

Minoston™

Z-Wave™ Meter Plug



Federal Communications Commission (FCC) Statement

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 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.

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: 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 equipment should be installed and operated with minimum distance 20cm between the radiator and your body.

IC Caution:

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

DECLARATION DE CONFORMITE D'INDUSTRIE CANADA

Ce périphérique a été testé et reconnu conforme aux limites spécifiées dans RSS-210.

Son utilisation est soumise aux deux conditions suivantes :

- (1) il ne doit pas provoquer d'interférences gênantes et
- (2) il doit tolérer les interférences reçues, notamment celles susceptibles d'en perturber le fonctionnement.



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WARRANTY

Minoston Products warrants this product to be free from manufacturing defects for a period of two years 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. If the unit should prove defective within the warranty period.

SPECIFICATIONS

Model: MP31ZP

Power: 120 VAC, 60 Hz.

Signal (Frequency): 908.42 MHz.

Maximum load for outlet 10A, 1200W Resistive

Maximum load for the Z-Wave™ controlled outlet:

600W Incandescent, ½ HP Motor or 1200W Resistive

Range: Up to 100 feet line of sight between the Wireless Controller and the closest Z-Wave™ receiver module.

Operating Temperature Range: 32-104° F (0-40° C)

Specifications subject to change without notice due to continuing product improvement

Website: www.nie-tech.com

WARNING

RISK OF FIRE

RISK OF ELECTRICAL SHOCK

RISK OF BURNS

CONTROLLING APPLIANCES:

EXERCISE EXTREME CAUTION WHEN USING Z-Wave™ DEVICES TO CONTROL APPLIANCES. OPERATION OF THE Z-Wave™ DEVICE MAY BE IN A DIFFERENT ROOM THAN THE CONTROLLED APPLIANCE, ALSO AN UNINTENTIONAL ACTIVATION MAY OCCUR IF THE WRONG BUTTON ON THE REMOTE IS PRESSED. Z-Wave™ DEVICES MAY AUTOMATICALLY BE POWERED ON DUE TO TIMED EVENT PROGRAMMING. DEPENDING UPON THE APPLIANCE, THESE UNATTENDED OR UNINTENTIONAL OPERATIONS COULD POSSIBLY RESULT IN A HAZARDOUS CONDITION. FOR THESE REASONS, WE RECOMMEND DO NOT RETURN THIS PRODUCT TO THE STORE THE FOLLOWING:

DO NOT USE Z-Wave™ DEVICES TO CONTROL ELECTRIC HEATERS OR ANY OTHER APPLIANCES WHICH MAY PRESENT A HAZARDOUS CONDITION DUE TO UNATTENDED OR UNINTENTIONAL OR AUTOMATIC POWER ON CONTROL.

Introduction:

The MP31ZP is a Z-Wave™ enabled device and is fully compatible with any Z-Wave Plus™ enabled network. Each module is designed to act as a repeater, which will re-transmit a radio frequency (RF) signal by routing the signal around obstacles and radio dead spots to ensure that the signal is received at its intended destination. MP31ZP is a security enabled Z-Wave Plus™ device. A security Enabled Z-Wave Plus™ Controller must be used in order to fully utilize the product. This product can be operated in any Z-Wave network with other Z-Wave certified devices from other manufacturers. All mains operated nodes within the network will act as repeaters regardless of vendor to increase reliability of the network."

Key Features:

- Remote ON/OFF control via the Z-Wave™ controller
- Manual ON/OFF control with the front panel push button
- Support Association Group and Auto Report switch status

- Support Z-Wave™ Range Test Tool
- Support firmware upgrades via Over-the-air (need Gateways support)

Product Overview:

- A AC plug
- B Z-Wave™ controlled outlet
- C ON/OFF/PROG Push button
- D / Status LED



Key Function Description

- Function 1: Press button one times to turn the outlet1 ON or OFF
- Function 2: Press button three times quickly to ADD and REMOVE
- Function 3: Press and hold button for 6-8 seconds to Z-Wave™ Range test tool
- Function 4: Press the button twice quickly and then press and hold the button 10S.device will reset
(Node:Please use this procedure only when the network primary controller is missing or otherwise inoperable)
- Function 5: Press button six times quickly to Change Parameter 17 Value(circulate)

LED Indicate Description

1:LED Indicate Power Meter

- White = Plug is off
- Dark Blue = 0 – 200 W
- Cyan = 200 – 400 W
- Green = 400 – 600 W
- Orange = 600 – 800 W
- Red = 800 – 1000 W
- Purple = 1000 – 1200 W
- Purple blink = over 1200 W

2:LED Indicate Z-Wave™ Range Test Tool

- Solid Green = direct communication with the primary controller is stable
- Flashing green = direct communication with the primary controller, but the signal is not good
- Solid orange = communication with the primary controller via repeater nodes, the signal is stable
- Flashing orange = communication with the primary controller via repeater nodes, but the signal is not good
- Solid red = communication with the primary controller has failed

Z-Wave™ Remote Control

ADD or Remove the MP31ZP from the existing Z-Wave™ home control network with your primary controller.

---Refer to your primary controller instructions to process the inclusion / exclusion setup procedure.

---When prompted by your primary controller, click the PROG button Three times in one second.

Include MP31ZP to/from a Z-Wave™ Gateway with supporting Security. The MP31ZP can support the Primary Controller that implemented the S2 security protocol.

Notice: Including a node ID allocated by Z-Wave™TM Controller means "Add" or "Inclusion". Excluding a node ID allocated by Z-Wave™TM Controller means "Remove" or "Exclusion".

Z-Wave™ MULTI_CHANNEL

MP31ZP is multi channel device, It has three endpoints. Outlet-1 is Endpoint1, outlet-2 is Endpoint2. USB is Endpoint3.

MP31ZP Endpoint1 / Endpoint2 Device Type

Generic Device Class: GENERIC_TYPE_SWITCH_BINARY

Specific Device Class: SPECIFIC_TYPE_POWER_SWITCH_BINARY

	Endpoint1	Endpoint2	Endpoint3
Manual Control	Press PROG Button one times	Press PROG Button two times	
Z-Wave Control	COMMAND_CLASS_BASIC Command: BASIC_SET Properties2:01 Value=00(OFF) Value=FF(ON)	COMMAND_CLASS_BASIC Command: BASIC_SET Properties2:02 Value=01(OFF) Value=FF(ON)	
Report	COMMAND_CLASS_SWITCH_BINARY Command: SWITCH_BINARY_REPORT Properties1:01 Value=00(OFF) Value=FF(ON)	COMMAND_CLASS_SWITCH_BINARY Command: SWITCH_BINARY_REPORT Properties1:02 Value=00(OFF) Value=FF(ON)	COMMAND_CLASS_SWITCH_BINARY Command: SWITCH_BINARY_REPORT Properties1:03 Value=00(OFF) Value=FF(ON)

Z-Wave™ protocol Command Class Node Info

COMMAND_CLASS_ZWAVEPLUS_INFO,
 COMMAND_CLASS_SWITCH_BINARY,
 COMMAND_CLASS_ASSOCIATION,
 COMMAND_CLASS_MULTI_CHANNEL_ASSOCIATION,
 COMMAND_CLASS_ASSOCIATION_GRP_INFO,
 COMMAND_CLASS_TRANSPORT_SERVICE,
 COMMAND_CLASS_VERSION,
 COMMAND_CLASS_MANUFACTURER_SPECIFIC,
 COMMAND_CLASS_DEVICE_RESET_LOCALLY,
 COMMAND_CLASS_POWERLEVEL,
 COMMAND_CLASS_CONFIGURATION,
 COMMAND_CLASS_NOTIFICATION,
 COMMAND_CLASS_METER,
 COMMAND_CLASS_SECURITY_2,
 COMMAND_CLASS_MULTI_CHANNEL,
 COMMAND_CLASS_SUPERVISION,
 COMMAND_CLASS_FIRMWARE_UPDATE_MD

The Below listed Command Class are all supported the Security S2

COMMAND_CLASS_VERSION,
COMMAND_CLASS_SWITCH_BINARY,
COMMAND_CLASS_ASSOCIATION,
COMMAND_CLASS_MULTI_CHANNEL_ASSOCIATION
COMMAND_CLASS_ASSOCIATION_GRP_INFO,
COMMAND_CLASS_MULTI_CHANNEL
COMMAND_CLASS_MANUFACTURER_SPECIFIC,
COMMAND_CLASS_DEVICE_RESET_LOCALLY,
COMMAND_CLASS_POWERLEVEL,
COMMAND_CLASS_CONFIGURATION,
COMMAND_CLASS_NOTIFICATION
COMMAND_CLASS_METER
COMMAND_CLASS_FIRMWARE_UPDATE_MD

MP31ZP protocol Endpoint 1

Full Command Class Node Info

COMMAND_CLASS_ZWAVEPLUS_INFO,
COMMAND_CLASS_ASSOCIATION,
COMMAND_CLASS_ASSOCIATION_GRP_INFO,
COMMAND_CLASS_MULTI_CHANNEL_ASSOCIATION
COMMAND_CLASS_SWITCH_BINARY,
COMMAND_CLASS_METER
COMMAND_CLASS_SUPERVISION,
COMMAND_CLASS_SECURITY_2

The Below listed Command Class are all supported the Security S2

COMMAND_CLASS_ASSOCIATION,
COMMAND_CLASS_ASSOCIATION_GRP_INFO,
COMMAND_CLASS_MULTI_CHANNEL_ASSOCIATION
COMMAND_CLASS_SWITCH_BINARY,
COMMAND_CLASS_METER

MP31ZP protocol Endpoint 2

Full Command Class Node Info

COMMAND_CLASS_ZWAVEPLUS_INFO,
COMMAND_CLASS_ASSOCIATION,
COMMAND_CLASS_ASSOCIATION_GRP_INFO,
COMMAND_CLASS_MULTI_CHANNEL_ASSOCIATION
COMMAND_CLASS_SWITCH_BINARY,
COMMAND_CLASS_METER_V4,
COMMAND_CLASS_SUPERVISION,
COMMAND_CLASS_SECURITY_2

The Below listed Command Class are all supported the Security S2

COMMAND_CLASS_ASSOCIATION,
COMMAND_CLASS_ASSOCIATION_GRP_INFO,
COMMAND_CLASS_MULTI_CHANNEL_ASSOCIATION
COMMAND_CLASS_SWITCH_BINARY,
COMMAND_CLASS_METER,

MP31ZP protocol Endpoint 3

Full Command Class Node Info

COMMAND_CLASS_ZWAVEPLUS_INFO,
COMMAND_CLASS_ASSOCIATION,
COMMAND_CLASS_ASSOCIATION_GRP_INFO,
COMMAND_CLASS_MULTI_CHANNEL_ASSOCIATION,
COMMAND_CLASS_SWITCH_BINARY,
COMMAND_CLASS_SUPERVISION,
COMMAND_CLASS_SECURITY_2

The Below listed Command Class are all supported the Security S2

COMMAND_CLASS_ASSOCIATION,
COMMAND_CLASS_ASSOCIATION_GRP_INFO,
COMMAND_CLASS_MULTI_CHANNEL_ASSOCIATION,
COMMAND_CLASS_SWITCH_BINARY

Z-Wave™ Configuration Parameters

You may use the below configuration parameters to change settings of the corresponding functionality.

- 1: Restores state after power failure
Paramter No: 1(0x01) Size:1 Byte Value: 00(default) The state before a power outage.
Value: 01 outlet on
Value: 02 outlet off
- 2: Power Wattage Report Value Threshold(Wattage) Value Scope :0----65535W
Paramter No: 2(0x02) Size:4 Byte Value: xx xx xx xx (Default 10W)
Value: 00 00 Disabled
- 3: Power Wattage Report Frequency (Timer) Value Scope :30----2678400S
Paramter No: 3(0x03) Size:4 Byte Value: xx xx xx xx (Default 30S)

- 4: Energy (kWh) Report Frequency (Timer) Value Scope :30----2678400S
 Paramter No: 4(0x04) Size:4 Byte Value: xx xx xx xx (Default 300S)
- 5: Voltage (V) Report Frequency (Timer) Value Scope :30----2678400S
 Paramter No: 5(0x05) Size:4 Byte Value: xx xx xx xx (Default 300S)
- 6: Electricity (A) Report Frequency (Timer) Value Scope :30----2678400S
 Paramter No: 6(0x06) Size:4 Byte Value: xx xx xx xx (Default 300S)
- 7: Overload Protection (Current) Value Scope :1----16A
 Paramter No: 7(0x07) Size:1 Byte Value: xx (Default 13A)
- 8: Endpoint1 Enable Auto Turn-OFF Timer Value=0 Auto Turn-OFF Timer Disabled (default);
 Paramter No: 8(0x08) Size:1 Byte Value=1 Auto Turn-OFF Timer Enabled
- 9: Endpoint1 Count Down Configuration(Turn off the output by time)
 Paramter No: 9(0x09) Size:4 Byte Value: xx xx Turn off Output
 Value Scope :1----65535Minutes (default:60M)
- 10: Endpoint1 Enable Auto Turn-ON Timer Value=0 Auto Turn-ON Timer Disabled (default);
 Paramter No: 10(0x0A) Size:1 Byte Value=1 Auto Turn-ON Timer Enabled
- 11: Endpoint1 Count Down Configuration(Turn on the output by time)
 Paramter No: 11(0x0B) Size:4 Byte Value: xx xx xx xx Turn off Output
 Value Scope :1----65535Minutes (default:60M)
- 12:Endpoint2 Enable Auto Turn-OFF Timer Value=0 Auto Turn-OFF Timer Disabled (default);
 Paramter No: 12(0x0C) Size:1 Byte Value=1 Auto Turn-OFF Timer Enabled
- 13:Endpoint2 Count Down Configuration(Turn off the output by time)
 Paramter No: 13(0x0D) Size:4 Byte Value: xx xx xx xx Turn off Output
 Value Scope :1----65535Minutes (default:60M)
- 14:Endpoint2 Enable Auto Turn-ON Timer Value=0 Auto Turn-ON Timer Disabled (default);
 Paramter No: 14(0x0E) Size:1 Byte Value=1 Auto Turn-ON Timer Enabled
- 15:Endpoint2 Count Down Configuration(Turn on the output by time)
 Paramter No: 15(0x0F) Size:4 Byte Value: xx xx xx xx Turn off Output
 Value Scope :1----65535Minutes (default:60M)
- 16:Manual Control Value=0 Manual Control Disabled
 Paramter No: 16(0x10) Size:1 Byte Value=1 Manual Control Enabled (default);
- 17:Status LED Configuration (default:Value=01)
 Paramter No: 17(0x11) Size:1 Byte
 Value: 00 LED indicator will display power consumption whenever the device is plugged in
 Value: 01 LED indicator will display power consumption whenever the device is ON in and will turn off when the plug is OFF
 Value: 02 LED indicator will display the level of power consumption for 5 seconds only whenever the device is turned on or off
 Value: 03 Always OFF

Support for Association Groups

MP31ZP supports 3 association groups. Group 1 support 1 node ID,Group 2--3 Support maximum of 5 node ID's

Root Device	Endpoint1	Endpoint2	Endpoint3
Group 1:Lifeline	Group 1:Lifeline	Group 1:Lifeline	Group 1:Lifeline
Group 2:Basic set From Endpoint1	Group 2:Basic set command		
Group 3:Basic set From Endpoint2		Group 2:Basic set command	

Association group_1:Z-Wave Plus™ Lifeline

Association group_1 is default to associate with the primary controller (Gateway/Hub/Controller) for MP31ZP Status change report,
 1. MP31ZP will trigger AUTO report function if the Switch status had been changed.

Association group_2:basic set command

When the output of the MP31ZP Enpoint1 socket is changed, On (0xFF) or Off (0x00)orOverload, The MP31ZP will automatically send out a related basic set command. On (0xFF) or Off (0x00) to its associated group.

Association group_3:basic set command

When the output of the MP31ZP Enpoint2 socket is changed, On (0xFF) or Off (0x00)orOverload, The MP31ZP will automatically send out a related basic set command. On (0xFF) or Off (0x00) to its associated group.

Support for Overload Protection

MP31ZP support Overload Protection ,When the MP31ZP load exceeds the overload setting value, the overload signal is sent out
 Notification Type : Overload 0x08 . Event :Overload detected 0x08

Restoring Factory Defaults

MP31ZP is removed from the network and will be restored to the factory setting

All Configuration Parameters values and Association information will be restored to factory default settings and excluded from the network.

Remark : All the setting and data will be permanently deleted.

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