



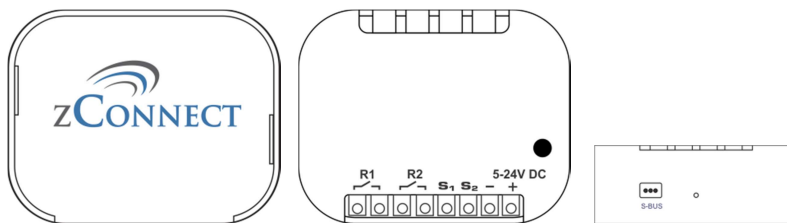
# Z-WAVE GARAGE DOOR CONTROLLER

Z-Wave is the world's leading wireless smart home automation technology, providing affordable solutions for homeowner's convenience, allowing them to save time and money. Z-Wave has been incorporated into a range of devices capable of interacting with your household utilities and appliances.

With Z-Wave devices you can automate everyday tasks, like opening and closing windows, switching off lights, locking doors, adjusting room temperature and much more. This garage door controller is a wireless z-wave enabled device and is fully compatible with any z-wave network with the same region Radio Frequency.

The garage door controller is designed for residential and light commercial usage, primarily for integration with Z-Wave home automation systems such as VeraEdge/VeraPlus/VeraSecure, Fibaro HC2/Lite or similar.

The garage door controller pairs with your existing automatic garage door opener via wired garage motor wall opener momentary switch to provide wireless remote opening and closing control from your Z-Wave network and controller. When installed, you can open and close your garage door from anywhere. The garage door controller has a lot of build in extra functionality.



## PACKAGE CONTENTS

1 x Z-Wave garage door controller

1 x Quick User Guide

## PRODUCT DESCRIPTION

The garage door controller is a Z-Wave controlled module and has two low voltage relay on board, two dry contact inputs, S-Bus port for external devices and sophisticated firmware to support multiple functions.

You can attach optional external devices to get audible and visual warnings to alert those nearby of the door's impending movement, connect different binary and multilevel sensors via S-Bus port, IR beam sensor, limit switch to report its open or closed status to the Z-Wave controller etc. The garage door controller also works as a repeater for your Z-Wave network. If you are away from your home or property where you might want to remotely close garage, you can do it remotely from your smart phone or any internet enabled device via home automation application.

The garage door controller supports encrypted communications via the Security Command Class to prevent hacking and supports the Over the Air (OTA) feature for the product's firmware upgrade (subject availability on your Z-Wave Gateway).

**Please note: This device will work only with garage door motor which has dry contacts for the optional wall switch. Refer to your garage door motor manual.**

- Allows remote operation of a garage door opener using Z-Wave controllers.
- Acts as a Z-Wave repeater to improve communications within the Z-Wave mesh network.
- Connects to the garage door openers pushbutton wall console.
- A wireless/wired tilt sensor can be mounted on the garage door and reports the door's position to the controller.
- An optional IR safety beams can be wired to Z-Wave garage door controller.
- Responds to Z-Wave commands from Z-Wave controllers to open or close the garage door.
- An optional warning indicator light flashes and a beeper sounds for 5 seconds before the door begins to move.
- Optional binary sensors like limit or reed switch can be connected to Z-Wave garage door controller.
- Optional multilevel sensors like temperature, PIR, humidity, luminosity and energy can be connected to Z-Wave garage door controller via S-Bus.
- Please note: Only one type of multilevel sensor can be connected to Z-Wave garage door controller at time and it has to be connected prior inclusion into Z-Wave network. If you need to change sensor to different type please exclude Z-Wave garage door controller from Z-Wave network and then include again.
- All above mentioned sensors can control other Z-Wave modules within Z-Wave network or garage door opener itself.
- Z-Wave garage door controller provides two ASSOCIATIONS GROUPS (see ASSOCIATIONS chapter below):

## SPECIFICATION

Power	5-24 V DC
Operating temperature	from -10 °C to 50 °C
RF Power output	2 MW
Z-Wave RF	921.4 MHz AU,NZ, Brazil, Thailand
Power consumption when on	<0.72W
Power consumption in stand-by mode	<0.2W
Range indoor	Up to 45m
Range outdoor	Up to 75m
Dimensions	18 * 48 * 37 mm
Max voltage for solid state relay	50V AC/DC
Max current for solid state relay	100 mA
Protection	IP-30

## INSTALLATION

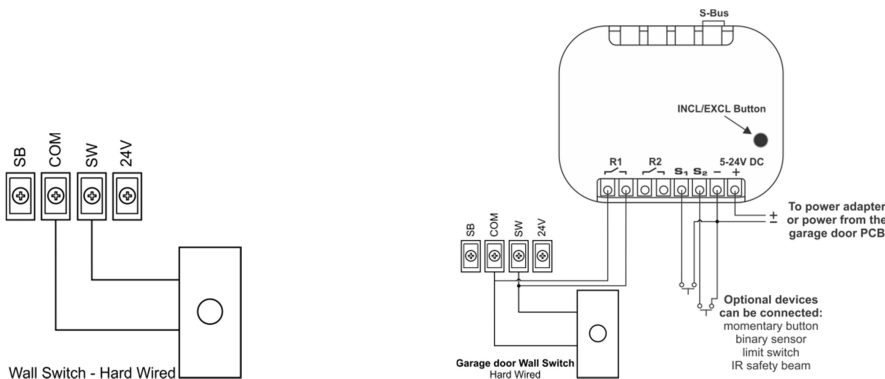


**ATTENTION! THE POWER SUPPLY INPUT OF THE DEVICE IS A 230 VOLT 50 HZ. OBSERVE SAFETY RULES DURING THE ASSEMBLY / DISASSEMBLY OF THE DEVICE.**

BEFORE INSTALLING THE DEVICE IT IS NECESSARY TO CHOOSE THE RIGHT PLACE OF INSTALLATION AND TO PROVIDE THE POWER FOR THE DEVICE.

## IDENTIFYING GARAGE DOOR OPTIONAL OUTPUT TERMINALS

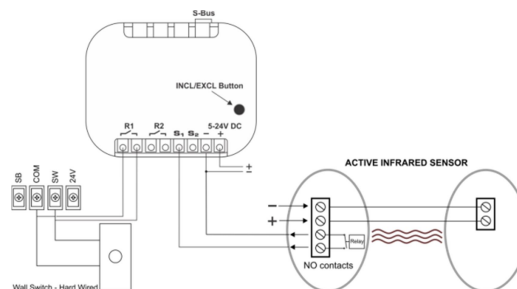
1. Locate on your garage door opener output terminals for the manual wall switch (hard wired). In this sample below these terminals are marked as COM and SW. You'll going to use it to connect Z-Wave garage door controller. See diagram below.



Some motors could have terminals with the power from PCB you can use to power up Z-Wave module. In this sample these terminals marked as COM and 24V. Otherwise you'll need to provide 5-24V DC power to the module.

## USING OPTIONAL SAFETY BEAMS WITH Z-WAVE GARAGE DOOR CONTROLLER

Using optional Active Infrared Sensor as safety beams you'll add extra security and safety to your installation. You can create Safety scenes in your Z-Wave Gateway base on events involved Active Infrared Sensor to prevent closing door if person or object obstruct movement. The installation of Safety Beams greatly enhances safety by constantly monitoring for persons or objects that might pass within the path of the moving garage door. See example of wiring diagram below.



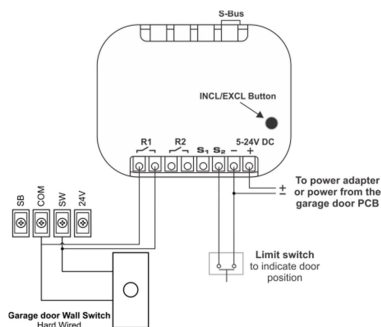
### Active Infrared Sensor mounting:

Mount the each IR module so that its bottom edge sits 125mm off the floor.

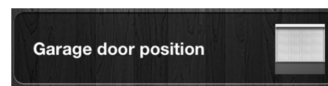
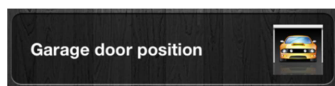
Fasten each IR module to the wall of use brackets.

Fasten the 2 Safety Beam modules (“Emitter” and “Receiver”) to the mounting brackets so that the LED Indicator on each Safety Beam module is facing upwards (refer to Active Infrared Sensor manual).

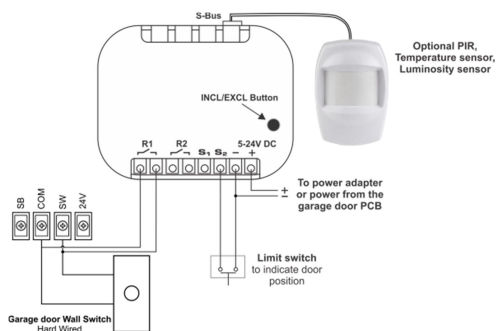
## USING OPTIONAL LIMIT SWITCH WITH Z-WAVE GARAGE DOOR CONTROLLER



A limit switch is an electromechanical device that consists of an actuator mechanically linked to a set of contacts. When an object comes into contact with the actuator, the device operates the contacts to make or break an electrical connection. Connecting appropriate limit switch to the garage door controller will create a mechanical sensor to indicate status of your garage door in Z-Wave gateway interface to show when it's open or closed.



## USING OPTIONAL MULTILEVEL SENSORS WITH Z-WAVE GARAGE DOOR CONTROLLER VIA s-Bus



The garage door controller has an S-Bus port to connect optional multilevel external devices (sensors), such as PIR, temperature sensor, humidity and luminosity. It is possible to connect binary sensors as well.

Please note you can only connect one sensor at time and it has to be done when garage door controller is not included into any Z-Wave network.

For more info refer to the sensor manuals.

These sensors can control other devices or garage door controller itself. Control means turning ON/OFF relays R1, R2 on board or send commands other devices in the same association group when sensor measured value will reach set point (see chapter Associations).

If you decide to connect optional sensors to S-Bus port after Z-Wave network inclusion you'll need to exclude garage door controller from Z-Wave network, connect the sensor and include the garage door controller into Z-Wave network again.

## INCLUSION INTO Z-WAVE NETWORK

**Note:** If you are installing a complete Z-Wave system for the first time, please refer to the installation guide of your Z-Wave Gateway before installing this device.

1. To Include the Z-Wave garage door controller into Z-Wave network:

- set the Z-Wave Gateway into learning mode with NWI (see your controller manual for auto inclusion),
- click check box 'Add in security mode if device supports it' (If there is such option in your Z-Wave Gateway),
- extend 'Duration of Learning Mode' to 60 seconds and
- connect power to the Z-Wave garage door controller (keep it to close proximity to Z-Wave Gateway).

The device will be added automatically (NWI). Wait until your Z-Wave Gateway will finished configuration. It can take up to 2 min.

2. If your Z-Wave Gateway doesn't support NWI mode set the Z-Wave Gateway into standard learning mode (refer to your controller manual) and click inclusion button on garage door controller three times.

If this Z-Wave garage door module was part of another Z-Wave network you'll need to reset it to the factory defaults via exclusion procedure.

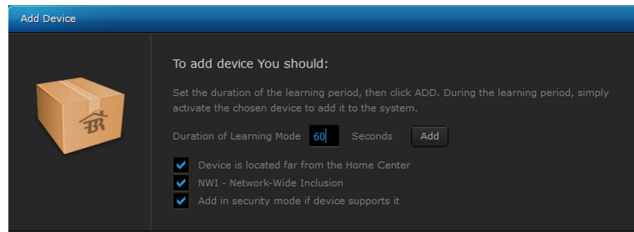
a. Set the Z-Wave Gateway into exclusion mode and press INCL/EXCL button on module three times. You should see on controller interface that exclusion procedure was completed successfully. Next step is to set the controller into inclusion mode and press this inclusion/exclusion button again three times.

b. After inclusion you'll see new device in controller interface. For most Z-Wave controllers this device will be represented as two ON/OFF switches referring to R1 and R2 and sensors referring to S1 and S2. If you have connected sensor via S-Bus port prior inclusion you'll see it in interface as well.

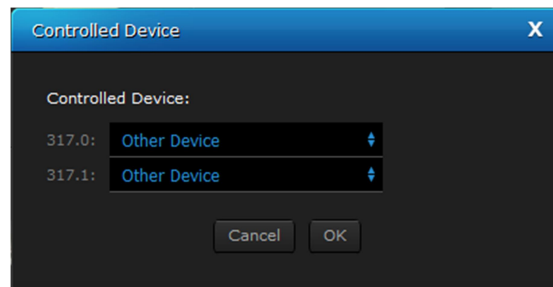
## GARAGE DOOR CONTROLLER IN FIBARO Home Center2 INTERFACE

Please be sure that device is excluded (reset to factory defaults) before inclusion into Fibaro HC2. During inclusion keep Garage Door Controller close to Fibaro HC2 if you are using 'Add in security mode if device supports it' option.

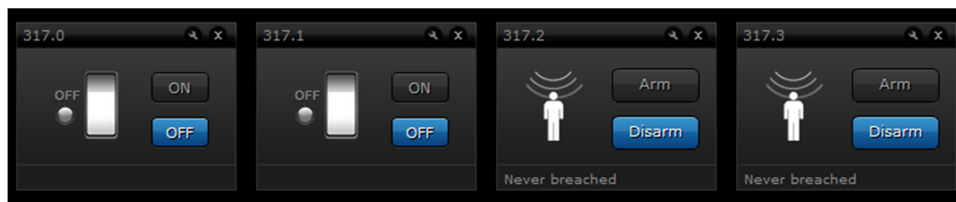
For the inclusion into Fibaro HC2 you can use NWI mode (please tick check box for NWI, tick check box for device location, tick check box for 'Add in security mode if device supports it' and extend duration time for 60 seconds) as indicated below



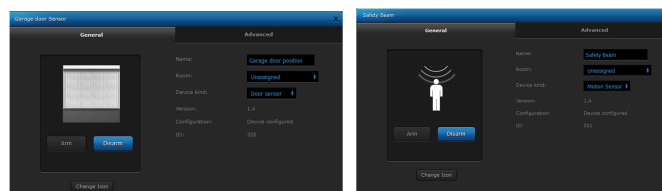
After inclusion you'll see 'Controlled Device' selection prompt for the relay R1 and R2. Please select 'Other Device' and click 'OK'



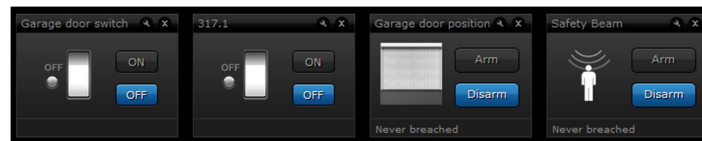
Then you'll see new four devices represent relay 1 for garage door button represented as switch, second relay R2 for optional devices and two binary switches represented as motion sensors:



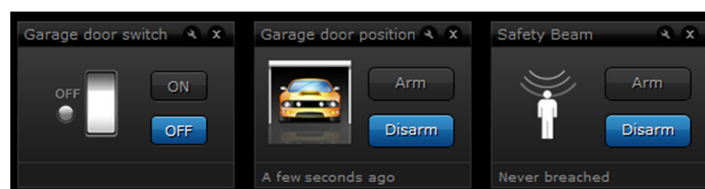
Now you can rename devices appropriately and change icons.



Now you can see configured components:



If relay2 not in use you may hide it and have only three components only:



## EXCLUSION FROM Z-WAVE NETWORK

Set the Z-Wave Gateway into exclusion mode and press button on Garage Door Controller three times. You should see on the controller interface that the exclusion procedure was completed successfully.

## Z-WAVE INTERFACE SETUP and PARAMETERS SETUP

You can change the device modes of operations by using configuration parameter in Z-Wave controller interface settings if required. These settings are available in all Z-wave controllers. However in some controllers you will need to add parameter line if it's hidden in the system.

Please note! Relay 1 is factory pre-configured in PARAMETER 4 to work with garage door opener output terminals for the manual wall switch.

### Relays PARAMETERS

- PARAMETER № 1 – Relay 1 mode selection (Normal, Reverse, and Strobe).
- PARAMETER № 2 – Relay 1 and 2 closed contacts time interval in strobe mode.
- PARAMETER № 3 – Relay 1 and 2 open contacts time interval in strobe mode.
- PARAMETER № 4 – Auto OFF with delay for relay 1 (factory default)
- PARAMETER № 5 – Time delay interval for command ON for relay 1.
- PARAMETER № 6 – Time delay interval for command OFF for relay 1.
- PARAMETER № 7 – Restore to the last known state for relay 1 after power was interrupted.
- PARAMETER № 8 – Broadband command turns all ON/ turn all OFF settings.
- PARAMETER № 9 – Hide relay 2 in controller interface.
- PARAMETER № 10 – Relay 2 mode selection (Normal, Reverse, Strobe).
- PARAMETER № 11 – Auto OFF with delay for relay 2.
- PARAMETER № 12 – Time delay interval for command ON for relay 2.
- PARAMETER № 13 – Time delay interval for command OFF for relay 2.
- PARAMETER № 14 – Restore to the last known state for relay 2 after power was interrupted.
- PARAMETER № 15 – Association between Relay1 and Relay2. When Relay1 will be switched ON Relay2 will be ON as well.
- PARAMETER № 16 – Relay 1 and sensor S1 integration.

### Optional Sensors PARAMETERS

- PARAMETER № 20 – Relay 1 and connected sensor integration
- PARAMETER № 21 – Relay 2 and connected sensor integration

### SENSOR 1 PARAMETERS

- PARAMETER № 24 – Sensor 1 options values for processing
- PARAMETER № 26 – Time interval to submit Sensor 1 readings to controller.

### SENSOR 2 PARAMETERS

- PARAMETER № 29 – Values of sensor 2 options for processing. Devices included in association group 3 will be using this parameter for controlling sensor 3.
- PARAMETER № 31 – Time interval to submit Sensor 2 readings to controller.

### SENSOR 3 PARAMETERS

- PARAMETER № 32 – Multilevel sensor 3 values for turning devices ON in association group 4 or device itself.
- PARAMETER № 33 – Multilevel sensor 3 values for turning devices OFF in association group 4 or device itself.
- PARAMETER № 34 – Values of sensor 3 options for processing. Devices included in association group 4 will be using this parameter for controlling sensor 3.
- PARAMETER № 35 – Time interval to submit Sensor 3 readings to controller.
- PARAMETER № 36 – Enforced time interval to submit Sensor 3 readings to association group 1.

### SENSOR 4 PARAMETERS

- PARAMETER № 37 – Multilevel sensor 4 values for turning devices ON in association group 5 or device itself
- PARAMETER № 38 – Multilevel sensor 4 values for turning devices OFF in association group 5 or device itself.
- PARAMETER № 39 – Values of sensor 4 options for processing. Devices included in association group 5 will be using this parameter for controlling sensor 4.
- PARAMETER № 40 – Time interval to submit Sensor 4 readings to controller.
- PARAMETER № 41 – Enforced time interval to submit Sensor 4 readings to association group 1.

- PARAMETER № 50 – Device reaction for the command in secure mode
- PARAMETER № 51 – Secure command selection after sending signal to 2 associating group
- PARAMETER № 52 – Secure command selection after sending signal to 3 associating group
- PARAMETER № 53 – Secure command selection after sending signal to 4 associating group
- PARAMETER № 54 – Secure command selection after sending signal to 5 associating group

## **PARAMETERS VALUES**

### **PARAMETER № 1 – Relay 1 mode selection (Normal, Reverse, and Strobe).**

Relay 1 can be operated in 3 different modes:

- a. Normal mode – Closed contacts when ON, open contacts when OFF
- b. Reverse mode – Closed contacts when OFF, open contacts when ON
- c. Strobe mode – Strobe when ON, open contacts when OFF

Parameter value = 0 (Normal mode)

Parameter value = 1 (Reverse mode)

Parameter value = 2 (Strobe mode)

### **PARAMETER № 2 – Relay 1 and 2 closed contacts time interval in strobe mode.**

Value 1 = 0.1 sec (10 = 1sec)

Values range (1-65000)

Parameter value = 10 (default)

### **PARAMETER № 3 – Relay 1 and 2 open contacts time interval in strobe mode.**

Value 1 = 0.1 sec (10 = 1sec)

Values range (1-65000)

Parameter value = 10 (default)

### **PARAMETER № 4 – Auto OFF with delay for relay 1 (factory default)**

Relay will turn off automatically after time specified in this parameter.

After receiving command ON Relay 1 will be switched OFF automatically with predefined delay. Value 1 = 0.1 sec (10 = 1sec), when value = 0 then delay is disabled.

Values range (1-65000)

Parameter value = 5 (default) – **factory settings for garage door controller**

Parameter value = 0 (Auto OFF disabled)

### **PARAMETER № 5 – Time delay interval for command ON for relay 1.**

Relay 1 will be switched ON with predefined delay. Value 1 = 0.1 sec (10 = 1sec), when value = 0 then delay is disabled.

Values range (1-65000)

Parameter value = 0 (default)

### **PARAMETER № 6 – Time delay interval for command OFF for relay 1.**

Relay 1 will be switched OFF with predefined delay. Value 1 = 0.1 sec (10 = 1sec), when value = 0 then delay is disabled.

Values range (1-65000)

Parameter value = 0 (default)

### **PARAMETER № 7 – Restore to the last known state for relay 1 after power was interrupted.**

Parameter value = 0 (Restore to the last known state) - default

Parameter value = 1 (Do not restore to the last known state. It will return to “off” position)

### **PARAMETER № 8 – Broadband command turn all ON/ turn all OFF settings.**

Parameter value = 0 (accept broadband command turn all ON/ turn all OFF) - default

Parameter value = 1 (ignore broadband command turn all ON/ turn all OFF)

Parameter value = 2 (ignore broadband command turn all ON, accept broadband command turn all OFF)

Parameter value = 3 (accept broadband command turn all ON, ignore broadband command turn all OFF)

### **PARAMETER № 9 – Hide relay 2 in controller interface.**

Device has two relays and by default they are visible in controller interface. To hide it there select Parameter value=1.

Parameter value = 0 (Visible) - default

Parameter value = 1 (Not visible)

### **PARAMETER № 10 – Relay 2 mode selection (Normal, Reverse, Strobe).**

Relay 2 can be operated in 3 different modes:

- a. Normal mode – Closed contacts when ON, open contacts when OFF
- b. Reverse mode – Closed contacts when OFF, open contacts when ON
- c. Strobe mode – Strobe when ON, open contacts when OFF

Parameter value = 0 (Normal mode)

Parameter value = 1 (Reverse mode)

Parameter value = 2 (Strobe mode)

**PARAMETER № 11 – Auto OFF with delay for relay 2.**

Relay will turn off automatically after time specified in this parameter.

After receiving command ON Relay 2 will be switched OFF automatically with predefined delay. Value 1 = 0.1 sec (10 = 1sec), when value = 0 then delay is disabled.

Values range (1-65000)

Parameter value = 0 (default)

**PARAMETER № 12 – Time delay interval for command ON for relay 2.**

Relay 2 will be switched ON with predefined delay. Value 1 = 0.1 sec (10 = 1sec), when value = 0 then delay is disabled.

Values range (1-65000)

Parameter value = 1 (default)

**PARAMETER № 13 – Time delay interval for command OFF for relay 2.**

Relay 2 will be switched OFF with predefined delay. Value 1 = 0.1 sec (10 = 1sec), when value = 0 then delay is disabled.

Values range (1-65000)

Parameter value = 1 (default)

**PARAMETER № 14 – Restore to the last known state for relay 2 after power was interrupted.**

Parameter value = 0 (Restore to the last known state) - default

Parameter value = 1 (Do not restore to the last known state. It will return to “off” position)

**PARAMETER № 15 – Association between Relay1 and Relay2. When Relay1 will be switched ON Relay2 will be ON as well.**

Parameter value = 0 (No association between two relays) - default

Parameter value = 1 (When Relay1 will be switched ON Relay2 will be ON as well)

**PARAMETER № 16 – Relay 1 and sensor S1 integration**

Parameter value = 0 (Sensor doesn't control Relay 1) – by default

Parameter value = 1 (Sensor S1 does control Relay 1 by blocking command ON)

**Optional Sensors PARAMETERS**

**PARAMETER № 20 – Relay 1 and connected sensor integration**

Parameter value = 0 (Sensor doesn't control Relay 1) – by default

Parameter value = 1 (Sensor 1 does control Relay 1)

Parameter value = 2 (Sensor 2 does control Relay 1)

Parameter value = 3 (Sensor 3 does control Relay 1 via S-Bus)

Parameter value = 4 (Sensor 4(temperature) does control Relay 1 via S-Bus)

**PARAMETER № 21 – Relay 2 and connected sensor integration**

Parameter value = 0 (Sensor doesn't control Relay 2) – by default

Parameter value = 1 (Sensor 1 does control Relay 2)

Parameter value = 2 (Sensor 2 does control Relay 2)

Parameter value = 3 (Sensor 3 does control Relay 2 via S-Bus)

Parameter value = 4 (Sensor 4(temperature) does control Relay 2 via S-Bus)

**SENSOR 1 PARAMETERS**

**PARAMETER № 24 – Sensor 1 options values for processing**

Values of sensor 1 options for processing. Devices included in association group 2 will be using this parameter for controlling sensor 1.

Parameter value = 0 (Do not react on ON/OFF actions) – by default

Parameter value = 1 (Send command ON during time without action and send command OFF on event/trigger)

Parameter value = 2 (Send command OFF during time without action and send command ON on event/trigger)

Parameter value = 3 (Send command ON during time without action)

Parameter value = 4 (Send command OFF during time without action)

Parameter value = 5 (Send command ON on event/trigger)

Parameter value = 6 (Send command OFF on event/trigger)

Parameter value = 7 (Send real sensor value to other device)

Parameter value = 8 (Only for binary sensor on condition that it was grouped with relay(Parameter № 20 has value = 4 or Parameter № 21 has value = 4). Binary sensor will work in bistable switch mode (every following event will change relay status to opposite)

Nº	Multilevel sensors	Binary sensors
0	Don't respond to control value. (by default)	
1		Save-Turn ON Breach - Turn OFF
2		Save-Turn OFF Breach - Turn ON
3		Save-Turn ON
4		Save-Turn OFF
5		Breach - Turn ON
6		Breach - Turn OFF
7	Send value of sensor to association Group	
8	<b>ONLY FOR BINARY SENSOR!</b> Use binary sensor like toggle switch	

**PARAMETER Nº 26 – Time interval to submit Sensor1 readings to controller.**

Values range (10-600 sec)

Parameter value = 0 (not to send received values by force)

Parameter value = 300 (default)

**SENSOR 2 PARAMETERS**

**PARAMETER Nº 29 – Values of sensor 2 options for processing. Devices included in association group 3 will be using this parameter for controlling sensor 3.**

Parameter value = 0 (Do not react on ON/OFF actions) – by default

Parameter value = 1 (Send command ON during time without action and send command OFF on event/trigger)

Parameter value = 2 (Send command OFF during time without action and send command ON on event/trigger)

Parameter value = 3 (Send command ON during time without action)

Parameter value = 4 (Send command OFF during time without action)

Parameter value = 5 (Send command ON on event/trigger)

Parameter value = 6 (Send command OFF on event/trigger)

Parameter value = 7 (Send real sensor value to other device)

Parameter value = 8 (Only for binary sensor on condition that it was grouped with relay(Parameter Nº 20 has value = 4 or Parameter Nº 21 has value = 4). Binary sensor will work in bistable switch mode (every following event will change relay status to opposite)

**PARAMETER Nº 31 – Time interval to submit Sensor2 readings to controller.**

Values range (10-600 sec)

Parameter value = 0 (not to send received values by force)

Parameter value = 300 (default)

**SENSOR 3 PARAMETERS**

**PARAMETER Nº 32 – Multilevel sensor 3 values for turning devices ON in association group 4 or device itself.**

Values range (-60-1000)

Parameter value = 0 (default)

Please note! Value selection depends on sensor type and its readings.

**PARAMETER Nº 33 – Multilevel sensor 3 values for turning devices OFF in association group 4 or device itself.**

Values range (-60-1000)

Parameter value = 0 (default)

Please note! Value selection depends on sensor type and its readings.



**PARAMETER № 34 – Values of sensor 3 options for processing. Devices included in association group 4 will be using this parameter for controlling sensor 3.**

Parameter value = 0 (Do not react on ON/OFF actions) – by default

Parameter value = 1 (Send command ON during time without action and send command OFF on event/trigger)

Parameter value = 2 (Send command OFF during time without action and send command ON on event/trigger)

Parameter value = 3 (Send command ON during time without action)

Parameter value = 4 (Send command OFF during time without action)

Parameter value = 5 (Send command ON on event/trigger)

Parameter value = 6 (Send command OFF on event/trigger)

Parameter value = 7 (Send real sensor value to other device)

Parameter value = 8 (Only for binary sensor on condition that it was grouped with relay (Parameter № 20 has value = 4 or Parameter № 21 has value = 4). Binary sensor will work in bistable switch mode (every following event will change relay status to oposite)

**PARAMETER № 35 – Time interval to submit Sensor 3 readings to controller.**

Values range (1-100 sec)

Parameter value = (default values depends on connected sensor type)

temperature =1;

humidity=5;

luminosity=100 lux;

power=50 Watt.

**PARAMETER № 36 – Enforced time interval to submit Sensor 3 readings to association group 1.**

Values range (10-600 sec)

Parameter value = 0 (not to send received values by force)

Parameter value = 300 (default)

**SENSOR 4 PARAMETERS**

**PARAMETER № 37 – Multilevel sensor 4 values for turning devices ON in association group 5 or device itself**

Values range (-60-1000)

Parameter value = 0 (default)

Please note! Value selection depends on sensor type and its readings.

**PARAMETER № 38 – Multilevel sensor 4 values for turning devices OFF in association group 5 or device itself.**

Values range (-60-1000)

Parameter value = 0 (default)

Please note! Value selection depends on sensor type and its readings.

**PARAMETER № 39 – Values of sensor 4 options for processing. Devices included in association group 5 will be using this parameter for controlling sensor 4.**

Parameter value = 0 (Do not react on ON/OFF actions) – by default

Parameter value = 1 (Send command ON during time without action and send command OFF on event/trigger)

Parameter value = 2 (Send command OFF during time without action and send command ON on event/trigger)

Parameter value = 3 (Send command ON during time without action)

Parameter value = 4 (Send command OFF during time without action)

Parameter value = 5 (Send command ON on event/trigger)

Parameter value = 6 (Send command OFF on event/trigger)

Parameter value = 7 (Send real sensor value to other device)

Parameter value = 8 (Only for binary sensor on condition that it was grouped with relay(Parameter № 20 has value = 4 or Parameter № 21 has value = 4). Binary sensor will work in bistable switch mode (every following event will change relay status to oposite)

**PARAMETER № 40 – Time interval to submit Sensor 4 readings to controller.**

Values range (1-100 sec)

Parameter value = (default values depends on connected sensor type)

temperature =1;

humidity=5;

luminosity=100 lux;

power=50 Watt.

**PARAMETER № 41 – Enforced time interval to submit Sensor 4 readings to association group 1.**

Values range (10-600 sec)

Parameter value = 0 (not to send received values by force)

Parameter value = 300 (default)

## DEVICE PARAMETERS IN SECURE MODE

Z-Wave garage door controller supports secure transmission within Z-Wave network (Security Command Class). Z-Wave Security Command Class implementing security 128 bit AES protocol (it has been adopted by the U.S. government and is now used worldwide as ISO/IEC 18033-3 standard). This protocol allows Z-Wave garage door controller operate in fully secure mode to prevent unsanctioned access. Please check if your Z-Wave Gateway supports these secure settings.

### PARAMETER № 50 – Device reaction for the command in secure mode

Parameter value = 0 (react for the command in secure and unsecure mode) – default

Parameter value = 1 (react for the command only in secure mode)

### PARAMETER № 51 – Secure command selection after sending signal to 2 associating group

Parameter value = 0 (Sensor 1 triggered, send command to 2<sup>th</sup> association group) – default

Parameter value = 1 (Sensor 1 triggered, send secured command to 2<sup>th</sup> association group)

### PARAMETER № 52 – Secure command selection after sending signal to 3 associating group

Parameter value = 0 (Sensor 1 triggered, send command to 3<sup>th</sup> association group) – default

Parameter value = 1 (Sensor 1 triggered, send secured command to 3<sup>th</sup> association group)

### PARAMETER № 53 – Secure command selection after sending signal to 4 associating group

Parameter value = 0 (Sensor 1 triggered, send command to 4<sup>th</sup> association group) – default

Parameter value = 1 (Sensor 1 triggered, send secured command to 4<sup>th</sup> association group)

### PARAMETER № 54 – Secure command selection after sending signal to 5 associating group

Parameter value = 0 (Sensor 1 triggered, send command to 5<sup>th</sup> association group) – default

Parameter value = 1 (Sensor 1 triggered, send secured command to 5<sup>th</sup> association group)

## ASSOCIATIONS

Z-Wave devices can communicate with each other and exchange data and other information as to the central controller, and directly, without the participation of the controller. Each event can correspond to a list of recipients, a group called the Association. Refer to the owner's manual of your Z-Wave controller to configure associations.

Z-Wave garage door controller provides five ASSOCIATIONS GROUPS (subject to controller implementation):

**Group 1** - the device (recommended to use controller in this group), which will get reports about changing the status of Z-Wave garage door controller relay and sensors values connected to it. Group size is - 3 devices.

**Group 2** - devices controlled by sensor 1. Group size - 10 devices

**Group 3** - devices controlled by sensor 2. Group size - 10 devices

**Group 4** - devices controlled by sensor 3. Group size - 10 devices

**Group 5** - devices controlled by sensor 4 (optional temperature sensor). Group size - 10 devices

## TROUBLESHOOTING

### Unable to include Z-Wave garage door controller in Z-Wave network:

- Z-Wave garage door controller was not properly excluded from a previous Z-Wave network. Use EXCLUSION FROM Z-WAVE NETWORK procedure to reset device for factory defaults.

### Z-Wave garage door controller does not respond to Z-Wave gateway command:

- Make sure that the maximum range (30m) is not exceeded and the signal path is not obstructed by heavy metal obstacles such as metal beams, reinforced concrete mesh, etc.
- Make sure the device is not in the including/excluding mode, repeat the programming process. Make sure that there are no obstacles preventing the door from moving. Make sure that the Z-Wave garage door controller connection wires are connected to the proper terminals on the garage door opener. Trace the wires from the garage door opener's pushbutton wall console to the door opener. This is where the Z-Wave garage door controller connection wires should be connected.

**Range test (Z-Wave network check)** – please use only if required due to intensive load for Z-Wave network.

This test is allowing user to check connectivity between Z-Wave garage door controller and Z-Wave gateway.

1. Hold inclusion/exclusion button for 10 sec until LED on device will start frequently blinking.
  2. Range test includes 10 cycles, after that it will start frequently blinking again.
  3. To finish range test please click inclusion/exclusion button once.
    - a. **LED frequently blinking** – device is trying to connect to Z-Wave Gateway within 3 sec. If connection was successful network test will commence (step b) otherwise device will try to connect via routing (point c). After finishing evaluation LED will be OFF for 2 sec and then report link quality by blinking (point A)
    - b. **Direct link to Z-Wave Gateway** - LED is frequently blinking and device will send packages to Z-Wave Gateway. Approximate time is 1-15 sec. After finishing evaluation LED will be OFF for 2 sec and then report link quality by blinking (point A)
    - c. **Indirect link to Z-Wave Gateway via routing** - LED is less frequently blinking and device will try to connect to Gateway via nearest Z-Wave device. Approximate time is 1-3 sec. If routing connection was successful network test will commence. If connection wasn't successful device will report end of cycle (point 2). If successful network test will commence for 1-15 sec. After finishing evaluation LED will be OFF for 2 sec and then report link quality by blinking (point A)
- A. Connection quality**  
After finishing evaluation LED start blinking with interval 1 sec showing connection quality:
- 1 blink – connection is very bad
  - 2 blinks - connection is bad
  - 3 blinks - connection is acceptable
  - 4 blinks - connection is good
  - 5 blinks - connection is very good

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