

Touch Panel Switch

MH-S510 Series

Introduction

Touch Panel Switch is a wall panel built-in with Z-Wave Plus module. With its stylish design and stable performance, the panel can be used to control house-hold electrical appliances like lamp, motor, coffee machine, TV set etc. This product can be included and operated in any Z-Wave network with other Z-Wave certified devices from any other manufacturers.

Specifications

- Power supply: 85~260VAC, 50/60Hz
- Z-Wave frequency: 908.42MHz (US), 921.4MHz (AU) or other frequency customized

Item	Models	Max Load
510 series	MH-S511	1*5A
	MH-S512	2*5A
	MH-S513	3*5A
	MH-S511H	1*10A

Note: If an inductive load wired, please choose model MH-S511H. (LED load: <10A, inrush current<165A/ 20ms)

Installation Instructions

IMPORTANT:

- A qualified electrician with the understanding of wiring diagrams and knowledge of electrical safety should complete the installation inside the main circuit box (normally outside your house).
- Read all instructions and documentation and save for future reference.

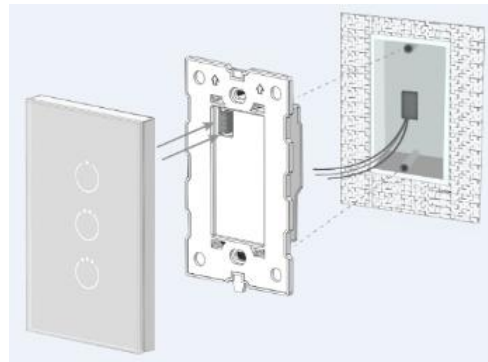
Step1 Preparing

CAUTION: Cut off power supply at circuit breaker or fuse before installation to avoid fire, shock or death!

Step2 Installation

Step 1: Separate the device into two parts: the touch panel and the bottom.

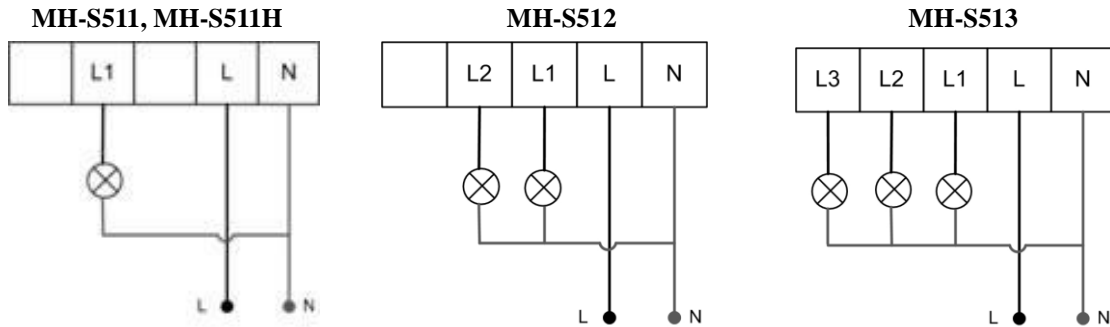
Step 2: Insert all wires into the right terminals by following the wiring diagrams as below, and tighten screws.



Step 3: Secure the bottom part onto a junction box with screws, and then mount the touch panel back.

Step 4: Confirm the device is well mounted, power on and it is ready to operate.

Wiring (standard strip length: 6-8mm)



Operation

Add the device into Z-Wave network:

1. Set controller into ADD mode. Follow instructions provided by controller manufacturer.
2. Press and hold any key on the panel for 8 seconds or 3 clicks in quick succession.

Note: If the ADD is successful, all INDICATION LEDs on the panel will flash 4 times.

Remove the device from Z-Wave network:

1. Set controller into REMOVE mode. Follow instructions provided by controller manufacturer.
2. Press and hold any key on the panel for 8 seconds or 3 clicks in quick succession.

Note: If the REMOVE is successful, all INDICATION LEDs on the panel will flash 4 times. The REMOVE will delete all association data.

Turning on/off the device:

The device can be controlled by:

- Pressing any key.
- Sending commands through controller or gateway. (the command classes which support this function are Basic Command Class, Binary Command Class, and Multi Channel Command Class.)

Multi Channel Control:

The switch can be controlled by command “MULTI_CHANNEL_ENCAP” in the command class “COMMAND_CLASS_MULTI_CHANNEL”.

Device Type	GENERIC_TYPE_SWITCH_BINARY
Supported command classes	COMMAND_CLASS_ZWAVEPLUS_INFO COMMAND_CLASS_SECURITY_2 COMMAND_CLASS_SUPERVISION COMMAND_CLASS_ASSOCIATION COMMAND_CLASS_ASSOCIATION_GRP_INFO COMMAND_CLASS_MULTI_CHANNEL_ASSOCIATION COMMAND_CLASS_SWITCH_BINARY

Correspondence between key and endpoint number:

1. First key correspond to endpoint 1.
2. Second key correspond to endpoint 2.
3. Third key correspond to endpoint 3.

Multi endpoint command format:

Byte	Name
1	COMMAND_CLASS_MULTI_CHANNEL
2	MULTI_CHANNEL_CMD_ENCAP
3	Source End Point
4	Destination End Point
5	COMMAND_CLASS_SWITCH_BASIC or COMMAND_CLASS_SWITCH_BINARY
6	BASIC_SET/BASIC_GET or BINARY_SET/BINARY_GET
7	Value (0xFF -- ON 0x0 -- OFF)

Multi Channel Association:

AG identifier (Root)	Max Node	Mapped endpoint group	Command Classes	Trigger situation
0x01	1 (EPs Max node is 0)	all endpoints	COMMAND_CLASS_BASIC, BASIC_REPORT	Short press any key for one time
		all endpoints	COMMAND_CLASS_DEVICE_RESET_LOCALLY, DEVICE_RESET_LOCALLY_NOTIFICATION	Touch any key 20 times in succession
		all endpoints	COMMAND_CLASS_CENTRAL_SCENE, CENTRAL_SCENE_NOTIFICATION	Short press any key for one time
0x02	5	EP1 group 2	COMMAND_CLASS_BASIC, BASIC_SET	Short press first button
0x03	5	EP2 group 2	COMMAND_CLASS_BASIC, BASIC_SET	Short press second button
0x04	5	EP3 group 2	COMMAND_CLASS_BASIC, BASIC_SET	Short press third button

Root device:

- 1.The gateway controls the root device to open, all end points will open
- 2.The gateway controls the root device to close, all end points will close
- 3.When End Point 1 opened, it will report opening status to root device.
- 4.When End Point 1 closed, it will report closing status to root device.

Association:

The device supports 4 association groups (AG):

AG identifier	Max Node ID	Command Classes	Trigger situation
0x01	1	COMMAND_CLASS_BASIC, BASIC_REPORT	Short press any key for one time
		COMMAND_CLASS_DEVICE_RESET_LOCALLY, DEVICE_RESET_LOCALLY_NOTIFICATION	Touch any key 20 times in succession
		COMMAND_CLASS_CENTRAL_SCENE, CENTRAL_SCENE_NOTIFICATION	Short press any key for one time
0x02	5	COMMAND_CLASS_BASIC, BASIC_SET	Short press first button
0x03	5	COMMAND_CLASS_BASIC, BASIC_SET	Short press second button
0x04	5	COMMAND_CLASS_BASIC, BASIC_SET	Short press third button

Central Scene Activate Device

As a Central Scene Activate device, it supports “Central Scene CC”. When pressing the switch button, it will send “Central Scene Notification” to Association Group 1 (normally associated to gateway). This function is always being activated and cannot be disabled.

ZWAVE Supported Command:

1.Root Device

Command Class supported : (supports S2 unauthenticated level)

- COMMAND_CLASS_ASSOCIATION,
- COMMAND_CLASS_ASSOCIATION_GRP_INFO,
- COMMAND_CLASS_MULTI_CHANNEL_ASSOCIATION,
- COMMAND_CLASS_MULTI_CHANNEL,
- COMMAND_CLASS_VERSION,
- COMMAND_CLASS_MANUFACTURER_SPECIFIC,
- COMMAND_CLASS_DEVICE_RESET_LOCALLY,
- COMMAND_CLASS_POWERLEVEL,
- COMMAND_CLASS_SWITCH_BINARY,
- COMMAND_CLASS_CONFIGURATION,
- COMMAND_CLASS_SCENE_ACTUATOR_CONF,
- COMMAND_CLASS_SCENE_ACTIVATION,
- COMMAND_CLASS_CENTRAL_SCENE,
- COMMAND_CLASS_BASIC,
- COMMAND_CLASS_FIRMWARE_UPDATE_MD

Command Class supported: (Not supports S2)

- COMMAND_CLASS_ZWAVEPLUS_INFO,
- COMMAND_CLASS_TRANSPORT_SERVICE,
- COMMAND_CLASS_SECURITY,
- COMMAND_CLASS_SUPERVISION

2.End Point Device

Command Class supported : (supports S2 unauthenticated level)

- COMMAND_CLASS_ASSOCIATION,
- COMMAND_CLASS_ASSOCIATION_GRP_INFO,
- COMMAND_CLASS_MULTI_CHANNEL_ASSOCIATION,
- COMMAND_CLASS_SWITCH_BINARY

Command Class supported: (Not supports S2)

- COMMAND_CLASS_ZWAVEPLUS_INFO,
- COMMAND_CLASS_SECURITY_2,
- COMMAND_CLASS_SUPERVISION

Parameters Setting:

Number	Function	size	description	Default	Possible values
0x02	Switch state saved or not when power failure	1	<p>0x00 not saved, switch will be off when powered again</p> <p>0x01 saved, switch will keep the same state when powered again</p>	0x01	0-1
0x04	LED Backlit brightness level	1	<p>0x00 LED disabled</p> <p>0x01~0x0A Min level-Max level</p>	0x0A	0-0x0A
0x05	Key Mode	1	<p>0x00 single click to switch on/off status</p> <p>0x01 Key default as off state. When it is turned on, then it will be turned off automatically after a time period , which can be set in item 0x06</p> <p>0x02 Key default as on state. When it is turned off, then it will be turned on automatically after a time period , which can be set in item 0x06</p>	0x00	0-2
0x06	Key On duration	2	<p>0x00 infinite</p> <p>1~32767 unit "sec"</p>	0x0000	0-32767
0x07	External aux-switch type	1	<p>0x00 Button(Momentary button)</p> <p>0x01 Toggle(2-state switches)</p>	0x00	0-1

Restoring Factory Settings

Press 20 times of any button (the interval time of touching is less than 500 milliseconds and the relay will keep same state after continually touching more than five times) or exclude the device from Z-Wave network, the factory setting will be restored.

Please use this procedure only when the network primary controller is missing or otherwise inoperable.

SAFETY NOTICE

1. Flush-mount only into a UL/ETL/CE certified plastic junction box and switch panel cover. The minimum size should be 90*60*50mm, minimum Volume is 270cm³.
2. Use Copper Conductors Only.
3. CAUTION - Risk of Electric Shock - More than one disconnect switch may be required to de-energize the equipment before servicing.

FCC Warning (Part 15.21) (USA only)

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

FCC Interference Statement (Part 15.105 (b)) (USA only)

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.

1-year Limited Warranty

We warrant this product to be free from defects in material and workmanship under normal and proper use for one year from purchase date of the original purchaser. We will, at its option, either repair or replace any part of its products that prove defective by reason of improper workmanship or materials. THIS LIMITED WARRANTY DOES NOT COVER ANY DAMAGE TO THIS PRODUCT THAT RESULTS FROM IMPROPER INSTALLATION, ACCIDENT, ABUSE, MISUSE, NATURAL DISASTER, INSUFFICIENT OR EXCESSIVE ELECTRICAL SUPPLY, ABNORMAL MECHANICAL OR ENVIRONMENTAL CONDITIONS, OR ANY UNAUTHORIZED DISASSEMBLY, REPAIR OR MODIFICATION. This limited warranty shall not apply if: (i) the product was not used in accordance with any accompanying instructions, or (ii) the product was not used for its intended function. This limited warranty also does not apply to any product on which the original identification information has been altered, obliterated or removed, that has not been handled or packaged correctly, that has been sold as second-hand or that has been resold contrary to Country and other applicable export regulations.