

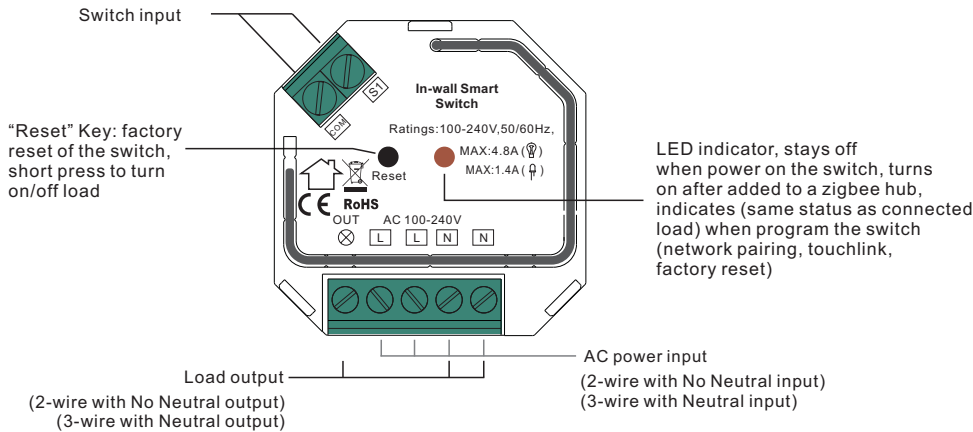
# ZigBee In Wall Smart Switch

70110014-A



**Important:** Read All Instructions Prior to Installation

## Function introduction



## Product Data

Input Voltage	Output Voltage	Output Current	Size(LxWxH)
100-240VAC	100-240VAC	Resistive load: max. 4.8A Capacitive/Inductive load: max. 1.4A	45.5x45x20.3mm

- ZigBee in wall smart switch based on latest ZigBee 3.0 protocol
- 100-240VAC Wide Input and Output Voltage
- Supports resistive loads, capacitive loads or inductive loads
- 1 channel output, max. load up to 4.8A
- Input and Output with Screw Terminals, Safe and Reliable
- Enables to control ON/OFF of connected light source
- ZigBee end device that supports Touchlink commissioning
- Can directly pair to a compatible ZigBee remote via Touchlink without coordinator
- Supports self-forming zigbee network without coordinator and add other devices to the network
- Supports find and bind mode to bind a ZigBee remote
- Supports zigbee green power feature and can bind max. 20 zigbee green power remotes
- Compatible with universal ZigBee gateway products
- Mini Size, Easy to be Installed into a standard size wall box
- Radio Frequency : 2.4GHz
- Waterproof grade: IP20

## Main Features:

- Can operate under two-wire connection with no neutral lead or three-wire connection with neutral lead
- Soft start function,
- Works with various types of switches – momentary, toggle, three-way, etc.
- Active element: semiconductor electronic switch,
- To be installed in wall switch boxes of dimensions allowing for installation, conforming to provisions of applicable regulations,
- The Bypass is an extension unit.

## The switch operates under the following loads:

- Conventional incandescent and HV halogen light sources
- ELV halogen lamps (with electronic transformers)
- MLV halogen lamps (with ferromagnetic transformers)
- Compact fluorescent CFL tube lamps with electronic ballast
- Fluorescent tube lamps with electronic ballast
- Supported light sources (power factor > 0.5) with minimal power of 3W using the Bypass (depending on the type of load)

## ZigBee Clusters the device supports are as follows:

### Input Clusters

- 0x0000: Basic
- 0x0003: Identify
- 0x0004: Groups
- 0x0005: Scenes
- 0x0006: On/off
- 0x0702: Simple Metering
- 0x0b04: Electrical Measurement
- 0x0b05: Diagnostics

### Output Clusters

- 0x0019: OTA

## Safety & Warnings

- DO NOT install with power applied to device.
- DO NOT expose the device to moisture.

## Operation

**1. Do wiring according to connection diagram correctly.**

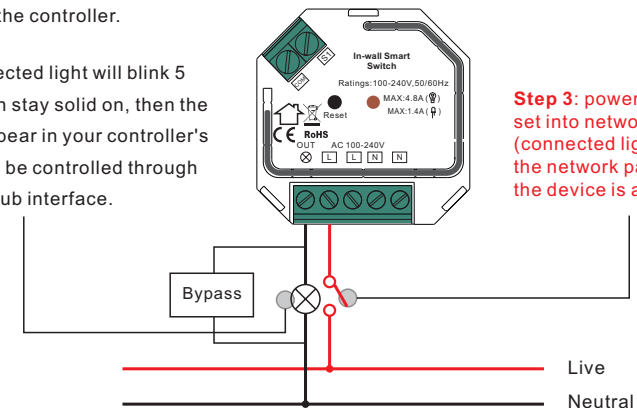
**2. This ZigBee device is a wireless receiver that communicates with a variety of ZigBee compatible systems. This receiver receives and is controlled by wireless radio signals from the compatible ZigBee system.**

## 3. Zigbee Network Pairing through Coordinator or Hub (Added to a Zigbee Network)

**Step 1:** Remove the device from previous zigbee network if it has already been added to, otherwise pairing will fail. Please refer to the part "**Factory Reset Manually**".

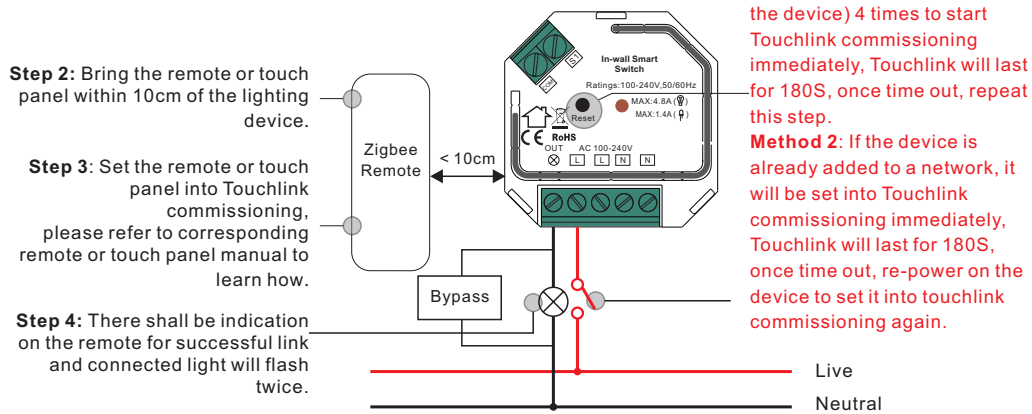
**Step 2:** From your ZigBee Controller or hub interface, choose to add lighting device and enter Pairing mode as instructed by the controller.

**Step 4:** Connected light will blink 5 times and then stay solid on, then the device will appear in your controller's menu and can be controlled through controller or hub interface.



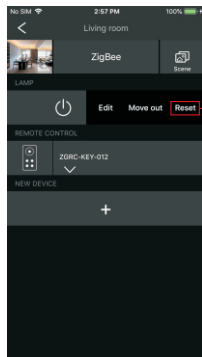
**Step 3:** power on the device, it will be set into network pairing mode (connected light flashes twice slowly), the network pairing mode will last until the device is added to a zigbee network.

#### 4. TouchLink to a Zigbee Remote



- Note:**
- 1) Directly TouchLink (both not added to a ZigBee network), each device can link with 1 remote.
  - 2) TouchLink after both added to a ZigBee network, each device can link with max. 30 remotes.
  - 3) For Third-Party Automation Devices add remote and device to network first then TouchLink.
  - 4) After TouchLink, the device can be controlled by the linked remotes.

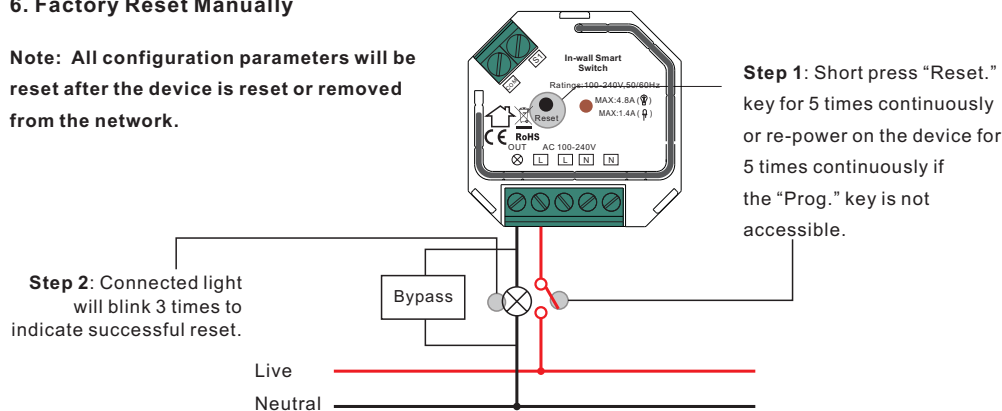
#### 5. Removed from a Zigbee Network through Coordinator or Hub Interface



From your ZigBee controller or hub interface, choose to delete or reset the lighting device as instructed. The connected light blinks 3 times to indicate successful reset.

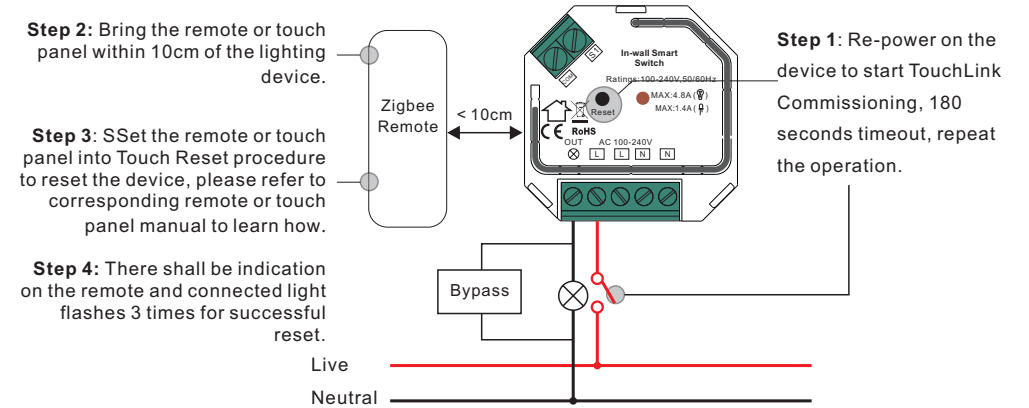
#### 6. Factory Reset Manually

**Note:** All configuration parameters will be reset after the device is reset or removed from the network.



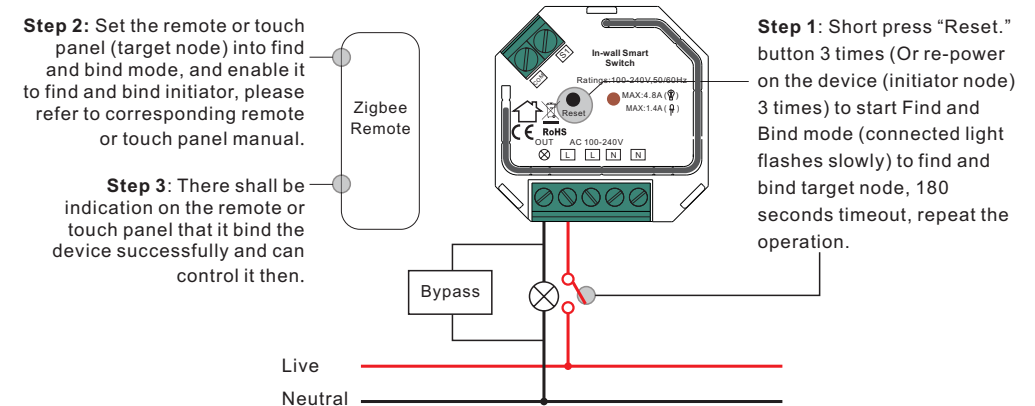
#### 7. Factory Reset through a Zigbee Remote (Touch Reset)

**Note:** Make sure the device already added to a network, the remote added to the same one or not added to any network.

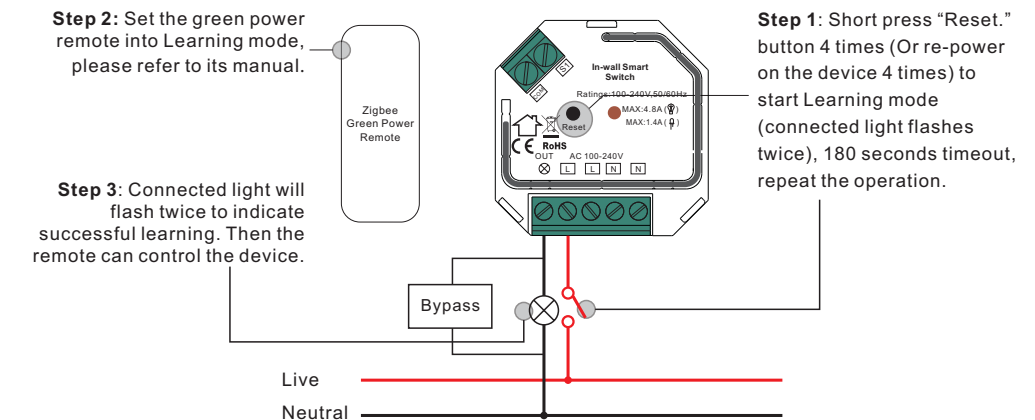


#### 8. Find and Bind Mode

**Note:** Make sure the device and remote already added to the same zigbee network.



#### 9. Learning to a Zigbee Green Power Remote

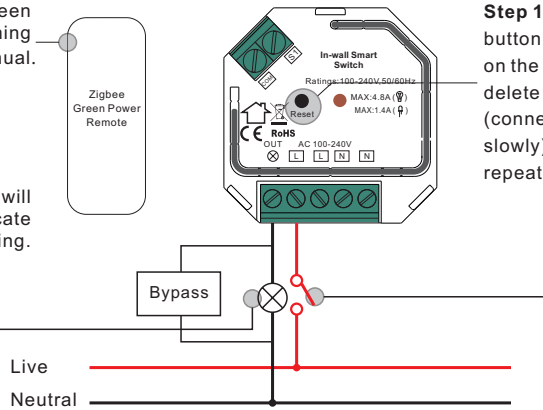


**Note:** Each device can learn to max. 20 zigbee green power remotes.

## 10. Delete Learning to a Zigbee Green Power Remote

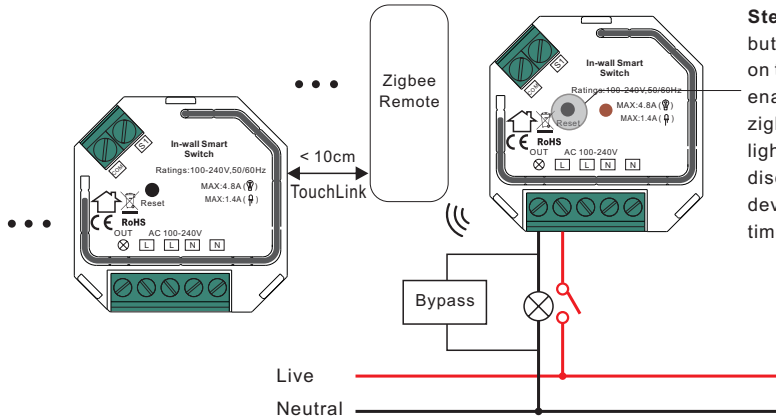
**Step 2:** Set the paired green power remote into Learning mode, please refer to its manual.

**Step 3:** Connected light will flash 4 times to indicate successful deleting.



**Step 1:** Short press "Reset." button 3 times (Or re-power on the device 3 times) to start delete Learning mode (connected light flashes slowly), 180 seconds timeout, repeat the operation.

## 11. Setup a Zigbee Network & Add Other Devices to the Network (No Coordinator Required)



**Step 1:** Short press "Reset." button 4 times (Or re-power on the device 4 times) to enable the device to setup a zigbee network (connected light flashes twice) to discover and add other devices, 180 seconds timeout, repeat the operation.

### Wiring Diagram

#### Compatible load types and recommended values of power for supported loads:

Supported load types	100-240V~	
<b>Resistive loads</b> Conventional incandescent and halogen light sources	20-1000W @ 230V 20-500W @ 110V	
<b>Capacitive loads</b> Fluorescent tube lamp (compact / with electronic ballast), electronic transformer, LED	Using Bypass: 3-300W @ 230V 3-150W @ 110V	No Bypass Used: 20-300W @ 230V 20-150W @ 110V
<b>Inductive loads</b> Ferromagnetic transformers	20-300W @ 230V 20-150W @ 110V	

### Notes for the diagrams:

**L** - terminal for live lead

**N** - terminal for neutral lead

**Out** - output terminal of the switch (controlling connected light source)

**S1** - terminal for switch (has the option of entering the device in inclusion/exclusion mode)

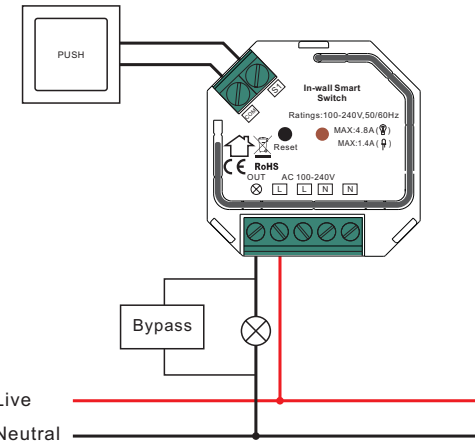
**COM** - terminal for grounding to the switch connected to the switch

### Supported external switch types (should be configured by factory setting):

1) **Push switch** (default factory setting)

2) **Normal On/Off switch** (should be configured by factory setting upon request)

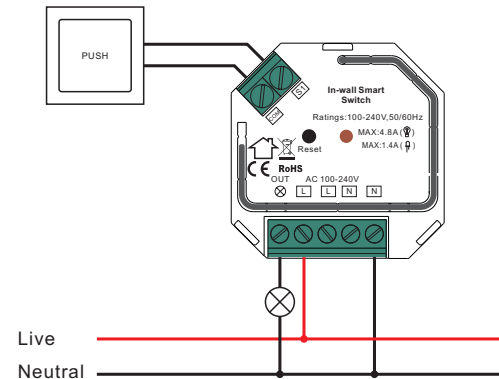
(1) 2-Wire Connection With No Neutral Lead



**NOTE:** Switch connected to the S1 terminal activates the basic functionality of the switch (turning the light on/off).

The Bypass is a device designed to work with the in-wall smart switch. It should be used in case of connecting LED bulbs or energy saving compact fluorescent lamps. The Bypass prevents flickering of the LED lights and glowing of the turned off compact fluorescent lamps. In the case of 2-wire connection, the Bypass allows to reduce minimum power of load required by the switch for correct operation. The Bypass provides powering of the switch in case of controlling the low loads of minimum power down to 3W (for  $\cos\phi > 0.5$ ).

(2) 3-Wire Connection With Neutral Lead



**NOTE:** Switch connected to the S1 terminal activates the basic functionality of the switch (turning the light on/off).

(3) Momentary Wall Switch Connection

