



**Satel**®  
MADE TO PROTECT

M A D D E

T O

P R O

T E C T

**Product catalogue**

2019



[www.satel.eu](http://www.satel.eu)



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

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

See a movie about the company

<https://www.satel.pl/en/firma/movie>



SATEL: everyday safety



SATEL: Made to Protect



# TABLE OF CONTENTS

## INTRUDER ALARM CONTROL PANELS

4

<b>Intruder alarms</b>	<b>4</b>
<b>INTEGRA RANGE OF INTRUDER CONTROL PANELS</b>	<b>5</b>
Operation, control and management	10
Mobile application	13
Zones/outputs expansion modules	14
Modules LTE and GPRS	15
Modules GSM/LTE and GSM/GPRS	15
TCP/IP modules	16
Bus converters	16
Access control modules	16
Voice messaging modules	17
<b>VERSA INTRUDER ALARM CONTROL PANEL</b>	<b>18</b>
Operation, control and management	20
Expansion modules	21
Mobile application	21
<b>PERFECTA INTRUDER ALARM CONTROL PANEL</b>	<b>22</b>
Operation, control and management	24
Mobile application	24
<b>MODULES COMPATIBILITY WITH CONTROL PANELS</b>	<b>25</b>
<b>CA-10 INTRUDER ALARM CONTROL PANEL</b>	<b>26</b>
Operation, control and management	27
Zones expansion modules	27
<b>CA-6 INTRUDER ALARM CONTROL PANEL</b>	<b>28</b>
Operation, control and management	28
<b>CA-5 INTRUDER ALARM CONTROL PANEL</b>	<b>29</b>
Operation, control and management	29
<b>CONTROL PANEL COMPARISON CHART</b>	<b>30</b>
<b>ABAX 2 wireless system</b>	<b>32</b>
System structure	33
System devices	34
Zones/outputs wireless expansion modules	34
Wireless detectors	35
Wireless sirens	37
Control and automation	37
<b>MICRA wireless security system</b>	<b>38</b>
MICRA alarm module	39
MICRA security system structure	39
Operation of MICRA system	40
Wireless detectors	40
Wireless siren for MICRA	41
Mobile application	41
<b>Detectors</b>	<b>42</b>
SLIM LINE	43
<b>SLIM LINE MOTION DETECTOR COMPARISON CHART</b>	<b>44</b>
Digital dual movement detectors	45
Digital PIR detectors	46
<b>MOTION DETECTOR COMPARISON CHART (PART 1)</b>	<b>46</b>
<b>MOTION DETECTOR COMPARISON CHART (PART 2)</b>	<b>47</b>
Gas detectors	48
Detectors for perimeter protection	49
<b>MAGNETIC DETECTOR COMPARISON CHART</b>	<b>51</b>
Other detectors	51

<b>Sirens</b>	<b>52</b>
Outdoor sirens .....	53
Indoor sirens.....	55
<b>SIREN COMPARISON CHART.....</b>	<b>56</b>
<b>Communication and messaging</b>	<b>58</b>
Modules LTE and GPRS.....	59
Modules GSM/LTE and GSM/GPRS .....	59
Application for control of GPRS-A, GSM-X, GPRS-A LTE, GSM-X LTE.....	60
<b>MODULE COMPARISON CHART.....</b>	<b>60</b>
TCP/IP communication.....	61
Phone messaging .....	61
<b>Radio remote controllers</b>	<b>62</b>
Sets .....	62
Keyfobs.....	63

## **ACCESS CONTROL 64**

<b>ACCO NET Access control system</b>	<b>64</b>
System structure.....	65
Advanced software .....	66
ACCO-NT control panel.....	66
Door controllers.....	67
ACCO terminals .....	67
System units.....	67
Transponders.....	67
ACCO accessories.....	67

<b>ACCO Access control system</b>	<b>68</b>
Door controllers.....	69
System units.....	70
ACCO terminals .....	70
Transponders.....	71
ACCO accessories.....	71

## **MONITORING 72**

STAM-2 monitoring station system structure.....	72
Monitoring station software .....	73
Hardware solutions.....	74
Telephone receivers .....	74
Ethernet receivers.....	74
Visualization .....	75
Sets .....	75

## **ENCLOSURES 76**

Plastic enclosures.....	76
Metal enclosures .....	77
Metal enclosures with transformer .....	77
Enclosure accessories.....	78
<b>ENCLOSURE COMPARISON CHART.....</b>	<b>79</b>

## **POWER SUPPLY 80**

Power supplies.....	80
Transformers .....	81
Batteries.....	81

## **ACCESSORIES 82**

Code locks .....	82
Protection modules.....	83
Distribution box modules.....	83
Cables .....	83

Training suitcase.....	83
Accessories for communication modules.....	84
Antennas.....	84
Accessories for ACTIVA.....	84
Siren accessories.....	84
Detector accessories.....	85
Others.....	86

**LIST OF CERTIFICATES FOR DEVICES ..... 87**

**LIST OF PRODUCTS**

<b>A</b>	<b>B</b>	<b>G</b>			
ACCO-DB..... 66	B-1..... 50	GKX-1..... 86	INT-TSH-WSW..... 10, 20	OPU-2 B..... 77	SPL-2030 O..... 54
ACCO-KLCDR-BG..... 67	B-1 BR..... 50	GPRS-A..... 15, 59	INT-TSI-BSB..... 10	OPU-3 P..... 76	SPL-2030 R..... 54
ACCO-KLCDR-BW..... 67	B-1M..... 50	GPRS-A LTE..... 15, 59	INT-TSI-SSW..... 10	OPU-4 P..... 76	SPL-5010 BL..... 54
ACCO-KP..... 67, 69	B-1M BR..... 50	GRAPHITE..... 47	INT-TSI-WSW..... 10	OPU-4 PW..... 76	SPL-5010 O..... 54
ACCO-KP-PS..... 67, 69	B-1T..... 50	GRAPHITE Pet..... 47	INT-VG..... 17	<b>P</b>	SPL-5010 R..... 54
ACCO-KPWG..... 67, 69	B-1T BR..... 50	GREY..... 45	INT-VMG..... 17, 86	PAS-DALLAS..... 67, 71	SPL-5020 BL..... 54
ACCO-KPWG-PS..... 67, 69	B-2..... 50	GREY Plus..... 45	IPX-SMA..... 84	PERFECTA 16..... 23	SPL-5020 O..... 54
ACCO-NT..... 66	B-2 BR..... 50	GSM-X..... 15, 59	IVORY..... 48	PERFECTA 16-WRL..... 22, 23	SPL-5020 R..... 54
ACCO-SCR-BG..... 67, 70	B-2S..... 50	GSM-X-ETH..... 15, 59	<b>K</b>	PERFECTA 32..... 23	SPL-TO..... 84
ACCO Server..... 66	B-2S BR..... 50	GSM-X LTE..... 15, 59	K-1..... 50	PERFECTA 32 LTE..... 23	SPLZ-1011 BL..... 54
ACCO Soft..... 66	B-2T..... 50	GX CONTROL..... 60	K-1 2E..... 50	PERFECTA 32-WRL..... 22, 23	SPLZ-1011 O..... 54
ACCO-USB..... 70	B-2T BR..... 50	<b>H</b>	K-2..... 50	PERFECTA 32-WRL LTE..... 22, 23	SPLZ-1011 R..... 54
ACCO-USB-CZ..... 66	B-3..... 51	HOLDER A..... 86	K-2 2E..... 50	PERFECTA CONTROL..... 24	SPW-100..... 55
ACCO Web..... 66	B-3A..... 51	HOLDER A2..... 86	K-3..... 50	PERFECTA-T 32..... 23	SPW-150..... 55
ACTIVA-2..... 49	B-4..... 51	HOOD C..... 85	K-3 2E..... 50	PERFECTA-T 32-WRL..... 22, 23	SPW-210 BL..... 55
ACTIVA-3..... 49	B-4M..... 51	HOOD C GY..... 85	KT-STD-1..... 67, 71	PIN5/PIN5..... 83	SPW-210 O..... 55
ACTIVA-4..... 49	B-4S..... 51	<b>I</b>	KT-STD-2..... 67, 71	PIN5/RJ-TTL..... 83	SPW-210 R..... 55
ACTIVA-5..... 49	BAT-ER-3,6..... 81	INDIGO..... 49	<b>L</b>	PK-01..... 82	SPW-220 BL..... 55
ACTIVA-6..... 49	BRACKET A..... 85	INDIGO - tester..... 49	LOGOBAND-A..... 67, 71	PNK-1..... 51	SPW-220 O..... 55
ACTIVA-7..... 49	BRACKET B..... 85	INT-ADR..... 14	LR-CL..... 85	PRF-LCD..... 24	SPW-220 R..... 55
ACTIVA-8..... 49	BRACKET C..... 85	INT-ADV..... 17	LR-CL2..... 85	PRF-LCD-WRL..... 24	SPW-250 BL..... 55
ACTIVA BR..... 49	BRACKET C GY..... 85	INT-AVT..... 17	<b>M</b>	<b>R</b>	SPW-250 O..... 55
ACTIVA-D..... 84	BRACKET D..... 85	INT-CR..... 13	MAGENTA..... 49	RE-1K..... 63	SPW-250 R..... 55
ACTIVA-K..... 84	BR-STD-1..... 67, 71	INT-E..... 14	MFD-300..... 41	RE-2K..... 63	STAM-1 K..... 74
ACU-220..... 14, 34	BR-STD-2..... 67, 71	INT-E 24..... 14	MFD-300 BR..... 41	RE-4K..... 63	STAM-1 P..... 74
ACU-280..... 14, 34	BR-STD-3..... 67, 71	INTEGRA 24..... 9	MGD-300..... 41	RJ/PIN5..... 83	STAM-1 PE..... 74
ACX-210..... 34	<b>C</b>	INTEGRA 32..... 9	MGD-300 BR..... 41	RXH-1K..... 62	STAM-1 PTSA..... 75
ACX-220..... 34	CA-5..... 29	INTEGRA 64..... 9	MIC-1..... 86	RXH-2K..... 62	STAM-1 R..... 74
ADD-200..... 36	CA-5 BLUE-L..... 29	INTEGRA 64 Plus..... 9	MICRA..... 39, 61	RXH-4K..... 62	STAM-1 RE..... 74
AGATE..... 49	CA-5 BLUE-S..... 29	INTEGRA 128..... 9	MICRA CONTROL..... 41	<b>S</b>	STAM-2..... 73
AGD-200..... 36	CA-5 KLCD-L..... 29	INTEGRA 128 Plus..... 9	MKP-300..... 40	S-1..... 50	STAM-2 BE..... 75
AGD-200 BR..... 36	CA-5 KLCD-S..... 29	INTEGRA 128-WRL..... 9	MLT-POD..... 86	S-2..... 50	STAM-2 BS..... 75
AGD-200 DG..... 36	CA-5 KLED-S..... 29	INTEGRA 256 Plus..... 9	MMD-300..... 41	S-3..... 50	STAM-2 BT..... 75
AMBER..... 47	CA-6..... 28	INTEGRA CONTROL..... 13	MMD-300 BR..... 41	S-4..... 50	STAM-2 Pro..... 73
AMBER 2E..... 47	CA-6 KLED..... 28	INT-FI..... 16	MMD-302..... 41	SD-3001 BL..... 53	STAM-2 RG..... 75
ANT-868..... 84	CA-6 KLED-S..... 28	INT-GSM..... 15, 59	MMD-302 BR..... 41	SD-3001 O..... 53	STAM-2 UE..... 75
ANT-900/1800..... 84	CA-10..... 26	INT-IORS..... 14	MP-1..... 86	SD-3001 R..... 53	STAM-BOX..... 74
ANT-GSM-E..... 84	CA-10 BLUE-L..... 27	INT-KLCD-BL..... 11	MPD-300..... 40	SD-6000 R..... 54	STAM-IRS..... 74
ANT-GSM-I..... 84	CA-10 BLUE-S..... 27	INT-KLCD-GR..... 11	MPT-300..... 40	SDR-18..... 86	STAM-VIEW..... 73
ANT-OBU-Q..... 84	CA-10 E..... 27	INT-KLCDK-GR..... 12	MPT-350..... 24, 40	SILVER..... 45	SX6-TO..... 84
AOCD-260..... 36	CA-10 KLCD..... 27	INT-KLCDL-BL..... 11	MSD-300..... 40	SLIM-DUAL..... 43	SZW-02..... 82
AOD-210..... 36	CA-10 KLCD-L..... 27	INT-KLCDL-GR..... 11	MSD-350..... 40	SLIM-DUAL-LUNA..... 44	<b>T</b>
AOD-210 GY..... 36	CA-10 KLCD-S..... 27	INT-KLCDR-BL..... 11	MSP-300 R..... 41	SLIM-DUAL-LUNA-PET..... 44	T-1..... 63
APB-200..... 37	CA-10 KLED..... 27	INT-KLCDR-GR..... 11	MST-1..... 86	SLIM-DUAL-PET..... 43	T-2..... 63
APD-200..... 35	CA-10 KLED-S..... 27	INT-KLCDS-BL..... 12	MTX-300..... 40	SLIM-DUAL-PRO..... 44	T-4..... 63
APD-200 Pet..... 35	CA-10 KLED-S..... 27	INT-KLCDS-GR..... 12	MZ-1 CT..... 83	SLIM-PIR..... 43	TD-1..... 51
APMD-250..... 35	CA-64 ADR-MOD..... 14	INT-KLFR-BSB..... 11	MZ-1 S..... 83	SLIM-PIR-LUNA..... 43	TOPAZ..... 46
APS-30..... 81	CA-64 PTSA..... 13	INT-KLFR-SSW..... 11	MZ-2 CT..... 83	SLIM-PIR-LUNA-PET..... 43	TOPAZ Pet..... 46
APS-412..... 81	COBALT..... 45	INT-KLFR-WSW..... 11	MZ-2 S..... 83	SLIM-PIR-PET..... 43	TR 40 VA..... 81
APS-612..... 81	COBALT Plus..... 45	INT-KNX-2..... 16	MZ-3 CT..... 83	SLIM-PIR-PRO..... 43	TR 60 VA..... 81
APS-724..... 80	COBALT Pro..... 45	INT-KSG-BSB..... 10	MZ-3 S..... 83	SM-2..... 61	TSD-1..... 51
ARU-200..... 34	CT-CL..... 85	INT-KSG-SSW..... 10	MZ S/L..... 83	SMET-256..... 75	<b>U</b>
ASD-200..... 37	CT-CL2..... 85	INT-KSG-WSW..... 10	<b>N</b>	SOW-300 BL..... 55	USB-RS..... 83
ASD-250..... 37	CZ-DALLAS..... 16, 67, 70	INT-KWRL2-BSB..... 11	<b>O</b>	SOW-300 O..... 55	<b>V</b>
ASP-200 R..... 37	CZ-EMM..... 16, 67, 70	INT-KWRL2-SSW..... 11	OBU-M-LCD..... 77	SOW-300 R..... 55	VD-1..... 49
ASP-215 BL..... 37	CZ-EMM2..... 16, 67, 70	INT-KWRL2-WSW..... 11	OBU-M-LCD-S..... 77	SP-500 BL..... 53	VD-1 BR..... 49
ASP-215 O..... 37	CZ-EMM3..... 16, 67, 70	INT-O..... 14	SP-500 O..... 53	SP-500 R..... 53	VERSA 5..... 19
ASP-215 R..... 37	CZ-EMM4..... 16, 67, 70	INT-ORS..... 14	SP-500 R..... 53	SP-4001 BL..... 53	VERSA 10..... 19
ASP-200 E..... 37	CZ-EMM POD..... 86	INT-PP..... 14	SP-4001 BL..... 53	SP-4001 O..... 53	VERSA 15..... 19
ASW-200 F..... 37	CZ-USB-1..... 67, 70	INT-R..... 17	SP-4001 R..... 53	SP-4002 BL..... 53	VERSA 15/10/5..... 18
ASW-210..... 37	<b>D</b>	INT-RS Plus..... 16	SP-4002 BL..... 53	SP-4002 BL..... 53	VERSA CONTROL..... 21
AXD-200..... 36	DG-1 CO..... 48	INT-RX-S..... 13	SP-4002 BL..... 53	SP-4002 BL..... 53	VERSA IP..... 18, 19
AXD-200 BR..... 36	DG-1 LPG..... 48	INT-S-BL..... 12	SP-4002 R..... 53	SP-4003 BL..... 53	VERSA-KWRL2..... 20
AXD-200 DG..... 36	DG-1 ME..... 48	INT-SCR-BL..... 13	SP-4002 R..... 53	SP-4003 O..... 53	VERSA-LCD-BL..... 20
	DG-1 TCM..... 48	INT-SF-BSB..... 12	SP-4003 BL..... 53	SP-4003 O..... 53	VERSA-LCD-GR..... 20
	DS-T1..... 84	INT-SF-SSW..... 12	SP-4003 O..... 53	SP-4004 BL..... 53	VERSA-LCDM-WH..... 20
	DS-T2..... 84	INT-SF-WSW..... 12	SP-4004 R..... 53	SP-4004 R..... 53	VERSA-LCDR-WH..... 20
	DT-1..... 61	INT-S-GR..... 12	SP-4004 R..... 53	SP-4004 R..... 53	VERSA-LED-BL..... 21
	<b>E</b>	INT-SK-GR..... 12	SP-4006 BL..... 53	SP-4006 R..... 53	VERSA-LED-GR..... 21
	ETHM-1 Plus..... 16, 61	INT-SZ-BL..... 17	SP-4006 R..... 53	SP-6500 R..... 54	VERSA-MCU..... 21
	ETHM-2..... 61	INT-SZ-GR..... 17	SP-4006 R..... 53	SPL-2010 BL..... 54	VERSA Plus..... 18, 19
	<b>F</b>	INT-SZK-GR..... 17	SP-4006 R..... 53	SPL-2010 O..... 54	<b>W</b>
	FD-1..... 51	INT-TSG-GR..... 17	SP-4006 R..... 53	SPL-2010 R..... 54	WSR..... 83
	FD-1 BR..... 51	INT-TSG-BSB..... 10, 20	SP-4006 R..... 53	SPL-2030 BL..... 54	<b>Z</b>
	FPX-1..... 85	INT-TSG-SSW..... 10, 20	SP-4006 R..... 53		ZB-1..... 83
	FPX-1 BR..... 85	INT-TSG-WSW..... 10, 20	SP-4006 R..... 53		ZB-2..... 83
	FPX-1 DG..... 85	INT-TSH-BSB..... 10, 20	SP-4006 R..... 53		
		INT-TSH-SSW..... 10, 20	SP-4006 R..... 53		

# 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*

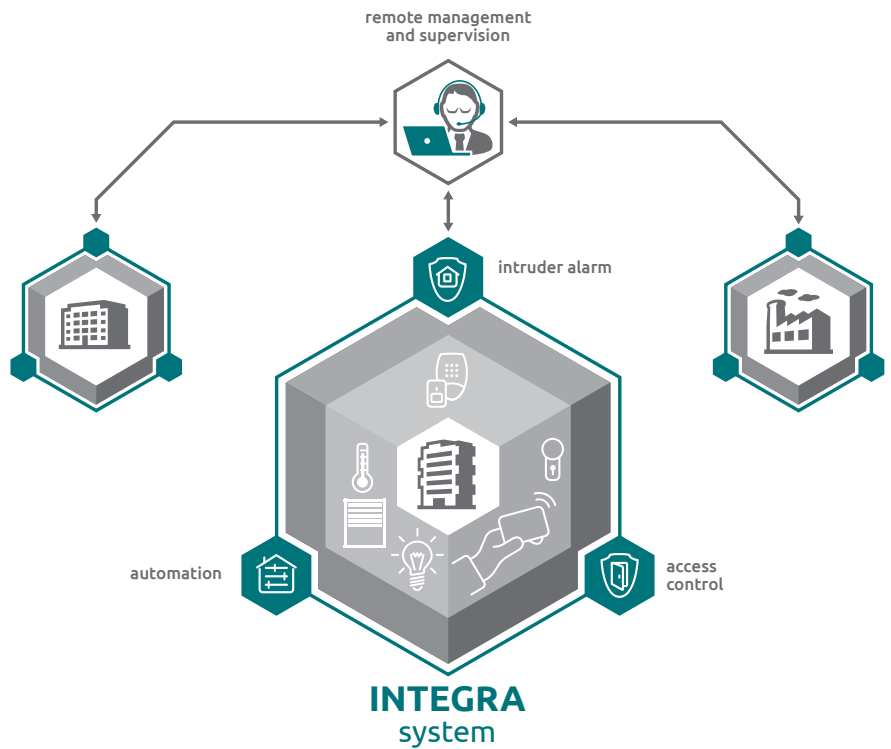
*perfecta*

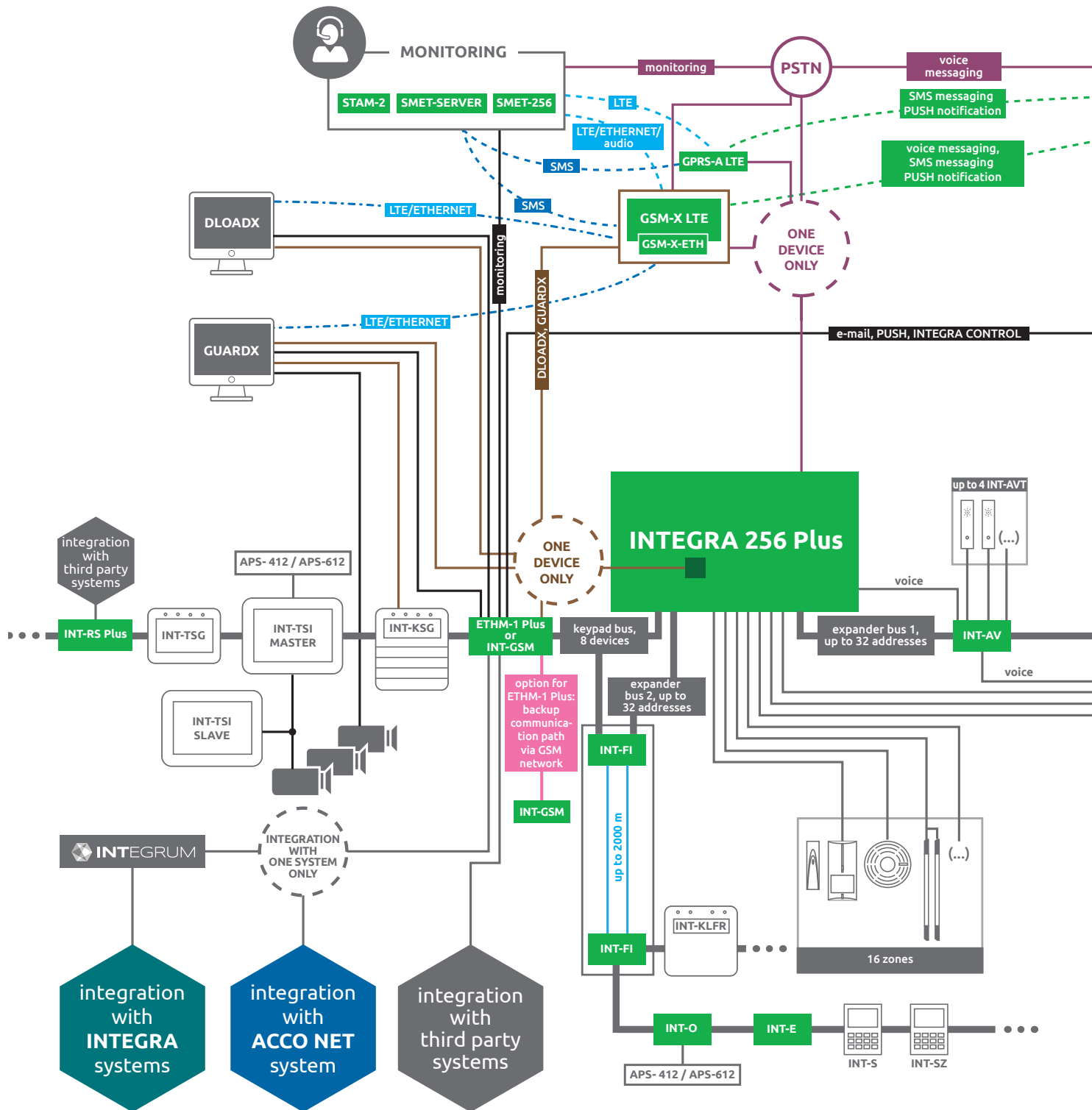
# INTEGRA range of intruder control panels

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.

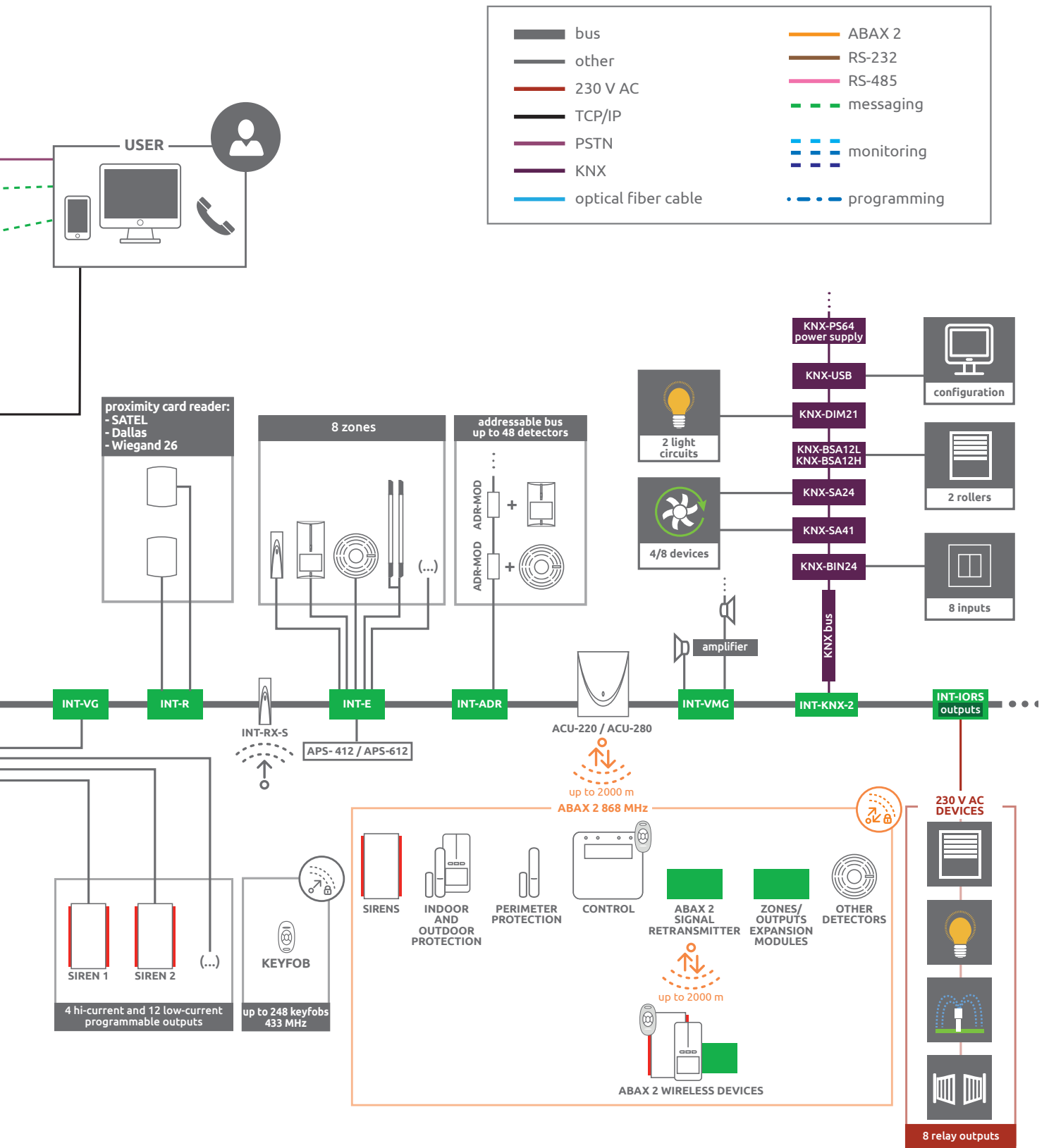


Security is also a crucial element in business. Professional application calls for special solutions: the superior goal in this case is to provide maximum safety – no compromises. INTEGRA and INTEGRA Plus control panels set high standards in this scope. A number of solutions, both in terms of hardware and software, predestines them for installations which require highest class security. This gives them a place among top advanced alarm panels in the world.





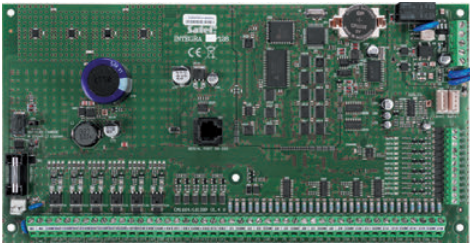




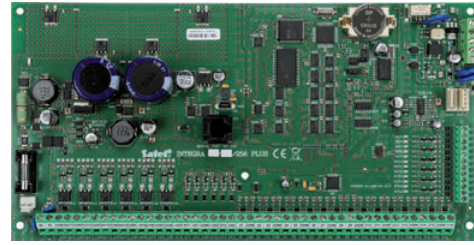
Structure outline of the **INTEGRA Plus** intelligent alarm system. The above exemplary structure does not include the entire product offer of SATEL.

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



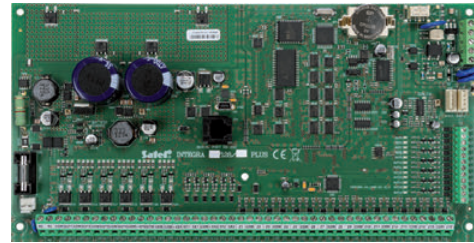
INTEGRA 128



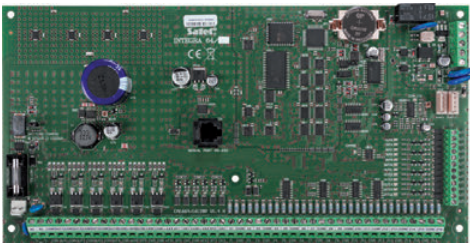
INTEGRA 256 Plus



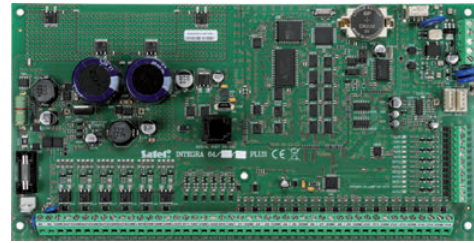
INTEGRA 128-WRL



INTEGRA 128 Plus



INTEGRA 64



INTEGRA 64 Plus



INTEGRA 32



INTEGRA 24

**integra**

# OPERATION, CONTROL AND MANAGEMENT

## INT-TSI

### Touchscreen keypad

- certified for **EN 50131 Grade 3**
- 7" capacitive touchscreen responding to a gentle touch
- glass panel for display protection
- MACRO features to facilitate home automation control
- full per-user interface customization with TSI-Builder application
- interactive widgets for controlling automation appliances
- 2 zones
- support for IP cameras video streaming
- possibility to activate FIRE, AUX, PANIC alarms



screen diagonal



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



## INT-TSH

### Touchscreen keypad

- certified for **EN 50131 Grade 3**
- keypad for control panels of **INTEGRA, INTEGRA Plus, VERSA**
- 7" capacitive touchscreen responding to a gentle touch
- graphical user interface with colourful icons
- MACRO features to facilitate control of alarm system and home automation elements (supported by the **INTEGRA** and **INTEGRA Plus** control panels only)
- possibility of tailoring the status screen to users's needs
- 2 zones (supported by the **INTEGRA** and **INTEGRA Plus** control panels only)
- possibility to activate FIRE, AUX, PANIC alarms



screen diagonal



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



## INT-TSG

### Touchscreen keypad

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



screen diagonal



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



## INT-KSG

### Touch-sensor keypad

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



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



## INT-KLFR

### LCD keypads

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



available in black (INT-KLFR-B5B), gray (INT-KLFR-SSW) and white (INT-KLFR-WSW)



## INT-KWRL2

### Wireless LCD keypad

- certified for **EN 50131 Grade 2**
- can work as part of the **ABAX 2** wireless system
- partitions / system status LED indicators
- white backlight for display and keys
- proximity card / tag reader
- audible signaling of selected system events
- FIRE, AUX, PANIC alarms triggered from keypad
- remote configuration and update of firmware
- tamper protection
- power supply: 2 CR123A 3 V batteries
- compatible with **ABAX** system



available in black (INT-KWRL2-B5B), gray (INT-KWRL2-SSW) and white (INT-KWRL2-WSW)



## INT-KLCD / INT-KLCDR

### LCD keypads

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



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



## INT-KLCDL

### LCD keypads

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



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



## INT-KLCDS

LCD keypads

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



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



## INT-KLCDK-GR

LCD keypads

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



12



## 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



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



## 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



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



## INT-SK-GR

Partition keypad

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

### INT-SCR-BL

Multi-function keypad with proximity card reader

- certified for **EN 50131 Grade 3**
- partition keypad and entry keypad modes
- proximity card reader
- LEDs for partition state indication
- buzzer for acoustic signaling
- keypad backlight
- optical tamper for opening and removal from mounting surface
- relay for electromagnetic lock/electric strike
- door control input
- doorbell button
- outdoor operation
- optional **MLT-POD** spacer pad available



### INT-CR

Proximity card arm/disarm device

- partitions arming and disarming with proximity cards or tags
- support for 125 kHz passive transponders
- 3 programmable partition arm modes
- 3 LEDs for system state indication and user interface display
- built-in buzzer

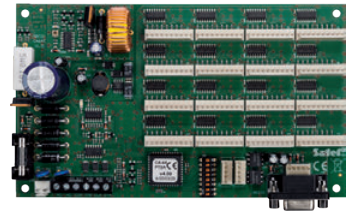


433 MHz

### INT-RX-S

433 MHz keyfob receiver expansion module

- full remote control user identification
- flexible assignment of functions to keyfobs' buttons
- compatible with **P-2, P-4, T-1, T-2, T-4, MPT-300, MPT-350** keyfobs
- small enclosure facilitates installation in a suitable place



### CA-64 PTSA

Mimic board

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

## MOBILE APPLICATION

### INTEGRA CONTROL

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

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



## ZONES/OUTPUTS EXPANSION MODULES



abax2



### ACU-220

ABAX 2 wireless system controller

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

For more information, see page 34



abax2

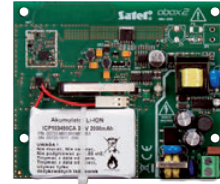


### ACU-280

ABAX 2 wireless system controller

- certified for **EN 50131 Grade 2**
- two-way radio communication in 868 MHz band – 4 channels
- range up to 1600 m in open area
- supports up to 48 wireless system devices
- support for up to 4 **INT-KWRL2** or 6 **VERSA-KWRL2** wireless keypads
- supports up to 248 wireless **APT-200** keyfobs
- can work together with **INTEGRA**, **INTEGRA Plus** and **VERSA** control panels – connection via communication bus
- controller firmware update without demounting of the device
- remote configuration and update of devices registered to the controller

For more information, see page 34

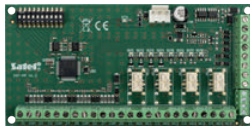


abax2

### ARU-200 **COMING SOON**

Radio repeater for ABAX 2 devices

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



### 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



### 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



### 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



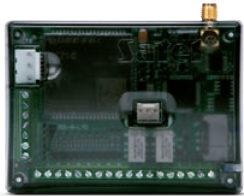
## MODULES LTE and GPRS



### INT-GSM

GPRS communication module for INTEGRA and INTEGRA Plus control panels

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



GPRS-A LTE



GPRS-A



### GPRS-A LTE / GPRS-A

Universal monitoring module

- certified for **EN 50136 SP 5 (GPRS-A)**
- compliance with **EN 50136 SP 5** requirements (**GPRS-A LTE**)
- event reporting: SMS / LTE\*
- 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 1024 numbers) / **GX CONTROL** / **GX Soft** / via IoT
- IoT – support for MQTT, JSON, 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 firmware update capability
- optional connection of the dedicated **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

15

## MODULES GSM/LTE and GSM/GPRS



GSM-X LTE



GSM-X



### GSM-X LTE / GSM-X

Universal, multi-purpose communication module

- certified for **EN 50136 SP 5, DP 4\* (GSM-X)\***
- compliance with **EN 50136 SP 5, DP 4** requirements (**GSM-X LTE**)\*
- event reporting: voice (mobile network) / SMS / LTE\*\* / Ethernet\*
- converting and retransmitting codes of events received from other devices (simulation of telephone monitoring station)
- sending notifications to max. 8 phone numbers
- notification: audio/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 (**GSM-X LTE**), 4 (**GSM-X**)
- 4 outputs (OC) controlled by SMS/CLIP/DTMF/**GX CONTROL**/**GX Soft**
- 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 firmware update capability
- optional connection of the dedicated **APS-412**, **APS-612** or **APS-1412** power supplies
- expansion capability by adding **GSM-X-ETH** Ethernet module

\*when used with GSM-X-ETH

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



### GSM-X-ETH

Ethernet module for GSM-X, GSM-X LTE communicator

- cooperation with **GSM-X**, **GSM-X LTE** universal communication module
- support for Ethernet as additional communication channel

## TCP/IP MODULES



### ETHM-1 Plus

TCP/IP communication module

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

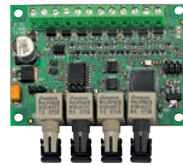
## BUS CONVERTERS



### INT-KNX-2

KNX integration module

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



### INT-FI

Fiber-optic interface

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



### INT-RS Plus

RS-232 interface for systems integration

- RS-232 interface installed on keypad bus
- **GUARDX** communication
- RS-232 based monitoring support
- open protocol for systems integration

## ACCESS CONTROL MODULES



### CZ-EMM

Proximity card reader

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



### CZ-EMM2

Proximity card reader

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



### CZ-EMM3

Proximity card reader

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



### CZ-EMM4

Proximity card reader

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



### CZ-DALLAS

Dallas iButton reader

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



### INT-R

Universal expander for card/chip readers

- support for two proximity card/Dallas iButton readers
- support for Wiegand 26 interface readers
- relay to control electromagnetic door lock
- input for door status sensor
- Input for door unlocking with a button
- fire emergency unlocking feature
- tamper input



### INT-SZ

Code lock

- LEDs for door state indication
- 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)



### INT-SZK-GR

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

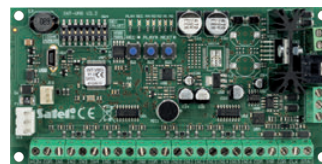
## VOICE MESSAGING MODULES



### 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 25  
– MODULES COMPATIBILITY WITH CONTROL PANELS

# VERSA intruder alarm control panel

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

## Common features and functions:

- certified for **EN 50131 Grade 2**
- 5 up to 30 zones:
  - » NO, NC, EOL, 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

18

## Additional functions and features of control panels

### VERSA Plus:

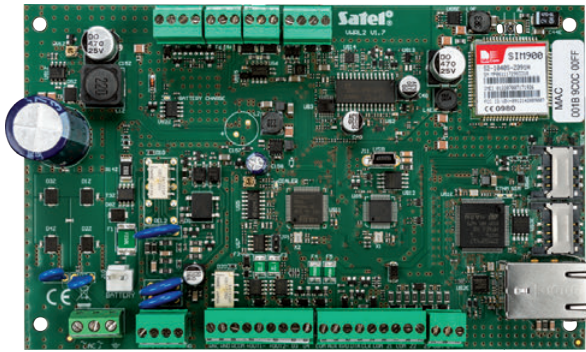
- supply outputs: 3
- built-in modules:
  - » Ethernet (mobile application, PUSH notifications, e-mail messages, reporting to monitoring station)
  - » GSM/GPRS (SMS, CLIP, reporting to monitoring station, **DLOADX**, mobile application, PUSH notifications)
  - » PSTN (voice messaging, reporting to monitoring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

### VERSA IP:

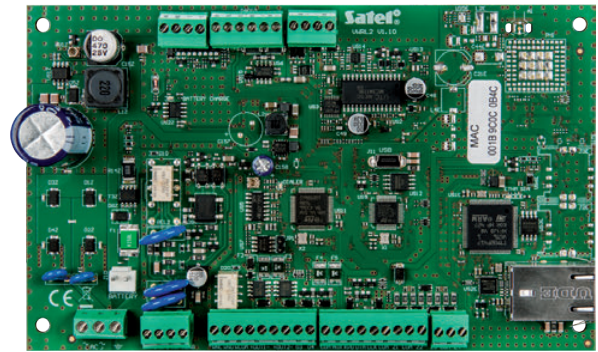
- supply outputs: 3
- built-in modules:
  - » Ethernet (mobile application, PUSH notifications, e-mail messages, reporting to monitoring station)
  - » PSTN (voice messaging, reporting to monitoring station)
  - » voice module
  - » acoustic alarm verification module
- USB communication port
- remote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

### VERSA 15/10/5:

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



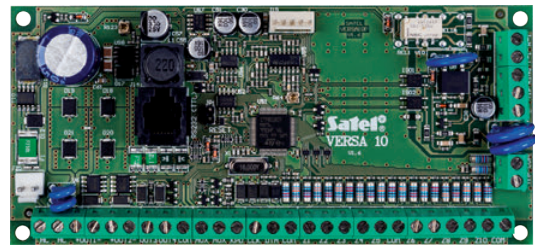
VERSA Plus



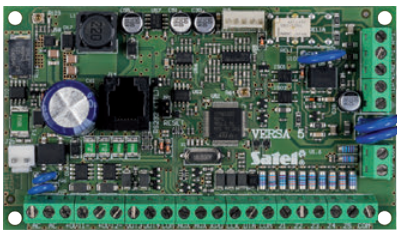
VERSA IP



VERSA 15



VERSA 10



VERSA 5



## OPERATION, CONTROL AND MANAGEMENT

### 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 (**VERSA-LCDR-WH / VERSA-KWRL2**)
- power supply: 2 CR123A 3 V batteries (**VERSA-KWRL2**)
- compatible with **ABAX** system (**VERSA-KWRL2**)



abax2



### INT-TSG

Touchscreen keypad

- certified for **EN 50131 Grade 3**
- keypad for control panels of **INTEGRA**, **INTEGRA Plus**, **VERSA**
- 4.3" capacitive touchscreen responding to a gentle touch
- glass panel for display protection
- graphical user interface with colourful icons
- MACRO features to facilitate control of alarm system and home automation elements (supported by the **INTEGRA** and **INTEGRA Plus** control panels only)
- LEDs informing about the current system status
- possibility of tailoring the status screen to user's needs
- 2 zones (supported by the **INTEGRA** and **INTEGRA Plus** control panels only)
- possibility to activate FIRE, AUX, PANIC alarms



4,3" screen diagonal



available in black (INT-TSG-B5B), gray (INT-TSG-SSW) and white (INT-TSG-WSW)



### INT-TSH

Touchscreen keypad

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



7" screen diagonal



available in black (INT-TSH-B5B), gray (INT-TSH-SSW) and white (INT-TSH-WSW)



### VERSA-LCD

LCD keypad for VERSA panels

- compliance with **EN 50131 Grade 2** requirements
- easily readable display
- LED indicators for system and partitions status
- quick selection of arming modes with dedicated buttons
- FIRE, AUX, PANIC alarms triggered from keypad
- keypad and display backlight
- built-in buzzer



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



## VERSA-LED

LED keypad for VERSA panels

- LED indicators for zones, system and partitions status
- quick selection of arming modes with dedicated buttons
- FIRE, AUX, PANIC alarms triggered from keypad
- keypad backlight
- built-in buzzer



available with backlight  
blue (VERSA-LED-BL) and green (VERSA-LED-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

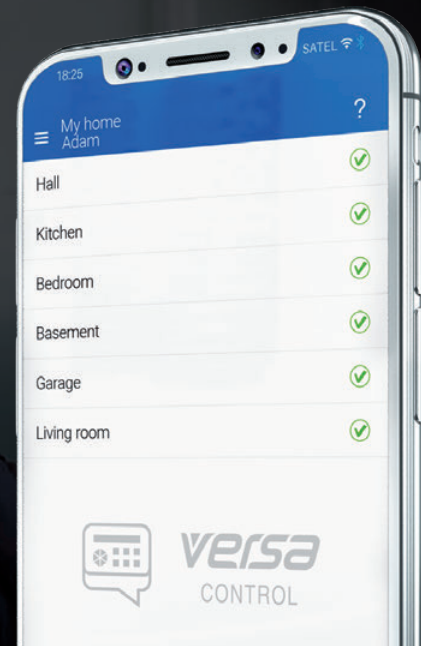
For more information about devices that work with VERSA control panels, see page 25  
– MODULES COMPATIBILITY WITH CONTROL PANELS

## 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



# PERFECTA intruder alarm control panel

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

## Common features and functions:

- certified for **EN 50131 Grade 2 (PERFECTA)**
- compliance with **EN 50131 Grade 2** requirements (**PERFECTA LTE** and **PERFECTA-T**)
- from 8 to 32 wired programmable zones:
  - » configuration options: NO, NC, EOL, 2EOL/NO, 2EOL/NC
  - » support for roller shutter and vibration detectors
- from 4 to 12 wired programmable outputs
- 2 power outputs on mainboard
- built-in modules:
  - » cellular phone\* (**PERFECTA, PERFECTA LTE**) (SMS, CLIP, reporting to station, mobile application, audio and PUSH notifications)
  - » PSTN (**PERFECTA-T**) (reporting to station, audio notifications)
  - » voice module (playback of voice messages for telephone messaging)
  - » alarm audio verification module (listen-in function)
- system division into 2 partitions:
  - » 3 detection modes in each partition
  - » user or timer controlled
- communication bus for connecting of keypads and expansion modules
- system control by using:
  - » LCD keypads (up to 4)
  - » **PERFECTA CONTROL** mobile application (**PERFECTA, PERFECTA LTE**)
  - » **MPT-350** remote control keyfobs (up to 15)
- updateable firmware
- password codes:
  - » 15 user codes
  - » 1 service code
- editable names (of users, partitions, zones, outputs and modules) for easy control and supervision of the system
- timers:
  - » 8 timers with exception setting capability
- memory of 3584 events
- auto diagnostics of basic system components
- built-in switching power supply:
  - » overload protection
  - » deep battery discharge protection
  - » battery charging current control
- programming control panel setting:
  - » locally – keypad, computer running **PERFECTA Soft** program, connected to control panel RS-232 (TTL) port
  - » remotely – computer with **PERFECTA Soft** program, connection using mobile data transmission\* (**PERFECTA, PERFECTA LTE**)
- extra software tool:
  - » **CONFEX** configurator – auxiliary program for designing alarm security systems

\* supporting mobile data transmission via LTE/HSPA+/EDGE/GPRS in case of PERFECTA LTE control panels (depending on the capabilities of cellular network), GPRS in case of PERFECTA control panels

## Additional functions and features of control panels

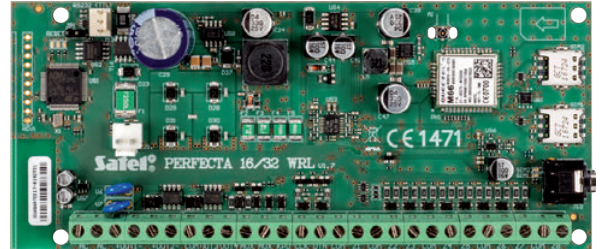
### PERFECTA 16-WRL, PERFECTA 32-WRL, PERFECTA 32-WRL LTE and PERFECTA-T 32-WRL:

- integrated 433 MHz radio module for encrypted wireless communication:
  - » two-way with **PRF-LCD-WRL** keypads and **MSP-300 R** sirens
  - » one-way with **MICRA** family detectors and **MPT-350** keyfobs
- additional 4 wireless outputs for **MSP-300 R** sirens

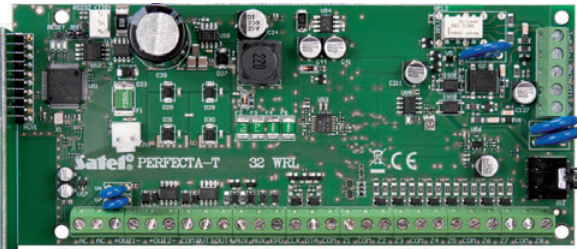




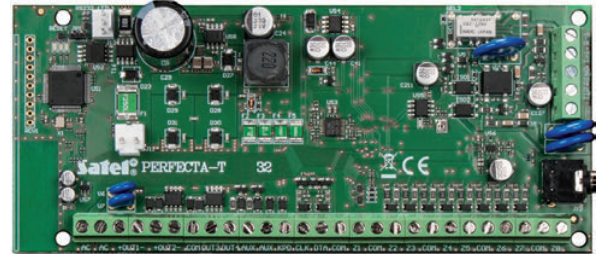
PERFECTA 16-WRL / PERFECTA 32-WRL



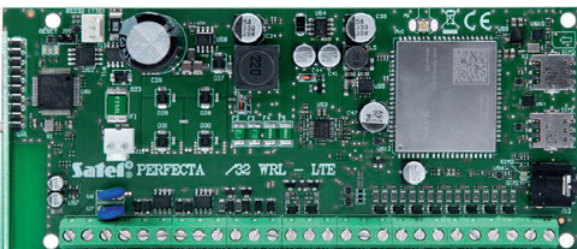
PERFECTA 16 / PERFECTA 32



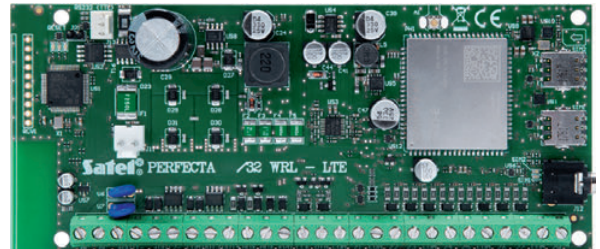
PERFECTA-T 32-WRL



PERFECTA-T 32



PERFECTA 32-WRL LTE



PERFECTA 32 LTE

**perfecta**

## OPERATION, CONTROL AND MANAGEMENT

### PRF-LCD / PRF-LCD-WRL

LCD keypads for PERFECTA control panels

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



433 MHz



### MPT-350

Remote control keyfob

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

433 MHz

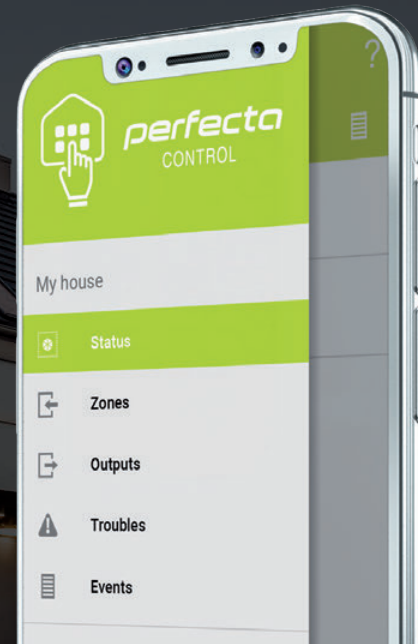
For more information about devices that work with PERFECTA control panels, see page 25  
– MODULES COMPATIBILITY WITH CONTROL PANELS

## MOBILE APPLICATION

### PERFECTA CONTROL

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

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



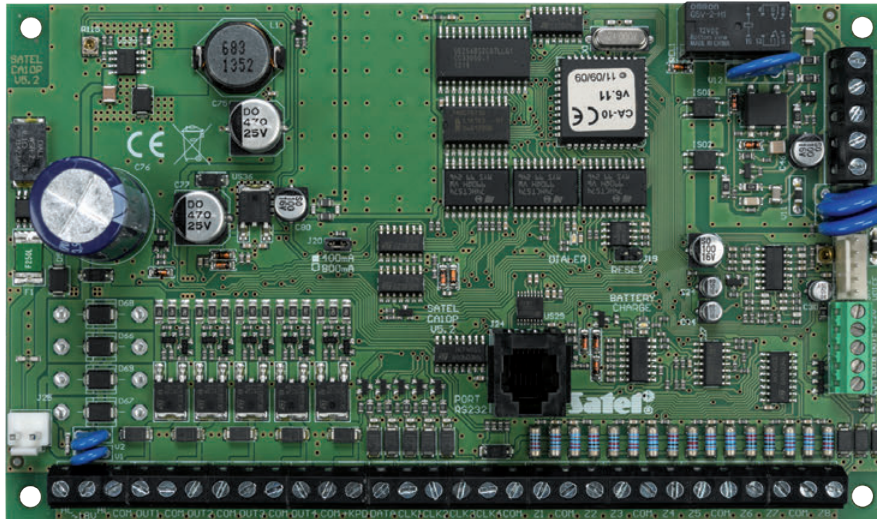
# MODULES COMPATIBILITY WITH CONTROL PANELS

		INTEGRA 24	INTEGRA 32	INTEGRA 64	INTEGRA 64 Plus	INTEGRA 128	INTEGRA 128 Plus	INTEGRA 128-WRL	INTEGRA 256 Plus	VERSA 5	VERSA 10	VERSA 15	VERSA IP	VERSA Plus	PERFECTA 16	PERFECTA 32	PERFECTA 32 LITE	PERFECTA 16-WRL	PERFECTA 32-WRL	PERFECTA 32-WRL LTE	PERFECTA-T 32	PERFECTA-T 32-WRL	
INT-S	partition keypad	*	*	*	*	*	*	*	*														
INT-SF	partition keypad	*	*	*	*	*	*	*	*														
INT-SK	partition keypad	*	*	*	*	*	*	*	*														
INT-SCR-BL	multi-function keypad with 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	wireless system controller	*	*	*	*	*	*	*	*	*	*	*	*	*									
ACU-280	wireless system controller	*	*	*	*	*	*	*	*	*	*	*	*	*									
ARU-200	ABAX repeater	*	*	*	*	*	*	*	*														
VERSA-MCU	wireless system controller 433 MHz									*	*	*	*	*									
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	*	*	*	*	*	*	*	*														
GSM-X	universal communication module	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
GSM-X LTE	universal communication module	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
GPRS-A	universal monitoring module	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
GPRS-A LTE	universal monitoring 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	*	*	*	*	*	*	*	*														
INT-SZ	code lock	*	*	*	*	*	*	*	*														
INT-SZK	code lock	*	*	*	*	*	*	*	*														



# CA-10 intruder alarm control panel

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



CA-10 P

26

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

## OPERATION, CONTROL AND MANAGEMENT

### CA-10 KLCD-L

#### LCD keypad

- LEDs for partition and system state indication
- FIRE, AUX, PANIC alarms triggered from keypad
- keypad and display backlight
- buzzer for acoustic signaling
- two zones expansion
- communication loss indication
- RS-232 for easy programming of keypad options, names and messages



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



### CA-10 KLCD-S

#### LCD keypad

- LEDs for partition and system state indication
- FIRE, AUX, PANIC alarms triggered from keypad
- keypad and display backlight
- buzzer for acoustic signaling
- two zones expansion
- communication loss indication
- RS-232 for easy programming of keypad options, names and messages



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



### CA-10 KLCD

#### LCD keypad

- LEDs for partition and system state indication
- FIRE, AUX, PANIC alarms triggered from keypad
- keypad and display backlight
- buzzer for acoustic signaling
- two zones expansion
- RS-232 for easy programming of keypad options, names and messages



### CA-10 KLED

#### LED keypad

- LEDs for zones (12), partition and system state indication
- FIRE, AUX, PANIC alarms triggered from keypad
- keypad backlight
- buzzer for acoustic signaling
- two zones expansion



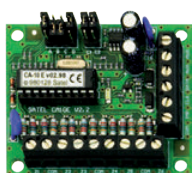
### CA-10 KLED-S

#### LED keypad

- LEDs for zones (16), partition and system state indication
- FIRE, AUX, PANIC alarms triggered from keypad
- keypad backlight
- buzzer for acoustic signaling
- two zones expansion

27

## ZONES EXPANSION MODULES



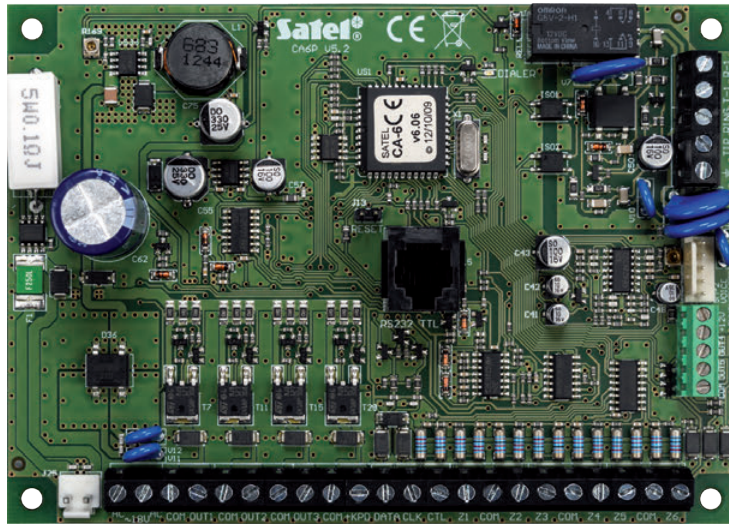
### CA-10 E

#### Zone expansion module

- system expansion with up to 6 zones
- LED for zone state indication

# CA-6 intruder alarm control panel

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



CA-6 P

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

## OPERATION, CONTROL AND MANAGEMENT



### CA-6 KLED

#### LED keypad

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



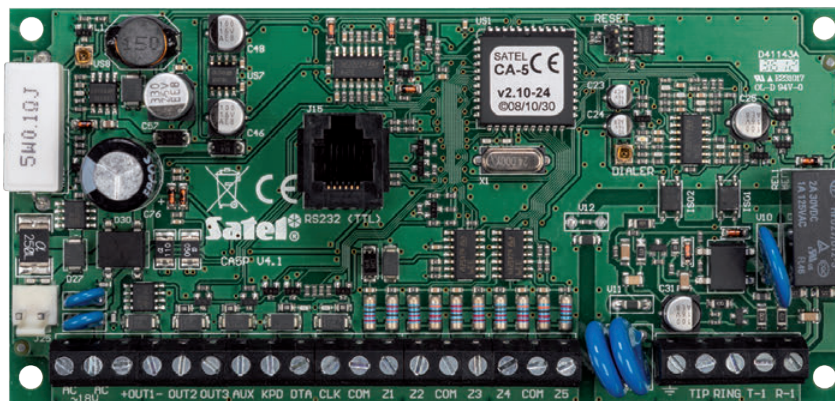
### CA-6 KLED-S

#### LED keypad

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

# CA-5 intruder alarm control panel

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



CA-5 P

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

29

## OPERATION, CONTROL AND MANAGEMENT



### CA-5 KLCD-L

LCD keypad

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



available with backlight  
blue (CA-5 BLUE-L)  
and green (CA-5 KLCD-L)



### CA-5 KLCD-S

LCD keypad

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



available with backlight  
blue (CA-5 BLUE-S)  
and green (CA-5 KLCD-S)



### CA-5 KLED-S

LED keypad

- LEDs for zones state indication
- FIRE, AUX, PANIC alarms triggered from keypad
- keypad backlight
- buzzer for acoustic signaling

# CONTROL PANEL COMPARISON CHART

	INTEGRA 256 Plus	INTEGRA 128-WRL	INTEGRA 128 Plus	INTEGRA 128	INTEGRA 64 Plus	INTEGRA 64	INTEGRA 32	INTEGRA 24	VERSA Plus	VERSA IP	VERSA 15
On-board zones / Total number of zones	16 / 256	8 / 128	16 / 128	16 / 128	16 / 64	16 / 64	8 / 32	4 / 24	4 / 30	4 / 30	15 / 30
Number of keypad zones	8 x 2	8 x 2	8 x 2	8 x 2	8 x 2	8 x 2	4 x 2	4 x 2			
Number of objects / partitions	8 / 32	8 / 32	8 / 32	8 / 32	8 / 32	8 / 32	4 / 16	1 / 4	1 / 2	1 / 2	1 / 2
Available keypads: LED / LCD	• / •	• / •	• / •	• / •	• / •	• / •	• / •	• / •	• / •	• / •	• / •
Touch-sensor keypad support	• / •	• / •	• / •	• / •	• / •	• / •	• / •	• / •	- / •	- / •	- / •
Operation with proximity tags and cards	•	•	•	•	•	•	•	•	•	•	•
Users keyfobs	option	•	option	option	option	option	option	option	option	option	•
Users and master users + service	248 + 1	248 + 1	248 + 1	248 + 1	200 + 1	200 + 1	68 + 1	17 + 1	30 + 1	30 + 1	30 + 1
Additional armed modes	programmable	programmable	programmable	programmable	programmable	programmable	programmable	programmable	day / night	day / night	day / night
On-board outputs / Total number of outputs	4+12 / 256	2+6 / 128	4+12 / 128	4+12 / 128	4+12 / 64	4+12 / 64	2+6 / 32	2+2 / 24	2+2+1 / 12	2+2+1 / 12	2+2 / 12
Power supply	2 A + 1,5 A	2 A	2 A + 1,5 A	3 A	2 A + 1,5 A	3 A	1,2 A	1,2 A	2 A	2 A	2 A
Access control features	•	•	•	•	•	•	•	•			
Built-in communicator: PSTN / cellular / ETHERNET	• / - / -	- / • / -	• / - / -	• / - / -	• / - / -	• / - / -	• / - / -	• / - / -	• / • / •	• / - / •	• / - / -
Remote control via DTMF	•	•	•	•	•	•	•	•	•	•	option
Remote control via SMS	option	•	option	option	option	option	option	option	•		
Programming: local / remote	•	•	•	•	•	•	•	•	•	•	•
Operation via mobile applications	option	option	option	option	option	option	option	option	•	•	option
Communication via Ethernet	option	option	option	option	option	option	option	option	•	•	option
Communication via cellular network	option	•	option	option	option	option	option	option	•		
Security grade according to EN 50131	Grade 3	Grade 2	Grade 3	Grade 2	Grade 3	Grade 2	Grade 2	Grade 2	Grade 2	Grade 2	Grade 2
Wireless devices support	option	•	option	option	option	option	option	option	option	option	option



VERSA 10	VERSA 5	PERFECTA 32-WRL	PERFECTA 32-WRL LTE	PERFECTA 16-WRL	PERFECTA 32	PERFECTA 32 LTE	PERFECTA 16	PERFECTA-T 32	PERFECTA-T 32-WRL	CA-10	CA-6	CA-5
10/30	5/30	8/32	8/32	8/16	8/32	8/32	8/16	8/32	8/32	8/16	6/8	5/5
										4 x 2	2	
1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/4	1/2	1/1
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•	•	•	•	•				option	•			
30 + 1	30 + 1	15 + 1	15 + 1	15 + 1	15 + 1	15 + 1	15 + 1	15 + 1	15 + 1	32 + 1	13 + 1	6 + 1
day / night	day / night	day / night	day / night	day / night	day / night	day / night	day / night	day / night	day / night	with bypass	with bypass	
2+2/12	2+2/12	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+4	4+2/6	3+2/5	1+2/3
2 A	1 A	2 A	2 A	2 A	2 A	2 A	2 A	2 A	2 A	1,7 A	1,2 A	1,2 A
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# abax2

## ABAX 2 WIRELESS SYSTEM

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

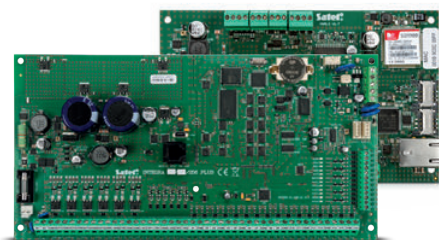
ABAX 2 is ideally suited as a wireless solution for alarm systems based on the INTEGRA, INTEGRA Plus and VERSA control panels. When used with these devices it gets its full functionality and offers its best possibilities to the users. Moreover, ABAX 2 can work together with any alarm control panel or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

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

# SYSTEM STRUCTURE



MOVEMENT DETECTORS



ALARM CONTROL PANELS



CONTROL AND AUTOMATION



DETECTORS FOR PERIMETER PROTECTION

ABAX 2 WIRELESS SYSTEM CONTROLLER



up to 2000 m



SIRENS



OTHER DETECTORS



ZONES/OUTPUTS EXPANSION MODULES



ABAX 2 DEVICE SIGNAL RETRANSMITTER



ABAX 2 WIRELESS DEVICES



WIRED SIRENS AND DETECTORS

# abax2

UP TO 8 YEARS\*  

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

## SYSTEM DEVICES



### ACU-220

ABAX 2 wireless system controller

- certified for **EN 50131 Grade 2**
- two-way radio communication in 868 MHz band – 4 channels
- range up to 2000 m in open area
- support for up to 48 wireless devices
- support for up to 4 **INT-KWRL2** or 6 **VERSA-KWRL2** wireless keypads
- support for up to 256 **APT-200** wireless keyfobs
- can work together with **INTEGRA**, **INTEGRA Plus** and **VERSA** control panels – connection via communication bus
- can work in stand-alone mode or together with any control panel
  - » 8 programmable outputs
  - » 4 programmable zones
- 4 controller status indicating output
- antenna diversity – automatic selection of antenna depending on the received signal strength
- controller settings programmable from:
  - » control panel service menu or **DLOADX** program - if the controller is used with the **INTEGRA**, **INTEGRA Plus** or **VERSA** control panels
- wireless system diagnostics - **ABAX 2 Soft** software
- controller firmware update without demounting of the device
- remote configuration and update of devices registered to the controller
- tamper protection
- power supply: 12 V DC



### ACU-280

ABAX 2 wireless system controller

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



### ARU-200

COMING SOON

Radio repeater for ABAX 2 devices

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



### ARF-200

COMING SOON

Radio signal strength tester

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

## 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
- compatible with **ABAX** system



### ACX-210

Miniature wireless expansion module for wired zones and outputs

- adding wired devices to the **ABAX 2** system
- 4 programmable zones - support for wired detectors in NO, NC, EOL, 2EOL/NO and 2EOL/NC configurations
- 4 programmable OC type outputs
- remote configuration and update of firmware
- compact size
- power supply: 4-24 V DC
- compatible with **ABAX** system

## WIRELESS DETECTORS

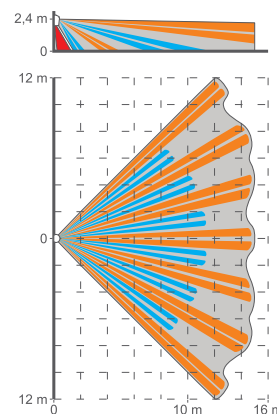
### APMD-250

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**)
- compatible with **ABAX** system



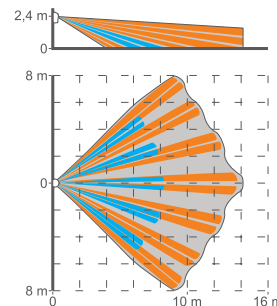
### APD-200 Pet

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
- compatible with **ABAX** system



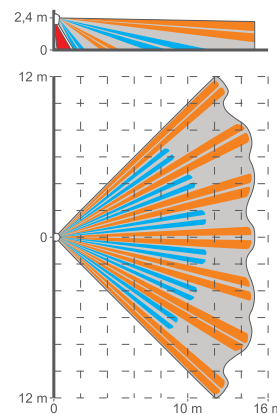
### APD-200

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
- compatible with **ABAX** system

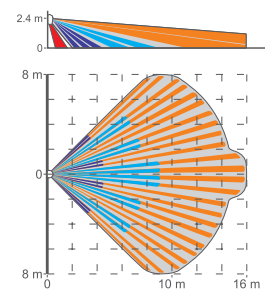


## AOD-210

Wireless dual-technology outdoor motion detector



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

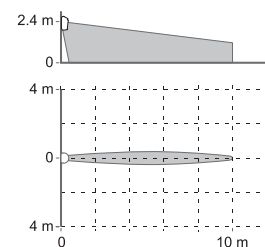


## AOCD-260

Wireless dual-technology outdoor curtain detector



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



## AXD-200

Wireless universal detector



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

## AGD-200

Wireless glass-break detector



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

## ADD-200 **COMING SOON**

Wireless outdoor dusk and temperature detector



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



### 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
- compatible with **ABAX** system



### 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
- compatible with **ABAX** system

## WIRELESS SIRENS



### ASP-200 R

Wireless outdoor acoustic-optical siren

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



### ASP-215

Wireless indoor acoustic-optical siren

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



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

## CONTROL AND AUTOMATION



### APT-200

Bidirectional remote control keyfob

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



### APB-200

Wireless panic button

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

COMING SOON

### ASW-200 E, ASW-200 F

230 V AC wireless controller

COMING SOON

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



### ASW-210

Wireless two-channel in-wall 230 V AC controller

- remote power-on/power-off of devices powered from 230 V AC mains
- two control inputs
- remote configuration and update of firmware
- compact size
- in-wall installation
- compatible with **ABAX** system

An aerial photograph of a small, dark-roofed cabin with white trim, situated in a dense forest of tall evergreen trees. The cabin is located on a small clearing near a body of water, with a wooden dock extending into the lake. The scene is captured from a high angle, showing the surrounding forest and the calm water of the lake.

# MICRA

38

## MICRA WIRELESS SECURITY SYSTEM

The MICRA wireless system has been designed primarily to protect small-size buildings.

The possibility of using wireless motion, magnetic contact or glass break detectors provides protection against burglary and, for additional security, wireless smoke and flood detectors can inform you about the risk of fire or uncontrolled water leakage. Remote operation of the system using keyfobs, wireless keypad or mobile application is convenient, and at the same time simple and intuitive.

Thanks to analog inputs, MICRA can also perform the function of supervision of technical equipment, providing information on exceeding critical parameters, e.g. temperature or pressure.



## MICRA ALARM MODULE

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

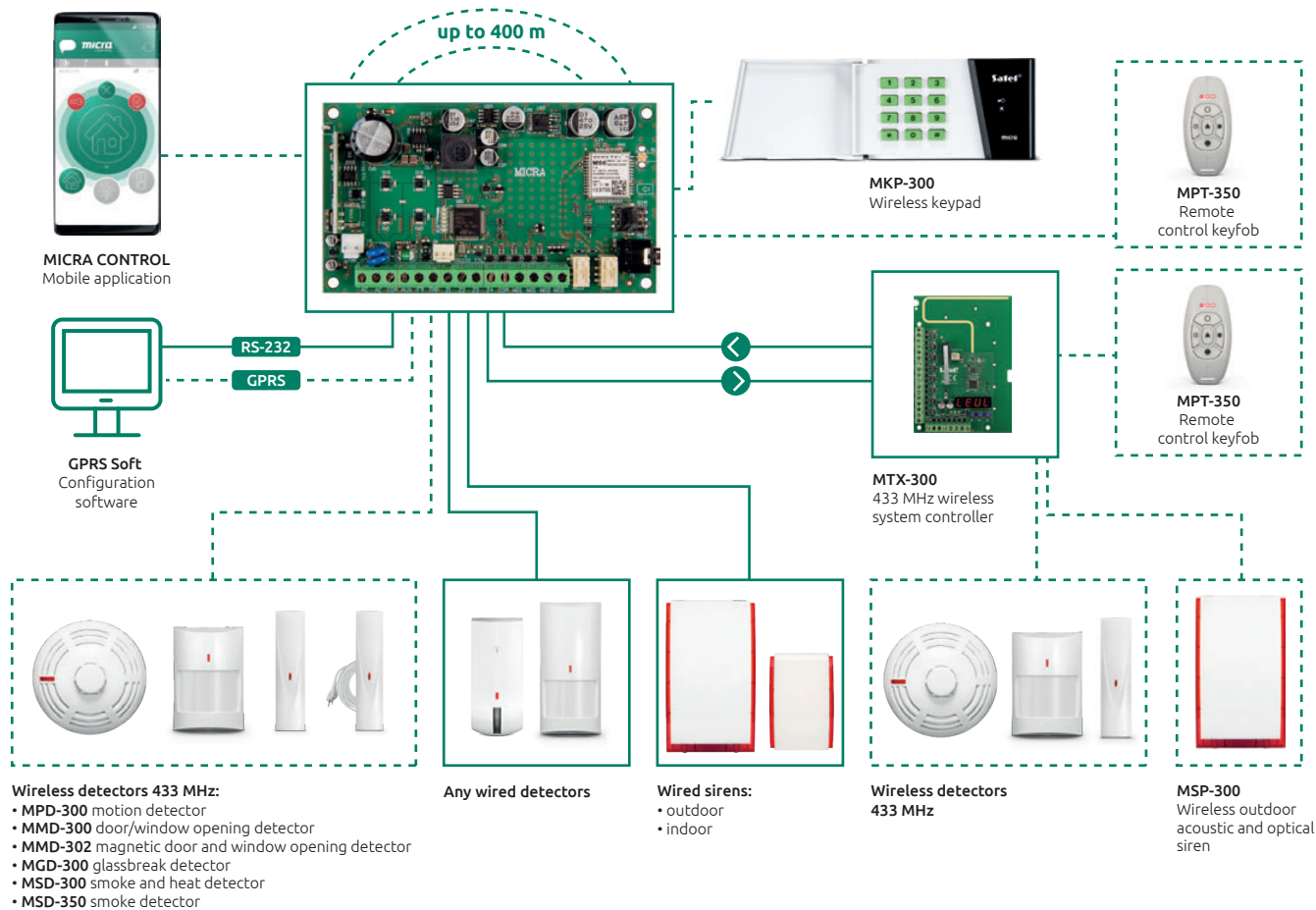


### MICRA

Alarm module with GSM/GPRS communicator

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

## MICRA SECURITY SYSTEM STRUCTURE





433 MHz

### MTX-300

433 MHz wireless system controller

- works with any control panel, automation controller as well as **MICRA** alarm module
- optional stand-alone operation
- handling of up to 32 keyfobs (**MPT-300**, **MPT-350**, **P-2**, **P-4**, **T-1**, **T-2**, **T-4**)
- handling of up to 16 detectors (**MFD-300**, **MGD-300**, **MMD-300**, **MMD-302**, **MPD 300**, **MSD-300**, **MSD-350**)
- handling of up to 4 sirens (**MSP-300 R**)
- 8 programmable relay outputs
- 2 programmable inputs for control of sirens
- programmed by using buttons placed on it
- programmed via **MTX-SOFT** program
- tamper protection

## OPERATION OF MICRA SYSTEM



### MKP-300

Arm/disarm wireless keypad

- up to 8 user codes
- outputs control
- FIRE, 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 PIR detector

- certified for **EN 50131 Grade 2** (with **PERFECTA** systems)
- 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



### MSD-300

Wireless smoke and heat alarm

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



### MSD-350

Wireless smoke detector

- certified stand-alone operation according to **EN 14604**
- photoelectric sensor of visible smoke
- acoustic and optical alarm signaling
- testing function
- chamber soiling indication
- tamper protection
- low power consumption and battery status control
- power supply: CR123A 3 V battery



### MMD-300

Wireless magnetic contact

- certified for **EN 50131 Grade 2** (with **PERFECTA** systems)
- additional external detector input
- LED indicator for test mode indications
- powered by 3 V CR123A battery



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



### MMD-302

Wireless magnetic contact

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



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



### MFD-300

Wireless water flood detector

- detection of water presence for flood threatened areas
- external easy to mount sensor – cable length: 3 m
- powered by 3 V CR123A battery



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



### MGD-300

Wireless glassbreak detector

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



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

## WIRELESS SIREN FOR MICRA



### MSP-300 R

Wireless outdoor acoustic-optical siren

- certified for **EN 50131 Grade 2** (with **PERFECTA** systems)
- works with: **MTX-300** controller
- optical and acoustic signaling triggered by radio
- optical signaling: ultra bright LEDs
- ability to trigger one of several acoustic signals

- advanced radio system to ensure optimized communication with low power consumption
- remote configuration
- supply from high-performance **BAT-ER-3,6** battery with 3.6 Ah capacity and wide operating temperature range
- tamper protection against opening; removing from mounting surface

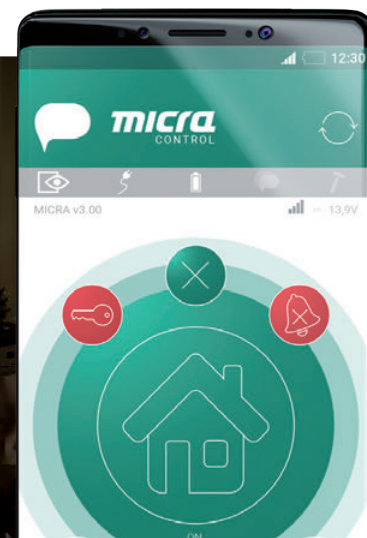
41

## 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





## DETECTORS

Detectors are one of the basic elements of an intrusion and holdup alarm system. They are most often used to detect occurrences caused by the presence and actions of people staying on the premises. They can detect motion, sound (e.g. glass break), shocks (forcing a door), or changing position of an object (e.g. sculpture), and then transmit the 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

**SLIM-PIR / SLIM-PIR-PET**

Digital PIR motion detectors

- compliance with **EN 50131 Grade 2** requirements
- 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 (ZEOL: 2 x 1,1 k $\Omega$ )
- 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**)

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

Digital PIR motion detectors

- compliance with **EN 50131 Grade 2** requirements
- 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-CL2**) or long-range (**LR-CL2**) one (**SLIM-PIR-LUNA**)
- ability to configure detector operating parameters using the **OPT-1** keyfob
- built-in end-of-line resistors (ZEOL: 2 x 1,1 k $\Omega$  / 2 x 4,7 k $\Omega$  / 2 x 5,6 k $\Omega$ )
- 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**)

**SLIM-PIR-PRO**

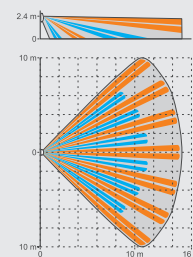
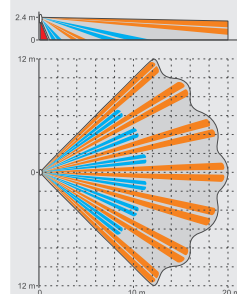
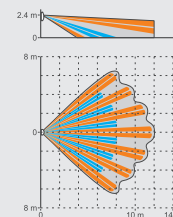
Digital PIR motion detector

- compliance with **EN 50131 Grade 3** requirements
- 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**
- ability to configure detector operating parameters using the **OPT-1** keyfob
- built-in end-of-line resistors (ZEOL: 2 x 1,1 k $\Omega$  / 2 x 4,7 k $\Omega$  / 2 x 5,6 k $\Omega$ )
- 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

**SLIM-DUAL / SLIM-DUAL-PET**

Digital dual technology PIR+MW motion detectors

- compliance with **EN 50131 Grade 2** requirements
- 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 (ZEOL: 2 x 1,1 k $\Omega$ )
- 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**)

Coverage area  
SLIM LINE series detectorsSLIM-PIR  
SLIM-DUALSLIM-PIR-LUNA  
SLIM-DUAL-LUNA  
SLIM-PIR-PRO  
SLIM-DUAL-PROSLIM-PIR-PET  
SLIM-DUAL-PET  
SLIM-PIR-LUNA-PET  
SLIM-DUAL-LUNA-PET



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

Digital dual technology PIR+MW motion detectors

- compliance with **EN 50131 Grade 2** requirements
- 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

- compliance with **EN 50131 Grade 3** requirements
- 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**
- 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

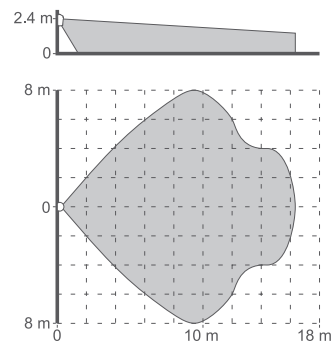
## DIGITAL DUAL MOVEMENT DETECTORS



### COBALT / COBALT Plus / COBALT Pro

Digital dual technology motion detectors

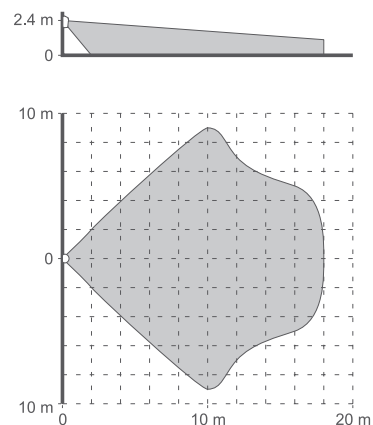
- dual technology PIR+MW
- dual element pyrosensor (**COBALT, COBALT Plus**)
- quad element pyrosensor (**COBALT Pro**)
- build-in EOL resistors
- digital detection algorithm
- microwave based antimask feature (**COBALT Plus, COBALT Pro**)



### SILVER

Digital dual technology motion detector

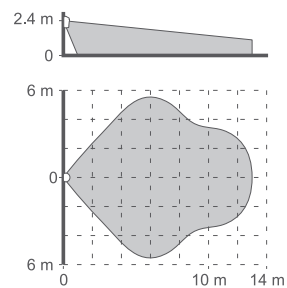
- certified for **EN 50131 Grade 2**
- dual technology PIR+MW
- new generation DSP and analysis algorithm
- build-in EOL resistors
- precise LODIFF™ Fresnel sealed optics
- microwave based antimask feature
- cloaking attempts detection
- remotely triggered test mode
- alarm memory feature



### GREY / GREY Plus

Digital dual technology PIR+MW motion detectors

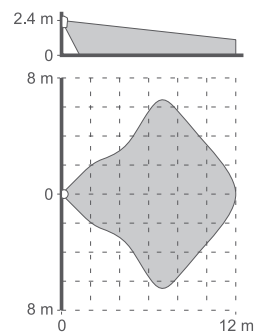
- certified for **EN 50131 Grade 2 (GREY Plus)**
- advanced DSP with high resolution ADC
- adjustable sensitivity for PIR and MW
- remote triggering of test mode
- MW antimasking feature (**GREY Plus**)
- immunity to movement of pets (up to 15 kg)
- alarm memory



### 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)



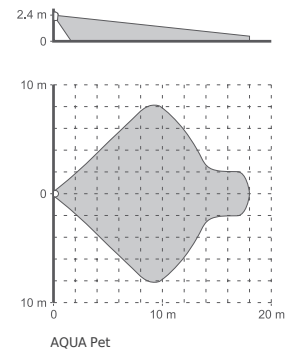
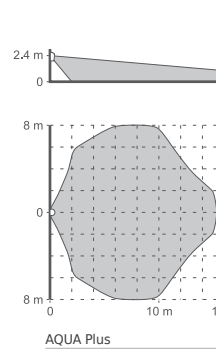
## DIGITAL PIR DETECTORS



### AQUA Plus / AQUA Pro / AQUA Pet / AQUA S

Digital PIR motion detectors

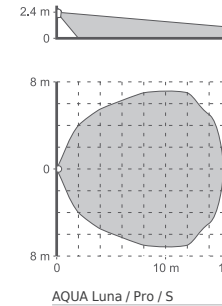
- certified for **EN 50131 Grade 2 (Plus, Pet)**
- **EN 50131 Grade 2** compliance (**S**)
- dual element pyrosensor (**Plus, Pet, S**)
- quad element pyrosensor (**Pro**)
- build-in EOL resistors (**Plus, Pet**)
- digital detection algorithm
- replaceable Fresnel lens with sealed optics (**Plus, Pro,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



### AQUA Luna

Digital PIR motion detector with emergency lighting feature

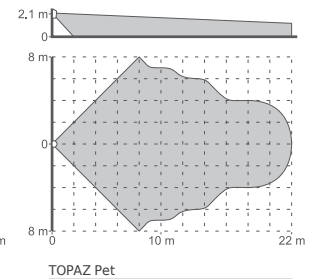
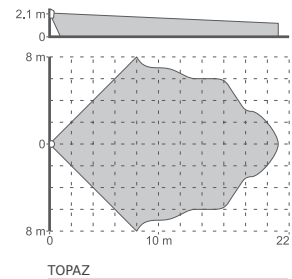
- **EN 50131 Grade 2** compliance
- remotely controlled LED emergency lighting
- digital signal processing
- 3-step sensitivity adjustment
- digital temperature compensation



### TOPAZ / TOPAZ Pet

Digital PIR motion detectors

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



## MOTION DETECTOR COMPARISON CHART (PART 1)

	AQUA Plus	AQUA S	AQUA Pet	AQUA Pro	AQUA Luna	AQUA Ring/ AQUA Ring S	AMBER	AMBER 2E	TOPAZ/ TOPAZ Pet	GRAPHITE	GRAPHITE Pet	IVORY
Sensor	PIR	PIR	PIR	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	stepless	stepless
Remote LED disable										•	•	•
Active IR anti-masking												
Anti-masking feature												
Cloaked intruder detection												
Pyrosensor type	dual	dual	dual	quad	dual	quad / dual	dual	dual	dual	dual	dual	dual
Optic type	Fresnel - replaceable	Fresnel - replaceable	Fresnel	Fresnel - replaceable	Fresnel - replaceable	Fresnel	Fresnel	Fresnel	Fresnel	Fresnel - replaceable	Fresnel	zwierciadko
Bracket	•	•		•	•		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°	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°	18 x 18 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			





### AQUA Ring / AQUA Ring S

Ceiling mount digital PIR

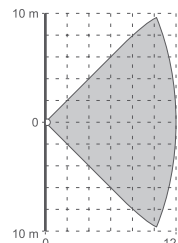
- EN 50131 Grade 2 compliance (**AQUA Ring**)
- pyrosensor: quad element (**AQUA Ring**) / dual element (**AQUA Ring S**)
- digital detection algorithm
- powered by 24 V AC/DC (**AQUA Ring S**)



### AMBER / AMBER 2E

PIR motion detectors

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



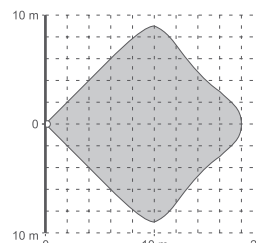
AMBER / AMBER 2E



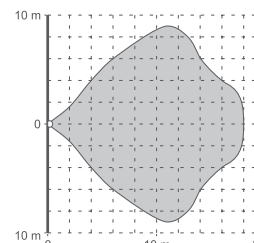
### GRAPHITE / GRAPHITE Pet

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
- immunity to movement of pets (up to 15 kg) (**GRAPHITE Pet**)



GRAPHITE



GRAPHITE Pet

47

## MOTION DETECTOR COMPARISON CHART (PART 2)

	COBALT	COBALT Plus	COBALT Pro	SILVER	GREY	GREY Plus	NAVY	OPAL	OPAL Plus	OPAL Pro	AGATE
Sensor	PIR+MW	PIR+MW	PIR+MW	PIR+MW	PIR+MW	PIR+MW	PIR+GB	PIR+MW	PIR+MW	PIR+MW	PIR+MW
Motion detection digital algorithm	•	•	•	•	•	•	•	•	•	•	•
Digital temperature compensation	•	•	•	•	•	•	•	•	•	•	•
Sensor self-test				•	•	•	•	•	•	•	•
Digital interference filter				•	•	•	•	•	•	•	•
Sensitivity adjustment	•	•	•	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	quad	dual	dual	dual	dual	dual	dual	dual	dual
Optic type	Fresnel	Fresnel	Fresnel	Fresnel	Fresnel	Fresnel	Fresnel	Fresnel	Fresnel	Fresnel	Fresnel
Bracket	•	•	•	•	•	•	•	•	•	•	•
Immunity to small pets movement					option	option	option	option	option	option	option
Range	11 x 10 m, 130°	11 x 10 m, 130°	11 x 10 m, 130°	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°
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

See Detector accessories - page 65

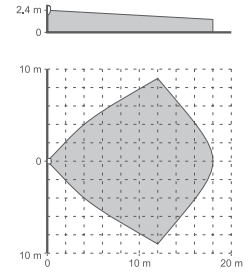


## IVORY

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

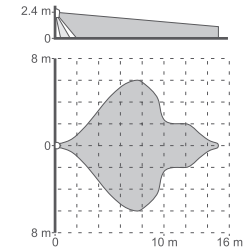


## OPAL / OPAL Plus / OPAL Pro

Outdoor PIR+WM dual-tech motion detectors

- meets EN 50131 Grade 3 requirements for indoor applications (**OPAL Pro**)
- meets EN 50131 Grade 2 requirements for indoor applications (**OPAL**, **OPAL Plus**)
- PIR and microwave circuits
- active IR antimasking implemented in indoor applications (**OPAL Pro**)
- antimasking function implemented through MV circuit in indoor applications (**OPAL Plus**)
- built-in dusk sensor (**OPAL Plus**, **OPAL Pro**)
- creep zone protection
- remote sensitivity configuration of detection circuits and dusk sensor by using **OPT-1** keyfob (**OPAL Plus**, **OPAL Pro**)

- sensitivity configuration of detection circuits by using PCB buttons
- configuration of dusk sensor sensitivity by using PCB buttons (**OPAL Plus**, **OPAL Pro**)
- splash-proof polycarbonate enclosure, IP54 rated
- tamper protection
- digital temperature compensation
- low current consumption
- immunity to movement of pets (up to 20 kg)
- can be mounted directly on flat surface or by using the dedicated (ball- or angle-type) brackets available in the **BRACKET C** set
- option to mount the **HOOD C** protection on the enclosure



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

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



### 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)



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

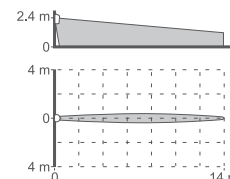
See Accessories for ACTIVA – page 84



### AGATE

#### Outdoor curtain motion detector

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



49



### VD-1

#### Vibration detector with magnetic contact

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



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



### 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 detectors

- EN 50131 Grade 2 compliance (S-1, S-2, S-3, S-4)
- surface mounted (K-1, K-1 2E, S-1, S-4)
- insert mounted (K-2, K-2 2E, S-2, K-3, K-3 2E, S-3)
- tamper loop (S-1, S-2, S-3)
- 2EOL termination 1.1 kOhm (K-1 2E, K-2 2E, K-3 2E)
- sealed aluminium body (K-3, K-3 2E, S-3)
- tamper contact with terminals (S-4)



K-1 / K-1 BR



K-2 / K-2 BR



K-3



S-4, S-4 BR



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



### B-1 / B-1 BR

#### Side magnetic detector

- surface mounted (screw mount or self adhesive)
- small sized sealed body



### B-1M / B-1M BR

#### Side magnetic detector

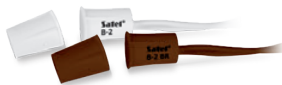
- surface mounted (screw mount or self adhesive)
- medium sized sealed body



### B-1T / B-1T BR

#### Side magnetic detector with terminals

- surface mounted (screw mount)
- medium sized body



### B-2 / B-2 BR

#### Flush-mounted magnetic detector

- recessed mounted
- sealed body



### B-2T / B-2T BR

#### Flush-mounted magnetic detector with terminals

- recessed mounted
- screw terminals



### B-2S / B-2S BR

#### Flush-mounted magnetic detector

- recessed mounted
- small sized sealed body (Ø6.5 mm)



**B-3 / B-3A**  
Side magnetic detector

- surface mounted (screw mount)
- rugged, metal sealed body
- armored cable (**B-3A**)



**B-4M**  
Gate magnetic detector

- surface mounted (screw mount)
- rugged, metal sealed body
- armored cable



**B-4L**  
Gate magnetic detector

- surface mounted (screw mount)
- rugged, metal sealed body
- armored cable



**B-4S**  
Gate magnetic detector

- surface mounted (screw mount)
- rugged, metal sealed body
- armored cable

## MAGNETIC DETECTOR COMPARISON CHART

	surface mount	flush mount	possible to glue	plastic housing	metal housing	sealed housing	reinforced housing	tamper loop	tamper switch	eol resistors	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	•			•		•			•		•	
B-1 / B-1 BR	•		•	•		•						
B-1M / B-1M BR	•		•	•		•						
B-1T / B-1T BR	•			•		•					•	
B-2 / B-2 BR		•		•		•						
B-2T / B-2T BR		•		•		•					•	
B-2S / B-2S BR		•		•		•						
B-3	•				•	•	•					
B-3A	•				•	•	•					•
B-4M	•				•	•	•					•
B-4L	•				•	•	•					•
B-4S	•				•	•	•					•

## 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



**FD-1**  
Water flood detector

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

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

## SIRENS

An effective and rigid siren is one of key components of intruder security system. SATEL's product range includes a wide selection of different sirens, to suit almost any type of installation.

All these sirens provide several common features: high quality of components used, and advanced technology – just to make them reliable.

## 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), blue (SP-4001 BL) and orange (SP-4001 O)



### SP-4002

Outdoor siren with optical and acoustical signaling

- microprocessor controlled
- acoustical signaling: piezo transducer
- optical signaling: ultra bright LEDs
- inner metal shield
- tamper protection:
  - » against removing from mounting surface
  - » against opening
- sealed lead acid backup battery included



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



### SP-4003

Outdoor siren with optical and acoustical signaling

- acoustical signaling: piezo transducer
- optical signaling: ultra bright LEDs
- inner metal shield
- tamper protection:
  - » against removing from mounting surface
  - » against opening



available with glass in red (SP-4003 R), blue (SP-4003 BL) and orange (SP-4003 O)



### SP-4004

Outdoor siren with optical and acoustical signaling

- certified for **EN 50131 Grade 2**
- acoustical signaling: piezo transducer
- optical signaling: ultra bright LEDs
- support for sealed lead acid backup battery
- auxiliary LEDs for status indication
- fully potted design for best environmental protection
- inner metal shield
- built-in level to facilitate mounting
- tamper protection:
  - » against removing from mounting surface
  - » against opening



available with glass in red (SP-4004 R), blue (SP-4004 BL)



### SP-4006

Outdoor siren with optical and acoustical signaling

- acoustical signaling: piezo transducer
- optical signaling: ultra bright LEDs
- inner metal shield
- tamper protection:
  - » against removing from mounting surface
  - » against opening
- sealed lead acid backup battery included



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



### SP-500

Outdoor siren with optical and acoustical signaling

- acoustical signaling: piezo transducer
- optical signaling: ultra bright LEDs
- tamper protection:
  - » against removing from mounting surface
  - » against opening



available with glass in red (SP-500 R), blue (SP-500 BL) and orange (SP-500 O)



### SD-3001

Outdoor siren with optical and acoustical signaling

- microprocessor controlled
- acoustical signaling: dynamic horn
- optical signaling: ultra bright LEDs
- inner metal shield
- tamper protection:
  - » against removing from mounting surface
  - » against opening
- support for sealed lead acid backup battery



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



### SP-6500 R

Outdoor siren with optical and acoustical signaling

- EN 50131 Grade 2 compliance
- acoustical signaling: piezo transducer
- optical signaling: ultra bright LEDs
- support for sealed lead acid backup battery
- auxiliary LEDs for status indication
- fully potted design for best environmental protection
- inner metal shield
- built-in level to facilitate mounting
- mechanical design that allows to choose between vertical and horizontal opening
- tamper protection:
  - » against removing from mounting surface
  - » against opening



### 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), blue (SPL-5010 BL) and orange (SPL-5010 O)



### 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), blue (SPL-5020 BL) and orange (SPL-5020 O)



### SPL-2010

Outdoor siren with optical and acoustical signaling

- acoustical signaling: piezo transducer
- optical signaling: ultra bright LEDs
- inner metal shield
- tamper protection:
  - » damping the siren with acoustical signaling with PUR foam
  - » against removing from mounting surface
  - » against opening



available with glass in red (SPL-2010 R), blue (SPL-2010 BL) and orange (SPL-2010 O)



### SPL-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), blue (SPL-2030 BL) and orange (SPL-2030 O)



### 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), blue (SPLZ-1011 BL) and orange (SPLZ-1011 O)



## INDOOR SIRENS

**SPW-100**

Indoor siren

- acoustical signaling: piezo transducer
- tamper protection against opening

**SPW-150**

Indoor siren with acoustical signaling (battery back-up)

- acoustical signaling: piezo transducer
- automatic alarm on power failure
- alkaline battery back-up power
- tamper protection:
  - » against removing from mounting surface
  - » against opening

**SOW-300 R**

Indoor LED beacon

- optical signaling: ultra bright LEDs
- three signalling modes
- tamper protection against opening



available with glass in red (SOW-300 R),  
blue (SOW-300 BL)  
and orange (SOW-300 O)

**SPW-210**

Indoor siren with acoustical signaling

- certified for **EN 50131 Grade 2**
- acoustical signaling: piezo transducer
- tamper protection:
  - » against removing from mounting surface
  - » against opening



available with glass in red (SPW-210 R),  
blue (SPW-210 BL)  
and orange (SPW-210 O)

**SPW-220**

Indoor siren with optical and acoustical signaling

- acoustical signaling: piezo transducer
- optical signaling: ultra bright LEDs
- tamper protection:
  - » against removing from mounting surface
  - » against opening



available with glass in red (SPW-220 R),  
blue (SPW-220 BL)  
and orange (SPW-220 O)

**SPW-250**







































Indoor siren with acoustical signaling (battery back-up)

- acoustical signaling: piezo transducer
- automatic alarm on power failure
- lithium battery back-up power
- tamper protection:
  - » against removing from mounting surface
  - » against opening



available with glass in red (SPW-250 R),  
blue (SPW-250 BL)  
and orange (SPW-250 O)

# SIREN COMPARISON CHART

	siren type	acoustic signalling	optical signalling	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 84



## Welcome to e-Academy

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

E-Academy will be the perfect solution for you.

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

Our specialists are at your disposal when you need it.

  
MADE TO PROTECT

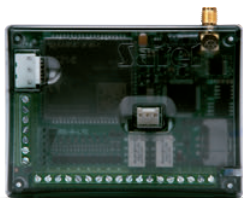
SUBSCRIBE  
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## COMMUNICATION AND MESSAGING

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



### GPRS-A LTE / GPRS-A

Universal monitoring module

- certified for **EN 50136 SP 5 (GPRS-A)**
- compliance with **EN 50136 SP 5** requirements (**GPRS-A LTE**)
- event reporting: SMS / LTE\*
- 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 1024 numbers) / **GX CONTROL** / **GX Soft** / via IoT
- IoT – support for MQTT, JSON, 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 firmware update capability
- optional connection of the dedicated **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



### INT-GSM

GPRS communication module for INTEGRA and INTEGRA Plus control panels

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

59

## MODULES GSM/LTE and GSM/GPRS



GSM-X LTE



GSM-X



### GSM-X LTE / GSM-X

Universal, multi-purpose communication module

- certified for **EN 50136 SP 5, DP 4\* (GSM-X)\***
- compliance with **EN 50136 SP 5, DP 4** requirements (**GSM-X LTE**)\*
- event reporting: voice (mobile network) / SMS / LTE\*\* / Ethernet\*
- converting and retransmitting codes of events received from other devices (simulation of telephone monitoring station)
- sending notifications to max. 8 phone numbers
- notification: audio/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 (**GSM-X LTE**), 4 (**GSM-X**)
- 4 outputs (OC) controlled by SMS/CLIP/DTMF/**GX CONTROL**/**GX Soft**
- 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 firmware update capability
- optional connection of the dedicated **APS-412**, **APS-612** or **APS-1412** power supplies
- expansion capability by adding **GSM-X-ETH** Ethernet module

\*when used with GSM-X-ETH

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



### GSM-X-ETH

Ethernet module for GSM-X, GSM-X LTE communicator

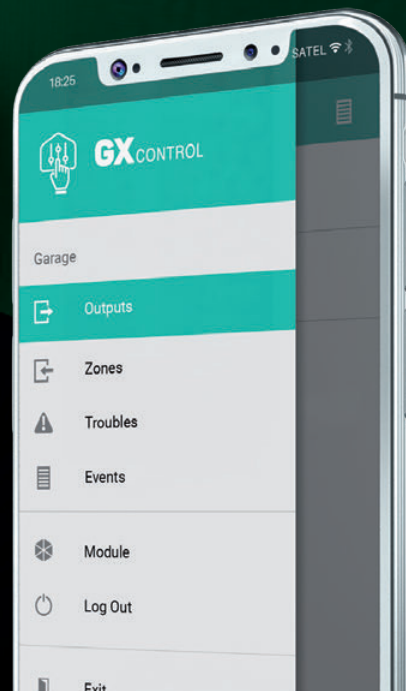
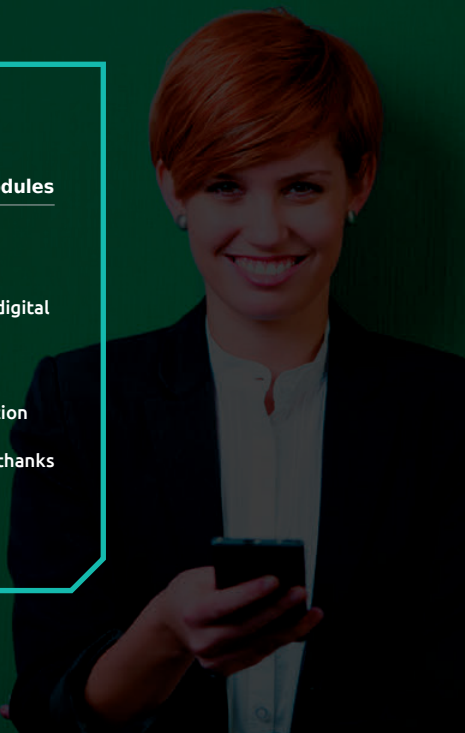
- cooperation with **GSM-X**, **GSM-X LTE** universal communication module
- support for Ethernet as additional communication channel

## APPLICATION FOR CONTROL OF GPRS-A, GSM-X, GPRS-A LTE, GSM-X LTE

### GX CONTROL

Mobile application for remote control of GPRS-A, GSM-X, GPRS-A LTE, GSM-X LTE modules

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



## MODULE COMPARISON CHART

	GSM-X LTE	GSM-X	GPRS-A LTE	GPRS-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* / SMS / audio	GPRS / SMS / audio	LTE* / SMS	GPRS / SMS	
Automatic connections routing to cellular network in case of telephone line failure	•	•			
CallerID forwarding	•	•			
PAGER (DTMF) messaging conversion to SMS	•	•			
SMS/CLIP/PUSH messaging on selected events	•/•/•	•/•/•	•/•/•	•/•/•	•/•/-
Number of control inputs	8	4	8	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	•/•	•/•	•/•	•/•	•/-
Voice messaging	•	•			
Remote output control	•	•	•	•	•
IoT function			•	•	
External modem functionality for INTEGRA panels	•	•			
Listen-in feature – alarm verification					•
SATEL connection setup service	•	•	•	•	
Remote module configuration via cellular network	•	•	•	•	•
Mobile application – communication via	LTE*	GPRS	LTE*	GPRS	SMS*
Remote programming of control panels via cellular network	•	•			
Remote update of module firmware via cellular network	•	•	•	•	•

\*mobile data transmission via LTE/HSPA+/EDGE/GPRS (depending on the capabilities of cellular network)



## MICRA

Alarm module with GSM/GPRS communicator

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

## TCP/IP COMMUNICATION



### ETHM-1 Plus

TCP/IP communication module

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



### ETHM-2

Universal TCP/IP communication module

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

61

## 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



#### RXH-1K

Radio remote controllers with superhet receiver

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



#### RXH-2K

Radio remote controllers with superhet receiver

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



#### RXH-4K

Radio remote controllers with superhet receiver

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





### RE-1K

#### Radio remote controllers

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



### RE-2K

#### Radio remote controllers

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



### RE-4K

#### Radio remote controllers

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

## 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

# ACCESS CONTROL



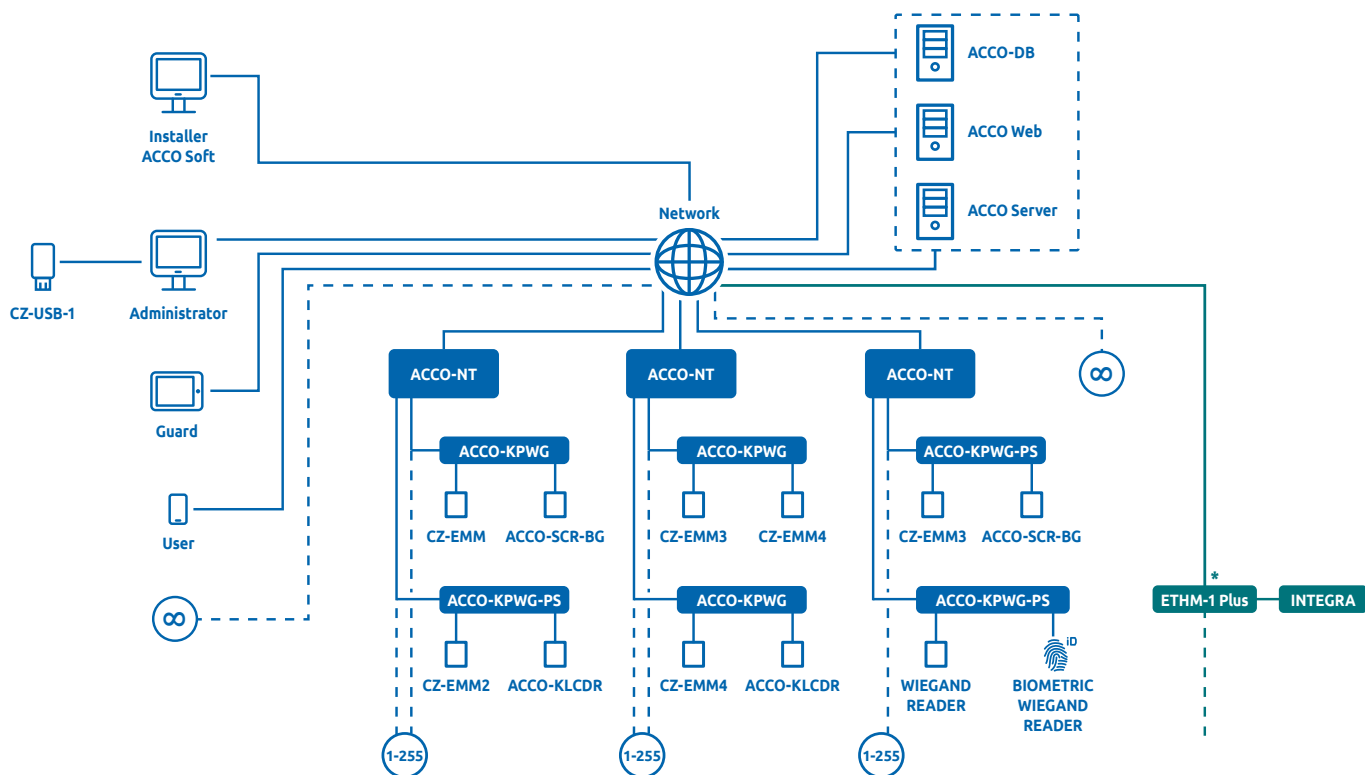
## ACCO NET ACCESS CONTROL SYSTEM

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

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

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

## SYSTEM STRUCTURE



\* possibility of integration with alarm system based on INTEGRA control panel

65

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

## ADVANCED SOFTWARE

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

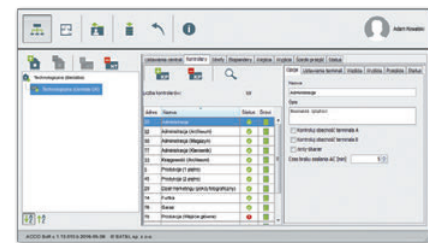
- the **ACCO Server** software is responsible for communication between an unlimited number of control panels. The result is a system that can manage any number of objects to create a distributed, scalable, global system. Communication takes place via encrypted TCP/IP transmission
- the **ACCO-DB** database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



### ACCO Soft

An installer tool for remote configuration of the system

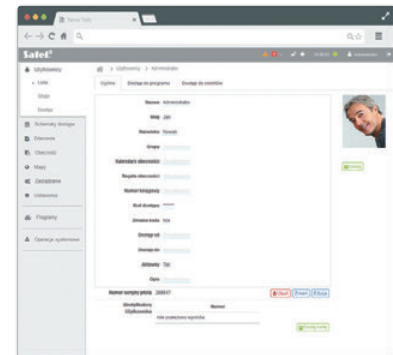
- creating the system structure
- creating access control zones
- configuring **ACCO-NT** control panels
- capability to remotely update **ACCO-NT** control panel firmware
- adding and configuring expansion modules (**INT-E**, **INT-O**, **INT-ORS**, **INT-IORS**, **INT-PP**, **INT-RX**)
- defining access pathways
- creating multilevel maps
- access from any location in the world
- integration configuration of **ACCO NET** zones and **INTEGRA** and **INTEGRA Plus** systems partitions



### ACCO Web

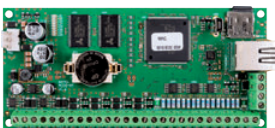
A tool for remote management of the system

- access from any location in the world via the web browser
- supporting for mobile devices
- multiple users can log in simultaneously
- adding and managing users (**CZ-USB** reader)
- creating access rules and schedules
- creating presence reports, also simultaneously for any number of users
- viewing events with filtering option (also concerning the integrated **INTEGRA** and **INTEGRA Plus** alarm systems)
- maintenance of the system from „Management“ menu and multilevel maps
- viewing the state of server, control panels and controllers
- viewing arrangement of cameras in the building
- viewing images from IP cameras
- anti-passback function
- control and preview of the status of **INTEGRA** and **INTEGRA Plus** alarm systems partitions integrated with **ACCO NET**



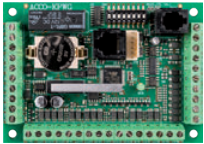
## ACCO-NT CONTROL PANEL

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

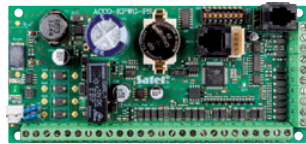


- responsible for communication between door controllers and **ACCO Server**
- has two RS-485 buses which total length may be up to 2,400 meters
- up to 255 door controllers can be connected to a single control panel
- in addition, the control panel can be extended with keyfob receiver, zone and output expansion modules. This allows you to program functionality tailored to the investor's requirements through logical functions. As a result, the system offers options such as control of barriers, gates, elevators, roller shutters, awnings or light
- each **ACCO-NT** control panel allows creating up to 255 partitions. A single partition can contain a number of single doors, which are supervised by the **ACCO-KP** and **ACCO-KPWG** controllers
- USB connector located on the control panel board simplifies initial configuration of the control panel by the installer
- the **APS-412**, **APS-612** or **APS-1412** backup power supply unit is responsible for maintaining continuous operation of the control panel even during mains power loss
- a single **ACCO-NT** control panel may be integrated with many intruder alarms based on **INTEGRA** and **INTEGRA Plus** control panels

## DOOR CONTROLLERS



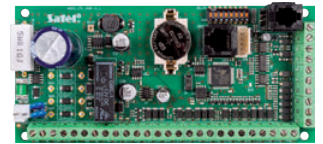
ACCO-KPWG



ACCO-KPWG-PS



ACCO-KP



ACCO-KP-PS

Descriptions page 69

## ACCO TERMINALS



ACCO-KLCDR-BW



ACCO-KLCDR-BG



ACCO-SCR-BG



CZ-EMM



CZ-EMM2



CZ-EMM3



CZ-EMM4



CZ-DALLAS

Descriptions page 70

## SYSTEM UNITS



CZ-USB-1

Descriptions page 70

## TRANSPONDERS



KT-STD-1



KT-STD-2



BR-STD-1



BR-STD-2



BR-STD-3



PAS-DALLAS

Descriptions page 71

## ACCO ACCESSORIES



OP-KT-1



OP-KT-2



LOGOBAND-A

Descriptions page 71

## 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.

## DOOR CONTROLLERS

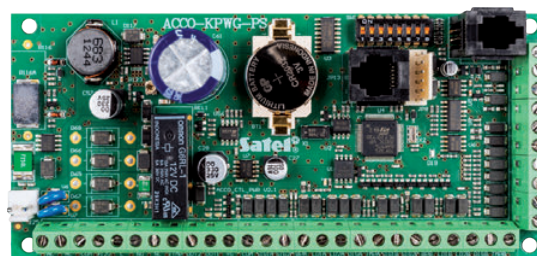
### ACCO-KP / ACCO-KP-PS / ACCO-KPWG / ACCO-KPWG-PS

#### Door controllers

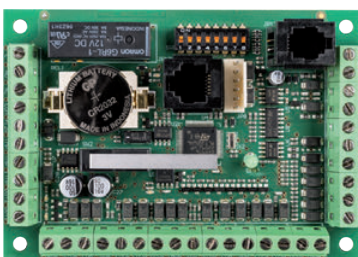
- support for single door with entry and exit authorization
- support for SATEL terminals and for Wiegand compatible terminals (**ACCO-KPWG, ACCO-KPWG-PS**)
- standalone or **ACCO** system operation mode
- 1,024 users
- user rights definition
- access authorization with proximity card and/or code
- biometric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



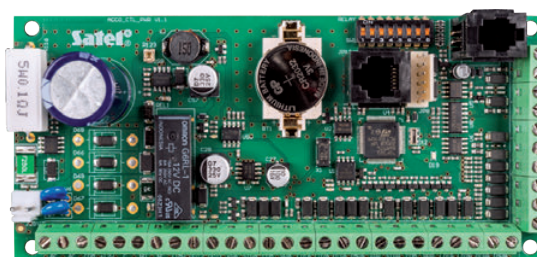
ACCO-KPWG



ACCO-KPWG-PS

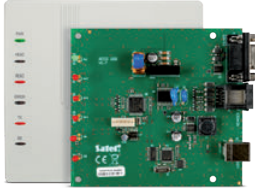


ACCO-KP



ACCO-KP-PS

## SYSTEM UNITS



### ACCO-USB

RS-485 to USB interface

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



### ACCO-USB-CZ

Proximity card reader

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



### CZ-USB-1

Proximity card reader

- operation in Windows environment
- operation at 125 kHz frequency

## ACCO TERMINALS

### ACCO-KLCDR

LCD keypads

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



Available in white (ACCO-KLCDR-BW) and gray (ACCO-KLCDR-BG)



### CZ-EMM/ CZ-EMM2

Proximity card readers

- access authorization with proximity card



### CZ-EMM3 / CZ-EMM4

Proximity card readers

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



### ACCO-SCR-BG

Keypad

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



### CZ-DALLAS

Dallas iButton reader

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



## TRANSPONDERS



### KT-STD-1

#### Proximity card

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



### KT-STD-2

#### Thick proximity card

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



### BR-STD-1

#### Proximity tag

- passive 125 kHz transponder



### BR-STD-2

#### Proximity tag

- passive 125 kHz transponder



### BR-STD-3

#### Proximity tag

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



### PAS-DALLAS

#### Dallas iButton

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

71

## ACCO ACCESSORIES



### OP-KT-1

#### Plastic holder

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



### OP-KT-2

#### Plastic holder

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



### LOGOBAND-A

#### Neck strap with clip

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

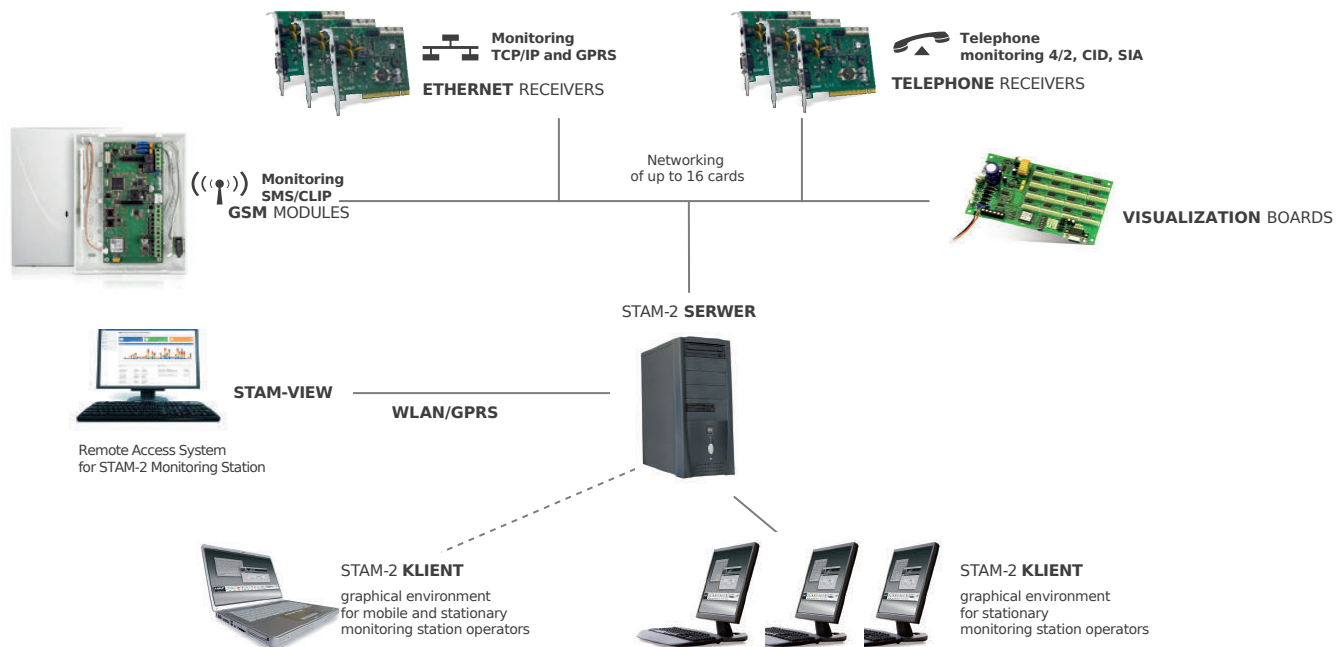


## Monitoring

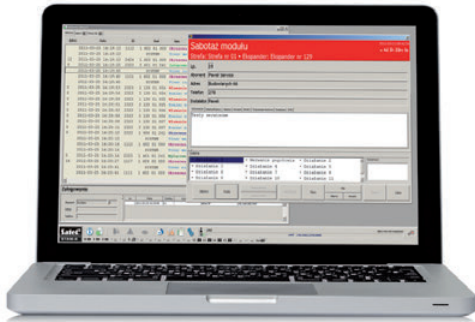
Alarm receiving centers are responsible for effective reception of the information from supervised premises, as well as prompt reaction to incoming events.

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

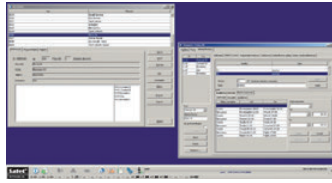
### STAM-2 MONITORING STATION SYSTEM STRUCTURE



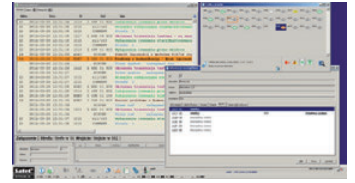
## MONITORING STATION SOFTWARE



Event handling window



Subscriber editing window



State board window

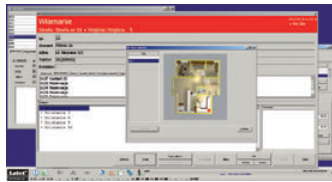
### STAM-2 / STAM-2 Pro

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

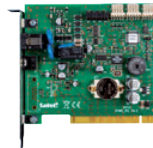
## TELEPHONE RECEIVERS



### 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

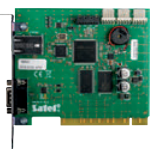
Termination receiver card

- 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 transmitters
- support for up to 256 subscribers with individual link supervision
- hardware event buffering
- ETHERNET link supervision
- optional incoming events filtering based on physical address (MAC)
- support for automatic IP address configuration with DHCP
- possibility to install in computer's PCI slot
- RS-232 port for communication with central monitoring station system

### STAM-1 RE

TCP/IP receiver expansion card



- TCP/IP reporting receiver for SATEL Ethernet and GPRS transmitters
- support for up to 256 subscribers with individual link supervision
- hardware event buffering
- ETHERNET link supervision
- optional incoming events filtering based on physical address (MAC)
- support for automatic IP address configuration with DHCP
- possibility to install in computer's PCI slot



### SMET-256

TCP/IP reporting converter to telephone formats

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

## VISUALIZATION



### STAM-1 PTSA

Mimic board for STAM monitoring station

- LED visualization of 64 premises
- support for up to 63 boards in a system
- on-board switching mode power supply

## SETS



### STAM-2 BT

STAM-2 Set

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



### STAM-2 BE

STAM-2 Set

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



### STAM-2 BS

STAM-2 software

- **STAM-2** software (3 workstations license)
- protection dongle



### STAM-2 UE

STAM-2 BS upgrade

- 10 workstations license for **STAM-2** software



### STAM-2 RG

STAM-2 Pro expansion

- possibility to assign to the operator a specific region or regions from which information will be displayed from users assigned to individual regions



## Enclosures

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



76

### 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**  
Enclosures

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



**OPU-2 A**  
Enclosures

- tamper protection
- dimensions:  
» 126 x 158 x 32 mm
- antenna mount:  
» with SMA connector



**OPU-1 B**  
Enclosures

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



**OPU-2 B**  
Enclosures

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

## METAL ENCLOSURES



**OBU-M-LCD**  
Enclosure

- dimensions: 215 x 150 x 45 mm



**OBU-M-LCD-S**  
Enclosure

- dimensions: 190 x 130 x 40 mm



**OBU-M-LED-S**  
Enclosure

- dimensions: 140 x 135 x 40 mm



**OMI-5**  
Enclosure

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

## 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-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



### OMI-2

Enclosure

- EN 50131 Grade 3 compliance
- double tamper protection
- dimensions: 325 x 310 x 110 mm
- transformer: 40 VA
- primary voltage: 230 V AC, 50 Hz
- secondary voltage: 18 V AC, 50 Hz



### OMI-1

Enclosure

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

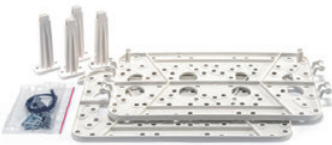
## ENCLOSURE ACCESSORIES



### 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

a set of plastic mounting inserts and supports

- can be used in **OMI-5** enclosure
- allows installation of SATEL control panels and modules as in **OPU-3 P** enclosure



# ENCLOSURE COMPARISON CHART<sup>A</sup>

		plastic enclosures						metal enclosures								
		OPU-4 P	OPU-4 PW	OPU-3 P	OPU-2 A	OPU-2 B	OPU-1 A	OPU-1 B	OBU-M-LCD	OBU-M-LCD-S	OBU-M-LED-S	OMI-5	OMI-4 <sup>B</sup>	OMI-3 <sup>B</sup>	OMI-2 <sup>B</sup>	OMI-1 <sup>B</sup>
<b>CONTROL PANELS, EXPANSION MODULES</b>																
INTEGRA 256 Plus	intruder alarm control panel			•							• C	•				
INTEGRA 128-WRL	intruder alarm control panel	•	•	•							• C/E/F	• E/F				
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		•		•	
INTEGRA 24	intruder alarm control panel	•	•	•							• C		•		•	
CA-64 PTSA	mimic board	•	•	•							• C		•		•	
INT-E	zone expansion module	•	•	•							• C		•		•	
INT-ADR	addressable bus expansion module	•	•	•			•				• C		•		•	
INT-PP	zone and output expansion module	•	•	•							• C		•		•	
INT-O	output expansion module	•	•	•							• C		•		•	
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	•	•	•			•				• C		•		•	
INT-GSM	GPRS communication module	•	•	•			•				• C/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 32-WRL	intruder alarm control panel	•	•	•												
PERFECTA 32-WRL LTE	intruder alarm control panel	•	•	•												
PERFECTA 16-WRL	intruder alarm control panel	•	•	•												
PERFECTA 32	intruder alarm control panel	•	•	•							• C/E		• E		• E	
PERFECTA 32 LTE	intruder alarm control panel	•	•	•							• C/E		• E		• E	
PERFECTA 16	intruder alarm control panel	•	•	•							• C/E		• E		• E	
PERFECTA-T 32-WRL	intruder alarm control panel	•	•	•												
PERFECTA-T 32	intruder alarm control panel	•	•	•							• C		• E		• E	
VERSA Plus	intruder alarm control panel	•	•	•							• C/E		• E		• E	
VERSA IP	intruder alarm control panel	•	•	•							• C		•		•	
VERSA 15	intruder alarm control panel	•	•	•							• C		•		•	
VERSA 10	intruder alarm control panel	•	•	•							• C		•		•	
VERSA 5	intruder alarm control panel	•	•	•							• C		•		•	
MICRA	alarm module with GSM / GPRS communicator	•	•	•							• C		•		•	
CA-10 E	zone expansion module	•	•	•			•				• C		•		•	
CA-10	intruder alarm control panel	•	•	•							• C		•		•	
CA-6	intruder alarm control panel	•	•	•							• C		•		•	
CA-5	intruder alarm control panel	•	•	•							• C		•		•	
<b>KEYPADS</b>																
INT-KLCD-GR / -BL	LCD keypad															
INT-KLCDR-GR / -BL	LCD keypad															
INT-KLCDL-GR / -BL	LCD keypad															
INT-KLCDS-GR / -BL	LCD keypad															
INT-S-GR / -BL	partition keypad															
INT-SZ-GR / -BL	code locks															
VERSA-LCD-GR / -BL	LCD keypad															
VERSA-LED-GR / -BL	LED keypad															
CA-10 KLCD-L / CA-10 BLUE-L	LCD keypad															
CA-10 KLCD-S / CA-10 BLUE-S	LCD keypad															
CA-10 KLED-S	LED keypad															
CA-6 KLED-S	LED keypad															
CA-5 KLCD-L / CA-5 BLUE-L	LCD keypad															
CA-5 KLCD-S / CA-5 BLUE-S	LCD keypad															
CA-5 KLED-S	LED keypad															
<b>ABAX 2 WIRELESS SYSTEM</b>																
ACU-220	wireless system controller	•	•	•												
ACX-220	wireless expansion module for wired zones and outputs	•	•	•												
<b>COMMUNICATION MODULES</b>																
GSM-X LTE	universal communication module	•	•	•							• C/E		• E		• E	
GSM-X	universal communication module	•	•	•							• C/E		• E		• E	
GPRS-A LTE	universal reporting module	•	•	•							• C/E		• E		• E	
GPRS-A	universal reporting module	•	•	•							• C/E		• E		• E	
ETHM-2	universal TCP/IP communication module	•	•	•							• C		•		•	
<b>POWER SUPPLIES</b>																
APS-412	backup power supply	•	•	•												
APS-612	backup power supply	•	•	•												
TR 40 VA	transformer	•	•	•												
TR 60 VA	transformer	•	•	•												
<b>ACCO ACCESS CONTROL SYSTEM</b>																
ACCO-NT	control panel	•	•	•												
ACCO-KP / ACCO-KPWG	door controller	•	•	•							• C		•		•	
ACCO-KP-PS / ACCO-KPWG-PS	door controller with power supply	•	•	•							• C		•		•	
<b>MONITORING</b>																
STAM-1 PTSA	mimic board for STAM monitoring station	•	•	•												
<b>OTHERS</b>																
MP-1	relay module	•	•	•												
MST-1	DTMF remote operation module	•	•	•												

<sup>A</sup> 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.

<sup>B</sup> 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.

<sup>C</sup> When using OMI-5 PI.

<sup>D</sup> When using OMI-5 DIN.

<sup>E</sup> Devices with a GSM telephone require the use of an antenna mounted outside the enclosure.

<sup>F</sup> The INTEGRA 128-WRL control panel requires the ABAX antenna to be led out of the 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



#### 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 lub 12 A (powering devices) + 2 A (charging battery) (**APS-1412**)
  - » 7 A (output) lub 6 A (powering devices) + 1 A (charging battery) (**APS-724**)
- compliant with:
  - » **EN 50131-3 Grade 2** requirements (**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



### 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



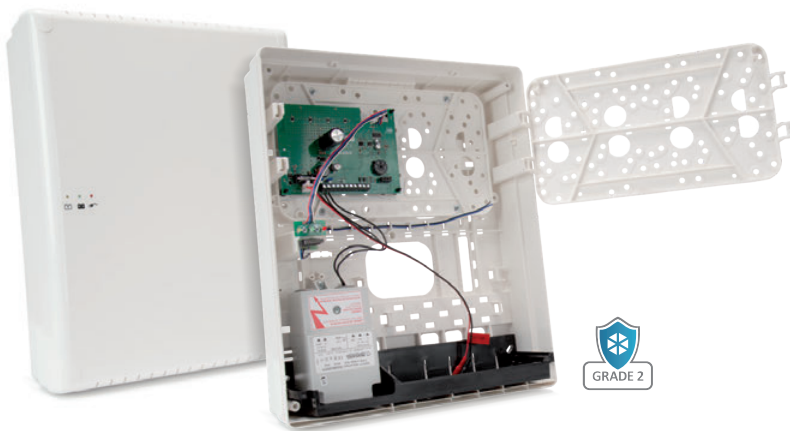
APS-412



### 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



### APS-30

Backup power supply

- certified for **EN 50131-6 Grade 2**
- high efficiency 12 V DC switch mode power supply
- 3 A total output current
- short circuit and overload protection built-in
- designed for use with sealed lead-acid batteries
- current controlled battery charging circuit
- battery deep discharge protection
- 2 OC outputs for remote supervision
- optical indication of the AC mains power supply status, battery status and the battery charging process
- audible signaling of troubles

81

## 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



### BAT-ER-3,6

Battery for wireless outdoor sirens

- dedicated to power **ASP-100** and **MSP-300** sirens
- voltage 3.6 V
- capacity 13 Ah
- operating temperature range from -55°C to +85°C
- over 5 years life expectancy (at temperatures up to 30°C)
- low self-discharge (<1% per year at 20°C)
- short-circuit protection
- resistance to harsh working conditions



## 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.

### CODE LOCKS



#### SZW-02

Code lock

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

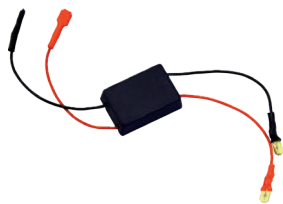


#### PK-01

Standalone access control module

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

## 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

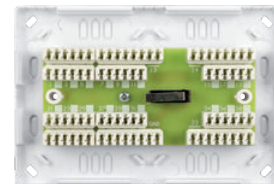
- facilitates installation of low-voltage installations, like alarm installations
- KRONE type terminals



MZ-1 CT



MZ-2 CT



MZ-3 CT

### MZ S/L

Distribution box modules

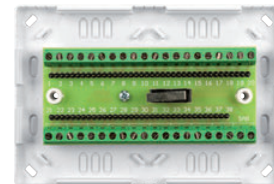
- facilitates installation of low-voltage installations, like alarm installations
- screw type terminals



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)



### PIN5/RJ-TTL

RS-232 TTL cable

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



### PIN5/PIN5

RS-232 TTL cable

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



### RJ/PIN5

RS-232 cable

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

## TRAINING SUITCASE

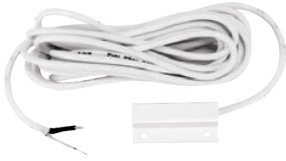


### WSR

Demonstration sets

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

## 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

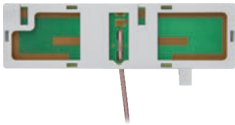


### DS-T2

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-GSM-I

GSM antenna

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



### ANT-GSM-E

GSM antenna

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



### ANT-900/1800

GSM antenna

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



### ANT-868

ISM antenna

- antenna for ABAX wireless devices: **ACX-201, INTEGRA 128-WRL**

**868 MHz**



### ANT-OBU-Q

GSM antenna

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



### IPX-SMA

IPX / SMA adapter cable

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

## ACCESSORIES FOR ACTIVA



### ACTIVA-D

Distance piece for **ACTIVA-K**



### ACTIVA-K

Angular holder with tamper for **ACTIVA** barriers

## SIREN ACCESSORIES



### SPL-TO

Optical anti foam tamper detector

- detects an attempt of damping the siren with acoustical signaling with PUR foam
- compatibility: **SPL-2030, SPL-5010, SPL-5020**



### SX6-TO

Optical anti foam tamper detector

- detects an attempt of damping the siren with acoustical signaling with PUR foam
- compatibility: **SD-6000**

## DETECTOR ACCESSORIES



### BRACKET A

Adjustable holder for motion detectors

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



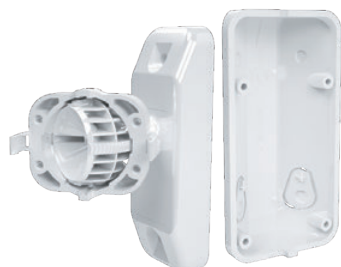
### BRACKET B

Adjustable holder for motion detectors

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

### 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



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 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**



### HOOD C

Protective hood for outdoor detectors

- protects the detector against atmospheric precipitation, pollution, etc.
- mounted with snap catches, without using any tools

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



### FPX-1

Flood probe for the universal detector AXD-200

- 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**



### LR-CL2 / CT-CL2

Enclosure cover with Fresnel lens

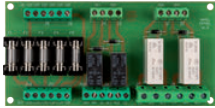
- complete enclosure cover with long-range lens (**LR-CL2**)
- complete enclosure cover with vertical curtain type lens (**CT-CL2**)
- designed for: **SLIM-PIR, SLIM-DUAL**



### 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**



**MP-1**

Relay module

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



**INT-VMG**

Voice message module

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



**MST-1**

DTMF remote operation module

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



**MIC-1**

Microphone

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



**CZ-EMM POD**

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



**MLT-POD**

Spacer for proximity card reader

- increased card reading range when installed on surfaces with metal components
- 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-302**



# LIST OF CERTIFICATES FOR DEVICES

		 <b>GRADE 3</b>		 <b>GRADE 2</b>		 <b>SP 5</b>		 <b>DP 4</b>	
		compliance	certificate	compliance	certificate	compliance	certificate	compliance	certificate
<b>CONTROL PANELS, KEYPADS AND EXPANSION MODULES</b>									
INTEGRA 24	intruder alarm control panel			•			•		
INTEGRA 32	intruder alarm control panel						•		
INTEGRA 64	intruder alarm control panel						•		
INTEGRA 128	intruder alarm control panel						•		
INTEGRA 64 Plus	intruder alarm control panel		•						
INTEGRA 128 Plus	intruder alarm control panel		•						
INTEGRA 256 Plus	intruder alarm control panel		•						
INTEGRA 128-WRL	intruder alarm control panel						•		
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-KSG	touch-sensor keypad			•					
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-TSG	touchscreen keypad		•						
INT-TSH	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 32-WRL	intruder alarm control panel						•		
PERFECTA 32-WRL LTE	intruder alarm control panel			•					
PRF-LCD / PRF-LCD-WRL	LCD keypads for PERFECTA control panels						•		
VERSA 5	intruder alarm control panel						•		
VERSA 10	intruder alarm control panel						•		
VERSA 15	intruder alarm control panel						•		
VERSA Plus	intruder alarm control panel						•		
VERSA IP	intruder alarm control panel						•		
VERSA-LCDM-WH / LCDR-WH	LCD keypad for VERSA panels						•		
<b>ABAX 2 TWO WAY WIRELESS SYSTEM</b>									
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						•		
A OCD-260	wireless dual-technology outdoor curtain detector			•					
AOD-210	wireless dual-technology outdoor motion detector			•					
<b>COMMUNICATION MODULES</b>									
ETHM-1 Plus	TCP/IP communication module							••	
ETHM-2	universal TCP/IP communication module						••		
GSM-X	universal multi-purpose communication module							••	
GSM-X LTE	universal multi-purpose communication module						••		
GSM-X with GSM-X-ETH	universal multi-purpose communication module with Ethernet module for GSM-X communicator								••
GPRS-A	universal monitoring module							••	
GPRS-A LTE	universal monitoring module						••		
INT-GSM	GPRS communication module							••	
<b>DETECTORS</b>									
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						•		
GRAPHITE PET	digital PIR motion detector						•		
GREY Plus	digital dual technology PIR+MW motion detector						•		
IVORY	advanced PIR motion detector with mirror optics					•			
MPD-300	wireless PIR detector						•*		
MMD-300	wireless magnetic contact						•*		
OPAL	outdoor PIR+WM dual-tech motion detector					•			
OPAL Plus	outdoor PIR+WM dual-tech motion detector					•			
OPAL Pro	outdoor PIR+WM dual-tech motion detector		•						
S-1	magnetic detector					•			
S-2	magnetic detector					•			
S-3	magnetic detector					•			
S-4	magnetic detector					•			
SILVER	digital dual technology motion detector						•		
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	•							

		 <b>GRADE 3</b>		 <b>GRADE 2</b>		 <b>SP 5</b>		 <b>DP 4</b>	
		compliance	certificate	compliance	certificate	compliance	certificate	compliance	certificate
<b>SIRENS</b>									
MSP-300	wireless outdoor acoustic-optical siren				•*				
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				•				
<b>ENCLOSURES</b>									
OMI-5	enclosure		•						
OMI-4	enclosure	•							
OMI-3	enclosure	•							
OMI-2	enclosure	•							
OMI-1	enclosure	•							
OPU-3P	enclosure		•						
OPU-4P	enclosure		•						
<b>POWER SUPPLIES</b>									
APS-1412	backup power supply			•					
APS-612	backup power supply		•						
APS-412	backup power supply				•				
APS-30	backup power supply			•	•				

\* certified for EN 50131 Grade 2 with PERFECTA systems

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

# Contact

## **SATEL SP. Z O.O**

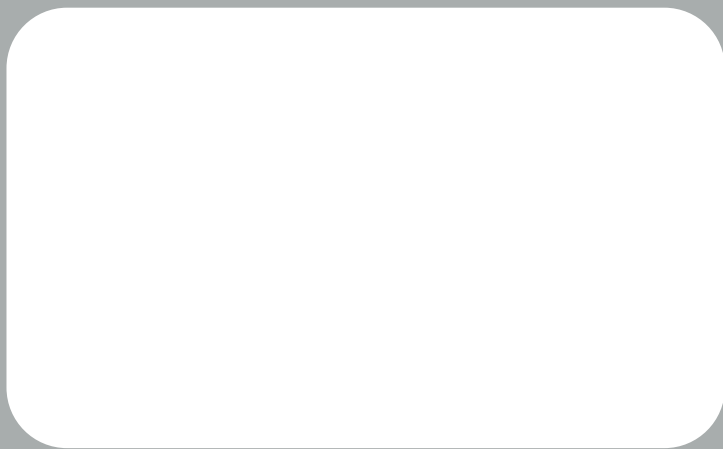
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K-EN0120

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