EV Charging Station

WEMOB-STATION (30 to 40 kW)

User Manual

User Manual

WEMOB-STATION

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Model: 30 to 40 kW

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SUMMARY OF THE REVISIONS

The information below describes the revisions made to this manual.

Version	Revision	Description
-	R00	First edition
-	R01	General review
-	R02	General review

1 SAFETY INSTRUCTIONS

This manual contains the necessary information for the proper installation and operation of the WEMOB-STATION electric vehicle charging station.

It is intended for use by personnel with appropriate training or technical qualifications to operate this type of equipment.

1.1 SAFETY WARNINGS IN THIS MANUAL

The following safety warnings are used in this manual:

DANGER!
Failure to follow the recommended procedures in this warning may result in death, serious injury, and significant material damage.

ATTENTION!
Failure to follow the recommended procedures in this warning may result in material damage.

NOTE!
The information provided in this note is important for the correct understanding and proper operation of the equipment.

1.2 PRELIMINARY RECOMMENDATIONS

DANGER!
- Only personnel with proper qualifications and familiarity with the charging station and associated equipment should plan or perform the installation, startup, operation, and maintenance of this equipment.
- Such personnel must follow all safety instructions contained in this manual and/or those required by local regulations.
- Failure to comply with the safety instructions may result in risk of death and/or damage to the equipment.
- A damaged charging station must be taken out of service and repaired. For more information, refer to Section 1.4 TECHNICAL SUPPORT on page 1-3.
- Always disconnect the main power supply before touching any electrical components associated with the EV charging station.
- Do not allow the charging station to be operated by children or by persons with reduced physical, mental, or sensory capabilities.

NOTE!
For the purposes of this manual, qualified personnel are those who have been trained and are capable of:
1. Installing, grounding, energizing, and operating the EV charging station according to this manual and applicable safety standards.
2. Using personal protective equipment (PPE) in accordance with established regulations.
3. Providing first aid assistance.

- If the charging station is not used for an extended period of time, it is recommended to keep it powered on to prevent condensation inside the unit.

ATTENTION!
- The electronic boards contain components that are sensitive to electrostatic discharge (ESD). Do not touch components or connectors directly.
- If the charging station will not be used for an extended period, it is recommended to keep it powered on to prevent internal condensation.

NOTE!
- Read this manual completely before installing or operating this equipment.
- WEMOB® is a registered trademark of WEG S/A.

1.3 CHARGING CABLE PRECAUTIONS

Follow the instructions below to avoid damage to the charging cable:

- Fully unwind the charging cable before starting use.
- Do not allow the cable tip (plug) to fall to the ground.
- Never connect the charging cable to an extension cord or an adapter.
- Never disconnect the charging cable, either from the charging station or the electric vehicle, by pulling the cable itself.
- Ensure the charging cable is in an obstacle-free area and is not bent, trapped, or pinched.
- Ensure the charging cable does not come into contact with heat sources, sharp, or cutting objects.
- A damaged charging cable may cause a short circuit, fire, or electric shock.
- Do not use this product if the charging cable is worn, has damaged insulation, is dirty, or shows any other signs of damage.
- Make sure the charging cable does not cross pedestrian or vehicle pathways where it could be stepped on, stressed, or cause tripping hazards, damage to the cable, or to the charging station.
- Do not pull the charging cable forcefully.
- Never touch the charging cable or charging plug with wet hands.
- Protect the charging cable from weather exposure. Do not immerse the cable in water or other liquids.
- Do not allow liquids or foreign objects to enter the vehicle connector plug. Do not modify or alter the plug.
- After use, place the charging plug into its corresponding socket located on the side of the station.

NOTE!
Throughout this manual, the term "charging cable" refers to the assembly consisting of the electrical cables and the vehicle connector plug.

1.4 TECHNICAL SUPPORT

If you need to contact WEG, please use the channels below:

Talk to WEG

WEG Website

DANGER!
A damaged charging station must be taken out of service and repaired.

2 GENERAL INFORMATION

2.1 ABOUT THIS MANUAL

This manual provides information on how to install, operate, and the main features of the WEMOB-STATION electric vehicle charging station.

2.2 TERMS AND DEFINITIONS USED IN THIS MANUAL

A: Ampere, unit of electric current intensity.

AC: Alternating Current.

APN: Access Point Name.

CCS: Combined Charging System, also referred to as "Combo".

CHAdeMO: Abbreviation of "Charge de Move", a commercial name for a fast charging method for electric vehicles.

cm: Centimeter = 0.01 m.

DC: Direct Current.

EV: Electric Vehicle.

FCK: Characteristic Compressive Strength of Concrete.

FOTA: Firmware Over The Air, firmware update without physical contact with the station.

IMD: Insulation Monitoring Device.

in: Inch, unit of length. 1 inch = 2.54 cm.

kg: Kilogram, unit of mass.

kVA: KiloVolt-Ampere = 1000 (10^3) VA.

LGPL: GNU Lesser General Public License.

m: Meter, unit of length.

mm: Millimeter = 0.001 m.

MPa: Unit of pressure measurement in Mega Pascal.

Nm: Newton meter, unit of torque.

ºC: Unit of temperature in degrees Celsius.

OCPP: Open Charge Point Protocol, an open standard protocol for communication between charging stations and a central system.

PE: Protective Earth.

PPE: Personal Protective Equipment.

RCCB: Residual Current Circuit Breakers.

RFID: Radio Frequency Identification.

V: Volt, unit of voltage.

VA: Volt Ampere, unit of apparent power.

2.3 ABOUT THE CHARGING STATION

The WEMOB-STATION electric vehicle charging station is a high-performance product that enables fast charging of electric vehicles in direct current (DC), while managing control, monitoring, and protection of the equipment and users.

It features one (01) DC combo connector compliant with the CCS (Combined Charging System) Type 2 standard. With a modern design, the WEMOB-STATION charging station can be installed indoors or outdoors, providing a complete solution for fast charging of electric vehicles at service stations and highways.

It includes a 10.1" color display that offers a user-friendly interface with instructions and detailed information to start and stop charging, including real-time data such as charging status, charging time, battery charge level, among others, allowing easy and intuitive operation of the charging station.

The WEMOB-STATION charging station offers connectivity via wireless data network (Wi-Fi), wired Ethernet network (RJ45), cellular (LTE), and RFID (Radio Frequency Identification), as well as LED indicators and an audible signal to indicate the station's status and/or charging monitoring.

2.4 OVERVIEW

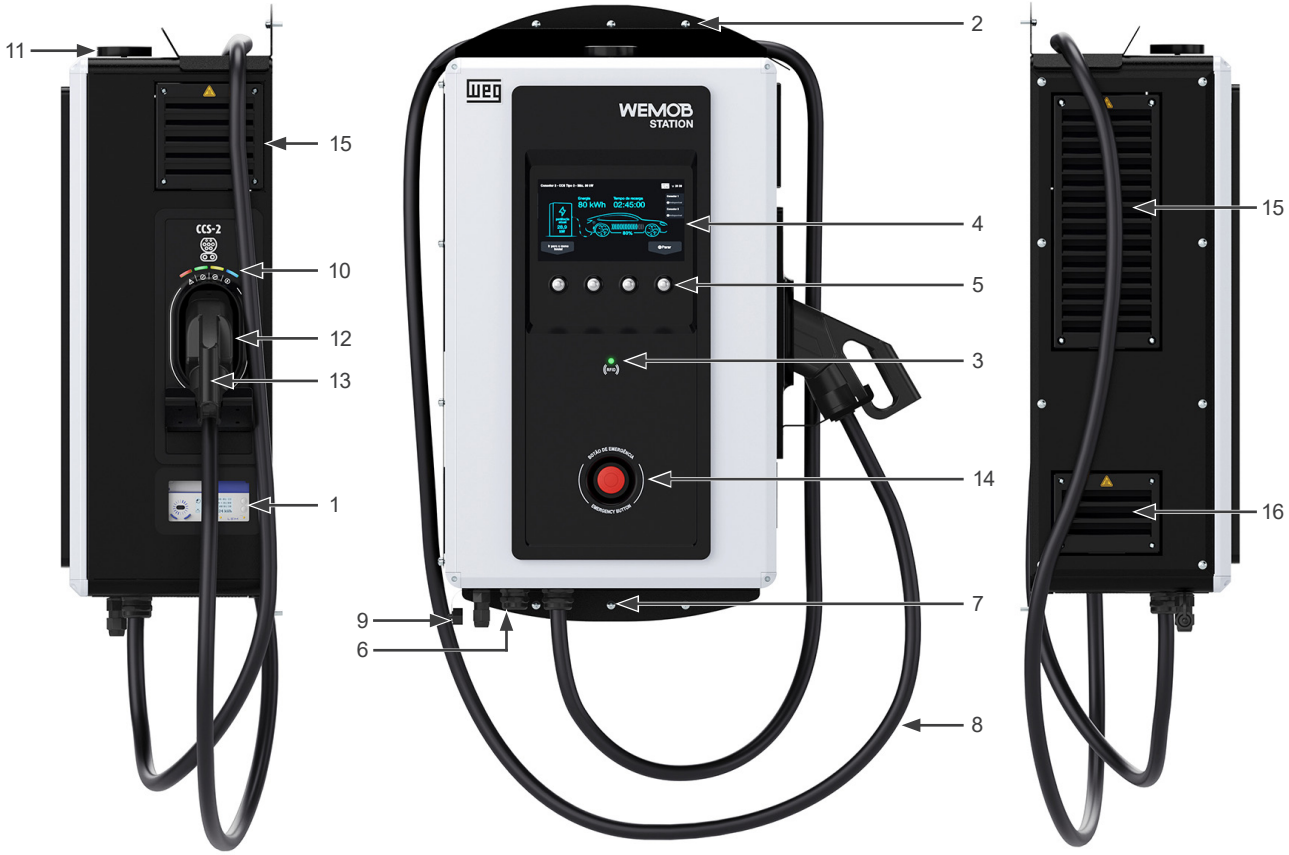


Figure 2.1: *Overview of the WEMOB-STATION Charging Station (30/40 kW)*

Table 2.1: *Overview of the WEMOB-STATION Charging Station (30/40 kW)*

1 - Energy meter (*)	9 - RJ45 connector
2 - Mounting	10 - Charging status LEDs
3 - RFID Reader/LED	11 - Wi-Fi/Cellular antenna
4 - 10.1" display	12 - Socket for charging plug storage
5 - Selection buttons	13 - Charging plug
6 - Power cable input	14 - Emergency button
7 - Charging cable output	15 - Side air outlet
8 - Charging cable	16 - Side air inlet

(*) Some models of the WEMOB-STATION charging stations (30/40 kW) may not include energy meters.

2.5 IDENTIFICATION LABEL

The identification label of the WEMOB-STATION charging station is located on the outside of the rear enclosure. This label contains important information about the station.

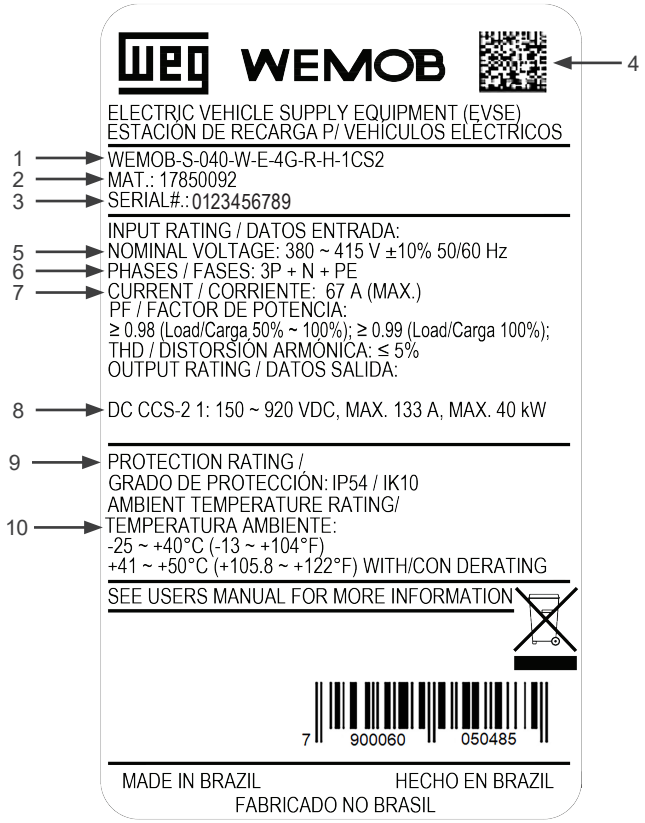


Figure 2.2: *Identification Label of the WEMOB-STATION (30/40 kW)*

Table 2.2: *Identification Label of the WEMOB-STATION (30/40 kW)*

1 - Product model	6 - Number of phases
2 - Stock item	7 - Maximum input current
3 - Serial number	8 - Maximum voltage, current, and power of the connector
4 - Manufacturing date	9 - Protection rating
5 - Rated supply voltage and frequency	10 - Ambient temperature range

2.6 CONSTRUCTION ASPECTS

The WEMOB-STATION charging station is built with painted steel sheets, processed (cutting, drilling, bending, chemical treatment, painting, and finishing) by WEG or approved manufacturers, ensuring quality at every stage of the manufacturing process. The unpainted parts of the station are galvanized or treated with other appropriate processes to ensure corrosion resistance.

It can be installed indoors or outdoors, with an IP54 and IK10 protection rating.

The cooling of the charging station is done by forced convection. Air enters through louvers located on the left side and bottom of the station, circulates inside, and passes through heat sinks positioned on each power module (AC/DC converters). The hot air is exhausted through the upper side of the station, where exhaust fans are installed.

Cleaning or replacing the louvers' filters can be done from the outside without the need to open doors or interrupt the station's operation.

ATTENTION!
The air outlets can reach temperatures close to 80 °C [176 °F].

2.7 CONNECTORS

The WEMOB-STATION charging station (30/40 kW) features a conventional 4.3 m charging cable with a Combo CCS-2 plug, suitable for the station's maximum output current, depending on the purchased model, which can serve a variety of electric vehicles (EVs):

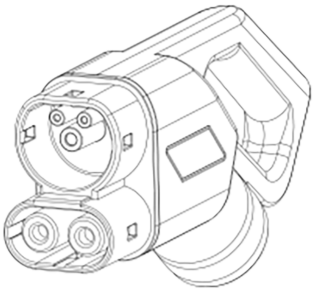


Figure 2.3: *Connector Model of the WEMOB-STATION (30/40 kW)*

To release the connector from the socket located on the side face of the station, perform the sequence of movements shown below.

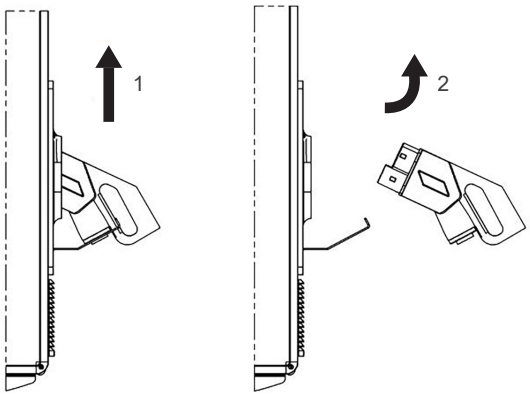


Figure 2.4: *Procedure to Remove the Connector (Plug) from the Socket*

NOTE!
After finishing the electric vehicle charging, insert the connector back into the socket located on the side face of the station. Do not leave the charging cable on the ground.

2.8 SIGNALING LEDS AND AUDIBLE ALERT

Above the socket for storing the charging plug, there is a set of signaling LEDs that provide visual information about the operational status of the charging station. It consists of four (4) LEDs, which can light up or blink together or individually in various colors. In addition, audible signals may be emitted to indicate its status.

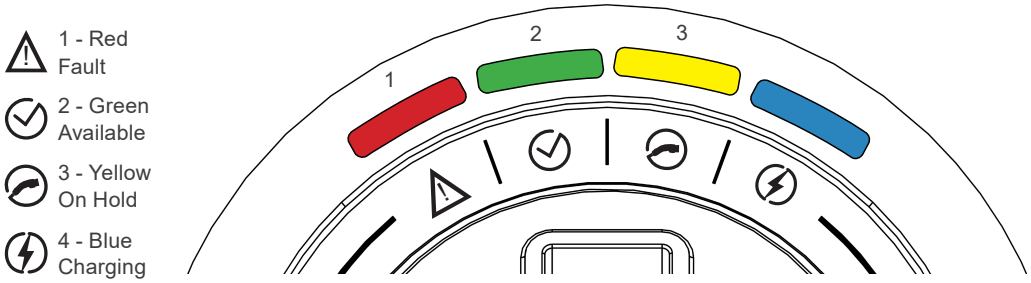


Figure 2.5: *Signaling LEDs*

Table 2.3: *Status Signaling*

LED Color	Status	Description
All LEDs blinking	INITIALIZING	Charging station performing self-test
All LEDs off	OFF	Charging station without power
Solid Green	AVAILABLE	Station ready for use
Blinking Green	AUTHORIZED	User authorized for charging (only if authentication is re-quired)
Solid Yellow	STANDBY	Electric vehicle connected and in recognition process
Blinking Yellow		Charging finished (complete or incomplete)
Solid Blue	CHARGING	Charging in progress
Blinking Red	FAULT	Station in fault or error state

NOTE!
In case of error, besides the signaling LED, the charging station will emit a long-duration audible alert.

DANGER!
Do not forcibly disconnect the vehicle by pulling the charging cable. Stop the charging process through the vehicle first, and only after release, remove the plug. Some electric vehicles allow engine start with the charging cable connected. Make sure to disconnect the cable before moving the vehicle.

2.9 RECEIVING AND STORAGE

The WEMOB-STATION charging station is delivered packaged in a wooden crate with an internal plastic lining. On the outside of this packaging, there is a label describing the main product characteristics: model, WEG stock item, serial number, manufacturing date, etc.

Upon receipt, check if:

- The identification label matches the purchased model.
- There is any damage during transport. If any problem is detected, contact the carrier immediately.
- If the WEMOB-STATION charging station is not installed immediately, keep it inside the closed packaging and store it in a clean, dry place with a temperature between -25 °C [-13 °F] and +80 °C [176 °F].

After receipt:

- Remove the plastic film to avoid moisture condensation.
- Do not store under direct sunlight, rain, extreme cold, excessive humidity, or salty air.
- Store in a clean, protected location with air humidity not exceeding 80 %.
- Keep away from insects or household rodents.
- During storage, the above conditions must be maintained; however, if components are stored for more than one year, measures should be taken to dehumidify the storage area.
- When using equipment after a long storage period, check if the equipment is free from scratches, dirt, rust, and other damage.

NOTE!
The performance and reliability of the WEMOB-STATION charging station may be compromised if stored in an environment outside the conditions mentioned above.

3 INSTALLATION AND CONNECTION

This chapter describes the mechanical and electrical installation procedures for the WEMOB-STATION charging station. The guidelines and recommendations must be followed to ensure the safety of people, equipment, and the proper operation of the equipment.

3.1 RECOMMENDED HANDLING PROCEDURES

It is recommended to remove the packaging completely only after positioning the WEMOB-STATION charging station in its final operating location. Before lifting or moving the charging station, read the instructions below to become familiar with the available points for mechanical connection of lifting equipment, transportation, and fragile points.

3.1.1 Lifting

Make sure the equipment used to lift the WEMOB-STATION charging station is suitable for its geometry and weight.

Observe the center of gravity and ensure the lifting supports are appropriate and secure, with multiple attachment points. The lifting must be performed slowly and steadily. Beforehand, verify that there are no obstacles along the entire path to be traveled during this step. If any alteration or damage to the panel structure is found, abort the lifting and reposition the cables or chains as shown in Figure 3.1 on page 3-1.

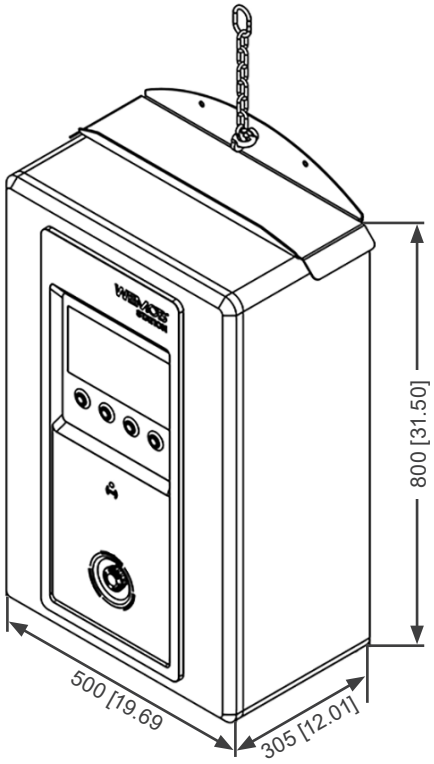


Figure 3.1: *Geometry, weight, and recommended lifting for the WEMOB-STATION – mm [in]*

If using a crane or hoist, the lifting eyelet on the charging station can be used to remove it from the packaging.

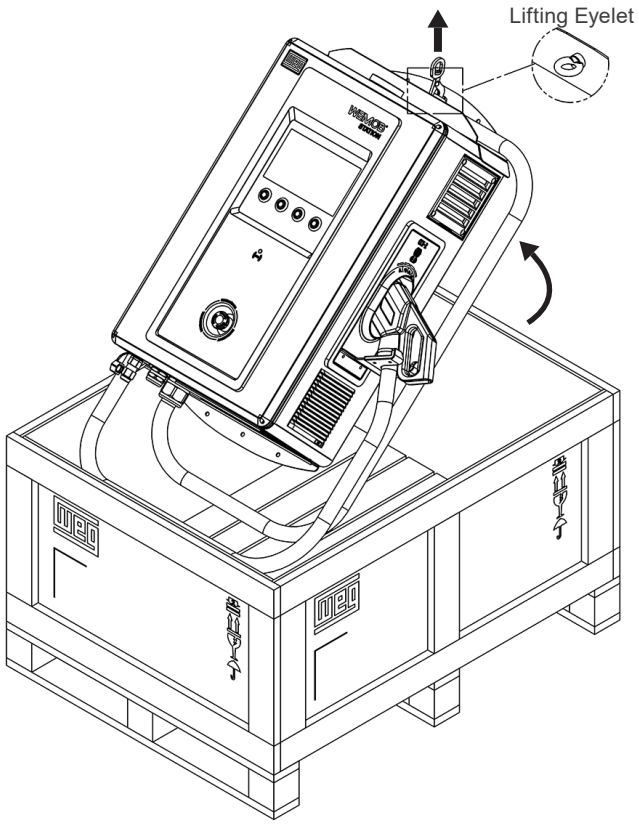
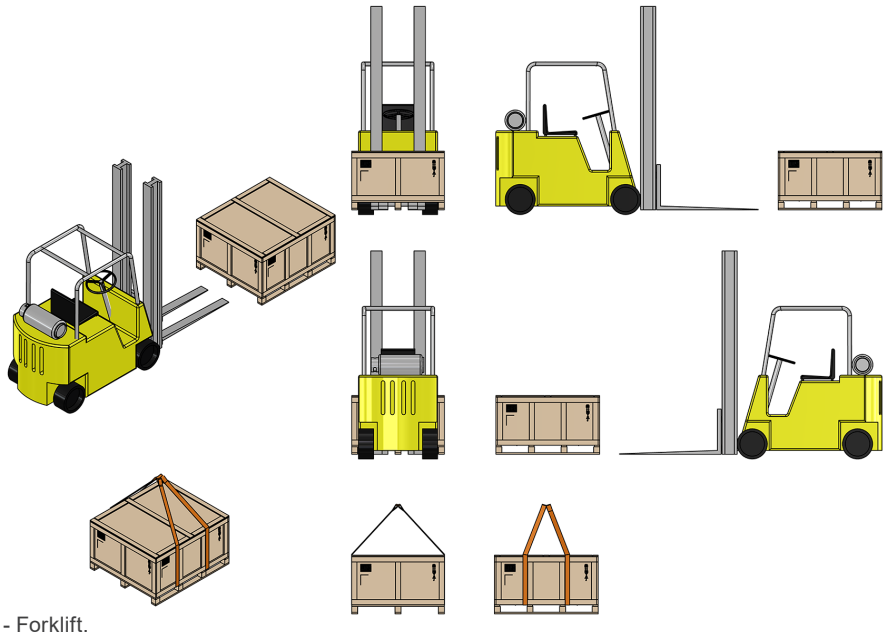


Figure 3.2: *Procedure for removing the WEMOB-STATION from the packaging using a crane/hoist*

3.1.2 Moving

If using a crane, hoist, or jib crane, ensure the movements are slow and smooth so that the WEMOB-STATION does not experience excessive swinging or vibrations.

When using hydraulic carts, forklifts, rollers, or other transport equipment, distribute the mechanical support points of these devices from one end to the other of the WEMOB-STATION, avoiding applying pressure to fragile areas. If the packaging has already been removed, make sure the WEMOB-STATION door is closed and locked.



- Forklift.
- Hoist with balance beam.

Figure 3.3: *Procedure for moving with forklift or hoist*

ATTENTION!
Use of chains for lifting and moving underneath the enclosure is prohibited.

3.1.3 Unpacking

Use appropriate tools to unpack the WEMOB-STATION charging station. Remove the plastic film with your hands or a utility knife, always taking care not to damage the station.

While unpacking, inspect the product for any damage. Do not install the WEMOB-STATION if any damage is suspected.

Remove any debris from the packaging (plastic, wood, styrofoam, metal, nails, screws, nuts, etc.) that may remain on the charging station.

ATTENTION!
- Use personal protective equipment (PPE).

If any component is found damaged, it is recommended to:
- Stop unpacking immediately.
- Contact the carrier and formally report the problem.
- Photograph the damaged parts and/or components.

3.2 MECHANICAL INSTALLATION

The WEMOB-STATION charging station is designed for indoor or outdoor use, for floor (ground) mounting. It is necessary to ensure some requirements to protect the device at the installation site.

NOTE!
Be careful not to damage circuit boards or components during installation.

3.2.1 Environmental Conditions

The following criteria must be considered when selecting a suitable installation location:

- To ensure secure mounting, verify the condition of the concrete structure before installation.
- To ensure secure mounting, verify the condition of the floor (ground) before installation.
- The surface must be sufficiently stable and strong to support the weight of the charging station.
- Do not install the charging station on inclined surfaces or under objects or suspended furniture that could fall and damage it.
- Determine the vehicle parking position to ensure the charging cable can reach the vehicle's charging socket.
- Do not install the station near pedestrian or vehicle traffic routes where power cables cross these routes.
- Leave a minimum clearance of 0.4 meters (1.3 feet) around the entire station to allow user access.
- Installing the WEMOB-STATION in locations with direct sunlight exposure may reduce output power due to heating from solar radiation.

To ensure proper operation and longer service life, observe the following:

- Avoid direct exposure to sunlight, rain, snow, extreme cold, excessive humidity, salt spray, electrical storms, or other adverse weather conditions.
- In harsh environments, provide additional protection by installing the station indoors or under a protective canopy.
- Do not install near heat-emitting devices.
- Do not install close to walls or other equipment without respecting minimum spacing distances.
- Do not spill water or other liquids on the equipment.
- Avoid exposure to flammable, explosive, or corrosive gases, vapors, or liquids.
- Do not expose the station to excessive vibration.
- Avoid exposure to dust, metallic particles, or airborne oils.
- Never expose the station to water jets, such as pressure washers or garden hoses.

Permitted Environmental Conditions for Operation:

- Temperature: -25 °C [-13 °F] to 40 °C [104 °F] under normal conditions; 41 °C [105.8 °F] to 50 °C [122 °F] with derating.
- Relative humidity: 5 % to 95 % non-condensing.
- Install the station in areas with air circulation.
- Maximum altitude: 2000 m above sea level under normal conditions. For higher altitudes, consult WEG.
- Condensation must not cause conductive pollution.

3.2.2 Cleaning and Maintenance

DANGER!
Before starting cleaning and/or maintenance, ensure the upstream circuit breaker is turned off.

To maintain proper operation and extend the service life of the station, observe the following:

- Clean the station exterior, cables, and charging plugs periodically at least 1 a month is recommended.
- Clean with the station powered off.
- Never clean while an electric vehicle is charging.
- Use only a clean, soft, dry cloth for cleaning.
- Do not use abrasive cloths, sponges, or detergents.
- Do not spill water or other liquids on the equipment.

- Do not use alcohol, solvents, or chemicals.
- For heavy dirt, use a cloth slightly dampened with water to remove dust and grime.
- Keep air intakes clean and unobstructed to allow air circulation.
- Clean air filters every six (6) months.
- Replace air intake and exhaust filters every twelve (12) months.
- Optionally, apply automotive wax on metal parts for extra protection.

Regular Checks:

- Condition of protection and control devices, especially for wear caused by electrical arcing and loose contacts.
- Charging cable and connector: check for cracks, splits in the connector and cable, cable insulation integrity, and that no internal wires are visible.
- Condition of conductors and their connections, especially grounding conductors.
- Display: check for damage, cracks in protective acrylic, or display discoloration.
- Metal enclosure: check for dents affecting protection rating, rust, paint defects, etc.
- Emergency stop button: check for cracks, proper locking/unlocking mechanism function.
- Fans condition.
- Ground electrode resistance supplying the charging station.

If any of the following occurs, the station must be immediately de-energized and removed from service:

- Station struck by lightning.
- Station damaged by accident or impact.
- Station damaged by fire.
- Station location flooded.
- Seal failures compromising the protection rating.

DANGER!
A damaged charging station must be taken out of service and repaired.

NOTE!
- In heavily polluted environments, cleaning frequency and air filter replacement may need to be increased.
- If charging station performance drops, air filters should be replaced.

3.2.3 Corrective Maintenance

Any failure or anomaly detected in the electrical equipment during operation must be reported to qualified personnel for repair.

This is especially important when protective devices trip without a known cause.

If the circuit breaker trips, identify and fix the cause before re-energizing the equipment.

DANGER!
A damaged charging station must be taken out of service and repaired. For more information, consult Section 1.4 TECHNICAL SUPPORT on page 1-3.

3.2.4 Door Opening and Closing

The door is secured by four (04) screws located on the front face of the station.

To open the door, follow the instructions below:

1. Using a Phillips screwdriver, remove the four (04) M4 screws located at the edges of the station's front cover.

2. Open the door.

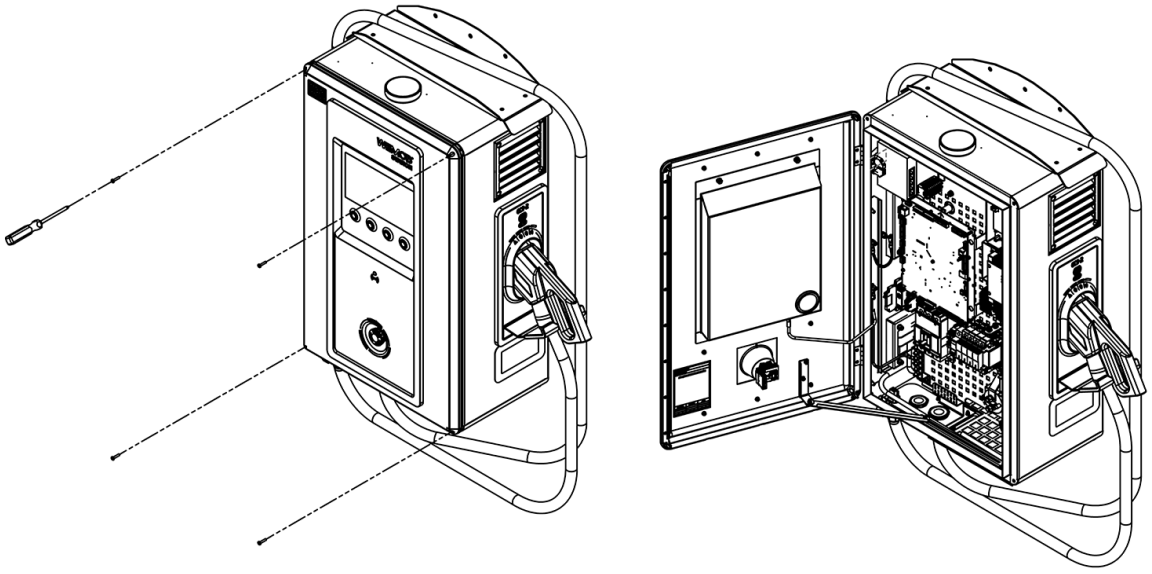


Figure 3.4: *Door opening instructions*

To close the door, follow the reverse procedure (recommended tightening torque is 2.5 Nm).

ATTENTION!
The installation of the WEMOB-STATION charging station must be carried out by a qualified person.

3.2.5 Positioning

A minimum clearance of 0.7 meters (0.7 m) must be maintained around the entire charging station to allow proper air circulation and better heat dissipation, as well as user access. It is recommended to provide a physical barrier to prevent collisions between vehicles and the charging station.

The front and side areas of the WEMOB-STATION must not be obstructed, as they allow the necessary ventilation flow for heat radiation across all surfaces, and also permit full door opening, access to internal components for maintenance or installation, cable handling, and free access to the front for station use.

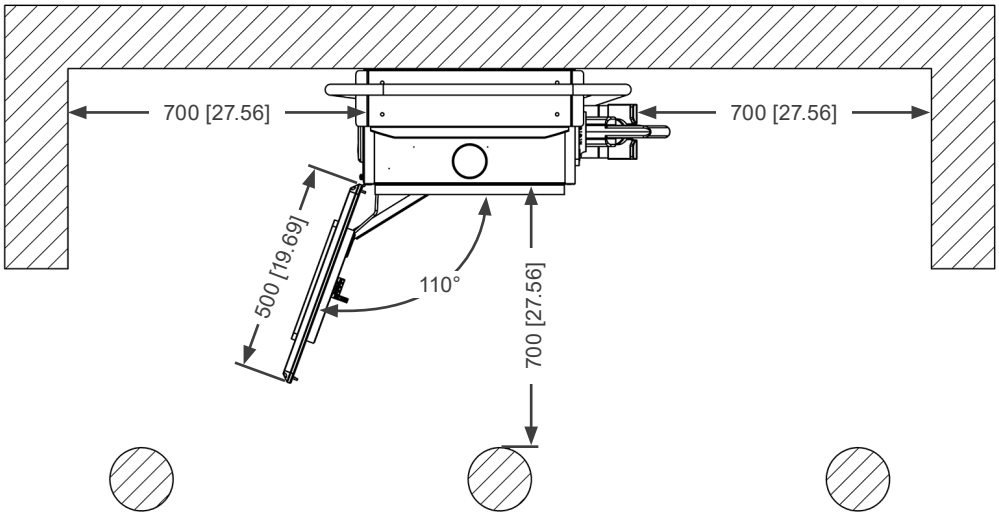


Figure 3.5: *Minimum clearance for mounting the WEMOB-STATION to the concrete structure – mm [in]*

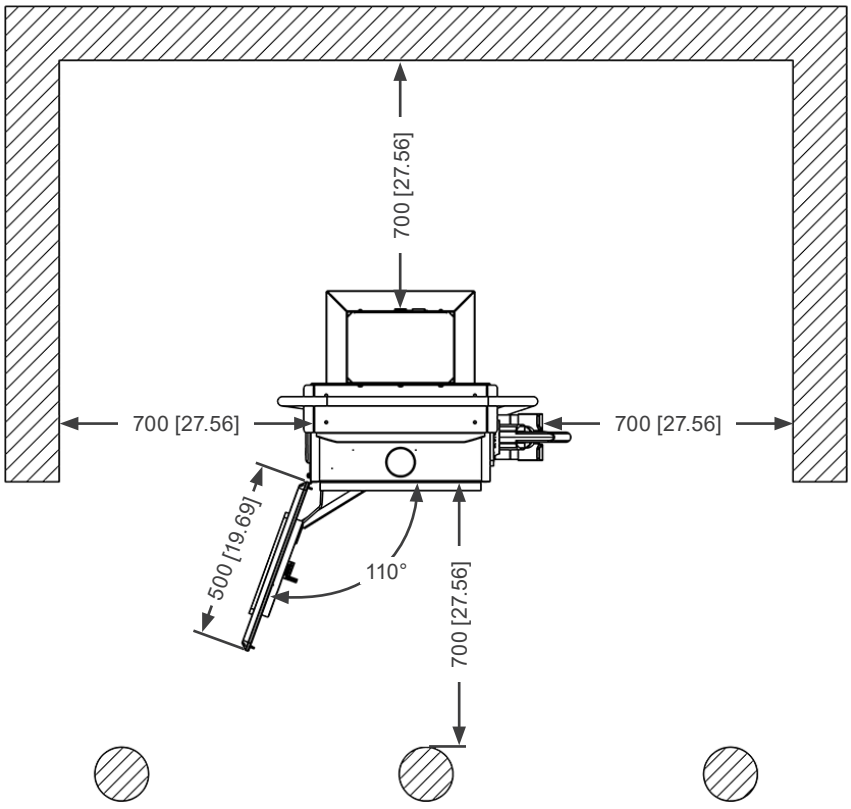


Figure 3.6: *Recommended minimum clearance for mounting the WEMOB-STATION on the pedestal – mm [in]*

ATTENTION!
The final operating position of the WEMOB-STATION must allow heat radiation from all its surfaces and enable the necessary ventilation flow for its proper operation.

3.2.6 Mounting

The WEMOB-STATION has six (06) mounting points, three (03) on the top face and three (03) on the bottom face. The WEMOB-STATION can be mounted directly to a concrete structure using the separately supplied kit, or on a pedestal (optional item available for purchase together with the WEMOB-STATION).

- **Mounting to a concrete structure:** the WEMOB-STATION must be fixed to a concrete structure using the separately supplied kit, which includes anchors, washers, spring washers, and screws. It is essential to use all six (06) mounting points to ensure a secure fixing of the charging station and operator safety.

ATTENTION!

- To ensure safety, it is recommended to use the separately supplied kit to mount the WEMOB-STATION (30/40 kW) to a concrete structure.
- If the WEMOB-STATION (30/40 kW) is installed on a masonry wall, a technical reassessment regarding the use of the supplied installation kit is mandatory. It is recommended to use mounting materials suitable to support a load greater than the equipment weight, which is 115 kg, considering an additional safety margin to avoid structural failure.
- To ensure a safe and stable mounting, it is essential to inspect the concrete structure's condition beforehand. Make sure the structure does not have cracks, wear, or any compromise that could result in instability or risk of the charging station falling.

To mount the WEMOB-STATION (30/40 kW), follow the procedures below:

1. Mark the six (06) hole locations on the surface.

2. Using a drill, make the six (06) holes with a Ø 10 mm drill bit.

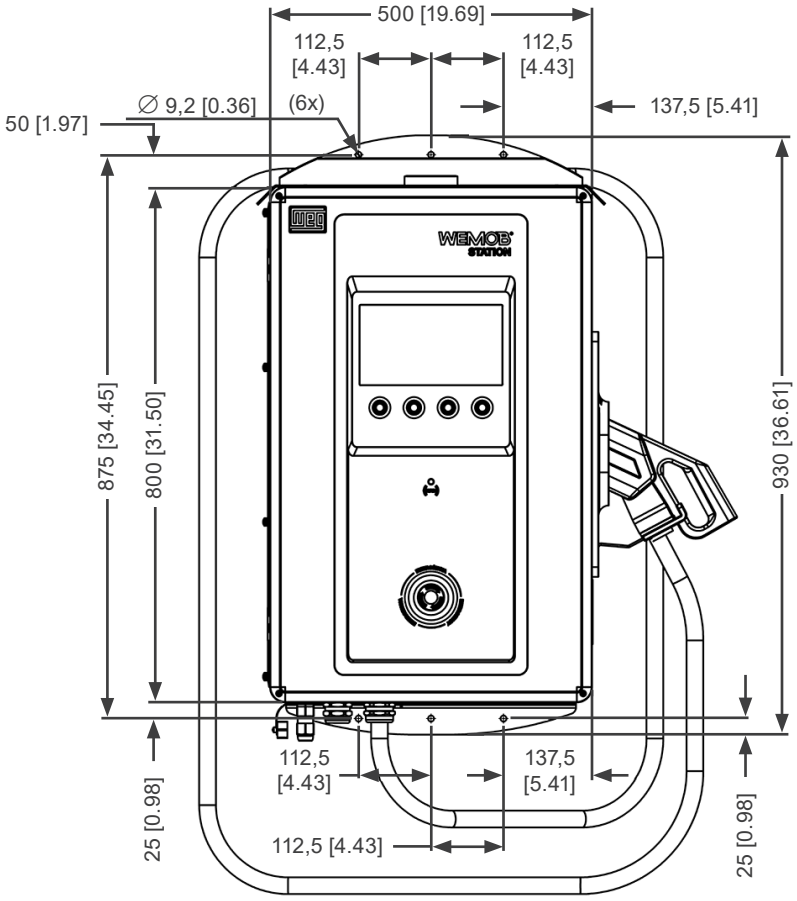


Figure 3.7: *WEMOB-STATION (30/40 kW) dimensions – mm [in]*

3. Insert the six (06) plastic anchors with diameter Ø 10x50 mm into the holes.

4. Bring the station close to the surface and align the holes on the back face with the holes in the concrete structure.

   Movement of the WEMOB-STATION can be performed using the lifting eye, as shown in Figure 3.8 on page 3-9.

5. Begin mounting at the bottom of the structure, using the three (03) mounting points available there, with three (03) M6 hex bolts.

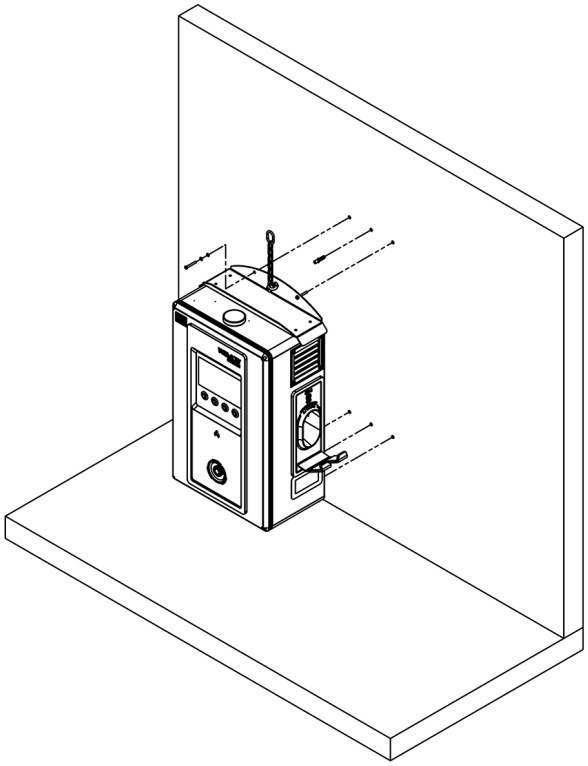


Figure 3.8: *Example of mounting*

6. Remove the lifting eye.

7. Fix the top part of the structure using the three (03) mounting points available there, with three (03) M6 hex bolts.

8. Perform the final tightening torque of 10 Nm on all mounting points to ensure a secure fixation for the charging station and operator safety.

- **Mounting on pedestal:** to mount the WEMOB-STATION on a pedestal, the Pedestal Kit must be purchased. The kit includes the pedestal, screws, nuts, washers, and anchors for fixing both the pedestal and the charging station.

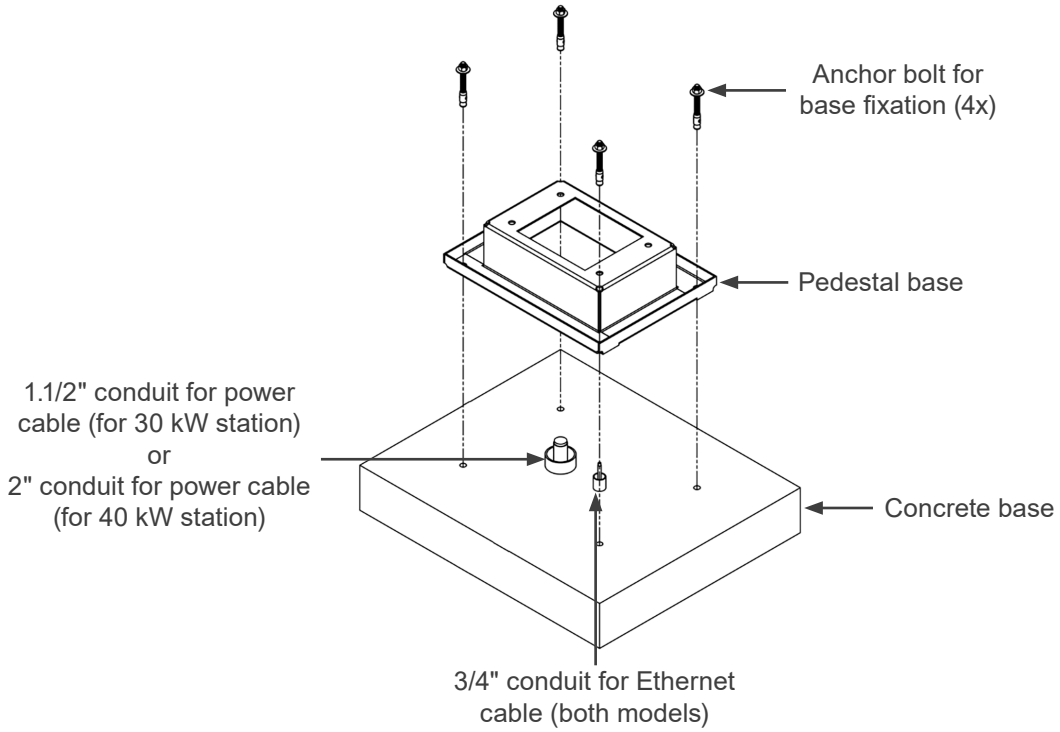
1. To fix the WEMOB-STATION to the pedestal, first fix the pedestal to a concrete base.

   The pedestal's mounting base must be properly leveled on both horizontal axes.

   At least one 2" conduit should be provided for the 40 kW charging station model, and a 1.1/2" conduit for the 30 kW charging station model, according to the purchased model, for the power cable entry. If the Ethernet connection is wired, another 3/4" conduit should be provided for the Ethernet cable. Use the internal DIN rail for installing a circuit breaker or other protection/disconnection device.

   It is recommended to have a minimum cable slack of 1 meter (1 m) for this installation. Make sure the power cable length is sufficient to connect to the internal terminals of the charging station.

The pedestal base must be fixed to a concrete base using four (04) anchor bolts (3/8"), supplied with the product, which must be drilled or already embedded in concrete according to the distances indicated in Figure 3.9 on page 3-10.



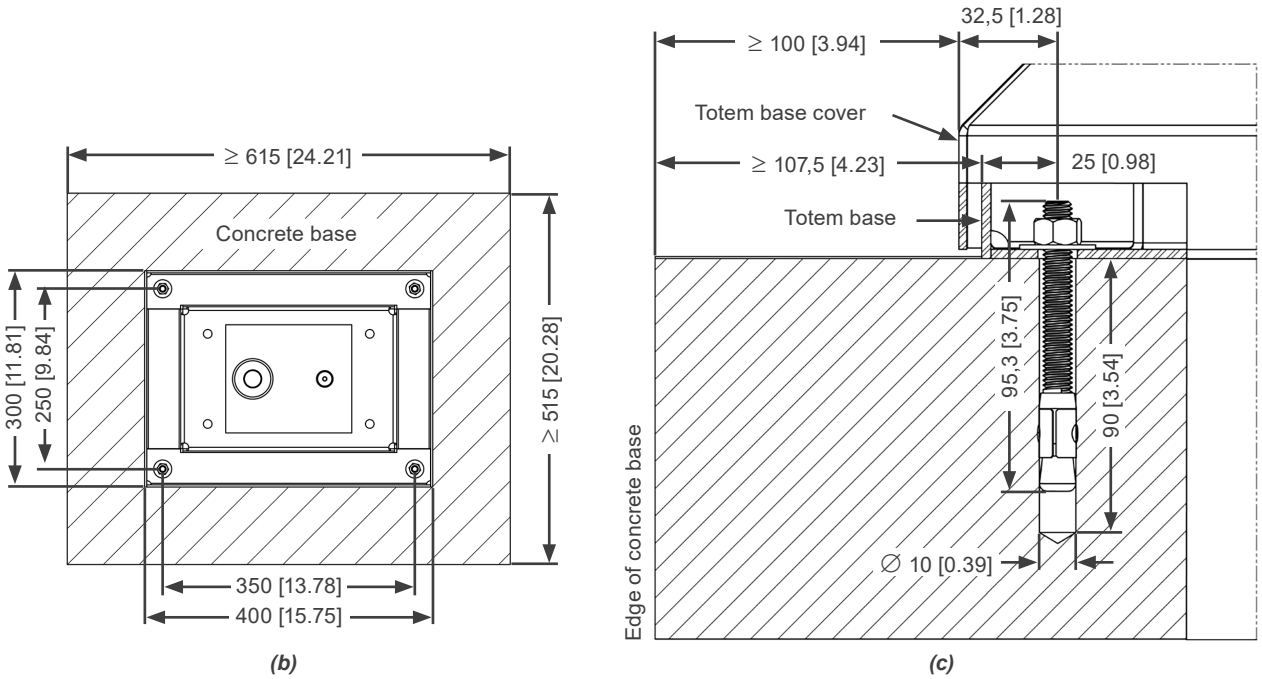


Figure 3.9: *(a), (b), and (c) Dimensions of the pedestal fixing base in mm [in]*

The assembly of the pedestal to the product fixing base is shown in Figure 3.10 on page 3-11, using four (04) M10 hex bolts supplied with the product. The recommended tightening torque is 35 Nm.

To access the interior of the pedestal and fix it to the base, it is necessary to remove the enclosure and the flange mounted inside the pedestal. To remove the enclosure, unscrew the six (06) M4 Phillips screws using a Phillips screwdriver, and use the key on the two (02) locks located on the back of the pedestal. To remove the flange, unscrew the four (04) M4 hex screws.

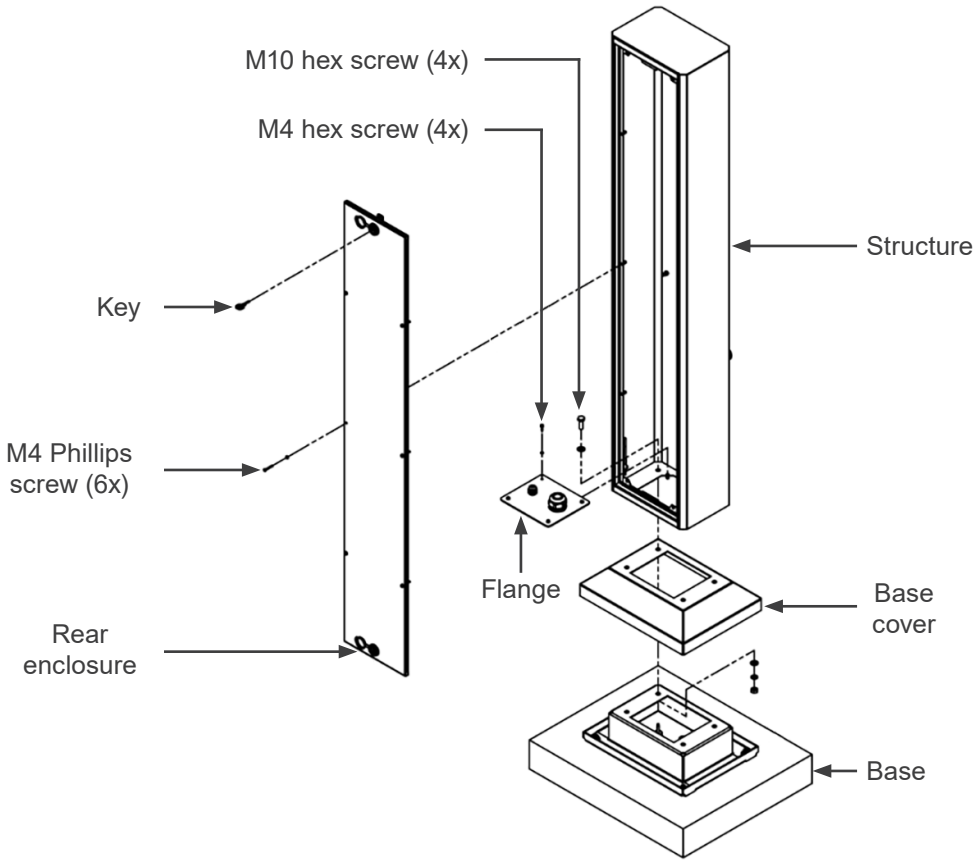


Figure 3.10: *Exploded view of the assembly*

After fixing the pedestal to the product base, perform grounding of the flange using one (01) M4 lock washer, supplied with the product, in any of the flange fastening holes, as shown in Figure 3.11 on page 3-11. The recommended tightening torque is 3 Nm.

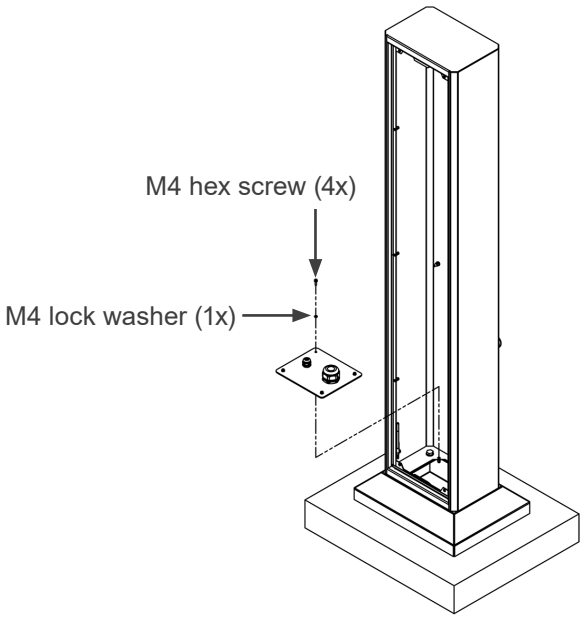


Figure 3.11: *Grounding point of the WEMOB pedestal flange*

2. Bring the station close to the pedestal and align the holes on the rear face with the holes on the structure.

   The movement of the WEMOB-STATION can be done using the lifting eye, as shown in Figure 3.12 on page 3-12.

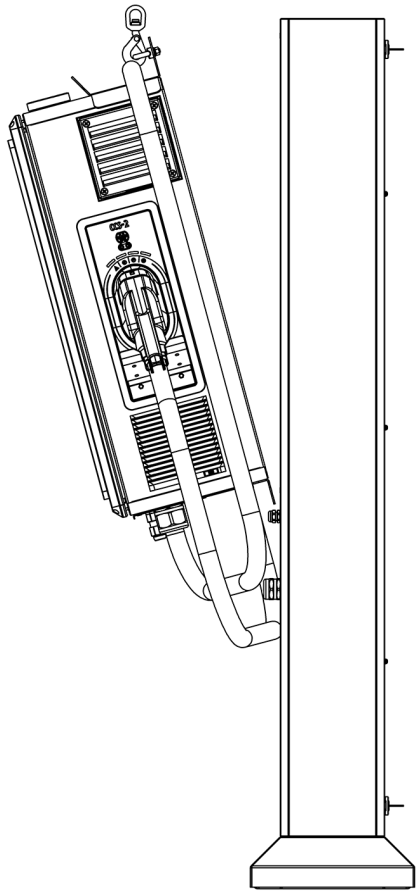


Figure 3.12: *Example of fastening*

3. Start fastening at the lower part of the structure, through the three (03) existing points, using three (03) M6 hex screws, as shown in Figure 3.13 on page 3-12.

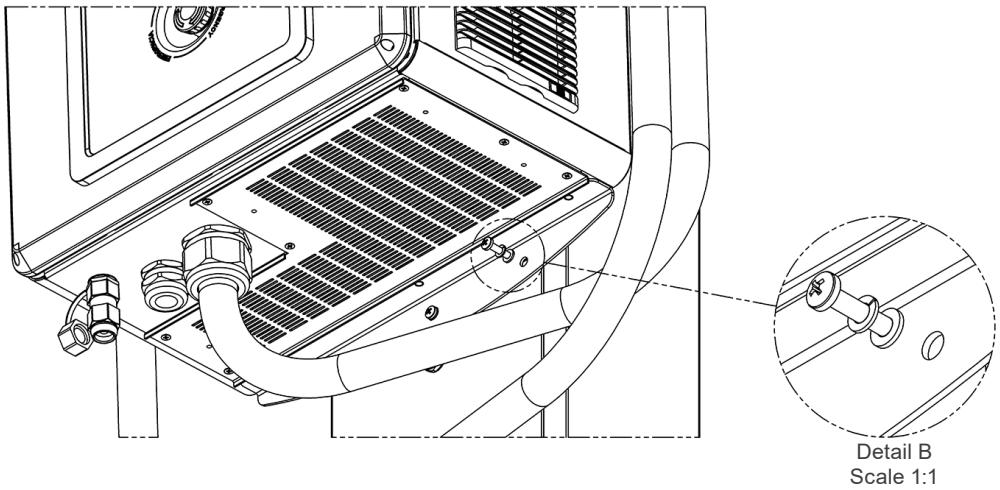


Figure 3.13: *Example of fastening the lower screws*

4. Remove the lifting eye.

5. Fasten the upper part of the structure through the three (03) existing points, using three (03) M6 hex screws.

6. Perform the final tightening torque of 10 Nm on all fastening points to ensure secure mounting of the charging station and operator safety, as shown in Figure 3.14 on page 3-13.

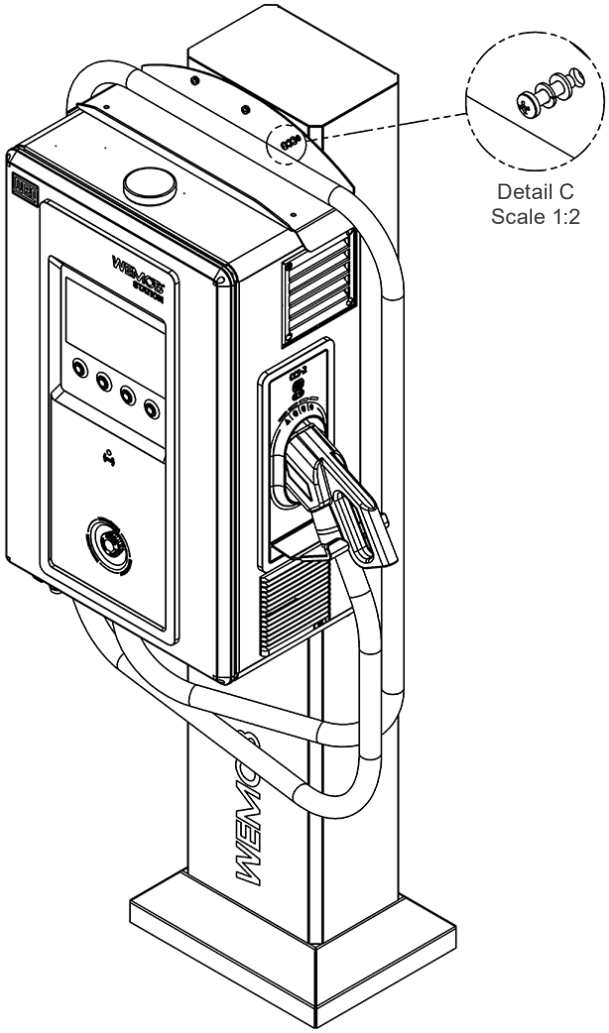


Figure 3.14: *Example of fastening the WEMOB-STATION (30/40 kW) on the pedestal*

After properly fastening the WEMOB-STATION charging station to the pedestal, reassemble the rear enclosure of the pedestal, applying the recommended tightening torque of 2.5 Nm.

3.3 ELECTRICAL INSTALLATION

The following information is intended to serve as a guide for achieving a proper installation. Also follow the electrical installation standards applicable in your locality.

DANGER!

- The WEMOB-STATION requires high current and consequently high power for its operation. Ensure that the demand requirements are met by the electric utility company.
- Protections and installations must comply with national, state, and local electrical installation regulations.
- Ensure that the power supply network is disconnected before starting any wiring.
- The supply voltage must be compatible with the voltage range of the WEMOB-STATION.
- The charging station must be connected to a protective earth (PE) grounding.

ATTENTION!
- The installation of the WEMOB-STATION charging station must be carried out by a qualified person.
- When flexible cables are used for power and grounding connections, it is necessary to use appropriate terminals at the cable ends.
- All electrical connections must be firmly tightened to avoid the risk of sparking, excessive heating, or voltage drop in the circuits.
- The use of copper conductors is recommended.

3.3.1 Grounding Requirements

The charging station must be mandatorily connected to a protective earth (PE).

Do not use the neutral conductor for grounding; use a dedicated grounding conductor. The grounding resistance must be less than 100 Ω or below the maximum value defined by applicable electrical installation standards.

ATTENTION!
- Ensure that during installation and operation, the charging station remains constantly and properly connected to the protective earth (PE).
- Do not share the grounding wiring with other equipment operating at high currents (for example: welding machines, high-power motors, among others).

3.3.2 Power Supply Connection

ATTENTION!
- The installation of the WEMOB-STATION charging station must be carried out by a qualified person.
- Check the product identification label to verify the operating voltage range of the station.
- The WEMOB-STATION charging station internally has a molded case circuit breaker (MCCB) providing overload and short-circuit protection, named "Q1".

The connection of the WEMOB-STATION to the electrical network is made directly to the terminals of the circuit breaker Q1 (Phases L1-L2-L3), the neutral terminal, and the Earth bus (PE) (structure grounding) as shown in Figure 3.15 on page 3-15.

It is recommended to use copper conductors with the following minimum cross-sectional areas:

Table 3.1: *Minimum conductor size for power supply*

Model (Station Power)	Max Input Current		Minimum Phases (L1-L2-L3) Conductor	Minimum Neutral (N) Conductor	Minimum Earth (PE) Conductor	Minimum External Diameter (Multipolar Cable)	Maximum External Diameter (Multipolar Cable)
	380 V	415 V					
40 kW	67 A	62 A	25 mm²	16 mm²	16 mm²	20 mm [0.79 in]	31 mm [1.22 in]
30 kW	52 A	48 A	16 mm²	16 mm²	16 mm²	18 mm [0.71 in]	25 mm [0.98 in]

NOTE!
- The installation can be done using a five-core (05) multipolar cable.
- The conductor cross-sections specified consider a supply voltage of 380 V.
- Minimum conductor sizes are based on copper with PVC insulation rated at 70 ºC [158 °F], free installation method (not bundled), reference method F, and ambient conductor temperature up to 45 ºC [113 °F].

The correct conductor size of the power cable depends on the power and the distance from the distribution box or breaker panel to the charging station. Single or multiple cables may be used to meet the required power. Consider possible correction factors for cable current capacity due to installation method, temperature, distance, and voltage drop. Under certain circumstances, this may lead to an increase in the cable cross-sectional area.

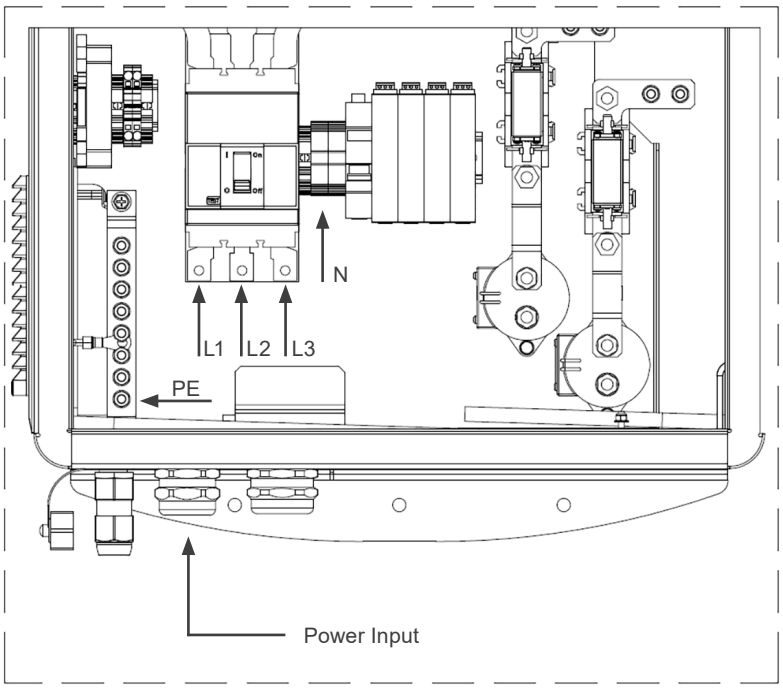


Figure 3.15: *Power Input*

Connections to the terminals of circuit breaker "Q1" must be made using ring terminals, either pre-insulated or compression type. The size must be selected according to the cable cross-section, respecting the minimum recommended condition shown in Figure 3.16 on page 3-15.

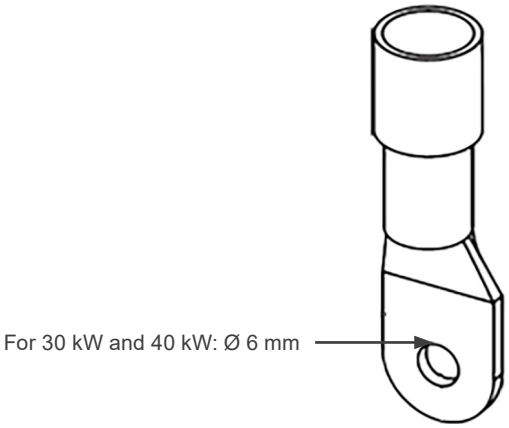


Figure 3.16: *Ring Terminal Specification - mm*

Pay attention to the size of the ring terminal, comparing its dimensions with the spacing between the phase separators or copper terminals. The recommended tightening torque for the screws of Ø 6 ring terminals is 10 Nm.

3.3.3 Protection Device

ATTENTION!
The WEMOB-STATION charging station must be connected to a four-pole circuit breaker and a residual current device (RCD) or residual current breaker (RCB) with a sensitivity of 30 mA (AC) type A, exclusively dedicated to the charging station's power circuit.

Determine the rated working current of the upstream circuit breaker for the WEMOB-STATION charging station according to the manufacturer's data, the maximum input current of the station, the short-circuit levels of the installation and the station, the gauge and length of the power cables.

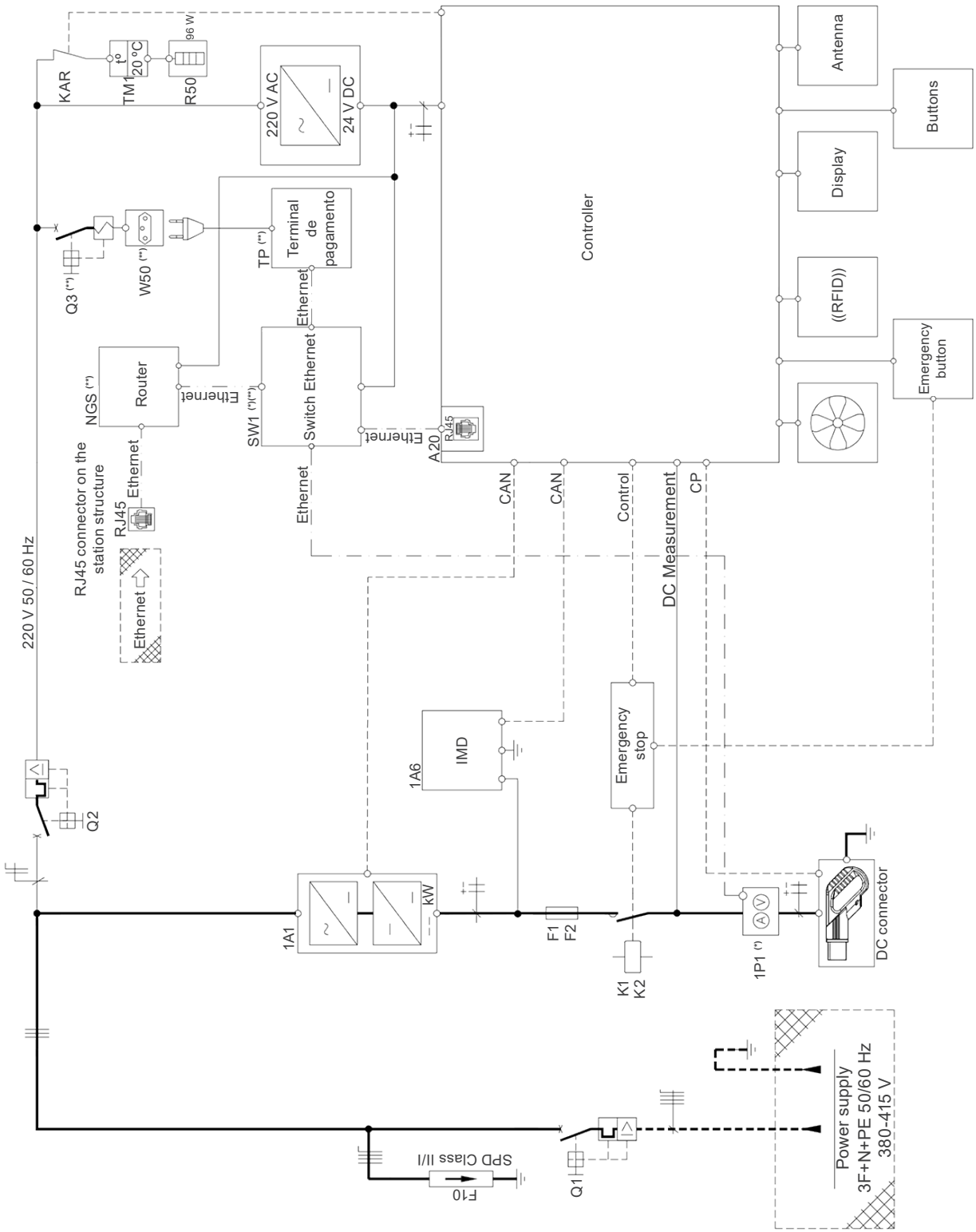
Also take into account the derating factor of the circuit breaker's nominal current based on the ambient temperature where the circuit breaker is installed (in the distribution panel or breaker box), as well as the selectivity of the protective devices.

3.3.4 Preparation for Energization

Before powering on the WEMOB-STATION, verify that:

- All power, grounding, and control connections are correct and secure.
- The resistance between the station's ground (PE) and the low-voltage panel ground (PE) complies with local standards.
- All tools, leftover installation materials, or foreign objects not part of the product have been removed from inside the WEMOB-STATION.
- Using an (AC) voltmeter, check the line voltage values. The voltages between terminals L1, L2, and L3 of the Q1 circuit breaker must be within the permitted operating range of the station. Also verify that the voltages between the phases (L1-L2-L3) and neutral are within the station's permitted operating range (as indicated on the product label).

4 SINGLE-LINE DIAGRAM



(*) Some WEMOB-STATION charging station models may not include energy meters and a switch.
(**) Some WEMOB-STATION charging station models may not include a payment terminal, router, or switch.

Figure 4.1: *Simplified single-line diagram of the WEMOB-STATION (30/40 kW)*

Table 4.1: *Characteristics of the single-line diagram components according to the station model*

Description (Component Tag)		Model (Station Power)	
		30 kW	40 kW
Molded case circuit breaker (Q1)	Model	DWB160B80-3DF	
	Current	64 - 80 A	
	Current adjustment	80 A	
	Maximum short-circuit breaking capacity (Icu)	18 kA (380 V)	
		16 kA (415 V)	
Circuit breaker (Q2)	Model	MDWH-C10	
	Current	10 A	
NH_aR fuse (F1; F2)	Model	FNH00-100K-A	FNH00-200K-A
	Current	100 A	200 A

5 EMERGENCY STOP BUTTON

The WEMOB-STATION charging station has an emergency stop button located on the front panel. In emergency situations, the button must be pressed! When pressed, the ongoing charging session will be immediately interrupted, and the power output will be safely de-energized, protecting both the user and the station.

The display screen will remain on to report the fault and show instructions to the user.

NOTE!
- DO NOT PRESS THE EMERGENCY STOP BUTTON UNLESS THERE IS AN EMERGENCY!
- The emergency stop button must not be used as an alternative to end a charging session or to interrupt another user's charging.
- The same fault message will be displayed on the screen whether the emergency stop button is pressed or not.

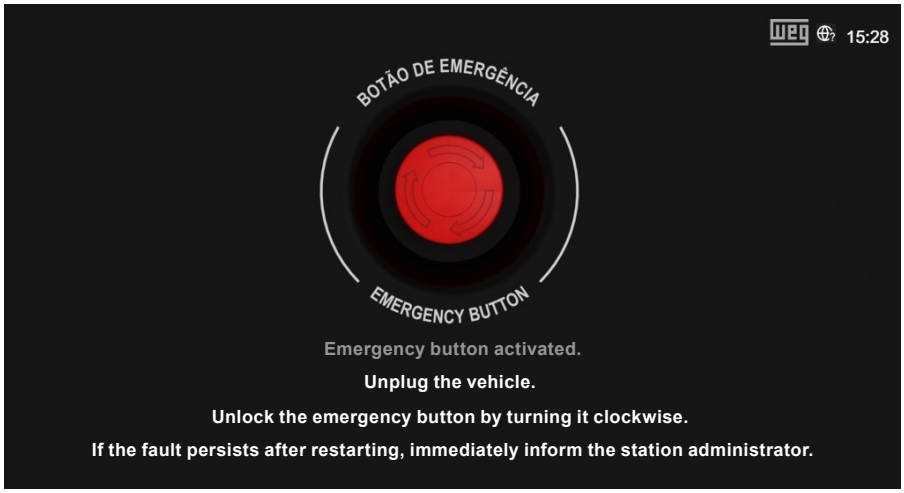


Figure 5.1: *Screen indicating the emergency button has been activated*

In case of an emergency, press the emergency stop button, remove the charging plug from the electric vehicle, and immediately inform the charging station administrator.

Once the emergency condition has been resolved or it has been verified that the button was pressed accidentally or intentionally, unlock the button by rotating it clockwise.

After the emergency button is reset, the station will restart and perform a complete self-test process.

If no problems are detected during startup, the station will return to normal operation.

Figure 5.2: *Emergency button reset system*

6 CONNECTIVITY

The charging stations may support connectivity via wireless data network (Wi-Fi), wired network (RJ45), cellular network, and RFID (Radio Frequency Identification).

NOTE!
Make sure the model of the charging station you purchased includes these functionalities. If necessary, compare the model described on the product identification label with the “smart code” listed in the WEMOB product line catalog, available for download at: **www.weg.net**.

Remote intelligent management is performed through the open protocol OCPP 1.6J, which allows connecting charging stations with users and operators via cloud portals.

The OCPP 1.6J communication protocol enables connection to management platforms. The protocol used in WEMOB-STATION stations is open, allowing connection to the WEMOB Management Platform or third-party management platforms.

Through the WEMOB Management Platform, it is possible to collect data and remotely manage charging stations. The platform includes the WEMOB-Station Fleet Management, which allows user registration, user management, usage monitoring, billing for charging sessions, among other configurations.

User identification (authentication) is performed via RFID cards or the WEMOB EV Drivers app. With the app, users can locate stations on a map, get real-time connector status (available, occupied, under maintenance), view statistics, and usage history.

The WEMOB-STATION is also compatible with third-party management platforms.

NOTE!
Access to non-domestic charging stations via the app is an optional feature included when contracting the WEMOB Management Platform service. For more information, contact your regional sales representative.

To download the WEMOB EV Drivers app, visit the Google Play Store or the Apple App Store on your smartphone. Search for "WEMOB EV Drivers" or scan the QR Code below to download.

AVAILABLE ON Google Play

Download on the App Store

6.1 COMMISSIONING

The commissioning of the charging station is performed via the WEMOB EV Drivers app or via WEB pages embedded in the station firmware. For the WEB pages option, the station generates an “access point,” which is a Wi-Fi network identified as WEG-EVSE-xxx, allowing another device (smartphone, tablet, computer, notebook, etc.) to access the station’s configuration settings.

NOTE!
- The actual name of the Wi-Fi network **WEG-EVSE-xxx** is unique and varies according to the device, where xxx represents an alphanumeric combination.
- The access point generated by the charging station remains active for ten (10) minutes after the station is powered on. After this period, it is necessary to restart the station.
- Some devices may not be compatible with the access point generated by the station. If this occurs, try using another device (different brand or model).

To commission the charging station, follow the instructions below:

1. Power on the charging station.

2. Connect your computer or mobile device to the Wi-Fi network WEG-EVSE-xxx. If using a Windows® computer or notebook, left-click the network icon (or) in the bottom-right corner of the taskbar. The appearance of these icons varies depending on the installed Windows® version. The utility will show all wireless networks available in your area. Click the network identified by the SSID (network name) WEG-EVSE-xxx, then click "Connect". In the next window, enter the access password: **"password"**.

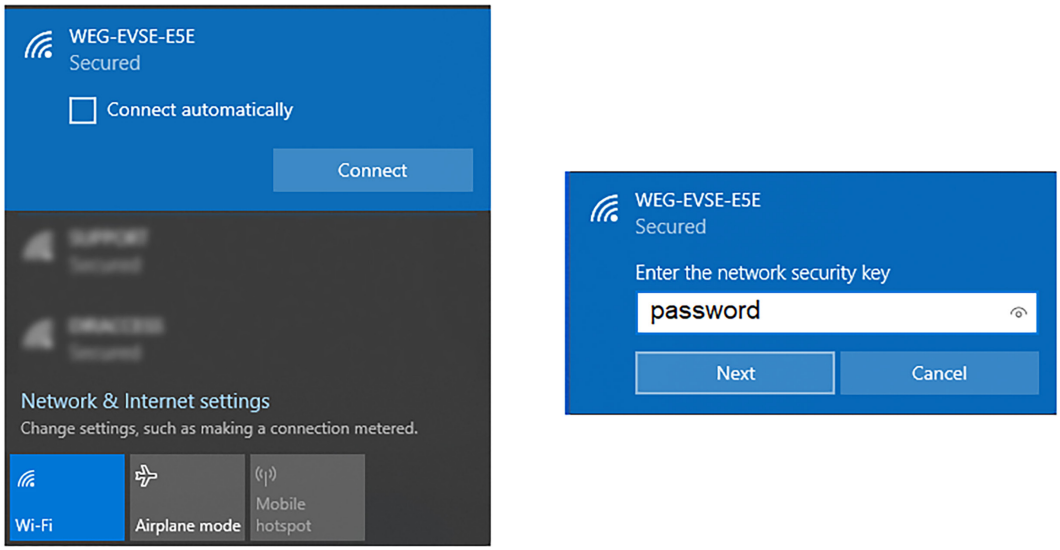


Figure 6.1: *Wi-Fi Network WEG-EVSE-xxx*

NOTE!
- If you wish to perform the configuration using a mobile device (smartphone, tablet, etc.), it is recommended to disable the mobile data network (3G/4G, etc.). It is also recommended to be at a maximum distance of 1.5 meters [59.06 in] from the charging station to perform this procedure.
- If using a computer or notebook, disconnect any connected Ethernet cable, then enable the Wi-Fi network adapter.

3. Upon connection, a pop-up window will appear for configuration. If the pop-up does not appear, open a web browser (we recommend using the latest versions of Google Chrome®, Mozilla Firefox®, or Microsoft Edge®) and navigate to the address http://setup.com or http://10.10.10.1.

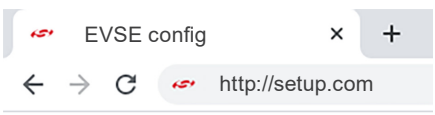


Figure 6.2: *Access via web browser*

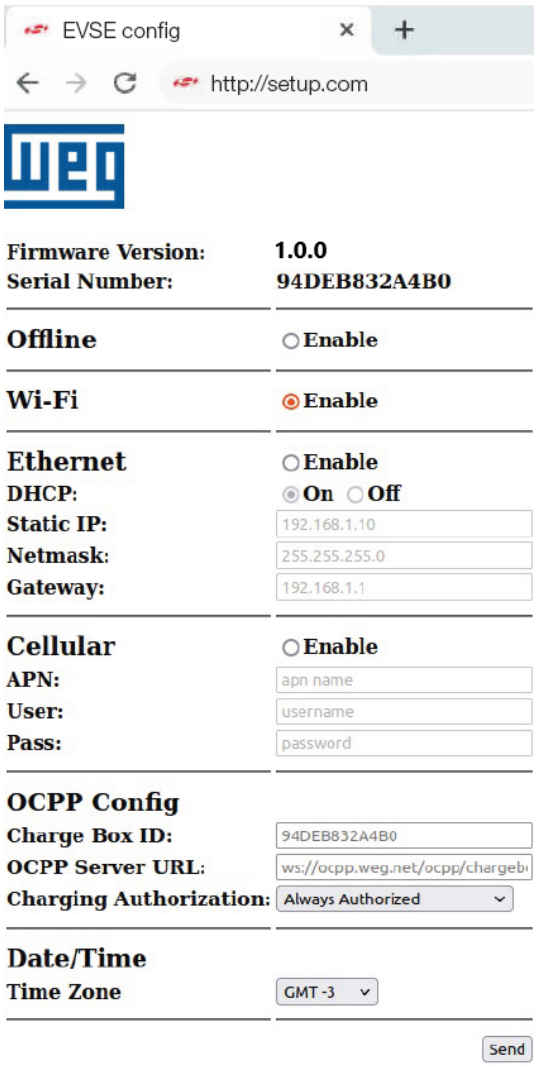


Figure 6.3: *Configuration page of the STATION via web browser*

4. Fill in the following fields:

Offline:

- Enable: disables all network interfaces.

OCPP functions are not used, and the station's date and time are configured via the Set Date/Time field.

Date/Time:

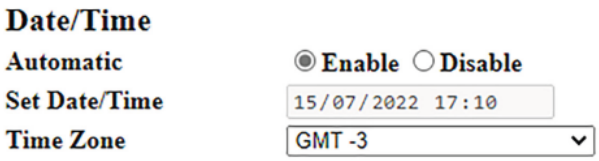
- Automatic: only available when Offline mode is selected.

  Enable: date and time fields are automatically filled based on the device commissioning the station (cellphone, notebook, etc.).

  Disable: allows the user to manually select date and time.

- Set Date/Time: if in Offline mode and Automatic option is disabled, this allows manual setting of date and time.

- Time Zone: automatically filled based on the device commissioning the station, but manual adjustment is also allowed. Adjust the time zone according to your location.



Wi-Fi:

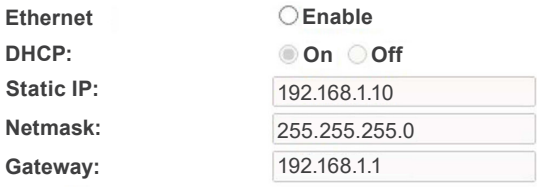
- Enable or disable the Wi-Fi network interface.

Ethernet:

- Enable: enable or disable the wired Ethernet network interface (RJ45).
- DHCP:

  On: the station obtains an IP address automatically.

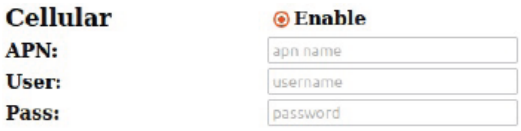
  Off: settings must be defined manually.
  Static IP: IP address assigned manually by the user.
  Netmask: network mask, default is 255.255.255.0.
  Gateway: usually the IP address of the router.



Cellular:

- Enable or disable the cellular network interface.

You can configure the APN (Access Point Name), User, and Password for the cellular interface.



NOTE!
- Check with your cellular operator for the correct APN, user, and password settings.
- If the acquired charging station model has only Wi-Fi connectivity, configuring Ethernet and cellular networks is not allowed. Only the Wi-Fi network can be enabled.

OCPP Config:

- **Charge Box ID**: text field to identify the station on the OCPP server.

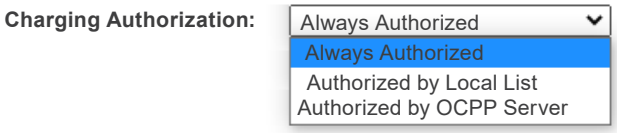
Example: chargebox01

NOTE!
- This field is factory pre-filled and editing it is not recommended as it is a unique identifier. Editing this field may pose data security risks and is not covered by the product warranty.
- Spaces, accents, and special characters are not allowed.
- Allowed characters: underscore (_) and hyphen (-).
- Case-sensitive.

- **OCPP Server URL**: text field for the OCPP server address (WEG or third party).
- Example: ws://wemob-ws.app.wnology.io:80/steve/websocket/CentralSystemService.
- **Charging Authorization**: defines whether the station requires authentication to start charging.

Three (3) authorization modes are available:

- Always Authorized: allows charging without authentication. Select to allow free access to charging.
- Authorized by Local List: user authentication is done via RFID cards registered on the "Local List", which is managed locally by the station without OCPP server integration.
- Authorized by OCPP Server: authorization is provided by the OCPP server. Users and their RFID cards must be registered on the WEMOB platform.



NOTE!
- The options Always Authorized and Authorized by Local List can operate offline without data network or OCPP server connection.
- In Authorized by OCPP Server mode, no verification is made against RFID cards stored in the Local List, and the charging station depends on a data network connection and the OCPP server. Refer to the WEMOB EV Driver and WEMOB-Station Fleet Management guides for more platform information.

Press the "Send" button. A message will appear confirming the completion of this configuration step: "User configuration completed successfully!" Press "OK" to be redirected to the Wi-Fi network configuration page.

Figure 6.4: *Setup configuration completed*

NOTE!
If the Wi-Fi interface was not enabled, the commissioning process will end.

5. On the Wi-Fi network configuration page, select the network you wish to connect to. In this example, the Wi-Fi network is SUPPORT. This configuration page shows all Wi-Fi networks near the station along with their signal strength. Enter the network password in the "Password" field. It is not necessary to select "Reconnect to device". If needed, under "Advanced Settings," you can configure the network IP address. "DHCP": the station obtains an IP address automatically. "Static": IP address manually assigned by the user. These fields should be filled out as explained in the previous item "Ethernet".

To finish, click "Connect." If the connection is successful, a message will appear confirming the completion of the setup: "Setup is complete".

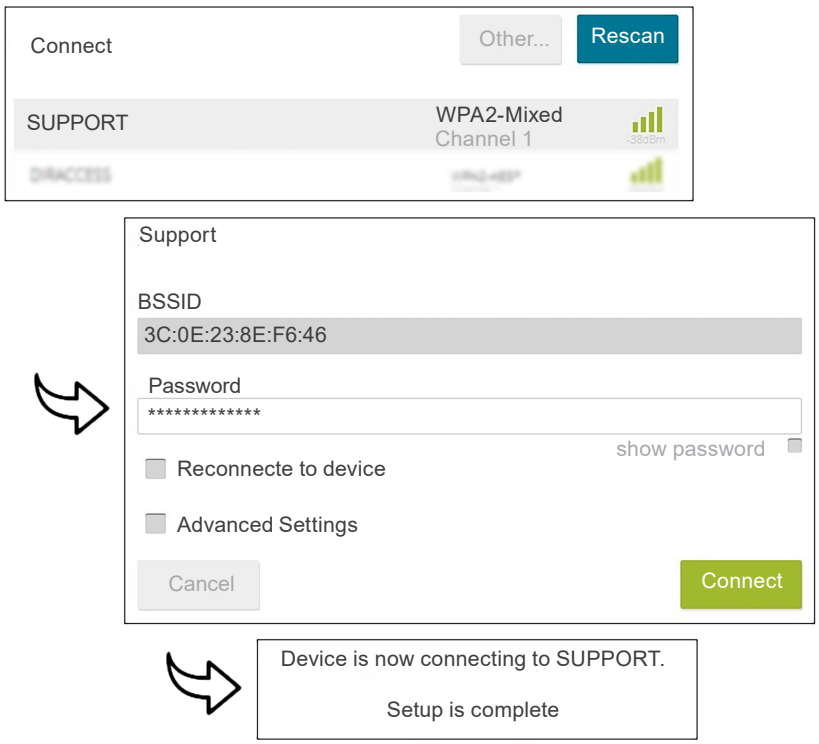


Figure 6.5: *Wi-Fi Network Configuration Page via Web Browser*

The MAC Address (Media Access Control Address) of the station is represented by the Serial Number shown on the configuration page, which is a unique identifier for each wireless device.

NOTE!
- On some access points, password verification may fail, showing the message: "Failed to verify network password." If you are sure the password is correct, simply click "Save & Continue."
- The option "Reconnect to device" may remain unchecked.
- In case of an error, restart the station and repeat the configuration procedure.

6. In case of an error, restart the station and repeat the configuration procedure.

NOTE!
Whenever the name or password of your main router's Wi-Fi network is changed, the charging station must be reconfigured.

It is possible to change the Wi-Fi connection and connect the station to another network in two ways: using the current IP address of the station, or resetting the Wi-Fi settings.

Repeat steps 5 and 6. In step 5, use the current IP address of the charging station. To do this, you need to know the station's IP address, e.g., 192.168.100.55.

NOTE!
For managed networks, ensure that ports 53, 80, and 443 are open in the router configuration of the charging station, as these ports are used to communicate with the WEG OCPP Server. For operation with other servers, contact your CPO.

6.2 WI-FI NETWORK

The charging station needs to be installed in a location with a good Wi-Fi signal from the router. If necessary, install repeaters or a wireless "access point". The router connects to another router via cable, where the second device acts as a repeater. You can verify the Wi-Fi signal level by using a smartphone or other device, checking if the signal bars are fully filled. The higher the level, the better the Wi-Fi network signal. These bars indicate if the Wi-Fi signal is good in the chosen environment. The charging station has an external antenna to better capture the Wi-Fi network signal.

If it is the first time configuring the station on the Wi-Fi network, the station creates an access point, a Wi-Fi network identified as WEG-EVSE-xxx, so another device (smartphone, tablet, computer, etc.) can access the Wi-Fi settings of the station.

NOTE!
- The charging station connects only to Wi-Fi networks IEEE 802.11 b/g/n, 2.4 GHz, with WPA2/WPA Personal security protocols, which require only a password for access without a username.
- If the registered Wi-Fi network is not available during station startup or operation, it will automatically reconnect as soon as the Wi-Fi network is available again.

6.3 ETHERNET

NOTE!
Charging stations are not designed to operate on networks that require username and password authentication (proxy).

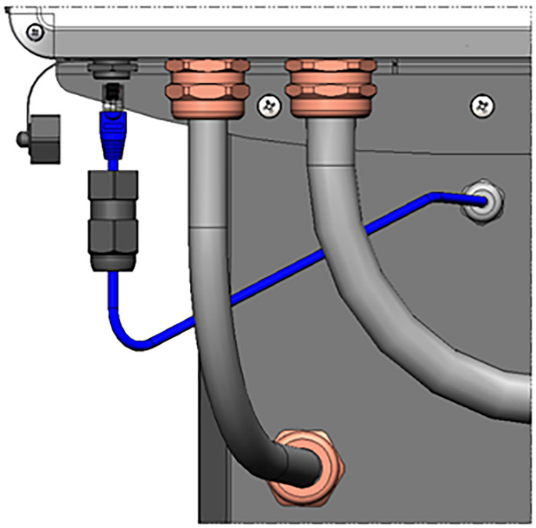


Figure 6.6: *Location and connection of the network cable on the charging station*

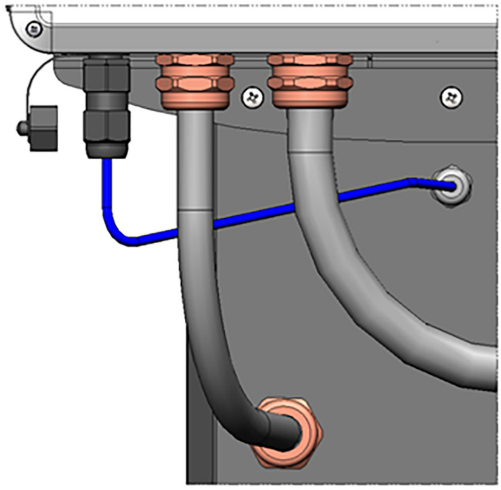


Figure 6.7: *Connection to the RJ45 Connector*

The RJ45 connector follows the Fast Ethernet 100BASE-TX standard, using two pairs of cables for data transmission and reception. Connect the router cable to the charging station at the RJ45 port. Use a standard Ethernet cable, 100 Base-TX (Fast Ethernet), CAT 5e or higher, with a maximum length of 100 meters. To avoid communication interference, power cables should be kept separated as far as possible from the Ethernet communication cable. Pass the Ethernet cable through the cable gland supplied separately, connect the RJ45 terminal, and plug it into the adapter connector located next to the power cable entry.

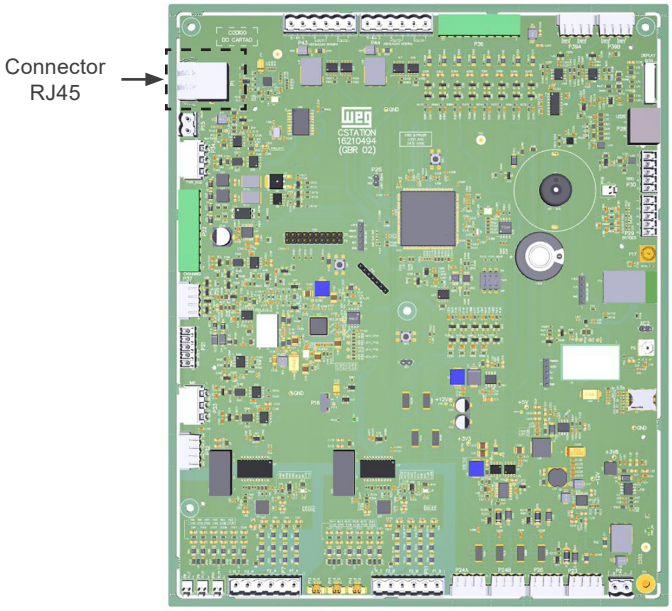


Figure 6.8: *Location of the RJ45 Connector on the Control Electronic Board*

6.4 CELLULAR

NOTE!
Some charging station models have a cellular (LTE) network module. Check if your purchased station model includes this functionality.

The charging station needs to be installed in a location with good cellular signal strength. You can verify the signal level using a mobile phone. Check if the signal bars on the device are fully filled. The higher the level, the better the cellular network signal. These bars indicate whether the cellular network signal is strong in the chosen environment.

The charging station has a high-gain external antenna and is compatible with LTE Cat M1 and NB-IoT mobile networks, allowing the use of a SIM Card with a data plan to connect the station when it is out of range of a Wi-Fi or Ethernet (RJ45) network.

NOTE!
This product operates exclusively with a nano SIM Card (12.3 mm [0.48] height × 8.8 [0.35] mm width). When contracting a data plan with a telecom operator, please pay attention to this detail.

ATTENTION!
Make sure the station is turned off before inserting or removing the SIM Card. Otherwise, the station and/or SIM Card may be damaged.

To install the charging station SIM Card, follow the instructions below:

1. Open the front door of the charging station.

2. Locate the SIM Card slot on the right-center part of the control electronic board.

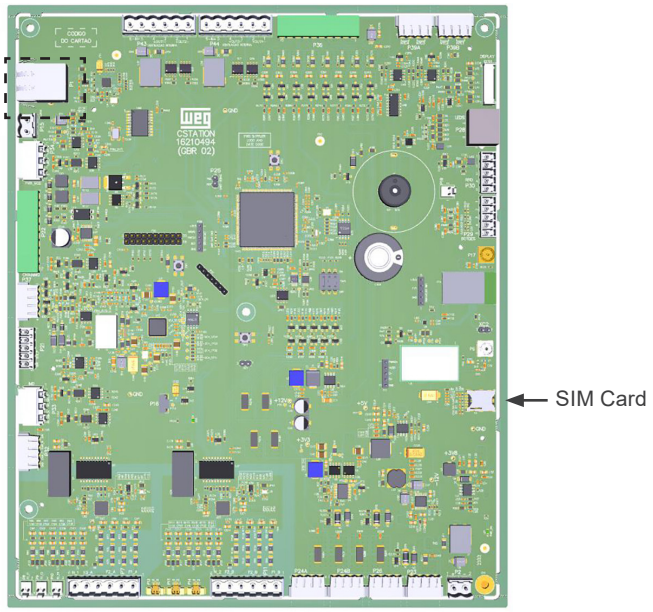


Figure 6.9: *Location of the SIM Card Slot on the Control Electronic Board*

3. Align the SIM Card with the control electronic board slot. For correct insertion, the chamfered edge of the SIM Card should be aligned to the right, and the metallic contacts facing downwards. Observe the orientation drawing on the slot.

4. Carefully insert the SIM Card, pressing gently with your index finger until it is fully seated in the slot.

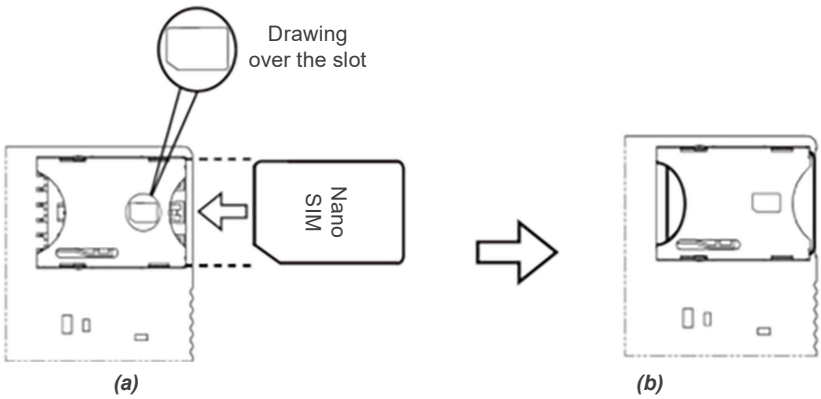


Figure 6.10: *(a) and (b): SIM Card Insertion Procedure*

5. Close the front door again.

To remove the SIM Card from the charging station, follow the instructions below:

1. Open the front door of the charging station.

2. At the bottom of the SIM Card slot, there is a semicircle. Use this opening to carefully remove the SIM Card with your index finger.

3. Remove the SIM Card.

4. Close the front door again.

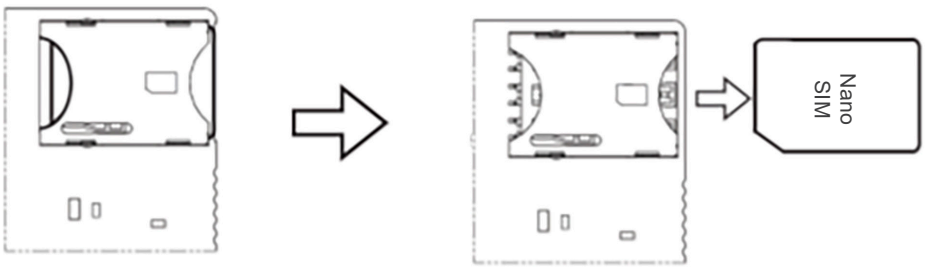


Figure 6.11: *(a) and (b) Procedure to remove the SIM Card*

6.5 RFID

The WEMOB-STATION charging station ships from the factory configured to not require authentication, allowing free access for charging in the "Always Authorized" operating mode.

To require authentication, this setting must be changed in Section 6.1 COMMISSIONING on page 6-1, in the OCPP Config field, by selecting the authorization mode "Authorized by Local List" in the Charging Authorization option.

Each RFID card has a unique identification number (ID) pre-programmed at the factory.

The charging station supports RFID cards/tags operating at a frequency of 13.56 MHz, with RF interface ISO/IEC 14443 A.

RFID card registration can be done locally or via the OCPP server.

To register cards locally, one card will be added to the Local List as the administrator "Master," and the others as users "User." The "Master" card is used to manage (add/delete) "User" cards.

NOTE!
- During the card registration procedure, it is not allowed to start or stop a charge using the RFID card.
- The inclusion or exclusion of cards must be done while the station is in "Available" mode.
- RFID cards are supplied separately in packages of ten (10) units. Material 15759624 – WEMOB-RFID.
- Identify the "Master" card with a label or permanent marker. Do not punch holes in the card.

6.5.1 Registration of the RFID "Master" Card

When the charging station is powered on, it checks if a "Master" card has already been registered. If not, the RFID LED will blink for approximately one (01) minute, waiting for the first card to be presented to the RFID reader, which will be considered the "Master" card. After this period, if no card is presented, the station will start its normal operation without the Local RFID List functionality (authorization only via OCPP). After this period, the station must be restarted (rebooted) to enter registration mode again.

To locally register the "Master" card, follow the instructions below.

1. Power on the charging station; the ((RFID)) reader LED will blink green for one (01) minute.

2. Present the "Master" card to the ((RFID)) reader.

3. If registration is successful, the station will emit a short beep (one beep), and the RFID reader LED will turn solid green.

4. If the one (01) minute time elapses, restart the station and repeat the procedure.

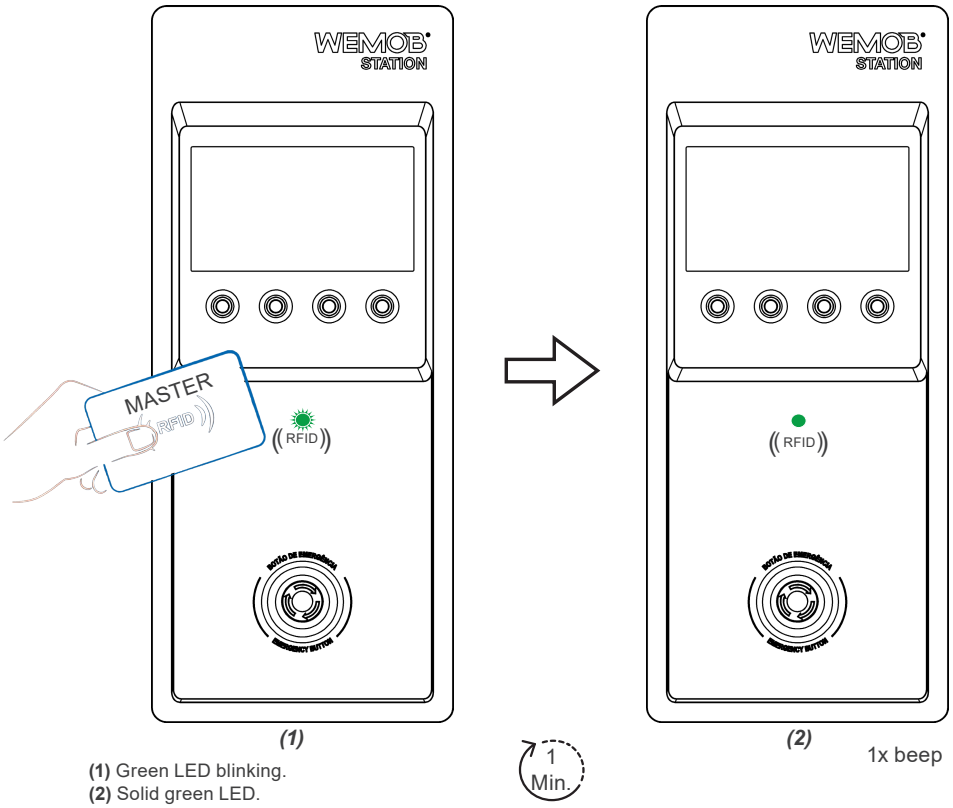


Figure 6.12: *Registration of the RFID "Master" Card*

NOTE!
- Only one (01) "Master" card can be registered.
- The "Master" card cannot be used to stop a charging session.
- In case of loss of the "Master" card, a Factory Reset must be performed. For more information, see Section 6.6 FACTORY RESET on page 6-13.

6.5.2 Registration/Deletion of the RFID "User" Card

After the "Master" card is registered, it is possible to add or delete RFID cards for "User" profiles. To register a "User" card, first present the "Master" card to the ((RFID)) reader, and the station will enter the "User" card registration mode. During this process, the ((RFID)) reader LED will blink green for one (01) minute, waiting for the "User" card to be presented.

To locally register the "User" card, follow the instructions below:

1. Power on the charging station. The ((RFID)) reader LED will show solid green, indicating that a "Master" card is registered in the Local List.

2. Present the "Master" card to the ((RFID)) reader; the station will emit one (01) short beep, and the ((RFID)) reader LED will start blinking green for one (01) minute.

3. Present the "User" card to the ((RFID)) reader.

4. If the "User" card registration is successful, the station will emit one (01) short beep, and the ((RFID)) reader LED will turn solid green.

5. To register additional "User" cards, repeat steps 2 to 4.

> **NOTE!**
> Repeat steps 2 to 4 to register new "User" cards. The sequence "Master" -> "User1" -> "User2"... is not valid. For each new "User" card, the above procedure must be repeated.

To delete a "User" card from the Local List, follow the same procedure used for registration by repeating the steps above. If the card is already registered, it will be deleted. If the deletion is successful, the station will emit two (02) short beeps, and the ((RFID)) reader LED will turn solid green.

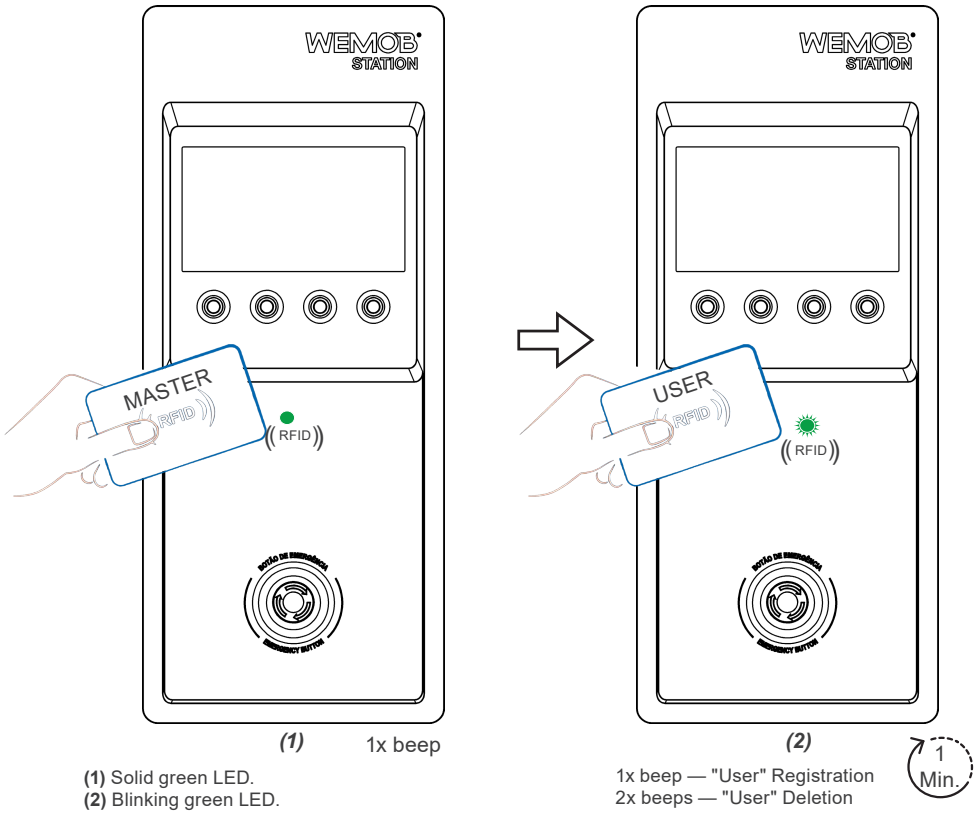


Figure 6.13: *Registration/Deletion of the RFID "User" Card*

NOTE!
- The charging station allows a maximum of one hundred (100) registered ((RFID)) "User" cards.
- The station will emit a long beep sound when an unregistered card is presented to the RFID reader.

6.5.3 Procedure for Charging Using RFID

In this operating mode, the user will need a "User" card properly registered by the station manager to start a charging session.

To start charging the electric vehicle, follow the instructions below:

1. Verify that the station is in the "available" mode (ready for use), with a continuous GREEN LED indication.

2. Present the "User" card to the station's ((RFID)) reader.

3. After the "User" card identification is confirmed, the station will indicate for one (01) minute with a blinking GREEN "available" LED that the charging has been authorized.

4. Remove the plug from the charging station and connect it to the vehicle. After connecting to the vehicle, the station will indicate with a continuous YELLOW LED. If a connection is not established between the station and the vehicle within one (01) minute, the station will emit a long beep and return to "available" mode with a continuous GREEN LED indication.

5. If the connection is successful, the station will start charging the electric vehicle and indicate it with a continuous BLUE LED.

6. To finish the charging session, present the "User" card to the ((RFID)) reader again or finish via the vehicle.

NOTE!
- Follow the instructions on the back of the WEMOB-RFID card.
- Each vehicle has its own method for finishing a charging session; we recommend reading the vehicle's manual for proper interruption of the process.
- The station will emit a long beep when an unregistered card is presented to the ((RFID)) reader.

6.6 FACTORY RESET

If you need to reset the factory settings, change commissioning settings, or delete the Local RFID Card List, this must be done with the front door open and the station powered on. Locate the button "SW2 - RESET" in the center of the electronic board and press it for:

- Three seconds (3 s): deletes all commissioning settings and the RFID "Master" card. After this period, the station will emit one (01) short beep, release the button, and wait for the station to reboot.

- Five seconds (5 s): deletes all commissioning settings and the Local Card List ("User" and "Master"). After this period, the station will emit two (02) short beeps, release the button, and wait for the station to reboot.

DANGER!
Do not touch energized components or parts during the Factory Reset procedure. Use an insulating material, such as a plastic pen, to safely press the "SW2" button.

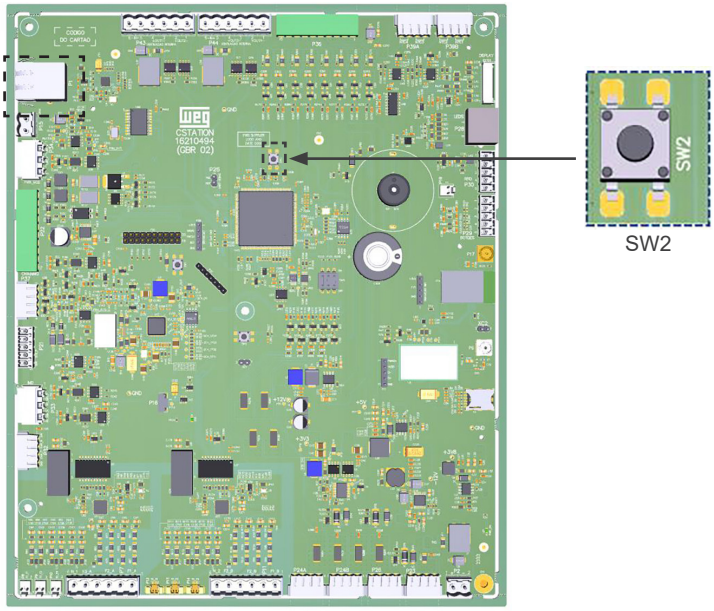


Figure 6.14: *Location of the "SW2" reset button on the electronic board*

NOTE!
The RFID "Master" card can be used to perform a factory reset (*), without the need to open the front door of the charging station. This procedure deletes all commissioning settings and the Local Card List ("User" and "Master").

(*) Available only on charging stations with firmware version 2.0.0 or higher.

To perform the Factory Reset procedure using the RFID "Master" card, follow the instructions below:

1. Hold the "Master" card near the ((RFID)) reader for twenty seconds (20 s).

2. The station will emit one (01) short beep, and the ((RFID)) reader LED will start blinking green.

3. After ten seconds (10 s), the station will emit one (01) short beep every two seconds (2 s), indicating that it will enter the next stage of the process.

4. After twenty seconds (20 s), the station will emit two (02) short beeps. Remove the RFID "Master" card from the reader and wait for the station to reboot.

6.7 FIRMWARE UPDATE

The electric vehicle charger market is recent and constantly evolving. Firmware updates are periodically released to add features and improve the performance of your charging station. Updates keep your charging station at the forefront and allow it to keep up with the latest market developments. Update your charging station with the latest firmware and benefit from additional features.

The update is performed remotely using Firmware Over The Air (FOTA) technology, through the "Firmware Update" command via OCPP. The wireless download process of these updates typically takes between three and ten minutes, depending on connection speed and update size. It is only possible to download the latest firmware version; downgrading to an older version is not allowed.

Firmware files are available at: **http://updates.weg.net/chargingstation**

ATTENTION!
Point to the firmware directory (URI) corresponding to the acquired charging station model, otherwise you risk damaging the charging station.

6.8 CONNECTIVITY INDICATION

In the upper right corner of the WEMOB-STATION display, an icon related to network connection is shown. Through this icon, you can observe the signal strength (Wi-Fi and cellular networks), whether the station is commissioned, if it is connected to an OCPP server, etc.

- Station not commissioned:

- Station commissioned, but without Wi-Fi, cellular, or Ethernet connectivity:

- Station commissioned, with connectivity, but no connection to the OCPP server (characterized by an exclamation mark):

- Station commissioned, with connectivity and connected to the OCPP server:

7 OPERATION

DANGER!
- Before operating the charging station, perform a visual inspection for any damages. A damaged charging station must be taken out of service and repaired.
- Do not allow children or persons with reduced mental or sensory capabilities to operate the charging station.

After completing the mechanical and electrical installation, the WEMOB-STATION charging station is ready to operate by switching on the circuit breaker “Q1”.

When powering on the charging station, an opening video is displayed, and the CCS connector status LEDs will light solid GREEN, indicating the station is available to start a charging session.

NOTE!
- Check if the emergency stop button is not activated.
- The emergency stop button should not be used as an alternative to end a charging session or to interrupt another user’s charging.

The WEMOB-STATION charging station features a 10.1" color display providing a user-friendly interface with detailed instructions and information to start and stop a charging session, including ongoing charging status, charging time, battery charge level, etc., displayed on the screen to enable easy and intuitive operation.

The station offers three (03) available authorization modes (Charging Authorization), configurable in Section 6.1 COMMISSIONING on page 6-1:

- Always Authorized: allows charging without authentication. Select to permit free access to perform charging sessions.
- Authorized by Local List: user identification (authentication) is done through RFID cards registered in the “Local List,” which is managed by the station and not integrated with the OCPP server.
- Authorized by OCPP Server: authorization is provided by the OCPP server. In this mode, users and their RFID cards must be registered on the WEMOB platform.

7.1 OPERATION MODE "ALWAYS AUTHORIZED"

Allows charging without authentication; users have free access to charge. To perform a charging session, simply follow the instructions displayed on the screen; the instruction screens will appear sequentially.

NOTE!
The WEMOB-STATION (30/40 kW) charging station only features the CCS-2 connector.

NOTE!
Screens shown in this manual use as an example the 150 kW charging station. Therefore, consider the maximum power as 30 kW or 40 kW, according to the model purchased.

To start the charging process:

1. Select connector 2, the DC fast charging connector (CC) CCS Type 2. At this stage, the indicator LEDs on the connector will light solid GREEN.

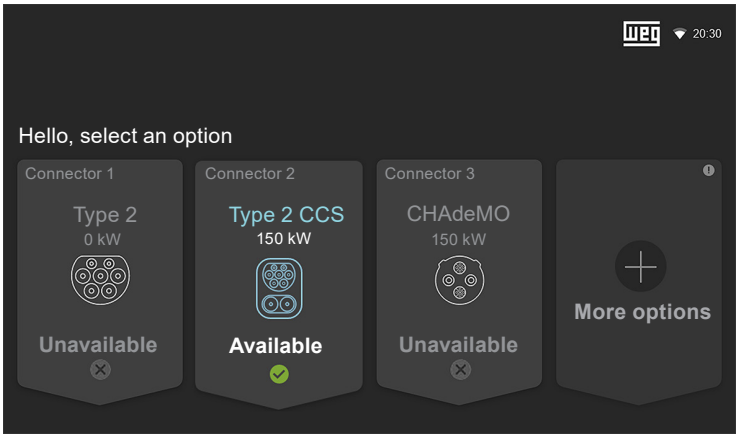


Figure 7.1: *Initial screen (example 150 kW)*

2. Remove the plug from the charging station and connect it to the electric vehicle.

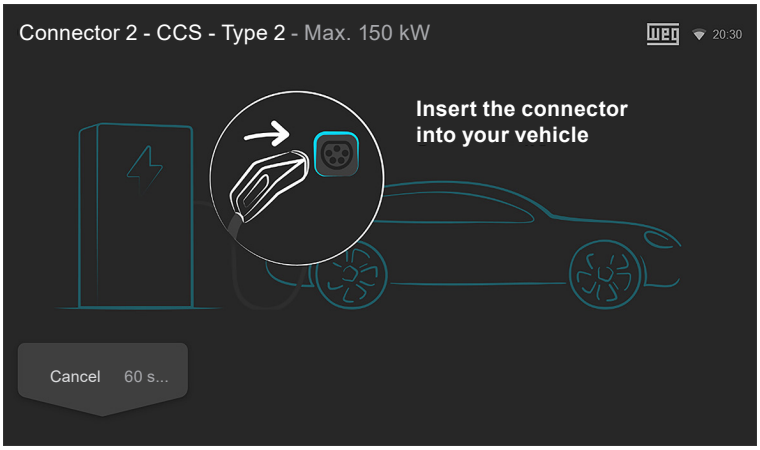


Figure 7.2: *Instruction screen for "Insert the connector into your vehicle"*

It is possible to cancel the process by pressing the "Cancel" button. If the connector is not inserted into the electric vehicle within 60 seconds (60 s), the process will be automatically canceled and the display will return to the initial screen.

3. After connecting to the vehicle, the station starts a communication and safety test process. The charging station will indicate with a solid YELLOW light. If 60 seconds (60 s) pass without establishing a connection between the station and the vehicle, the station will emit a long beep and return to the "available" mode, with a solid GREEN light.

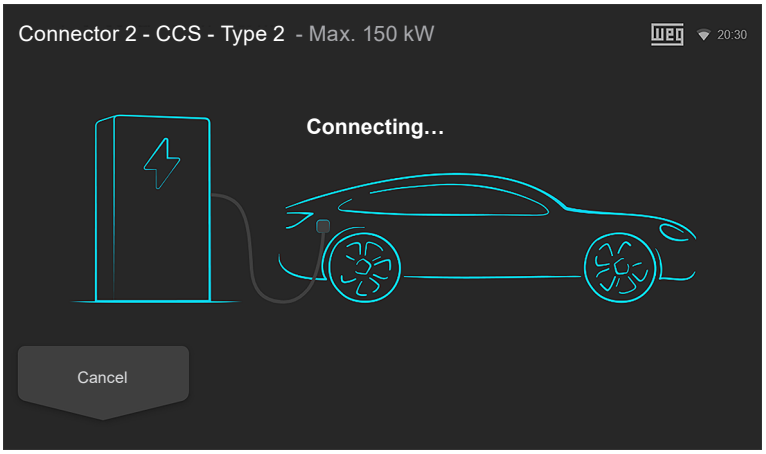


Figure 7.3: *Screen indicating the electric vehicle is connected and being recognized*

The process can be canceled by pressing the "Cancel" button.

4. Within a few seconds, if the connection is successful, the station will automatically start charging the electric vehicle, and the status indicator LEDs on the connector will light solid BLUE. Detailed charging information is displayed on the screen.

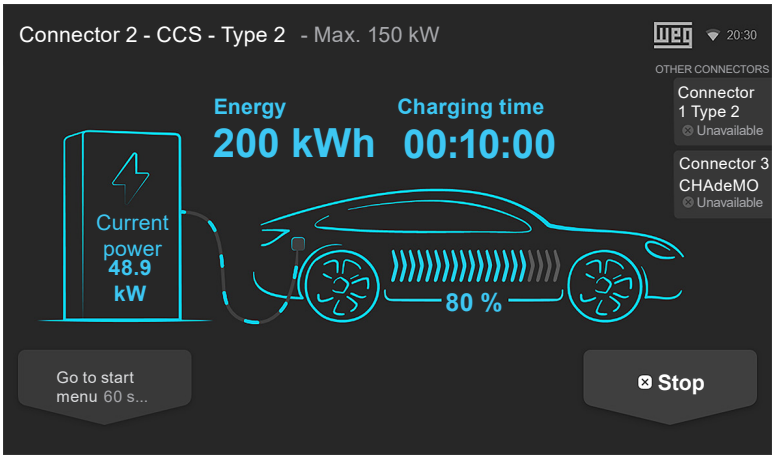


Figure 7.4: *Screen showing charging details and "Stop" button*

It is possible to return to the main menu by pressing the "Go to main menu" button or by waiting 60 seconds (60 s) for the screen to return automatically. You can stop the charging at any time by pressing the "Stop" button, regardless of whether the charge is complete or not.

5. To end a charging session, whether complete or not, in the "Always Authorized" operation mode, the charge is always ended by the electric vehicle.

Complete charge: after the battery is fully charged, the electric vehicle will keep the connector locked. The station will indicate with a YELLOW light, signaling that the charge is complete and user intervention is required.

On the initial and charging details screens, the message "Completed" is displayed next to the selected connector.

User Intervention: in this case, the charging session can be ended at any time by pressing the "Stop" button on the charging details screen or it must be done through the vehicle
Each vehicle has its own method to end a charging session; therefore, we recommend reading the vehicle's manual for the correct procedure to interrupt the charging process.

After disconnecting the charging cable from the electric vehicle, the station will return to the initial status, indicating with a solid GREEN light. Available for the next charging session.

NOTE!
When finishing charging the electric vehicle, insert the plug into the socket located on the side panel of the station. Do not leave the charging cable on the ground.

7.2 OPERATION MODE "AUTHORIZED BY LOCAL LIST OR OCPP SERVER"

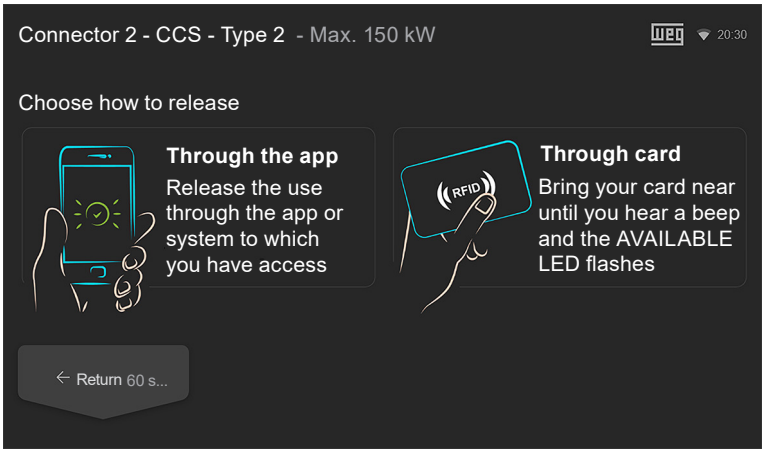


Figure 7.5: *Screen for selecting the authorization method (example 150 kW)*

1. If selected via app, the start and stop of charging must be done through the application.

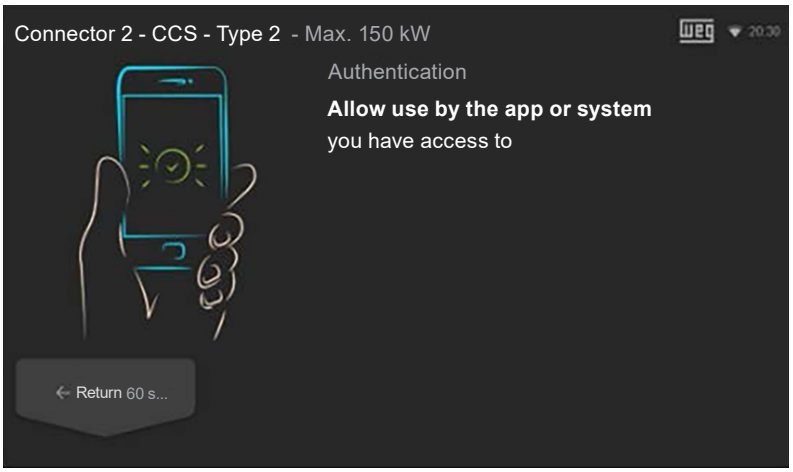


Figure 7.6: *Charging authorization screen via app*

If selected via RFID card, the start and stop of charging must be done using the RFID card.

Approach the "User" card to the station's ((RFID)) reader.

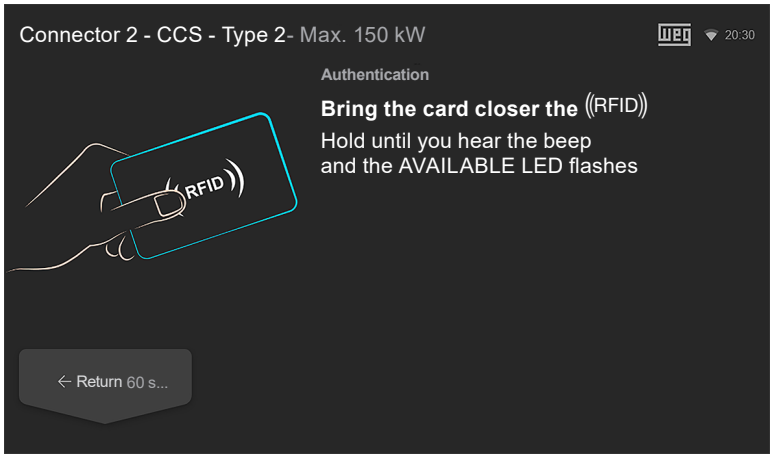


Figure 7.7: *Screen with instructions to authorize charging via RFID*

If the card is not recognized, a new screen will appear prompting the user to try again or informing that their card has been denied.

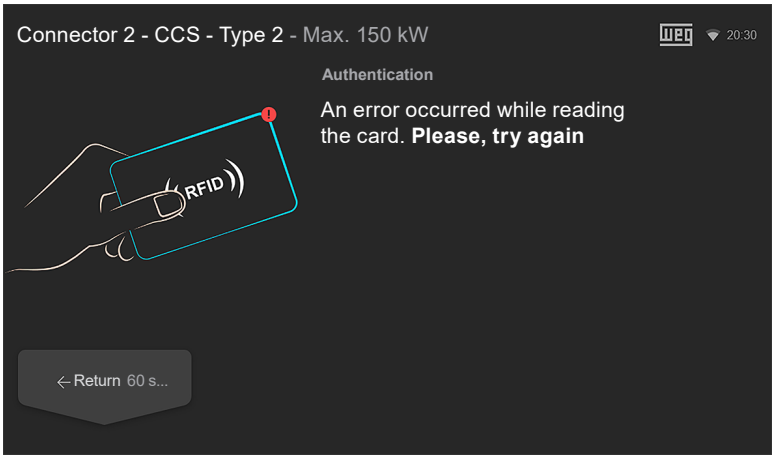


Figure 7.8: *Screen indicating an error in RFID card authentication*

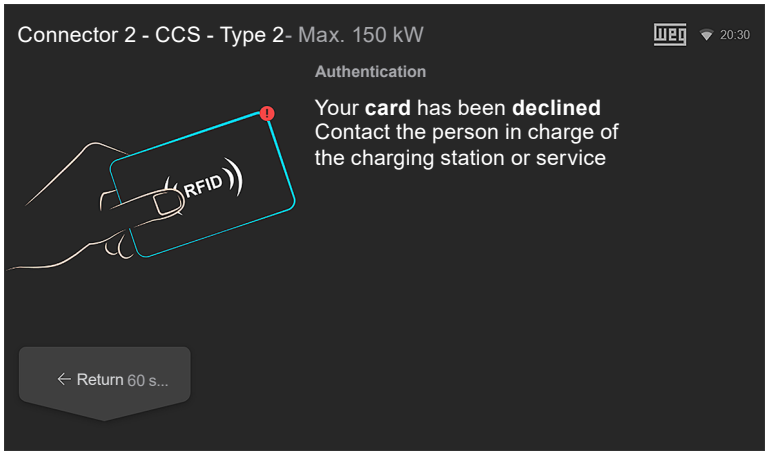


Figure 7.9: *Screen indicating a problem with RFID card authentication*

NOTE!
The station will emit a long beep when a non-registered card is presented to the ((RFID)) reader.

2. After confirming the user identification, the station will indicate for 60 seconds (60 s) through the "available" LED with a blinking GREEN light that the charging has been authenticated.

3. Remove the plug from the charging station and connect it to the electric vehicle.

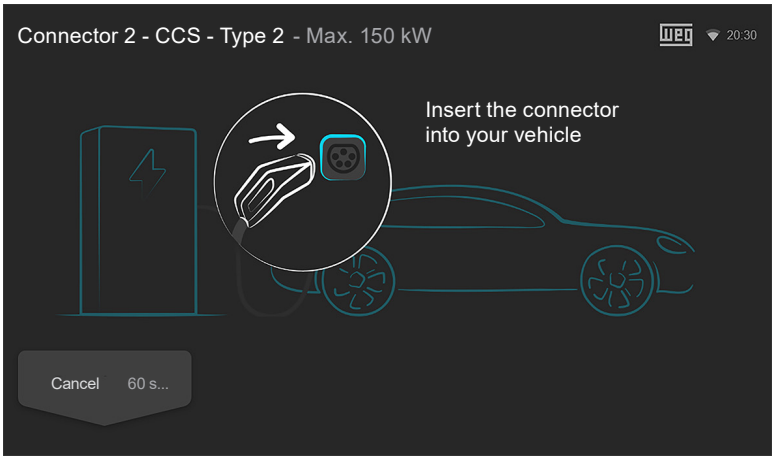


Figure 7.10: *Instruction screen for "Insert the connector into your vehicle"*

It is possible to cancel the process by pressing the "Cancel" button. If the connector is not inserted into the electric vehicle within 60 seconds (60 s), the process will be automatically canceled and the display will return to the home screen.

4. After connecting to the vehicle, the station initiates a communication and safety testing process. The charging station will indicate with a steady YELLOW light. If 60 seconds (60 s) elapse without establishing a connection between the station and the vehicle, the station will emit a long beep and return to the "available" mode, with a steady GREEN light.

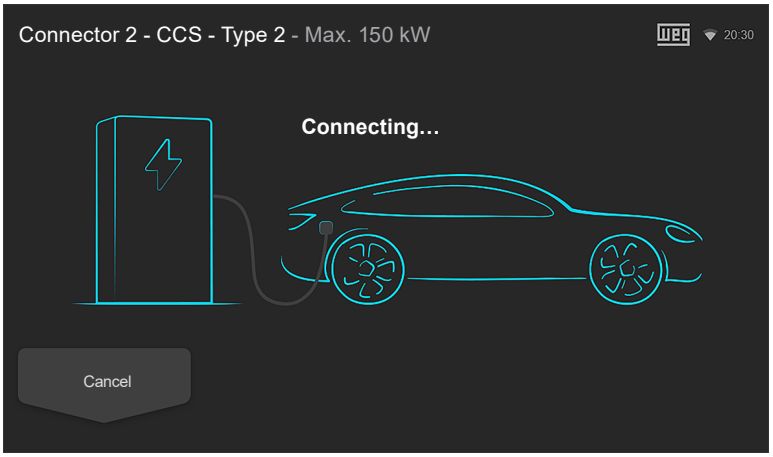


Figure 7.11: *Screen indicating that the electric vehicle has been connected and is in the recognition process*

It is possible to cancel the process by pressing the "Cancel" button.

5. Within a few seconds, if the connection is successful, the station will automatically start charging the electric vehicle, and the status LEDs of the connector will light up with a steady BLUE color. Detailed charging information is displayed on the screen.

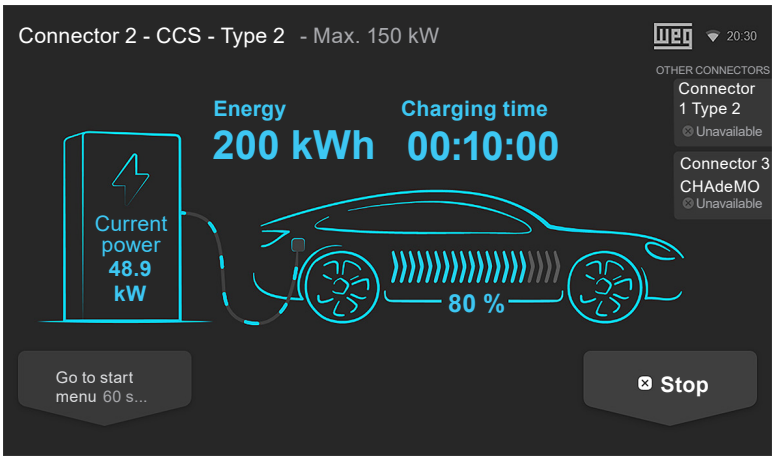


Figure 7.12: *Screen with charging details in progress and the "Stop" button*

You can go to the home menu by pressing the "Go to Home Menu" button or by waiting for the screen to automatically return after 60 seconds (60 s). You can stop the charging at any time by pressing the "Stop" button, whether the charging is complete or not.

6. To finish a charging session, complete or not, end it through the electric vehicle, app, or RFID card, depending on the selected authentication method.

Charging complete: after the battery is fully charged, the electric vehicle will keep the connector locked. The station will indicate this by a steady YELLOW light, signaling that the charging is complete and user intervention is required.

The initial and charging details screens will display the message "Completed" next to the selected connector.

User intervention: in this case, the charging can be stopped at any time by pressing the "Stop" button on the charging details screen or it must be done through the vehicle. Each vehicle has its own method for ending a charging session; therefore, we recommend reading the vehicle's manual for the proper procedure to stop charging.

Press the "Stop" button; then, if the app method is selected, the charging must be ended through the app.

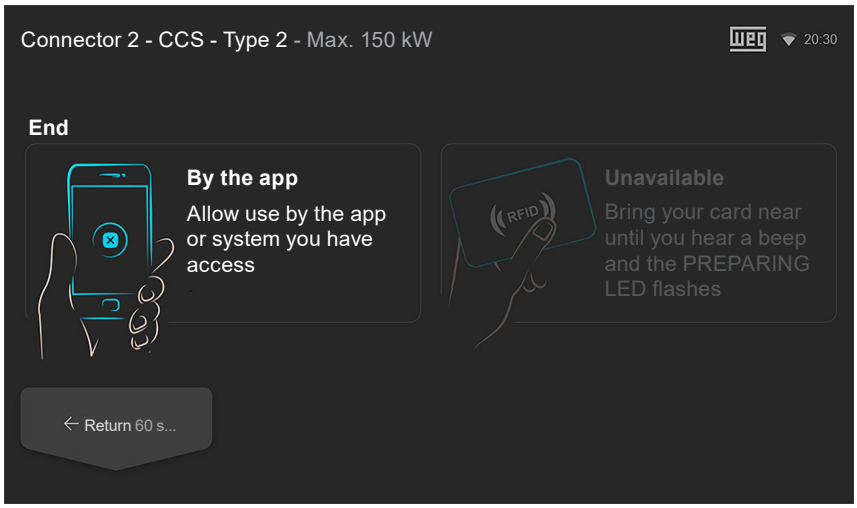


Figure 7.13: *Screen for ending the charging session via app*

If RFID card is selected, the charging session must be ended using the RFID card. Hold the "User" card close to the station's ((RFID)) reader.

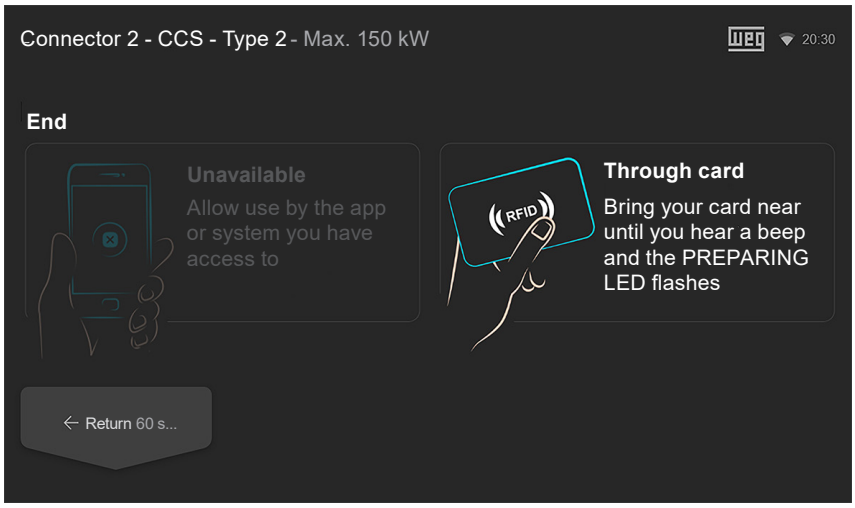


Figure 7.14: *Screen for ending the charging session via RFID card*

After disconnecting the charging cable from the electric vehicle, the station will return to the initial status, signaling with a steady GREEN light. The connector will be available for the next charging session.

NOTE!
When finishing the electric vehicle charging, insert the plug into the socket located on the side panel of the station. Do not leave the charging cable on the ground.

7.3 CHARGING DETAILS

The following images show detailed information of the DC charging process using the CCS-2 connector.

7.3.1 Charging in Progress

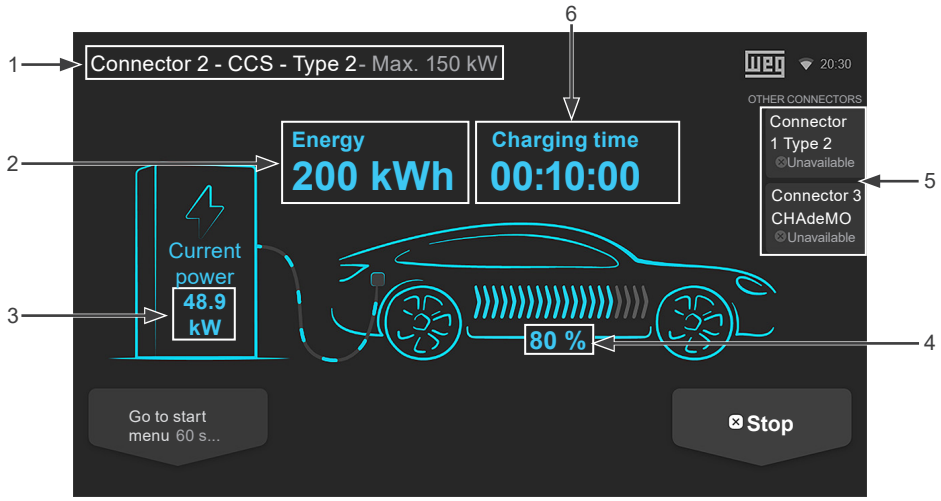


Figure 7.15: *Screen with charging details in progress (example 150 kW)*

1 - Displays charging data on the selected connector. In this example, connector 2, DC charging connector (CC) CCS type 2, with a maximum power of 150 kW.

2 - Displays energy delivered to the vehicle so far, in kWh.

3 - Displays current power delivered to the vehicle, in kW.

4 - Displays battery charge percentage.

5 - Displays information about other connectors (unavailable for CCS-only model).

6 - Displays elapsed charging time.

7.3.2 Charging Complete

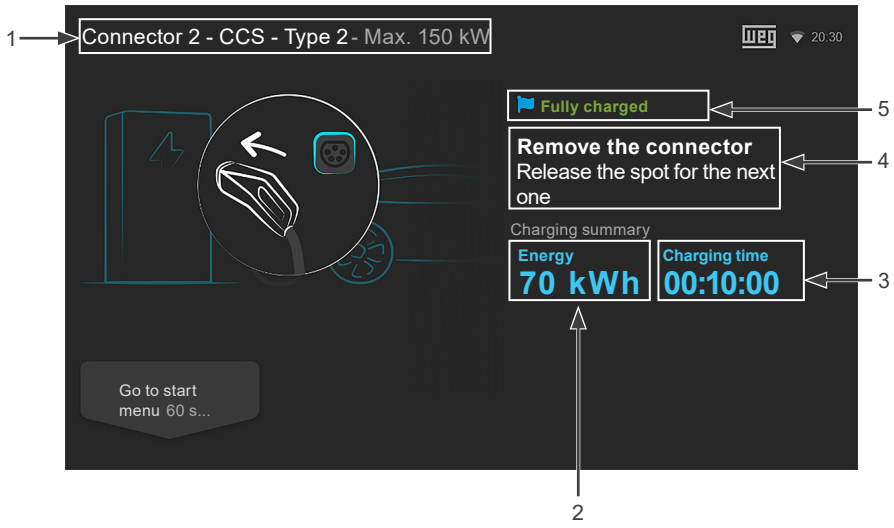


Figure 7.16: *Screen with details of a completed charging session*

1 - Displays data of the completed charge on the selected connector. In this example, DC charging connector (CC) CCS type 2, with a maximum power of 150 kW.

2 - Displays energy delivered to the vehicle, in kWh.

3 - Displays elapsed charging time.

4 - On-screen instructions for the user to remove the connector and free the spot for the next user.

5 - Indicates that the charging session is complete.

7.3.3 Error During Charging

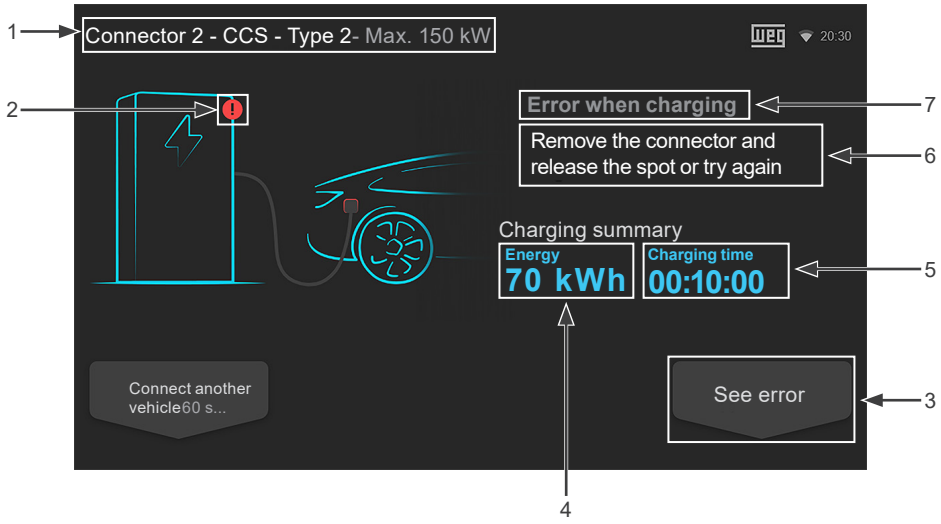


Figure 7.17: *Screen with details of a charging session interrupted due to an error*

1 - Displays data of the charge with error on the selected connector. In this example, connector 2, DC charging connector (CC) CCS type 2, with a maximum power of 150 kW.

2 - Indicates there is an error at the station.

3 - Shows a new window with error details.

4 - Displays energy delivered to the vehicle, in kWh.

5 - Displays elapsed charging time.

6 - On-screen instructions for the user to remove the connector and free the spot for the next user.

7 - Indicates that the charging session ended due to an error.

Clicking "View error" opens a screen with the error history showing date and time, error code, simplified error description, and status indicating whether the error is active or resolved.

7.4 CONNECTOR STATUS

The display shows status symbols over the images of each connector.

NOTE!
The WEMOB-STATION CCS model charging station has only the CCS connector available.

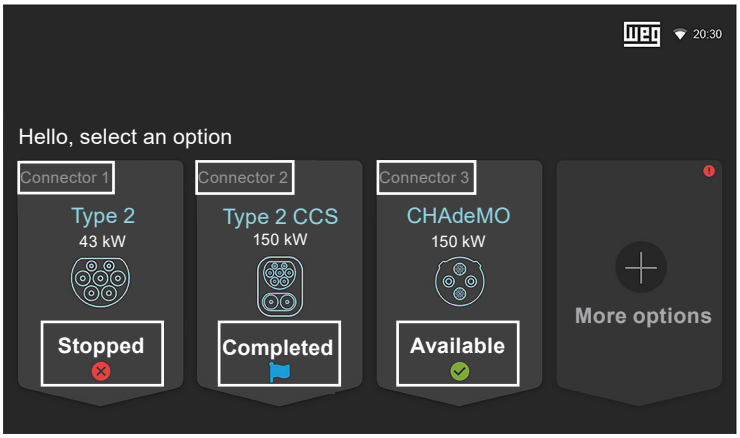


Figure 7.18: *Home screen showing the status of each connector*

Table 7.1: *Connector Status Indication*

Status	Description
Available	Connector available, ready for use
Busy	Connector occupied, a charging session is in progress
Completed	Charging session complete, remove the connector to free spot
Stopped	Connector in fault/error
Available 03:24	This connector is reserved and can only be used by the user who made the reservation
Unavailable	Connector unavailable and out of service

7.5 ERRORS

The WEMOB-STATION charging station can report various errors, which may be related to an issue with the charging station itself or occur during a charging session.

Diagnostics can be performed via the "Errors" screen by selecting the "More Options" menu from the main screen (as shown in Figure 7.17 on page 7-10) and then selecting "Errors." This will display a screen with the error history, including the date and time, error code, a simplified error description, and the status indicating whether the error is active or already resolved.

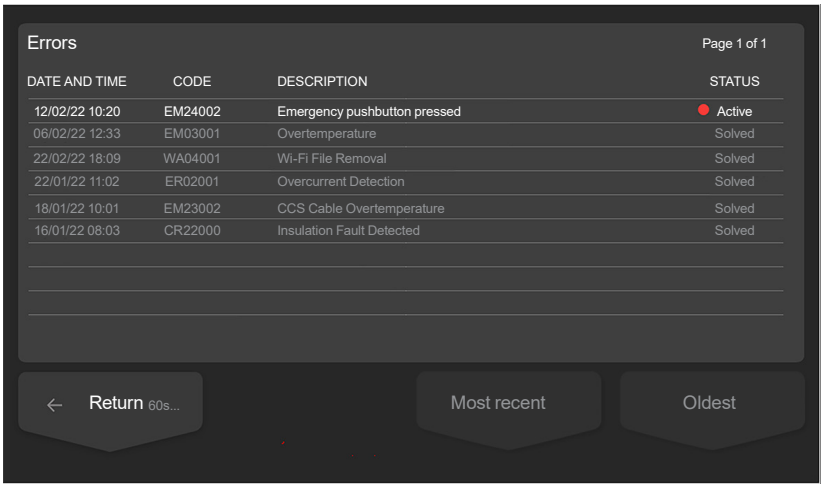


Figure 7.19: *Screen with error details*

Errors are classified according to their severity level:

- Emergency.
- Error.
- Warning.

Table 7.2: *Consequences according to the level of action*

Severity Level	Identifier	Audible Signal	Action
Error	ER	3 long beeps	An error corresponds to a malfunction in the system or a component. The station requires intervention. Power the station off, eliminate the cause of the error, and then turn it back on. If the error persists, do not use the station and contact authorized technical support
Fault	FA	3 short beeps	A fault can usually be recovered automatically without needing to restart the station. Disconnect the charging connector from the electric vehicle; the connector status LED should return to AVAILABLE. If the fault persists, contact authorized technical support
Warning	WA	No audible signal	A warning is an informational message. No immediate action is required

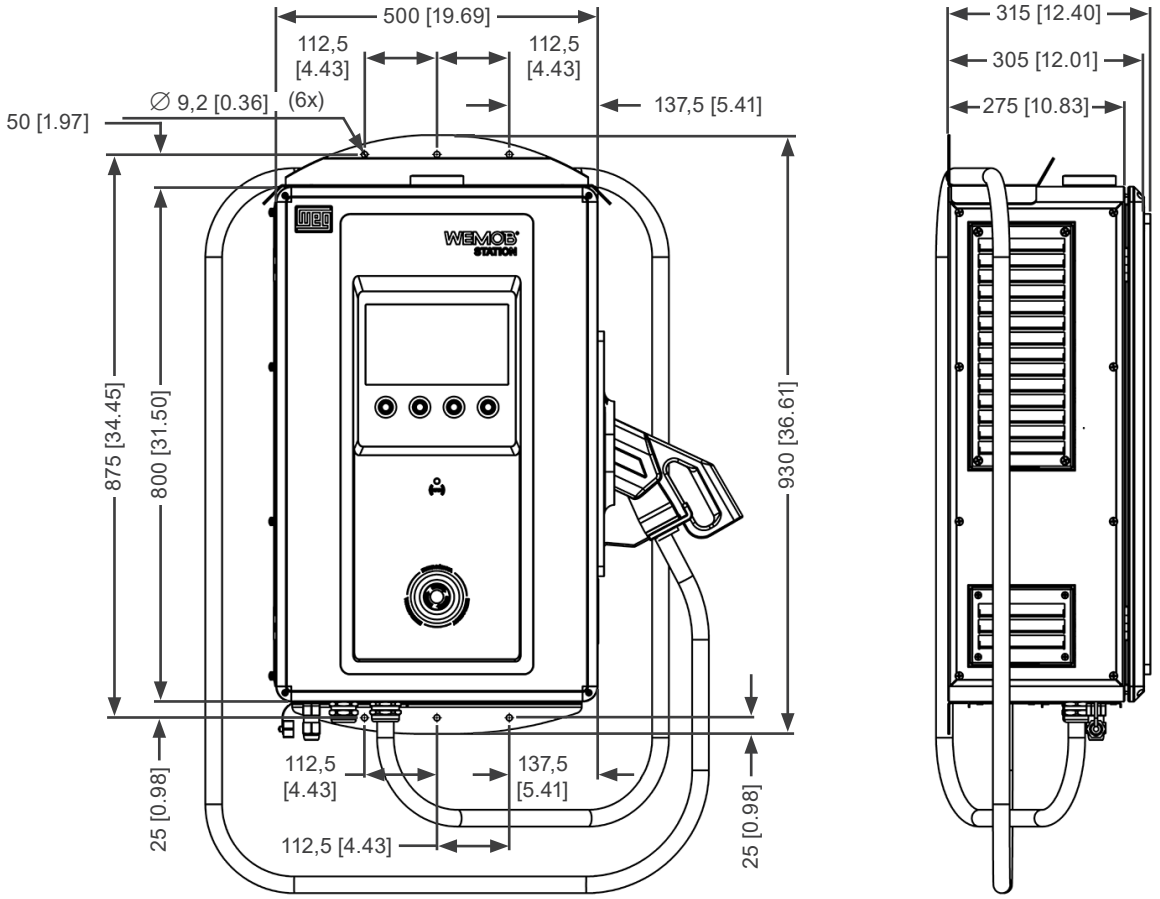
8 TECHNICAL SPECIFICATIONS

Table 8.1: *Technical specifications*

Input Data		
Nominal Voltage	380 - 415 V AC ± 10 % 3F+N+PE	
Nominal Frequency	50/60 Hz ± 5 %	
Maximum Input Current	52 A	67 A
Power Factor	≥0.98 from 50 to 100 % load	
	≥ 0.99 100 % load	
Efficiency	95 % (1)	
Output Data (CCS)		
Output Voltage	150 to 920 V DC	
Maximum Output Power	30 kW	40 kW
Maximum Output Current	80 A	133 A
Charging Cable Version	CCS Type 2	
Mechanical Life of Charging Plug (no load, insertion/removal)	> 10000 times	
Charging Cable Length	4.3 m	
General Characteristics		
Installation Mode	Concrete structure and floor (ground-mounted)	
Charging Standard	Mode 4 (IEC 61851-1)	
Electric Shock Protection	Class I equipment	
Electrical Connection	Permanent connection	
Access	Non-restricted	
Enclosure	Metallic	
Approximate Weight	≤ 115 kg – packaged without totem	
	≤ 155 kg – packaged with totem	
Signaling	Multicolor status LED	
	10.1" color display	
	Audible signal (beep)	
Connectivity	Wi-Fi	
	RFID	
	Cellular (LTE)	
	Wired Ethernet (RJ45)	
Communication Protocol	OCPP 1.6 JSON	
Protections	Short circuit	
	Overcurrent	
	Surge protection (via varistor)	
	Overtemperature (internal)	
	Hardware failures	
	Communication failure with EV	
	Insulation monitoring failure (IMD)	
Environmental Conditions		
Degree of Protection	IP54	
Impact Protection	IK10	
Operating Temperature	-25 °C [-13 °F] to 40 °C [104 °F] (without derating) 41 °C [105.8 °F to 50 °C [122 °F] (with derating)	
Storage Temperature	-25 °C [-13 °F] to 80 °C [176 °F]	
Relative Humidity	5 % to 95 %, non-condensing	
Maximum Altitude	2000 m above sea level	

(1) Nominal load applied to power modules (excluding auxiliary systems and cooling).

8.1 WEMOB-STATION DIMENSIONS



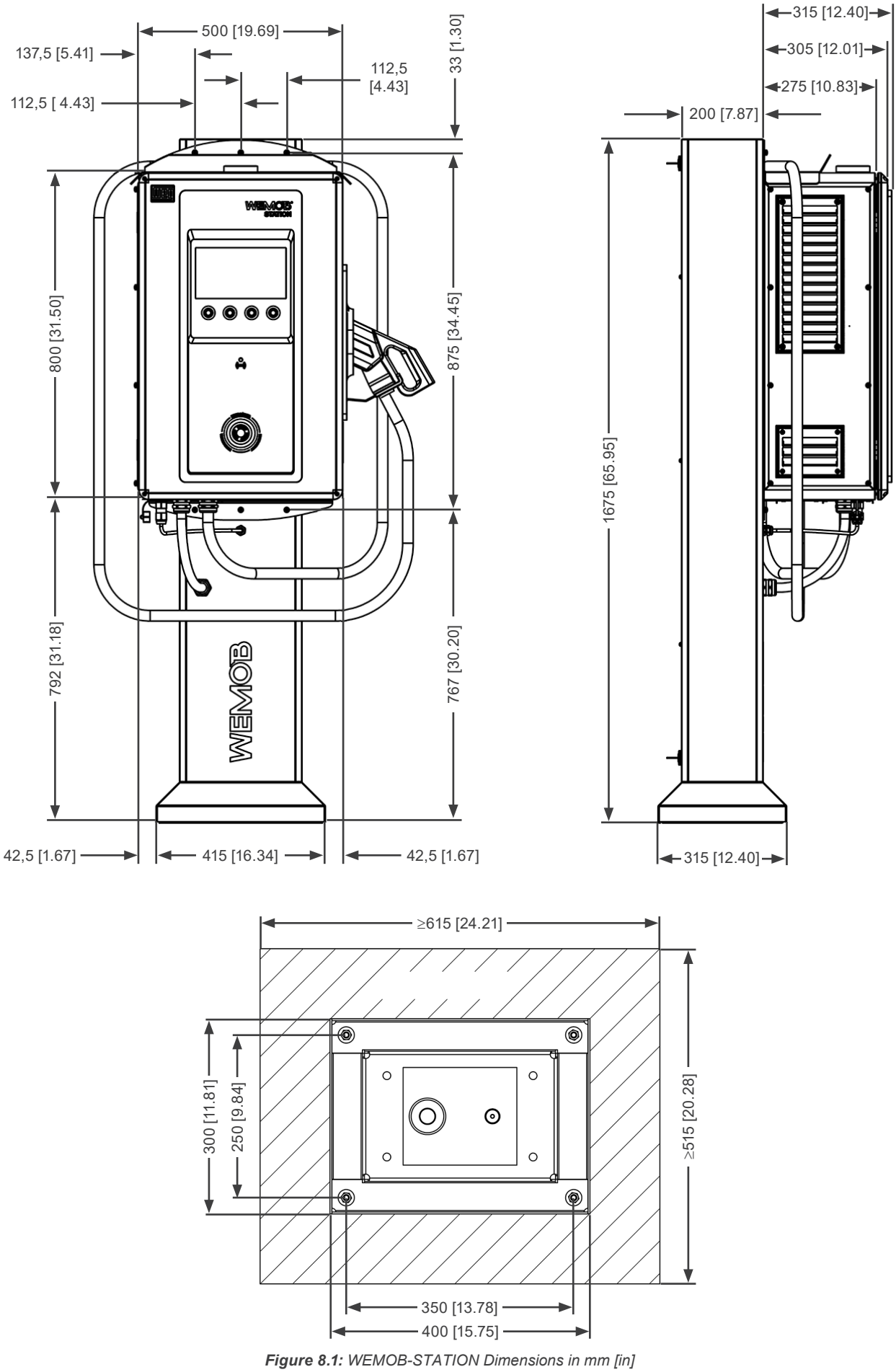


Figure 8.1: *WEMOB-STATION Dimensions in mm [in]*

9 ANATEL

ANATEL 17035-20-03402	"This equipment is not entitled to protection against harmful interference and may not cause interference to duly authorized services." "Contains a product approved by ANATEL under number 17035-20-03402."

ANATEL 02765-22-07968	"This equipment is not entitled to protection against harmful interference and may not cause interference to duly authorized services." "Contains a product approved by ANATEL under number 02765-22-07968."

ANATEL 08590-22-07908	"This equipment is not entitled to protection against harmful interference and may not cause interference to duly authorized services." "Contains a product approved by ANATEL under number 08590-22-07908."

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