

# WIRELESS SMOKE AND HEAT DETECTOR ASD-100

asd100\_en 08/08

The ASD-100 wireless smoke and heat detector is designed for operation as part of the ABAX two-way wireless system. It is supported by the ACU-100 controller with firmware in version 1.06 or later.

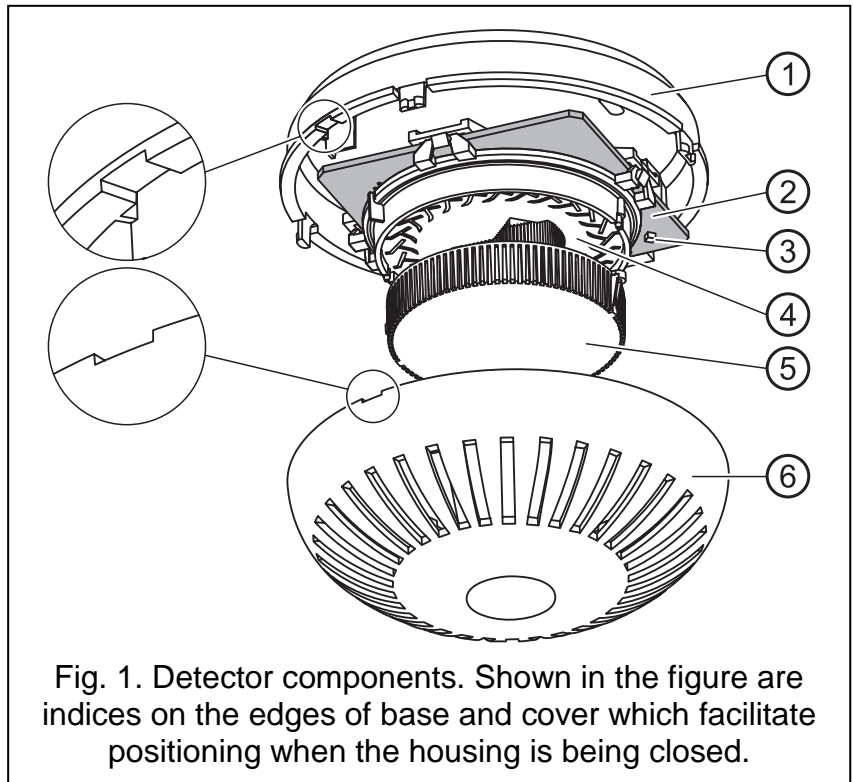
The ASD-100 detector is signaling alarm after detection of visible smoke (optical detector) or after registration of high temperature (thermal detector). The thermal detector responds to exceeding the specified temperature threshold and a high rate of temperature rise. It is possible to activate / deactivate and select operating mode of the thermal detector by radio. The operating modes correspond to the classes (A1, A2 or B) defined in the EN 54-5 Standard. The class determines conditions (temperature threshold and temperature rise rate) in which alarm is to be signaled. The detector will be sending information on the alarm until its causes (smoke, high temperature) cease to exist. Alarm signaling by means of buzzer/indicator LED will last for a preprogrammed period of time.

The ASD-100 detector is equipped with a buzzer, the operating parameters of which (activation / deactivation of signaling, selecting one of 3 sound signals, duration of signaling) are programmed by radio.

The detector is supplied from a CR123A 3 V lithium battery which ensures 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.

Explanations for Fig. 1:

- 1 - housing base.
- 2 - electronics board.
- 3 - red LED indicator. After smoke or heat is discovered, the LED will be on for a preset period of time. Additionally, when in test mode, the LED will signal communication with the controller and fouling of the optical chamber (during polling) or alarm memory: quick blinking – alarm was caused by the smoke detector; slow blinking – alarm was caused by the heat detector. Quitting the test mode will reset the alarm memory.
- 4 - base of optical chamber.
- 5 - cover of optical chamber with labyrinth.
- 6 - housing cover.



## 1. Installation

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The detector is designed for indoor installation. It should be mounted on the ceiling, at least 0,5 m away from the walls.



**Before mounting the detector permanently, check the level of signal received by the ACU-100 controller from the detector and, if necessary, change the place of installation so as to select the optimum location 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.**

**Do not install the detector in places with high concentration of dust and/or formation and condensation of water steam. The detector should not be mounted in the vicinity of heaters and cookers.**

1. Open the housing, turning the cover anticlockwise.
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 electronics board.
3. Close the housing. Put the cover where the electronics board and the optical chamber are installed to the base as shown in Fig. 1: the indices on the edges of base and cover must be aligned. Turn the cover clockwise.
4. Select the place 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 optimum signal level, open the housing and secure the housing base to the ceiling.
7. Close the detector housing.
8. Configure the detector as required. For configuration information see the ACU-100 controller user manual. When the configuration is finished, the detector is ready for work.

## 2. Maintenance

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The ASD-100 detector requires periodic checks which should be carried out at least every 6 months. With the passage of time, accumulation of dust inside the optical chamber may result in false alarms being reported by the detector. In order to check the status of optical chamber, run remotely the test mode and watch how the LED indicator is flashing in the detector during polling. When the optical chamber is fouled, the LED indicator flashes 2 times (normally, the polling period is signaled by a single flash).

**Note:** *When the LED indicates alarm memory by flashing, there is no signaling of communication with the controller.*

When the LED indicates fouling of the chamber, do the following:

1. Open the detector housing.
2. Release catches in the housing and remove the electronics board with optical chamber .
3. Remove the optical chamber cover.
4. Using a soft brush or compressed air, clean the cover labyrinth and the optical chamber base, paying attention to the recesses where LEDs are situated.
5. Replace the optical chamber cover.
6. Secure the electronics board with optical chamber in the cover catches. The electronics board must be fastened so that the LED can contact the optical cable.

7. Close the detector housing.

### 3. Technical data

|  |                             |
|--|-----------------------------|
| Working frequency band.....                              | 868.0 MHz ÷ 868.6 MHz       |
| Radio communication range .....                          | up to 400 m (in open area)  |
| Power supply .....                                       | CR123A lithium battery, 3 V |
| Battery life.....  | approx. 3 years             |
| Detector class acc. to PN-EN 54-5 (thermal sensor) ..... | A1, A2, B                   |
| Minimum working temperature.....                         | -10 °C                      |
| Housing dimensions .....                                 | Φ106 x 49 mm                |
| Weight.....  | 114 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  |   | CE 1471 |
|--|---|---------|
| <b>Product:</b><br>ASD-100 – wireless smoke and heat detector for ABAX system.   | <b>Manufacturer:</b> SATEL spółka z o.o.<br>ul. Schuberta 79<br>80-172 Gdańsk, POLSKA<br>tel. (+48) 0-58 320-94-00<br>fax. (+48) 0-58 320-94-01 |         |
| <b>Product description:</b> Smoke and heat detector 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. |   |         |
| <b>The product is in conformity with the following EU Directives:</b><br>R&TTE 1999/5/EC   |   |         |
| <b>The product meets the requirements of harmonized standards:</b><br>ETSI EN 300 220-1: v.2.1.1; ETSI EN 300 220-2: v.2.1.1<br>ETSI EN 301 489-1: v.1.6.1.; EN 301 489-3: v.1.4.1<br>EN60950-1:2004   |   |         |
| <b>Notified entity participating in the conformity assessment:</b><br>Identification No.: 1471   |   |         |
| Gdańsk, Poland 2007-11-26  | <b>Head of Test Laboratory:</b><br>Michał Konarski  |         |
| The latest EC declaration of conformity and product approval certificates are available for downloading on website <a href="http://www.satel.pl">www.satel.pl</a>  |   |         |

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