

The AVD-100 wireless vibration detector and magnetic contact is designed for operation within the ABAX two-way wireless system. It is supported by the ACU-100 controller with firmware in version 1.06 or later.

Owing to its advanced features of piezoelectric sensor signal processing, the vibration detector can distinguish between the natural vibrations received from the environment, and those caused by an attempt to force the door or window. The sensor signal is analyzed in respect of its amplitude, duration and number of vibrations. The detector sensitivity and the number of vibrations after which violation will be reported, are defined remotely.

The magnetic detector will signal violation after the magnet is moved away from the reed switch, which means breaking the electric circuit. Two reed switches are used in the detector and you can program by radio which of them is to be active.

The AVD-100 detector occupies 2 positions on the list of controller supported devices.

Explanations for Fig. 1:

- 1 - screen.
- 2 - piezoelectric sensor.
- 3 - LED indicator. It lights red in the test mode only, indicating communication with the controller (during polling), violations (on registering vibrations by the vibration detector or after the magnet is moved away from the reed switch) and tampers.
- 4 - tamper contact, which responds to opening of the housing and pull-off from the surface.
- 5 - CR123A 3 V lithium battery, ensuring operation for approx. 3-year period. The detector controls the battery status. When the voltage drops to 2.6 V, the "low battery" information is sent to the controller. The low battery signaling continues until the battery is replaced.
- 6 - side reed switch.
- 7 - lower reed switch.

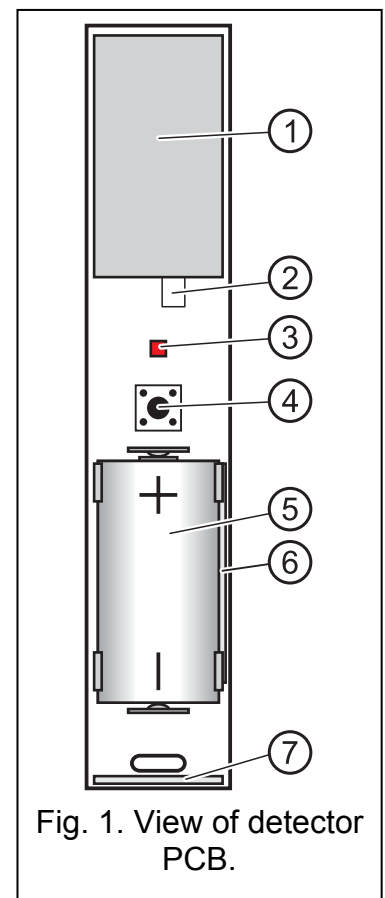


Fig. 1. View of detector PCB.

1. Installation

The detector is designed for indoor installation.

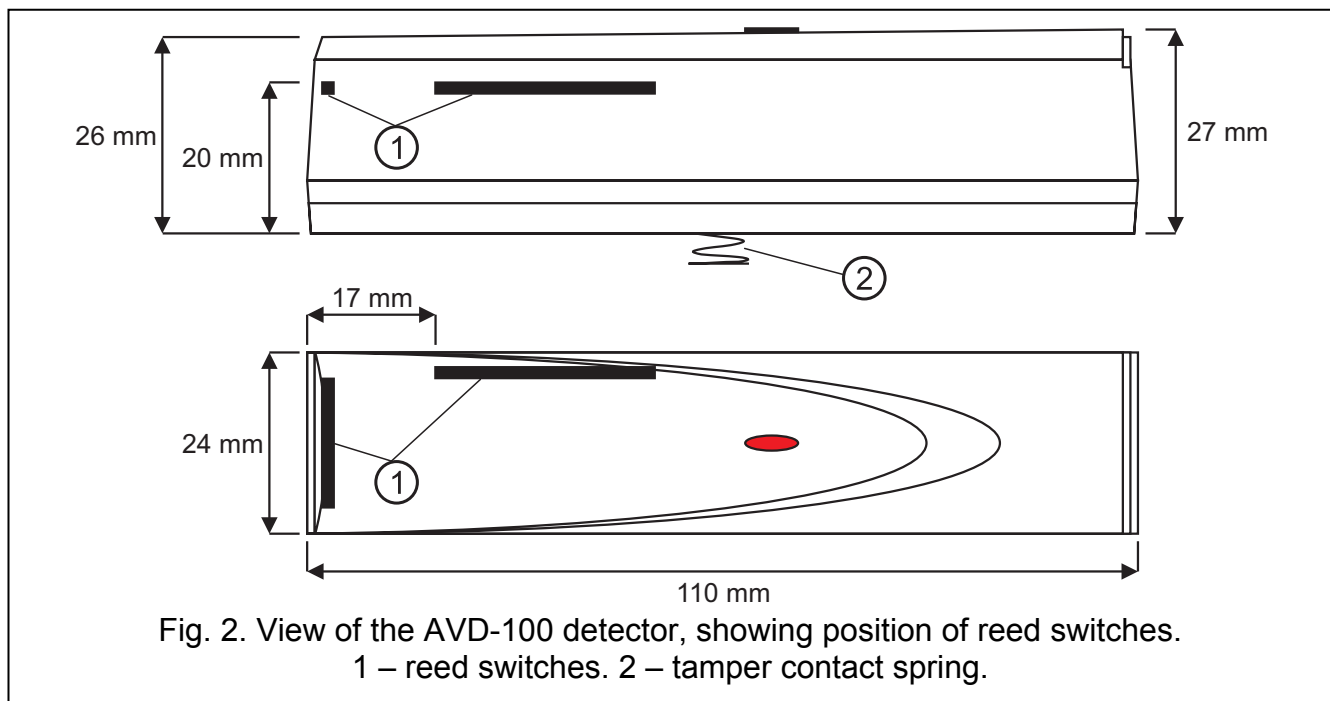


Before you mount the detector permanently, check the level of signal received from the detector by the ACU-100 controller and, if necessary, change the place of installation so that the location is optimal in terms of communication.

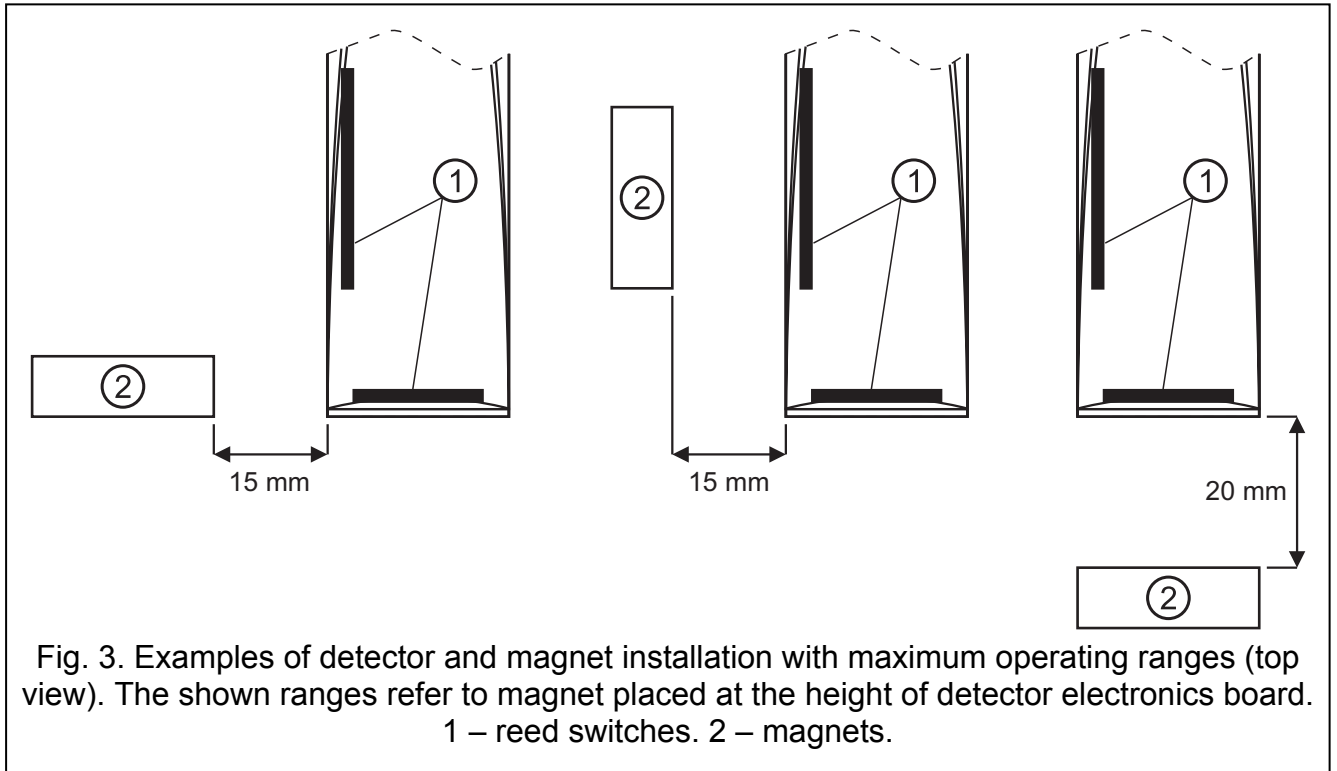
Install the battery inside the detector just before registering it in the controller. If unregistered or having no communication with the controller, the detector will consume more energy, which will reduce the battery life.

Be particularly careful when installing or replacing the battery, so as not to damage the reed switches on the electronics board.

1. Open the housing.
2. Install the battery and add the detector to the wireless system (see the ACU-100 controller user manual). A label with 7-digit serial number that should be entered during registration of the detector in the system is provided on the screen on the electronics board.
3. Close the detector housing.
4. Select the place (window / door frame, etc.), where the detector is to be installed and attach it there temporarily.
5. Check the level of signal reaching the controller from the detector. If necessary, select another place for installation.
6. Having selected the place which ensures the optimal signal level, open the housing and fasten the housing rear panel to the mounting surface.
7. Close the detector housing.
8. Secure the magnet to window or door, taking into account the maximum permissible distance from the reed switch (see Fig. 3).



9. Configure the detector to suit your requirements. For information on configuration - see the ACU-100 controller user manual.
10. Start remotely the test mode and check that the detector responds appropriately to vibrations and magnet removal.
11. Exit the test mode. The detector is now ready for work.



2. Technical data


Working frequency band	868.0 MHz ÷ 868.6 MHz
Radio communication range	up to 400 m (in open area)
Supply	CR123A lithium battery, 3 V
Battery life	approx. 3 years
Maximum detection range of vibration detector, depending on mounting surface :	
concrete	1.5 m
brick	2.5 m
wood	3.5 m
steel	3 m
PVC	2.25 m
Environment class	II
Working temperature range	-10 °C...+55 °C
Housing dimensions	24 x 110 x 27 mm
Weight.....	59 g



Batteries in the battery-supplied wireless equipment should be replaced by qualified personnel. Incorrect replacement of the battery can pose an explosion hazard.

Always use the CR123A 3V lithium batteries.

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

DECLARATION OF CONFORMITY		CE1471
Product: AVD-100 – wireless vibration detector and magnetic contact for ABAX system	Manufacturer: SATEL spółka z o.o. ul. Schuberta 79 80-172 Gdańsk, POLSKA tel. (+48) 0-58 320-94-00 fax. (+48) 0-58 320-94-01	
Product description: Vibration detector and magnetic contact intended for use with ABAX wireless alarm system components. Operating in the 868.0MHz – 868.6MHz frequency band. Supplied from a 3 V lithium cell. Device is intended for installation in intruder alarm systems.		
The product is in conformity with the following EU Directives: R&TTE 1999/5/EC		
The product meets the requirements of harmonized standards: ETSI EN 300 220-1: v.2.1.1; ETSI EN 300 220-2: v.2.1.1 ETSI EN 301 489-1: v.1.6.1.; EN 301 489-3: v.1.4.1 EN60950-1:2004		
Notified entity participating in the conformity assessment: Identification No.: 1471		
Gdańsk, Poland 2007-11-26	Head of Test Laboratory: Michał Konarski 	
The latest EC declaration of conformity and product approval certificates are available for downloading on website www.satel.pl		

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