MADE TO PROTECT

Satel®

ABAX
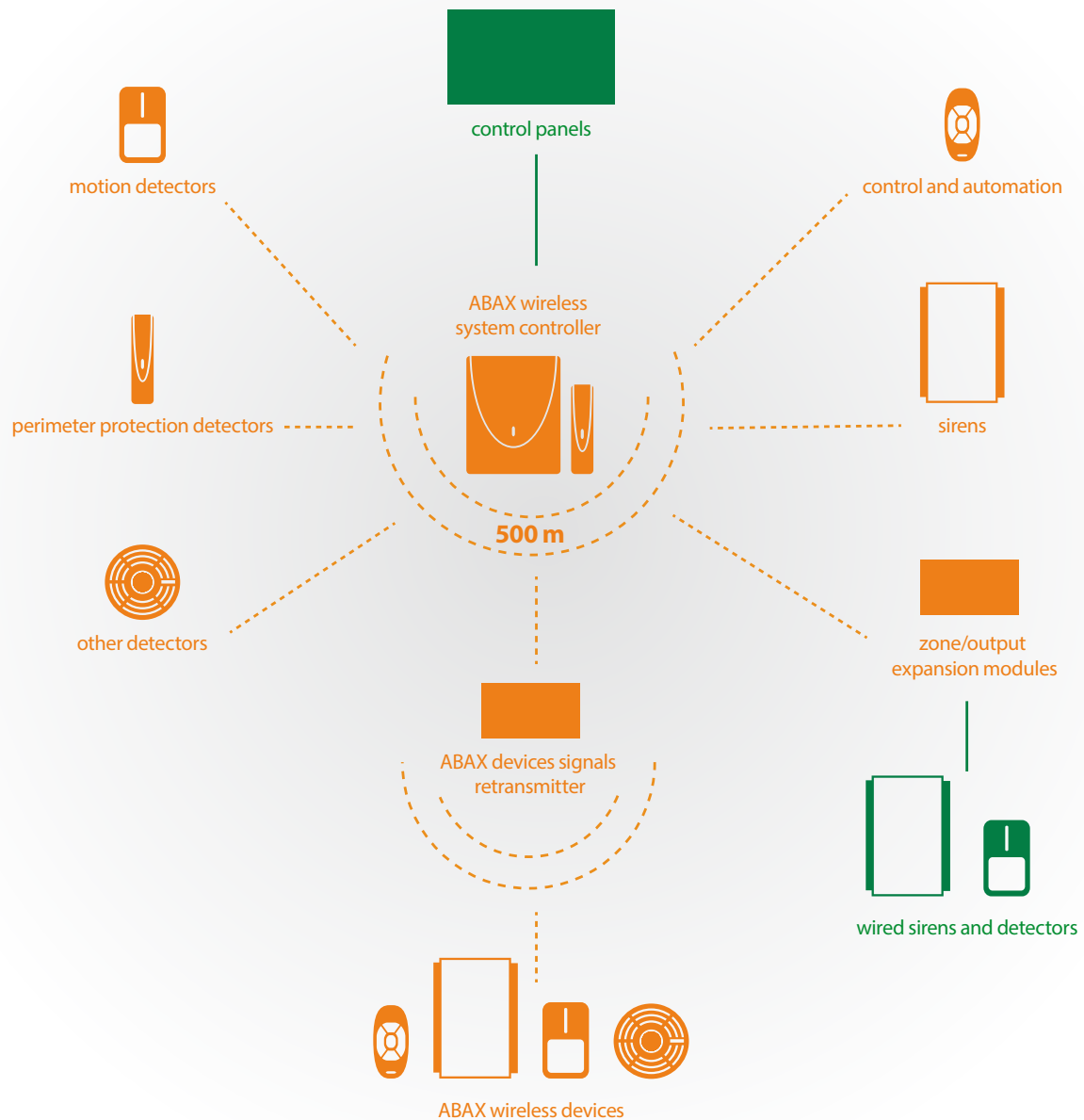## TWO-WAY WIRELESS SYSTEM

ABAX system – diagram

The diagram below shows components of the **ABAX** system, which includes: controller of **ABAX** wireless system, repeater of signal from **ABAX** devices, detectors of various types and uses, indoor and outdoor sirens, wireless expansion modules for wired zones/outputs, as well as control and automation solutions.

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control panels

motion detectors

control and automation

ABAX wireless
system controller

perimeter protection detectors

sirens

500 m

other detectors

zone/output
expansion modules

ABAX devices signals
retransmitter

wired sirens and detectors

ABAX wireless devices

SATEL's product offer includes two system controllers: ACU-120 and ACU-270. Both controllers are compatible with control panels of INTEGRA, INTEGRA Plus, VERSA and VERSA Plus families. ACU-120 and ACU-270 can receive signal from wireless detectors, sirens and other dedicated **ABAX** devices. Both controllers offer an excellent range – up to 500 m in open area, obtained through the use of an advanced radio system. Additionally, depending on the level of the received radio signal, the ACU-120 controller will automatically select the optimal antenna that will be used to receive the transmission. Where a system with wider operating area is needed, it is advisable to install the ARU-100 repeater, which provides a signal from devices located beyond the controller operating range. Using the **ABAX** family solutions is also a practical way for expansion of the wired alarm system already installed in the building.

ABAX system

Two-way wireless ABAX system is a solution offered by SATEL for alarm systems, where wiring, necessary for proper operation of the system, is difficult or entirely impossible.

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APPLICATIONS

When designing the **ABAX** wireless system, we focused on providing the highest safety level, versatility of use and ease of installation. The radio communication enables wireless, discrete and functional signaling devices to be installed almost anywhere. With such solutions, it is possible to create special security systems to protect, for example, the most valuable works of art. The wireless systems are an excellent option mainly for historic churches, museums and other buildings which require special treatment because of their historical value.

MUSEUMS

CHURCHES

APARTMENTS

GRADE 2
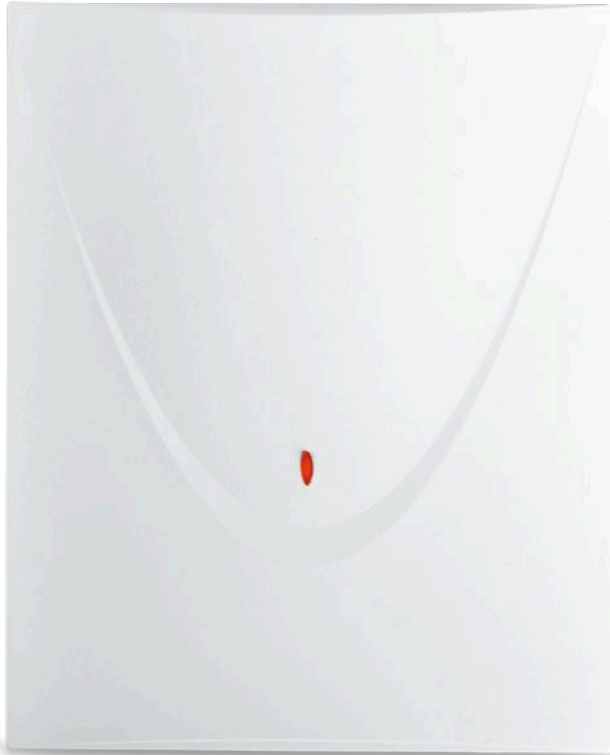
COMPLIANCE
with stringent standards

COMPLIANCE WITH STANDARDS

Owing to universality of applied solutions, the two-way wireless **ABAX** system can interface with the **INTEGRA**, **INTEGRA Plus**, **VERSA** and **VERSA Plus** control panels. Compliance with requirements of the standards is confirmed by certificates issued by independent laboratories. A European Certificate confirms compliance with **EN 50131** (Grade 2).

ADVANCED TECHNOLOGY

Using two-way wireless radio communication, the ABAX system provides a level of security until recently only available in traditional wired systems.

The ABAX system exceptional reliability of transmission is due primarily to sending acknowledgement of all major messages between the key system devices. Because SATEL seeks to maximize security, any information transmitted by radio is encrypted, so the possibility of interference in the transmitted data is limited to a minimum.

NEW
dimension of
SAFETY

Bidirectionality, a characteristic feature of the ABAX system, is used throughout its operation to successively poll all connected devices. This is done regardless of whether they are in active or passive mode. Moreover, during the polling, remote configuration of devices is carried out.

The time before information about violation is sent to the control panel depends on the device status. When the device is in active mode, such signal is transmitted immediately. If, however, the given partition is armed, the devices assigned to it will be toggled to passive mode, and the violation information will be sent during polling. The polling interval is definable by the Installer.

ENERGY EFFICIENCY

Advanced power saving features applied by SATEL engineers ensure long operation of the **ABAX** devices without the need for battery replacement: up to 3 years, depending on the configuration.

3 YEARS

Up to 3 years
without battery
replacement

VARIETY OF APPLICATIONS

A wide range of devices available as part of the **ABAX** system includes not only the detectors of intruder alarms, such as PIR and dual PIR + microwave motion detectors or magnetic detectors. The offer also includes other detectors, such as smoke and heat, and water flood detectors, as well as additional devices: universal remote control keyfobs or 230 V controlled sockets.

The comprehensive range of **ABAX** devices is complemented by dedicated indoor and outdoor sirens. Owing to such a broad product offer, this system can be successfully used to build both complex alarm systems, as well as the so-called smart systems, which combine security with energy savings and comfort.

FLEXIBLE EXPANSION

The heart of **ABAX** system is the wireless controller. There is a choice of two devices: ACU-120 and ACU-270, which provide an interface between control panels and wireless devices. These controllers are designed for the INTEGRA, INTEGRA Plus, VERSA and VERSA Plus control panels, and enable wireless expansion of those systems. The **ABAX** system can be also built using the INTEGRA 128-WRL panel, which combines the features of advanced control panel with GSM messaging and wireless controller in a single device. A single controller is able to support up to 48 wireless devices, and if you need to build a more complex system based on INTEGRA panels, you can easily use multiple controllers whose ranges partially or completely overlap. When connecting the controllers to the INTEGRA, INTEGRA Plus, VERSA and VERSA Plus panels, the bus interface can be used.

ABAX system is the perfect solution for expansion of the already existing wired alarm system.

ENHANCED DIAGNOSTICS

A big advantage of the **ABAX** system are its enhanced diagnostic tools, which not only allow you to assess the occupancy of **ABAX** frequency band (868 MHz), but also carry out a long-term assessment of the quality of communication with individual wireless devices.

Additionally, preparation of the installation is made easier by the dedicated **ARF-100** signal level tester for **ABAX** system. Using it, you can easily and quickly test the quality of radio communication at the desired location. The connectivity test is performed in both directions with simulation of various types of devices, either battery powered or having a permanent power source.

INTUITIVE CONFIGURATION

To configure the **ABAX** wireless system, you can use an LCD keypad (even in the case of a third-party system) or a computer with the DLOAD program installed.

EASE OF INSTALLATION

Ease of installation and configuration are trademarks of the **ABAX** system. Despite the use of high-tech solutions, installation steps have been reduced to a minimum. Registering of a new device consists in entering its serial number shown on the label and inserting the battery or triggering the tamper protection. The controller will automatically recognize the type of the new device, prompting the default settings, or will let you change them according to your needs.

FEATURES	ADVANTAGES
Operation in harmonized 868 MHz band	Reliable communication owing to the use of "noise-free" band
Compliance with EN50131 European standard	Ability to implement ABAX system wherever EN50131 Grade 2 compliance is required
Bi-directional transmission with acknowledgments	Reliable transmission of alarm signals from detectors to the control panel
Digital, encrypted communication	Effective protection against intentional corruption of information
Advanced power management	Long time of operation on one set of batteries (up to 3 years without need for replacement)
Remote configuration of wireless devices	Easily modifiable configuration of devices without physical access to them
Availability of diagnostic tools	Easier selection of the optimal location for installation and configuration of devices by the Installer
Wide range of available ABAX devices	Possibility to implement both simple and complex systems based entirely on wireless technology, including intelligent systems
Detection of jamming attempts	Ability to early respond to any attempts of intentional interference with operation of wireless devices
Long range of wireless communication	Ability to build extensive wireless systems (with up to 500 m operating range in open area)
Remote start of test function	Periodic installation testing made much easier to carry out

ACU-120
Wireless system controller

ACU-270
Wireless system controller

ARU-100
ABAX devices signals retransmitter

ACX-200
Zones and outputs expansion wireless module

ACX-201
Zones and outputs expansion wireless module

AOD-200
Dual technology outdoor wireless motion detector

APD-100
Wireless PIR detector

APMD-150
Wireless dual technology PIR+microwave detector

AOCD-250
Wireless curtain motion detector

AMD-103
Compact wireless magnetic detector for ABAX systems

AMD-102
Wireless magnetic contact

AMD-101
Dual channel wireless magnetic contact

AMD-100
Wireless magnetic contact

AGD-100
Wireless glassbreak detector

AVD-100
Wireless vibration detector and magnetic contact

AFD-100
Wireless flood detector

ARD-100
Wireless reorientation detector

ATD-100
Wireless temperature detector

ASD-110
Wireless smoke and heat detector

ASD-150
Wireless smoke detector

APT-100
Bidirectional remote control keyfob

ASP-205 R
Wireless indoor siren

ASP-105 R
Wirelessly triggered outdoor siren

ASP-100 R
Wireless outdoor acoustic-optical siren

ARF-100
Site survey tool for ABAX system

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MORE THAN **25 YEARS OF EXPERIENCE**

Professional protection of each type of premises, as well as people staying therein, through advanced, yet functional and cost-effective solutions – these few words may serve as the shortest description of the mission of SATEL, a manufacturer of security systems with involvement of 100% Polish capital. Due to integrity in business and a special emphasis on high quality and a wide range of products offered, the SATEL brand has been highly appreciated in the industry for over 25 years.

This philosophy of management and hard work of more than 300 SATEL's employees produce tangible results. The wide range of over 400 offered products provides countless opportunities to create security, home automation, fire alarm, access control and monitoring systems, tailored to the individual needs of each user. At the same time, these systems meet all requirements prescribed by Polish and international regulations and industry standards.

Bringing the functionality of devices into line with current requirements and expectations of the market with the use of the latest technologies is one of the main objectives of SATEL. For this reason the design and production departments of the Company are continuously being modernized and expanded. A natural consequence of all actions aimed at the production of top-quality devices was the introduction of the quality management system conforming to ISO 9001:2000 in 2002. Regardless of this certification, SATEL also carries out a full functional test of all products leaving the production line, thus ensuring reliability of the manufactured devices. Focusing on modern design and attaching importance to the highest levels of quality and functionality of its products, SATEL has gained many satisfied customers not only in Poland but also in more than 50 markets worldwide.