

Istruzioni

Last Electrical Cyber Shield



Proper Use

LECS is an innovative Plug and Play device, which carries out numerous checks on the network (LAN) and implements particular countermeasures in case critical digital threats are detected. Specifically, the LECS + implements an electrical countermeasure.

Power is supplied via an external 5V DC - 3A power supply with USB 3 Type C connector, while the "intelligent" pass-thru sockets use standard IEC 220v AC power cables.

Use is allowed only indoors and not outdoors. Contact with moisture must be absolutely avoided. For reasons of safety and product approval, alteration and / or modification of the same are not permitted. Any use other than that described in these instructions could damage the product. Also, improper use can cause short circuit, fire, electric shock or other hazards. Read the instructions carefully and keep them in a safe place. In case of transfer of the product to third parties, also include these instructions for use. This product complies with applicable national and European requirements. All company names and product names contained therein are trademarks of their respective owners. All rights reserved.

Package Contents

- LECS + Device
- USB Type C - Power Supply 5V 3A DC x1
- Instructions
- Network Cable Cat. 6 - 0.5mt
- IEC Cable UPS 220v AC (EU)

Explanation of symbols



The lightning bolt symbol in a triangle is used to warn of a health hazard, such as electric shock.



The symbol with an exclamation point in a triangle indicates important information in these instructions for use, which must be observed.

Safety Warnings



Read the instructions carefully and observe the safety information specifically.



In the event of failure to comply with the safety instructions and information on correct use contained in this manual, no responsibility is assumed for any damage to persons or property. In these cases, the warranty is void.

a) General

- The product is not a toy. Keep out of the reach of children and pets.
- Do not leave the packing material unattended. It could become a dangerous toy for children.
- Do not subject the product to mechanical stress.
- Protect the product from extreme temperatures, direct sunlight, strong shocks, water, high humidity, condensation and gas, vapors and flammable solvents.
- If the product can no longer be used safely, take it out of service and protect it from any accidental use. Correct operation is no longer guaranteed if the product:
 - is visibly damaged,
 - no longer works correctly,
 - has been stored for long periods in adverse environmental conditions or
 - has been subjected to severe transport-related stresses.
- Handle the product with care. Jumps, bumps or falls, even from low heights, can damage the product.
- Consult an expert if you have any doubts about the operation, safety or connection of the product.
- All maintenance, modification or repair work must only be carried out by a technician or at an authorized repair center.



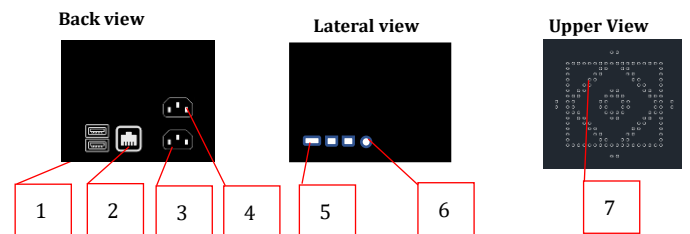
- Do not hesitate to contact our technical support or other technicians if you have any questions that are not answered in this manual.

b) Electrical safety

- Before connecting to the power grid, check that the electrical data shown on the product label correspond to those of the local power supply.
 - Never spill any liquid on electrical devices and never place any container of liquid near them. In the event that liquids or foreign objects enter the device, it is necessary to first disconnect the power from the relative electrical socket (for example, by activating the circuit breaker) and then remove the power plug from the socket. Thereafter, the product can no longer be used and must be taken to an authorized repair center.
 - Do not use the product immediately after moving it from a cold to a warm environment. The condensation that would form could damage the product. In addition, the power supply could cause electric shock and be life-threatening. Wait for the product to reach room temperature before connecting and using it. This stage could take several hours.
 - The power supply socket must be installed close to the appliance and must be easily accessible.
 - To remove the plug from the power socket, never pull the cable, but grasp the plug firmly.
 - If you do not plan to use the appliance for a long time, remove the plug from the socket.
 - For safety reasons, always disconnect the plug from the power outlet during a thunderstorm.
 - For connection to the voltage source, use only the supplied power cable or one with identical characteristics.
 - Take care that the power cord is not crushed, bent, damaged by sharp objects or exposed to other mechanical stresses. Avoid excessive thermal stress on the power cord with excessive heat or cold. Do not modify the power cord, it could be damaged. A damaged cord can cause a fatal electric shock.
 - If the power cord is damaged, do not touch it. First, disconnect the relevant socket from the power supply (e.g. by activating the corresponding circuit breaker) and then carefully disconnect the plug from the socket. Never use the product with a damaged power cord.
 - A damaged power cord can only be replaced by the manufacturer, an authorized repair center or a qualified technician in order to avoid danger.
 - The plug must never be connected or disconnected with wet hands.
 - Make sure that when installing the cable, it is not pinched, bent or damaged by sharp edges.
 - Always lay cables in such a way that no one can trip or get entangled, in order to avoid possible injuries.
- #### c) People and product
- The housing heats up during operation. Make sure there is adequate ventilation. The housing must not be covered. The ventilation openings must not be obstructed and must be clean and remain so.
 - Do not place naked flames on or next to the appliance.



Components



1. USB ports [for optionals not includ.];
2. LAN Primery port for detection;
3. Electrical INPUT IEC 220v AC;
4. Electrical OUTPUT IEC 220v AC;
5. Power Supply USB 3.0 Type-C;
6. Jack Audio (optional not. Includ.);
7. LED with diffuse internal light

Installation and implementation

a. Required

LECS device needs the following requirements:

1. A LAN network with DHCP service enabled.
It's strongly recommended to install the device on a mirror-span port);
Note: The mirror port on the switch must be enabled for outgoing traffic for send data to the cloud (securitylecs.com) and view data on dashboard.
(Please verify this with your switch vendor or use USB adapter not included)
2. Active internet connection to start the device, as well as to view the LOGs in the optional WebApp;
3. External 5v DC - 3 ° power supply with USB 3 Type C connector (also supports power banks with the same electrical characteristics in terms of power supply);
4. Ethernet patch cable for connection to the network.
5. Optional: Electrical cable IEC 220V AC Europea for energetic Air-Gap
6. Registration on LECS Dashboard and Serial Key is necessary for installation, require accepting the T&C (available on our website).

b. Installation and first use

Place LECS on a flat, heat-resistant surface. Proceed as follows:

1. Connect the Ethernet Cable to back side of LECS device (please see the back view, port 1);
2. **Optional:** LECS can manage the electric power supply (ON/OFF) via electric relè another device. Specifically, voltage will be removed on the output IEC port (indicator 4) in case of high-impact cyber attacks. The voltage to that port (indicator 4) is supplied from the IEC input port (indicator 3). Do not connect loads greater than 5 Amps.
Procedure:
 - a. Then connect a 220v IEC 13 power supply cable to the voltage input (indicator 4) and to the electrical outlet.
Note: LECS functions as an intelligent pass-thru switch. Collegare il cavo in dotazione IEC14 – Schucko femmina al LECS.
 - b. Connect the power cable of the device to be protected to the Schuko port of this cable.
3. Connect the power cable (5V DC - 3A) to the device (see side view, port 5) and to the electrical socket. LECS will turn on automatically. After about 20 seconds the device will be operational.
Only the internal green LED will remain lit to indicate correct operation (see top view, indicator 7).
4. Go to the Google Play Store (for Android operating systems) to download the "LECS" App or to the website <https://www.securitylecs.com> to use the web application; (require accepting the terms and privacy)
5. Register, inserting the required data and the license serial number present in the package;
6. Now you can log in to the control portal.

Note: To have the "online" status active on the WebApp, or to start sending data to the portal, it is necessary to wait about 5-10 minutes from connecting to the network.

c. Shutdown and reboot

LECS can be turned off by disconnecting it from the power supply. ATTENTION: switch off the device only if it is in the "OK" state (internal green LED on) or if the internal green and red LEDs are on at the same time (device anomaly).

LECS can be restarted by performing the aforementioned shutdown operation, and then reconnecting the device to the power supply again.

Notify Code / Error

LECS communicates status information through the LEDs placed inside the device for technical control purposes. *

LED Green fixed	→ Starting phase and boot OK Procedure: Device started in correct way. No operation is require.
LED Red blinking and green off	→ Cyber threat detected (not critical). Procedure: Check the app or your dashboard for details.
LED Red fixed	→ Dangerous Cyber threat detected (critical) and countermeasures Procedure: LECS is acting the countermeasured vs the cyber threat. Untile the LED is Red, do not power-off LECS (no remove any powersupply cable from LECS)
LED red fixed and green blinking	→ Detection of some network Error or malfunction Procedure: If LECS is in this state, please reboot the LECS device (remove power supply cord and after 5 second, power on)

Cyber threats detected by LECS are automatically classified by the device into three levels:

- **Critical:** the device acting the propely countermeasures;
- **Medium:** the device monitor this activity and track (via cloud compute);
- **Low/Anomaly:** LECS can also detect the flow and connection error in LAN.

** Always check the news on the lecs.io website. Firmware updates could change the functionality of the LEDs.*

d. Tips and Warnings

The firmware **disables** the wireless modules of the device. Specifically, Raspberry has an 802.11 wireless module concurrent with a Bluetooth module, both of which are disabled (turned off) on the firmware side.
Do not use near a sensible health/medical device on in airplane.

Maintenance and cleaning

- The device does not require maintenance. Therefore avoid disassembling it.
- Remove all cables from the device before starting cleaning.
- Never use aggressive detergents, alcohol or other chemicals for cleaning. These could damage the surface or compromise the functionality of the device itself.
- Dust can be removed using a dry cloth or a vacuum cleaner(for home use).
- When cleaning, do not press the surface too hard to avoid scratches.

For T&C - Please

Disposal



Electronic devices are recyclable waste and must not be disposed of with household waste. At the end of its life cycle, dispose of the product in accordance with the relevant legal provisions. This complies with legal obligations and contributes to the protection of the environment.

Always verify the normatives in you Country.

Tech Spech

Voltage of internal SBC.....	5V/DC (USB Type C)
Current.....	3A
Voltage for IEC electrical ports.....	220v AC(EU);
Current.....	Pass-thru. Max 5 Ampere
Network Ports.....	1 (2 with optional USB not included)
Hardware.....	Raspberry Pi 4 @
Memory inside.....	Micro SD UHC from 16 GB (with firmware ready inside)
Fan.....	5V da 50 mm (not in all models – optional not included)
Materials.....	Anodized aluminum box (thickness 1.5 mm)
Ambiental Temperature to operate.....	from 15° C a +40° C
Ambient Humidity.....	from 10% a 90% relative humidity, without condensation
Dimension (L x H x P).....	123,8mm x 83,6mm x 114 mm
Weight.....	249 g

Manufacturer Data

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