

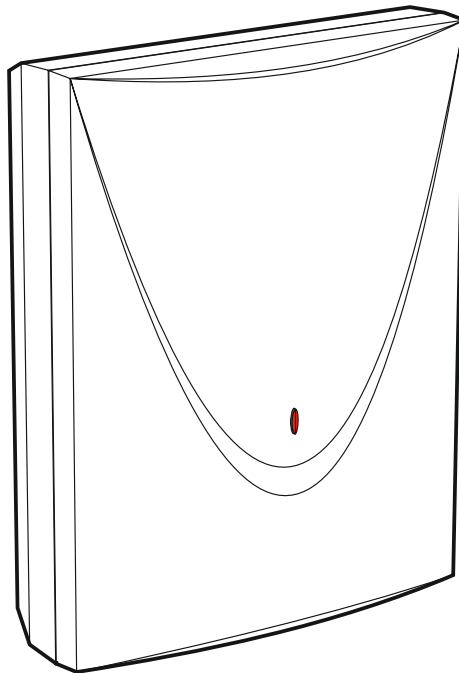
Satel®

MICRA

MRU-300

Radio signal repeater

CE



Firmware version 1.00

mru-300_en 07/20

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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 name 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 MRU-300 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:



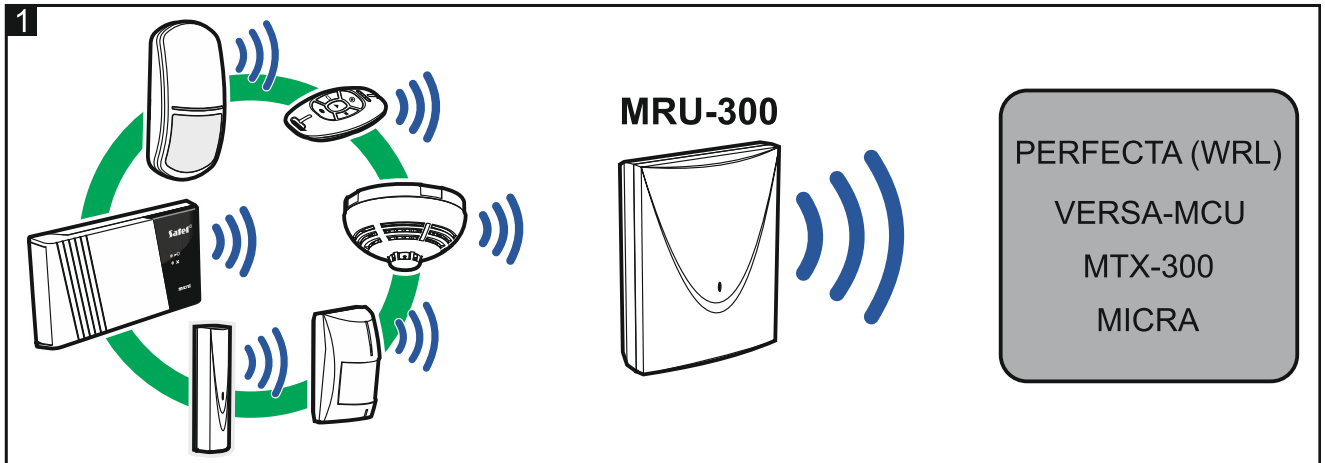
- note;



- caution.

The MRU-300 radio signal repeater receives transmissions from wireless MICRA system devices and retransmits them. It works with:

- PERFECTA alarm control panels (WRL type),
- VERSA-MCU controller,
- MTX-300 controller,
- MICRA alarm module (firmware version 2.02 or newer).



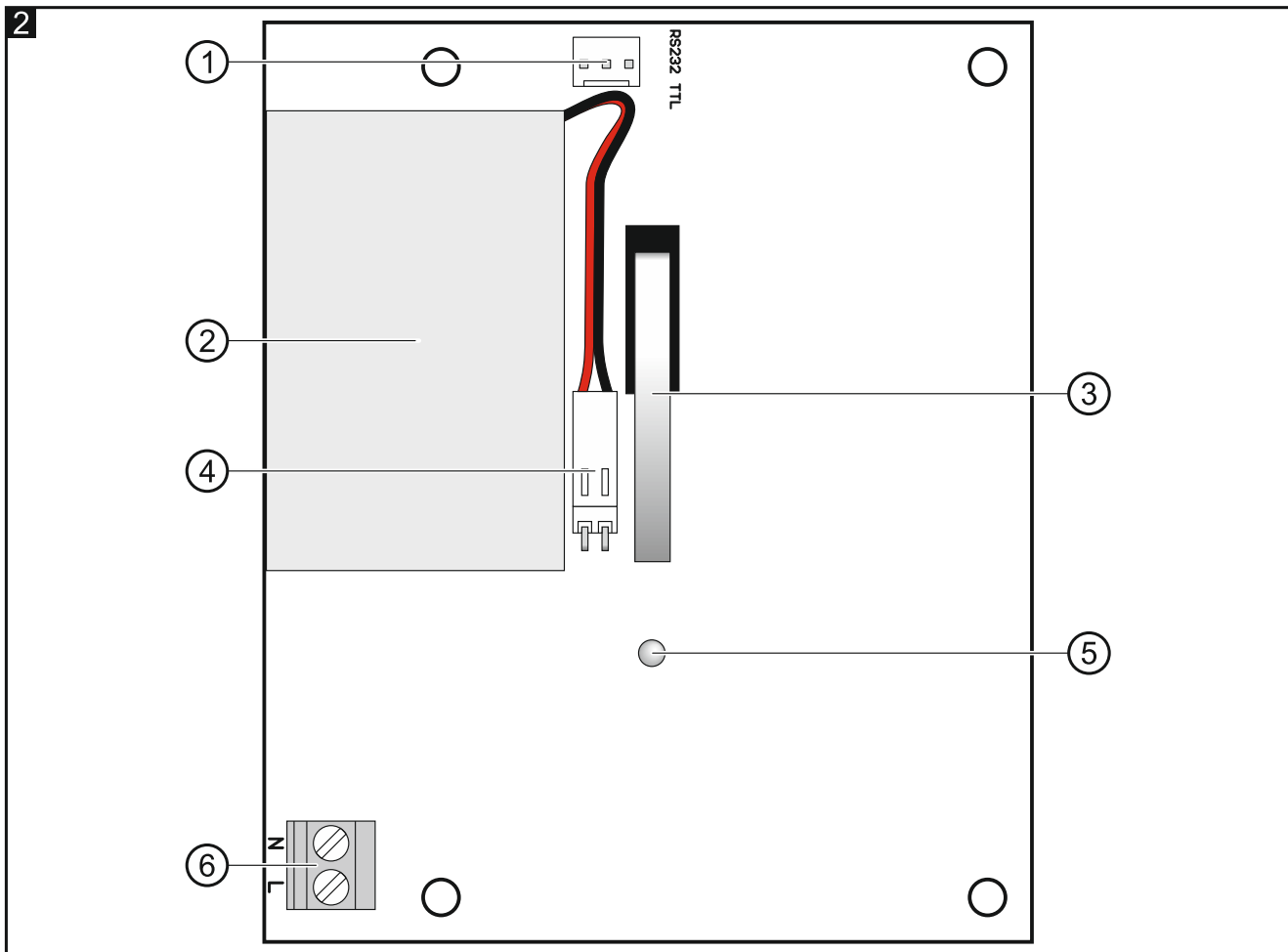
The repeater supports the following MICRA devices:

- detectors:
 - MFD-300** – wireless water flood detector.
 - MGD-300** – wireless glass-break detector.
 - MMD-300** – wireless magnetic contact.
 - MMD-302** – wireless magnetic contact with input for roller shutter detector.
 - MPD-300** – wireless passive infrared detector.
 - MPD-310** – wireless passive infrared detector.
 - MPD-310 Pet** – wireless passive infrared detector with pet immunity up to 20 kg.
 - MSD-300** – wireless smoke and heat detector.
 - MSD-350** – wireless smoke detector.
 - MXD-300** – wireless multipurpose detector.
- **MPT-350** keyfobs.
- **MKP-300** wireless keypads.

1. Features

- Encrypted radio communication in the 433 MHz frequency band.
- 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. Used for updating the repeater's firmware. You can connect the repeater to the computer using the SATEL USB-RS converter.
- ② battery.
- ③ tamper switch (NC).
- ④ battery connector.
- ⑤ bicolor LED indicator of the repeater status:
 - AC power OK – ON in green;
 - no 230 VAC power – flashing in green;
 - radio transmission – flash in red.
- 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.

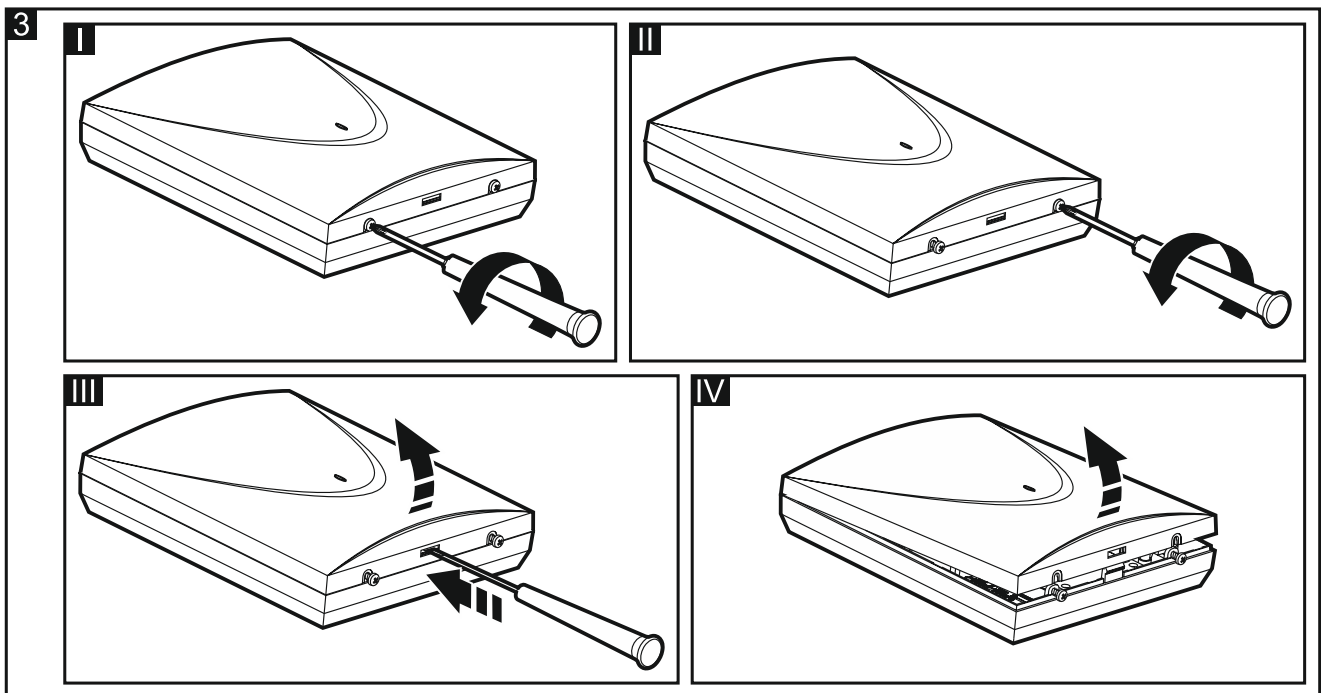
The used batteries must not be discarded, but should be disposed of in accordance with the existing rules for environment protection.

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

Prior to installation you should plan the arrangement of all MICRA 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 controller / control panel, in which the devices are registered, 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 alarm 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. Register the repeater in the system (see: PERFECTA / VERSA control panel installer manual, MTX-300 controller manual or MICRA module manual).



You do not have to register the repeater but its operation will not be supervised if unregistered (power failures, lack of presence or tamper will not be reported).

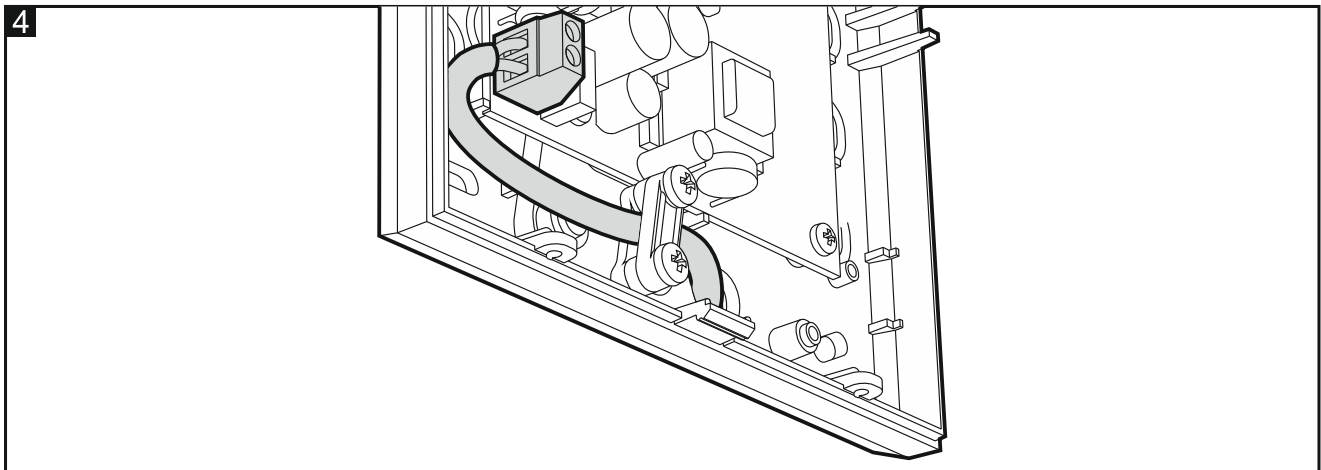
The repeater is identified as the MMD-300 detector. Information about low battery should be interpreted as AC power supply loss.

7. Close and open the tamper switch. If the transmission from the device is received, continue with the installation. If the transmission from the device is not received, select a different mounting location and repeat the test. Sometimes, it is sufficient to shift the device ten or twenty centimeters.



We recommend that the enclosure is closed while the range of radio communication is being tested.

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 holes for wall plugs (anchors) in the wall.
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 specially 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.

4. Specifications

Operating frequency band.....	433.05 MHz ÷ 434.79 MHz
Radio communication range (in open area)	
PERFECTA	up to 500 m
VERSA-MCU / MTX-300 / MICRA.....	up to 450 m
Supply voltage	230 VAC ±15%, 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 EN50130-5	II
Working 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.....	266 g