

FIMER



Installation manual

FIMER FLEXA AC Station



Safety instruction

This manual contains important safety instructions that must be followed during the installation and maintenance of the equipment.



Keep this manual

Keep this document in a safe place for easy access during installation and maintenance..

The installer should read this document in its entirety before installing the equipment

Operators are required to read this manual and adhere to the instructions contained therein.

FIMER cannot be held liable for damages caused to persons and/or property, or to the equipment, if the conditions described below have not been met.

The purpose of this document is to support qualified technicians, who have received adequate training and/or have demonstrated adequate skills and knowledge in the construction, installation, operation and maintenance of electrical equipment.

The guarantee requirements are contained in the Terms and Conditions of Sale section included in the purchase order for this product.

NOTE: Any modification not approved by FIMER will immediately void the product guarantee.

Guarantee and delivery conditions

The guarantee conditions are considered valid if the customer complies with the instructions contained in this manual; any deviation from the guarantee conditions, with respect to what is described below, must be expressly indicated in the purchase order.

FIMER declares that the equipment complies with the legal provisions currently in force in the country of installation and has issued a relevant declaration of conformity.

FIMER assumes no responsibility for any failure to comply with the instructions for correct installation and may not be held responsible for systems upstream or downstream of the equipment supplied.

Modifications to the equipment are strictly forbidden. Any modification, manipulation or alteration to the hardware or software not expressly agreed with the manufacturer will result in the immediate cancellation of the guarantee.

Given the extensive combinations of system configurations and possible installation settings, it is essential to check the following before proceeding with installing the product: adequate space for housing the equipment, airborne noise produced by the environment and possible conditions for flammability.

FIMER cannot be held responsible for defects or malfunctions deriving from: improper use of the equipment; deterioration due to transport or particular environmental conditions; incorrect or missing maintenance; tampering or unsafe repairs; use or installation by unqualified persons.

FIMER is not responsible for any loss of the equipment, or part of it, that is not used according to the regulations and laws in force in the country of installation





Purpose and structure of the document

This use and maintenance manual is a guide that will allow you to work safely and perform the necessary operations to keep the equipment in good working order.

If the equipment is used in a manner not specified in this manual, the protection provided by the equipment may be compromised.

The document was originally written in Italian; therefore, in case of inconsistencies or doubt, please ask FIMER SpA for the original document.



List of documents in appendix

In addition to this user manual, you can consult and download the product documentation by visiting www.fimer.com.

This document contains only the information deemed necessary for the routine use and maintenance of the equipment.



Skills and requirements for the operator and maintenance personnel

The personnel assigned to use, maintain and install the equipment must be qualified by FIMER (by means of a letter attesting to their qualification) for the activities described and must reliably demonstrate their ability to correctly interpret the contents of this manual.



Installation must be carried out by FIMER qualified installers and/or FIMER authorized electricians in compliance with the regulations in force in the country of installation and in accordance with all the safety standards for carrying out electrical work.



The installation or maintenance of the product may not be entrusted to unqualified persons or persons in an altered physical or mental state.



The customer bears civil responsibility for the qualifications and mental or physical state of personnel interacting with the equipment. Such personnel must always use the personal protective equipment (PPE) required by the laws of the country of destination and by their employer's instructions

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1 - General information

FIMER FLEXA AC Station is the AC charging station for powering electric vehicles ideal for public, semi-public and residential applications: it is available in single-phase or three-phase setup and can be equipped with either Type 2 or Type 3A sockets (in accordance with IEC 62196-2 standard). Other connector types are not supported.

Characterized by significant robustness and ease of use, this device allows the simultaneous recharging of two electric vehicles up to a maximum of 44kW (22kW each) in the T2-T2 configuration or up to a maximum of 25.7kW (22kW+3.7kW) in the T2-T3A configuration.



Prepare and size the entire power supply circuit in accordance with the local and international standards in force, according to the product configuration and the chosen power.

This document describes how to install, configure and maintain the product.



A description of the equipment features is provided to help identify its main components and specify the technical terminology used in the manual.

This chapter contains information on the model, equipment details, technical characteristics and data, dimensions and the identification of the equipment

1.1 - Field of use



FIMER is not liable for damages of any kind that may arise from incorrect or reckless operations.

The equipment may not be used for a purpose that does not conform to that envisaged in the field of use. The equipment must not be installed by inexperienced personnel, or even by experienced personnel if operations are performed on the equipment that are not in accordance with this manual and the accompanying documentation.

This equipment is a charging station for electric vehicles; the following classification (according to IEC 61851-1) identifies its features:

- Power supply: permanently connected to the AC power supply
- Output: AC
- Environmental conditions: external use
- Device for places with free access
- Fixed installation in ground
- Protection against electric shock: Class I
- Charging type: Mode 3 according to IEC 61851-1
- Optional ventilation function not supported

Technical data

Model	FIMER FLEXA AC Station Stand Alone		FIMER FLEXA AC Station - Local Controller		FIMER FLEXA AC Station - Future Net	
Socket type	T2-T2	T2-T3A	T2-T2	T2-T3A	T2-T2	T2-T3A
Standard			IEC61851-1			
Charging method			Modo 3			
Maximum power per socket	22KW	22kW per T2 and 3.7kW per T3A	22KW	22kW per T2 and 3.7kW per T3A	22KW	22kW per T2 and 3.7kW per T3A
Power system			3P + N + PE			
Rated voltage			230/400V AC ± 10%			
Frequency			50Hz - 60Hz			
Rated current	64A	48A	64A	48A	64A	48A
Rated impulse withstand voltage (Uimp)			4kV			
Rated conditional short-circuit current of an assembly (icc)			10kA			
Rated diversity factor (RDF)			1			
Degree of pollution			2			
EMC classification			Class B emissions			
Protective measures against electric shock			Class I			
Connection to the mains			Class I			
Grounding system type			TT or TN (both with PE)			
Indoor/outdoor installation			External			
Fixed or removable installation			Fixed			
Overvoltage category			III			
IP protection rating			IP 54			
IK protection rating			IK10			
Case material			Stainless steel AISI 304			
Dimensions			1315 mm x 437 mm x 293 mm			
Weight			48 kg			
Operating temperature			-25...+50°C			
Storage temperature			-25...+70°C			
Humidity			0...95% (non-condensing)			
Altitude			Up to 2000m			
Product intended for use by			Unskilled people			
Positioning in area with			Unlimited access			
Magnetothermal protection	Included (2 x MCB 4P D40 10kA)	Included (MCB 4P D40 10kA + MCB 2P D20 10kA)	Included (2 x MCB 4P D40 10kA)	Included (MCB 4P D40 10kA + MCB 2P D20 10kA)	Included (2 x MCB 4P D40 10kA)	Included (MCB 4P D40 10kA + MCB 2P D20 10kA)
Differential protection	Included (2 x RCD 4P Type A 40A 30mA & RCM 6mA DC)	Included (RCD 4P Type A 40A 30mA & RCM 6mA DC + RCD 2P Type A 25A 30mA & RCM 6mA DC)	Included (2 x RCD 4P Type A 40A 30mA & RCM 6mA DC)	Included (RCD 4P Type A 40A 30mA & RCM 6mA DC + RCD 2P Type A 25A 30mA & RCM 6mA DC)	Included (2 x RCD 4P Type A 40A 30mA & RCM 6mA DC)	Included (RCD 4P Type A 40A 30mA & RCM 6mA DC + RCD 2P Type A 25A 30mA & RCM 6mA DC)
Energy meter			MID Certificate			
Remote control			2xNo/4xNO 40A, AC-1 @40°C			
OCPP	-	-	-	-	OCPP 1.5 or 1.6 JSon	OCPP 1.5 or 1.6 JSon
Internal Load Manager	•	•	•	•	•	•
Connectivity	Modbus TCP/IP	Modbus TCP/IP	Modbus TCP/IP	Modbus TCP/IP	Modbus TCP/IP + OCPP	Modbus TCP/IP + OCPP
3G/4G connection	-	-	-	-	•	•
RFID	-	-	RFID local management	RFID local management	RFID local management	RFID local management
Status LED	•	•	•	•	•	•
OLED Monitor	-	-	•	•	-	-
TFT 4.3" Monitor	-	-	-	-	•	•
Certification			CE, RCM (dedicated codes)			



When installing in TN-earthing systems, there may be additional specific local regulations regarding system safety and failure protection that the installer must understand and implement.

The device may only be connected to the mains in countries for which it has been certified/approved.

The following are strictly forbidden:



- Installing the equipment in particularly flammable environments or in adverse or non-authorized environmental conditions
- Using the equipment with faulty or disabled safety devices
- Using the equipment or parts of the equipment by connecting it to other machines or equipment, unless expressly allowed
- Modifying operating parameters not accessible to the operator and/or parts of the equipment to adjust its performance or change its isolation status
- Cleaning the product with corrosive products that could damage parts of the equipment or generate electrostatic charges
- Using or installing the appliance or parts thereof without having read and understood the contents of the use and maintenance manual

1.2 - Symbols and definitions

Symbol



GENERAL WARNING



THE ORIGINAL MANUAL OR OTHER ADDITIONAL DOCUMENTATION MUST BE CONSULTED



PROHIBITION OR RESTRICTIONS



THE OPERATIONS DESCRIBED MUST BE CARRIED OUT USING THE CLOTHING AND/OR PROTECTIVE EQUIPMENT PROVIDED BY THE EMPLOYER



THE PRODUCTS SHOULD NOT BE DISPOSED OF WITH HOUSEHOLD WASTE, BUT COLLECTED IN A DIFFERENT MANNER AS, ALTHOUGH NOT COMPOSED OF MATERIALS HARMFUL TO HEALTH, THEY ARE MADE OF RECYCLABLE MATERIALS



HAZARD-WARNING SIGNAL: PRESENCE OF ELECTRICAL VOLTAGE



OBLIGATION SIGNAL: READ THE INSTRUCTIONS



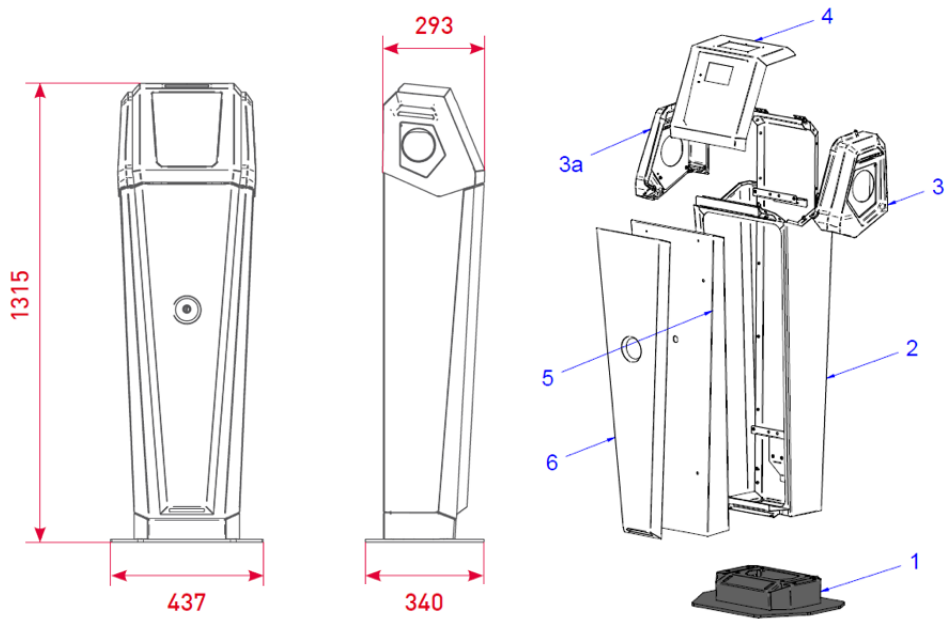
THE INSTALLATION OF THE ELECTRONIC DEVICE SHOULD BE PERFORMED ONLY BY QUALIFIED PERSONNEL

Regarding the symbols on the product nameplate, the indications not listed above are identified as follows:

1.3 - Product dimensions and charateristics



Weight: 48 kg
Dimensions: 1315 mm x 437 mm x 293 mm



1	Stand
2	Rear casing
3	Right side cover
3a	Left side cover
4	Upper cover
5	Front door
6	Front shield

1.4 - Support

For any further information or request for support, FIMER is available through the dedicated section of the website www.fimer.com or by writing to service.emobility@fimer.com

2 - Safety and equipment

2.1 - Safety warnings



Please read this document carefully before installing and starting up the product.

The installation and start-up phases of the device must be carried out exclusively by qualified personnel, able to identify hazards and act safely.

The phases of maintenance, repair or subsequent repositioning must also be carried out only by qualified personnel: there are no components that can be repaired by the user or maintained independently.



The product must not be operated by children or persons not considered able to assess the installation-related risks.

Pets and non-domestic animals must be kept away from the appliance.

Total or partial non-compliance with the indications contained in this document can lead to serious or fatal injuries.

The qualified installer must always ensure that the installation takes place in accordance with the local regulations in force at the time of installation.

2.2 - Compliant use

The device requires grounding by a dedicated equipotential cable, to be connected in the grounding terminal inside the device.

In any case, before installation, it is necessary to verify that the power supply system is fully compliant with the state of the art and provided by qualified personnel in accordance with local and international regulations in force.

It is only safe to use the device if it is used as intended.

Different uses and unauthorized modifications to the appliance or any of its components are therefore impermissible and are thus considered non-compliant.



The device is designed to be connected and to communicate information and data via a network interface. Users are solely responsible for consistently providing and ensuring a secure connection between the product and their data network or any other network (as applicable). Users should establish and maintain all appropriate measures (such as, but not limited to, installing firewalls, applying authentication measures, encrypting data, installing anti-virus programs, etc.) to protect the product, the network, their system and interface against any type of security breach, unauthorized access, interference, intrusion, loss or theft of data or information. FIMER and its affiliates are not liable for damages or losses related to such security breaches, any unauthorized access, interference, intrusion, leakage or theft of data or information. The data, examples and diagrams in this manual are included only with the aim of describing the product and should not be considered as a guaranteed declaration of ownership. All persons responsible for installing the equipment indicated in this manual must ensure that each intended installation is suitable and acceptable, including compliance with any applicable safety or other operational requirements. In particular, any risk in applications where a system or product failure would create a risk of damage to property or persons (including but not limited to personal injury or death) will be the sole responsibility of the person or entity installing the equipment; those responsible are encouraged to ensure that all measures are taken to exclude or mitigate such risks.

This document has been carefully checked by FIMER but deviations cannot be completely ruled out. If errors are detected, the reader is kindly requested to notify FIMER. Other than under explicit contractual commitments, in no event shall FIMER be responsible or liable for any loss or damage resulting from the use of this manual or from the installation of the equipment.



The product is not suitable for free display on the Internet. To ensure maximum security of information and operation, the device must remain protected from any attempt to contact it via the Internet and therefore a communication can only be originated from the device and not vice versa.

If you require further information, support or cybersecurity reports, you can write to itteb.cybersecurity@fimer.com.

2.3 - Product handling



The total weight of the product without packaging is approximately 48 kg: make sure to use a suitable tool for handling.

Transport and store in a dry place away from heat sources (as specified in the technical specifications), only in the original packaging.

Never grab the product from the charging connectors.

3 - Installation



CAUTION: Failure to observe the instructions provided in this manual can cause serious damage to both the product and the installer (in the most serious cases, injuries can be fatal). Before proceeding with the installation, start-up and use of the product, you should carefully read the instructions in this manual. FIMER recommends using experienced professionals, who comply with current regulations, to install the product correctly.

The Wallbox device is intended for installation in Europe and Australia only.

The following table shows the main local limitations prescribed in IEC 61851-1 that the installer must consider before proceeding with choosing and installing the device. However, it remains the responsibility of the installer to verify that these standards are still in effect, and especially to verify the existence of any additional local standards that may limit the use of such devices in the chosen country:

Paese	National limitations
US	Device not suitable for this country
CA	Device not suitable for this country
JP	Device not suitable for this country
DK	The reclosing function of the differential switches (ARD) must be disabled the disabling of the reclosing function of the differential switches must be carried out by qualified FIMER personnel
UK	The reclosing function of the differential switches (ARD) must be disabled the disabling of the reclosing function of the differential switches must be carried out by qualified FIMER personnel
FR	The reclosing function of the differential switches (ARD) must be disabled the disabling of the reclosing function of the differential switches must be carried out by qualified FIMER personnel
CH	The reclosing function of the differential switches (ARD) must be disabled the disabling of the reclosing function of the differential switches must be carried out by qualified FIMER personnel

3.1 - Preparing for installation

Before installing, make sure that:

- Input power supply is completely switched off and remains off until installation is completed
- The work area is adequately marked and isolated (access to people not required for the work must be prevented)
- Installation should not be done with wet hands and no water jet may be directed at the product
- Do not install in conditions of rain, fog, or high humidity
- The packaging of the product is perfectly intact and without obvious damage (if the product is damaged, contact your seller or request support at www.fimer.com)
- The product and all components (including cords) are perfectly intact and without any defects or obvious faults

To ensure the correct operation of the product, referring to local regulations in force, calculate the distance between the power supply panel and the installation site properly to determine the voltage drop, cord thickness and existing load, which are useful for identifying the maximum operating current.



The entire electrical power supply system to which the product is connected must first be correctly sized by a qualified professional. The electrical data of the device, which must be consulted for the correct sizing of the power supply system, are the data on the label of the device itself.

When installing this product, you must comply with all local and international standards for the construction and installation of electrical/electronic equipment, including but not limited to IEC 60364-1 and IEC 60364-5-52.

The power supply system must meet the following requirements:

- TN or TT system, in both cases with PE cord
- Three-phase power supply: 230/400 V AC \pm 10% - 50Hz/60Hz

3.2 - Tools required

1. Cutter
2. Flathead screwdriver or screwdriver
3. Torque wrench for hexagonal screws
4. Marker/pencil
5. Drill and 12mm diameter tip, suitable for the material of the fixing surface to be drilled
6. Hexagonal wrenches
7. Wire stripping pliers



FIMER declines all responsibility for damages to property or persons deriving from the use of these instruments. The installation must be carried out by qualified personnel and in accordance with the regulations in force for the installation of electrical equipment.

3.3 - Package contents

- 1 FIMER FLEXA AC Station
- 4 Anchor devices M12x105
- 1 MASTER RFID card (only for the Local Controller version) and 2 USER RFID cards
- 2 Keys for opening the front door
- Installation manual, guarantee certificate and declaration of conformity

3.4 - Space and positioning



Before choosing a location for this product, consult the electric vehicle's manual and follow any applicable guidelines. Ensure that there are no heat sources, flammable substances, or electromagnetic sources in the installation area either during the product installation phase or throughout its life.

In addition, the installation site must be sufficiently ventilated to ensure proper heat dissipation.

For mobile cellular or Wi-Fi versions of the product, make sure the selected area has cellular reception or Wi-Fi coverage.

Before installation, make sure that the environmental conditions (such as temperature, altitude and humidity) according to section 1.1 of the product specifications are met.



To ensure the functionality of the device and to guarantee its correct use by the user, the space around the device must be free to allow air circulation, maneuvering the cords, recharging operations by the user and routine and extraordinary maintenance in safety.

In addition, the space required to park the electric vehicle for recharging must be taken into consideration.

For locations where the device will be exposed to direct sunlight or weather for most of the day, it is recommended to install a cover to protect the charging station.

Also:

- Make sure the charging device is protected from collisions by barriers or poles;
- Design the parking layout for easy access to the charging cord;
- Provide a comfortable environment for users, providing safety against vandalism or theft;
- Install the charging device in a location where it can be clearly seen or monitored;
- Install sufficient lighting around the device.

3.5 - Unpacking

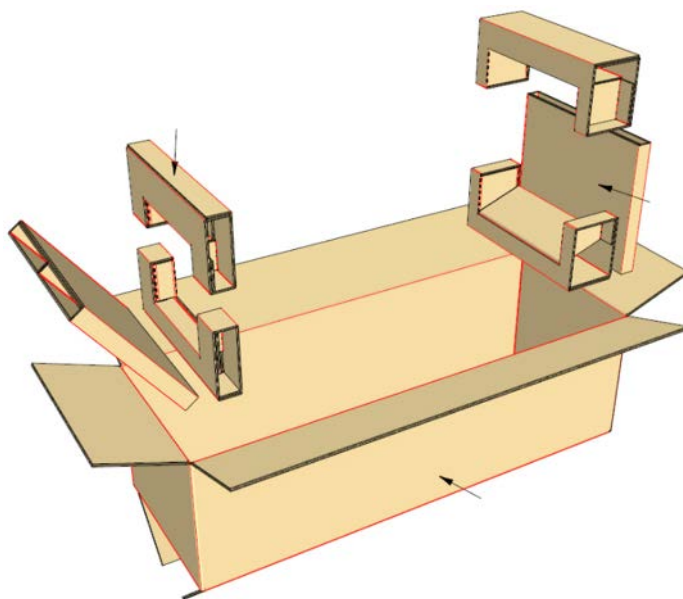
Before proceeding with the installation of the device, it is necessary to check, upon unpacking, that the various parts of the device do not present physical damage due to shocks, tears or abrasions.

If any damage is detected, stop the installation procedure immediately and contact technical support as described in section 1.4.

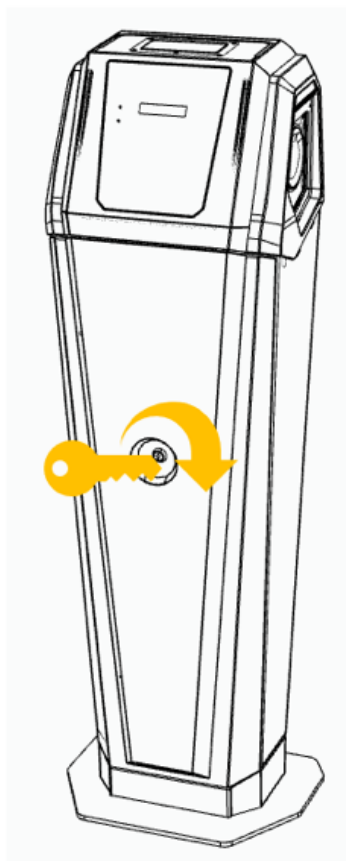
The various components are protected by packaging and adhesive tapes. Before installation, each component must be cleared of any traces of dust, the packaging or adhesive tapes.



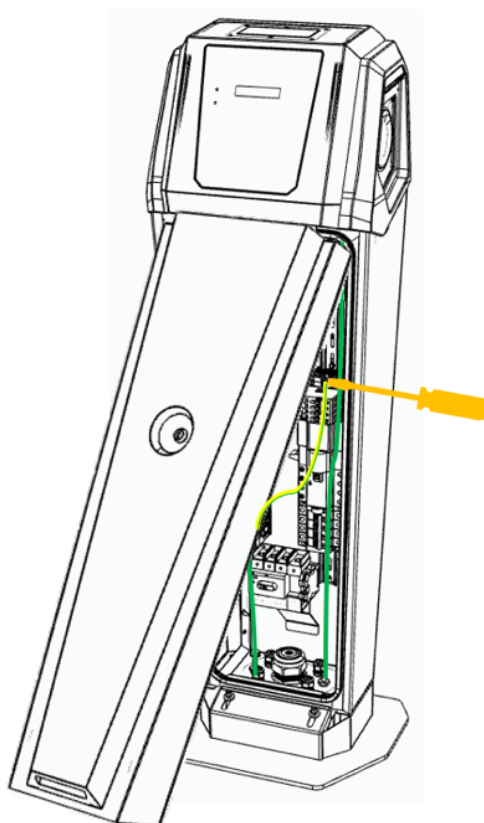
The following images are for illustrative purposes only; they may not show all internal components of the product or present negligible differences from the actual configuration



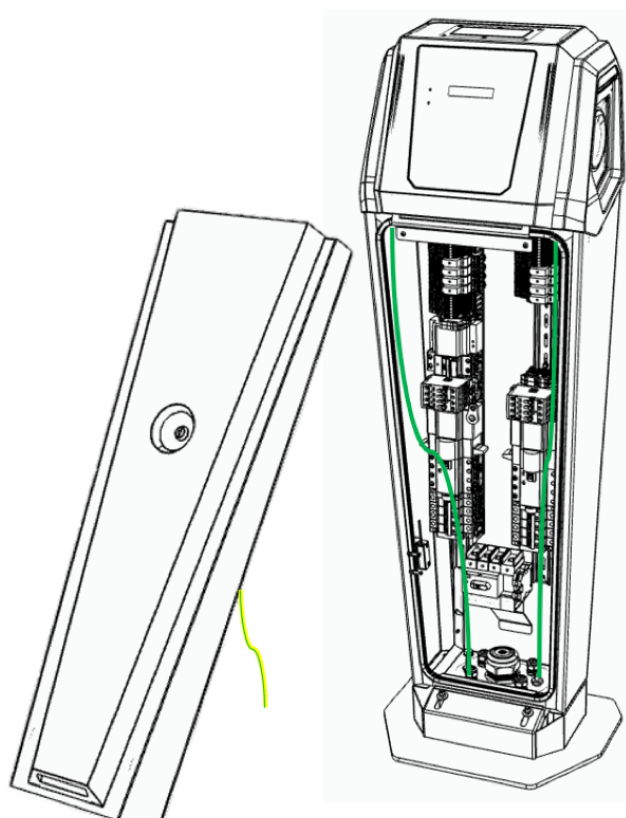
1. Open the main packaging
2. Using appropriate handling equipment, remove the station from the enclosure and place it horizontally on the work surface
3. Using the supplied key, open the front lock



4. Slightly open the lower part of the door and, using the flathead screwdriver, unhook the grounding wire from the clamp to which it is hooked

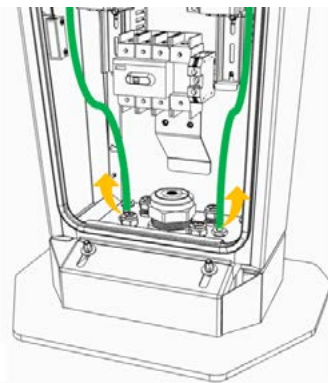


5. Since the front door is no longer fastened to the station, it can be removed completely

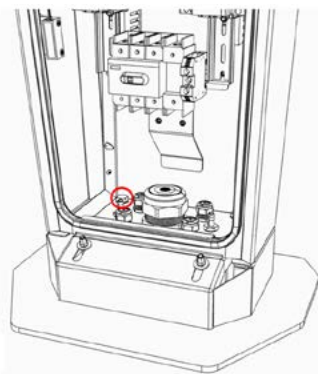




6. Remove the main disconnect switch's terminal covers and remove the two drain hoses from the 2 metal hose adaptors



7. Using a ratchet for hexagonal screws, unscrew the 4 fixing bolts and their washers from the bottom of the station, separating the stand and the plate from the station with cord glands (CAUTION: as indicated in step 2, be sure to place the station on a horizontal plane before removing the hexagonal screws to avoid dropping the station body when removing the screws)



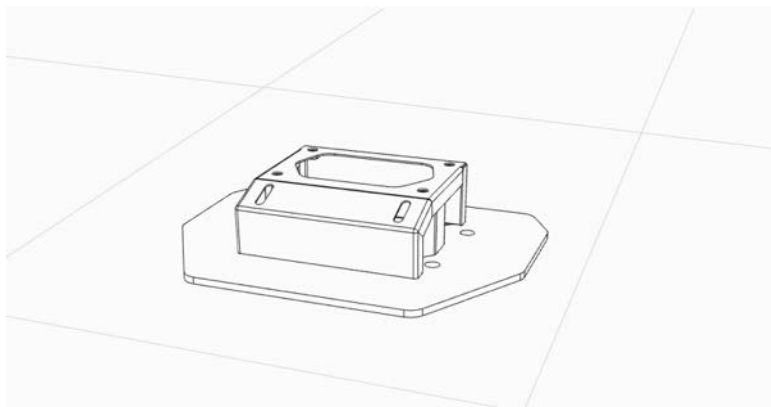
3.6 - Anchor device installation

The following images are for illustrative purposes only; they may not show all internal components of the product or present negligible differences from the actual configuration.

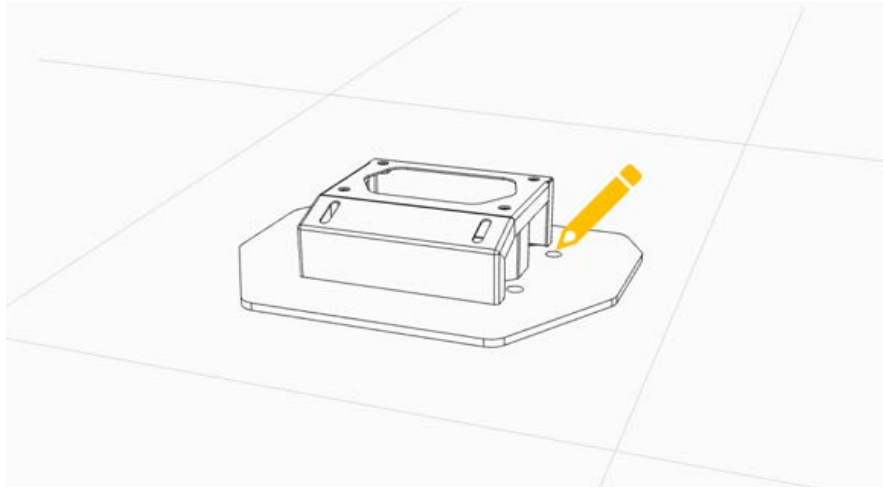


3.6.1 Installation on existing ground

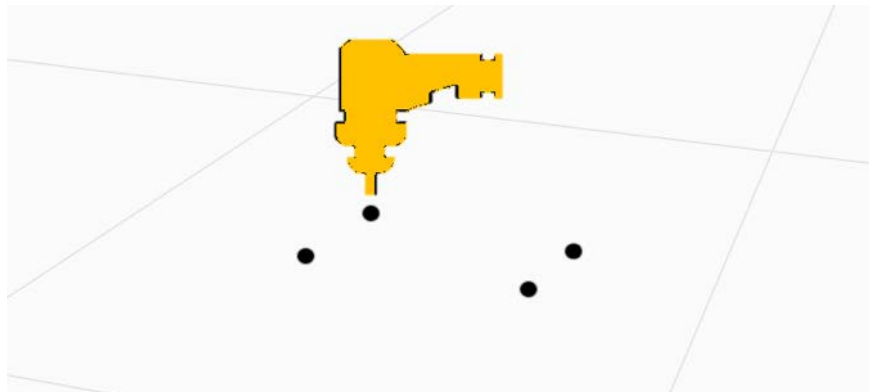
1. Place the stand on the ground where you want to install the product (in any case respecting the indications previously provided on the subject of positioning) and letting the corrugated pipe come out of the ground for about 3-5cm



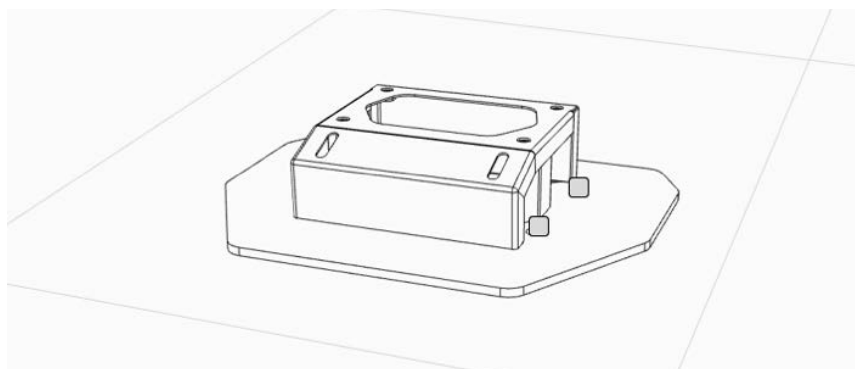
2. Using the stand as a template, make marks on the floor at the position of the 4 present holes



3. Remove the stand and drill holes in the ground at the position of the 4 marks previously made with a 12mm drill bit to position the anchoring devices. The maximum drilling depth is 60mm for at least 120mm thick soils, and 80mm for at least 160mm thick soils. Then, clean the hole made from any debris of drilling



4. If the installer wants to further increase the seal, it is possible to inject in the 4 holes just made some resin anchor (or chemical)
5. Remove pre-screwed bolts and washers from the anchor devices
6. Insert the 4 anchor devices into the 4 holes just drilled
7. Place again the stand at the position of the anchor devices (so that the threaded parts protruding from the ground pass through the holes in the stand), pass the corrugated cord through the stand and secure it to the ground using the 4 bolts and 4 washers previously unscrewed from the anchor devices (use a tightening torque of 62-79Nm)



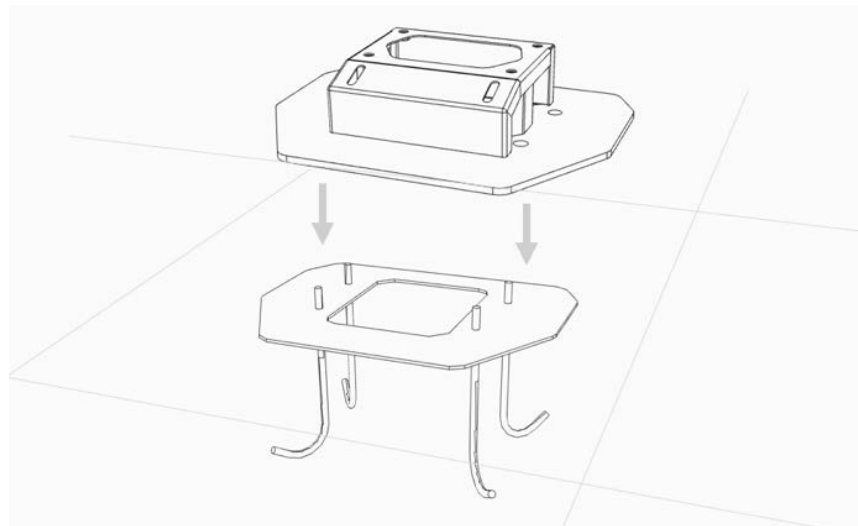
3.6.2 Installation in fresh concrete

In case of installation in concrete plinth, it is necessary to use the plate with clamps (not included in the standard package) following the following procedure:

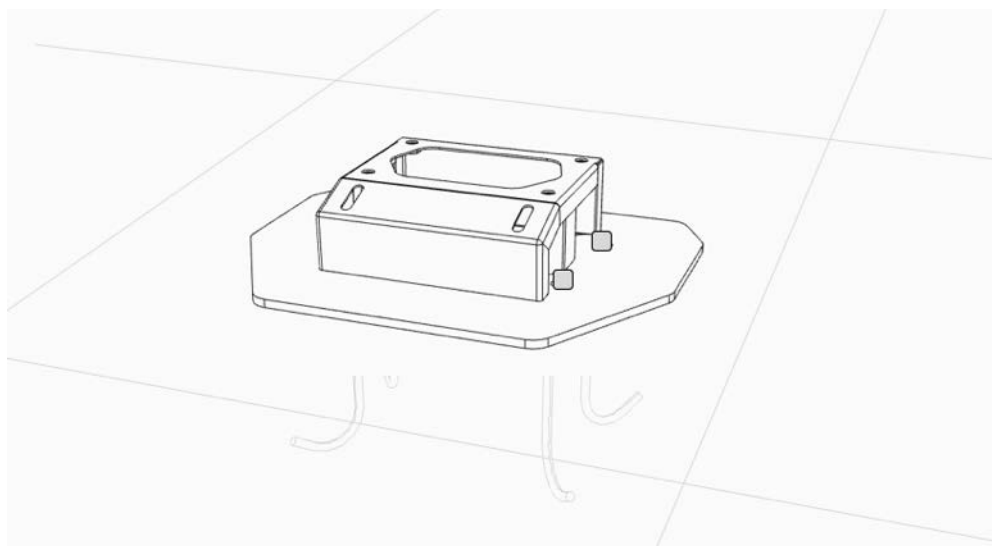
1. Install the plate with clamps inside the concrete casting, making sure that only the clamps are submerged, while the horizontal plate should barely emerge from the surface



2. Once the concrete solidified, place the stand on top of the upper part of the plate with clamps, so that the protruding threaded parts pass through the holes in the stand, and run the corrugated cord through the stand



3. Fasten the stand to the plate with clamps using M10 bolts and M10 washers (available in the clamp base package) to be screwed onto the protruding threaded parts with a tightening torque of 36-46Nm



3.7 - Charging station installation



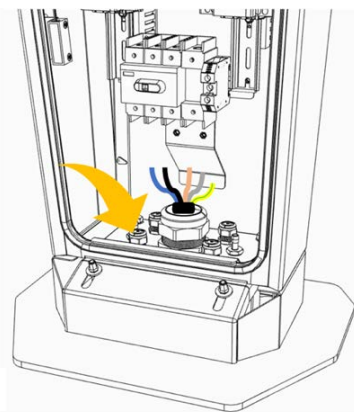
During installation, prevent the electrical connection of the power supply; the entire work area must be cordoned off and only qualified and authorized personnel may access it.

The power supply to the equipment must remain off. Failure to follow these instructions could result in serious injury or death.

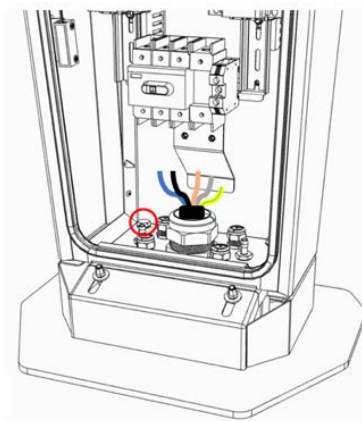
Make sure to keep the station in a vertical position by using appropriate safety equipment during the entire phase of fixing the station to the stand

The following images are for illustrative purposes only; they may not show all internal components of the product or present negligible differences from the actual configuration

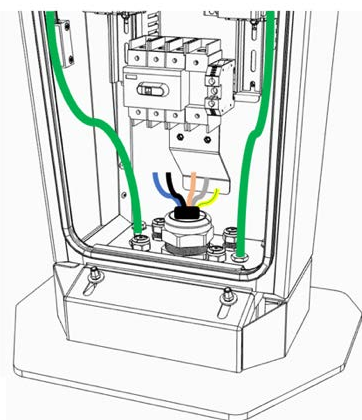
1. Using special handling equipment, place the station on top of the stand previously secured to the ground and run the cords through the bottom of it. Bring the plate with the cord glands to the area where the cords come out, loosen the main cord gland and pass the multipolar cord through it. Finally, lay the plate with the cord glands on the bottom of the station:



2. Reuse the Ø10 hex head screws and Ø10 washers (previously removed during unpacking) to secure the plate with cords gland to the bottom of the station (and consequently the station to its stand) with a tightening torque of 36-46Nm



3. Reattach the two drain hoses to the 2 metal hose adaptors



3.8 - Power and grounding cord connection



During installation, prevent the electrical connection of the power supply; the entire work area must be cordoned off and only qualified and authorized personnel may access it.

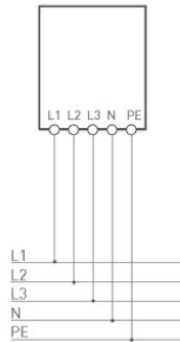
The equipment should be powered through properly sized cords with appropriate resistance for the current flow for which the product was designed. Before wiring, ensure that the cords are properly sized and that the maximum allowable bending radii are not exceeded. The electrical data of the device, which must be consulted for the correct sizing of the power supply system, are the data on the label of the device itself.



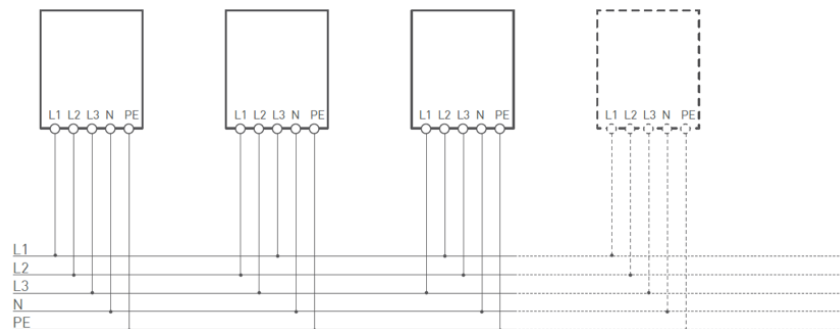
The power supply to the equipment must remain off throughout this step. Failure to follow these instructions could result in serious injury or death.

The images below are for illustrative purposes only and may not show all internal components in the product.

The following diagram shows how to electrically connect the station:



In the case of multiple installations, it is suggested a phase rotation as follows:



In the station are already contained differential protection devices (complying with one of the following standards: IEC 61008-1, IEC 61009-1, IEC 60947-2 and IEC 62423) and magnetothermal (complying with IEC 60947-2, IEC 60947-6-2 or IEC 61009-1 or with the relevant parts of IEC 60898 or IEC 60269). Other types of protection (e.g., overvoltage protection) are not included.

In particular, T3A sockets are protected by two-pole magnetothermal protection (D curve, 20 A, 10 kA) and two-pole pure differential switch (type A, 25 A, 30 mA) with the addition of a DC 6mA direct current monitoring device, while T2 sockets are protected by four-pole magnetothermal switch (D curve, 40 A, 10 kA) and four-pole pure differential switch (type A, 40 A, 30 mA) with the addition of a DC 6mA direct current monitoring device



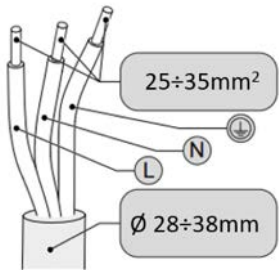
The following guidelines provide information regarding the power cords to be used and the recommended conductor size:

Multipolar cord outer diameter: 28÷38 mm

Recommended conductor cross-section: 25÷35 mm²

Wire stripping length:

- Main disconnect switch terminal block (L1-L2-L3-N): 18÷21 mm
- Grounding clamp: 17 mm

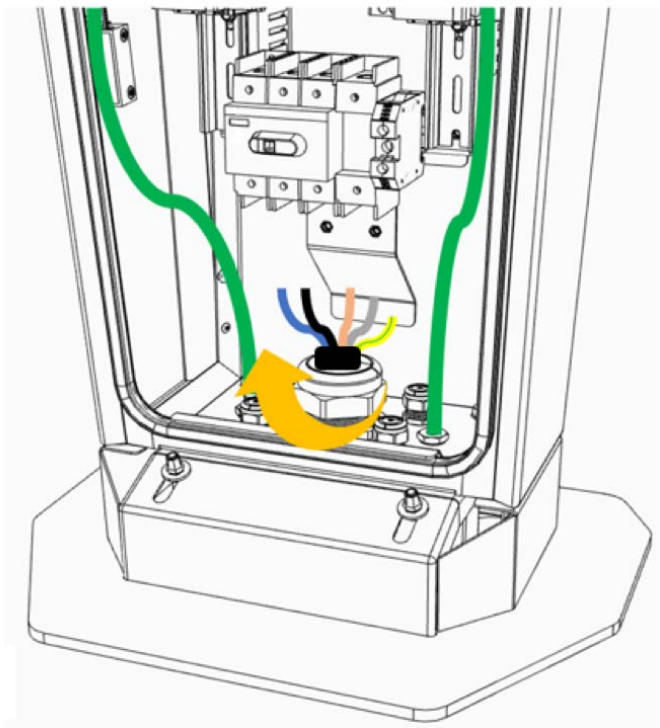


The following table shows the maximum length of the conductors in relation to the chosen section:

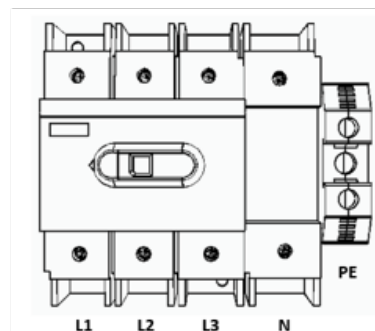
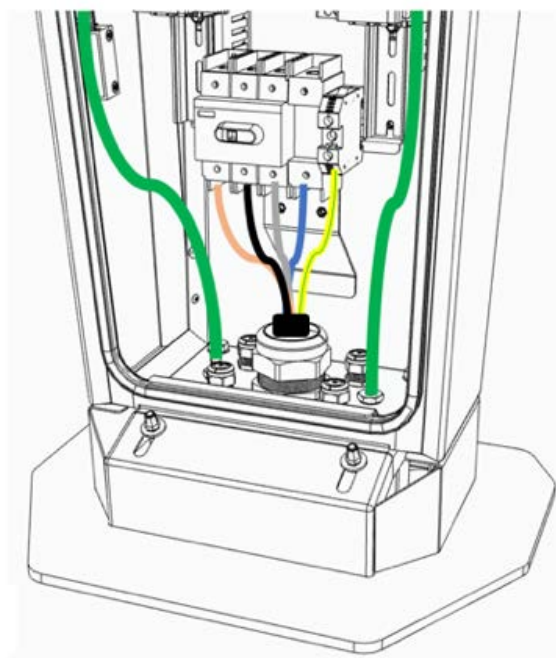
AC Station version [type of sockets]	In (A)	Cross-section of conductor [mm ²]	Maximum conductor length [m]
T2-T3A	48	25	152
T2-T3A	48	35	210
T2-T2	64	25	114
T2-T2	64	35	158

For mode 3 case B the cords used for charging the vehicle must have a minimum I^2t value of 75 000 A²s

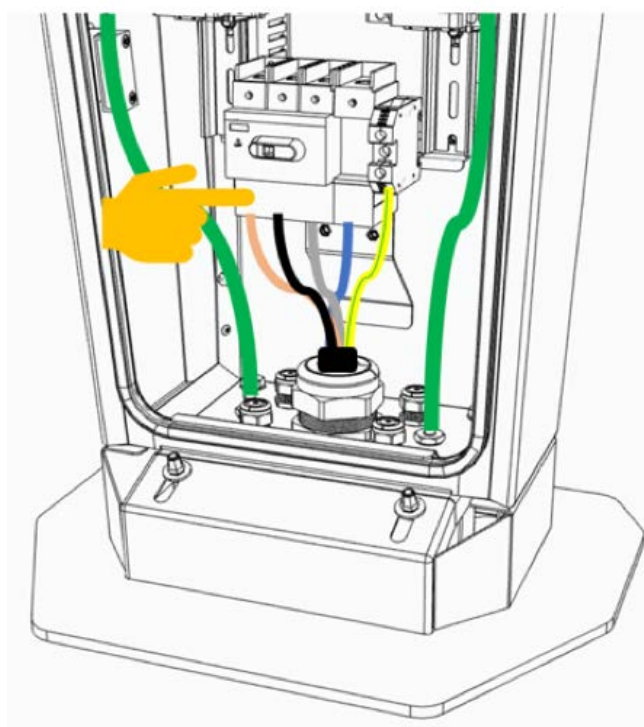
1. Pull the multipolar cord, leaving some space inside the column, and tighten the cord gland (making sure the remaining cord glands are also tightened)



2. Strip the wires to a length of 18-21mm for the power supply cable and neutral wires, and 17mm for the ground cord. Connect the ground cord to the respective terminal and tighten with a torque of 3Nm and then connect the phases and neutral to the main disconnect switch (after removing the terminal covers), making sure that the entire ferrule of each cord is fully threaded (the tightening torque for the terminals of the disconnect switch is 6Nm).



3. Place the disconnect switch terminal covers on the lower terminals (previously removed)



3.9 - Communication cords connection (local controller and future net versions)



During the installation it is necessary not to allow the electrical connection of the power supply, but it is necessary to cover with insulation tape and appropriate signalling the entire working area, that can be accessed only by qualified and authorized personnel.

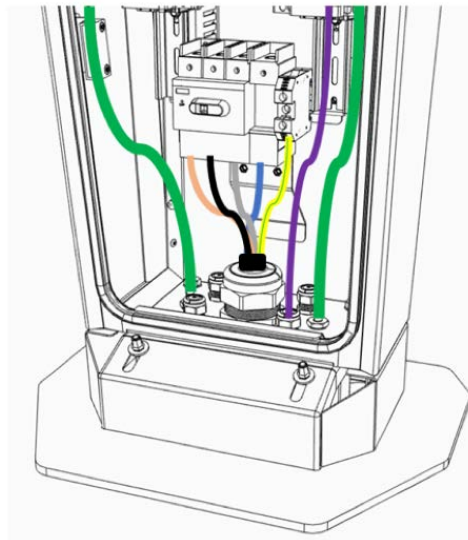
The power supply to the equipment must remain off throughout this step.

Failure to follow these instructions could result in serious personal injury and property damage and even death

The images below are for illustrative purposes only and may not show all internal components actually installed in the product

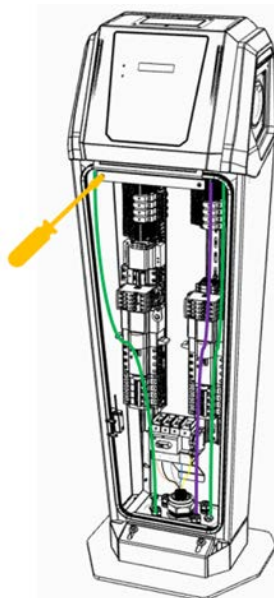
The Local Controller version, when connected in Master-Slave configuration, requires the installation of an Ethernet cord.

1. The Ethernet cord must be inserted from the bottom of the station (where the power cords are inserted) and must pass through one of the dedicated cable glands (smaller than the one intended for power cords)
2. Pull the cord to a length that reaches the top of the station and tighten the cable gland, while still leaving some room inside the column (purple cord)

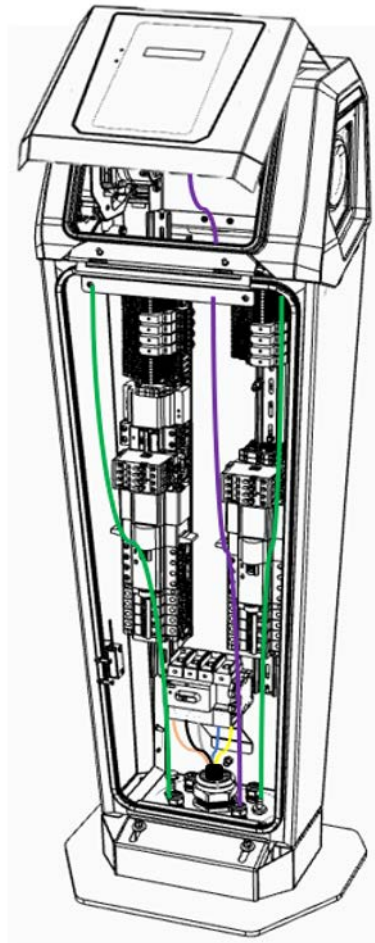


Once the top of the column is reached, the end of the Ethernet cord should be plugged into the appropriate Ethernet port:

1. Unscrew the two M5 screws and their washers at the bottom of the station's head; lift the head cover



2. Plug the available end of the Ethernet cord into the lower right side of the station's head, where an Ethernet port is available



3. Close the cover and re-tighten the two M5 screws and their washers previously removed with a tightening torque of 4.3-5.5Nm

3.10 - Finishing operations and power supply

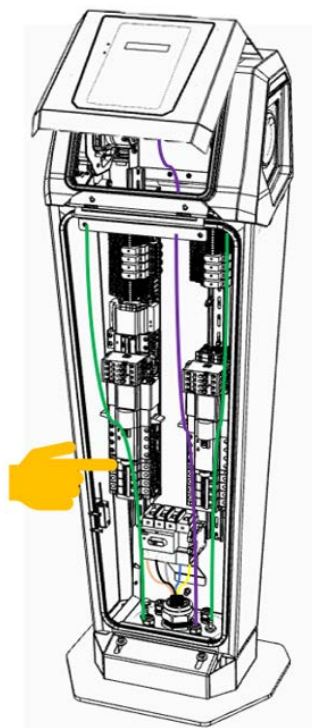


During this phase, prevent the electrical connection of the power supply; the entire work area must be properly marked and only qualified and authorized personnel may access it.

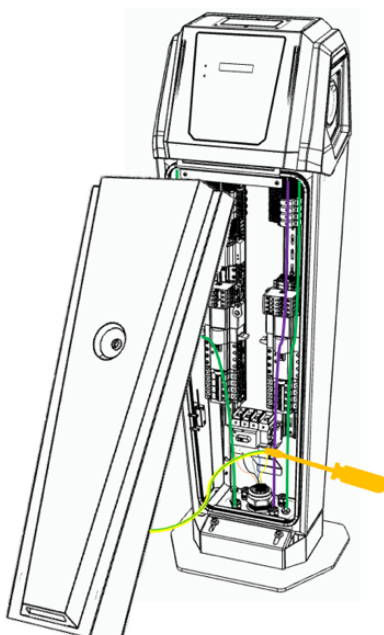
The equipment can only be powered up after this step is completed.

Failure to follow these instructions could result in serious personal injury and property damage and even death

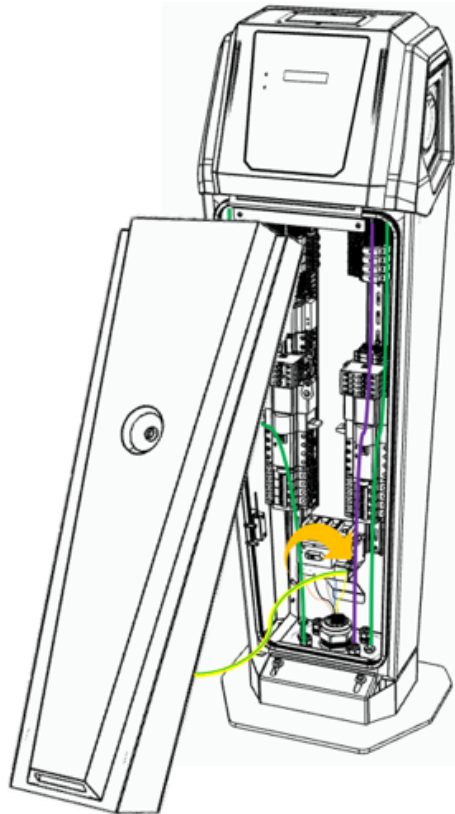
1. Re-equip all circuit breakers (differential and magnetothermal switches) inside the station. Also, check that all the circuit breakers' motor controls are enabled



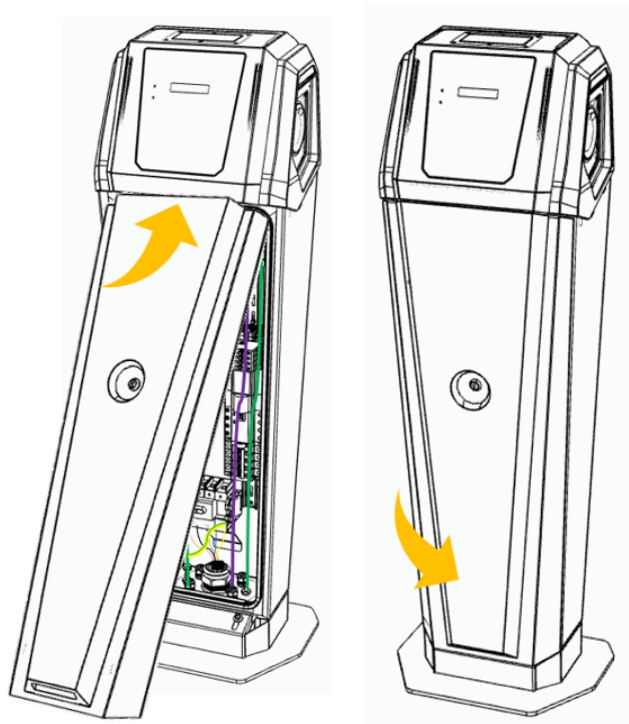
2. Verify the correct connection (L1-L2-L3-N-PE) making sure that the respective positions of the phases and neutral in the main disconnect switch are correct, as well as verifying that the ground protection is correctly connected to its dedicated terminal
3. Bring the door close to the station so you can re-establish the ground connection between the ground terminal and the station door



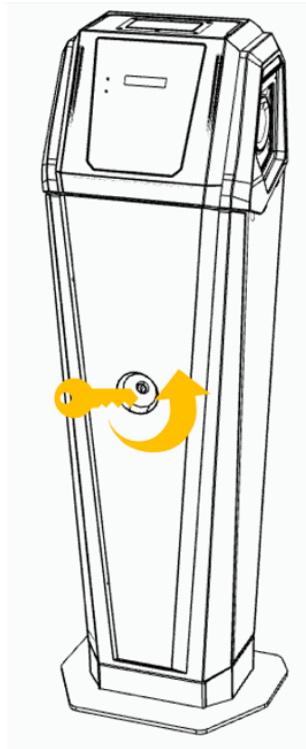
4. Reset the main disconnect switch



5. Close the station door by first inserting the upper part of the door into the station body and then close the lower part as well



6. The last operation is to lock the door using the special key. It is advisable to keep the door against the station casing until the lock has been closed



7. Once the station is closed, you can power it up by enabling the upstream power system
8. The LEDs on the station head will start flashing with different colors following a sequence of internal controls
9. Once the sequence of controls, which includes a cycle of closing-opening of the socket covers, has been completed, the LEDs will turn steady green.
10. If the station is equipped with a display, the words "FIMER SpA" or the FIMER logo will appear



4. First startup and configuration

FIMER products are configured in THE factory before delivery according to the information provided by the customer.

At the time of purchase, all customers or users are required to provide information regarding the required configuration and electrical features of the network to which the station will be connected.



FIMER considers the information provided at the time of purchase to be final and, consequently, any configuration changes or any other necessary actions that were not agreed upon or defined at the time of purchase will not be included in the guarantee.

For all these reasons, once the above mentioned procedure has been scrupulously completed by qualified technical personnel, the device can be considered ready for its first use.

5. Instructions for use

The images below are for illustrative purposes only and may not show all internal components actually installed in the product.

5.1 Operations prior to charging



Throughout the charging process, DO NOT remove the charging connector from the electric vehicle. Remove the charging connector from the vehicle only when charging is complete. Pulling the charging connector out of the vehicle during the charging process can result in serious personal injury or property damage.

Before starting a new charging session:

- Make sure that the product and its connectors are perfectly intact, dry and free of any impurities
- Do not insert fingers or objects into the socket
- Make sure the product is not and has not been exposed to heat sources or explosive or flammable substances
- Ensure that the electric vehicle is compatible with the technical characteristics of the product
- Do not use adapters or extensions not specified by the manufacturer as they may damage the product and create a risk of injury to the user
- No vehicle adapters should be used to connect a connector to a vehicle socket
- Adapters between the vehicle socket and plug may be used only when specifically designated and approved by the vehicle manufacturer or the manufacturer of the electric vehicle power equipment and in accordance with national requirements. Such adapters shall, however, conform to the requirements of IEC 61851-1 and other relevant standards governing both the plug and the socket of the adapter. The adapters must in any case be marked with specific indications of use permitted by the manufacturer (e.g. IEC 62196). Such adapters shall not allow the switch between different modes of operation

5.2 Recharging operations

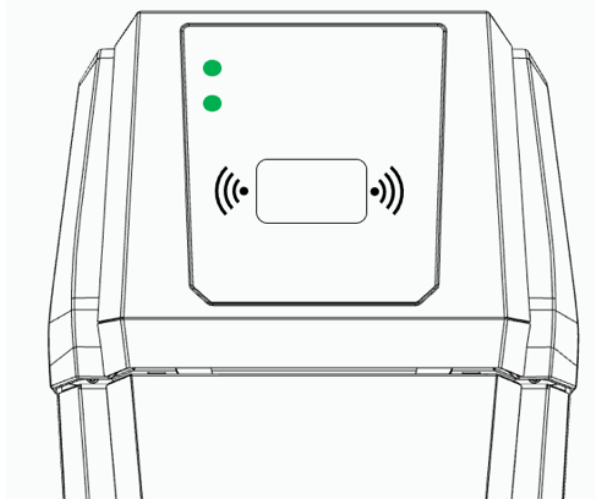


The Local Controller and Future Net versions have displays. The following indications about the graphics available on the displays are for illustrative purposes only and may differ from what is actually available on the stations installed in the field (depending on the firmware version).

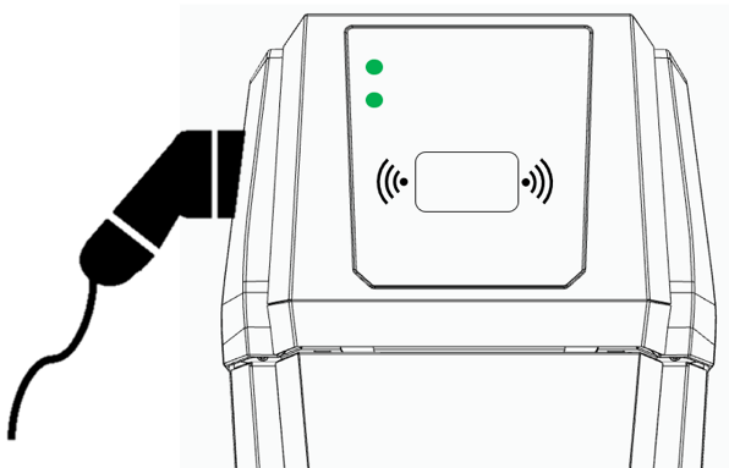
The following is an indication of the colors of the front LEDs on the head of the charging station. Similar colors, however, will also be visible on the side of the product, near each socket.

5.2.1 Stand Alone Version

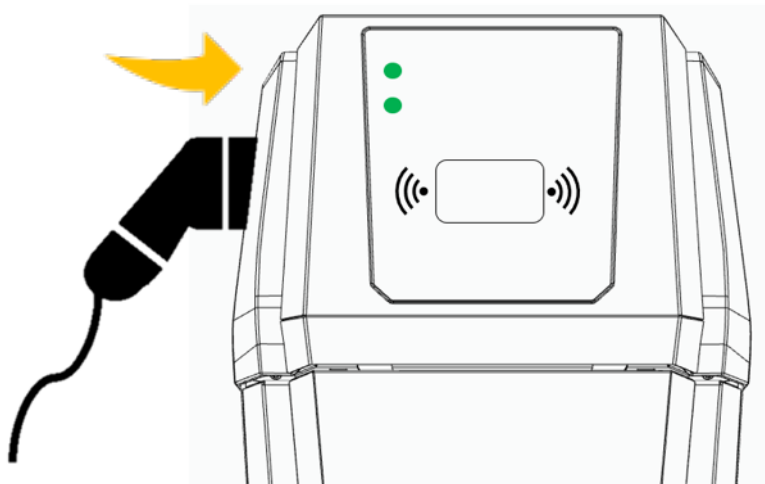
1. Steady green LEDs indicate that the station is ready for charging



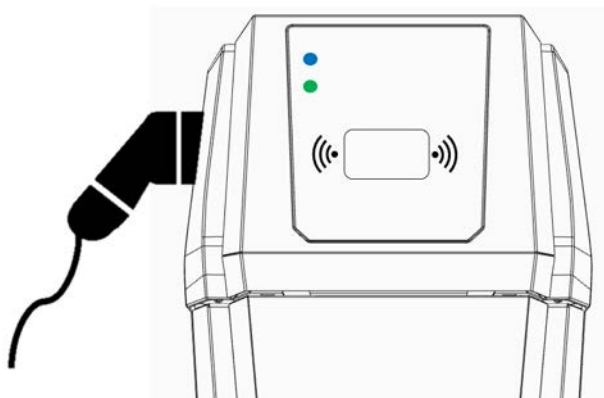
2. Insert the charging cord until it is fully seated in the socket you wish to use



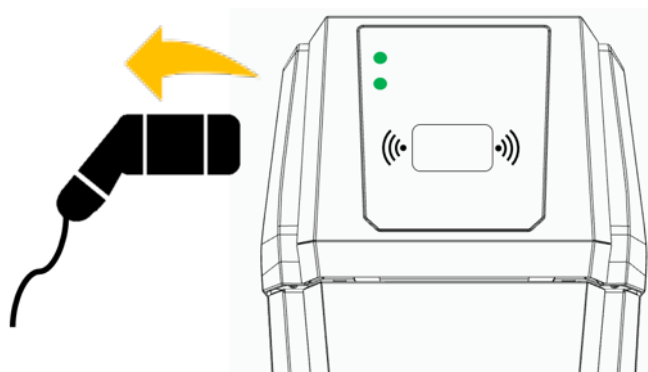
3. The station will lock the cord during the whole charging phase



4. Charging starts and the LED corresponding to the socket used turns steady BLUE



5. When charging is complete (battery charged), the station unlocks the socket used
6. The corresponding LED turns steady GREEN again and you can pull out the cord



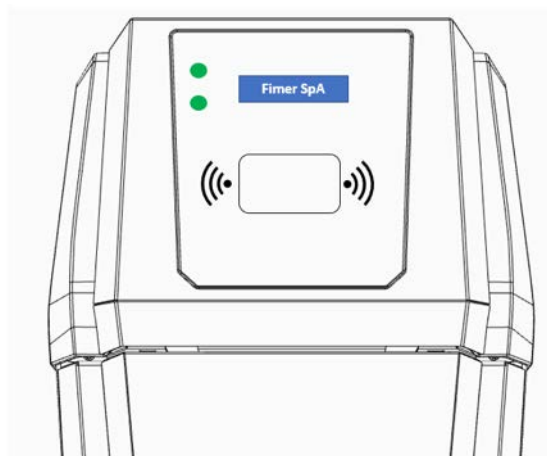
If the user wants instead to stop the charging process before the battery is fully charged, it is necessary to interrupt it by forcing the end of the session through the electric vehicle.

The vehicle will communicate to the station the end of the charging session and the station will unlock the socket used. In case of a loss of power supply during the charging session, the station is still able to unlock the socket and allow the removal of the cord.

The procedure just described can be performed on both available sockets, even in simultaneous use.

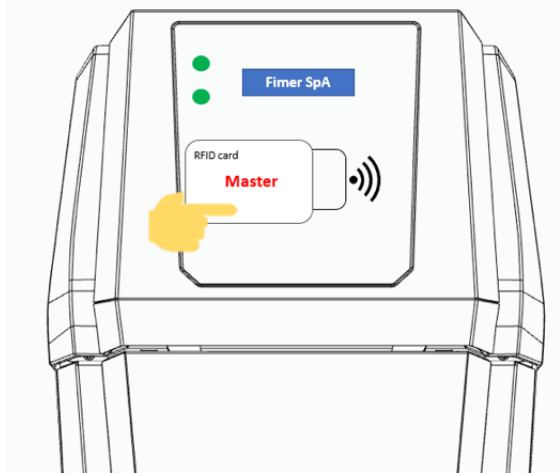
5.2.2 Local Controller Version

1. The steady green LEDs and the word "FIMER SpA" on the display indicate that the station is ready to charge. At this stage, both sockets are locked and the charging cord cannot be inserted

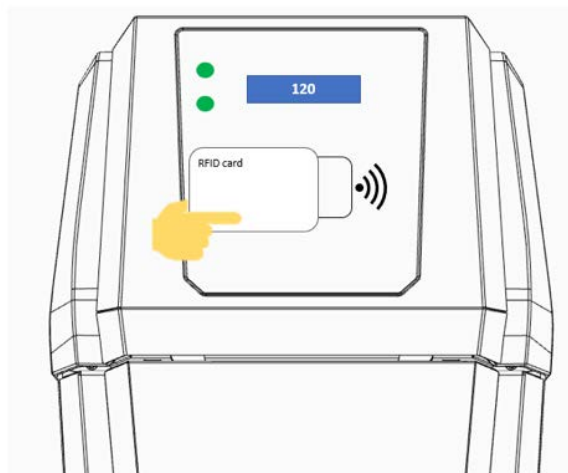


You must register all USER RFiD cards that will be enabled for charging, using the provided MASTER RFiD card.
This operation, to be carried out only in the initial phase or whenever a new user must be enabled for charging,
 is performed as follows:

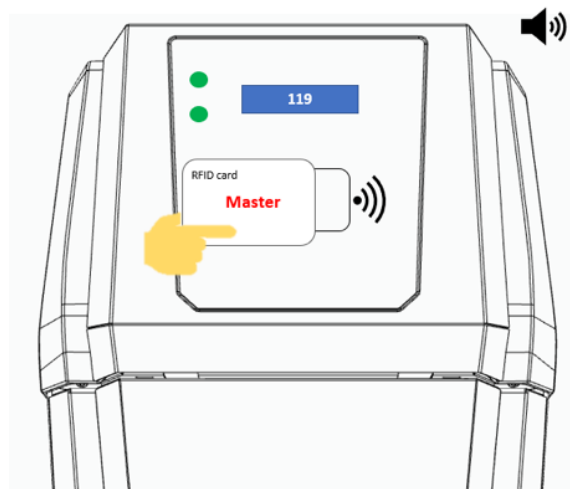
2. Swipe the MASTER RFiD card over the dedicated area



3. On the display will be shown the number of USER RFiD cards that can still be associated
4. Pass the USER RFiD cards over the dedicated area, one after the other, making sure that between one passage and another the counter of residual associations decreases by one unit

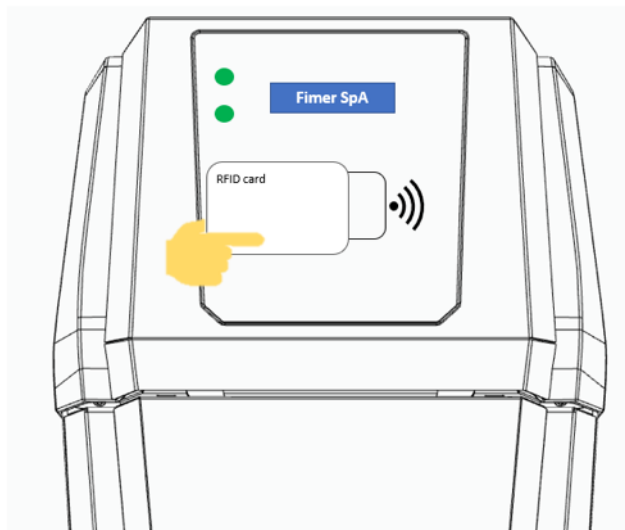


5. To conclude the card association operation, swipe the MASTER RFiD card over the dedicated area. A prolonged beep will confirm the successful completion of the user RFiD card association operations

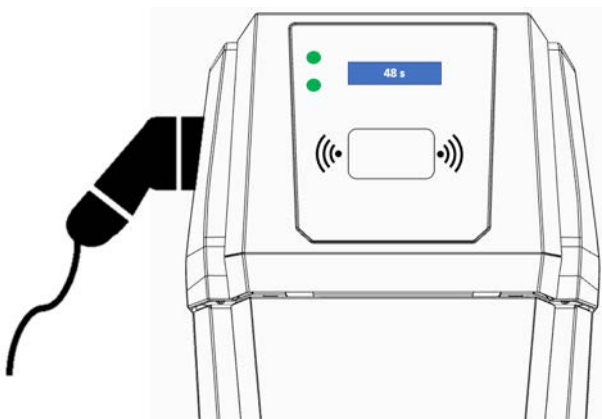


The station is now ready to deliver regular USER charging sessions as described below:

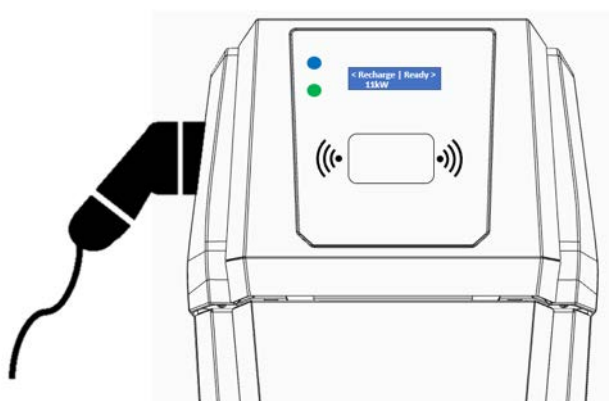
6. Swipe the USER RFID card over the dedicated area



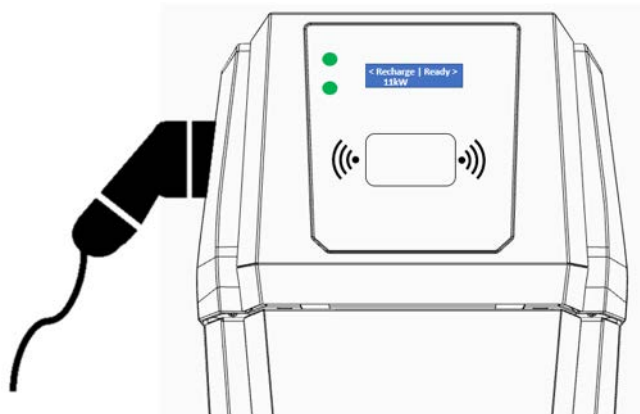
7. The station opens the available socket (or both if free). The user must insert the charging cord within 50 seconds, ensuring that the cord is fully seated in the socket



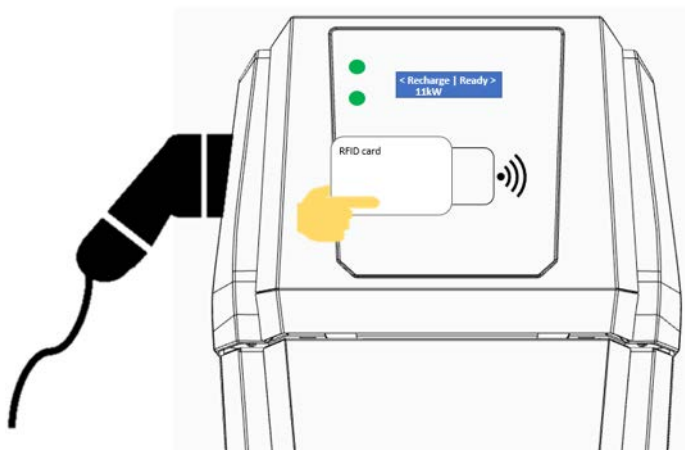
8. The station locks the socket
9. The charging session starts, the LED corresponding to the socket used turns steady BLUE and the display shows the indications of the two sockets, indicating whether both are charging or one is still available. The charging time, power and energy indications are also available on the display



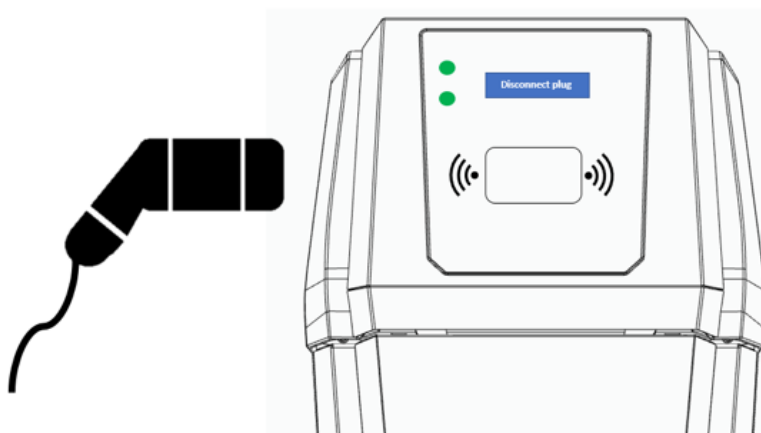
10. When the battery of the electric vehicle is fully charged, the LED will turn steady GREEN



11. The user is required to swipe the USER RFID card over the dedicated area to allow the unlocking of the socket in use and close the charging session



12. When a message appears on the display indicating that you can remove the cord, please do so

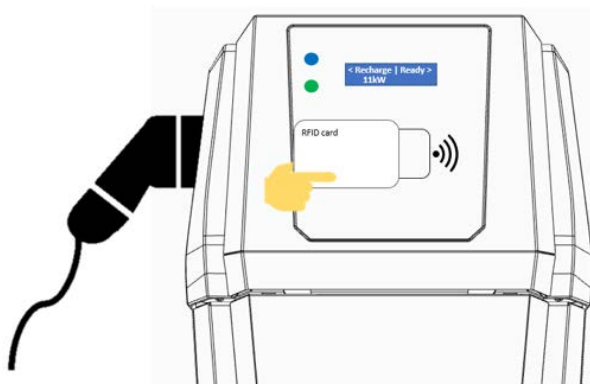


13. The station locks the used socket again and returns to its initial state ready for a new charging session

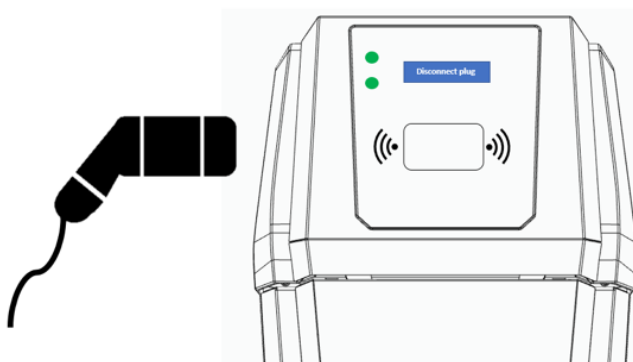


If you wish to stop the charging session before the battery is fully charged, please follow the directions below:

1. Swipe the USER RFID card over the dedicated area to close the charging session



2. The LED will turn a steady GREEN color. When the display shows a message indicating that you should remove the cord from the socket being used, please do so

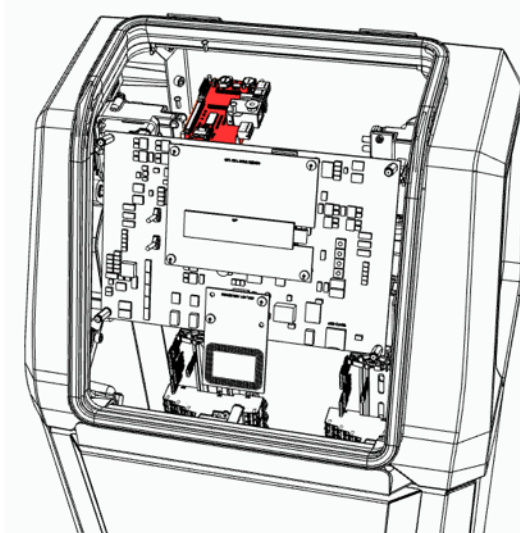


3. The station will lock the socket just used again and then return to its initial state ready for a new charging session

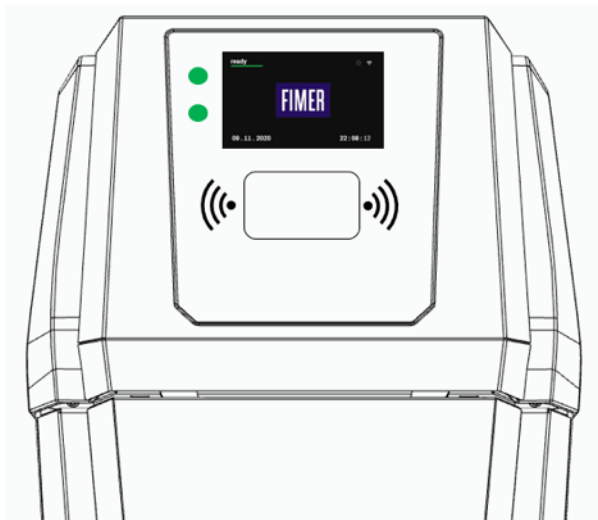
The procedure just described can be performed on both available sockets, even in simultaneous use.

5.2.3 Future Net Version

The Future Net versions are equipped with a SIM card for 3G/4G connection. The SIM slot is located on the board highlighted in the following image, but on the bottom side (not visible in the image):



1. Steady green LEDs and the FIMER logo on the display indicate that the station is ready to charge. At this stage, both sockets are locked and the charging cord cannot be inserted

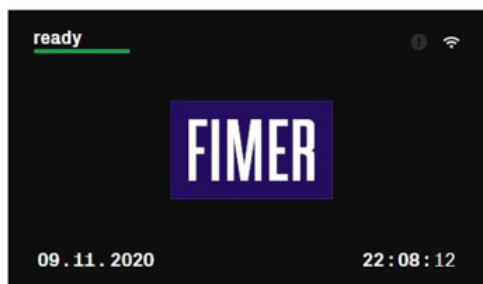


2. An antenna symbol can be seen on the display, identifying the cellular connection. After a few minutes from the beginning of power supply, the station is regularly connected to the cellular network and on the display can be found the following symbols

OLED



4.3" TFT

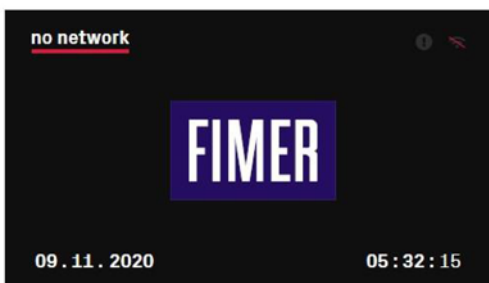


3. Qualora la connessione cellulare non sia disponibile, il display presenterà la seguente simbologia

OLED



4.3" TFT



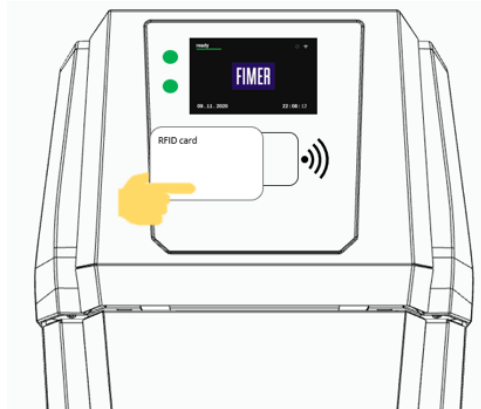
Once the cellular connection is established, the station is ready for use.



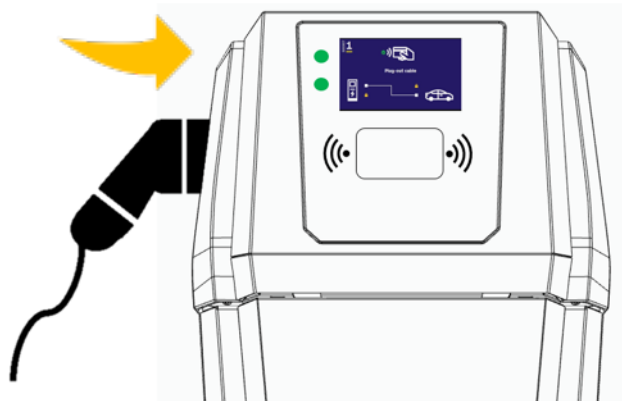
The USER RFiD cards are not registered through a local procedure with a MASTER RFiD card (as for the Local Controller model), but must be set up by the manufacturer (on explicit request of the customer) or can be done through the management portal.

If the charging sessions are activated by means of a USER RFiD card, the instructions for use are the same as those for the Local Controller scenario. Therefore, if the Future Net station is equipped with OLED screen, please refer to the instructions reported above, while if the station is equipped with 4.3" TFT screen, then please refer to the following instructions:

4. Swipe the USER RFiD card over the dedicated area



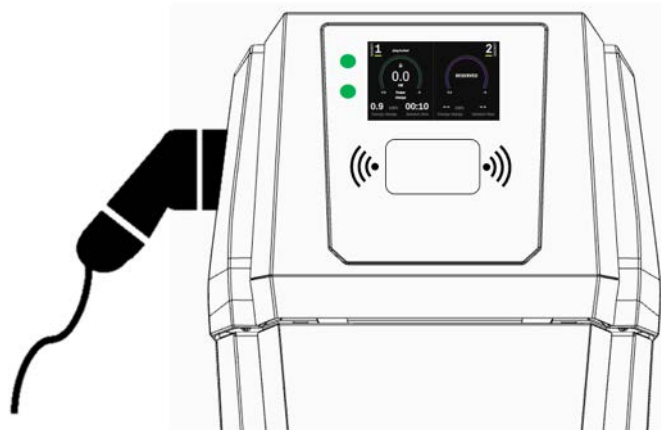
5. The station opens the available socket (or both if free). The user must insert the charging cord within 50 seconds, ensuring that the cord is fully seated in the socket



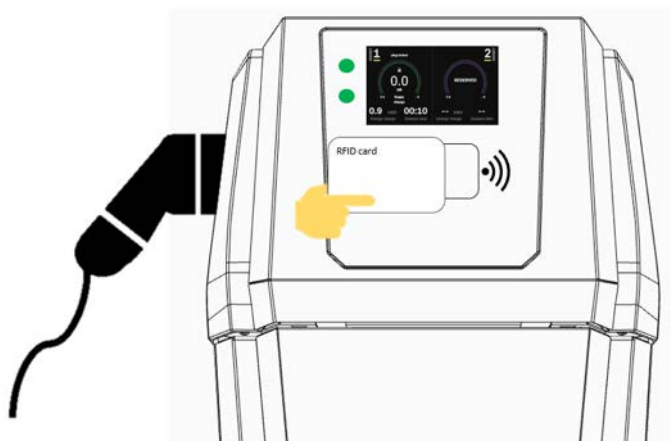
6. The station locks the socket
7. The charging session starts, the LED corresponding to the socket used turns steady BLUE and the display shows the indications of the two sockets, indicating whether both are charging or one is still available. The charging time, power and energy indications are also available on the display



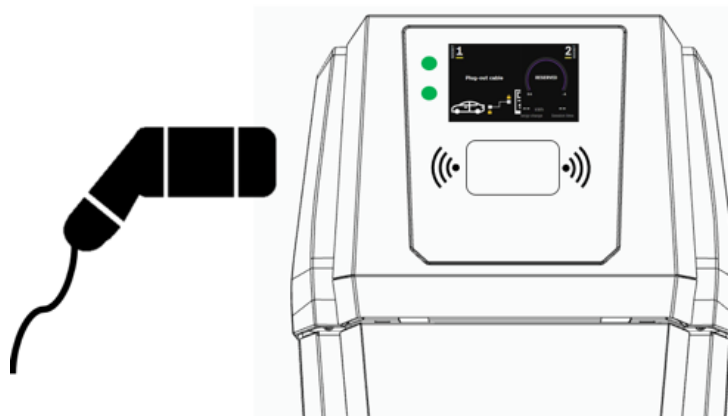
8. When the battery of the electric vehicle is fully charged, the LED will turn steady GREEN



9. The user is required to swipe the USER RFID card over the dedicated area to allow the unlocking of the socket in use and close the charging session



10. When a message appears on the display indicating that you can remove the cord, please do so

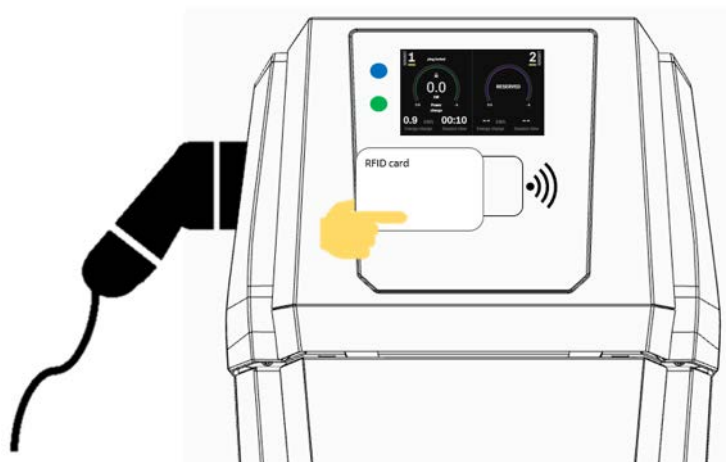


11. The station locks the used socket again and returns to its initial state ready for a new charging session

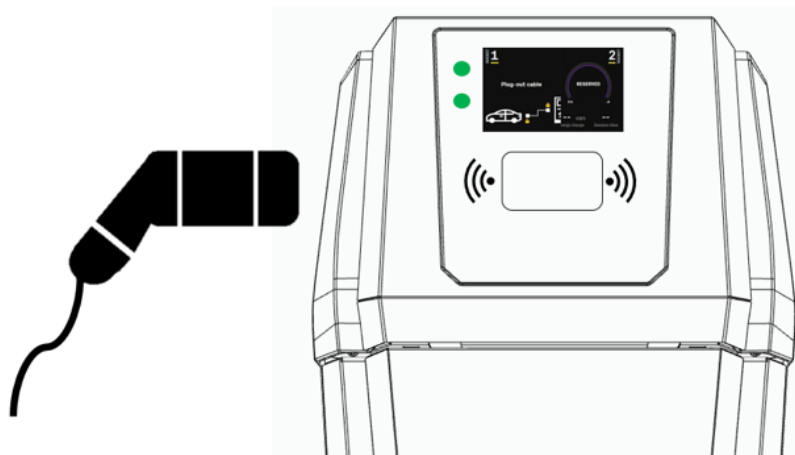


If you wish to stop the charging session before the battery is fully charged, please follow the directions below:

12. Swipe the USER RFID card to close the charging session



13. The LED will turn a steady GREEN color. When the display shows a message indicating that you should remove the cord from the socket being used, please do so



14. The station will lock the socket just used again and then return to its initial state ready for a new charging session

The procedure just described can be performed on both available sockets, even in simultaneous use.



If, on the other hand, the charging sessions are managed through mobile app or dedicated portal, the instructions for use are available in the manual dedicated to the use of the management platform or mobile app, that is to be requested expressly from the manufacturer or the provider of the recharging service.

6

6. Troubleshooting

All versions of the station are equipped with a complete diagnostic and alarm system.

The Stand Alone version communicates any failures or alarms through the LEDs available on the head of the station that light up RED.

The Local Controller and Future Net versions, in addition to LED signaling, provide more detailed information on the alarms through their displays, also providing the error number present.



In the event of an error, whatever it may be, the charging session is interrupted and the socket involved is immediately unlocked. In this case, for Local Controller and Future Net versions, it is not necessary to close the charging session by using the USER RFID card.



If the cause of the fault was attributable to the electric vehicle, after disconnecting the affected cord, the station performs several verification cycles that, if they confirm the proper functioning of all internal components, enables again the station by reassigning the steady GREEN color to the LED relating to the socket involved. Otherwise, the LED remains RED and charging is no longer available on that socket until the problem is resolved.

For additional details regarding error codes or failures management, please refer to the User Guide available by contacting the contacts provided in section 1.4 or by connecting to www.fimer.com

7

7. Maintenance



Before performing any maintenance work, disconnect the device from its power supply and mark and isolate the work area to prevent serious damage or injury.

The proper operation and life of the product depend on periodic maintenance and inspection, at least every 6 months. To performed this maintenance, please contact a qualified FIMER technician.

A damaged or defective unit should not be operated, but should be immediately replaced or repaired by qualified service personnel in accordance with the manufacturer's instructions.

If a device is damaged, the product and the power supply must be secured (if possible, by disconnecting the circuit breaker upstream of the faulty product), affix an appropriate warning forbidding its use immediately and contact a qualified technician or use one of the service channels indicated in section 1.4.



Cleaning the exterior of the device is always recommended when necessary; it should be done avoiding strong jets of air or water as well as the use of soaps or detergents that are too aggressive and corrosive for the product's materials.

To clean, use a soft damp cloth with mild detergent and, when finished, wipe off any traces of moisture or liquid with a soft dry cloth.

The owner is responsible for the maintenance and condition of the product.

Maintenance must always be carried out in compliance with current regulations and making sure to protect people, things and animals during all maintenance operations.

An external inspection and cleaning of the station is recommended at least once a year, e.g. checking the integrity of the plastic parts and fixing points.

An internal inspection by a FIMER qualified electrician is also required on an annual basis. During these inspections, the electrician must also verify that the product meets all the guidelines and standards of the country in which it is installed, as long as the product operates.



It is advisable, only by means of operations carried out by a qualified technician in compliance with safety regulations and by previously disconnecting the station from its power supply, to periodically check its internal status and press the TEST button on the residual current circuit breakers inside the station at least every 6 months.

The station does not include any components that can be repaired or replaced independently by the user

8

8. Decommissioning and disposal



The product must be used and subsequently disposed of in accordance with the regulations in force for the treatment of waste electrical and electronic equipment (WEEE) or any other regulations in force in the country of installation (in accordance with Directive 2012/19/EU).

This product must not be disposed of with household waste.

The device may contain materials that could be recycled.

Additional information on disposal facilities can be obtained from local authorities.

Before proceeding with disassembling and removal, disconnect the power supply from the power supply panel and make sure that no one can access the panel and accidentally turn on the power again during all phases of decommissioning.

If you want to uninstall and store the device for later use, the following precautions should be observed:

- Disconnect the device from its power supply
- Clean the unit and store it in its original packaging once it has dried completely
- Comply with the environmental storage conditions as shown in the table in section 1.3



FIMER Spa
Via John Fitzgerald Kennedy, 26
20871, Vimercate (MB) – Italia
www.fimer.com

