Satel®

MADE TO PROTECT

MADE TO PROTECT

Product catalogue

2024

www.satel.pl

30 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 30 years.

This philosophy of management and hard work of more than 350 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
https://www.satel.pl/en/about-us/

SATEL: everyday safety

SATEL: Made to Protect

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Intruder alarm control panels

INTRUDER ALARMS

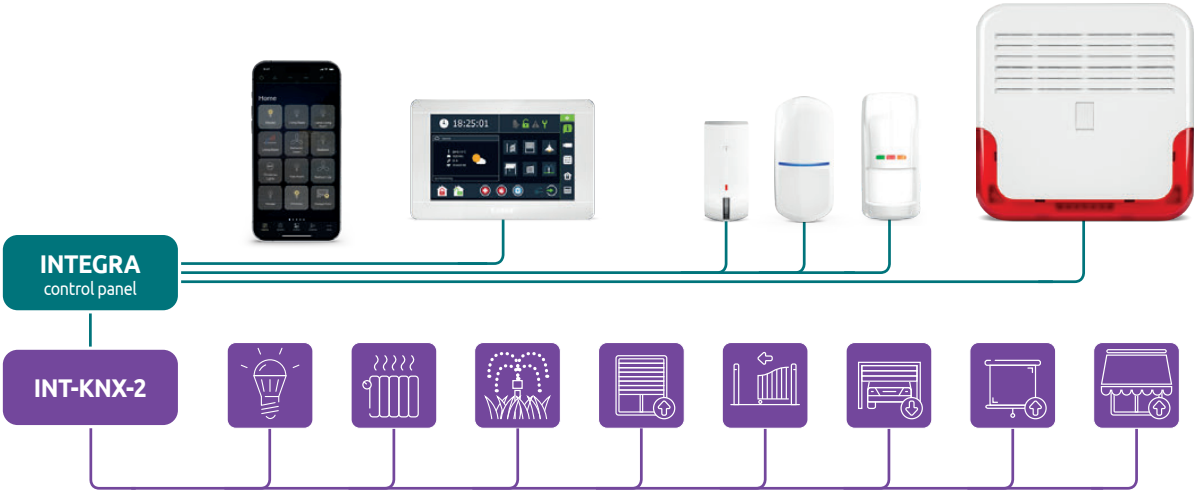
Intruder alarm control panels are the most important products of SATEL's product portfolio. Wide selection of available devices allows optimal choice of proper components for a particular installation – from a small shop or flat, up to large commercial and office buildings.

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.

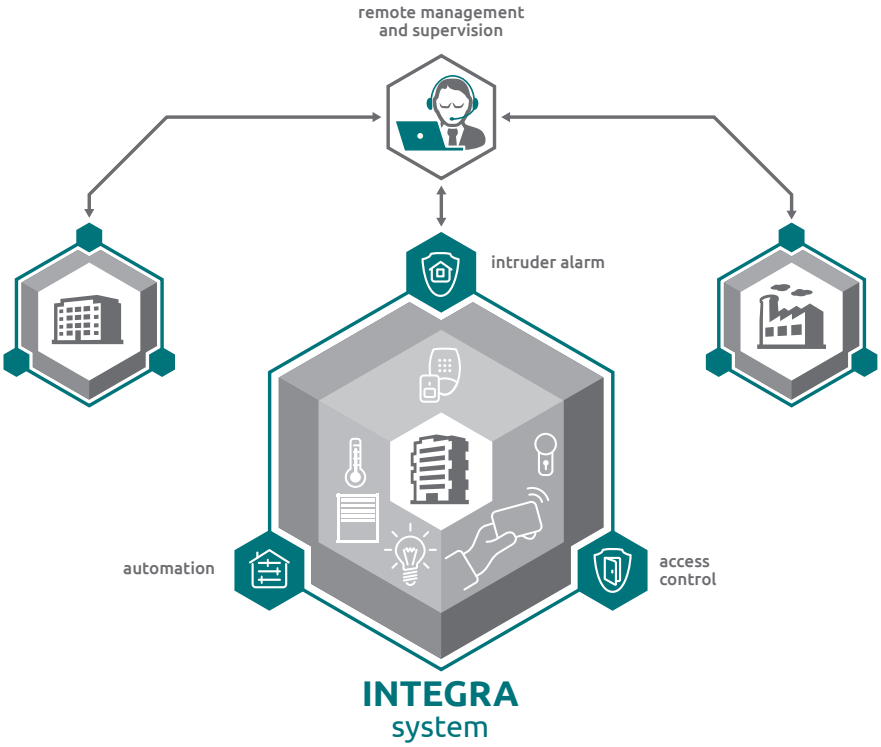
integra | versa | perfecta

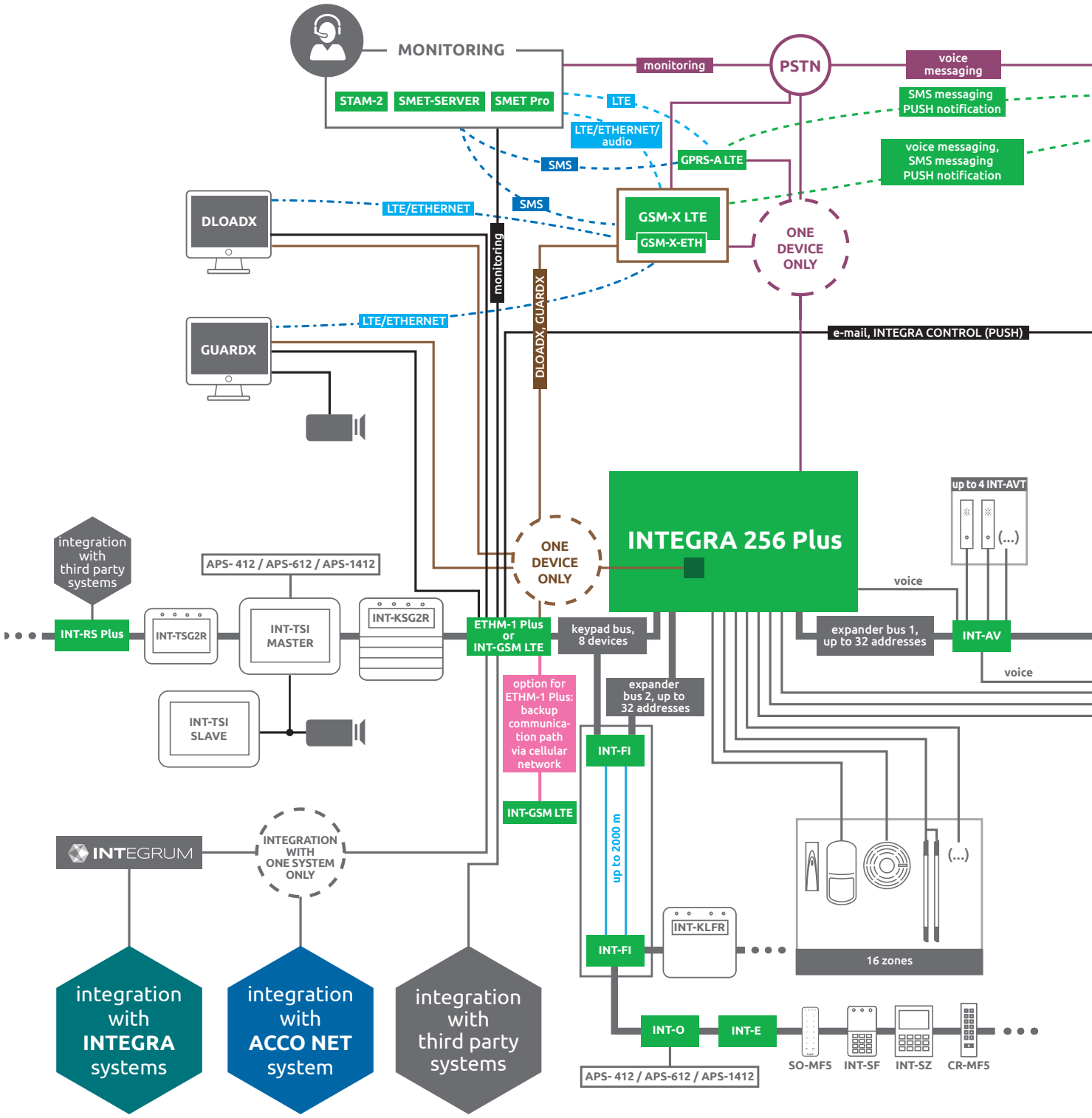
INTEGRA range of intruder control panels

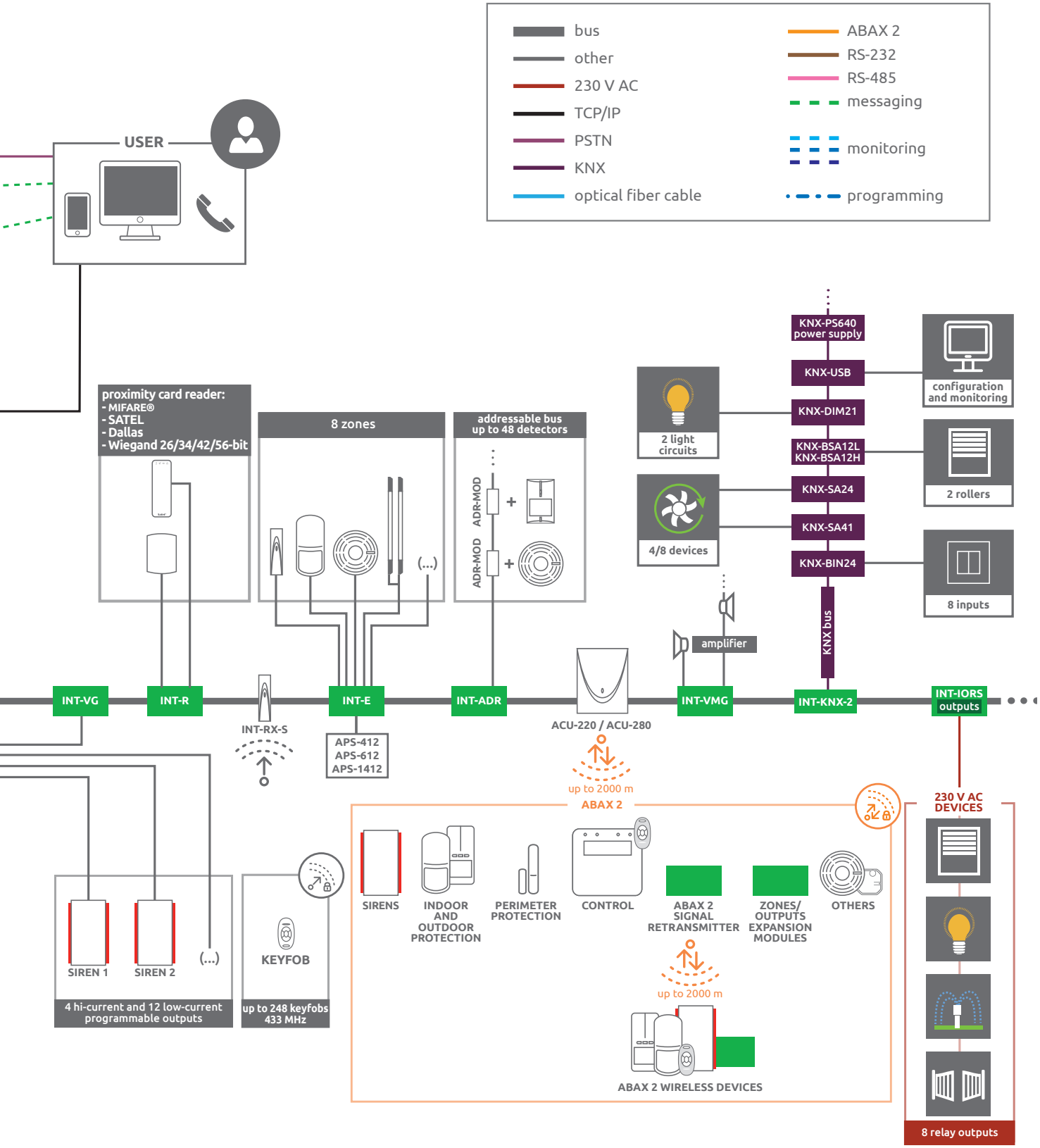
Advanced devices such as control panels from INTEGRA and INTEGRA Plus family, except for their basic function i.a. detection and notification of intruders' trespassing, can provide protection in a much broader sense in residential buildings, and guarantee comfort of everyday life through conducting basic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




MONITORING
STAM-2
SMET-SERVER
SMET Pro
monitoring
PSTN
voice messaging
LTE
LTE/ETHERNET/ audio
SMS messaging PUSH notification
SMS
GPRS-A LTE
voice messaging, SMS messaging PUSH notification
DLOADX
LTE/ETHERNET
SMS
GSM-X LTE
GSM-X-ETH
ONE DEVICE ONLY
monitoring
DLOADX, GUARDX
GUARDX
LTE/ETHERNET
e-mail, INTEGRA CONTROL (PUSH)
up to 4 INT-AVT
(...)
INTEGRA 256 Plus
integration with third party systems
APS- 412 / APS-612 / APS-1412
ONE DEVICE ONLY
voice
INT-RS Plus
INT-TSG2R
INT-TSI MASTER
INT-KSG2R
ETHM-1 Plus or INT-GSM LTE
keypad bus, 8 devices
expander bus 1, up to 32 addresses
INT-AV
voice
option for ETHM-1 Plus: backup communica-tion path via cellular network
expander bus 2, up to 32 addresses
INT-TSI SLAVE
INT-FI
INT-GSM LTE
up to 2000 m
INTEGRUM
INTEGRATION WITH ONE SYSTEM ONLY
INT-KLFR
(...)
INT-FI
16 zones
integration with INTEGRA systems
integration with ACCO NET system
integration with third party systems
INT-O
INT-E
SO-MF5
INT-SF
INT-SZ
CR-MF5
APS- 412 / APS-612 / APS-1412

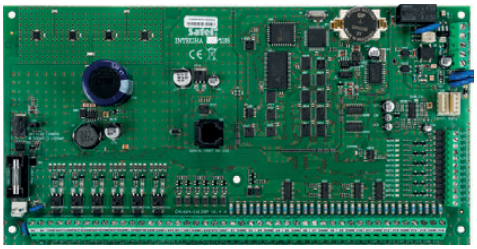


Structure outline of the **INTEGRA Plus** intelligent alarm system.
The above exemplary structure does not include the entire product offer of SATEL.

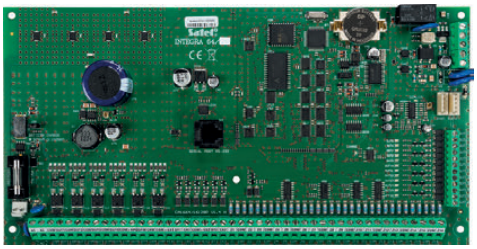
INTEGRA INTRUDER ALARM CONTROL PANEL

- certified for **EN 50131 Grade 3** (**INTEGRA 64 Plus/128 Plus/256 Plus**)
- certified for **EN 50131 Grade 2** (**INTEGRA 32/64/128**)
- 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:
  - » thermostat type outputs
- 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
- 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**
- control panel program stored in FLASH memory with the option to update it - locally or remotely (via **UpServ**) - without dismantling of the control panel
- panel programming:
  - » local (LCD keypad/PC (with **DLOADX** program) connected by RS-232, or USB **INTEGRA Plus** only)
  - » remotely (a mobile phone or a computer connecting via a modem or via a cellular network or Ethernet)
- 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-VG**)
- advanced telephone tone analysis:
  - » TBR-21 compliant tone detection
  - » intelligent redial attempts
  - » programmable dialing sequence
- built-in 300 bps modem
- compatibility with dedicated communication modules:
  - » Ethernet: **ETHM-1 Plus**
  - » cellular LTE: **INT-GSM LTE** or GPRS: **INT-GSM**
- 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
  - » **CONFX** 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

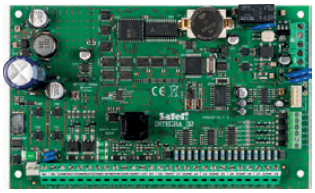
GRADE 2



INTEGRA 128

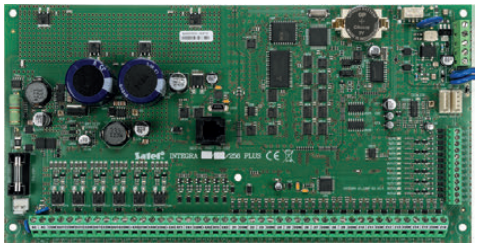


INTEGRA 64

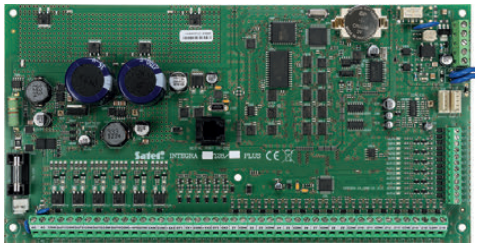


INTEGRA 32

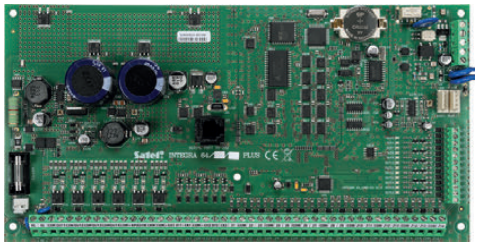
GRADE 3



INTEGRA 256 Plus



INTEGRA 128 Plus



INTEGRA 64 Plus

integra

OPERATION, CONTROL AND MANAGEMENT

INT-TSI

Touchscreen keypad

- certified for **EN 50131 Grade 3**
- 7" capacitive touchscreen
- 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
- 2 zones
- support for IP cameras video streaming
- "Intercom" widget - video intercom functionality; cooperation with door stations supporting the SIP protocol
- possibility to activate FIRE, AUX, PANIC alarms

GRADE 3 | 7" screen diagonal | available in black (INT-TSI-B), white (INT-TSI-W)

INT-TSH2 / INT-TSH2R

Touchscreen keypad

- certified for **EN 50121 Grade 3 (INT-TSH2)**
- **EN 50131 Grade 3** compliance **(INT-TSH2R)**
- compatible with the **INTEGRA**, **INTEGRA Plus**, **VERSA** and **PERFECTA 64 M** control panels
- 7" capacitive touchscreen
- glass panel for display protection
- MACRO features to facilitate home automation control
- multi-level menu
- 24 user screens
- fully configurable interface via the **DLOADX** software
- more than 20 preset themes available or possibility to create a new user theme
- possibility of activating the FIRE, AUX, PANIC alarms
- 2 programmable zones (**INTEGRA** and **INTEGRA Plus** only)
- MIFARE® proximity card reader (**INTEGRA** and **INTEGRA Plus** only) (**INT-TSH2R**)

GRADE 3 | GRADE 3 | 7" screen diagonal | available in black (INT-TSH2-B and INT-TSH2R-B) and white (INT-TSH2-W and INT-TSH2R-W) | MIFARE®

INT-TSG2 / INT-TSG2R

Touchscreen keypad

- certified for **EN 50121 Grade 3 (INT-TSG2)**
- **EN 50131 Grade 3** compliance **(INT-TSG2R)**
- compatible with the **INTEGRA**, **INTEGRA Plus**, **VERSA** and **PERFECTA 64 M** control panels
- 4,3" capacitive touchscreen
- glass panel for display protection
- MACRO features to facilitate home automation control
- multi-level menu
- 24 user screens
- fully configurable interface via the **DLOADX** software
- more than 20 preset themes available or possibility to create a new user theme
- LEDs informing about the current system status
- possibility of activating the FIRE, AUX, PANIC alarms
- 2 programmable zones (**INTEGRA** and **INTEGRA Plus** only)
- MIFARE® proximity card reader (**INTEGRA** and **INTEGRA Plus** only) (**INT-TSG2R**)

GRADE 3 | GRADE 3 | 4,3" screen diagonal | available in black (INT-TSG2-B and INT-TSG2R-B) and white (INT-TSG2-W and INT-TSG2R-W) | MIFARE®

INT-KSG2R

Keypad with touch keys

- certified for **EN 50121 Grade 3**
- compatible with the **INTEGRA**, **INTEGRA Plus** and **PERFECTA 64 M** control panels
- large backlit graphic display
- configurable screensaver with optional display of the clock, date, status of system components (partitions, zones, outputs), temperatures
- MACRO features to facilitate home automation control
- keypad with touch keys with support for swipe gestures
- dedicated keys:
  - » for activating the FIRE, AUX, PANIC alarms
  - » function (**INTEGRA**: preset function selection; **PERFECTA 64 M**: arming in various modes/disarming)
  - » for activating macro-commands
- keypad and display backlight in white
- LEDs informing about the current system status
- 2 programmable zones (**INTEGRA** and **INTEGRA Plus** only)
- MIFARE proximity card reader (**INTEGRA** and **INTEGRA Plus** only)

GRADE 3 | available in: black (INT-KSG2R-B) and white (INT-KSG2R-W) | MIFARE®

INT-KLFR

LCD keypad

- 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 125 kHz

GRADE 3

available in
black (INT-KLFR-B) and white (INT-KLFR-W)

EM Marin

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 reader 125 kHz
- audible signaling of selected system events
- FIRE, AUX, PANIC alarms triggered from keypad
- remote configuration and update of firmware
- tamper protection
- power supply:
  - » 2 x **CR123A** 3V batteries (required)
  - » **APS-055** 5 V DC power adapter (optional)

GRADE 2

abax2

available in
black (INT-KWRL2-B) and white (INT-KWRL2-W)

EM Marin

INT-KLCD / INT-KLCDR

LCD keypad

- 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 125 kHz (**INT-KLCDR**)

GRADE 3 GRADE 2

available with backlight
white (INT-KLCD-W, INT-KLCDR-W) and blue (INT-KLCD-BL, INT-KLCDR-BL)

EM Marin

INT-KLCDL

LCD keypad

- **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**

GRADE 2

available with backlight
blue (INT-KLCDL-BL) and green(INT-KLCDL-GR)

INT-KLCDS

LCD keypad

- **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**

GRADE 2

available with backlight
blue (INT-KLCDS-BL) and green(INT-KLCDS-GR)

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

GRADE 2

available in
black (INT-SF-B)
and white (INT-SF-W)

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

GRADE 2

available with backlight in
white (INT-S-W), blue (INT-S-BL) and green (INT-S-GR)

SO-MF5

Multi-function keypad with MIFARE® proximity card reader

- user identification by code and/or MIFARE® proximity card
- option to operate as:
  - » **INT-SCR** partition keypad in the **INTEGRA** alarm system
  - » **ACCO-SCR** keypad with proximity card reader in the **ACCO NET** or **ACCO** access control system
  - » keypad with proximity card reader in systems of other manufacturers (OSDP, Wiegand)
  - » standalone door control module

Descriptions page 78

MIFARE®

available in
black (SO-MF5-B) and white (SO-MF5-W)

CR-MF5

Multi-function keypad with MIFARE® proximity card reader

- user identification by code and/or MIFARE® proximity card
- option to operate as:
  - » **INT-SCR** partition keypad in the **INTEGRA** alarm system
  - » **ACCO-SCR** keypad with proximity card reader in the **ACCO NET** or **ACCO** access control system
  - » keypad with proximity card reader in systems of other manufacturers (OSDP, Wiegand)
  - » standalone door control module

Descriptions page 78

MIFARE®

GRADE 3

EM Marin

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 125 kHz
- 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

EM Marin

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

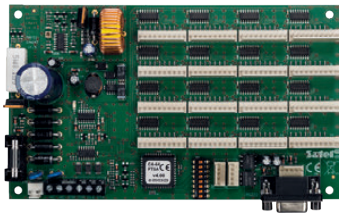
433 MHz keyfob receiver expansion module

- full remote control user identification
- flexible assignment of functions to keyfobs' buttons
- compatible with: **T-1, T-2, T-4, MPT-350, MPB-300**
- 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

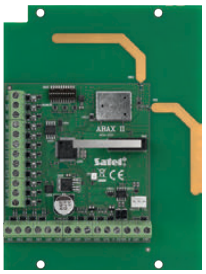
INTEGRA CONTROL

Application for remote control of INTEGRA and INTEGRA Plus systems by using smartphones and tablets

- control system arming modes and connected devices, check their current status
- browse events recorded by the alarm system
- trigger run entire sequences of commands thanks to macro commands
- create shortcuts to selected functions and add them to the home screen of your mobile device
- run created shortcuts using voice assistants
- control and change room temperature
- create and edit timers
- watch video feed from external IP cameras and associate macro commands with them for faster access
- receive push notifications and critical alerts

integra CONTROL | iOS | HUAWEI

ZONES/OUTPUTS EXPANSION MODULES



abax2

GRADE 2

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**, 6 **VERSA-KWRL2** or 4 **PRF-LCD-A2** wireless keypads
- support for up to 256 wireless keyfobs
- can work together with **INTEGRA**, **INTEGRA Plus**, **VERSA** and **PERFECTA 64 M** 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
- integration, for example, with automation or data acquisition systems using the Modbus RTU communication protocol – connection via the RS-485 bus

Descriptions page 34

abax2

GRADE 2

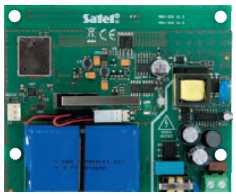
ACU-280

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**, 6 **VERSA-KWRL2** or 4 **PRF-LCD-A2** wireless keypads
- supports up to 248 wireless keyfobs
- can work together with **INTEGRA**, **INTEGRA Plus**, **VERSA** and **PERFECTA 64 M** control panels
- controller firmware update without demounting of the device
- remote configuration and update of devices registered to the controller
- integration, for example, with automation or data acquisition systems using the Modbus RTU communication protocol – connection via the RS-485 bus

Descriptions page 34

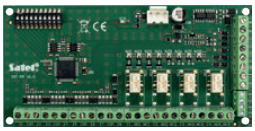
abax2



ARU-200

Radio signal retransmitter

- retransmission of signals of 46 wireless devices
- remote upgrade of retransmitter firmware
- LED indicator of retransmitter status
- tamper protection against opening the enclosure
- power supply 230 V AC
- built-in switching mode power supply
- short-circuit protection of power supply input
- battery as an emergency power source
- battery charging system
- battery monitoring and disconnection of a discharged battery
- operation within the two-way wireless **ABAX 2** system



GRADE 3

INT-PP

Zone and output expansion module

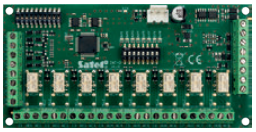
- certified for **EN 50131 Grade 3**
- system expansion with 8 zones
- system expansion with 8 outputs:
  - » 4 relay outputs
  - » 4 low current OC outputs
- compatible with **APS-412, APS-612** or **APS-1412** power supply

GRADE 3

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, APS-612** or **APS-1412** power supply



GRADE 3

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, APS-612** or **APS-1412** 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
- compatible with **APS-412, APS-612** or **APS-1412** power supply

INT-IORS

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
- compatible with **APS-412, APS-612** or **APS-1412** power supply

INT-ADR

Addressable bus expansion module

- dedicated independent bus for addressable detectors
- support for up to 48 addressable zones
- compatible with **APS-412, APS-612** or **APS-1412** 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

MODULES LTE and GPRS

INT-GSM LTE

INT-GSM

GRADE 3 SP 5

INT-GSM LTE / INT-GSM

LTE communication module / GPRS communication module — for INTEGRA and INTEGRA Plus control panels

- certified compliance with **EN 50131 Grade 3** and **EN 50136 SP 5**
- messaging: SMS, CLIP, PUSH, e-mail (**INTEGRA Plus**)
- remote control: SMS, CLIP, mobile application
- reporting: LTE* (TCP/UDP), SMS messages
- compatibility 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 from both SIM cards (**INT-GSM**)
- ability to check the pre-paid account balance and send notification if it drops below required minimum
- NTP server / cellular network time synchronization
- capability 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**

*data transmission using LTE/HSPA+/EDGE/GPRS technology in the case of INT-GSM LTE (depending on the cellular network capabilities) and GPRS technology in the case of INT-GSM

TCP/IP MODULES

SP 5

ETHM-1 Plus

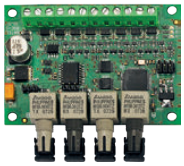
TCP/IP communication module

- certified for **EN 50131 Grade 2** and **EN 50136 SP 5**
- support for **INTEGRA**, **INTEGRA Plus**, **VERSA** and **PERFECTA 64 M** central control panels
- possibility of cooperation with the **INT-GSM LTE** / **INT-GSM** communication module (**INTEGRA**, **INTEGRA Plus** only):
  - » Dual Path Reporting, compliant with **EN 50136**
  - » backup communication path
- TCP/IP reporting
- remote programming via **DLOADX** or **PERFECTA Soft** program
- **INTEGRA** and **INTEGRA Plus** system supervision via **GUARDX** program
- support for **INTEGRA CONTROL**, **VERSA CONTROL**, **PERFECTA CONTROL** mobile application
- event notification capability using e-mail messages (**INTEGRA Plus**, **VERSA**)
- encrypted data transmission
- support for DHCP automatic address configuration
- open protocol for systems integration via the TCP/IP channel

INT-KNX-2

KNX integration module

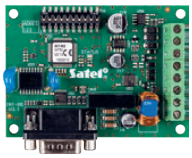
- KNX actuators control via **INTEGRA** and **INTEGRA Plus**
- reception of KNX telegrams by **INTEGRA** and **INTEGRA Plus**
- direct connection to KNX bus
- module configuration with **DLOADX**



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)



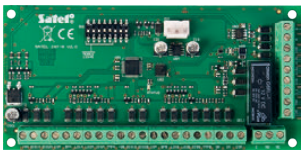
INT-RS Plus

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

For more information about KNX devices that work with INTEGRA control panels, – see page 87:
KNX – integration of various systems

ACCESS CONTROL MODULES



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

CR-MF3

MIFARE® proximity card reader

- user identification by MIFARE® proximity card
- option to operate as:
  - » proximity card reader in the **INTEGRA** alarm system
  - » proximity card reader in the **ACCO NET** or **ACCO** access control system
  - » proximity card reader in systems of other manufacturers (OSDP, Wiegand)
  - » standalone door control module

Descriptions page 78

SO-MF3

MIFARE® proximity card reader

- user identification by MIFARE® proximity card
- option to operate as:
  - » proximity card reader in the **INTEGRA** alarm system
  - » proximity card reader in the **ACCO NET** or **ACCO** access control system
  - » proximity card reader in systems of other manufacturers (OSDP, Wiegand)
  - » standalone door control module

available in
black (SO-MF3-B) and white (SO-MF3-W)

Descriptions page 78

SO-PRG-B

MIFARE® card programmer

- programming and reading MIFARE® proximity cards
- powered from the computer USB port
- LED indicators

Descriptions page 78

CZ-EMM / CZ-EMM2

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-EMM**)

CZ-EMM3 / 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 (**CZ-EMM4**)
- optional **MLT-POD** spacer pad available

INT-SZ

Code lock

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

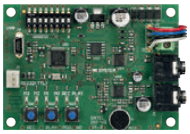
available with backlight
blue (INT-SZ-BL) and green(INT-SZ-GR)

CZ-DALLAS

Dallas iButton reader

- installed directly on wall/door frame
- support for standard Dallas iButtons

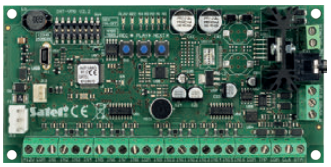
VOICE MESSAGING MODULES



INT-VG

Remote interactive voice module

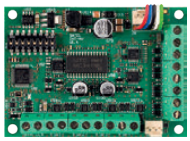
- customizable voice menu
- provides "text to speech" function
- remote arming/disarming and output control
- management of violation, zones and failures
- macro functions
- 16 voice messages can be assign to events
- programming settings using the **VG Soft** program



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-AV

Alarm acoustic verification module

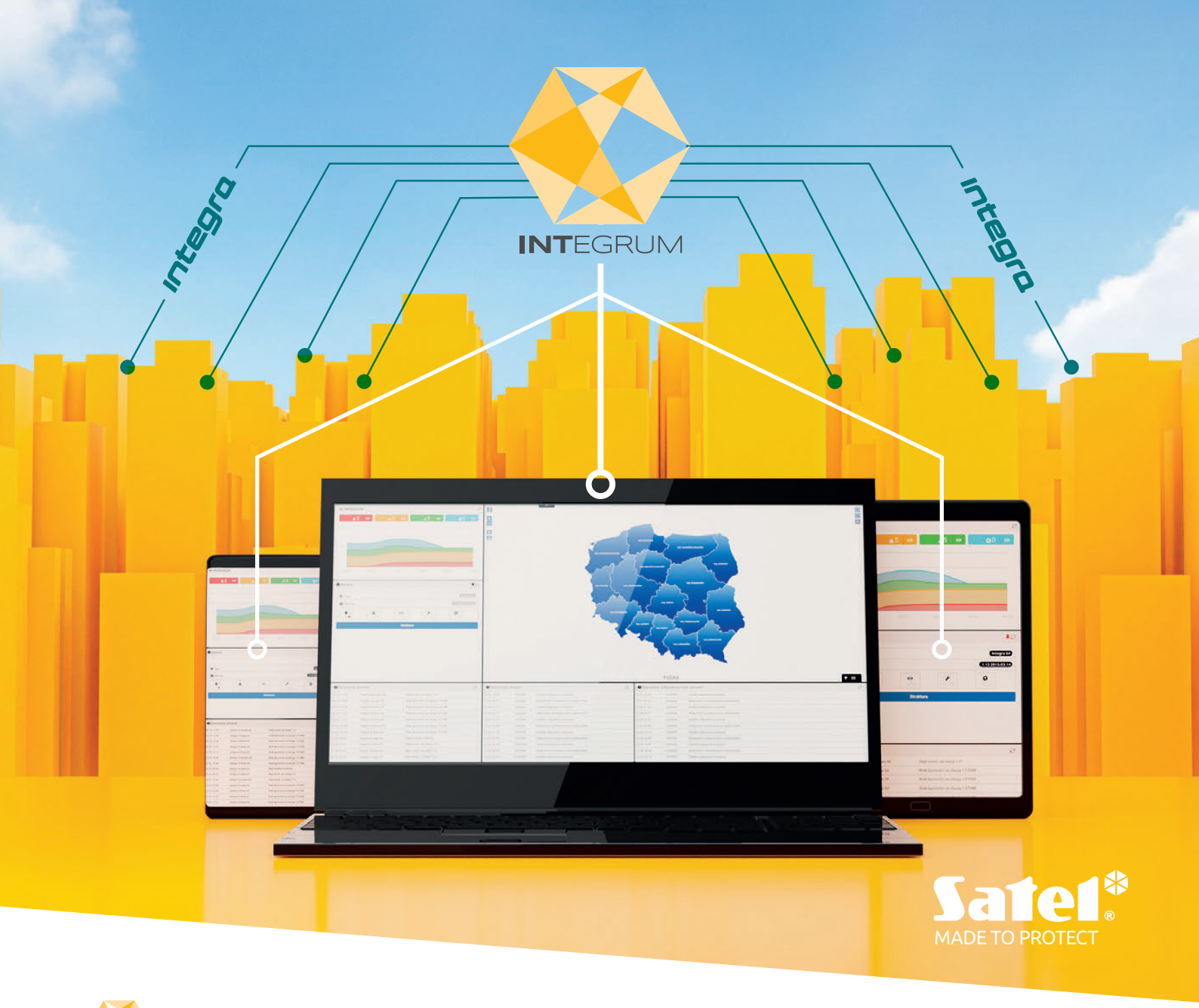
- alarm acoustic verification module enables the elimination of false alarms
- local broadcasting of messages from the monitoring station
- two-way transmission of audio signals between the intercoms and the telephone line
- works with up to 4 intercoms working in half duplex mode
- microphone sabotage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

For more information about devices that work with INTEGRA control panels, see page 29 – MODULES COMPATIBILITY WITH CONTROL PANELS



INTEGRUM

Software dedicated to management of a large number
of distributed security systems based on the **INTEGRA alarm control panels**.

- Convenient administration and supervision
- Optimisation of system implementation and development costs
- Can be easily expanded with new supervised security zones at any time

www.**satel**.pl

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** (**VERSA Plus, VERSA IP, VERSA**)
- compliance with **EN 50131 Grade 2** (**VERSA Plus LTE**)
- 5 up to 30 zones:
  - » NO, NC, EOL, 2EOL/NO, 2EOL/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 / VERSA Plus LTE:

- supply outputs: 3
- built-in modules:
  - » Ethernet (mobile application, PUSH notifications, e-mail messages, reporting to monitoring station)
  - » cellular communicator* (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/cellular data network* and PSTN (**DLOADX**)
- 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 cellular network* or Ethernet
- firmware update - locally or remotely via **UpServ**

VERSA IP:

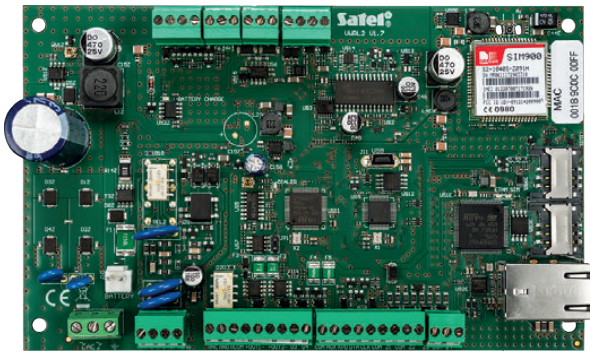
- supply outputs: 3
- built-in modules:
  - » Ethernet (mobile application, PUSH notifications, e-mail messages, reporting to monitoring station)
  - » PSTN (voice messaging, reporting to monitoring station)
  - » voice module
  - » acoustic alarm verification module
- USB communication port
- remote 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:

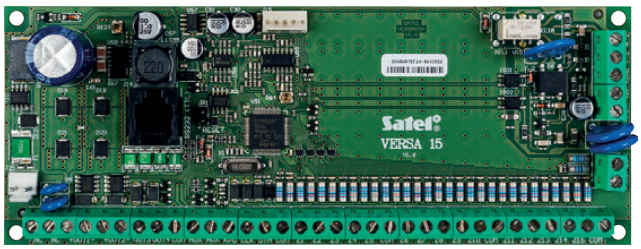
- supply outputs: 2
- RS-232 (TTL) port for panel programming
  - » RJ type socket
- compatible with **ETHM-1 Plus**:
  - » **DLOADX** remote uploading/downloading over TCP/IP networks
  - » TCP/IP reporting
- programming the control panel settings:
  - » locally – keypad or computer (with **DLOADX** program), connected to RS-232 TTL port
  - » remotely – computer connecting to the control panel via modem or Ethernet network

* mobile data transmission via:
- » LTE/HSPA+/EDGE/GPRS in case of **VERSA Plus LTE** control panels (depending on the capabilities of cellular network),
- » GPRS in case of **VERSA Plus** control panels.

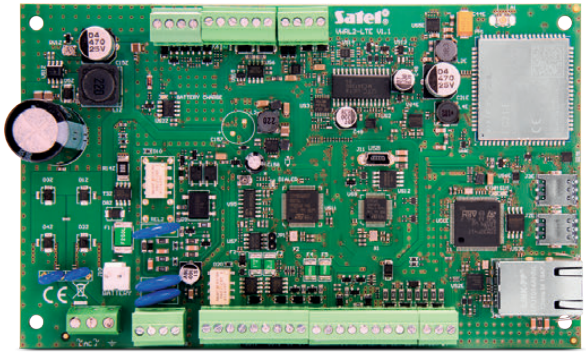
GRADE 2



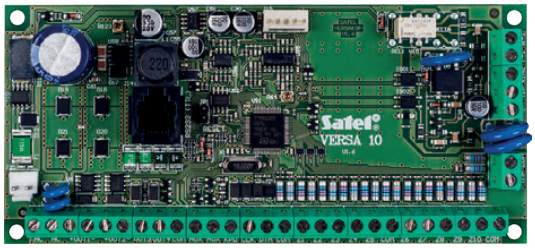
VERSA Plus



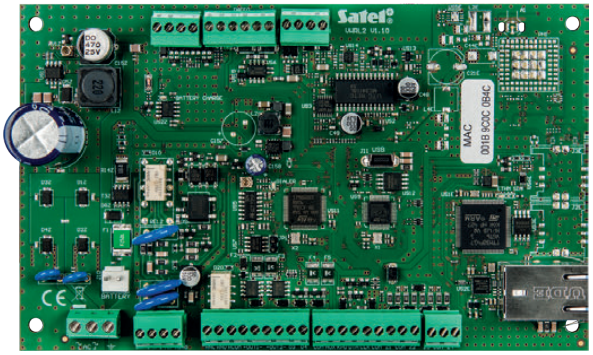
VERSA 15



VERSA Plus LTE



VERSA 10



VERSA IP

VERSA-LCDM-WH / VERSA-LCDR-WH / VERSA-KWRL2

LCD keypad for VERSA panels

- certified for **EN 50131 Grade 2** (**VERSA-LCDM-WH** / **VERSA-KWRL2**)
- working as part of the wireless system **ABAX 2** (**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 125 kHz (**VERSA-LCDR-WH**, **VERSA-KWRL2**)
- power supply:
  - » 12 V DC (**VERSA-LCDM-WH**, **VERSA-LCDR-WH**)
  - » 2 **CR123A** 3 V batteries - required (**VERSA-KWRL2**)
  - » **APS-055** 5 V DC power supply - optional (**VERSA-KWRL2**)

GRADE 2 | abax2 | EM Marin

INT-TSG2 / INT-TSG2R

Touchscreen keypad

- certified for **EN 50121 Grade 3 (INT-TSG2)**
- **EN 50131 Grade 3** compliance **(INT-TSG2R)**
- compatible with the **INTEGRA**, **INTEGRA Plus**, **VERSA** and **PERFECTA 64 M** control panels
- 4,3" capacitive touchscreen
- glass panel for display protection
- MACRO features to facilitate home automation control
- multi-level menu
- 24 user screens
- fully configurable interface via the **DLOADX** software
- more than 20 preset themes available or possibility to create a new user theme
- LEDs informing about the current system status
- possibility of activating the FIRE, AUX, PANIC alarms
- 2 programmable zones (**INTEGRA** and **INTEGRA Plus** only)
- MIFARE® proximity card reader (**INTEGRA** and **INTEGRA Plus** only) (**INT-TSG2R**)

GRADE 3 | GRADE 3 | 4,3" screen diagonal | available in black (INT-TSG2-B and INT-TSG2R-B) and white (INT-TSG2-W and INT-TSG2R-W) | MIFARE®

INT-TSH2 / INT-TSH2R

Touchscreen keypad

- certified for **EN 50121 Grade 3 (INT-TSH2)**
- **EN 50131 Grade 3** compliance **(INT-TSH2R)**
- compatible with the **INTEGRA**, **INTEGRA Plus**, **VERSA** and **PERFECTA 64 M** control panels
- 7" capacitive touchscreen
- glass panel for display protection
- MACRO features to facilitate home automation control
- multi-level menu
- 24 user screens
- fully configurable interface via the **DLOADX** software
- more than 20 preset themes available or possibility to create a new user theme
- possibility of activating the FIRE, AUX, PANIC alarms
- 2 programmable zones (**INTEGRA** and **INTEGRA Plus** only)
- MIFARE® proximity card reader (**INTEGRA** and **INTEGRA Plus** only) (**INT-TSH2R**)

GRADE 3 | GRADE 3 | 7" screen diagonal | available in black (INT-TSH2-B and INT-TSH2R-B) and white (INT-TSH2-W and INT-TSH2R-W) | MIFARE®

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

GRADE 2 | available with backlight blue (VERSA-LCD-BL) and green (VERSA-LCD-GR)

EXPANSION MODULES

VERSA-MCU

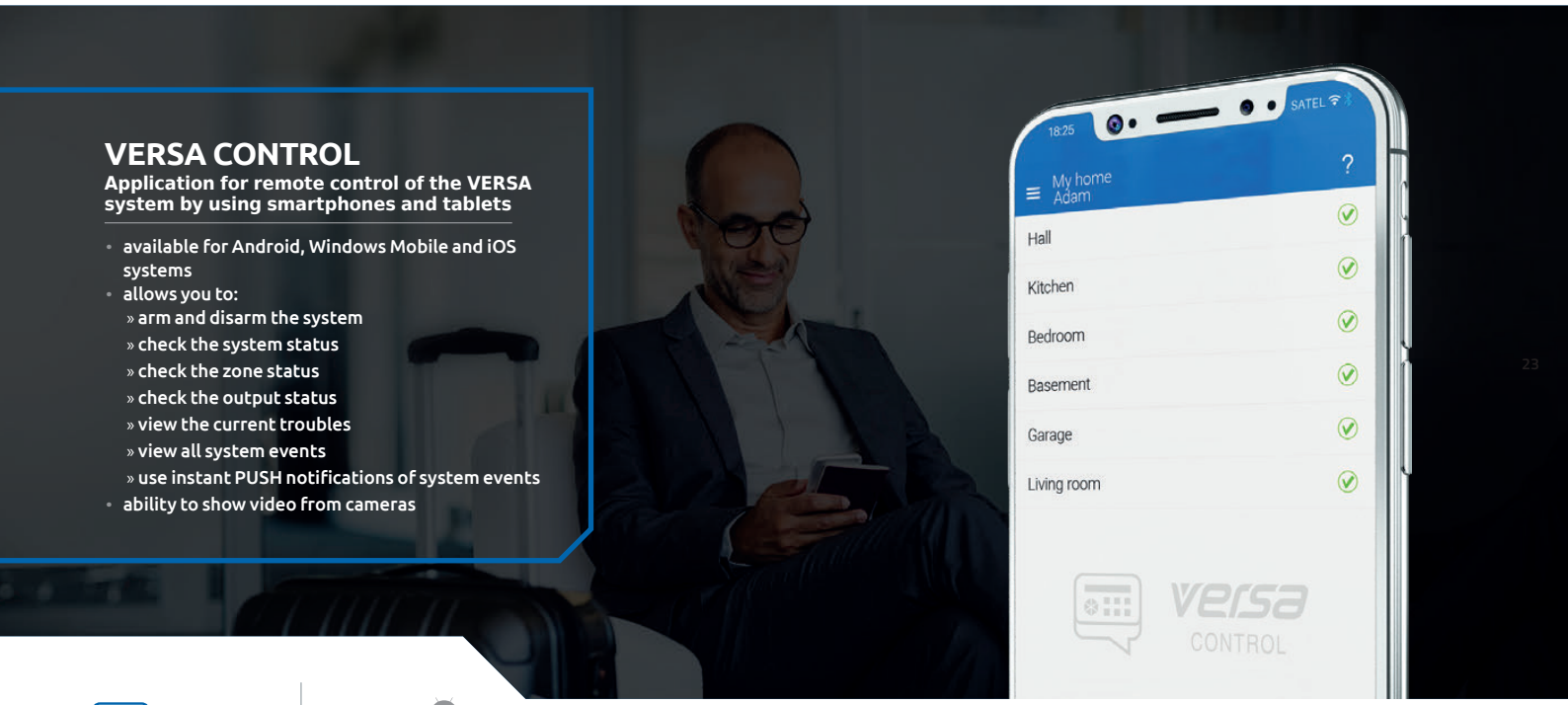
Wireless system controller

- 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

For more information about devices that work with VERSA control panels, see page 29 – MODULES COMPATIBILITY WITH CONTROL PANELS

MOBILE APPLICATION



VERSA CONTROL

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
- ability to show video from cameras

versa CONTROL | iOS

PERFECTA intruder alarm control panel

The alarm system based on PERFECTA control panel is a dedicated system for protection of small and medium-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**
- from 8 to 64 programmable zones:
  - » configuration options: NO, NC, EOL, 2EOL/NO, 2EOL/NC
  - » support for roller shutter and vibration detectors
- from 4 to 64 programmable outputs (up to 60 wired)
- 2 power outputs on mainboard
- built-in modules:
  - » cellular communication module (**PERFECTA**, **PERFECTA LTE**, **PERFECTA 64 M**) (SMS, CLIP, reporting to station, mobile application, audio and PUSH notifications)
  - » Ethernet (**PERFECTA-IP**) (reporting to station, mobile application, PUSH notifications)
  - » PSTN (**PERFECTA-T**) (reporting to station, audio notifications)
  - » voice module (except for **PERFECTA-IP**) (playback of voice messages for telephone messaging)
  - » alarm audio verification module (except for **PERFECTA-IP**) (listen-in function)
- system division into partitions from 2 to 4:
  - » 3 arming 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 (except for **PERFECTA-T**)
  - » keyfobs
- firmware update:
  - » locally
  - » remotely via **UpServ** (except for **PERFECTA-T**)
- password codes:
  - » from 15 to 62 user passwords
  - » 1 service password
- editable names (users, partitions, zones, outputs and modules) for easy control and supervision of the system
- timers:
  - » 8 timers with exceptions 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 with **PERFECTA Soft** program, connection using mobile data transmission (**PERFECTA**, **PERFECTA LTE**, **PERFECTA 64 M**) or Ethernet (**PERFECTA-IP**, **PERFECTA 64 M**)
- extra software tool:
  - » **CONFX** configurator – auxiliary program for designing alarm security systems

Additional functions and features of control panels

PERFECTA - WRL models:

- integrated radio module for encrypted communication with **MICRA** system wireless devices
  - » two-way – with PRF-LCD-WRL keypads MSP-300 sirens
  - » one way – MICRA system detectors and MPT-350 remote control keyfobs
- system control by using:
  - » **PRF-LCD-WRL** wireless keypads
- additional 4 wireless outputs for **MSP-300** sirens

PERFECTA – non-WRL models:

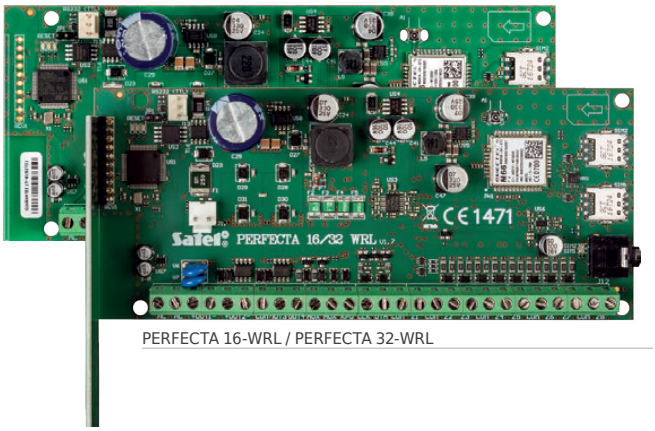
- possibility to connect the **INT-RX-S** keyfob receives expansion module

PERFECTA 64 M:

- possibility to connect one of the devices ensuring encrypted radio communication with wireless devices:
  - » **ACU-220**/**ACU-280** controller – **ABAX 2** system
  - » **PERFECTA-RF** module – **MICRA** system
  - » **INT-RX-S** keyfob receiver expansion module – 433 MHz keyfobs
- system control by using:
  - » **PRF-LCD-A2** (**ABAX 2** system) or **PRF-LCD-WRL** (**MICRA** system) wireless keypads
  - » keypads with touchscreen or touch keys
  - » proximity cards or tags
- additional 4 wireless outputs for **MSP-300** sirens (in **MICRA** system)
- 8 thermostats for outputs control
- possibility to connect **ETHM-1 Plus** Ethernet communication module (reporting to station, mobile application, PUSH notifications, remote programming)

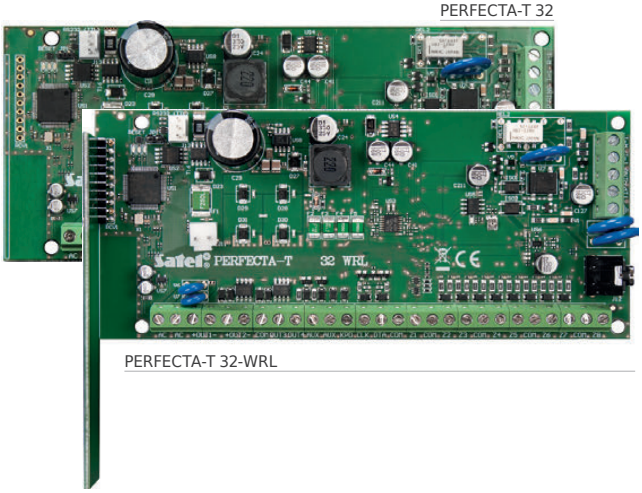
GRADE 2

PERFECTA 16 / PERFECTA 32



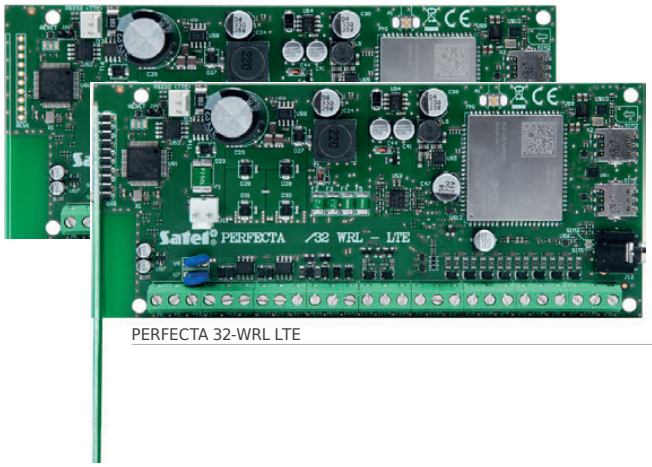
PERFECTA 16-WRL / PERFECTA 32-WRL

PERFECTA-T 32



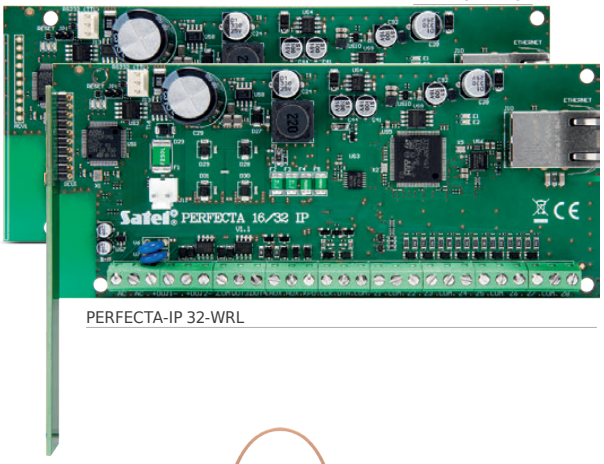
PERFECTA-T 32-WRL

PERFECTA 32 LTE



PERFECTA 32-WRL LTE

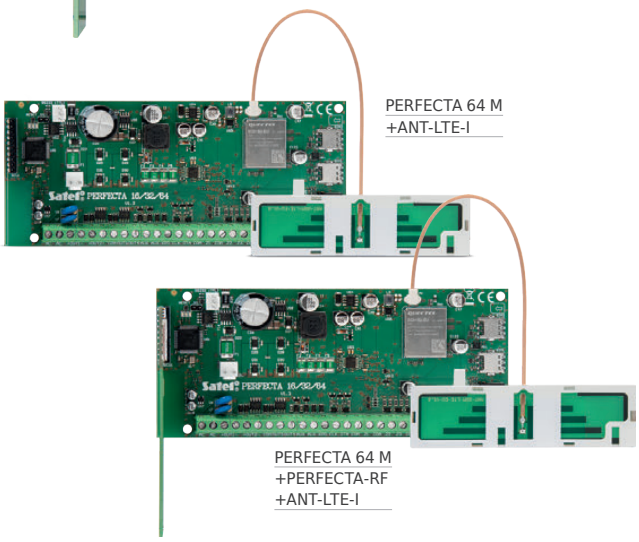
PERFECTA-IP 32



PERFECTA-IP 32-WRL

PERFECTA 64 M

PERFECTA 64 M
+PERFECTA-RF

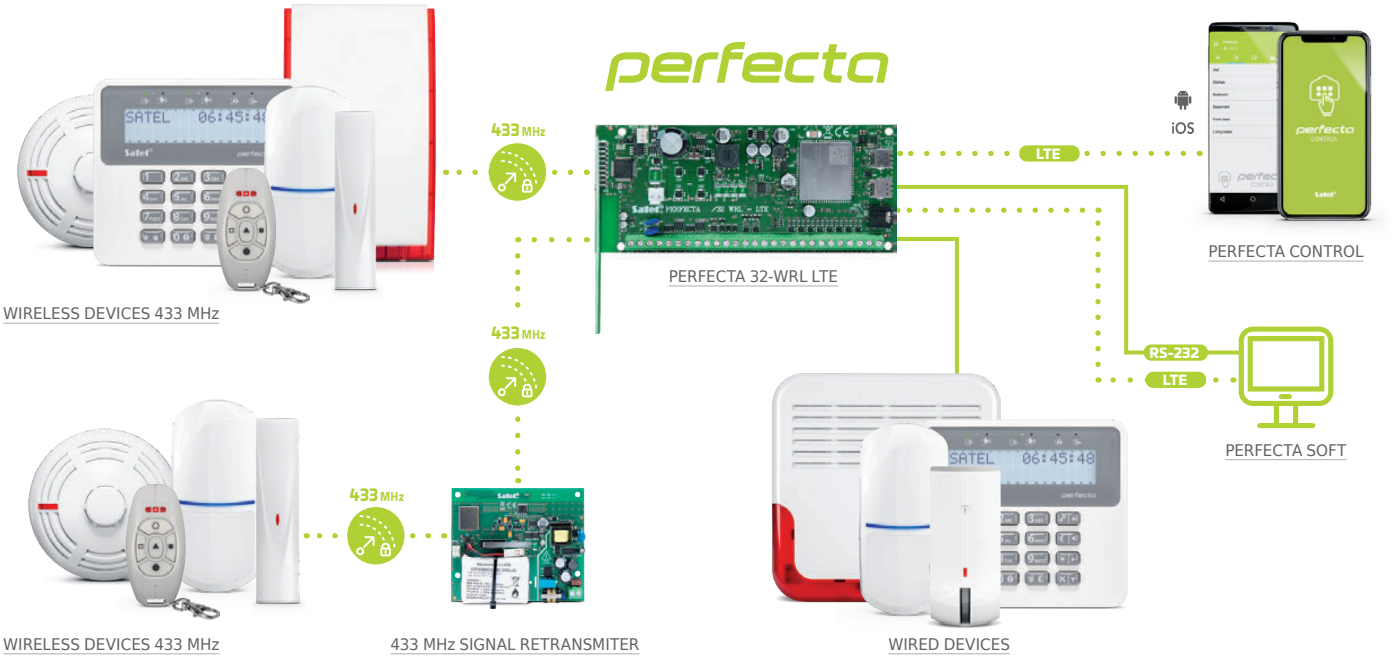


PERFECTA 64 M
+ANT-LTE-I

PERFECTA 64 M
+PERFECTA-RF
+ANT-LTE-I

perfecta

Scheme of the system based on the PERFECTA 32-WRL LTE control panel



OPERATION, CONTROL AND MANAGEMENT

INT-TSG2 / INT-TSG2R

Touchscreen keypad

- certified for **EN 50121 Grade 3 (INT-TSG2)**
- **EN 50131 Grade 3** compliance **(INT-TSG2R)**
- compatible with the **INTEGRA**, **INTEGRA Plus**, **VERSA** and **PERFECTA 64 M** control panels
- 4,3" capacitive touchscreen
- glass panel for display protection
- MACRO features to facilitate home automation control
- multi-level menu
- 24 user screens
- fully configurable interface via the **DLOADX** software
- more than 20 preset themes available or possibility to create a new user theme
- LEDs informing about the current system status
- possibility of activating the FIRE, AUX, PANIC alarms
- 2 programmable zones (**INTEGRA** and **INTEGRA Plus** only)
- MIFARE® proximity card reader (**INTEGRA** and **INTEGRA Plus** only) (**INT-TSG2R**)

GRADE 3 | GRADE 3 | 4,3" screen diagonal | available in black (INT-TSG2-B and INT-TSG2R-B) and white (INT-TSG2-W and INT-TSG2R-W) | MIFARE®

INT-TSH2 / INT-TSH2R

Touchscreen keypad

- certified for **EN 50121 Grade 3 (INT-TSH2)**
- **EN 50131 Grade 3** compliance **(INT-TSH2R)**
- compatible with the **INTEGRA**, **INTEGRA Plus**, **VERSA** and **PERFECTA 64 M** control panels
- 7" capacitive touchscreen
- glass panel for display protection
- MACRO features to facilitate home automation control
- multi-level menu
- 24 user screens
- fully configurable interface via the **DLOADX** software
- more than 20 preset themes available or possibility to create a new user theme
- possibility of activating the FIRE, AUX, PANIC alarms
- 2 programmable zones (**INTEGRA** and **INTEGRA Plus** only)
- MIFARE® proximity card reader (**INTEGRA** and **INTEGRA Plus** only) (**INT-TSH2R**)

GRADE 3 | GRADE 3 | 7" screen diagonal | available in black (INT-TSH2-B and INT-TSH2R-B) and white (INT-TSH2-W and INT-TSH2R-W) | MIFARE®

INT-KSG2R

Keypad with touch keys

- certified for **EN 50121 Grade 3**
- compatible with the **INTEGRA**, **INTEGRA Plus** and **PERFECTA 64 M** control panels
- large backlit graphic display
- configurable screensaver with optional display of the clock, date, status of system components (partitions, zones, outputs), temperatures
- MACRO features to facilitate home automation control
- keypad with touch keys with support for swipe gestures
- dedicated keys:
  - » for activating the FIRE, AUX, PANIC alarms
  - » function (**INTEGRA**: preset function selection; **PERFECTA 64 M**: arming in various modes/disarming)
  - » for activating macro-commands
- keypad and display backlight in white
- LEDs informing about the current system status
- 2 programmable zones (**INTEGRA** and **INTEGRA Plus** only)
- MIFARE proximity card reader (**INTEGRA** and **INTEGRA Plus** only)

GRADE 3

available in:
black (INT-KSG2R-B) and white (INT-KSG2R-W)

MIFARE®

PRF-LCD / PRF-LCD-A2 / PRF-LCD-WRL

LCD keypads for PERFECTA control panels

- certified for **EN 50131 Grade 2** (**PRF-LCD**, **PRF-LCD-A2**)
- operation as part of the **ABAX 2** wireless system (**PRF-LCD-A2**)
- operation as part of the **MICRA** wireless system (**PRF-LCD-WRL**)
- large, easy-to-read LCD display
- LEDs informing about the current 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
- proximity card reader (**PRF-LCD-A2**)
- power supply:
  - » 12 V DC (**PRF-LCD**)
  - » 2 **CR123A** 3 V batteries - required (**PRF-LCD-A2**, **PRF-LCD-WRL**)
  - » **APS-055** 5 V DC power supply - optional (**PRF-LCD-A2**, **PRF-LCD-WRL**)

GRADE 2

abax2 | micra | EM Marin

PERFECTA RF

MICRA wireless system module

- compatible with the **PERFECTA 64 M** control panel
- direct connection to an interface on the control panel board
- encrypted radio communication
  - » two-way – with **PRF-LCD-WRL** keypads and **MSP-300** sirens
  - » one way – **MICRA** system detectors and **MPT-350** remote control keyfobs

micra

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 29 – MODULES COMPATIBILITY WITH CONTROL PANELS

PERFECTA CONTROL

Application for remote control of the PERFECTA, PERFECTA LTE, PERFECTA-IP and PERFECTA 64 M systems 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
  - » control of outputs - selected functions of building automation
  - » check the status of thermostats and changing their settings (PERFECTA 64 M)
  - » view the current troubles
  - » view all system events
  - » use instant PUSH notifications of system events
- ability to show video from cameras

perfecta CONTROL iOS

MODULES COMPATIBILITY WITH CONTROL PANELS

		INTEGRA 32	INTEGRA 64	INTEGRA 64 Plus	INTEGRA 128	INTEGRA 128 Plus	INTEGRA 256 Plus	VERSA 10	VERSA 15	VERSA IP	VERSA Plus	VERSA Plus LTE	PERFECTA 16	PERFECTA 32	PERFECTA 32 LTE	PERFECTA 16-WRL	PERFECTA 32-WRL	PERFECTA 32-WRL LTE	PERFECTA-T 32	PERFECTA-T 32-WRL	PERFECTA-IP 32	PERFECTA-IP 32-WRL	PERFECTA 64 M
INT-S	partition keypad	•	•	•	•	•	•																
INT-SF	partition keypad	•	•	•	•	•	•																
INT-SCR-BL	multi-function keypad with proximity card reader	•	•	•	•	•	•																
CR-MF5	multi-function keypad with MIFARE® proximity card reader	•	•	•	•	•	•																
SO-MF5	multi-function keypad with MIFARE® proximity card reader	•	•	•	•	•	•																
INT-CR	proximity card arm/disarm device	•	•	•	•	•	•	•	•	•	•	•											•
INT-RX-S	433 MHz keyfobs receiver expansion module	•	•	•	•	•	•	•	•	•	•	•	•	•	•				•		•		•
CA-64 PTSA	mimic board	•	•	•	•	•	•																
INT-E	zone expansion module	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
INT-ADR	addressable bus expansion module	•	•	•	•	•	•																
INT-PP	zone and output extension module	•	•	•	•	•	•																
ACU-220	ABAX 2 wireless system controller	•	•	•	•	•	•	•	•	•	•	•											•
ACU-280	ABAX 2 wireless system controller	•	•	•	•	•	•	•	•	•	•	•											•
ARU-200	ABAX 2 repeater	•	•	•	•	•	•																•
VERSA-MCU	MICRA wireless system controller							•	•	•	•	•											
PERFECTA-RF	MICRA wireless system module																						•
INT-O	output expansion module	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
INT-ORS	DIN rail compatible outputs expansion module	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
INT-IORS	DIN rail compatible zones and outputs expansion module	•	•	•	•	•	•																
INT-KNX-2	KNX integration module	•	•	•	•	•	•																
INT-RS Plus	RS-232 interface for systems integration	•	•	•	•	•	•																
INT-FI	fiber-optic interface	•	•	•	•	•	•																
ETHM-1 Plus	TCP/IP communication module	•	•	•	•	•	•	•	•														•
INT-GSM	GPRS module	•	•	•	•	•	•																
INT-GSM LTE	LTE module	•	•	•	•	•	•																
INT-AV	alarm acoustic verification module	•	•	•	•	•	•																
INT-VG	remote interactive voice module	•	•	•	•	•	•	•	•														
SM-2	voice synthesizer	•	•	•	•	•	•	•	•	•	•	•											
INT-VMG	voice message module	•	•	•	•	•	•																
INT-R	universal expander for card / chip readers	•	•	•	•	•	•																

CONTROL PANEL COMPARISON CHART

	INTEGRA 256 Plus	INTEGRA 128 Plus	INTEGRA 128	INTEGRA 64 Plus	INTEGRA 64	INTEGRA 32	VERSA Plus	VERSA Plus LTE	VERSA IP
On-board zones / Total number of zones	16 / 256	16 / 128	16 / 128	16 / 64	16 / 64	8 / 32	4 / 30	4 / 30	4 / 30
Number of keypad zones	8 x 2	8 x 2	8 x 2	8 x 2	8 x 2	4 x 2			
Number of objects / partitions	8 / 32	8 / 32	8 / 32	8 / 32	8 / 32	4 / 16	1 / 2	1 / 2	1 / 2
Available keypads: LED / LCD	• / •	• / •	• / •	• / •	• / •	• / •	• / •	• / •	• / •
Keypad support: with touch keys / with touchscreen	• / •	• / •	• / •	• / •	• / •	• / •	– / •	– / •	– / •
Operation with proximity cards: MIFARE / EM Marin	• / •	• / •	• / •	• / •	• / •	• / •	– / •	– / •	– / •
Users keyfobs	option	option	option	option	option	option	option	option	option
Users and master users + service	248 + 1	248 + 1	248 + 1	200 + 1	200 + 1	68 + 1	30 + 1	30 + 1	30 + 1
Additional armed modes	program-mable	program-mable	program-mable	program-mable	program-mable	program-mable	day / night	day / night	day / night
On-board outputs / Total number of outputs	4+12 / 256	4+12 / 128	4+12 / 128	4+12 / 64	4+12 / 64	2+6 / 32	2+2+1 / 12	2+2+1 / 12	2+2+1 / 12
Power supply	2 A + 1,5 A	2 A + 1,5 A	3 A	2 A + 1,5 A	3 A	1,2 A	2 A	2 A	2 A
Access control features	•	•	•	•	•	•			
Built-in communicator: PSTN / cellular / ETHERNET	• / – / –	• / – / –	• / – / –	• / – / –	• / – / –	• / – / –	• / • / •	• / • / •	• / – / •
Remote control via DTMF	•	•	•	•	•	•	•	•	•
Remote control via SMS	option	option	option	option	option	option	•	•	
Programming: local / remote	•	•	•	•	•	•	•	•	•
Operation via mobile applications	option	option	option	option	option	option	•	•	•
Communication via Ethernet	option	option	option	option	option	option	•	•	•
Communication via cellular network	option	option	option	option	option	option	•	•	
Security grade according to EN 50131	Grade 3	Grade 3	Grade 2	Grade 3	Grade 2	Grade 2	Grade 2	Grade 2	Grade 2
Wireless devices support	option	option	option	option	option	option	option	option	option

VERSA 15	VERSA 10	PERFECTA 64 M	PERFECTA 32-WRL	PERFECTA 32-WRL LTE	PERFECTA-IP 32-WRL	PERFECTA 16-WRL	PERFECTA 32	PERFECTA 32 LTE	PERFECTA-IP 32	PERFECTA 16	PERFECTA-T 32	PERFECTA-T 32-WRL
15 / 30	10 / 30	4 / 64	8 / 32	8 / 32	8 / 32	8 / 16	8 / 32	8 / 32	8 / 32	8 / 16	8 / 32	8 / 32
1 / 2	1 / 2	1 / 4	1 / 2	1 / 2	1 / 2	1 / 2	1 / 2	1 / 2	1 / 2	1 / 2	1 / 2	1 / 2
• / •	• / •	– / •	– / •	– / •	– / •	– / •	– / •	– / •	– / •	– / •	– / •	– / •
– / •	– / •	• / •	– / –	– / –	– / –	– / –	– / –	– / –	– / –	– / –	– / –	– / –
– / •	– / •	– / •										
•	•	option	•	•	•	•	option	option	option	option	option	•
30 + 1	30 + 1	62 + 1	15 + 1	15 + 1	15 + 1	15 + 1	15 + 1	15 + 1	15 + 1	15 + 1	15 + 1	15 + 1
day / night	day / night	day / night	day / night	day / night	day / night	day / night	day / night	day / night	day / night	day / night	day / night	day / night
2+2 / 12	2+2 / 12	2+2 / 60+4	2+2 / 12+4	2+2 / 12+4	2+2 / 12+4	2+2 / 12+4	2+2 / 12	2+2 / 12	2+2 / 12	2+2 / 12	2+2 / 12	2+2 / 12+4
2 A	2 A	2 A	2 A	2 A	2 A	2 A	2 A	2 A	2 A	2 A	2 A	2 A
• / – / –	• / – / –	– / • / –	– / • / –	– / • / –	– / – / •	– / • / –	– / • / –	– / • / –	– / – / •	– / • / –	• / – / –	• / – / –
option	option											
		•	•	•		•	•	•		•		
•	•	•	•	•	•	•	•	•	•	•	•	•
option	option	•	•	•	•	•	•	•	•	•		
option	option	option			•				•			
		•	•	•		•	•	•		•		
Grade 2	Grade 2	Grade 2	Grade 2	Grade 2	Grade 2	Grade 2	Grade 2	Grade 2	Grade 2	Grade 2	Grade 2	Grade 2
option	option	option	•	•	•	•						•

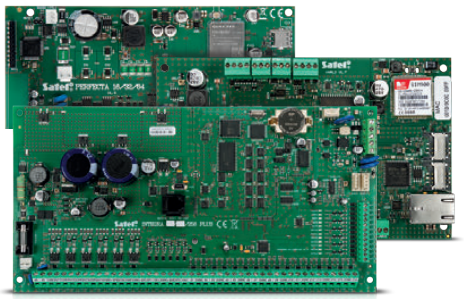
ABAX 2 WIRELESS SYSTEM

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, VERSA and PERFECTA 64 M 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



ALARM CONTROL PANELS

MOVEMENT DETECTORS

CONTROL AND AUTOMATION

ABAX 2 WIRELESS SYSTEM CONTROLLER

DETECTORS FOR PERIMETER PROTECTION

SIRENS

up to
2000 m

OTHER DETECTORS

ZONES/OUTPUTS EXPANSION MODULES

ABAX 2 DEVICE SIGNAL RETRANSMITER

ABAX 2 WIRELESS DEVICES

abax2

UP TO 8 YEARS*

* in ECO mode, depending on the product and its working conditions

WIRED SIRENS AND DETECTORS

SYSTEM DEVICES

GRADE 2

ACU-220

ABAX 2 wireless system controller

- certified for **EN 50131 Grade 2**
- two-way radio communication in 868 MHz (or 915 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**, 6 **VERSA-KWRL2** or 4 **PRF-LCD-A2** wireless keypads
- support for up to 256 wireless keyfobs
- can work together with **INTEGRA**, **INTEGRA Plus**, **VERSA** and **PERFECTA 64 M** control panels – connection via communication bus
- can work in stand-alone mode or together with any control panel
  - » 8 programmable outputs
  - » 4 programmable inputs
- integration, for example, with automation or data acquisition systems using the Modbus RTU communication protocol – connection via the RS-485 bus
- 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
  - » control panel service menu or **PERFECTA Soft** program – if the controller is used with the **PERFECTA 64 M** 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 V DC

GRADE 2

ACU-280

ABAX 2 wireless system controller

- certified for **EN 50131 Grade 2**
- two-way radio communication in 868 MHz (or 915 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**, 6 **VERSA-KWRL2** or 4 **PRF-LCD-A2** wireless keypads
- supports up to 248 wireless keyfobs
- can work together with **INTEGRA**, **INTEGRA Plus**, **VERSA** and **PERFECTA 64 M** control panels – connection via communication bus
- integration, for example, with automation or data acquisition systems using the Modbus RTU communication protocol – connection via the RS-485 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
  - » control panel service menu or **PERFECTA Soft** program – if the controller is used with the **PERFECTA 64 M** 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 V DC

** Depending on the country, a different frequency band may be used.*
Note - in the EU, this radio equipment is only permitted to operate in the 868 MHz frequency band.

ARU-200

Radio signal retransmitter

- retransmission of signals of 46 wireless devices
- remote upgrade of retransmitter firmware
- LED indicator of retransmitter status
- tamper protection against opening the enclosure
- power supply 230 V AC
- built-in switching mode power supply
- short-circuit protection of power supply input
- battery as an emergency power source
- battery charging system
- battery monitoring and disconnection of a discharged battery

ARF-200

Radio signal strength tester

- ability to check the radio signal strength at the ABAX 2 installation location without having to actually place the device there
- two operating modes to check the strength of signal:
  - » received by the tester from the controller
  - » received by the controller from the tester
- ability to check the radio noise level in all 4 channels of the ABAX 2 system
- LED indicators of the selected operating mode and radio channel
- LED indicator of the radio signal strength
- built-in battery status control

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** or **APS-1412** power supply units

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

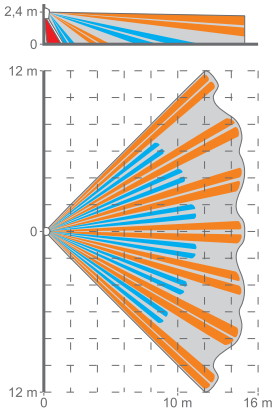
WIRELESS DETECTORS

for APMD-250 dark grey housing (OPC-1 DG) is available

APMD-250

Wireless dual-technology motion detector

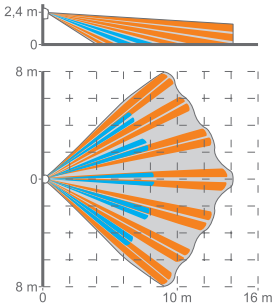
- certified for **EN 50131 Grade 2**
- two detection circuits: PIR (dual element pyrosensor) and microwave
- independently adjustable sensitivity of PIR and MW paths
- option to test the sensors separately
- digital motion detection algorithm
- digital temperature compensation
- option to enable/disable the creep zone protection
- wide-angle lens, designed specifically for **SLIM LINE** detectors
- option to replace the wide-angle lens with a curtain (**CT-CL**) or long-range (**LR-CL**) one
- remote configuration and updating of the firmware
- built-in temperature sensor
- LED indicator of violations in test mode
- low energy consumption and battery status check
- power supply: CR123A 3 V battery
- tamper protection
- adjustable bracket for wall-mounting or ceiling-mounting (**BRACKET D**)



APD-200 Pet

Wireless PIR detector

- certified for **EN 50131 Grade 2**
- pyrosensor: quad element
- adjustable detection sensitivity
- digital motion detection algorithm
- digital temperature compensation
- wide-angle lens, designed specifically for **SLIM LINE** detectors
- remote configuration and updating of the firmware
- built-in temperature sensor
- LED indicator of violations in test mode
- pet immunity up to 20 kg
- low energy consumption and battery status check
- power supply: CR123A 3 V battery
- tamper protection

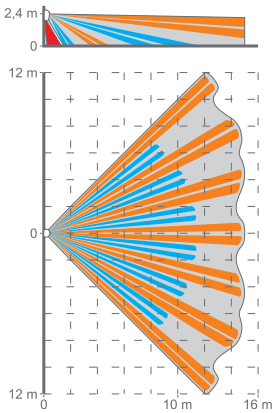


for APD-200 dark grey housing (OPC-1 DG) is available

APD-200

Wireless PIR detector

- certified for **EN 50131 Grade 2**
- pyrosensor: dual element
- adjustable detection sensitivity
- digital motion detection algorithm
- digital temperature compensation
- option to enable/disable the creep zone protection
- wide-angle lens, designed specifically for **SLIM LINE** detectors
- option to replace the wide-angle lens with a curtain (**CT-CL**) or long-range (**LR-CL**) one
- remote configuration and updating of the firmware
- built-in temperature sensor
- LED indicator of violations in test mode
- low energy consumption and battery status check
- power supply: CR123A 3 V battery
- tamper protection



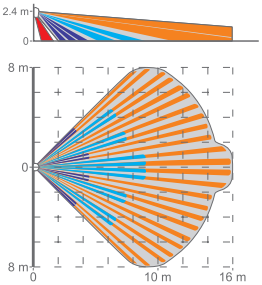
AOD-210

Wireless dual-technology outdoor motion detector

available in white (AOD-210) and gray (AOD-210 GY)

See Detector accessories page 100

- 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 with the use of holders included in the **BRACKET C** set (ball- or angle-type) or **BRACKET E** (distance holder)
- option to mount the **HOOD C** protection on the enclosure

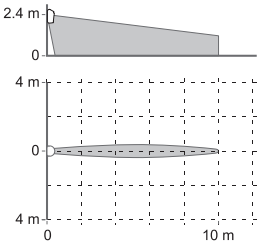


AOCD-260

Wireless dual-technology outdoor curtain detector

See Detector accessories page 100

- 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 the angle-type holder or holders included in the **BRACKET E** set (distance holder)
- option to mount the **HOOD A** protection on the enclosure



ACD-220

Wireless curtain detector

available in white (ACD-220), brown (ACD-220 BR) and dark-gray (ACD-220 DG)

- passive infrared sensor (PIR)
- adjustable detection sensitivity
- digital algorithm of motion detection
- digital temperature compensation
- lens designed specifically for SATEL short range curtain detectors
- remote configuration and firmware update
- built-in temperature sensor
- LED indicator signalling violations in test mode
- low power consumption and battery monitoring
- power supply: CR123A 3 V battery
- tamper protection

AXD-200

Wireless universal detector

available in white (AXD-200), brown (AXD-200 BR) and dark-gray (AXD-200 DG)

See Detector accessories page 100

- certified for **EN 50131 Grade 2**
- selectable operating mode - can be used as:
  - » magnetic contact / dual channel magnetic contact (2 x NC hardwired zone expander) / magnetic contact with input for roller shutter detector (NC and roller shutter hardwired zone expander)
    - detection of opening a door, window, etc.
    - control input for NC type wired detector
    - additional digital channel for wired detector control (two-channel detector with roller shutter input)
    - control input for wired roller shutter detector (detector with roller shutter input)
    - additional hardwired zone expander mode (2 x NC or NC and roller shutter)
  - » shock and magnetic contact
    - detection of shocks and vibrations accompanying attempts to force a door or window
    - detection of open door, window, etc.
    - input for control of an NC type wire detector
    - 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)
  - » water 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
- can be mounted outdoors in the **OPX-1** enclosure (optionally with the **OPXM-1** magnet)
- tamper protection
- low power consumption and battery status control
- power supply: CR123A 3 V battery

ADD-200

Wireless outdoor dusk and temperature detector

- dusk sensor:
  - » light intensity measurement in the 2 lx to 250 lx range
  - » option to select one of the 16 detection thresholds
  - » immunity to momentary and accidental changes in light intensity
- temperature sensor:
  - » temperature measurement in the -30°C to + 70°C range
  - » programmable temperature threshold
- dust- and waterproof, weather resistant polycarbonate enclosure with IP65 rating
- power supply: CR123A 3V battery

available in white (AGD-200), brown (AGD-200 BR) and dark-gray (AGD-200 DG)

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

ASD-250

Wireless smoke detector

- certified stand-alone operation according to **EN 14604**
- can signal alarms from other **ASD-250** detectors (within one ABAX 2 system controller)
- photoelectric sensor of visible smoke
- acoustic and optical alarm signaling
- remote configuration
- testing function
- Swirl chamber with unique shape for quicker smoke detection
- fine Hexamesh stainless steel filter
- chamber soiling indication
- tamper protection
- low power consumption and battery status control
- power supply: CR123A 3 V battery

ASD-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
- chamber soiling indication
- tamper protection
- low power consumption and battery status control
- power supply: CR123A 3 V battery

ACMD-200

Wireless carbon monoxide detector

- electrochemical carbon monoxide sensor
- digital temperature compensation
- test function
- LED for optical signalling
- piezoelectric transducer for acoustic signalling
- monitoring of the gas sensor
- battery status check

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

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

available with glass in red (ASP-215 R) and blue (ASP-215 BL)

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

APT-210

Bidirectional remote control keyfob

- customizable button functions (up to 6 functions)
- visual and audible command acknowledgement by the controller
- remote configuration and update of firmware
- battery status control
- power supply: CR2032 3 V battery
- splashproof housing – IPX4

APB-200

Wireless panic button

- the panic button can be used to:
  - » trigger a panic alarm
  - » call for help
  - » control other devices, including elements of building automation or access control system
- push button design to prevent accidental pressing
- ECO option to extend battery life
- remote button firmware update
- remote configuration
- LED for easy button testing
- power supply: CR14250 3 V battery
- tamper protection

APB-210

Wireless control button

- compact dimensions
- button can be used to:
  - » trigger a panic alarm
  - » call for help
  - » control other devices, including elements of building automation or access control system
- remote configuration and update of firmware
- low power consumption and battery status control
- power supply: CR2032 3 V battery

ASW-200 E

Smart plug with Type E socket (EURO)

- control of electrical devices of up to 2300 W
- compact size
- LED indicator informing the user about the current consumption of the connected appliance/appliance status (depending on the settings)
- programmable pointer colour
- allows manual and remote control of connected devices

ASW-200 F

Smart plug with Type F socket (SCHUKO)

- control of electrical devices of up to 2300 W
- compact size
- LED indicator informing the user about the current consumption of the connected appliance/appliance status (depending on the settings)
- programmable pointer colour
- allows manual and remote control of connected devices

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

ART-200

Wireless radiator thermostat

- helps to reduce energy consumption by regulating the temperature in closed rooms
- enables remote and manual control of the radiator valve
- compatible with valves with M30x1.5mm thread or Danfoss RA mount (using the included adapter)
- temperature control range from 5 °C to 30 °C
- 3 operating modes
- built-in temperature sensor
- fast heating function (Boost Heat)
- valve descaling function
- protection against children (Child Lock)
- battery charge control function
- power supply: 2x AA (LR06) battery

AFD-200

Wireless water flood detector

- detection of water flooding using built-in probe
- detection of detector overturn
- built-in temperature sensor
- LED indicator and sounder indicating violations
- remote configuration and update of firmware
- low power consumption and battery status control
- power supply: CR123A 3 V battery

ART-210

Wireless radiator thermostat

- helps to reduce energy consumption by regulating the temperature in closed rooms
- enables remote and manual control of the radiator valve
- compatible with valves with M30x1.5mm thread or Danfoss RA, Danfoss RAV and Danfoss RAVL mount (using the included adapters)
- temperature adjustment in the range from 5°C to 30°C
- 3 operating modes
- built-in temperature sensor
- fast heating function (Boost Heat)
- valve descaling function
- protection against children (Child Lock)
- open window detection
- anti-freeze protection
- option to close the valve manually
- option to rotate messages on the display by 180°
- remote configuration and update of firmware
- low power consumption and battery status control
- power supply: 2x LR6 AA 1.5 V battery

MICRA WIRELESS SYSTEM

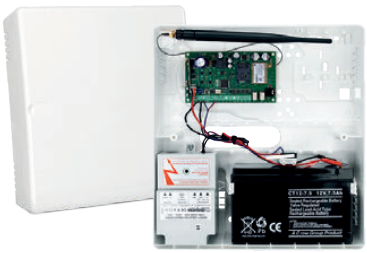
The MICRA wireless system was designed primarily to protect small-size buildings and structures.

The possibility of using wireless motion detectors, magnetic contacts or glass break detectors offer protection against burglary, and wireless smoke and flood detectors can provide additional security by alerting you about the risk of fire or uncontrolled water leakage. Remote system operation using keyfobs, a wireless keypad or a mobile application is convenient, as well as simple and intuitive.

Thanks to the analog inputs, the MICRA module can also be used for supervision of technical devices by providing information that some critical parameter values, e.g. temperature or pressure, have been exceeded.

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.

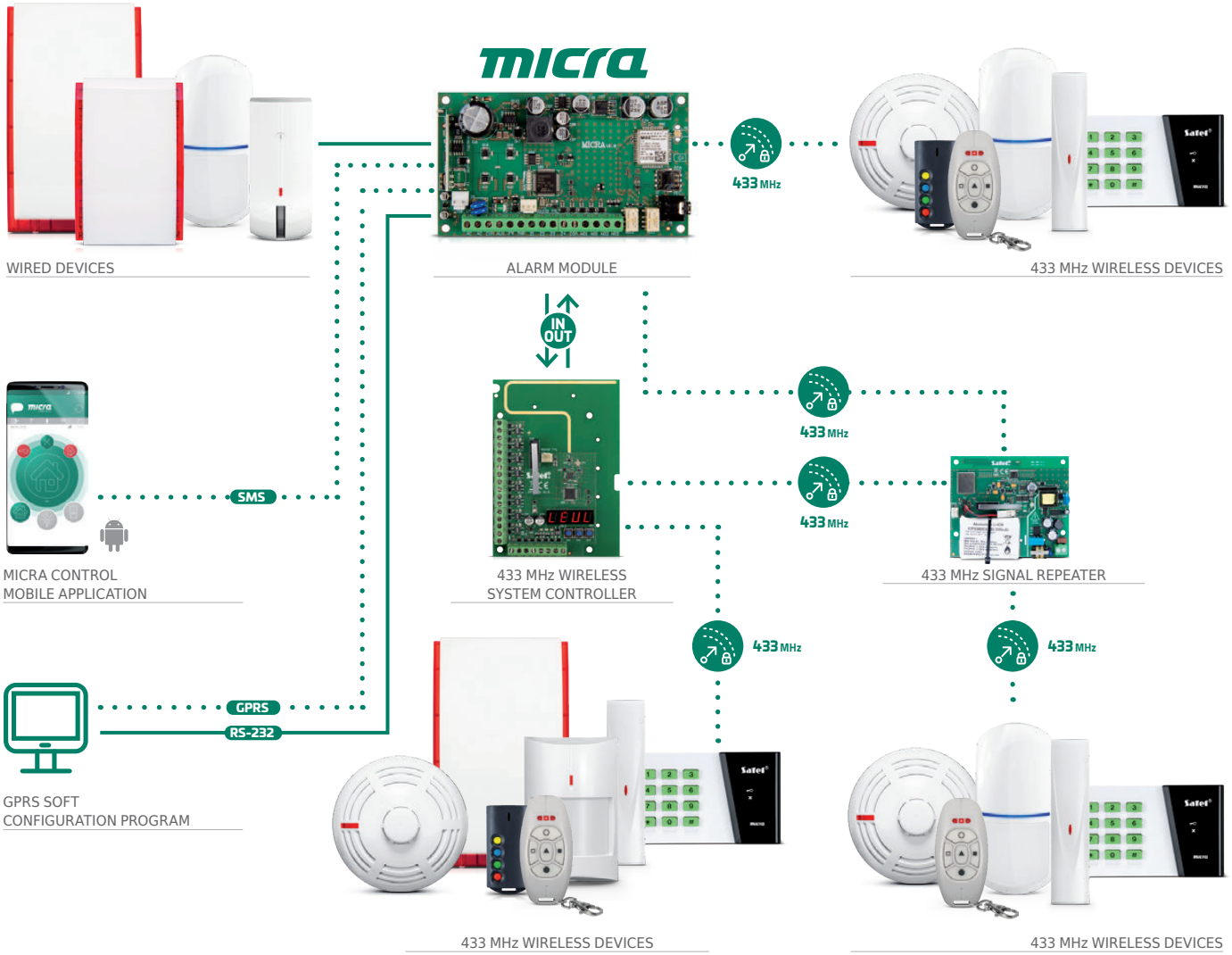


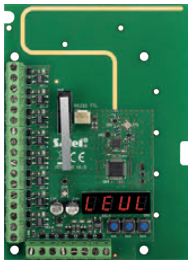
MICRA

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 wireless detectors of the **MICRA** system
  - » up to 8 keyfobs (**MPT-350**, **T-1**, **T-2**, **T-4**)
  - » 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





433 MHz

MTX-300

433 MHz wireless system controller

- works with any control panel, automation controller as well as **MICRA** alarm module
- support for wireless devices:
  - » up to 16 **MICRA** system detectors
  - » up to 32 remote control keyfobs (**MPT-350**, **T-1**, **T-2**, **T-4**)
  - » 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

MRU-300

Repeater of radio signals from 433 MHz wireless system

- retransmission of signals received from the **MICRA** system devices:
  - » detectors: **MGD-300**, **MMD-300**, **MMD-302**, **MPD-300**, **MPD-310**, **MPD-310 Pet**, **MSD-300**, **MSD-350**, **MXD-300**
  - » remote control keyfobs and panic buttons (**MPT-350**, **MPB-300**)
  - » wireless keypads (**MKP-300**)
- works with the **PERFECTA** control panels (**WRL** models or **PERFECTA 64 M** with **PERFECTA-RF** module connected), **VERSA-MCU** controller, **MTX-300** controller, **MICRA** alarm module
- built-in backup battery
- tamper protection
- 230 V AC power supply

OPERATION OF MICRA SYSTEM

MKP-300

Arm/disarm wireless keypad

- up to 8 user codes
- outputs control
- FIRE, AUX, PANIC keypad alarms
- keypad backlight
- arm/disarm command confirmation LEDs
- powered by 3 V CR123A cell

MPT-350

Remote control keyfob

- 5 buttons with function assignment capability
- ergonomic enclosure preventing buttons from being pushed accidentally
- powered by CR2032 button cell

WIRELESS DETECTORS

MPD-300

Wireless motion detector

- dual element pyrosensor
- interchangeable Fresnel lenses
- adjustable mounting bracket included
- immunity to movement of pets (up to 15 kg)
- LED indicator for detector walk testing
- powered by 3 V CR123A battery

for MPD-310 dark grey housing (OPC-1 DG) is available

MPD-310 / MPD-310 Pet

Wireless motion detectors

- adjustable detection sensitivity
- digital motion detection algorithm
- digital temperature compensation
- pyroelement: double (**MPD-310**), quadruple (**MPD-310 Pet**)
- option to replace the standard lens with a curtain (**CT-CL**) or long-range (**LR-CL**) lens (**MPD-310**)
- option to enable/disable creep zone control (**MPD-310**)
- immunity to movement of animals up to 20 kilograms (**MPD-310 Pet**)
- LED indicator of violations in the test mode
- adjustable wall or ceiling mount holder (**BRACKET D**) (**MPD-310**)
- power supply: CR123A 3 V 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
- low power consumption and battery status control
- power supply: CR123A 3 V battery

MMD-300

Wireless magnetic contact

- additional external detector input
- LED indicator for test mode indications
- powered by 3 V CR123A battery

available in
white (MMD-300) and brown (MMD-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)

MMD-302

Wireless magnetic contact

- rollerblind detector interface with pulse analysis additional external detector input
- LED indicator for test mode indications
- powered by 3 V CR123A battery

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

MPB-300

Wireless panic button

- the panic button can be used to:
  - » trigger a panic alarm
  - » call for help
  - » control other devices, including elements of building automation or access control system
- push button design to prevent accidental pressing
- LED for easy button testing
- power supply: CR14250 3 V battery
- tamper protection

MXD-300

Wireless universal detector

- option to select one of the available operating modes, as:
  - » magnetic contact / magnetic contact with roller shutter input
    - detection of opening a door, window, etc.
    - input for connecting an NC type wired detector
    - input for connecting a wired roller shutter detector (detector with roller shutter input)
  - » shock detector / shock detector and magnetic contact
    - detection of shocks and vibrations accompanying attempts to force a door or window open
    - detection of opening a door, window, etc. (shock detector and magnetic contact)
  - » water flood detector
    - detection of water flood in areas with water installations
    - input for connecting an external **FPX-1** flood probe – the probe sold separately
- LED indicator of violations in test mode
- low energy consumption and battery status control
- power supply: CR123A 3V battery

available in
white (MXD-300)
and brown (MXD-300 BR)

WIRELESS SIREN FOR MICRA

MSP-300 R

Wireless outdoor acoustic-optical siren

- 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 **ER34615** battery with 13 Ah capacity and wide operating temperature range
- tamper protection against opening; removing from mounting surface

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

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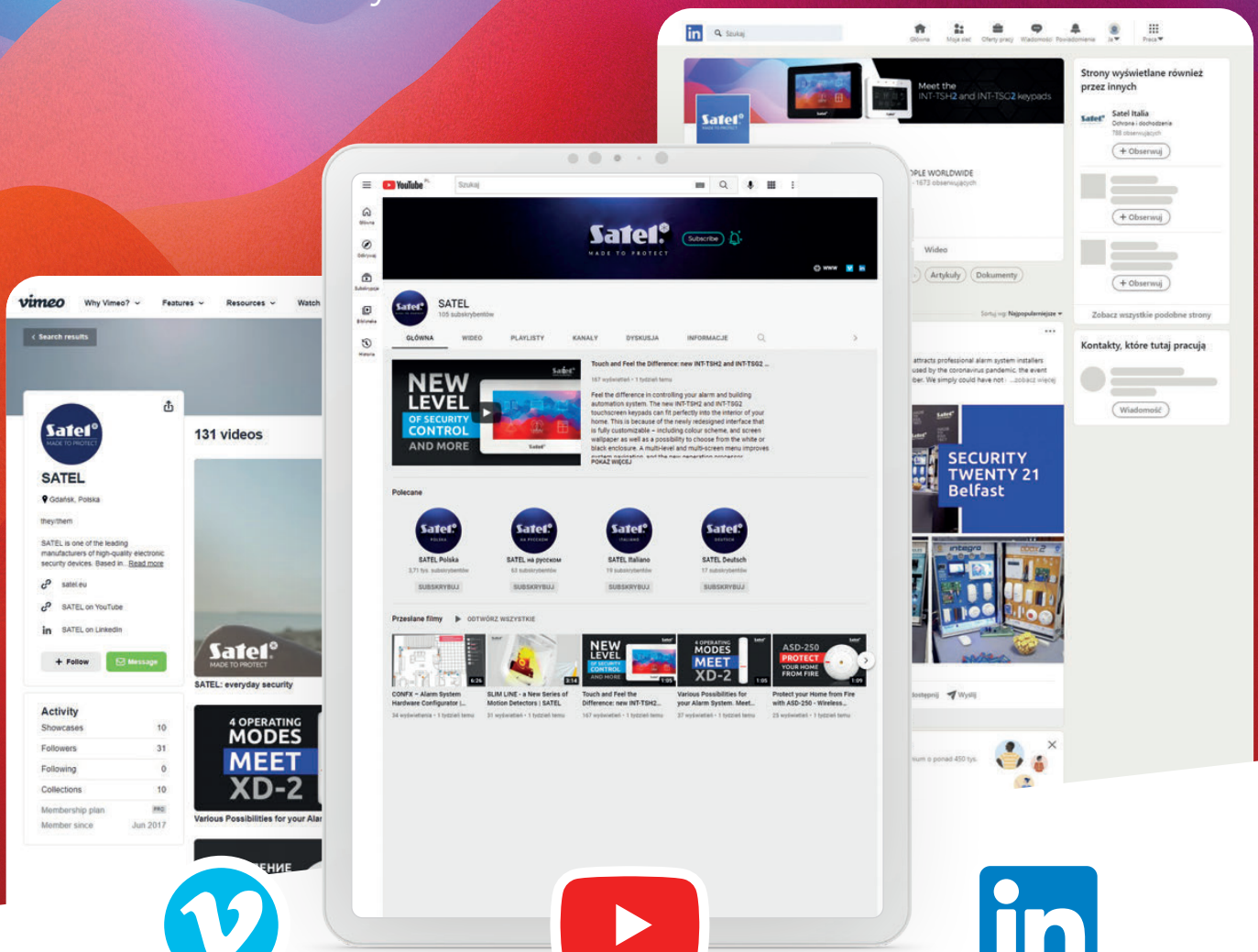
MADE TO PROTECT

WE ARE HERE!

Join the SATEL Community



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DETECTORS

Detectors are basic components of an intruder and hold-up alarm system. Most often they are used to detect effects produced by the presence and activity of people staying on the premises. They can detect movement, sound (e.g. of breaking glass), door opening, as well as shocks (caused by forcing a door open), and then send information to the alarm control panel.

As part of the additional protection, devices can also be used to detect early fire symptoms (smoke and heat detectors), water leak (flood detectors), temperature changes, as well as appearance of hazardous volatile substances (gas detectors).

SLIM LINE

5 YEARS WARRANTY

See Detector accessories – page 100

GRADE 2

for SLIM-PIR
dark grey housing
(OPC-2 DG) is available

SLIM-PIR / SLIM-PIR-PET

Digital PIR motion detectors

- certified for **EN 50131 Grade 2**
- pyrosensor: dual element (**SLIM-PIR**), quad element (**SLIM-PIR-PET**)
- adjustable sensitivity of detection
- digital motion detection algorithm
- digital temperature compensation
- wide-angle lens, designed specifically for the SLIM LINE detectors
- pet immunity up to 20 kg (**SLIM-PIR-PET**)
- option to replace the wide-angle lens with a curtain (**CT-CL2**) or long-range (**LR-CL2**) one (**SLIM-PIR**)
- built-in end-of-line resistors (2EOL: 2 x 1.1 kΩ)
- LED indicator
- selectable color of the LED indicator (4 colors available)
- LED indicator remote enable/disable
- supervision of motion detection and supply voltage circuit
- tamper protection against opening of enclosure
- can be installed using the dedicated adjustable bracket (**BRACKET D**)

GRADE 2

DOBRY DESIGN 2020 WYRÓŻNIONE

for SLIM-PIR-LUNA
dark grey housing
(OPC-1 DG) is available

SLIM-PIR-LUNA / SLIM-PIR-LUNA-PET

Digital PIR motion detectors

- certified for **EN 50131 Grade 2**
- pyrosensor: dual element (**SLIM-PIR-LUNA**), quad element (**SLIM-PIR-LUNA-PET**)
- adjustable sensitivity of detection
- digital motion detection algorithm
- digital temperature compensation
- option to enable/disable the creep zone protection (**SLIM-PIR-LUNA**)
- wide-angle lens, designed specifically for the SLIM LINE detectors
- pet immunity up to 20 kg (**SLIM-PIR-LUNA-PET**)
- option to replace the wide-angle lens with the curtain (**CT-CL**) or long-range (**LR-CL**) one (**SLIM-PIR-LUNA**)
- ability to configure detector operating parameters using the **OPT-1** keyfob
- built-in end-of-line resistors (2EOL: 2 x 1,1 kΩ / 2 x 4,7 kΩ / 2 x 5,6 kΩ)
- lighting feature implemented with white LEDs
- remote lighting control or motion activated lighting capability
- LED indicator
- selectable color of the LED indicator (7 colors available)
- LED indicator remote enable/disable
- remote switching between two levels of PIR sensor sensitivity
- configuration mode remote enable/disable
- supervision of motion detection and supply voltage circuit
- tamper protection against opening of enclosure and removal from mounting
- adjustable wall-ceiling bracket (**BRACKET D**) included (**SLIM-PIR-LUNA**)

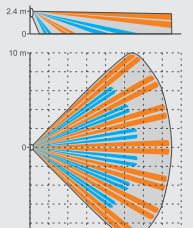
GRADE 3

SLIM-PIR-PRO

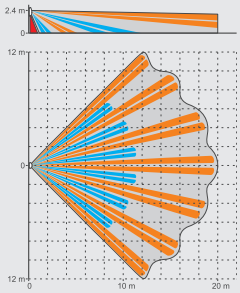
Digital PIR motion detector

- certified for **EN 50131 Grade 3**
- dual element pyrosensor
- adjustable sensitivity of detection
- digital motion detection algorithm
- digital temperature compensation
- option to enable/disable the creep zone protection
- wide-angle lens, designed specifically for SLIM LINE detectors
- option to replace the wide-angle lens with a curtain (**CT-CL**) or long-range (**LR-CL**) one
- active IR anti-masking, compliant with **EN 50131-2-2** for **Grade 3**
- programmable 60-second anti-mask delay
- ability to configure detector operating parameters using the **OPT-1** keyfob
- built-in end-of-line resistors (2EOL: 2 x 1,1 kΩ / 2 x 4,7 kΩ / 2 x 5,6 kΩ)
- LED indicator
- selectable color of the LED indicator (7 colors available)
- LED indicator remote enable/disable
- configuration mode remote enable/disable
- supervision of motion detection and supply voltage circuit
- tamper protection against opening of enclosure and removal from mounting
- adjustable wall-ceiling bracket (**BRACKET D**) included, provided with tamper switch

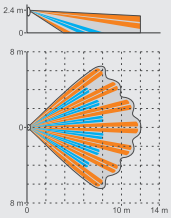
Coverage area SLIM LINE series detectors



SLIM-PIR
SLIM-DUAL



SLIM-PIR-LUNA
SLIM-DUAL-LUNA
SLIM-PIR-PRO
SLIM-DUAL-PRO



SLIM-PIR-PET
SLIM-DUAL-PET
SLIM-PIR-LUNA-PET
SLIM-DUAL-LUNA-PET

for SLIM-DUAL
dark grey housing
(OPC-2 DG) is available

SLIM-DUAL / SLIM-DUAL-PET

Digital dual technology PIR+MW motion detectors

- certified for **EN 50131 Grade 2**
- two detection circuits: PIR (pyrosensor: dual element – **SLIM-DUAL**, quad element – **SLIM-DUAL-PET**) and microwave
- adjustable detection sensitivity of both sensors
- digital motion detection algorithm
- digital temperature compensation
- digital filter of signals received by the microwave sensor to ensure immunity to false alarms caused by the power network and discharge lamps
- wide-angle lens, designed specifically for SLIM LINE detectors
- pet immunity up to 20 kg (**SLIM-DUAL-PET**)
- option to replace the wide-angle lens with a curtain (**CT-CL2**) or long-range (**LR-CL2**) one (**SLIM-DUAL**)
- built-in end-of-line resistors (2EOL: 2 x 1,1 kΩ)
- LED indicator
- selectable color of LED indicator for alarm signaling (4 colors available)
- LED indicator remote enable/disable
- supervision of motion detection and supply voltage circuit
- tamper protection against opening of enclosure
- can be installed using the dedicated adjustable bracket (**BRACKET D**)

for SLIM-DUAL-LUNA
dark grey housing
(OPC-1 DG) is available

SLIM-DUAL-LUNA / SLIM-DUAL-LUNA-PET

Digital dual technology PIR+MW motion detectors

- certified for **EN 50131 Grade 2**
- two detection circuits: PIR (pyrosensor: dual element – **SLIM-DUAL-LUNA**, quad element – **SLIM-DUAL-LUNA-PET**) and microwave
- adjustable detection sensitivity of both sensors
- option to test the sensors separately
- digital motion detection algorithm
- digital temperature compensation
- digital filter of signals received by the microwave sensor to ensure immunity to false alarms caused by the power network and discharge lamps
- operating mode selection: basic, advanced, PIR or MW
- option to enable/disable the creep zone protection (**SLIM-DUAL-LUNA**)
- wide-angle lens, designed specifically for SLIM LINE detectors
- pet immunity up to 20 kg (**SLIM-DUAL-LUNA-PET**)
- option to replace the wide-angle lens with a curtain (**CT-CL**) or long-range (**LR-CL**) one (**SLIM-DUAL-LUNA**)
- ability to configure detector operating parameters using the **OPT-1** keyfob
- built-in end-of-line resistors (2EOL: 2 x 1,1 kΩ / 2 x 4,7 kΩ / 2 x 5,6 kΩ)
- lighting feature implemented with white LEDs
- remote lighting control or motion activated lighting capability
- LED indicator
- selectable color of LED indicator (7 colors available)
- LED indicator remote enable/disable
- remote switching between two sets of detector operating parameters
- configuration mode remote enable/disable
- supervision of motion detection and supply voltage circuit
- tamper protection against opening of enclosure and removal from mounting
- adjustable wall-ceiling bracket (**BRACKET D**) included (**SLIM-DUAL-LUNA**)

SLIM-DUAL-PRO

Digital dual technology PIR+MW motion detector

- certified for **EN 50131 Grade 3**
- two detection circuits: PIR (dual element pyrosensor) and microwave
- adjustable detection sensitivity of both sensors
- option to test the sensors separately
- digital motion detection algorithm
- digital temperature compensation
- digital filter of signals received by the microwave sensor to ensure immunity to false alarms caused by the power network and discharge lamps
- operating mode selection: basic or advanced
- option to enable/disable the creep zone protection
- wide-angle lens, designed specifically for SLIM LINE detectors
- option to replace the wide-angle lens with a curtain (**CT-CL**) or long-range (**LR-CL**) one
- active IR anti-masking, compliant with **EN 50131-2-4** for **Grade 3**
- programmable 60-second anti-mask delay
- ability to configure detector operating parameters using the **OPT-1** keyfob
- built-in end-of-line resistors (2EOL: 2 x 1,1 kΩ / 2 x 4,7 kΩ / 2 x 5,6 kΩ)
- LED indicator
- selectable color of LED indicator (7 colors available)
- LED indicator remote enable/disable
- configuration mode remote enable/disable
- supervision of motion detection and supply voltage circuit
- tamper protection against opening of enclosure and removal from mounting
- adjustable wall-ceiling bracket (**BRACKET D**) included, provided with tamper switch

SLIM LINE MOTION DETECTOR COMPARISON CHART

	SLIM-PIR	SLIM-PIR--PET	SLIM-PIR--LUNA	SLIM-PIR--LUNA-PET	SLIM-PIR--PRO	SLIM-DUAL	SLIM-DUAL--PET	SLIM-DUAL--LUNA	SLIM-DUAL--LUNA-PET	SLIM-DUAL--PRO
Sensor	PIR	PIR	PIR	PIR	PIR	PIR+MW	PIR+MW	PIR+MW	PIR+MW	PIR+MW
Motion detection digital algorithm	•	•	•	•	•	•	•	•	•	•
Sensor self-test	•	•	•	•	•	•	•	•	•	•
Digital interference filter	•	•	•	•	•	•	•	•	•	•
Sensitivity adjustment	stepless	stepless	stepless	stepless	stepless	stepless	stepless	stepless	stepless	stepless
Digital temperature compensation	•	•	•	•	•	•	•	•	•	•
Remote LED disable	•	•	•	•	•	•	•	•	•	•
Active IR anti-masking					•					•
Anti-masking feature										
Cloaked intruder detection								•	•	•
Pyrosensor type	dual	quad	dual	quad	dual	dual	quad	dual	quad	dual
Optic type	Fresnel - replaceable	Fresnel	Fresnel - replaceable	Fresnel	Fresnel - replaceable	Fresnel - replaceable	Fresnel	Fresnel - replaceable	Fresnel	Fresnel - replaceable
Bracket	option		•		•	Option		•		•
Immunity to small pets movement		•		•			•		•	
Range	15 x 20 m, 90°	12 x 13 m, 90°	20 x 24 m, 90°	12 x 13 m, 90°	20 x 24 m, 90°	15 x 20 m, 90°	12 x 13 m, 90°	20 x 24 m, 90°	12 x 13 m, 90°	20 x 24 m, 90°
Built-in EOL resistors	•	•	•	•	•	•	•	•	•	•
Other unique features	selectable LED indicator color	selectable LED indicator color	lighting feature, selectable LED indicator color, configurable using OPT-1 keyfob, possibility to switch between two sensitivity levels	lighting feature, selectable LED indicator color, configurable using OPT-1 keyfob, possibility to switch between two sensitivity levels	selectable LED indicator color, configurable using OPT-1 keyfob	selectable LED indicator color (alarm signalisation)	selectable LED indicator color (alarm signalisation)	lighting feature, selectable LED indicator color, configurable using OPT-1 keyfob, possibility to switch between two sets of detector operating parameters	lighting feature, selectable LED indicator color, configurable using OPT-1 keyfob, possibility to switch between two sets of detector operating parameters	selectable LED indicator color configurable using OPT-1 keyfob

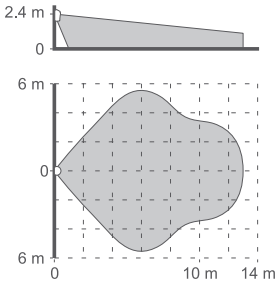
DIGITAL DUAL MOVEMENT DETECTORS

GRADE 2

GREY / GREY Plus

Digital dual technology PIR+MW motion detectors

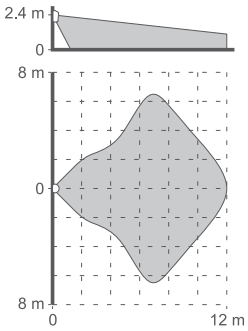
- **EN 50131 Grade 2** compliance (**GREY Plus**)
- advanced DSP with high resolution ADC
- adjustable sensitivity for PIR and MW
- remote triggering of test mode
- MW antimasking feature (**GREY Plus**)
- PET immune mode (up to 15 kg)
- alarm memory



NAVY

Dual technology detector PIR+GB

- digital signal processing
- motion and glass breaking detection
- true temperature compensation
- adjustable sensitivity
- 2 independent alarm outputs
- immunity to movement of pets (up to 15 kg)



DIGITAL PIR DETECTORS

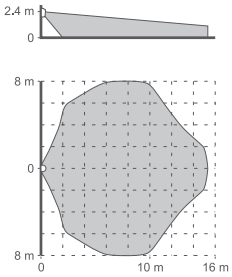
GRADE 2

GRADE 2

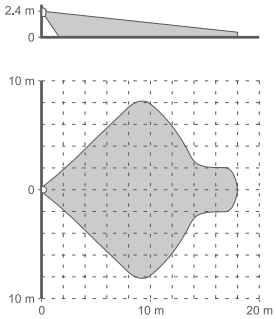
AQUA Plus / AQUA Pet / AQUA S

Digital PIR motion detectors

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



AQUA Plus



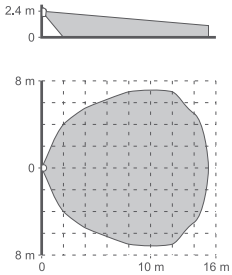
AQUA Pet

GRADE 2

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

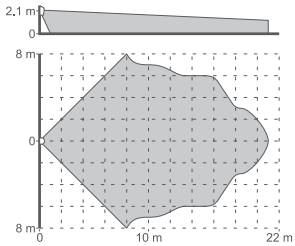


AQUA Luna / S

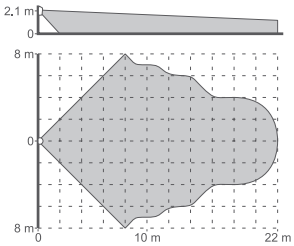
TOPAZ / TOPAZ Pet

Digital PIR motion detectors

- digital signal processing
- immunity to movement of pets (up to 20 kg) (**TOPAZ Pet**)
- build-in EOL resistors
- temperature compensation
- sensitivity adjustment



TOPAZ



TOPAZ Pet

MOTION DETECTOR COMPARISON CHART (PART 1)

	AQUA Plus	AQUA S	AQUA Pet	AQUA Luna	AQUA Ring/ AQUA Ring S	AMBER	AMBER 2E	TOPAZ/ TOPAZ Pet	GRAPHITE
Sensor	PIR	PIR	PIR	PIR	PIR	PIR	PIR	PIR	PIR
Motion detection digital algorithm	•	•	•	•	•	•	•	•	•
Digital temperature compensation	•	•	•	•	•	•	•	•	•
Sensor self-test									•
Digital interference filter									•
Sensitivity adjustment	•	•	•	•	•	•	•	•	stepless
Remote LED disable									•
Active IR anti-masking									
Anti-masking feature									
Cloaked intruder detection									
Pyrosensor type	dual	dual	dual	dual	quad / dual	dual	dual	dual	dual
Optic type	Fresnel - replaceable	Fresnel - replaceable	Fresnel	Fresnel - replaceable	Fresnel	Fresnel	Fresnel	Fresnel	Fresnel - replaceable
Bracket	•	•		•		option	option	option / –	option*
Immunity to small pets movement			•					– / •	
Range	15 x 14 m, 130°	15 x 14 m, 130°	18 x 16 m, 90°	15 x 14 m, 130°		12 x 20 m, 90°	12 x 20 m, 90°	21 x 16 m, 90°/ 22 x 16 m, 90°	18 x 18 m, 90°
Built-in EOL resistors	•		•		• / –		•	•	•
Other unique features				lighting feature	ceiling mount	compact enclosure, very low current consumption	compact enclosure, very low current consumption	compact enclosure, very low current consumption	

*applies only to devices manufactured after 6-09-2021

GRADE 2

AQUA Ring / AQUA Ring S

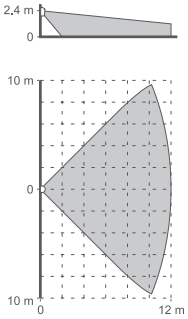
Ceiling mount digital PIR

- **EN 50131 Grade 2** compliance (**AQUA Ring**)
- pyrosensor: 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



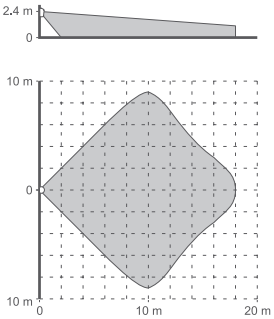
AMBER / AMBER 2E

GRADE 2

GRAPHITE

Digital PIR motion detectors

- certified for **EN 50131 Grade 2**
- high quality dual element pyrosensor
- built-in EOL resistors
- new generation DSP and analysis algorithm
- precise LODIFF™ Fresnel sealed optics
- remotely triggered test mode
- alarm memory feature
- PET immune mode(up to 15 kg)*



GRAPHITE

MOTION DETECTOR COMPARISON CHART (PART 2)

	IVORY	GREY	GREY Plus	NAVY	OPAL	OPAL Plus	OPAL Pro	AGATE	CD-2
Sensor	PIR	PIR+MW	PIR+MW	PIR+GB	PIR+MW	PIR+MW	PIR+MW	PIR+MW	PIR
Motion detection digital algorithm	•	•	•	•	•	•	•	•	•
Digital temperature compensation	•	•	•	•	•	•	•	•	•
Sensor self-test	•	•	•	•	•	•	•	•	
Digital interference filter	•	•	•	•	•	•	•	•	
Sensitivity adjustment	stepless	stepless	stepless	stepless	stepless	stepless	stepless	stepless	stepless
Remote LED disable	•	•	•	•	•	•	•	•	
Active IR anti-masking							•	•	
Anti-masking feature			•		•	•			
Cloaked intruder detection									
Pyrosensor type	dual	dual	dual	dual	dual	dual	dual	dual	dual
Optic type	mirror	Fresnel	Fresnel	Fresnel	Fresnel	Fresnel	Fresnel	Fresnel	Fresnel
Bracket	•	•	•	•	option	option	option	•	
Immunity to small pets movement		option	option	option	option	option	option		
Range	18 x 18 m, 90°	13 x 11 m, 104°	13 x 11 m, 104°	12 x 13 m, 90°	15,5 x 12 m, 97°	15,5 x 12 m, 97°	15,5 x 12 m, 97°	14 x 0,7 m, 5°	5 m x 1 m, 15°
Built-in EOL resistors	•								
Other unique features					high immunity to adverse weather conditions	high immunity to adverse weather conditions, built-in dusk sensor, configurable using OPT-1 keyfob	high immunity to adverse weather conditions, built-in dusk sensor, configurable using OPT-1 keyfob	active infrared barrier, high immunity to adverse weather conditions	curtain detector

*applies only to devices manufactured after 6-09-2021

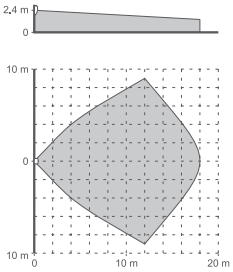
See Detector accessories – page 100

GRADE 2

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



GRADE 3

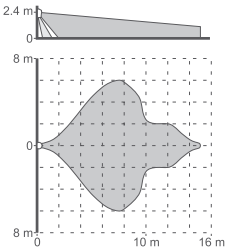
GRADE 2

available in white (OPAL, OPAL Plus, OPAL Pro) and gray (OPAL GY, OPAL Plus GY, OPAL Pro GY)

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**)
- programmable 60-second anti-mask delay (**OPAL Pro**)
- 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
- immunity to movement of pets (up to 20 kg)
- mounting option with the use of holders included in the **BRACKET C** set (ball- or angle-type) or **BRACKET E** (distance holder)
- option to mount the **HOOD C** protection on the enclosure



OPAL / OPAL GY / OPAL Plus / OPAL Plus GY / OPAL Pro / OPAL Pro GY

GAS DETECTORS

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

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

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 seven models:
  - » **ACTIVA-2** (2 beams, height: 52 cm)
  - » **ACTIVA-3** (3 beams, height: 78 cm)
  - » **ACTIVA-4** (4 beams, height: 105 cm)
  - » **ACTIVA-5** (5 beams, height: 131 cm)
  - » **ACTIVA-6** (6 beams, height: 158 cm)
  - » **ACTIVA-7** (7 beams, height: 184 cm)
  - » **ACTIVA-8** (8 beams, height: 211 cm)

See Accessories for ACTIVA – page 99

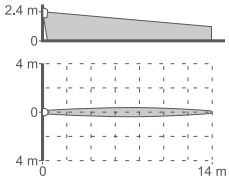
GRADE 3

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
- programmable 60-second anti-mask delay
- splash-proof polycarbonate enclosure, IP54 rated
- tamper protection
- sensitivity of detection circuits configured by using PCB potentiometers
- low current consumption
- mounting option using the angle-type holder or holders included in the **BRACKET E** set (distance holder)
- option to mount the **HOOD A** protection on the enclosure

See Detector accessories – page 100

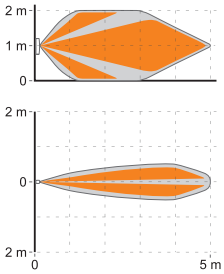


available in
white (CD-2),
brown (CD-2 BR)
and dark grey (CD-2 DG)

CD-2

Curtain detector

- passive infrared sensor (PIR)
- adjustable detection sensitivity
- digital algorithm of motion detection
- digital temperature compensation
- lens designed specifically for SATEL short range curtain detectors
- LED for optical signalling
- monitoring of motion detection system and power supply voltage
- tamper protection



GRADE 2

XD-2 / XD-2L

XD-2 / XD-2L

Multipurpose detector

- compliance with **EN 50131 Grade 2**
- detector type selection with DIP-switches:
  - » magnetic contact
  - » shock detector
  - » shock detector and magnetic contact
  - » water flood detector
- LED indicator with remote enable/disable option
- can be mounted outdoors in the **OPX-1** enclosure (optionally with the **OPXM-1** magnet) (**XD-2**)
- supply voltage control
- built-in 2EOL resistors (**XD-2L**)
  - » alarm: 1,1 kΩ / 2,2 kΩ / 4,7 kΩ / 5,6 kΩ / 6,8 kΩ
  - » tamper: 1,1 kΩ / 2,2 kΩ / 4,7 kΩ / 5,6 kΩ
- tamper protection:
  - » against enclosure opening
  - » removal from mounting surface (**XD-2**)
- 2 magnets included (for surface and flush mounting)

available in
white (XD-2, XD-2L),
brown (XD-2 BR, XD-2L BR)
and dark grey (XD-2 DG, XD-2L DG)

MAGENTA

Digital glassbreak detector

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

INDIGO

Acoustic glassbreak detector

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

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**

K-1 / K-1 2E / K-2 / K-2 2E / K-3 / K-3 2E / S-1 / S-2 / S-3 / S-4

Magnetic contacts

- **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

K-2 / K-2 BR

K-3

K-1 2E / K-1 2E BR

K-2 2E / K-2 2E BR

K-3 2E

S-1 / S-1 BR

S-2 / S-2 BR

S-3

S-4 / S-4 BR / S-4 DG

B-1 / B-1 BR

Side magnetic contact

- surface mounted (screw mount or self adhesive)
- small sized sealed body
- body with dimensions 28 x 12,5 x 6,5 mm

B-1F / B-1F BR

Surface-mounted flat magnetic contact

- surface mounted (screw mount)
- flat body with dimensions of 68 x 20 x 5.3 mm

B-1M / B-1M BR

Side magnetic contact

- surface mounted (screw mount or self adhesive)
- medium sized sealed body
- body with dimensions 51 x 9 x 13,5 mm

B-1P / B-1P BR

Surface-mounted pill shaped magnetic contact

- surface-mounted (self-adhesive)
- small sealed pill shaped body with dimensions of 28 x 9.5 x 5 mm

B-1PT / B-1PT BR

Surface-mounted pill shaped magnetic contact with terminals

- surface-mounted (self-adhesive)
- small pill shaped body with dimensions of 28 x 10 x 6.5 mm

B-1S / B-1S BR

Surface-mounted miniature magnetic contact

- surface mounted (self-adhesive or by using miniature nails)
- miniature sealed body with dimensions of 17 x 8 x 4 mm

B-1T / B-1T BR

Side magnetic contact with terminals

- surface mounted (screw mount)
- body with dimensions 65,5 x 11,1 x 13,6 mm

B-2 / B-2 BR

Flush-mounted magnetic contact

- recessed mounted
- sealed body
- body diameter of 9 mm

B-2FL / B-2FL BR

Flush-mounted magnetic contact

- recessed mounted
- small sealed body with a round flange
- body diameter of 12.7 mm

B-2FLF / B-2FLF BR

Flush-mounted flat magnetic contact

- recessed mounted
- medium-sized body with a round flange
- body diameter of 15 mm

B-2S / B-2S BR

Flush-mounted magnetic contact

- recessed mounted
- body diameter of Ø 6,5 mm

B-2T / B-2T BR

Flush-mounted magnetic contact with terminals

- recessed mounted
- screw terminals
- body diameter of 9 mm

B-21 / B-21 BR

Flush-mounted magnetic contact

- recessed mounted
- medium-sized sealed body with a square flange
- body diameter of 6.5 mm
- flange side length of 10 mm

B-3 / B-3A

Side magnetic contact

- surface mounted (screw mount)
- rugged, metal sealed body
- armored cable (**B-3A**)
- body with dimensions 50 x 17 x 9,8 mm

B-3CM / B-3CS

Flush-mounted magnetic contact

- recessed mounted
- small metal sealed body with a round flange
- body diameters:
  - » 8 mm (**B-3CM**)
  - » 6 mm (**B-3CS**)

B-4M

Gate magnetic contact

- surface mounted (screw mount)
- rugged, metal sealed body
- armored cable
- body with dimensions 106 x 36,5 x 10 mm

B-4L

Gate magnetic contact

- surface mounted (screw mount)
- rugged, metal sealed body
- armored cable
- body with dimensions 104,5 x 44,5 x 11,5 mm

B-4S

Gate magnetic contact

- surface mounted (screw mount)
- rugged, metal sealed body
- armored cable
- body with dimensions 104,5 x 44,5 x 11,5 mm

MAGNETIC CONTACT COMPARISON CHART

	flush mount	surface mount	possible to glue	possible to screw	plastic housing	metal housing	sealed housing	tamper loop	tamper switch	2EOL resistors: 2 x 1,1 kΩ	screw terminals	metal shielded cable
K-1 / K-1 BR		•	•	•	•		•					
K-1 2E / K-1 2E BR		•	•	•	•		•			•		
K-2 / K-2 BR	•				•		•					
K-2 2E / K-2 2E BR	•				•		•			•		
K-3	•					•	•					
K-3 2E	•					•	•			•		
S-1 / S-1 BR		•	•	•	•		•	•				
S-2 / S-2 BR	•				•		•	•				
S-3	•					•	•	•				
S-4 / S-4 BR/ S-4 DG		•		•	•				•		•	
B-1 / B-1 BR		•	•	•	•		•					
B-1M / B-1M BR		•	•	•	•		•					
B-1F / B-1F BR		•		•	•							
B-1P / B-1P BR		•	•		•		•					
B-1PT / B-1PT BR		•	•		•						•	
B-1S / B-1S BR		•	•	•	•		•					
B-1T / B-1T BR		•		•	•						•	
B-2 / B-2 BR	•				•		•					
B-2FL / B-2FL BR	•				•		•					
B-2FLF / B-2FLF BR	•				•							
B-2S / B-2S BR	•				•		•					
B-2T / B-2T BR	•				•						•	
B-21 / B-21 BR	•				•		•					
B-3		•		•		•	•					
B-3A		•		•		•	•					•
B-3CM	•					•	•					
B-3CS	•					•	•					
B-4M		•		•		•	•					•
B-4L		•		•		•	•					•
B-4S		•		•		•	•					•
XD-2		•	•	•	•		•*		•			

*when placed inside OPX-1 enclosure

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

PNK-1

Latching panic button

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

TSD-1

Universal smoke and heat detector

- certified for compliance:
  - » **EN54-7** – smoke detection
  - » **EN54-5** – heat detection
- unique Swirl chamber for increased smoke sensitivity
- 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 control panels and external devices

PB-10

Panic buton

- the panic button can be used to:
  - » trigger a panic alarm
  - » call for help
  - » control other devices, including elements of building automation or access control system
- compatible with any alarm control panels that supports NC type detectors
- push button design prevents accidental pressing
- tamper protection

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.

OUTDOOR SIRENS

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) and blue (SP-4001 BL)

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
- sealed lead acid backup battery included

available with glass in red (SP-4002 R) and blue (SP-4002 BL)

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) and blue (SP-4003 BL)

GRADE 2

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) and 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
- sealed lead acid backup battery included

available with glass in red (SP-4006 R) and blue (SP-4006 BL)

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) and blue (SP-500 BL)

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
- support for sealed lead acid backup battery

available with glass in red (SD-3001 R) and blue (SD-3001 BL)

GRADE 2

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

GRADE 2

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

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

available with glass in red (SPL-5010 R) and blue (SPL-5010 BL)

SPL-5020

Outdoor siren with optical and acoustical signaling

- acoustical signaling: piezo transducer
- optical signaling: light bulb
- 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
- support for sealed lead acid backup battery

available with glass in red (SPL-5020 R) and blue (SPL-5020 BL)

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) and blue (SPL-2010 BL)

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

available with glass in red (SPL-2030 R) and blue (SPL-2030 BL)

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

available with glass in red (SPLZ-1011 R) and blue (SPLZ-1011 BL)

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)
and blue (SOW-300 BL)

GRADE 2

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)
and blue (SPW-210 BL)

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)
and blue (SPW-220 BL)

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)
and blue (SPW-250 BL)

SIREN COMPARISON CHART

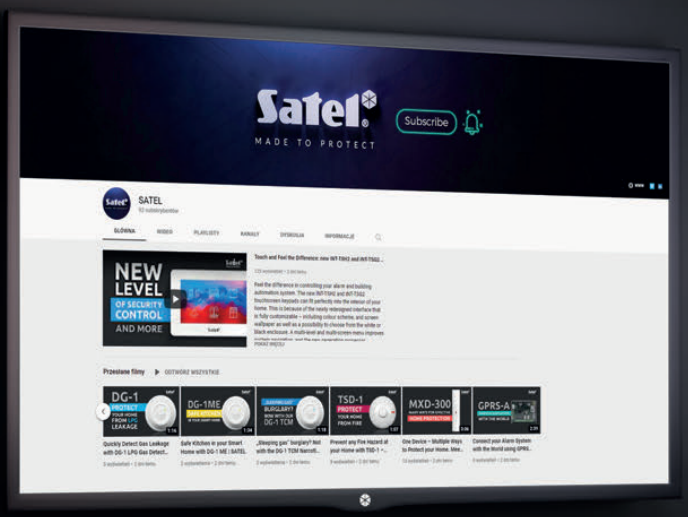
	siren type	acoustic signaling	optical signaling	armed indicator	backup battery	metal shield	tamper – enclosure openings	tamper – tearing from the surface	tamper – foaming	maximum signaling time limitation	lens colors	enclosure design
SD-6000	outdoor	dynamic horn	LED	•	option	•	•	•		•		
SP-6500	outdoor	piezo transducer	LED	•	option	•	•	•		•		
SP-4006	outdoor	piezo transducer	LED rails		•	•	•	•		•		
SP-4004	outdoor	piezo transducer	LED	•	option	•	•	•		•		
SP-4003	outdoor	piezo transducer	LED rails	•		•	•	•				
SP-4002	outdoor	piezo transducer	LED		•	•	•	•		•		
SP-4001	outdoor	piezo transducer	LED	•		•	•	•				
SD-3001	outdoor	dynamic horn	LED		option	•	•	•		•		
SP-500	outdoor	piezo transducer	LED				•	•				
SPLZ-1011	outdoor	piezo transducer	LED		•	•	•	•	•	•		
SPL-2010	outdoor	piezo transducer	LED			•	•	•	•			
SPL-2030	outdoor	piezo transducer	LED			option	•	•	option			
SPL-5020	outdoor	piezo transducer	bulb		option	option	•	•	option			
SPL-5010	outdoor	piezo transducer	LED			option	•	•	option			
SPW-250	indoor	piezo transducer			•		•	•				
SPW-220	indoor	piezo transducer	LED	•			•	•				
SPW-210	indoor	piezo transducer					•	•				
SPW-150	indoor	piezo transducer			•		•	•				
SPW-100	indoor	piezo transducer					•	•				
SOW-300	indoor		LED	•			•					

See SIREN ACCESSORIES page 99

SUPPORTING PROFESSIONALS

Satel®
MADE TO PROTECT

choose how you want to learn about the SATEL products:

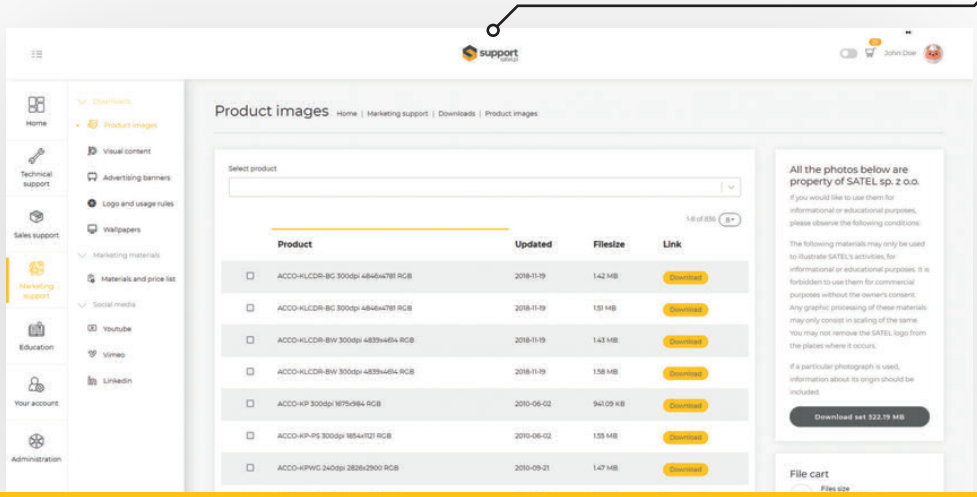


video materials
on YouTube and Vimeo

technical support
- support line
- ticket portal

online training
- webinars
- e-Academy

support
on our website

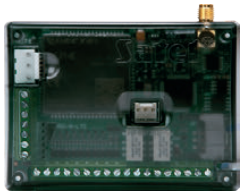


www.satel.pl

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, cellular or Ethernet networks.

MODULES LTE and GPRS



GPRS-A LTE

GPRS-A

GRADE 2 SP 5

GPRS-A LTE / GPRS-A

Universal monitoring module

- certified compliance with **EN 50131 Grade 2** (**GPRS-A LTE**)
- certified compliance with **EN 50136 SP 5**
- reporting: LTE* (TCP / UDP), SMS
- converting and retransmitting codes of events received from other devices (simulation of telephone monitoring station)
- sending notifications to max. 8 phone numbers
- notification messaging: SMS / CLIP / PUSH
- 8 programmable inputs (NO / NC / analog)
- 1-Wire bus – handling of up to 8 digital temperature sensors
- possibility to configure response to exceeded threshold values at:
  - » analog inputs
  - » 1-Wire sensors
- input for AC voltage presence supervision
- 4 outputs (2 relay, 2 OC type) controlled via SMS / CLIP (up to 10 000 numbers) / **GX CONTROL** / **GX Soft** / via IoT
- IoT – support for MQTT, JSON, JSON/HTTP, MODBUS RTU open protocols
- possibility to check pre-paid account balance and send notification if it drops below required minimum
- module configuration – PC with **GX Soft** software:
  - » local connection - USB RS-232 (TTL)
  - » remote connection – data transmission via cellular network*
- support for **GX CONTROL** mobile application
- remote update of the module firmware via **UpServ**
- optional connection of the dedicated **APS-412**, **APS-612** power supply

* mobile data transmission via LTE/HSPA+/EDGE/GPRS in case of GPRS-A LTE (depending on the capabilities of cellular network), GPRS in case of GPRS-A

GPRS-A Lite

Universal monitoring module

- reporting: LTE* (TCP / UDP), SMS
- converting and retransmitting codes of events received from other devices (simulation of telephone monitoring station)
- sending notifications to max. 8 phone numbers
- notification messaging: SMS / CLIP
- 4 programmable inputs (NO / NC)
- input for AC voltage presence supervision
- 4 outputs (OC type) controlled via SMS / CLIP (up to 10 000 numbers) / **GX Soft**
- possibility to check pre-paid account balance and send notification if it drops below required minimum
- module configuration – PC with **GX Soft** software:
  - » local connection - USB (Micro-B)
  - » remote connection – data transmission via cellular network*
- remote update of the module firmware via **UpServ**

* data transmission using the LTE/EDGE/GPRS technology – depending on the cellular network capabilities

INT-GSM LTE

INT-GSM

GRADE 3 | SP 5

INT-GSM LTE / INT-GSM

LTE communication module / GPRS communication module — for INTEGRA and INTEGRA Plus control panels

- certified compliance with **EN 50131 Grade 3** and **EN 50136 SP 5**
- messaging: SMS, CLIP, PUSH, e-mail (**INTEGRA Plus**)
- remote control: SMS, CLIP, mobile application
- reporting: LTE* (TCP/UDP), SMS messages
- compatibility 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 from both SIM cards (**INT-GSM**)
- ability to check the pre-paid account balance and send notification if it drops below required minimum
- NTP server / cellular network time synchronization
- capability 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**

*data transmission using LTE/HSPA+/EDGE/GPRS technology in the case of INT-GSM LTE (depending on the cellular network capabilities) and GPRS technology in the case of INT-GSM

MODULES GSM/LTE

GSM-X LTE

GRADE 2 | DP 4 | SP 5

GSM-X LTE

Universal, multi-purpose communication module

- certified compliance with **EN 50131 Grade 2**
- certified compliance with **EN 50136 SP 5** and **DP 4***
- reporting: audio (cellular / PSTN*) / SMS / LTE**/ Ethernet*** network)
- converting and retransmitting codes of events received from other devices (simulation of telephone monitoring station)
- sending notifications to max. 8 phone numbers
- notification: audio (cellular / PSTN*) / SMS / PUSH / CLIP
- conversion of PAGER messages into SMS
- simulation of analog telephone line by using cellular connection – GSM gateway
- routing connections to cellular network in case of telephone line failure
- compatibility with **INTEGRA** and **INTEGRA Plus** control panels:
  - » fast data transfer through RS-232
  - » TCP/IP event reporting
  - » automatic composition of notification content (**INTEGRA Plus**)
  - » possibility of remote control panel programming (**DLOADX**) and remote administration of the alarm system (**GUARDX**)
- SMS and CLIP receiver for **STAM-2** monitoring station
- programmable inputs (NO, NC): 8
- 4 outputs (OC) controlled by SMS / CLIP / DTMF / **GX CONTROL** / **GX Soft** / via IoT
- IoT – support for MQTT, JSON
- dual SIM card support
- possibility to check the pre-paid account balance and send notification if it drops below required minimum
- module configuration – PC with **GX Soft** software:
  - » local connection - USB
  - » remote connection – data transmission via cellular network** or Ethernet ***
- support for **GX CONTROL** mobile application
- remote update of the module firmware via **UpServ**
- optional connection of the dedicated **APS-412**, **APS-612** or **APS-1412** power supply
- expansion capability by adding:
  - » **GSM-X-ETH** Ethernet module
  - » **GSM-X-PSTN** phone module

* when used with GSM-X-PSTN
** data transmission using LTE/HSPA+/EDGE/GPRS technology (depending on the cellular network capabilities)
*** when used with GSM-X-ETH

GSM-X-ETH

Ethernet module for GSM-X LTE communicator

- support for Ethernet as additional communication channel

GSM-X-PSTN

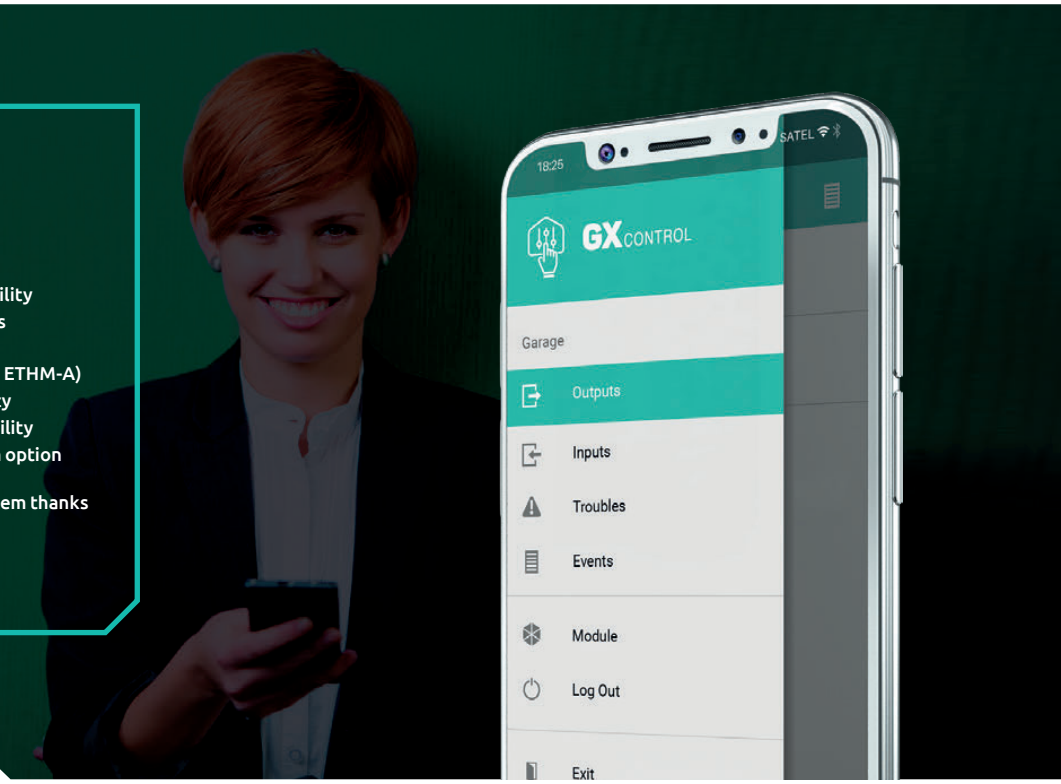
Telephone module for GSM-X LTE communicator

- support for additional communication channel: analog PSTN telephone network

GX CONTROL

Mobile application for remote control of SATEL communication modules

- support for communication modules:
  - » checking status of inputs with blocking capability
  - » checking and controlling the status of outputs
  - » presentation of reading from analog inputs and digital sensors (GPRS-A, GPRS-A LTE, and ETHM-A)
  - » 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



GX CONTROL | iOS

MODULE COMPARISON CHART

	GSM-X LTE	GPRS-A LTE	GPRS-A	GPRS-A Lite	ETHM-A	MICRA
Simulation of analog telephone line over cellular network (GSM gateway feature)	•					
Handling of calls incoming via cellular network	•					
Simulation of telephone monitoring receiver	•	•	•	•	•	
Telephone line reporting conversion to	LTE / Ethernet* / SMS / audio	LTE / SMS	GPRS / SMS	LTE / SMS	ETHERNET	
Automatic connections routing to cellular network in case of telephone line failure	•					
CallerID forwarding	•					
PAGER (DTMF) messaging conversion to SMS	•					
audio/SMS/CLIP/PUSH/e-mail messaging on selected events	•/•/•/•/-	-/•/•/•/-	-/•/•/•/-	-/•/•/-/-	-/-/-/•/•	-/•/•/-/-
Number of control inputs	8	8	8	4	8	5
Inputs: NO/NC/analog	•/•/-	•/•/•	•/•/•	•/•/-	•/•/•	•/•/•
1-Wire digital temperature sensor bus		•	•		•	
Messaging triggering by means of: control inputs/outputs state changes	•/•	•/•	•/•	•/•	•/•	•/-
Reporting triggering by means of: control inputs/outputs state changes	•/•	•/•	•/•	•/•	•/•	•/-
Remote output control	•	•	•	•	•	•
IoT function - supported protocols	MQTT / JSON	MQTT / JSON / JSON/HTTP / MODBUS RTU	MQTT / JSON / JSON/HTTP / MODBUS RTU		MQTT / JSON / JSON/HTTP	
Expanded support for INTEGRA control panels	•					
Listen-in feature – alarm verification						•
SATEL connection setup service	•	•	•	•	•	
Remote module configuration via cellular network / Ethernet	•/•*	•/-	•/-	•/-	-/•	•/-
Mobile application (communication via)	GX CONTROL (LTE/Ethernet*)	GX CONTROL (LTE)	GX CONTROL (GPRS)		GX CONTROL (Ethernet)	MICRA CONTROL (SMS)
Remote update of module firmware via cellular network / Ethernet	•/•*	•/-	•/-	•/-	-/•	•/-

* when used with GSM-X-ETH

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 (**MGD-300, MMD-300, MMD-302, MPD 300, MPD-310, MPD-310 Pet, MSD-300, MSD-350, MXD-300**)
  - » 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)

TCP/IP COMMUNICATION

SP 5

ETHM-1 Plus

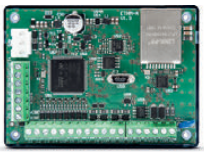
TCP/IP communication module

- má certifikát zhody s **EN 50131 Grade 2** a **EN 50136 SP 5**
- spolupráca s ústredňami **INTEGRA**, **INTEGRA Plus**, **VERSA** a **PERFECTA 64 M**
- možnosť spolupráce s komunikačným modulom **INT-GSM LTE / INT-GSM** (iba **INTEGRA**, **INTEGRA Plus**):
  - » Dual Path Reporting, zhodný s **EN 50136**
  - » záložný kanál spojenia
- monitoring TCP/IP alebo UDP
- programovanie pomocou programu **DLOADX** alebo **PERFECTA Soft**
- spravovanie systému **INTEGRA** a **INTEGRA Plus** pomocou programu **GUARDX**
- obsluha systému z mobilného telefónu pomocou aplikácie **INTEGRA CONTROL**, **VERSA CONTROL**, **PERFECTA CONTROL**
- možnosť oznamovania o udalostiach pomocou správ typu E-mail (**INTEGRA Plus**, **VERSA**)
- kódovaný prenos údajov
- obsluha automatickej konfigurácie adries DHCP
- otvorený protokol na integráciu kanálom TCP/IP s inými systémami

ETHM-2

Universal TCP/IP communication module

- 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
- remote control via web browser
- unit configuration via web browser (using the **ETHM-2 Soft** program)
- local configuration via RS-232 (using the **ETHM-2 Soft** program)
- basic alarm unit with TCP/IP communication functionality
- encrypted data transmission



ETHM-A

Universal monitoring module

- monitoring: Ethernet (TCP/UDP)
- conversion and retransmission of event codes received from other devices (the module simulates a monitoring station)
- messaging: PUSH/E-mail
- 8 programmable inputs (NO/NC/analogue)
- 1-Wire digital sensor bus (up to 8 sensors)
- configurable module response to exceeded programmed threshold values:
  - » from analogue inputs
  - » from 1-Wire sensors
- 4 OC outputs controlled by **GX CONTROL** mobile application or **GX Soft** software
- support for open communication protocols:
  - » MQTT
  - » JSON
  - » JSON/HTTP
- configuration of the module settings with **GX Soft**:
  - » locally via RS-232 (TTL)
  - » remotely via Ethernet
- support for the **GX CONTROL** mobile app
- remote update of firmware via **UpServ**

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
- incoming call answering:
  - » system state check
- programming settings using the **DT-1 Soft** program

SM-2

Voice synthesizer

- records and plays back a 16 second voice message

RADIO REMOTE CONTROLLERS

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.

SETS

RK-1K / RK-2K / RK-4K / RK-4K SMA

Radio controllers

- relay outputs (channels):
  - » 1 (**RK-1K**)
  - » 2 (**RK-2K**)
  - » 4 (**RK-4K** / **RK-4K SMA**)
- option to chose the output operating mode: monostable, bistable, pulse
- supports up to 1024 keyfob remote controllers
- compatible with: **MPT-350**, **T-1**, **T-2**, **T-4**, **MPB-300**
- optional configuration by using a computer with the **RK Soft** program installed
- 2 OC type outputs
  - » battery indication
  - » indication of alarm system arming / disarming / alarm clearing
- 2 inputs for monitoring the alarm system state
  - » arming information
  - » alarm information
- SMA connector for an external antenna (**RK-4K SMA**)
- DC/AC power supply
- the set contains 2 keyfobs:
  - » T-1 (**RK-1K**)
  - » T-2 (**RK-2K**)
  - » T-4 (**RK-4K** / **RK-4K SMA**)

KEYFOBS

T-1 / T-2 / T-4

Remote controller keyfobs

- KEELOQ® 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

T-1

T-2

T-4

MPT-350

Remote control keyfob

- 5 buttons with function assignment capability
- ergonomic enclosure preventing buttons from being pushed accidentally
- powered by CR2032 button cell

MPB-300

Wireless panic button

- push button design to prevent accidental pressing
- LED for easy button testing
- power supply: CR14250 3 V battery
- tamper protection

ACCESS CONTROL

COMPLIANCE with **GDPR**

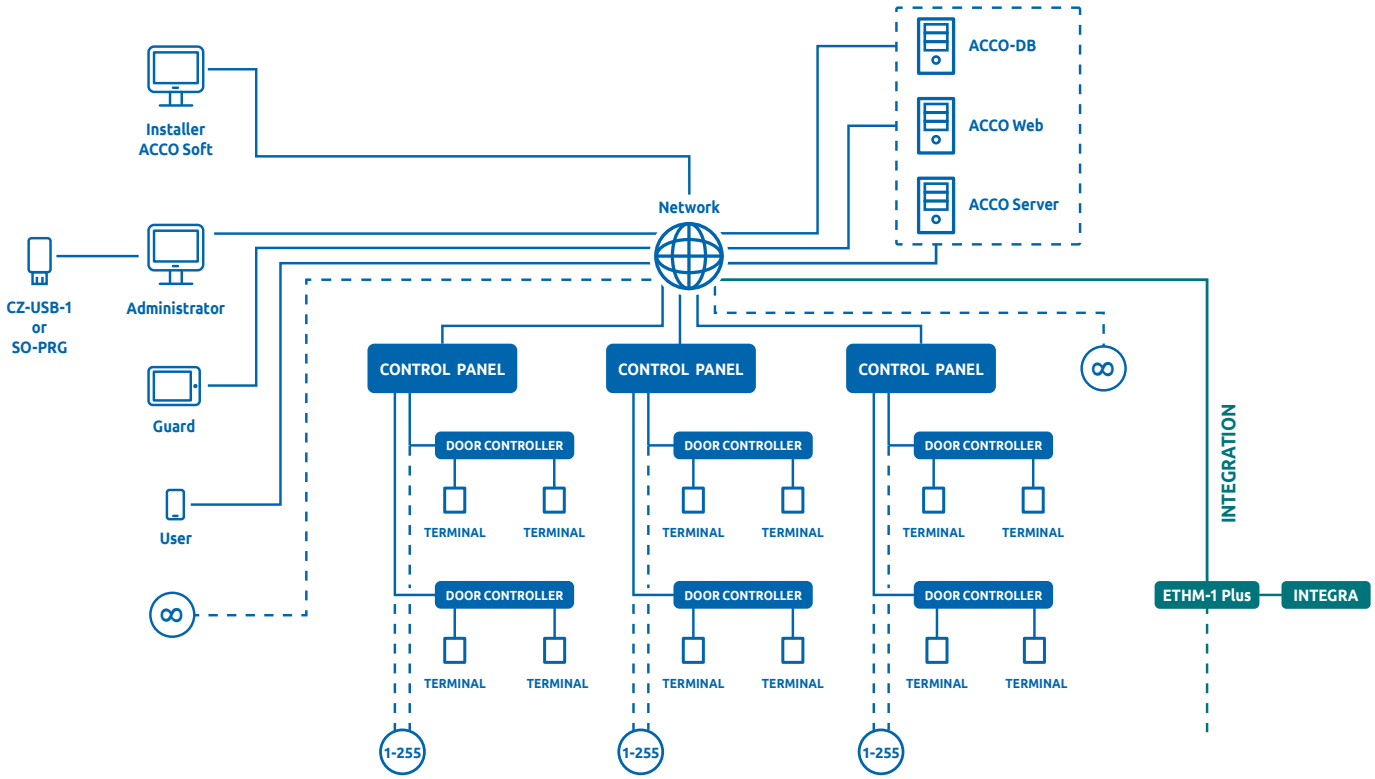
ACCO NET ACCESS CONTROL SYSTEM

The ACCO NET is a scalable access control system with distributed system. The main components of this solution are: ACCO Server software and ACCO-NT2 control panels. The actuators are ACCO-KP series 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-NT2 bus and update their firmware.

Integration with the alarm system – a single ACCO-NT2 control panel may be integrated with 8 intruder alarms based on INTEGRA control panels.

SYSTEM STRUCTURE



CONTROL PANEL: ACCO-NT2 or ACCO-NT archive model of control panel
DOOR CONTROLLER: ACCO-KP2 or discontinued: ACCO-KP-PS, ACCO-KP, ACCO-KPWG-PS, ACCO-KPWG.
TERMINAL: SO-MF5, SO-MF3, CR-MF5, CR-MF3, ACCO-KLCDR, ACCO-SCR-BG, CZ-EMM, CZ-EMM2, CZ-EMM3, CZ-EMM4, CZ-DALLAS, OSDP or Wiegand reader.
INTEGRATION: possibility of integration with alarm system based on INTEGRA / INTEGRA Plus control panel.

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)

INTEGRATION WITH THE ALARM SYSTEM

- simplified security and access control supervision in protected buildings
- **INTEGRA** partitions and **ACCO-NT2** zones integration:
  - » convenient administration of **ACCO NET** user privileges
  - » possibility to control **INTEGRA** and **INTEGRA Plus** partitions by up to 8,000 **ACCO-NT2** 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

ADVANCED SOFTWARE

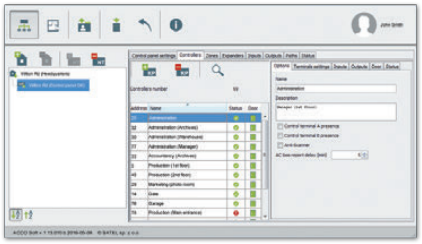
The ACCO NET is an access control system, the management, administration and configuration of which are based on advanced software. Its components are installed on a computer running Debian system and may, depending on the size of the system, reside on a single machine or even on three separate ones.

- 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

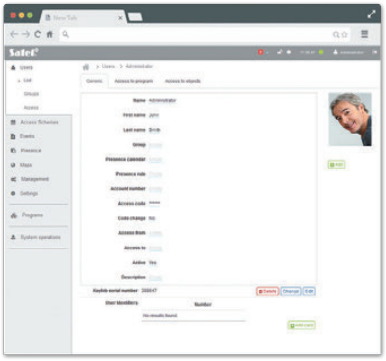
- creating the system structure
- creating access control zones
- configuring **ACCO-NT2** control panels
- ability to remotely update the firmware of **ACCO-NT2** control panels and **ACCO-KP** series controllers
- configuration of devices with MIFARE® card readers (OSDP): **SO-MF5**, **SO-MF3**, **CR-MF5**, **CR-MF3**
- adding and configuring expansion modules (**INT-E**, **INT-O**, **INT-ORS**, **INT-IORS**, **INT-PP**, **INT-RX**)
- defining access pathways
- access from any location in the world
- integration configuration of **ACCO NET** zones and **INTEGRA** and **INTEGRA Plus** systems partitions



ACCO Web

A tool for remote management of the system

- access from anywhere in the world using a web browser
- operation from mobile devices
- option of several people logging in at the same time
- adding and managing users (**CZ-USB-1** or **SO-PRG**)
- compliance with GDPR
- generating a document / statement / consent to the processing of personal data
- the right to be forgotten
- generating personalized badges (for PDF / printout)
- creating rules and calendars
- creating presence reports, including for any number of users at the same time
- presence dashboard - people counter in zone or premises + quick report
- checking the status / presence of users based on historical data
- review of events with filtering option (also those regarding integrated INTEGRA alarm systems)
- operating the system from the "Management" menu and multi-level maps (created in Map Editor)
- preview of the status of server, control panels and controllers
- preview of the location of cameras in the premises
- preview of image from IP cameras (link opens in a separate browser window)
- anti-passback function
- control and preview of the status of **INTEGRA** alarm systems integrated with **ACCO NET**



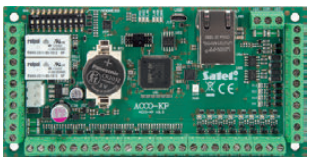
ACCO-NT2 CONTROL PANEL

The ACCO-NT2 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-NT2** 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** series controllers
- USB connector located on the control panel board simplifies initial configuration of the control panel by the installer
- the **APS-412** / **APS-612** / **APS-1412** backup power supply unit is responsible for maintaining continuous operation of the control panel even during mains power loss
- a single **ACCO-NT2** control panel may be integrated with many intruder alarms based on **INTEGRA** and **INTEGRA Plus** control panels

DOOR CONTROLLER

Descriptions page 77



ACCO-KP2

ACCO TERMINALS

Descriptions page 78

SO-MF5-B / SO-MF5-W

SO-MF3-B / SO-MF3-W

CR-MF5

CR-MF3

ACCO-KLCDR-BW / ACCO-KLCDR-BG / ACCO-KLCDR-W

ACCO-SCR-BG

CZ-EMM

CZ-EMM2

CZ-EMM3

CZ-EMM4

CZ-DALLAS

SYSTEM UNITS

Descriptions page 78

CZ-USB-1

SO-PRG-B

TRANSPONDERS

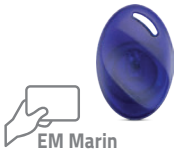
Descriptions page 80

MC-DF3-2

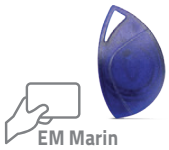
MC-SRV-8

KT-STD-1

KT-STD-2



BR-STD-1



BR-STD-2

BR-STD-3

PAS-DALLAS

ACCO ACCESSORIES

Descriptions page 81

OP-KT-1

OP-KT-2

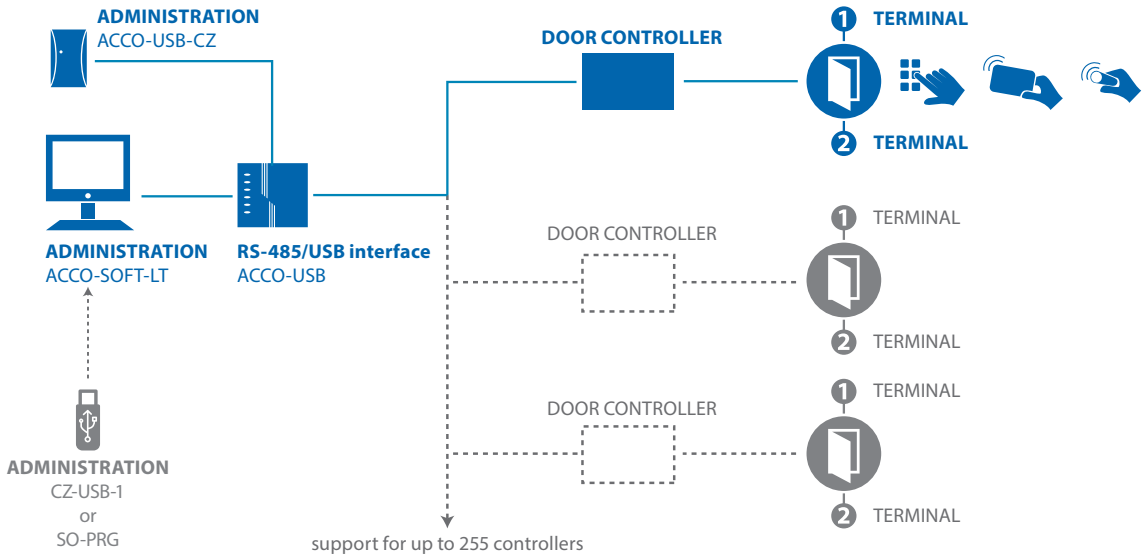
LOGOBAND-A

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 though out system concept ensures the highest possible quality and makes it suitable for individual needs.

SYSTEM STRUCTURE



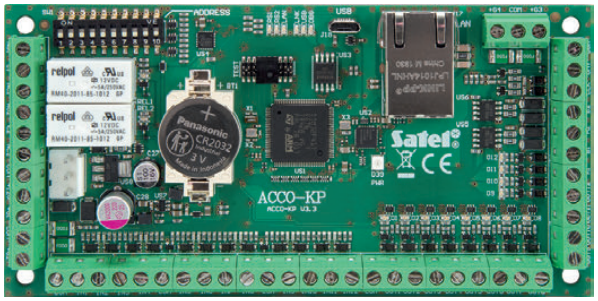
DOOR CONTROLLER: ACCO-KP2 or discontinued: ACCO-KP-PS, ACCO-KP, ACCO-KPWG-PS, ACCO-KPWG.
TERMINAL: SO-MF5, SO-MF3, CR-MF5, CR-MF3, ACCO-KLCDR, ACCO-SCR-BG, CZ-EMM, CZ-EMM2, CZ-EMM3, CZ-EMM4, CZ-DALLAS, Wiegand reader.

DOOR CONTROLLER

ACCO-KP2

Door controller

- support for single door with entry and exit authorization
- standalone or **ACCO**/**ACCO NET** system operation mode
- 1,024 users (standalone or ACCO system operation mode)
- user rights definition
- possibility to assign the user a code, proximity card (passive transponder in the form of a card, tag, etc.) or DALLAS iButton
- support for various terminals enabling the user identification – keypads and proximity card readers
- support for terminals using various transmission protocols
  - » EM Marin (SATEL terminals)
  - » Wiegand
  - » DALLAS
- time schedules
  - » 256 weekly schedules
  - » 256 daily schedules
  - » 256 time frames
- holiday access schedules
- non-volatile 24,576 event log
- registering information on time attendance control
- protection against multiple use of the same code / card for access (anti-passback)
- programming means:
  - » standalone or **ACCO** system operation mode – computer with the **ACCO-SOFT-LT** program
  - » **ACCO NET** operation mode – computer with the **ACCO Soft** program
- non-volatile FLASH settings memory
- firmware update without the necessity to dismantle the module
  - » locally (single module) – via USB port of the module
  - » via RS-485 bus (single or many modules) – using **ACCO-USB** converter
  - » remotely in broadcast mode (single or many controllers) - via the **ACCO-NT2** control panel (**ACCO NET** system operation mode)
- scheduled door locking and unlocking
- programmable limits on number of accesses (only **ACCO** system operation mode)
- power status control in cooperation with the **APS-412** / **APS-612** / **APS-1412** power supply – connected to the APS connector in the module



ACCO-KP2

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

EM Marin

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**

EM Marin

CZ-USB-1

Proximity card reader

- operation in Windows environment
- operation at 125 kHz frequency

MIFARE®

SO-PRG-B

MIFARE® card programmer

- programming and reading MIFARE® proximity cards
- programming of **MC-SRV-8** service cards, used for configuring MIFARE® card readers
- support for MIFARE proximity cards (13.56 MHz):
  - » Ultralight CSN/SSN
  - » Classic CSN/SSN/MSN
  - » DESFire (EV1 / EV2 / EV3) CSN/MSN
- USB port (Micro-B)
- powered from the computer USB port
- LED indicators

ACCO TERMINALS

MIFARE®

Available in:
black (SO-MF5-B)
and white (SO-MF5-W)

SO-MF5

Multi-function keypad with MIFARE® proximity card reader

- user identification by code and/or MIFARE® proximity card
- option to operate as:
  - » **INT-SCR** partition keypad in the **INTEGRA** alarm system
  - » **ACCO-SCR** keypad with proximity card reader in the **ACCO NET** or **ACCO** access control system
  - » keypad with proximity card reader in systems of other manufacturers (OSDP, Wiegand)
  - » standalone door control module
- support for MIFARE proximity cards (13.56 MHz):
  - » Ultralight CSN/SSN
  - » Classic CSN/SSN/MSN
  - » DESFire (EV1 / EV2 / EV3) CSN/MSN
- programming with **CR Soft** program or **MC-SRV-8** service card
- LED indicators (4 pcs.)
- doorbell button controlling OC type output
- relay output for controlling an electric strike, electromagnetic lock or other device which activates the door (**INTEGRA**, standalone)
- door status input (**INTEGRA**, standalone)
- request-to-exit input (**INTEGRA**, standalone)
- built-in sounder (volume adjustable)
- optical tamper protection against enclosure opening and removal from the wall

MIFARE®

Available in:
black (SO-MF3-B)
and white (SO-MF3-W)

SO-MF3

MIFARE® proximity card reader

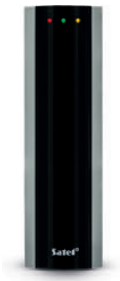
- user identification by MIFARE® proximity card
- option to operate as:
  - » proximity card reader in the **INTEGRA** alarm system
  - » proximity card reader in the **ACCO NET** or **ACCO** access control system
  - » proximity card reader in systems of other manufacturers (OSDP, Wiegand)
  - » standalone door control module
- support for MIFARE proximity cards (13.56 MHz):
  - » Ultralight CSN/SSN
  - » Classic CSN/SSN/MSN
  - » DESFire (EV1 / EV2 / EV3) CSN/MSN
- programming with **CR Soft** program or **MC-SRV-8** service card
- LED indicators (4 pcs.)
- relay output for controlling an electric strike, electromagnetic lock or other device which activates the door (**INTEGRA**, standalone)
- door status input (**INTEGRA**, standalone)
- request-to-exit input (**INTEGRA**, standalone)
- built-in sounder (volume adjustable)
- optical tamper protection against enclosure opening and removal from the wall

CR-MF5

Multi-function keypad with MIFARE® proximity card reader

- user identification by code and/or MIFARE® proximity card
- option to operate as:
  - » **INT-SCR** partition keypad in the **INTEGRA** alarm system
  - » **ACCO-SCR** keypad with proximity card reader in the **ACCO NET** or **ACCO** access control system
  - » keypad with proximity card reader in systems of other manufacturers (OSDP, Wiegand)
  - » standalone door control module
- support for MIFARE proximity cards (13.56 MHz):
  - » Ultralight CSN/SSN
  - » Classic CSN/SSN/MSN
  - » DESFire (EV1 / EV2 / EV3) CSN/MSN
- programming with **CR Soft** program or **MC-SRV-8** service card
- LED indicators (3 pcs.)
- doorbell button controlling OC type output
- relay output for controlling an electric strike, electromagnetic lock or other device which activates the door (**INTEGRA**, standalone)
- door status input (**INTEGRA**, standalone)
- request-to-exit input (**INTEGRA**, standalone)
- built-in sounder (volume adjustable)
- optical tamper protection against enclosure opening and removal from the wall
- indoor and outdoor operation

MIFARE®



CR-MF3

MIFARE® proximity card reader

- user identification by MIFARE® proximity card
- option to operate as:
  - » proximity card reader in the **INTEGRA** alarm system
  - » proximity card reader in the **ACCO NET** or **ACCO** access control system
  - » proximity card reader in systems of other manufacturers (OSDP, Wiegand)
  - » standalone door control module
- support for MIFARE proximity cards (13.56 MHz):
  - » Ultralight CSN/SSN
  - » Classic CSN/SSN/MSN
  - » DESFire (EV1 / EV2 / EV3) CSN/MSN
- programming with **CR Soft** program or **MC-SRV-8** service card
- LED indicators (3 pcs.)
- relay output for controlling an electric strike, electromagnetic lock or other device which activates the door (**INTEGRA**, standalone)
- door status input (**INTEGRA**, standalone)
- request-to-exit input (**INTEGRA**, standalone)
- built-in sounder (volume adjustable)
- optical tamper protection against enclosure opening and removal from the wall
- indoor and outdoor operation

MIFARE®

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

EM Marin

Available versions: white backlight, white housing (ACCO-KLCDR-W), blue backlight, white housing (ACCO-KLCDR-BW), blue backlight, gray housing (ACCO-KLCDR-BG)

ACCO-SCR-BG

Keypad with proximity card reader

- 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

EM Marin

EM Marin

CZ-EMM/ CZ-EMM2

Proximity card readers

- access authorization with proximity card
- support for cards, tags and other 125 kHz passive transponders

EM Marin

CZ-EMM3 / CZ-EMM4

Proximity card readers

- access authorization with proximity card
- support for cards, tags and other 125 kHz passive transponders
- outdoor operation
- doorbell button (only **CZ-EMM4**)
- optional **MLT-POD** spacer pad available

Dallas iButton

CZ-DALLAS

Dallas iButton reader

- installed directly on wall/door frame
- support for standard Dallas iButtons

TRANSPONDERS

MIFARE®

MC-DF3-2

MIFARE® proximity card

- 13.56 MHz passive transponder of the MIFARE DESFire EV3 2K standard
- standard credit card size (85 x 55 mm)
- colour: white
- printed SATEL logo

MIFARE®

MC-SRV-8

MIFARE® service card

- 13.56 MHz passive transponder of the MIFARE® DESFire EV3 8K standard
- option to save the settings card of MIFARE® readers to the memory
- cooperation with devices: **SO-MF3**, **SO-MF5**, **CR-MF3**, **CR-MF5**
- standard credit card size (85 x 55 mm)
- colour: white
- printed SATEL logo, SRV marking

EM Marin

KT-STD-1

Proximity card

- passive 125 kHz transponder
- standard credit card size, dimensions: 85 x 55 mm
- colour: white

EM Marin

KT-STD-2

Thick proximity card

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

EM Marin

BR-STD-1

Proximity tag

- passive 125 kHz transponder

EM Marin

BR-STD-2

Proximity tag

- passive 125 kHz transponder

BR-STD-3

Proximity tag

- 125 kHz passive transponder
- made of synthetic leather
- color: black
- SATEL logo

EM Marin

PAS-DALLAS

Dallas iButton

- Dallas iButton key
- compatible with **CZ-DALLAS** iButton reader

Dallas iButton

ACCO ACCESSORIES

OP-KT-1

Plastic holder

- plastic holder for **KT-STD-1**, **MC-DF3-2**, **MC-SRV-8** proximity card

OP-KT-2

Plastic holder

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

LOGOBAND-A

Neck strap with clip

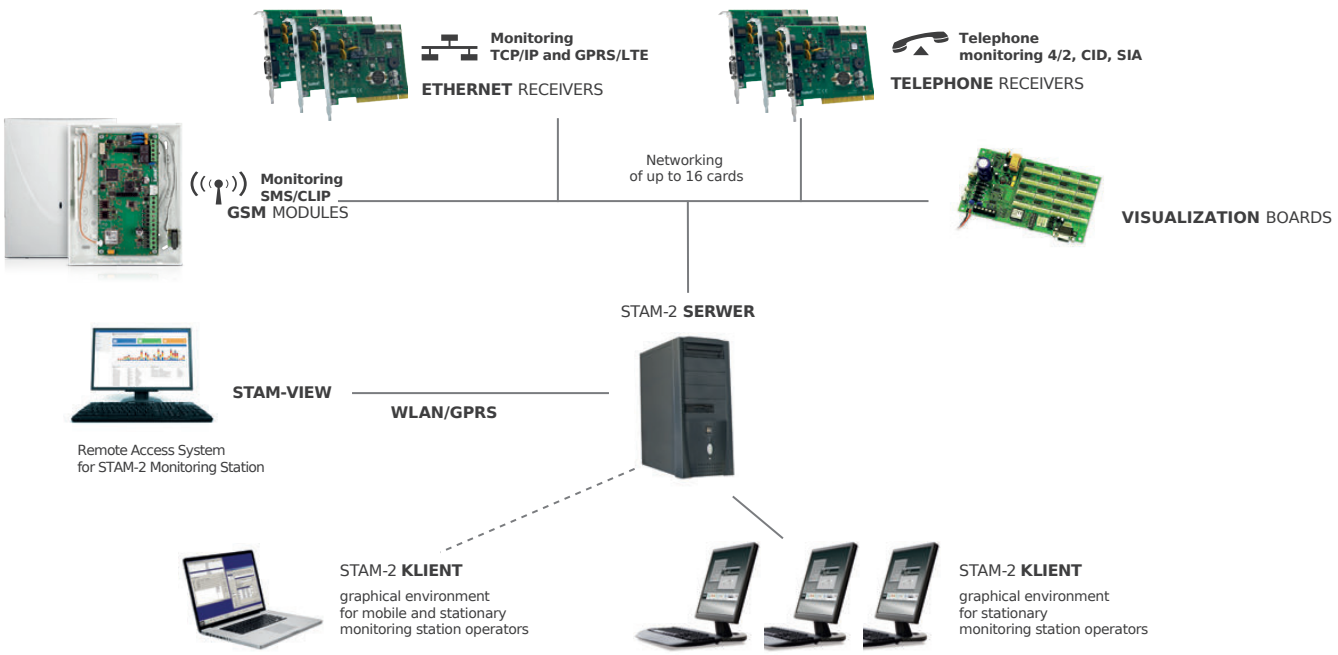
- suitable for proximity card holder, tag, keys etc.

Monitoring

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

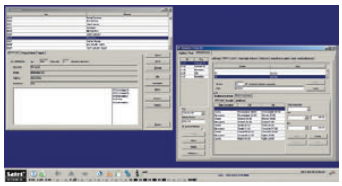
To meet market requirements, SATEL have developed a range of products that allow to establish a modern central monitoring station, which utilizes various communication channels – providing the security specialists with a professional, advanced tool which enables them to efficient operation.

STAM-2 MONITORING STATION SYSTEM STRUCTURE

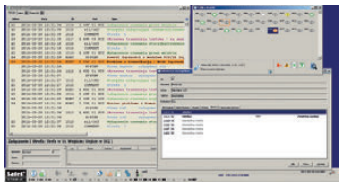


MONITORING STATION SOFTWARE

Event handling window



Subscriber editing window



State board window

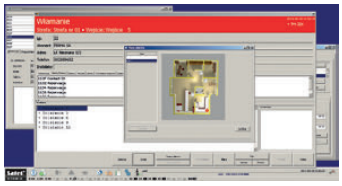
STAM-2 / STAM-2 Pro

Multiuser, multi-workstation monitoring station management software

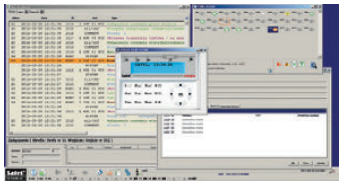
- support for telephone line monitoring, GSM reporting, monitoring using TCP/IP networks
- cross-platform Java™ based multi-user/multi-workstation solution networked client-server architecture
- support for visual alarm verification
- support for over 50,000 subscribers
- multiple identifiers for single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

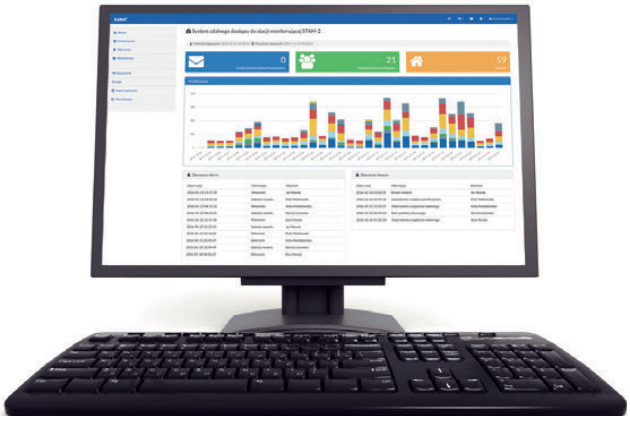
- 10 workstations license
- creating detailed site plans with a possibility to mark detectors' location
- indication of alarm source on site plan
- site status control by means of virtual keypad
- possibility to use maps for presentation of a site status



Indication of alarm source on site plan



Site status control by means of virtual keypad



STAM-VIEW

Remote Access System for STAM-2 Monitoring Station

- 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

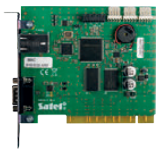
- PCI slot compatible form factor
- telephone line jack for telephone line monitoring
- multiprotocol compatibility (incl. Contact ID)
- auto-negotiation of communication protocol
- data transmission verification support
- no limitation for number of data received
- FIFO buffer for 250 last received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

STAM-1 K

Termination receiver card

- PCI slot compatible form factor
- RS-232 for connecting the **STAM-1 PTSA** mimic board
- 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

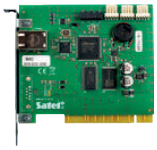
ETHERNET RECEIVERS



STAM-1 PE

TCP/IP receiver base card

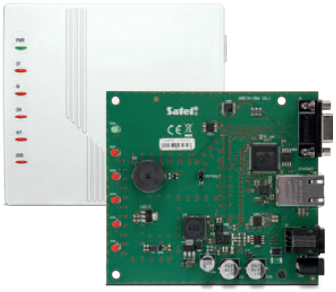
- TCP/IP reporting receiver for SATEL Ethernet and GPRS/LTE transmitters
- support for up to 256 subscribers with individual link supervision
- hardware event buffering
- ETHERNET link supervision
- optional incoming events filtering based on physical address (MAC)
- support for automatic IP address 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/LTE 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

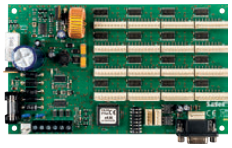


SMET Pro

Converter for a monitoring station

- receiving events sent in the SATEL format via the Ethernet / cellular data network
- capability to convert the SATEL transmission format to the transmission formats supported by a given monitoring station - simulation of the analog telephone line or receivers: RC4000 VISONIC, Sur-Gard and RSM-02
- buffering the received events in the converter memory until they are sent to the monitoring station
- support of up to 1024 subscribers in the extended mode (with control of communication with the subscriber) and additional subscribers in the simple mode
- transmitting data to the monitoring station by using a telephone cable, a RS-232 cable or via the Internet
- support of static and dynamic IP address
- MAC address filtering
- option to synchronize the time with the NTP server
- control of the Ethernet cable presence
- configuring using a computer with the **SMET Soft** program installed (communication via RS-232 or the Internet)
- possibility to update the converter firmware
- supplied with 12 VDC

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

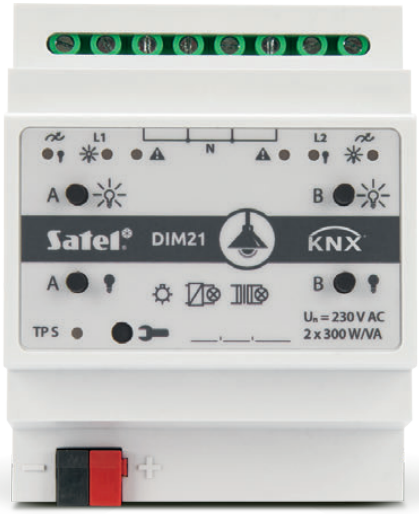
KNX – BUILDING AUTOMATION

SATEL KNX denotes modules for a smart system that meet the highest requirements for applications in modern building control. The solutions are based on KNX technology, which is a global open standard for many types of systems. The KNX devices can be used in all types of buildings, including residential, office, industrial or business ones.

According to the KNX standard, system components are connected into one network in which they „communicate" with each other, thus allowing you to build an integrated structure for all your systems. Individual system components are connected with just one main bus.

SATEL KNX – KEY BENEFITS

- system functionality perfectly tailored to the users' expectations
- high flexibility during the system extension and modification
- effective and convenient ETS program:
  - » allows programming and commissioning of all KNX devices as well as planning and making changes when the system is in use
  - » gives you freedom of choice – the system integrator can use devices from different manufacturers in one system
- energy saving
- ability to integrate with the alarm system



KNX – INTEGRATION OF VARIOUS SYSTEMS

security | energy management | heating and air conditioning | ventilation | lighting | control of blinds and awnings | multimedia

INTEGRATION WITH THE ALARM SYSTEM

Integration of systems based on **INTEGRA** and **INTEGRA Plus** control panels with a wide range of **KNX** devices expands the capabilities of both systems. This makes it possible to meet the expectations of demanding customers who are looking for something more than just the standard functionalities of the alarm system or KNX system. For everyday control of both systems (synergy effect), you can use touchscreen keypads being part of the alarm system, which translates into cost optimization. The **INTEGRA CONTROL** mobile application can be used to remotely control the alarm system and some functions of the KNX system.

KNX-DIM21

Two-channel dimming actuator for 230 V AC lighting

- 2 independent channels up to 300 W per channel
- can handle all types of loads (resistive, inductive, capacitive)
- automatic recognition of the type of load
- ability to detect low power loads of approx. 1 W
- adjustment of control characteristics to the type of load
- implemented functions: central, enable/disable, dimming, scene, time, value forcing
- detection of light source loss/failure, output overload, channel overheat, channel fault, loss of channel power supply
- double overheat protection
- defining reaction to KNX bus failure/recovery (ON, OFF, last value)
- defining reaction to mains recovery (ON, OFF, last value)
- advanced mains voltage analysis
- front panel with module status indicators and control buttons

KNX-SA24

Switch actuator

- 8 channels, 2 independent circuits with 4 relays per circuit
- switching: voltage up to 230 V, current up to 16 A (resistive load, surge current up to 168 A 20 ms, 800 A 200 µs)
- operation in NO or NC mode
- implemented functions: central, logic, scenes, time, safety, threshold values, state forcing
- defining reaction to KNX bus loss / recovery (ON, OFF, last value)
- defining reaction to mains recovery (ON, OFF, last value)
- front panel with module status indicators and control buttons

KNX-SA41

Switch actuator

- 4 channels, 4 independent circuits with 1 relay per circuit
- switching: voltage up to 230 V, current up to 16 A (resistive load, surge current up to 168 A 20 ms, 800 A 200 µs)
- operation in NO or NC mode
- implemented functions: central, logic, scenes, time, safety, threshold values, state forcing
- defining reaction to KNX bus loss / recovery (ON, OFF, last value)
- defining reaction to mains recovery (ON, OFF, last value)
- front panel with module status indicators and control buttons

KNX-BSA12L

Two-channel roller shutter actuator

- 2 independent channels
- 24 V DC roller shutter motor control
- switching up to 6 A current
- handling different types of window coverings (roller shutter, roller blind, awning, window drive)
- automatic recognition of end positions (auto-calibrating)
- detection of current position of blind/shade, shutter slats etc.
- detection of shutter absence/failure
- implemented functions: central, scene, position forcing, weather alarms
- defining reaction to KNX bus loss/recovery (ON, OFF, last value)
- defining reaction to mains recovery (ON, OFF, last value)
- front panel with module status indicators and control buttons

KNX-BSA12H

Two-channel roller shutter actuator

- 2 independent channels
- 230 V AC roller shutter motor control
- switching up to 6 A current
- handling different types of window coverings (roller shutter, roller blind, awning, window drive)
- automatic recognition of end positions (auto-calibrating)
- detection of current position of blind/shade, shutter slats etc.
- detection of shutter absence/failure
- implemented functions: central, scene, position forcing, weather alarms
- defining reaction to KNX bus loss/recovery (ON, OFF, last value)
- defining reaction to mains recovery (ON, OFF, last value)
- front panel with module status indicators and control buttons

KNX-BIN24

Binary input module

- input voltage range 0-30 V AC DC
- 8 physical channels (binary inputs)
- 8 virtual channels
- 4 logic channels
- 4 timer channels
- selecting polarity of some channels as NO/NC
- possibility of defining some channels as monostable or bistable
- 20 configurable function blocks
- implemented functions: switch, edge, dimmer, shutters, sequence, counter, scenes
- definable time of short-press/long-press activation of channel input
- front panel with module status indicators and control buttons

POWER SUPPLY

KNX-PS640

Power supply unit

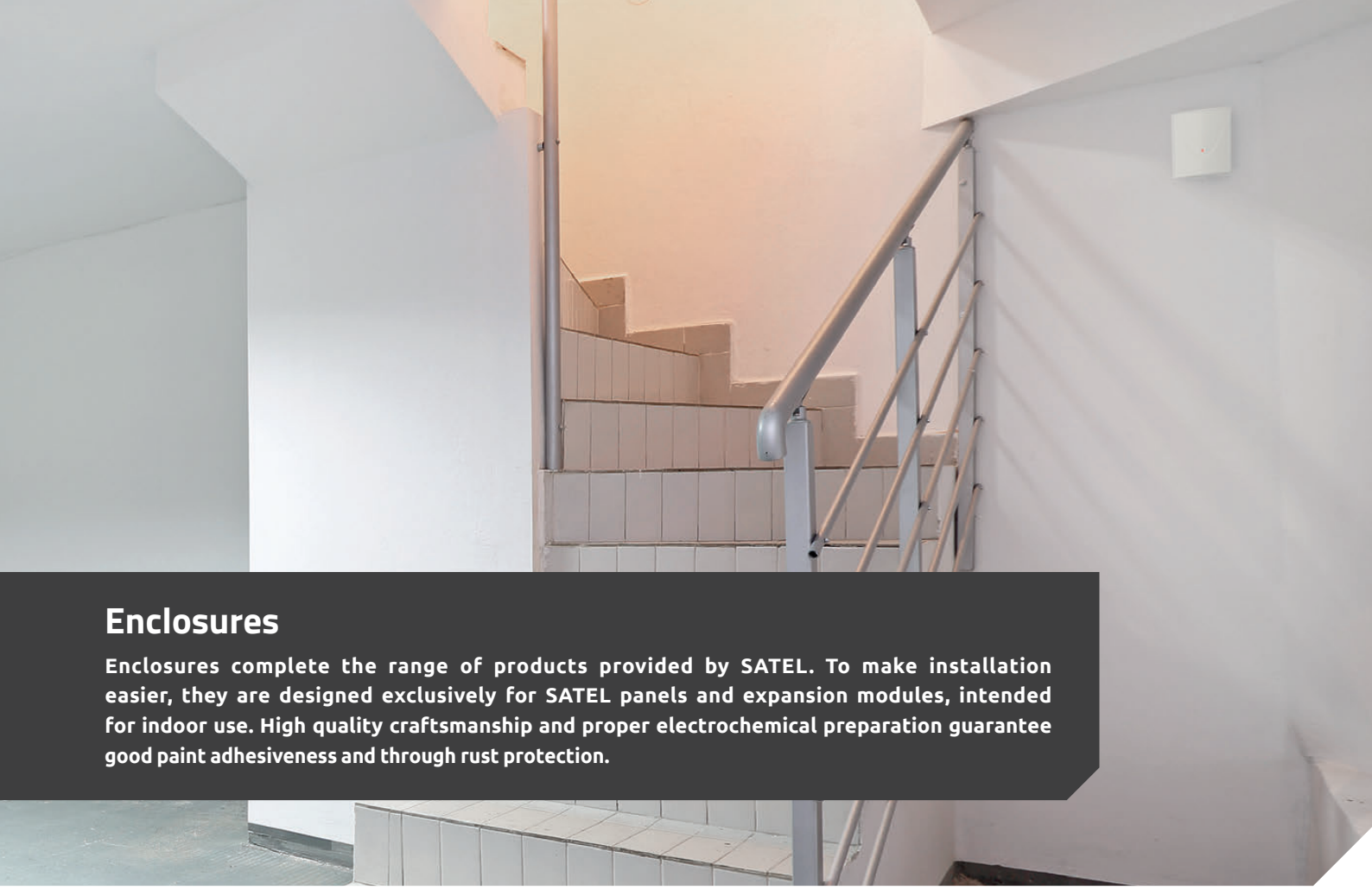
- power supply 230 V AC
- output voltage 28-30 V DC
- output current 640 mA
- overload / short-circuit resistance
- front panel with module status and overload indicators

ACCESSORIES

KNX-USB

Interface KNX-USB

- possibility of communication between
- for programming and configuration of KNX devices in ETS program
- option of saving events generated on KNX bus to non-volatile interface memory (up to 350 K events)
- possibility of exporting recorded telegram traffic into XML file (for ETS) or CSV file
- LEDs indicating the device state



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

- certified for **EN 50131 Grade 3**
- 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
- optional holder **HOLDER A** / **HOLDER A2**

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
- optional holder **HOLDER A** / **HOLDER A2**

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
Enclosure

- tamper protection
- dimensions:
  » 126 x 158 x 32 mm

OPU-1 B
Enclosure

- tamper protection
- dimensions:
  » 126 x 158 x 46 mm
- surface-mounted

OPU-2 B
Enclosure

- tamper protection
- dimensions:
  » 126 x 158 x 46 mm
- surface-mounted
- antenna mount:
  » with SMA connector

OPX-1
Universal hermetic enclosure

- dimensions: 29 × 157 × 28 mm
- support for **AXD-200** and **XD-2** detectors
- IP65 rating
- tamper protection
- output for flood probe **FPX-1**
- surface-mounted

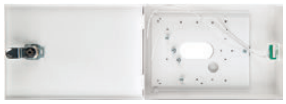
four colour versions:
white (OPX-1), gray (OPX-1 GY), dark gray (OPX-1 DG), black (OPX-1 B)

OPXM-1
Magnet in hermetic enclosure

- dimensions: 20 x 102 x 23 mm
- support for **AXD-200** or **XD-2** detectors placed in **OPX-1** enclosure
- IP65 rating
- surface-mounted

four colour versions:
white (OPXM-1), gray (OPXM-1 GY), dark gray (OPXM-1 DG), black (OPXM-1 B)

METAL ENCLOSURES



OBU-M-LCD-S
Enclosure

- dimensions: 190 x 130 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

METAL ENCLOSURES WITH TRANSFORMER

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-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-3

Enclosure

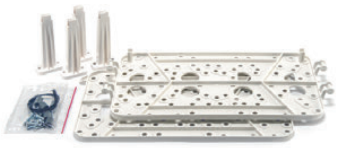
- **EN 50131 Grade 3** compliance
- double tamper protection
- dimensions: 330 x 405 x 110 mm
- transformer: 50 VA
- primary voltage: 230 V AC, 50 Hz
- secondary voltage: 20 V AC, 50 Hz

ENCLOSURE ACCESSORIES

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

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

OPU-PIN

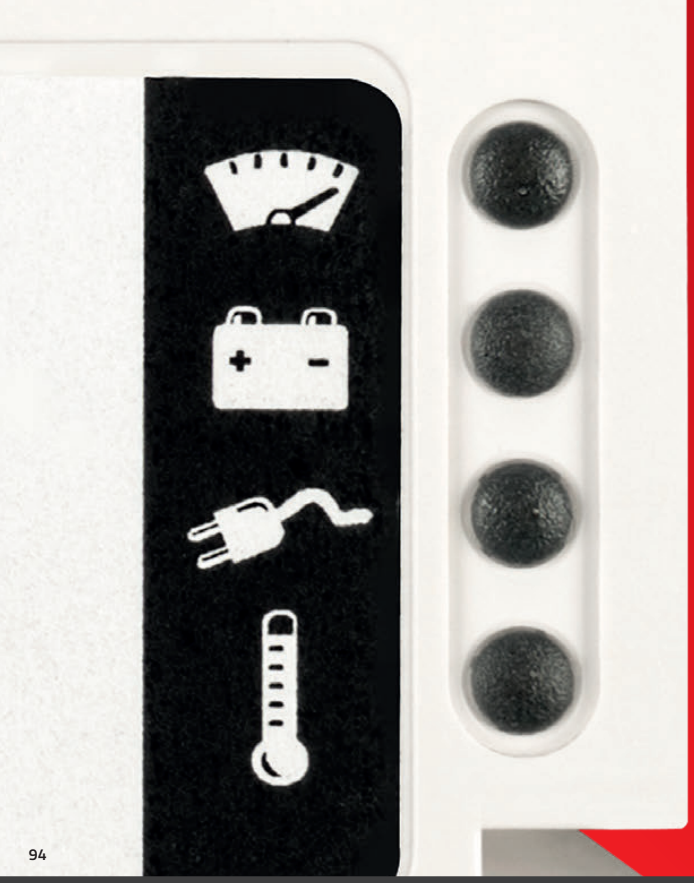
Set of pins for mounting electronics boards in enclosures

- application: universal enclosures of the **OPU** and **OMI** series

ENCLOSURE COMPARISON CHART[A]

		plastic enclosures												
		OPU-4 P	OPU-4 PW	OPU-3 P	OPU-2 B	OPU-1 A	OPU-1 B	OPX-1	OPXM-1	OBU-M-LCD-S	OMI-5	OMI-4[B]	OMI-3[B]	OMI-2[B]
CONTROL PANELS, EXPANSION MODULES														
INTEGRA 256 Plus	intruder alarm control panel			•							•[C]	•		
INTEGRA 128 Plus	intruder alarm control panel			•							•[C]	•		
INTEGRA 128	intruder alarm control panel			•							•[C]	•		
INTEGRA 64 Plus	intruder alarm control panel			•							•[C]	•		
INTEGRA 64	intruder alarm control panel			•							•[C]	•		
INTEGRA 32	intruder alarm control panel	•	•	•							•[C]	•	•	•
CA-64 PTSA	mimic board	•	•	•							•[C]	•	•	•
INT-E	zone expansion module	•	•	•		•	•				•	•	•	•
INT-ADR	addressable bus expansion module	•	•	•		•	•				•[C]	•	•	•
INT-PP	zone and output expansion module	•	•	•			•				•	•	•	•
INT-O	output expansion module	•	•	•		•	•				•	•	•	•
INT-KNX-2	KNX integration module	•	•	•		•	•				•[C]	•	•	•
INT-RS Plus	RS-232 interface for systems integration	•	•	•		•	•				•[C]	•	•	•
INT-FI	fiber-optic interface	•	•	•		•	•				•[C]	•	•	•
ETHM-1 Plus	TCP/IP communication module	•	•	•	•	•[F]	•[F]				•[C]	•	•	•
INT-GSM	GPRS communication module	•	•	•	•						•[C/E]	•[E]	•[E]	•[E]
INT-GSM LTE	LTE communication module	•	•	•	•						•[C/E]	•[E]	•[E]	•[E]
INT-VG	remote interactive voice module	•	•	•							•[C]	•	•	•
INT-VMG	voice message module	•	•	•							•[C]	•	•	•
INT-AV	alarm acoustic verification module	•	•	•							•[C]	•	•	•
INT-R	universal expander for card / chip readers	•	•	•		•	•				•[C]	•	•	•
INT-ORS	outputs expansion module										•[D]			
INT-IORS	zones and outputs expansion module										•[D]			
PERFECTA 64 M	intruder alarm control panel	•	•	•										
PERFECTA 32-WRL	intruder alarm control panel	•	•	•										
PERFECTA 32-WRL LTE	intruder alarm control panel	•	•	•										
PERFECTA-IP 32-WRL	intruder alarm control panel	•	•	•										
PERFECTA 16-WRL	intruder alarm control panel	•	•	•										
PERFECTA 32	intruder alarm control panel	•	•	•							•[C/E]	•[E]	•[E]	•[E]
PERFECTA 32 LTE	intruder alarm control panel	•	•	•							•[C/E]	•[E]	•[E]	•[E]
PERFECTA-IP 32	intruder alarm control panel	•	•	•							•[C]	•	•	•
PERFECTA 16	intruder alarm control panel	•	•	•							•[C/E]	•[E]	•[E]	•[E]
PERFECTA-T 32-WRL	intruder alarm control panel	•	•	•										
PERFECTA-T 32	intruder alarm control panel	•	•	•							•[C]	•	•	•
VERSA Plus	intruder alarm control panel	•	•	•							•[C/E]	•[E]	•[E]	•[E]
VERSA Plus LTE	intruder alarm control panel	•	•	•							•[C/E]	•[E]	•[E]	•[E]
VERSA IP	intruder alarm control panel	•	•	•							•[C]	•	•	•
VERSA 15	intruder alarm control panel	•	•	•							•[C]	•	•	•
VERSA 10	intruder alarm control panel	•	•	•							•[C]	•	•	•
MICRA	alarm module with GSM / GPRS communicator	•	•	•										
KEYPADS														
INT-KLCD	LCD keypad													
INT-KLCDR	LCD keypad													
INT-KLCDL	LCD keypad													
INT-KLCDS	LCD keypad									•				
VERSA-LCD	LCD keypad									•				
VERSA-LED	LED keypad									•				
ABAX 2 WIRELESS SYSTEM														
ACU-220	wireless system controller	•	•	•		•	•							
ACU-280	wireless system controller	•[G]												
ACX-220	wireless expansion module for wired zones and outputs	•	•	•		•	•							
AXD-200	wireless universal detector							•[H]	•[I]					
DETECTORS														
XD-2	multipurpose detector							•[H]	•[I]					
COMMUNICATION MODULES														
GSM-X LTE	universal communication module	•	•	•	•						•[C/E]	•[E]	•[E]	•[E]
GPRS-A LTE	universal reporting module	•	•	•							•[C/E]	•[E]	•[E]	•[E]
GPRS-A	universal reporting module	•	•	•							•[C/E]	•[E]	•[E]	•[E]
ETHM-2	universal TCP/IP communication module	•	•	•							•[C]	•	•	•
ETHM-A	universal monitoring module	•	•	•							•[C]	•	•	•
POWER SUPPLIES														
APS-412	backup power supply	•	•	•							•			
APS-612	backup power supply			•							•			
TR 40 VA	transformer	•	•	•							•[C]			
TR 60 VA	transformer	•	•	•							•[C]			
ACCO ACCESS CONTROL SYSTEM														
ACCO-NT2	control panel	•	•	•							•[C]	•	•	•
ACCO-KP2	door controller	•	•	•		•	•				•	•	•	•
MONITORING														
STAM-1 PTSA	mimic board for STAM monitoring station	•	•	•							•[C]	•	•	•
OTHERS														
MP-1	relay module	•	•	•		•	•				•[C]	•	•	•

[A] 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
[B] 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. In the case of modules without a power supply, the necessity to use an additional power source must be taken into account
[C] When using OMI-5 PI
[D] When using OMI-5 DIN
[E] Devices with a GSM telephone require the use of an antenna mounted outside the enclosure
[F] No support for the RS232-RSTTL, PIN5/RJ-TTL, RJ/PIN5 adapters
[G] When using HOLDER A2
[H] Output for FPX-1 flood probe
[I] Magnet in hermetic enclosure compatible with AXD-200 and XD-2 detectors installed inside OPX-1 enclosure



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-1412 / APS-724

GRADE 2

APS-1412 / APS-724

Backup power supplies

- high efficiency switch mode power supply: 12 V DC (**APS-1412**) / 24 V DC (**APS-724**)
- output current:
  - » 14 A or 12 A (powering devices) + 2 A (charging battery) (**APS-1412**)
  - » 7 A (output) or 6 A (powering devices) + 1 A (charging battery) (**APS-724**)
- compliant with:
  - » **EN 50131-3 Grade 2** compliance (**APS-1412**)
  - » **EN 60950-1** safety standard requirements
  - » **EN 55011 Class B** standard regarding the level of conducted and radiated EMI
- active power factor correction system (up to 0.99)
- energy efficiency:
  - » up to 92% (**APS-1412**)
  - » up to 94% (**APS-724**)
- short-circuit and over-current protection
- designed for use with sealed lead-acid battery
- battery deep discharge protection
- 4 OC outputs for trouble indication
- optical indication of power output status, battery status, AC status and too high temperature of the power supply
- audible indication of troubles
- anodized aluminum enclosure
- IEC C14 power cable connector
- dedicated connector for interfacing with SATEL devices (**APS-1412**)

APS-612

GRADE 3

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 switch mode power supply with active PFC (up to 0.98)
- 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
- 4 OC outputs for indication of troubles
- optical indication of power output, battery, AC power status and too high temperature of the power supply
- audible signaling of troubles
- dedicated connector for interfacing with SATEL devices
- designed for mounting on DIN 35 mm rail and in **OPU-3 P** and **OMI-5** enclosures

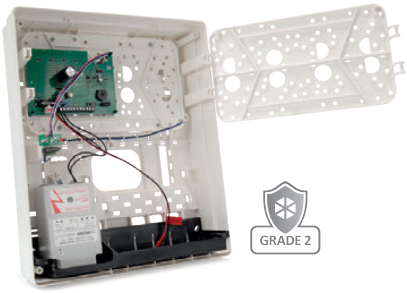
APS-412

GRADE 2

APS-412

Backup power supply

- certified for **EN 50131-6 Grade 2**
- high efficiency 12 V DC switch mode power supply
- does not require mains transformer
- 4 A total output current
- short circuit and overload protection
- designed for use with sealed lead-acid batteries
- optionally selected battery charging current
- battery deep discharge protection
- 3 OC outputs for trouble indication
- optical indication of power supply unit, battery and overload status
- acoustic failure indication
- dedicated connector for interfacing with SATEL devices
- designed for mounting on DIN 35 mm rail and in **OPU-3 P**, **OPU-4 P**, **OPU-4 PW** and **OMI-5** enclosures



APS-30

GRADE 2

APS-30 S

GRADE 2

APS-30 / APS-30 S

Backup power supply

- **EN 50131-6 Grade 2** compliance
- 12 V DC switch mode power supply
- output current:
  - » 3 A
  - » 2,5/2 A (powering devices) + 0,5/1 A (charging battery)
- short-circuit and over-current protection
- designed for use with sealed lead-acid battery
- battery deep discharge protection
- 2 OC outputs for trouble indication
- optical indication of AC mains power supply status, battery status, battery charging
- acoustic signaling of troubles
- the set includes 60 VA transformer
- the set contained in the housing:
  - » **OPU-3P** (**APS-30**)
  - » **OPU-4P** (**APS-30 S**)

APS-055

Flush-mounted power supply

- external power source for SATEL wireless keypads, e.g.:
  - » **INT-KWRL2**, **PRF-LCD-A2**, **PRF-LCD-WRL**, **VERSA-KWRL2**
- 5 VDC switching power supply with output voltage stabilization
- output current: 0.5 A.
- electronic short-circuit and overload protection
- mounted in in-wall and on-wall electrical junction boxes with a minimum diameter of 60 mm

TRANSFORMERS

TR 60 VA

Transformer

- input: 230 V AC, 0.8 A mains input fuse
- output: 18 / 20 V AC
- output current: 3 A
- degree of protection IP43

TR 40 VA

Transformer

- input: 230 V AC, 0.63 A mains input fuse
- output: 16 / 18 V AC
- output current: 2.22 A
- degree of protection IP43

BATTERIES

ER34615

Battery* for wireless outdoor sirens

- power supply for the **ASP-200** and **MSP-300** sirens
- voltage 3.6 V
- capacity 14.5 Ah
- operating temperature range from -55°C to +85°C
- low self-discharge rate (<2% per year at 23°C)
- resistance to harsh working conditions
- no plug-in cable

** Note - the brand or colour of the battery, depending on the delivery date, may differ from one shown in the pictures. Available for order only in Europe, delivered exclusively via road transport*

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.

STANDALONE DOOR CONTROL MODULES

available
in black (SO-MF5-B)
and white (SO-MF5-W)

SO-MF5

Multi-function keypad with MIFARE® proximity card reader

- user identification by code and/or MIFARE® proximity card
- option to operate as:
  - » **INT-SCR** partition keypad in the **INTEGRA** alarm system
  - » **ACCO-SCR** keypad with proximity card reader in the **ACCO NET** or **ACCO** access control system
  - » keypad with proximity card reader in systems of other manufacturers (OSDP, Wiegand)
  - » standalone door control module
- support for up to 128 codes
- support for up to 128 proximity cards
- programming with **CR Soft** program or **MC-SRV-8** service card
- LED indicators (4 pcs.)
- white keypad backlight
- relay output for controlling an electric strike, electromagnetic lock or other device which activates the door
- possibility to specify the number of times a card/code is used

Descriptions page 78

available in
black (SO-MF3-B)
and white (SO-MF3-W)

SO-MF3

MIFARE® proximity card reader

- user identification by MIFARE® proximity card
- option to operate as:
  - » proximity card reader in the **INTEGRA** alarm system
  - » proximity card reader in the **ACCO NET** or **ACCO** access control system
  - » proximity card reader in systems of other manufacturers (OSDP, Wiegand)
  - » standalone door control module
- support for up to 128 proximity cards
- programming with **CR Soft** program or **MC-SRV-8** service card
- LED indicators (4 pcs.)
- relay output for controlling an electric strike, electromagnetic lock or other device which activates the door
- possibility to specify the number of times a card is used

Descriptions page 78

MIFARE®

CR-MF5

Multi-function keypad with MIFARE® proximity card reader

- user identification by code and/or MIFARE® proximity card
- option to operate as:
  - » **INT-SCR** partition keypad in the **INTEGRA** alarm system
  - » **ACCO-SCR** keypad with proximity card reader in the **ACCO NET** or **ACCO** access control system
  - » keypad with proximity card reader in systems of other manufacturers (OSDP, Wiegand)
  - » standalone door control module
- support for up to 128 codes
- support for up to 128 proximity cards
- programming with **CR Soft** program or **MC-SRV-8** service card
- LED indicators (3 pcs.)
- white keypad backlight
- relay output for controlling an electric strike, electromagnetic lock or other device which activates the door
- indoor and outdoor operation
- possibility to specify the number of times a card/code is used

Descriptions page 78

MIFARE®

CR-MF3

MIFARE® proximity card reader

- user identification by MIFARE® proximity card
- option to operate as:
  - » proximity card reader in the **INTEGRA** alarm system
  - » proximity card reader in the **ACCO NET** or **ACCO** access control system
  - » proximity card reader in systems of other manufacturers (OSDP, Wiegand)
  - » standalone door control module
- support for up to 128 proximity cards
- programming with **CR Soft** program or **MC-SRV-8** service card
- LED indicators (4 pcs.)
- relay output for controlling an electric strike, electromagnetic lock or other device which activates the door
- indoor and outdoor operation
- possibility to specify the number of times a card is used

Descriptions page 78

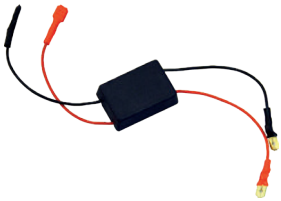
EM Marin

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

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

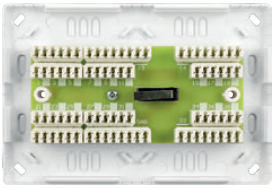
MZ CT

Distribution box modules

- facilitates installation of low-voltage installations, like alarm installations
- KRONE type terminals

MZ-1 CT

MZ-2 CT



MZ-3 CT

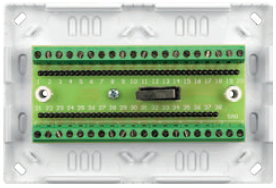
MZ S/L

Distribution box modules

- facilitates installation of low-voltage installations, like alarm installations
- screw type terminals:
  - » Ø 1,5 mm (**MZ S**)
  - » Ø 2,5 mm (**MZ L**)

MZ-1 S

MZ-2 S



MZ-3 S

CABLES

USB-RS

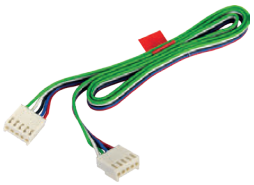
USB-RS converter

- 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)

RS232-RSTTL

RS-232 TTL cable with converter

- cable with converter for connecting the **ETHM-1 Plus** module to the **PERFECTA 64 M** and **VERSA** control panels



PIN5/PIN5

RS-232 TTL cable

- cable for connection of RS Ports of **INTEGRA** and **CA-64** panels equipped with PIN5 connector and modules equipped with PIN5 connector: **ETHM-1**, **ETHM-1 Plus**

PIN5/RJ-TTL

RS-232 TTL cable

- cable for connecting of **ETHM-1** and **ETHM-1 Plus** module with **VERSA**

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: **ETHM-1**, **ETHM-1 Plus, INT-GSM, INT-GSM LTE**

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

ACCESORIES FOR COMMUNICATION MODULES

DS-T1

Digital temperature sensor (surface mounted, 1-Wire interface)

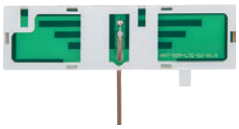
- 1-Wire interface
- temperature measurement in -35°C to +60°C range
- surface mounted
- suitable for outdoor use
- cable length: 3 m

DS-T2

Digital temperature sensor

- 1-Wire interface
- temperature measurement in the range from -40°C to +110°C
- for recessed mounting
- designed for outdoor operation
- IP65 ingress protection rating
- cable length: 3 m
- sensor diameter: 6 mm

ANTENNAS



ANT-LTE-I

Antenna for communication modules

- antenna for devices using the following technologies: LTE, UMTS/HSPA+, GSM/GPRS/EDGE
- designed for mounting in **OPU-2 B**, **OPU-3 P** and **OPU-4 P** enclosures
- applications: **GSM-X LTE**, **INT-GSM**, **INT-GSM LTE**, **MICRA**, **PERFECTA**, **PERFECTA LTE**, **PERFECTA 64 M**, **VERSA Plus**, **VERSA Plus LTE**
- IPX connector

ANT-LTE-O

Antenna for communication modules

- antenna for devices using the following technologies: LTE, UMTS/HSPA+, GSM/GPRS/EDGE
- applications: **GPRS-A**, **GPRS-A LTE**, **GSM-X LTE***, **INT-GSM***, **INT-GSM LTE***, **MICRA***, **PERFECTA***, **PERFECTA LTE***, **PERFECTA 64 M***, **VERSA Plus***, **VERSA Plus LTE***
- SMA male connector
- mounting outside an enclosure

**via IPX-SMA*

ANT-900/1800

GSM antenna

- 900/1800 MHz antenna for modules: **GPRS-A**, **MICRA***, **VERSA Plus***

**via IPX-SMA*

ANT-868

ISM antenna

- antenna for ABAX wireless devices: **ACX-201**

868 MHz

IPX-SMA

IPX / SMA adapter cable

- adapter cable for connecting antenna with SMA connector, e.g. **ANT-900/1800**, **ANT-LTE-O** communication module with IPX connector
- designed for: **GSM-X LTE**, **INT-GSM**, **INT-GSM LTE**, **MICRA**, **PERFECTA**, **PERFECTA LTE**, **PERFECTA 64 M**, **VERSA Plus**, **VERSA Plus LTE**

ACCESSORIES FOR ACTIVA

ACTIVA-D

Distance piece for **ACTIVA-K**

ACTIVA-K

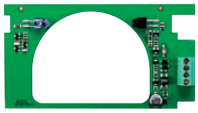
Angular holder with tamper for **ACTIVA** barriers

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**

HOLDER-ER

Holder with a plug-in cable for batteries ER34615

- for **ER34615** battery
- application: **ASP-200** and **MSP-300** alarm sirens originally designed to be powered with the **BAT-ER-3.6** battery

DETECTOR ACCESSORIES

BRACKET A

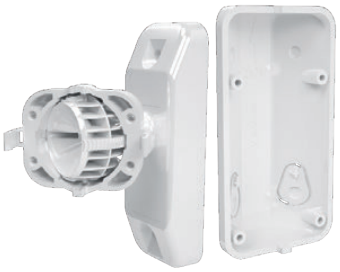
Adjustable holder for motion detectors

- tilt angle adjustment within approx. 30°
- swivel angle adjustment within approx. 90°
- optional wall- or ceiling mounting of detector
- compatibility: **AGATE**, **AMBER**, **AMBER 2E**, **AOCD-260**, **AQUA Luna**, **AQUA Plus**, **AQUA S**, **GRAPHITE**, **GREY**, **GREY Plus**, **IVORY**, **MPD -300**, **NAVY**, **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**, **AOCD-260**, **AQUA Luna**, **AQUA Plus**, **AQUA S**, **GRAPHITE**, **GREY**, **GREY Plus**, **IVORY**, **MPD-300**, **NAVY**, **TOPAZ**



available in two color versions:
white (BRACKET C)
– for OPAL, OPAL Plus, OPAL Pro and AOD-210
gray (BRACKET C GY)
– for OPAL GY, OPAL Plus GY, OPAL Pro GY, AOD-210 GY

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

BRACKET D

Adjustable holder for motion detectors

- inner cable duct
- fully enclosed design for better appearance of installation
- angle adjustment of tilt within 35° (15° up and 20° down)
- angle adjustment of swivel within 90° (45° each side)
- optional wall- or ceiling mounting of detector
- designed for: **SLIM-PIR**, **SLIM-PIR-LUNA**, **SLIM-DUAL**, **SLIM-DUAL-LUNA**, **APD-200**, **APMD-250, MPD-310**

available in two color versions:
white (BRACKET D) and dark grey (BRACKET D DG)

BRACKET E

Elements of ceiling-and-wall mount distance holder for OPAL (GY)/AOD-210 (GY) and AGATE/AOCD-260 detectors, available in white and gray

- **BRACKET E-1** (**GY**) – Body for mounting **BRACKET E-2A** (**GY**) and **BRACKET E-2B** (**GY**) insert or **BRACKET E-5** (**GY**) ball-joint holder
- **BRACKET E-2A** (**GY**) – Insert for mounting **AGATE** and **AOCD-260** detectors
- **BRACKET E-2B** (**GY**) – Insert for mounting **OPAL** (**GY**) and **AOD-210** (**GY**) detectors
- **BRACKET E-3** (**GY**) – Spacer (height 30 mm) for installing detectors at a distance from the wall/ceiling
- **BRACKET E-4** (**GY**) – Base (height 20 mm)
- **BRACKET E-5** (**GY**) – Ball-joint holder for **OPAL** (**GY**) and **AOD-210** (**GY**) detectors
- **BRACKET E-6** – Tamper sensor (1 NO/NC switch, cable length 500 mm)

BRACKET E-1 GY

BRACKET E-1

BRACKET E-2A GY

BRACKET E-2A

BRACKET E-2B GY

BRACKET E-2B

BRACKET E-3 GY

BRACKET E-3

BRACKET E-6

BRACKET E-5

BRACKET E-5 GY

BRACKET E-4

BRACKET E-4 GY

examples of use

HOOD C

Protective hood for outdoor detectors

- protects the detector against atmospheric precipitation, pollution, etc.
- mounted with snap catches, without using any tools
- application: **OPAL**, **OPAL GY**, **OPAL Plus**, **OPAL Plus GY**, **OPAL Pro**, **OPAL Pro GY**, **AOD-210**, **AOD-210 GY**

available in:
white (HOOD C)
and gray (HOOD C GY)

HOOD A

Protective hood for outdoor curtain detectors

- protects the detector against atmospheric precipitation, pollution, etc.
- mounted with snap catches, without using any tools
- application: **AGATE**, **AOCD-260**

FPX-1

Flood probe for the universal detectors
AXD-200, **MXD-300**, **XD-2**, **XD-2L**

- cable length: 3 m

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

OPT-1

IR keyfob

- remote configuration of detector operating parameters
- compatible with:
  SLIM-PIR-LUNA,
  SLIM-PIR-LUNA-PET,
  SLIM-PIR-PRO,
  SLIM-DUAL-LUNA,
  SLIM-DUAL-LUNA-PET,
  SLIM-DUAL-PRO,
  OPAL Plus,
  OPAL Pro

OPC-1 DG

Housing for motion detectors

- complete housing in dark gray
- application: **SLIM-PIR-LUNA**, **SLIM-DUAL-LUNA**, **APD-200**, **APMD-250**, **MPD-310**

OPC-2 DG

Housing for motion detectors

- complete housing in dark gray
- application: **SLIM-PIR**, **SLIM-DUAL**

LR-CL2 / CT-CL2

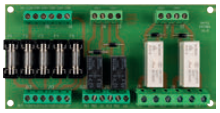
Enclosure cover with Fresnel lens

- complete enclosure cover with long-range lens (**LR-CL2**)
- complete enclosure cover with vertical curtain type lens (**CT-CL2**)
- designed for: **SLIM-PIR**, **SLIM-DUAL**

LR-CL / CT-CL

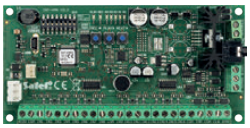
Enclosure cover with Fresnel lens

- complete enclosure cover with long-range lens (**LR-CL**)
- complete enclosure cover with vertical curtain type lens (**CT-CL**)
- designed for: **SLIM-PIR-LUNA**, **SLIM-PIR-PRO**, **SLIM-DUAL-LUNA**, **SLIM-DUAL-PRO**, **APD-200**, **APMD-250, MPD-310**



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

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
- compatibility: **INT-SCR-BL**, **CZ-EMM3**, **CZ-EMM4**, **PK-01**, **ACCO-SCR-BG**

HOLDER A / HOLDER A2
Holder

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

GKX-1
Changeable keypad buttons with color pictograms

- 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-300, MMD-302, MXD-300**

LIST OF CERTIFICATES FOR DEVICES

		GRADE 3	GRADE 3	GRADE 2	GRADE 2	SP 5	SP 5	DP 4	DP 4
		compliance	certificate	compliance	certificate	compliance	certificate	compliance	certificate
CONTROL PANELS, KEYPADS AND EXPANSION MODULES									
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		•						
INT-E	zone expansion module		•						
INT-KLCD	LCD keypad		•						
INT-KLCDL	LCD keypad			•					
INT-KLCDR	LCD keypad				•				
INT-KLCDS	LCD keypad			•					
INT-KLFR	LCD keypad		•						
INT-KSG2R	keypad with touch keys		•						
INT-O	output expansion modules		•						
INT-PP	zone and output expansion module		•						
INT-S-BL	partition keypad			•					
INT-SCR-BL	multi-function keypad with proximity card reader		•						
INT-SF	partition keypad				•				
INT-TSG2	touchscreen keypad		•						
INT-TSG2R	touchscreen keypad	•							
INT-TSH2	touchscreen keypad		•						
INT-TSH2R	touchscreen keypad	•							
INT-TSI	touchscreen keypad		•						
PERFECTA 16	intruder alarm control panel				•				
PERFECTA 16-WRL	intruder alarm control panel				•				
PERFECTA 32	intruder alarm control panel				•				
PERFECTA 32 LTE	intruder alarm control panel				•				
PERFECTA-IP 32	intruder alarm control panel				•				
PERFECTA 32-WRL	intruder alarm control panel				•				
PERFECTA 32-WRL LTE	intruder alarm control panel				•				
PERFECTA-IP 32-WRL	intruder alarm control panel				•				
PERFECTA 64 M	intruder alarm control panel				•				
PRF-LCD	LCD keypads for PERFECTA control panels				•				
PRF-LCD-A2	LCD keypad for PERFECTA 64 M control panel				•				
VERSA 10	intruder alarm control panel				•				
VERSA 15	intruder alarm control panel				•				
VERSA Plus	intruder alarm control panel				•				
VERSA Plus LTE	intruder alarm control panel			•					
VERSA IP	intruder alarm control panel				•				
VERSA-LCDM-WH / LCDR-WH	LCD keypad for VERSA panels				•				
VERSA-LCD-BL / -GR	LCD keypad for VERSA panels				•				
ABAX 2 TWO WAY WIRELESS SYSTEM									
ACU-220	wireless system controller				•				
ACU-280	wireless system controller				•				
APD-200 / APD-200 Pet	wireless PIR motion detector				•				
APMD-250	wireless dual-technology motion detector				•				
INT-KWRL2	LCD keypad				•				
VERSA-KWRL2	LCD keypad for VERSA panels				•				
AXD-200	wireless universal detector				•				
ASP-215	wireless indoor acoustic-optical siren				•				
ASP-200	wireless outdoor acoustic-optical siren				•				
AOCD-260	wireless dual-technology outdoor curtain detector			•					
AOD-210	wireless dual-technology outdoor motion detector			•					
COMMUNICATION MODULES									
ETHM-1 Plus	TCP/IP communication module				•		•*		
GSM-X LTE	universal multi-purpose communication module				•		•*		
GSM-X LTE with GSM-X-ETH	universal multi-purpose communication module with Ethernet module								•*
GPRS-A	universal monitoring module						•*		
GPRS-A LTE	universal monitoring module				•		•*		
INT-GSM	GPRS communication module		•				•*		
INT-GSM LTE	LTE communication module		•				•*		
DETECTORS									
AGATE	outdoor curtain motion detector	•							
AQUA Plus	digital PIR motion detector				•				
AQUA Pet	digital PIR motion detector				•				
AQUA Ring	ceiling mount digital PIR			•					
AQUA S	digital PIR motion detector			•					
AQUA Luna	digital PIR motion detector with emergency lighting feature			•					
GRAPHITE	digital PIR motion detector				•				
GREY Plus	digital dual technology PIR+MW motion detector			•					
IVORY	advanced PIR motion detector with mirror optics			•					
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 contact			•					
S-2	magnetic contact			•					
S-3	magnetic contact			•					
S-4	magnetic contact			•					
SLIM-PIR	digital PIR motion detector				•				
SLIM-PIR-PET	digital PIR motion detector				•				
SLIM-PIR-LUNA	digital PIR motion detector				•				
SLIM-PIR-LUNA-PET	digital PIR motion detector				•				
SLIM-PIR-PRO	digital PIR motion detector		•						
SLIM-DUAL	digital dual technology PIR+MW motion detector				•				
SLIM-DUAL-PET	digital dual technology PIR+MW motion detector				•				
SLIM-DUAL-LUNA	digital dual technology PIR+MW motion detector				•				
SLIM-DUAL-LUNA-PET	digital dual technology PIR+MW motion detector				•				
SLIM-DUAL-PRO	digital dual technology PIR+MW motion detector		•						
XD-2	multipurpose detector			•					
XD-2L	multipurpose detector			•					

		GRADE 3	GRADE 3	GRADE 2	GRADE 2	SP 5	SP 5	DP 4	DP 4
		compliance	certificate	compliance	certificate	compliance	certificate	compliance	certificate
SIRENS									
SD-6000	outdoor siren with optical and acoustical signaling				•				
SP-4004	outdoor siren with optical and acoustical signaling				•				
SP-6500	outdoor siren with optical and acoustical signaling			•					
SPW-210	indoor siren with acoustical signaling				•				
ENCLOSURES									
OMI-5	enclosure		•						
OMI-4	enclosure	•							
OMI-3	enclosure	•							
OMI-2	enclosure	•							
OPU-3P	enclosure		•						
OPU-4P	enclosure		•						
POWER SUPPLIES									
APS-1412	backup power supply			•					
APS-612	backup power supply		•						
APS-412	backup power supply				•				
APS-30	backup power supply			•					
APS-30 S	backup power supply			•					

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

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