B is under the coverage from a coordinator or a router whose **permit-join feature is enabled**, Z811B will be permitted to join the network.

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. Power on Z811B. It will start to search and join the network.
Step3. The Network Indicator flashes **once** when it is finding a network to join.
Step4. The indicator will stay ON after it is joined successfully.

5-2. Permit-Join

Z811B is designed to work as a router. To allow other devices to join the ZigBee network, users could enable the Permit-Join feature using the tips:
A. Press the *Binding Key* to enable the Permit-Join feature. The indicator will flash once per second.
B. The default Permit-Join period of time is 60 seconds.

5-3. Binding

Z811B can be bound with the On/Off or level controller such as Netvox Z501.

Step1. Press and hold the *Binding Key* for 3 seconds.
Step2. Release the binding key, and then press the *Binding Key* **once** (to bind EP1) or **twice** (to bind EP2) within 2 seconds.
Step3. Enable the binding feature of the On/Off or level controller.
Step4. The indicator flashes **5 times** after the binding is completed; otherwise, it will flash **10 times**.

5-4. Customized mode setting

On	For curtain：moving upward to open / moving sideward to open
Off	For curtain：moving downward to close / moving center to close
Physical Upper limit	Turn on; curtain moving upward to upper limit
Customized upper bound	Customized upper boundary position
Customized lower bound	Customized lower boundary position
Physical Lower limit	Turn off; curtain moving downward to lower limit

When the rolling direction is incorrect, please use the Attribute 0x0002 (Cluster 0x0100) to reverse the rolling direction, (refer to chapter 7). Before using the curtain controller, users need to set customized boundary of curtain. **It is suggested that customized boundary matches physical upper limit and physical lower limit.**

Steps to set customized boundary.
Entering into customized Mode: modify the **Mode Attribute** of **Shade Config Cluster** to **0x01** to enter into customized mode. After entering into customized Mode, the curtain/shade will go to fully-open/ fully-roll-up status.

(1) Customized upper boundary / customized lower boundary

a.While entering customized mode, the curtain will automatically move to physical upper limit.
b. Press "on"; curtain will move down, press "on" again to set your customized upper boundary.
c.Press "off", curtain will keep moving down., press "off" again to set your customized lower boundary.

(2) Customized upper boundary / physical lower limit

a.While entering customized mode, the curtain will automatically move to physical upper limit.
b. Press "on"; curtain will move down, press "on" again to set your customized upper boundary.

 c.Press "off", curtain will keep moving down to complete physical lower limit.

(3) Physical upper limit / customized lower boundary

a.While entering customized mode, the curtain will automatically move to physical upper limit.
b.Press "off", curtain will move down, press "off" again to set customized lower boundary.

(4) Physical upper limit / physical lower limit

a.While entering customized mode, the curtain will automatically move to physical upper limit.
b.Press "off", curtain will move down to complete physical lower limit.

When the customized mode is completed, indicator will flash 5 times within 1 second. Customized mode will be saved automatically and does not eliminate while power off or goes to factory setting. If you change another curtain please reset customized mode again.

5-5. Controlling

- ON command:
  a. Send ON command → the curtain/shade will go to the proper opened/roll-up status.
  b. While the curtain/shade is opening/rolling-up, send ON command again to stop it.

- OFF command:
    i.   Send OFF command → the curtain/shade will go to the proper closed/roll-down status.
    ii.   While the curtain/shade is closing/rolling-up, send OFF command again to stop it.

Please adjust the left-right curtain to proper position before controlling it.

5-6. Restore to Factory Setting

There are 2 methods to restore it to factory setting:

Method A:
  Step1. Press and hold the *Binding Key* for 15 seconds. The network indicator will flash **3 times** (at the 3rd, the 10th, and the 15th second).
  Step2. After releasing the *Binding Key*, press the *Binding Key* again within 2 seconds to complete the restore.

Method B:
  Step1. Power off Z811B.
  Step2. Press and hold the *Binding Key*, then power on Z811B to perform the restore.

6. Home Automation Clusters for Z811B

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 Z811B.

Server side	Client side
EP 0x01 (Device ID: AC Shade(0x0200)	
Basic(0x0000)	*None*
Identify(0x0003)	
Groups(0x0004)	
Scenes(0x0005)	
On/Off(0x0006)	
Level control(0x0008)	
Commissioning(0x0015)	
Shade Configuration(0x0100)	
Diagnostics（0x0B05）	
EP 0x02 (Device ID: AC Shade(0x0200)	
Basic(0x0000)	
Identify(0x0003)	
Groups(0x0004)	
Scenes(0x0005)	
On/Off(0x0006)	
Level control(0x0008)	
Shade Configuration(0x0100)	

of the Device

Attributes Basic

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	11	O
0x0002	*StackVersion*	8-bit Unsigned integer	0x00 –0xff	Read only	53	O
0x0003	*HWVersion*	8-bit Unsigned integer	0x00 –0xff	Read only	10	O
0x0004	*ManufacturerName*	Character string	0 – 32 Bytes	Read only	netvox	O
0x0005	*ModelIdentifier*	Character string	0 – 32bytes	Read only	Z811B E3R	O
0x0006	*DateCode*	Character string	0 – 16 bytes	Read only	201410 27	O
0x0007	*PowerSource*	8-bit Enumeration	0x00 –0xff	Read only	0x01	M

7. Important Maintenance Instructions

- Please keep the device in a dry place. Precipitation, humidity, and all types of liquids or moisture can contain minerals that corrode electronic circuits. 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.

8. Device specification that can work with Z811B

Curtains attempting to work with controller Z811B needs to meet the following requirements :

1. Use AC motors.

2. Stand by and working power consumption are significantly different.

3. Built-in stroke automatic control, can work manually when power is off.

4. Synchronized belt driving mode, that is both sides of the curtain have synchronous operation.

5. Motion speed is constant, there is an intermediate position setting function.

6 . The active timing is consistent and timely on individual operation.

7. Curtains that are already verified to meet above specification are listed in below:

EG 800-80AC02 monorail off , Manufacturer: Shenzhen- Side Technology Co., Ltd. Website : http: //www.wyongli.com

HY168A - SSB track off , Manufacturer: Zhejiang Ocean Home Co., Ltd. Website : HTTP: //www.siaer.com/

HY45SL - October 17 rolling machines , Manufacture: Zhejiang Ocean Home Co., Ltd. Website : HTTP: //www.siaer.com