

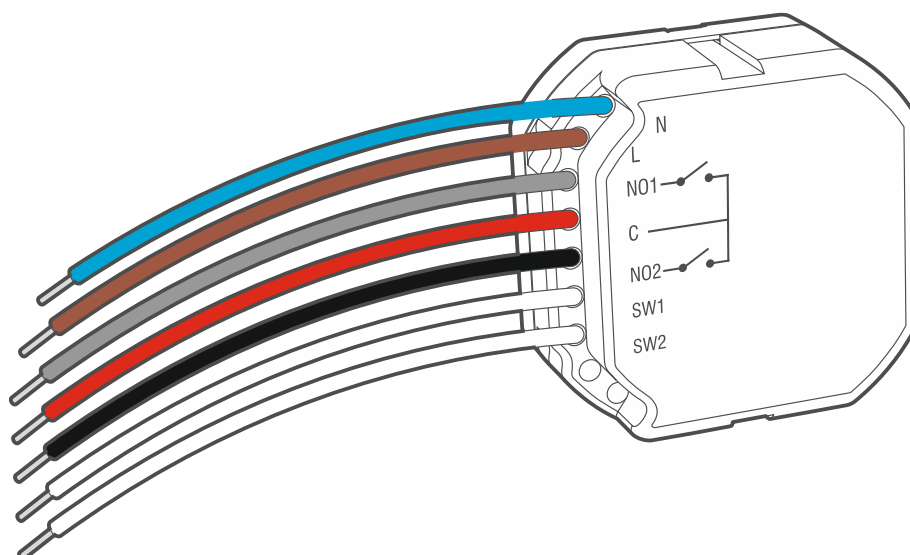
abox2

Flush-mounted wireless two-channel
230 VAC controller

ASW-210

Firmware version 1.02

EN



CE

asw-210_en 09/24

Satel®

SATEL sp. z o.o. • ul. Budowlanych 66 • 80-298 Gdańsk • POLAND
tel. +48 58 320 94 00
www.satel.pl

IMPORTANT

The device should be installed by qualified personnel.

Prior to installation, please read carefully this manual in order to avoid mistakes that can lead to malfunction or even damage to the equipment.

Disconnect power before making any electrical connections.

Changes, modifications or repairs not authorized by the manufacturer shall void your rights under the warranty.

Description of symbols on the device:



The device meets the requirements of the applicable EU directives.



The device is designed for indoor installation.



The device must not be disposed of with other municipal waste. It should be disposed of in accordance with the existing rules for environment protection (the device was placed on the market after 13 August 2005).



Alternating current (AC).



Direct current (DC).



Switch.

SATEL aims to continually improve the quality of its products, which may result in changes in their technical specifications and software. Current information about the changes being introduced is available on our website.

Please visit us at:
<https://support.satel.pl>

Hereby, SATEL sp. z o.o. declares that the radio equipment type ASW-210 is in compliance with Directive 2014/53/EU. The full text of the EU declaration of conformity is available at the following internet address: www.satel.pl/ce

In the EU, this radio equipment is only permitted to operate in the 868 MHz frequency band.

Signs in this manual



Caution – information on the safety of users, devices, etc.



Note – suggestion or additional information.

CONTENTS

1.	Features	2
2.	Specifications	2
3.	Description.....	3
	Wires	3
	Terminals.....	4
	Radio communication	4
	Operating modes	4
4.	Installation	5

The ASW-210 controller enables 230 VAC wired devices to be remotely switched ON/OFF. Additionally, the controller inputs make it possible to manually control these devices by using wired switches. The controller is designed to work as part of the ABAX 2 / ABAX two-way wireless system. It is supported by:

- ABAX 2:
 - ACU-220 / ACU-280 controller (firmware version 6.08 or newer),
 - ARU-200 repeater.
- ABAX:
 - ACU-120 / ACU-270 controller,
 - ARU-100 repeater,
 - INTEGRA 128-WRL control panel.

1. Features

- 2 programmable relay outputs (which can be controlled by using the monostable or bistable switch).
- Galvanic isolation of the controller outputs.
- 2 programmable wired inputs (support for NO or NC type switches).
- Encrypted two-way radio communication in the 866 MHz / 868 MHz / 915 MHz frequency band (AES standard for the ABAX 2 system).
- Transmission channel diversity – 4 channels for automatic selection of the one that will enable transmission without interference with other signals in the 866 MHz / 868 MHz / 915 MHz frequency band (ABAX 2 system only).
- Remote update of detector firmware (ABAX 2 system only).
- Remote configuration.
- Mounted in in-wall and on-wall electrical junction boxes with a minimum diameter of 60 mm.

2. Specifications

Operating frequency band.....866 MHz / 868.0 MHz ÷ 868.6 MHz / 915 MHz – 928 MHz

Radio communication range (in open area)

ABAX 2

ACU-220 up to 1000 m

ACU-280 up to 1000 m

ABAX..... up to 500 m

Supply voltage 230 VAC, 50 Hz

Standby power consumption.....0.47 W

Maximum power consumption1 W

Rated switching voltage250 VAC

Relay outputs rated load – AC1 5 A / 250 VAC

Minimum switching current.....10 mA

Rated switching current.....5 A

Maximum breaking capacity – AC1..... 1250 VA

Minimum breaking capacity.....50 mW

Contact resistance	$\leq 100 \text{ m}\Omega$
Electrical life (number of cycles) – AC1 (360 cycles/hour)	$> 10^5$
Complied with standards.....	EN 50130-4, EN 50130-5
Environmental class according to EN50130-5	II
Operating temperature range.....	$-10^{\circ}\text{C}...+55^{\circ}\text{C}$
Maximum humidity.....	$93\pm 3\%$
Dimensions	
Variant A.....	47 x 47.4 x 22 mm
Variant B.....	47 x 47 x 22 mm
Weight.....	40 g

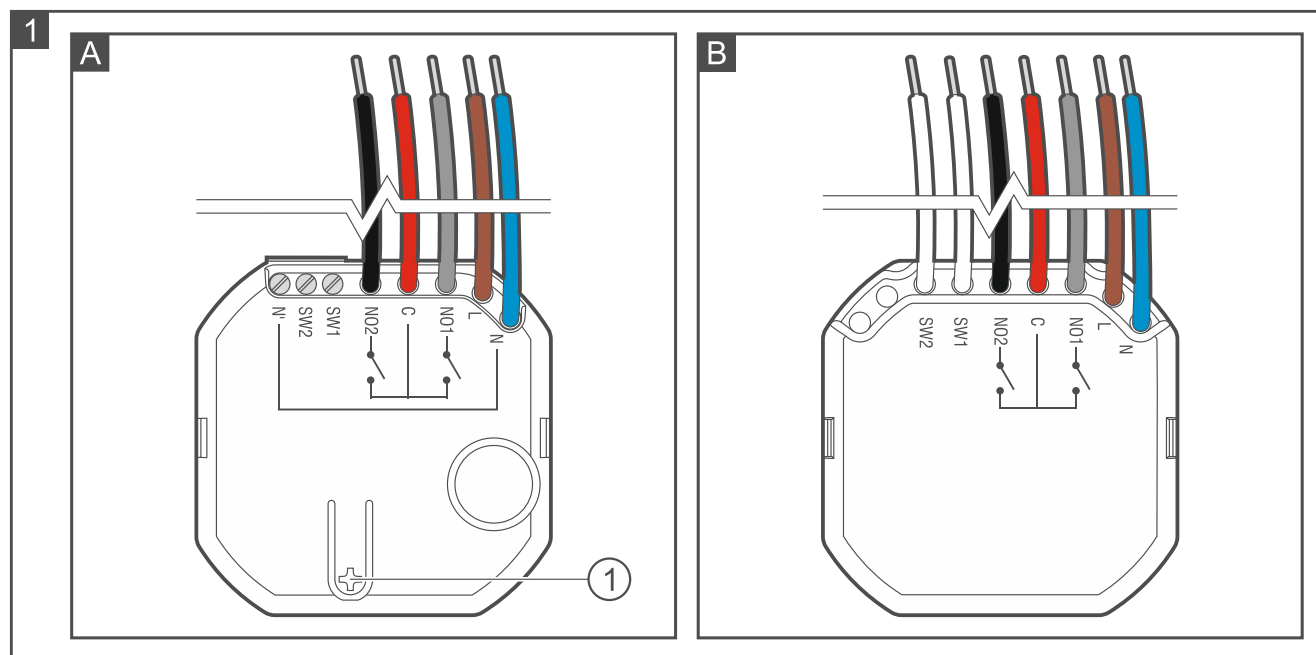
3. Description

On the list of wireless devices, the controller takes up:

- ABAX 2 – two positions (optionally, it can occupy one position),
- ABAX – one position.



The variant A of the device (with screw terminals) had been manufactured until 2024 when it was replaced by variant B (no terminals, wires only).



① button used to:

- register the controller in the system – press while adding the controller to the system,
- block / unblock the registration – press and hold for 10 seconds to block / unblock the capability to add the controller to the system.



In variant B, the button is located at the back of the enclosure.

Wires

- N** [blue] - for connecting 230 VAC supply neutral wire.
- L** [brown] - for connecting 230 VAC supply phase wire.

- NO1** [gray] - NO contact of the relay output 1 (normally it is disconnected from the common contact C – does not conduct electricity).
- NO2** [black] - NO contact of the relay output 2 (normally it is disconnected from the common contact C – does not conduct electricity).
- C** [red] - common contact C of the relay outputs.
- SW1** [white] - control input 1. [only variant B]
- SW2** [white] - control input 2. [only variant B]

Terminals [only variant A]

- SW1** [white] - control input 1.
- SW2** [white] - control input 2.
- N'** - for connecting 230 VAC supply neutral wire.



If the controller occupies one position on the list of wireless devices, the state of both relay outputs changes simultaneously.

Given the specific character of radio communication, it is not recommended that the controller be used in applications where quick switching of the output status is expected.

It is not recommended to use the relay outputs to switch the capacitive loads (e.g. LED lighting power supplies, LED lamps) frequently, i.e. more than every 10 seconds.

Do not connect more than one LED lighting power supply to the relay output.

If the controller occupies one position on the list of wireless devices, only the SW1 input is supported.

The controller inputs are not galvanically isolated.

Radio communication

The ASW-210 controller connects to the ABAX 2 / ABAX controller / control panel at regular time intervals to provide information about its status (periodical communication). Additional communication takes place when the ASW-210 controller:

- informs the ABAX 2 / ABAX controller / control panel that an input state has changed,
- acknowledges receiving a command (to turn a relay ON/OFF) from the ABAX 2 / ABAX controller / control panel.

Operating modes

You can select the operating mode when configuring the ASW-210 controller settings (refer to the ABAX 2 controller / INTEGRA 128-WRL control panel manual). For each position occupied by the controller on the list of wireless devices, you can select a different operating mode:

- mode 0** – the relay can only be controlled via the controller / control panel. The state of the wired input is of no consequence for the relay, but information about the input state is sent to the controller / control panel.
- mode 1** – the relay can be controlled via the controller / control panel as well as by using the monostable switch connected to the wired input. Information about the input state is sent to the controller / control panel.
- mode 2** – the relay can be controlled via the controller / control panel as well as by using the bistable switch connected to the wired input. Information about the input state is sent to the controller / control panel.

4. Installation



Disconnect power before making any electrical connections.

Connect the controller to a single-phase network according to the applicable standards.

Do not remove the controller from the enclosure. Installing the controller without enclosure or with a damaged enclosure poses a risk of electric shock and may damage the module.

Do not install the device at locations above 2000 m above sea level.

The ASW-210 controller is designed for mounting inside an electrical junction box (60 mm deep). It should be installed indoors, in spaces with normal air humidity. When choosing the installation location, remember that thick masonry walls, metal partitions etc. reduce the radio signal range.

The electrical circuit to which the controller is to be connected must be protected by a suitable safety device. Let the owner / user of the ABAX 2 / ABAX system know how to disconnect the device from the mains supply (e.g. indicate the fuse or circuit breaker protecting the controller supply circuit).

To connect the wires, use screw terminal blocks, splicing connectors, etc.

1. Power off the circuit to which the controller is to be connected.
2. Open the electrical junction box in which the controller is to be installed.
3. Connect the controller to the 230 VAC supply circuit (brown wire [L] to phase wire; blue wire [N] to neutral wire – Fig. 2).
4. Place the controller in the junction box. Make sure the electric wires are behind the controller enclosure.
5. Power on the circuit to which the controller is connected.
6. Add the ASW-210 controller to the wireless system and configure its settings (see ABAX 2 controller manual or INTEGRA 128-WRL control panel manual). The sticker with serial number which shall be entered when registering the detector in the system can be found on the enclosure.



In the ABAX system, the controller is identified as ASW-100.

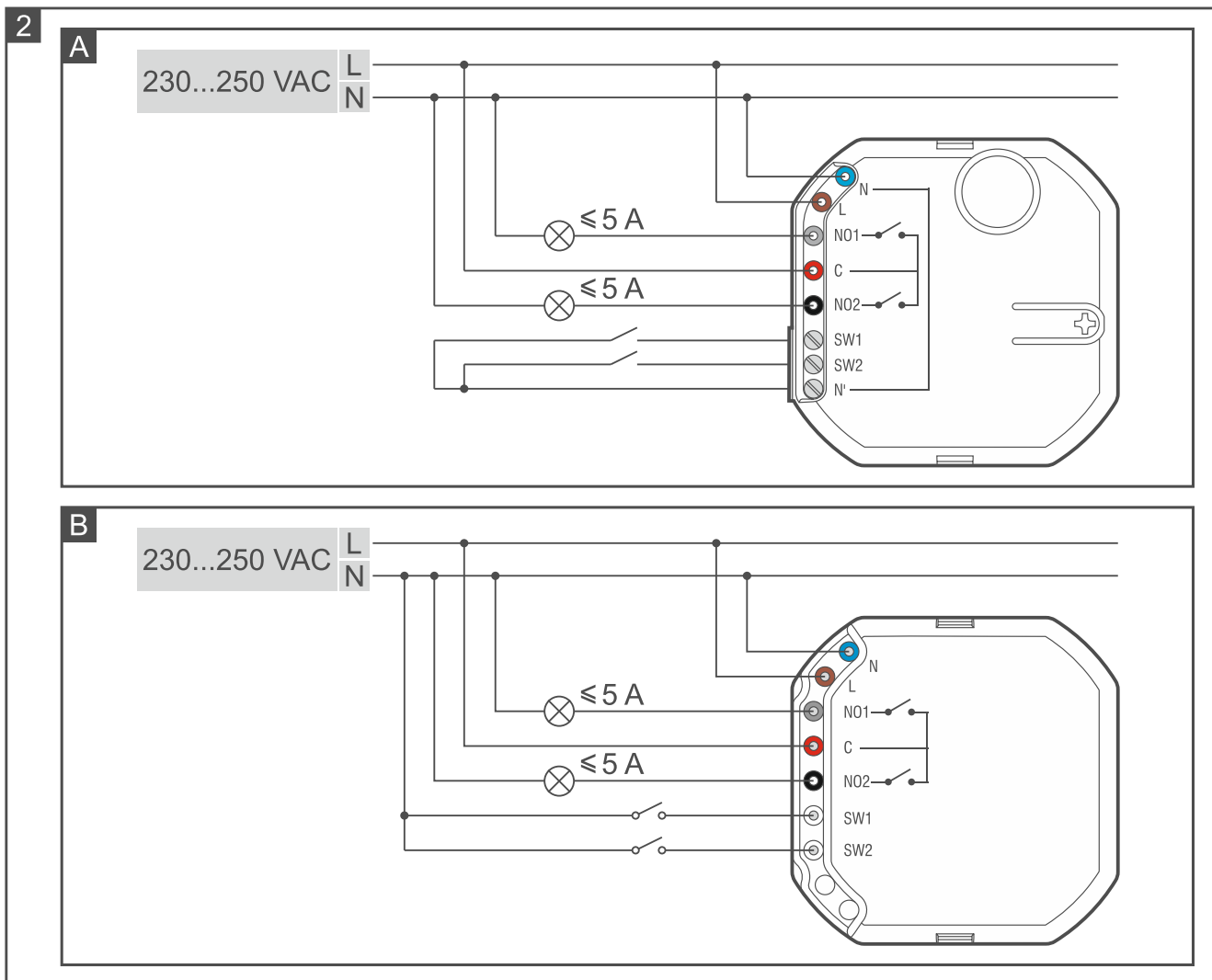
If the ABAX 2 / ABAX controller is connected to the VERSA / VERSA Plus / VERSA IP control panel, use the DLOADX program to add and configure the ASW-210 controller.

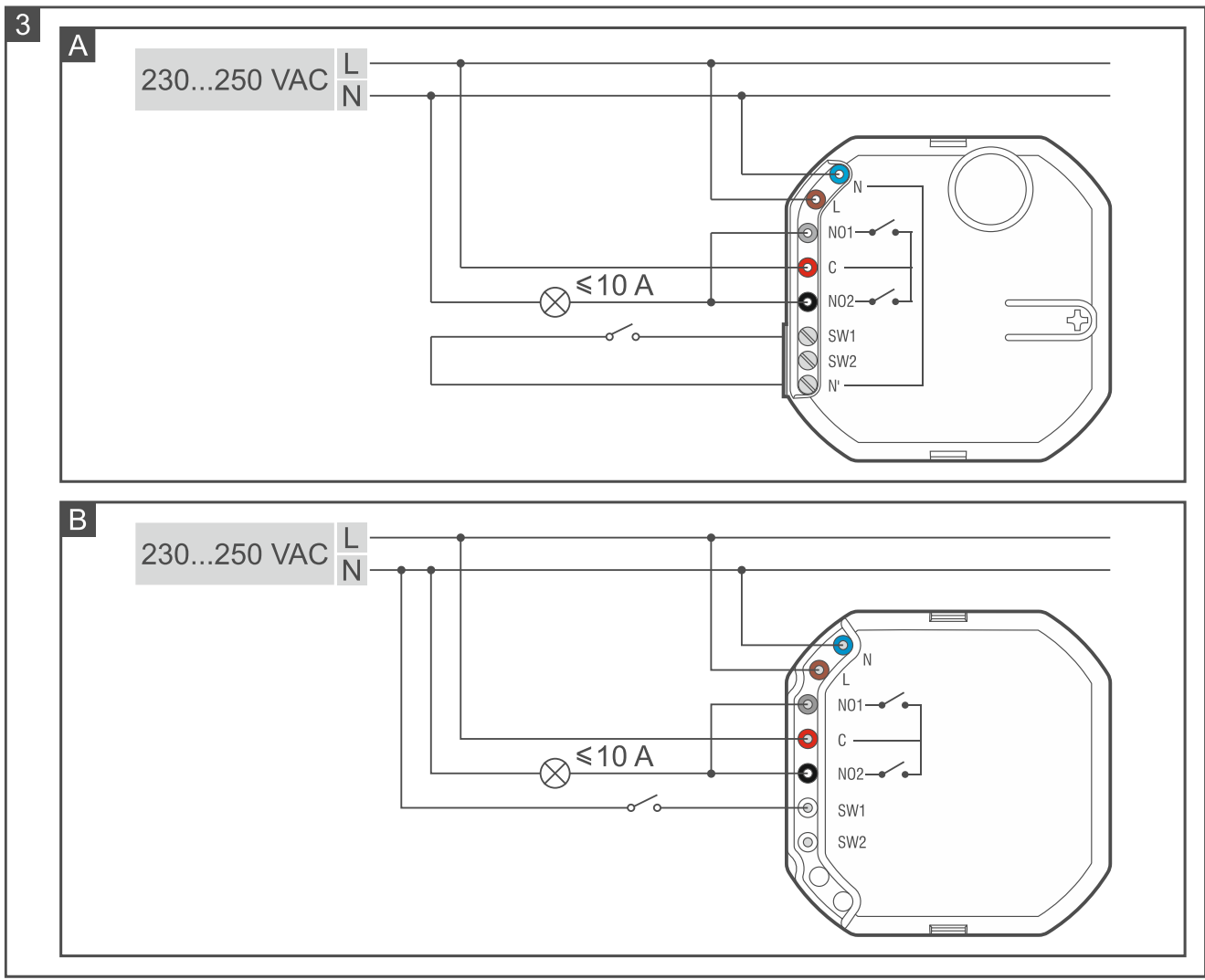
Simultaneous operation of the ASW-210 controller by the ABAX 2 and ABAX controller / INTEGRA 128-WRL alarm control panel is not possible.

7. Close the junction box.
8. Check the level of radio signal received from ASW-210 controller by the ABAX 2 / ABAX controller / control panel. If it is low, try to move around the ASW-210 controller and check if it improves the signal strength. The controller can be installed in the selected junction box if the signal strength is higher than 40%.
9. Power off the circuit to which the controller is connected.
10. Open the junction box and remove the controller.
11. Connect the wires of controller relay outputs to the wires of electrical circuits to be controlled by the controller (Fig. 2 and 3). Fig. 2 shows a case in which the controller

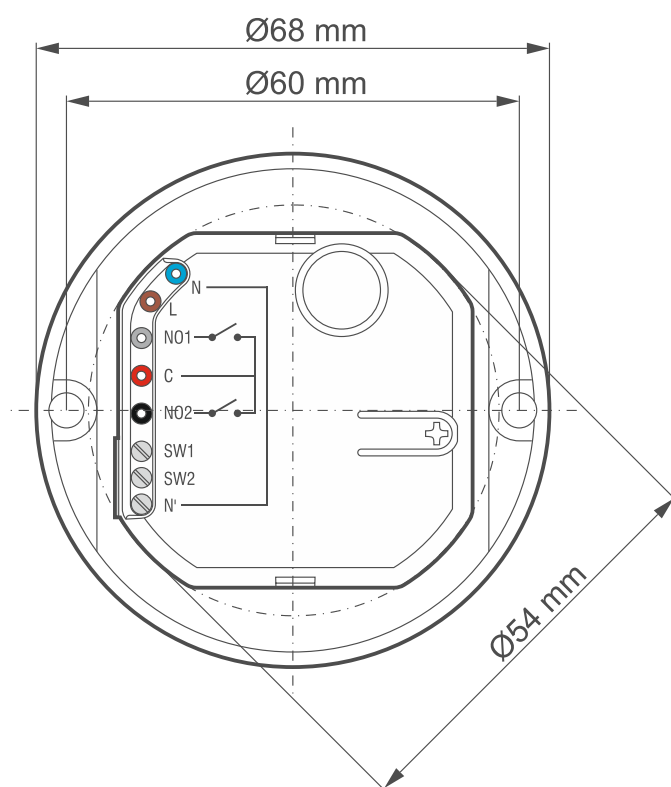
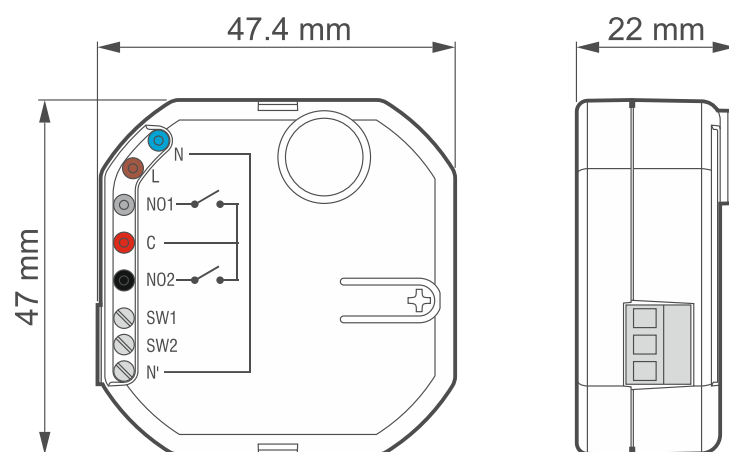
occupies 2 positions on the list of wireless devices; in Fig. 3 the controller occupies just 1 position.

12. Connect buttons / switches to the controller inputs (Fig. 2 and 3). Fig. 2 shows a case in which the controller occupies 2 positions on the list of wireless devices; in Fig. 3 the controller occupies just 1 position. In case of the controller in variant A (with terminals), to make connections, use flexible wires with a cross-sectional area of 0.5-0.75 mm².
13. Mount the controller in the junction box. Make sure the electric wires are behind the controller enclosure.
14. Close the junction box.
15. Power on the circuit to which the controller is connected.
16. Check the controller for proper functioning.





A



B

