Nice

On/Off-Control 2

Turning electrical devices on/off remotely

EN - Instructions and warnings for installation and use

v1.6

1 WARNINGS AND GENERAL PRECAUTIONS

- ⚠ **CAUTION! – Any use other than that specified herein or in environmental conditions other than those stated in this manual is to be considered improper and is strictly forbidden!**
- ⚠ **CAUTION! – Important instructions: keep this manual in a safe place to enable future product maintenance and disposal procedures.**
- ⚠ **CAUTION! – All installation and connection operations must be performed exclusively by suitably qualified and skilled personnel with the unit disconnected from the mains power supply.**
- ⚠ **CAUTION! – This manual contains important instructions and warnings for personal safety. Read carefully all parts of this manual. If in doubt, suspend installation immediately and contact Nice Technical Assistance.**

- The product's packaging materials must be disposed of in full compliance with local regulations.
- Never apply modifications to any part of the device. Operations other than those specified can cause malfunctions. The manufacturer declines all liability for damage caused by makeshift modifications to the product.
- Never place the device near the sources of heat or expose to naked flames. These actions can damage the product and cause malfuntions.
- This product isn't intended for use by people (including children) with reduced physical, sensory or mental capabilities or who lack experience and knowledge, unless they are supervised by a person responsible for their safety.
- Make sure children don't play with the product.
- The device is designed to operate in an electrical home installation. Faulty connection or use can result in a fire or electric shock.
- Even when the device is turned off, voltage can be present at its terminals. Any maintenance introducing changes to the configuration of connections or the load must be always performed with a disabled fuse.

2 PRODUCT DESCRIPTION

On/Off-Control 2 is designed to be installed in standard wall switch boxes or anywhere else where it's necessary to control electric devices.

On/Off-Control 2 allows to control connected devices either through the Z-Wave® Plus network or a wall switch. The device is connected directly to the Z-Wave® Plus network and equipped with active power and energy consumption metering functionality.

On/Off-Control 2 monitors load power consumption, loads energy consuption and mains voltage values.

Data is transmitted through Z-Wave® Network to the controller.

Advanced microcontroller ensures maximum accuracy measurements and resolution (+ / - 5% for loads above 10 W).

2.1 - Main features of On/Off-Control 2:

- Compatible with any Z-Wave® or Z-Wave Plus® Controller
- Supporting the protected mode (Z-Wave® network security mode) with AES-128 encryption
- Possessing advanced microprocessor control
- Having an active power and energy metering functionality
- Working with momentary and toggle types of switches
- Installable in wall switch boxes of dimensions allowing for installation in compliance with applicable regulations
- Functioning as an extension unit
- Measuring active power of the load, energy consumed and voltage of the network
- Compatible with the following:
  - Incandescent bulbs
  - LEDs
  - Conductors
  - Fluorescent lamps
  - Electronic transformers
  - Ferromagnetic transformers
  - Halogens

2.2 - On/Off-Control 2 is a fully compatible Z-Wave Plus® device.

This device can be used with all devices accredited with the Z-Wave® Plus certificate and is compatible with such devices produced by other manufacturers. All non-battery operated devices within the network act as repeaters to increase reliability of the network. The device is a Security Enabled Z-Wave® Plus product and a Security Enabled Z-Wave® Controller must be used to fully utilize the product.

3 SPECIFICATIONS

⚠ Applied load and On/Off-Control 2 itself can be damaged if the applied load is inconsistent with the technical specifications!

3.1 - Hardware parameters

- Don't connect loads greater than those recommended!

Table A1 - On/Off-Control 2 - Hardware parameters		Values / types
1.	Power supply voltage range:	100-240 VAC 50/60 Hz
2.	Radio protocol:	Z-Wave (800 series chip)
3.	Radio frequency band:	EU: 868.4 MHz, 869.85 MHz AH: 919.8 MHz, 921.4 MHz
4.	Max. transmitting band:	+6dBm
5.	Range:	up to 100 m outdoors, up to 30 m indoors (depending on the terrain and building structure)
6.	Supported device type:	- Incandescent bulbs, - LEDs - Conductors - Fluorescent lamps - Electronic transformers - Ferromagnetic transformers - Halogens
7.	Nominal Resistive/incandescent bulbs/Halogens channel current:	2 x 5 A (10 A overall)
8.	Nominal LED/Fluorescent (Self Ballasted Lamp) real power:	2 x 80 W
9.	Nominal electronic transformers (LED/CCFL External Ballast Lamp) channel current:	2 x 2 A
10.	Internal power consumption (standby state):	less than 300 mW
11.	Internal power consumption (active state):	less than 1 W
12.	Overcurrent protection:	Each channel
13.	Operating temperature:	0 - 35ºC
14.	For installation in boxes:	Ø = 50 mm, dept ≥ 60 mm
15.	Dimensions (Height × Width × Depth):	46 × 36 × 19.9 mm
16.	Ambient humidity:	10-95% RH without condensation
17.	Compliance with EU directives:	RoHS 2011/65/EU RED 2014/53/EU

3.2 - Power of the load:

Measuring the active power of the load connected to the output allows the value of the load to be controlled in real time. The power is expressed in Watts [W].

3.3 - Mains voltage:

The device allows to control the status of the mains supply to the device(s) in real time. The value is given in Volts [V].

Note. IEC certification applies in EU countries and most countries using 220 - 240 V~.

4 INSTALLATION

⚠ ⚠ Danger of electrocution!

- On/Off-Control 2 is designed to operate in an electrical home installation. Faulty connection or use can result in a fire or electric shock.
- All works on the device can be performed only by a qualified and licensed electrician. Observe national regulations.
- Even when the device is turned off, voltage can be present at its terminals. Any maintenance introducing changes to the configuration of connections or the load must be always performed with the disabled fuse.
- Connecting the On/Off-Control 2 in a manner inconsistent with the manual can cause risk to health, life or material damage.

⚠ Warning!

Don't connect outputs with any kind of wiring. This can result in the permanent transmitter malfunction and/or the entire device damage.

4.1 - When connecting On/Off-Control 2, act in accordance with the following rules:

- Connect only in accordance with one of the diagrams below.
- On/Off-Control 2 should be installed in a wall switch box compliant with relevant national safety standards and no deeper than 60 mm.
- Electrical switches used in the installation should be compliant with relevant safety standards.
- Wires used to connect the control switch shouldn't be longer than 100 m.

4.2 - Installation of the On/Off-Control 2

1. Switch off the mains voltage (disable the fuse).
2. Open the wall switch box.
3. Connect the device in accordance with with one of the following diagrams presented on page 4 (fig.1) Single wall switch, (fig.2) Double wall switch.
4. After verifying correctness of the connection, switch on the mains voltage.
5. Add the device to the Z-Wave network.
6. Turn off the mains voltage, then arrange the device in the wall switch box.
7. Close the wall switch box and turn on the mains voltage.

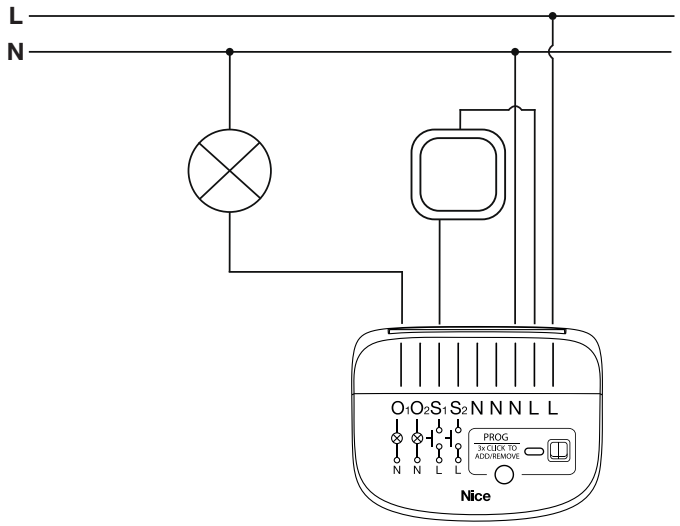

Figure 1: Single wall switch

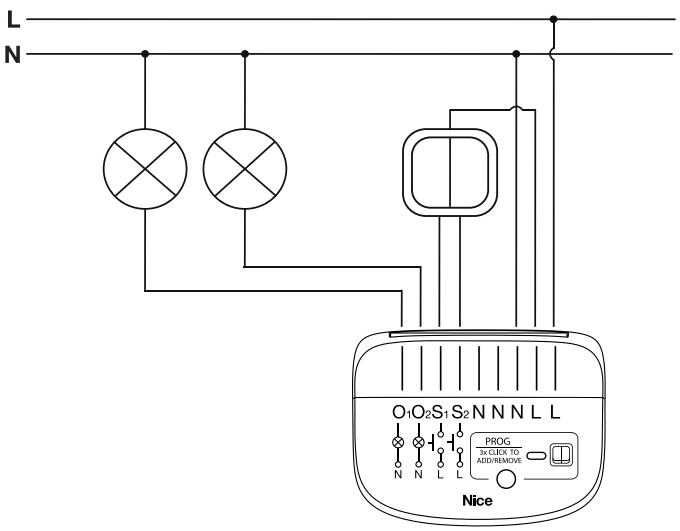

Figure 2: Double wall switch

4.3 - Notes for the diagrams

S1 - Terminal for the 1st wall switch (has the function of activating the learning mode)
S2 - Terminal for the 2nd wall switch (has the function of activating the learning mode)
L - Terminal for the live lead
O1 - Output terminal of the 1st channel
O2 - Output terminal of the 2nd channel
N - Terminal for the neutral lead
PROG - Service button (used to add/remove the device and navigate the menu)

Note.

The switch connected to the S1 or S2 terminal functions as a master switch.
You can activate the basic functionality of the device and activate the learning mode (adding/removing).
In On/Off-Control 2 the switch connected to the S1 terminal turns on/off the first load, and the switch connected to the S2 terminal turns on/off the second load.
After switching on the mains voltage LED indicator signals the Z-Wave network inclusion state with a color:

GREEN - the device added to the non-secure, S0 or S2 Unauthenticated mode
MAGENTA - the device added to the S2 Authenticated mode
RED - the device not added

5 STAIRCASE SWITCH CONNECTION

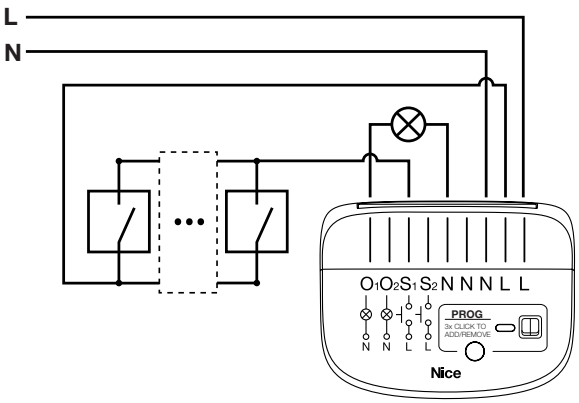

Figure 3: Momentary switches ×1

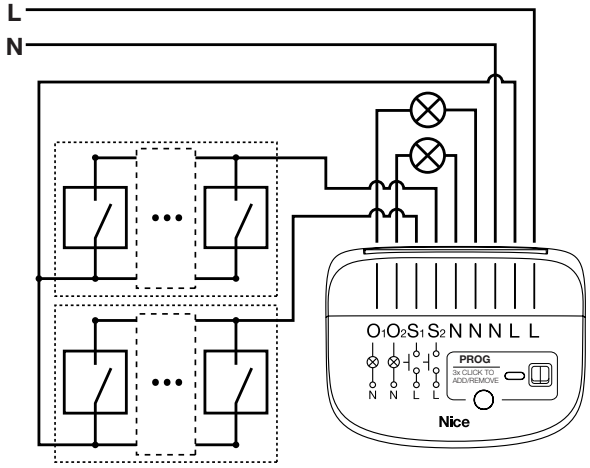

Figure 4: Momentary switches ×2

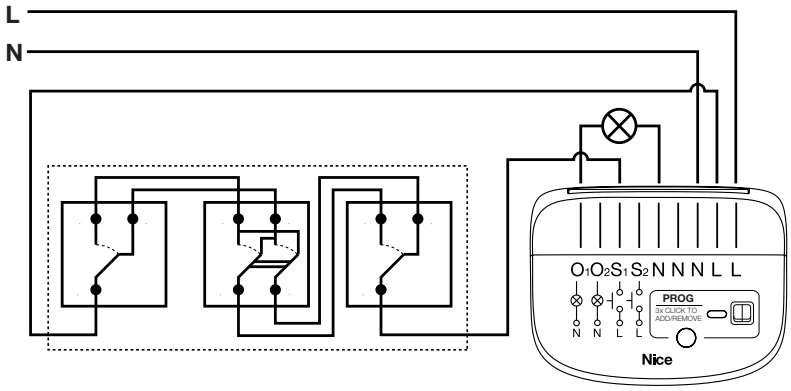

Figure 5: Star-cross switches ×1

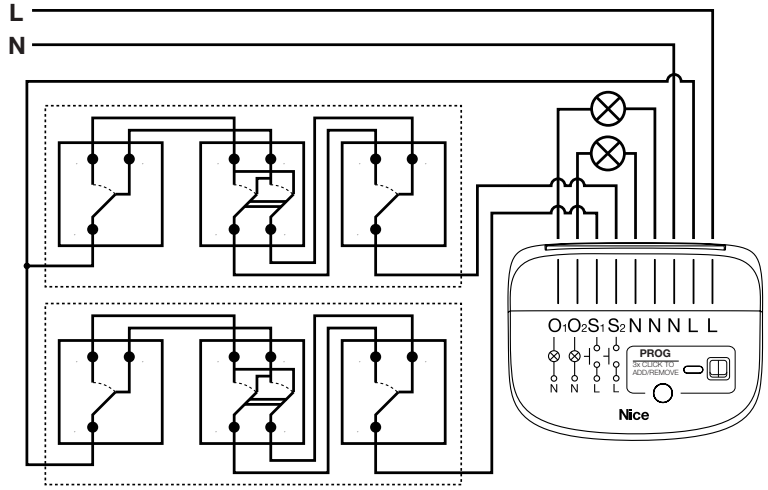

Figure 6: Star-cross switches ×2

6 ADDING THE DEVICE

- In case of problems with adding, removing, or using S1 or S2 wall switch, use the PROG-button instead (located on the housing).
- The device tries to add itself after pressing the switch 3 times.

Adding (Inclusion) - The Z-Wave device learning mode allows to add the device to the existing Z-Wave network.

6.1 - To add the device to the Z-Wave network manually:

1. Place On/Off-Control 2 within the direct range of your Z-Wave controller.
2. Identify the S1 or S2 switch or the PROG button.
3. Set the main controller in the (security/non-security) add mode (see the controller's manual).
4. Press quickly three times one of the S1 or S2 switches or the PROG button.
5. Wait for the adding process to end.
6. Successful adding is confirmed by the Z-Wave controller's message and the green LED diode when adding the device to the non-secure, S0, S2 Unauthenticated mode or magenta LED diode when adding the device to the S2 Authenticated mode.

6.2 - Adding device using the SmartStart method

To add On/Off-Control2 to the Z-Wave network using SmartStart:

1. Scan the DSK QR code or input the underlined 5-digit PIN code (label on the side of the box and on the device).
2. Power the device (turn on the mains voltage).
3. Successful adding is confirmed by the Z-Wave indicator on the display.

7 REMOVING THE DEVICE

When removing the device from the Z-Wave Network through switches (S1 or S2) there is a 10 minutes time limit after powering the device.

Removing (Exclusion) - The Z-Wave device remove mode allows to remove the device from the existing Z-Wave network.

7.1 - To remove the device from the Z-Wave network:

1. Place On/Off-Control 2 within the direct range of your Z-Wave controller.
2. Identify S1 or S2 switch or the PROG button.
3. Set the main controller in the remove mode (see the controller's manual).
4. Quickly, three times press S1 or S2 switch or the PROG button.
5. Wait for the removing process to end.
6. Successful removing is confirmed by the Z-Wave controller's message and the red LED diode.

8 OPERATING THE DEVICE

8.1 - Controlling On/Off-Control 2 with the PROG-button

On/Off-Control 2 is equipped with the PROG-button, which allows to use the menu and perform the following actions:

1x click:

- Select a desired menu position (if menu is active).
- Turn ON/OFF both channels (the 1st and 2nd).

3x click:

- Send the Node Info Z-Wave command frame (adding/removing).

Hold:

- Enter the menu

8.2 - Resetting On/Off-Control 2

1. Switch off the mains voltage (disable the fuse).
2. Remove On/Off-Control 2 from the wall switch box.
3. Switch on the mains voltage.
4. Press and hold the PROG-button to enter the menu.
5. Wait for the visual LED indicator to glow yellow.
6. Quickly release and click the PROG-button again.
7. After a few seconds the device is restarted, which is signalled with the red LED indicator color.

9 POWER AND ENERGY CONSUMPTION

- On/Off-Control 2 requires the power consumption of connected load equal to 5 W or greater to correctly measure the power and energy.
- Power measurement can contain mains voltage fluctuations within +/- 10%.
- On/Off-Control 2 measures power and consumed energy for each channel separately. Disconnecting the module from the power supply doesn't erase stored energy consumption data.

Power value is sent to the main Z-Wave controller, e.g. Yubii Home

- every hour.
- if the current power differs more than 20% from the value sent in the previous report.

Consumed energy value is sent to the main Z-Wave controller and saved in the device memory

- every hour.
- if the current energy differs more than 1 kWh from the value sent in the previous report.

The most advanced micro-controller technology carries out the measuring, which guarantees maximum accuracy and precision (+/- 1% for loads greater than 5 W).

Electric active power - the power that an energy receiver changes into work or heat. The unit of active power is Watt [W].

Electric energy - the energy consumed by a device through a time period. Electricity consumers are charged on the basis of active power used for a given unit of time, which is most commonly measured in kilowatt-hour [kWh]. One kilowatt-hour is equal to one kilowatt of power consumed over a period of one hour, 1 kWh = 1000 Wh.

On/Off-Control 2 is equiped with the voltage measurement feature. The voltage value is displayed in the user interface and app interface.

The voltage measurement fearture is turned off by default.

The voltage measurement has to be turned on, to be displayed.

(see chapter 12 ADVANCED PARAMETERS - Parameter 200. Voltage Measurement).

10 ASSOCIATIONS

10.1 Association (linking devices) - the direct control of other devices within the Z-Wave system network using the wall switch connected to On/Off-Control 2.

The association enables On/Off-Control 2 to control directly a device included in the Z-Wave network e.g. other Relay Switch, Dimmer or Roller Shutter.

- Association ensures the direct transfer of control commands between devices, which is performed without participation of the main controller and requires an associated device to be in the direct range.
- On/Off-Control 2 supports the operation of multichannel devices. Multichannel devices include two or more circuits inside one physical unit.

10.2 The On/Off-Control 2 provides the association of three groups:

Table A2 - On/Off-Control 2 - Association groups			
1st association group	“Lifeline”	Reports the device status and allows for assigning single device only.	(main controller by default)
2nd association group	“On/Off (1)”	is assigned to switch connected to the S1 terminal.	(uses Basic command class)
3rd association group	“On/Off (2)”	is assigned to switch connected to the S2 terminal.	(uses Basic command class)

On/Off-Control 2 in the 2nd to 3rd group allows to control 5 regular or multichannel devices per one association group, with the exception of “Lifeline” that is reserved solely for the controller and hence only 1 node can be assigned.

With the Outputs (channels) mode parameter set to 1 (Outputs connected), after clicking on the S1/S2 button, the associations from both end points are sent (groups On/Off (1) and On/Off (2)).

With the auto off mode enabled on one of the endpoints when the auto off time passes, no association is sent with the exception of "Lifeline".

11 ADDITIONAL FUNCTIONALITY

11.1 - Overheat and overcurrent protection
On/Off-Control 2 after detecting overheat or overcurrent:
- switches off its relays.
- sends information about switching off the relays to the controller.
- sends the Notification Report to the controller (System for overheat, Power Management for overcurrent).

11.2 - Overvoltage notification
When the voltage exceeds the value set with parameter 201, the device sends the notification to the hub. If the voltage level drops 5 V below the notification tripping threshold, and this voltage level is kept for at least ten minutes, the device sends a notification cancellation to the hub. This functionality is disabled by default.

11.3 - Voltage drop
- When a voltage drop below 70 V continues for more than one second, local switches (S1/ S2) are blocked. The device can still be controlled by the Z-Wave network.
- When there is a power blackout, the device sends the notification to the hub*.

*Assuming that the hub has its own power supply and the traffic in the network isn't high.

11.4 - Central scenes
On/Off-Control 2 can activate scenes in the Z-Wave controller by sending the scene ID and attribute of a specific action using the Central Scene Command Class.
By default scenes are activated, scene parameters are number 40 and 41.

Table A3 - On/Off-Control 2 - S1 Terminal - Activating scenes

	Action	Scene ID	Attribute
Switch connected to S1 terminal	Switch clicked once	1	Key Pressed 1 time
	Switch clicked twice	1	Key Pressed 2 times
	Switch clicked thrice	1	Key Pressed 3 times
	Switch held	1	Key Held Down
	Switch released	1	Key Released

Table A4 - On/Off-Control 2 - S2 Terminal - Activating scenes

	Action	Scene ID	Attribute
Switch connected to S2 terminal	Switch clicked once	2	Key Pressed 1 time
	Switch clicked twice	2	Key Pressed 2 times
	Switch clicked thrice	2	Key Pressed 3 times
	Switch held	2	Key Held Down
	Switch released	2	Key Released

12 ADVANCED PARAMETERS

On/Off-Control 2 allows to customize its operation to user's needs. The settings are available in the interface of the Z-Wave controller.

Table A5 - On/Off-Control 2 - Advanced parameters			
Parameter:	**1. Restore state after power failure**		
Description:	This parameter determines if the device returns to the state prior to the power failure after the power is restored.		
Available settings:	0 - The device doesn't save the state prior to the power failure and returns to the „off" position. 1 - The device restores its state prior to the power failure.		
Default setting:	**1**	Parameter size:	**1** [byte]

Parameter:	**20. Switch type**		
Description:	This parameter defines how the device clasifies the switches connected to S1 and S2 terminals.		
Available settings:	0 - momentary switch 1 - toggle switch (contact closed - ON, contact opened - OFF) 2 - toggle switch (the output changes state whenever the switch changes state)		
Default setting:	**2**	Parameter size:	**1** [byte]

Parameter:	**24. Buttons orientation**		
Description:	This parameter enables changing inputs orientation without the need of changing electrical connections.		
Available settings:	0 – normal orientation 1 – inverted orientation		
Default setting:	**0**	Parameter size:	**1** [byte]

Parameter:	**40. First button - scenes sent**		
Description:	This parameter determines which actions result in sending scene IDs assigned to them.		
Available settings:	0 - 15 1 - Key pressed 1 time 2 - Key pressed 2 times 4 - Key pressed 3 times 8 - Key Hold Down and Key Released		
Default setting:	**15**	Parameter size:	**1** [byte]

Parameter:	**41. Second button - scenes sent**		
Description:	This parameter determines which actions result in sending scene IDs assigned to them.		
Available settings:	0 - 15 1 - Key pressed 1 time 2 - Key pressed 2 times 4 - Key pressed 3 times 8 - Key Hold Down and Key Released		
Default setting:	**15**	Parameter size:	**1** [byte]

Parameter:	**154. First channel - auto off**		
Description:	This parameter allows to set the auto off time for the first channel.		
Available settings:	0 – auto off disabled 1 – 3600 [1 s – 3600 s] – auto off time		
Default setting:	**0**	Parameter size:	**2** [byte]

Parameter:	155. Second channel - auto off		
Description:	This parameter allows to set the auto off time for the second channel.		
Available settings:	0 – auto off disabled 1 – 3600 [1 s – 3600 s] – auto off time		
Default setting:	**0**	Parameter size:	**2** [byte]

Parameter:	200. Voltage measurement		
Description:	This parameter allows to set the value by which the mains voltage must change for the device to send the voltage measurement report. If the voltage level is restored below the notification tripping threshold, after ten minutes the device sends a notification cancellation to the hub.		
Available settings:	0, 3 – 10 0 – Functionality disabled 3 – 10 [3 V – 10 V] Threshold value for voltage reports		
Default setting:	**0**	Parameter size:	**1** [byte]

Parameter:	201. Voltage value for notification		
Description:	This parameter allows to set the value that the mains voltage must exceed for the device to send the voltage notification report.		
Available settings:	0, 100 – 260 0 – functionality disabled 100 – 260 [100 V – 260 V] value for voltage notifications		
Default setting:	**0**	Parameter size:	**2** [byte]

Parameter:	202. Outputs (channels) mode		
Description:	This parameter allows you to connect both channels and control them simultaneously (only for local control). When you select the connected output mode, both channels work with settings of the first channel (master).		
Available settings:	0 - Outputs independent 1 - Outputs connected		
Default setting:	**0**	Parameter size:	**1** [byte]

Note.

By setting parameter 202 to "outputs connected", you can control both outputs simultaneusly with a single input wall switch, the device behaves as follows:

- It keeps the 'auto off' and 'scene sent' parameters independent for each channel.
- The associations are sent based on the status of the outputs.
- The outputs are switched to the same state. If the outputs are initially in different states, pressing the wall switch results in changing the state of the first one (the second doesn't change). Every next click of the wall switch changes both outputs to the same state.
- The radio (RF) control works independently for both channels.
- The connected output mode is managed internally by the device. You mustn't connect the outputs with any kind of wiring as it can result in the device maifunction and/ or pernament demage of the device.

Table A6 - On/Off-Control 2 - NIF Command Class		
Command Class	**Version**	**Secure**
COMMAND_CLASS_ZWAVEPLUS_INFO [0x5E]	V2	None
COMMAND_CLASS_SWITCH_BINARY [0x25]	V2	Highest Available
COMMAND_CLASS_ASSOCIATION [0x85]	V2	Highest Available
COMMAND_CLASS_MULTI_CHANNEL_ASSOCIATION [0x8E]	V3	Highest Available
COMMAND_CLASS_ASSOCIATION_GRP_INFO [0x59]	V3	Highest Available
COMMAND_CLASS_TRANSPORT_SERVICE [0x55]	V2	None
COMMAND_CLASS_SECURITY [0x98]	V1	None
COMMAND_CLASS_SECURITY_2 [0x9F]	V1	None
COMMAND_CLASS_MULTI_CHANNEL [0x60]	V4	Highest Available
COMMAND_CLASS_SUPERVISION [0x6C]	V1	None
COMMAND_CLASS_DEVICE_RESET_LOCALLY [0x5A]	V1	Highest Available
COMMAND_CLASS_POWERLEVEL [0x73]	V1	Highest Available
COMMAND_CLASS_VERSION [0x86]	V3	Highest Available
COMMAND_CLASS_MANUFACTURER_SPECIFIC [0x72]	V2	Highest Available
COMMAND_CLASS_INDICATOR [0x87]	V3	Highest Available
COMMAND_CLASS_CONFIGURATION [0x70]	V4	Highest Available
COMMAND_CLASS_FIRMWARE_UPDATE_MD [0x7A]	V5	Highest Available
COMMAND_CLASS_METER [0x32]	V5	Highest Available
COMMAND_CLASS_NOTIFICATION [0x71]	V8	Highest Available
COMMAND_CLASS_PROTECTION [0x75]	V2	Highest Available
COMMAND_CLASS_APPLICATION_STATUS [0x22]	V1	None
COMMAND_CLASS_CENTRAL_SCENE [0x5B]	V3	Highest Available

Table A7 - On/Off-Control 2 - Not in NIF Command Class		
Command Class	**Version**	**Secure**
COMMAND_CLASS_BASIC [0x20]	V2	Highest Available

Table A8 - On/Off-Control 2 - Z-WAVE Plus CC	
Root Device / End Point 1	
Role Type	AOS - ROLE_TYPE_SLAVE_ALWAYS_ON
Node Type	ZWAVEPLUS_INFO_REPORT_NODE_TYPE_ZWAVEPLUS_NODE
Installer Icon Type	ICON_TYPE_GENERIC_ON_OFF_POWER_SWITCH [0x0700]
User Icon Type	ICON_TYPE_GENERIC_ON_OFF_POWER_SWITCH [0x0700]
End Point 2	
Role Type	AOS - ROLE_TYPE_SLAVE_ALWAYS_ON
vNode Type	ZWAVEPLUS_INFO_REPORT_NODE_TYPE_ZWAVEPLUS_NODE
Installer Icon Type	ICON_TYPE_GENERIC_ON_OFF_POWER_SWITCH [0x0700]
User Icon Type	ICON_TYPE_GENERIC_ON_OFF_POWER_SWITCH [0x0700]

Table A9 - On/Off-Control 2 - Multichannel CC	
Endpoint 1	
Generic Type	GENERIC_TYPE_SWITCH_BINARY
Specific Type	SPECIFIC_TYPE_NOT_USED
Supported CC	COMMAND_CLASS_ZWAVEPLUS_INFO [0x5E] COMMAND_CLASS_SWITCH_BINARY [0x25] COMMAND_CLASS_ASSOCIATION [0x85] COMMAND_CLASS_MULTI_CHANNEL_ASSOCIATION [0x8E] COMMAND_CLASS_ASSOCIATION_GRP_INFO [0x59] COMMAND_CLASS_SECURITY [0x98] COMMAND_CLASS_SECURITY_2 [0x9F] COMMAND_CLASS_SUPERVISION [0x6C] COMMAND_CLASS_METER [0x32] COMMAND_CLASS_NOTIFICATION [0x71] COMMAND_CLASS_APPLICATION_STATUS [0x22]
Description	Channel 1
Endpoint 2	
Generic Type	GENERIC_TYPE_SWITCH_BINARY
Specific Type	SPECIFIC_TYPE_NOT_USED
Supported CC	COMMAND_CLASS_ZWAVEPLUS_INFO [0x5E] COMMAND_CLASS_SWITCH_BINARY [0x25] COMMAND_CLASS_ASSOCIATION [0x85] COMMAND_CLASS_MULTI_CHANNEL_ASSOCIATION [0x8E] COMMAND_CLASS_ASSOCIATION_GRP_INFO [0x59] COMMAND_CLASS_SECURITY [0x98] COMMAND_CLASS_SECURITY_2 [0x9F] COMMAND_CLASS_SUPERVISION [0x6C] COMMAND_CLASS_METER [0x32] COMMAND_CLASS_NOTIFICATION [0x71] COMMAND_CLASS_APPLICATION_STATUS [0x22]
Description	Channel 2

Table A10 - On/Off-Control 2 - Root Device			
Group	Profile	Command Class & Command	Group Name
1	General: Lifeline (0x00: 0x01)	COMMAND_CLASS_DEVICE_RESET_LOCALLY [0x5A] DEVICE_RESET_LOCALLY_NOTIFICATION [0x01] COMMAND_CLASS_INDICATOR [0x87] INDICATOR_REPORT [0x03] COMMAND_CLASS_CENTRAL_SCENE [0x5B] CENTRAL_SCENE_NOTIFICATION [0x03] COMMAND_CLASS_SWITCH_BINARY [0x25] SWITCH_BINARY_REPORT [0x03] COMMAND_CLASS_METER [0x32] METER_REPORT [0x02] COMMAND_CLASS_NOTIFICATION [0x71] NOTIFICATION_REPORT [0x05]	Lifeline
2	Control: KEY01 (0x20: 0x01)	COMMAND_CLASS_BASIC [0x20] BASIC_SET [0x01]	On/Off (1)
3	Control: KEY02 (0x20: 0x02)	COMMAND_CLASS_BASIC [0x20] BASIC_SET [0x01]	On/Off (2)

Table A11 - On/Off-Control 2 - End Point 1			
Group	Profile	Command Class & Command	Group Name
1	General: Lifeline (0x00: 0x01)	COMMAND_CLASS_SWITCH_BINARY [0x25] SWITCH_BINARY_REPORT [0x03] COMMAND_CLASS_METER [0x32] METER_REPORT [0x02] COMMAND_CLASS_NOTIFICATION [0x71] NOTIFICATION_REPORT [0x05]	Lifeline
2	Control: KEY01 (0x20: 0x01)	COMMAND_CLASS_BASIC [0x20] BASIC_SET [0x01]	On/Off (1)

Table A12 - On/Off-Control 2 - End Point 2			
Group	Profile	Command Class & Command	Group Name
1	General: Lifeline (0x00: 0x01)	COMMAND_CLASS_SWITCH_BINARY [0x25] SWITCH_BINARY_REPORT [0x03] COMMAND_CLASS_METER [0x32] METER_REPORT [0x02] COMMAND_CLASS_NOTIFICATION [0x71] NOTIFICATION_REPORT [0x05]	Lifeline
2	Control: KEY02 (0x20: 0x02)	COMMAND_CLASS_BASIC [0x20] BASIC_SET [0x01]	On/Off (2)

16 ASSOCIATION CC / MULTICHANNEL ASSOCIATION CC

Table A13 - On/Off-Control 2 - Association CC / Multichannel association CC		
Root Device		
Group	**Max Nodes Supported**	**Comment**
1	1	Lifeline
2	5	On/Off (1)
3	5	On/Off (2)
End Point 1		
Group	**Max Nodes Supported**	**Comment**
1	0	Lifeline
2	5	On/Off (1)
End Point 2		
Group	**Max Nodes Supported**	**Comment**
1	0	Lifeline
2	5	On/Off (2)

17 SWITCH BINARY CC

Table A14 - On/Off-Control 2 - Switch Binary CC			
Root Device / Endpoint 1			
Command	**Value**	**State**	**Description**
SET/REPORT	0 (0x00)	OFF	Channel 1
SET	1-99 (0x01-0x63)	ON	Channel 1
SET	…	reserved	Channel 1
SET/REPORT	255 (0xFF)	ON	Channel 1
Endpoint 2			
Command	**Value**	**State**	**Description**
SET/REPORT	0 (0x00)	OFF	Channel 2
SET	1-99 (0x01-0x63)	ON	Channel 2
SET	…	reserved	Channel 2
SET/REPORT	255 (0xFF)	ON	Channel 2

18 BASIC CC

Table A15 - On/Off-Control 2 - Basic CC			
Command	**Root**	**Mapping**	
		EP1	EP2
Basic Set	= EP1	Binary Switch Set	Binary Switch Set
Basic Get	= EP1	Binary Switch Get	Binary Switch Get
Basic Report	= EP1	Binary Switch Report	Binary Switch Report

19 INDICATOR CC

Table A16 - On/Off-Control 2 - Root Device				
Indicator ID – 0x50 (Identify)				
Property ID **0x03 (Toggling, On/Off Periods)** **0x04 (Toggling, On/Off Cycles)** **0x05 (Toggling, On time within an On/Off period)** **etc.**				
Command	**Indicator ID**	**Property ID**	**Value**	**Other**
SET	All	0x03	0x00 – 0xFF	
SET	All	0x04	0x00 – 0xFF	
SET	All	0x05	0x00 – 0xFF	
GET	**All**	**-**	**-**	**Device send Indicator Report**

20 METER CC

Table A17 - On/Off-Control 2 - Meter CC				
Root/Endpoint 1				
Meter Type	**Scale**	**Rate Type**	**Precision**	**Size**
Electric [0x01]	Electric_kWh [0x00]	Import [0x01]	1	4
Electric [0x01]	Electric_W [0x02]	Import [0x01]	1	4
Electric [0x01]	Electric_V [0x04]	Import [0x01]	0	4

Table A18 - On/Off-Control 2 - Meter CC				
Endpoint 2				
Meter Type	**Scale**	**Rate Type**	**Precision**	**Size**
Electric [0x01]	Electric_kWh [0x00]	Import [0x01]	1	4
Electric [0x01]	Electric_W [0x02]	Import [0x01]	1	4

21 PROTECTION CC

Table A19 - On/Off-Control 2 - Protection CC		
Root		
Type	**State**	**Description**
Local	0	Unprotected - The device isn't protected, and can be operated normally through the user interface.
Local	2	No operation possible – button can't change relay state, other functionalities are available (menu).
RF	0	Unprotected - The device accepts and responds to all RF Commands.
RF	1	No RF control - Command class basic and switch binary are rejected, other command classes are handled.

Note:
Protection CC State can be set independently on each endpoint.

22 NOTIFICATION CC

Table A20 - On/Off-Control 2 - Notification CC - Root Device			
Root Device			
Notification Type	**Event**	**Event /State Parameter**	**Status**
Power Management [0x08]	Voltage drop/drift [0x05/V2]	-	0xFF – enable (not changeable)
Power Management [0x08]	Over-current detected [0x06/V3]	-	0xFF – enable (not changeable)
Power Management [0x08]	Over-voltage detected [0x07]	-	0xFF – enable (not changeable)
System [0x09]	System hardware failure with manufacturer proprietary failure code [0x03]	MP code: 0x01 [device overheat]	0xFF – enable (not changeable)

Note.
If the voltage level is restored below the notification tripping threshold, after ten minutes the device sends a notification cancellation to the hub.

Table A21 - On/Off-Control 2 - Notification CC - Endpoint 1			
Endpoint 1			
Power Management [0x08]	Over-current detected [0x06/V3]	-	0xFF – enable (not changeable)

Table A22 - On/Off-Control 2 - Notification CC - Endpoint 2			
Endpoint 2			
Power Management [0x08]	Over-current detected [0x06/V3]	-	0xFF – enable (not changeable)

23 REGULATIONS

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WEEE Directive Compliance

Device labelled with this symbol shouldn't be disposed with other household wastes.
It shall be handed over to the applicable collection point for the recycling of waste electrical and electronic equipment.

Declaration of conformity

Hereby, NICE SpA Oderzo TV Italia declares that the device is in compliance with the essential requirements and other relevant provisions of Directive 2014/53/EU. The full text of the EU declaration of conformity is available at the following internet address: www.niceforyou.com/en/download?v=18

Attention!
This product isn't a toy.
Keep away from children and animals!

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