**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.

**See a movie about the company**

SATEL: everyday safety
SATEL: Made to Protect
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Intruder alarm control panels

**INTRUDER ALARMS**

Intruder alarm control panels are the most important products of SATEL’s product portfolio. Wide selection of available devices allows optimal choice of proper components for a particular installation – from a small shop or flat, up to large commercial and office buildings.

Many years of experience and cutting-edge manufacturing technology guarantees reliability of the equipment. To ensure effective utilization of device capabilities, our engineers choose the most flexible solutions during the design stage. Their focus is also put on an user friendly interface – to make sure that system set up and maintenance as well as everyday use will be an enjoyable experience.
INTEGRA range of intruder control panels

Advanced devices such as control panels from INTEGRA and INTEGRA Plus family, except for their basic function i.a. detection and notification of intruders’ trespassing, can provide protection in a much broader sense in residential buildings, and guarantee comfort of everyday life through conducting basic home automation.

Security is also a crucial element in business. Professional application calls for special solutions: the superior goal in this case is to provide maximum safety – no compromises. INTEGRA and INTEGRA Plus control panels set high standards in this scope. A number of solutions, both in terms of hardware and software, predestines them for installations which require highest class security. This gives them a place among top advanced alarm panels in the world.
Structure outline of the INTEGRA Plus intelligent alarm system.
The above exemplary structure does not include the entire product offer of SATEL.
INTEGRA INTRUDER ALARM CONTROL PANEL

Advanced devices, such as the INTEGRA and INTEGRA Plus series control panels, in addition to their basic function, which is detection and intrusion notification, can, in a much wider sense, provide security in residential buildings, and ensure the comfort of everyday life through smart home function.

- certified for EN 50131 Grade 3 (INTEGRA 64 Plus/128 Plus/256 Plus)
- certified for EN 50131 Grade 2 (INTEGRA 32/64/128-128-WRL)
- EN 50131 Grade 2 compliance (INTEGRA 24)
- 4 up to 256 zones:
  - support for NC, NO, EOL, 2EOL/NC and 2EOL/NO loop configurations
  - 3EOL configuration (INTEGRA Plus)
  - pulse analysis with sensitivity setting for vibration and roller shutter sensors
  - flexible selection of zone function
  - detector diagnostic tools
- 4 up to 256 programmable outputs
- built-in 868 MHz bidirectional interconnect for detectors and output devices (INTEGRA 128-WRL only)
- 4 up to 32 partitions:
  - partitions controlled by users, timers, inputs or automatically related to other partitions
  - partition grouping into up to 8 objects
- expansion buses for easy installation of additional modules
- onboard RS-232 port for local upload/download, external modem support and event printing – RJ type socket
- USB port for quick and easy programming (INTEGRA Plus only)
- on-board communicator with reporting, messaging, remote control and remote uploading/downloading features:
  - telephone dialer (except INTEGRA 128-WRL)
  - GSM/GPRS 900/1800/1900 communicator (INTEGRA 128-WRL only)
- system operation:
  - LCD keypads
  - touchscreen keypad with MACRO features
  - touch sensor keypad with MACRO features
  - partition keypads
  - remote controller keyfobs
  - personal computer (local RS-232/modem connection/TCP/IP networks)
  - SMS
  - mobile application INTEGRA CONTROL
- FLASH based firmware for easy updates without disconnecting the wiring
- panel programming:
  - local LCD keypad/PC (with DLOADX program) connected by RS-232, or USB INTEGRA Plus only)
  - remote (TCP/IP connection/GPRS connection)
- settings backup in FLASH memory
- system codes:
  - up to 8 master user codes (1 master user code per object)
  - 16 up to 240 user code
  - 1 service code
  - selection of user rights, additional definition of access rights
  - dynamic function menu depending on current user rights
  - individual keypads/code locks/card readers assignment of users
  - periodic code changing with prefix feature
  - dual code access partitions
- name editing (user/zone/output/partition/object) for easy control and maintenance
- timers:
  - 16 up to 64 installer defined weekly system timers
  - user defined partition timers
- event log (439 up to 24 575 entries)
- enhanced online/offline event log printing features
- access control:
  - door opening by the use of partition keypad, code lock, proximity card readers, Dallas iButton readers (dedicated relays, function does not reduce number of available programmable outputs)
  - door control input (does not reduce number of available panel’s zones)
  - opening every door by the use of LCD keypad
- reporting (Contact ID, SIA and other formats):
  - 4 monitoring station numbers (2+2 backup)
  - 9 identifiers
- messaging:
  - 4 to 16 telephone numbers
  - 16 to 32 voice messages (optional message reception DTMF confirmation)
  - 16 to 64 text messages
- incoming call answering:
  - partition state check
  - output control
  - voice menu for telephone control (with INT-VC)
- advanced telephone tone analysis (except INTEGRA 128-WRL):
  - TBR-21 compliant tone detection
  - intelligent dialing attempts
  - programmable dialing sequence
- built-in 300 bps modem
- external modem support: PSTN, ISDN and GSM
- flexible output control by programmable logical operations
- auto-diagnostic features for all system components
- battery backed-up RTC with calendar
- onboard switching mode power supply
- twin-regulator power supply with advanced diagnostics (INTEGRA Plus only)
- optical indication of output state, battery charger and dialer operation
- electrical protection for all zones, outputs and buses
- extra software tools:
  - GUARDX – supervision and management program for INTEGRA alarm control panels
  - CONFEX configurator – auxiliary program for designing alarm systems
- integration with KNX standard (with INT-KNX-2 module)
- integration with ACCO NET access control system (with ETHM-1 Plus module)
- possibility to combine multiple INTEGRA systems into one scalable, centrally managed INTEGRUM system
INT-TSI
Touchscreen keypad
• certified for EN 50131 Grade 3
• 7” capacitive touchscreen responding to a gentle touch
• glass panel for display protection
• MACRO features to facilitate home automation control
• full per-user interface customization with TSI-Builder application
• interactive widgets for controlling automation appliances
• Z zones
• support for IP cameras video streaming
• possibility to activate FIRE, AUX, PANIC alarms

INT-TSH
Touchscreen keypad
• certified for EN 50131 Grade 3
• keypad for control panels of INTEGRA, INTEGRA Plus, VERSA series
• 7” capacitive touchscreen responding to a gentle touch
• graphical user interface with colourful icons
• MACRO features to control of alarm system and home automation elements (supported by the INTEGRA and INTEGRA Plus control panels only)
• possibility of tailoring the status screen to user’s needs
• Z zones (supported by the INTEGRA and INTEGRA Plus control panels only)
• possibility to activate FIRE, AUX, PANIC alarms

INT-TSG
Touchscreen keypad
• certified for EN 50131 Grade 3
• keypad for control panels of INTEGRA, INTEGRA Plus, VERSA series
• capacitive 4.3” touchscreen reacting even to a slight touch
• glass panel for display protection
• graphical user interface with colourful icons
• MACRO features to facilitate control of alarm system and home automation elements (supported by the INTEGRA and INTEGRA Plus control panels only)
• LEDs informing about the current system status
• possibility of tailoring the status screen to user’s needs
• Z zones (supported by the INTEGRA and INTEGRA Plus control panels only)
• possibility to activate FIRE, AUX and PANIC alarms

INT-KSG
Touch-sensor keypad
• EN 50131 Grade 2 compliance
• large display with new user interface, able to deliver more information at once
• new display feature that provides customized information set on system status
• MACRO sequences for easy triggering of complex system operations
• backlit touch-sensor keypad
• individual LED and buzzer for key-press feedback
• FIRE, AUX, PANIC alarms triggered from keypad
• 2 programmable zones with adjustable EOL value

PRODUCT CATALOGUE
**INT-KLFR**

LCD keypads

- certified for EN 50131 Grade 3
- white backlight for keys and display
- LED indicating system status
- FIRE, AUX, PANIC alarms triggered from keypad
- audible signaling of selected events in the system
- 2 zones
- RS-232 connector for interfacing with GUARDX program
- proximity card reader

available in black (INT-KLFR-BSB), gray (INT-KLFR-SSW) and white (INT-KLFR-WSW)

**INT-KWRL2**

Wireless LCD keypad

- certified for EN 50131 Grade 2
- can work as part of the ABAX 2 wireless system
- partitions / system status LED indicators
- white backlight for display and keys
- proximity card / tag reader
- audible signaling of selected system events

- FIRE, AUX, PANIC alarms triggered from keypad
- remote configuration and update of firmware
- tamper protection
- power supply: 2 CR123A 3 V batteries
- compatible with ABAX system

available in black (INT-KWRL2-BSB), gray (INT-KWRL2-SSW) and white (INT-KWRL2-WSW)

**INT-KLCD / INT-KLCDR**

LCD keypads

- certified for EN 50131 Grade 3 (INT-KLCD)
- certified for EN 50131 Grade 2 (INT-KLCDR)
- keypad and display backlight
- LEDs for system state indication
- FIRE, AUX, PANIC alarms triggered from keypad
- buzzer for acoustic signaling
- two zones expansion
- RS-232 for supervision and management applications GUARDX
- proximity card reader (INT-KLCDR)

available with backlight blue (INT-KLCD-BL, INT-KLCDR-BL) and green (INT-KLCD-CR, INT-KLCDR-GR)

**INT-KLCDL**

LCD keypads

- EN 50131 Grade 2 compliance
- keypad and display backlight
- LEDs for system state indication
- FIRE, AUX, PANIC alarms triggered from keypad
- buzzer for acoustic signaling
- two zones expansion
- RS-232 for supervision and management applications GUARDX

available with backlight blue (INT-KLCDL-BL) and green (INT-KLCDL-GR)
INT-KLCDS
LCD keypads
- EN 50131 Grade 2 compliance
- keypad and display backlight
- LEDs for system state indication
- FIRE, AUX, PANIC alarms triggered from keypad
- buzzer for acoustic signaling
- two zones expansion
- RS-232 for supervision and management applications GUARDX

INT-KLCDK-GR
LCD keypads
- keypad and display backlight
- LEDs for system state indication
- FIRE, AUX, PANIC alarms triggered from keypad
- buzzer for acoustic signaling
- two zones expansion
- RS-232 for supervision and management applications GUARDX

INT-SF
Partition keypad
- certified for EN 50131 Grade 2
- keypad white backlight
- controls single partition in the system
- FIRE, AUX, PANIC alarms triggered from keypad
- LEDs for partition state indication
- buzzer for acoustic signaling
- access control features
- relay for electromagnetic lock/electric strike
- door control input

INT-S
Partition keypad
- EN 50131 Grade 2 compliance
- controls single partition in the system
- FIRE, AUX, PANIC alarms triggered from keypad
- LEDs for partition state indication
- buzzer for acoustic signaling
- access control features
- relay for electromagnetic lock/electric strike
- door control input

INT-SK-GR
Partition keypad
- controls single partition in the system
- FIRE, AUX, PANIC alarms triggered from keypad
- LEDs for partition state indication
- buzzer for acoustic signaling
- access control features
- relay for electromagnetic lock/electric strike
- door control input
**INT-SCR-BL**
Multi-function keypad with proximity card reader
- certified for EN 50131 Grade 3
- partition keypad and entry keypad modes
- proximity card reader
- LEDs for partition state indication
- buzzer for acoustic signaling
- keypad backlight
- optical tamper for opening and removal from mounting surface
- relay for electromagnetic lock/electric strike
- door control input
- doorbell button
- outdoor operation
- optional MLT-POD spacer pad available

---

**INT-CR**
Proximity card arm/disarm device
- partitions arming and disarming with proximity cards or tags
- support for 125 kHz passive transponders
- 3 programmable partition arm modes
- 3 LEDs for system state indication and user interface display
- built-in buzzer

**INT-RX-S**
433 MHz keyfob receiver expansion module
- full remote control user identification
- flexible assignment of functions to keyfobs’ buttons
- compatible with P-2, P-4, T-1, T-2, T-4, MPT-300, MPT-350 keyfobs
- small enclosure facilitates installation in a suitable place

**CA-64 PTSA**
Mimic board
- connecting of up to 128 LEDs for indicating zone/ partition state of security system
- RS-232 for communication with GUARDX application
- onboard switching mode power supply

---

**MOBILE APPLICATION**

**INTEGRA CONTROL**
Application for remote control of INTEGRA and INTEGRA Plus systems by using smartphones and tablets
- available for iOS and Android systems
- easy to use, large onscreen keypad buttons
- support for arming/disarming/outputs control
- security system event log reading
- 192-bit encryption of data transmission
- quick access menus for performing sequence of actions
- instant PUSH notifications of system events

---

**INTRUDER ALARMS**
 **INTRUDER ALARM CONTROL PANELS**
ACU-220
ABAX 2 wireless system controller

- certified for EN 50131 Grade 2
- two-way radio communication in 868 MHz band – 4 channels
- range up to 2000 m in open area
- support for up to 48 wireless devices
- support for up to 4 INT-KWRL2 or 6 VERSA-KWRL2 wireless keypads
- support for up to 256 APT-200 wireless keyfobs
- can work together with INTEGRA, INTEGRA Plus and VERSA control panels
- can work in stand-alone mode or together with any control panel
- controller firmware update without demounting of the device
- remote configuration and update of devices registered to the controller

For more information, see page 34

ACU-280
ABAX 2 wireless system controller

- certified for EN 50131 Grade 2
- two-way radio communication in 868 MHz band – 4 channels
- supports up to 48 wireless system devices
- support for up to 4 INT-KWRL2 or 6 VERSA-KWRL2 wireless keypads
- supports up to 248 wireless APT-200 keyfobs
- can work together with INTEGRA, INTEGRA Plus and VERSA control panels – connection via communication bus
- controller firmware update without demounting of the device
- remote configuration and update of devices registered to the controller

For more information, see page 34

INT-PP
Zone and output expansion module

- certified for EN 50131 Grade 3
- system expansion with 8 zones
- system expansion with 8 outputs:
  - 4 relay outputs
  - 4 low current OC outputs
- compatible with APS-412 power supply

INT-E
Zone expansion module

- certified for EN 50131 Grade 3
- system expansion with 8 zones
- support for NO, NC, EOL, 2EOL/NO, 2EOL/NC zone configurations
- programmable EOL resistance value
- pulse analysis with sensitivity setting for vibration and roller shutter sensors
- compatible with APS-412 power supply

INT-O
Output expansion modules

- certified for EN 50131 Grade 3
- system expansion with 8 outputs:
  - 8 low current OC outputs
  - up to 8 relay outputs
- compatible with APS-412 power supply

INT-ORS
DIN rail compatible outputs expansion module

- 8 relay outputs for direct control of 230 V mains powered appliances
- installation directly on 35 mm DIN rail

INT-ORS
DIN rail compatible zones and outputs expansion module

- 8 programmable zones
- 8 relay outputs for direct control of 230 V mains powered appliances
- installation directly on 35 mm DIN rail

ARU-200
Radio repeater for ABAX 2 devices

- effectively increases the system range
- retransmission of radio signals from up to 46 devices
- remote configuration and update of firmware
- built-in backup battery
- tamper protection
- power supply: 230 V AC
INTRUDER ALARM CONTROL PANELS

GPRS MODULES

INT-ADR
Addressable bus expansion module
• dedicated independent bus for addressable detectors
• support for up to 48 addressable zones
• compatible with APS-412 power supply

CA-64 ADR-MOD
Addressing module
• converts standard (NO, NC) detector into addressable detector
• installs inside detector enclosure
• compatible with INT-ADR addressable bus module

INT-GSM
GPRS communication module for INTEGRA and INTEGRA Plus control panels
• certified for EN 50136 SP S
• messaging: SMS, CLIP, PUSH, e-mail (INTEGRA Plus)
• remote control: SMS, CLIP, mobile application
• reporting: GPRS (TCP/UDP), SMS messages
• possibility of cooperation with the ETHM-1 Plus Ethernet module:
  » Dual Path Reporting, compliant with EN 50136
  » backup communication path
• dual SIM support
• ability to simultaneously receive incoming messages and calls via both SIM cards.

GSM-X
Universal multi-purpose GSM/GPRS communication module
• certified for EN 50136 SP S. DP 4*
• conversion of telephone reporting into audio/SMS/Ethernet/GPRS formats
• sending notifications to max. 8 phone numbers
• notification: audio/SMS/PUSH/CLIP
• conversion of PAGER messages into SMS
• telephone line simulation via GSM
• switching to GSM in case of telephone line failure
• GSM gateway for telephone exchanges
• compatibility with INTEGRA and INTEGRA Plus control panels:
  » fast data transfer through RS-232
  » conversion of RS-232/TCP/IP reporting
  » automatic composition of notification content (INTEGRA Plus)
  » ability to remotely connect to DLOADX and GUARDX programs

GSM-X-ETH
Ethernet module for GSM-X communicator
• cooperation with GSM-X universal communication module
• support for Ethernet as additional communication channel

GPRS-A
Universal GPRS monitoring module
• certified for EN 50136 SP S
• conversion of telephone reporting to SMS/GPRS formats
• sending notifications to max. 8 phone numbers
• notification messaging: SMS/CLIP/PUSH
• 8 programmable inputs (NO/NC/analog)
• 1-Wire digital temperature sensor bus
• possibility to configure response to exceeded threshold values at:
  » analog inputs
  » 1-Wire sensors
• 4 outputs (2 relay, 2 OC type) controlled via SMS/CLIP/GX CONTROL/GX Soft (via IoT)
• IoT – support for MQTT, JSON, MODBUS RTU open protocols via GPRS
• possibility to check pre-paid account balance and send notification if it drops below required minimum
• configuration by using GX Soft program:
  » locally via RS-232 (TTL)
  » remotely via GPRS
• support for GX CONTROL mobile application
• remote firmware update capability
• optional connection of the dedicated APS-612 power supply

* when used with GSM-X-ETH

SP 5

GX CONTROL
Version 1.1
15
**TCP/IP MODULES**

**ETHM-1 Plus**  
TCP/IP communication module

- certified for **EN 50136 SP 5**  
- supported by **INTEGRA, INTEGRA Plus** and **VERSA** control panels  
- TCP/IP reporting  
- remote programming via **DLOADX** program  
- possibility of cooperation with the **INT-GSM** communication module:  
- Dual Path Reporting, compliant with **EN 50136**  
- backup communication path  
- **INTEGRA** and **INTEGRA Plus** system supervision via **GUARDX** program  
- **INTEGRA** and **INTEGRA Plus** system operation from WWW browser level  
- support for **INTEGRA CONTROL** mobile application  
- encrypted data transmission  
- support for **DHCP** automatic address configuration  
- open protocol for systems integration via the TCP/IP channel

**BUS CONVERTERS**

**INT-KNX-2**  
KNX integration module

- KNX actuators control via **INTEGRA** and **INTEGRA Plus**  
- reception of KNX telegrams by **INTEGRA** and **INTEGRA Plus**  
- direct connection to KNX bus  
- module configuration with **DLOADX**

**INT-FI**  
Fiber-optic interface

- **INTEGRA** and **INTEGRA Plus** keypad and expansion buses to fiber-optic conversion  
- support for two fiber pairs allowing modules daisy-chaining  
- communication range between transmitter and receiver up to 2 km  
- high immunity to interference  
- full galvanic isolation  
- supported also by the **ACCO** (RS-485)

**INT-RS Plus**  
RS-232 interface for systems integration

- RS-232 interface installed on keypad bus  
- **GUARDX** communication  
- RS-232 based monitoring support  
- open protocol for systems integration  
- compatible with **INTEGRA** and **INTEGRA Plus**

**ACCESS CONTROL MODULES**

**CZ-EMM**  
Proximity card reader

- installed directly on wall/door frame  
- communication format: EM Marin  
- support for proximity cards/tags 125 kHz  
- optional **CZ-EMM-POD** spacer pad available

**CZ-EMM2**  
Proximity card reader

- installed directly on wall/door frame  
- communication format: EM Marin  
- support for proximity cards/tags 125 kHz

**CZ-EMM3**  
Proximity card reader

- installed directly on wall/door frame  
- communication format: EM Marin  
- support for 125 kHz proximity cards/tags  
- outdoor operation  
- optional **MLT-POD** spacer pad available

**CZ-EMM4**  
Proximity card reader

- installed directly on wall/door frame  
- communication format: EM Marin  
- support for 125 kHz proximity cards/tags  
- outdoor operation  
- doorbell button  
- optional **MLT-POD** spacer pad available

**CZ-DALLAS**  
Dallas iButton reader

- installed directly on wall/door frame  
- support for standard Dallas iButtons
INT-R
Universal expander for card/chip readers
- support for two proximity card/Dallas iButton readers
- support for Wiegand 26 interface readers
- relay to control electromagnetic door lock
- input for door status sensor
- Input for door unlocking with a button
- fire emergency unlocking feature
- tamper input

INT-SZ
Code lock
- LEDs for door state indication
- PANIC, AUX, FIRE alarms triggered from keypad
- buzzer for door left open indication
- relay for electromagnetic lock/electric strike
- door control input
- available with backlight blue (INT-SZ-BL) and green (INT-SZ-GR)

INT-SZK-GR
Code lock
- LEDs for door state indication
- PANIC, AUX, FIRE alarms triggered from keypad
- buzzer for door left open indication
- relay for electromagnetic lock/electric strike
- door control input

INT-VMG
Voice message module
- ability to record up to 32 messages
- triggering messages with the INTEGRA and INTEGRA Plus alarm control panel or other external devices
- built-in amplifier allows direct connection of a loudspeaker
- line output for easy connection to a PA system
- built-in USB port for quick programming with a computer
- programming settings using the VMG-SOFT program

INT-VM
Alarm acoustic verification module
- alarm acoustic verification module enables the elimination of false alarms
- local broadcasting of messages from the monitoring station
- two-way transmission of audio signals between the intercoms and the telephone line
- works with up to 4 intercoms working in half duplex mode
- microphone sabotage detection function

INT-AVT
Alarm acoustic verification panel
- two-way transmission of audio signals between the intercoms and the telephone line
- two-way communication activation button
- up to 4 INT-AVT panels may be connected to the INT-AV module

VOICE MESSAGING MODULES
VERSA intruder alarm control panel

VERSA is a range of modern intruder alarm control panels, intended for small commercial and residential security installations. What makes them stand out on the market are their expansion capabilities – both hardwired and wireless, as well as variety of supported communication media and user friendliness.

Common features and functions:

- certified for EN 50131 Grade 2
- 5 up to 30 zones:
  - NO, NC, EOL, ZEOL/NO, ZEOL/NC zone configurations
  - support for vibration and roller shutter detectors
- detectors supervision
- additional tamper input
- 4 up to 12 programmable outputs
- 2 partitions:
  - 3 arming modes for each partition
  - arming/disarming by users or timer controlled
- communication bus for keypads and expansion modules
- built-in telephone dialer for:
  - reporting (SIA, Contact ID, other)
  - personal messaging (8 telephone numbers, 64 text messages, 16 voice messages)
- remote programming (built-in 300 bps modem)
- system operation via:
  - touchscreen keypads, LCD or LED (up to 6)
  - mobile application VERSA CONTROL
  - proximity tags/cards
  - remote control keyfobs
- easy update of firmware
- system codes:
  - 30 user codes
  - 1 service code
- individual naming (users, partitions, zones, outputs, modules) for easy system operation and management
- timers:
  - 4 timers with the possibility to set exceptions
- event log with 2047 entries
- automatic diagnostics of basic system components
- built-in high efficiency switching mode power supply:
  - overload protection
  - deep discharge protection
  - battery charging supervision
- extra software tool:
  - CONFX configurator – auxiliary program for designing alarm systems

Additional functions and features of control panels

VERSA Plus:

- supply outputs: 3
- built-in modules:
  - Ethernet (mobile application, PUSH notifications, e-mail messages, reporting to monitoring station)
  - GSM/GPRS (SMS, CLIP, reporting to monitoring station, DLOADX, mobile application, PUSH notifications)
  - PSTN (voice messaging, reporting to monitoring station)
  - voice module
  - acoustic alarm verification module
- USB communication port
- remote service access via TCP/IP, GSM/GPRS and PSTN
- one potential-free relay output
- efficient 2 A power supply
- integrated audible signaling
- programming the control panel settings:
  - locally – keypad or computer (with DLOADX program), connected to USB port
  - remotely – computer connecting to the control panel via GPRS or Ethernet

VERSA IP:

- supply outputs: 3
- built-in modules:
  - Ethernet (mobile application, PUSH notifications, e-mail messages, reporting to monitoring station)
  - PSTN (voice messaging, reporting to monitoring station)
  - voice module
  - acoustic alarm verification module
- USB communication port
- remote service access via TCP/IP and PSTN
- one potential-free relay output
- efficient 2 A power supply
- integrated audible signaling
- programming the control panel settings:
  - locally – keypad or computer (with DLOADX program), connected to USB port
  - remotely – computer connecting to the control panel via Ethernet

VERSA 15/10/5:

- supply outputs: 2
- RS-232 port for panel programming
  - RJ type socket
- support for GSM/GPRS communicator:
  - SMS/GPRS reporting
  - voice/SMS messaging
- compatible with ETHM-1 Plus:
  - DLOADX remote uploading/downloading over TCP/IP networks
  - TCP/IP reporting
- programming the control panel settings:
  - locally – keypad or computer (with DLOADX program), connected to RS-232 TTL port
  - remotely – computer connecting to the control panel via modem or Ethernet network
VERSA-LCDM-WH / VERSA-LCDR-WH / VERSA-KWRL2

LCD keypad for VERSA panels

- certified for EN 50131 Grade 2 (VERSA-LCDM-WH / VERSA-KWRL2)
- large, easily readable LCD display
- LED indicators for partition and system status indication
- dedicated buttons for quick selection of arming mode (away/stay/day/stay night)
- FIRE, AUX, PANIC alarms triggered from keypad
- display and keypad backlight

- acoustic indication of system events
- fully wireless communication with VERSA control panel (VERSA-KWRL2)
- ACU-220 or ACU-280 controllers required for operation (VERSA-KWRL2)
- proximity card reader (VERSA-LCDR-WH, VERSA-KWRL2)
- power supply: 2 CR123A 3 V batteries (VERSA-KWRL2)
- compatible with ABAX system (VERSA-KWRL2)

INT-TSG

Touchscreen keypad

- certified for EN 50131 Grade 3
- keypad for control panels of INTEGRA, INTEGRA Plus, VERSA series
- 4.3” capacitive touchscreen responding to a gentle touch
- glass panel for display protection
- graphical user interface with colourful icons

- MACRO features to facilitate control of alarm system and home automation elements (supported by the INTEGRA and INTEGRA Plus control panels only)
- LEDs informing about the current system status
- possibility of tailoring the status screen to user’s needs
- 2 zones (supported by the INTEGRA and INTEGRA Plus control panels only)
- possibility to activate FIRE, AUX, PANIC alarms

available in black (INT-TSG-BSB), gray (INT-TSG-SSW) and white (INT-TSG-WSW)

INT-TSH

Touchscreen keypad

- certified for EN 50131 Grade 3
- keypad for control panels of INTEGRA, INTEGRA Plus, VERSA series
- 7” capacitive touchscreen responding to a gentle touch
- graphical user interface with colourful icons

- MACRO features to facilitate control of alarm system and home automation elements (supported by the INTEGRA and INTEGRA Plus control panels only)
- possibility of tailoring the status screen to user’s needs
- 2 zones (supported by the INTEGRA and INTEGRA Plus control panels only)
- possibility to activate FIRE, AUX, PANIC alarms

available in black (INT-TSH-BSB), gray (INT-TSH-SSW) and white (INT-TSH-WSW)

VERSA-LCD

LCD keypad for VERSA panels

- compliance with EN 50131 Grade 2 requirements
- easily readable display
- LED indicators for system and partitions status
- quick selection of arming modes with dedicated buttons

- FIRE, AUX, PANIC alarms triggered from keypad
- keypad and display backlight
- built-in buzzer

available with backlight blue (VERSA-LCD-BL) and green (VERSA-LCD-GR)
VERSAL-LED
LED keypad for VERSA panels
• LED indicators for zones, system and partitions status
• quick selection of arming modes with dedicated buttons
• FIRE, AUX, PANIC alarms triggered from keypad
• keypad backlight
• built-in buzzer

available with backlight blue (VERSAL-LED-BL) and green (VERSAL-LED-GR)

EXPANSION MODULES

VERSAMCU
Wireless system controller
• support for up to 30 MICRA wireless detector
• support for 433 MHz remote control keyfobs
• controller programming via panel’s service menu or DLOADX software
• firmware upgrade without the need for dismantling
• compact enclosure that facilitates installation

433 MHz

MOBILE APPLICATION

VERSACONTROL
Application for remote control of the VERSA system by using smartphones and tablets
• available for Android, Windows Mobile and iOS systems
• allows you to:
  » arm and disarm the system
  » check the system status
  » check the zone status
  » check the output status
  » view the current troubles
  » view all system events
  » use instant PUSH notifications of system events

For more information about devices that work with VERSA control panels, see page 25
– MODULES COMPATIBILITY WITH CONTROL PANELS
**PERFECTA intruder alarm control panel**

The alarm system based on PERFECTA and PERFECTA-T control panel is a dedicated system for protection of small-size office and business premises, as well as houses and apartments. The system can include both wired and wireless devices. Configuration of the system is simple and its operation – intuitive.

**Common features and functions:**

- certified for **EN 50131 Grade 2** (PERFECTA)
- compliance with **EN 50131 Grade 2** requirements (PERFECTA-T)
- from 8 to 32 wired programmable zones:
  - configuration options: NO, NC, EOL, 2EOL/NO, 2EOL/NC
  - support for roller shutter and vibration detectors
- from 4 to 12 wired programmable outputs
- 2 power outputs on mainboard
- built-in modules:
  - GSM/GPRS with 2 SIM slots (SMS, CLIP, reporting to station, mobile application, audio and PUSH notifications) (PERFECTA)
  - PSTN (reporting to station, audio notifications) (PERFECTA-T)
  - voice module (playback of voice messages for telephone messaging)
  - alarm audio verification module (listen-in function)
- system division into 2 partitions:
  - 3 detection modes in each partition
  - user or timer controlled
- communication bus for connecting of keypads and expansion modules
- system control by using:
  - LCD keypads (up to 4)
  - PERFECTA CONTROL mobile application (PERFECTA)
- updateable firmware
- password codes:
  - 15 user codes
  - 1 service code
- editable names (of users, partitions, zones, outputs and modules) for easy control and supervision of the system
- timers:
  - 8 timers with exception setting capability
- memory of 3584 events
- auto diagnostics of basic system components
- built-in switching power supply:
  - overload protection
  - deep battery discharge protection
  - battery charging current control
- programming control panel setting:
  - locally – keypad, computer running PERFECTA Soft program, connected to control panel RS-232 (TTL) port
  - remotely – computer running PERFECTA Soft program, communicating with the control panel via GPRS (PERFECTA)
- extra software tool:
  - CONFX configurator – auxiliary program for designing alarm security systems

**Additional functions and features of control panels**

**PERFECTA 16-WRL, PERFECTA 32-WRL and PERFECTA-T 32-WRL:**

- integrated 433 MHz radio module for encrypted wireless communication:
  - two-way with PRF-LCD-WRL keypads and MSP-300 R sirens
  - one-way with MICRA family detectors and MPT-350 keyfobs
- additional 4 wireless outputs for MSP-300 R sirens
- system control by using:
  - PRF-LCD-WRL wireless keypads (up to 4)
  - MPT-350 remote control keyfobs (up to 15)
OPERATION, CONTROL AND MANAGEMENT

PRF-LCD / PRF-LCD-WRL
LCD keypads for PERFECTA control panels

- certified for EN 50131 Grade 2
- large, easy-to-read LCD display
- LEDs indicating partition and system status
- quick activation of selected arming mode by using function keys
- FIRE, AUX, PANIC alarms triggered from keypad
- backlit display and keys
- audible signaling of selected system events
- two-way encrypted radio communication at 433 MHz (PRF-LCD-WRL)
- power: two lithium batteries 3 V CR123A (PRF-LCD-WRL) / 12 V DC (PRF-LCD)

433 MHz

MPT-350
Remote control keyfob

- 5 buttons with function assignment capability
- ergonomic enclosure protected against accidentally pressing the buttons
- power: CR2032 battery

433 MHz

For more information about devices that work with PERFECTA control panels, see page 25

~ MODULES COMPATIBILITY WITH CONTROL PANELS

MOBILE APPLICATION

PERFECTA CONTROL
Application for remote control of PERFECTA system by using smartphones and tablets

- available for Android and iOS systems
- allows you to:
  » arm and disarm the system
  » check the system status
  » check the zone status
  » check the output status
  » view the current troubles
  » view all system events
  » use instant PUSH notifications of system events

For more information about devices that work with PERFECTA control panels, see page 25

~ MODULES COMPATIBILITY WITH CONTROL PANELS
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<td>VERSA-MCU wireless system controller 433 MHz</td>
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<tr>
<td>INT-SZ code lock</td>
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<td>INT-SZK code lock</td>
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</tr>
</tbody>
</table>
CA-10 intruder alarm control panel

CA-10 was designed with medium-size protected objects in mind. It offers a variety of functions for optimal configuration of security system. Operation and programming using LCD keypad makes the system user friendly for both the installer and the end user.

- up to 16 zones:
  - support for NC, NO, EOL/NC, and 2EOL/NO loop configurations
  - flexible selection of zone function
  - detector diagnostic tools
- 6 programmable outputs
- 4 partitions
- RS-232 port for local upload/download and event printing – RJ type socket
- on-board PSTN telephone dialer for reporting, messaging and remote uploading/downloading
- system operation:
  - LCD and LED keypads
  - remote operation by telephone (with optional MST-1 module)
- system programming:
  - local (LCD/LED keypad, PC (using the DLOAD10 program) connected to RS-232 port)
  - remote (PC communicating via modem)
- system codes:
  - up to 4 master user codes (1 code per partition)
  - up to 28 user codes (max 12 per partition)
  - 1 service code
  - an option to define system access authority for the codes
- 4 timers
- event log with 255 entries
- event printing feature
- monitoring using Contact ID and other protocols:
  - 2 monitoring stations numbers
- messaging:
  - 8 telephone numbers
  - 1 voice message
  - 4 text messages
- incoming call answering
- advanced telephone tone analysis:
  - TBR-21 compliant tone detection
  - intelligent redial attempts
  - programmable dialing sequence
- built-in 300 bps modem
- auto-diagnostic features for basic system components
- switching mode power supply
OPERATION, CONTROL AND MANAGEMENT

### CA-10 KLCD-L

**LCD keypad**
- LEDs for partition and system state indication
- FIRE, AUX, PANIC alarms triggered from keypad
- Keypad and display backlight
- Buzzer for acoustic signaling
- Two zones expansion
- Communication loss indication
- RS-232 for easy programming of keypad options, names and messages

![CA-10 KLCD-L](image)

Available with backlight blue (CA-10 BLUE-L) and green (CA-10 KLCD-L)

### CA-10 KLCD-S

**LCD keypad**
- LEDs for partition and system state indication
- FIRE, AUX, PANIC alarms triggered from keypad
- Keypad and display backlight
- Buzzer for acoustic signaling
- Two zones expansion
- Communication loss indication
- RS-232 for easy programming of keypad options, names and messages

![CA-10 KLCD-S](image)

Available with backlight blue (CA-10 BLUE-S) and green (CA-10 KLCD-S)

### CA-10 KLED

**LED keypad**
- LEDs for partition and system state indication
- FIRE, AUX, PANIC alarms triggered from keypad
- Keypad backlight
- Buzzer for acoustic signaling
- Two zones expansion
- Communication loss indication
- RS-232 for easy programming of keypad options, names and messages

### CA-10 KLED-S

**LED keypad**
- LEDs for zones (16), partition and system state indication
- FIRE, AUX, PANIC alarms triggered from keypad
- Keypad backlight
- Buzzer for acoustic signaling
- Two zones expansion

### ZONES EXPANSION MODULES

### CA-10 E

**Zone expansion module**
- System expansion with up to 6 zones
- LED for zone state indication
CA-6 intruder alarm control panel

CA-6 is an intruder alarm control panel which is simple to install and use, and provides high security to small and medium premises. This panel is flexible to program, which makes it ideal for installation in specific applications.

- up to 8 zones:
  - support for NC, NO, EOL, 2EOL/NC and 2EOL/NO loop configurations
  - flexible selection of zone function
- 5 programmable outputs
- 2 partitions
- RS-232 TTL port for local upload/download – RJ type socket
- on-board PSTN telephone dialer for reporting, messaging and remote uploading/downloading
- system operation:
  - LED keypad
  - remote operation by telephone (with optional MST-1 module)
- system programming:
  - local (LED keypad, PC (using the DLOAD10 program) connected to RS-232 port)
  - remote (PC communicating via modem)
- system codes:
  - 1 master user code
  - up to 12 user codes
  - 1 service code
  - an option to define system access authority for the codes
- 4 timers
- event log with 255 entries
- monitoring using Contact ID and other protocols:
  - 2 monitoring stations numbers
- messaging:
  - 4 telephone numbers
  - 1 voice message
  - 2 text messages
- incoming call answering
- advanced telephone tone analysis:
  - TBR-21 compliant tone detection
  - intelligent redial attempts
  - programmable dialing sequence
- built-in 300 bps modem
- auto-diagnostic features for basic system components
- on-board switching mode power supply

OPERATION, CONTROL AND MANAGEMENT

CA-6 KLED
LED keypad
- LEDs for zones, partition and system state indication
- FIRE, AUX, PANIC alarms triggered from keypad
- keypad backlight
- buzzer for acoustic signaling
- two zones expansion

CA-6 KLED-S
LED keypad
- LEDs for zones, partition and system state indication
- FIRE, AUX, PANIC alarms triggered from keypad
- keypad backlight
- buzzer for acoustic signaling
- two zones expansion
CA-5 intruder alarm control panel

CA-5 is an easy to install intruder alarm control panel intended for small premises. Advanced functionality and programming flexibility are its main advantages, while support for LCD keypad for operation and programming is an additional benefit.

- 5 on board zones:
  » support for NC, NO, EOL, 2EOL/NC and 2EOL/NO loop configurations
  » flexible selection of zone function
- 3 outputs (bell output + 2 programmable outputs)
- RS-232 TTL port for local upload/download – RJ type socket
- on-board PSTN telephone dialer for reporting, messaging and remote uploading/downloading
- system operation:
  » LCD and LED keypads
- system programming:
  » local (LCD/LED keypad, PC (using the DLOAD10 program) connected to RS-232 port)
  » remote (PC connected via modem)
- system codes:
  » 1 master user code
  » up to 5 user codes
  » 1 service code
  » optional limitation of authority for some passwords
- event log with 255 entries
- monitoring using Contact ID and other protocols:
  » 2 monitoring stations numbers
- advanced telephone tone analysis:
  » TBR-21 compliant tone detection
  » intelligent redial attempts
  » programmable dialing sequence
- built-in 300 bps modem
- auto-diagnostic features for basic system components
- on-board switching mode power supply

OPERATION, CONTROL AND MANAGEMENT

CA-5 KLCD-L
LCD keypad
- LEDs for system state indication
- FIRE, AUX, PANIC alarms triggered from keypad
- keypad and display backlight
- buzzer for acoustic signaling

CA-5 KLED-S
LED keypad
- LEDs for zones state indication
- FIRE, AUX, PANIC alarms triggered from keypad
- keypad backlight
- buzzer for acoustic signaling
<table>
<thead>
<tr>
<th>Feature</th>
<th>INTEGRA 256 Plus</th>
<th>INTEGRA 128-WRL</th>
<th>INTEGRA 128 Plus</th>
<th>INTEGRA 128</th>
<th>INTEGRA 64 Plus</th>
<th>INTEGRA 64</th>
<th>INTEGRA 32</th>
<th>INTEGRA 24</th>
<th>VERSA Plus</th>
<th>VERSA IP</th>
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<tbody>
<tr>
<td>On-board zones / Total number of zones</td>
<td>16 / 256</td>
<td>8 / 128</td>
<td>16 / 128</td>
<td>16 / 64</td>
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<td>4 x 2</td>
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<td>Number of objects / partitions</td>
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<td>● / ●</td>
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<td>● / ●</td>
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<td>Operation with proximity tags and cards</td>
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<tr>
<td>On-board outputs / Total number of outputs</td>
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<td>Remote control via DTMF</td>
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<td>Security grade according to EN 50131</td>
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<td>Grade 3</td>
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<td>VERSA 5</td>
<td>PERFECTA 32-WRL</td>
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<td>8 / 16</td>
<td>8 / 32</td>
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| 30 + 1   | 30 + 1  | 30 + 1  | 15 + 1         | 15 + 1          | 15 + 1      | 15 + 1      | 15 + 1        | 15 + 1          | 13 + 1 |

| day / night | day / night | day / night | day / night | day / night | day / night | day / night | day / night | day / night | bypass |

<table>
<thead>
<tr>
<th>2+2 / 12</th>
<th>2+2 / 12</th>
<th>2+2 / 12</th>
<th>2+2 / 12+4</th>
<th>2+2 / 12</th>
<th>2+2 / 12</th>
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<th>2+2 / 12+4</th>
<th>4+2 / 6</th>
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<td>2 A</td>
<td>1,7 A</td>
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| option   | option  | option  | •               | •               | option      | option      | option        | •               | •    |

| •        | •       | •       | •              | •               | •           | •           | •             | •               | •    |

| option   | option  | option  | •               | •               | option      | option      | option        | •               | •    |

| option   | option  | option  | •               | •               | option      | option      | option        | – / –           | – / – |

| •        | •       | •       | •              | •               | •           | •           | •             | •               | •    |

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<tbody>
<tr>
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<td>option</td>
</tr>
</tbody>
</table>
ABAX 2 WIRELESS SYSTEM

The purpose of the ABAX 2 wireless system is to protect the premises inside and outside. This system can also be successfully used to implement building automation. Therefore, it provides a unique combination of security and comfort.

ABAX 2 is ideally suited as a wireless solution for alarm systems based on the INTEGRA, INTEGRA Plus and VERSA control panels. When used with these devices it gets its full functionality and offers its best possibilities to the users. Moreover, ABAX 2 can work together with any alarm control panel or automation controller, and, in certain cases, it can also operate in stand-alone mode.

Due to the use of encrypted, two-way radio communication, the ABAX 2 system offers the level of protection that until recently has been available only in the traditional wired systems. Advanced energy saving features enable long operation of battery-powered devices – up to 8 years without battery replacement, depending on configuration (in ECO mode).
SYSTEM STRUCTURE

ABAX 2 WIRELESS SYSTEM

MOVEMENT DETECTORS

ALARM CONTROL PANELS

ABAX 2 WIRELESS SYSTEM CONTROLLER

DETECTORS FOR PERIMETER PROTECTION

SIRENS

OTHER DETECTORS

ZONES/OUTPUTS EXPANSION MODULES

ABAX 2 WIRELESS DEVICES

ABAX 2 DEVICE SIGNAL RETRANSMITTER

WIRED SIRENS AND DETECTORS

ABAX 2 WIRELESS SYSTEM

2000 m

INTRUDER ALARM CONTROL PANELS
SYSTEM DEVICES

ACU-220
ABAX 2 wireless system controller
- certified for EN 50131 Grade 2
- two-way radio communication in 868 MHz band – 4 channels
- range up to 2000 m in open area
- support for up to 48 wireless devices
- support for up to 4 INT-KWRL2 or 6 VERSA-KWRL2 wireless keypads
- can work together with INTEGRA, INTEGRA Plus and VERSA control panels – connection via communication bus
- can work in stand-alone mode or together with any control panel
  » 8 programmable outputs
  » 4 programmable zones
- 4 controller status indicating output
- antenna diversity – automatic selection of antenna depending on the received signal strength
- controller settings programmable from:
  » control panel service menu or DLOADX program - if the controller is used with the INTEGRA, INTEGRA Plus or VERSA control panels
- wireless system diagnostics - ABAX 2 Soft software
- controller firmware update without demounting of the device
- remote configuration and update of devices registered to the controller
- tamper protection
- power supply: 12 VDC

ACU-280
ABAX 2 wireless system controller
- certified for EN 50131 Grade 2
- two-way radio communication in 868 MHz band – 4 channels
- range up to 1600 m in open area
- supports up to 48 wireless system devices
- support for up to 4 INT-KWRL2 or 6 VERSA-KWRL2 wireless keypads
- supports up to 248 wireless APT-200 keyfobs
- can work together with INTEGRA, INTEGRA Plus and VERSA control panels – connection via communication bus
- controller settings programmable from:
  » control panel service menu or DLOADX program - if the controller is used with the INTEGRA, INTEGRA Plus or VERSA control panels
- wireless system diagnostics - ABAX 2 Soft software
- controller firmware update without demounting of the device
- remote configuration and update of devices registered to the controller
- compact size
- tamper protection
- power supply: 12 VDC

ARU-200
Radio repeater for ABAX 2 devices
- effectively increases the system range
- retransmission of radio signals from up to 46 devices
- remote configuration and update of firmware
- built-in backup battery
- tamper protection
- power supply: 230 V AC

ARF-200
Radio signal strength tester
- diagnostic tool for easier testing of wireless communication environment
- indication of the strength of signal received from controller and the strength of tester signal received by controller
- operating mode selection: simulation of battery-powered or other devices
- LED indicator of radio signal strength
- signal strength values registration function*
- built-in lithium polymer battery
- MICRO USB connector for battery charging / power supply (5 V DC)
- compatible with ABAX system
* functionality available soon

ZONES/OUTPUTS WIRELESS EXPANSION MODULES

ACX-220
Wireless expansion module for wired zones and outputs
- adding wired devices to the ABAX 2 system
- 4 programmable zones - support for wired detectors in NO, NC, EOL, 2EOL/NO and 2EOL/NC configurations
- 4 programmable relay outputs
- remote configuration and update of firmware
- tamper protection
- power supply: 12 V DC, can work with APS-412, APS-612 power supply units
- compatible with ABAX system

ACX-210
Miniature wireless expansion module for wired zones and outputs
- adding wired devices to the ABAX 2 system
- 4 programmable zones - support for wired detectors in NO, NC, EOL, 2EOL/NO and 2EOL/NC configurations
- 4 programmable OC type outputs
- remote configuration and update of firmware
- compact size
- power supply: 4-24 V DC
- compatible with ABAX system
APMD-250
Wireless dual-technology motion detector

- certified for EN 50131 Grade 2
- two detection circuits: PIR (dual pyroelement) and microwave
- high false alarm immunity
- state-of-the-art lens with unique beam distribution
- advanced digital signal processing
- dynamic compensation of protected room temperature variations
- creep zone protection
- remote configuration and update of firmware

APD-200 Pet
Wireless PIR detector

- certified for EN 50131 Grade 2
- quad pyroelement
- state-of-the-art lens with unique beam distribution
- advanced digital signal processing
- dynamic compensation of protected room temperature variations
- remote configuration and update of firmware
- built-in temperature sensor
- LED indicator of test mode violations
- pet immunity function (up to 20 kg)
- tamper protection
- low power consumption and battery status control
- power supply: CR123A 3 V battery
- compatible with ABAX system

APD-200
Wireless PIR detector

- certified for EN 50131 Grade 2
- dual pyroelement
- state-of-the-art lens with unique beam distribution
- advanced digital signal processing
- dynamic compensation of protected room temperature variations
- remote configuration and update of firmware
- creep zone protection
- built-in temperature sensor
- LED indicator of test mode violations
- tamper protection
- low power consumption and battery status control
- power supply: CR123A 3 V battery
- adjustable bracket for wall/ceiling mounting
- compatible with ABAX system
AOD-210

Wireless dual-technology outdoor motion detector

- compliant with EN 50131 Grade 2 requirements (for indoor applications)
- two detection circuits: PIR (dual pyroelement) and microwave
- high false alarm immunity
- advanced digital signal processing
- dynamic compensation of temperature variations for correct detector operation within a range of -40°C to +55°C
- creep zone protection
- built-in dusk sensor
- remote configuration and update of firmware
- independently adjustable sensitivity of PIR and MW circuits and dusk sensor
- built-in temperature sensor
- three LED indicators of test mode violations
- pet immunity function (up to 20 kg)
- splash- and weather-proof polycarbonate enclosure, IP54 rated
- tamper protection
- low power consumption and battery status control
- power supply: CR123A 3 V battery
- mounting option using a ball-type or angle-type bracket from the BRACKET C set
- option to mount the HOOD C protection on the enclosure
- compatible with ABAX system

AOC-260

Wireless dual-technology outdoor curtain detector

- compliant with EN 50131 Grade 2 requirements (for indoor applications)
- two detection circuits: PIR and microwave
- high immunity to false alarms
- advanced digital signal processing
- dynamic compensation of temperature variations for correct detector operation in -40°C to +55°C range
- remote configuration and update of firmware
- independently adjustable sensitivity of PIR and MW circuits
- built-in temperature sensor
- LED indicator of test mode violations
- splash- and weather-proof polycarbonate enclosure, IP54 rated
- tamper protection
- low power consumption and battery status control
- power supply: CR123A 3 V battery
- mounting option using angle-type bracket
- compatible with ABAX system

AXD-200

Wireless universal detector

- certified for EN 50131 Grade 2
- selectable operating mode - can be used as:
  - magnetic detector
    - detection of open door, window, etc.
    - control input for NC type wired detector
  - two-channel magnetic detector
    - detection of open door, window, etc.
    - control input for NC type wired detector
    - additional digital channel for control of a wired detector
  - magnetic detector with roller shutter input
    - detection of open door, window, etc.
    - control input for a wired roller shutter detector
    - control input for NC type wired detector
    - additional digital channel for control of a wired detector
  - shock and magnetic detector
    - detection of shocks and vibrations accompanying attempts to force a door or window
    - detection of open door, window, etc.
    - adjustment of detection sensitivity
- reorientation detector
- detection of changes in object position
- individual protection of valuables
- temperature detector
- temperature measurement in -10°C to +55°C range
- two programmable temperature thresholds (upper and lower)
- flood detector
- detection of water leaks
- input for connecting the FPX-1 external flood probe (the probe available separately)
- remote configuration and update of firmware
- LED indicator of test mode violations
- tamper protection
- low power consumption and battery status control
- power supply: CR123A 3 V battery
- compatible with ABAX system

AGD-200

Wireless glass-break detector

- detection of normal, tempered and laminated glass breaking
- multi-frequency signal analysis
- remote configuration and update of firmware
- adjustable sensitivity of detection
- built-in temperature sensor
- LED indicator of test mode violations
- tamper protection
- low power consumption and battery status control
- power supply: CR123A 3 V battery
- compatible with ABAX system

ADD-200

Wireless outdoor dusk and temperature detector

- hermetic, resistant to adverse weather conditions polycarbonate enclosure, IP65 rated
- power supply: CR123A 3 V battery
- compatible with ABAX system
**WIRELESS SIRENS**

**ASP-200 R**
Wireless outdoor acoustic-optical siren
- certified for EN 50131 Grade 2
- independently triggered optical and acoustic signaling
- optical signaling: LEDs
- acoustic signaling: piezoelectric transducer
- four acoustic signals to choose from
- remote configuration and update of firmware
- operating temperature range: -40°C to +55°C
- electronic circuitry protected against weather
- enclosure of high impact resistance polycarbonate with a very high mechanical strength
- tamper protection
- low power consumption and battery status control
- power supply: BAT-ER-3,6 3.6 V 13 Ah battery
- compatible with ABAX system

**ASP-200**
Wireless smoke and heat detector
- acoustic and optical alarm signaling
- testing function
- photoelectric sensor of visible smoke
- integrated thermal sensor
- swirl chamber with unique shape for quicker smoke detection
- fine Hexamesh stainless steel filter

**ASP-215**
Wireless indoor acoustic-optical siren
- certified for EN 50131 Grade 2
- two definable signaling modes
- optical signaling: LEDs
- acoustic signaling: piezoelectric transducer
- three acoustic signals to choose from
- remote configuration and update of firmware
- built-in temperature sensor
- tamper protection
- low power consumption and battery status control
- power supply: CR123A 3 V battery
- compatible with ABAX system

**ASP-215 R**
Wireless outdoor acoustic-optical siren
- certified for EN 50131 Grade 2
- independently triggered optical and acoustic signaling
- optical signaling: LEDs
- acoustic signaling: piezoelectric transducer
- four acoustic signals to choose from
- remote configuration and update of firmware
- operating temperature range: -40°C to +55°C
- electronic circuitry protected against weather
- enclosure of high impact resistance polycarbonate with a very high mechanical strength
- tamper protection
- low power consumption and battery status control
- power supply: BAT-ER-3,6 3.6 V 13 Ah battery
- compatible with ABAX system

**COMING SOON**

**CONTROL AND AUTOMATION**

**APT-200**
Bidirectional remote control keyfob
- customizable button functions (up to 6 functions)
- visual and audible command acknowledgement by the controller
- backlit buttons
- remote firmware update
- power supply: CR2032 3 V battery
- compatible with ABAX system

**APB-200**
Wireless panic button
- configurable button function, e.g. to call for help in an emergency situation
- enclosure construction resistant to accidental button pressing
- power supply: CR2032 3 V battery
- compatible with ABAX system

**ASW-200 E, ASW-200 F**
230 V AC wireless controller
- remote power-on/power-off of devices plugged into 230 V AC socket
- manual control option
- multicolor operating status indicator
- remote configuration and update of firmware
- compact enclosure integrated with mains plug and socket
- available in version:
  - ASW-200 E – with type E socket (EURO)
  - ASW-200 F – with type F socket (SCHUKO)
- compatible with ABAX system

**ASW-210**
Wireless two-channel in-wall 230 V AC controller
- remote power-on/power-off of devices powered from 230 V AC mains
- two control inputs
- remote configuration and update of firmware
- compact size
- in-wall installation
- compatible with ABAX system
MICRA WIRELESS SECURITY SYSTEM

MICRA system was designed for the protection of small premises, like kiosks, boutiques, lodges, garages or hobby rooms – however, its application range may be much wider. Thanks to its compact design, the whole installation may be easily moved if necessary. This makes it a perfect solution for temporary security installation e.g. for the construction sites.

The ability to use wireless motion detectors and magnetic contacts enables the security installer to ensure optimal protection against burglary, while the wireless smoke, flood and glassbreak detectors can provide additional safety. The operation of the system with remote control keyfobs, wireless keypad or mobile phone is straightforward and intuitive. With its built-in analog inputs, MICRA may be used as a monitoring device used for the supervision of technical equipment, responsible for the notification on exceeding of critical parameters like the temperature or pressure.
**MICRA ALARM MODULE**

The MICRA alarm module versatility stems from its capability to support both traditional hardwired detectors, as well as dedicated wireless ones. Because of the use of wireless communication, installation of the MICRA system is maximally simplified.

**MICRA**

Alarm module with GSM/GPRS communicator

- 4 programmable inputs for detectors
- Inputs mode selection: digital (on/off) or analog (voltage)
- dedicate tamper loop input
- 2 relay outputs controlled locally or remotely
- remote control receiver supporting:
  - up to 8 keyfobs (MPT-300, MPT-350, P-2, P-4, T-1, T-2, T-4)
  - up to 8 wireless detectors (MFD-300, MGD-300, MMD-300, MMD-302, MPD-300, MSD-300, MSD-350)
  - wireless keypad (MKP-300)
- GPRS/SMS monitoring with events definition
- SMS/CLIP personal messaging on selected events
- audio verification over telephone via external microphone (MIC-1)
- remote update of module firmware (application "UpServ")
- local (RS-232) or remote (GPRS/SMS) programming (using the GPRS-Soft program)

**MICRA SECURITY SYSTEM STRUCTURE**

- **MPT-300, MPT-350** Remote control keyfobs
- **MKP-300** Wireless keypad
- **GPRS Soft** Configuration software
- **RS-232, GPRS**
- **Wireless detectors 433 MHz:**
  - MPD-300 movement detector
  - MMD-300 magnetic detector
  - MMD-302 magnetic detector
  - MGD-300 glass-break detector
  - MSD-300 smoke and heat detector
  - MSD-350 smoke detector
- **Any wired detectors**
- **Wired sirens:**
  - outdoor
  - indoor
- **MICRA CONTROL** Mobile application
- **up to 400 m**
MTX-300
433 MHz wireless system controller
- works with any control panel as well as MICRA alarm module
- optional stand-alone operation
- handling of up to 32 keyfobs (MPT-300, MPT-350, P-2, P-4, T-1, T-2, T-4)
- handling of up to 16 detectors (MFD-300, MGD-300, MMD-300, MMD-302, MPD 300, MSD-300, MSD-350)
- handling of up to 4 sirens (MSP-300 R)
- 8 programmable relay outputs
- 2 programmable inputs for control of sirens
- programmed by using buttons placed on it
- programmed via MTX-SOFT program
- tamper protection

OPERATION OF MICRA SYSTEM

MKP-300
Arm/disarm wireless keypad
- up to 8 user codes
- outputs control
- fire, panic and AUX keypad alarms
- keypad backlight
- arm/disarm command confirmation LEDs
- powered by CR123A cell

MPT-300
Remote control keyfob
- 5 buttons with function assignment capability
- KEELQ code hopping for increased security
- ergonomic enclosure protected against accidentally pressing the buttons
- powered by 2x CR2016 button cell

WIRELESS DETECTORS

MPD-300
Wireless PIR detector
- certified for EN 50131 Grade 2 (with PERFECTA systems)
- dual element pyro sensor
- interchangeable Fresnel lenses
- adjustable mounting bracket included
- optional pet immunity up to 15 kg
- LED for detector walk testing
- powered by 3 V CR123A lithium battery

MSD-300
Wireless smoke and heat alarm
- EN54-7 compliant photoelectric visible smoke sensor
- integrated EN54-5 compliant heat sensor
- possibility to work as a standalone device
- acoustic and optical alarm indication
- test/reset button
- powered by 3 V CR123A lithium battery

MSD-350
Wireless smoke detector
- certified stand-alone operation according to EN 14604
- photoelectric sensor of visible smoke
- acoustic and optical alarm signaling
- testing function
- chamber soiling indication
- tamper protection
- low power consumption and battery status control
- power supply: CR123A 3 V battery
MMD-300
Wireless magnetic contact
- certified for EN 50131 Grade 2 (with PERFECTA systems)
- additional external detector input
- LED for test mode indications
- powered by 3 V CR123A battery

Available in white (MMD-300) and brown (MMD-300 BR)

MMD-302
Wireless magnetic contact
- rollerblind detector interface with pulse analysis
- additional external detector input
- LED for test mode indications
- powered by 3 V CR123A battery

Available in white (MMD-302) and brown (MMD-302 BR)

MFD-300
Wireless water flood detector
- detection of water presence for flood threatened areas
- external easy to mount sensor
- powered by 3 V CR123A battery

Available in white (MFD-300) and brown (MFD-300 BR)

MGD-300
Wireless glassbreak detector
- detection of plate, tempered and laminated glass breaking
- multi frequency digital signal analysis
- test mode to facilitate sensitivity adjustments
- powered by 3 V CR123A battery

Available in white (MGD-300) and brown (MGD-300 BR)

WIRELESS SIREN FOR MICRA

MSP-300 R
Wireless outdoor acoustic-optical siren
- certified for EN 50131 Grade 2 (with PERFECTA systems)
- works with MTX-300 controller
- optical and acoustic signaling triggered by radio
- optical signaling: ultra bright LEDs
- ability to trigger one of several acoustic signals
- advanced radio system to ensure optimized communication with low power consumption
- remote configuration
- supply from high-performance BAT-ER-3.6 battery with 3.6 Ah capacity and wide operating temperature range
- tamper protection:
  » against opening
  » against removing from mounting surface

Available in white (MMD-302) and brown (MMD-302 BR)

MOBILE APPLICATION

MICRA CONTROL
Application for remote control of MICRA module by using smartphones and tablets
- available for Android system
- remote control by SMS:
  » arming, disarming
  » zone bypass
  » system status checking
  » outputs control
  » autoconfiguration feature

Available for Android system
DETECTORS

Intruder detectors are an important part of SATEL product line. Wide range of motion detectors is completed by other kind of detection devices like acoustic glassbreak detectors, selection of magnetic contacts or impressive range of gas detectors. Continuous research in the detection field lead to constant improvement and introduction of new designs based on breakthrough technologies.
**DIGITAL DUAL MOVEMENT DETECTORS**

**COBALT / COBALT Plus / COBALT Pro**
Digital dual technology motion detectors
- dual technology PIR+MW
- dual element pyrosensor (COBALT, COBALT Plus)
- quad element pyrosensor (COBALT Pro)
- build-in EOL resistors
- digital detection algorithm
- microwave based antimask feature (COBALT Plus, COBALT Pro)

**SILVER**
Digital dual technology motion detector
- certified for EN 50131 Grade 2
- dual technology PIR+MW
- new generation DSP and analysis algorithm
- build-in EOL resistors
- precise LODIFF™ Fresnel sealed optics
- microwave based antimask feature
- cloaking attempts detection
- remotely triggered test mode
- alarm memory feature

**GREY / GREY Plus**
Digital dual technology PIR+MW motion detectors
- certified for EN 50131 Grade 2 (GREY Plus)
- advanced DSP with high resolution ADC
- adjustable sensitivity for PIR and MW
- remote triggering of test mode
- MW antimasking feature (GREY Plus)
- pet immunity up to 15 kg
- alarm memory

**NAVY**
Dual technology detector PIR+GB
- digital signal processing
- motion and glass breaking detection
- true temperature compensation
- adjustable sensitivity
- 2 independent alarm outputs
- pet immunity up to 15 kg
**AQUA Plus / AQUA Pro / AQUA Pet / AQUA S**

Digital PIR motion detectors

- certified for EN 50131 Grade 2 (Plus, Pet)
- EN 50131 Grade 2 compliance (S)
- dual element pyrosensor (Plus, Pet, S)
- quad element pyrosensor (Pro)
- build-in EOL resistors (Plus, Pet)
- digital detection algorithm
- replaceable Fresnel lens with sealed optics (Plus, Pro, S)
- home pet immunity up to 15 kg (Pet)
- powered by 24 V AC/DC (S)

**AQUA Luna**

Digital PIR motion detector with emergency lighting feature

- EN 50131 Grade 2 compliance
- remotely controlled LED emergency lighting
- digital signal processing
- 3-step sensitivity adjustment
- digital temperature compensation

**TOPAZ / TOPAZ Pet**

Digital PIR motion detectors

- digital signal processing
- home pet immunity up to 20 kg (TOPAZ Pet)
- build-in EOL resistors
- temperature compensation
- sensitivity adjustment

---

**MOTION DETECTOR COMPARISON CHART (PIR)**

<table>
<thead>
<tr>
<th></th>
<th>AQUA Plus</th>
<th>AQUA S</th>
<th>AQUA Pet</th>
<th>AQUA Pro</th>
<th>AQUA Luna</th>
<th>AQUA Ring/ AQUA Ring S</th>
<th>AMBER</th>
<th>AMBER 2E</th>
<th>TOPAZ/ TOPAZ Pet</th>
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<tbody>
<tr>
<td>Technology</td>
<td>PIR</td>
<td>PIR</td>
<td>PIR</td>
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<td>Advanced digital interference filter</td>
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<tr>
<td>Sensitivity adjustment</td>
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<tr>
<td>Digital temperature compensation</td>
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<td>Remote LED disable</td>
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<td>Anti-mask feature</td>
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<tr>
<td>Cloaked intruder detection</td>
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<tr>
<td>Optic type</td>
<td>Fresnel – replaceable</td>
<td>Fresnel – replaceable</td>
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<td>Fresnel – replaceable</td>
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<td>Pet immunity</td>
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<tr>
<td>Range</td>
<td>15 x 14 m, 130°</td>
<td>15 x 14 m, 130°</td>
<td>18 x 16 m, 90°</td>
<td>15 x 14 m, 130°</td>
<td>15 x 14 m, 130°</td>
<td>12 x 20 m, 90°</td>
<td>12 x 20 m, 90°</td>
<td>21 x 16 m, 90° / 22 x 16 m, 90°</td>
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<tr>
<td>Other unique features</td>
<td>build-in EOL resistors</td>
<td>build-in EOL resistors</td>
<td>emergency lighting feature</td>
<td>ceiling mount</td>
<td>compact enclosure, very low current consumption</td>
<td>compact enclosure, very low current consumption, build-in EOL resistors</td>
<td>compact enclosure, very low current consumption, build-in EOL resistors</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**AQUA Ring / AQUA Ring S**

Ceiling mount digital PIR

- EN 50131 Grade 2 compliance (AQUA Ring)
- pyro sensor: quad element (AQUA Ring) / dual element (AQUA Ring S)
- digital detection algorithm
- powered by 24 V AC/DC (AQUA Ring S)

**AMBER / AMBER 2E**

PIR motion detectors

- digital signal processing
- build-in EOL resistors (AMBER 2E)
- temperature compensation
- sensitivity adjustment

**GRAPHITE / GRAPHITE Pet**

Digital PIR motion detectors

- certified for EN 50131 Grade 2
- high quality dual element pyro sensor
- build-in EOL resistors
- new generation DSP and analysis algorithm
- precise LODIFF™ Fresnel sealed optics
- remotely triggered test mode
- alarm memory feature
- home pet immunity up to 15 kg (GRAPHITE Pet)

**IVORY**

Advanced PIR motion detector with mirror optics

- EN 50131 Grade 2 compliance
- high quality segmented mirror
- build-in EOL resistors
- advanced digital signal processing
- temperature compensation
- stepless sensitivity adjustment
- remote walk test triggering
- alarm memory feature

**MOTION DETECTOR COMPARISON CHART (PIR+DUAL)**
**OPAL / OPAL Plus / OPAL Pro**

Outdoor PIR+WM dual-tech motion detectors

- meets EN 50131 Grade 3 requirements for indoor applications (OPAL Pro)
- meets EN 50131 Grade 2 requirements for indoor applications (OPAL, OPAL Plus)
- PIR and microwave circuits
- active IR antimasking implemented in indoor applications (OPAL Pro)
- antimasking function implemented through MV circuit in indoor applications (OPAL Plus)
- built-in dusk sensor (OPAL Plus, OPAL Pro)
- creep zone protection
- remote sensitivity configuration of detection circuits and dusk sensor by using OPT-1 keyfob (OPAL Plus, OPAL Pro)
- sensitivity configuration of detection circuits by using PCB buttons
- configuration of dusk sensor sensitivity by using PCB buttons (OPAL Plus, OPAL Pro)
- splash-proof polycarbonate enclosure, IP54 rated
- tamper protection
- digital temperature compensation
- low current consumption
- home pet immunity up to 20 kg
- can be mounted directly on flat surface or by using the dedicated (ball- or angle-type) brackets available in the BRACKET C set
- option to mount the HOOD C protection on the enclosure

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**GAS DETECTORS**

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**DG-1 CO**

Carbon monoxide detector

- digital signal analysis
- optical and acoustical indication of threshold concentration detection
- optical indication: red LED
- low current consumption
- full auto-diagnostics

---

**DG-1 ME**

Methane detector

- digital signal analysis
- optical and acoustical indication of threshold concentration detection
- optical indication: yellow LED
- low current consumption
- full auto-diagnostics
- pre-alarm feature

---

**DG-1 LPG**

Liquefied petroleum gas detector

- digital signal analysis
- optical and acoustical indication of threshold concentration detection
- optical indication: green LED
- low current consumption
- full auto-diagnostics
- pre-alarm feature

---

**DG-1 TCM**

Trichloromethane based narcotic gas detector

- digital signal analysis
- optical and acoustical indication of threshold concentration detection
- optical indication: blue LED
- low current consumption
- full auto-diagnostics
DETECTORS FOR PERIMETER PROTECTION

ACTIVA
Active infrared barrier
- encrypted, synchronized transmission to prevent transmitter substitution
- up to 20 m range (up to 10 m outdoors)
- bracket that allows installation parallel or perpendicular to wall
- optical and acoustic indication to facilitate installation
- outdoor operation
- programming settings by means of ACTIVA-SOFT configurator

available in white (ACTIVA) and brown (ACTIVA BR)

AGATE
Outdoor curtain motion detector
- meets EN 50131 Grade 3 requirements (for indoor applications)
- PIR and microwave circuits
- active IR antimasking implemented in indoor applications
- splash-proof polycarbonate enclosure, IP54 rated
- tamper protection
- sensitivity of detection circuits configured by using PCB potentiometers
- low current consumption
- can be installed either directly on flat surface or using the dedicated angle-type or adjustable brackets

VD-1
Vibration detector with magnetic contact
- piezoceramic vibration sensor
- digital signal processing
- detection sensitivity and settings adjustment
- NC relay output for connection to intruder alarm panels
- independent integrated magnetic contact

available in white (VD-1) and brown (VD-1 BR)

INDIGO
Acoustic glassbreak detector
- detection of plate, tempered and laminated glass breaking
- advanced dual-path signal analysis
- auto-diagnostic feature
- trimmer sensitivity adjustment

MAGENTA
Digital glassbreak detector
- dual path signal analysis
- detection of plate, tempered and laminated glass breaking
- stepless sensitivity adjustment
- test mode to facilitate adjustments

Tester INDIGO
Acoustic glassbreak detector tester
- simulates plate, laminated and tempered glass breaking sound
- powered by 6LR61 9 V battery
- compatibility: AGD-200, INDIGO, MAGENTA, MGD-300, NAVY

See Accessories for ACTIVA – page 82

**Magnetic detectors**

- EN 50131 Grade 2 compliance (S-1, S-2, S-3, S-4)
- Surface mounted (K-1, K-1 2E, S-1, S-4)
- Insert mounted (K-2, K-2 2E, S-2, K-3, K-3 2E, S-3)
- Tamper loop (S-1, S-2, S-3)
- 2EOL termination 1.1 kOhm (K-1 2E, K-2 2E, K-3 2E)
- Sealed aluminium body (K-3, K-3 2E, S-3)
- Tamper contact with terminals (S-4)

**K-1 / K-1 BR**
- Surface mounted (screw mount or self adhesive)
- Small sized sealed body

**K-2 / K-2 BR**
- Surface mounted (screw mount or self adhesive)
- Medium sized sealed body

**K-3**
- Surface mounted (screw mount)
- Medium sized body

**K-1 2E / K-1 2E BR**
- Surface mounted (screw mount or self adhesive)
- Medium sized sealed body

**K-2 2E / K-2 2E BR**
- Surface mounted (screw mount or self adhesive)
- Medium sized sealed body

**K-3 2E**
- Surface mounted (screw terminals)

**S-1 / S-1 BR**
- Surface mounted (screw mount or self adhesive)
- Small sized sealed body

**S-2 / S-2 BR**
- Surface mounted (screw mount or self adhesive)
- Small sized sealed body

**S-3**
- Surface mounted (screw terminals)

**B-1 / B-1 BR**
- Side magnetic detector
  - Surface mounted (screw mount or self adhesive)
  - Small sized sealed body

**B-1M / B-1M BR**
- Side magnetic detector
  - Surface mounted (screw mount or self adhesive)
  - Medium sized sealed body

**B-1T / B-1T BR**
- Side magnetic detector with terminals
  - Surface mounted (screw mount)
  - Medium sized body

**B-2 / B-2 BR**
- Flush-mounted magnetic detector
  - Recessed mounted
  - Sealed body

**B-2T / B-2T BR**
- Flush-mounted magnetic detector with terminals
  - Recessed mounted
  - Screw terminals

**B-2S / B-2S BR**
- Flush-mounted magnetic detector
  - Recessed mounted
  - Small sized sealed body (Ø6.5 mm)
B-3 / B-3A
Side magnetic detector
- surface mounted (screw mount)
- rugged, metal sealed body
- armored cable (B-3A)

B-4M
Gate magnetic detector
- surface mounted (screw mount)
- rugged, metal sealed body
- armored cable

B-4L
Gate magnetic detector
- surface mounted (screw mount)
- rugged, metal sealed body
- armored cable

B-4S
Gate magnetic detector
- surface mounted (screw mount)
- rugged, metal sealed body
- armored cable

MAGNETIC DETECTOR COMPARISON CHART

<table>
<thead>
<tr>
<th></th>
<th>surface mount</th>
<th>flush mount</th>
<th>possible to glue</th>
<th>plastic housing</th>
<th>metal housing</th>
<th>sealed housing</th>
<th>reinforced housing</th>
<th>tamper loop</th>
<th>tamper switch</th>
<th>eol resistors</th>
<th>screw terminals</th>
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OTHER DETECTORS

TD-1
Programmable temperature detector
- programmable threshold and temperature gradient
- possibility to work in two modes (economy feature)
- support for external temperature sensor
- two relay outputs to control external devices

TSD-1
Universal smoke and heat detector for alarm systems
- unique Swiri chamber for increased smoke sensitivity
- **EN54-7** compliant smoke detection
- **EN54-5** compliant heat detection
- selectable operating mode (smoke, heat, multisensor)
- line type configuration (NO/NC/2EOL) with DIP switches
- precision stainless steel Hexamesh filter
- smoke chamber dirt build-up indicator
- easy installation with detachable base
- compatible with all 12 V alarm panels

PNK-1
Latching panic button
- triggers panic alarm and remote notification for hold-up situation
- compatibility with all panels supporting NC zones

FD-1
Water flood detector
- detection of water presence for flood threatened areas
- external easy to mount sensor
- cable length 3 m
- tamper protection

**available in white (FD-1) and brown (FD-1 BR)**
SIRENS

An effective and rigid siren is one of key components of intruder security system. SATeL’s product range includes a wide selection of different sirens, to suit almost any type of installation. All these sirens provide several common features: high quality of components used, and advanced technology – just to make them reliable.
SP-4001
Outdoor siren with optical and acoustical signaling
- acoustical signaling: piezo transducer
- optical signaling: ultra bright LEDs
- inner metal shield
- tamper protection:
  » against removing from mounting surface
  » against opening
available with glass in red (SP-4001 R), blue (SP-4001 BL) and orange (SP-4001 O)

SP-4002
Outdoor siren with optical and acoustical signaling
- microprocessor controlled
- acoustical signaling: piezo transducer
- optical signaling: ultra bright LEDs
- inner metal shield
- tamper protection:
  » against removing from mounting surface
  » against opening
available with glass in red (SP-4002 R), blue (SP-4002 BL) and orange (SP-4002 O)

SP-4003
Outdoor siren with optical and acoustical signaling
- acoustical signaling: piezo transducer
- optical signaling: ultra bright LEDs
- inner metal shield
- tamper protection:
  » against removing from mounting surface
  » against opening
available with glass in red (SP-4003 R), blue (SP-4003 BL) and orange (SP-4003 O)

SP-4004
Outdoor siren with optical and acoustical signaling
- certified for EN 50131 Grade 2
- acoustical signaling: piezo transducer
- optical signaling: ultra bright LEDs
- support for sealed lead acid backup battery
- auxiliary LEDs for status indication
- fully potted design for best environmental protection
- inner metal shield
- built-in level to facilitate mounting
- tamper protection:
  » against removing from mounting surface
  » against opening
available with glass in red (SP-4004 R), blue (SP-4004 BL)

SP-4006
Outdoor siren with optical and acoustical signaling
- acoustical signaling: piezo transducer
- optical signaling: ultra bright LEDs
- inner metal shield
- tamper protection:
  » against removing from mounting surface
  » against opening
available with glass in red (SP-4006 R), blue (SP-4006 BL) and orange (SP-4006 O)

SP-500
Outdoor siren with optical and acoustical signaling
- acoustical signaling: piezo transducer
- optical signaling: ultra bright LEDs
- tamper protection:
  » against removing from mounting surface
  » against opening
available with glass in red (SP-500 R), blue (SP-500 BL) and orange (SP-500 O)

SD-3001
Outdoor siren with optical and acoustical signaling
- microprocessor controlled
- acoustical signaling: dynamic horn
- optical signaling: ultra bright LEDs
- inner metal shield
- tamper protection:
  » against removing from mounting surface
  » against opening
available with glass in red (SD-3001 R), blue (SD-3001 BL) and orange (SD-3001 O)
**SP-6500 R**
Outdoor siren with optical and acoustical signaling
- EN 50131 Grade 2 compliance
- acoustical signaling: piezo transducer
- optical signaling: ultra bright LEDs
- support for sealed lead acid backup battery
- auxiliary LEDs for status indication
- fully potted design for best environmental protection
- inner metal shield
- built-in level to facilitate mounting
- mechanical design that allows to choose between vertical and horizontal opening
- tamper protection:
  - against removing from mounting surface
  - against opening

**SPL-5010**
Outdoor siren with optical and acoustical signaling
- acoustical signaling: piezo transducer
- optical signaling: ultra bright LEDs
- tamper protection:
  - damping the siren with acoustical signaling with PUR foam (optional SPL-TO)
  - against removing from mounting surface
  - against opening
- optional inner metal shield

**SPL-5020**
Outdoor siren with optical and acoustical signaling
- acoustical signaling: piezo transducer
- optical signaling: ultra bright LEDs
- tamper protection:
  - damping the siren with acoustical signaling with PUR foam (optional: SX6-TO)
  - against removing from mounting surface
  - against opening
- optional inner metal shield
- support for sealed lead acid backup battery

**SPL-2030**
Outdoor siren with optical and acoustical signaling
- acoustical signaling: piezo transducer
- optical signaling: ultra bright LEDs
- tamper protection:
  - damping the siren with acoustical signaling with PUR foam (optional SPL-TO)
  - against removing from mounting surface
  - against opening
- optional inner metal shield

**SPL-2010**
Outdoor siren with optical and acoustical signaling
- acoustical signaling: piezo transducer
- optical signaling: ultra bright LEDs
- inner metal shield
- tamper protection:
  - damping the siren with acoustical signaling with PUR foam
  - against removing from mounting surface
  - against opening
- available with glass in red (SPL-2010 R), blue (SPL-2010 BL) and orange (SPL-2010 O)

**SPL-5020**
Outdoor siren with optical and acoustical signaling
- acoustical signaling: piezo transducer
- optical signaling: ultra bright LEDs
- inner metal shield
- tamper protection:
  - damping the siren with acoustical signaling with PUR foam (optional: SPL-TO)
  - against removing from mounting surface
  - against opening
- available with glass in red (SPL-5020 R), blue (SPL-5020 BL) and orange (SPL-5020 O)

**SD-6000 R**
Outdoor siren with optical and acoustical signaling
- certified for EN 50131 Grade 2
- acoustical signaling: dynamic horn
- optical signaling: ultra bright LEDs
- support for sealed lead acid backup battery
- auxiliary LEDs for status indication
- fully potted design for best environmental protection
- inner metal shield
- built-in level to facilitate mounting
- mechanical design that allows to choose between vertical and horizontal opening
- tamper protection:
  - damping the siren with acoustical signaling with PUR foam (optional: SX6-TO)
  - against removing from mounting surface
  - against opening

**SPLZ-1011**
Outdoor siren with optical and acoustical signaling
- microprocessor controlled
- acoustical signaling: piezo transducer
- optical signaling: ultra bright LEDs
- inner metal shield
- tamper protection:
  - damping the siren with acoustical signaling with PUR foam
  - against removing from mounting surface
  - against opening
- sealed lead acid backup battery included

**SPLZ-TO**
Support for sealed lead acid backup battery
- available with glass in red (SPLZ-1011 R), blue (SPLZ-1011 BL) and orange (SPLZ-1011 O)
INDOOR SIRENS

SPW-100
Indoor siren
• acoustical signaling: piezo transducer
• Tamper protection against opening

SPW-150
Indoor siren with acoustical signaling (battery back-up)
• acoustical signaling: piezo transducer
• Automatic alarm on power failure
• Alkaline battery back-up power
• Tamper protection:
  » against removing from mounting surface
  » against opening

SOW-300 R
Indoor LED beacon
• Optical signaling: ultra bright LEDs
• Three signalling modes
• Tamper protection against opening
  available with glass in red (SOW-300 R),
  blue (SOW-300 BL) and orange (SOW-300 O)

SPW-210
Indoor siren with acoustical signaling
• Certified for EN 50131 Grade 2
• Acoustical signaling: piezo transducer
• Tamper protection:
  » against removing from mounting surface
  » against opening
  available with glass in red (SPW-210 R),
  blue (SPW-210 BL) and orange (SPW-210 O)

SPW-220
Indoor siren with optical and acoustical signaling
• Acoustical signaling: piezo transducer
• Optical signaling: ultra bright LEDs
• Tamper protection:
  » against removing from mounting surface
  » against opening
  available with glass in red (SPW-220 R),
  blue (SPW-220 BL) and orange (SPW-220 O)

SPW-250
Indoor siren with acoustical signaling (battery back-up)
• Acoustical signaling: piezo transducer
• Automatic alarm on power failure
• Lithium battery back-up power
• Tamper protection:
  » against removing from mounting surface
  » against opening
  available with glass in red (SPW-250 R),
  blue (SPW-250 BL) and orange (SPW-250 O)
## SIREN COMPARISON CHART

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<th>Siren Type</th>
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See SIREN ACCESSORIES page 82
Welcome to e-Academy

Do you prefer to acquire industry knowledge from short instructional videos?

E-Academy will be the perfect solution for you.

Log in to our website and see how to connect, program and operate SATEL devices.

Our specialists are at your disposal when you need it.
COMMUNICATION AND MESSAGING

Efficient messaging is essential for a security system. SATEL provides a complete range of devices intended for reliable transmission of alarm messages through variety of available media: PSTN telephone lines, ISDN networks, GSM or TCP/IP Ethernet networks.
GPRS MODULES

GPRS-A
Universal GPRS monitoring module
- certified for EN 50136 SP 5
- conversion of telephone reporting to SMS/GPRS formats
- sending notifications to max. 8 phone numbers
- notification messaging: SMS/CLIP/PUSH
- 8 programmable inputs (NO/NC/analog)
- 1-Wire digital temperature sensor bus
- possibility to configure response to exceeded threshold values at:
  » analog inputs
  » 1-Wire sensors
- 4 outputs (2 relay, 2 OC type) controlled via SMS/CLIP/GX CONTROL/GX Soft: via IoT
- IoT – support for MQTT, JSON, MODBUS RTU open protocols via GPRS
- possibility to check pre-paid account balance and send notification if it drops below required minimum
- configuration by using GX Soft program:
  » locally via RS-232 (TTL)
  » remotely via GPRS
- support for GX CONTROL mobile application
- remote firmware update capability
- optional connection of the dedicated APS-612 power supply.

GSM/GPRS MODULES

GSM-X
Universal multi-purpose GSM/GPRS communication module
- certified for EN 50136 SP 5, DP 4*
- conversion of telephone reporting into audio/SMS/Ethernet*/GPRS formats
- sending notifications to max. 8 phone numbers
- notification: audio/SMS/CLIP
- conversion of PAGER messages into SMS
- telephone line simulation via GSM
- switching to GSM in case of telephone line failure
- GSM gateway for telephone exchanges
- compatibility with INTEGRA and INTEGRA Plus control panels:
  » fast data transfer through RS-232
  » conversion of RS-232/TCP/IP reporting
- automatic composition of notification content (INTEGRA Plus)
- ability to remotely connect to DLOADX and GUARDX programs
- support for Ethernet as additional communication channel
- dual SIM support
- possibility to check the pre-paid account balance and send notification if it drops below required minimum
- configuration using GX Soft software:
  » locally via USB
  » remotely via Ethernet* or GPRS
- support for GX CONTROL mobile application
- remote firmware update capability
- expansion capability by adding GSM-X-ETH Ethernet module

GSM-X-ETH
Ethernet module for GSM-X communicator
- cooperation with GSM-X universal communication module
- support for Ethernet as additional communication channel

INT-GSM
GPRS communication module for INTEGRA and INTEGRA Plus control panels
- certified for EN 50136 SP 5
- messaging: SMS, CLIP, PUSH, e-mail INTEGRA Plus
- remote control: SMS, CLIP, mobile application
- reporting: GPRS (TCP/UDP), SMS messages
- possibility of cooperation with the ETHM-1 Plus Ethernet module:
  » Dual Path Reporting, compliant with EN 50136
  » backup communication path
- dual SIM support
- ability to simultaneously receive incoming messages and calls via both SIM cards.
- possibility to check the pre-paid account balance and send notification if it drops below required minimum
- NTP server / GSM network time synchronization
- possibility of using the SATEL connection setup service
- operating the system from INTEGRA CONTROL mobile application
- programming control panels by using DLOADX (remote connection)
- supervision of the alarm system by using GUARDX (remote connection)
- connecting to the INTEGRUM application
- remote update of module firmware via UpServ

MICRA
GSM/GPRS communication module
- 4 programmable inputs for detectors
- inputs mode selection: digital (on/off) or analog (voltage)
- dedicate tamper loop input
- 2 relay outputs controlled locally or remotely
- remote control receiver supporting:
  » up to 8 keyfobs (MPT-300, MPT-350, P-2, P-4, T-1, T-2, T-4)
  » up to 8 wireless detectors (MPD-300, MGD-300, MMD-300, MMD-302, MPD-300, MSD-300, MSD-350)
- wireless keypad (MKP-300)
- GPRS/SMS monitoring with events definition
- SMS/CLIP personal messaging on selected events
- audio verification over telephone via external microphone (MIC-1)
- remote update of module firmware (application UpServ)
- local (RS-232) or remote (GPRS/SMS) programming (using the GPRS-SOFT program)
APPLICATION FOR CONTROL OF GPRS-A, GSM-X

GX CONTROL
Mobile application for remote control of GSM-X and GPRS-A modules

- support for GSM-X and GPRS-A modules:
  - checking status of inputs with blocking capability
  - checking and controlling the status of outputs
  - presentation of readings from analog inputs and digital sensors (GPRS-A only)
  - viewing event memory with filtering capability
  - viewing troubles with memory clearing capability
- PUSH notification with individual configuration option
- simple and quick configuration
- secure, encrypted communication with the system thanks to the connection set-up service
- intuitive user interface

MODULE COMPARISON CHART

<table>
<thead>
<tr>
<th>Feature</th>
<th>GSM-X</th>
<th>GPRS-A</th>
<th>MICRA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Simulation of analog telephone line over GSM network (GSM gateway feature)</td>
<td>✓</td>
<td>✓/✓</td>
<td>-/✓</td>
</tr>
<tr>
<td>Handling of incoming GSM calls</td>
<td>✓</td>
<td>✓/✓</td>
<td>-/✓</td>
</tr>
<tr>
<td>Simulation of telephone monitoring receiver</td>
<td>✓</td>
<td>✓/✓</td>
<td>-/✓</td>
</tr>
<tr>
<td>Telephone line monitoring conversion to: GPRS/SMS/CSD transmission</td>
<td>✓/✓/✓</td>
<td>✓/✓/✓</td>
<td>-/✓/✓</td>
</tr>
<tr>
<td>Automatic switching to GSM in case of telephone line failure</td>
<td>✓</td>
<td>✓/✓/✓</td>
<td>-/✓/✓</td>
</tr>
<tr>
<td>CallerID forwarding</td>
<td>✓</td>
<td>✓/✓/✓</td>
<td>-/✓/✓</td>
</tr>
<tr>
<td>PAGER (DTMF) messaging conversion to SMS</td>
<td>✓</td>
<td>✓/✓/✓</td>
<td>-/✓/✓</td>
</tr>
<tr>
<td>SMS/CLIP/PUSH messaging on selected events</td>
<td>✓/✓/✓</td>
<td>✓/✓/✓</td>
<td>✓/✓/✓</td>
</tr>
<tr>
<td>Number of control inputs</td>
<td>4</td>
<td>8</td>
<td>5</td>
</tr>
<tr>
<td>Inputs: NO/NC/analog</td>
<td>✓/✓/✓</td>
<td>✓/✓/✓</td>
<td>✓/✓/✓</td>
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<tr>
<td>1-Wire digital temperature sensor bus</td>
<td>✓</td>
<td>✓/✓/✓</td>
<td>✓/✓/✓</td>
</tr>
<tr>
<td>Messaging triggering by means of: control inputs/outputs state changes</td>
<td>✓/✓/✓</td>
<td>✓/✓/✓</td>
<td>✓/✓/✓</td>
</tr>
<tr>
<td>Reporting triggering by means of: control inputs/outputs state changes</td>
<td>✓/✓/✓</td>
<td>✓/✓/✓</td>
<td>✓/✓/✓</td>
</tr>
<tr>
<td>Voice messaging</td>
<td>✓</td>
<td>✓/✓/✓</td>
<td>✓/✓/✓</td>
</tr>
<tr>
<td>Remote output control</td>
<td>✓</td>
<td>✓/✓/✓</td>
<td>✓/✓/✓</td>
</tr>
<tr>
<td>IoT function</td>
<td>✓</td>
<td>✓/✓/✓</td>
<td>✓/✓/✓</td>
</tr>
<tr>
<td>External modem functionality for INTEGRA panels</td>
<td>✓</td>
<td>✓/✓/✓</td>
<td>✓/✓/✓</td>
</tr>
<tr>
<td>Listen-in feature – alarm verification</td>
<td>✓</td>
<td>✓/✓/✓</td>
<td>✓/✓/✓</td>
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<tr>
<td>SATEL connection setup service</td>
<td>✓</td>
<td>✓/✓/✓</td>
<td>✓/✓/✓</td>
</tr>
<tr>
<td>Remote module configuration via GPRS</td>
<td>✓</td>
<td>✓/✓/✓</td>
<td>✓/✓/✓</td>
</tr>
<tr>
<td>Mobile application – communication via: GPRS/SMS</td>
<td>✓/✓/✓</td>
<td>✓/✓/✓</td>
<td>✓/✓/✓</td>
</tr>
<tr>
<td>Remote programming of control panels via GPRS</td>
<td>✓</td>
<td>✓/✓/✓</td>
<td>✓/✓/✓</td>
</tr>
<tr>
<td>Remote update of module firmware via GPRS</td>
<td>✓</td>
<td>✓/✓/✓</td>
<td>✓/✓/✓</td>
</tr>
</tbody>
</table>
TCP/IP COMMUNICATION

**ETHM-1 Plus**
TCP/IP communication module

- certified for **EN 50136 SP 5**
- supported by **INTEGRA, INTEGRA Plus** and **VERSA** control panels
- TCP/IP reporting
- remote programming via DLOADX program
- possibility of cooperation with the **INT-GSM** communication module:
  - Dual Path Reporting, compliant with **EN 50136**
  - backup communication path
  - **INTEGRA** and **INTEGRA Plus** system supervision via GUARDX program

**ETHM-2**
Universal TCP/IP communication module

- **EN 50136 SP 5** compliance
- telephone line monitoring conversion to TCP/IP transmission, compatible with any panel
- TCP/IP reporting triggered by means of module inputs
- e-mail personal messaging

**PHONE MESSAGING**

**DT-1**
PSTN telephone communicator

- PSTN communicator for intruder panels not equipped with on-board dialers
- monitoring using variety of protocols:
  - 2 central station numbers
  - 2 identifiers
- messaging:
  - 6 telephone numbers
  - 1 or 2 voice messages
  - 1 or 2 text messages

**SM-2**
Voice synthesizer

- records and plays back a 16 second voice message
All applications that require remote control of any devices may take the benefits provided by universal remote controllers. For that purpose, SATEL offers a complete range of controllers operating at 433 MHz, which can be used to operate up to four separate channels.

Additional features provided by SATEL controllers are aimed at alarm systems functionality. In conjunction with the panel they can be used not only for arming/disarming, but also for triggering an entry delay or as a portable panic button.

**RXH-1K**
Radio remote controllers with superhet receiver
- attractive and ergonomic keyfob design
- superior range (up to 300 m) and selectivity thanks to superhet receiver
- option to choose from the three modes: bistable, monostable, pulse
- 1 independent channel
- support for up to 40 keyfobs
- keyfob low battery indication
- arm/disarm signalling with the sounder

**RXH-2K**
Radio remote controllers with superhet receiver
- attractive and ergonomic keyfob design
- superior range (up to 300 m) and selectivity thanks to superhet receiver
- option to choose from the three modes: bistable, monostable, pulse
- 2 independent channels
- support for up to 340 keyfobs
- keyfob low battery indication
- arm/disarm signalling with the sounder
- RS-232 port for PC-based management

**RXH-4K**
Radio remote controllers with superhet receiver
- attractive and ergonomic keyfob design
- superior range (up to 300 m) and selectivity thanks to superhet receiver
- option to choose from the three modes: bistable, monostable, pulse
- 4 independent channels
- support for up to 340 keyfobs
- keyfob low battery indication
- arm/disarm signalling with the sounder
- RS-232 port for PC-based management
**RX-1K**
Radio remote controllers
- up to 4 separate, programmable channels
- support for up to 40 keyfobs
- operating range up to 200 m open space
- option to choose from the three modes: bistable, monostable, pulse
- remote low battery indication
- arm/disarm/reset confirmation

**RX-2K**
Radio remote controllers
- up to 4 separate, programmable channels
- support for up to 340 keyfobs
- operating range up to 200 m open space
- option to choose from the three modes: bistable, monostable, pulse
- remote low battery indication
- arm/disarm/reset confirmation
- the RS-232 port which enables programming by means of computer with **DLOAD10** program installed

**RX-4K**
Radio remote controllers
- up to 4 separate, programmable channels
- support for up to 340 keyfobs
- operating range up to 200 m open space
- option to choose from the three modes: bistable, monostable, pulse
- remote low battery indication
- arm/disarm/reset confirmation
- the RS-232 port which enables programming by means of computer with **DLOAD10** program installed

**RE-1K**
Radio remote controllers
- up to 4 separate, programmable channels
- support for up to 16 keyfobs
- operating range up to 200 m open space
- option to choose from the three modes: bistable, monostable, pulse
- remote low battery indication

**RE-2K**
Radio remote controllers
- up to 4 separate, programmable channels
- support for up to 16 keyfobs
- operating range up to 200 m open space
- option to choose from the three modes: bistable, monostable, pulse
- remote low battery indication

**RE-4K**
Radio remote controllers
- up to 4 separate, programmable channels
- support for up to 16 keyfobs
- operating range up to 200 m open space
- option to choose from the three modes: bistable, monostable, pulse
- remote low battery indication
- arm/disarm/reset confirmation
- the RS-232 port which enables programming by means of computer with **DLOAD10** program installed

**KEYFOBS**

**P-2 / P-4 / T-1 / T-2 / T-4**
Remote controller keyfobs
- KEEOQ® dynamic code-hopping technology:
  - ideal for security demanding applications
  - high immunity to interference signals
- SAW Resonator frequency stabilization
- immunity to environmental changes
- powered by single 12 V A23 battery
ACCESS CONTROL

ACCO NET ACCESS CONTROL SYSTEM

The ACCO NET is a scalable access control system with distributed system. The main components of this solution are: ACCO Server software and ACCO-NT control panels. The actuators are ACCO-KP door controllers, to which readers for user identification are connected. Owing to extensive functionality, intuitive management methods as well as flexibility of building and expanding the system structure, the ACCO NET meet the requirements of large and medium-sized multi-departmental enterprises, such as retail chains, bank branches, customer service centers and other institutions. Simplicity and ease of use of the system is guaranteed by the ACCO Web internet application available remotely through the web browser. This tool allows you to manage the system from anywhere in the world, both from desktops and mobile devices.

You can add the already functioning ACCO systems to the ACCO NET system. You only need to connect the controllers to the ACCO-NT bus and update their firmware.

Integration with the alarm system – a single ACCO-NT control panel may be integrated with 8 intruder alarms based on INTEGRA control panels.
**SYSTEM STRUCTURE**

**Administrator**
- Installer: ACCO Soft
- Network
- **ACCO Server**
- **ACCO Web**
- **ACCO-DB**
- **ACCO-NT**
- **ACCO-KPWG**
- **ACCO-KLCDR**
- **ACCO-SCR-BG**
- **CZ-USB-1**
- **CZ-EMM**
- **CZ-EMM2**
- **CZ-EMM3**
- **CZ-EMM4**
- **ETHM-1 Plus**
- INTEGRA

**Guard**
- **ACCO-NT**
- **ACCO-KPWG**
- **ACCO-KPWG-PS**
- **CZ-EMM**
- **CZ-EMM2**
- **CZ-EMM3**
- **CZ-EMM4**
- **WIEGAND READER**
- **BIOMETRIC READER**

**User**
- **ACCO-NT**
- **ACCO-KPWG**
- **ACCO-KPWG-PS**
- **CZ-EMM**
- **CZ-EMM2**
- **CZ-EMM3**
- **CZ-EMM4**
- **WIEGAND READER**
- **BIOMETRIC READER**

INTEGRATION WITH THE ALARM SYSTEM
- **simplified security and access control supervision in protected buildings**
- **INTEGRA partitions** and **ACCO-NT zones integration**:
  » convenient administration of **ACCO NET** user privileges
  » possibility to control **INTEGRA** and **INTEGRA Plus** partitions by up to 8,000 **ACCO-NT** users
  » possibility to arm and disarm integrated partitions and zones from terminals, **ACCO Soft** and **ACCO Web** softwares
  » visualization of the status of partitions, zones and outputs of the alarm control panels
- **common event history**
- **possibility of automatic selected door locking / unlocking configuration in case of** **INTEGRA** and **INTEGRA Plus** burglary / fire alarm

---

**Flexibility of the system**
- unlimited number of objects in different configurations of system structure
- many smaller objects gathered in one centrally managed system
- system of unlimited size, managed from many places at the same time
- support for 65,000 users

**Distributed system**
- ability to control and configure the system from any place in the world:
  » system management by multiple administrators
  » system supervision by security personnel
  » system operation by the users

**Reliable and secure communication**
- data transmission using TCP/IP protocol
- advanced encryption of transmitted data

**Simple and intuitive interface**
- access to the system from web browser using **ACCO Web** application
- operating the **ACCO Web** from mobile devices
- fast and easy reading of cards, key tags with the **CZ-USB** reader connected directly to the computer port

**Full operational safety**
- system of multi-level recording of user data and event log
- automatic downloading of “outstanding” data after connection resumption

**Varied user identification and authorization methods**
- card / key tag / chip
- access code
- keyfob
- possibility to program double authorization (card/key tag and access code)
advanced software

The ACCO NET is an access control system, the management, administration and configuration of which are based on advanced software. Its components are installed on a computer running Debian or CentOS system and may, depending on the size of the system, reside on a single machine or even on three separate ones.

- **the ACCO Server** software is responsible for communication between an unlimited number of control panels. The result is a system that can manage any number of objects to create a distributed, scalable, global system. Communication takes place via encrypted TCP/IP transmission.
- **the ACCO-DB** database stores configuration and information on the structure of the system, data of 65,000 users and unlimited number of events.
- **the ACCO Web** application server allows you to manage access to objects from anywhere in the world via a web browser.

**ACCO Soft**

An installer tool for remote configuration of the system.

- creating the system structure
- creating access control zones
- configuring ACCO-NT control panels
- capability to remotely update ACCO-NT control panel firmware
- adding and configuring expansion modules (INT-E, INT-O, INT-ORS, INT-IORS, INT-PP, INT-RX)

**ACCO Web**

A tool for remote management of the system.

- access from any location in the world via the web browser
- supporting for mobile devices
- multiple users can log in simultaneously
- adding and managing users (CZ-USB reader)
- creating access rules and schedules
- creating presence reports, also simultaneously for any number of users
- viewing events with filtering option (also concerning the integrated INTEGRA and INTEGRA Plus alarm systems)

**ACCO-NT Control Panel**

The ACCO-NT control panel can store up to 1,000,000 own events and 100,000 events from each controller, as well as data of 8,000 users. Thus, if connection with the server is lost as a result, for example, of internet link failure, full functionality of that part of the system for which the given control panel is responsible will be maintained.

- responsible for communication between door controllers and ACCO Server
- has two RS-485 buses which total length may be up to 2,400 meters
- up to 255 door controllers can be connected to a single control panel
- in addition, the control panel can be extended with keyfob receiver, zone and output expansion modules. This allows you to program functionality tailored to the investor’s requirements through logical functions. As a result, the system offers options such as control of barriers, gates, elevators, roller shutters, awnings or light
- each ACCO-NT control panel allows creating up to 255 partitions. A single partition can contain a number of single doors, which are supervised by the ACCO-KP and ACCO-KPWG controllers
- USB connector located on the control panel board simplifies initial configuration of the control panel by the installer
- the APS-412 or APS-612 backup power supply unit is responsible for maintaining continuous operation of the control panel even during mains power loss
- a single ACCO-NT control panel may be integrated with many intruder alarms based on INTEGRA and INTEGRA Plus control panels
## DOOR CONTROLLERS

<table>
<thead>
<tr>
<th>Model</th>
<th>Image</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCO-KPWG</td>
<td><img src="image1" alt="ACCO-KPWG" /></td>
</tr>
<tr>
<td>ACCO-KPWG-PS</td>
<td><img src="image2" alt="ACCO-KPWG-PS" /></td>
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<tr>
<td>ACCO-KP</td>
<td><img src="image3" alt="ACCO-KP" /></td>
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<tr>
<td>ACCO-KP-PS</td>
<td><img src="image4" alt="ACCO-KP-PS" /></td>
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</tbody>
</table>

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## ACCO TERMINALS

<table>
<thead>
<tr>
<th>Model</th>
<th>Image</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCO-KLCDR-BW</td>
<td><img src="image5" alt="ACCO-KLCDR-BW" /></td>
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<tr>
<td>ACCO-KLCDR-BG</td>
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<tr>
<td>ACCO-SCR-BG</td>
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</tr>
<tr>
<td>CZ-EMM</td>
<td><img src="image8" alt="CZ-EMM" /></td>
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<tr>
<td>CZ-EMM2</td>
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<tr>
<td>CZ-EMM3</td>
<td><img src="image10" alt="CZ-EMM3" /></td>
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<tr>
<td>CZ-EMM4</td>
<td><img src="image11" alt="CZ-EMM4" /></td>
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<tr>
<td>CZ-DALLAS</td>
<td><img src="image12" alt="CZ-DALLAS" /></td>
</tr>
</tbody>
</table>

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## SYSTEM UNITS

<table>
<thead>
<tr>
<th>Model</th>
<th>Image</th>
</tr>
</thead>
<tbody>
<tr>
<td>CZ-USB-1</td>
<td><img src="image13" alt="CZ-USB-1" /></td>
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</tbody>
</table>

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## TRANSPONDERS

<table>
<thead>
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<th>Image</th>
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<tbody>
<tr>
<td>KT-STD-1</td>
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<td>KT-STD-2</td>
<td><img src="image15" alt="KT-STD-2" /></td>
</tr>
<tr>
<td>BR-STD-1</td>
<td><img src="image16" alt="BR-STD-1" /></td>
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<tr>
<td>BR-STD-2</td>
<td><img src="image17" alt="BR-STD-2" /></td>
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<tr>
<td>BR-STD-3</td>
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</tr>
<tr>
<td>PAS-DALLAS</td>
<td><img src="image19" alt="PAS-DALLAS" /></td>
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</tbody>
</table>

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## ACCO ACCESSORIES

<table>
<thead>
<tr>
<th>Model</th>
<th>Image</th>
</tr>
</thead>
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<tr>
<td>OP-KT-1</td>
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<tr>
<td>OP-KT-2</td>
<td><img src="image21" alt="OP-KT-2" /></td>
</tr>
<tr>
<td>LOGOBAND-A</td>
<td><img src="image22" alt="LOGOBAND-A" /></td>
</tr>
</tbody>
</table>

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ACCO ACCESS CONTROL SYSTEM

Growing market demand for standalone access control system inspired SATEL’s engineers to develop flexible solution that meets the requirements of numerous groups of customers.

ACCO system consist of distributed intelligent devices networked for central supervision and management. The combination of proven hardware and software solutions with thorough system concept ensures the highest possible quality and makes it suitable for individual needs.
ACCO ACCESS CONTROL SYSTEM

DOOR CONTROLLERS

ACCO-KP / ACCO-KP-PS / ACCO-KPWG / ACCO-KPWG-PS

Door controllers

• support for single door with entry and exit authorization
• support for SATEL terminals and for Wiegand compatible terminals (ACCO-KPWG, ACCO-KPWG-PS)
• standalone or ACCO system operation mode
• 1,024 users
• user rights definition
• access authorization with proximity card and/or code
• biometric authorization (ACCO-KPWG, ACCO-KPWG-PS)
• 256 schedules
• holiday schedules
• non-volatile 24,576 event log
• work time registration event tagging
• anti-passback
• programming means:
  » permanently or temporarily connected LCD keypad
  » PC connected via RS-232 port
  » PC connected via ACCO-USB interface to RS-485 bus
• non volatile settings memory
• FLASH based firmware update
• scheduled door locking and unlocking
• programmable limits on number of accesses
• switching mode backup power supply 12 V DC 1.2 A (ACCO-KP-PS, ACCO-KPWG-PS)
**PRODUCT CATALOGUE**

**SYSTEM UNITS**

**ACCO-USB**
RS-485 to USB interface
- RS-485 ACCO system bus to PC USB connection
- socket RJ-45 for ACCO-USB-CZ system management reader
- powered by USB port
- Plug&Play installation
- LEDs for device state indication

**ACCO-USB-CZ**
Proximity card reader
- support for cards, tags and other 125 kHz passive transponders
- system management reader for easy proximity cards management via ACCO software
- LED indicator for reader state indication
- built-in buzzer for acoustic feedback
- RJ-45 connector for connecting to ACCO-USB

**CZ-USB-1**
Proximity card reader
- operation in Windows environment
- operation at 125 kHz frequency

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**ACCO TERMINALS**

**ACCO-KLCDR**
LCD keypads
- large, easy to read backlit LCD display
- access authorization with code and/or proximity card
- support for cards, tags and other 125 kHz passive transponders
- LED indicators for door and controller status indication
- built-in buzzer for acoustic feedback
- display and keypad backlight
- tamper protection

Available in white (BW) and gray (BG)

**CZ-EMM/ CZ-EMM2**
Proximity card readers
- access authorization with proximity card

**CZ-EMM3 / CZ-EMM4**
Proximity card readers
- access authorization with proximity card
- outdoor operation
- doorbell button (only CZ-EMM4)
- optional MLT-POD spacer pad available

**ACCO-SCR-BG**
Keypad
- access authorization with code and/or proximity card
- support for cards, tags and other 125 kHz passive transponders
- LED indicators for door and controller status indication
- built-in buzzer for acoustic feedback
- keys backlight
- optical tamper protection against opening and removing from mounting surface
- doorbell button
- indoor and outdoor operation
- optional MLT-POD spacer pad available

**CZ-DALLAS**
Dallas iButton reader
- installed directly on wall/door frame
- support for standard Dallas iButtons

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TRANSPONDERS

**KT-STD-1**  
Proximity card  
- passive 125 kHz transponder  
- standard credit card size, dimensions: 85 x 55 mm  
- colour: white

**KT-STD-2**  
Thick proximity card  
- passive 125 kHz transponder  
- standard credit card size, dimensions: 85 x 55 mm, 2 mm thick  
- colour: white

**BR-STD-1**  
Proximity tag  
- passive 125 kHz transponder

**BR-STD-2**  
Proximity tag  
- passive 125 kHz transponder

**BR-STD-3**  
Proximity tag  
- passive 125 kHz transponder

**PAS-DALLAS**  
Dallas iButton  
- passive 125 kHz transponder  
- compatible with **CZ-DALLAS** iButton reader

ACCO ACCESSORIES

**OP-KT-1**  
Plastic holder  
- plastic holder for **KT-STD-1** proximity card

**OP-KT-2**  
Plastic holder  
- plastic holder for **KT-STD-2** proximity card

**LOGOBAND-A**  
Neck strap with clip  
- suitable for proximity card holder, tag, keys etc.
Monitoring

Alarm receiving centers are responsible for effective reception of the information from supervised premises, as well as prompt reaction to incoming events.

To meet market requirements, SATEL have developed a range of products that allow to establish a modern central monitoring station, which utilizes various communication channels – providing the security specialists with a professional, advanced tool which enables them to efficient operation.

STAM-2 MONITORING STATION SYSTEM STRUCTURE

- **ETHERNET RECEIVERS**
  - Monitoring
  - TCP/IP and GPRS

- **TELEPHONE RECEIVERS**
  - Telephone monitoring 4/2, CID, SIA

- **GSM MODULES**
  - Monitoring
  - SMS/CLIP

- **STAM-VIEW**
  - Remote Access System for STAM-2 Monitoring Station

- **WLAN/GPRS**

- **STAM-2 SERWER**
  - Networking of up to 16 cards

- **STAM-2 KLIENT**
  - Graphical environment for mobile and stationary monitoring station operators

- **STAM-2 KLIENT**
  - Graphical environment for stationary monitoring station operators

- **VISUALIZATION BOARDS**
MONITORING STATION SOFTWARE

STAM-2 / STAM-2 Pro
Multiuser, multi-workstation monitoring station management software

- support for telephone line monitoring, GSM reporting, monitoring using TCP/IP networks
- cross-platform Java™ based multi-user/multi-workstation solution networked client-server architecture
- support for visual alarm verification
- support for over 50,000 subscribers
- multiple identifiers for single subscriber

- code categories, defined for each subscriber and identifier
- alert notification
- overdue tasks notification
- reports for subscribers, operators and whole monitoring station
- database backups

Extended functionality (STAM-2 Pro):

- 10 workstations license
- creating detailed site plans with a possibility to mark detectors' location
- indication of alarm source on site plan
- site status control by means of virtual keypad
- possibility to use maps for presentation of a site status

- enhancement of the monitoring station system with remote events viewing ability
- access to the system via a web browser:
  + ability to remotely verify the system status
- easy testing of the system at startup and periodic maintenance
- effective protection against unauthorized access to data
- ability to filter events recorded by the station
- text messaging system to facilitate internal communication
- automatic backup
- optional visual alarm verification
HARDWARE SOLUTIONS

STAM-IRS
Integrated monitoring receiver with micro server
- support for up to 14 telephone or TCP/IP receiver cards
- 3 RS-232 ports for additional GSM receivers
- built-in INTEL ATOM based micro server PC with dual SSD storage
- 7” TFT LCD screen for server management
- built-in 10 A power supply with support for backup battery
- industry standard 19” chassis suitable for rack mounting
- pre-installed and pre-configured essential software

STAM-BOX
Enclosure with power supply for monitoring station receiver cards
- industry standard 19” form factor
- support for up to 14 receiver cards
- built-in 3 A buffered power supply
- support for back up power supply – 12 V 17 Ah battery
- LEDs indicating cards’ status

TELEPHONE RECEIVERS

STAM-1 P
Base receiver card
- PCI slot compatible form factor
- RS-232 for connecting to the computer
- telephone line jack for telephone line monitoring
- multiprotocol compatibility (incl. Contact ID)
- auto-negotiation of communication protocol
- data transmission verification support
- no limitation for number of data received
- FIFO buffer for 250 last received events
- full auto-diagnostic
- telephone line overhear audio jack

STAM-1 R
Expansion receiver card
- PCI slot compatible form factor
- telephone line jack for telephone line monitoring
- multiprotocol compatibility (incl. Contact ID)
- auto-negotiation of communication protocol
- data transmission verification support
- no limitation for number of data received
- FIFO buffer for 250 last received events
- full auto-diagnostic

STAM-1 K
Termination receiver card
- PCI slot compatible form factor
- telephone line jack for telephone line monitoring
- multiprotocol compatibility (incl. Contact ID)
- auto-negotiation of communication protocol
- data transmission verification support
- no limitation for number of data received
- FIFO buffer for 250 last received events
- full auto-diagnostic

ETHERNET RECEIVERS

STAM-1 PE
TCP/IP receiver base card
- TCP/IP reporting receiver for SATEL Ethernet and GPRS transmitters
- support for up to 256 subscribers with individual link supervision
- hardware event buffering
- ETHERNET link supervision
- optional incoming events filtering based on physical address (MAC)
- support for automatic IP address configuration with DHCP
- possibility to install in computer’s PCI slot
- RS-232 port for communication with central monitoring station system

STAM-1 RE
TCP/IP receiver expansion card
- TCP/IP reporting receiver for SATEL Ethernet and GPRS transmitters
- support for up to 256 subscribers with individual link supervision
- hardware event buffering
- ETHERNET link supervision
- optional incoming events filtering based on physical address (MAC)
- support for automatic IP address configuration with DHCP
- possibility to install in computer’s PCI slot
### SMET-256
TCP/IP reporting converter to telephone formats
- SATEL TCP/IP reporting conversion to telephone line monitoring
- compatible with SATEL Ethernet and GPRS transmitters
- simulation of Visonic RC4000 and SurGuard MLR2 receivers
- support for up to 256 subscribers with individual link supervision
- support for unlimited number of subscribers without individual link supervision
- event buffering until successful reception by telephone receiver
- ETHERNET link supervision
- optional incoming events filtering based on physical address (MAC)
- configuring the device using web browser (via TCP/IP) or by means of **SMET-256 SOFT** program (via RS-232)
- support for automatic IP address configuration with DHCP

### VISUALIZATION

#### STAM-1 PTSA
Mimic board for STAM monitoring station
- LED visualization of 64 premises
- support for up to 63 boards in a system
- on-board switching mode power supply

### SETS

#### STAM-2 BT
STAM-2 Set
- STAM-1 P receiver card
- STAM-2 software (3 workstations license)
- installation guide
- protection dongle

#### STAM-2 BE
STAM-2 Set
- STAM-1 PE receiver card
- STAM-2 software (3 workstations license)
- installation guide
- protection dongle

#### STAM-2 BS
STAM-2 software
- STAM-2 software (3 workstations license)
- protection dongle

#### STAM-2 UE
STAM-2 BS upgrade
- 10 workstations license for STAM-2 software

#### STAM-2 RG
STAM-2 Pro expansion
- possibility to assign to the operator a specific region or regions from which information will be displayed from users assigned to individual regions
Enclosures

Enclosures complete the range of products provided by SATEL. To make installation easier, they are designed exclusively for SATEL panels and expansion modules, intended for indoor use. High quality craftsmanship and proper electrochemical preparation guarantee good paint adhesiveness and through rust protection.

PLASTIC ENCLOSURES

OPU-4 P
Enclosure
- double tamper protection
- possibility to install wireless devices with antennas inside
- dimensions: 266 x 286 x 100 mm
- space for TR 40 VA, TR 60 VA transformer or APS-412 backup power supply
- surface mounting

OPU-4 PW
Enclosure
- double tamper protection
- possibility to install wireless devices with antennas inside
- dimensions: 322 x 342 x 100 mm
- space for TR 40 VA, TR 60 VA transformer or APS-412 backup power supply
- flush mounting

OPU-3 P
Enclosure
- certified for EN 50131 Grade 3
- double tamper protection
- removable plates simplifying system installation and maintenance
- possibility to install wireless devices with antennas inside
- dimensions: 324 x 382 x 108 mm
- space for TR 40 VA, TR 60 VA transformer or APS-412, APS-612 backup power supply
**OPU-1 A Enclosures**
- tamper protection
- dimensions: 126 x 158 x 32 mm

**OPU-2 A Enclosures**
- tamper protection
- dimensions: 126 x 158 x 32 mm
- antenna mount: with SMA connector

**OPU-1 B Enclosures**
- tamper protection
- dimensions: 126 x 158 x 46 mm

**OPU-2 B Enclosures**
- tamper protection
- dimensions: 126 x 158 x 46 mm
- surface-mounted
- antenna mount: ANT-GSM-I
  - with SMA connector

**METAL ENCLOSURES**

**OBU-M-LCD Enclosure**
- dimensions: 215 x 150 x 45 mm

**OBU-M-LCD-S Enclosure**
- dimensions: 190 x 130 x 40 mm

**OBU-M-LED-S Enclosure**
- dimensions: 140 x 135 x 40 mm

**OMI-5 Enclosure**
- EN 50131 Grade 3 compliance
- double tamper protection
- dimensions: 328 x 406 x 120 mm
- APS-612 or APS-412 (DIN rail) power supply can be mounted inside
- can accommodate 17 Ah battery
- optionally, you can use:
  - extra DIN rail (OMI-5 DIN) to install INT-ORS, INT-IORS expanders
  - a set of plastic mounting inserts and supports (OMI-5 PI) for mounting SATEL control panels and modules as in OPU-3 P enclosure

**OMI-4 Enclosure**
- EN 50131 Grade 3 compliance
- double tamper protection
- dimensions: 330 x 405 x 110 mm
- transformer: 75 VA
- primary voltage: 230 V AC, 50 Hz
- secondary voltage: 20 V AC, 50 Hz

**OMI-3 Enclosure**
- EN 50131 Grade 3 compliance
- double tamper protection
- dimensions: 330 x 405 x 110 mm
- transformer: 50 VA
- primary voltage: 230 V AC, 50 Hz
- secondary voltage: 20 V AC, 50 Hz

**METAL ENCLOSURES WITH TRANSFORMER**
OMI-2 Enclosure
- EN 50131 Grade 3 compliance
- double tamper protection
- dimensions: 325 x 310 x 110 mm
- transformer: 40 VA
- primary voltage: 230 V AC, 50 Hz
- secondary voltage: 18 V AC, 50 Hz

OMI-1 Enclosure
- EN 50131 Grade 3 compliance
- double tamper protection
- dimensions: 290 x 285 x 105 mm
- transformer: 20 VA
- primary voltage: 230 V AC, 50 Hz
- secondary voltage: 18 V AC, 50 Hz

CA-64 OBU Enclosure
- tamper protection
- dimensions: 325 x 400 x 95 mm
- transformer: 50 VA
- primary voltage: 230 V AC, 50 Hz
- secondary voltage: 20 V AC

CA-10 OBU Enclosure
- tamper protection
- dimensions: 320 x 300 x 90 mm
- transformer: 40 VA
- primary voltage: 230 V AC, 50 Hz
- secondary voltage: 18 V AC

CA-6 OBU Enclosure
- tamper protection
- dimensions: 255 x 255 x 80 mm
- transformer: 20 VA
- primary voltage: 230 V AC, 50 Hz
- secondary voltage: 18 V AC

OMI-5 DIN
35 mm DIN rail for mounting in enclosure
- can be used in OMI-5 enclosure
- allows mounting of INT-ORS & INT-IORS expanders
- length: 280 mm

OMI-5 PI
a set of plastic mounting inserts and supports
- can be used in OMI-5 enclosure
- allows installation of SATEL control panels and modules as in OPU-3 P enclosure
## ENCLOSURE COMPARISON CHART*

<table>
<thead>
<tr>
<th>Control Panels, Keypads and Expansion Modules</th>
<th>Plastic Enclosures</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>INTEGRA 256 Plus</strong></td>
<td>*</td>
</tr>
<tr>
<td><strong>INTEGRA 128-WRL</strong></td>
<td>*</td>
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<tr>
<td><strong>INTEGRA 128</strong></td>
<td>*</td>
</tr>
<tr>
<td><strong>INTEGRA 64 Plus</strong></td>
<td>*</td>
</tr>
<tr>
<td><strong>INTEGRA 84</strong></td>
<td>*</td>
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<tr>
<td><strong>INTEGRA 72</strong></td>
<td>*</td>
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<tr>
<td><strong>INTEGRA 24</strong></td>
<td>*</td>
</tr>
<tr>
<td><strong>INT-KLCD-GR</strong></td>
<td>* LCD keypads</td>
</tr>
<tr>
<td><strong>INT-KLCDR-GR</strong></td>
<td>* LCD keypads</td>
</tr>
<tr>
<td><strong>INT-KLCDL-GR</strong></td>
<td>* LCD keypads</td>
</tr>
<tr>
<td><strong>INT-SK-GR</strong></td>
<td>* partition keypads</td>
</tr>
<tr>
<td><strong>CA-64 PTSA</strong></td>
<td>* mimic board</td>
</tr>
<tr>
<td><strong>INT-E</strong></td>
<td>* zone expansion module</td>
</tr>
<tr>
<td><strong>INT-ADR</strong></td>
<td>* addressable bus expansion module</td>
</tr>
<tr>
<td><strong>INT-PP</strong></td>
<td>* zone and output expansion module</td>
</tr>
<tr>
<td><strong>INT-O</strong></td>
<td>* output expansion module</td>
</tr>
<tr>
<td><strong>INT-KNX-2</strong></td>
<td>** KNX integration module</td>
</tr>
<tr>
<td><strong>INT-RS 254</strong></td>
<td>* RS-232 interface for systems integration</td>
</tr>
<tr>
<td><strong>INT-FI</strong></td>
<td>* fiber-optic interface</td>
</tr>
<tr>
<td><strong>ETHM-1 Plus</strong></td>
<td>* TCP/IP communication module</td>
</tr>
<tr>
<td><strong>INT-GSM</strong></td>
<td>* GPRS communication module</td>
</tr>
<tr>
<td><strong>INT-VG</strong></td>
<td>* remote interactive voice module</td>
</tr>
<tr>
<td><strong>INT-WG</strong></td>
<td>* voice message module</td>
</tr>
<tr>
<td><strong>INT-AV</strong></td>
<td>* alarm acoustic verification module</td>
</tr>
<tr>
<td><strong>INT-R</strong></td>
<td>* universal expander for card / chip readers</td>
</tr>
<tr>
<td><strong>INT-SZK</strong></td>
<td>* zone keypads</td>
</tr>
<tr>
<td><strong>PERFECTA 32-WRL</strong></td>
<td>* intruder alarm control panel</td>
</tr>
<tr>
<td><strong>PERFECTA 16-WRL</strong></td>
<td>* intruder alarm control panel</td>
</tr>
<tr>
<td><strong>PERFECTA 32</strong></td>
<td>* intruder alarm control panel</td>
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<tr>
<td><strong>PERFECTA 16</strong></td>
<td>* intruder alarm control panel</td>
</tr>
<tr>
<td><strong>PERFECTA 12-WRL</strong></td>
<td>* intruder alarm control panel</td>
</tr>
<tr>
<td><strong>PERFECTA 12-TL</strong></td>
<td>* intruder alarm control panel</td>
</tr>
<tr>
<td><strong>VERSA Plus</strong></td>
<td>* intruder alarm control panel</td>
</tr>
<tr>
<td><strong>VERSA IP</strong></td>
<td>* intruder alarm control panel</td>
</tr>
<tr>
<td><strong>VERSA 15</strong></td>
<td>* intruder alarm control panel</td>
</tr>
<tr>
<td><strong>VERSA 10</strong></td>
<td>* intruder alarm control panel</td>
</tr>
<tr>
<td><strong>VERSA 3</strong></td>
<td>* intruder alarm control panel</td>
</tr>
<tr>
<td><strong>MICRA</strong></td>
<td>* alarm module with GSM/GPRS communicator</td>
</tr>
<tr>
<td><strong>CA-10</strong></td>
<td>* intruder alarm control panel</td>
</tr>
<tr>
<td><strong>CA-10 KLCD-L/CA-10 BLUE-L</strong></td>
<td>* LCD keypads</td>
</tr>
<tr>
<td><strong>CA-10 KLCD-S/CA-10 BLUE-S</strong></td>
<td>* LCD keypads</td>
</tr>
<tr>
<td><strong>CA-10 KLED</strong></td>
<td>* LED keypads</td>
</tr>
<tr>
<td><strong>CA-10 KLED</strong></td>
<td>* LED keypads</td>
</tr>
<tr>
<td><strong>CA-10 E</strong></td>
<td>* zone expansion module</td>
</tr>
<tr>
<td><strong>CA-6</strong></td>
<td>* intruder alarm control panel</td>
</tr>
<tr>
<td><strong>CA-6 KLED</strong></td>
<td>* LED keypads</td>
</tr>
<tr>
<td><strong>CA-5</strong></td>
<td>* intruder alarm control panel</td>
</tr>
<tr>
<td><strong>CA-5 KLCD-L/CA-5 BLUE-L</strong></td>
<td>* LCD keypads</td>
</tr>
<tr>
<td><strong>CA-5 KLCD-S/CA-5 BLUE-S</strong></td>
<td>* LCD keypads</td>
</tr>
<tr>
<td><strong>CA-5 KLED-S</strong></td>
<td>* LED keypads</td>
</tr>
<tr>
<td><strong>ABAX 2 WIRELESS SYSTEM</strong></td>
<td>* wireless system controller</td>
</tr>
<tr>
<td><strong>ACU-220</strong></td>
<td>* wireless expansion module for wired zones and outputs</td>
</tr>
<tr>
<td><strong>ACO-220</strong></td>
<td>* wireless expansion module for wired zones and outputs</td>
</tr>
<tr>
<td><strong>COMMUNICATION MODULES</strong></td>
<td>* universal communication module</td>
</tr>
<tr>
<td><strong>GSM-X</strong></td>
<td>* universal reporting module</td>
</tr>
<tr>
<td><strong>GPRS-A</strong></td>
<td>* universal communication module</td>
</tr>
<tr>
<td><strong>ETHM-2</strong></td>
<td>* TCP/IP communication module</td>
</tr>
<tr>
<td><strong>POWER SUPPLIES</strong></td>
<td>* backup power supplies</td>
</tr>
<tr>
<td><strong>APS-412</strong></td>
<td>* backup power supplies</td>
</tr>
<tr>
<td><strong>AP-412</strong></td>
<td>* backup power supplies</td>
</tr>
<tr>
<td><strong>ACCO ACCESS CONTROL SYSTEM</strong></td>
<td>* control panel</td>
</tr>
<tr>
<td><strong>ACCO-NT</strong></td>
<td>* door controllers</td>
</tr>
<tr>
<td><strong>ACCO-KP</strong></td>
<td>* door controllers with power supply</td>
</tr>
<tr>
<td><strong>MONITORING</strong></td>
<td>* mimic board for STAM monitoring station</td>
</tr>
<tr>
<td><strong>CODE LOCKS</strong></td>
<td>* zone keypads</td>
</tr>
<tr>
<td><strong>SZW-02</strong></td>
<td>* code lock</td>
</tr>
</tbody>
</table>

* The chart indicates what devices can be installed in the given enclosure. It does not specify how many different devices can be installed in one enclosure.

** In determining whether a particular module with power supply can be installed, the parameters of the transformer installed in the enclosure are taken into account.
Power supply

Components of the alarm system must be supplied with DC or AC voltage. Switching mode power supplies, batteries and transformers available from SATEL ensure continuous operation of the devices included in the system.

**POWER SUPPLIES**

**APS-612**

Backup power supply

- certified for **EN 50131-3 Grade 3**
- meets **EN 60950-1** safety requirements
- conforms to conducted and radiated EMI level according to **EN 55011** Class B
- 12 V DC high-efficiency switching mode power supply with active PFC
- total output current: 3 A (output) + 3 A (charging)
- short-circuit and overload protection
- accepts sealed lead-acid battery
- optional 1.5 A or 3 A battery charging current
- battery deep discharge protection
- overheat protection
- 4 DC outputs for indication of troubles
- optical indication of mains, battery, overload and overheat status
- audible signaling of troubles
- designed for mounting on DIN 35 mm rail and in OPU-3 P, OMI-5 enclosures
### APS-412
Backup power supply
- certified for **EN 50131-6 Grade 2**
- output 12 V DC
- power supply capacity: 4 A (total)
- 3 OCP outputs for remote supervision
- dedicated connector for use with new SATEL modules
- DIN 35 mm rail mountable
- short circuit and overload protection
- designed for use with sealed lead-acid batteries
- high efficiency switch mode power supply
- does not require mains transformer
- current controlled battery charging circuit
- battery deep discharge protection
- optical indication for mains, battery and overload status
- acoustic failure indication

### APS-30
Backup power supplies
- **EN 50131-6 Grade 2** compliance
- high efficiency 12 VDC switching mode power supply
- total output current:
  - 3 A (APS-30)
- short circuit and overload protection built-in
- designed for use with sealed lead-acid batteries
- current controlled battery charging circuit
- battery deep discharge protection
- 2 OCP outputs for remote supervision
- optical indication of the AC mains supply/battery status and the battery charging process
- acoustical failure indication

### TRANSFORMERS

<table>
<thead>
<tr>
<th>TR 60 VA</th>
<th>TR 40 VA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transformer</td>
<td>Transformer</td>
</tr>
<tr>
<td>input: 230 V AC, 0.8 A mains input fuse</td>
<td>input: 230 V AC, 0.63 A mains input fuse</td>
</tr>
<tr>
<td>output: 18 / 20 V AC</td>
<td>output: 16 / 18 V AC</td>
</tr>
<tr>
<td>output current: 3 A</td>
<td>output current: 2.22 A</td>
</tr>
<tr>
<td>degree of protection IP43</td>
<td>degree of protection IP43</td>
</tr>
</tbody>
</table>

### BATTERIES

<table>
<thead>
<tr>
<th>BAT-ER-3,6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Battery for wireless outdoor sirens</td>
</tr>
<tr>
<td>dedicated to power <strong>ASP-100</strong> and <strong>MSP-300</strong> sirens</td>
</tr>
<tr>
<td>voltage 3.6 V, capacity 13 Ah</td>
</tr>
<tr>
<td>operating temperature range from -55°C to +85°C</td>
</tr>
<tr>
<td>over 5 years life expectancy (at temperatures up to 30°C)</td>
</tr>
<tr>
<td>low self-discharge (&lt;1% per year at 20°C)</td>
</tr>
<tr>
<td>short-circuit protection</td>
</tr>
<tr>
<td>resistance to harsh working conditions</td>
</tr>
</tbody>
</table>
CODE LOCKS

SZW-02
Code lock
- operates control panels: arming, disarming and entry delay triggering
- controls relay for electromagnetic lock/electric strike
- LED for relay state indication
- 3 incorrect codes alarm

PK-01
Standalone access control module
- user authorization with code or proximity card
- up to 50 users
- module configuration via keypad
- LED status indicators
- keypad backlight for easy use in dark areas
- built-in relay for electromagnetic locks
- sealed circuitry for outdoor use
- optional MLT-POD spacer pad available

Accessories
Wide range of security systems related accessories is an addition to SATEL’s base product lines, which is intended to provide a better customization for the whole project.
**PROTECTION MODULES**

**ZB-1**  
Battery deep discharge protection  
- battery disconnecting to prevent deep discharge  
- compatible with all devices not equipped with such feature

**ZB-2**  
Automatic overload protection with notification output  
- protects 12 V power supply outputs against overloading  
- compatible with all power supplies not equipped with such feature  
- OVL output for overload indication

**DISTRIBUTION BOX MODULES**

**MZ CT**  
Distribution box modules  
- facilitates installation of low-voltage installations, like alarm installations  
- KRONE type terminals

**MZ S/L**  
Distribution box modules  
- facilitates installation of low-voltage installations, like alarm installations  
- screw type terminals

**CABLES**

**USB-RS**  
USB-RS converter  
- appropriate for the SATEL devices provided with the following port:  
  » RS-232 – PIN5 or RJ type connector  
  » RS-232 (TTL) – PIN3 or RJ type connector  
- suitable for programming SATEL radio controllers  
- 4 cables terminated with appropriate plugs  
- USB type B socket for connecting the converter to the computer  
- delivered with a USB cable (1.8 m)

**PIN5/RJ-TTL**  
RS-232 TTL cable  
- cable for connecting of ETHM-1 and ETHM-1 Plus module with VERSA

**PIN5/PIN5**  
RS-232 TTL cable  
- cable for the connection of RS Ports of INTEGRA and CA-64 panels equipped with PIN5 connector and modules equipped with PIN5 connector: GSM-X, ETHM-1, ETHM-1 Plus

**RJ/PIN5**  
RS-232 cable  
- cable for connection of RS Ports of INTEGRA panels equipped with RJ connector and modules equipped with PIN-5 connector: GSM-X, ETHM-1, ETHM-1 Plus

**TRAINING SUITCASE**

**WSR**  
Demonstration sets  
- available for any type of control panel  
- comprise:  
  » mainboard  
  » keypad  
  » power supply  
  » some modules  
- are excellent equipment for presentation and training  
- different equipment configurations upon request
ANTENNAS

ANT-GSM-I
GSM antenna
- 900/1800 MHz antenna for modules: GSM-X, INT-GSM, MICRA, INTEGRA 128-WRL, PERFECTA, VERSA Plus
- designed for mounting in OPU-2 B, OPU-3 P, OPU-4 P enclosures

ANT-GSM-E
GSM antenna
- 900/1800 MHz antenna for modules: GPRS-A, MICRA, INTEGRA 128-WRL, VERSA Plus
- SMA male connector

ANT-900/1800
GSM antenna
- 900/1800 MHz antenna for modules: GPRS-A, MICRA, INTEGRA 128-WRL, VERSA Plus

ANT-868
ISM antenna
- antenna for ABAX wireless devices: ACX-201, INTEGRA 128-WRL
- 868 MHz

ANT-OBU-Q
GSM antenna
- GSM quad-band antenna for following modules: GPRS-A, MICRA, INTEGRA 128-WRL, VERSA Plus

IPX-SMA
IPX / SMA adapter cable
- adapter cable for connecting antenna with SMA connector, e.g. ANT-OBU-Q, ANT-900/1800, ANT-GSM-E to GSM/GPRS communication module with IPX connector
- designed for: GSM-X, MICRA, INTEGRA 128-WRL, PERFECTA, VERSA Plus

ACCESSORIES FOR ACTIVA

ACTIVA-D
Distance piece for ACTIVA-K

ACTIVA-K
Angular holder with tamper for ACTIVA barriers

SIREN ACCESSORIES

SPL-TO
Optical anti foam tamper detector
- detects an attempt of damping the siren with acoustical signaling with PUR foam
- compatibility: SPL-2030, SPL-5010, SPL-5020

SX6-TO
Optical anti foam tamper detector
- detects an attempt of damping the siren with acoustical signaling with PUR foam
- compatibility: SD-6000
DETECTOR ACCESSORIES

**BRACKET A**
Adjustable holder for motion detectors
- tilt angle adjustment within approx. 30°
- swivel angle adjustment within approx. 90°
- optional wall- or ceiling mounting of detector
- compatibility: AGATE, AMBER, AMBER 2E, AOC-260, AQUA Luna, AQUA Pro, AQUA S, COBALT, COBALT Plus, COBALT Pro, GRAPHITE, GREY, GREY Plus, IVORY, MPD-300, NAVY, SILVER, TOPAZ

**BRACKET B**
Adjustable holder for motion detectors
- inner cable duct
- fully enclosed design for better appearance of installation
- tilt angle adjustment within approx. 30°
- swivel angle adjustment within approx. 90°
- optional wall- or ceiling mounting of detector
- compatibility: AGATE, AMBER, AMBER 2E, AOC-260, AQUA Luna, AQUA Pro, AQUA S, COBALT, COBALT Plus, COBALT Pro, GRAPHITE, GREY, GREY Plus, IVORY, MPD-300, NAVY, SILVER, TOPAZ

**FPX-1**
Flood probe for the universal detector AXD-200
- cable length: 3 m

Available in three color versions: white (FPX-1 W), brown (FPX-1 BR), dark gray (FPX-1 DG)

**HOOD C**
Protective hood for outdoor detectors
- protects the detector against atmospheric precipitation, pollution, etc.
- mounted with snap catches, without using any tools

Available in two color versions: white (Hood C), gray (Hood C GY)

**LR-CL**
Enclosure cover with LR (long range) type Fresnel lens for APD-200 and APMD-250 detectors
- complete enclosure cover for APD-200 and APMD-250 motion detectors
- long range type Fresnel lens

**CT-CL**
Enclosure cover with CT (vertical curtain) type Fresnel lens for APD-200 and APMD-250 detectors
- complete enclosure cover for APD-200 and APMD-250 motion detectors
- vertical curtain type Fresnel lens

**OPT-1**
IR keyfob
- compatible with the OPAL Plus outdoor detector
- remote sensitivity configuration of PIR and MW detection circuits and dusk sensor

**BRACKET C**
Set of wall brackets for mounting outdoor detectors

**Ball-joint swivel type bracket:**
- for mounting on a flat surface (rectangular pillar, wall)
- angle between detector base and bracket mounting surface adjustable horizontally through 90° (+/- 45°)
- angle between detector base and bracket mounting surface adjustable vertically through 60° (+/- 30°)
- tamper switch which responds to an attempt to pull the bracket away from wall, complete with 3 wires for connecting it to the NC or NO type circuit

**Angle type bracket:**
- for mounting on a flat surface (rectangular pillar, wall, inside corner of two walls)
- tilt angle between detector base and bracket mounting surface: 45°
- tamper element breaking off at an attempt to detach the bracket from the wall
### MP-1
**Relay module**

- high-current AC/DC appliance control
- triggering with low-current OC outputs
- 4 relays
- 5 fuses

### INT-VMG
**Voice message module**

- ability to record up to 32 messages
- triggering messages with the **INTEGRA** and **INTEGRA Plus** alarm control panel or other external devices
- built-in amplifier allows direct connection of a loudspeaker
- line output for easy connection to a PA system
- built-in USB port for quick programming with a computer

### MST-1
**DTMF remote operation module**

- remote operation over telephone line by using DTMF telephone handset
- remote system state check
- CA-10 and CA-6 compatible

### MIC-1
**Microphone**

- microphone designed for work with **PERFECTA**, **PERFECTA-T** control panels and **MICRA** module
- compact design for easy installation in any location
- dedicated 10 m long microphone cable with 3.5 mm jack plug

### CZ-EMM POD
**Spacer for CZ-EMM reader** (6 mm)

### MLT-POD
**Spacer for proximity card reader**

- increased card reading range when installed on surfaces with metal components

### HOLDER A / HOLDER A2
**Holder**

- compatibility: **ACU-280** (HOLDER A2), **VERSA-MCU** (HOLDER A)
- mounted inside **OPU-4 P** enclosure
- easy installation

### GKD-1
**Changeable keypad buttons with color pictograms** for **APT-200**, **MPT-300**, **MPT-350** keyfobs

- changeable keypad buttons for **APT-200**, **MPT-300**, **MPT-350** keyfobs
- color pictograms:
  - arming in full mode
  - arming in night mode
  - disarming
  - control within horizontal direction
  - control within vertical direction

### SDR-18
**Flat-head screwdriver (0.3x1.8x40 mm)**

- screwdriver with a 1.8 mm wide flat drive tip
- application: **AXD-200**, **ACX-210**, **MMD-302**
## List of Certificates for Devices

### Control Panels, Keypads and Expansion Modules

| INTEGRA 24 | Intruder alarm control panel | ☑️ |
| INTEGRA 32 | Intruder alarm control panel | ☑️ |
| INTEGRA 64 | Intruder alarm control panel | ☑️ |
| INTEGRA 128 | Intruder alarm control panel | ☑️ |
| INTEGRA 64 Plus | Intruder alarm control panel | ☑️ |
| INTEGRA 128 Plus | Intruder alarm control panel | ☑️ |
| INTEGRA 256 Plus | Intruder alarm control panel | ☑️ |
| INTEGRA 128-WRL | Intruder alarm control panel | ☑️ |
| INTEGRA 64 Plus | Intruder alarm control panel | ☑️ |
| INTEGRA 128 Plus | Intruder alarm control panel | ☑️ |
| INTEGRA 256 Plus | Intruder alarm control panel | ☑️ |
| INTEGRA 128-WRL | Intruder alarm control panel | ☑️ |
| INT-E | Zone expansion module | ☑️ |
| INT-KLCD | LCD keypad | ☑️ |
| INT-KLCDL | LCD keypad | ☑️ |
| INT-KLCDM | LCD keypad | ☑️ |
| INT-KLCDS | LCD keypad | ☑️ |
| INT-KLP | LCD keypad | ☑️ |
| INT-KWR1 | LCD keypad | ☑️ |
| INT-KSG | Touch-sensor keypad | ☑️ |
| INT-O | Output expansion modules | ☑️ |
| INT-5F | Partition keypad | ☑️ |
| INT-SCR-8L | Multi-function keypad with proximity card reader | ☑️ |
| INT-15G | Touchscreen keypad | ☑️ |
| INT-15H | Touchscreen keypad | ☑️ |

### Perfecta 16

- Intruder alarm control panel | ☑️ |
- PERFECTA 16-WRL | Intruder alarm control panel | ☑️ |
- PERFECTA 32 | Intruder alarm control panel | ☑️ |
- PERFECTA 32-WRL | Intruder alarm control panel | ☑️ |
- PRF-LCD / PRF-LCD-WRL | LCD keypads for PERFECTA control panels | ☑️ |

### VERSA

- VERSA 5 | Intruder alarm control panel | ☑️ |
- VERSA 10 | Intruder alarm control panel | ☑️ |
- VERSA 15 | Intruder alarm control panel | ☑️ |
- VERSA Plus | Intruder alarm control panel | ☑️ |
- VERSA IP | Intruder alarm control panel | ☑️ |
- VERSA-LCDM-WH | LCD keypad for VERSA panels | ☑️ |
- VERSA-KWR12 | LCD keypad for VERSA panels | ☑️ |

### ABAK 2 Two Way Wireless System

- ACU-220 | Wireless system controller | ☑️ |
- ACU-280 | Wireless system controller | ☑️ |
- APD-200 | Wireless PIR motion detector | ☑️ |
- APD-200 Pet | Wireless PIR motion detector | ☑️ |
- APMD-250 | Wireless dual-technology motion detector | ☑️ |
- AXD-200 | Wireless universal detector | ☑️ |
- ASP-215 | Wireless indoor acoustical-optical siren | ☑️ |
- ASP-200 | Wireless outdoor acoustical-optical siren | ☑️ |
- ADDC-200 | Wireless dual-technology outdoor curtain detector | ☑️ |
- ADD-210 | Wireless dual-technology outdoor motion detector | ☑️ |

### Communication Modules

- ETHM-1 Plus | TCP/IP communication module | ☑️
- ETHM-2 | Universal TCP/IP communication module | ☑️
- GSM-X | Universal multi-purpose GSM/GPRS communication module | ☑️
- GSM-X with GSM-X-ETH | Universal multi-purpose GSM/GPRS communication module with Ethernet module for GSM-X communicator | ☑️
- GPS-A | Universal GPRS monitoring module | ☑️
- INT-GSM | GPRS communication module | ☑️

### Detectors

- AGATE | Outdoor curtain motion detector | ☑️
- AGATE Plus | Digital PIR motion detector | ☑️
- AQUA Plus | Digital PIR motion detector | ☑️
- AQUA Pet | Digital PIR motion detector | ☑️
- AQUA Ring | Ceiling mounted digital PIR | ☑️
- AQUA S | Digital PIR motion detector | ☑️
- AQUA Luna | Digital PIR motion detector with emergency lighting feature | ☑️
- GRAPHITE | Digital PIR motion detector | ☑️
- GRAPHITE PET | Digital PIR motion detector | ☑️
- GREY Plus | Digital dual-technology PIR+MW motion detector | ☑️
- IVORY | Advanced PIR motion detector with mirror optics | ☑️
- MPD-300 | Wireless PIR detector | ☑️
- MMD-300 | Wireless magnetic contact | ☑️
- OPAL | Outdoor PIR+WM dual-tech motion detector | ☑️
- OPAL Plus | Outdoor PIR+WM dual-tech motion detector | ☑️
- OPAL Pro | Outdoor PIR+WM dual-tech motion detector | ☑️
- S-1 | Magnetic detector | ☑️
- S-2 | Magnetic detector | ☑️
- S-3 | Magnetic detector | ☑️
- S-4 | Magnetic detector | ☑️
- SILVER | Digital dual-technology motion detector | ☑️

### Sirens

- MSP-300 | Wireless outdoor acoustical-optical siren | ☑️
- SD-6000 | Outdoor siren with optical and acoustical signaling | ☑️
- SP-4004 | Outdoor siren with optical and acoustical signaling | ☑️
- SP-6000 | Outdoor siren with optical and acoustical signaling | ☑️
- SPW-210 | Indoor siren with acoustical signaling | ☑️

### Enclosures

- OM-5 | Enclosure | ☑️
- OM-4 | Enclosure | ☑️
- OM-3 | Enclosure | ☑️
- OM-2 | Enclosure | ☑️
- OM-1 | Enclosure | ☑️
- OPU-3P | Enclosure | ☑️

### Power Supplies

- APS-612 | Backup power supply | ☑️
- APS-1012 | Backup power supply | ☑️
- APS-412 | Backup power supply | ☑️
- APS-30 / APS-15 | Backup power supply | ☑️

* certified for EN 50131 Grade 2 with PERFECTA systems
** requirement for systems that meet EN 50131 standards for Grade 2 or Grade 3
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