

# lares



*simply unique*

**Ksenia**  
security innovation

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**lares**

## The Intrusion Control Panels series **lares**

product code KSI1000016.300 1 lares16 mother board only  
 KSI1100016.300 1 lares16-IP mother board only  
 KSI1000048.300 1 lares48 mother board only  
 KSI1100048.300 1 lares48-IP mother board only  
 KSI1100128.300 1 lares128-IP mother board only



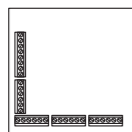
**lares** is the name of the newest generation of Professional Control Panels.

*Calling them simply "Intrusion" Control Panels is truly like asunder estimating their huge potential given that their extraordinary fast and intelligent system is in a position to embrace all other branches of Security and to manage up to very complex installation in terms of Home Automation & Home Integration.*

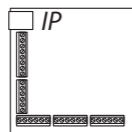
*They are available in 3 different sizes and 5 different versions expandable from 16 to 128 inputs, therefore positioned to cover all applications from the small residential/business to commercial.*

The unique and powerful capabilities of the **lares** Control Panel Family are mainly related to their modularity and versatility: even after the installation of a small system it is possible, to easily follow-up with any further future need of expansion, both in terms of intrusion than in terms of TVCC or access control and, more in general, to any domotic applications.

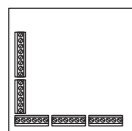
**lares16**



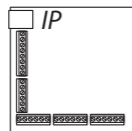
**lares16 IP**



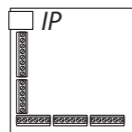
**lares48**



**lares48 IP**



**lares128 IP**



The 5 Control Panels types currently available are the following:

**lares16**  
 the smallest, but already equipped with 10 zones onboard expandable to 16.

**lares16-IP**  
 like as the above but with **integrated Ethernet interface**.

**lares48**  
 the panel for the mid-residential, 10 zones onboard expandable to 48.

**lares48-IP**  
 like as the above but with **integrated Ethernet interface**.

**lares128-IP**  
 the panel for all needs, 10 zones onboard up to 128 with **integrated Ethernet interface**.

## The System's Heart

The heart of the **lares** system is clearly the **mother board**. It can be located inside the metal cabinet sized 255x295x80 mm (suitable for the 16 zones lares model), or inside the larger cabinet sized 325x400x90 mm (suitable for all lares models) which can contain two expansion modules and the GSM/GPRS communicator gemino.

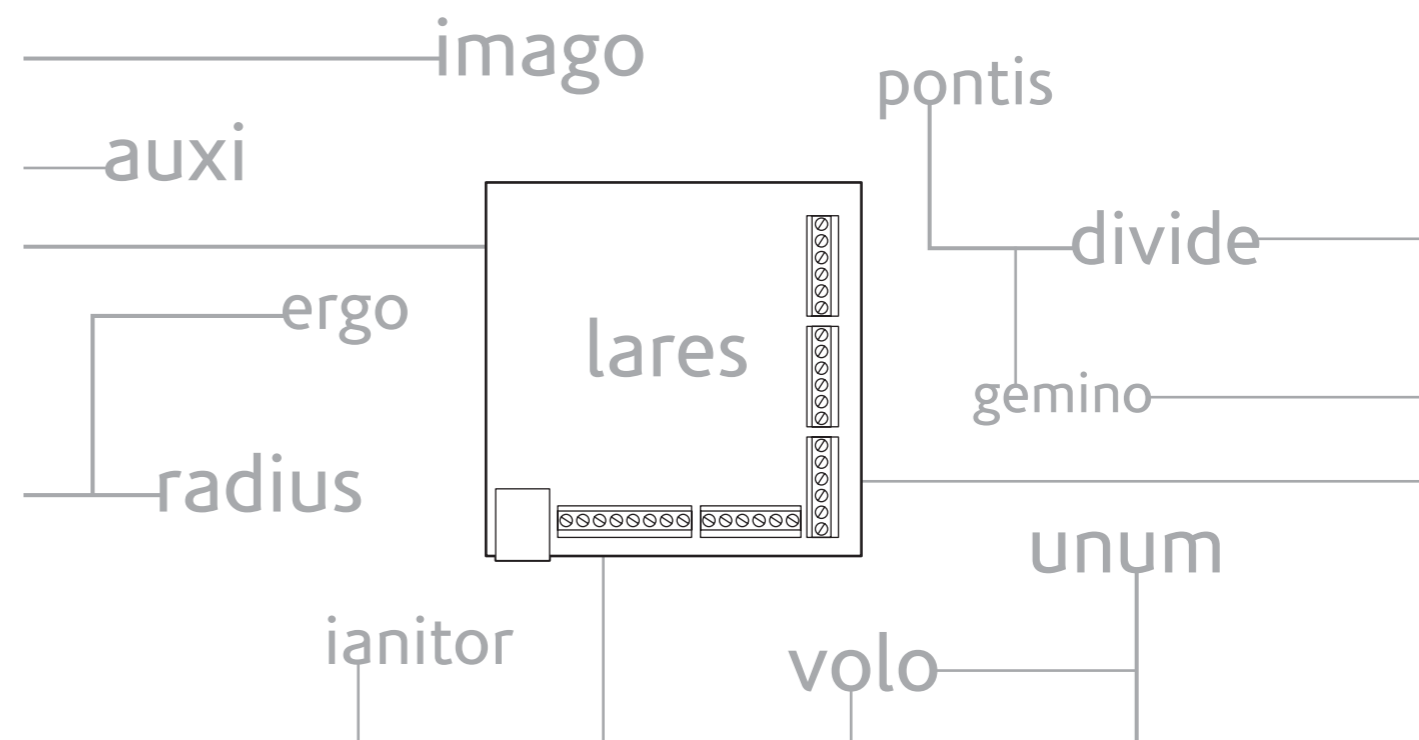
So the recommended configurations are:

- Small cabinet fitted with 1,7 A power supply and 7,2 Ah battery;
- Large cabinet fitted with 3 A power supply and 17 Ah battery.

The mother board is equipped with 6 inputs, 4 programmable inputs/outputs, 1 relay output 1A rated, the **KS-BUS Interface** for linking all Ksenia Security's peripherals, the USB Communication Port, the Ethernet Port (for IP version only), the power circuitry to charge, control and protect the battery. All **lares** Control Panels are highly reliable and compliant to the European Standard EN50131-3 grade 3.



lares motherboard



## System Expansion: the KS-BUS Peripherals

By means of the 4 wires KS-BUS, all Ksenia Security Peripherals can be linked to the mother board enabling the system to be tailored in accordance to the user needs.

**All Peripherals linked to the BUS are acquired by the Control Panel automatically through a 6 digits serial number.**

Here are in short all peripherals -with their main features-which can be linked to the KSBUS (for more information regarding each single product please refer to the Data Sheet available on the web).

**ergo: ultra-slim LCD Keypad (16x2) with Cap-Sense Tech.**

It is a simple and unique user interface; thanks to ergo it is possible to monitor the system in all its functionalities. Ergo also includes a proximity reader which is compatible with the NFC Technology in order to manage the system by transponder tags or smart phones as well as an audio digital system to take advantage of the voice menu and perform audio verification.

**volvo: outdoor NFC proximity reader with multicolor LED signal of**

arming state and possibility of activate up to 5 scenarios using a mini-Tag or NFC enabled smart-phone.

**auxi: expansion module with 5 programmable inputs/outputs.** It allows to increase the number of inputs/outputs for both the Control Panel and gemino Communicator in the expandable version.

**gemino bus: the GSM/GPRS Communicator.** Unheard reliability thanks to the dual SIM and dual Antenna's management algorithm. It allows to send voice messages, SMS and e-mail or to manage the system by means of a guided voice menu or through SMS command. It can be used to program/manage the Control Panel via GPRS. It does not require an external voice module since already integrated in the Panel. It can be employed as alternative or together with the pontis PSTN Interface.

**pontis: the PSTN interface module.** It allows to transmit voice messages through the PSTN line or to manage the system by means of a guided voice menu. It can be utilized to send Alarm signal to the Central Monitoring Stations with the Contact ID or SIA protocols. It does not require external modules, since already integrated in the Control Panel.

**imago bus: outdoor siren, self-powered and with low power consumption, fully controllable via BUS.** On top of the power LED to show the alarm signal, it's equipped with two LEDs for auxiliary signaling like for instance system off /system on. Thanks to a precise temperature sensor, it's possible to trigger actions in home automation contexts.

**radius bus: indoor siren, fully controllable by BUS.** On top of signaling Alarm events, it is equipped with a powerful LED light in order to act as Emergency Light in case of black-out. Just like the outdoor siren radius is fitted with a precise temperature sensor.

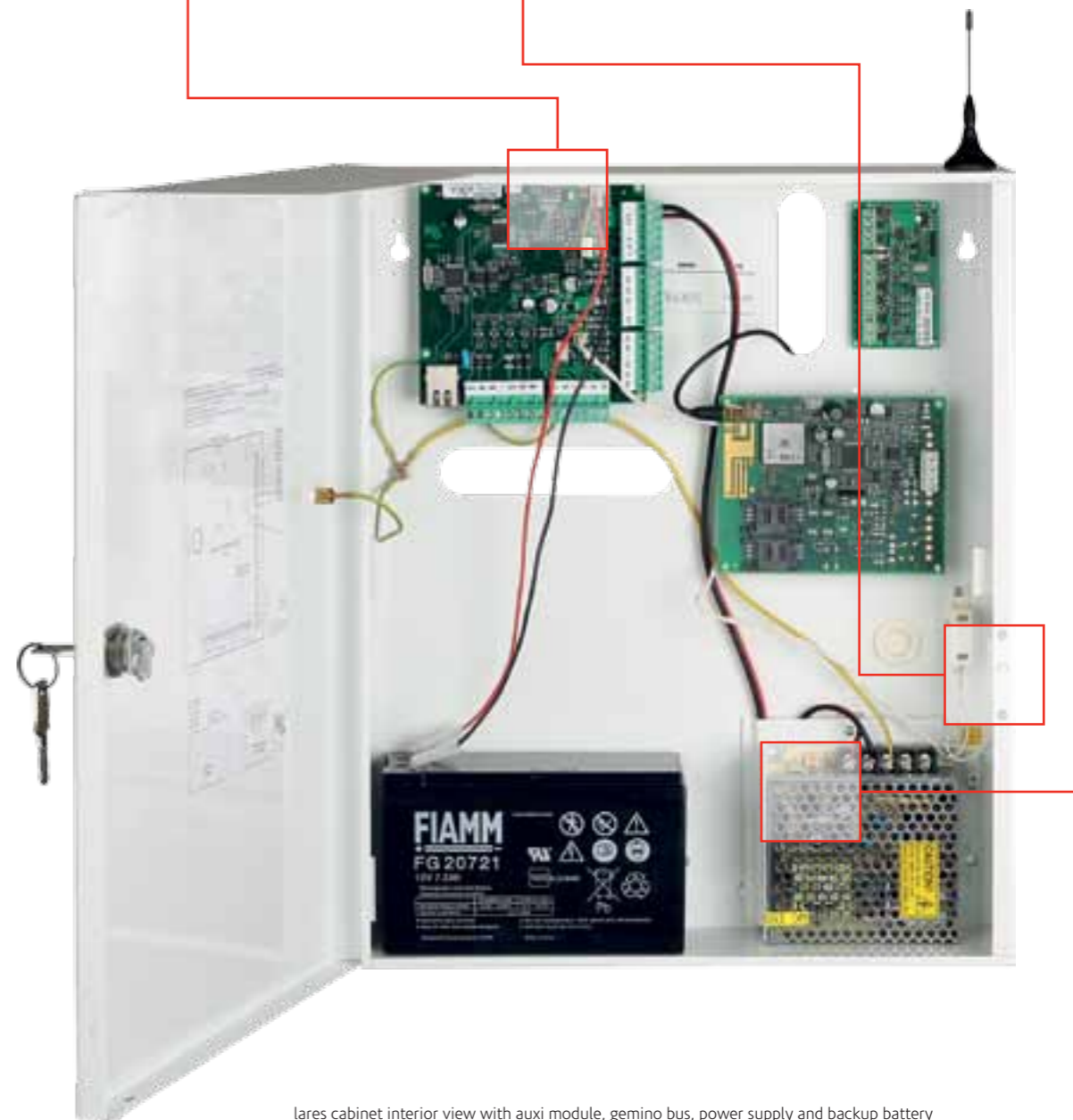
Box opening for micro USB port



Tamper microswitch on box door



Switching Power Supply, 1,7 or 3 A rated



lares cabinet interior view with auxi module, gemino bus, power supply and backup battery

## Main function's description of lares

### Inputs Section

Each Panel is available with 6 programmable inputs and 4 terminals that can be configured as inputs or outputs.

In practice, each Panel is already having 10 inputs onboard. Additionally, a specific connector is available to link all Protections against cabinet opening and wall-removal. Depending on the model, the number of inputs can be increased up to a max. of 128. No matter if they are inputs on the Panel or on the expansion module *auxi*, each input is flexible and programmable according to the specific need: 5 different types of balance (NC, NA, EOL, 2EOL and 3EOL); direct connection of shutter or inertial sensors; system answer (24h, immediate, delayed entry, delayed exit, entry and exit path, last exit); command functions (partition arming and disarming, calls block, alarms reset) and much more functions. In case of path zones, it is possible and extremely easy to decide if they have to respect or not a violation sequence, and also which shall be the last zone in the path, so as to activate the system once the path will be completed, even when the time has not expired yet.

The inputs can also be grouped in AND groups, in order to activate an alarm or whatever system event only when all zones belonging to the same group have been violated. Furthermore, even in this case it is possible to easily decide if they have to be violated in sequence or not.

### Outputs Section

The Control Panel mother board is equipped with a relay programmable output, 1 A rated, supervised, 1 dry contact and 1 +12V switch, and with 4 OC outputs, 500mA each. Depending on the model, the outputs number can be increased up to a max of 128.

Each output is programmable according to the needs: polarity (normally open or normally closed); functioning (bistable or monostable); activation times (time ON and time OFF).

The outputs can be freely associated to the Panel events or manually activated by the Keypad or remotely.

### Partitions

Each input can be freely associated to one or more partitions (or groups) to simplify its management; depending on the model up to 20 partitions are available (see table at the last page). For each partition is possible to program the delays (entry, exit, pre-warning, patrol) on top of defining the different insertion modes.

### USB Interface

Each Control Panel is provided with an "dual role" USB, which can be directly linked to the PC for programming the Panel or visualize its status. The same Port can be very conveniently used to upload the program directly from a flash memory with no need of a PC.

### Ethernet Connectivity

The Control Panel versions lares16-IP, lares 48-IP and lares 128-IP have already integrated onboard the Ethernet interface: a solution which enables to manage the Control Panel in a very easy manner and from any part of the world thanks to any internet connection. It is possible to program the system, to perform all available management operations thanks to the integrated WEB-SERVER, which enables any internet browser to be connected to the Control Panel.

The system has got a "Triple Protection Data Security System": all remote operations require a password insertion, the data travel on the net with an encrypted protocol and, at last, is possible to disable in any moment the entire remote access or to limit its functionalities.

### Voice Messages

The Control Panels allows up to 400 different voice messages to be recorded; they allow to promptly advise the user in case of alarm or malfunctioning (with a customized message for each zone) or to guide the user in the various system functions through the voice-mail.

They can be recorded in many different ways:

- directly from the microphone of ergo
  - from the microphone of your PC
  - importing wave files
  - by two text-to speech (TTS) engines with vocal synthesis
- Both the TTS engines are available through the programming/control software basis: one of them is available with free license, the second one of excellent quality thanks to Loquendo® (\*) libraries is released through a "one-off" payment license. With this the installer will be able to program both lares Control Panels than gemino GSM Communicator on top of other future devices.

### Central Monitoring Station

lares Control Panel can send alarm or generic event to Central monitoring Stations through the Contact-ID protocol (on PSTN line) or via the SIA-over-IP protocol. In the latter case Ksenia can provide a management SW running on generic server for the reception of those events.

Loquendo®

(\*) Loquendo® TTS is a trade-mark by Loquendo S.p.A.



WebServer for control/management. It is Integrated into lares Control Panel and compliant with every SmartPhone, Tab or iPad.

### System Control from remote

The system can be easily managed by means of the following available options:

- through the integrated Web-Server
- using the integrated voice-mail
- sending SMS (i.e. to modify numbers in the phonebook, turning on scenarios, ...);
- using the data link of the gemino;

### Power Supply Control

lares controls both the main power voltage and the battery voltage. Periodically it verifies the efficiency status of the battery and inform us in case of issues. In case of prolonged absence of power, lares is equipped with the function "battery separation" to prevent deep discharges: the Control Panel itself disconnects the battery and before to "self-switch-off", carries on all necessary controls, memorizes date and time of the switch-off event and then finally performs a Switch-off immune of any issues. In this case even the involved sirens will not get into alarm, avoiding useless disturbs.



## lares and the Domotics

Even on this, the lares series is unique.

**Not only its platform integrates very easily in all Home Integration & Automation's logic, but it becomes the protagonist, being perfectly in a position to manage, autonomously and with no need of PC or complicated programs, the domotics applications that you've ever dreamed for your Home.**

In the following there is a list of domotics applications not related to the intrusion:

- lightning
- heating and conditioning system
- irrigation system
- automations and load controls
- fire revelation and suppression system
- audio/video entertainment
- audio and video Surveillance
- access control

The I/O modules to be used to program and to manage the different loads are the same auxi modules required to expand the Control Panel zones or the programmable inputs of gemino and thanks to their level of miniaturization and the newest auto-learning system with the serial code can be easily hidden inside a common DIN box already located into the wall for other purposes (e.g. sockets or circuit-breakers).

**The domotics management system is strictly related to the concept of scenario:** every time there is a system event (it could be a keypad command, a code insertion, a zone violation, the combination of more customized events, etc.), the system enables the possibility to program by means of the following parameters the desired scenario:

- arming / disarming partitions
- activation / deactivation / toggle of outputs (up to 8 for each scenario)
- reproduction of a voice message
- activation of a voice communicator
- email transmission
- SMS transmission
- up to 2 timers activation/deactivation

**By means of our user interfaces it is very simple to manage the system:**

- to every ergo keypad can be associated up to 10 scenarios, one digit each;

- through the outdoor volo proximity reader it is possible to trigger up to 5 scenarios, each one corresponding to one color of the LED.

Another important news is the retention of all most used scenarios to simplify the use of the system:

- if from a keypad we activate more frequently a specific scenario, the system will automatically propose us the same at first, allowing in any case to use the circular scroll to check all other available scenarios that can be activated;
- in the same way, by the outdoor proximity reader, the most used colors will be shown in sequence<sup>1</sup>.

### Firmware Update

**Both the firmware of the Control Panel and the one of all peripherals linked through the KS-BUS can be easily updated in few seconds.** There is neither the need to special connection nor to insert jumpers or switch-off the system or its peripherals: the firmware can be downloaded directly to the Panel thanks to its USB Port (both from PC and from flash-memory upload) or from remote thanks to the Ethernet Communication (if activated by the user).

**The update is automatic and meant to be absolutely secure, all Ksenia Security's devices are equipped with a unique Technology for the Firmware update: the dual-firmware-mode.**

*One copy of the new FW is saved on the peripheral (Control Panel) which has to be updated, once the copy is terminated (which can be done during the normal function of the system), the peripheral verifies the new FW by means of a CRC (Cyclic-Redundancy-Check): if it is correct it will start to use the new FW, otherwise will continue to use the old one, ensuring the highest reliability, even on case of interruption of transmission. This basically means that all Ksenia Security Systems are back-ward compatible, new features or functions available in the future could be added even on preexisting systems with no need to modify or change the peripheral devices yet installed.*

### Future Devices

This special management update ensures that, once a lares Control Panel is installed, it will be compatible with all future Ksenia Security devices, with no need of substitute the Control Panel but simply by updating the its firmware.

<sup>1</sup>Please refer to the user guide.

## lares Burglar Systems

Main Features:	lares16	lares16-IP	lares48	lares48-IP	lares128-IP
<b>HARDWARE</b>					
Maximum number of inputs	16	16	48	48	128
Built-in inputs (fixed + programmable)	6+4	6+4	6+4	6+4	6+4
Maximum number of OC outputs + relays	16	16	48	48	128
Ethernet connectivity management	NO	SI	NO	SI	SI
"On-the-go" USB port	SI	SI	SI	SI	SI
Small metal cabinet 255x295x80mm	SI	SI	SI	SI	SI
Large metal cabinet 325x400x90mm	SI	SI	SI	SI	SI
Back-Up battery	12V-7Ah	12V-7Ah	12V-7Ah	12V-7Ah	12V-7Ah
auxi expansion modules	4	4	24	24	40
ergo LCD keyboards	8	8	12	12	20
volo proximity reader	8	8	12	12	20
divide bus isolator/repeater	8	8	12	12	20
imago siren on bus	8	8	12	12	20
radius siren on bus	8	8	12	12	20
Power supply unit	1,7A or 3A	1,7A or 3A	1,7A or 3A	1,7A or 3A	1,7A or 3A
Power supply voltage	14,2V ± 1% A	14,2V ± 1% A	14,2V ± 1% A	14,2V ± 1% A	14,2V ± 1% A
Current consumption (max.)	60mA	100mA	60mA	100mA	100mA
Weight without battery and power supply unit (enclosure P)	1.7 kg	1.7 kg	1.7 kg	1.7 kg	1.7 kg
Weight without battery and power supply unit (enclosure G)	2.8 kg	2.8 kg	2.8 kg	2.8 kg	2.8 kg
Temperature range		-5°C – +55 °C	(23 °F – 131 °F)		
Protection class	IP34	IP34	IP34	IP34	IP34
<b>SOFTWARE</b>					
Manageable partitions	8	8	12	12	20
Programmable switch-on modes	16	16	32	32	64
Timers	16	16	16	32	32
Daily scheduler	SI	SI	SI	SI	SI
User codes	16	16	48	48	128
Transponder keys	64	64	64	128	128
Recorded events (logger)	1500	1500	1500	1500	1500
Telephone numbers	20	20	50	50	100

### CERTIFICATIONS

Europe CE, RoHS, EN50131-3 grade 3

### PROGRAMMING

The lares Control Panels can be programmed by PC, by IP (for the version with integrated Ethernet) and directly by uploading on the USB Port.

### PARTS INCLUDED

- Each PCBA will be delivered complete with
- 4 plastic sustainer for mounting into the metal cabinet
  - 1 User Manual and Quick Reference Guide ITA/EN

### OPTIONALS

#### Metal cabinet (255x295x85mm) painted in white / KSI7402100.010

Metal cabinet painted in white with lockable door: it may contain 1 lares mother board, 1 expansion module 1 Power Supply and 1 back-up Battery 12 Vdc/7Ah rated.

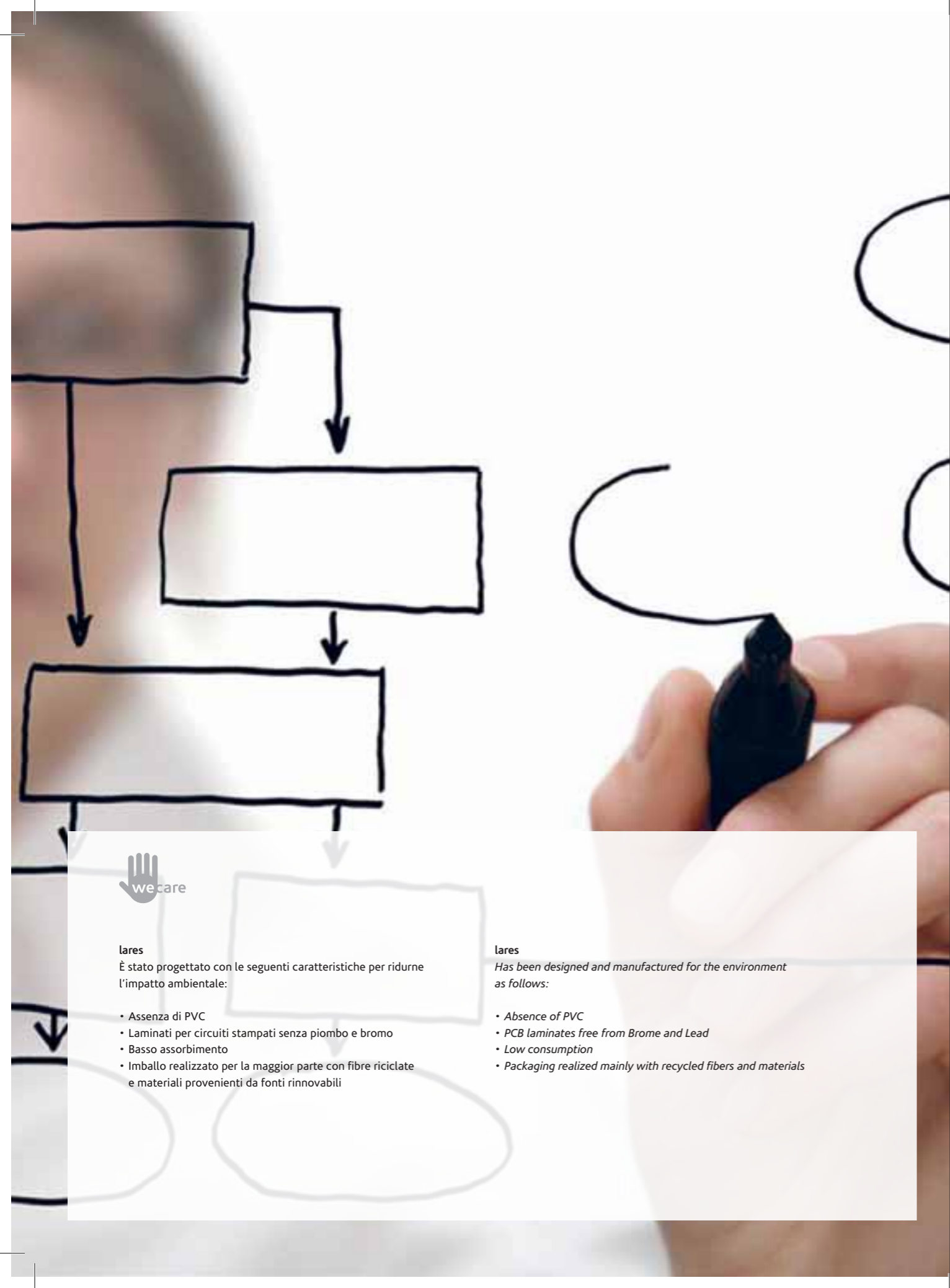
#### Metal cabinet (325x400x90mm) painted in white / KSI7403100.010

Metal cabinet painted in white with lockable door: it may contain 1 lares mother board, 2 expansion modules, 1 Power Supply and 1 back-up Battery 12 Vdc/17Ah rated.

#### Switching Power Supply 12V.-1,7 A / KSI7101217.000

#### Switching Power Supply 12V.- 3,0 A / KSI7101230.000

#### Lead-Battery 12 Vdc-7Ah / KSI7212070.000



#### lares

È stato progettato con le seguenti caratteristiche per ridurre l'impatto ambientale:

- Assenza di PVC
- Laminati per circuiti stampati senza piombo e bromo
- Basso assorbimento
- Imballo realizzato per la maggior parte con fibre riciclate e materiali provenienti da fonti rinnovabili

#### lares

*Has been designed and manufactured for the environment as follows:*

- *Absence of PVC*
- *PCB laminates free from Bromine and Lead*
- *Low consumption*
- *Packaging realized mainly with recycled fibers and materials*

New Dimension of Security

Ksenia

1 2 3  
4 5 6  
7 8 9  
\* 0 #

Ksenia  
security innovation

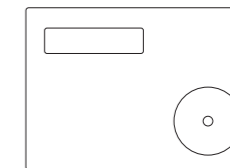
THE USER INTERFACES

ergo/ volo

## THE USER INTERFACES ergo keypad series

### Multifunction LCD CAPSENSE Keypad

product code KSIZ100000.300



*ergo derives from Latin and means then, therefore, at last.*

Isn't this the Keypad we were all waiting for? Finally a clear and simple Keypad, beautiful and useful also as programming tool, it incorporates a proxy reader with NFC Technology, with no mechanical parts, versatile (you can change the color in 3 seconds with a 'click'), modern, thin (less than 13 mm), it can be placed in every interior design.

**ergo** is a very advanced LCD Keypad carefully developed with the objective to capture a modern, minimalist and discreet style and an **extremely slim profile** ( less than ½ inch.), which allows it to be positioned in any interior architecture thus expressing a new feeling of design, prestige and innovation. Thanks to the "CapSense" Technology, here you won't see any of the ugly mechanical parts (like as membranes, buttons, plastic cover, etc.) which are typically available in other products and that are often the ideal dust location and the source of bad contacts. In the case of **ergo** the front is completely smooth and all desired functions can be implemented by simply touching upon the surface in the areas shown by the graphic (letters, symbols, circular-scroll mouse) in a very simple and rational manner. All available functions, as detailed below, are really a lot and surprising.

**It can be customized in the 4 different Ksenia colors** (White, Black, Red and metallized Grey), simply by removing the transparent cover and interchanging the internal cover (Lexan) with one of those included in the package envelope, such operation is meant to be so easy and safe that can be done by the end-user at any time. Moreover, with no need of additional parts, it can be "flush-mounted" taking advantage of any std. box DIN 503, or just as it is on any wall (with no need of additional parts) or if desired even the desk-solution can be chosen thanks to the included stylish sustainer parts.



#### why ergo

- **because** is a very advanced LCD Keypad carefully developed with the objective to capture a modern, minimalist and discreet style as well as an extremely slim profile ( less than ½ inch.), which allows it to be positioned in any interior architecture thus expressing a new feeling of design, prestige and innovation.
- **because** thanks to the "CapSense" Technology, here you won't see any of those ugly mechanical parts (like as membranes, buttons, plastic cover, etc.) which are typically available in other products and that are often the ideal dust location and the source of bad contacts. In the case of ergo the front is completely smooth and all desired functions can be implemented by simply touching upon the surface in the areas shown by the graphic (letters, symbols, circular-scroll mouse) in a very simple and rational manner.
- **because** it can be customized in the 4 different Ksenia colors (White, Black, Red and metallized Grey), simply by removing the transparent cover and interchanging the internal cover (Lexan) with one of those included in the package envelope, such operation is meant to be so easy and safe that can be done by the end-user at any time and without risks.
- **because** with no need of additional parts, it can be "flushmounted" taking advantage to any std. box DIN 503, or just as it is on any wall (with no need of additional parts) or if desired even the desk-solution can be chosen thanks to the included stylish sustainer parts.
- **because** it can be used also to program the gemino GSM/GPRS Communicator and to record "personalized" messages to be associated to any alarm event.

- **because** it integrates the RFID proxy reader even in NFC technology (see note below) , based upon which it is possible for example to arm and disarm your security system or a given zone simply by using your mobile phone as a tag -with no need of other dedicated device in your pocket.
- **because** thanks to its innovative circular scroll, it presents a unique solution to access your menu quickly and easy like never before.
- **because** its backlight is sophisticated and discreet (without excessive colors), therefore allowing it to be located in a very harmonized way even in your night section.
- **because** is simply beautiful..

**Near Field Communication (NFC)** is a technology which delivers wireless connectivity (RF) bi-directionally and short-range (to a max. of 10 cm). It has been jointly developed by Philips and Sony. This NFC technology can be considered an evolution of the contactless RFID (Radio Frequency Identification) and similar technologies. NFC, contrary to other RFID devices, allows a bidirectional communication: when two NFC devices (Initiator and Target) are within a 4-8 cm radius, a peer-to-peer network is created and both can send and receive information. NFC works at a 13,56 MHz frequency and can reach a max. transmission speed of 424 Kbit/s.



proximity Mini-Tag





**MAIN FEATURES & FUNCTIONS:**

- LCD Display 16x2 (visible area 61x16mm)
- "CapSense" Technology (no mechanical press-buttons)
- Circular Scroll / quick menu access
- Available in 4 different colors
- RFID/ NFC Proximity Reader
- Integrated Microphone and Speaker for recording and two-way vocal communication
- "Fast Addressing System" no need to pre-set the device address (automatic recognition from the Control Panel/GSM Communicator)
- 2 programmable inputs/outputs

**TECHNICAL DATA**

- Power Supply / 13,8Vcc
- Consumption / 15mA stand-by, 400mA max
- 7 contacts terminals
- Dimensions / 105x145x25 mm

**PARTS INCLUDED**

- 1 complete ergo keypad
- 4 colored covers
- 1 Installation Manual
- 2 screws for DIN 503 box

**HOW TO ORDER**

Ksenia finite Product Code **KSIZ100000.300**

**FUNCTIONS**

- Display of system status
- Display of functioning parameters (date/time, active GSM network, GSM level, etc)
- System commands (complete or partial arming, reset, activation of outputs terminals, phone calls, etc.)
- Programming of system parameters
- Programming of local parameters (audio volume, backlight levels)
- KP functionality exclusion for front cleaning purposes

The **ergo** keypad has been conceived not only to be linked to a Ksenia Intrusion Control Panel, but even to the Universal GSM/GPRS Communicator **gemino**, since, differently to other similar devices, it works also as "programming unit", making the installer's life much easier by avoiding the need of having a PC with for the Communicator programming.

detail of the capsense LCD Keypad



ergo in its desk-mounting version (included)

flush-mounting installation of ergo



ergo and the gemino Communicator

**volo proximity reader**

product code **KSIZ200000.300**



**CERTIFICATIONS**

European CE

**PROGRAMMING**

**volo** can be connected to the 4-wires KS-BUS and can be programmed directly from the Control Panel.

**TECHNICAL SPECIFICATIONS**

- Power Supply / 13.8 VDC
- Consumption / 40mA
- RFID / NFC frequency / 13.56MHz
- Dimensions / 127x43x17 mm

**PARTS INCLUDED**

- volo proximity reader with a 2 meters long cable
- Quick Installation Guide ITA/EN
- 2 Fischer screws, diameter 5mm.

**HOW TO ORDER**

Ksenia finite product code **KSIZ200000.300** (black version)  
**KSIZ200000.310** (white version)

**OPTIONALS**

- **KSIZ200001.300** Optional black frame (310 white version).
- **KSIZ760000.000** Pocket Mini-Tag in Black color with metal key-holder ring.



**volo** is an outdoor proximity reader with NFC Technology.

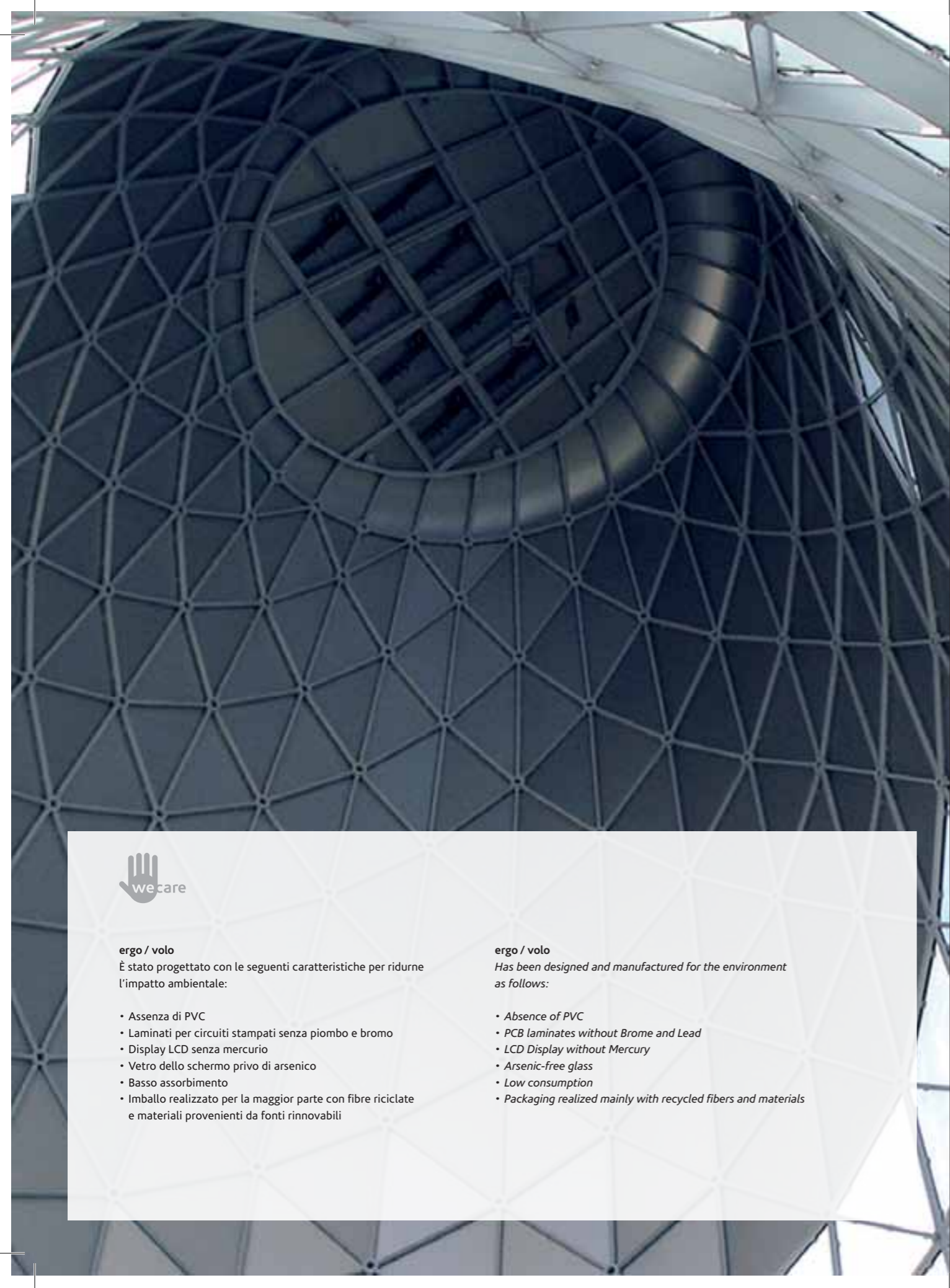
**FUNCTION DESCRIPTION**

**volo** is a device that allows, being linked on the KS-BUS, the user to manage the arming /disarming of the Ksenia Security System and more in general the activation/ deactivation of different scenarios programmed in terms of Home Integration, by means of mini-Tags and/or NFC-enabled smart-phones. It can be installed either directly onto the wall (in vertical) or screwed onto the Box DIN 503 (with an optional black frame).

The device is fitted with an LED with 5 colors (red, green, blue, yellow, white) and each of them can be associated to a customizable scenario. It is very simple to activate a scenario: approaching a valid Tag or NFC-enabled Phone to the Proxy Reader, the LED will switch on in the color associated to the possible scenario, proposing automatically the most probable choice at first. To activate the desired scenario take the Tag or the Phone away when the LED is lit of the color related to that scenario: as acknowledge the LED will remain ON with the same color for other 3 seconds.

Its sober design allows the **volo** to be installed in every interior design. This device has been developed with an innovative tamper protection (against wall removal and opening): an accelerometer. This allows to avoid any mechanical switch and the related risk of deterioration and moist infiltration in Outdoor. Its plastic enclosure and the PCB protection treatment (full immersion in epoxy resin) allow its Outdoor Installation without additional protection. Available in black and white version.





#### ergo / volo

È stato progettato con le seguenti caratteristiche per ridurre l'impatto ambientale:

- Assenza di PVC
- Laminati per circuiti stampati senza piombo e bromo
- Display LCD senza mercurio
- Vetro dello schermo privo di arsenico
- Basso assorbimento
- Imballo realizzato per la maggior parte con fibre riciclate e materiali provenienti da fonti rinnovabili

#### ergo / volo

*Has been designed and manufactured for the environment as follows:*

- *Absence of PVC*
- *PCB laminates without Brome and Lead*
- *LCD Display without Mercury*
- *Arsenic-free glass*
- *Low consumption*
- *Packaging realized mainly with recycled fibers and materials*



**Ksenia**  
security innovation

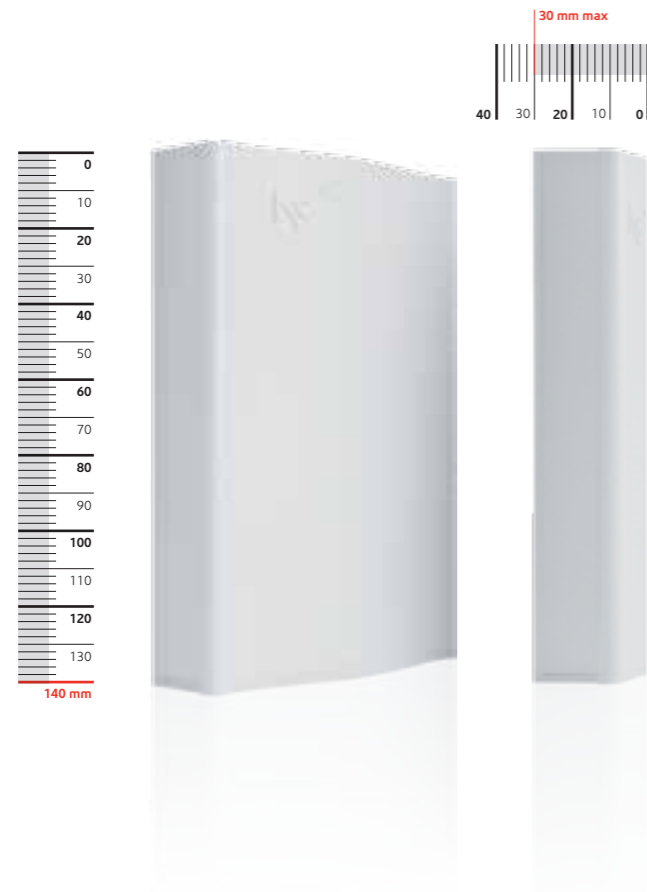


COMMUNICATION & PROGRAMMING SYSTEMS

**gemino / pontis / basis**

## COMMUNICATION & PROGRAMMING SYSTEMS

### gemino series



*gemino derives from Latin and means closely related/linked or to put one next to the other.*

Which is the aim of an Highly reliable GSM/GPRS Communicator if not to guarantee a tight link, the union in any moment and in any conditions between the sender and the receiver (final user or Central Monitoring Station) and eventually to set in (the same user, Police...)?

gemino in slim plastic housing



PCBA slim plastic housing



local modality upload



## Universal GSM/GPRS Communicator gemino expandable (up to 10 inputs)

product code KSI4100010.300 / PCBA only  
product code KSI4100010.310 / with Slim "double-use" plastic case

## Universal GSM/GPRS Communicator gemino 4

product code KSI4100020.300 / PCBA only  
product code KSI4100020.310 / with Slim "double-use" plastic case



gemino is a Bi-directional Universal GSM/GPRS COMMUNICATOR specifically developed for Professional Security applications, even though its flexibility enables its use in many telecom/communication, industrial and residential applications, basically anywhere there is a need to transmit signals in a reliable manner and in absence of the fixed line (or as alternative to it) in order to protect sensitive installations (like as, but not limited to, industrial plants, solar installations, rural and marine installations, incubators, glasshouses, etc.).

- It decodes the Contact ID protocol and sends SMS up to 8 programmed numbers and/or emails to your smart phone, PC or to a Central Monitoring Station;
- It incorporates a VOICE DIALLER and a TTS (text-to-speech) Converter;
- It remotely manages outputs in order to activate or deactivate any desired automation or Home Appliance in general;
- It delivers a solid back-up line to the PSTN line;
- It has 2 open collector output, 500 mA rated;
- Thanks to an expander module auxi, it can manage up to 10 inputs (only expandable version);
- Easy Scan. This function allows the user to know the best mobile operator in the plant location, even before any SIM insertion.

As an interface, gemino steadily controls the status of the PSTN line: in case of its absence, all linked communication devices will use the simulated phone line delivered by the communicator, therefore allowing to make and receive calls via GSM with a very high-quality audio output thanks to the adoption of a digital audio channel. Contrary to many other devices currently available in the marketplace, gemino integrates the GSM antenna directly on the PCB, making the external antenna basically redundant for the majority of the application while, for particular installations an external antenna can be added and the Communicator can always manage and provide the best quality signal between the two; moreover, other interesting news is that gemino offers the possibility to manage 2 different SIM cards, even from 2 different providers, monitoring continuously the status of the GSM network according to three different simultaneous modes:

1. measuring the signal level and quality
2. verifying the proper registration to the GSM network
3. detecting the presence of interferences (jamming)

In short gemino is in a position to steadily choose which antenna and which SIM card (or provider) has to be used so as to assure the best possible GSM coverage for Security system applications (Patent pending).



gemino radio module (X-Rays Quality Control)



2 SIM cards slots

Additionally, for all pre-paid SIM Cards, the Communicator includes the credit control and the automatic update of each SIM Card's expiring date upon each new re-charge. **gemino** can be programmed in few seconds via a PC linked through the USB port or by using the same port to upload the program from a flash memory with no need to take a PC with.

Quite distinctively, it is equipped with the communication KS-BUS in order to be linked with new LCD Keypad of the **ergo** series: through the keypad is possible to control the **gemino**, make voice calls and program all **gemino**'s parameters; on the bus is also possible to link the expander modules, thus offering the possibility to manage up to 10 inputs to activate SMS, voice calls or email, and 2 outputs, basically transforming a simple interface into a powerful communicator. At last, it integrates on board 2 OC (open collector), which can be used to indicate a status (e.g. absence of a PSTN or GSM issues) or programmed to be remotely activated by SMS or CLIP taking advantage to the user recognition feature.

#### MAIN FEATURES

- Simulated PSTN line's generator for the connection to any Control Panel;
- Decoding of the contact ID protocol and transmission via SMS and/or email (it allows to receive an SMS or emails for each Control Panel's zone);
- Decoding up to 200 Contact ID events;
- SMSs and emails can have a length up to 128 characters, for a total of 200 messages associated to contact ID events;
- Slots for 2 SIM cards (not included);
- Embedded Antenna + connector for external Antenna with automatic signal selection;
- Micro USB port for programming and control;



Micro USB port

- High quality digital audio;
- KS-BUS interface;
- Linkable on the bus to an ergo Keypad and up to 2 expander modules;
- It can be managed and programmed also via system Keypad ergo by means of a dedicated cable (optional);
- Up to 10 inputs (using auxi expansion modules);
- Voice communicator with the possibility to record up to 200 messages for a total of 700 s;
- Voice message recorder through the Keypad or through a TTS engine available from PC;
- Onboard outputs: 2 OC up to 500 mA programmable as remote control on your mobile phone (via SMS or user recognition);
- Phone book; up to 100 phone numbers;
- Programmable via PC through USB port or by a flash memory upload or via system Keypad ergo;
- GSM Jamming Detection;
- Telit EasyScan®;
- Credit control on both pre-paid SIM cards.

#### TECHNICAL DATA

- **Voltage** / 13,8 Vdc;
- **Consumption** / 80mA stand-by, 250mA max;
- **GSM line** / GSM/GPRS Telit BGA module 22x22 mm (designed in Italy) Quad-Band (850-900-1800 and 1900 MHz);
- 2 OC outputs on board ( GSM failure and PSTN absence);
- Up to 10 programmable inputs on the expander module;
- **Simulated PSTN line** / line voltage: 40V, loop current: 20mA, programmable line tone, ring voltage: 120Vac;
- **Line selection** / DTMF;
- **Operative temperature** / +5 to +40 °C;
- **PCB dimensions** / 92x113x20 mm;
- **Max. overall – dimensions** / 140x102x30 mm (max.);
- **Weight** / 170 gr.

## GSM/GPRS Communicator **gemino BUS** (GSM/GPRS Communicator for lares Control Panels)

product code KSI4101000.300 / solo scheda PCBA  
product code KSI4101000.310 / with slim plastic box



#### CERTIFICATIONS

R&TTE 1995/5/CE

#### MAIN FEATURES

- Programming directly from lares Contrl Panel;
- Outgoing calls management with 400 vocal messages, for a total of 700 sec;
- SMS sending with the date, time and event description details;
- Plant remote control by voice-mail;
- Remote scenarios activation by SMS;
- High Quality Digital Audio;
- Two SIM cards slots (not included);
- Telit EasyScan® (allows to know the best operator before inserting any SIM card);
- Credit check for pre-paid SIM.

#### TECHNICAL DATA

- **Voltage** / 13,8 Vdc;
- **Consumption** / 70mA stand-by, 250mA max;
- **GSM line** / GSM/GPRS Telit BGA module 22x22mm (designed in Italy) Quad-Band (850-900-1800 and 1900 MHz);
- **Operative temperature** / +5 to +40°C;
- **PCB dimensions** / 92x113x20 mm;
- **Max. overall – dimensions** / mm 140x102x30 (max.);
- **Weight** / 170 gr.

**gemino BUS** is a Bidirectional GSM/GPRS Communicator for lares Control Panels. It is the ideal device to send and receive signals from your intrusion panel or for home automation purposes.

By the **gemino BUS** Communicator is possible to receive all alarm and status signalization from the lares Control Panel using pre-recorded vocal messages or by SMS.

It is also possible to manage the system by a complete but simple voice-mail with which you can activate scenarios, to check the plant and zones status, make audio verification by-pass zones. It is also possible to trigger up to 10 scenarios simply sending an SMS to the device, or making a ring (for free) to the SIM telephone number inserted in the device.

It is possible to manage the system via GPRS from anywhere in the world, with no need of dedicated modem, simply using your PC, the basis SW and an Internet connection.

All in one device that integrates directly on the PCB the GSM/GPRS antenna, making the external antenna as an optional; moreover, other interesting news is that **gemino** offers the possibility to manage 2 different SIM cards, even from 2 different providers, monitoring continuously the status of the GSM network according to three different simultaneous modes:

1. measuring the signal level and quality
2. verifying the proper registration to the GSM network
3. detecting the presence of interferences (jamming)

**In short gemino is in a position to steadily choose which antenna and which SIM card (or provider) has to be used so as to assure the best possible GSM coverage for Security system applications (Patent pending).**

Additionally, for all pre-paid SIM Cards, the Communicator includes the credit control and the automatic update of each SIM Card's expiring date upon each new re-charge.

Thanks to the EasyScan **gemino BUS** tells immediately which is the best operator for the area of installation of the plant with no need to insert any SIM in the slots displaying it onto the ergo keypad connected to the Control Panel.

It can be connected to the system with the KS-BUS, with 4 wires only, in parallel to all the other KS-BUS-compliant devices.

It is the natural integration for lares series Control Panel Communication:

**gemino BUS can work as preferred communication channel or as a backup for the PSTN line.** It allows the Control Panel to manage two different calls at the same time (one on GSM and the other on PSTN).



slots for the two SIM cards



micro USB port for the local programming

### why gemino

- **because** it is specifically developed for Professional Security applications, with the scope to guarantee the highest degree of reliability for the transmission of alarm events, even in the most difficult installations where it can face significant challenges related to signal issues or even provider issues;
- **because** it is a Bidirectional Universal GSM/GPRS Quad-band Communicator which can be linked to ANY type of Control Panel via Contact ID\*;
- **because** for the majority of the application gemino integrates the GSM antenna directly on the PCB, making the external antenna basically redundant while, for particular installations an external antenna can be added and the Communicator will always manage and provide the best quality signal between the two;
- **because** it offers the possibility to manage 2 different SIM cards, even from 2 different Providers, in order to assure the best communication pattern by monitoring continuously the status of the GSM networks, should one provider have a serious issue, or in case of dangerous interferences (Jamming) or simply in case the credit of one pre-paid SIM card should be over;
- **because** it incorporates a VOICE DIALLER and a TTS (text-to-speech) Converter addition of being able to send up to 200 "customized" vocal messages for each stored phone number, or up to 200 different and "customized" SMS and/or emails for each alarm event;
- **because** can be programmed in few seconds by a PC linked to the USB port or by using the same port to upload the program from a flash memory with no need to take a PC with. Quite distinctively, it is also equipped with the communication KS-BUS in order to be linked directly to the new LCD Keypad of the ergo series from which is possible to control, make voice calls and program all gemino's parameters;
- **because** it is equipped with 2 programmable OC (Open Collectors) outputs up to 500mA which can be programmed to be remotely activated - by using the mobile phone as a remote control at no cost - taking advantage from the user recognition.
- **because** it has 4 programmable inputs (outputs) onboard or alternatively it can reach up to 10 programmable inputs\* by adding the expansion modules auxi having 5 I/O each.
- **because** its elegant and modern plastic case fits easily everywhere, even in public spaces- thanks to its very low volume (140\*102\*30mm) or alternatively in a small selfpowered metal box.



simple interface



customizable



automatic signal selection



can be placed everywhere

\* expandable and gemino 4 versions

## Accessories

### gemino expandable PCBA only / KSI4100010.300

GSM/GPRS module (PCBA only) complete with 4 plastic sustainers for assembly (for metal cabinet only).



### gemino4 PCBA only / KSI4100020.300

GSM/GPRS module (PCBA only) with 4 programmable inputs/outputs and 4 plastic sustainers for assembly (for metal cabinet only).



### gemino bus PCBA only / KSI4101000.300

GSM/GPRS module (PCBA only) with 4 plastic sustainers for assembly (for metal cabinet only).



### Plastic box "slim" version, suitable for GSM main board / KSI7302000.010

Plastic box "slim" version, suitable for GSM main board or alternatively 2 "auxi" expander modules input/output. dimensions 100x140x27 mm (l x h x p)



### White metal cabinet / KSI7401000.010

White metal cabinet with door opening, ground connections, tamper switch and dedicated USB protected opening: it may contain the GSM/GPRS PCBA (alternatively with or without 4 progr. Inputs) + nr.1 expansion module 5 I/O "auxi" + nr.1 back-up battery at 12Vdc. dimensions 220x155x60 mm (l x h x p)



### Auxi expansion module / KSI2300000.300 (for expandable version only)

Expansion module (PCBA) with 5 inputs/outputs complete with 4 sustainers for mounting both into the metallic cabinet and in the plastic box.



**Kit auxiliary Antenna / KSI4800000.300**

Kit auxiliary Antenna with 30 cm cable.

**Kit external Antenna / KSI4800001.300**

Kit external Antenna with 3 m cable.

**Kit Programming Cable from keypad ergo / KSI7500000.000**

Kit Programming Cable 1,5 m. for GSM/GPRS communicator gemino from keypad ergo.

**Black USB Adapter / KSI7501000.020**

USB Adapter from type micro A male to type A female -black color.

**4 GB Flash memory / KSI7501002.000**

4GB flash-memory branded "Ksenia" with plastic case and magnetic closure for program upload and installer gadget.

**Programming cable from PC (USB) to gemino (micro USB) / KSI7501001.000**

Programming cable from PC (USB) to gemino (micro USB), 180 cm long.

PSTN telephone interface **pontis**

product code **KSI4200000.300**



**pontis** is the PSTN communication board for **lares** Panel series. Thanks to its compact size (60x75mm) can be installed directly in the same box with the **lares** Control Panel and connected to lares board via the 4 wire KS-BUS. Despite of other burglar telephone interface system, **pontis** is built with a powerful chip modem, managed by an high speed DSP-IC (digital signal processor). Thanks to this solution, **pontis** can manage remotely the panel (telemonitoring) with a standard modem (without purchasing a dedicated modem) with a speed up to 14400 bps. With **pontis** board, it is possible to program and manage your **lares** Panel only via the PSTN lines.

Using **pontis** board it is possible to activate the dialer function of **lares** Control Panel: it is possible to send alarm, fault condition or any other status of the panel using pre-recorded voice messages on the panel; **pontis** can be used with the GSM communicator gemino bus: as a priority communication channel, as a back-up of GSM or in parallel to it, managing two calls at the same time (one over GSM and one via PSTN). Moreover it is possible to manage your panel calling the board: a voice-mail menu will help you on choosing scenarios, bypass or un-bypass zones and activate outputs.

Finally **pontis** communicator permits to send alarm to monitoring station via *Contact ID* or *SIA* protocol.

Several programmable options are available on **pontis** communicator like as monitor PSTN lines and the second call option that permit to manage other telephone devices connected to the lines, like faxes.

**CERTIFICATIONS**

Europe / CE

Europe / ETSI ES 203 021 parti 1, 2 e 3 (ex. TBR021)

**HOW TO PROGRAM**

Programmable parameters of **pontis** are directly managed by lares control panel.

**TECHNICAL DATA**

- Power Supply / 12Vdc
- Current consumption / 100mA (max)
- DTMF selection
- Temperature range / +5 to 40°C
- PCBA size (WxHxD) / mm 75x60x15
- Weight / 50g

**PARTS INCLUDED**

- 1 PCBA module **KSI4200000.300**
- 4 sustainers for metal cabinet's mounting
- 1 Installation Manual in ITA/EN

**HOW TO ORDER**

Ksenia finished product **KSI420000.300**

# SOFTWARE PLATFORM

## Software **basis**



SW screenshot

*basis derives from Latin and means base, support, foundation.*

Which name could be more indicated for an innovative software platform able to self-upgrade and with a fundamental importance as support for programming Ksenia devices (e.g.: Gemino GSM/GPRS Communicator) and Control Panels?

**basis is the software platform entirely developed by Ksenia Security to program the lares Control Panels, the gemino Universal Communicator and expansion devices connected to the system.**

**basis is a very friendly, unique and innovative software platform, downloadable by free-License directly from our web site. On top of being customizable, modular and self-upgrading, is available for all main Operative Systems nowadays available on the market.**

The simple and intuitive interface allows the user to configure the Control Panel with the least number of proceedings; further the state of the programming is displayed in detail for a quick checking of what you have done.

By basis is possible to monitor the Control Panel (zones, partitions, pending alarms...) and the state of the BUS peripheral in real-time, as shown in the figure.

The clear and simple display makes the installer to work easily, both during the construction phase of the plant, both during checking the status of the same, even remotely. The auto update allows upgrades of both SW and FW of the devices connected to the unit. These updates are automatically downloaded whenever the PC is connected to the Internet.

### why basis

- because it's a very advanced software platform solution developed following the most modern information technologies. Its modular structure enables its full customization to the point that each installation can be easily tailored so as to be adapted to different employ solutions;
- because it can be installed in any PC which supports Microsoft, Apple, Oracle and Linux Operating Systems with no need of powerful computing capacity and with no need of Third Party Software to function;
- because it's been developed thinking to the End-User. From the professional security installer, through the Central Monitoring Stations, to the End-User: each of them will have at full disposal exactly what 's desired;
- because it is self-updatable. After the first installation it links automatically to our Updating-Center and verifies periodically the availability of new software data. No more patches, service packs and need of boring installations!;
- because it facilitates the programming of all Ksenia devices and allow them to be controlled in real time;
- because is distributed under a free license Just download itnow for free!



Customizable software



Modular structure



Auto updating



Innovative software platform



Real time control



Free license



**gemino / pontis / basis**

Sono stati progettati con le seguenti caratteristiche per ridurre l'impatto ambientale:

- Assenza di PVC
- Laminati per circuiti stampati senza piombo e bromo
- Basso assorbimento
- Imballo realizzato per la maggior parte con fibre riciclate e materiali provenienti da fonti rinnovabili

**gemino / pontis / basis**

*Has been designed and manufactured for the environment as follows:*

- *Absence of PVC*
- *PCB laminates free from Bromine and Lead*
- *Low consumption*
- *Packaging realized mainly with recycled fibers and materials*

**Ksenia**  
security innovation



THE BUS PERIPHERALS

**auxi / pontis / radius / imago / divide**



## Expansion module series **auxi**

product code KSI2300000.300



**auxi** is an expansion module with 5 programmable I/O.

**auxi** enables to increase up to 5 (or multiples with multiple modules) the numbers of programmable inputs (outputs) of the **gemino** GSM/GPRS Communicators and of the **lares** intrusion Control Panels.

**auxi** configuration into the system is very fast, no need to configure any dip-switches: **auxi** will be automatically acquired by **gemino** or **lares** and identified univocally with its serial numbers that you can find impressed on the PCBA label.

Its dimension allow its insertion within a standard DIN 503 box for wall mounting or alternatively into the plastic box "slim" (Ksenia p/n KSI7302000.010) or into the metal cabinet (Ksenia p/n KSI7401000.010).

### HOW TO PROGRAM

**auxi** is to be linked to **gemino** or **lares** through the 4 wires **KS-BUS** and has 5 terminals which can be configured as programmable inputs with End-of-Line resistors or OC outputs at 500 mA. One of the five terminals can be configured as analog input 0-10 Vdc while one of them as 0-10 Vdc analog output (only with **lares** panels).

**auxi** incorporates a non-volatile memory of the terminal programs which limits to 1000 times the number of re-programmings of the terminals in order to guarantee their correct functioning. The programming of the terminal functions (either input or output) are implemented during the programming of **gemino** or **lares**.

*auxi derives from latin means to increase, to potenziare.*

Let's give power to the **lares** Control Panels and/or to the **gemino** GSM/GPRS Expandable Communicator by adding 5 or 10 programmable inputs.

### why **auxi**

- **because** with the same expansion module you can either increase the number of zones of the control panel or increase up to 10 the number of programmable inputs (outputs) of **gemino** expandable;
- **because** it is automatically and univocally configurable by means of its serial number: forget about having to adjust dipswitches or assign addresses to them;
- **because** it is very small and therefore can be installed inside the wall within a standard DIN503 box;
- **because** all its 5 terminals can be programmed as Open Collector outputs up to 500 mA each;
- **because** all its 5 terminals can be programmed as inputs with EOL resistors;
- **because** 1 of its 5 terminals can be programmed as analog input 0-10 Vdc (only for **lares** control panels);
- **because** 1 of its 5 terminals can be programmed as analog output 0-10 Vdc (only for **lares** control panels).

### TECNICAL DATA

- Voltage / 13,8Vdc
- Current consumption / 20mA (excluding terminal P and outputs)
- 1 analogic input / 0 – 10Vdc
- Up to 5 alarm inputs with programmable EOL
- 1 analogic output 0 – 10Vdc, 20mA
- Up to 5 Open Collector outputs of 500mA each
- Power terminal / 1,5A protected by a self-restorable thermal fuse
- PCBA dimension / 75x45x20 mm

### PARTS INCLUDED

- 1 PCBA modul KSI2300000.300
- 4 sustainers for metal cabinet's mounting
- 1 Installation Manual in ITA/EN

### CERTIFICATIONS

Europe / CE

## PSTN telephone interface **pontis**

product code KSI4200000.300



**pontis** is the PSTN communication board for **lares** Panel series. Thanks to its compact size (60x75 mm) can be installed directly in the same box with the **lares** Control Panel and connected to **lares** board via the 4 wire **KS-BUS**. Despite of other burglar telephone interface system, **pontis** is built with a powerful chip modem, managed by an high speed DSP-IC (digital signal processor). Thanks to this solution, **pontis** can manage remotely the panel (telemonitoring) with a standard modem (without purchasing a dedicated modem) with a speed up to 14400 bps. With **pontis** board, it is possible to program and manage your **lares** Panel only via the PSTN lines.

Using **pontis** board it is possible to activate the dialer function of **lares** Control Panel: it is possible to send alarm, fault condition or any other status of the panel using pre-recorded voice messages on the panel; **pontis** can be used with the GSM communicator **gemino** bus: as a priority communication channel, as a back-up of GSM or in parallel to it, managing two calls at the same time (one over GSM and one via PSTN). Moreover it is possible to manage your panel calling the board: a voice-mail menu will help you on choosing scenarios, bypass or un-bypass zones and activate outputs.

Finally **pontis** communicator permits to send alarm to monitoring station via **Contact ID** or **SIA** protocol. Several programmable options are available on **pontis** communicator like as monitor PSTN lines and the second call option that permit to manage other telephone devices connected to the lines, like faxes.

### CERTIFICATIONS

Europe / CE

Europe / ETSI ES 203 021 parti 1, 2 e 3 (ex. TBR021)

### HOW TO PROGRAM

Programmable parameters of **pontis** are directly managed by **lares** control panel.

### TECHNICAL DATA

- Power Supply / 12Vdc
- Current consumption / 100mA (max)
- DTMF selection
- Temperature range / +5 to 40°C
- PCBA size (WxHxD) / mm 75x60x15
- Weight / 50g

### PARTS INCLUDED

- 1 PCBA module KSI4200000.300
- 4 sustainers for metal cabinet's mounting
- 1 Installation Manual in ITA/EN

### HOW TO ORDER

Ksenia finished product KSI420000.300

## Indoor siren **radius**

product code **KSI6100000.310** (universal version)  
**KSI6101000.310** (for BUS KS only)



The **radius** self-powered indoor siren is actually a **professional (acoustic & optical) Sounder** which shows a unique and exclusive design, extremely slim (max. 37 mm thick) associated with a modern technology aimed to combine the best possible performances with the maximum energy saving: very high sound pressure, 3W power LED Alarm Light which also acts as **emergency light in case of main power's black-out**. The siren is fully controlled by a microprocessor which checks the possible status of the device and sends the appropriate signal.

**radius**, like as the **ergo** Keypad, has been designed to be fully flexible even from a chromatic stand point of view to be easily and superbly integrated in any kind of interior design: as a matter of fact, its design allows the end user to take advantage of 4 different colors, i.e. white, metallized grey, red and black. With regard to its function, **radius** is available with 2 inputs to activate the acoustic and optical signals, which thanks to the programming of the inputs polarities are easy to be linked to any Control Panel (Universal version only). The first time you power up it, the siren reads all the inputs and associates them to the correct polarity and stand-by status with no need to program them manually, saving the programming itself on a non-volatile memory; either they are inputs with positive or negative command, or with or without intrinsic security (command to miss or to give), **radius** links any of them with the associated function.

The battery is steadily monitored and its malfunctioning immediately signalized to the Control Panel.

On top of the automatic protection for preventing wire-cutting actions, **radius** is protected by 2 tamper switches against cover opening and against removal from the wall.

In the KS-BUS communication's version (only for lares Control Panels) the siren is equipped with a precision temperature sensor to display the indoor temperature in the **ergo** Ksenia Keypad and for Home Automation applications.

1



2



### CERTIFICATION

Europe / CE  
 Europe / EN50131-4 grade 3

### PROGRAMMING

In the KS-BUS version, **radius** is linked to the **lares** Control Panel by means of the 4-wires serial KS-BUS and it can be easily programmed from the Control Panel.

### TECHNICAL DATA

- Ultra-modern design with additional Emergency Light function;
- Interchangeable cover in the 4 different Ksenia colors;
- Acoustic and Lighting signal in case of wire-cutting action;
- 1 input for the alarm;
- 1 input for the main 3 W power LED only;
- Auto-learning of input polarity;
- High Sound Pressure Piezoelectric Buzzer (>100 dBA at 1m);
- Integrated Temperature Sensor (radius-bus version only), precision  $\pm 0,1^{\circ}\text{C}$ ;
- Back-up Battery;
- **Temperature Range** / from  $+5^{\circ}$  to  $+40^{\circ}\text{C}$ ;
- **Dimensions (W x H x D)** / 102x142x37 mm max;
- **Weight (with Battery)** / 300 g.

### PARTS INCLUDED

**KSI6100000.310\*** (universal) oppure **KSI6101000.310** (KS-BUS)

1 Siren complete with PCBA and battery

Set of 4 colored covers

1 Quick Installation Guide in ITA/EN

### HOW TO ORDER

- **KSI6100000.310\*** (universal)  
 oppure **KSI6101000.310** (KS-BUS)

1. detail of radius colored interchangeable mask.
2. radius with black lexan mask.

## Outdoor Siren **imago**

product code KSI6300000.3XX\* (Universal)  
 KSI6301000.3XX (for KS-BUS only)  
 (\*) the code suffix 3XX indicates the different color option,  
 e.g. 318 (white cover with red bottom), etc.



**imago** is available with 3 inputs to activate the acoustic and optical signals, which thanks to the programming of the inputs polarities are easy to be linked to any Control Panel (universal version only). The first time you power up it, the siren reads all the inputs and associates them to the correct polarity and stand-by status with no need to program them manually, saving the programming itself on a nonvolatile memory; either they are inputs with positive or negative command, or with or without intrinsic security (command to miss or to give), **imago** links any of them with the associated function.

The battery is steadily monitored and its malfunctioning or discharge immediately signaled to the Control Panel. On top of the automatic protection for preventing wire-cutting actions, **imago** is protected by 2 tamper switches against cover opening and against removal from the wall.

Moreover, in spite of its very slim profile, it hides a strong metal undercover against smashing.

The housing is made of very high-quality anti-UV polycarbonate and its mechanical characteristics are meant to guarantee a long time resistance against all weather conditions.

In the KS-BUS communication's version (only for lares Control Panels) the siren is equipped with a precision temperature sensor **Compass Opening** for to display the outdoor temperature in the **ergo** Ksenia Keypad and for Home Automation applications.

**Compass Opening** for the easiest mounting and installation with strong 6mm inox Steel Bolts.

All **imago** plastic parts are in high-quality thickness Polycarbonate with anti-UV protection and IP43 degree against the worst weather conditions.



It is possible to choose **imago** among 3 different colors for the transparent bottom. Even the front Cover is available in different colors and can be customized on request by screen-printing the installer logo.



**CERTIFICATION**

Europe / CE  
 Europe / EN50131-4 grado 3  
 Italia / IMQ (ongoing)

**PROGRAMMING**

In the KS-BUS version, **imago** is linked to the **lares** Control Panel by means of the 4-wires serial KS-BUS and it can be easily programmed from the Control Panel.

In the stand-alone version, **imago** is equipped with 3 programming Jumpers:

- one for choosing max. Alarm Duration (3 or 10 minutes);
- one for Tamper Exclusion (in case of siren opening, only the tamper relay is activated or even the Alarm functions sound and lights);
- one for Resetting the 3 inputs polarity programming.

**TECHNICAL DATA**

- **Ultra modern design** with original and convenient rotating opening;
- **Solid Polycarbonate UV-resistant housing** (min. 3 mm thickness);
- **Front available in different chromatic solutions** (various colors available);
- **Transparent bottom** in orange, red and blue;
- **Strong metal undercover against smashing;**
- **Wire-cutting action protection;**
- **1 input** for alarm activation (universal version only);
- **1 input** for the main 3 W power LED (universal version only);
- **1 input** for the 2 high-efficiency signalling red LEDs (universal version only);
- **Auto-learning of input polarity;**
- **High Sound Pressure Piezoelectric Buzzer** (>100dBA at 1m);
- **Alarm Duration's Setting;**
- **Tamper Exclusion Programmable** (universal version only);
- **Battery Efficiency Control and signaling output** (500mA OC);
- **Integrated Temperature Sensor** (bus version only), precision  $\pm 0,1^{\circ}\text{C}$ ;
- **PCBA Sealing** (Conformal Coating);
- **Back-up Battery** / 6Vdc-1,2Ah;
- **Temperature Range** / from  $-30^{\circ}$  to  $+60^{\circ}\text{C}$ ;
- **Protection degree** / IP 43;
- **Dimensions (WxHxD)** / 195x330x60 mm;
- **Weight (without Battery)** / Kg 1,200;
- **Weight (with Battery)** / Kg 1,500.

**PARTS INCLUDED**

KSI6300000.3XX\* (universal)  
 or KSI6301000.3XX (version per BUS-KS)

(\* ) the code suffix 3XX indicates the different color option, e.g. .318 (white cover with red bottom), etc

1 Siren complete with PCBA and metal undercover  
 2 sets 6 mm Dia. Bolts & Nuts  
 1 Quick Installation Guide in ITA/EN

**HOW TO ORDER**

Ksenia finished product: see above – alternatively is possible to order covers only (e.g. KSI6901000.340 only cover in beige color, or KSI6901000.3X0 for color Y) - for details please refer to Ksenia Price List.

**divide bus isolator/repeater**

product code KSI2500000.300



divide is a separation board for the KS-BUS

**FUNCTION DESCRIPTION**

divide allows you to separate the KS-BUS in order to:

- dissect a part of the system so that any failure or sabotage of devices will not generate disservice on the whole network;
  - boost the signal on the bus; this amplification allows to increase the extension of the bus for further 500 m.
- Given the nature of the device are not necessary programming of any kind: the central and / or devices continue on the bus to "detect" the other in a transparent manner.

**CERTIFICAZIONI**

Europe CE

**PROGRAMMAZIONE**

No programming needed.

**TECHNICAL DATA**

- **Power Supply** / 13,8Vdc
- **Consumption** / 20mA
- **2 4-wire KS-BUS terminal** (specular in connection)
- **Board Dimension** / 45x75 mm

**PARTI COMPRESSE**

1 Module KSI2500000.300  
 1 Quick Installation Guide in ITA/EN  
 4 Plastic sustainers for installation into "slim" box or metal cabinet

**HOW TO ORDER**

- KSI2500000.300  
 Ksenia finished product



**auxi / pontis / radius / imago / divide**

Sono stati progettati con le seguenti caratteristiche per ridurre l'impatto ambientale:

- Assenza di PVC
- Laminati per circuiti stampati senza piombo e bromo
- Basso assorbimento
- Imballo realizzato per la maggior parte con fibre riciclate e materiali provenienti da fonti rinnovabili

**auxi / pontis / radius / imago / divide**

*Has been designed and manufactured for the environment as follows:*

- *Absence of PVC*
- *PCB laminates free from Brome and Lead*
- *Low consumption*
- *Packaging realized mainly with recycled fibers and materials*



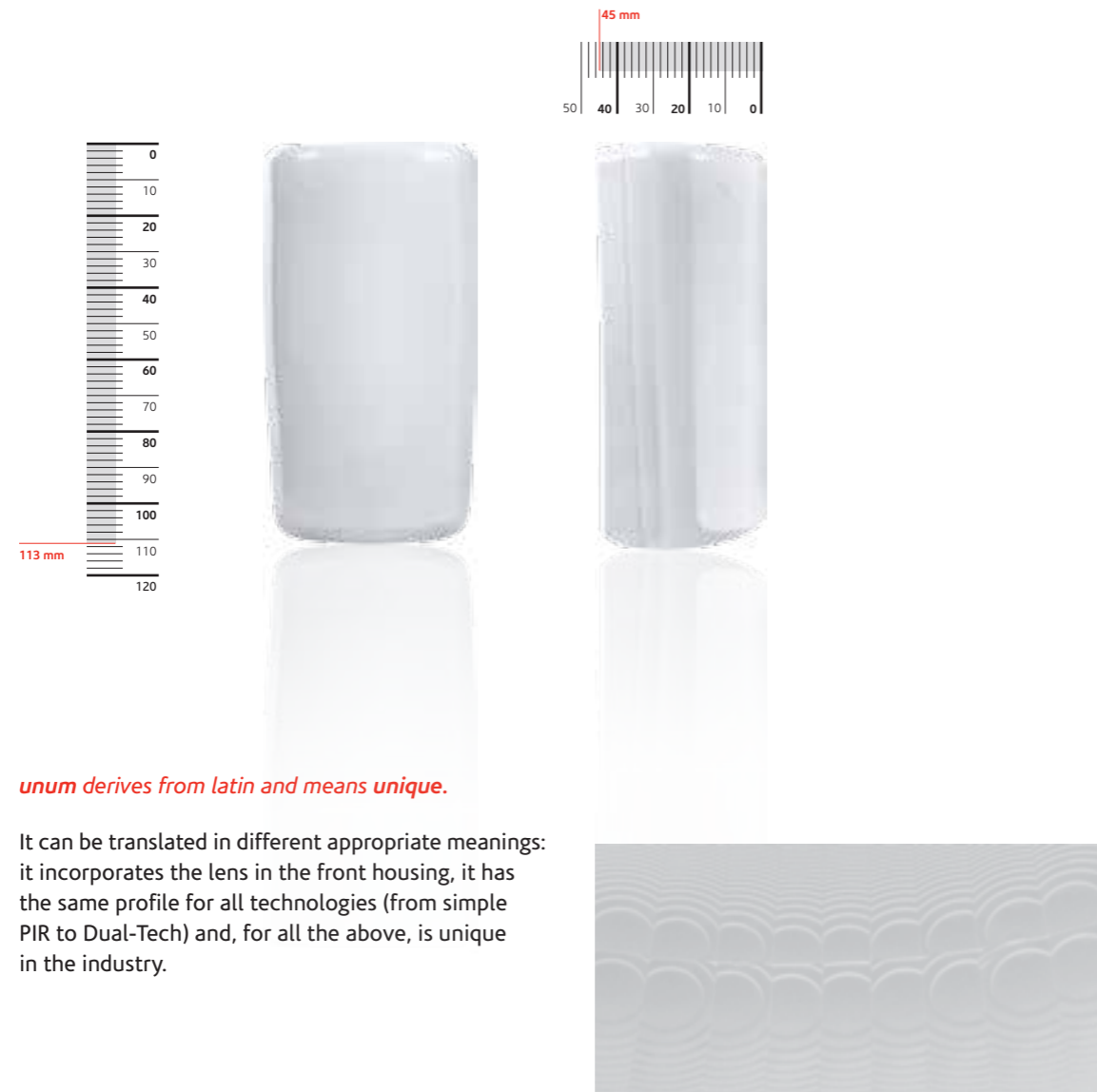
**Ksenia**  
security innovation

MOTION DETECTORS

**unum/ ianitor**

# INDOOR MOTION DETECTORS

## unum series



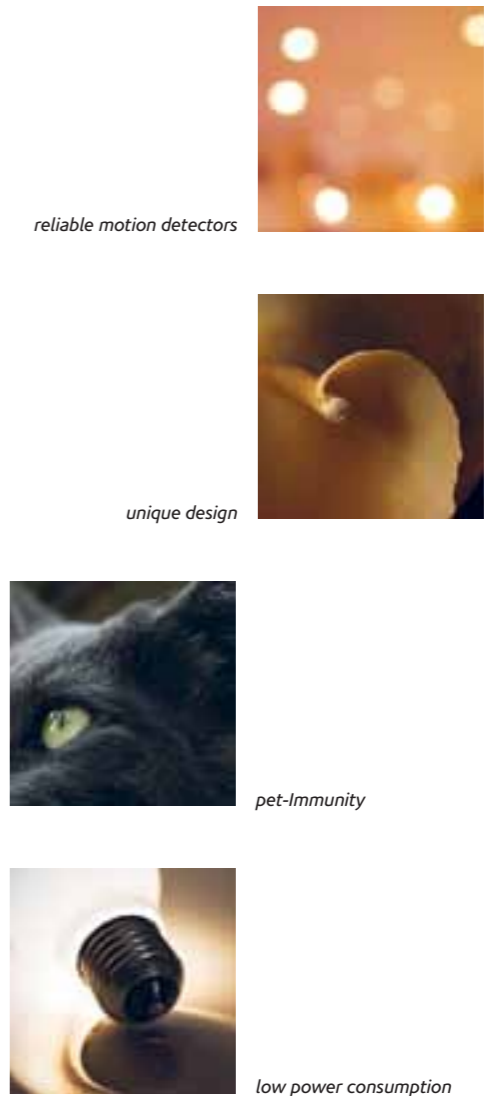
*unum derives from latin and means unique.*

It can be translated in different appropriate meanings: it incorporates the lens in the front housing, it has the same profile for all technologies (from simple PIR to Dual-Tech) and, for all the above, is unique in the industry.

lens detail viewed from inside

### why unum

- **because** they are "state-of-the-art" Professional Motion Detectors realized with the very best components and materials to guarantee, at first place and without compromises, the highest possible degree of reliability available from the most modern Technologies;
- **because** they have a unique aesthetic- minimalist and discreet-different from the rest, being the result of many studies and suggestions collected from Interior Architects and End-users, who wanted something that could actually merge, integrate with their architecture styles to the point to become themselves active players to that instead of being something "not too nice but necessary to be installed" to the purpose of having an intrusion system up and running;
- **because** unum detectors apply the new ELT Technology (Embedded Lens Technology), which takes advantage from decades of experience in designing professional lens for motion detection purposes, thus enabling to achieve the objective to literally make the lens disappearing from the detector profile, thanks to very sophisticated techniques which also use the same special material of the lens (HDPE), to basically allow it to be fully embedded, completely integrated in the front cover itself;
- **because** they do not need, unlike other products in the market, to have on their front side all those colored lights (LEDs) which very often the installers need to disable because too annoying for the end-customers;
- **because** all the different detector models, although having different functions, like as the simple PIR or Dual-Tech, with or without Pet Immunity, all of them have the same design and size, so to avoid the unpleasant view of different detectors shapes on the walls, too often in the same room or environment;
- **because** they have a truly wide operating temperature range;
- **because**, they are eco-friendly, in line with Ksenia Security Company's belief, all unum utilize components like as DSP ASIC with very low consumption.



reliable motion detectors

unique design

pet-Immunity

low power consumption

## PIR Motion Detector series unum

product code KSI5101000.300



The PIR Motion Detectors unum are professional state-of-the-art motion sensors engineered with the world's best components and materials. These detectors provide the highest degree of reliability in motion detection, without the risk of false alarms. Additionally the UNUM series introduces in the market the only detectors with trendy invisible lens, i.e. the lens integrated into the front cover thanks to E.L.T. (Embedded Lens Technology) which takes advantage from decades of experience in designing professional lens. The PIR side starts with a EvenEye lens and a top-quality infrared detector. Next, a modern DSP ASIC (patent-pending) converts the infrared detector signal into digital form, for best reliability and stability. Finally, the signal is evaluated by the ASIC's HighBar processor, for "best-in-class" false alarm rejection with excellent intruder detection.

### HOW TO ORDER

- KSI5101000.300  
PIR unum series indoor detector

### CERTIFICATIONS

Region / Certifications  
Europe / RoHS, CE, EN50131-2-2 Grade2

### TECHNICAL DATA

- IR Sensor / Dual-Element-Pyroelectric;
- Power Supply / 8-16 Vdc; 24 mA at 12 Vdc;
- Alarm Relay  
Solid State, 60V, 50 mA, isolation 1500 Vrms;
- Tamper Switch  
Form A contact, normally closed (NC) 50 mA at 30 Vcc;
- Events Detection  
HighBar false alarm rejection processor;
- RF Immunity / 20 V/m, 10-1000 MHz; 10 V/m, 1-2 Ghz;
- White Light Immunity / 6500 lux;
- Sensitivity / Selectable: 2-event or 3-event;
- Operating Temperature Range -10°C to +55° C (+14°F to +131°F);
- Housing Material / Base: ABS, Cover: HDPE;
- Overall Dimensions / 113x60x45 mm (HxWxD).

### OPTIONAL ACCESSORIES

- KSI5900000.000  
Wall-Mounting Bracket

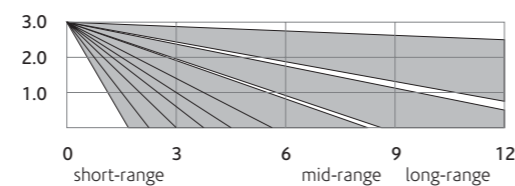
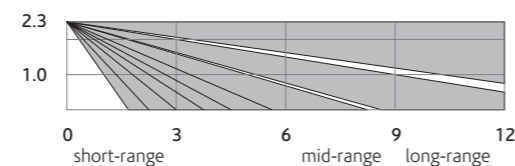
### MAIN FUNCTIONS DESCRIPTION

#### Alarm processing

Dual-element detector fields-of-view alternate between (+) and (-) polarity. HighBar-qualified signal events are counted as "pulses" exclusively when polarity alternates. Depending on sensitivity setting, (+,-), (-,+), (+,-,+) or (-,+,-) will cause an alarm.

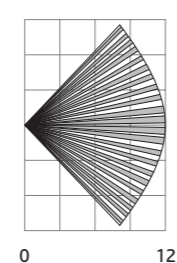
#### Range

12 meters in sensor-facing direction  
12 meters at 45°angle from sensor-facing direction



#### Optical Fields-of-View

Long-range / 44  
Mid-range / 36  
Short-range / 18



Sensor Optical View Pattern  
(top view, in meters)

## PIR-Pet Immune Motion Detector series unum

product code KSI5101100.300



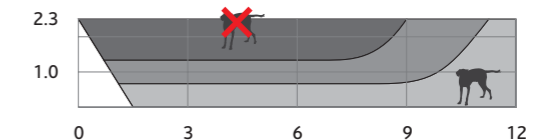
### PET IMMUNITY

The PI-PIR Motion Detector unum is designed to allow the presence of pets (10 kg or lighter) without signaling an alarm. It includes a special micro-element lens array that produces much stronger optical signals for humans than for pets. Furthermore, the optical sensitivity of each PI-PIR Motion Detectors unum is factory-calibrated to ensure accurate discrimination between humans and pets.

*note: Pets come in many varieties.*

*Some pets (especially larger ones with very short hair), even if lighter than 10 kg, may produce enough infrared radiation to cause alarms. PI-PIR Motion Detectors UNUM users are strongly advised to test the sensor with their own pets, in order to verify that the PI-PIR Motion Detectors UNUM will not signal an alarm when their pets are moving within its fields of view.*

The diagram below shows the PI-PIR Motion Detectors unum's zones of greatest human/pet discrimination. The PI-PIR Motion Detectors UNUM should be mounted so that pets will occupy only the lighter-colored spaces.



### HOW TO ORDER

- KSI5101100.300  
PIR Pet Immune unum series indoor detector

## Dual-Tech Motion Detector series unum

product code KS15102000.300



The DT Motion Detectors unum are professional state-of-the-art motion sensors engineered with the world's best components and materials. Every aspect of these sensors provides the most reliable motion sensing without the risk of false alarms. Additionally the unum series introduces in the market the only detectors with trendy invisible lens, i.e. the lens integrated into the front cover thanks to E.L.T. (Embedded Lens Technology) which takes advantage from decades of experience in designing professional lens by adopting its own material to design the entire cover too.

DT Motion Detectors unum include two motion sensing systems: microwave Doppler motion sensing and PIR motion sensing. Together, the two systems' signals are evaluated by proprietary signal processing algorithms, which reject false alarm conditions while detecting intruders.

The DT Motion Detector unum microwave system includes a modern, compact, DRO-based micro-strip Doppler transceiver, with PCB "patch" antennas. The Doppler signal is digitally processed to detect intruders and reject distractions. Constant-motion signals (such as fans) are de-emphasized, and fluorescent light frequencies are digitally removed.

The PIR side starts with a Even Eye lens and a top-quality infrared detector. Next, a modern DSP ASIC (patent-pending) converts the infrared detector signal into digital form, for best reliability and stability. Finally, the signal is evaluated by the ASIC's HighBar processor, for "best-in-class" false alarm rejection with excellent intruder detection.

### HOW TO ORDER

- KS15102000.300  
DT unum series indoor detector

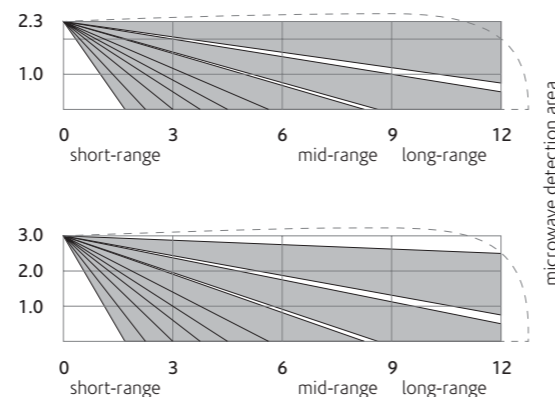
### CERTIFICATIONS

Europe / RoHS, CE, EN 300 440, EN50131-2-4 Grado 2

### TECHNICAL DATA (in addition to what stated above)

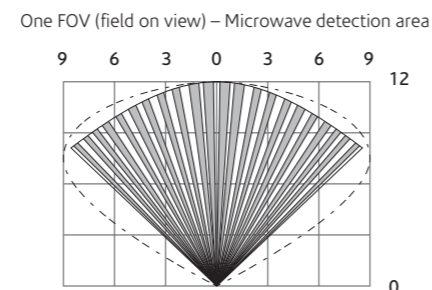
- Microwave Operating Freq. / around 10GHz. (see unit label);
- Events Detection / Sure Spot processing engine;
- RF Immunity / 20 V/m, 10-1000 MHz; 10 V/m, 1-2 GHz;
- Microwave Range / 20%-100% adjustable;
- Lighting rejection / selectable 50 or 60 Hz.

**Range**  
12 meters in sensor-facing direction  
12 meters at 45° angle from sensor-facing direction  
**Sensor Optical View Pattern**  
(side view, in meters)



**Optical Fields-of-View**  
Long-range 44 / Mid-range 36 / Short-range 18

**Diagramma di copertura visiva (vista dall'alto, in metri)**



*Dual-Tech Motion Detector*  
**Pet Immune**



## Dual-Tech Pet Immune Motion Detector series unum

product code KSIS102100.300

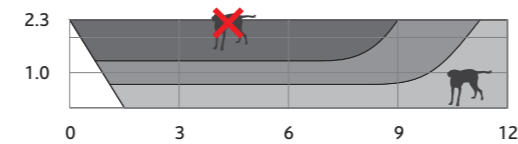


48 INDOOR MOTION DETECTOR / unum series



The DT-PI unum series join the advantages of the Dual-Technology described above and Pet Immunity. The best Technology to server the customer.

The diagram below shows the PI-PIR Motion Detectors unum's zones of greatest human/pet discrimination. The DT-PI detectors unum should be mounted so that pets will occupy only the lighter-colored spaces.



### HOW TO ORDER

- KSIS102100.300  
DT Pet Immune unum series indoor detector

## Dual-Tech Pet Immune Anti-Masking Motion Detector series unum

product code KSIS102110.300

The motion detectors unum DT-AM are professional motion detectors of who use the benefits of the Dual-Technology, pet immunity and anti-masking. They represent the top range of detectors for indoor of Ksenia Security. The unum DT-AM detector integrates directly on the card end of line resistors, selected to fit each plant type with comfortable removable jumpers.

### OPERATION OF ANTI-MASKING

The mask is detected by two analysis, running simultaneously: the first is an alteration of normal balance between alarm signals from Infrared (PIR) and microwave derived from the analysis continuous signal, using a reduced sensitivity of the microwave to minimize the effect of continuously moving objects that could affect only the microwave. You can disable this type of analysis acting on a jumper. The second analysis is based on an area of supervision (within one meters from the sensor): a person entering in the safe zone will activate the detection process of masking. This second function cannot be disabled.



Outdoor motion detector  
**ianitor**

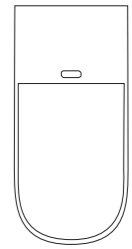
## Triple-Tech Motion Detector series **ianitor**

product code KSI5303000.300



## Triple-Tech Motion Detector Anti-Masking series **ianitor**

product code KSI5303010.300



The **ianitor TRIPLE TECH** Motion Detector is a professional state-of-the-art motion sensor engineered with the world's best components and materials, specially designed for installation externally, to ensure the highest degree of reliability in the detection of movement even in the most severe temperature and humidity situations, without incurring in false alarms that would be generated by many causal commonly found in open spaces.

### Motion detection systems

*ianitor TRIPLE TECH* Motion Detector includes two motion sensing systems: one microwave Doppler motion sensing, one PIR and one DFIR (Double Frequency PIR) motion sensing, with directional motion sensing to reject false alarms caused by swaying objects. Together, the two systems' signals are evaluated by proprietary signal processing algorithms, which reject false alarm conditions while detecting intruders.

### The **ianitor TRIPLE TECH**

Motion Detector microwave system includes a modern, compact, DRO-based micro-strip Doppler transceiver, with PCB "patch" antennas. The Doppler signal is digitally processed to detect intruders and reject distractions. Constant-motion signals (such as fans) are de-emphasized, and fluorescent light frequencies are digitally removed. The optical side starts with an EvenEye lens and a top-quality specially-designed DFIR infrared detector. Next, a modern microcontroller converts the infrared detector signal into digital form, for best reliability and stability. Finally, the signal is evaluated with anti-sway processing, for "best-in-class" false alarm rejection with excellent intruder detection.

### ANTI-SWAY FUNCTION

The **ianitor TRIPLE TECH** Motion Detector is a motion sensor, and it will normally detect swaying motion. However, the outdoor environment may contain swaying objects that are not intruders (for example, wind-blown trees). Thus, to suppress "nuisance alarms", the **ianitor TRIPLE TECH** Motion Detector provides an "anti-sway" function to require that, before motion is indicated, a moving object must make directional progress across the sensor's fields of view. This function can be enabled or disabled by a programming jumper. Obviously, with this feature enabled, you must an extended in front of the sensor is needed to Report an alarm. For details please refer to installation instructions (see paragraphs 8 and 9).

### OPERATION OF ANTI-MASKING

The mask is detected by two analysis, running simultaneously: the first is an alteration of normal balance between alarm signals from Infrared (PIR) and microwave derived from the analysis continuous signal, using a reduced sensitivity of the microwave to minimize the effect of continuously moving objects that could affect only the microwave. You can disable this type of analysis acting on a jumper. The second analysis is based on an area of supervision (within one meters from the sensor): a person entering in the safe zone will activate the detection process of masking. This second function cannot be disabled.

### TECHNICAL DATA

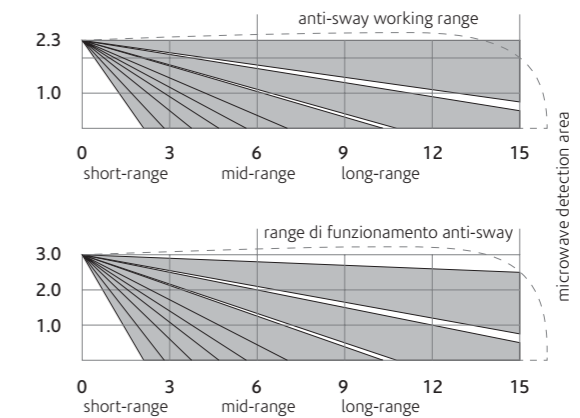
#### Range

15 meters in sensor-facing direction

15 meters at 45° angle from sensor-facing direction

Sensor Optical View Pattern (side view, in meters)

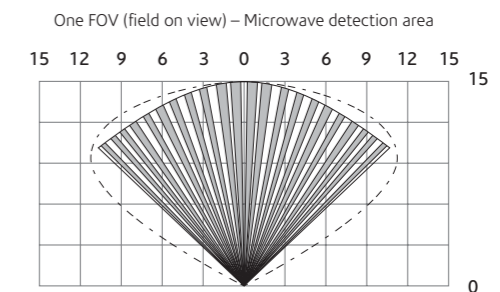
#### Diagramma di copertura visiva (vista laterale, in metri)



### Optical Fields-of-View

Long-range 88 / Mid-range 38 / Short-range 26

### Sensor Optical View Pattern (top view, in meters)



**CERTIFICATIONS**

Europe / CE, EN50131-2-4 Grado 2

**TECHNICAL DATA**

- **IR Sensors (2)** / Dual-element + Quad-element;
- **Power Supply** / 8-16 Vdc; 50 mA at 12 Vdc;
- **Alarm Relay** / Solid state, Form A (NC).  
50 mA at 30 Vdc, 1500 Vrms isolation;
- **Alarm, Trouble Signal Outputs** / NPN open-collector to (-), 50 mA Max., NC no alarm; NC no trouble, Remote LED Enable, DFIR Range, DFIR;
- **Sensitivity Inputs** / Logic levels from (-):  
1Vdc=LOW; 3Vdc=HIGH; Max.=16 Vdc
- **Tamper Switches (cover/wall)** / Form A (NC).  
50 mA at 30 Vdc
- **Housing Material** / PC housing, HDPE lens
- **Dimensions** / 171×76×61 mm (H×W×D)
- **Lighting Rejection** / Selectable: 50 or 60 Hz
- **Microwave Operating Freq**  
Around 10 GHz See unit label;
- **Events Detection**  
DFIR anti-sway false alarm rejection processor;
- **RF Immunity** / 20 V/m, 10-1000 MHz; 10 V/m, 1-2 GHz;
- **White Light Immunity** / 25000 lux;
- **Sensitivity** / DFIR
- **Selectable** / short-walk or long-walk
- **Range** / Microwave 20%-100% adjustable
- **Operating Temperature Range**  
-30 °C to +55 °C (-22°F to +131°F)
- **Storage** / -40 °C to +60 °C (-40 °F to +140 °F)

**HOW TO ORDER**

- **KSI5303000.300**  
TT Pet Immune ianitor series outdoor detector
- **KSI5303010.300**  
TT Pet Immune Anti-Masking ianitor series outdoor detector

**OPTIONAL ACCESSORIES**

- **KSI5900001.300**  
Mounting Bracket



Outdoor mounting view



ianitor wall-mounting Bracket