User Manual

Universal Controller With or Without Relay (Wireless Touch Panel & Scene Selector)

Model: Z825K

20140303
FW V1.0 (20140318)
HW V1.0

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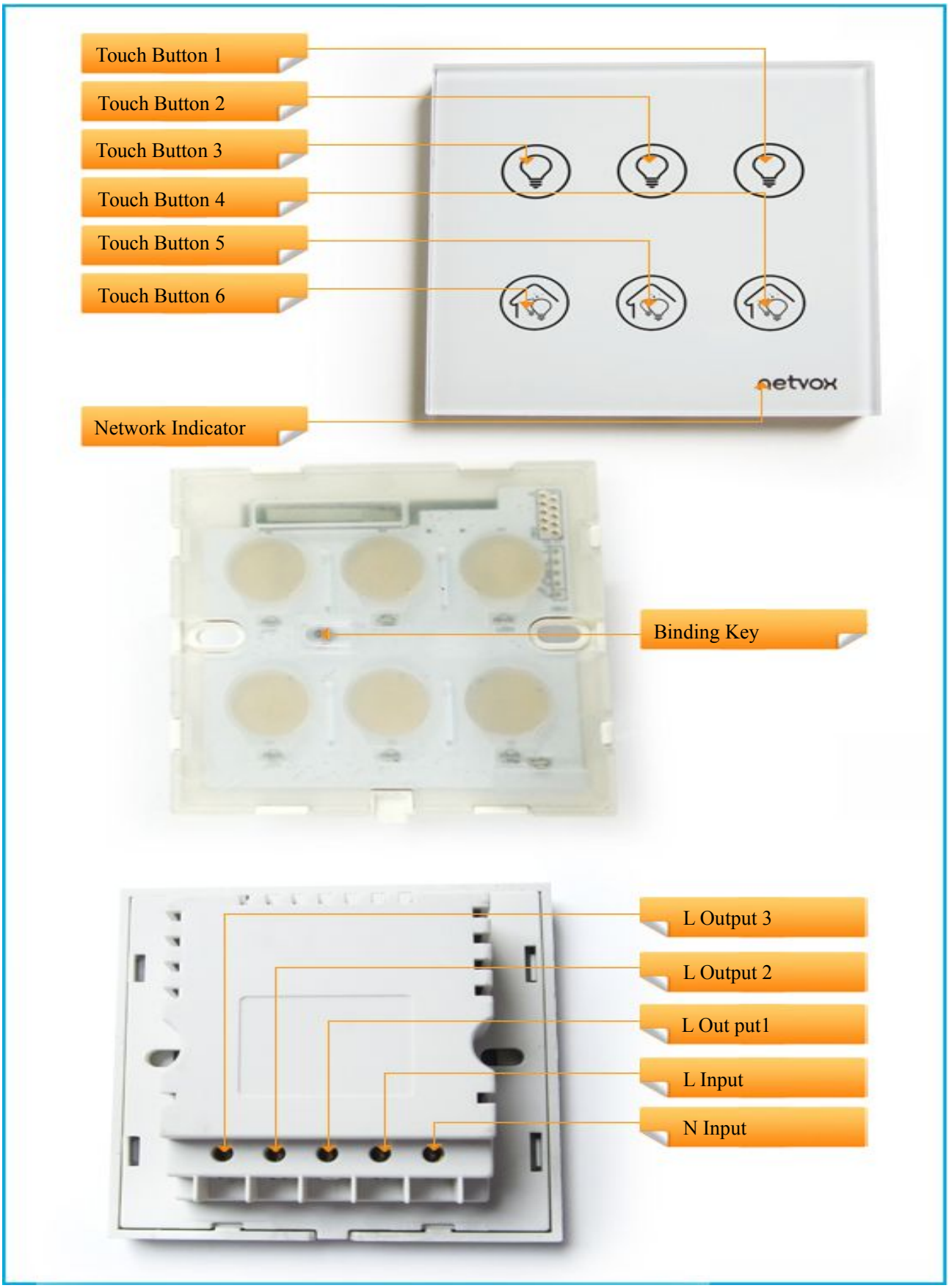
1. Introduction

Z825K, a touch panel mains power outlet & scene selector, acts as a router in ZigBee network. There are up to 3 relay output modules allowing users to remote control the switch. There are 6 touch panels allowing users to perform the on/off controls, scene controls or power meters. Users are able to check the data of current, voltage, power and energy via paired MainPowerOutlet controller. Each end point controls up to 4 sences or 4modes via Scene Selector & Mode Selector.

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



3. Specification

- Protocol based on IEEE 802.15.4 / ZigBee ProTM
- Utilizes 2.4GHz ISM band; up to 16 channels
- Power supply: 100~240VAC 50/60HZ
- Power consumption: 8mA@230V
- Support up to 6 end points (EP)
- Support up to 3 output relay controls
- Wireless controller types: On/Off Switch, Level Control Switch, Scene Selector&Mode Selector, Door Lock Controller, Color Dimmer Switch, Windows Covering Controller
- Local controller types: On/Off OutPut，MainPower Outlet
- Up to 150 meters wireless transmission range in non-obstacle space
- This device is NOT truly waterproof/ resistant and is for indoor use.
- Easy installation and configuration

4. Setting up Z825K

4-1. Connection

Connect power supply (100~240VAC 50/60HZ) to Z825K.

4-2. Join the ZigBee Network

After Z825K is turned on, it will search for an existing ZigBee network and send a request to join the network automatically. While Z825K is under the coverage from a coordinator or a router whose **permit-join feature is enabled**, Z825K will be permitted to join the network.

(1) 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).
(2) Power on Z825K. It will start to search and join the network. The Network Indicator flashes **green twice** in certain interval when searching the network.
(3) The Network Indicator stays **green** after it is joined successfully.

4-3. Permit-Join

Z825K 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:

(1) Short press the *Binding Key* to enable the Permit-Join feature. The Network Indicator will flash green once per second for 60 times. (The default permit-join period of time is 60 seconds).

(2) Press *Binding Key* again during the permit-join period to stop joining the network.

(3) Z825K can connect max. 14 end points. (EP)

4-4. Binding

Z825K can be bound with the On/Off device such as Netvox Z501.

(1) Press and hold the *Binding Key* for 3 seconds. The Network Indicator will flash **green once**.

(2) Release the *Binding Key* and then press the *Binding Key* **N times** (N = the number of the On/Off button) within 5 seconds. For example, press the *Binding Key* 3 times when you would like to bind On/Off Button.

(3) Enable the binding feature of the On/Off device.

(4) The Network Indicator flashes **green 5 times** after the binding is completed; otherwise, it will flash **green 10 times**.

Note: It supports 36 binding rules/ 36 groups/ 32 scenes

4-5. Store Scene (EP is Scene Selector or Mode Selector)

After the device has successfully joined the network, identity needs EP of store scene as a router (ex. ZC06A). Long press Z825K configured as scene selector and mode selector touch keys for 3 seconds, the network green indicator flashes once, release the touch key, meanwhile short press binding key once within 2 seconds. It will pass addgroupifidentify, and add the EP router which is identifying into the same group (Group address 0x0001-0xfff7) and store scene.

If the router has went through this process to add the group, then the previous group will be deleted. Note: scenario backlight indicator is blue. When the scenario is established successfully (there's not a same group ID in the network) network Green indictor flashes slowly 5 times. When the scenarios fails to establish (there's a same group ID in the network), the network green indicator flashes 10 times

4-6.Identify Times

According to the identify Times information which Z825K received. The indicator will flash identity times (bright 0.5 sec.;off 0.5 sec.).

4-7. Control

(1) Z825K configured as OnOff OutPut, MainPowerOutlet: binding end points send on/off command to Z825K. When Z825K receives “on” signal to break over relay; relay magnets connects to switch, as a result, the external circuit is turned on; the corresponding **green** indicator is on.
When receiving “off” signal, the relay off, magnet will not connect to switch, the switch is off, so that the external circuit is disconnected, the corresponding **red** indicator is on.

(2) Z825K configured as OnOff OutPut, MainPowerOutlet: touch keys are configured local switches. Users can control switch of external circuit through the Z825K touch keys.

(3) Z825K configured as **Scene Selector & Mode Selector: Scenario Control.** The current mode is **Scene Selector,** you can short press Selector & Touch Key to achieve Recall Scene function. Short press and release scenario touch key. Blue indicator flashes once; each scenario can store up to **4** scenes through commanding, respectively **blue, red, green, pink** four colors to distinguish each scene. When only one scenario configuration, the blue indicator stays on. When configurated two scenarios, scene 1 blue indicator stays on and scene 2 red indicator stays on Same process for storing 3 scenes and 4 scenes.

(4) Z825K configured as Scene Selector & Mode Selector: **mode Control.** The current mode is **mode selector**, you can short press Selector & Touch Key to achieve **mode sensor** function. Each scenario key can store up to **3** modes, respectively **blue, red, green**, three colors to distinguish each Mode. When configurated only one scenario, the blue indicator stays on. When configurated two scenarios, mode 1 blue indicator stays on and mode 2 red indicator stays on. Same process for storing 3 modes and 4 scenes modes.

Note: Z825K allow only one type of mode at the same time. For example, if it’s setted to be mode, it becomes a mode selector. If it’s setted to be scenario, it becomes a scene selector. Users are able to customize the brightness of indicators.

(5) Z825K configured to be on/off Switch, level control switch, door lock controller, color dimmer switch, windows covering controller: short press the touch key to send configurating command; the touch key indicator flash once. Long press tough key for 3 seconds; the touch key indicator flash once to send configurating command. If the configurating command is, for example, **Move** or **WindowsCoverOpen** while long pressing touch key, the device will send corresponding **STOP** command.

4-8. Reset Power Consumption Summation

To reset the power consumption data, please follow the steps:

(1) Press and hold the Binding Key for 20 seconds. The Network Indicator will flash 5 **times** (on 3rd, 6th ,10^{th,} 15th, and 20th second).
(2) After releasing the Binding Key, press On Key or Off Key within 3 seconds. The reset is completed.

4-9. Restore to Factory Setting

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

(1) Press and hold the Binding Key for 15 seconds. The Network Indicator will flash 4 **times** (on 3rd, 6th ,10th, 15tth second.)

(2) After releasing the Binding Key, press On Key or Off Key within 3 seconds. The restore is completed.

5.Zigbee description

1.End Point(s)：0x01；0x02; 0x03；0x04；0x05; 0x06

2.Device ID：Mains Power Outlet (0009) ，Mains Power Outlet (0009) ，Mains Power Outlet (0009) ，Scene Selector（0x0004），Scene Selector（0x0004），Scene Selector（0x0004）

3.EndPoint（0x01-0x03） Cluster ID

Server side	**Client side**
EP 依实际配置 (Device ID:实际配置)	
Basic(0x0000)	Identify(0x0003)
Identify(0x0003)	Group（0x0004）
On/Off(0x0006)	Scene（0x0005）
Commissioning(0x0015)	On/Off(0x0006)
Meter(0x0702)	LevelContorl（0x0008）
Electrical Measurement （0x0B04）	DoorLock（0x0101）
Diagnostics(0x0B05)	WindowsCovering（0x0102）
	ColorControl（0x0300）

Attributes of the Basic Information

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	0x0B	O
0x0002	*StackVersion*	8-bit Unsigned integer	0x00 –0xff	Read only	0x33	O
0x0003	*HWVersion*	8-bit Unsigned integer	0x00 –0xff	Read only	0x14	O

Identifier	Name	Type	Range	Access	Default	Mandatory / Optional
0x0004	*ManufacturerName*	Character string	0 – 32 Bytes	Read only	netvox	O
0x0005	*ModelIdentifier*	Character string	0 – 32bytes	Read only	Z825KE3R	O
0x0006	*DateCode*	Character string	0 – 16 bytes	Read only		O
0x0007	*PowerSource*	8-bit Enumeration	0x00 –0xff	Read only	0x01	M

Attribute ID and command description

Z825K uses **Cluster ID （ 0x0702 ）** which is referred from **Simple Metering of SE** and **Electrical Measurement ClusterID（0x0B04).** The Cluster ID (0x0702) in Netvox customizes the current, voltage, power, energy attribute.

Z825K reports the power consumption data to the ZigBee network.
The related Cluster ID:

- Simple Metering Cluster ID (0x0702)
- Electrical Measurement Cluster ID (0x0B04)

The related Attribute ID of Simple Metering Cluster ID:

- Current Attribute ID: 0xE000; unit: mA
- Voltage Attribute ID: 0xE001; unit: V
- Power Attribute ID: 0xE002; unit: kW
- Energy Attribute ID: 0xE003; related to AttributeID CurrentSummationDeliver (0x0000); unit: kWh

The related Attribute ID of Electrical Measurement Cluster ID:

- Current Attribute ID: 0x0508
- Voltage Attribute ID: 0x0505
- Power Attribute ID: 0x050B
- Power Factor Attribute ID: 0x0510

The command to reset power consumption summation: 0xE0. The format is:

Bits:8	16	8	8	8
Frame control	Manufacturer code	Transaction Sequence number	Command identifer	Frame payload
				Action
0x05	0x109F		0xe0	0x00

(clusterid：0x0702，Action：0x00)

Backlight brightness adjustment

The device has manual and wireless backlight adjustment function, whereas the backlight can be adjusted manually while turned on and off. Long press binding key for 6 seconds (during this interval, network green indicator will flash twice, on the 3rd and 6th seconds) and release. Short press any switch key once, backlight indicator will adjust according to current situation.

6.Loading property

Rated Load（AC） ** Remark**	Max. Load with LEDs **Remark**	Max. Inductive Load（cosφ=0.4）	Max. Load with Electric Motors	Overload Protection with Auto Power Cutoff
10A/250V	LED power less than 400W, and less than 8 LEDs（per relay）	8A/250V	1.5HP/250V	**Yes**

While the measured current is over stander 10A, device will cut off the power. In the mean time, the network indicator will flash 10 times and send alarming command.

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.