

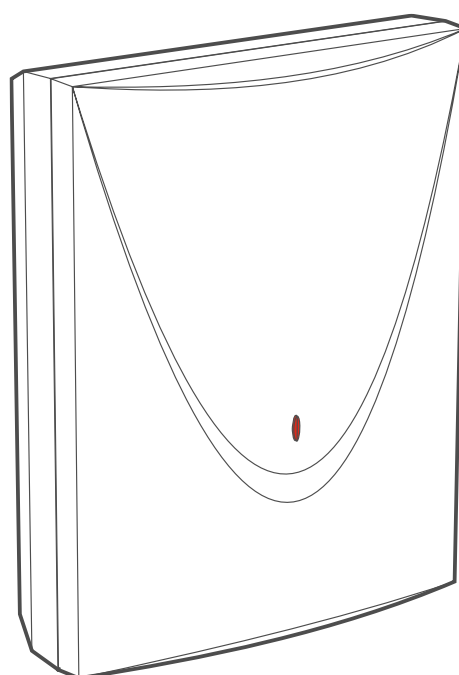
**abax2**

Radio signal repeater

**ARU-200**

Firmware version 1.00

**EN**



**CE**

aru-200\_en 02/23

**Satel**®

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## 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.



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).



The device meets the technical regulations of the Eurasian Customs Union.



Protection class II (protective insulation).

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 ARU-200 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](http://www.satel.pl/ce)**

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

The following symbols may be used in this manual:



- note,



- caution.

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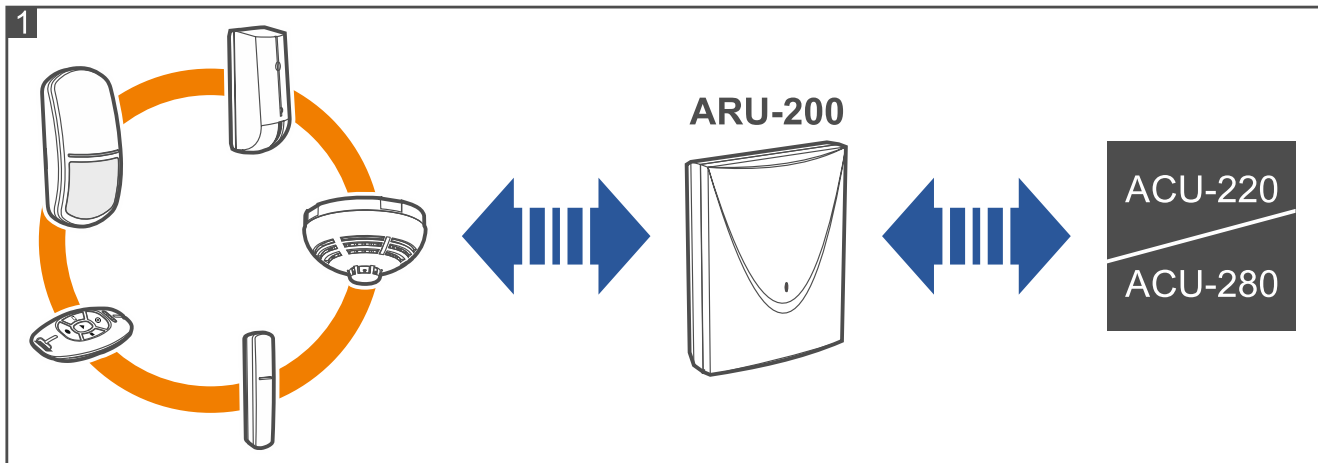
The ARU-200 radio signal repeater receives transmissions from wireless ABAX 2 system devices and retransmits them. This manual applies to the repeater supported by the ACU-220 and ACU-280 controllers with firmware version 6.03 (or newer).



*The repeater does not support the wireless devices:*

- ABAX,
- ABAX 2: ASP-200, ASP-201, INT-KWRL2, VERSA-KWRL2.

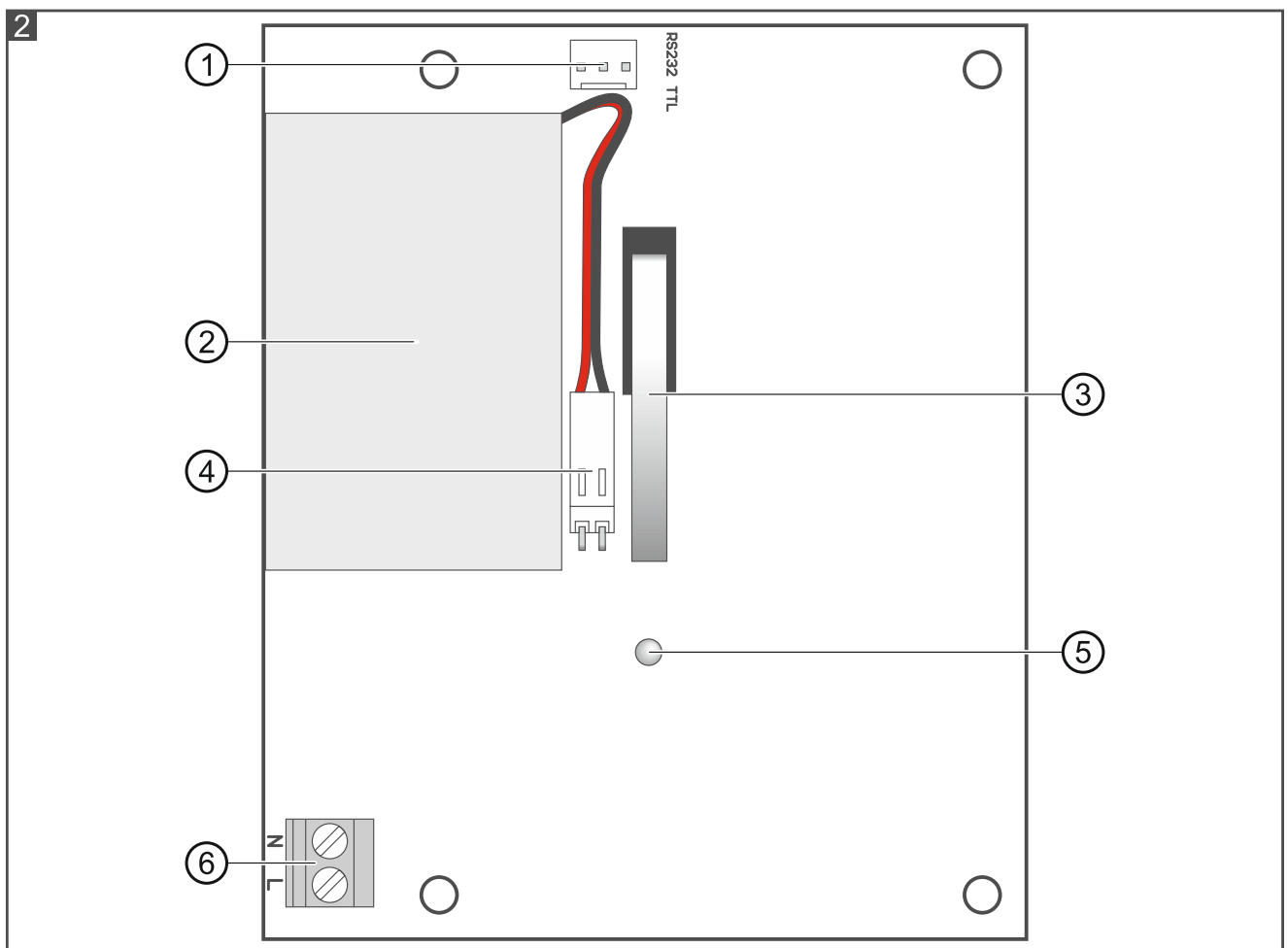
*The firmware of the devices supported by the repeater cannot be updated remotely.*



## 1. Features

- Retransmission of signals from 46 wireless devices.
- Encrypted two-way radio communication in the 868 MHz / 915 MHz frequency band (AES standard).
- Transmission channel diversity – 4 channels for automatic selection of the one that will enable transmission without interference with other signals in the 868 MHz / 915 MHz frequency band.
- Remote update of repeater firmware.
- LED indicator of the repeater status.
- Tamper protection against cover removal.
- Powered with 230 VAC.
- Built-in switching power supply.
- Short-circuit protection of the power input.
- Backup battery.
- Battery charging circuit.
- Battery status supervision and low battery disconnect system.

## 2. Electronics board



- ① RS-232 (TTL) port.
- ② battery.
- ③ tamper switch (NC).
- ④ battery connector.
- ⑤ bicolor LED indicator of the repeater status:
  - normal operation – ON in green;
  - communication with the controller – flash in red;
  - 230 VAC power trouble – flashing in green.
- ⑥ 230 VAC terminals.

## 3. Installation and start-up



**Disconnect power before making any electrical connections.**

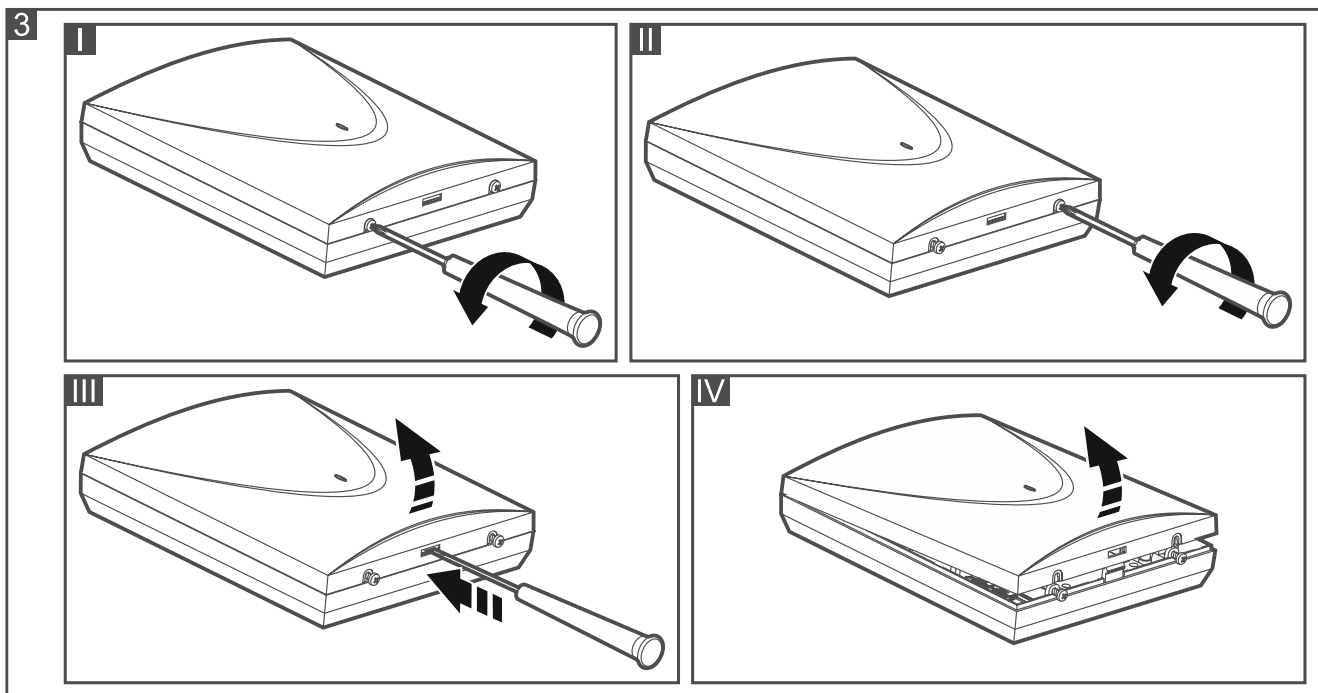
**There is a danger of battery explosion when handling the battery improperly.**

**The used batteries must not be discarded, but should be disposed of in accordance with the existing rules for environment protection.**

The repeater should be installed indoors, in spaces with normal air humidity.

Prior to installation you should plan the arrangement of all ABAX 2 system wireless devices, whose signals are to be retransmitted. Select the place of installation so that the repeater is located within the operating range of the devices and, at the same time, the ABAX 2 controller is located within the operating range of the repeater. The radio communication range depends not only on the installation location, but also on the position of the repeater antenna, i.e. on how the enclosure is mounted (horizontally, vertically, diagonally). Please note that thick walls, metal partitions, etc. will reduce the range of the radio signal. It is recommended that the repeater be mounted high above the floor. This will allow you to get a better range of radio communication and avoid the risk of the repeater being accidentally covered by people moving around the premises. Installing the device in close vicinity of electrical systems is not recommended, since it can affect the range of radio signal. The repeater should be permanently connected to the 230 VAC mains supply. Before you make the cabling, familiarize yourself with the electrical installation of the facility. Make sure that the circuit you choose for powering will be always alive. The circuit must be provided with a 2-pole switch disconnecter with at least 3 mm contact separation and/or short-circuit protection with a 16 A time-delay fuse. The owner or user of the ABAX 2 system should be instructed on how to disconnect the repeater from the mains (e.g. show them which circuit breaker protects the repeater supply circuit).

1. Loosen the cover locking screws and remove the enclosure cover (Fig. 3).



2. Place the repeater at the location of intended installation.
3. Make an opening for power wires in the enclosure base.
4. Temporarily connect the repeater to 230 VAC mains.
5. Replace the cover.
6. Add the repeater to the ABAX 2 system (see the ABAX 2 controller manual). The repeater occupies two positions on the device list.



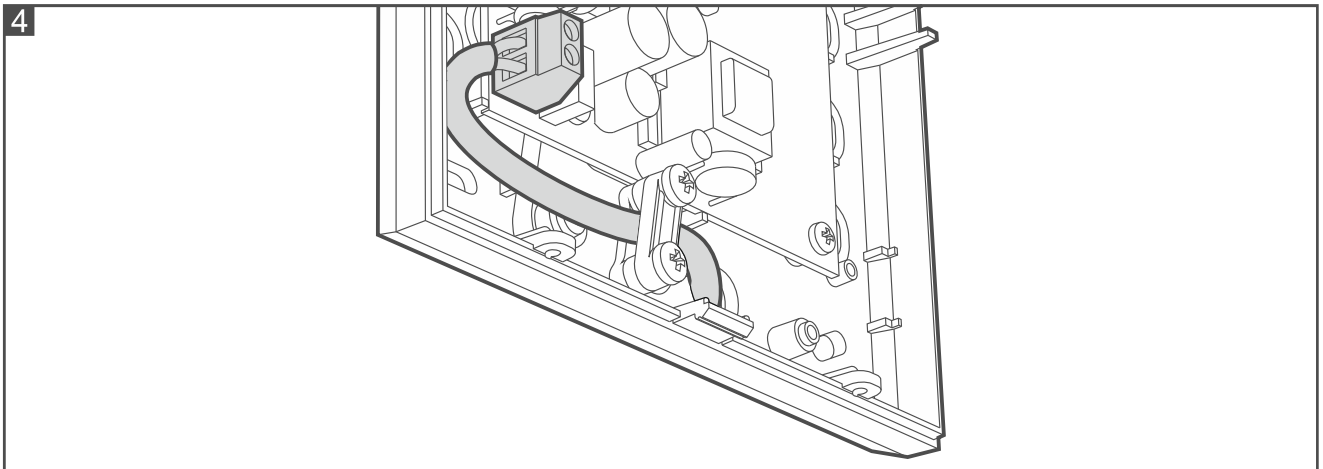
*In the INTEGRA / VERSA alarm system, the repeater is identified as ARU-100.*

7. Check the level of signal received from the repeater by the ABAX 2 controller. If the signal level is lower than 40%, select another place for installation. Sometimes, it is sufficient to shift the detector ten or twenty centimeters.



*The ARF-200 tester makes it possible to check the radio signal strength at the place of future installation without having to put the repeater there.*

8. Power down the repeater.
9. Remove the cover and disconnect the temporary power supply.
10. Place the enclosure base against the wall and mark the location of mounting holes.
11. Drill the holes for wall plugs (screw anchors).
12. Run the power wires through the opening in the enclosure base.
13. Using wall plugs and screws, secure the enclosure base to the wall. Proper wall plugs must be selected for the type of mounting surface (different for concrete or brick wall, different for plaster wall, etc.).
14. Attach the power wires to the repeater terminals: the phase wire to L terminal, the neutral wire to N terminal (secure the cable using the element provided for this purpose – see Fig. 4).



15. Connect the battery to the connector (the repeater will not start on connecting the battery alone).
16. Replace the cover and lock it with screws.
17. Energize the circuit to which the repeater is connected.
18. Specify which wireless devices are to communicate with the controller via the repeater using the keypad connected to the control panel or the DLOADX, ABAX 2 Soft or PERFECTA Soft program (for information on programming, go to the ABAX 2 controller manual).



*Due to the specific nature of communication, there can be some delays in the transmission of information between detectors, repeater and controller in the system. In order to minimize the delays and speed up the communication, you can set the detectors permanently in the active state, that is, one in which the detectors will report each alarm immediately. This applies to the detectors which are violated occasionally because battery life will not be affected in their case.*

## 4. Specifications

Operating frequency band .....	868.0 MHz ÷ 868.6 MHz / 915 MHz – 928 MHz
Radio communication range (in open area)	
ACU-220 .....	up to 2000 m
ACU-280 .....	up to 1600 m

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Supply voltage .....	230 VAC, 50-60 Hz
Standby current consumption .....	8 mA
Maximum current consumption .....	15 mA
Battery (lithium-ion) .....	3.7 V / 1800 mAh
Environmental class according to EN 50130-5 .....	II
Operating temperature range .....	-10°C...+55°C
Maximum humidity .....	93±3%
Electronics board dimensions .....	87 x 104 mm
Enclosure dimensions .....	126 x 158 x 32 mm
Weight .....	265 g