Push Compatible Matter + Zigbee Knob Smart Dimmer

PUSH CE FC RoHS COMPLIANT zigbee certified product matter

Important: Read All Instructions Prior to Installation

Function introduction

LED indicator, stays off when power on the dimmer, turns on after added to a matter hub, indicates (same status as connected load) when program the dimmer (network pairing, factory reset)
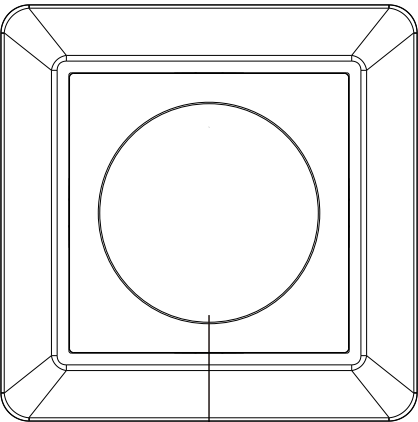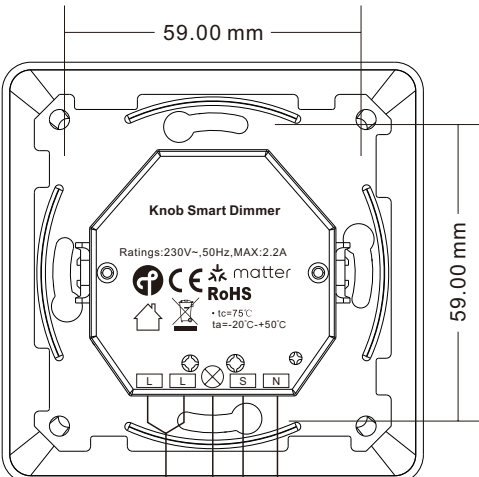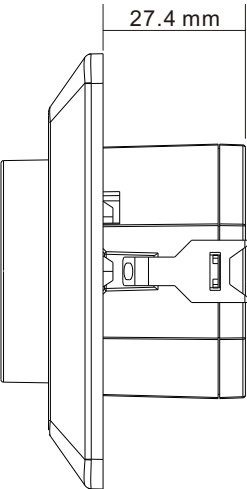
Rotary knob, short press to turn on/off, rotate clockwise to increase brightness, rotate counterclockwise to decrease brightness
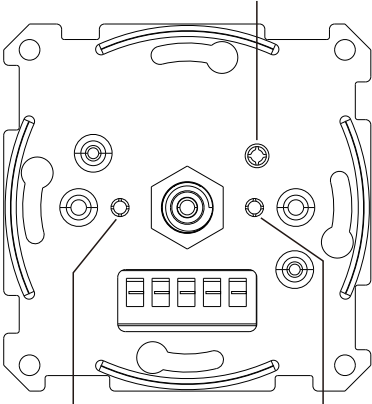
"Min. Set" Key: set minimum brightness and startup brightness

"Reset" Key: factory reset of the dimmer, turn on/off the load

Front side
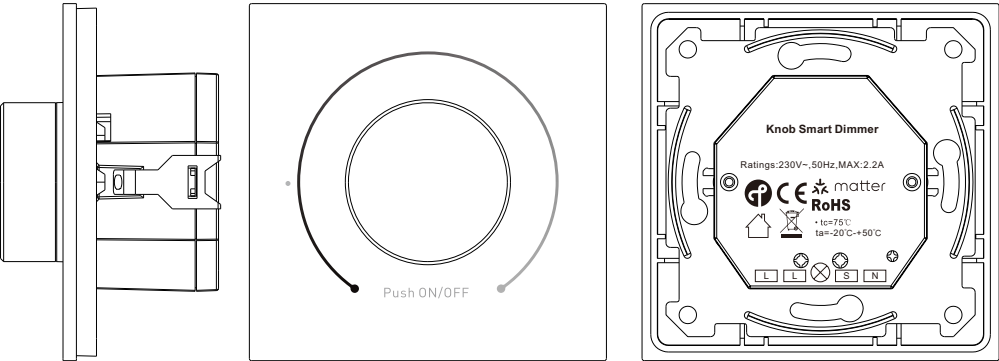
With Plastic Frame

27.4 mm

59.00 mm

59.00 mm

Knob Smart Dimmer

Ratings:230V~,50Hz,MAX:2.2A

matter RoHS
• tc=75℃
ta=-20℃-+50℃

L L ⊗ S N

Live input
Load output
Neutral input
Push switch input

Back side

With Glass Frame

Push ON/OFF

Knob Smart Dimmer

Ratings:230V~,50Hz,MAX:2.2A

matter RoHS
• tc=75℃
ta=-20℃-+50℃

L L ⊗ S N

Product Data

Input Voltage	Output Voltage	Output Current	Size(LxWxH)	
100-240VAC	100-240VAC	2.2A max	Plastic Frame: 83.8x83.8x47.1mm	Glass Frame: 80x80x53mm

Compatible Load Types			
Load Symbol	Load Type	Maximum Load	Remarks
	Dimmable LED lamps	250W @ 230V 125W @ 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	250W @ 230V 125W @ 110V	Maximum permitted number of drivers is 250W divided by driver nameplate power rating.
	Incandescent lighting, HV Halogen lamps	500W @ 230V 250W @ 110V	
	Low voltage halogen lighting with electronic transformers	250W @ 230V 125W @ 110V	

• Matter + Zigbee knob smart dimmer
• 100-240VAC wide input and output voltage, can work under no neutral wiring and with neutral wiring, self-adaptive
• Supports resistive loads, capacitive loads or inductive loads
• Enables to set minimum brightness and startup brightness
• 1 channel output, up to 500W
• 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
• App control + touchlink remote control + green power kinetic switch control
• App control through Matter (e.g. Apple Home, Amazon Alexa, Google Home)
• Can be voice controlled through Apple Siri, Google Assistant, Amazon Alexa
• With push switch input, can be controlled by universal AC push switches
• Standard size, can be compatible with existing EU standard frames, and installed into 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
• 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 functions
• 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.

Operation

1. Do wiring according to connection diagram correctly.

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

3. Add to a Matter platform and control through the platform:

Note: An Apple HomePod mini is used as a Matter border router for adding and controlling the device. For other Matter border routers, please refer to their user manuals to learn how to add and control Matter devices.

Step 1: Prepare an iPhone (iOS 16.2 or later) or iPad (iPadOS 16.2 or later) with the latest version firmware, and prepare an Apple HomePod mini with the latest version firmware.

Step 2: Connect the iPhone or iPad to your home WLAN network. Run the Apple Home app and set up the HomePod mini as instructed by Apple (as shown in **Figure 1** to **Figure 7**).
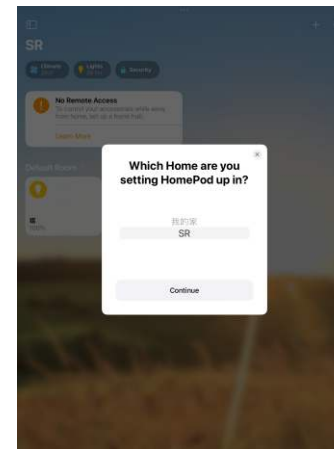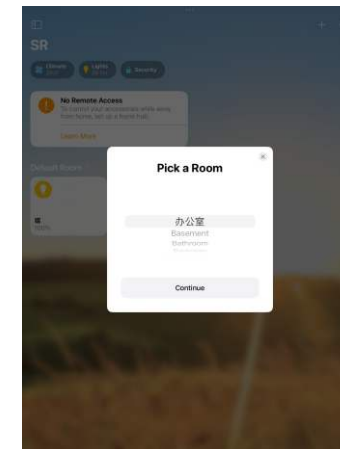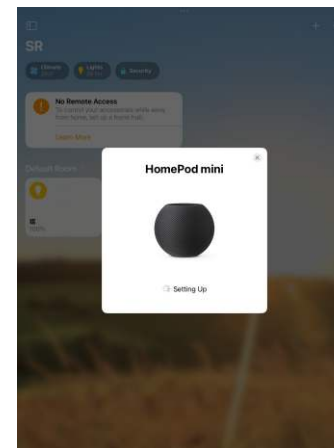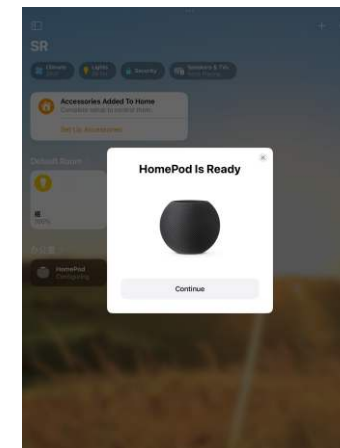

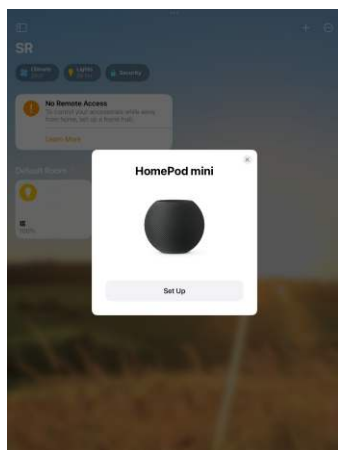Figure 3

Figure 4

Figure 5
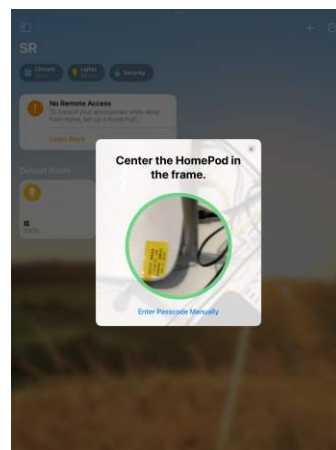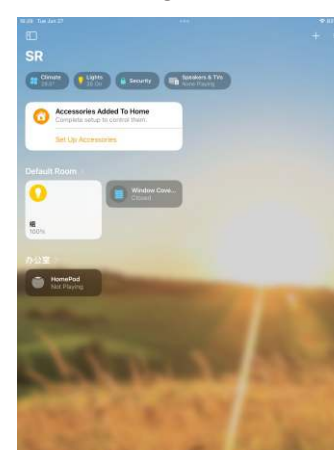

Figure 6

Figure 1

Figure 2

Figure 7

Step 3: Do wiring of the Matter thread dimmer according to the wiring diagram and power on it.

Step 4: Add the Matter thread dimmer to the Apple Home app by scanning the QR code sticker on the dimmer as shown in **Figure 8** to **Figure 16**.
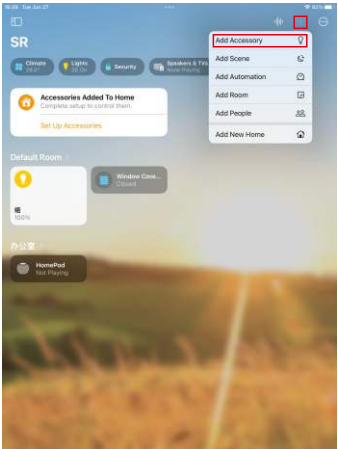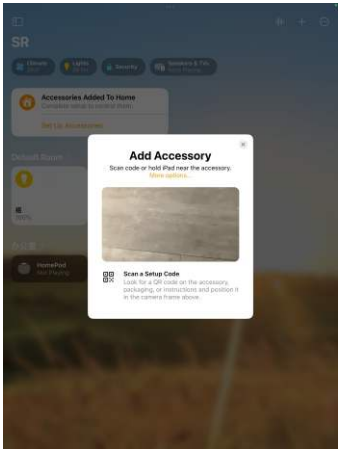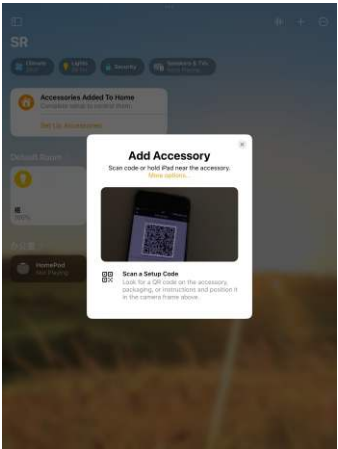

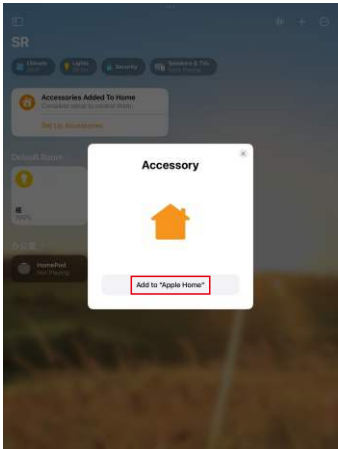**Figure 8**

Figure 9

Figure 10

Figure 11

Note: Before scanning the QR coder sticker on the dimmer as shown in Figure 10, short press the reset button 5 times to reset the dimmer so that it can be discovered by the Apple Home app. Otherwise if it has already been added to another gateway, current gateway can not discover and add it.
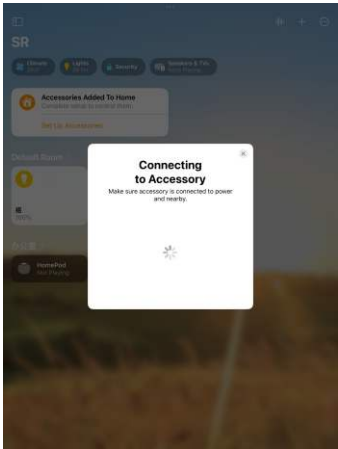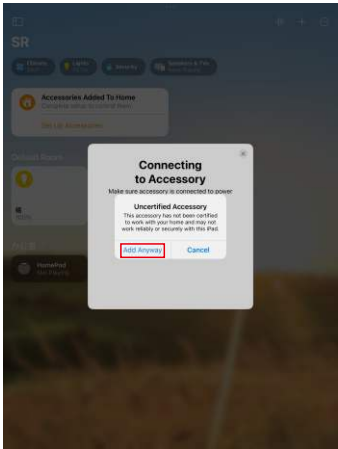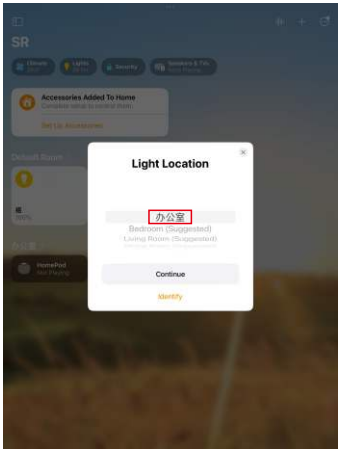

Figure 12

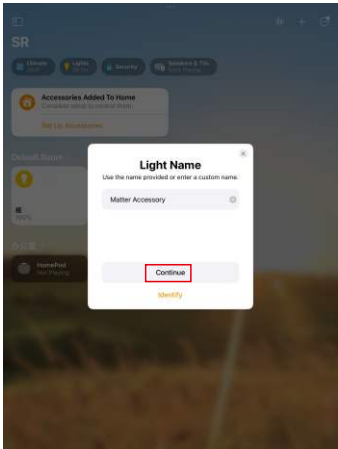**Figure 13**

Figure 14

Figure 15

Note: When choose the room that you would like to add the dimmer to, please make sure to choose the same room that the HomePod mini is located as shown in Figure 14.
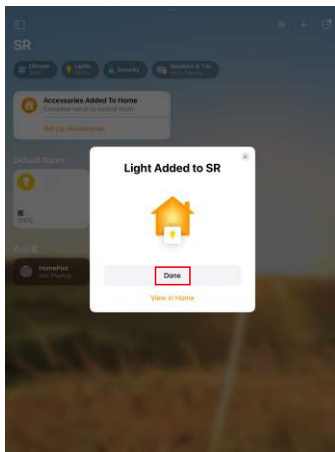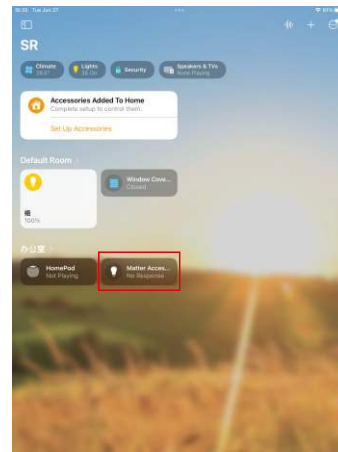
Figure 16

Figure 17

Step 5: once the dimmer is added to the gateway successfully, tap on the device to control on/off and brightness of the dimmer as shown in **Figure 17** to **Figure 19**.
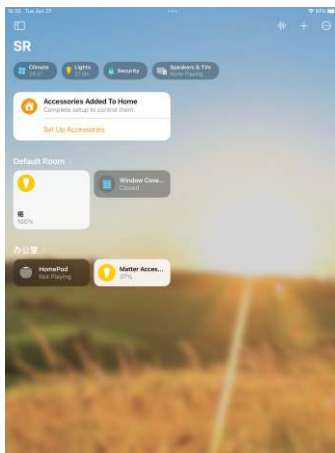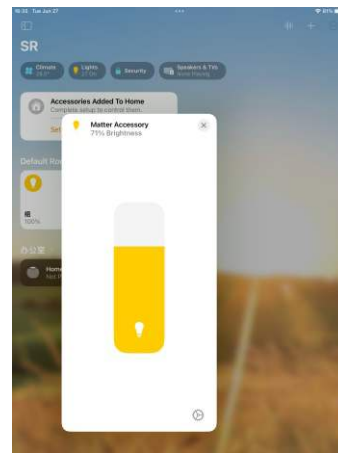

Figure 18

Figure 19

4. Setting minimum brightness:

Press and hold down "Min. Set " key for 3s to set minimum brightness: when current brightness value is 1% - 50%, it will be set as minimum brightness. When current brightness value is 100%, previously set minimum brightness will be deleted. Once a minimum brightness is set, the connected load can not be dimmed below this level.

5. Set Startup Brightness

Short press "Min. Set" key twice to set startup brightness: when current brightness value is 1 - 50%, it will be set as startup brightness. When current brightness value is 0%, previously set startup brightness will be deleted.

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 turned off , the driver will directly go to the dimmed level after turned on.

6.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.

7. Restore factory settings

To restore the factory settings, short press the "Reset" button 5 times or switch the device on and off in the following sequence. If the device is successfully reset, the connected light will blink 3 times to indicate successful reset.

Stage	Duration	State
1	< 1s	ON
2	> 3s	OFF
3	5s - 15s	ON
4	> 3s	OFF
5	< 1s	ON
6	> 3s	OFF
7	< 1s	ON
8	> 3s	OFF
9	< 1s	ON
10	> 3s	OFF

8. Touchlink to a Zigbee remote

Step 1: Short press "Reset" button 4 times to start Touchlink pairing.
Step 2: Bring the remote within 10cm of the receiver.
Step 3: Set the remote into Touchlink pairing, please refer to its manual.
Step 4: There shall be indication on the remote for successful link and the connected light will flash.

Note: There are two control situations:
1. Only one remote, to control one or more receivers: directly perform Touchlink pairing between the remote and the receiver.

2. Only one receiver, to be controlled by multiple remotes, or multiple remotes and multiple receivers with cross-control: use one receiver as the Zigbee hub, add all remotes and other receivers to the hub, and then perform Touchlink pairing between the remotes and the receivers. The steps are as follows:
Step 1: Use one receiver as the Zigbee hub and short press "Reset" button 4 times to start adding Zigbee devices.
Step 2: Reset power of another receiver once to enter Zigbee network pairing mode, it will be added by the hub, and the connected light will flash.
Step 3: Set a Zigbee remote to enter Zigbee network pairing mode, it will be added by the hub, and the indicator will flash to indicate.
Step 4: Add more receivers and remotes to the hub as you would like, refer to the corresponding remote manual.
Step 5: Touchlink the added receivers and the remotes.

9. Learning to a Zigbee Green Power Switch

Step 1: Short press "Reset" button 4 times to start Learning mode.
Step 2: Set the green power switch into Learning mode, please refer to its manual.
Step 3: There shall be indication on the switch for successful learning.

Note: There are two control situations:

1. Only one receiver, to be controlled by multiple GP switches: directly perform pairing between the GP switch and the receiver.

2. Only one GP switch, to control multiple receivers, or multiple GP switches and multiple receivers with cross-control: use one receiver as the Zigbee hub, add all other receivers to the hub, and then pair the GP switch with the receiver. The steps are as follows:

Step 1: Use one receiver as the Zigbee hub and short press "Reset" button 4 times to start adding Zigbee devices.
Step 2: Reset power of another receiver once to enter Zigbee network pairing mode, it will be added by the hub and the connected light will flash.
Step 3: Add more receivers to the hub as you would like.
Step 4: Pair the added receivers with the GP switches.

Wiring Diagram

Notes for the diagrams:
L - terminal for live lead
N - terminal for neutral lead
$\otimes$ - output terminal of the dimmer (controlling connected light source)
S - terminal for push switch

Supported Switch Types:
The switch types this device supports can be configured by factory setting:
1. Push Switch (factory default setting)
**2. Toggle On/Off Switch (can be configured by factory setting upon request)**

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

Supported load types		100-240V~	
	Resistive loads Conventional incandescent and halogen light sources	20-500W @ 230V 20-250W @ 110V	
	Capacitive loads Fluorescent tube lamp (compact / with electronic ballast), electronic transformer, LED	Using Bypass: 3-250W @ 230V 3-125W @ 110V	No Bypass Used: 20-250W @ 230V 20-125W @ 110V
	Inductive loads Ferromagnetic transformers	20-250W @ 230V 20-125W @ 110V	

This phase dimmer adopts leading edge dimming (forward phase control) or trailing edge dimming (reverse phase control), two versions are available for choosing, factory default version is trailing edge. Please make sure the connected loads support the control type you choose. Please refer to the user manual of the load or consult the supplier of the load.
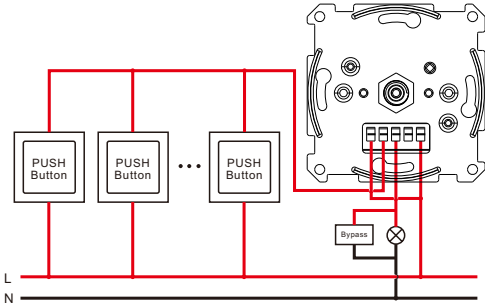
(1) 2-Wire Connection With No Neutral Lead

Single push switch wiring

Multiple push switches wiring for multiple control points
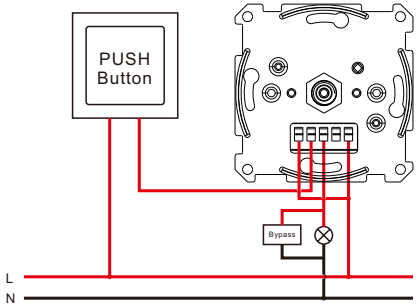

The Bypass is a device designed to work with the knob smart dimmer. It should be used in case of connecting LED bulbs or energy saving compact fluorescent lamps. The Bypass prevents flickering of the LED lights and glowing of the turned off compact fluorescent lamps. In the case of 2-wire connection,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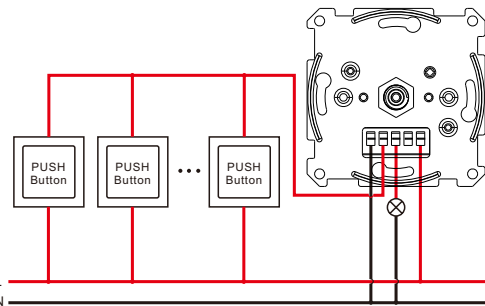
(2) 3-Wire Connection With Neutral Lead

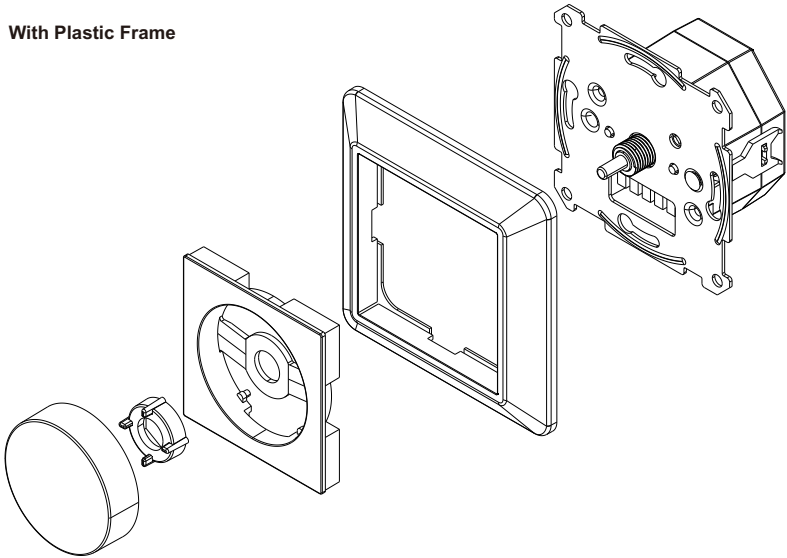**Single push switch wiring**
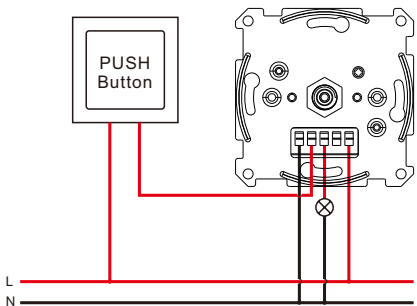
Multiple push switches wiring for multiple control points

Installation

With Plastic Frame

With Glass Frame