



LIGHT CONTROL

VITRUM VI EU ON-OFF 6 TRIAC

Model: WallZ-503
Type: 6CH-6TRIAC

User Manual
V. 1.22

INTRODUCTION

Purpose of this document

This manual describes the most essential functions and technical specifications to help technicians to install, setup and control the device. The device is a Z-Wave Plus (™) device of the Vitrum 2.0 product range.

Product description

The Light Control is a Security Enabled Z-Wave Plus device being able to both control other Z-Wave (™) devices and activate scenes in Gateways. The wall controller can be added to and operated in any Z-Wave network with other Z-Wave certified devices from other manufacturers.

The Light Control is a mains power, always listening device. As all non-battery operated nodes within the network will act as repeaters, no matter the vendor is, to increase the network reliability.

The device is able to control other devices, not able to act as Z-Wave network controller. A security enabled controller is to be used to add or remove the device from the network and have all functionality from the device.

Main features of Light Controller

- Control lights directly using 'ON'/'OFF' buttons
- Control of groups of other Z-Wave devices using 'ON'/'OFF' buttons
- Activation of scenes in Gateways.
- Compatible with any Z-Wave or Z-Wave Plus Controller.
- Supports Z-Wave network Security Modes S2 Unauthenticated
- Touch operated button with RGB back-light
- Based on Z-Wave consumption @ 500 module for wider coverage and higher data rate
- Very low standby power consumption
- Triac switching at zero crossing point of AC
- Easy installation
- Acoustic feedback at button press.

Visit www.vitrum.com site for the complete device list.

Safety and warnings

- Do not install the device connected to mains
- Installation and maintenance working with 100 to 240V mains power must be carried out only by authorized technicians with country specific knowledge of installation guidelines and norms and regulations
- The device must never be used without the front glass plate. It must be installed in a way that protect from accidental contact. During installation procedure, the dummy plastic cover must be left on.
- Use only insulated tools and disconnect the device from mains circuit breakers before and during any installation activity.
- This device is permanently connected to the mains thus implies it is mandatory to have an always accessible disconnect device (like a circuit breaker) incorporated in the general wiring of the building with at least 3 mm separation between contacts.

QUICK START

1. Connect your device to mains
2. Start add mode on your Z-Wave controller
3. Start add mode on your device by pressing add button
4. Set associations on your device from your controller

INSTALLATION

Before you start

Please read carefully this user manual before any installation.

You will need available and ready to use:

- Small Phillips insulated (alternate) screw driver
- Small slotted insulated (alternate) screw driver

Package content

- 1 x Wall Metric mountable device
- 2 x Metric screw set
- 2 x Plastic screw set
- 1 x Protective shell
- 1 x short reference document (this manual)

Preparation

Remove carefully the device from the cardboard support.

Keep this manual for further reference.

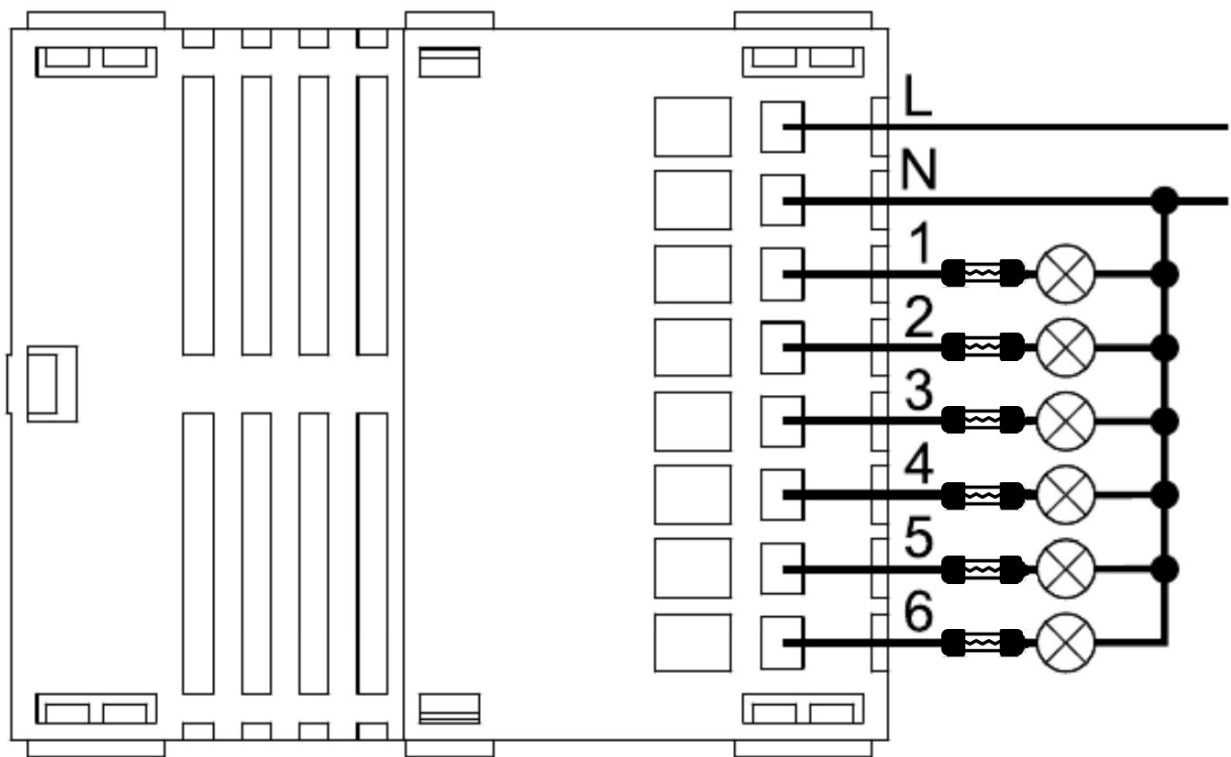
Notice

Dispose cardboard box & holder, plastic bags and front plastic shell according to local recycling regulation. Box and holder are PAP recyclable, plastic bags are LDPE, front shell is PP.

Installing

Wire the device according the schematic below.

- L** Power connection (LIVE)
- N** Power connection (Neutral)



Position the device in the wall's mounting box and check cables are not interfering with the device case.

Use the appropriate screw set that matches the wall box and fix the device in place without applying unnecessary torque to fix the screws.

Do not locate the device facing direct sunlight, humid or dusty places.

See suitable ambient temperature listed in the specifications.

Do not place the device near combustible substances or sources of heat (e.g. fires, radiators, boiler, etc.)

It's strongly recommended to protect your device by adding a fuse on each output line.

Add the device to a certified Z-Wave network

The device supports both Classic Add (Classic Inclusion) and Network Wide Add (Network Wide Inclusion).

The device supports encryption S2 Unauthenticated.

Follow the steps below to add the device to the network.

1. Set primary controller into Add mode (please see controller instruction manual) and operate on it either to enable S2 Unauthenticated encryption or to disable encryption
2. Check the device is not already added to the network (please refer to the manual section "How to check the device is added to the network")
3. Press and hold button N.1 located on top-left front-end device more than 4 seconds till button LED blinks shortly magenta or press shortly the Physical button located on the front-end top-back device (see section "Physical Button Operating" to locate Physical Button).
4. Every device LED button blinks green shortly 3 times upon the device added successfully

Should the device fail the Classic Add (Classic Inclusion) the device enters into Network Wide Add (Network Wide Inclusion) mode up to 4 times. Any time the device enters into Wide Add Mode, LED Button N.1 blinks Magenta and keeps on to emit a short beep.

Remove the device from a certified Z-Wave network

1. Set primary controller into Remove mode (please see controller instruction manual)
2. Check the device is not already removed from the network (please refer to the manual section "How to check the device is added to the network")
3. Press and hold button N.1 located on top-left front-end device more than 6 seconds till the device emits a long beep. Release the button and press it shortly 3 times again or press shortly the Physical button located on the front end top-back device
4. Button LED blinks red shortly upon the device removed successfully.
5. Check the device is removed from the network (please refer to the manual section "How to check the device is added to the network")

How to check the device is added to the network

Press button N.1 shortly. The LED button blinks red shortly whether the device is not added to the network.

ASSOCIATION (Single Channel and Multichannel)

Association enables the device to control other nodes added to the same Z-Wave network. There are 7 association groups. Each group supports maximum 20 nodes for association.

Lifeline report

Add Controller Node ID to the list of Node ID destinations belonging to the Lifeline Group, in order to let the controller receive Central Scene Notification report and Device Reset Locally Notification reports.

Lifeline report with End Point information

Add both Controller Node ID and Controller End Point to the list of End Points belonging to the Lifeline Group, in order to let the controller receive Central Scene Notification report with the End Point source address information. That may be achieved by sending the Multichannel Association Set Command Class and filling "Multi Channel Node ID" field with the Controller Node ID and "End Point" field with the Controller End Point.

Association groups

Root Device

Group Identifier	Group Name	Profile	Command Class and Command list	Max Nodes
1	Lifeline	General:Lifeline	Central Scene Notification Report Device Reset Locally Notification Basic Report	20
2	Button 1 Control	Control:Key1	Basic Set	20
3	Button 2 Control	Control:Key2	Basic Set	20
4	Button 3 Control	Control:Key3	Basic Set	20
5	Button 4 Control	Control:Key4	Basic Set	20
6	Button 5 Control	Control:Key5	Basic Set	20
7	Button 6 Control	Control:Key6	Basic Set	20

End Point 1

Group Identifier	Group Name	Profile	Command Class and Command list	Max Nodes
1	Lifeline	General:Lifeline	Central Scene Notification Report Basic Report	0
2	Button 1 Control	Control:Key1	Basic Set	20

End Point 2

Group Identifier	Group Name	Profile	Command Class and Command list	Max Nodes
1	Lifeline	General:Lifeline	Central Scene Notification Report Basic Report	0
2	Button 2 Control	Control:Key2	Basic Set	20

End Point 3

Group Identifier	Group Name	Profile	Command Class and Command list	Max Nodes
1	Lifeline	General:Lifeline	Central Scene Notification Report Basic Report	0
2	Button 3 Control	Control:Key3	Basic Set	20

End Point 4

Group Identifier	Group Name	Profile	Command Class and Command list	Max Nodes
1	Lifeline	General:Lifeline	Central Scene Notification Report Basic Report	0
2	Button 4 Control	Control:Key4	Basic Set	20

End Point 5

Group Identifier	Group Name	Profile	Command Class and Command list	Max Nodes
1	Lifeline	General:Lifeline	Central Scene Notification Report Basic Report	0
2	Button 5 Control	Control:Key5	Basic Set	20

End Point 6

Group Identifier	Group Name	Profile	Command Class and Command list	Max Nodes
1	Lifeline	General:Lifeline	Central Scene Notification Report Basic Report	0
2	Button 6 Control	Control:Key6	Basic Set	20

CONFIGURATION

The device is configured according to the parameter list below.

Use Configuration Get Command Class to get the current parameter value and Configuration Set Command Class to change the actual value. Get command should always be used before Set command to update the value.

Parameters list

Parameter Number	Parameter Name	Default value	Size	Value Range
7 8 9 10 11 12	Button N.1 Off status LED Button N.2 Off status LED Button N.3 Off status LED Button N.4 Off status LED Button N.5 Off status LED Button N.6 Off status LED	3	1	0: Off 1: Red 2: Green 3: Blue 4: Yellow 5: Magenta 6: Cyan 7: White
13 14 15 16 17 18	Button N.1 On status LED Button N.2 On status LED Button N.3 On status LED Button N.4 On status LED Button N.5 On status LED Button N.6 On status LED	4	1	
25	Output port connected to Button N.1	1	1	0: Disconnected
26	Output port connected to Button N.2	2	1	1: Button connected to Output Port 1
27	Output port connected to Button N.3	3	1	2: Button connected to Output Port 2
28	Output port connected to Button N.4	4	1	3: Button connected to Output Port 3
29	Output port connected to Button N.5	5	1	4: Button connected to Output Port 4
30	Output port connected to Button N.6	6	1	5: Button connected to Output Port 5 6: Button connected to Output Port 6 <u>Remark:</u> connecting a button to an output port already connected to another different button, will force the previously connected button to be automatically disconnected
31 32 33 34 35 36	Basic Set On from Group 2 Basic Set On from Group 3 Basic Set On from Group 4 Basic Set On from Group 5 Basic Set On from Group 6 Basic Set On from Group 7	1	1	0: 99 (0x63) 1: 255 (0xFF)
206	Buttons Max. Brightness	100	1	5-100 (0x05-0x64), value must be greater or equal than Parameter N.207
207	Buttons Min. Brightness	5	1	0-100 (0x00-0x64), value must be less or equal than Parameter N.206
209	Buzzer	1	1	0: disabled 1: enabled
218	Front-end Buttons lock	0	1	0: disabled 1: enabled

DEVICE TYPE AND CAPABILITIES INFORMATIONS

Z-Wave Plus Info

This command class provides additional information about the Z-Wave Plus device.

Role Type	ROLE_TYPE_SLAVE_ALWAYS_ON (0x05)
Node Type	NODE_TYPE_ZWAVEPLUS_NODE (0x00)
Installer Icon Type	ICON_TYPE_GENERIC_ON_OFF_POWER_SWITCH (0x0700)
User Icon Type	ICON_TYPE_GENERIC_ON_OFF_POWER_SWITCH (0x0700)

Node Information Frame (NIF)

NIF contains information about the device type and the node capabilities.

To send a NIF (broadcast) press and hold Physical button located on the front end top-back device, for over 2 seconds till the device emits two short beeps, than release the button. NIF is sent out upon the released of the button while the device emits a long beep.

NIF is also sent by setting the device either into Add or Remove mode.

Device Class

Basic Device Class	04 - ROUTING_SLAVE
Generic Device Class	10 - SWITCH_BINARY
Specific Device Class	01 - POWER_SWITCH_BINARY

Supported Command Classes

Command Class	Version	Device insecurely added	Device insecurely added on secure net	Device securely added on secure net
ZWAVEPLUS_INFO	2	✓	✓	
VERSION	2	✓		✓
MANUFACTURER_SPECIFIC	2	✓		✓
DEVICE_RESET_LOCALLY	1	✓		✓
POWERLEVEL	1	✓		✓
ASSOCIATION	2	✓		✓
MULTI_CHANNEL_ASSOCIATION	3	✓		✓
ASSOCIATION_GROUP_INFO	1	✓		✓
MULTI_CHANNEL	4	✓		✓
CONFIGURATION	2	✓		✓
NODE_NAMING	1	✓		✓
CENTRAL_SCENE	3	✓		✓
SWITCH_BINARY	1	✓		✓
TRANSPORT_SERVICE	2	✓	✓	
SECURITY_2	1	✓	✓	
SUPERVISION	1	✓	✓	

Supported Command Classes not in NIF

Command Class	Version	Device insecurely added	Device insecurely added on secure net	Device securely added on secure net
BASIC	1	✓		✓

Controlled Command Classes

BASIC SET

Manufacturer specific informations

Informations are advertised from Manufacturer Specific Command Class.

Parameter	Value (hex)
Manufacturer ID	0x010A
Product Type ID	0x8161
Product ID	0x2062

End Points

Description

Each endpoint is used by the device for:

- Switching directly light on/off
- Controlling a group of other Z-Wave devices
- Activation of “scene on” and “scene off” in Gateways

Root Device is mapped on End Point 1.

Capabilities

Capabilities are advertised from Multichannel and Security 2 Command Classes.

Multi Channel End Point Report

Field	Value
Properties 1 Identical Dynamic	0x40 True False
Properties 2 Individual End Points	0x06 6
Properties 3 Aggregated End Points	0x00 0

Multi Channel Capability Report (Device insecurely added)

Field	Value
Properties 1 End Point Dynamic	0x01 1-6 False
Generic Device Class	10 - SWITCH_BINARY
Specific Device Class	01 - POWER_SWITCH_BINARY
Command Class	5E - COMMAND_CLASS_ZWAVEPLUS_INFO 85 - COMMAND_CLASS_ASSOCIATION 59 - COMMAND_CLASS_ASSOCIATION_GRP_INFO 8E - COMMAND_CLASS_MULTI_CHANNEL_ASSOCIATION 25 - COMMAND_CLASS_SWITCH_BINARY 6C - COMMAND_CLASS_SUPERVISION 9F - COMMAND_CLASS_SECURITY_2

Multi Channel Capability Report (Device securely added)

Field	Value
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Properties 1 End Point Dynamic	0x01 1-6 False
Generic Device Class	10 - SWITCH_BINARY
Specific Device Class	01 - POWER_SWITCH_BINARY
Command Class	5E - COMMAND_CLASS_ZWAVEPLUS_INFO 6C - COMMAND_CLASS_SUPERVISION 9F - COMMAND_CLASS_SECURITY_2

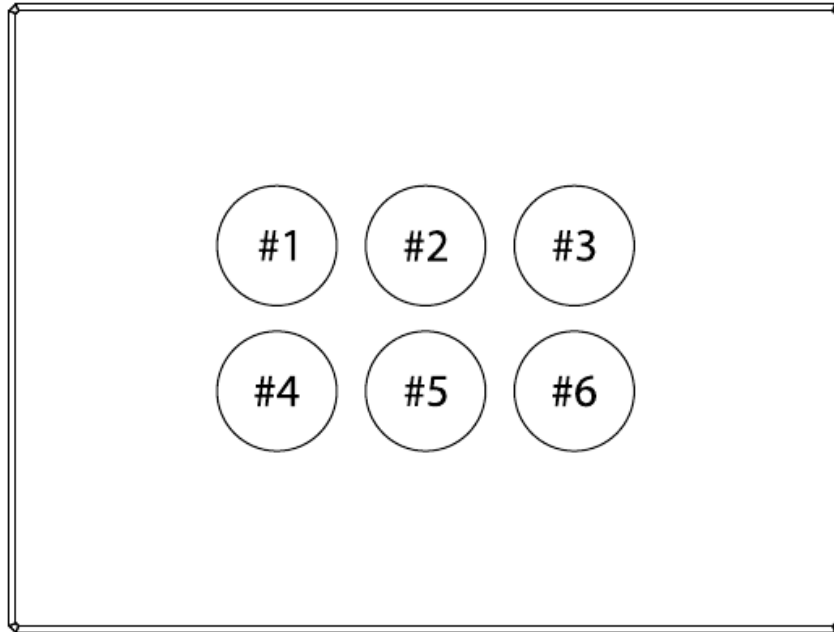
S2 Commands Supported Report (Device securely added in secure net)

Field	Value
Source End Point	1-6
Command Class	85 - COMMAND_CLASS_ASSOCIATION 59 - COMMAND_CLASS_ASSOCIATION_GRP_INFO 8E - COMMAND_CLASS_MULTI_CHANNEL_ASSOCIATION 25 - COMMAND_CLASS_SWITCH_BINARY

OPERATING

Buttons are numbered according to the picture below showing the front-end device.

Each button has a back-light RGB LED showing different colors according to the operating status or reporting the status of a special condition.



Normal operating

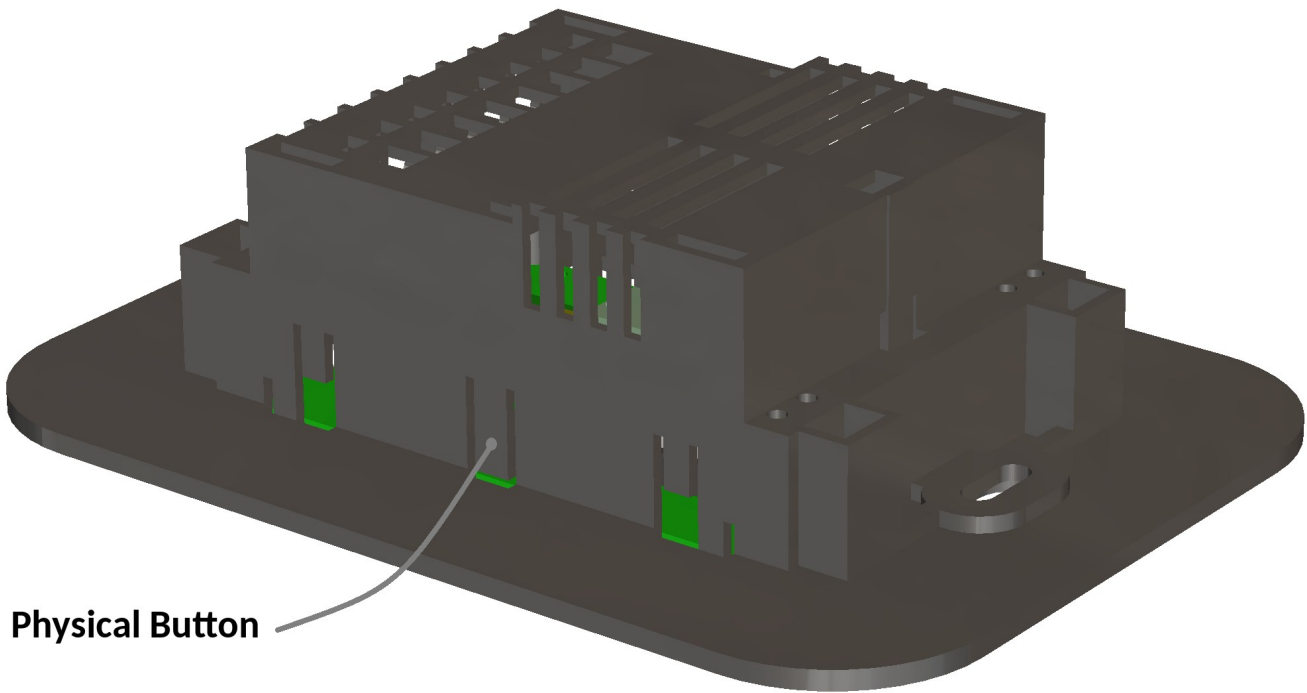
Description	Color
End Point Basic Set Off	Blue
End Point Basic Set On	Yellow

Special operating condition

Description	Color
Device removed from the Z-Wave network	Button pressed blinks red shortly one time
HW fault detected (contact assistance)	Button N.1 red, Buttons N.2-6 off

Physical button operating

Operation	Description
Send a NIF (broadcast)	Press and hold the button for over 2 seconds till the device emits two short beeps, than release the button. NIF is sent out upon the released of the button while the device emits a long beep.
Revert the device to factory default configuration (Factory reset)	<p>Please use this procedure only when the network primary controller is missing or otherwise inoperable.</p> <p>Press and hold the button for about 5 seconds till the buzzer plays a long beep, release the button and press it again till the buzzer plays a sequence of 3 short beeps, than release the button.</p> <p>Warning: don't care the 2 short beeps played after 2 seconds from start and keep on pressing the button till the buzzer plays the 3 short beeps sequence.</p> <p>See Factory reset below for more details and notes.</p>
Add the device to the network	Press the button shortly
Remove the device from the network	Press the button shortly



Physical Button

Factory reset

During factory reset the device sends a Device Reset Locally notification from the Lifeline group.

The device reverts to its factory default settings, blinking all LED buttons and reboots and send the Device Reset Locally Notification from the Lifeline group.

Do not disconnect the device from power supply till rebooting is completed.

Configuration and settings are restore to default values.

Home ID and Node ID are cleared as well.

Specifications

Power mode	Always Powered
Operation Voltage	230 VAC 50 Hz
Power Consumption (standby)	Less than 1.5W
Frequency	868.4 MHz (EU)
Operating temperature range	from 0°C to +40°C
Relative Humidity range	20% - 90% RH non condensing
Storage temperature range	from -40°C to +55°C
Storage Relative Humidity range	10% - 93% RH non condensing
IP Class	IP20
Package Dimension (L x W x H)	170 x 135 x 50 mm
Weight	210 g
Max RF radiated powered	2.5 mW
Operation range	Up to 80 m open
Warranty	1 year

Models range

The WallZ-503/6CH-6TRIAC belongs to the below models range

Model	Code	Region	Freq. (MHz)	Product Type ID	Product ID	FW ID
WallZ-503/6CH-6TRIAC	01E06S263	EU	868.4	0x8161	0x2062	0x1261
	01EE6S263	IL	916.0	0x8162	0x2063	0x1262
	01EB6S263	KR	921.7	0x8163	0x2064	0x1263

Compliance with EC Directives

This device is built in compliance with the European directives EMC:2004/108/CE and R&TTE:1999/5/CE.

The manufacturer assumes no responsibility for any use not indicated in this manual.

The manufacturer reserve the right to modify the product at any time and without notice in order to improve its quality and functionality. Therefore any information given in this user manual is subject to be modified. Please check for update at www.vitrum.com.