

Nice

BiDi-Switch

CE

Power switch bidirectional interface

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 manual 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.
- Handle the product with care, don't crush, knock or drop it to avoid damage.

2 PRODUCT DESCRIPTION

The BiDi-Switch control unit enables switching on/off up to 2 mains-powered electric devices.

The BiDi-Switch 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 DOMI, enabling the remote control of the unit.

Two keys are used on each transmitter: one for the toggle command for the first output and one for the toggle command for the second output.

The control unit memorizes the ON-OFF status of the connected devices, so in case of a power failure, when the power supply is restored the output returns to the previous status.

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-Switch.

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.

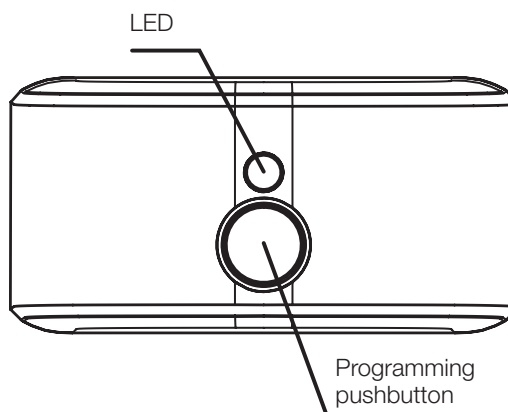


Figure 1: Localisation of the programming button

3 TECHNICAL SPECIFICATIONS

BiDi-Switch is produced by Nice S.p.a. (TV).

Warning

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 deemed necessary, while maintaining the same functionalities and intended use.

Table A1 - BiDi-Switch - Specifications	
Type	in-wall/flush box mounted control unit for mains powered devices
Power supply	100-240 V AC, 50/60 Hz
Load rated current	6.5 A per channel, 10 A combined
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	20 g

Table A2 - BiDi-Switch - 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-Switch 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-Switch control unit was designed for insertion in a junction box or wall box; its housing doesn't have any protection against water and only has basic protection against contact with solid parts. Never place the BiDi-Switch in inadequately protected environments.
- Never open or perforate the BiDi-Switch 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.

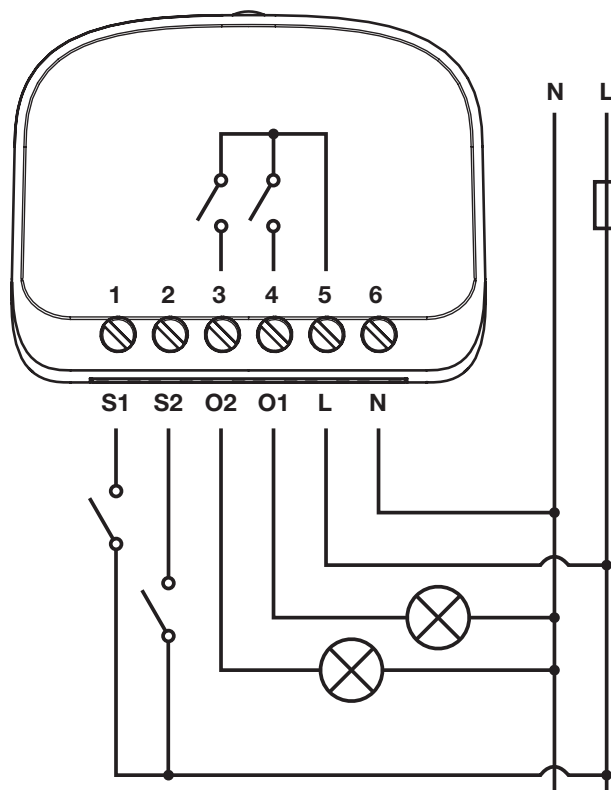


Figure 2: Wiring diagram of the BiDi-Switch

4.3 - Electrical connection of the device

The first device to be controlled needs to be connected between neutral (N) and terminal O1 of the colntrol unit; the second device must be connected between neutral (N) and terminal O2; the devices are powered directly by the control unit.

4.4 - Power supply

The electric power supply of the control unit must be connected through terminals L and N (Live, Neutral). The BiDi-Switch control unit can operate with supply voltage of 100 to 240 V 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 outputs directly. The switches are connected between Live (L) and terminals S1 and S2 as shown in Figure 2. The switch connected to S1 is responsible for O1 control, and the switch connected to S2 is responsible for O2 control. Toggle or momentary switches can be connected to S1 and S2 terminals, but the operation of the control unit might need to be adjusted for the connected type of switch, to check and change the type of switch see table A11.

⚠ ⚠ CAUTION! – The circuit breakers are subject to mains voltage and must therefore be adequately protected and insulated.

Note. By default S1 / S2 are set as bistable switches.

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 ERGO, PLANO and NICEWAY transmitters.
- All memorisation sequences are timed. They need to be completed within the set time limits.
- With transmitters that envisage several “groups”, the relative group to associate with the control unit needs to be selected before proceeding.
- 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 fixed (table A3). 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 is not important which key is pressed on the transmitter.

Key	Command
The ▲ key or the 1 st channel	ON/OFF
The ■ key or the 2 nd channel	ON/OFF
The ▼ key or the 3 rd channel	
the 4 th channel	


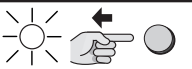



5.2 - Memorising transmitters in Mode I

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

Table A4 - BiDi-Switch - Memorising first transmitter during startup in Mode I		
N°	Description	Example
1.	Connect the control unit to the power mains, confirmed by 2 red LED flashes.	
2.	Within 10 seconds: <ul style="list-style-type: none"> • Monodirectional transmitters: press and hold any key of the transmitter for at least 3 seconds to be memorized. • Bidirectional transmitters: press any key of the transmitter to be memorized. 	MONO:  BIDI: 
3.	If the memorisation procedure is successful, the LED emits 3 red flashes.	

If no transmitters should be memorized during startup, the programming procedure concludes automatically after 10 seconds and the LED emits one long red flash.

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

Table A5 - BiDi-Switch - Memorising first and other transmitters in Mode I		
N°	Description	Example
1.	Press and hold the programming pushbutton (Figure 1).	
2.	Release the programming pushbutton (Figure 1) when the LED glows with red (1 st position).	
3.	Within 10 seconds: <ul style="list-style-type: none"> • Monodirectional transmitters: press and hold any key of the transmitter for at least 3 seconds to be memorized. • Bidirectional transmitters: press any key of the transmitter to be memorized. 	MONO:  BIDI: 
4.	If the memorisation procedure is successful, the LED emits 3 red flashes.	
5.	Repeat steps 3 and 4 to acquire all the remotes.	-
6.	If the device doesn't receive any signal for 10 seconds, the programming procedure ends automatically.	-



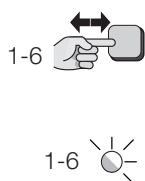

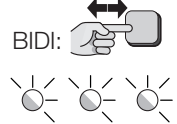
Note. If the memory is full (30 transmitters memorised) 6 red flashes are emitted and the transmitter can't be memorised.

5.3 - Mode II

In Mode II each key of the transmitter can be associated with one of 8 possible commands (Table A6); 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 specific key 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.

Table A6 - BiDi-Switch - Memorisation using Mode II	
N°	Command
1	ON output 1
2	OFF output 1
3	ON/OFF output 1
4	ON output 2
5	OFF output 2
6	ON/OFF output 2

5.4 - Memorising transmitters in Mode II

Table A7 - BiDi-Switch - Memorising first and other transmitters in Mode II		
N°	Description	Example
1.	Press and hold the programming pushbutton (Figure 1).	
2.	Release the programming pushbutton (Figure 1) when the LED glows with orange (2 nd position).	
3.	Press the programming pushbutton (Figure 1) the number of times corresponding to the required command 1 = ON output 1 2 = OFF output 1 3 = ON/OFF output 1 4 = ON output 2 5 = OFF output 2), 6 = ON/OFF output 2).	
4.	Check that the LED emits the number of long orange flashes corresponding to the required command.	MONO: 
5.	Within 10 seconds: <ul style="list-style-type: none"> • Monodirectional transmitters: press and hold any key of the transmitter for at least 3 seconds to be memorized. • Bidirectional transmitters: press any key of the transmitter to be memorized. 	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) 6 orange flashes are emitted and the transmitter cannot be memorised.

5.5 - Memorising a new transmitter using the 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. Please refer to the manual of the transmitters for further details.

⚠ CAUTION! – The enabling code can only be transferred between two transmitters that have the same radio coding.

Table A8 - Mono and bi-directional transmitters - transmitting the 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 
3.	Press command key on the previously memorised transmitter.	Old 
4.	When the code is transferred, for an instant both transmitters vibrate and the green LED glows 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 - Auto Off

This function allows to automatically turn OFF the connected device when saved time passes from turning it ON. By default, the auto OFF function for both outputs is disabled.

To set auto OFF time or disable the function, follow the steps from the table below:











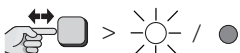
Table A9 - BiDi-Switch - Setting auto OFF for output 1		
N°	Description	Example
1.	Press and hold the programming pushbutton (Figure 1).	
2.	Release the programming pushbutton (Figure 1) when the LED glows with green (3 rd position).	
3.	If you want to disable the auto OFF function, wait 10 seconds, so the programming procedure ends automatically.	
4.	Press the key of the transmitter responsible for turning ON the first output or S1 switch to start the timer.	
5.	Press the key of the transmitter responsible for turning OFF the first output or S1 switch to stop the timer. The maximum time that can be set is 18 hours.	
6.	The auto OFF time is saved and the programming procedure ends automatically.	

Table A10 - BiDi-Switch - Setting auto OFF for output 2		
N°	Description	Example
1.	Press and hold the programming pushbutton (Figure 1).	
2.	Release the programming pushbutton (Figure 1) when the LED glows with white (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 key of the transmitter responsible for turning ON the second output or S2 switch to start the timer.	
5.	Press the key of the transmitter responsible for turning OFF the second output or S2 switch to stop the timer. The maximum time that can be set is 18 hours.	
6.	The auto OFF time is saved and the programming procedure ends automatically.	

6.2 - Type of connected switches


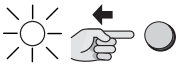


The control unit allows to connect momentary or toggle switches to the S1 and S2 inputs. By default, the toggle switch type is set. To change the type of connected switch, follow the steps from the table below:

Note. By default with the NC contact on the input the output is always activated.

Table A11 - BiDi-Switch - Setting type of connected switches		
N°	Description	Example
1.	Press and hold the programming pushbutton (Figure 1).	
2.	Release the programming pushbutton (Figure 1) when the LED glows with violet (5 th position).	
3.	Press the key of the transmitter responsible for turning ON any output to toggle the setting, the LED informs about the current setting: <ul style="list-style-type: none"> • Fixed violet – momentary switch • Turned off – toggle switch 	
4.	If the device doesn't receive any signal for 10 seconds, the programming procedure ends automatically.	





6.3 - Deleting transmitters

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

Table A12 - BiDi-Switch - Delete single transmitter from memory		
N°	Description	Example
1.	Press and hold the programming pushbutton (Figure 1).	
2.	Release the programming pushbutton (Figure 1) when the LED glows with yellow (6 th position).	
3.	Press any key 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.	

6.4 - Factory reset

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

Table A13 - BiDi-Switch - Restoring to factory defaults		
N°	Description	Example
1.	Press and hold the programming pushbutton (Figure 1).	
2.	Release the programming pushbutton (Figure 1) when the LED glows with yellow (6 th position).	
3.	LED emits 5 yellow flashes to confirm the correct reset.	
4.	The programming procedure ends 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 consecutive positions of the programming menu.

N°	Color	Description
1	Red	Memorization in Mode I
2	Orange	Memorization in Mode II
3	Green	Auto OFF for output 1 settings
4	White	Auto OFF for output 2 settings
5	Violet	Switch type settings
6	Yellow	Reset

7.2 - Other signals

Color	Description
2 red flashes	Control unit initialized properly
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

8 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.

9 DECLARATION OF CONFORMITY

Nice S.p.A. declares that the radio equipment type BiDi-Switch complies with Directive 2014/53/EU.

The full text of the EU Declaration of Conformity is available at: <http://www.niceforyou.com/en/support>



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