

# technical specification

## INTRUDER ALARM CONTROL PANELS

## INTEGRA intruder alarm control panels

	INTEGRA 24	INTEGRA 32	INTEGRA 64	INTEGRA 64 Plus	INTEGRA 128	INTEGRA 128 Plus	INTEGRA 128-WRL
<b>SYSTEM FEATURES</b>							
50131-3 security grade	Grade 2	Grade 2	Grade 2	Grade 3	Grade 2	Grade 3	Grade 2
Max. total number of zones	24	32	64	64	128	128	128
Max. number of addressable zones (CA-64 ADR)	16	24	48	48	112	112	120
Max. number of wireless zones (ACU-100)	16	24	48	48	112	112	120
Simultaneous support for addressable and wireless zones	•	•	•	•	•	•	•
Max. number of programmable outputs	20	32	64	64	128	128	128
Max. number of wireless outputs (ACU-100)	16	24	48	48	112	112	120
ABAX wireless system compatibility	bus communication	integrated					
Partitions	4	16	32	32	32	32	32
Objects	1	4	8	8	8	8	8
Users / master / service	16 / 1 / 1	64 / 4 / 1	192 / 8 / 1	192 / 8 / 1	240 / 8 / 1	240 / 8 / 1	240 / 8 / 1
Expansion modules	32	32	64	64	64	64	32
Event log	439	439	5887	6143	22527	22527	21503
Timers	16	28	64	64	64	64	64
<b>SYSTEM OPERATION</b>							
Keypads	4	4	8	8	8	8	8
Partition keypads	32	32	64	64	64	64	32
Proximity readers: attached to expansion modules / integrated with keypads	64 / 4	64 / 4	128 / 8	128 / 8	128 / 8	128 / 8	64 / 8
<b>MAINBOARD SPECIFICATION</b>							
Nominal mainboard supply voltage (±15%)	18 V AC, 50-60 Hz	18 V AC, 50-60 Hz	20 V AC, 50-60 Hz	18 V AC, 50-60 Hz			
Nominal power supply output voltage (±10%)	12 V DC						
Power supply load capacity	1,2 A	1,2 A	3 A	2 A + 1,5 A	3 A	2 A + 1,5 A	2 A
High current programmable outputs load	2 A	2 A	3 A	3 A	3 A	3 A	2 A
Low current programmable outputs load	50 mA						
Max. battery capacity	7 Ah	18 Ah	24 Ah				
Environmental class	II						
Operating temperature range	-10°C...+55°C						
On-board zones	4	8	16	16	16	16	8
On-board outputs	4	8	16	16	16	16	8
Number of buses: keypad / expansion modules	1 / 1	1 / 1	1 / 2	1 / 2	1 / 2	1 / 2	1 / 1
Dimensions (mm)	142 x 106	173 x 106	264 x 134	264 x 134	264 x 134	264 x 134	192 x 106
<b>COMMUNICATION</b>							
PSTN dialer	•	•	•	•	•	•	internal
GSM communicator	external	external	external	external	external	external	internal
Messaging telephone numbers	4	8	16	16 + 16	16	16 + 16	16
Voice messages	16	16	16	16	32	32	16
Text messages (Pager/SMS)	16	32	64	64	64	64	64
ETHM-1 TCP/IP module support	•	•	•	•	•	•	•
TCP/IP monitoring	•	•	•	•	•	•	•
TCP/IP upload/download	•	•	•	•	•	•	•
Control via WWW browser	•	•	•	•	•	•	•
TCP/IP supervision with Guard application	•	•	•	•	•	•	•
Remote control with mobile phone	•	•	•	•	•	•	•

## INTEGRA keypads

	INT-KSG	INT-KLCD-GR/BL	INT-KLCDR-GR/BL	INT-KLCDL-GR/BL	INT-KLCDS-GR/BL	INT-KLCDK-GR
Supply voltage ( $\pm 15\%$ )	12 V DC	12 V DC	12 V DC	12 V DC	12 V DC	12 V DC
Standby current consumption	165 mA	17 mA	60 mA	61 mA	33 mA	30 mA
Max. current consumption	175 mA	101 mA	156 mA	147 mA	151 mA	110 mA
Dimensions (mm)	143 x 156 x 22	140 x 126 x 26	140 x 126 x 26	145 x 115 x 26	114 x 94 x 23,5	160 x 132 x 29
Environmental class	II	II	II	II	II	II
Operating temperature range	-10°C...+55°C	-10°C...+55°C	-10°C...+55°C	-10°C...+55°C	-10°C...+55°C	-10°C...+55°C

## INTEGRA and VERSA operation

	INT-S-GR/BL	INT-SK-GR	INT-SCR-BL	INT-IT	INT-CR	INT-RX	INT-RX-S
INTEGRA / VERSA compatibility	• / -	• / -	• / -	• / •	• / •	• / •	• / •
Supply voltage ( $\pm 15\%$ )	12 V DC						
Max. current consumption	66 mA	65 mA	125 mA	80 mA	75 mA	30 mA	29 mA
Max. switched voltage	24 V	24 V	24 V				
Max. switched current	2 A	2 A	2 A				
Frequency						433 MHz	433 MHz
Dimensions (mm)	80 x 127 x 24	144 x 80 x 27	47 x 158 x 24	21 x 44 x 50	35 x 127 x 21	72 x 118 x 24	24 x 110 x 27
Environmental class	II	II	III	II	II	II	II
Operating temperature range	-10°C...+55°C	-10°C...+55°C	-25°C...+55°C	-10°C...+55°C	-10°C...+55°C	-10°C...+55°C	-10°C...+55°C

## Zones/outputs expansion modules for INTEGRA and VERSA control panels

	CA-64 E	CA-64 EPS	CA-64 ADR	ACU-100	ACU-250	CA-64 PP	CA-64 O	CA-64 OPS	INT-IORS	INT-ORS
INTEGRA / VERSA compatibility	• / •	• / •	• / -	• / •	• / •	• / -	• / •	• / •	• / -	• / •
Supply voltage ( $\pm 15\%$ )	12 V DC	18 V AC	18 V AC	12 V DC	12 V DC	18 V AC	12 V DC	18 V AC	12 V DC	12 V DC
Power supply type		A	A			A		A		
Power supply load capacity	1,2 A	2,2 A				2,2 A		2,2 A		
Max. battery capacity	7 Ah	7 Ah				7 Ah		7 Ah		
Dimensions (mm)	80 x 57	140 x 68	140 x 68	104 x 73	24 x 110 x 27	142 x 101	140 x 68	142 x 101	121 x 93 x 58	121 x 93 x 58
Max. number of zones	8	8	48	48		8			8	
Support for vibration and roller shutter sensors	•	•								
Programmable EOL value	•	•			24		8	8	8	8
Max. number of outputs						116 mA			280 mA	230 mA
Max. current consumption (active relay state)										
Average current consumption ( $\pm 10\%$ )	18 mA	39 mA	46 mA	100 mA	33 mA	45 mA	17 mA	39 mA		
Environmental class	II									
Operating temperature range	-10°C...+55°C									

## Mimic board

	CA-64 PTSA
Supply voltage ( $\pm 15\%$ )	18 V AC, 50-60 Hz
Power supply type	A
Power supply load capacity	1,3 A
Max. battery capacity	7 Ah
Dimensions (mm)	173 x 102
Environmental class	II
Operating temperature range	-10°C...+55°C

## TCP/IP communication module

	ETHM-1
Supply voltage ( $\pm 15\%$ )	12 V DC
Average current consumption ( $\pm 10\%$ )	112 mA
Dimensions (mm)	68 x 140
Environmental class	II
Operating temperature range	-10°C...+55°C

## Voice module

	INT-VG
Max. current consumption	35 mA
Supply voltage	12 V DC
Standby mode current consumption	27 mA
Environmental class	II
Operating temperature range	-10...+55 °C
Board dimensions	57 x 80 mm
Weight	32 g

## Voice message module

	INT-VMG
Supply voltage	12 V DC
Board dimensions	68 x 140 mm
Operating temperature range	-10...+55 °C
Standby mode current consumption	75 mA
Max. current consumption	500 mA
Weight	80 g
Maximum humidity	93 ±3%
Environmental class according to EN50130-5	II
Maximum power of speaker output	6 W
Recommended impedance of loudspeaker connected to SPEAKER terminals	8 Ω

## KNX bus integration module

	<b>INT-KNX</b>
Environmental class	II
Supply voltage	12 V DC
Board dimensions	57 x 80 mm
Operating temperature range	-10...+55 °C
Standby mode current consumption	35 mA
Max. current consumption	35 mA
Weight	140 g
Maximum humidity	93 ±3%

## Fiber-optic interface

	<b>INT-FI</b>
Environmental class	II
Average current consumption (standby mode) (±10%)	120 mA
Board dimensions	80 x 57 mm
Operating temperature range	-10...+55 °C
Nominal supply voltage (±15%)	12 V DC
Max. current consumption	160 mA
Weight	125 g

## RS-232 interface for systems integration

	<b>INT-RS</b>
Environmental class	II
Supply voltage	12 V DC
Average current consumption (standby mode) (±10%)	35 mA
Board dimensions	57 x 80 mm
Operating temperature range	-10...+55 °C
Max. current consumption	35 mA
Weight	39 g

## Multifunction expander for card / chip readers

	<b>INT-R</b>
Environmental class	II
Board dimensions	140 x 68 mm
Operating temperature range	-10...+55 °C
Supply voltage	12 V DC ±15%
Standby mode current consumption	110 mA
Max. current consumption	150 mA
Weight	80 g
Relay contacts rated load (resistive)	5 A / 30 V DC
Maximum humidity	93 ±3%

## Access control modules for INTEGRA systems

	<b>INT-SZ-GR/INT-SZ-BL</b>	<b>INT-SZK-GR</b>
Supply voltage (±15%)	12 V DC	12 V DC
Average current consumption (±10%)	24 mA	19 mA
Max. switched voltage	24 V	24 V
Max. switched current	2 A	2 A
Dimensions (mm)	80 x 127 x 24	144 x 80 x 27
Environmental class	II	II
Operating temperature range	-10°C...+55°C	-10°C...+55°C

## Proximity card readers

	<b>CZ-EMM</b>	<b>CZ-EMM2</b>	<b>CZ-EMM3</b>	<b>CZ-EMM4</b>
Supply voltage (±15%)	12 V DC	12 V DC	12 V DC	12 V DC
Average current consumption (±10%)	50 mA	31 mA	80 mA	80 mA
Dimensions (mm)	80 x 120 x 16	35 x 127 x 21	47 x 158 x 24	47 x 158 x 24
Environmental class	II	II	III	III
Operating temperature range	-10°C...+55°C	-10°C...+55°C	-25°C...+55°C	-25°C...+55°C

## VERSA intruder alarm control panels

	VERSA 5	VERSA 10	VERSA 15
<b>SYSTEM FEATURES</b>			
50131-3 security grade	Grade 2	Grade 2	Grade 2
Max. number of zones programmable	30	30	30
Tamper input	•	•	•
Max. number of wireless devices	30	30	30
Max. number of programmable outputs	12	12	12
ABAX wireless system compatibility	•	•	•
Standard user / installer	30 / 1	30 / 1	30 / 1
Partitions	2	2	2
Event log	2047	2047	2047
Timers	4	4	4
<b>SYSTEM OPERATION</b>			
Keypads	6	6	6
Proximity card readers	6	6	6
<b>MAINBOARD SPECIFICATION</b>			
Supply voltage ( $\pm 10\%$ )	18 V AC, 50-60 Hz	18 V AC, 50-60 Hz	18 V AC, 50-60 Hz
Power supply type	A	A	A
Nominal output voltage ( $\pm 10\%$ )	13,7 V DC	13,7 V DC	13,7 V DC
Power supply current rating	1 A	2 A	2 A
High current outputs current rating ( $\pm 10\%$ )	1,1 A	1,1 A	1,1 A
Low current outputs current rating	50 mA	50 mA	50 mA
Max. battery capacity	7 Ah	17 Ah	17 Ah
Environmental class	II	II	II
Operating temperature range	-10°C...+55°C	-10°C...+55°C	-10°C...+55°C
On-board zones	5	10	15
On-board programmable outputs	4	4	4
Supply outputs	2	2	2
Communication buses	1	1	1
Dimensions (mm)	120 x 68	150 x 68	180 x 68
<b>COMMUNICATION</b>			
Telephone dialer	•	•	•
Telephone line monitoring	SIA, Contact ID, inne	SIA, Contact ID, inne	SIA, Contact ID, inne
Messaging telephone numbers	8	8	8
Voice messages	16	16	16
Text messages: pager (SMS)	64	64	64
Support for GSM/GPRS communicators	•	•	•
GPRS reporting support with additional module	•	•	•
Support for TCP/IP communicators	•	•	•
TCP/IP reporting with additional module	•	•	•
E-mail messaging with additional module	•	•	•

## VERSA keypads

	VERSA-LCDM-WH	VERSA-LED-BL	VERSA-LED-GR	VERSA-LCD-BL	VERSA-LCD-GR
Environmental class	II	II	II	II	II
Supply voltage	12 V DC	-	-	-	-
Enclosure dimensions	139 x 124 x 22 mm	114,5 x 95 x 22,5 mm			
Operating temperature range	-10...+55°C	-10...+55 °C	-10...+55 °C	-10...+55 °C	-10...+55 °C
Standby mode current consumption	50 mA	40 mA	33 mA	40 mA	36 mA
Max. current consumption	60 mA	120 mA	110 mA	130 mA	110 mA
Weight	236 g	97 g	97 g	123 g	123 g
Maximum humidity	93±3%	-	-	-	-
Nominal supply voltage ( $\pm 15\%$ )	-	12 V DC	12 V DC	12 V DC	12 V DC

## Wireless system control

	VERSA-MCU
Number of supported remote control keyfobs	30
Supply voltage	12 V DC
Enclosure dimensions	24 x 110 x 27 mm
Operating temperature range	-10 °C...+55 °C
Standby mode current consumption	24 mA
Max. current consumption	29 mA
Weight	30 g
Maximum humidity	93±3%
Environmental class according to EN50130-5	II
Number of supported wireless detectors	30
Supported keyfobs	MPT-300, P-2, P-4, T-1, T-2, T-4
Supported wireless detectors	MFD-300, MMD-300, MPD-300, MSD-300
Keyfob and wireless detector operating frequency band	433,05 ÷ 434,79 MHz

**MICRA Alarm module with GSM/GPRS communicator**

	<b>MICRA</b>
Number of inputs	4 + 1
Inputs mode	digital (on/off) or analog (voltage)
Number of outputs	2 + 1
Number of supported remotes	8 (models: MPT-300, P-2, P-4, T-1, T-2, T-4 types)
Number of supported wireless detectors	8 (models: MFD-300, MMD-300, MPD-300, MSD-300)
Number of supported wireless keypads	1 (model: MKP-300)
GSM telephone	quad-band, GPRS class 10
Microphone connector	3.5 mm Jack
AUX output rating	500 mA
FT output rating	50 mA
Maximum relay load	1 A / 30 V DC (resistive)
Recommended transformer	TR40VA (18 V AC, 40 VA)
Battery current consumption	120 mA (standby) / 420 mA (max.)
230 V mains current consumption	50 mA (standby) / 150 mA (max.)*
Max. battery charging current	250 mA ±20%
Low battery voltage threshold	11 V
Battery cut-off threshold	10.5 V
Total power supply rating	2 A
Environmental class	II
Operating temperature range	-10°C...+55°C
Dimensions (with enclosure) (mm)	266 x 286 x 100
Weight (excl. transformer and battery)	1072 g

\* measured with recommended TR40VA transformer

**Wireless keypad**

	<b>MKP-300</b>
Environmental class	II
Battery working time	Estimated 3 years
Operating temperature range	-10...+55 °C
Standby mode current consumption	80 µA
Max. current consumption	20 mA
Weight	164 g
Maximum humidity	93 ±3%
Operating frequency band	433.05 ± 434.79 MHz
Radio communication range (in open area)	to 200 m
Battery	CR123A 3V
Dimensions	144 x 80 x 27 mm

**Remote control keyfob**

	<b>MPT-300</b>
Enclosure dimensions	38 x 78 x 16 mm
Operating temperature range	-10...+55 °C
Weight	30 g
Maximum humidity	93 ±3%
Operating frequency band	433.05 ± 434.79 MHz
Radio communication range (in open area)	to 100 m
Battery	2 x CR2016 3V
Environmental class according to EN50130-5	II

**Wireless motion detector**

	<b>MPD-300</b>
Environmental class	II
Detected target velocity	0,3...3 m/s
Enclosure dimensions	63 x 96 x 49 mm
Operating temperature range	-10...+55 °C
Recommended mounting height	2,4 m
Standby mode current consumption	90 µA
Max. current consumption	20 mA
Weight	108 g
Maximum humidity	93 ±3%
Operating frequency band	433.05 ± 434.79 MHz
Radio communication range (in open area)	to 200 m
Battery	CR123A 3V
Battery life expectancy (energy save mode)	Estimated 3 years

## Wireless smoke and heat detector

	<b>MSD-300</b>
Battery working time	Estimated 3 years
Enclosure dimensions	ø108 x 61 mm
Operating temperature range	0...+55 °C
Standby mode current consumption	50 µA
Max. current consumption	20 mA
Weight	170 g
Operating frequency band	433,05 ÷ 434,79 MHz
Radio communication range (in open area)	to 200 m
Battery	CR123A 3V
Class according to EN 54-5 (heat sensor)	A1R
Minimum static response temperature	54 °C
Maximum static response temperature	65 °C

## Wireless door/window opening detector

	<b>MMD-300</b>
Additional input sensitivity	312 ms
Environmental class	II
Enclosure dimensions	24 x 110 x 27 mm
Operating temperature range	-10...+55 °C
Standby mode current consumption	80 µA
Max. current consumption	27 mA
Weight	64 g
Maximum humidity	93 ±3%
Operating frequency band	433,05 ÷ 434,79 MHz
Radio communication range (in open area)	to 200 m
Battery	CR123A 3V
Battery life expectancy (energy save mode)	Estimated 3 years

## Wireless flood detector

	<b>MFD-300</b>
Battery working time	Estimated 3 years
Enclosure dimensions	24 x 110 x 27 mm
Operating temperature range	-10...+55 °C
Standby mode current consumption	80 µA
Max. current consumption	27 mA
Weight	90 g
Maximum humidity	93 ±3%
Operating frequency band	433,05 ÷ 434,79 MHz
Radio communication range (in open area)	to 200 m
Battery	CR123A 3V
Environmental class according to EN50130-5	II
Probe wire length	3 m

## CA-10, CA-6, CA-5 intruder alarm control panels

	<b>CA-10</b>	<b>CA-6</b>	<b>CA-5</b>
<b>SYSTEM FEATURES</b>			
Max. total number of zones	16	8	5
Max. number of outputs	6	5	3
Bus communication with ABAX wireless controller	•		
Partitions	4	2	1
Users / master users / service	28 / 4 / 1	12 / 1 / 1	5 / 1 / 1
Expansion modules	•	•	
Zone expansion in keypads	•	•	
Event log	255	255	255
Event printing	•		
Timers	4	4	
<b>SYSTEM OPERATION</b>			
LCD keypads	•		•
LED keypads	•	•	•
Radio remote controllers RX/RE support	•	•	•
<b>MAINBOARD SPECIFICATION</b>			
Supply voltage ( $\pm 15\%$ )	18 V AC, 50-60 Hz	18 V AC, 50-60 Hz	18 V AC, 50-60 Hz
Power supply type	A	A	A
Nominal power supply output voltage ( $\pm 10\%$ )	12 V DC	12 V DC	12 V DC
Power supply load capacity	1,7 A	1,2 A	1,2 A
High current programmable outputs load ( $\pm 10\%$ )	2,2 A	2,2 A	1,1 A
Low current programmable outputs load	50 mA	50 mA	50 mA
Max. battery capacity	17 Ah	7 Ah	7 Ah
Environmental class	II	II	II
Operating temperature range	-10°C...+55°C	-10°C...+55°C	-10°C...+55°C
On-board zones	8	6	5
RS-232 port	•	•	•
PSTN telephone dialer	•	•	•
Built-in modem	•	•	•
Dimensions (mm)	173 x 102	142 x 102	147 x 70
<b>COMMUNICATION</b>			
Monitoring	•	•	•
Telephone messaging	•	•	
Messaging telephone numbers	8	4	
Voice messages	1	1	
Text messages (Pager/SMS)	4	2	
Upload/download functionality	•	•	•

## Keypads CA-10, CA-6, CA-5

	<b>CA-10 KLCD</b>	<b>CA-10 KLCD-L</b>	<b>CA-10 KLCD-S</b>	<b>CA-10 KLED</b>	<b>CA-10 KLED-S</b>	<b>CA-6 KLED-S</b>	<b>CA-6 KLED</b>	<b>CA-5 KLCD-L</b>	<b>CA-5 KLCD-S</b>	<b>CA-5 KLED-S</b>
Supply voltage ( $\pm 15\%$ )	12 V DC	12 V DC	12 V DC	12 V DC	12 V DC	12 V DC	12 V DC	12 V DC	12 V DC	12 V DC
Average current consumption ( $\pm 10\%$ )	95 mA	61 mA	33 mA	15 mA	15 mA	15 mA	15 mA	64 mA	33 mA	15 mA
Dimensions (mm)	160 x 132 x 29	145 x 115 x 26	114 x 94 x 23	144 x 80 x 27	80 x 95 x 20	80 x 95 x 20	144 x 80 x 27	145 x 115 x 26	114 x 94 x 23	80 x 95 x 20
Environmental class	II	II	II	II	II	II	II	II	II	II
Operating temperature range	-10°C...+55°C	-10°C...+55°C	-10°C...+55°C	-10°C...+55°C	-10°C...+55°C	-10°C...+55°C	-10°C...+55°C	-10°C...+55°C	-10°C...+55°C	-10°C...+55°C

## Zone expansion module

	<b>CA-10 E</b>
Supply voltage ( $\pm 15\%$ )	12 V DC
Average current consumption ( $\pm 10\%$ )	11 mA
Environmental class	II
Operating temperature range	-10°C...+55°C

## ABAX TWO WAY WIRELESS SYSTEM

## Wireless system controller

	<b>ACU-100</b>	<b>ACU-250</b>
Supply voltage ( $\pm 15\%$ )	12 V DC	12 V DC
Dimensions (mm)	104 x 73	24 x 110 x 27
Max. number of zones	48	
Max. number of outputs	24	
Average current consumption ( $\pm 10\%$ )	100 mA	33 mA
Environmental class	II	II
Operating temperature range	-10°C...+55°C	-10°C...+55°C

## Controller inputs and outputs expansion module

	<b>ACX-100</b>
Supply voltage ( $\pm 15\%$ )	12 V DC
Average current consumption ( $\pm 10\%$ )	26 mA
Outputs load capacity	50 mA
Dimensions (mm)	72 x 118 x 24
Environmental class	II
Operating temperature range	-10°C...+55°C

## Zones and outputs expansion wireless modules

	<b>ACX-200</b>	<b>ACX-201</b>
Supply voltage ( $\pm 15\%$ )	12 V DC	18 V AC 50-60 Hz
Power supply load capacity		1,2 A
Average current consumption depending on relay status ( $\pm 10\%$ )	40 mA ± 120 mA	40 mA ± 120 mA
Operating range in the open space	up to 500 m	up to 500 m
Relay outputs load capacity	1 A/24 V	1 A/24 V
Dimensions (mm)	126 x 158 x 32	250 x 250 x 80
Environmental class	II	II
Operating temperature range	-10°C...+55°C	-10°C...+55°C

## Wireless movement detectors

	<b>APMD-150</b>	<b>APD-100</b>
Supply type	lithium battery CR123A 3 V	lithium battery CR123A 3 V
Estimated battery lifetime	3 years	3 years
Operating range in the open space	up to 500 m	up to 500 m
Dimensions (mm)	63 x 136 x 49	63 x 96 x 49
Motion detection target speed	do 3 m/s	do 3 m/s
Recommended installation height	2,4 m	2,4 m
Environmental class	II	II
Operating temperature range	-10°C...+55°C	-10°C...+55°C

## Wireless detectors for perimeter protection

	<b>AMD-100</b>	<b>AMD-101</b>	<b>AMD-102</b>	<b>ARD-100</b>	<b>AVD-100</b>	<b>AGD-100</b>
Supply type	lithium battery CR123A 3 V					
Estimated battery lifetime	3 years					
Operating range in the open space	up to 500 m					
Dimensions (mm)	24 x 110 x 27					
Additional input sensitivity	312 ms					
Environmental class	II	II	II	II	II	II
Operating temperature range	-10°C...+55°C	-10°C...+55°C	-10°C...+55°C	-10°C...+55°C	-10°C...+55°C	-10°C...+55°C

## Wireless flood detector

	<b>AFD-100</b>
Supply type	lithium battery CR123A 3 V
Estimated battery lifetime	3 years
Operating range in the open space	up to 500 m
Dimensions (mm)	24 x 110 x 27
Environmental class	II
Operating temperature range	-10°C...+55°C

## Wirelessly triggered outdoor siren

	<b>ASP-105</b>
Supply voltage	12 V DC ±15%
Type of internal battery	6 V 1,2 Ah
Operating range in the open space	up to 500 m
Average current consumption (standby mode)	150 mA ±10%
Average current consumption (signaling mode)	600 mA ±10%
Dimensions (mm)	148 x 254 x 64
Environmental class	III
Operating temperature range	-35°C...+55°C

## Wireless smoke and heat detector

	<b>ASD-110</b>
Supply type	lithium battery CR123A 3 V
Estimated battery lifetime	3 years
Operating range in the open space	up to 500 m
Dimensions (mm)	106 x 106 x 49
Minimal operating temperature	-10°C

## Site survey tool for ABAX system

	<b>ARF-100</b>
Supply type	alkaline battery 9 V 6LR61
Dimensions (mm)	70 x 196 x 32
Environmental class	II
Operating temperature range	-10°C...+55°C

## Wireless indoor siren

	<b>ASP-205</b>
Supply type	lithium battery CR123A 3 V
Estimated battery lifetime	3 years
Operating range in the open space	up to 500 m
Dimensions (mm)	87 x 134 x 37
Environmental class	II
Operating temperature range	-10°C...+55°C

## Wireless control

	<b>ASW-100 E</b>	<b>ASW-100 F</b>
Supply voltage ( $\pm 15\%$ )	230 V AC	230 V AC
Maximum load	16 A AC	16 A AC
Operating range in the open space	up to 500 m	up to 500 m
Dimensions (mm)	65 x 100 x 77	65 x 100 x 77
Plug type	hybrid (type E and type F)	hybrid (type E and type F)
Socket type	E	F
Environmental class	II	II
Operating temperature range	-10°C...+55°C	-10°C...+55°C

## DETECTORS

### Digital movement detectors

	COBALT	COBALT Plus	COBALT Pro	SILVER	AQUA Plus	AQUA Plus 2E	AQUA Pet	AQUA Pet 2E	AQUA Pro	AQUA Luna	AQUA S	AQUA Ring	AQUA Ring S	AMBER	AMBER 2E	GRAPHITE	GRAPHITE Pet	IVORY
Pyrosensor type	dual element	dual element	quad element	dual element	dual element	dual element	dual element	dual element	quad element	dual element	dual element	dual element	dual element	dual element	dual element	dual element	dual element	
Microwave unit	10,525 GHz	10,525 GHz	10,525 GHz	10,525 GHz														
Antimask feature	•	•	•	•														
Lens	extra wide	extra wide	extra wide	precise LODIFF	extra wide	extra wide	precise LODIFF	precise LODIFF	extra wide	extra wide	extra wide	360°	360°	WA	WA	precise LODIFF	precise LODIFF	mirror
EOL resistors					2 x 1,1 kΩ		2 x 1,1 kΩ							2 x 1,1 kΩ				
Digital temperature compensation	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
PIR sensitivity adjustment	jumpers	jumpers	jumpers	trimmer	jumpers	jumpers	jumpers	jumpers	jumpers	jumpers	jumpers	jumpers	jumpers	jumpers	trimmer	trimmer	trimmer	
Microwave range adjustment	trimmer	trimmer	trimmer	trimmer														
Installation height compensation					•	•			•	•	•					•		
Prealarm feature					•	•	•	•	•	•	•							
Auto-diagnostics	basic	basic	basic	advanced	basic	basic	basic	basic	basic	basic	basic	basic	basic		advanced	advanced	advanced	
Supply voltage (±15%)	12 V DC	12 V DC	12 V DC	12 V DC	12 V DC	12 V DC	12 V DC	12 V DC	12 V DC	24 V AC/DC	12 V DC	24 V AC/DC	12 V DC	12 V DC	12 V DC	12 V DC	12 V DC	
Average current consumption (±10%)	24 mA	24 mA	24 mA	16 mA	9,5 mA	9,5 mA	9,5 mA	9,5 mA	9,5 mA	9,5 mA	9,5 mA	27 mA for 24 V AC 14 mA for 24 V DC	9,5 mA	3 mA	3 mA	11 mA	11 mA	12 mA
Backlight current consumption										25 mA								
Dimensions (mm)	63 x 136 x 49	63 x 136 x 49	63 x 136 x 49	62 x 136 x 49	63 x 96 x 49	63 x 96 x 49	63 x 96 x 49	63 x 96 x 49	63 x 96 x 49	63 x 96 x 49	63 x 96 x 49	ø 97 x 29	ø 97 x 29	48,5 x 66 x 36	48,5 x 66 x 36	62 x 96 x 48	62 x 96 x 48	57 x 123 x 42
Adjustable mounting bracket	•	•	•	•	•	•			•	•	•			optional	optional	•	•	
Environmental class	II	II	II	II	II	II	II	II	II	II	II	II	II	II	II	II	II	
Operating temperature range	-30°C...+55°C	-30°C...+55°C	-30°C...+55°C	-30°C...+55°C	-30°C...+55°C	-30°C...+55°C	-30°C...+55°C	-30°C...+55°C	-30°C...+55°C	-30°C...+55°C	-30°C...+55°C	-30°C...+55°C	-30°C...+55°C	-30°C...+55°C	-30°C...+55°C	-30°C...+55°C	-30°C...+55°C	

### Gas detectors

	DG-1 CO	DG-1 LPG	DG-1 ME	DG-1 TCM
Supply voltage (±15%)	12 V DC	12 V DC	12 V DC	12 V DC
Average current consumption (±10%)	12 mA	35 mA	35 mA	80 mA
Dimensions (mm)	ø 97 x 36			
Environmental class	II	II	II	II
Operating temperature range	-30°C...+55°C	-30°C...+55°C	-30°C...+55°C	-30°C...+55°C

## Active infrared barrier

	<b>ACTIVA-2</b>	<b>ACTIVA-3</b>	<b>ACTIVA-4</b>	<b>ACTIVA-5</b>	<b>ACTIVA-6</b>	<b>ACTIVA-7</b>	<b>ACTIVA-8</b>
Number of beams	2	3	4	5	6	7	8
Length (cm)	52	78	105	130	158	184	210
Supply voltage ( $\pm 15\%$ )	12 V DC						
Standby current consumption	55 mA	58 mA	60 mA	63 mA	65 mA	70 mA	75 mA
Max. current consumption	60 mA	63 mA	65 mA	68 mA	70 mA	75 mA	80 mA
Emitted wavelength	950 nm						
Adjustable range (m)	10 / 20	10 / 20	10 / 20	10 / 20	10 / 20	10 / 20	10 / 20
Operating temperature range	-25°C...+55°C						

## Magnetic detectors

	<b>K-1</b>	<b>K-1 2E</b>	<b>K-2</b>	<b>K-2 2E</b>	<b>K-3</b>	<b>K-3 2E</b>	<b>S-1</b>	<b>S-2</b>	<b>S-3</b>	<b>S-4</b>
Max. reed switched voltage	20 V	20 V	20 V	20 V	20 V	20 V	20 V	20 V	20 V	20 V
Max. switched current	0,02 A	0,02 A	0,02 A	0,02 A	0,02 A	0,02 A	0,02 A	0,02 A	0,02 A	0,02 A
Weight	10 g	10 g	10 g	10 g	24 g	24 g	29 g	28 g	43 g	24 g
Transient resistance	0,15 Ω	-	0,15 Ω	-	0,15 Ω	-	0,15 Ω	0,15 Ω	0,15 Ω	0,15 Ω
Life expectancy (20 V, 20 mA)	360 000	360 000	360 000	360 000	360 000	360 000	360 000	360 000	360 000	360 000
Contact material	Ru (Ruten)	Ru (Ruten)	Ru (Ruten)	Ru (Ruten)	Ru (Ruten)	Ru (Ruten)	Ru (Ruten)	Ru (Ruten)	Ru (Ruten)	Ru (Ruten)
Make distance	18 mm	18 mm	28 mm	28 mm	15 mm	15 mm	18 mm	28 mm	15 mm	18 mm
Break distance	28 mm	28 mm	40 mm	40 mm	24 mm	24 mm	28 mm	40 mm	24 mm	28 mm
Resistance	-	2 x 1100 Ω	-	2 x 1100 Ω	-	2 x 1100 Ω	-	-	-	-

## Magnetic detectors

	<b>B-1</b>	<b>B-1M</b>	<b>B-1T</b>	<b>B-2</b>	<b>B-2S</b>	<b>B-2T</b>	<b>B-3</b>	<b>B-3A</b>	<b>B-4L</b>	<b>B-4M</b>	<b>B-4S</b>
Max. reed switched voltage	100 V	100 V	100 V	100 V	100 V	100 V	100 V	100 V	100 V	100 V	100 V
Max. switched current	0,5 A	0,5 A	0,5 A	0,5 A	-	0,5 A	0,4 A	0,4 A	0,4 A	0,4 A	0,4 A
Make distance	24 mm	30 mm	25 mm	19 mm	25 mm	19 mm	38 mm	38 mm	75 mm	75 mm	75 mm
Break distance	29 mm	33 mm	30 mm	20 mm	27 mm	20 mm	42 mm	42 mm	80 mm	80 mm	80 mm
Dimensions	28 x 12,5 mm	51 x 9 mm	65 x 13,5 x 11 mm	ø11 x 14,5 mm	ø6,5 x 27 mm	ø11 x 19 mm	50 x 17 x 9,8 mm	50 x 17 x 9,8 mm	104,5 x 44,5 mm	107 x 50 mm	88,9 x 44,5 mm

## Vibration detector with magnetic contact

	<b>VD-1</b>
Supply voltage ( $\pm 15\%$ )	12 V DC
Standby current consumption	3,5 mA
Max. current consumption	5,4 mA
Dimensions (mm)	24 x 110 x 27
Environmental class	II
Operating temperature range	-30°C...+55°C

## Digital glassbreak detector

	<b>MAGENTA</b>
Supply voltage	12 V DC
Enclosure dimensions	24 x 110 x 27 mm
Operating temperature range	-30...+55 °C
Standby mode current consumption	5 mA
Max. current consumption	10 mA
Weight	40 g
Relay contacts rated load (resistive)	40 mA / 16 V DC
Environmental class according to EN50130-5	II
Alarm signaling time	2 s
Detection range	to 6 m

## Acoustic glassbreak detector

	<b>INDIGO</b>
Supply voltage ( $\pm 15\%$ )	12 V DC
Average current consumption ( $\pm 10\%$ )	12,5 mA
Dimensions (mm)	48 x 78 x 23
Environmental class	II
Operating temperature range	-30°C...+55°C

## Programmable temperature detector

	<b>TD-1</b>
Environmental class	III
Supply voltage	12 V DC
Enclosure dimensions	48 x 78 x 18 mm
Operating temperature range	-35...+60 °C
Standby mode current consumption	15 ±20% mA
Max. current consumption	50 mA
Weight	108 g
Relay contacts rated load (resistive)	1 A / 30 V DC

## Universal smoke and heat detector for alarm systems

	<b>TSD-1</b>
Supply voltage	12 V DC
Enclosure dimensions	ø108 x 61 mm
Operating temperature range	-10...+55 °C
Standby mode current consumption	250 µA
Max. current consumption	24 mA
Weight	164 g
Relay contacts rated load (resistive)	40 mA / 16 V DC
Maximum humidity	93 ±3%
Class according to EN 54-5 (heat sensor)	AIR
Minimum static response temperature	54 °C
Maximum static response temperature	65 °C
Environmental class according to EN50130-5	II

## Latching panic button

	<b>PNK-1</b>
Max. switched voltage	160 V
Max. switched current	250 mA
Max. switched power	5 VA
Dimensions (mm)	40 x 60 x 25

## Water flood detector

	<b>FD-1</b>
Supply voltage (±15%)	12 V DC
Average current consumption (±10%)	3 mA
Dimensions (mm)	24 x 110 x 27
Environmental class	II
Operating temperature range	-10°C...+55°C

## SIRENS

## Outdoor sirens

	<b>SP-4001</b>	<b>SP-4002</b>	<b>SP-4003</b>	<b>SP-4006</b>	<b>SD-3001</b>	<b>SP-500</b>	<b>SPLZ-1011</b>	<b>SPI-2010</b>	<b>SPI-2030</b>	<b>SPI-5010</b>	<b>SPI-5020</b>
Supply voltage ( $\pm 15\%$ )	12 V DC	12 V DC	12 V DC	12 V DC	12 V DC	12 V DC	12 V DC				
Average current consumption (acoustic signaling)	250 mA	220 mA	200 mA	200 mA	1,7 A	250 mA	220 mA	250 mA	250 mA	250 mA	200 mA
Average current consumption (optical signaling)	35 mA	60 mA	250 mA	250 mA	35 mA	35 mA	120 mA	35 mA	35 mA	35 mA	350 mA
Optical signaling	LED	LED	LED	LED	LED	LED	LED	LED	LED	LED	light bulb
Acoustical signaling	piezo	piezo	piezo	piezo	dynamic	piezo	piezo	piezo	piezo	piezo	piezo
Alarm tone selection	•	•	•	•	•	•	•	•	•	•	•
Sealed lead acid battery	•	•	•	•	optional 6 V 1,3 Ah	•	•	•	•	•	optional 12 V 0,8 Ah
Battery type	6 V 1,3 Ah	6 V 1,3 Ah	6 V 1,3 Ah	6 V 1,3 Ah	12 V 1,3 Ah	6 V 1,3 Ah	12 V 1,3 Ah	12 V 1,3 Ah	12 V 1,3 Ah	12 V 1,3 Ah	12 V 0,8 Ah
Enclosure	polycarbonate	polycarbonate	polycarbonate	polycarbonate	polycarbonate	polycarbonate	polycarbonate	polycarbonate	polycarbonate	polycarbonate	polycarbonate
Dimensions (mm)	148 x 254 x 64	300 x 195 x 97	300 x 195 x 97	298 x 197 x 90	298 x 197 x 90	298 x 197 x 90	298 x 197 x 72	298 x 197 x 72			
Inner metal shield	•	•	•	•	•	optional	•	•	optional	optional	optional
Tamper opening switch	•	•	•	•	•	•	•	•	•	•	•
Tamper removal from mounting	•	•	•	•	•	•	•	•	•	•	•
Anti foam tamper (SPL-SAB)											
Optical anti foam tamper (SPL-TO)											
Environmental class	III	III	III	III	III	III	III	III	III	III	III
Operating temperature range	-35°C...+55°C	-35°C...+55°C	-35°C...+55°C	-35°C...+55°C	-35°C...+55°C	-35°C...+55°C	-35°C...+55°C	-35°C...+55°C	-35°C...+55°C	-35°C...+55°C	-35°C...+55°C

## Indoor sirens

	<b>SPW-250</b>	<b>SPW-220</b>	<b>SPW-210</b>	<b>SPW-100</b>	<b>SOW-300 R/O</b>	<b>SOW-300 BL</b>
Supply voltage ( $\pm 15\%$ )	12 V DC	12 V DC				
Average current consumption (acoustic signaling)	90 mA	100 mA	100 mA	240 mA		
Average current consumption (optical signaling)		180 mA			24/14 mA*	44/24 mA*
Optical signaling		LED			LED	LED
Acoustical signaling	piezo	piezo	piezo	piezo		
Alarm tone selection		•	•	•		
Dimensions (mm)	87 x 134 x 37	87 x 134 x 37	87 x 134 x 37	130 x 130 x 40	97 x 97 x 37	97 x 97 x 37
Tamper opening switch	•	•	•	•	•	•
Tamper removal from mounting	•	•	•		II	II
Environmental class	II	II	II	II	II	II
Operating temperature range	-10°C...+55°C	-10°C...+55°C	-10°C...+55°C	-10°C...+55°C	-10°C...+55°C	-10°C...+55°C

\* Depends on optic signaling mode.

## COMMUNICATION AND MESSAGING

## GSM/GPRS modules

	<b>GPRS-T1</b>	<b>GPRS-T2</b>	<b>GSM-4</b>	<b>GSM-5</b>	<b>GSM LT-1</b>	<b>GSM LT-2</b>
Supply voltage ( $\pm 15\%$ )	12 V DC	12 V DC	12 V DC	12 V DC	12 V DC	12 V DC
Average current consumption ( $\pm 10\%$ )					230 mA	230 mA
Average current consumption (standby mode) ( $\pm 10\%$ )	50 mA	50 mA	100 mA	100 mA	100 mA	50 mA
Max. current consumption ( $\pm 10\%$ )	220 mA	180 mA	250 mA	330 mA		
Outputs load			50 mA	50 mA		
Dimensions (mm)	80 x 57	80 x 57	162 x 104	162 x 104		
Environmental class	II	II	II	II	II	II
Operating temperature range	-10°C...+55°C	-10°C...+55°C	-10°C...+55°C	-10°C...+55°C	-10°C...+55°C	-10°C...+55°C

## Voice synthesizer

	<b>SM-2</b>
Supply voltage ( $\pm 15\%$ )	12 V DC
Average current consumption ( $\pm 10\%$ )	18 mA
Dimensions (mm)	65 x 43 x 20
Environmental class	II
Operating temperature range	-10°C...+55°C

## PSTN telephone communicator

	<b>DT-1</b>
Supply voltage ( $\pm 15\%$ )	12 V DC
Average current consumption ( $\pm 10\%$ )	30 mA
Dimensions (mm)	145 x 90 x 38
Environmental class	II
Operating temperature range	-10°C...+55°C

## Terminal adapter for ISDN networks

	<b>ISDN-MOD</b>
Supply voltage ( $\pm 15\%$ )	12 V DC
Average current consumption ( $\pm 10\%$ )	500 mA
Environmental class	II
Operating temperature range	-10°C...+55°C

## Universal TCP/IP communication module

	<b>ETHM-2</b>
Supply voltage	12 V DC $\pm 15\%$
Average current consumption (standby mode)	150 mA
Max. current consumption ( $\pm 10\%$ )	450 mA
Dimensions (mm)	68 x 120
Operating temperature range	0°C...+45°C
	0°C...+45°C

## Video alarm verification unit

	<b>VIVER</b>
Supply voltage ( $\pm 15\%$ )	12 V DC
Average current consumption (standby mode) ( $\pm 10\%$ )	160 mA
Max. current consumption ( $\pm 10\%$ )	200 mA
Dimensions (mm)	69 x 139
Environmental class	I
Operating temperature range	+5°C...+40°C

## External 56k modem

	<b>MDM56</b>
Supply voltage ( $\pm 15\%$ )	12 V DC
Average current consumption ( $\pm 10\%$ )	110 mA
Dimensions (mm)	125 x 114,5 x 31
Environmental class	II
Operating temperature range	-10°C...+55°C

## RADIO REMOTE CONTROLLERS

### Sets

	<b>RXH-1K</b>	<b>RXH-2K</b>	<b>RXH-4K</b>	<b>RE-1K</b>	<b>RX-1K</b>	<b>RE-2K</b>	<b>RX-2K</b>	<b>RE-4K</b>	<b>RX-4K</b>
Supply voltage ( $\pm 15\%$ )	12 V DC								
Max. current consumption ( $\pm 10\%$ )	40 mA	70 mA	100 mA	40 mA	30 mA	60 mA	50 mA	65 mA	65 mA
Operating frequency band	433,05 ÷ 434,79 MHz								
Independent control channels	1	2	4	1	1	2	2	4	4
Number of supported keyfobs	40	340	340	16	40	16	340	340	340
RS-232						•	•	•	•
Dimensions (mm)	72 x 118 x 24								
Environmental class	II								
Operating temperature range	-10°C...+55°C								

### Keyfobs

	<b>P-2</b>	<b>P-4</b>	<b>T-1</b>	<b>T-2</b>	<b>T-4</b>
Independent control channels	2	4	1	2	4
Dimensions (mm)	37 x 55 x 15	37 x 55 x 15	35 x 70 x 15	35 x 70 x 15	35 x 70 x 15
Battery type	23A 12 V				

## POWER SUPPLIES

	<b>APS-1012</b>	<b>APS-524</b>	<b>APS-30</b>	<b>APS-15</b>
Supply voltage (transformer)			230 V AC	230 V AC
PCB nominal supply voltage	230 V AC 50 Hz	230 V AC 50 Hz	20 V AC	20 V AC
Nominal output voltage ( $\pm 15\%$ )	12 V DC	24 V DC	12 V DC	12 V DC
Power supply load capacity	10 A	5 A	3 A	1,5 A
OC outputs load	50 mA	50 mA	50 mA	50 mA
Recommended battery type	12 V 17 Ah	2 x 12 V 17 Ah	12 V 17 Ah	12 V 7 Ah
Dimensions (mm)	403 x 323 x 100	403 x 323 x 100	296 x 330 x 90	170 x 270 x 81
Environmental class	I	I	I	I
Operating temperature range	+5°C...+40°C	+5°C...+40°C	+5°C...+40°C	+5°C...+40°C

## ACCO ACCESS CONTROL SYSTEM

### Door controllers

	ACCO-KPWG	ACCO-KP	ACCO-KPWG-PS	ACCO-KP-PS
Number of users	1024	1024	1024	1024
Event log	24 576	24 576	24 576	24 576
Supply voltage	12 V DC ±15%	12 V DC ±15%	18 V AC ±10%	18 V AC ±10%
Switching mode power supply			•	•
Power supply load capacity			1,2 A	1,2 A
Battery load testing and charging mechanism			•	•
Number of inputs	5	5	5	5
Number of OC outputs	2	2	2	2
Number of relay outputs	1	1	1	1
Maximum relay switching current	8 A	8 A	8 A	8 A
RS-232	•	•	•	•
RS-485	•	•	•	•
RJ socket dedicated for LCD keypad connection during programming	•	•	•	•
Dimensions (mm)	104 x 73	104 x 73	151 x 70	151 x 70
Environmental class	II	II	II	II
Operating temperature range	-10°C...+55°C	-10°C...+55°C	-10°C...+55°C	-10°C...+55°C

### ACCO terminals

	ACCO-KLCDR-BG	ACCO-KLCDR-BW	ACCO-SCR-BG	ACCO-USB
Supply voltage (±15%)	12 V DC	12 V DC	12 V DC	5 V (received from USB port)
Max. current consumption	160 mA	160 mA	110 mA	
Dimensions (mm)	140 x 126 x 26	140 x 126 x 26	47 x 158 x 24	125 x 114,5 x 31
Operating temperature range	-10°C...+55°C	-10°C...+55°C	-20°C...+55°C	+5°C...+40°C
Outdoor operation			•	
Doorbell button			•	
PIN code access authorization	•	•	•	
Proximity card access authorization	•	•	•	

### Proximity card readers

	CZ-EMM	CZ-EMM2	CZ-EMM3	CZ-EMM4	ACCO-USB-CZ
Supply voltage (±15%)	12 V DC	12 V DC	12 V DC	12 V DC	12 V DC (received from ACCO-USB converter)
Average current consumption	50 mA	31 mA	80 mA	80 mA	
Dimensions (mm)	80 x 120 x 16	35 x 127 x 21	47 x 158 x 24	47 x 158 x 24	120 x 80 x 29
Outdoor operation		•		•	
Doorbell button				•	
Proximity card access authorization	•	•	•	•	
Environmental class	II	II	III	III	
Operating temperature range	-10°C...+55°C	-10°C...+55°C	-25°C...+55°C	-25°C...+55°C	-10°C...+55°C

## Integrated monitoring receiver with micro server

	<b>STAM-IRS</b>
Operating temperature range	0...+35 °C
Supply voltage	230 V AC
Current consumption from 230 V mains (with 1 card connected)	0,25 A
Current consumption from battery in emergency power mode (with 1 card connected)	2,5 A
Recommended battery capacity	40 Ah
PCI slots for cards	14
COM ports	4
USB 2.0 ports	2
Operating system	Microsoft Windows XP Professional
Main disk drive	32 GB
Spare disk drive	60 GB
Display	TFT LCD supporting the resolution of 800 x 600
Maximum humidity	90 %
Enclosure dimensions	55 x 48 x 17,7 cm
Weight (without cards)	15 kg

## Visualization board for STAM monitoring station

	<b>STAM-1 PTSA</b>
Supply voltage ( $\pm 15\%$ )	20 V AC, 50-60 Hz
Power supply type	A
Power supply load capacity	1,3 A
Max. battery capacity	7 Ah
Dimensions (mm)	173 x 102
Environmental class	II
Operating temperature range	-10°C...+55°C

## TCP/IP reporting converter to telephone formats

	<b>SMET-256</b>
Recommended power supply	12 V DC / 750 mA
Dimensions (mm)	125 x 114,5 x 31
Environmental class	II
Operating temperature range	-10°C...+55°C

## Battery deep discharge protection

	<b>ZB-1</b>
Cut-off voltage	10,5 V $\pm 0,5\%$
Max. current	7 A
Environmental class	II
Operating temperature range	-10°C...+55°C

## Relay module

	<b>MP-1</b>
Supply voltage ( $\pm 15\%$ )	12 V DC
Max. switched voltage R1 and R2	48 V
Max. switched voltage R3 and R4	400 V AC / 250 V DC
Max. switched current R1 and R2	4 A
Max. switched current R3 and R4	8 A
Dimensions (mm)	140 x 68
Environmental class	II
Operating temperature range	-10°C...+55°C

## Code lock

	<b>SZW-02</b>
Supply voltage ( $\pm 15\%$ )	DC 9 V to 16 V
Average current consumption ( $\pm 10\%$ )	19 mA
Max. switched voltage	24 V
Max. switching current	2 A
Dimensions (mm)	144 x 80 x 27
Environmental class	II
Operating temperature range	-10°C...+55°C

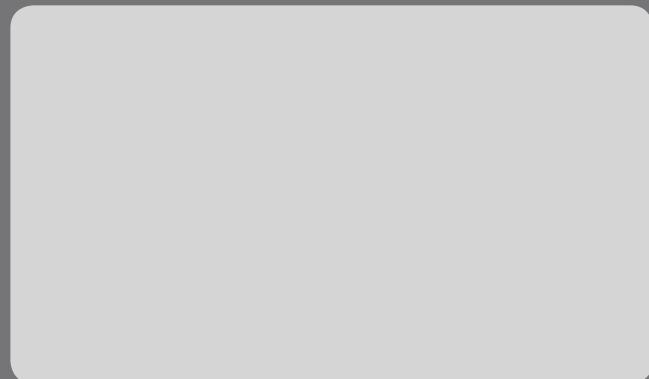
## DTMF remote operation module

	<b>MST-1</b>
Average current consumption ( $\pm 10\%$ )	16 mA
Dimensions (mm)	61 x 50
Environmental class	II
Operating temperature range	-10°C...+55°C

## Distribution box modules

	<b>MZ-1 S</b>	<b>MZ-1 L</b>	<b>MZ-1 CT</b>	<b>MZ-2 S</b>	<b>MZ-2 L</b>	<b>MZ-2 CT</b>	<b>MZ-3 S</b>	<b>MZ-3 L</b>	<b>MZ-3 CT</b>
Number of terminals	6	6	5 pairs	18	18	11 pairs	38	38	39 pairs
Terminal dimensions (mm)	1,5 x 2,5	2,5 x 2,5		1,5 x 2,5	2,5 x 2,5		1,5 x 2,5	2,5 x 2,5	
Jumpers for parallel connections				•	•		•	•	
Max. jumper circuit current				500 mA	500 mA		500 mA	500 mA	
Max. terminal voltage	24 V DC/AC	24 V DC/AC	24 V DC/AC	24 V DC/AC	24 V DC/AC	24 V DC/AC	24 V DC/AC	24 V DC/AC	24 V DC/AC
Tamper switch	•	•	•	•	•	•	•	•	•
Dimensions (mm)	89 x 28 x 30	89 x 28 x 30	89 x 28 x 30	89 x 66 x 30	89 x 66 x 30	89 x 66 x 30	132 x 89 x 30	132 x 89 x 30	132 x 89 x 30

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



**Satel**®

ul. Franciszka Schuberta 79, 80-172 Gdańsk, Poland, tel. +48 58 320-94-00, fax +48 58 320-94-01, e-mail: trade@satel.pl

Registered at the Sad Rejonowy Gdańsk-Połnoc VII Wydział Gospodarczy, National Court Register KRS 0000178400, REGON 192 976 380, EU VAT 584 015 40 38  
Initial capital: 1.830.000,00 PLN, WEEE Register E0007636WZ

The manufacturer reserves the right to change the specification and technical data of devices described in this catalog. (IND\_1212)