PAN26

Smart Touch In-Wall Switch

PAN26
Wiring diagram
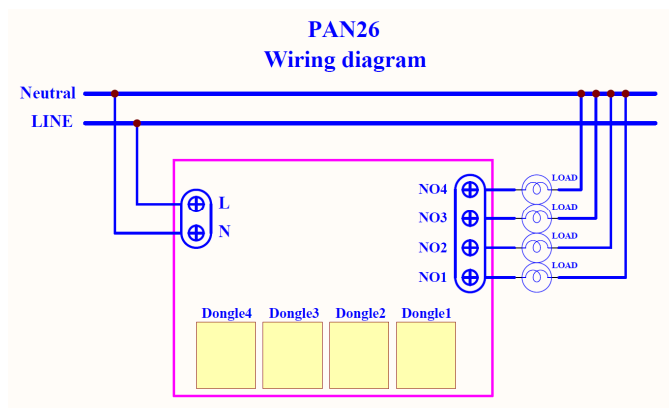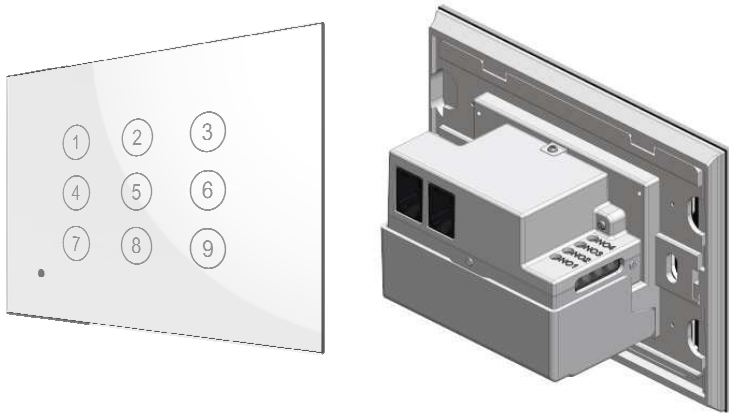

Note: The power cord must meet 1.25mm² or 16AWG or better

Introduction

All the control you want is just a few dongles away
Philio's patent pending Smart touch in-wall Switch is the world's first true smart electric switch that does so much in so little in-wall space. It comes with empty relays, but the magic happens when plug n' play dongles are inserted into it: On/off lights, dimmers, shutters and relays. From now on you can control everything from one elegant in-wall switch at your home or office; or use it as a regular switch because it has such a refined appearance.

This in-wall switch PAN26 is a security enabled wireless device, based on Z-Wave Plus technology. Z-Wave Plus™ enabled devices displaying the Z-Wave Plus™ logo can also be used with it regardless of the manufacturer, and can also be used in other manufacturer's Z-Wave™ enabled networks. Remote On/Off control of the switch is possible with other manufacturer's wireless Controller. PAN26 is designed to act as a repeater. Repeaters will re-transmit the RF signal to ensure that the signal is received by its intended destination by routing the signal around obstacles and radio dead spots. Because PAN26 supports Security Command Class, it can learn with Secured controller. Its functionality and supported command classes is identical when included as a secure and non-secure device.

Safety Precautions and Installation

- Avoid installing the unit in storming or raining weather.
- Be sure to isolate or switch off power source before installing or maintenance.
- Do ensure that the power supply circuit protected by a 16A circuit breaker or suitable equivalent fuse.

IMPORTANT
- Installation must be performed by skilled technicians who are informed about the standards and technical requirements of the appliance and its proper installation.
- Check your local codes as they apply to your situation. If the house wiring is of aluminum, consult with an electrician about proper wiring methods.

Before proceeding with the installation, TURN OFF THE POWER TO THE LIGHTING CIRCUIT AT THE CIRCUIT BREAKER OR FUSE BOX TO AVOID ELECTRICAL SHOCK.

Adding to Z-Wave™ Network

In the front casing, there is an on/off button with LED indicator below which is used to toggle switch on and off or carry out inclusion, exclusion, reset or association. When first power is applied, its LED flashes on and off alternately and repeatedly at 0.5 second intervals. It implies that it has not been assigned a node ID and start auto inclusion.

Auto Inclusion

The function of auto inclusion will be executed as long as the in-wall switch does not have Node ID and just connect the switch to main power.

Note: Auto inclusion timeout is 2 minutes during which the node information of explorer frame will be emitted once every several seconds. Unlike "inclusion" function as shown in the table below, the execution of auto inclusion is free from pressing the On/Off button on the Switch.

The table below lists an operation summary of basic Z-Wave functions. Please refer to the instructions for your Z-Wave™ Certified Primary Controller to access the Setup function, and to include/exclude/associate devices
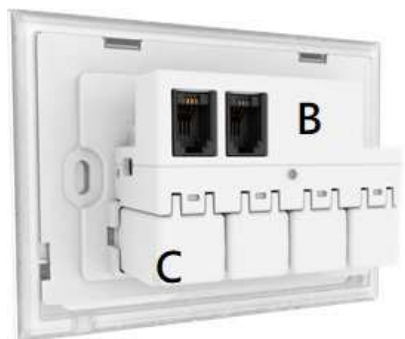
Function	Description	Annotation
No node ID	The Z-Wave Controller does not allocate a node ID to the Switch.	LED 1.5-second on, 1.5-second off
Inclusion	1. Put your Z-Wave controller into inclusion mode by following the instructions provided by the controller manufacturer. 2. Pressing INCLUDE_BUTTON (No.5) three times within 1.5 seconds will enter inclusion mode.	One press one flash LED
Exclusion	1. Put your Z-Wave controller into exclusion mode by following the instructions provided by the controller manufacturer. 1. Pressing INCLUDE_BUTTON (No.5) three times within 1.5 seconds will enter exclusion mode.	One press one flash LED

	3. Node ID has been excluded.	LED 0.5s On, 0.5s Off (Enter auto inclusion)
Reset	**1.** Pressing INCLUDE_BUTTON (No.5) three times within 2 seconds will enter inclusion mode.	Use this procedure only in the event that the primary controller is lost or otherwise inoperable.
	2. Within 1 second, press On/Off button again for 5 seconds.	
	3. IDs are excluded.	LED 0.5s On, 0.5s Off (Enter auto inclusion)
Association	1. The PAN26 is an always listening Z-Wave device, so associations be added or removed by a controller at any time. Or If your controller requires to have the PAN26 send a 'node information frame' or NIF for associations, pressing the On/Off button three times within 2 seconds will cause the PAN26 to send its NIF.	LED one press one flash
	2. There are 4 groups for the switch	

※Including a node ID allocated by Z-Wave Controller means inclusion. Excluding a node ID allocated by Z-Wave Controller means exclusion.
※Failed or success in including/excluding the node ID can be viewed from the Z-Wave Controller.
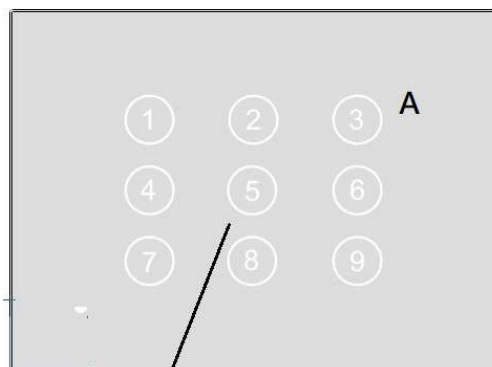
Z-Wave Supported Command Class:
• COMMAND_CLASS_ZWAVEPLUS_INFO_V2
• COMMAND_CLASS_CONFIGURATION
• COMMAND_CLASS_MANUFACTURER_SPECIFIC_V2
• COMMAND_CLASS_VERSION_V2
• COMMAND_CLASS_ASSOCIATION_GRP_INFO
• COMMAND_CLASS_POWERLEVEL
• COMMAND_CLASS_DEVICE_RESET_LOCALLY
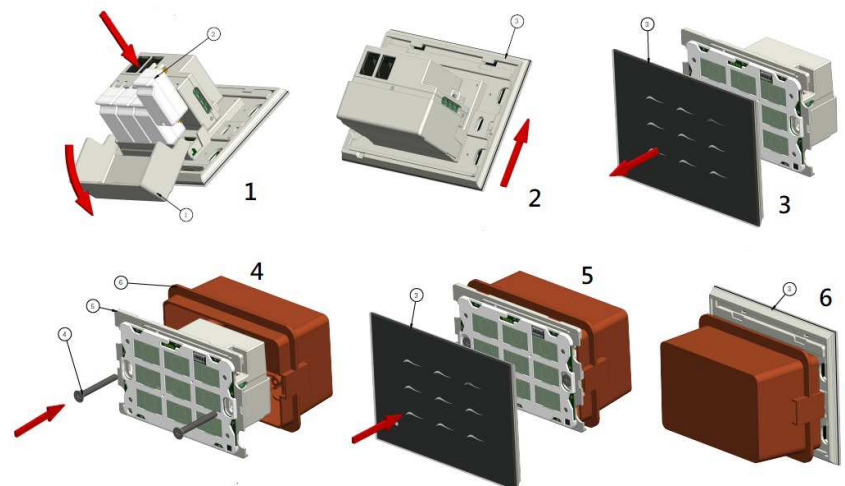• COMMAND_CLASS_SECURITY

Overview

A. LED indication (1-9 button).

B. RJ11 connector x 2.

C. switch or dimmer dongles (operational).

Power on/off and learn button

Installation and Operation

Assembly steps:
1. Open the back cover (1) and insert the dongle (figure 1)
2. Move the panel (3) upwards (Figure 2) and remove it (Figure 3)
3. Install the body (5) in the power distribution box and lock the screws (figure 4)
4. Cover the panel (3) (figure 5) and press down (figure 6)
5. Disassembly can be done in the opposite way

To start using PAN26 Smart touch in-wall Switch, please connect the device to power by L and N.

You also need a PSC03/PAN27 Philio Gateway to connect

1.   Connect power cable to the L and N, and you will see all button
     will turn as Blue
2. Installing the companion APP
2.1 Connect your phone to Internet, login or sign up for google account or APP ID
2.2 Launch Play store or APPLE store
2.3 Search for Philio Home Mate2, then install the companion app.
2.4 Click the APP and you can use local LAN search or QR code to find
     Philio Gateway

2.5 Please use ID: admin / password:888888 to login the APP.

About detail of APP, please see the APP manual(click)

How to use PAN26

1 The functions of PAN26：

1.1. PAN26 can install 4 Relay/Dimmer dongles and can hot plugin.
1.2. PAN26 can use RS485/Z-wave connect.
1.3. PAN26 can be use "Remote control" , Philio call it "Smart Button"
1.4. PAN26 each relay dongle can bear current 5A
1.5. PAN26 each shutter dongle can bear current 5A
1.6. PAN26 each dimmer dongle can bear current 0.7A

Include and Exclude：

1. Include/Exclude: Press Central button(NO5) 1 .5 seconds until the surround LED flash three times
2. To control Relay/Dimmer Dongle:
   The default key is 1. Right Top (Button 3) / 2. Right Button (Button 9)
                     3. Left Bottom (Button 7) / 4. Left Top (Button 1)
3. To control Relay Dongle: You press one time, it change on/off.

4. To control Dimmer Dongle:
* To short press button, the dimmer will be last time dimmer %.
* To long press button, the % will continue change until you free the button.

The setting button mode

1. To enter setting button mode
*Enter setting mode: Press central key (Button 5), and long press right bottom button (Button 9) until surround Blue LED will twice 3 times.
2. To config button mode with Dongle
When you success enter the config button mode, you will see the LED light disappear one by one then turn on Blue light.
The NO1 relay/dimmer dongle the surrounding blue led will flash one time.
The NO2 relay/dimmer dongle the surrounding blue led will flash two time.
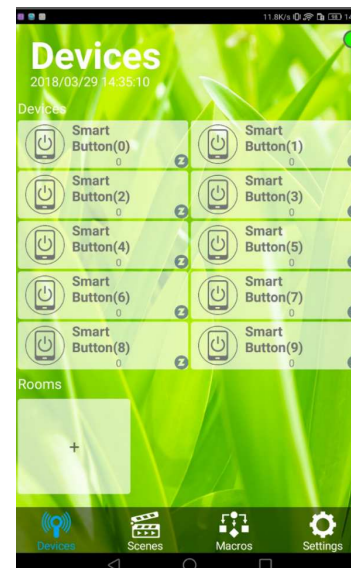The NO3 relay/dimmer dongle the surrounding blue led will flash three time.
The NO4 relay/dimmer dongle the surrounding blue led will flash four time.
*You need finish 4 relay/dongle setting, or the setting will not be saved.
*Leaving setting mode: Press central key (Button 5) ,and long press right bottom button (Button 9) until surround Blue LED will twice 3 times.

How to use Smart Button (Remote control)

1. When you include a 9 button PAN26 and you will see screen like this. You can collapse as 1 Button or expand as 9 buttons.
2. When you click 1 button, you will see the value will change to 105 And you also can long press as the value will be change value 9 every second (9,18, 27, 36, 45, 54, 63, 72, 81, 90, 99)
3. Please press the icon of the button, you will see a lot of config. The most important is "Associate", You need to Associate the Switch and Smart Button here.

Table of connections

interface	L-N	AC100-240V
	NO1-NO4	Control on/off Dimming
	RJ11	4P4C, for RS485 interface
Sensor	Lighting	Light /Dark
	Temperature	-10~40℃
	Humidity	0-80% RH
Button	Learn key	Z-wave include/exclude
LED indicator	1-9 Key	User define
	1-9 Key	Blue/Green
Dongle	Operational	Relay / Dimmer

4. Firmware update over the air (OTA)

PAN26 is based on 500 series SoC and supports Firmware Update Command Class,

it can receives the updated firmware image sent by controller via the Z-wave RF

media. It is a helpful and convenient way to improve some function if needed.

Troubleshooting

Symptom	Cause of Failure	Recommendation
The switch does not work and the LED is off	1. The Switch is not plugged into the electrical outlet properly 2. The Switch break down	1. Check power connections 2. Don't open up the Switch and send it for repair.
The LED illuminates, but cannot turn ON or OFF the switch	1. Check if the load plugged into the Switch has its own ON/OFF switch 2. Not carry out association 3. Same frequency interference	1. Set the ON/OFF switch of the load attached to ON 2. Carry out association 3.Wait for a while to re-try
LED keep flashing, but cannot control	Overload occurs	Remove the load attached or check max. load cannot exceed 10.0A

Specification

Operating Voltage	100-240VAC 50/60Hz 10A
Rated Voltage	220-240Vac 50Hz (EU), 120Vac 60Hz (US), 230Vac 50Hz (IL), 100Vac 50/60Hz (JP)
Output Current	Max.10A (Resistive Load), Relay dongle /Curtain dongle: 5A (model: ME001) Dimmer dongle: 0.7A (Model: ME002) 4 independent relay or dimmer outputs
Maximum DC output	DC12V*4
Maximum Load	10A (Resistive Load)
Range	Minimum 40M in door and 100M in outdoor, line of sight
Operating Temperature	0℃ ~ 40℃ (85% humidity)
Storage Temperature	-20 C ~ 60℃
Location	Indoor use only
Frequency Range	868.40MHz; 869.85MHz(EU) 908.40MHz; 916.00MHz(USA/Canada) 916MHz (Israel)
RF power	+5dBm(EU), -5dBm(US)
interface	RJ11 x 2 (4P4C) for RS485 interface
Dimension	117 (L) x 87(W) x 49 (H) mm
Patent pending	

** Specifications are subject to change and improvement without notice.

FCC ID: RHHPAN26

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⚠ DANGER

Danger of electrocution!

All works on the device may be performed only by a qualified and licensed electrician. Observe national regulations.

Any works introducing changes into the configuration must be always performed with disconnected voltage.

Choosing a Suitable Location
1. Do not locate the Module facing direct sunlight, humid or dusty place.
2. The suitable ambient temperature for the Module is 0℃~40℃.
3. Do not locate the Module where exists combustible substances or any source of heat, e.g. fires, radiators, boiler etc.
4. After putting it into use, the body of Module will become a little bit hot of which phenomenon is normal.

Warning:

1.Plug out to disconnect from power supply; Do not plug in line.

2. Do not exceed the max rating

Disposal

This marking indicates that this product should not be disposed with other household wastes throughout the EU. To prevent possible harm to the environment or human health from uncontrolled waste disposal, recycle it responsibly to promote the sustainable reuse of material resources. To return your used device, please use the return and collection systems or contact the retailer where the product was purchased. They can take this product for environmental safe recycling

FCC Interference Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules.

These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

• Reorient or relocate the receiving antenna.

• Increase the separation between the equipment and receiver.

• Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

• Consult the dealer or an experienced radio/TV technician for help.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and

(2) This device must accept any interference received, including interference that may cause undesired operation.

FCC Caution: Any changes or modifications not expressly approved by the party responsible

for compliance could void the user's authority to operate this equipment.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.