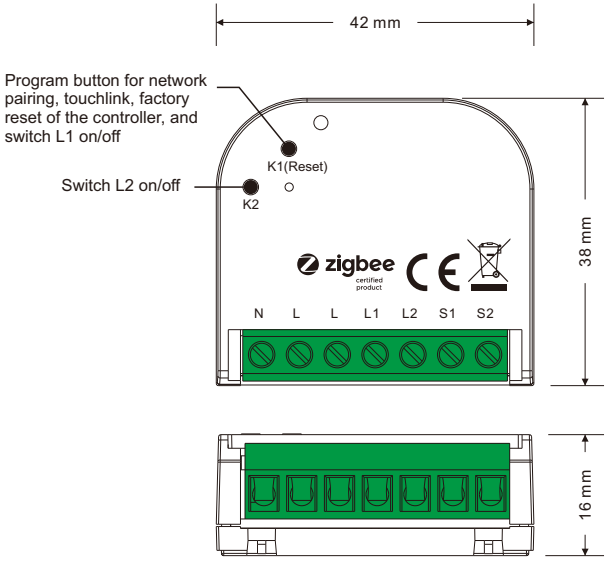
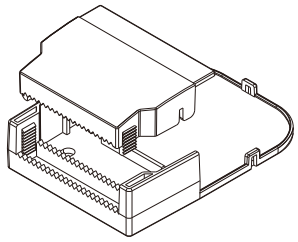
ZigBee 2CH Smart Relay

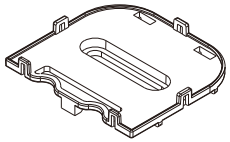
Important: *Read All Instructions Prior to Installation*

Function introduction





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



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

Product Data

Operation Voltage	Max. Load Current	Overcurrent Protection	Standby Power Consumption	Size(LxWxH)
100-240Vac	L1/L2: Inductive load: 2A max. Capacitive load: 2A max. Resistive load: 4A max. L1+L2: 4A max.	Max. 5A	<=0.5W	42x38x16mm

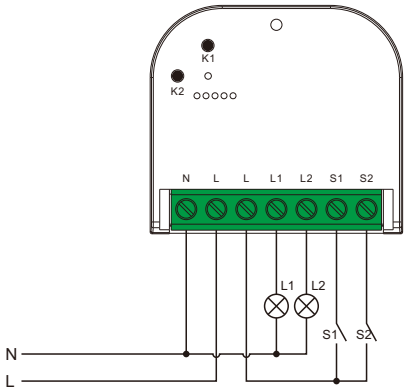
Compatible Load Types			
Load Symbol	Load Type	Maximum Load	Remarks
	LED bulbs	460W/CH @ 230V 220W/CH @ 110V	Due to variety of LED bulbs designs, maximum number of LED bulbs is further dependent on power factor result when connected to relay.
	LED drivers	460W/CH @ 230V 220W/CH @ 110V	Maximum permitted number of drivers is 460W divided by driver nameplate power rating.
	Incandescent lighting, HV Halogen lamps	CH1+CH2=920W @ 230V CH1+CH2=440W @ 110V	
	Low voltage halogen lighting with electronic transformers	460W/CH @ 230V 220W/CH @ 110V	

- 2-gang ZigBee in-wall switch based on latest ZigBee 3.0 protocol
- Enables to control ON/OFF of connected load
- ZigBee device with 2 endpoints which can be controlled separately
- ZigBee end device that supports Touchlink commissioning
- Supports zigbee green power and can bind max. 20 zigbee green power switches
- Can be controlled by universal single wire push switch, 2 channels can be controlled separately by 2 switches
- Compatible with various types of switches: momentary, toggle
- Active power and energy metering functionality
- Mini Size, Easy to be installed into a standard wall box
- Over load/ Over heat protection

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
L1,L2 - output terminal of the dimmer (controlling connected light source)
S1, S2 - terminal for switch

Instructions of button and LED indicator

No.	Operation	Key Number	Description
1.1	Short press once	K1	L1 load switch on/off
		K2	L2 load switch on/off
1.2	Short press three times	K1	Endpoint 1 enable find and bind mode or delete learning to a GP remote, LED indicator flashes 3 times, with a cycle of 3 seconds.
		K2	Endpoint 2 enable find and bind mode or delete learning to a GP remote, LED indicator flashes 4 times, with a cycle of 3 seconds.
1.3	Short press four times	K1	Endpoint 1 enable Touchlink mode, LED indicator flash slowly. When sucessfully Touchlink, LED indicator will flash rapidly for 3s.
		K2	Endpoint 2 enable Touchlink mode, LED indicator flash slowly. When sucessfully Touchlink, LED indicator will flash rapidly for 3s.
1.4	Short press five times	K1	Factory reset and enter network paring mode, the state will last for 180s or until it had been added into a zigbee network. LED indicator flash rapidly during this time.

External Switch Type Detection:

Upon power-up, the default switch type is set to push switch (momentary).
The system detects the actual switch type based on the user's first operation after power-up:
If the switch is pressed and held for more than 2 seconds, it is recognized as a regular switch (latching).



If the switch is pressed and released within 2 seconds, it remains identified as a push switch (momentary).

Note: For regular switch (latching), there are two types: normally open and normally closed, upon power-up, the panel must send a normally closed signal, otherwise, the recognized type of the switch maybe incorrect.

Over load protection

When under over load alarm state, the LED blinks slowly (0.5s each time) and reports to the gateway at an interval of 1 minute. The device will cut the output until it's restarted or cancellations the alarm.

Over heat protection

When the temperature of the power board exceeds 95°C, the output will be shut down and a warning will be reported to the gateway. Auto recovery after re-power on and the temperature is below 95°C

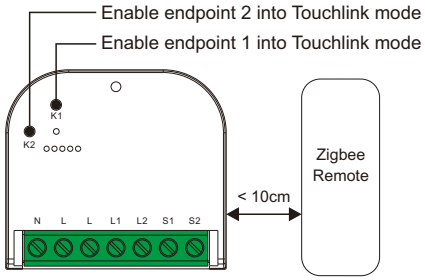
Zigbee network paring mode or factory reset

If the device had not been added into a network, the first time when power on, the device will enter network paring mode. The state will last for 180s or until it is added into a network.

The other way to set device into network pairing mode or factory reset:
Follow **Instructions of button and LED indicator** point 1.4

Touchlink to a zigbee remote

Step 1: Short press "K1" or "K2" 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.

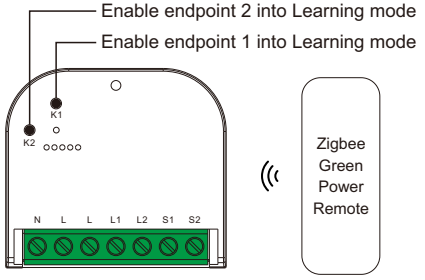


Note:
1) Directly TouchLink (both not added to a ZigBee network), each device can link with 1 remote.
2) TouchLink after both added to a ZigBee network, each device can link with max. 30 remotes.
3) To control by both gateway and remote, add remote and device to network first then TouchLink.
4) After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

Learning to a Zigbee Green Power Remote

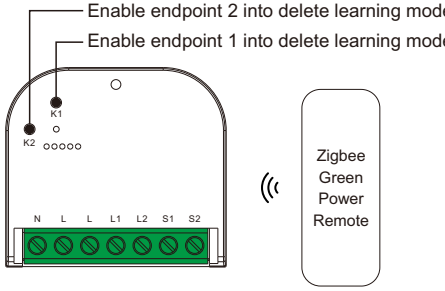
Step 1: Short press "K1" or "K2" button 4 times to start Learning mode, 180 seconds timeout, repeat the operation.
Step 2: Set the green power remote into Learning mode, please refer to its manual.
Step 3: LED indicator will flash twice to indicate successful learning. Then the remote can control the device.

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



Delete Learning to a Zigbee Green Power Remote

Step 1: Short press "K1" or "K2" button 3 times to start delete Learning mode, 180 seconds timeout, repeat the operation.
Step 2: Set the paired green power remote into Learning mode, please refer to its manual.
Step 3: LED indicator will flash 4 times to indicate successful deleting.



OTA

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

Zigbee Parameter

Zigbee application endpoints

Endpoint	Profile	Application
0(0x00)	0x0000(ZDP)	ZigBee Device Object (ZDO)
1(0x01)	0x0104(HA)	DeviceID = 0x0002(On/Off Output)
2(0x02)	0x0104(HA)	DeviceID = 0x0002(On/Off Output)
+3(0x03)	0x0104(HA)	DeviceID = 0x0007(Combined interface:OTA/Electric Meter/Alarm)
242	0x0104(HA)	Green power , DeviceID = 0x0066(GP combo Babic)

Support Cluster

Cluster	Description	Supported	Endpoint
0x0000	Basic	server	1,3
0x0003	identify	server	1,3
0x0004	Groups	server	1
0x0005	Scenes	server	1
0x0006	On/off	server	1
0x0009	Alarm	server	3
0x0b04	Electrical Measurement	server	3
0x0702	Simple Meter	server	3
0x0019	OTA Upgrade	Client	3
0x1000	Touchlink	server	1
0x0021	Green power	server	242
		Client	