NAMRON Z-WAVE SWITCH 16A

Important: Read All Instructions Prior to Installation

Function introduction

Switch input

namron
4512746
SR-ZV9101SAC-HP-SWITCH-B

LED indicator, indicates when program the switch (inclusion, exclusion, factory reset)

Action button

Reset

μ

100-240V~,50/60Hz,Max 16A

L1 L1 L L N

1 CH load output

AC 100-240V power input
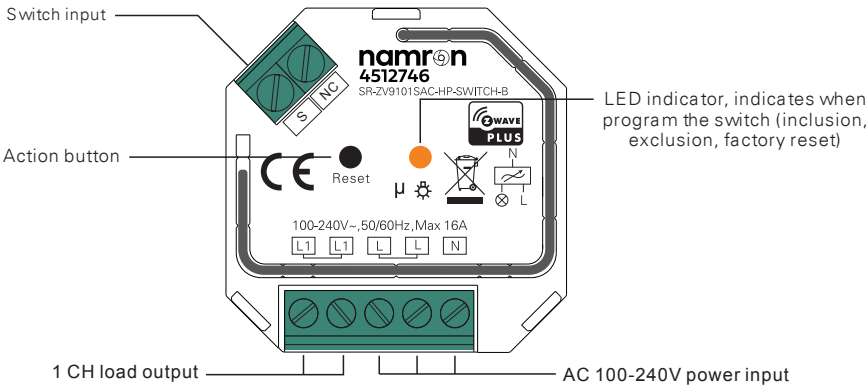
Product Data

Z-Wave Frequency	868.42 MHZ (EU)
Input Voltage	AC100-240V
Output Voltage	AC100-240V
Output Current	16A max.
Operating temperature	0 to 40°C
Relative humidity	8% to 80%
Dimensions	45.5x45x20.3mm

Compatible Load Types			
Load Symbol	Load Type	Maximum Load	Remarks
	LED lamps with transformers	1220W @ 230V 580W @ 110V	Due to variety of LED lamp designs, maximum number of LED lamps is further dependent on power factor result when connected to switch.
	LED drivers	1220W @ 230V 580W @ 110V	Maximum permitted number of drivers is 1220W divided by driver nameplate power rating.
	Incandescent lighting, HV Halogen lamps	3680W @ 230V 1760W @ 110V	
	Low voltage halogen lighting with electronic transformers	1220W @ 230V 580W @ 110V	
	Electrical appliances such as television, refrigerator, water heating etc.	3680W @ 230V 1760W @ 110V	

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

Quick Start
How to install:
- Step 1: power on the Z-Wave in-wall switch.
- Step 2: activate inclusion mode on your Z-Wave controller.
- Step 3: activate inclusion mode of the switch by triple press the action button on the switch. The switch will be included to Z-Wave network.

Product Description
The in-wall switch is a Z-Wave device that is used to switch ON/OFF the connected light or electrical appliances and can be controlled by other Z-Wave devices. The In-wall switch can be included and operated in any Z-Wave network with other Z-Wave certified devices from other manufacturers and/or other applications. All non-battery operated nodes within the network will act as repeaters regardless of vendor to increase reliability of the network.

This device supports the SmartStart inclusion. SmartStart enabled products can be added into a Z-Wave network by scanning the Z-Wave QR Code present on the product with a controller providing SmartStart inclusion. No further action is required and the SmartStart product will be added automatically within a period after the QR code being scanned or reset power of the device. Please find the QR code on the device casing.

The encryption mode that the switch supports is S2 Unauthenticated. When the switch is being included into a Z-Wave network, you can use your primary controller/gateway to enable encryption mode or disable encryption. (The primary controller/gateway shall support encryption mode configuration). The switch supports OTA and can update firmware wirelessly. In addition, the switch is equipped with Power Metering and over current protection.

Operation
Installation Guide
Please read carefully the enclosed user manual before installation of the in-wall switch, in order to ensure an error-free functioning.

ATTENTION: Prior to the assembly of the product, the voltage network has to be switched OFF and ensured against re-switching.

Inclusion (adding to a Z-Wave network)
1. Set primary controller/gateway into inclusion mode (Please refer to your primary controllers manual on how to turn your controller into inclusion).

2. Power on the in-wall switch and set it into inclusion mode. There are two methods to set the in-wall switch into inclusion mode:
1)Triple press the action button on the switch, LED indicator will flash rapidly, it will set the switch into inclusion mode for 30 seconds, if there is no reply from the gateway, the device will quit inclusion mode after 30 seconds.
2)When the value of parameter 5 is configured as 1, triple press the external switch rapidly within 1.5 seconds, LED indicator will flash rapidly, it will set the switch into inclusion mode for 30 seconds, if there is no reply from the gateway, the device will quit inclusion mode after 30 seconds.

The LED indicator will stay solid on for 3 seconds if the device is added to the network successfully. The indicator will turn off if inclusion fails.

Exclusion (removing from a Z-Wave network)
There are two exclusion methods:
Method 1: Exclusion from the primary controller/gateway as follows:
1. Set the primary controller/gateway into exclusion mode (Please refer to your primary controllers manual on how to set your controller into exclusion).

2. Power on the in-wall switch and set it into exclusion mode. There are two methods to set the in-wall switch into exclusion mode:
1)Triple press the action button on the switch, LED indicator will flash rapidly, it will set the switch into exclusion mode for 30 seconds, if there is no reply from the gateway, the device will quit exclusion mode after 30 seconds.
2)When the value of parameter 5 is configured as 1, triple press the external switch rapidly within 1.5 seconds, LED indicator will flash rapidly, it will set the switch into exclusion mode for 30 seconds, if there is no reply from the gateway, the device will quit exclusion mode after 30 seconds.

The LED indicator will stay solid on for 3 seconds if the device is removed from the network successfully. The indicator will turn off if exclusion fails.

Method 2: Factory reset the switch will force the switch to be excluded from a network. (please refer to the part "Factory Reset" of this manual)

Note: Factory reset is not recommended for exclusion, please use this procedure only if the primary controller/gateway is missing or otherwise inoperable.

Factory Reset
Press and hold down the action button for over 10 seconds, LED indicator flashes slowly, the switch will restart and reset to factory defaults.

Scene Control
Users can configure scenes using command class SCENE_ACTUATOR_CONF_SET, and activate the scenes using command class SCENE_ACTIVATION_SET.

Association
Z-Wave devices control other Z-Wave devices. The relationship between one device controlling another device is called association. In order to control a different device, the controlling device needs to maintain a list of devices that will receive controlling commands. These lists are called association groups and they are always related to certain events (e.g. button pressed). In case the event happens all devices stored in the respective association group will receive a common wireless command.

Association Groups:

Association Groups	Group Name	Max Nodes	Description
Group 1	Lifeline	5	1. When press and hold down "Reset" button for 10S to reset the device, send "Device Reset Locally Notification" to associated devices of this group to report factory reset information. 2. When over load detected, send "NOTIFICATION_REPORT" to associated devices of this group. 3. Report energy meter actively. 4. Send basic report automatically.

Set and unset associations:
(Note: All association information will be cleared automatically once the switch is excluded from a network.)

Set association by operating primary controller/gateway to send packets to the switch:
The primary controller/gateway sends packets to the switch using "Command Class ASSOCIATION"

Node Information Frame
The Node Information Frame is the business card of a Z-Wave device. It contains information about the device type and the technical capabilities. The inclusion and exclusion of the device is confirmed by sending out a Node Information Frame. Beside this it may be needed for certain network operations to send out a Node Information Frame.
How to send out Node Information Frame:
When the switch is set to inclusion/exclusion mode again, it will send out Node Information Frame, there are 2 kinds of operation as follows:
1. Triple press the action button, the dimmer will be set to inclusion/exclusion mode, then send out Node Information Frame.
2. When the switch is under inclusion mode, there are two kinds of operation:
1) Triple press inclusion/exclusion button, the switch will be set to inclusion mode again, and send out Node Information Frame.
2) Power off and power on the switch, it will be set to inclusion mode automatically, and send out Node Information Frame.

Technical Data

Wireless Range	up to 100 m outside, on average up to 40 m inside buildings
SDK	7.13.6.0
Explorer Frame Support	Yes
Device Type	On/Off Power Switch
Generic Device Class	GENERIC_TYPE_SWITCH_BINARY
Specific Device Class	SPECIFIC_TYPE_POWER_SWITCH_BINARY
Role Type	Always On Slave (AOS)
Routing	Yes

Supported Command Class

Node Info		Security Command Supported Report	
COMMAND_CLASS_ZWAVEPLUS_INFO	V2	COMMAND_CLASS_MANUFACTURER_SPECIFIC	V2
COMMAND_CLASS_TRANSPORT_SERVICE	V2	COMMAND_CLASS_VERSION	V3
COMMAND_CLASS_SECURITY	V1	COMMAND_CLASS_SWITCH_BINARY	V2
COMMAND_CLASS_SECURITY_2	V1	COMMAND_CLASS_SCENE_ACTIVATION	V1
COMMAND_CLASS_SUPERVISION	V1	OMMAND_CLASS_SCENE_ACTUATOR_CONF	V1
		COMMAND_CLASS_METER	V5
		COMMAND_CLASS_NOTIFICATION	V8
		COMMAND_CLASS_CONFIGURATION	V1
		COMMAND_CLASS_ASSOCIATION_GRP_INFO	V1
		COMMAND_CLASS_ASSOCIATION	V2
		COMMAND_CLASS_FIRMWARE_UPDATE_MD	V4
		COMMAND_CLASS_POWERLEVEL	V1
		COMMAND_CLASS_DEVICE_RESET_LOCALLY	V1
		COMMAND_CLASS_INDICATOR	V3

Notification Report

Notification Type	Triggerring Event
NOTIFICATION_TYPE_POWER_MANA GEMENT(08)	POWER_MANAGEMENT_OVERCURRENT_ DETECTED(06)
NOTIFICATION_TYPE_POWER_MANA GEMENT(08)	POWER_MANAGEMENT_OVERLOADED_N T_DETECTED(08)

Over Current Alarm: When connecting to resistive load, over current protection value is 16A.

Note: When over current or overload protection is enabled (value of configuration parameter 4 not configured as 0), if the device detects that the load current is over 16A or power is over 3700W, the relay will be forced to off, unless reset power of the device, otherwise the device will always be at alarm status, and report alarm every 60 seconds.

Configuration Command Class

Parameter	Size	Description	Default Value
0x02(2)	1	Info: Saving load state before power failure 0 — shutoff load 1 — turn on load 2 — save load state before power failure	2
0x03(3)	1	Info: Enable/disable to send the basic report to the Lifeline when the load state changed 0 — Disable to send Basic report 1 — Enable to send Basic report	1
0x04(4)	1	Enable/disable over current or over load protection, report alarm when the load is over 16A if enabled 0: disable 1: enable	1
0x05(5)	1	External switch type 0: push button switch 1: normal on/off switch	1
0x07(7)	1	Added to and removed from a network through external switch (when enables this function, triple press the external switch to be added to or removed from a network) 0 - disable 1 - enable Note: if this function is enabled, when triple press the switch rapidly, the device will be set to inclusion or exclusion mode, then device status will not be reported (basic report) during this process.	1
0x0A(10)	1	Power change absolute threshold report, report when the power change value is over the threshold, unit is W 0: disable absolute threshold report function 1-255: value of the power change absolute threshold, if power change value is over the threshold value, report the power change value using METER_REPORT	5
0x0B(11)	1	Current change absolute threshold, unit is 0.1A 0: disable absolute threshold function 1-255: value of the current change absolute threshold, if current change value is over the threshold value, report the current change value using METER_REPORT	1
0x0C(12)	1	Voltage change absolute threshold, unit is 1V 0: disable absolute threshold function 1-255: value of the voltage change absolute threshold, if voltage change value is over the threshold value, report the voltage change value using METER_REPORT	2
0x0d(13)	4	Time cycle to report the values of energy consumption, voltage, current and load power actively 60-2678400 (31 days), value of the time cycle, unit is S.	1800(30mins)

Wiring Diagram

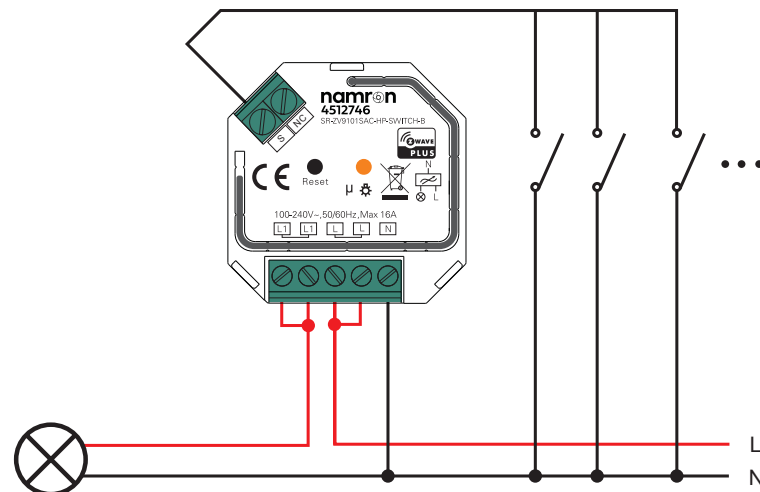**Notes for the diagrams:**

L - terminal for live lead
N - terminal for neutral lead
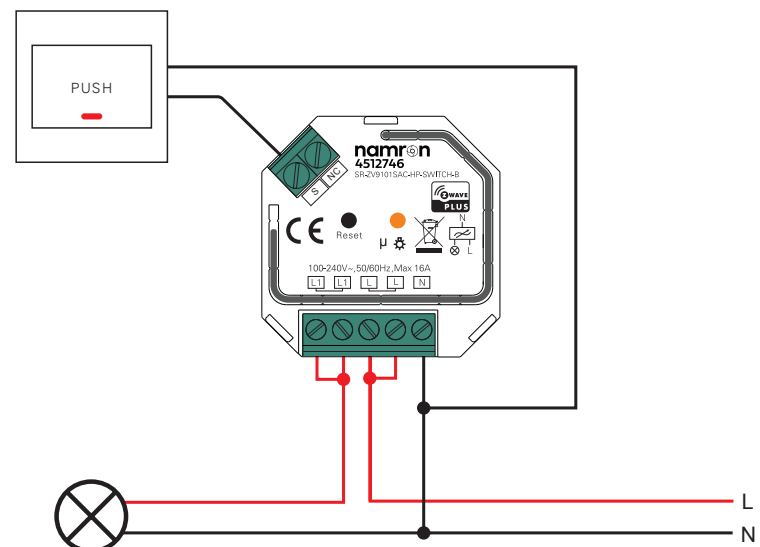**L1** - output terminals of the device (controlling connected light source)
S - terminal for external switch
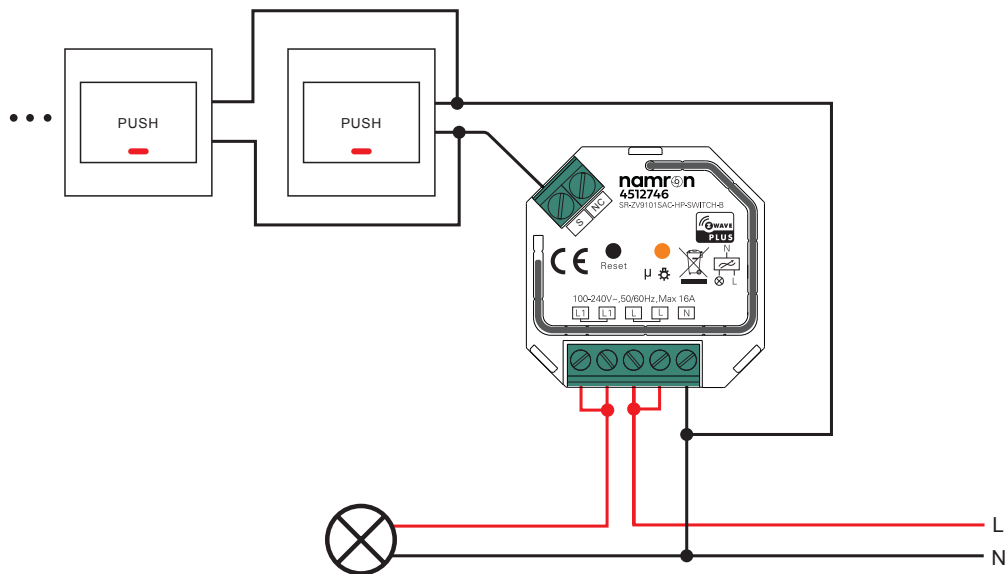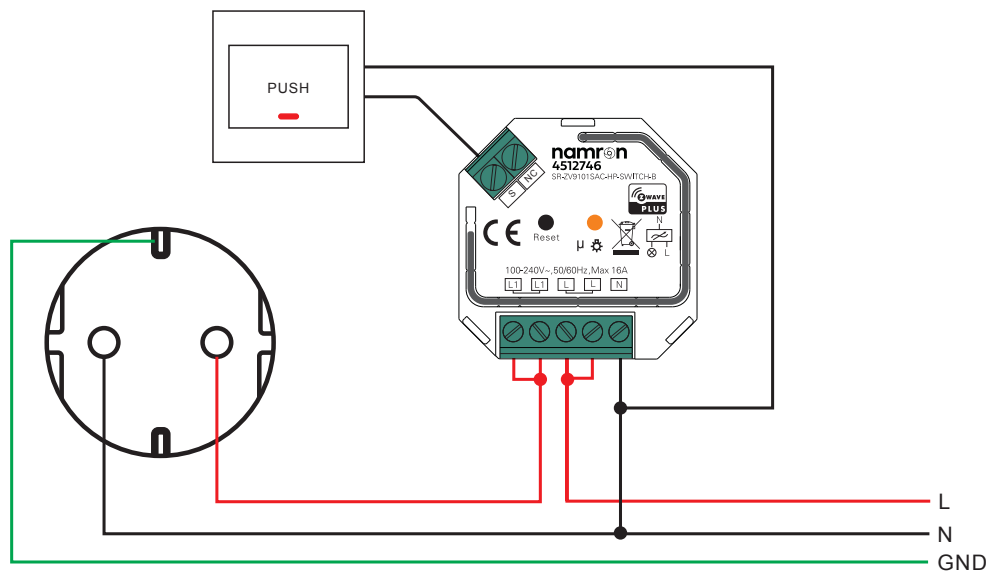**NC** - No Connection

1) With Normal On/Off Switch

2) With Single Push Button Switch

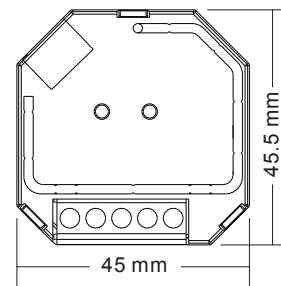## 3) With Multiple Push Switches for Multiple Control Points

PUSH • • • **PUSH**

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Reset μ ☼

100-240V~,50/60Hz,Max 16A
L1 L1 L L N

L
N

Product Dimension

45.5 mm

20.3 mm

45 mm

4) Connect With Socket

PUSH

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SR-ZV9101SAC-HP-SWITCH-B

Reset μ ☼

100-240V~,50/60Hz,Max 16A
L1 L1 L L N

L
N
GND
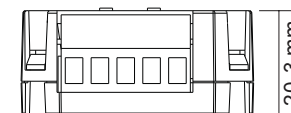
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the smarter choice