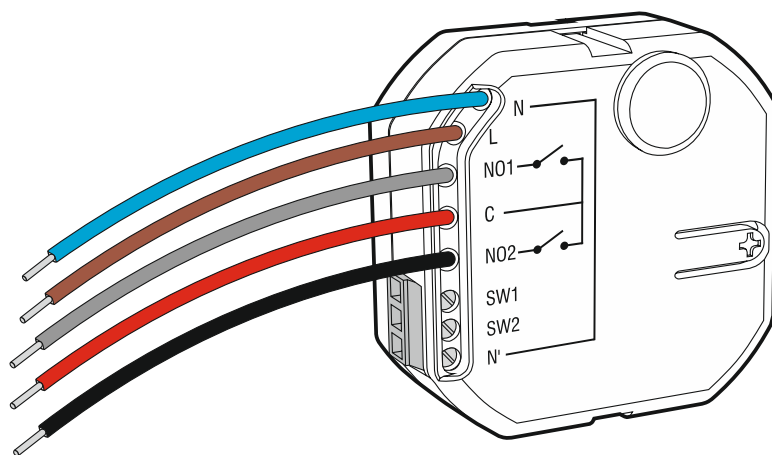# abax 2

ASW-210

Flush-mounted wireless two-channel 230 V AC controller

$C\,\epsilon$

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.

The rating plate of the device is located on the enclosure base.

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:
http://www.satel.eu

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.eu/ce

The following symbols may be used in this manual:

i - note,

⚠ - caution.

The ASW-210 controller enables 230 V AC 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. This manual applies to the controller with firmware version 1.0, which is supported by:

- ABAX 2:
  - ACU-220 / ACU-280 controller,
  - ARU-200 repeater.
- ABAX:
  - ACU-120 / ACU-270 controller (firmware version 5.05 or newer),
  - ARU-100 repeater (firmware version 2.02 or newer),
  - INTEGRA 128-WRL control panel (firmware version 1.19 or newer and firmware version of processor used to operate ABAX system 3.11 or newer).

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 868 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 868 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 ....868.0 MHz ÷ 868.6 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 V AC ±15%, 50-60 Hz
Standby current consumption ....5.5 mA
Maximum current consumption..13 mA
Rated switching voltage...250 V AC
Relay outputs rated load – AC1 .... 5 A / 250 V AC
Minimum switching current ....10 mA
Rated switching current ....5 A
Maximum breaking capacity – AC1 .... 1250 VA

Minimum breaking capacity..50 mW

Contact resistance ....≤ 100 Ω

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°C...+55°C

Maximum humidity ....93±3%

Dimensions .... 47 x 47.4 x 22 mm

Weight..40 g

3. Description

The controller takes up two positions on the list of wireless devices (optionally, it can occupy one position).
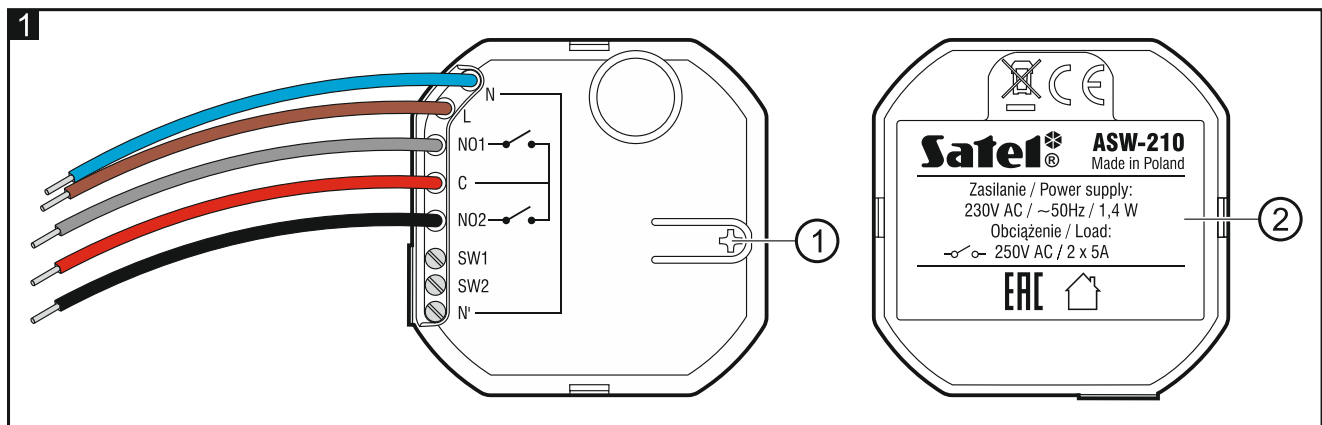
(1) button for registering the controller to the ABAX 2 / ABAX system.

(2) rating plate.

Wires

N [blue]	-	for connecting 230 V AC supply neutral wire.
L [brown]	-	for connecting 230 V AC 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.

Terminals

SW1, SW2	-	control input (NO).
N'	-	for connecting 230 V AC supply neutral wire.

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.

The wired inputs of the controller are not galvanically isolated.

It is not recommended to use the controller to switch the capacitive loads (e.g. LED lighting power supply units, LED lamps) more frequently than every 10 seconds.

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

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 V AC 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.

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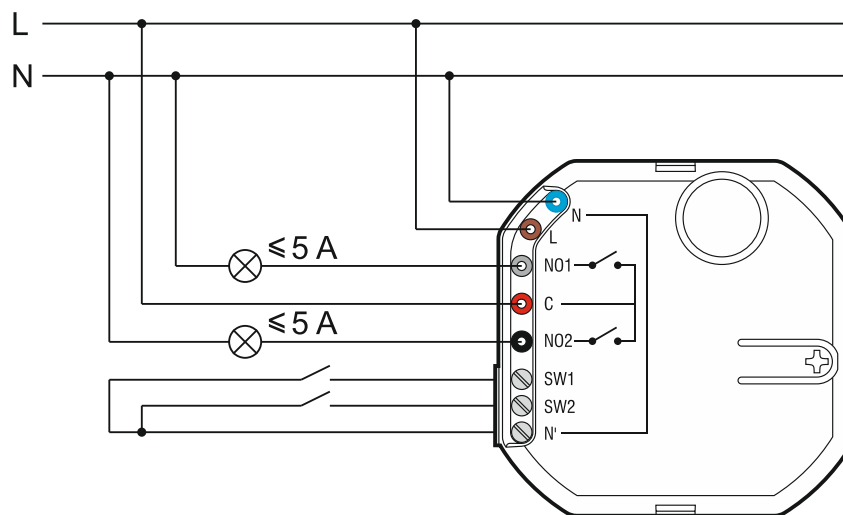
i *Given the specific character of radio communication, it is not recommended that the controller be used in applications where quick switching of the output status is expected.*

12. Connect switches to the controller inputs (Fig. 2). To make connections, use flexible wires with a cross-sectional area of 0.5-0.75 mm^2.

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.