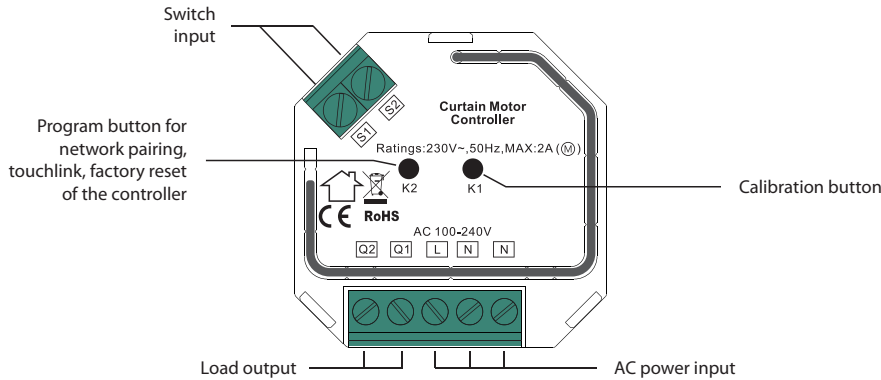


# Motor controller for blinds/curtains FS2CMC



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

## Function introduction



## Product Data

| Zigbee Protocol | Input Voltage | Output Voltage | Max. Load Current | Operating Temperature | Relative Humidity | Dimensions      |
|-----------------|---------------|----------------|-------------------|-----------------------|-------------------|-----------------|
| ZigBee 3.0      | AC100-240     | AC100-240      | 2A                | 0 do 40°C             | 8% do 80%         | 45,5x45x20,3 mm |

- Zigbee curtain motor controller based on latest ZigBee 3.0 protocol
- Full support for various curtain types: roller blinds, shutter blinds, drapes, etc.
- Controlled by smart app or directly by zigbee remote
- Local control with external switches even if not added to a zigbee network
- Accurate control, supports both ON/OFF and level control
- ZigBee end device that supports Touchlink commissioning
- Supports self-forming zigbee network without coordinator
- 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
- Waterproof grade: IP20

## Safety & Warnings

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

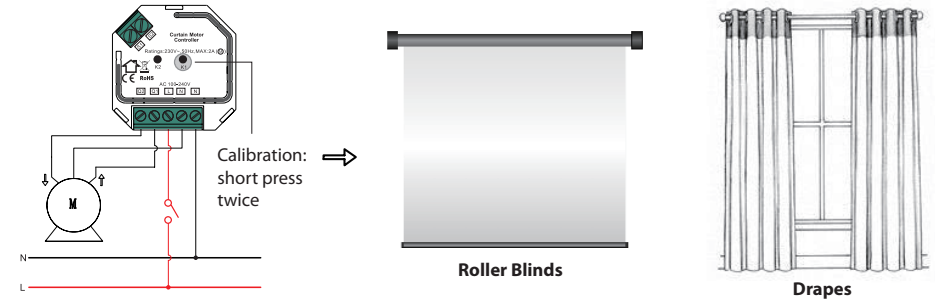
## Operation

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.

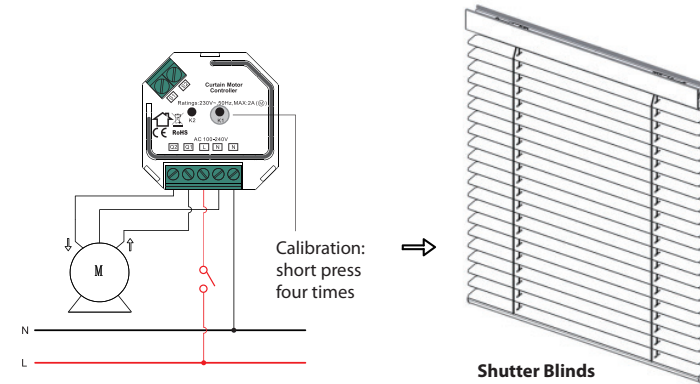
## 3. Positioning Calibration

Calibration is a process during which a curtain motor controller learns the position of the limit switches and a motor characteristic. Calibration is mandatory. Connect the controller to the motor according to wiring diagram, the calibration for different types of curtain are as follows:

1. Roller blinds and drapery type: short press button K1 twice, calibration starts automatically.



2. Shutter blinds type curtain: short press button K1 four times, calibration starts automatically.



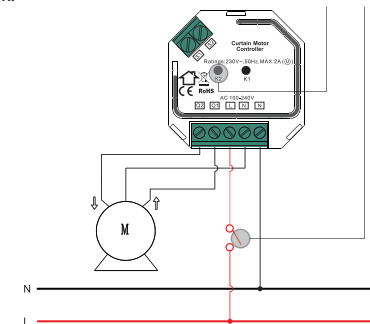
**Note:** to control another curtain motor, positioning calibration shall be done again.

## 4. 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 device and enter Pairing mode as instructed by the controller.

**Step 3:** power on the device, it will be set into network pairing mode, the network pairing mode will last until the device is added to the Zigbee network.

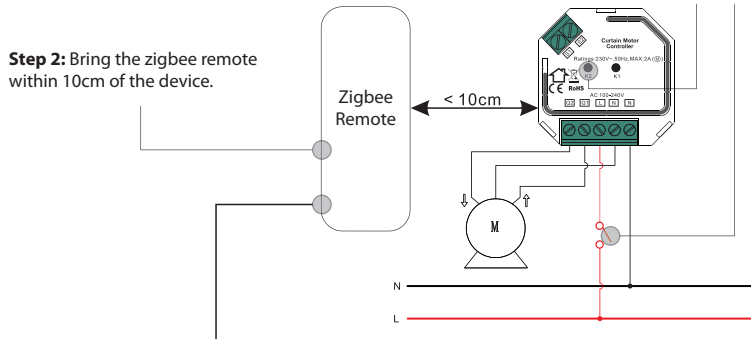


**Step 4:** There shall be response from the motor that the controller is added to the network successfully. Then the device will appear in your hub's menu and can be controlled through controller or hub interface.

### 5. TouchLink to a Zigbee Remote

**Step 1: Method 1:** Short press "K2" button (or re-power on the device) 4 times to start Touchlink commissioning immediately, Touchlink will last for 180S, once time out, repeat this step.

**Method 2:** If the device is already added to a network, it will be set into Touchlink commissioning immediately, Touchlink will last for 180S, once time out, re-power on the device to set it into touchlink commissioning again.



**Step 3:** Set the remote into Touchlink commissioning, please refer to corresponding remote manual to learn how.

**Step 4:** There shall be indication on the remote for successful link.

#### Note:

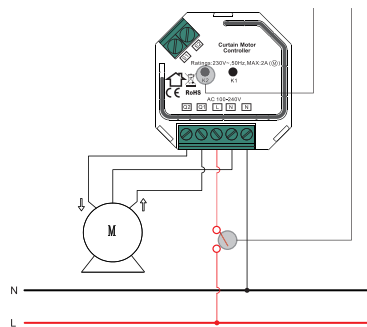
1. Directly TouchLink (both not added to a ZigBee network), each device can link with 1 remote.
2. TouchLink after both added to a ZigBee network, each device can link with max. 30 remotes.
3. To control by both remote and hub, add both remote and device to network first then TouchLink.
4. After TouchLink,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

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

From your ZigBee controller or hub interface, choose to delete or reset device as instructed.

### 7. Factory Reset Manually

**Step 1:** Short press button K2 5 times continuously (or reset power of the device for 5 times continuously).

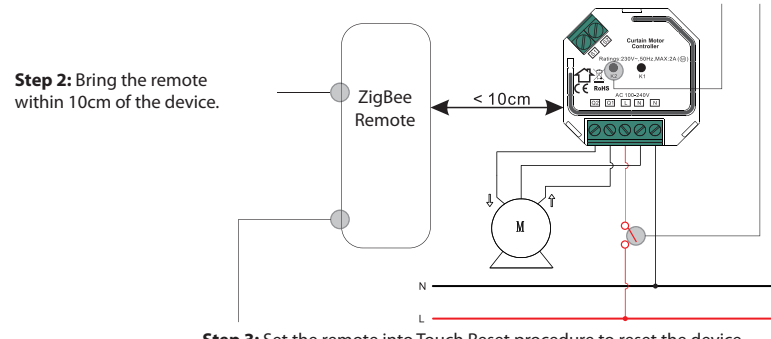


**Note:** All configuration parameters will be reset after the device is reset or removed from the network.

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

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

**Step 1:** Short press button K2 4 times continuously (Or reset power of the device 4 times) to start TouchLink Commissioning, which lasts for 180S, once timeout, repeat this step.

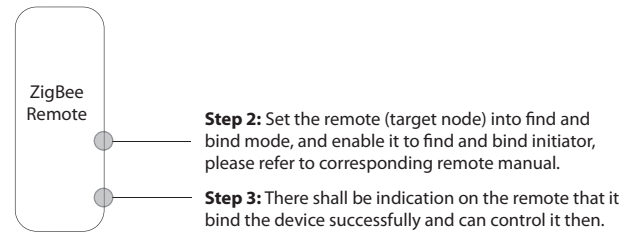


**Step 3:** Set the remote into Touch Reset procedure to reset the device, please refer to corresponding remote manual to learn how.

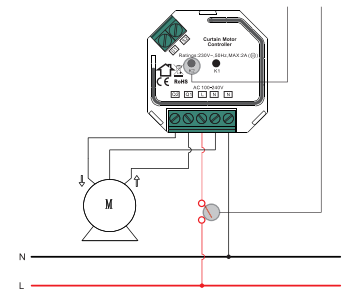
**Step 4:** There shall be indication on the remote for successful reset.

### 9. Find and Bind Mode

**Step 1:** Short press button K2 3 times (Or reset power of the device (initiator node) 3 times) to start Find and Bind mode to find and bind target node, find and bind mode lasts for 180S, once timeout, repeat this step.

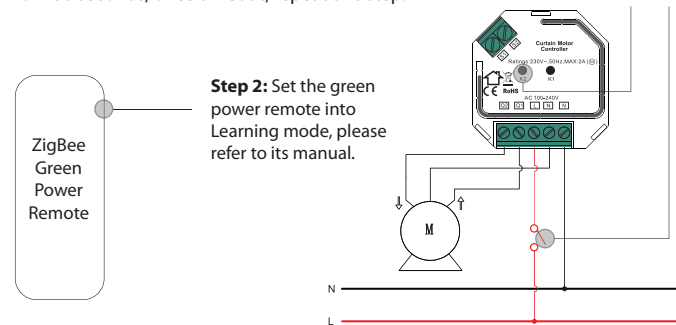


**Note:** Make sure the device and the remote already added to the same Zigbee hub which supports find and bind.



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

**Step 1:** Short press button K2 4 times (Or reset power of the device 4 times) to start Learning mode, learning mode lasts for 180 seconds, once timeout, repeat this step.



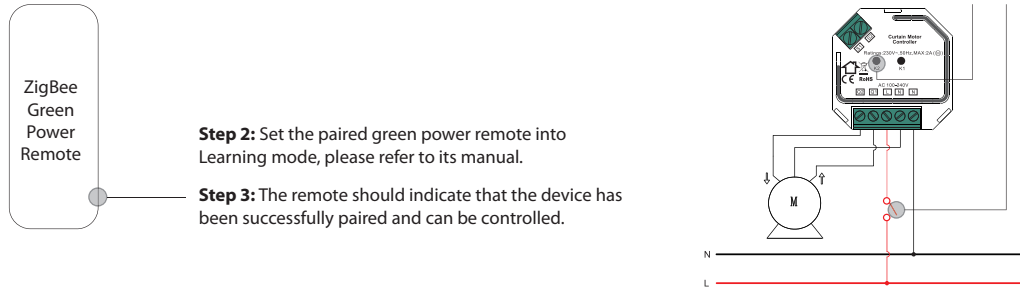
**Step 2:** Set the green power remote into Learning mode, please refer to its manual.

**Step 3:** The remote can control the device after successful learning.

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

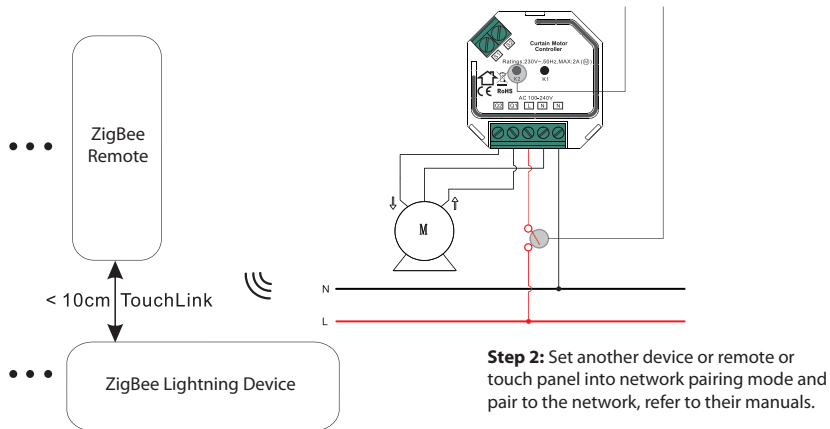
### 11. Delete Learning to a Zigbee Green Power Remote

**Step 1:** Short press button K2 3 times (Or reset power of the device 3 times) to start delete Learning mode, delete learning mode lasts for 180 seconds, once timeout, repeat this step.



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

**Step 1:** Short press button K2 4 times (Or reset power of the device 4 times) to enable the device to setup a zigbee network to discover and add other devices, the discovering and adding mode lasts for 180 seconds, once timeout, repeat this step.



**Step 3:** Pair more devices and remotes to the network as you would like, refer to their manuals.

**Step 4:** Bind the added devices and remotes through Touchlink so that the devices can be controlled by the remotes, refer to their manuals.

**Note:**

1. Each added device can link and be controlled by max. 30 added remotes.
2. Each added remote can link and control max. 30 added devices.

### 13. ZigBee Clusters the device supports are as follows:

**Input Clusters:**

- 0x0000 Basic
- 0x0003 Identify
- 0x0004 Groups
- 0x0005 Scenes
- 0x0006 On/Off
- 0x0008 Level Control
- 0x0102 Window Covering
- 0x0b05 Diagnostics
- 0x1000 ZLL Commissioning

**Output Clusters:**

- 0x0019 OTA

### 14. OTA

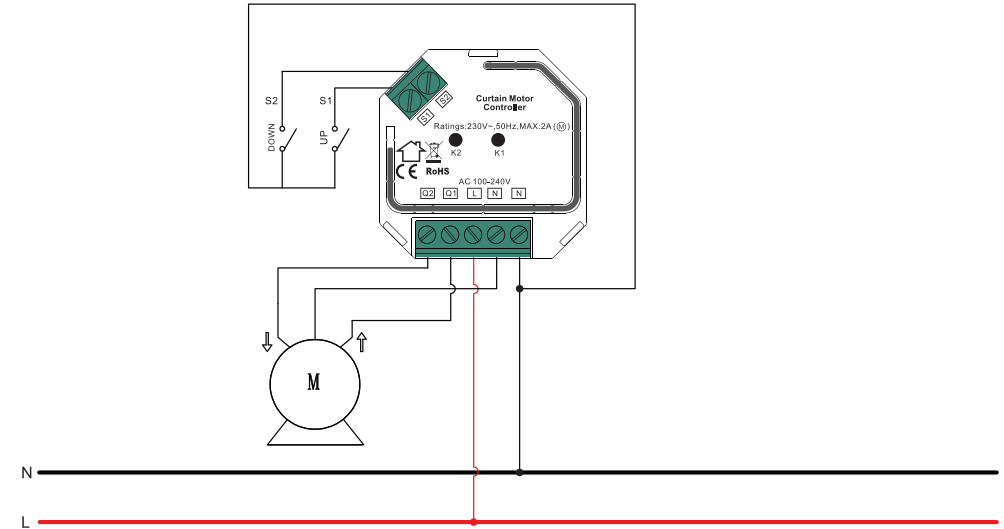
The device supports firmware updating through OTA, and will acquire new firmware from zigbee controller or hub every 10 minutes automatically.

### Wiring Diagram

Notes for the diagrams:

- L - terminal for live lead
- N - terminal for neutral lead
- S1 - terminal for switch key No. 1
- S2 - terminal for switch key No. 2
- Q1 - output terminal no. 1 for electrical motor
- Q2 - output terminal no. 2 for electrical motor
- K1 - positioning calibration button
- K2 - program button for network pairing, touchlink, factory reset

#### 1. Wiring Method 1: External Switches Control through Neutral Lead



#### 2. Wiring Method 2: External Switches Control through Live Lead

