# Installation manual

**lares 4.0**

Ksenia
security innovation

# 1. INTRODUCTION

Instruction for mounting and wall fixing the metal container, inside which the lares 4.0 control panel is housed, the connections required and a brief mention about the different programming methods reserved to the installer, including a quick overview of first access, are described in this manual.
The configuration of the control panel is the argument of "lares 4.0 Programming Manual".
The information described here is valid for all the models of lares 4.0 control panels.

## 1.1 Overview

lares 4.0 control panels represent the most advanced and reliable Solution in the Digital Revolution (IoT), in terms of Physical Security (Intrusion, Video Verification, Access Control) and Home & Building Automation (lighting control, heating/air conditioning, irrigation, roller shutters, automation and load control, access control, etc.).

All the models of lares 4.0 are hybrid (wired and wireless) and have a number of outputs equal to the number of inputs for managing any type of automation. All of them can be managed by a single user APP (lares 4.0) and programmed through the Ksenia Pro installer APP installed any mobile device, by the installer.
The Installer APP (Ksenia Pro) allows you to centralize and geolocalize all the installed units and therefore to offer maximum assistance to the end customer by receiving push notifications also for technological alerts.
In fact, by implementing a web server inside the motherboard, you do not need any program to be installed on the PC: it is possible to program the control panel, perform all the management operations available in the system through the integrated installer WEB-SERVER, connecting to the Ksenia SecureWeb cloud for the remote management and programming via mobile APP.

Regardless of the control panels size, the motherboard is native with Ethernet interface, 8 input terminals and 2 terminals that can be configured as inputs or outputs.
The control panel is available in 2 different versions: for smaller sizes the control panel has only one BUS (compatible, except for some exceptions, with all existing BUS devices that can be updated by the control panels) while for all the others it already integrates the double BUS and the 868MHz bi-directional wireless transceiver (compatible with all existing Ksenia wireless devices).

Particular attention is always put to the ease of installation and for this reason all the connection terminals are removable. On all versions and regardless of the control panel size, the cards have an SD card slot to expand the available memory, in addition to receiving directly on board (without communication BUS to maximize the transit speed of information and data ) both 3G or 4G/LTE module (or 4G-LTE/IP via gemino IoT communicator) and, where necessary, the PSTN module. In any case, the sending of voice messages, emails, sms, push notifications, Contact ID and SIA DC-09 level III protocol to the Surveillance Centers is guaranteed.
The control panel board can be installed inside existing metal containers of varying sizes. In addition to the control panel motherboard with its add-on modules, it allows you to allocate up to 7 expansion modules, the 18Ah back-up battery and a 50W switching power supply.

## 1.2 Main functions

| features | lares 4.0 wls 96 | lares 4.0 - 16 | lares 4.0 - 40 | lares 4.0 - 40 wls | lares 4.0 - 140 wls | lares 4.0 - 644+ |
|---|---|---|---|---|---|---|
| **Zones management** | | | | | | |
| Number of Zones (of wich radio) | 96 (96) | 16 (16) | 40 (40) | 40 (40) | 140 (64) | 644 (64) |
| Number of wired Zones | 40 | 16 | 40 | 40 | 140 | 644 |
| Support for IP Zones | ● | ● | ● | ● | ● | ● |
| Custom EOL Balances | 1 | 2 | 4 | 4 | 14 | 64 |
| Number of Outputs (of which radio) | 18 (16) | 18 (16) | 40 (40) | 40 (40) | 140 (128) | 644 (128) |
| Virtual Outputs (timer) | ● | ● | ● | ● | ● | ● |
| **On board features** | | | | | | |
| I/O terminal | 2 (outputs only) | 2 | 2 | 2 | 2 | 2 |
| Inputs | 4 | 8 | 8 | 8 | 8 | 8 |
| 868MHz radio interface | ● | - | - | ● | ● | ● |
| BUS interface | 1 | 1 | 1 | 2 | 2 | 2 |
| Indoor Siren Connector | ● | - | - | - | - | - |
| Partitions | 5 | 6 | 12 | 12 | 20 | 30 |
| Arming Modes | 8 | 8 | 32 | 32 | 64 | 128 |
| Hashtags | 2 | 2 | 12 | 12 | 20 | 64 |
| Rooms | 8 | 12 | 24 | 48 | 64 | 128 |
| Timer for Scheduler | 4 | 8 | 64 | 64 | 64 | 128 |
| Event log | 1500 | 1500 | 1500 | 5000 | 10000 | 10000 |
| Number of users | 16 | 16 | 64 | 128 | 512 | 1024 |
| Programmable Logics | 4 | 1 | 8 | 16 | 32 | 64 |
| Chrono-thermostats | 1 | 0 | 8 | 8 | 24 | 40 |
| Meters (energy) | 2 | 0 | 3 | 6 | 12 | 18 |
| **Scenarios and Notification** | | | | | | |
| Scenarios | 8 | 8 | 32 | 32 | 128 | 512 |
| Configurable event groups for Scenario | 32 | 32 | 64 | 64 | 256 | 1024 |
| Contact Lists | 8 | 8 | 8 | 8 | 16 | 32 |
| Contact ID receivers (pairs) | 1 | 1 | 3 | 3 | 3 | 3 |
| SIA receivers (pairs) | 1 | 1 | 3 | 3 | 3 | 3 |
| Configurable event groups for Notifications | 16 | 16 | 32 | 32 | 64 | 128 |
| **IP Expandability** | | | | | | |
| IP Cameras | 4 | 4 | 12 | 12 | 20 | 30 |
| ergo-T/ergo-T plus | 1 | 2 | 4 | 4 | 8 | 14 |
| gemino IoT | 1 | 1 | 1 | 1 | 1 | 1 |
| porta 4.0 | 1 | 1 | 1 | 1 | 1 | 1 |
| IP Supervisors (Control 4 and Crestron integration) | 1 | 1 | 1 | 1 | 1 | 1 |
| **BUS Expandability** | | | | | | |
| User interfaces (ergo, ergo-S/M, volo, volo-in) | 3 | 6 | 24 | 24 | 40 | 64 |
| I/O modules (auxi, auxi-10, auxi relais, auxi-H, auxi-L) | 6* | 4** | 24 | 24 | 64 | 250 |
| Sirens (radius, imago) | 1 | 6 | 24 | 24 | 40 | 64 |
| Isolators (divide, opis) | 2 | 4 | 12 | 12 | 20 | 32 |
| Transceivers (duo) | 0 | 2 | 2 | 1 (2***) | 1 (2***) | 1 (2***) |
| Home automation sensors (domus) | 1 | 0 | 8 | 8 | 32 | 64 |
| Load controllers (energia) | 1 | 0 | 1 | 3 | 6 | 6 |
| **Wireless Expandability** | | | | | | |
| Sensors (poli, nanus, unum, nebula, velum, matrix) | 32 | 16 | 40 | 40 | 64 | 64 |
| I/O module (auxi wls) | 8 | 8 | 20 | 20 | 64 | 64 |
| Sirens (imago wls) | 3 | 3 | 3 | 3 | 5 | 5 |
| Repeaters (duo) | 2 | 2 | 2 | 2 | 2 | 2 |
| Keypads (ergo wls) | 4 | 2 | 3 | 3 | 4 | 4 |
| Remote controls (opera) | 16 | 16 | 64 | 64 | 64 | 64 |

* Supports only auxi and auxi-H.

** Does not support auxi-H.

*** Second BUS receivers can be used disabling on board Transceiver.

| Hardware | |
|---|---|
| Power supply voltage | 15 Vcc ± 1% |
| Central Power Consumption (max) | 100mA |
| Temperature range | +5 °C / +40 °C    23 °F / 131 °F |
| Degree of protection IP | IP34 |

## 1.3 Compatibility

Content of this document is compatible with all lares 4.0 versions.

### 1.3.1 lares 4.0 versions and characteristics

- KSI1400016.300 - lares 4.0 - 16
- KSI1400040.300 - lares 4.0 - 40
- KSI1410040.300 - lares 4.0 - 40 wls
- KSI1410140.300 - lares 4.0 - 140 wls
- KSI1410644.300 - lares 4.0 - 644 wls

- KSI1400016.300 - lares 4.0 - 16:

up to 16 IN + 16 OUT with 6 partitions - native with Ethernet interface. (no wireless on board - requires a duo transceiver). Dedicated APP for Installer (Ksenia Pro) and User (lares 4.0).

- KSI1400040.300 - lares 4.0 - 40

up to 40 IN + 40 OUT with 12 partitions - native with Ethernet interface. (no wireless on board - requires a duo transceiver). Dedicated APP for Installer (Ksenia Pro) and User (lares 4.0).

- KSI1410040.300 - lares 4.0 - 40 wls

up to 40 IN + 40 OUT with 12 partitions native with Ethernet interface and 868 MHz bidirectional wireless (DPMS technology - Dynamic Power Management System) and double BUS on board.
Dedicated APP for Installer (Ksenia Pro) and User (lares 4.0).

- KSI1410140.300 - lares 4.0 - 140 wls

up to 140 IN + 140 OUT with 20 partitions native with Ethernet interface and 868 MHz bidirectional wireless (DPMS technology - Dynamic Power Management System) and double BUS on board.
Dedicated APP for Installer (Ksenia Pro) and User (lares 4.0)

- KSI1410644.300 - lares 4.0 - 644 wls

up to 644 IN + 644 OUT with 30 partitions (and beyond on specific project): native with Ethernet interface and 868 MHz bidirectional wireless (DPMS technology - Dynamic Power Management System) and double BUS on board.
Dedicated APP for Installer (Ksenia Pro) and User (lares 4.0).

*(\*) lares 4.0 - 644+ wls: it is possible to agree a customization of lares 4.0, for projects larger than 644 zones and/or outputs already available.*

## 1.3.2 lares 4.0 wls 96 and characteristics

- KSI1410096.30x - lares 4.0 wls 96 Kit (polycarbonate box and power supply)
- KSI1413096.30x - lares 4.0 wls 96 Kit (polycarbonate box, power supply and 3G module)
- KSI1410096.3xx - lares 4.0 wls 96 Kit (polycarbonate box, power supply and keypad)
- KSI1413096.3xx - lares 4.0 wls 96 Kit (polycarbonate box, power supply, keypad and 3G module)

- KSI1410096.30x - lares 4.0 wls 96 Kit

Able to manage up to 96 overall zonas including 40 wireless and 18 exits. Possible expansion wired on BUS: up to 3 user interfaces (to choose between ergo keypads and volo / volo-in proximity readers), 1 domus to manage to manage the thermostat functions, 6 expansion modules (to choose between auxi and auxi-H), 2 between opis and divide, 1 siren (imago or radius).
IP peripheral management (ergo-T, IoT geminium, port 4.0, cameras).
Supplied with white or black polycarbonate plastic box, 25W power supply and indoor siren.

- KSI1413096.30x - lares 4.0 wls 96 Kit

Same functions of the model described above with the 3G module and related antenna included.

- KSI1410096.3xx - lares 4.0 wls 96 Kit

Same features of the model described above with ergo S keypad included (same colour as box).

- KSI1413096.3xx - lares 4.0 wls 96 Kit

Same features of the model described above with the 3G module and related antenna included, ergo S keypad (same colour as box).

## 1.4 Technical data

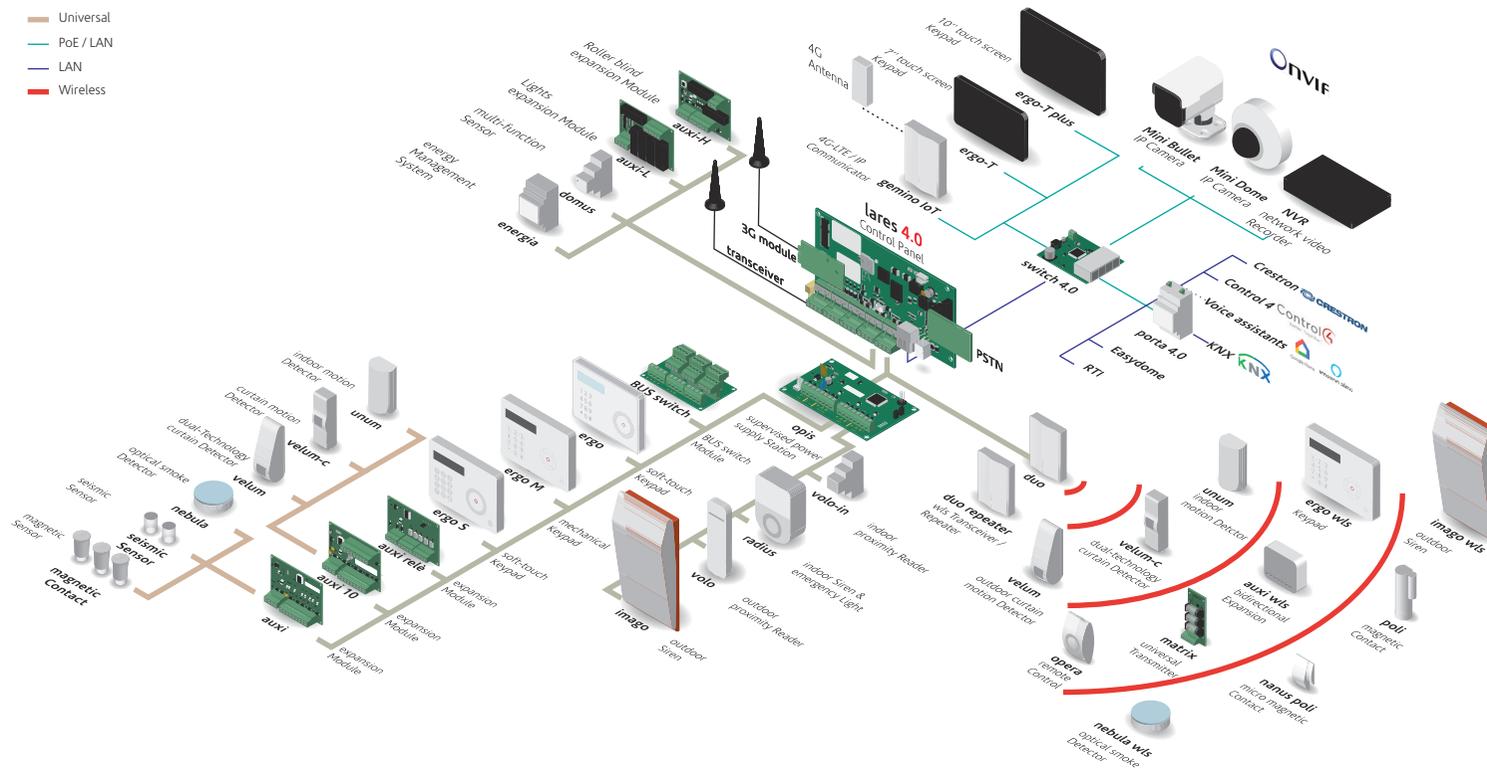| lares 4.0 | wls 96 | 16 | 40 | 40 wls | 140 wls | 644 wls |
|---|---|---|---|---|---|---|
| | | | | | | |
| Power supply voltage | 230 V~ -15/+10% 50 Hz 0.4A | | | 230 V~ -15/+10% 50 Hz 0.8A | | |
| Power Supply Battery Charger (Type A norm EN50131-6) | 15V ± 1% 1.7A | | | 15V ± 1% 3.5A | | |
| Current consumption (med./ stand-by) | 50mA | 40mA | 40mA | 60mA | 60mA | 60mA |
| Current consumption (max.) | 80mA | 70mA | 70mA | 100mA | 100mA | 100mA |
| Maximum current available for external devices | 160 mA grade 2 | 580 mA grade 2 230 mA grade 3 | | 1500 mA grade 2 600 mA grade 3 | | |
| Max. output voltage ripple | 120 mV | | | | | |
| Max. current for battery charging | 800 mA | | | | | |
| Maximum battery recharge time to 80% | 3 h | 10 h | | 24 h | | |
| Deep discharge voltage protection | 10 V | | | | | |
| Low battery threshold (restore) | <11 V   (13 V) | | | | | |
| Low voltage threshold | 12 V Voltage below which the power supply output fault is signaled | | | | | |
| Allocable batteries | 2Ah | 7Ah | | 18Ah | | |
| Maximum number of inputs | 96 | 16 | 40 | 140 | 644 | |
| Built-in inputs (fixed + programmable) | 4 | 8 | 8 | 8 | 8 | |
| Maximum number of outputs | 18 | 16 | 40 | 140 | 644 | |
| Ethernet connectivity management | YES | | | | | |
| Power supply fault detection | YES | | | | | |
| Over voltage protection | YES (17 V) | | | | | |
| Combinations of Digital Key | More than 4 billions | | | | | |
| Alarm transmission system | SP2, DP1, SP4, DP3 | | | | | |
| Time for generation and transmission of alarm messages | 3 sec. | | | | | |
| Time for detection and presentation failures | 10 sec. | | | | | |
| Protection class | IP 34 | | | | | |
| Security grade | 2 | 3 | | | | |
| Environmental class | II | | | | | |
| Isolation Class | I | | | | | |
| Overall dimensions (WxHxD) | 297x222x58 mm | 255x295x80mm - 325x400x90 mm - 325x440x90 mm | | | | |
| Weight (with battery) | 2.3 Kg (4.5 Kg) | 4.2 Kg (10 Kg) | | | | |
| Operating range | +5 / +40 °C | | | | | |
| Humidity (not condensed) | 95 % | | | | | |

## 1.5 lares 4.0 control panel and its peripherals

The following image offers a general overview of lares 4.0 and all the compatible peripherals that can be connected via BUS - Wireless and IP.

# FULL INSTALLATION CHART



**Legend**

— KS-BUS 485
— Universal
— PoE / LAN
— LAN
— Wireless

Roller blind expansion Module

Lights expansion Module

multi-function Sensor

energy Management System

**auxi-H**

**auxi-L**

**domus**

**energia**

10" touch screen Keypad

7" touch screen Keypad

4G Antenna

**ergo-T plus**

**ergo-T**

4G-LTE / IP Communicator

**gemino IoT**

**Mini Bullet** IP Camera

**Mini Dome** IP Camera

**NVR** network video Recorder

**ONVIF**

**lares 4.0** Control Panel

**3G module**

**transceiver**

**switch 4.0**

**Crestron**

**Control 4 Control**

**Voice assistants**

**porta 4.0**

**Easydome**

**KNX**

**RTI**

**PSTN**

indoor motion Detector

curtain motion Detector

dual-Technology curtain Detector

optical smoke Detector

**unum**

**velum-c**

**velum**

**nebula**

seismic Sensor

magnetic Sensor

**seismic Sensor**

**magnetic Contact**

**auxi**

**auxi 10**

**auxi relè**

**ergo S**

**ergo M**

**ergo**

**BUS switch**

soft-touch Keypad

mechanical Keypad

soft-touch Keypad

expansion Module

expansion Module

expansion Module

BUS switch Module

supervised power supply Station

**opis**

**volo-in**

**volo**

**imago**

**radius**

indoor Siren & emergency Light

indoor proximity Reader

outdoor proximity Reader

outdoor Siren

**duo**

**duo repeater** wls Transceiver / Repeater

**velum**

indoor Curtain motion Detector

outdoor Curtain motion Detector

**opera** remote Control

**unum** indoor motion Detector

**velum-c** dual-Technology curtain Detector

**matrix** universal Transmitter

**nebula wls** optical smoke Detector

**auxi wls** bidirectional Expansion

**nanus poli** micro magnetic Contact

**ergo wls** Keypad

**poli** magnetic Contact

**imago wls** outdoor Siren

**KSenia** security innovation

# 2. INSTALLATION

**Before starting with the installation, choose an appropriate site where to install the control panel, following the recommendations below:**

- Choose a vertical flat surface, with sufficient space around for installation and the opening operations.
- For an optimal wireless transmission, install the panel to an height of at least 150 cm from the floor, as much as possible centrally located with respect to the peripherals. Avoid installations in cellars or in proximity of obstacles that can disturb the propagation of radio waves, like huge metal or concrete beams, electrical frames, big White Goods or large metallic masses.
- Choose a place difficult to reach by thieves and accessible by the user, better if protected by one or more motion sensors.
- At the entrance, we suggest to consider the installation of just one keypad.

## 2.1 lares 4.0 control panel description and connections details

The main parts of the lares 4.0 system are identified below.
The image also shows the Power Supply connections: pay attention to the protection ground connection.
The large slot in the metal box bottom allows a convenient passing of cables for wiring the peripheral devices, even in the case of large systems.

- Figure 1 -
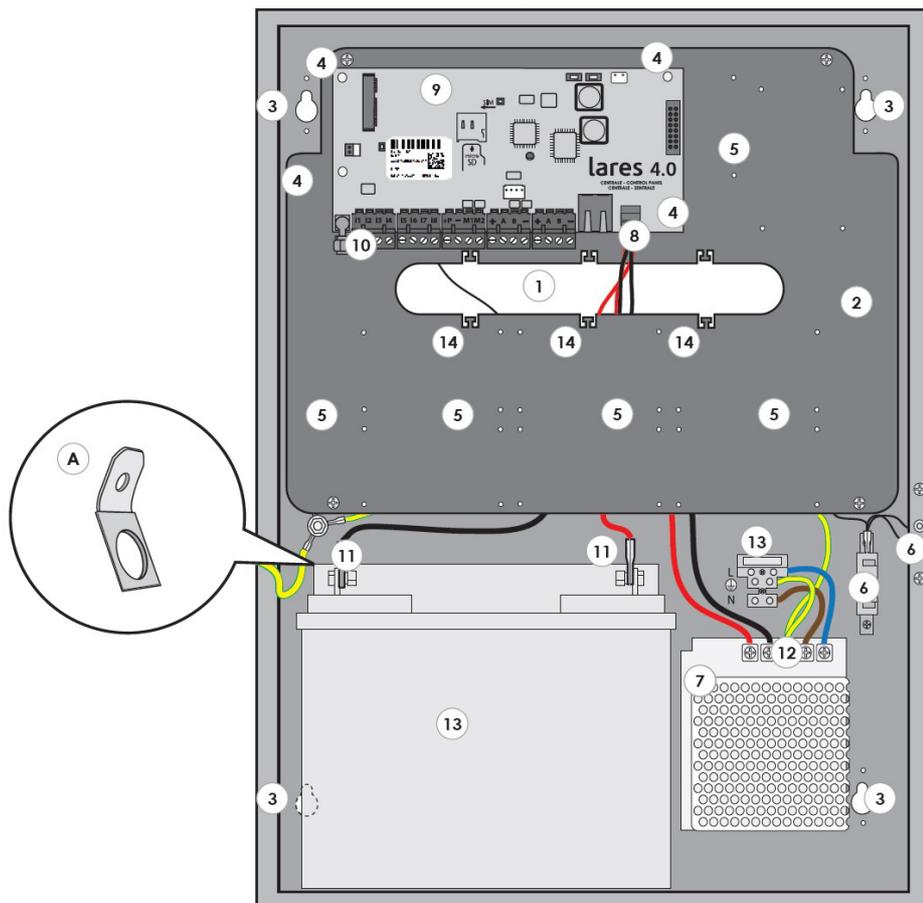
| 1. | Large slot for passing cables. |
|---|---|
| 2. | Removable metal plate. |
| 3. | Bottom fixing holes. |
| 4. | Support for motherboard. |
| 5. | Support for motherboard expansion modules. |
| 6. | Tamper micro-switch. |
| 7. | 18Ah battery. |
| 8. | Cable Included for connecting the Power Supply and the Battery.<br>The two terminals without fastons are for the Power Supply (15Vdc), the two connectors with fastons are for the Battery 12V. |
| 9. | Iares 4.0 motherboard. |
| 10. | Connection terminals. |
| 11. | Battery terminals. If necessary use the included faston adapters (A). |
| 12 | Power Supply unit terminals. |
| 13. | 2A fuse. |
| 14. | Holes for cables fixing. |

## 2.1.1 Wall mounting instructions

In order to correctly install the metal cabinet and the components inside it, please follow the instructions here below:
1. Fix the metal box on the wall, height ≤ 2mt, using screws Ø6mm (included).
2. Wire the cables as shown in picture "- Figure 1 -" page 11 .
3. Ensure the cables to the fixing holes (see "- Figure 1 -" page 11 ) using plastic clamps (Not included).

- Figure 2 -



Removable metal plate
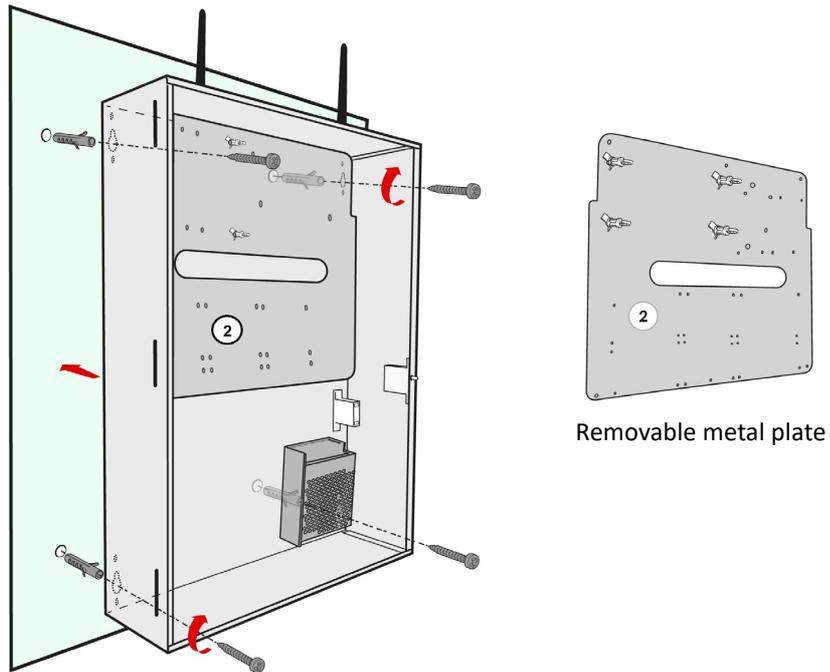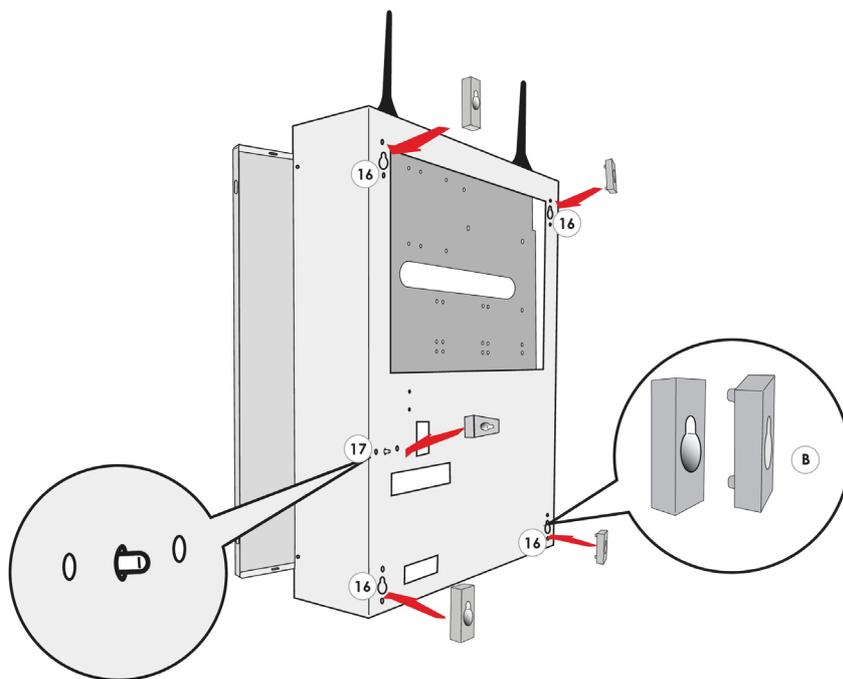
- Figure 3 -



| 16. | Metal box fixing holes. If necessary use the included 5 shims box (B). |
|-----|-----------------------------------------------------------------------|
| 17. | Tamper micro-switch. |

- Figure 4 -
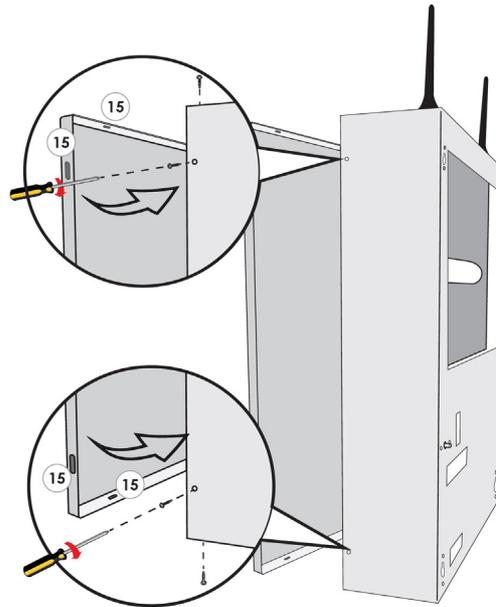


| 15. | Holes for front cover fixing. Use the included 4 screws. Aafter closing the cover of the metal box, fix with the included screws at the indicated points 15. |
|---|---|

4. Arrange outside the Panel an isolating device (e.g. Circuit Breaker Device 16A Curve C).
5. The Power Supply has an internal fuse (50W - F3.15AL). In case it should fail, its replacement requires the opening of the Power Supply and must therefore be carried out by authorized personnel.
6.  Wire the protection ground connection directly on the Power Supply unit.
7. The Power Supply conductors must be 1.5 mm² minimum section
8. Depending on the installed Control Panel, check the relative box in the label outside the metal cabinet, using a petroleum solvent resistant pen.

## 2.1.2 lares 4.0 motherboard description

- Figure 5 -
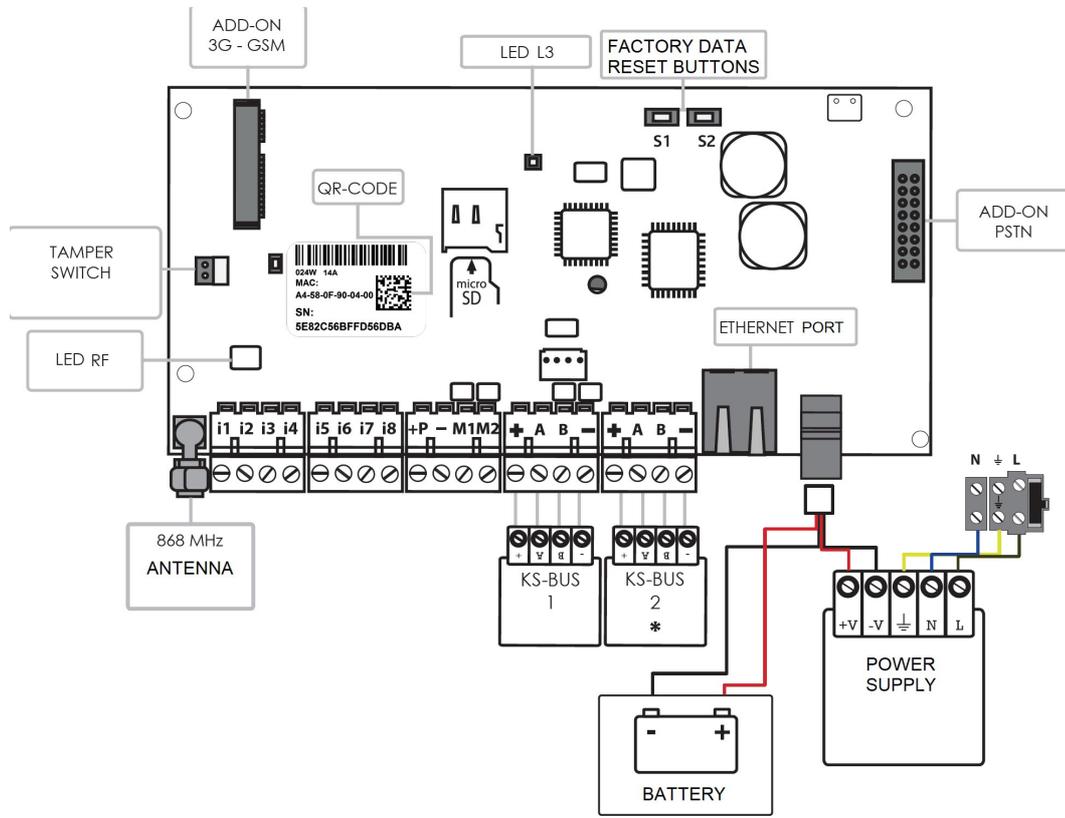


Note1: Power Supply cable (n.8 in "- Figure 1 -" page 11 ) included for connecting the Power Supply and the Battery is composed of four terminals: two terminals without fastons are for the Power Supply (15Vdc), the two connectors with fastons are for the Battery 12V.
Note2: Inertial sensors and roller shutter sensors cannot be connected.
To install lares 4.0 on metal boxes code KSI7402117.010 or KSI7403130.010 adjust the Power Supply to 15V.
.

| i1, i2, i3, i4, i5,i6, i7, i8 | Input Terminals . |
|---|---|
| M1, M2 | Input / Output Terminals (OC 500mA max). |
| + P | Positive Terminal of Power Supply (1.5A max). |
| - | Negative Terminal of Power Supply. |

| + | | Positive Terminal of BUS supply (15V 1,5 A Max). |
|---|---|---|
| A | KS-BUS Serial BUS of communication | Data |
| B | | Data |
| - | | Negative Terminal of BUS supply. |

## 2.2 lares 4.0 wls 96 control panel description and connections details

- Figure 6 -
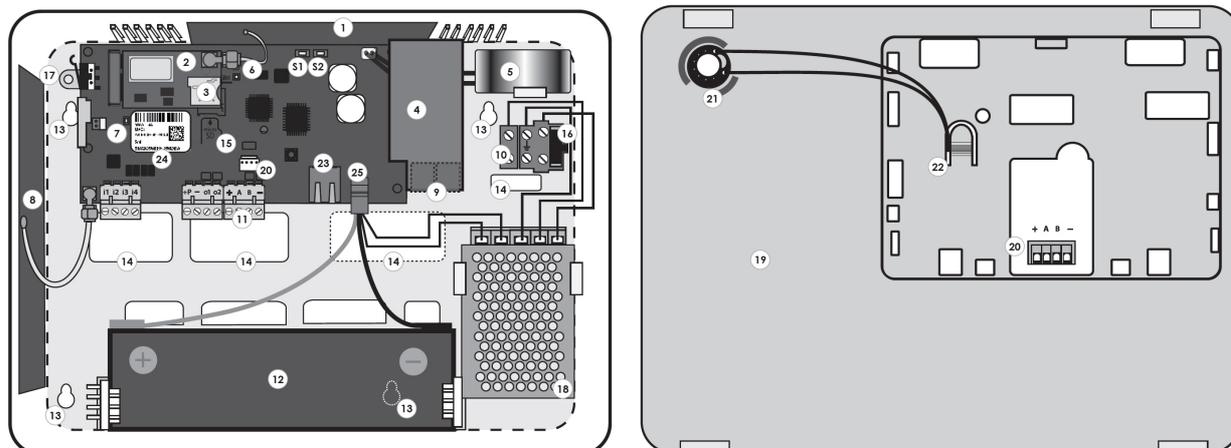


To properly install the panel box to the wall, use the Ø 5mm screws (included).

| 1 | GSM Antenna |
|---|---|
| 2 | GSM expansion module (optional) |
| 3 | Slot micro SIM Card |
| 4 | PSTN expansion module (optional) |
| 5 | Indoor siren |
| 6 | Condition LED |
| 7 | LED |
| 8 | RF 868 Antenna |
| 9 | LINE /TEL: Connecting terminals to the telephone line |
| 10 | Power terminal block (220V) |
| 11 | BUS terminal block, removable inputs/outputs |
| 12 | Backup battery KSI7212020.000 (not included in the panels) |
| 13 | Fixing holes |
| 14 | Big openings for passing cable routing |
| 15 | Micro SD Slot for system upgrade and create/restore backup configuration (Micro SD not included) |
| 16 | Fuse |
| 17 | Support screw tamper |
| 18 | Power Supply |
| 19 | Front cover |
| 20 | BUS connection terminal |
| 21 | Openings for passing speaker cables |

| 22 | Integrate speaker |
|---|---|
| 23 | Ethernet Connector |
| 24 | QR-code label of control panel |
| 25 | Battery Connectors |
| S1 | Switch (Reset / Data Factory) |
| S2 | Switch (Secureweb Registration) |

## 2.2.1 Local or remote keypad description

- Figure 7  -
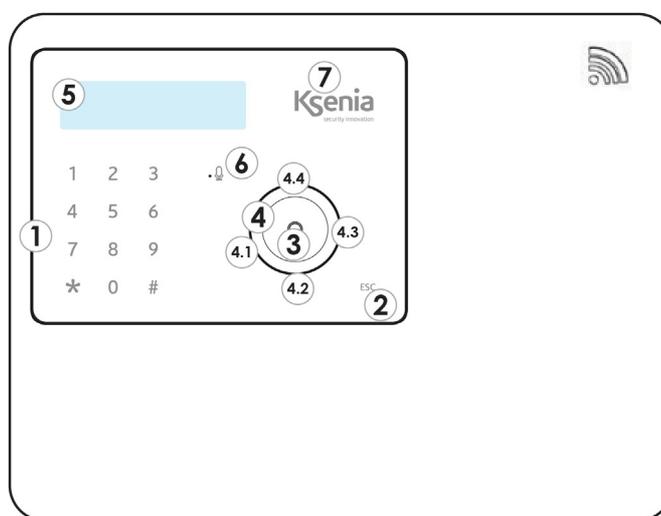


| 1 | Soft Touch keypad |
|---|---|
| 2 | ESC soft touch |
| 3 | ENTER key |
| 4 | Soft touch Scroll for menu navigation:<br>4.1  Scroll to Sx<br>4.2  Scroll Down<br>4.3  Scroll to Dx<br>4.4  Scroll Up |
| 5 | Dot-matrix display |
| 6 | Bidirectional audio |
| 7 | Proximity Reader. |

## 2.2.2 Wall mounting instruction

After removing the 2 fixing screws, open the box front as illustrated below (B):

1. push the plastic clips (A) with a screwdriver;
2. lift outward;
3. slide the cover downwards rotating outwards;

- Figure 8 -
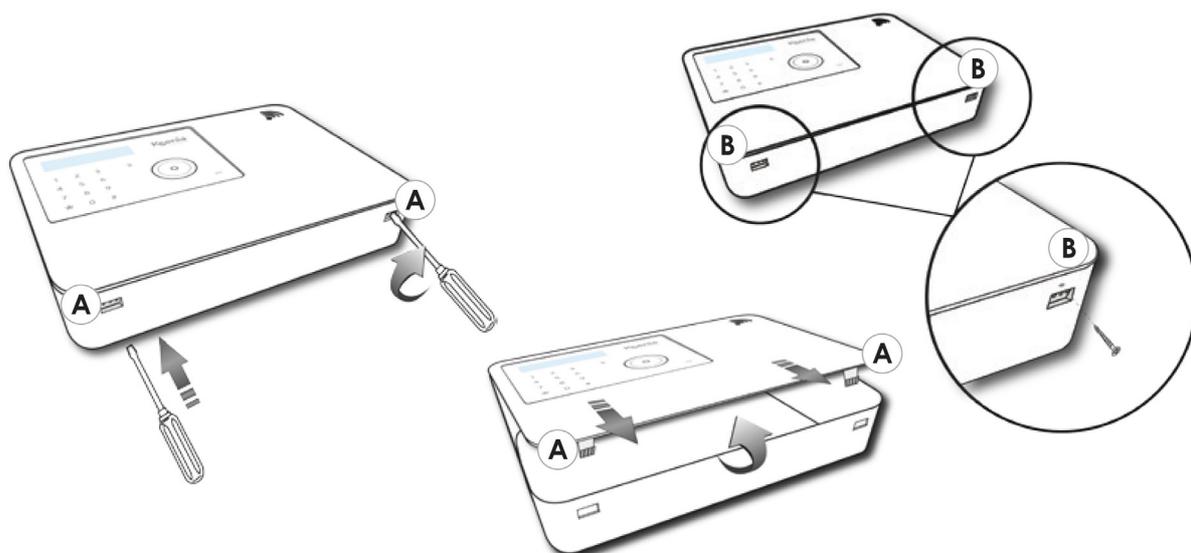


4. drill the wall according to the fixing points and install the 5 mm screws included inside the package;
5. make sure to correctly position the panel box by using an air bubble level as indicated below (1).

- Figure 9 -
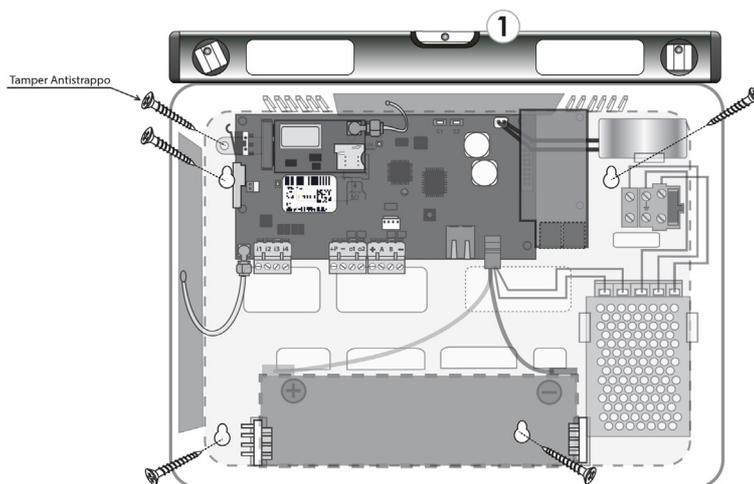


6. install and wire the 12V/2Ah battery as shown in the figure.

### 2.2.3 lares 4.0 wls 96 motherboard description

- Figure 10 -
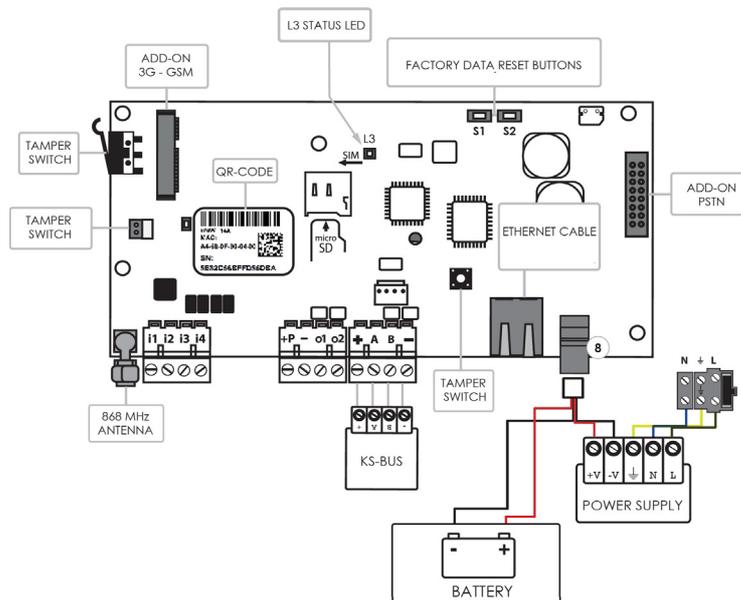


Note1: Power Supply cable included for connecting the Power Supply and the Battery is composed of four terminals: two terminals without fastons are for the Power Supply (15Vdc), the two connectors with fastons are for the Battery 12V.
Note2: Inertial sensors and roller shutter sensors cannot be connected.

| i1, i2, i3, i4 | Input Terminals. |
|---|---|
| + P | Positive Terminal of Power Supply (1.5 A max). |
| - | Negative Terminal of Power Supply. |
| o1 - o2 | Output Terminals Open-Connector (OC 500mA max). |

| + | | Positive Terminal of BUS supply (15V 1,5 A Max). |
|---|---|---|
| A | KS-BUS Serial BUS of communication | Data |
| B | | Data |
| - | | Negative Terminal of BUS supply. |

## 2.2.4 Outputs section

The motherboard of lares 4.0 wls 96 has 2 OC outputs of 500mA each one, programmable as you need: polarities (normally open or normally closed), functions (bistable or monostable), activation times (ON time).

- Figure 11 -
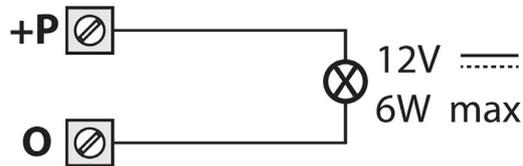


## 2.3 Status LED

**STATUS LED RD - L2**
This LED blinks every time the Control Panel receives a valid radio packet.

**STATUS LED - L3**
The Control Panel has an RGB LED (L3) which, depending on the status, indicates some different information.
.

| GREEN flashing | Normal operation. |
|---|---|
| WHITE flashing | Initialization phase. |
| PURPLE flashing | NOR memory formatting. |
| RED flashing | Firmware update in progress. |
| YELLOW flashing | Data factory restore. |
| BLU flashing | Reload backup of the configuration, following a firmware update with database replacement. |
| FIXED YELLOW | NOR memory access problems. execute Control Panel formatting. |
| FIXED RED | Firmware problems. Contact Ksenia Security technical assistance. |

## 2.4 Maintenance operations

| Factory data restore | Press the S1 button for 4 seconds, the status LED L3 will start flashing RED/ GREEN colour. When the LED L3 turns fixed RED, release the button. |
|---|---|
| Sign out from SecureWeb | Press the S2 button, the status LED L3 will start flashing GREEN/BLU. When the LED L3 turns fixed BLU the procedure is completed. |
| Complete formatting the control panel | Press S1 and S2 at the same time, LED L3 flashes RED/BLUE alternately. After 4 seconds, when L3 becomes fixed purple, the necessary pressure time to control factory data and the deregistration to the SecureWeb has been reached, if you keep pressing the buttons for another 10 seconds the LED will start to flash PURPLE and starts the complete formatting. **WARNING!** Carry out this procedure only if the L3 LED is fixed YELLOW. |

## 2.5 Add-On 3G module

### 2.5.1 Installation

The 3G Add-On is an optional module that is installed on the lares 4.0 motherboard, regardless of the central panel model, in the appropriate "ADD-ON 3G/GSM" slot, shown in the following image.

- Figure 12 -
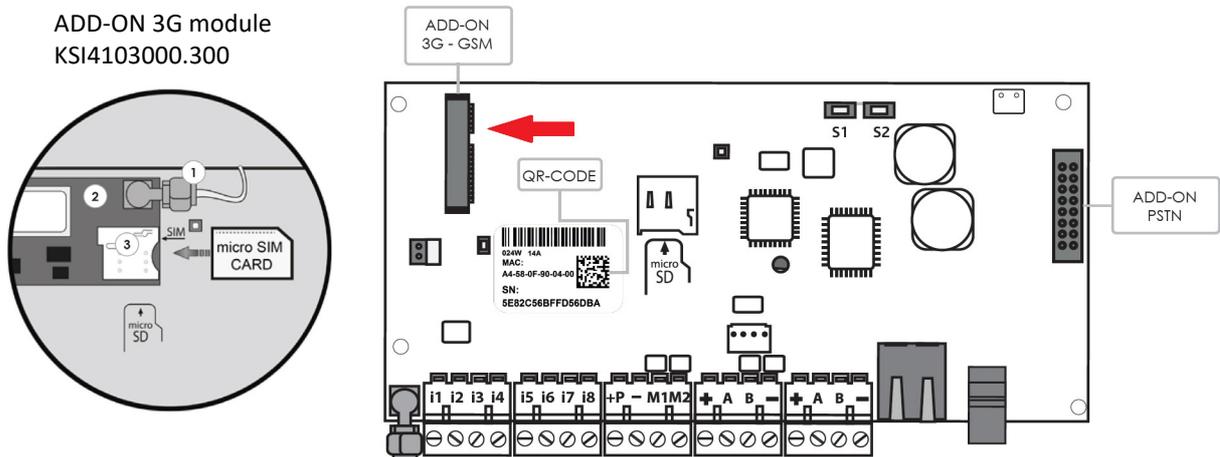


| 1 | 3G antenna cable. |
|---|---|
| 2 | 3G communication module. |
| 3 | Slot SIM Card (micro SIM). |

- NOTE1: please pay attention to the correct insertion direction of the SIM card as illustrated.
  IMPORTANT: before inserting the micro SIM inside the GSM module, be sure to DE-ACTIVATE the PIN code request by using a mobile phone.
- NOTE2: micro SIM not included in the package.

3G add-on module features are the following:
- Voice and/or SMS messages transmission.
- Separate SMS distinct for each event.
- Stop calls when the system is disarmed.
- Voice Dialer with possibility to personalize the messages.
- Voice message Recorder by TTS Text-to-Speach.
- High Quality Digital Audio.
- GSM Jamming detection.
- Contact ID Transmission.

## 2.6 Add-On 4G/LTE

### 2.6.1 Installation

4G/LTE add-on module is an easy installation module, directly plugged into the lares 4.0 control panel motherboard, regardless of the lares 4.0 model, using the connector shown in the following image (as an alternative to Add-On 3G module).
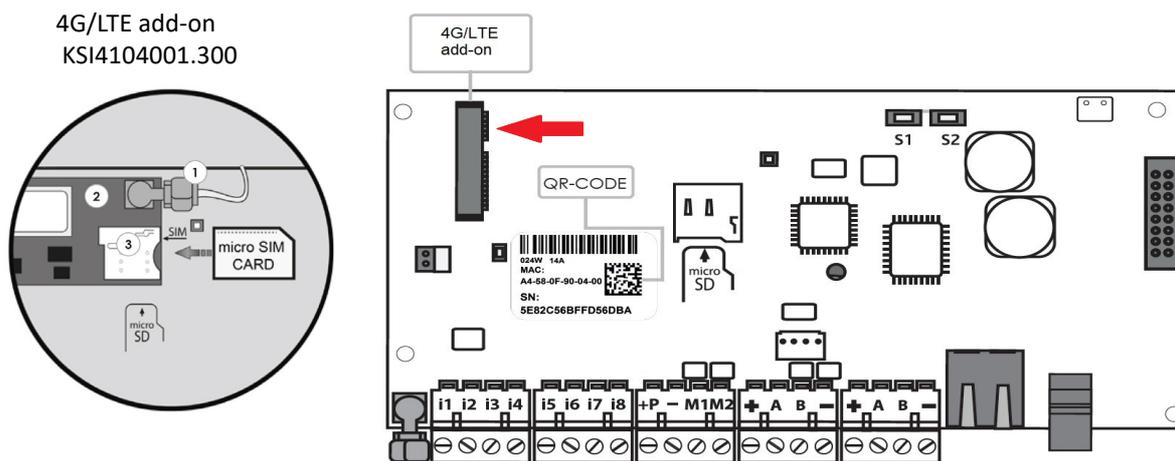


| 1 | Antenna 4G/cable. |
|---|---|
| 2 | 4G/LTE add-on module. |
| 3 | Slot SIM Card (micro SIM). |

- NOTE1: please pay attention to the correct insertion direction of the SIM card as illustrated. IMPORTANT: before inserting the micro SIM inside the GSM module, be sure to DE-ACTIVATE the PIN code request by using a mobile phone.
- NOTE2: micro SIM not included in the package.

Install 4G/LTE module to enrich lares 4.0 with the following features:
- Remote configuration of the control panel through free Ksenia PRO App for installer or from Ksenia SecureWeb service
- Remote management of the control panel through free lares 4.0 APP for users
- Sending of messages using the SIA DC09 digital protocol, with channel and receiver supervision
- Notifications via SMS, e-mail, voice messages, Push notifications
- Possibility of video-verification of ONVIF IP cameras connected to the local network
- Contact ID protocol to the Surveillance Centers is guaranteed

## 2.7 Add-On PSTN module

### 2.7.1 Installation

The PSTN Add-On is an optional module that is installed on the lares 4.0 motherboard, regardless of the central panel model, in the appropriate "ADD-ON PSTN" slot, shown in the following image.

- Figure 13 -
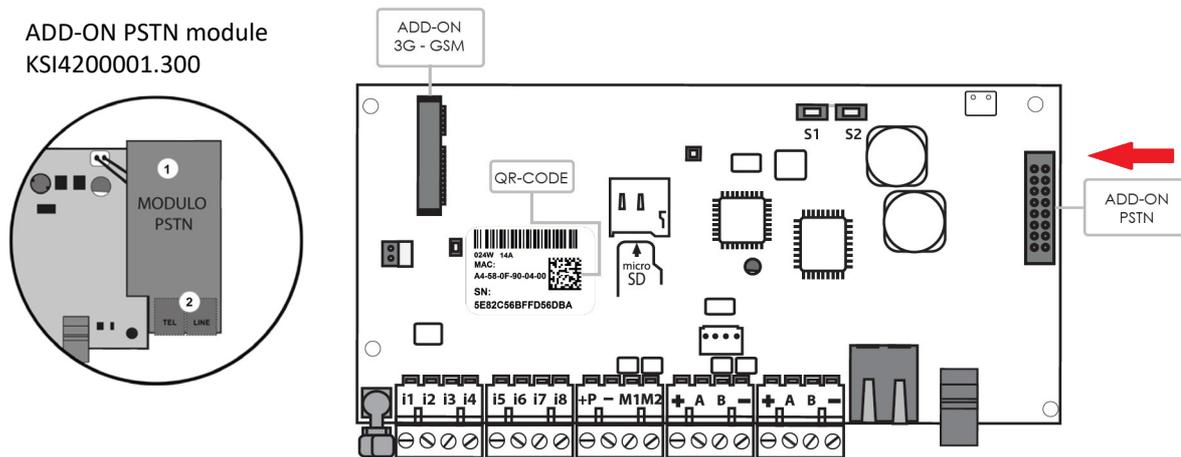


| 1 | PSTN communication module. |
|---|---|
| 2 | LINE / TEL: connectors for wiring to the telephone line.<br>TEL: connector for wiring of phones, fax or other devices which use the PSTN line.<br>LINE: connector for wiring to the telephone line. |

PSTN add-on module features are the following:
• Voice messages transmission.
• Stop calls when the system is disarmed.
• Voice Dialer with possibility to personalize the messages.
• Voice message Recorder by TTS Text-to-Speach.
• Contact ID Transmission.

## 2.8 Control panel power terminals

- Figure 14 -
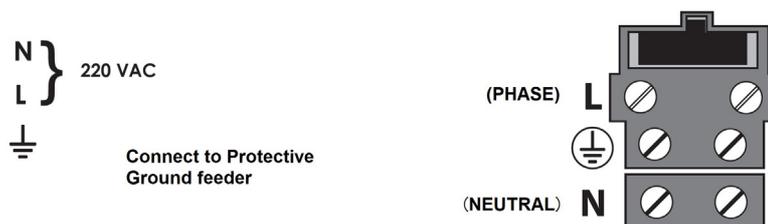


Before powering and switching on the panel, make sure that all the necessary wirings have been executed.
- in presence of GSM Module, verify its connections to the Control Panel board, that the micro SIM has been inserted and that the GSM Antenna has been linked by means of its SMA connector.
- in presence of PSTN Module, verify the connections with the panel board. Insert the RJ11 connector both for incoming and outcoming line.
- Verify that the connection of RF 868 Antenna has been linked by means of its SMA connector.
- If present, verify the connection of the integrated Keypad with the BUS terminals.
- In presence of an Internet Network, wire the Ethernet cable to its connector.
- If required, execute all wired inputs cablings.
- If required, execute all wired outputs cablings.
- Make all wirings for the mains.
- Connect the battery using the provided cables.

For all details on how to realize all connections, please refer to the next paragraphs.

## 2.9 KS-BUS (RS485) connection diagram

Peripheral units of the Ksenia system are connected through the fast KS-BUS. It is recommended not to exceed, for each wiring branch (control panel - device), the maximum length of 500 m (1400 feet), and the complete wiring should not be longer than 1000m (2800 feet).

Always use a shielded cable with one end of the shield connected to the Control Panel's ground and the other end free. Figure below is an example.

- Figure 15 -
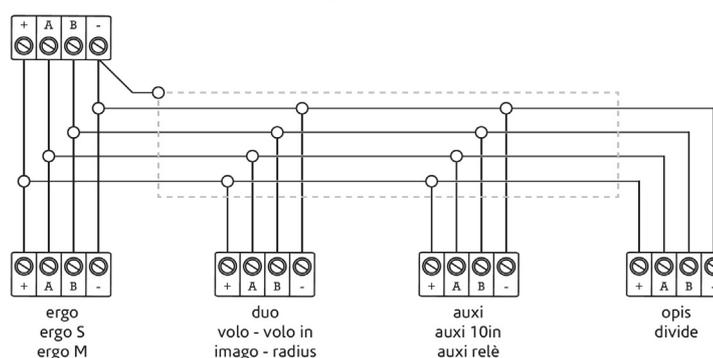


## 2.10 KS-BUS Connection cable (section and characteristics)

Alarm cable recommended:
- for data connection ([A B] terminals): cable 2x0.22mm
- for power supply ([+/-] terminals): make sure that the section of the cable is proportioned according the distance to cover and the charge applied.

## 2.11 Compatible BUS devices

| Devices | Ksenia product name | EN50131 certified | Absorption |
|---|---|---|---|
| Expansion | auxi | ✓ | 20 mA (P terminal and outputs excluded) |
| | auxi 10in | | 20 mA (+P1 and +P2 terminals excluded) |
| | auxi relé | | 100mA max |
| | auxi-H | No | 70 mA (P terminal excluded) |
| | auxi-L | | 120 mA max |
| LCD keypad | ergo ergo S ergo M | ✓ | 15 mA standby 100 mA max |
| Siren | imago radius BUS | ✓ | 20 mA standby 250 mA max |
| 2G/3G module | Add-On 3G | ✓ | 50 mA standby / 2.2 A max |
| Proximity readers | volo | ✓ | 40 mA |
| | volo-in | | 10 mA |
| Isolator and repeater | divide | ✓ | 20 mA |
| Wireless repeater | duo BUS | ✓ | 50 mA max |
| Supervised power supply station | opis | ✓ | 50 mA standby / 950 mA max |
| PSTN module | Add-On PSTN | ✓ | 10 mA su 12V / 30 mA su 3.3V |
| Multifunction sensor | domus | No | 10 mA max |
| Energy management system | energia | No | 20 mA |

A general overview of lares 4.0 and all the compatible peripherals that can be connected via BUS - Wireless and IP, are available at paragraph: .

## 2.12 Battery replacement

To replace the battery it is necessary to open the front cover of the control panel, remove the fastons from the exhausted battery and one by one, insert them in the new battery by respecting the polarities.
Once the fastons have been inserted into the new battery, close the front cover of the control panel.

# 3. CONFIGURATION - LOGGING IN FOR THE FIRST TIME

Choose one of the following methods for configuring the *lares 4.0* platform:

1. remotely from PC, through any browser by logging in to **www.kseniasecureweb.com** server (how to do it is described in the paragraph "Access to the portal Ksenia SecureWeb" pag. 27 );
2. remotely from mobile, downloading the dedicated **APP Ksenia PRO** for Security installers for free from Android or iOS stores and scanning the control panel's QR code (how to do it is described in the paragraph "Access to the portal Ksenia SecureWeb" pag. 27 );
3. from PC, via web browser, simply by entering the local IP address of the lares 4.0 control panel (i.e.: *https:// 192.168.20.200*) (how to acquire IP address is described in the paragraph "How to read the control panel IP address from keypad" pag. 32 ) ;
4. from keypad (this procedure is only limited to a few features) (see "Programming from keypad" pag. 31 ).
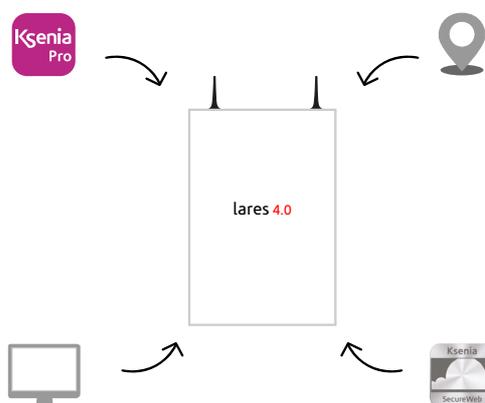


| INSTALLER DEFAULT PIN : | 123456 |
| --- | --- |
| USER DEFAULT PIN : | 000001 |

The whole configuration of the control panel is described in the document "lares 4.0 Programming Manual".

## 3.1 Access to the portal Ksenia SecureWeb

Open the browser and type the name of the site **www.kseniasecureweb.com** in the address bar.
The credentials required to access the SecureWeb service are the same as those used to access the reserved area of the **www.kseniasecurity.com** website (e-mail address + password). If you do not have these credentials, register free of charge by clicking on <**Register**> .
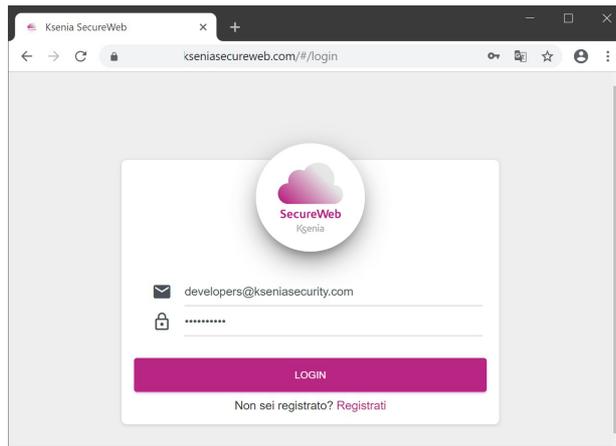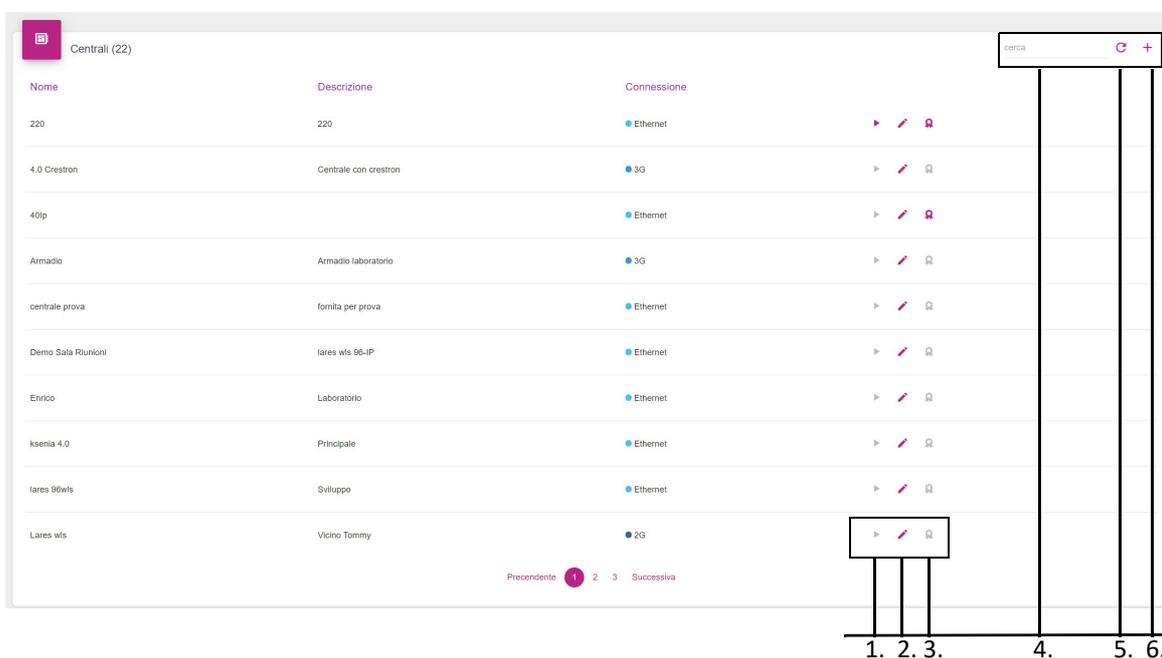
## 3.2 Configuration from PC

1. After successful login, **www.kseniasecureweb.com** page will open;
2. to **add** a new control panel click on **<+> sign in the Panel section**, see the following image;
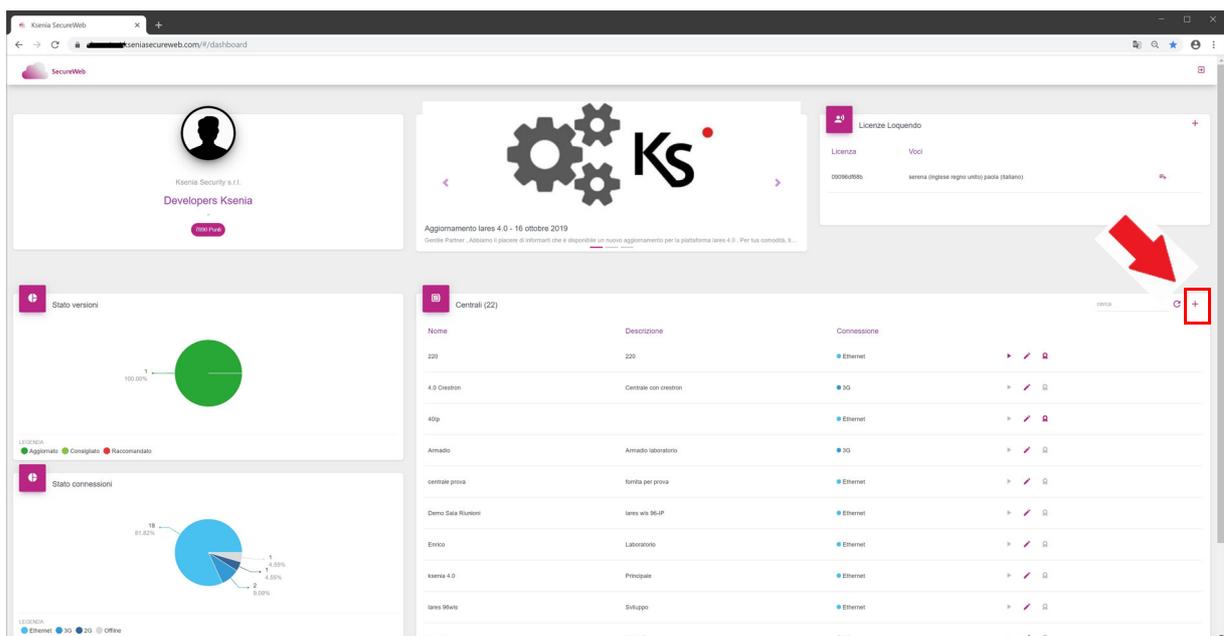


3. type the serial number printed on the control panel label;
4. give a name and a description to the control panel and possibly also coordinates;
5. click on <SAVE> and the new control panel will appear in the list;
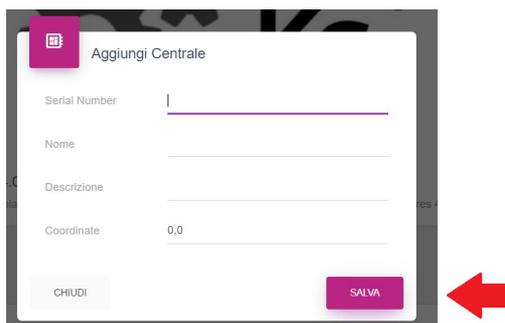
6. The following image displays the list of control panels from which the installer can start some operations such as: logging in, editing, deleting, score acquisition, searching by filter, etc.
   See description below:



1. open the login and the Installer configuration web pages
   (if the symbol is grey, the control panel is not reachable)
2. open a new window with the possibility to modify the name, the description and the coordinates of the control panel selected or delete it
3. start the score acquisition for the selected panel
4. filtering criteria for name, description, connection
5. reload the page list
6. add new control panel.


7. Click on the <little triangle> symbol to access the control panel, type the installer PIN code (default 123456) to open the HOME page.
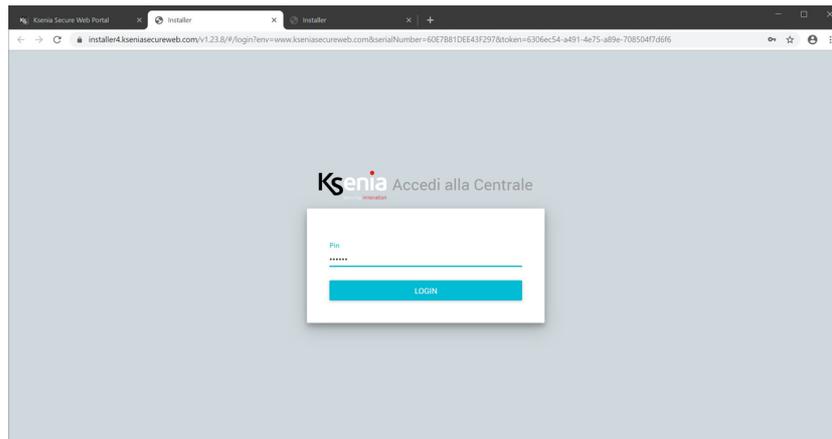
## 3.3 Configuration from APP Ksenia PRO

1.  Open the APP "Ksenia PRO" and enter the credentials;
2.  click on the (+) symbol in the bottom right hand corner (Android) or in the top left hand corner (IOS);
3.  type the serial number or click on the camera icon to scan the QR code (this is also shown on the control panel label);
4.  make sure you do this if the message appears asking you for access to use the camera;
5.  give the control panel a name and a description;
6.  click on <Save>.

**The control panel is ready to be configured by using Ksenia SecureWeb and it will be present in the "devices" list.**

## 3.4 Programming from keypad

**The configuration of the control panel from keypad is limited to a few features listed below.**

Access the installer menu with a **PIN code (default: 123456)**. You can navigate the various items by pressing the keys once you have entered the installer menu:

- **ENTER**: enter the sub-menu, confirm the values displayed or modified.
- **ESC**: exit the sub-menu, return to the previous menu, leave the installer menu.
- **DOWN ARROW (SCROLL CLOCKWISE)/UP ARROW (SCROLL ANTICLOCKWISE)**: move from one item to another within the same menu.

A list of some installer menu items:
- **Sys. management:** system management with the following items:
  **Reset alarm:**  all the alarms will be stopped, the tamper and alarm memories will be deleted.
  **Stop calls:** all the communications, in progress and in queue, will be deleted (SMS, phone calls, email, etc.).
  **Freeze system:** three possible choises
  - ▪ No freeze: normal activity.
  - ▪ Freeze alarms: no action against the alarms will be performed.
  - ▪ Freeze actions: freeze all the actions of control panel.
- **User management:** assign a **RF-ID** key to the users configured.
- **Event logger:** list of events occurred with details.
- **Fault list:** list of faults in progress.
- **Zone status:** view of the status of the zones configured in the system.
- **Zone test:** list of zones that were never been in alarm since the TEST started, useful during the installation process.
- **Installer data:** installer data management
  **Change PIN:** change installer PIN code.
  **Description:** installer name.
  **Number:** installer telephone number.
- **Update:** it launches the software upgrade using the file present in the SD card and previously downloaded from www.kseniasecurity.com, reserved area.
- **Programm. Back-up :**
  - **Create new**: backs-up any programming by saving the file on an SD card.
  - **Restore**: any programming data saved previously will be read from the SD card and loaded into the control panel.
- **Networking:** network configuration menu which allows the network parameters to be read/modified
  - **IP Address**: the control panel IP Address
  - **Subnet mask**: subnet-mask
  - **Gateway**: IP address of gateway
  - **DHCP server**: OFF / ON (default ON). This menu item is activated to allow the DHCP to be re-enabled if the control panel has been set to a fixed IP address.
- **Language:** select the language of the keypad form the list.
- **Panel version:** this allows you to view the control panel firmware version (although not the web server).

## 3.4.1 How to read the control panel IP address from keypad

If the network, where the control panel is installed, supports DHCP, to read the IP address make the following operations:

- • Step 1. make sure the control panel is connected to the network;
- • Step 2. enter the installer menu by dialing the PIN code on the numeric keypad (default: 123456);
- • Step 3. scroll the menu items up to "Networking" and press OK;
- • Step 4. the "IP Address" is displayed, make a note and exit the menu by pressing ESC twice.

Then type the IP address in the browser address bar: <https://*control-panel-IP-address*>.

**Note: The default address will be 192.168.2.97 in the event that the network to which the control panel is connected does not support the DHCP, so type <https://192.168.2.97> in the browser address bar.**

*NOTE: When you first switch on the keypad, the English menu will be displayed. To change the language, access the installer menu from the keypad via the webserver.*

**3.5 lares 4.0 Declaration of conformity**

# DICHIARAZIONE DI CONFORMITÀ UE
# UE DECLARATION OF CONFORMITY
# DÉCLARATION DE CONFORMITÉ UE

Ksenia Security Srl, Strada Provinciale Valtesino, 44 – 63065 Ripatransone AP - Italia
Dichiara che / Declares that / Déclare que:

**lares 4.0**

KSI1400016.300          centrale lares 4.0 - 16 / Control Panel lares 4.0 - 16 /
                        centrale d'alarme lares 4.0 - 16
KSI1400040.300          centrale lares 4.0 - 40 / Control Panel lares 4.0 - 40 /
                        centrale d'alarme lares 4.0 - 40

è conforme ai requisiti essenziali di sicurezza delle seguenti direttive
complies with the essential safety requirements of the following CE Directives
est conforme aux exigences essentielles de sécurité des directives CE suivantes

2014/30/UE
2014/35/UE
2011/65/EU

è quindi conforme a quanto previsto dalle seguenti norme armonizzate
and therefore complies with the following harmonised standards
elle est donc conforme aux norms harmonisées suivantes

EN 60950-1:2006 + A11:2009 + A1:2010 + A12:2011 + A2:2013; EN 50130-4:2011;
EN 61000-6-3:2007+A1:2011; EN 50581:2012

Ripatransone, 02/04/2018

L'amministratore delegato
Raffaele Di Crosta

**3.6 lares 4.0 wls Declaration of conformity**

# DICHIARAZIONE DI CONFORMITÀ UE
# UE DECLARATION OF CONFORMITY
# DÉCLARATION DE CONFORMITÉ UE

Ksenia Security Srl, Strada Provinciale Valtesino, 44 – 63065 Ripatransone AP - Italia
Dichiara che / Declares that / Déclare que:

**lares 4.0 wls**

| | |
|---|---|
| KSI1410040.300 | *Centrale / Control Panel / centrale d'alarme* lares 4.0 - 40wls |
| KSI1410140.300 | *Centrale / Control Panel / centrale d'alarme* lares 4.0 - 140wls |
| KSI1410644.300 | *Centrale / Control Panel / centrale d'alarme* lares 4.0 - 644wls |
| KSI141X096.3XX | *Centrale / Control Panel / centrale d'alarme* lares 4.0 wls 96 |

è conforme ai requisiti essenziali di sicurezza delle seguenti direttive
complies with the essential safety requirements of the following CE Directives
est conforme aux exigences essentielles de sécurité des directives CE suivantes

2014/53/UE
2011/65/EU

è quindi conforme a quanto previsto dalle seguenti norme armonizzate
and therefore complies with the following harmonised standards
elle est donc conforme aux norms harmonisées suivantes

EN 60950-1:2006 + A11:2009 + A1:2010 + A12:2011 + A2:2013; EN 50130-4:2011;
EN 61000-6-3:2007+A1:2011; EN 301 489-1 v2.1.1; EN 301 489-3 v1.6.1; EN 301 489-7 v1.3.1; EN 301 511 v9.0.2; EN 300 220-2 v3.1.1; EN 50581:2012

Ripatransone, 05/09/2018

L'amministratore delegato
Raffaele Di Crosta

## Information for users: Disposal (WEEE-RAEE Directive)

Warning! Do not use an ordinary dustbin to dispose of this equipment.
Used electrical and electronic equipment must be treated separately, in accordance with the relative legislation which requires the proper treatment, recovery and recycling of used electrical and electronic equipment. Following the implementation of directives in member states, private households within the EU may return their used electrical and electronic equipment to designated collection facilities free of charge*. Local retailers may also accept used products free of charge if a similar product is purchased from them. If used electrical or electronic equipment has batteries or accumulators, these must be disposed of separately according to local provisions. Correct disposal of this product guarantees it undergoes the necessary treatment, recovery and recycling. This prevents any potential negative effects on both the environment and public health which may arise through the inappropriate handling of waste.

* Please contact your local authority for further details.

COMPLIANCE

Installation of these systems must be carried out strictly in accordance with the instructions described in this manual, and in compliance with the local laws and bylaws in force. This product has been designed and made with the highest standards of quality and performance adopted by Ksenia Security. It is recommended that the installed system should be completely tested at least once a month. Test procedures depend on the system configuration. Ask to the installer for the procedures to be followed.
Ksenia Security srl shall not be responsible for damage arising from improper installation or maintenance by unauthorized personnel.
The content of this guide can change without prior notice from KSENIA SECURITY and does not represent a commitment on the part of Ksenia Security.

CERTIFICATIONS
lares 4.0
 EN50131 Grade 3 - Class II
 T031:2017
 SSF 1014 Larmklass 3

lares 4.0 wls 96
 EN50131 Grade 2 - Class II
 T031:2017
 SSF 1014 Larmklass R

**ENVIROMENTAL CARE**

**lares 4.0 is designed and manufactured with the following features to reduce its environmental impact:**

**• No PVC**
**• Halogen-free laminates and lead-free PCBA**
**• Low consumption**
**• Packaging realized mainly with recycled fibers and materialsl**

**Designed and Produced in Italy**