

Nice

CE

BiDi-Dimmer

Bidirectional interface for lights indoor

EN - Instructions and warnings for installation and use

1 WARNINGS AND GENERAL PRECAUTIONS

- **⚠ CAUTION!** – **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 the Nice Technical Assistance.
- **⚠ 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!** – **Any use other than that specified herein or in environmental conditions other than those stated in this is to be considered improper and is strictly forbidden!**
- This product can only be used indoors or protected from weather conditions by a control unit housing.
- The products packaging materials must be disposed of in full compliance with local regulations.
- Don't open the device protection housing as it contains non-serviceable electrical circuits.
- Never modify any parts of the device. Operations other than those specified can only 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 and never expose it to naked flames. These actions can damage the product and cause malfunctions.
- This product isn't intended for use by people with reduced physical, sensory or mental capabilities (including children) or who lack experience and knowledge, unless they have been supervised or instructed to use the product by a person responsible for their safety.
- Make sure that children don't play with the product.
- Check the warnings in the instruction manual for the motor that the product is connected to.
- Handle the product with care, don't crush, knock or drop it to avoid damage.

2 PRODUCT DESCRIPTION

The BiDi-Dimmer control unit enables the control of a mains-powered, single light source. The light source can be turned on, turned off or dimmed (if dimmable).

The control unit has an algorithm of a light source detection. It automatically selects a suitable control mode and adjusts maximum and minimum light levels.

The BiDi-Dimmer control unit incorporates a radio transceiver operating at the frequency of 433.92 MHz with rolling code technology to guarantee optimal safety levels.

Each control unit can memorise up to 30 mono or bidirectional transmitters in the series ERA, ERGO, FLOR, NICEWAY and VERY, enabling the remote control of the unit.

The control unit has two inputs for controlling the unit with external pushbuttons.

Memorisation and programming can be done using the programming pushbutton (Figure 1) on the BiDi-Dimmer.

The user is guided through the various phases with LED signals.

The control unit has overload and overheating protection, which disables the relays and prevents damage to the circuit.

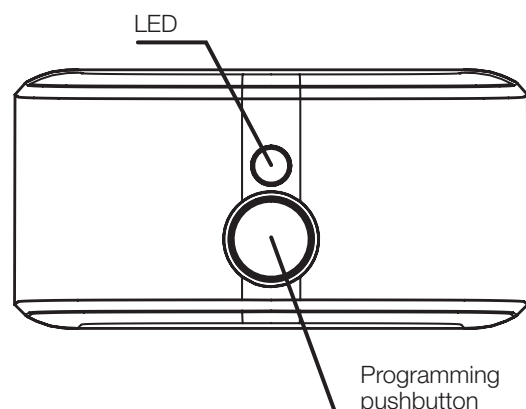


Figure 1: Localization of the programming button

3 TECHNICAL SPECIFICATIONS

BiDi-Dimmer is produced by Nice S.p.A.

Warnings

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 modify the product when necessary, while maintaining the same functionalities and intended use.

Table A1 - BiDi-Dimmer - Specifications	
Type	in-wall/flush box mounted control unit for single light source
Power supply	100–240 V AC, 50/60 Hz
Rated current	1.1 A
Rated power	Resistive loads (incandescent and halogen): 50–250 W for Vn =240 V; 25–125 W for Vn = 120 V Resistive-capacitive loads (fluorescent tube lamp, electronic transformer, LED): 50–200 VA for Vn =240 V; 25–100 VA for Vn = 120 V Resistive-inductive loads (ferromagnetic transformers): 50–220 VA for Vn =240 V; 25–110 VA for Vn = 120 V
Rated power with connected Nice LED Adaptor	Resistive-capacitive loads (fluorescent tube lamp, electronic transformer, LED): 5–200 VA for Vn =240 V; 5–100 VA for Vn = 120 V
Recommended wires cross-section	0.5–4 mm ² for 1 wire; 0.5–1.5 mm ² for 2 wires
Required circuit breaker	Compliant with IEC/EN 60898-1; Curve code: B; Rated current: up to 16 A; Breaking capacity: 6 kA; Rated insulation voltage: 500 V; Rated impulse withstand voltage: 4 kV;
Casing protection rating	IP 20
Operating temperature	0–35 °C
Dimensions (mm)	45 x 36 x h 23
Weight	34 g

Table A2 - BiDi-Dimmer - Radio transceiver	
Frequency band	433.05–434.04 MHz
Code	OPERA/FLOR (rolling code), PLN2+ (rolling code)
No. of memorisable transmitters	30
Transceiver range	Estimated at 150 m in open space and 20 m inside buildings (*)
Max. transmit power	10 dBm

(*) The transceiver range is strongly influenced by other devices operating at the same frequency with continuous transmission, such as alarms and radio headphones which interfere with the control unit transceiver.

4 INSTALLATION



- The product is subject to hazardous electric voltages
- The installation of the BiDi-Dimmer and automations must be performed exclusively by technically qualified personnel, in observance of current legislation and standards, and according to these instructions. All connections must be made with the system disconnected from the power supply.
- The BiDi-Dimmer control unit was designed for insertion in a junction box or wall box; its housing doesn't have any protection against water and has only basic protection against contact with solid parts. Never place BiDi-Awning in inadequately protected environments.
- BiDi-Dimmer can work in a 3-wire (with Neutral line) or 2-wire (without Neutral line) installation.
- Never open or perforate the BiDi-Awning housing. These actions are subject to hazardous electric voltages!

4.1 - Preliminary checks

- The power supply line must be protected by suitable (compliant with IEC/EN 60898-1 standard, rated up to 16A) magneto-thermal and residual-current circuit breakers.
- A disconnection device must be inserted in the power supply line of the electrical mains or equivalent system, for example an outlet and relative plug. The distance between the contacts must be at least 3 mm with an overvoltage category of III. If the disconnection device for the power supply isn't mounted near the automation, it must have a locking system to prevent unintentional, unauthorized connection.

4.2 - Electrical connections

CAUTION! – Risk of electric shock !

Carefully follow all the connection instructions.

If you have any questions, concerns or need additional product knowledge, visit the website: www.niceforyou.com, where you can find all the current technical data.

Incorrect connection can be dangerous and cause damage to the system.

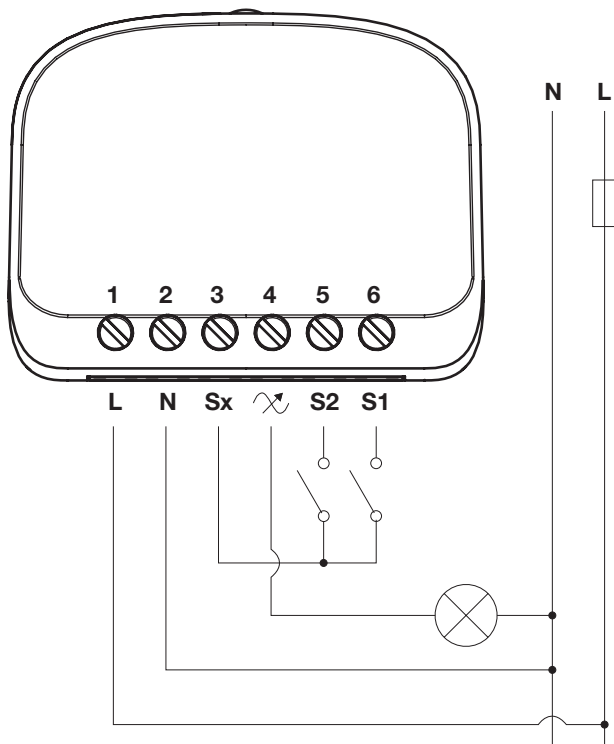


Figure 2: BiDi-Dimmer - 3-wire installation (with Neutral)

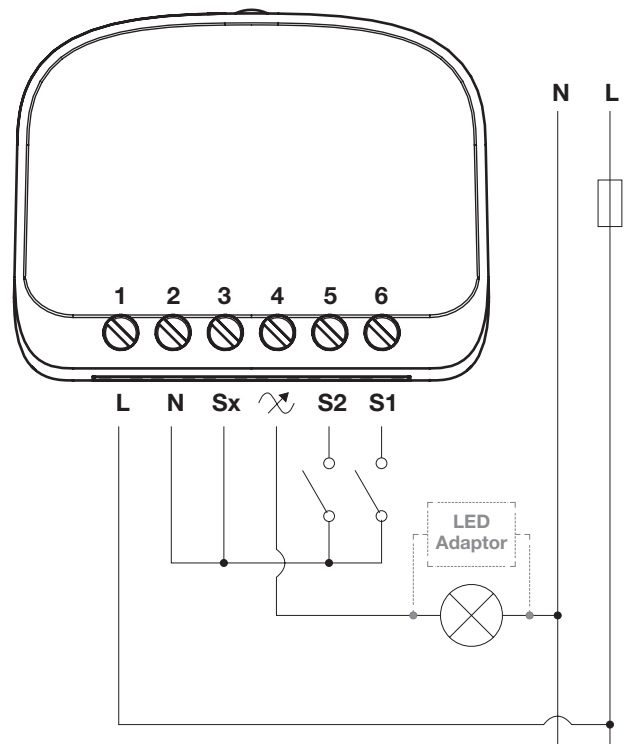


Figure 3: BiDi-Dimmer - 2-wire installation (without Neutral)

4.3 - Light source

The light source to be controlled needs to be connected between neutral (N) and terminal . The light source is powered directly by the control unit.

CAUTION! – Never connect more than one type of the light source per control unit!

4.4 - Power supply

The electric power supply of the control unit needs to be connected using terminals L and N (Line, Neutral) according to Figure 2. If no Neutral wire is present in the box, connect the N terminal with the Sx terminal according to Figure 3. The BiDi-Dimmer control unit can operate with supply voltage of 100 to 240 Volts and frequency of 50 or 60 Hz.

4.5 - Switches

If required, external switches can be connected to terminals S1 and S2, which can control the output directly. The switches are connected between Sx and terminals S1 and S2 as shown in Figure 2 and 3. Toggle or momentary switches can be connected to S1 and S2 terminals, but the operation of the control unit can require adjusting a type of a connected switch. For more information about checking and changing types of switches, see Table A14. The response to the connected switches is shown in the tables below (Table A3 for toggle switches, Table A4 for momentary switches).

Table A3 - BiDi-Dimmer - Response to connected toggle switches (default)		
Key	Action	Command
S1	Single click	If the lamp is >1% -> turn OFF the lamp
		If the lamp is OFF -> set the last level
S2	Single click	If the lamp is >1% -> set the brightness to 30%
		If the lamp is OFF -> set the brightness to the favourite level
	Double click	If the lamp is >1% -> turn OFF the lamp
		If the lamp is OFF -> turn ON the lamp to 100%

Table A4 - BiDi-Dimmer - Response to connected momentary switches		
Key	Action	Command
S1	Single click	If the lamp is >1% -> turn OFF the lamp
		If the lamp is OFF -> set the last level
	Double click	If the lamp is >1% -> set the lamp to 100%
		If the lamp is OFF -> set the brightness to the favourite level
	Hold	If the lamp is 100% -> start dimming down until released or until arrive at 0% (OFF)
		If the lamp is 0-99% -> start brightening up until released or until arrive at 100% (ON)
S2	Single click	If the lamp is >1% -> set the brightness to 30%
		If the lamp is OFF -> set the brightness to 70%
	Double click	If the lamp is >1% -> turn OFF the lamp
		If the lamp is OFF -> set the brightness to the favourite level
	Hold	If the lamp is 100% -> start dimming down until released or until arrive at 0% (OFF)
		If the lamp is 0-99% -> start brightening up until released or until arrive at 100% (ON)

⚠ CAUTION! – The switches carry mains voltage and must therefore be adequately protected and insulated.

4.6 - LED Adaptor

The Nice LED Adaptor should be used in case of connecting LED bulbs or energy saving compact fluorescent lamps. The LED Adaptor prevents flickering of the LED lights and glowing of the turned off compact fluorescent lamps. In the case of the 2-wire connection, the LED Adaptor allows to reduce minimum power of load required by the BiDi-Dimmer for correct operation. In such cases, connect the LED Adaptor in parallel to the light source as shown in Figures 2 and 3.

5 MEMORISING TRANSMITTERS

This chapter describes the memorisation procedures in Mode I, used to control a single automation with 3 keys of transmitters, and Mode II, used to control an automation with a single key, thus leaving other keys free to control other automations.

- The key ■ corresponds to the central key of the transmitters ERGO, PLANO and NICEWAY.
- All memorisation sequences are timed. They need to be completed within the set time limits.
- In case of transmitters, which can be assigned to groups (for example ERA P6BD) using BiDi interface, you need to select the relevant group before starting memorisation procedure.
- Settings with a radio are possible on all receivers located within the operating radius of the transmitter, and therefore only the device required for the operation should remain powered.

5.1 - Mode I

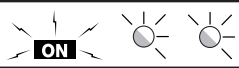

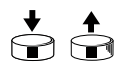
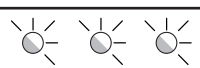
In Mode I the command associated with the transmitter keys is set (Table A5). In Mode I only one memorisation phase is performed for each transmitter and only one memory location is occupied. During memorisation in Mode I it isn't important which key is pressed on the transmitter.

Table A5 - BiDi-Dimmer - Memorisation using Mode I	
Key	Command
The ▲ key or the 1 st channel	Turn ON / Brighten UP (hold)
The ■ key or the 2 nd channel	Toggle between OFF and the last level
The ▼ key or the 3 rd channel	Dimm OFF / Dimm DOWN (hold)
The ▼ + ▲ keys or the 1 st + 3 rd channels *	Set favourite level (50% by default)
Slider (if equipped with)	Set level

*Pressing two keys and the same time isn't supported by some transmitters.


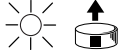



5.2 - Memorising transmitters in Mode I

When there is no transmitter memorised, the first one can be memorised during startup according to the following procedure:

Table A6 - BiDi-Dimmer - Memorising first transmitter during startup in Mode I		
N°	Description	Example
1.	Connect the control unit to the power mains, which is confirmed with 2 red flashes.	
2.	Within 10 seconds: <ul style="list-style-type: none"> • Monodirectional transmitters: press and hold any key of the transmitter to be memorized for at least 3 seconds. • Bidirectional transmitters: press any key of the transmitter to be memorized 	MONO:  3s BIDI: 
3.	If the memorisation procedure is successful, the LED emits 3 red flashes.	

If no transmitters are memorized during the startup phase, the programming procedure ends automatically after 10 seconds. The LED emits one long red flash.

The transmitters can be memorised using the programming pushbutton according to the following procedure:

Table A7 - BiDi-Dimmer - Memorising first and other transmitters in Mode I		
N°	Description	Example
1.	Press and hold the programming pushbutton.	
2.	Release the programming pushbutton when the LED illuminates with red (the 1 st position).	
4.	Within 10 seconds: <ul style="list-style-type: none"> • Monodirectional transmitters: press and hold any key of the transmitter to be memorized for at least 3 seconds. • Bidirectional transmitters: press any key of the transmitter to be memorized. 	MONO:  BIDI: 
5.	If the memorisation procedure is successful, the LED emits 3 red flashes.	
6.	Repeat steps 3 and 4 to acquire all the remotes.	
7.	If the device doesn't receive any signal for 10 seconds, the programming procedure ends automatically.	

Note.

If the memory is full (30 transmitters memorised) you hear 6 beeps and the transmitter can't be memorised.

5.3 - Mode II

In Mode II each key of the transmitter can be associated with one of 8 possible commands (Table A8). For example, one automation can be controlled with just one key memorised for the toggle command, while the other keys are left free to control other automations.

In Mode II one memorisation phase is performed for each key and each occupies one location in the memory. During Mode II memorisation, the key which is pressed is memorised.


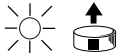








If another key is to be assigned a command on the same transmitter, a new memorisation phase needs to be performed for that specific key.

Warning! - For the partial positions to work correctly, you need to perform the calibration procedure (see chapter 6.1).

Table A8 - BiDi-Dimmer - Memorisation using Mode II	
N°	Command
1	Turn ON / Brighten UP (hold) *
2	Dimm OFF / Dimm OWN (hold) *
3	Toggle between OFF and the last level
4	OFF
5	Set 25%
6	Set 50%
7	Set 75%
8	ON

* Holding a key isn't supported by some transmitters.

5.4 - Memorising transmitters in Mode II

Table A9 - BiDi-Dimmer - Memorising first and other transmitters in Mode II		
N°	Description	Example
1.	Press and hold the programming pushbutton.	
2.	Release the programming pushbutton when the LED illuminates with orange color (the 2 nd position).	
3.	Press the programming pushbutton the number of times corresponding to the required command (1 = brighten, 2 = dimm, 3 = toggle, 4 = OFF, 5 = set 25%, 6 = set 50%, 7 = set 75%, 8 = ON).	1-8  
4.	Make sure that the LED emits the number of long orange flashes corresponding to the required command.	1-8 
5.	Within 10 seconds: <ul style="list-style-type: none"> • Monodirectional transmitters: press and hold the required key of the transmitter for at least 3 seconds to be memorized. • Bidirectional transmitters: press the required key of the transmitter to be memorized 	MONO:  3s  BIDI:  
6.	If the memorisation procedure is successful, the LED emits 3 orange flashes.	
7.	Repeat steps 5 and 6 to acquire all the remotes with the same command.	
8.	Repeat steps 3 to 6 to acquire all the remotes with another command.	
9.	If the device doesn't receive any signal for 10 seconds, the programming procedure ends automatically.	







Note.

If the memory is full (30 transmitters memorised) you hear 6 beeps and the transmitter can't be memorised.

5.5 - Memorising a new transmitter using an enabling code of an already memorised transmitter

The bidirectional transmitter has an enabling code. By transferring this code from a memorized transmitter to a new transmitter, the latter is recognized and memorized automatically by the control unit.

Warning! - For the partial positions to work correctly, you need to perform the calibration procedure. For more information, see chapter 6.1).

Table A10 - Mono and bi-directional transmitters - transmitting enabling code		
N°	Description	Example
1.	Put a previously memorised transmitter close to a new one.	
2.	On the new transmitter press the command key. The LED of the previously memorised transmitter switches on and starts flashing.	New   Old 
5.	Press command key on the previously memorised transmitter.	Old  
6.	When the code has been transferred, for an instant both transmitters vibrate and the green LED illuminates signalling end of the procedure. When the new transmitter is used for the first 20 times it transmits the enabling code to the receiver together with the command. The receiver memorizes automatically the identification code of the transmitter that sent it.	

6 SETTINGS

6.1 - Calibration

The control unit has an algorithm for light source detection. It automatically selects a suitable control mode and adjusts the maximum and minimum light levels.

⚠ CAUTION! – If the calibration procedure wasn't performed, the control unit performs the autocalibration the first time it recognizes a load.

The calibration process can be performed in two ways, with a pushbutton (Table A11) or with the bound transmitter (Table A12).


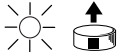








Table A11 - BiDi-Dimmer - Calibration with pushbutton		
N°	Description	Example
1.	Press and hold the programming pushbutton.	
2.	Release the programming pushbutton when the LED illuminates with blue (the 3 rd position).	
3.	Press the ■ key (or the 2 nd channel) of the transmitter to start the 1 st method of calibration (without the LED Adaptor) or press the ▼ key (or the 3 rd channel) to start the 2 nd method of calibration (with the LED Adaptor).	
4.	The control unit performs the calibration, the load can blink and change the brightness level. The load is switched off when the process is completed.	
5.	The programming procedure ends automatically.	

Table A12 - BiDi-Dimmer - Calibration with memorised transmitter equipped with PRG button		
N°	Description	Example
1.	Press the PRG pushbutton on the bound transmitter.	
2.	Release the PRG pushbutton when the connected load blinks.	
3.	Press the ■ key (or the 2 nd channel) of the transmitter to start the 1 st method of calibration (without the LED Adaptor) or press the ▼ key (or the 3 rd channel) to start the 2 nd method of calibration (with the LED Adaptor).	
4.	The control unit performs the calibration, the load can blink and change the brightness level. The load is switched off when the process is completed.	
5.	The programming procedure ends automatically.	

Note. After calibration, the preferred position is reset to the default value (50%).


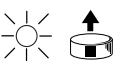
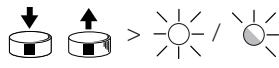
6.2 - Auto OFF

This function allows to automatically turn OFF the load when saved time passes from turning ON. By default, the auto OFF function is disabled. To set auto OFF time or disable the function, follow the steps from the table below:

Table A13 - BiDi-Dimmer - Setting auto OFF		
N°	Description	Example
1.	Press and hold the programming pushbutton (Figure 1).	
2.	Release the programming pushbutton (Figure 1) when the LED illuminates with green (the 4 th position).	
3.	If you want to disable the auto OFF function, wait 10 seconds, so the programming procedure ends automatically.	
4.	Press the transmitter key responsible for brightening UP the first output to start the timer.	
5.	Press the transmitter key responsible for dimming OFF the first output to stop the timer. The maximum time that can be set is 9 hours.	
6.	The auto OFF time is saved and the programming procedure ends automatically.	

6.3 - Type of connected switches


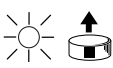
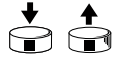
The control unit allows to connect the momentary or toggle switches to S1 and S2 inputs. By default, the toggle switch type is set. To change type of connected switch, follow the steps from the table below:

Table A14 - BiDi-Dimmer - Setting type of connected switches		
N°	Description	Example
1.	Press and hold the programming pushbutton.	
2.	Release the programming pushbutton when the LED illuminates with violet (5th position).	
3.	Press the key of the transmitter responsible for turning ON to toggle the setting, the LED informs about the current setting: <ul style="list-style-type: none"> • Fixed white – momentary switch • Flashing white – toggle switch 	
4.	If the device doesn't receive any signal for 10 seconds, the programming procedure ends automatically.	

6.4 - Favourite brightness level


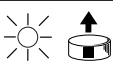
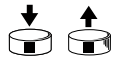
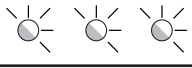
The control unit enables setting a quickly accessible favourite brightness level. The favourite level works only with transmitters memorized in Mode I. To recall the favourite brightness level: press the ▲ and ▼ key or the 1st and 3rd channel at the same time. The **load needs to be calibrated** for this function to work. By default, the favourite brightness level is set to 50%.

To set new favourite brightness level, follow the steps from the table below:

Table A15 - BiDi-Dimmer - Setting the preferred partial brightness		
N°	Description	Example
1.	Press and hold the programming pushbutton.	
2.	Release the programming pushbutton when the LED illuminates with white (the 6 th position).	
4.	Set the light at your desired brightness level	
5.	Save and conclude the programming by pushing the programming pushbutton.	


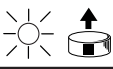
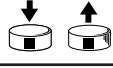

6.5 - Deleting transmitters

If memorised transmitters and settings need to be deleted, follow the steps from the table below:

Table A16 - BiDi-Dimmer - Deleting transmitter from memory		
N°	Description	Example
1.	Press and hold the programming pushbutton.	
2.	Release the programming pushbutton when the LED illuminates with yellow (the 7 th position).	
3.	Press any button on the acquired transmitter to remove it from memory.	
4.	LED emits 3 yellow flashes to confirm the correct removal.	
5.	If the device doesn't receive any signal for 10 seconds, the programming procedure ends automatically.	

6.6 - Factory reset

If the control unit needs to be reset to the factory settings (all transmitters and settings are deleted), follow the steps from the table below:

Table A17 - BiDi-Dimmer - Restoring to factory defaults		
N°	Description	Example
1.	Press and hold the programming pushbutton.	
2.	Release the programming pushbutton when the LED illuminates with yellow color (7th position).	
3.	Press the programming pushbutton.	
4.	LED emits 5 yellow flashes to confirm the correct reset.	
5.	The programming procedure concludes automatically. Afterwards the control unit will initiate the start-up procedure according to table A4.	

7 LED SIGNALS

7.1 - Programming menu

When pressing and holding the programming pushbutton on the control unit, the LED signals the following positions of the programming menu.

Table A18 - BiDi-Dimmer - Menu positions when holding the programming pushbutton		
N°	Color	Description
1	Red	Memorization in Mode I
2	Orange	Memorization in Mode II
3	Blue	Calibration
4	Green	Auto OFF settings
5	Violet	Switch type settings
6	White	Favourite brightness level settings
7	Yellow	Reset

7.2 - Other signals

Table A19 - BiDi-Dimmer - Other LED signals	
Color	Description
2 red flashes	No transmitters memorized
3 red flashes	Transmitter memorized in Mode I
3 orange flashes	Transmitter memorized in Mode II
6 red flashes	Memory for transmitters full (Mode I)
6 orange flashes	Memory for transmitters full (Mode II)
3 yellow flashes	Transmitter deleted from memory
5 yellow flashes	Control unit restored to factory settings

7 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.

⚠ 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.

⚠ CAUTION! – 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! – local legislation may envisage serious fines in the event of abusive disposal of this product.

8 DECLARATION OF CONFORMITY

Nice S.p.A. declares that the radio equipment type BiDi-Awning complies with Directive 2014/53/EU. The full text of the EU Declaration of Conformity is available at: <http://www.niceforyou.com/en/support>



Nice S.p.A
Oderzo TV Italia
info@niceforyou.com

www.niceforyou.com