

# ARD-100

## WIRELESS REORIENTATION DETECTOR

The wireless ARD-100 detector can sense a change in orientation of the protected object. The detector is designed for use as part of the ABAX two-way wireless system. This manual applies to the detector with firmware version 5.00, which is supported by:

- ACU-120 / ACU-270 controller,
- ACU-100 / ACU-250 controller with firmware version 4.03 2014-05-15 (or newer),
- ARU-100 repeater with firmware version 2.00 2014-05-15 (or newer),
- INTEGRA 128-WRL control panel with firmware version 1.12 2013-12-20 (or newer).

### 1. Features

- Built-in accelerometer to analyze acceleration and gravitation.
- Remote configuring.
- Tamper protection against cover removal and tearing enclosure from the wall.
- Battery status control.

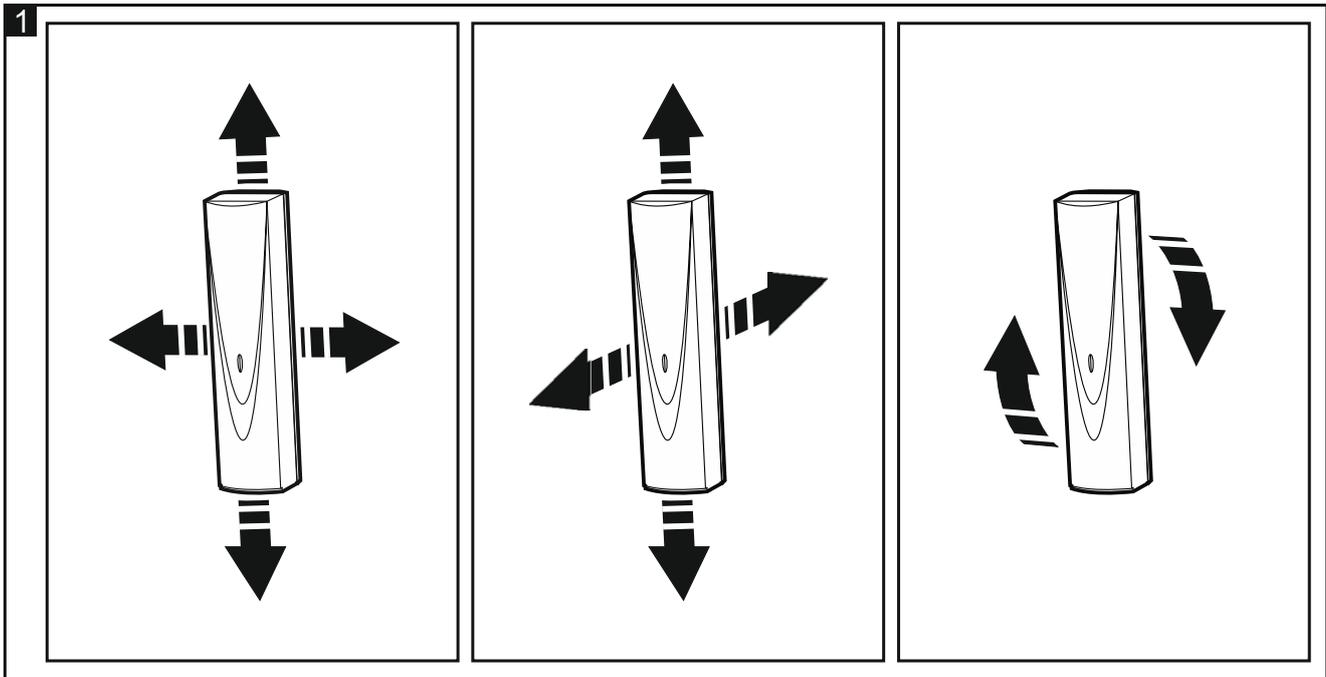
### 2. Specifications

Operating frequency band .....	868.0 MHz ÷ 868.6 MHz
Radio communication range (in open area).....	up to 500 m
Battery .....	CR123A 3 V
Battery life expectancy.....	approx. 3 years
Environmental class according to EN50130-5 .....	II
Operating temperature range.....	-10 °C...+55 °C
Enclosure dimensions.....	26 x 112 x 29 mm
Weight.....	48 g

**Hereby, SATEL sp. z o.o., declares that this detector is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC. The declaration of conformity may be consulted at [www.satel.eu/ce](http://www.satel.eu/ce)**

### 3. Description

Employed in the detector is an accelerometer, which analyzes acceleration and gravitation. The detector remembers position at the moment of being switched into active mode or starting the test mode. Changing the position against the remembered one will cause an alarm. Fig. 1 shows the changes in orientation that can be sensed by the detector.



### Electronics board

Figure 2 shows the inside of the detector.

- ① CR123A lithium battery.
- ② tamper contact.

The LED is placed on the other side of the electronics board.

### Alarms

The detector reports alarm in the following cases:

- sensing reorientation of the detector,
- opening the tamper contact (tamper alarm).

### Operating modes

The detector operating mode is defined remotely.

**Active** – information about each alarm is sent immediately.

**Passive** – information about tamper alarm is sent immediately, while information about alarm caused by change of the detector position only during the polling time. This operating mode prolongs the battery life.

### Test mode

If you want to test the detector, you can remotely enter the test mode. When in the test mode, the detector LED is working.

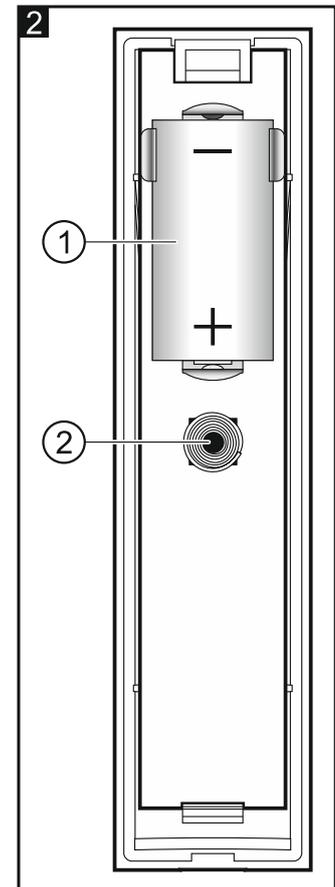
### LED

The LED is working for 2 minutes after battery is inserted, as well as in the test mode. The LED indicates:

- polling – short flash (80 milliseconds),
- alarm – ON for 2 seconds.

### Battery status control

When the battery voltage is below 2.75 V, information about low battery is sent during each transmission.



**Note:** For additional information about the detector and its configuration please refer to the manual for ABAX wireless system controller.

## 4. Installation

The detector is designed for indoor installation.

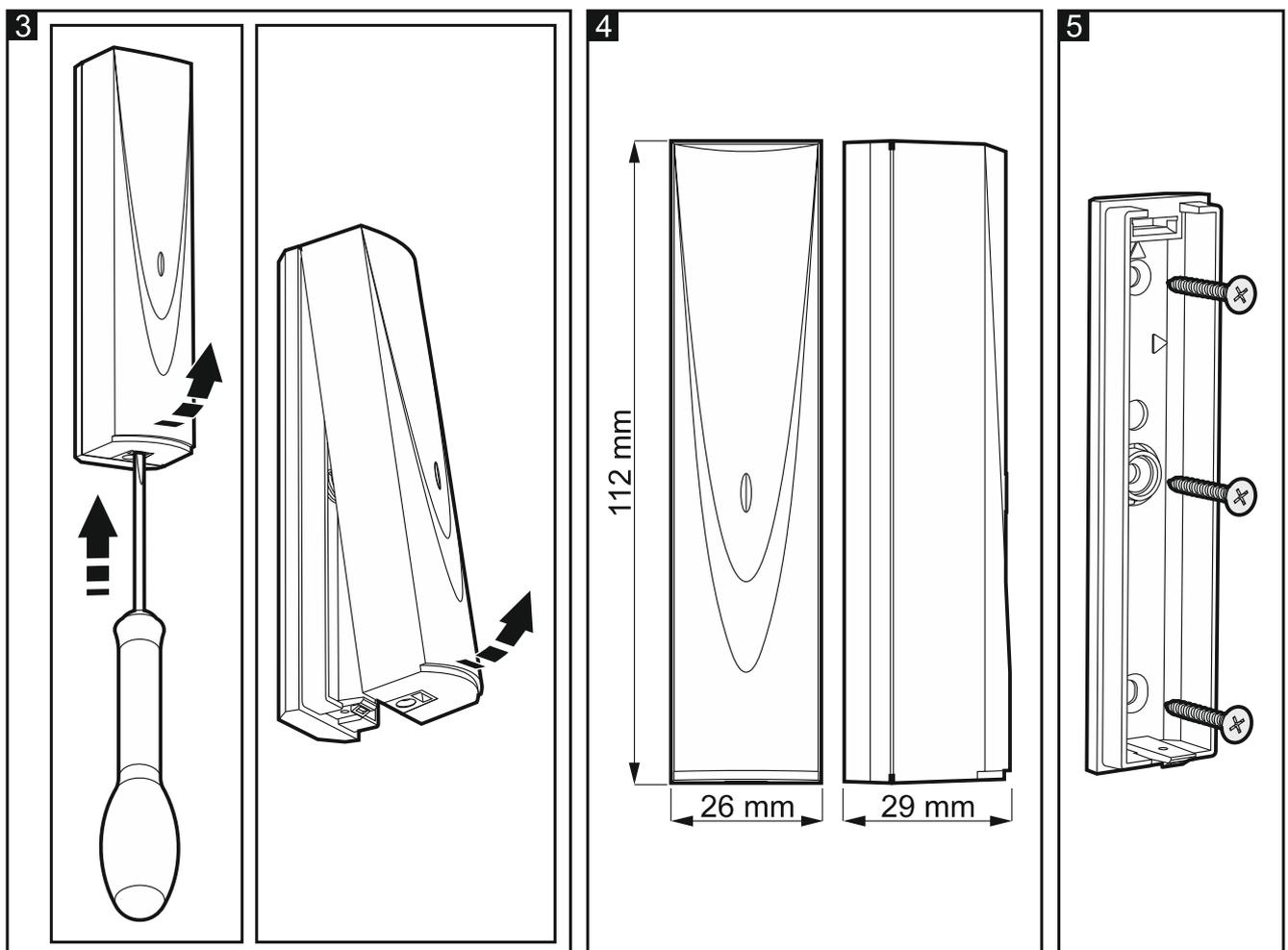


**There is a danger of battery explosion when using a different battery than recommended by the manufacturer, or handling the battery improperly.**

**Be particularly careful during installation and replacement of the battery. The manufacturer is not liable for the consequences of incorrect installation of the battery.**

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

1. Open the detector enclosure (Fig. 3).



2. Install the battery and add the device to the wireless system (see the ACU-100 / ACU-250 / ACU-120 / ACU-270 controller manual or the INTEGRA 128-WRL / VERSA control panel installer manual). The sticker with 7-digit serial number which shall be entered when registering the detector in the system can be found on the electronics board.
3. Close the detector enclosure.
4. Fasten the detector temporarily at the place of its future installation.
5. Check the level of signal received from the detector by the ACU-100 / ACU-250 / ACU-120 / ACU-270 controller or the INTEGRA 128-WRL control panel. If the signal level is lower than 40%, select another place for installation. Sometimes, it is sufficient to shift

the device ten or twenty centimeters to obtain a considerable improvement in the signal quality.

6. Open the detector enclosure (Fig. 3).
7. Use screws to fix the enclosure base to the mounting surface (Fig. 5). Wall plugs (screw anchors) and screws are included in the detector delivery set.
8. Close the detector enclosure.
9. Configure the detector (set the sensitivity). For detailed information regarding configuration of the detector, please refer to the manual for ABAX wireless system controller.
10. Launch remotely the test mode.
11. Check that the LED goes on after reorientation of the detector.