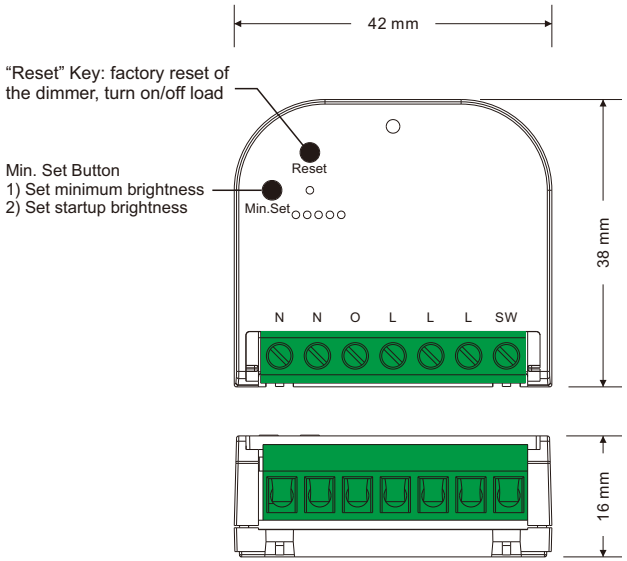
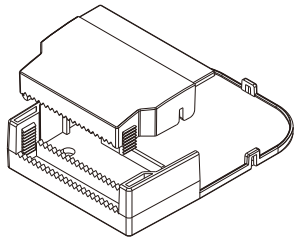
ZigBee Micro Smart Dimmer

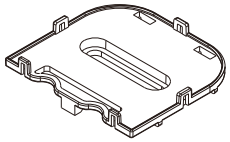
Important: *Read All Instructions Prior to Installation*

Function introduction





Accessory 1: Wire clamp cover. Need to purchase separately.



Accessory 2: din rail bracket. Need to purchase separately.

Product Data

Input Voltage	Output Voltage	Output Current	Max. Number of Parallel Connected Load	Size(LxWxH)
100-240VAC	100-240VAC	0.1-1.1A	6	42x38x16mm

Compatible Load Types			
Load Symbol	Load Type	Maximum Load	Remarks
	Dimmable LED lamps	200W @ 230V 100W @ 110V	Due to variety of LED lamp designs, maximum number of LED lamps is further dependent on power factor result when connected to dimmer.
	Dimmable LED drivers	200W @ 230V 100W @ 110V	Maximum permitted number of drivers is 200W divided by driver nameplate power rating.
	Incandescent lighting, HV Halogen lamps	250W @ 230V 125W @ 110V	
	Low voltage halogen lighting with electronic transformers	200W @ 230V 100W @ 110V	

ZigBee Clusters the device supports are as follows:

Input Clusters

• 0x0000: Basic • 0x0003: Identify • 0x0004: Groups • 0x0005: Scenes • 0x0006: On/off

• 0x0702: Simple Metering • 0x0008: Level Control • 0x0b04: Electrical Measurement • 0x0b05: Diagnostics

Output Clusters

• 0x0019: OTA

- ZigBee AC phase cut dimmer 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, Up to 250W
- Input and Output with Screw Terminals, Safe and Reliable
- Both leading edge version and trailing edge versions are available for choosing, preset by factory setting
- Enables to control ON/OFF and light intensity of connected light source
- ZigBee end device that supports Touchlink commissioning
- Can directly pair to a compatible ZigBee remote via Touchlink without coordinator
- Compatible with universal ZigBee gateway products
- Supports power metering
- Mini Size, Easy to be Installed into a standard 86*86mm wall box

Main Features:

- Can operate under two-wire connection with no neutral lead or three-wire connection with neutral lead
- Advanced microprocessor control
- Implemented algorithm of smart light source detection
- Active power and energy metering functionality
- Soft start function
- Innovative minimum dimming level and startup brightness setting 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

As a dimmer it operates under the following loads:

- Conventional incandescent and HV halogen light sources
- ELV halogen lamps and dimmable LED bulbs (with electronic transformers)
- MLV halogen lamps (with ferromagnetic transformers)
- Dimmable LED bulbs
- Dimmable compact fluorescent CFL tube lamps
- Supported dimmable light sources (power factor > 0.5) with minimal power of 3VA using the Bypass (depending on the type of load)

Trailing edge or leading edge dimming mode can be preset by factory setting to control following types of loads:

- "Trailing edge" for resistive loads
- "Trailing edge" for capacitive loads
- "Leading edge" for inductive loads

Note: factory default version is trailing edge.

Safety & Warnings

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

Wiring Diagram

Notes for the diagrams:

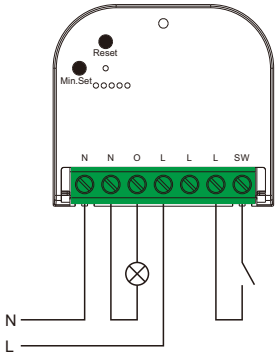
L - terminal for live lead

N - terminal for neutral lead

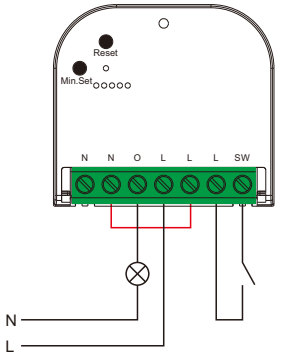
O - output terminal of the dimmer (controlling connected light source)

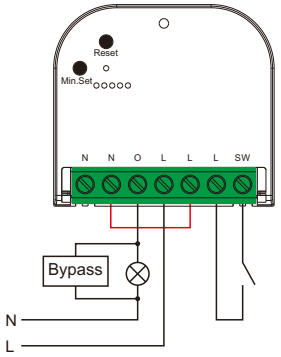
SW - terminal for switch

Method 1: With neutral



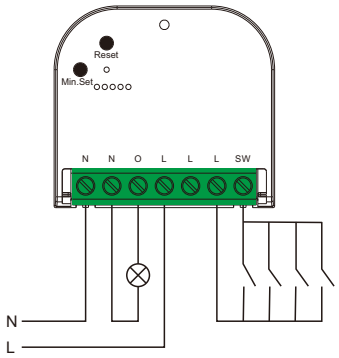
Method 2: Without neutral





* When using the device without neutral, the smart dimmer requires at least 20W @ 240 VAC of power consumption to operate. If the connected light has a smaller power consumption, then Bypass is needed for the device to work.

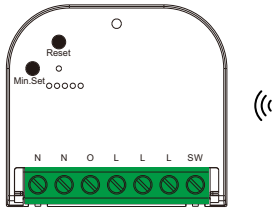
Method 3: Connect with multiple push switches

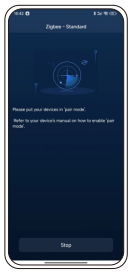


Operation

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

Step 1: From your ZigBee Controller or hub interface, choose to add lighting device and enter Pairing mode as instructed by the controller.
Step 2: Short press the “Reset” button 5 times to set it into network pairing mode. Pairing mode will last until the device is added to a network.
Step 3: 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.

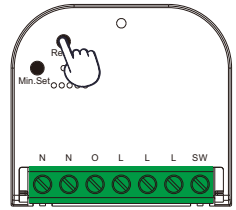




*** If the device had been added into the other zigbee network, please reset it first**

2. Factory Reset Manually

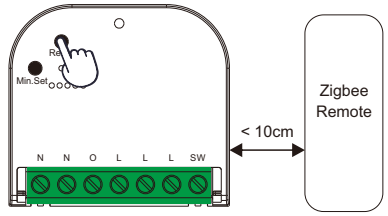
Step 1: Short press “Reset.” key for 5 times continuously.
Step 2: Connected light will blink 3 times to indicate successful reset.



Note:
1) If the device is already at factory default setting, there is no indication when factory reset again .
2) All configuration parameters will be reset after the device is reset or removed from the network.

3. TouchLink to a Zigbee Remote

Step 1: Short press “Reset” button 4 times to start Touchlink commissioning immediately, 180S timeout, repeat the operation.
Step 2: Bring the remote or touch panel within 10cm of the lighting device.
Step 3: Set the remote or touch panel into Touchlink commissioning, please refer to corresponding remote or touch panel manual to learn how.
Step 4: There shall be indication on the remote for successful link and connected light will flash twice.

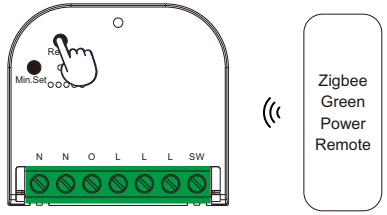


Note:
1) Directly TouchLink (both not added to a ZigBee network), each device can link with 1 remote.
2) TouchLink after both added to a ZigBee network, each device can link with max. 30 remotes.
3) To control by both gateway and remote, add remote and device to network first then TouchLink.
4) After TouchLink, the device can be controlled by the linked remotes.

4. Learning to a Zigbee Green Power Remote

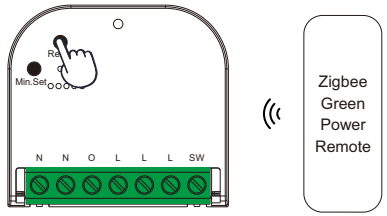
Step 1: Short press “Reset.” button 4 times to start Learning mode (connected light flashes twice), 180 seconds timeout, repeat the operation.
Step 2: Set the green power remote into Learning mode, please refer to its manual.
Step 3: Connected light will flash twice to indicate successful learning. Then the remote can control the device.

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



5. Delete Learning to a Zigbee Green Power Remote

Step 1: Short press “Reset.” button 3 times to start delete Learning mode (connected light flashes slowly), 180 seconds timeout, repeat the operation.
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.



6. Minimum and Startup Brightness Setting Button

Set minimum brightness: Adjust brightness to a desired level, press and hold down the button for 3 seconds to set it as minimum brightness, the connected load will flash to confirm successful setting, then the dimming range is between this minimum brightness and 100%.

Delete minimum brightness: Adjust brightness to 100%, press and hold down the button for 3 seconds to delete the previously set minimum brightness, the connected load will flash to confirm successful deleting, then the dimming range is between 1% and 100%.

Set Startup Brightness: adjust the brightness of connected load to a desired level between 1%-50%, then double click “Min. set” key to set the brightness adjusted as startup brightness, then the load will first go to startup brightness when turned on every time, then drop down to the brightness before last time turned off.

Delete Startup Brightness: adjust the brightness of connected load to 0%, then double click “Min. set” key to delete the previously set startup brightness.

Note: startup brightness setting function is to avoid the phenomenon that some dimmable LED drivers can not be turned on after dimmed to a low level and turned off. Once setting a startup brightness, if the startup brightness is higher than dimmed level before turned off, the driver will first go to the startup brightness after turned on then drop down to the dimmed level. If the startup brightness is lower than the dimmed level before tured off, the driver will directly go to the dimmed level after turned on.

7.Controlled by a push switch

Once connected with a push switch, click the push switch to switch ON/OFF, press and hold down it to increase/decrease light intensity.

8. OTA

The device supports firmware updating through OTA, and will acquire new firmware from zigbee controller or hub every 10 minutes automatically.