



ZW11 Z-Wave Mutil-relay Manual

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.

WARRANTY

Evalogik 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: ZW11

Power: DC5V / AC12-24V.

Signal (Frequency): 908.42 MHz.

Maximum load R1/R2 250 V / 15A*2
R3 250V/20A

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

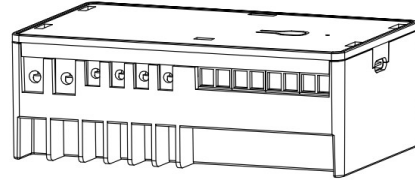
RISK OF ELECTRICAL SHOCK

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.



ZW11 Z-Wave Mutil-relay

Introduction:

This product can be operated in any Z-Wave network with other Z-Wave certified devices from other manufacturers. All non-battery operated nodes within the network will act as repeaters regardless of vendor to increase reliability of the 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. ZW11 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.

The Device Type of the ZW11 is on/off power switch.

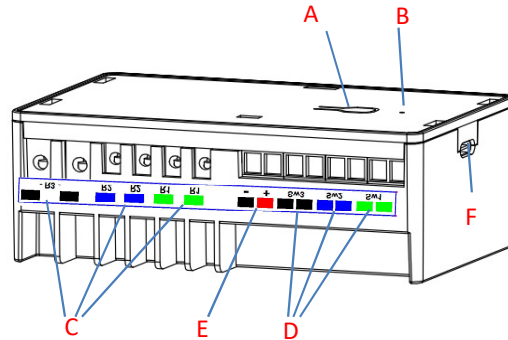
The Role Type of the ZW11 is Always On Slave Role Type

Key Features:

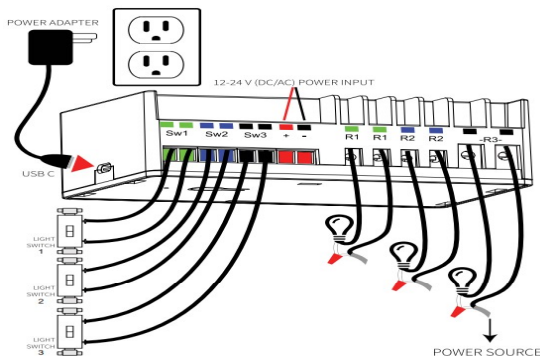
- Remote ON/OFF control via the Z-Wave controller
- Manual ON/OFF control with the front panel push button
- Support Association Group and Auto Report switch status
- Support firmware upgrades via Over-the-air (need Gateways support)

Product Overview:

- A. Program Button
- B. LED Indicator
- C. R1,R2,R3 Relay Out
- D. SW1,SW2,SW3 connect switch
- E. AC/DC 12-24V Input
- F. DC 5V Input TYPE-C



ZW11 Installation Wiring Diagram



Key function description

- Function 1: quickly press 3x: inclusion or exclusion
- Function 2: press and hold for more than 5s, change SW1 mode
- Function 3: press 2x and hold for more than 5s, change SW2 mode
- Function 4: press 3x and hold for more than 5s, change SW3 mode
- Function 5: press 4x, then LED lit for 4s, within this time press 4x again – LED blinks 3 times then off to FACTORY RESET (Node: Please use this procedure only when the network primary controller is missing or otherwise inoperable.)
- Function 6: press 5x change led parameter

Z-Wave Remote Control

ADD or Remove the ZW11 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 Program button three times in one second.

Include ZW11 to/from a Z-Wave Gateway with supporting Security. The ZW11 can support the Primary Controller that implemented the security S2.

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

Z-Wave™ Controller means "Remove" or "Exclusion".

Z-Wave MULTI_CHANNEL

ZW11 is multi channel device, It has three endpoints. Out-R1 is Endpoint1, Out-R2 is Endpoint2, Out-R3 is Endpoint3

ZW11 Endpoint1 / Endpoint2/ Endpoint3 Device Type

Generic Device Class: GENERIC_TYPE_SWITCH_BINARY

Specific Device Class: SPECIFIC_TYPE_POWER_SWITCH_BINARY

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_MULTI_CHANNEL
COMMAND_CLASS_SECURITY_2,
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_MANUFACTURER_SPECIFIC,
COMMAND_CLASS_DEVICE_RESET_LOCALLY,
COMMAND_CLASS_POWERLEVEL,
COMMAND_CLASS_MULTI_CHANNEL,
COMMAND_CLASS_CONFIGURATION

ZW11 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_SUPERVISION,
COMMAND_CLASS_SWITCH_BINARY,
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

ZW11 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_SUPERVISION,
COMMAND_CLASS_SWITCH_BINARY,
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

ZW11 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_SUPERVISION,
COMMAND_CLASS_SWITCH_BINARY,
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	All Relays OFF.
		Value: 01	All relays remember the status prior to power outage and turns back to it (default);
		Value: 02	All relays turned on after power failure
		Value: 03	R1&R2 state recovered, R3 – OFF
		Value: 04	R1&R2 state recovered , R3-ON

2: SW1 Type Select

Paramter No: 2(0x02)	Size:1 Byte	Value: 00	momentary switch
		Value: 01	toggle switch (contact closed -ON, contact opened - OFF)
		Value: 02	toggle switch(device changes status when switch changes status)(default)

3: SW2 Type Select

Paramter No: 3(0x03)	Size:1 Byte	Value: 00	momentary switch
		Value: 01	toggle switch (contact closed -ON, contact opened - OFF)
		Value: 02	toggle switch(device changes status when switch changes status)(default)

4: SW3 Type Select

Paramter No: 4(0x04) Size:1 Byte Value: 00 momentary switch
 Value: 01 toggle switch (contact closed -ON, contact opened - OFF)
 Value: 02 toggle switch(device changes status when switch changes status)(default)

5: LED indicator

Paramter No: 5(0x05) Size:1 Byte Value: 00 led OFF when output ON,led ON when output OFF(default)
 Value: 01 led ON when output ON,led OFF when output OFF
 Value: 02 led always OFF
 Value: 03 led always ON

6: Relay-1(EP1)Auto Turn-Off Timer

Paramter No: 6(0x06) , Size=4 , Value: 0 – timer disabled (default)
 Values: 1 – 65535 (minutes)

7: Relay-1(EP1)Auto Turn-ON Timer

Paramter No: 7(0x07) , Size=4 , Value: 0 – timer disabled (default)
 Values: 1 – 65535 (minutes)

8: Relay-2(EP2)Auto Turn-Off Timer

Paramter No: 8(0x08) , Size=4 , Value: 0 – timer disabled (default)
 Values: 1 – 65535 (minutes)

9: Relay-2(EP2)Auto Turn-ON Timer

Paramter No: 9(0x09) , Size=4 , Value: 0 – timer disabled (default)
 Values: 1 – 65535 (minutes)

10: Relay-3(EP3)Auto Turn-Off Timer

Paramter No: 10(0x0A) , Size=4 , Value: 0 – timer disabled (default)
 Values: 1 – 65535 (minutes)

11: Relay-3(EP3)Auto Turn-ON Timer

Paramter No: 11(0x0B) , Size=4 , Value: 0 – timer disabled (default)
 Values: 1 – 65535 (minutes)

12: Realy-1(EP1)Manual Control

Paramter No: 12(0x0C) Size:1 Byte Value: 00 manual control disabled
 Value: 01 manual control enabled (default)

13: Realy-2(EP2)Manual Control

Paramter No: 13(0x0D) Size:1 Byte Value: 00 manual control disabled
 Value: 01 manual control enabled (default)

14: Realy-3(EP3)Manual Control

Paramter No: 14(0x0E) Size:1 Byte Value: 00 manual control disabled
 Value: 01 manual control enabled (default)

Support for Association Groups

ZW11 supports 4 association groups. Group 1 support 1 node ID,Group 2 , 3 , 4 Support maximum of 5 node ID's

Group 2 Mapping to EP 1 Association Group 2 , Group 3 Mapping to EP 2 Association Group 2 , Group 4 Mapping to EP 3 Association Group 2

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	
Group 4:Basic set From Endpoint3			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 ZW11 Status change report,

1. ZW11 will trigger AUTO report function if the Switch status had been changed.

Association group_2:basic set command

When the output of the ZW11 EP1 state is changed, On (0xFF) or Off (0x00). The ZW11 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 ZW11 EP2 state is changed, On (0xFF) or Off (0x00). The ZW11 will automatically send out a related basic set command. On (0xFF) or Off (0x00) to its associated group.

Association group_4:basic set command

When the output of the ZW11 EP3 state is changed, On (0xFF) or Off (0x00). The ZW11 will automatically send out a related basic set command. On (0xFF) or Off (0x00) to its associated group.

Restoring Factory Defaults

ZW11 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.