Walli

Dimmer-Control

Compatible with Yubii ECOSYSTEM

Remotely controlled light dimming module

EN - Instructions and warnings for installation and use

v1.4

Nice

1 WARNINGS AND GENERAL PRECAUTIONS

- **This manual contains important instructions and warnings for personal safety.** Carefully read all parts of this manual. If in doubt, suspend installation immediately and contact Nice Technical Assistance.
- **Using this product for different purposes than specified in this manual is strictly forbidden!**
- **All installation and connection operations must be performed exclusively by suitably qualified and skilled personnel with the unit disconnected from the mains power supply.**
- The product 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.
- 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.
- To avoid risk of electrical shock, don't operate the device with wet or moist hands.
- The manufacturer will not be held responsible for any damage or loss of warranty privileges for other connected devices if the connection isn't compliant with their manuals.
- This product isn't a toy. Keep away from children and animals!

2 PRODUCT DESCRIPTION

Walli Dimmer-Control is a smart wall dimmer designed to control light source with the Z-Wave® network.
It measures active power and energy consumed by the controlled load.
You can install it with provided a cover plate and switch button or other compatible.

2.1 - Main features

- Can be used for dimming:
  - » 110/230V operated conventional incandescent and halogen
  - » 12V operated ELV halogen lamps and dimmable LED bulbs (with electronic transformers)
  - » 12V operated MLV halogen lamps (with ferromagnetic transformers)
  - » Dimmable LED bulbs
  - » Dimmable compact fluorescent CFL tube lamps
  - » Supported dimmable light sources (power factor > 0.5) with minimal power of 5VA using Nice Led Adaptor
- Can be used for switching:
  - » Compact fluorescent CFL tube lamps with electronic ballast
  - » Fluorescent tube lamps with electronic ballast
  - » LED bulbs (power factor > 0.7)
  - » Supported light sources (power factor > 0.5) with minimal powerof 5 VA using Nice Led Adaptor.
- Uses different operating modes:
  - » Trailing edge - for resistive loads (R)
  - » Trailing edge - for resistive-capacitive loads (RC)
  - » Leading edge - for resistive-inductive loads (RL)
- Can be used with Walli covers or other compatible covers such as G55, LC, SO
- Can be installed in two and three-wired configuration.
- Supports Z-Wave® network Security Modes: S0 with AES-128 encryption and S2 Authenticated with PRNG-based encryption.
- Works as a Z-Wave® signal repeater (all non-battery operated devices within the network act as repeaters to increase reliability of the network).

2.2. - Fully compatible Z-Wave Plus® device

This device can be used with all devices certified with the Z-Wave Plus® certificate and should be compatible with such devices produced by other manufacturers. All non-battery operated devices within the network will 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 needs to be used to fully utilize the product.

2.3 - Nice Led Adaptor

Nice Led Adaptor is designed to work with Walli Dimmer-Control. We recommend to use it in case of connecting LED bulbs or energy saving compact fluorescent lamps. Nice Led Adaptor prevents flickering of the LED lights and glowing of the turned off compact fluorescent lamps.
In the case of 2-wire connection, Nice Led Adaptor enables reducing minimum power of load required by Walli Dimmer-Control for correct operation. Nice Led Adaptor provides powering of Walli Dimmer-Control in case of controlling the low loads of minimum power down to 5VA (for cosφ>0.5).

Note

- In the case of 2-wire connection don't connect load below minimal power without Nice Led Adaptor.
- Nice Led Adaptor works only in trailing edge mode. Don't connect Nice Led Adaptor to Walli Dimmer-Control operating in leading edge mode.
- Nice Led Adaptor is sensitive to the frequent changes of the state of Walli Dimmer-Control (alternate switching on and off). Significant changes in brightness shouldn't be performed more than once per second.

2.4 - Technical specifications

Walli Dimmer-Control is produced by Nice S.p.A. (TV).

Note

All technical specifications stated in this section refer to an ambient temperature of 20 °C (± 5 °C).
Nice S.p.A. reserves the right to apply modifications to the product at any time when deemed necessary, while maintaining the same functionalities and intended use.

Table 1 - Walli Dimmer-Control - Hardware parameters

Parameter	Values / types
Compatible load types	• **Resistive loads** - conventional incandescent and halogen light sources • **Resistive-capacitive loads** - fluorescent tube lamp (compact / with electronic ballast), electronic transformer, LED • **Resistive-inductive loads** - ferromagnetic transformers
Rated load current	• 0.22 A - 1.52 A – resistive loads (incandescent and halogen) • 0.22 A - 1.3 A – resistive-capacitive loads (fluorescent tube lamp, electronic transformer, LED) • 0.22 A - 1.3 A – resistive-inductive loads (ferromagnetic transformers) • 0.022 A - 0.22 A – with Nice Les Adaptor: fluorescent tube lamp or LED
Active element	semiconductor electronic switch ε
Recommended external overcurrent protection	10A type B circuit breaker (EU) 13A type B circuit breaker (Sweden)
For installation in boxes	Ø ≥ 50 mm, depth ≥ 60 mm
Max. transmitting power	+6dBm
Range	• up to 50 m outdoors, • up to 40 m indoors Depending on the terrain and building structure
Radio protocol	Z-Wave (500 series chip)
Ambient humidity	10 – 95% RH without condensation
Operational temperature	0 - 35°C
Dimensions (Height × Width × Depth)	86 x 86 x 51 mm
Compliance with EU directives	RoHS 2011/65/EU RED 2014/53/EU

Note

Radio frequency of individual device must be same as your Z-Wave hub. Check information on the box or consult your dealer if you aren't sure.

3 INSTALLATION

3.1 - Safety rules

- ⚠ **Connecting the device in a manner inconsistent with this manual may cause risk to health, life or material damage.**
- Don't power the device before fully assembling it in the mounting box.
- Connect only in accordance with one of the figures.
- Install only in flush mounting boxes compliant with a relevant national safety standards and with depth no less than 40 mm.
- Don't connect devices which aren't compliant with the specification or relevant safety standards.
- Don't connect heating devices.
- Don't connect SELV or PELV circuits.
- Don't connect loads below minimal power in 2-wire connection without Nice Led Adaptor.
- Don't connect different types of light sources simultaneously.
- Don't connect the power supply without a load.
- Don't connect more than one transformer.
- When using magnetic transformer, load it with 50% of its nominal power at minimum.
- Minimize number of electronic transformers in a circuit, noises caused by them in electrical grids may affect device operation.

3.2 - Preparing for installation

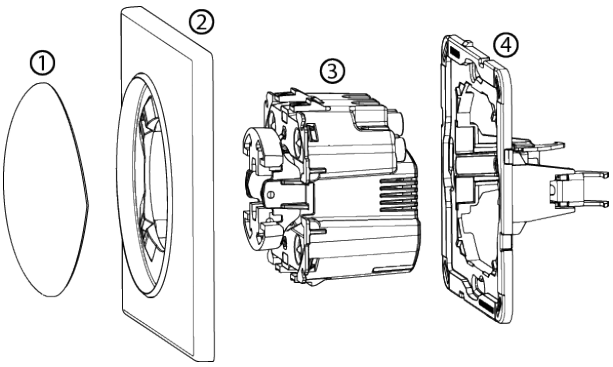


Figure 1: Device parts

Notes for Figure 1

1 – switch button
2 – cover plate
3 – unit (device)
4 – mounting frame

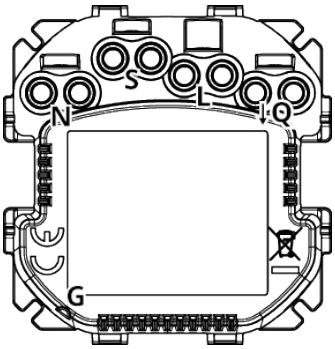


Figure 2: Device terminals

Notes for Figure 2

N – terminal for neutral wire
S – support terminal of 2-wire connection
L – terminal for live wire
Q – output terminal for controlled load
G – groove used to measure wire length

Prepare wires by removing 11.5 -13 mm of insulation from their ends. You can use groove on the side of the unit to measure the length.

When installing with NICE covers:

1. Pull out the switch button.
2. Take off the cover plate.

When installing with G55, LC or SO covers:

1. Pull out the original switch button.
2. Take off the original cover plate.
3. Dismount the original mounting frame.
4. Snap the new mounting frame.

Note

Additional mounting frames are sold separately. Make sure you have all required parts when installing with covers other than Nice.

3.3 - Electrical connection

1. Switch off the mains voltage (disable the fuse).
2. Connect with one of the figures below:

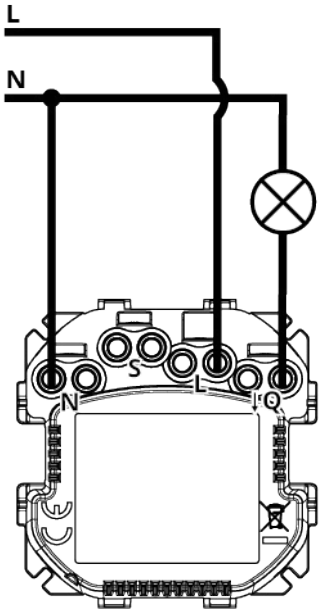


Figure 3: Example connection for 3-wire installation

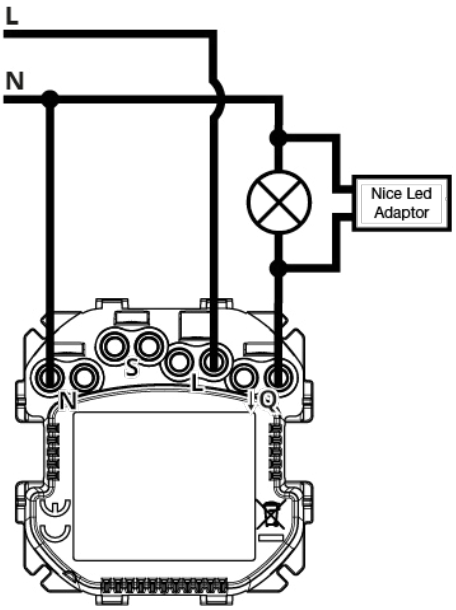


Figure 4: Example connection for 3-wire installation with Nice Led Adaptor

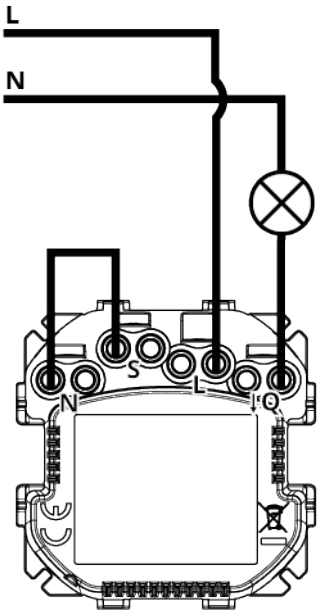


Figure 5: Example connection for 2-wire installation

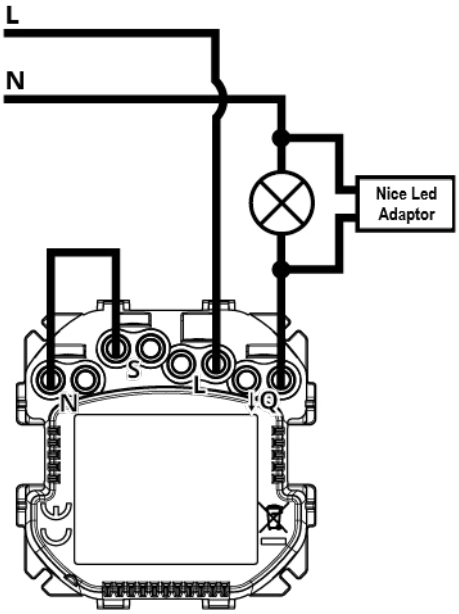


Figure 6: Example connection for 2-wire installation with Nice Led Adaptor

3. Verify correctness of connection.
4. Tighten the terminal screws using PH1 screwdriver.

3.4 - Assembling device

- When installing the device in the mounting box orient the device with terminal screws going up or to the left (for horizontal button position) to ensure button order.
- When installing with covers other than Nice, we recommend disabling the LED by changing parameter 13 to 0.

3.4.1 - Installation with Nice cover

1. Insert the device with mounting frame into the mounting box and secure with mounting claws and screws.
2. Snap the cover plate to the device.
3. Snap the switch button to the device.

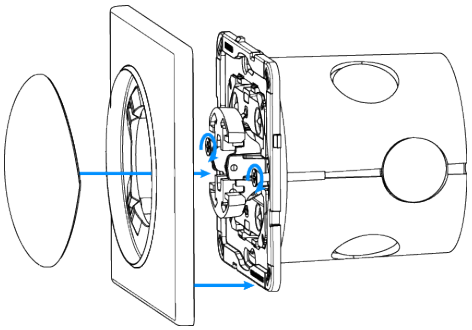


Figure 7: Installation with Nice cover

3.4.2 - Installation with G55 cover

1. Insert the device with mounting frame into the mounting box and secure with mounting claws and screws.
2. Snap the new cover plate to the device.
3. Snap the switch button adapter (sold seperately) to the device.
4. Snap the new switch button to the device.

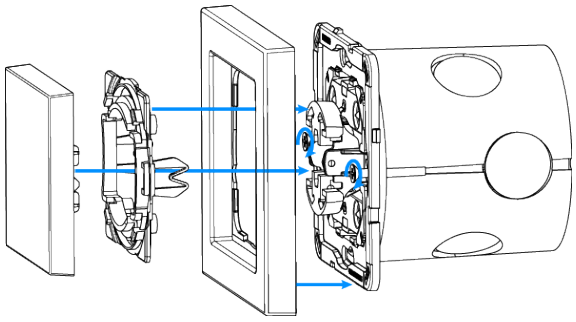


Figure 8: Installation with G55 cover

3.4.3 - Installation with LC cover

1. Insert the device with mounting frame (sold seperately) into the mounting box and secure with mounting claws and screws.
2. Snap the switch button adapter (sold seperately) to the device.
3. Snap the new inner cover plate to the device.
4. Snap the new outer cover plate to the device.
5. Snap the new switch button to the device.

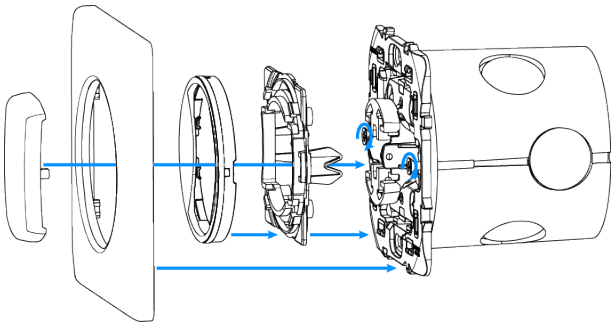


Figure 9: Installation with LC cover

3.4.4 - Installation with SO cover

1. Insert the device with mounting frame (sold seperately) into the mounting box and secure with mounting claws and screws.
2. Snap the new cover plate to the device.
3. Snap the new switch button to the device.

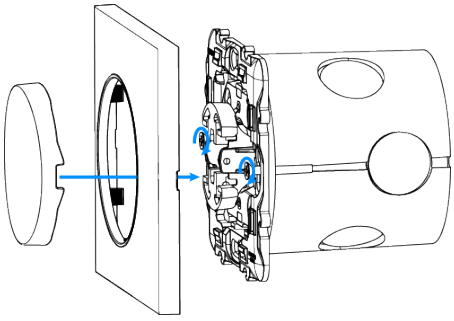


Figure 10: Installation with SO cover

3.5 - Activating device

1. If the device is fully assembled, switch on the mains voltage.
2. LED ring light notifies that the device is powered.
3. Wait for the calibration process to end. Light may blink, the device is switched off once the process is completed.
4. The device can be added to the Z-Wave network.

4 ADDING TO Z-WAVE NETWORK

Adding (Inclusion) – Z-Wave device learning mode, which enables adding the device to the existing Z-Wave network.

4.1 - Adding manually

1. Set the main hub in the (Security/non-Security Mode) add mode. For more information, see the hub manual.
2. Quickly, three times click one of the buttons.
3. If you are adding in Security S2 Authenticated, input the underlined part of the device device security key (DSK), which is labelled on the bottom of the box.
4. LED starts blinking yellow, wait for the adding process to end.
5. Adding result is confirmed with the Z-Wave hub message and the LED frame:
   - **Green** – successful (non-secure, S0, S2 non-authenticated)
   - **Magenta** – successful (Security S2 Authenticated)
   - **Red** – not successful

4.2 - Adding using SmartStart

With the **SmartStart** function enabled products can be added into the Z-Wave network by scanning the Z-Wave QR Code present on the product with a hub providing the SmartStart inclusion. A SmartStart product is added automatically within 10 minutes of being switched on in the network range.

Note
To use the SmartStart function your hub needs to support Security S2. For more information, see the hub manual.

1. Enter the full DSK string code to your hub. If your hub is capable of QR scanning, scan the QR code placed on the label on the bottom of the box.
2. Power the device.
3. Wait for the calibration process to end. Light may blink, the device is switched off once the process is completed.
4. Wait for the adding process to start (up to a few minutes), which is signalled with yellow LED blinking.
5. Adding result is confirmed with the Z-Wave hub message and the LED frame:
   - **Green** – successful (non-secure, S0, S2 non-authenticated)
   - **Magenta** – successful (Security S2 Authenticated)
   - **Red** – not successfu

Note
In case of problems with adding the device, reset the device and repeat the adding procedure.

5 REMOVING FROM Z-WAVE NETWORK

Removing (Exclusion) – Z-Wave device learning mode, which enables removing the device from the existing Z-Wave network. Removing also results in resetting the device to factory defaults.

1. Set the main hub in the remove mode. For more information, see the hub manual.
2. Quickly, three times click one of the buttons.
3. LED starts blinking yellow, wait for the removing process to end.
4. Successful removing is confirmed with the Z-Wave hub message and red LED color. The device starts calibrating the load.

Note
Removing device isn't possible if the central scene notifications have been activated with parameters 40 and 41.

6 CALIBRATION

The device is equipped with an algorithm of smart light source detection. It selects automatically suitable control mode (leading edge for inductive loads, trailing edge for capacitive or resistive loads) and adjusts maximum and minimum light levels.

Note
- Installer is obliged to verify the proper operation of the device. The calibration settings may require a manual correction.
- In a 2-wire connection for non-resistive loads minimum level (parameter 150) needs to be adjusted manually.
- If in a 2-wire connection calibration results in Voltage Drop error, maximum level (parameter 151) needs to be adjusted manually.
- Some types of LED and CF lamps are designed to operate in leading edge mode, with conventional dimmers.

Depending on parameter 175 the device starts calibration automatically or can be started manually by:
- setting parameter 159 to 1 or 2 (without or with Nice Led Adaptor).
- selecting blue or red menu position (without or with Nice Led Adaptor).

The result of calibration is confirmed with the LED frame:
- **Green** – Light source recognized as dimmable, dimming levels set
- **Yellow** – Light source recognized as non-dimmable, only switching possible
- **Red** – Calibration failed: lack of connected load or connected light source exceeds maximum power
- **Blinking Red** - Calibration failed: installation failure or damaged load

7 OPERATING DEVICE

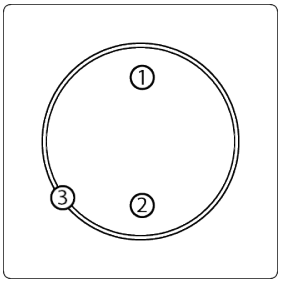


Figure 11: Controls

Notes for Figure 11

1 – the first / ▲ button
2 – the second / ▼ button
3 – LED ring

7.1 - Button control

Controlling connected load - to change the state of the connected load perform one of the following actions:

- Click ▲ if turned off – turn on with previous level
- Click ▲ if turned on – set to 100%
- 2 x click ▲ – set to 100%
- Click ▼ – turn off
- Hold ▲ – start brightening until released
- Hold ▼ – start dimming until released

Other actions

- 3 x click – start learn mode to add/remove to/from the Z-Wave network
- 1, 2, 3 x click/hold/release – activate scene in the hub for specific action (requires prior configuration)
- 3 x click, then press and hold – enter the menu

7.2 - Visual indications

The built-in LED light shows current device status.

Table 2 - Walli Dimmer-Control - Responses to button actions

Action	Color	Meaning
After powering the device	Green	Device added to a Z-Wave network (non-secure, S0, S2 non-authenticated)
	Magenta	Device added to a Z-Wave network (Security S2 Authenticated)
	Red	Device not added to a Z-Wave network
State of the device	White	Load turned ON (configurable)
Update	Blinking cyan	Update in progress
	Green	Update successful
	Red	Update not successful
Menu	Blinking green	Entering the menu (added as non-secure, S0, S2 non-authenticated)
	Blinking magenta	Entering the menu (added as Security S2 Authenticated)
	Blinking red	Entering the menu (not added to a Z-Wave network)
	Green	Resetting energy consumption memory
	Blue	Start load calibration
	Red	Start load calibration with Nice Led Adaptor
	Yellow	Resetting to factory defaults

7.3 - Menu

Menu enables performing the Z-Wave network actions.

To use the menu:

1. Quickly, three times click, then press and hold one of the buttons. The device blinks to signal adding status. For more information, see 7.2 - Visual indications.
2. Release the button when the device signals a desired position with color:
   - **Blue** – start load calibration
   - **Red** – start load calibration with Nice Led Adaptor
   - **Green** – reset energy consumption memory
   - **Yellow** – reset to factory defaults
3. Quickly click the button to confirm.

8 RESETTING TO FACTORY DEFAULTS

Reset procedure restoring the device back to its factory settings, which means all information about the Z-Wave hub and user configuration are deleted. Resetting to factory defaults doesn't reset energy consumption memory.

Note
Resetting the device isn't the recommended way of removing the device from the Z-Wave network. Use reset procedure only if the primary hub is missing or inoperable. Certain device removal can be achieved by the procedure of removing described.

1. Quickly, three times click, then press and hold one of the buttons to enter the menu.
2. Release the button when the device glows yellow.
3. Quickly click the button to confirm.
4. After a few seconds the device is restarted, which is signalled with red LED colour.

9 POWER AND ENERGY METERING

The device enables the active power and energy consumption monitoring. Data is sent to the main Z-Wave hub.

Measuring is carried out by the most advanced microcontroller technology,assuring maximum accuracy and precision (+/- 1% for loads greater than 10 W).

Electric active power – power that energy receiver is changing into a work or a heat. The unit of active power is Watt [W].

Note
Power measurement can contain mains voltage fluctuations within +/- 10%.

Electric energy – energy consumed by a device through a time period. Consumers of electricity in households are billed by suppliers on the basis of active power used in given unit of time. Most commonly measured in kilowatt-hour [kWh]. One kilowatt-hour is equal to one kilowatt of power consumed over period of one hour, 1 kWh = 1000 Wh.

To reset consumption memory:

1. Quickly, three times click, then press and hold one of the buttons to enter the menu.
2. Release button when the device glows green.
3. Quickly click the button. Device blinks two times green to confirm.

Note
The device stores periodically the consumption data in the device memory. Disconnecting the module from the power supply doesn't erase stored energy consumption data.

Table 3 - Walli Dimmer-Control - Load

Connection	Brightness	Resistive load	Resistive-inductive load	Resisitve-capacitive load
3-wire connection	Brightness > 70%	± (0.5% + 0.2 W)	± (0.5% + 0.2 W)	± (0.5% + 0.2 W)
	Brightness < 70%	± (2% + 0.2 W)	± (2% + 0.2 W)	± (2% + 0.2 W)
2-wire connection	Brightness > 70%	± (2% + 0.2 W)	Approximated*	Approximated*
	Brightness < 70%	± (4% + 0.2 W)	Approximated*	Approximated*

* Measurements are only illustrative, returned values may differ from the actual measurement. In the case of reporting incorrect values change the values of parameters 178 and 179.

10 ASSOCIATIONS

Association (linking devices) – direct control of other devices within the Z-Wave system network.

Assocations enable:

- reporting the device status to the Z-Wave hub with Lifeline group.
- creating simple automations by controlling other devices without participation of the main hub using groups assigned to actions on the device.

Note
Commands send to the 2nd and 3rd association groups reflect button operation according to device configuration. For example, turning the load on using button sends frame responsible for the same action.

Table 4 - Walli Dimmer-Control - Association groups

Association group	Name	Description
1st	Lifeline	Reports the device status and enables assigning a single device, the hub by default. Only one node can be assigned.
2nd	On/Off	Used for turning the associated devices on/off reflecting button operation (uses Basic command class)
3rd	Dimmer	Used for changing level of associated devices reflecting button operation (uses Switch Multilevel command class)

Walli Dimmer-Control in the 2nd to 3th group enables controlling five regular or multichannel devices per one association group. The **Lifeline** group is reserved for the hub and only one node can be assigned.

Table 5 - Walli Dimmer-Control - Commands sent to association groups

Button	1 click	2 clicks	Hold	Release
Button 1	Basic Set: the 2nd group, Multilevel Set: the 3rd group	Basic Set: the 2nd group, Multilevel Set: the 3rd group	Multilevel Start Change: the 3rd group	Multilevel Stop Change: the 3rd group
Button 2	Basic Set: the 2nd group, Multilevel Set: the 3rd group	-	Multilevel Start Change: the 3rd group	Multilevel Stop Change: the 3rd group

11 ADVANCED PARAMETERS

The device operation can be customized according to the user needs. The settings can be adjusted using Z-Wave hub to which the device is added. The way of adjusting them might differ depending on the hub.

In the Yubii Home interface parameters are presented as simple options in Advanced Settings of the device.

Table 6 - Walli Dimmer-Control - Advanced parameters

Parameter	Description	Available setting	Default setting	Parameter size
1. Remember device state	Determines how the device reacts in case of power supply failure such as power outage	**0** – remains switched off after restoring power **1** – restores remembered state after restoring power	**1** (restores the state)	**1** [byte]
2. Overload safety switch	Enables turning off the controlled device in case of exceeding the defined power. Controlled device can be turned back on using the button or sending a control frame.	**0** – function disabled **10 - 5000** (1.0-500.0 W, step 0.1 W) – power threshold	**3500** (350W)	**4** [bytes]
10. LED frame – power limit	Determines maximum active power. Exceeding it results in the LED frame flashing violet. Function is active only when parameter 11 is set to 8 or 9.	**100 - 5000** (10.0 - 500.0 W, step 0.1 W) – power threshold	**3500** (350W)	**4** [bytes]
11. LED frame – colour when ON	Defines the LED colour when the device is ON. When set to 8 or 9, LED frame colour changes depending on the measured power and parameter 10. Other colours are set permanently and don't depend on power consumption.	**0** – LED disabled **1** – white **2** – red **3** – green **4** – blue **5** – yellow **6** – cyan **7** – magenta **8** – color changes smoothly depending on measured power **9** – color changes in steps depending on measured power	**1** (white)	**1** [byte]

Table 6 - Walli Dimmer-Control - Advanced parameters

Parameter	Description	Available setting	Default setting	Parameter size
12. LED frame – colour when OFF	Defines the LED colour when the device is OFF	**0** – LED disabled **1** – white **2** – red **3** – green **4** – blue **5** – yellow **6** – cyan **7** – magenta	**0** (disabled)	**1** [byte]
13. LED frame – brightness	Enables adjusting the LED frame brightness	**0** – LED disabled **1 - 100** (1 - 100% brightness) **101** – brightness directly proportional to set level **102** – brightness inversely proportional to set level	**100** (100%)	**1** [byte]
24. Buttons orientation	Enables reversing the operation of the buttons	**0** – default - the 1st button brightens, the 2nd button dims **1** – reversed - the 1st button dims, the 2nd button brightens	**0**	**1** [byte]
30. Alarm configuration - 1st slot	Determines to which alarm frames and how the device should react. The parameters consist of 4 bytes, three most significant bytes are set according to the official the Z-Wave protocol specification.	• **1B [MSB]** – Notification Type • **2B** – Notification Status • **3B** – Event/State Parameters • **4B [LSB]** – action: **0x00** – no action on output **0xX1** – turn ON **0xX2** – turn OFF **0xX3** – turn ON/OFF continuously **0x0X** – no action on LED frame **0x1X** – LED frame blinks red **0x2X** – LED frame blinks green **0x4X** – LED frame blinks blue **0x8X** – disable LED frame **0xFX** – LED activate alarm sequence (red-white-blue)	**[0x00, 0x00, 0x00, 0x00]** (disabled)	**4** [bytes]
31. Alarm configuration - 2nd slot			**[0x05, 0xFF, 0x00, 0x00]** (Water Alarm, any notification, no action)	
32. Alarm configuration - 3rd slot			**[0x01, 0xFF, 0x00, 0x00]** (Smoke Alarm, any notification, no action)	
33. Alarm configuration - 4th slot			**[0x02, 0xFF, 0x00, 0x00]** (CO Alarm, any notification, no action)	
34. Alarm configuration - 5th slot			**[0x04, 0xFF, 0x00, 0x00]** (Heat Alarm, any notification, no action)	
35. Alarm configuration – duration	Defines duration of alarm sequence.When time set using this parameter elapses, an alarm is cancelled, LED frame and relay restore normal operation, but don't recover state from before the alarm.	**0** – infinite **1 - 32400** (1 s - 9 h, 1 s step) – duration	**600** (10min)	**1** [byte]
40. First button – scenes sent	Determines which actions result in sending scene IDs assigned to them. Values can be combined (e.g. 1+2=3 means that scenes for single and double click are sent). Enabling scenes for triple click disables entering the device in learn mode by triple clicking.	**1** – Key pressed 1 time **2** – Key pressed 2 times **4** – Key pressed 3 times **8** – Key hold down and key released	**0** (no scenes)	**1** [byte]
41. Second button – scenes sent				
60. Power reports – include self-consumption	Determines whether the power measurements should include power consumedby the device itself	**0** – Self-consumption not included **1** – Self-consumption included	**0** (not included)	**1** [byte]
61. Power reports – on change	Defines minimal change (from the last reported) in measured power that results in sending new report. For loads under 50 W the parameter is irrelevant, report is sent every 5 W change.	**0** – reporting on change disabled **1 - 500** (1 - 500%, 1% step) – minimal change	**15** (15%)	**2** [bytes]
62. Power reports – periodic	Defines reporting interval for measured power. Periodic reports are independent from changes in value (parameter 61).	**0** – periodic reports disabled **30 - 32400** (30 s - 9 h, 1 s step) – time interval	**3600** (1h)	**2** [bytes]
65. Energy reports – on change	Defines minimal change (from the last reported) in measured energy that results in sending a new report.	**0** – reporting on change disabled **1 - 500** (0.01 - 5 kWh, 0.01 kWh step) – minimal change	**10** (0.1 kWh)	**2** [bytes]

Table 6 - Walli Dimmer-Control - Advanced parameters				
Parameter	**Description**	**Available setting**	**Default setting**	**Parameter size**
66. Energy reports – periodic	Defines reporting interval for measured energy. Periodic reports are independent from changes in value (parameter 65)	**0** – periodic reports disabled **30 - 32400** (30 s - 9 h, 1 s step) – time interval	**3600** (1 h)	**2** [bytes]
150. Minimum brightness level	Is set automatically during the calibration process, but can be changed manually after the calibration	**1 - 98** (1 - 98%, 1% step) – level of brightness	**1**	**1** [byte]
151. Maximum brightness level		**2 - 99** (2 - 99%, 1% step) – level of brightness	**99**	**1** [byte]
152. Incandescence level of dimmable compact fluorescent lamps	The virtual value set as a percentage level between parameters MIN (1%) and MAX. (99%). The device sets to this value after the first switch on. It's required for warming up and switching dimmable compact fluorescent lamps and certain types of light sources.	**1 - 98** (1 - 98%, 1% step) – level of brightness	**1**	**1** [byte]
153. Incandescence time of dimmable compact fluorescent lamps	Determines the time required for switching compact fluorescent lamps and certain types of light sources. Setting this parameter to 0 disables the incandescence functionality.	**0 - 255** (0 - 25.5 s, 0.1 s step) – incandescence time	**0**	**2** [bytes]
154. Automatic control – dimming step size	Defines the percentage value of dimming step during the automatic control	**1 - 99** (1 - 99%, 1% step) – dimming step	**1**	**1** [byte]
155. Automatic control – time of dimming step	Defines the time of performing a single dimming step set in parameter 154 during the automatic control	**0 - 255** (0 - 2.55s, 10ms step)	**1** (10ms)	**2** [bytes]
156. Manual control – dimming step size	Defines the percentage value of the dimming step during the manual control	**1 - 99** (1 - 99%, 1% step) – dimming step	**1**	**1** [byte]
157. Manual control – time of dimming step	Defines the time of performing a single dimming step set in parameter 156 during the manual control	**0 - 255** (0 - 2.55 s, 10 ms step)	**5** (50ms)	**2** [bytes]
158. Auto-off functionality	Enables switching off the device automatically after a specified time from switching the light source on. It can be useful when the device is installed in the stairway.	**0** – auto-off disabled **1 - 32767** (1 s - 9.1 h, 1 s step) – auto-off time	**0**	**2** [bytes]
159. Force auto-calibration	Changing value of this parameter forces the calibration process. During the calibration parameter is set to 1 or 2 and switched to 0 upon completion.	**0** – readout **1** – force auto-calibration without Nice Led Adaptor **2** – force auto-calibration with Nice Led Adaptor	**0**	**1** [byte]
160. Auto-calibration status (read-only parameter)	Determines operating mode of the device (automatic/manual settings)	**0** – calibration procedure not performed or the device operates on manual settings **1** – the device operates on auto-calibration settings	**0**	**1** [byte]
161. Burnt out bulb detection	Defines percentage power variation (compared to power consumption measured during the calibration) to be interpreted as load error/burnt out bulb	**0** – function disabled **1 - 99** (1 - 99%, 1% step) – power variation	**0**	**1** [byte]
162. Time delay of a burnt out bulb and overload detection	Defines detection delay for the burnt out bulb (parameter 161) and overload (parameter 2)	**0** – detection of a burnt out bulb disabled **1 - 255** (1 - 255 s, 1 s step) – time delay	**5**	**2** [bytes]
163. First button – Switch ON value sent to 2nd and 3rd association groups	Defines value sent with Switch ON command to devices associated in the 2nd and 3rd association group.	**0 - 99**, **255** – value sent **254** – send value equal to the current level	**255**	**2** [bytes]
164. Second button – Switch OFF value sent to 2nd and 3rd association groups	Defines value sent with Switch OFF command to devices associated in the 2nd and 3rd association group.	**0 - 99**, **255** – value sent **254** – send value equal to the current level	**0**	**2** [bytes]
165. Double click – set level	Defines brightness level set after double-clicking any of the buttons. The same value is also sent to devices associated with the 2nd and 3rd association group	**0 - 99** (0 - 99%, 1% step) – set level	**99**	**1** [byte]
170. Load control mode	Enables setting the desired load control mode. Auto-calibration sets value of this parameter to 2 (control mode recognized during auto-calibration), but the installer can force control mode using this parameter. After changing parameter value, turn the load OFF and ON to change control mode.	**0** – forced leading edge **1** – forced trailing edge **2** – control mode selected automatically (based on auto-calibration)	**2**	**1** [byte]

Table 6 - Walli Dimmer-Control - Advanced parameters				
Parameter	**Description**	**Available setting**	**Default setting**	**Parameter size**
171. Load control mode recognized during auto-calibration (read only)	Enables reading load control mode that was set during auto-calibration	**0** – leading edge **1** – trailing edge	**-**	**1** [byte]
172. ON/OFF mode	This mode is necessary while connecting non-dimmable light sources. Setting this parameter to 1 ignores automatically brightening/dimming time settings. Forced auto-calibration sets this parameter value to 2.	**0** – ON/OFF mode disabled (dimming is possible) **1** – ON/OFF mode enabled (dimming isn't possible) **2** – mode selected automatically	**2**	**1** [byte]
173. Dimmability of the load (read only)	Enables reading if the load detected during calibration procedure is dimmable	**0** – load recognized as dimmable **1** – load recognized as non-dimmable	**-**	**1** [byte]
174. Soft-start functionality	Enables setting time required to warm up the filament of halogen bulb	**0** – no soft-start **1** – short soft-start (0.1 s) **2** – long soft-start (0.5 s)	**1**	**1** [byte]
175. Soft-start functionality	Determines the trigger of auto calibration procedure, such as power on, load error	**0** – no auto-calibration after power on **2** – Auto-calibration after each power on **3** – Auto-calibration after each LOAD ERROR (no load, load failure, burnt out bulb), if parameter 176 is set to 1 also after SURGE (output overvoltage) and OVERCURRENT (output overcurrent) **4** – Auto-calibration after each power on or after each LOAD ERROR (no load, load failure, burnt out bulb), if parameter 176 is set to 1 also after SURGE (output overvoltage) and OVERCURRENT output overcurrent)	**0**	**1** [byte]
176. Behaviour after OVERCURRENT or SURGE	Error occurrences related to surge or overcurrent results in turning off the output to prevent possible malfunction. By default the device performs three attempts to turn on the load (useful in case of temporary, short failures of the power supply).	**0** – device permanently disabled until re-enabling by command or external switch **1** – three attempts to turn on the load	**1**	**1** [byte]
177. Brightness level correction for flickering loads	Correction reduces spontaneous flickering of some capacitive loads (such as dimmable LEDs at certain brightness levels in a 2-wire installation. In countries using ripple-control, correction may cause changes in brightness. In this case it's necessary to disable correction or adjust the time of correction for flickering loads.	**0** – automatic correction disabled **1 - 254** (1 - 254 s, 1 s step) – duration of correction **255** – automatic correction always enabled	**255**	**2** [bytes]
178. Method of calculating the active power	Defines how to calculate active power. It is useful in a case of a 2-wire connection with light sources other than resistive	**0** – measurement based on the standard algorithm **1** – approximation based on the calibration data **2** – approximation based on the control angle	**0**	**2** [bytes]
179. Approximated power at the maximum brightness level	Determines the approximate value of the power that is reported by the device at its maximum brightness level.	**0 - 500** (0 - 500 W, 1 W step) – power consumed by the load at the maximum brightness level.	**0**	**2** [bytes]

12 Z-WAVE SPECIFICATION

Generic Device Class: GENERIC_TYPE_SWITCH_MULTILEVEL
Specific Device Class: SPECIFIC_TYPE_POWER_SWITCH_MULTILEVEL

Table 7 - Walli Dimmer-Control - Supported Command Classes

No.	Command Class	Version	Secure
1.	COMMAND_CLASS_ZWAVEPLUS_INFO [0x5E]	V2	
2.	COMMAND_CLASS_SWITCH_MULTILEVEL [0x26]	V4	YES
3.	COMMAND_CLASS_ASSOCIATION [0x85]	V2	YES
4.	COMMAND_CLASS_MULTI_CHANNEL_ASSOCIATION [0x8E]	V3	YES
5.	COMMAND_CLASS_ASSOCIATION_GRP_INFO [0x59]	V2	YES
6.	COMMAND_CLASS_TRANSPORT_SERVICE [0x55]	V2	
7.	COMMAND_CLASS_VERSION [0x86]	V2	YES
8.	COMMAND_CLASS_MANUFACTURER_SPECIFIC [0x72]	V2	YES
9.	COMMAND_CLASS_DEVICE_RESET_LOCALLY [0x5A]	V1	YES
10.	COMMAND_CLASS_POWERLEVEL [0x73]	V1	YES
11.	COMMAND_CLASS_SECURITY [0x98]	V1	
12.	COMMAND_CLASS_SECURITY_2 [0x9F]	V1	
13.	COMMAND_CLASS_SUPERVISION [0x6C]	V1	
14.	COMMAND_CLASS_METER [0x32]	V3	YES
15.	COMMAND_CLASS_CONFIGURATION [0x70]	V1	YES
16.	COMMAND_CLASS_CRC_16_ENCAP [0x56]	V1	
17.	COMMAND_CLASS_NOTIFICATION [0x71]	V8	YES
18.	COMMAND_CLASS_PROTECTION [0x75]	V2	YES
19.	COMMAND_CLASS_CENTRAL_SCENE [0x5B]	V3	YES
20.	COMMAND_CLASS_FIRMWARE_UPDATE_MD [0x7A]	V4	YES
21.	COMMAND_CLASS_APPLICATION_STATUS [0x22]	V1	
22.	COMMAND_CLASS_BASIC [0x20]	V1	YES

The device uses Notification Command Class to report different events to the hub (“Lifeline” group).

Table 8 - Walli Dimmer-Control - Notification Command Class

Notification Type	Event	Parameter	Status
Power Management [0x08]	Over-current detected [0x06/V3]		0xFF – enable (non-changeable)
Power Management [0x08]	Over-load detected [0x08]		0xFF – enable (non-changeable)
Power Management [0x08]	Load error [0x09]		0xFF – enable (non-changeable)
Power Management [0x08]	Surge detected [0x04]		0xFF – enable (non-changeable)
Power Management [0x08]	Voltage Drop/Drift [0x05]		0xFF – enable (non-changeable)
System [0x09]	System hardware failure with manufacturer proprietary failure code [0x03]	MP code: 0x01 [device overheat]	0xFF – enable (non-changeable)

Table 9 - Walli Dimmer-Control - Meter Command Class

Meter Type	Scale	Rate Type	Precision	Size
Electric [0x01]	Electric_kWh [0x00] (default)	Import [0x01]	2	4
Electric [0x01]	Electric_W [0x02]	Import [0x01]	1	2

Protection Command Class enables preventing local or remote control of the outputs.

Table 10 - Walli Dimmer-Control - Protecion Command Class			
Type	**State**	**Description**	**Hint**
Local	0	Unprotected - The device isn't protected, and may be operated normally with the user interface.	Inputs connected with outputs.
Local	2	No operation possible – button cannot change relay state, any other functionality is available (menu).	Inputs disconnected from outputs.
RF	0	Unprotected - The device accept and respond to all RF Commands.	Outputs can be controlled with Z-Wave.
RF	1	No RF control – command class basic and switch binary are rejected, every other command class is handled.	Outputs can't be controlled with Z-Wave.

13 PARTS COMPATIBILITY

Table 11 - Walli Dimmer-Control - Available Nice parts		
Name	**Symbol**	**Included in Walli Dimmer-Control**
Walli Dimmer Unit	FG-WDEU111-AS-8001	x
Switch Button Adapter	FG-WDSEU221-PP-0007	
Mounting Frame NICE	FG-Wx-AS-4004	x
Mounting Frame G55	FG-Wx-AS-4001	
Mounting Frame LC	FG-Wx-AS-4002	
Mounting Frame SO	FG-Wx-AS-4003	
Switch Button with Lightguide (white)	FG-WDSEU221-AS-8100	x
Single Cover Plate (white)	FG-Wx-PP-0001	x
Double Cover Plate (white)	FG-Wx-PP-0003	
Triple Cover Plate (white)	FG-Wx-PP-0004	

Table 12 - Walli Dimmer-Control - Required Nice parts for G55 (only with non-metalised outer surface: Standard 55, E2, Event, Event Clear) covers	
Name	**Symbol**
Walli Dimmer Unit	FG-WDEU111-AS-8001
Switch Button Adapter	FG-WDSEU221-PP-0007
Mounting Frame G55	FG-Wx-AS-4001

Table 13 - Walli Dimmer-Control - Required Nice parts for LC selected covers	
Name	**Symbol**
Walli Dimmer Unit	FG-WDEU111-AS-8001
Switch Button Adapter	FG-WDSEU221-PP-0007
Mounting Frame LC	FG-Wx-AS-4002

Table 14 - Walli Dimmer-Control - Required Nice parts for SO selected covers	
Name	**Symbol**
Walli Dimmer Unit	FG-WDEU111-AS-8001
Mounting Frame SO	FG-Wx-AS-4003

14 PRODUCT DISPOSAL

This product is an integral part of the automation and therefore must be disposed together with the latter. At the end of the product lifetime, the disassembly and scrapping operations must be performed by qualified personnel.
This product is made of various types of material, some of which can be recycled while others must be scrapped. Seek information on the recycling and disposal systems envisaged by the local regulations in your area for this product category.



As indicated by the symbol alongside, disposal of this product in domestic waste is strictly prohibited. Separate the waste into categories for disposal, according to the methods envisaged by current legislation in your area, or return the product to the retailer when purchasing a new version.

⚠ CAUTION!

- Some parts of the product may contain pollutant or hazardous substances which, if disposed of into the environment, may cause serious damage to the environment or physical health.
- Local legislation may envisage serious fines in the event of abusive disposal of this product.

15 DECLARATION OF CONFORMITY

Hereby, Nice S.p.A., declares that the radio equipment type Walli Dimmer-Control is in compliance with Directive 2014/53/EU. The full text of the EU Declaration of Conformity is available at: http://www.niceforyou.com/en/support.

IS0979A00EN_07-07-2026

Nice SpA
Oderzo TV Italia
info@niceforyou.com