Minoston®

Smart Toggle Dimmer Switch
• MS13Z •

Specifications:
Model: MS13Z
Power: 120VAC, 60Hz
Frequency: 908.42 MHz
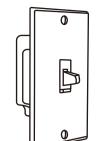Maximum: 500W incandescent, 150W LED
Minimum: 5W Dimmable LED
Temperature Range: 32° F~104° F

Indoor use in dry location

- Switch x1
- Wiring x1
- Screws x2
- Faceplate x1

FEATURES
1. 2 ways of control: Manual & wireless control switch on/off and brightness.
2. Support 3-way control with regular/ dummy switch(non-dimming switch)--neutral wire required.
3. Support 2 customized scene functions.
4. Built-in Z-Wave Plus signal repeater /range extender.
5. S2 security protocol + the latest 500 series Z-Wave chip.
6. OTA for firmware updates.
7. Support customized parameter settings.
8. Support brightness calibration of LED lights from different brands.

FCC / IC
This device complies with part 15 of the FCC and Industry Canada license-exempt RSS standard(s). Operation is subjected to the following two conditions:
FCC NOTE: The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment. Such modifications could void the user's authority to operate the equipment.
— 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) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

⚠ CAUTION - PLEASE READ!
This device (MS13Z) is intended for installation in accordance with the National Electric Code and local regulations in the United States, or the Canadian Electrical Code and local regulations in Canada. If you are unsure or uncomfortable about performing this installation consult a qualified electrician.

⚠ CONTROLLING APPLIANCES
Please exercise EXTREME CAUTION when using Z-Wave devices to control appliances. Reason being is because the appliance you want to control may be in a separate room and if unintentional behavior occurs (such as a device turning on or off - either intentionally via schedules, or unintentionally via network error) this event may lead to a hazardous condition. For these reasons, please note the following suggestions:
1) Do not include Z-Wave devices in Groups or Scenes if they control appliances.
2) Do not use Z-Wave devices to control electric heaters or any other appliances which may present a hazardous condition due to unattended, unintentional, or automatic power control

NOTE: 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 or more of the following measures:
Important note: To comply with the FCC RF exposure compliance requirements, no change to the antenna or the device is permitted. Any change to the antenna or the device could result in the device exceeding the RF exposure requirements and void user's authority to operate the device.

⚠ WARNING - SHOCK HAZARD
TURN OFF THE POWER to the circuit for the switch and lighting fixture at the service panel (circuit breaker) prior to installation.
ALL WIRING CONNECTIONS MUST BE MADE WITH THE POWER OFF to avoid personal injury and/or damage to the switch.

⚠ OTHER WARNINGS
Risk of Fire
Risk of Electrical Shock
Risk of Burns

⚠ MEDICAL EQUIPMENT
Please DO NOT use this switch to control Medical or Life Support equipment. Z-Wave devices should never be used to control the On/Off status of Medical and/or Life Support equipment.
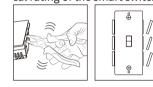
Z-WAVE INTEROPERABILITY
This product can be included and operated in any Z-Wave network with other Z-Wave certified devices from other manufacturers and/or other applications. All non-battery operated nodes within the network will act as repeaters regardless of vendor to increase the reliability of the network.
This Device supports Lifeline (association group 1) supporting 1 node for lifeline communication.
Group 1 must be assigned the Node ID of the primary controller where unsolicited notifications will be sent. The Z-Wave controller should set this association automatically after inclusion.
Lifeline association only supports the "Device Reset Locally" function. Refer to the instructions of your controller for any available details on how this can be set.

Installation in multiple gang boxes
Please break off one or both sides of the scored tabs on the front yoke if you install it in multiple gang Boxes. This does not affect the electrical rating of the smart switch.

Triple Gang Boxes
IMPORTANT! Please Read.
For 3-Way setups, please only use an On/Off, 3-Way slave switch (non-dimming).

Please Note.
Line and load must be in the same box for this schematic to work. if yours is not, please reach out for a custom schematic.

(3-WAY SWITCH WIRING)
Note: The Traveler terminal is only used for 3-way wiring .

To Replacement Bulb
When changing bulbs to cut off power of the switch for your safety and shock prevention.

Air-Gap Switch:
Push to left for Bulb replacement
Push back for normal use.

INSTALLATION
1. Connect the Smart Switch in accordance with the wiring diagram presented on(**Single switch**).
2. If one more external switch is needed, like a lamp between two floors can be controlled by either switch, connect wires like (**3-Way switch option 1/2**).
3. Place the device in a switch box.
4. Fix the shell with screws.(**Please use our screws.**)
5. Turn on the power supply to keep the necessary safety.

IMPORTANT!
The fixture controlled by the Z-Wave In-wall Smart Switch must not exceed 150W LED, 500W incandescent.
The switch is designed only for use with permanently installed fixtures.
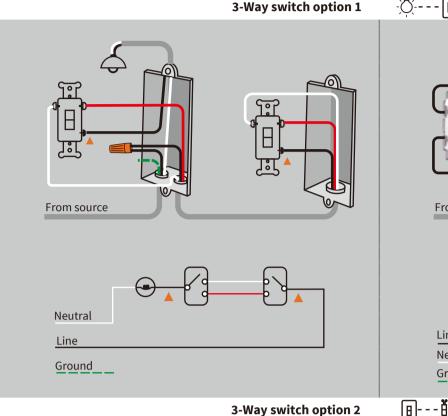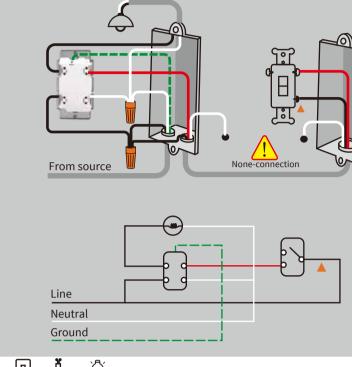**Pre-installation preparation**
1) Please prepare a flat head screwdriver, a wire stripper, and a voltmeter. Just in case you might need them.
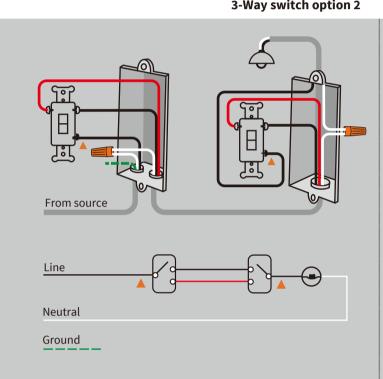2) Before installation makes sure the voltage supply is disconnected. And carefully remove the switch from the switch box.

Identify the wires.
- LINE (Hot) — Black (connected to power)
- NEUTRAL — White
- LOAD — Black (connected to lighting)
- GROUND — Green/Bare
- TRAVELER — Red/Other(only in 3-way in stallations)
- ▲ COMMON

Single switch

3-Way switch option 1

3-Way switch option 2

Operation	LED Status(Blue)	Switch
press down	ON (Default)	power OFF (Default)
press up	OFF (Default)	power ON (Default)
hold	/	dimmer up or dimmer down
press 2x quickly	/	send scene 1 / scene 2
press 3x quickly (see below)	flash quickly	inclusion /exclusion
press 5x quickly	flash slowly	Min / Max brightness level setting
press 6x quickly	flash two times	change LED status
press 7x quickly	flash two times	change locally button function
press 8x quickly	flash two times	restores state after power failure
except local press & hold	flash two times	dimmer speed
only for local press & hold	flash two times	dimmer speed
parameter change	flash two times	configuration succeed
tap-tap and hold 10 seconds	flash quickly	factory default

Adding your device to a Z-Wave network
Make your controller/hub into the "inclusion" mode, triple press the Up/Down push button quickly to include it in the network.

To exclude and reset the device
Make your controller/hub into the "exclusion" mode, triple press the Up/Down push button quickly to exclude it from the network.

To return your switch to factory defaults
1. Tap-tap and hold the upper paddle for at least 10 seconds.
Note: This should only be used in the event your network's primary controller is missing or otherwise inoperable.

Scene:
Scene 1: Tap-Down-2
Scene 2: Tap-Up-2

Works with Alexa & Google Assistant
It must be connected to a supported hub in order to interact with the Amazon Alexa / Google Home services.

Min / Max brightness level setting
1: Press the button 5 times (up/down) quickly, the blue indicator light flashes slowly, enter the setting "Min brightness" mode, and the load lamp automatically adjusts to the min brightness.
2: Press the up or down button to adjust the brightness of the bulb, select the appropriate brightness to set the min brightness.
3: Quick Press the button 5 times (up/down) to confirm it (the min brightness setting is completed). It will be entered into the "Max Brightness" setting automatically, the bulb will adjust to the max brightness.
4: Press the up or down button to adjust the brightness of the bulb, and select the appropriate brightness to set the max brightness.
5: Press the button 5 times (up/down) to confirm.
6: After confirmation, the brightness of the bulb will automatically be adjusted from the set min brightness to the max brightness, then from the max brightness to the min brightness, finally stays at the set min brightness. The blue indicator light stops flashing.
7: Min / Max brightness level settings are completed.
Remark: If the setting is not confirmed at Step 3/Step 5, the setting mode will be exited after 10S, and the adjusted value will not be saved.

Possible Problem	Possible Cause	Solution
1. The connected LED is flashed/too bright when set it to the Minimum brightness level.	LED brightness minimum setting is incorrect.	Please set the minimum brightness level according to the manual.
2. Couldn't pair with hub/your hub cannot recognize the device.	The device needs to be resetted before pairing.	Please reset the device according to the manual.
3. The device couldn't trun lights on/off manually.	Wiring errore	Please check the wiring diagram on the manual.
4. The smart switch is working and the 3-way switch does not.	3-way Wiring error	Please check the wiring diagram on the manual.

We are always here for you:
ask@minoston.com

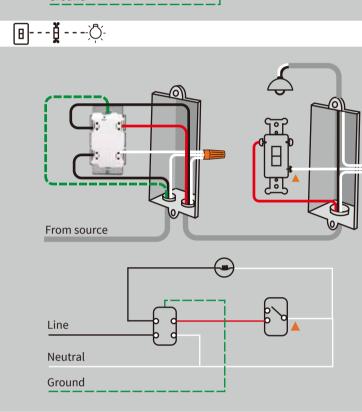## Parameter Settings
1: Locally Button function(quickly press 7x)
(LED flashes 2 times when the configuration parameter changed.)
---Parameter=1, Size=1,
   Value=0   Up Button: On/Down Button: Off(Default)
   Value=1   Up Button: Off/Down Button: On
   Value=2   Up Button: On/Off/Down Button: On/Off
---Parameter 1: Choose if you want the upper paddle to turn the light on or turn the light off when tapped, or if you'd like any paddle to change the state of the light.
Values: 0 – Upper paddle turns the light on, lower paddle turns the light off (default); 1 – Upper paddle turns the light off, lower paddle turns the light on; 2 - **any paddle changes the state of the light.**

2: LED Indicator(quickly press 6x)
(LED flashes 2 times when the configuration parameter changed.)
---Parameter=2, Size=1, Default =0
   Value=0   On when Off and Off when On
   Value=1   On when On and Off when Off
   Value=2   Always Off
   Value=3   Always On

3: Auto Turn-Off Timer
(LED flashes 2 times when the configuration parameter changed.)
---Parameter=4, Size=4, Values: 0 – 65535 (minutes);
                        0 (minutes) – default setting.

4: Auto Turn-On Timer
(LED flashes 2 times when the configuration parameter changed.)
---Parameter=6, Size=4, Values: 0 – 65535 (minutes);
                        0 (minutes) – default setting.

5: Association Setting Parameter
(LED flashes 2 times when the configuration parameter changed.)
---Parameter=7, Size=1, Value=00 – none
   Value=01 - local
   Value=02 - 3way
   Value=03 - 3way & local
   Value=04 - z-wave hub
   Value=05 - z-wave hub & local
   Value=06 - z-wave hub & 3-way
   Value=07 - z-wave hub & local & 3way
   Value=08 - timer
   Value=09 - timer & local
   Value=10 - timer & 3-way
   Value=11 - timer & 3-way & local
   Value=12 - timer & z-wave hub
   Value=13 - timer & z-wave hub & local
   Value=14 - timer & z-wave hub & 3-way
   Value=15 - all
Default = 15

6: Restores state after power failure(quickly press 8x)
(LED flashes 2 times when the configuration parameter changed.)
---Parameter=8, Size=1, Value=0   output off
                        Value=1   output on
                        Value=2   output the state after power (Default)

7: Dimmer speed（except local press & hold）
(LED flashes 2 times when the configuration parameter changed.)
---Parameter=9, Size=1,
   Value=1   from 0x63 to 0x00 or from 0x00 to 0x63 need 1s
   Value=2   from 0x63 to 0x00 or from 0x00 to 0x63 need 2s.
   ╲
   Value=10   from 0x63 to 0x00 or from 0x00 to 0x63 need 10s
Default = 1

8: Dimmer speed (only for local press & hold)
(LED flashes 2 times when the configuration parameter changed.)
---Parameter=10, Size=1,
   Value=1   from 0x63 to 0x00 or from 0x00 to 0x63 need 1s
   Value=2   from 0x63 to 0x00 or from 0x00 to 0x63 need 2s
   /
   Value=10 from 0x63 to 0x00 or from 0x00 to 0x63 need 10s
Default = 4

9: Multilevel minimum value can be set（ALL）(quickly press 5x)
(LED flashes 2 times when the configuration parameter changed.)
---Parameter=11, Size=1, Value=0   disable
                        Value=1
                        /
                        Value=99
Default = 10

Association Group:
Group 1 supports 1 node ID,
Group 2 Supports maximum of 5 node ID's
Association group_1: Z-Wave Plus Lifeline
Association Group 2: Send Basic Set ON / Off

Locally Button Press function:
1: press 1x: turn output ON (to last set brightness level) or OFF
2: hold: dimmer up or dimmer down relate to Parameter 1
3: quickly press 2x: send scne1/scene2
4: quickly press 3x: inclusion or exclusion
5: quickly press 5x: Set the minimum brightness
6: quickly press 6x: change LED Indicator Parameter
7: quickly press 7x: change Parameter 1
8: quickly press 8x: change Parameter 8
9: Factory reset: click Z-Wave button 2 times quickly, and hold for at least 10 seconds.

LED indicator:
1: flash two times
When configuration parameter succeed LED flash two times
2: quickly flash
When inclusion or exclusion or reset, LED will quickly flash till operate complete.

Generic Device Class:
0x11- GENERIC_TYPE SWITCH_MULTILEVEL
Specific Device Class:
0x01-SPECIFIC_TYPE POWER_SWITCH_MULTILEVEL
Command Classes:
0x5E - COMMAND_CLASS_ZWAVEPLUS_INFO
0x26 - COMMAND_CLASS_SWITCH_MULTILEVEL
0x85 - COMMAND_CLASS_ASSOCIATION
0x8E - COMMAND_CLASS_MULTI_CHANNEL_ASSOCIATION
0x59 - COMMAND_CLASS_ASSOCIATION_GRP_INFO
0x55 - COMMAND_CLASS_TRANSPORT_SERVICE
0x86 - COMMAND_CLASS_VERSION
0x72 - COMMAND_CLASS_MANUFACTURER_SPECIFIC
0x5A - COMMAND_CLASS_DEVICE_RESET_LOCALLY
0x73 - COMMAND_CLASS_POWERLEVEL
0x70 - COMMAND_CLASS_CONFIGURATION
0x5B- COMMAND_CLASS_CENTRAL_SCENE
0x9F - COMMAND_CLASS_SECURITY_2
0x6C - COMMAND_CLASS_SUPERVISION
0x7A - COMMAND_CLASS_FIRMWARE_UPDATE_MD

⚠ WARRANTY
Our Products warrants this product to be free from manufacturing defects for a period of one year from the original date of consumer purchase. This warranty is limited to the repair or replacement of this product only and does not extend to consequential or incidental damage to other products that may be used with this product. This warranty is in lieu of all other warranties, expressed or implied. Some states do not allow limitations on how long an implied warranty lasts or permit the exclusion or limitation of incidental or consequential damage, so the above limitations may not apply to you. This warranty gives you specific rights, and you may also have other rights which vary from state to state.