



# **WT1 Lite**

User manual

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# GENERAL FEATURES

The WT1 LITE offers simplified configurations, specially designed to meet the needs of applications in contexts such as smart cities or less demanding industrial environments. With its customized features, it provides a versatile solution for the real-time capture of physical, chemical, and perceptual metrics in these specific environments.



- **Operating temperature:** -30°C / +60°C
- **Operating humidity:** <100% non-condensing relative humidity
- **Atmospheric pressure:** 500 to 1,500 mbar
- **Power supply voltage / consumption:** 12V DC / 0.4A

1

**Average periods/data transmission:** Every 10 seconds for real-time information updates.

2

**Multisensory device:** Continuous collection of physical, chemical, and sensory data.

3

**Alarm mode:** Customizable thresholds on all measurement channels.

4

**Autonomous design:** Ideal for automated pollution control processes.

5

**Advanced software:** Data acquisition and processing software platform.

6

**Dispersion tracking:** Real-time and historical tracking of dispersion plumes.

7

**Software updates:** Always up to date with software hosted on secure servers and online update functionality.

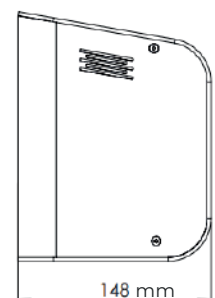
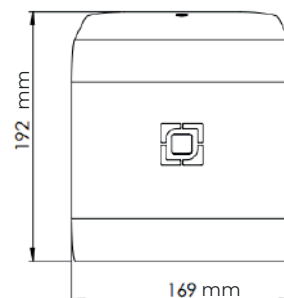
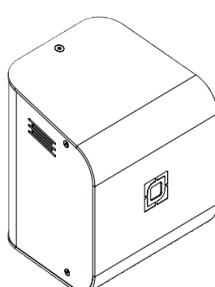
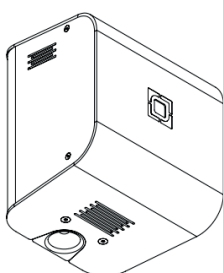
8

**Olfactory databases:** Directory for the identification and qualification of odors.

9

**Subjective perception report:** QR code on each module for database adaptation, device training, and alarm threshold adjustments.

**Weight:** 3kg  
**Materials:** Aluminum



# SAFETY INSTRUCTIONS

## GLOSSARY

### RISKS



Electrical hazard



Static electricity hazard



Fire hazard



Explosion hazard



Toxic product



Risk of corrosion



Hot or burning surface



Risk of irritation, harmfulness

### RECOMMENDATIONS



Attention



Unplug the device



Refer to the instruction manual



Wear protective goggles



Wear protective gloves



Do not dispose in trash, mandatory recycling center

The **WT1 Lite** system is an environmental monitoring device equipped with sensors for gases, odors, noise, and particles. To ensure the safety of users and the long-term performance of the device, it is crucial to follow these guidelines for proper and secure use.



### Important

- Any improper use or modification of the device may pose serious risks and void the warranty
- Always consult this manual and adhere to the recommended guidelines.

## RISKS AND ASSOCIATED INSTRUCTIONS



### ELECTRICAL HAZARD

- > **Prior disconnection:** Before any intervention, cleaning, or maintenance, always disconnect the device from the power source to avoid any risk of electrical shock.
- > **Voltage compatibility:** Before connecting the device, ensure that the voltage and power available on your electrical network match the specifications listed on the device's nameplate. Incorrect voltage may damage the equipment or pose a safety hazard.
- > **Cable integrity:** Never use damaged power cords. If the cable shows signs of wear, replace it immediately with a certified model approved by Ellona.
- > **Use of extension cords:** If an extension cord is required, ensure it has an appropriate cable gauge and power rating that meet the WT1 Lite's requirements to prevent overheating or short circuits.



**Warning:** Ellona recommends using only the provided power supply to power the WT1 Lite.

- > **Secure connection:** The provided power cord is designed to be plugged into a compliant outlet, with no grounding required, as the power supply unit is protected by double insulation. Never modify the electrical connections or the casing. Any attempt to alter, modify, or disconnect internal components may compromise safety, cause irreversible damage to the device, and void the warranty.
- > **Enclosure and protection:** The electrical connections and internal components are protected by covers. Never use the device without these protections, as it may expose you to dangerous voltages.



#### **RISK OF STATIC ELECTRICITY**

- > Handle the device in a dry environment to minimize electrostatic discharge.
- > Avoid direct contact with sensitive internal components without proper protective equipment (antistatic gloves).



#### **FIRE RISK**

- > Do not plug the device into an non-compliant or overloaded outlet.
- > Avoid exposing the device to extreme heat sources.
- > In case of electrical damage or overheated cable, disconnect immediately and contact Ellona.



#### **RISK OF EXPLOSION**

- > Never use the device in an explosive atmosphere (flammable gases, combustible vapors).
- > Consult the safety data sheets for each monitored gas.



#### **TOXICITY HAZARD**

- > Wear protective goggles and gloves if the device is used in areas containing harmful gases or particles.
- > Ensure that the air being monitored does not contain unidentified substances.



#### **RISK OF CORROSION**

- > Do not expose the device to corrosive substances without proper protective equipment.
- > Avoid prolonged contact with aggressive chemicals.



#### **HOT OR BURNING SURFACE**

- > If the device overheats, allow it to cool down before handling it after prolonged use.
- > Do not touch the internal components without appropriate protective equipment.



#### **RISK OF IRRITATION OR HARMFUL EFFECTS**

- > Wear a protective mask if monitoring irritant odors or particles.
- > Work in a well-ventilated environment.

## GENERAL RECOMMENDATIONS



> **Unplug the device:** Always unplug the device before cleaning, maintenance, or relocation.



> **Refer to the user manual:** Consult the manual for installation, configuration, or troubleshooting.



> **Wear protective goggles and gloves:** Mandatory for any handling in a potentially hazardous environment.



> **Do not dispose of in the trash:** This equipment contains electronic components. Do not dispose of it with household waste. Take it to a certified recycling center.

## CLEANING AND MAINTENANCE

### > External cleaning:

- Unplug the device.
- Use a soft brush or dry cloth.
- Do not use compressed air or solvents that could damage the surface.

### > Internal cleaning: For qualified Ellona personnel only.

### > Maintenance: If a part needs to be replaced, **only use parts certified by Ellona.**

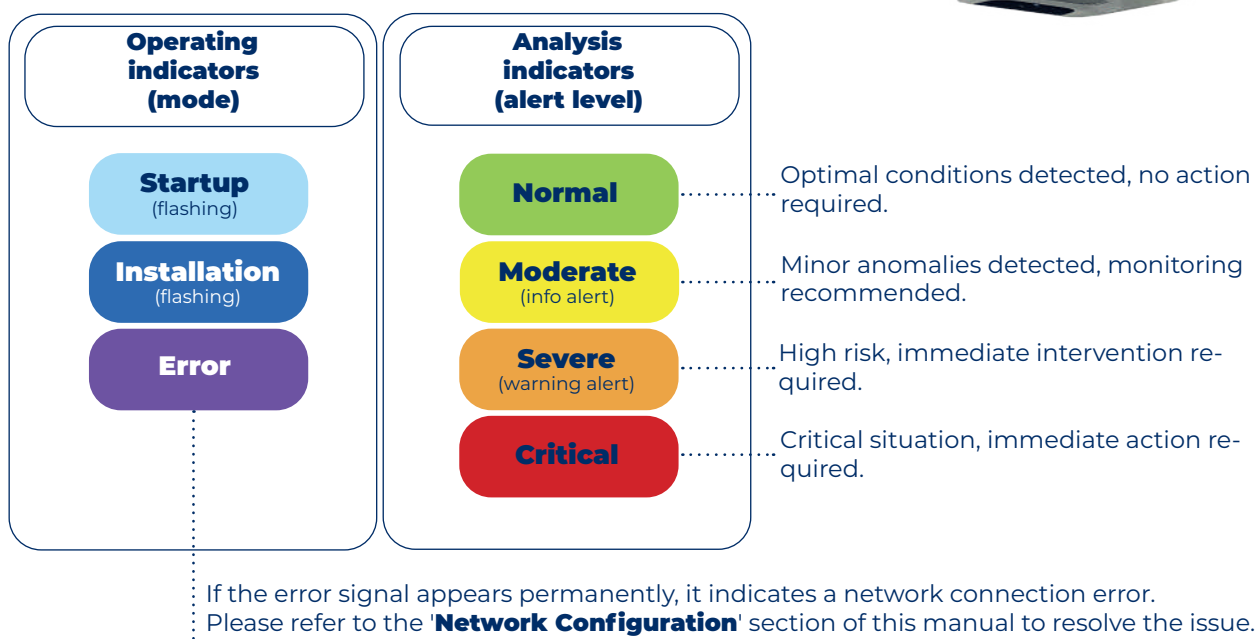


**Warning:** Any attempt at unauthorized maintenance may compromise your safety and the safety of the device.

**For any questions, assistance, or repairs,  
please contact an Ellona representative.**

## LED INDICATORS

The WT1 Lite is equipped with a status notification LED located on the front of the device. The displayed color indicates **the device's status** or **signals an alert level in the environmental analysis**, as shown below:



# START-UP INSTRUCTIONS

## Necessary tools for installation (Not supplied) :

- |                           |          |
|---------------------------|----------|
| > 1.5 mm Allen key .....  | <b>A</b> |
| > 2.5 mm Allen key .....  | <b>B</b> |
| > 5 mm Allen key .....    | <b>C</b> |
| > 10 mm flat wrench ..... | <b>D</b> |



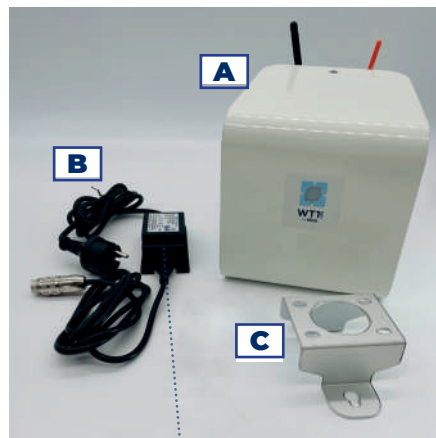
## 1- UNPACKING AND CONTENT CHECK

### > Unpacking steps

- Open the package carefully.
- Remove each item and place them on a flat, clean surface.

### > Checklist of contents to verify:

- |  |          |
|--|----------|
| - WT1 Lite device .....  | <b>A</b> |
| - External power supply unit (Ref: 59RKPO-UK1201000CD-2 from IdealPower) .....   | <b>B</b> |
| - Mounting bracket (pre-installed on the back of the device) .....   | <b>C</b> |
| - User manual  |          |
| - Optional accessories depending on the ordered configuration (e.g., pole with specific mounts, solar panel, adapters, external battery, etc.) |          |



**Check that no components are damaged** (power cord, communication antennas, casing, etc.).



**In case of damage,,** do not power on the device and contact an Ellona representative immediately.



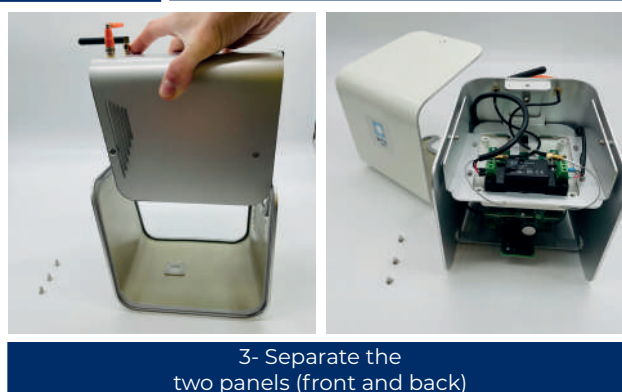
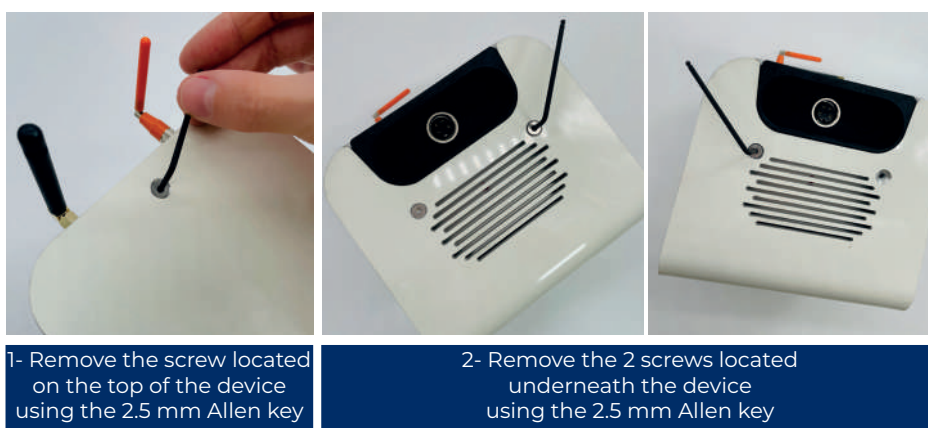




## 2- INSTALLING YOUR SIM CARD FOR LTE-M NETWORK

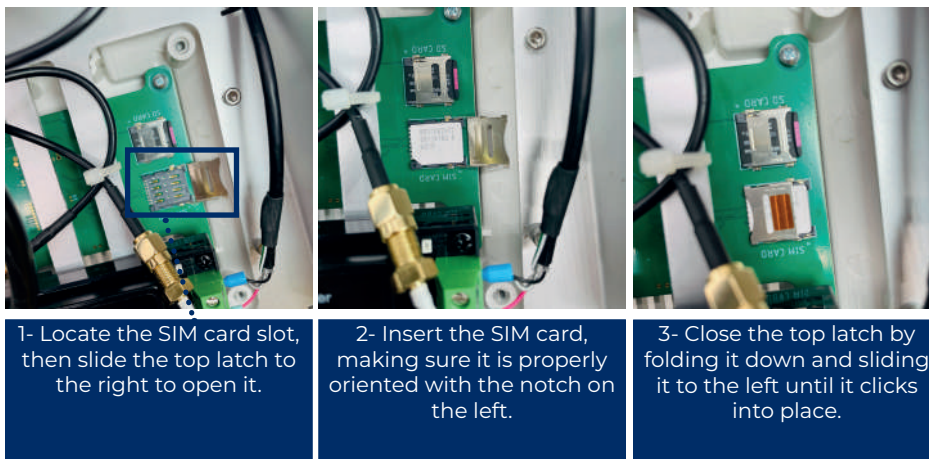
(if the SIM card is not already pre-installed)

> **Open the device casing** following the instructions below:





> **Insert your SIM card** (ensure correct orientation as indicated)



1- Locate the SIM card slot, then slide the top latch to the right to open it.

2- Insert the SIM card, making sure it is properly oriented with the notch on the left.

3- Close the top latch by folding it down and sliding it to the left until it clicks into place.



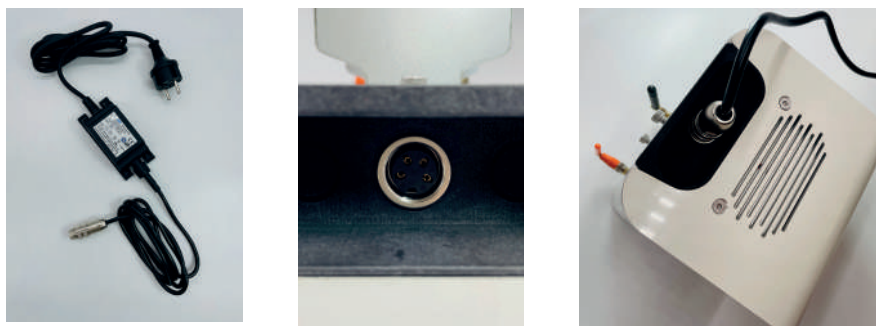
> **Note:** Only use an LTE-M network SIM card approved by Ellona to ensure optimal compatibility.

#### > **Close the device**

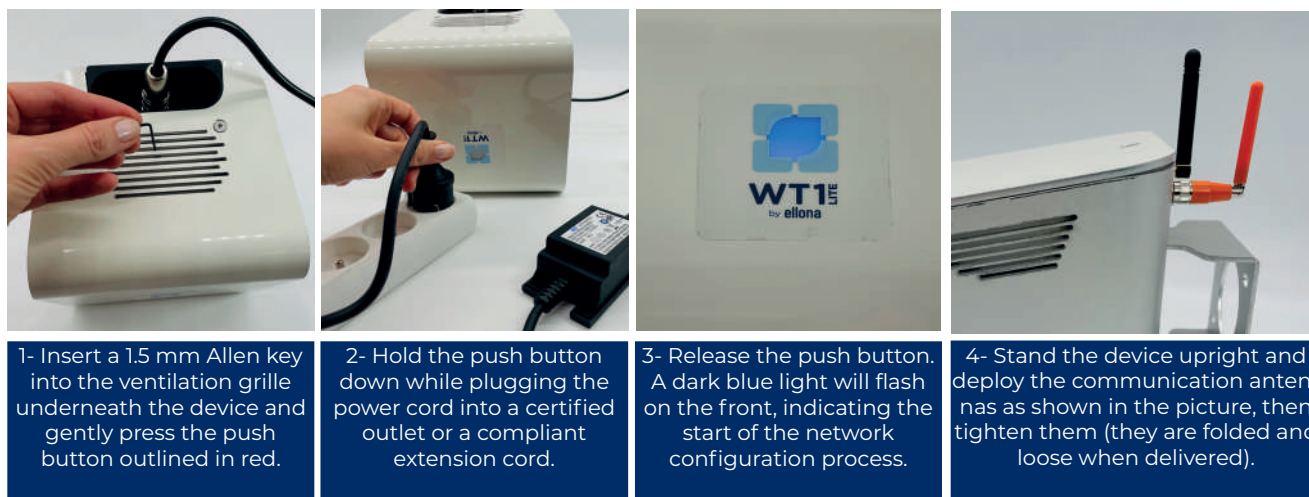
- Ensure the SIM card is securely locked in place before closing the casing.
- Carefully reattach the front and rear panels by pressing them firmly until the seals fit perfectly.
- Replace the three screws: two underneath the device and one on top. Tighten them securely to ensure proper sealing and safety.

## 4- NETWORK CONNECTION

> First, **connect the external power supply unit** to the device.



> Next, **initiate the network connection** by following the instructions below:



1- Insert a 1.5 mm Allen key into the ventilation grille underneath the device and gently press the push button outlined in red.

2- Hold the push button down while plugging the power cord into a certified power outlet or a compliant extension cord.

3- Release the push button. A dark blue light will flash on the front, indicating the start of the network configuration process.

4- Stand the device upright and deploy the communication antennas as shown in the picture, then tighten them (they are folded and loose when delivered).

### > Start the network configuration

- 1- Use a computer, tablet, or smartphone to search for available networks (LTE or WiFi).
- 2- Find the **serial number of your WT1 Lite on the identification plate** located at the back of the device.

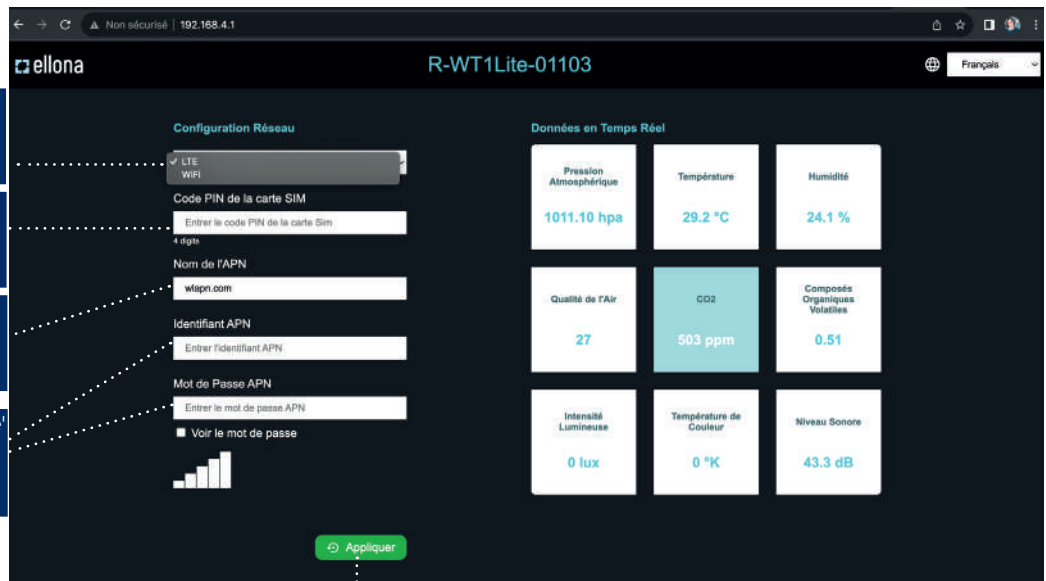


- 3- From the list of available networks, select the network that starts with "**R-WT1Lite-**" followed by the serial number.
- 4- Enter the following password: "**ellonapod2**".
- 5- When connecting to the Wi-Fi network, **a dedicated web page for configuring the WT1 Lite will open automatically**. If not, enter the following **IP address** in your web browser's address bar (Chrome, Firefox, Edge, etc.): **192.168.4.1**.

### > Network selection (LTE or Wi-Fi)

#### Procedure for selecting the LTE network

- 1- Select the desired network from the dropdown menu (LTE).
- 2- Enter the SIM card PIN code, or leave it blank if there is no PIN.
- 3- Enter the APN (Access Point Name) provided by the operator.
- 4- Fill in the 'APN Username' and 'APN Password' fields provided by the operator.



The screenshot shows the 'ellona' web interface for the 'R-WT1Lite-01103' device. The interface is in French and has a dark theme. On the left, under 'Configuration Réseau', there is a dropdown menu with 'LTE' selected. Below it are fields for 'Code PIN de la carte SIM', 'Nom de l'APN' (with 'wifapn.com' entered), 'Identifiant APN', and 'Mot de Passe APN'. A signal strength indicator is shown at the bottom of this section. On the right, under 'Données en Temps Réel', there are several data cards: 'Pression Atmosphérique' (1011.10 hpa), 'Température' (29.2 °C), 'Humidité' (24.1 %), 'Qualité de l'Air' (27), 'CO2' (503 ppm), 'Composés Organiques Volatiles' (0.51), 'Intensité Lumineuse' (0 lux), 'Température de Couleur' (0 °K), and 'Niveau Sonore' (43.3 dB). At the bottom center, there is a green 'Appliquer' button.

- 5- Click 'Apply' to validate the settings. A confirmation window will appear. Select 'OK' to restart the device and activate the LTE-M configuration.

## Procedure for selecting the Wi-Fi network

1- Select the desired network from the dropdown menu (Wi-Fi)

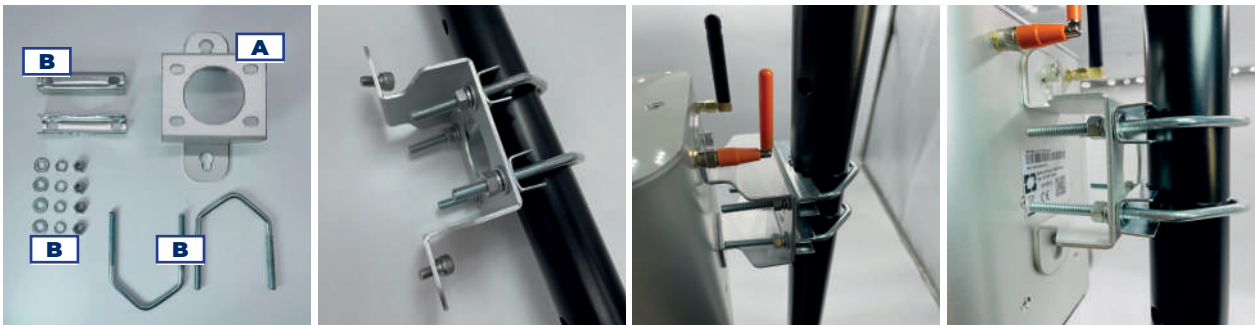
2- In the Wi-Fi SSID dropdown list, select the corresponding network

3- Enter the network password in the designated field

5- Click 'Apply' to validate the settings. A confirmation window will appear. Select 'OK' to restart the device and activate the Wi-Fi configuration.

## 5- MOUNTING THE DEVICE ON THE OUTDOOR SUPPORT (Example of mounting on a post)

> Mount the brackets on the device and on the support according to the following instructions:



**A** Hook provided and pre-mounted at the back of the device

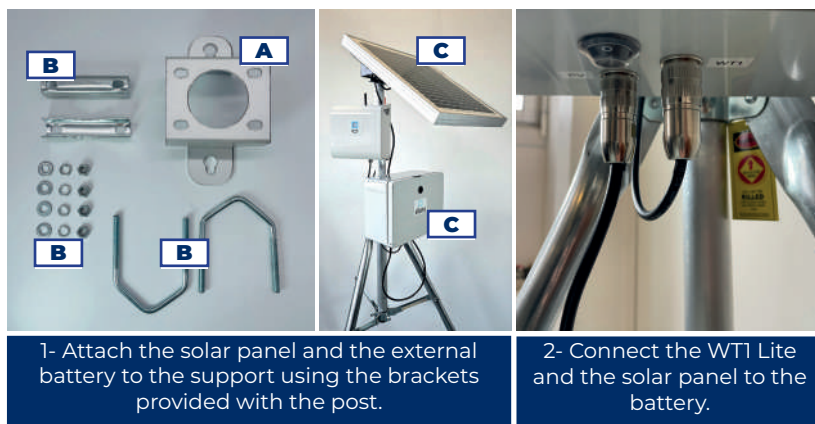
**B** Fixing brackets for the post are provided only if the post is ordered simultaneously.



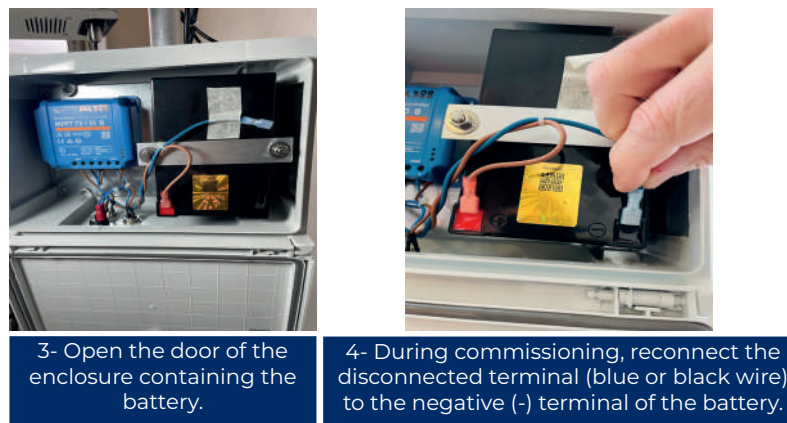
- > Place the device at the **recommended height** on your support (post, wall, etc.).
- > **Securely attach the brackets** to the support.
- > **Correctly orient the device** according to the instructions from the Ellona teams to maximize the effectiveness of the sensors.

## 6- FIXING OF ADDITIONAL DEVICES (if included in the service)

> Install the additional devices (solar panels, external batteries, etc.) on the support according to the following instructions:



- A** Hook provided and pre-mounted at the back of the device
- B** Fixing brackets are provided only if the post is ordered simultaneously
- C** Models of solar panels and batteries are provided as examples and may vary depending on the order



## 7- CHOICE OF LOCATION AND USAGE CONDITIONS



### > Location validation:

- Make sure that the location has been validated with the Ellona teams during the preliminary study.
- Check that the chosen support (post, wall, dedicated structure) complies with the installation recommendations.



### > Environmental conditions:

- Specific areas allowing air circulation for analysis must remain clear, with no direct exposure to water jets or obstructions.
- Install the device in a location protected from immersion and shielded from direct physical impacts.

# WARRANTY CONDITIONS

## 1. Warranty duration

The devices manufactured by ELLONA come with a 12-month warranty starting from the date of delivery. This warranty includes specific parts, such as sensors and mass flow meters.

## 2. Warranty coverage

The warranty covers the following services:

- Repair or replacement of defective components in the case of proven manufacturing defects.
- Complete product replacement if repair is not possible.
- Coverage of labor costs associated with the repair.

## 3. Warranty exclusions

The warranty does not apply in the following cases:

- Incorrect use or non-compliance with the instructions provided in the user manual and the WTI Lite datasheet (including sensor usage conditions).
- Damage caused by accidents (shocks, drops, etc.).
- Inadequate installation or unauthorized interventions.
- Normal wear and tear of components, such as the battery.
- Damage resulting from unauthorized modifications or use of spare parts not certified by ELLONA.
- Failures caused by the use of non-certified or incompatible accessories.
- Alterations caused by extreme environmental conditions (excessive temperature, humidity, dust, etc.) not covered by the device's specifications.



To know the exact conditions for using the sensors, please refer to the WTI Lite datasheet:

### **DATASHEET-WTI-LITE**

## 4- Warranty claim procedure

In case of an issue, the customer is asked to contact ELLONA customer support by providing:

- The product serial number.
- A copy of the proof of purchase.
- A detailed description of the incident or malfunction encountered.

## 5- Warranty execution

If the product is covered by the warranty, ELLONA commits to:

- Repairing or replacing the defective product within a reasonable timeframe.
- Providing an equivalent replacement product if the repair is impossible.

## 6- Limitation of liability

ELLONA's liability is limited to the repair or replacement of the warranted product. It cannot be held responsible for indirect or consequential damages, such as:

- Data loss.
- Economic losses.
- Any other operational loss.

## 7- Warranty transfer

The warranty is strictly limited to the first buyer of the product and cannot be transferred to a third party.

For further information on the general terms and conditions of sale, please refer to the following document: **General terms and conditions of sale.**

## 8- Revisions and claims

These warranty conditions may be modified in accordance with the specific terms of the contract between ELLONA and the customer. For any questions or claims regarding the warranty, please feel free to contact our after-sales service.



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