



ELECTRIC VEHICLE CHARGER EVC03 DC SIRIUS SERIES

Installation Guideline



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1 - SAFETY INFORMATION



CAUTION RISK OF ELECTRIC SHOCK



CAUTION: ELECTRIC VEHICLE CHARGER DEVICE SHALL BE MOUNTED BY A LICENSED OR AN EXPERIENCED ELECTRICIAN AS PER ANY REGIONAL OR NATIONAL ELECTRIC REGULATIONS AND STANDARDS IN EFFECT.



CAUTION



The AC grid connection and the electric vehicle charger's load plan are examined and approved by the electrical regulations and standards of the related region or country determined by the authorities. In the installation of multiple electric vehicle chargers, the load plan will be determined accordingly. The manufacturer shall not be liable in any way, directly or indirectly, for damages or risks caused by the errors that may occur due to AC grid connection or load planning.

CAUTION: FOR DEVICES WITHOUT EMERGENCY BUTTON;

If any suspicious or emergency situation arises at the charging station aside from normal operation, start by halting the charging process through the vehicle (using the appropriate switch or button, which may vary depending on the model), and then disconnect the socket. As an alternative option, consider switching off the MCB or RCCB in the panel where the product is energized by the installer.

IMPORTANT - Please read these instructions fully before installing or operating

1.1 - SAFETY WARNINGS

- Keep this manual in a safe place. These safety and operating instructions should be kept in a safe place for future reference.
- Check the voltage specified on the rating plate and do not use the charging station without the correct mains voltage.
- Do not use the appliance if you have any doubts about its proper function. If the appliance shows any signs of damage, switch off the main circuit breakers (circuit breaker (MCCB) and residual current circuit breaker (RCCB)) in the upstream distribution board. Please contact your local dealer.
- During the charging process, the ambient temperature (without direct sunlight) should be between -35 °C and +50 °C and the relative humidity between 5 % and 95 %. Only use the charging station under the specified parameters.
- The location of the device should be selected carefully so that the charging station does not overheat. High temperatures due to direct sunlight or heat sources during use can lead to a reduction in the charging current or to a temporary interruption of the charging process.
- The charging station is suitable for indoor and outdoor use. It can also be used in public areas.

- To reduce the risk of fire, electric shock or product damage, do not expose the device to heavy rain, snow, thunderstorms or other extreme weather conditions. You should also ensure that no liquids are spilled or splashed onto the charging station.
- Never touch the end connections of the charging station, the plug of the electric vehicle or other live parts with pointed or sharp metal objects.
- Avoid exposing the appliance to heat sources and do not place it near flammable, explosive, hard or corrosive materials, chemicals or vapors.
- Explosion hazard. This appliance contains parts that generate internal sparks or are capable of sparking and must therefore not come into contact with flammable vapors. The appliance should not be installed in lowered locations or below ground level.
- This device does not support the ventilation requirement demanded by the vehicle.
- Ensure that the specified power switch and residual current circuit breaker (RCCB) are connected to the building's power supply to avoid the risk of explosion and electric shock.
- The base of the charging station should be at (or above) floor level.
- No adapters or converters may be used. No cable extensions may be used.
- This product may only be used at a maximum altitude of 2,000 meters above sea level.
- Do not place any objects containing liquids, such as glasses and bottles, on the product.
- Keep plastic packaging materials out of the reach of babies, small children and pets to avoid the risk of choking.
- Do not clean the appliance with water.
- Do not use abrasive substances, wet cloths, alcohol or cleaning agents. A microfiber cloth is recommended.
- The key for the door lock, which can be used to unlock the product cover and prevent access to the electrical parts, must be kept out of the reach of small children.
- The device should be stored in its original packaging to prevent damage to the device components during transportation.
- Defects and damage that occur during transportation after delivery to the customer are not covered by the warranty.
- The maximum permissible current value of the service socket is 10 A.



WARNING: Persons (including children) with reduced physical, sensory or mental capabilities or lack of experience must not use electrical appliances without supervision by a person responsible for their safety.



CAUTION: This vehicle charger was developed exclusively for charging electric vehicles that do not require ventilation during the charging process.

1.2 - INSTRUCTIONS FOR DEALING WITH A FIRE AT ELECTRIC VEHICLE CHARGING STATION

- **Personal safety:** If you discover a fire or signs of danger, your own safety has top priority. Do not take any risks.
- **Immediate notification of the emergency services:** Contact the relevant emergency services in your region. Dial the emergency number 112.
- **Completion of the charging process:** If it is safe to do so, disconnect the charging cable from the vehicle and from the charging station.
- **Use of fire extinguishing agents:** If there is a fire extinguisher or other fire extinguishing equipment nearby and you are trained in its use, try to extinguish the fire. However, never jeopardize your own safety.
- **Avoid direct contact with the fire:** You may only attempt to extinguish the fire if you have the appropriate equipment or the necessary knowledge, and refrain from fighting the fire if it is too large or too dangerous.
- **Move away from the charging station:** If the fire cannot be brought under control or increases in intensity, leave the area around the charging station and keep an appropriate safety distance.
- **Do not inhale smoke:** Try not to inhale the smoke. If possible, please cover your mouth and nose with a damp cloth or a piece of clothing.
- **Warn others in the vicinity:** Inform other people in the vicinity of the fire hazard and ask them to move away from the area.
- **Wait for the emergency services:** After you have evacuated the danger zone to safety, wait in a safe place for the emergency services to arrive.
- **Do not return to the site where the charging station was installed:** Do not re-enter the area where the charging station has been installed until the emergency services have completed their work.
- **Report the incident:** Contact customer service to report the incident.

Remember that safety is the top priority. In the event of a fire, always contact the local emergency services and follow their instructions.

1.3 - GROUNDING WARNINGS

- The charging station should be connected to a centrally earthed system. The earthing conductor connected to the charging station should be connected to the earthing terminal of the device in the charging station. The power must be supplied via circuit conductors and the device must be connected to the earthing rod or the guide element on the charging station. Installers and buyers are responsible for the connection to the charging station.
- The connection may only be made with correctly earthed plugs to reduce the risk of electric shock.
- **WARNING:** Ensure that the charging station is permanently and properly earthed during installation and use.

1.4 - POWER CABLES, PLUGS AND CHARGING CABLE WARNINGS

- **Please note:** The plugs and connections of the charging station must be compatible.
- A damaged charging cable can cause a fire or electric shock. Refrain from using this product if the flexible charging cable or the vehicle cable is worn, has damaged insulation or shows other signs of damage.

- Make sure that the charging cable has been laid correctly so that you do not step on and/or trip over the cable and that the cable is not damaged or live.
- Do not pull the charging cable with force and do not damage it with pointed or sharp objects.
- Never touch the power cable/plug or the vehicle cable with wet hands, as this could lead to a short circuit or electric shock.
- To avoid the risk of fire or electric shock, this appliance must not be used with an extension cord. A damaged mains or vehicle cable should be replaced by the manufacturer, a customer service agent or similarly qualified specialist personnel in order to rule out any hazards.
- Appropriate protection is required when connecting the appliance to the main power line.

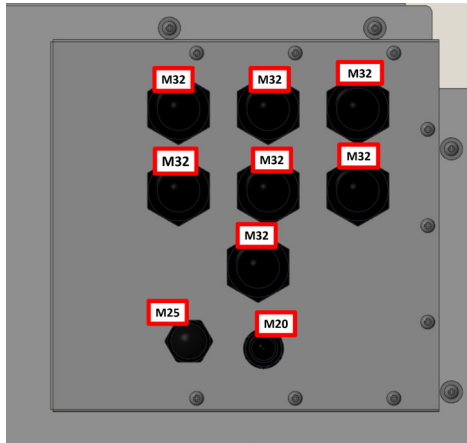
1.5 - PROTECTION BEFORE INSTALLATION OF THE SYSTEM

- Class I/B lightning protection should be connected to the upstream distribution board. A cable connection of at least 10 m between the charger and the protective device is recommended. *The charger is equipped with a class II/type C surge protective device (SPD).
- To avoid residual currents, a type A residual current relay with toroidal sensor should be used on the control panel upstream of the appliance. The minimum current sensitivity should be set to 300 mA.
- Circuit breaker (MCCB; Thermal Magnetic Adjustable) should be connected to the upstream distribution board.

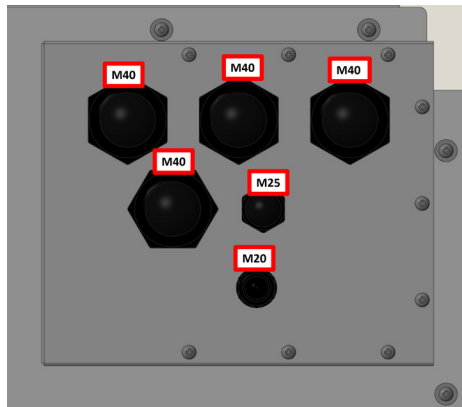
| Modell | Output power | Supply voltage | Input alternating current | Recommended cross-sectional value L1-L2-L3 (mm ²) (copper conductor cable) | Recommended cross-sectional value for neutral conductor (copper conductor cable) | Recommended cross-section value for PE (mm ²) (copper conductor cable) |
|-----------------------|--------------|----------------|---------------------------|--|---|--|
| EVC03-DC HP400/320 | 400kW | 400V (nom.) | 612A | 2 x 185 | 16 | 185 |
| | 320kW | 360V (-%10) | 680A | | | |
| EVC03-DC HP240/160 | 240kW | 400V (nom.) | 370A | 240 | 16 | 240 |
| | 160kW | 360V (-%10) | 410A | | | |

The minimum cable cross-sections are intended for the maximum AC input current. The final cross-sections of the installation conductors should be calculated by the installer based on the distances and the conditions at the installation site.

NOTE!!! If the product is to be upgraded from 320 kW to 400 kW and from 160 kW to 240 kW after installation, the infrastructure should be installed in accordance with the values specified in the power table above.



NOTE!!! : The mounting plate and cable sleeves shown in the picture are supplied from the factory with an output of 320/400 kW. Depending on the product performance to be preferred in the installations, the mounting plate revisions are the responsibility of the customer due to the cable cross-section.



NOTE!!! : The mounting plate and cable sleeves shown in the picture are supplied from the factory with an output of 160/240 kW. Depending on the product performance to be preferred in the installations, the mounting plate revisions are the responsibility of the customer due to the cable cross-section.

2 - MODEL DESCRIPTION

This product was developed for charging electric vehicles with a suitable charging system in accordance with the IEC 61851-1 standard for the pilot standard signal. This document describes the specific functions and characteristics of the corresponding variants of charging stations and measuring devices in relation to electrical energy in accordance with § 46 of the German Measurement and Verification Ordinance (MessEV), taking into account PTB-A 50.7 and PTB-REA document 6-A.

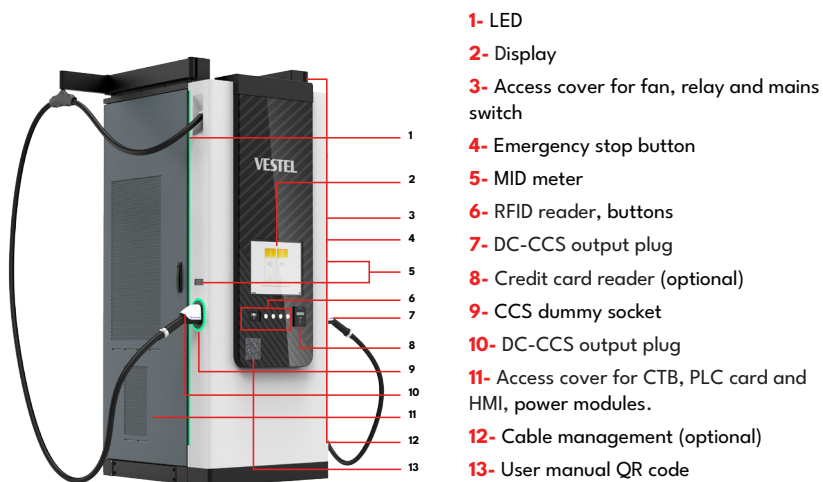
Only the following models are certified in accordance with MessEG and MessEV:

In accordance with the German Measurement and Calibration Act, the charging station can be billed according to kWh. You can consult the German Measurement and Verification Act, which is described in **chapter 14**.

| | |
|-------------------|--|
| Model name | Series EVC03-HP (name coding: EVC03-HP****-EICH) 1. Asterisk (*) : Rated power 400 : 320/400 kW DC output power 240 : 160/240 kW DC output power 2. Asterisk (*) : Direct current output combination 1 C : CCS output 1 3. Asterisk (*) : Direct current output combination 2 C : CCS output 2 4. Asterisk (*) : MID Meter VE : Vestel Edition |
| Cabinet | EVC03HP |

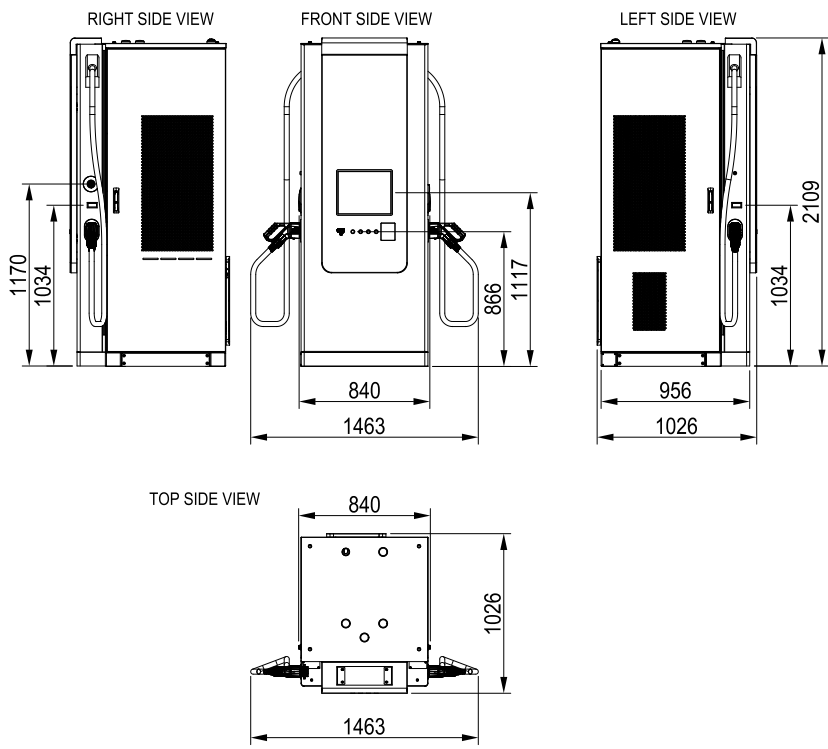
3 - GENERAL INFORMATION

3.1 - INTRODUCTION OF THE PRODUCT COMPONENTS



All product images are for illustrative purposes only

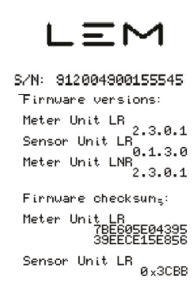
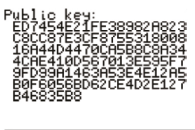
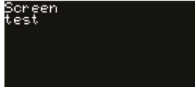
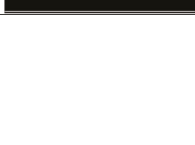

3.2 - DIMENSIONAL DRAWINGS



3.3 - LCD DISPLAY

This display can be used to show the various measured values and the associated units and registers in plain text.

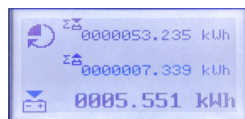
PRODUCT START DISPLAY

| Bildschirm | Beschreibung |
|--|--|
|  | Company logo Serial number of the device |
|  | Identifiers of the DCBM firmware versions |
|  | Integrity checks for legally relevant firmware components |
|  | Public key of the device, for authentication in LEM format (i.e. without OCMF-RFC5480 header), public key with OCMF format is encoded in the data matrix on the front of the device. |
|  | Test screen |

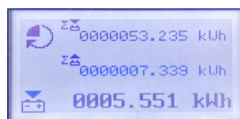
3.4 - PRODUCTS WITH CERTIFIED ENERGY METER

RFID/Autocharge and credit card authentication methods have different information on the meter display energy register at the beginning of the transaction.

RFID/Autocharge

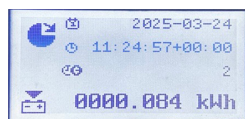


Credit card

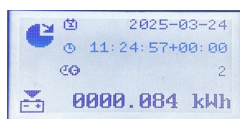


Date and time on site at the start of the transaction Total duration of the transaction

RFID/Autocharge



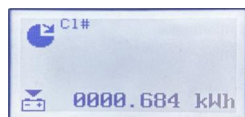
Credit card



Customer RFID/Autocharge

ID Customer Credit Card ID

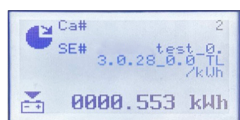
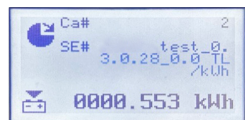
Prefix of the charging station operator, followed by the first 6 digits and the last 4 digits of the credit card ID



Cable compensation, EVSE identification input and chargepoint ID_Sw version_tariff (chargepointid_Sw version_tariff) with currency

RFID/Autocharge

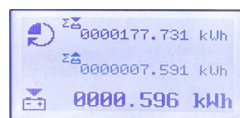
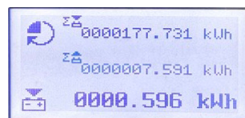
Credit card



Energy register at the end of the transaction.

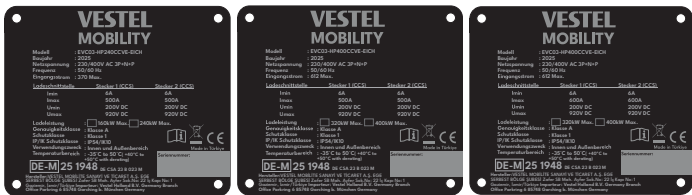
RFID/Autocharge

Credit card



3.5 - TYPE PLATE

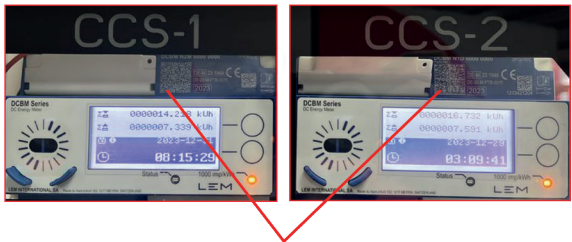
The type plate is located in the center right of the EV charger. The CE marking, the serial number and the electrical characteristics of the charger are indicated on the label. Read the instructions before first use.



Example of a type plate for EVC03

3.6 - PUBLIC KEY

A QR code with the public key is printed in full format on the front of the meter. The signature can be verified using a public key.



Information on the public key

Public key (for the measuring capsule, shown on the type plate of the charging station's measuring device in the form of a QR code)

4 - ELECTRICAL SPECIFICATION

| | | |
|--|--|--|
| Modell | | Series EVC03-HP |
| IEC protection class | | Class - I |
| Class IEC EMC | | IEC 61000-6-3 Class B-Domestic (Emission) IEC 61000-6-2 Industrial (Immunity) |
| Accuracy class | | Class A |
| Input - rated voltage and current value | Input rate | 400 Vac $\pm 10\%$, 50/60 Hz, 612A / phase- (320/400 kW option) 400 Vac $\pm 10\%$, 50/60 Hz, 370A / phase- (160/240 kW option) |
| | Connection | 3P+N+PE (TN,TT) |
| | Power factor | > 0,98 |
| | Efficiency | > %95 |
| | Residual current protection | 230 Vac RCBO 1P+N, Tip A, 30 mA (system) |
| | Stand-by power consumption | < 180 W |
| CCS output - 1 | Max. Performance | 320/400kW option <ul style="list-style-type: none"> • 1 x 320kW or 1 x 400kW • 2 x 160kW or 2 x 200kW 160/240kW option <ul style="list-style-type: none"> • 1 x 160kW or 1 x 240kW • 2 x 80kW or 2 x 120kW |
| | Voltage range | 200 - 920 Vdc |
| | Maximum current | 320/400kW options Liquid cooled or non-cooled cable variants are available. Derating may be applied. 500A continuous, up to 750A with liquid cooled cable <ul style="list-style-type: none"> • 1 x 320kW or 1 x 400kW • 2 x 160kW or 2 x 200kW 300A continuous, up to 500A with non-cooled cable <ul style="list-style-type: none"> • 1 x 320kW or 1 x 400kW • 2 x 160kW or 2 x 200kW 160/240kW option Non-cooled cable variants available, derating may be applied. 300A continuous, up to 500A with non-cooled cable <ul style="list-style-type: none"> • 1 x 160kW or 1 x 240kW • 2 x 80kW or 2 x 120kW |
| | Minimum current | 6 A |
| | Min. Energy for guaranteed accuracy | 3 kWh |
| | Interface compatibility | IEC62196-1 / 3 IEC 61851-1 / 23 / 24 ISO 15118-1 / 2 / 3 DIN 70121 REA document 6-A PTB-A 50.7 PTB A 50.8 |

| | | |
|-----------------------------|--|--|
| CCS output - 2 | Max. Performance | 320/400kW option <ul style="list-style-type: none"> • 1 x 320kW or 1 x 400kW • 2 x 160kW or 2 x 200kW 160/240kW option <ul style="list-style-type: none"> • 1 x 160kW or 1 x 240kW • 2 x 80kW or 2 x 120kW |
| | Voltage range | 200 - 920 Vdc |
| | Maximum current | 320/400kW options Liquid cooled or non-cooled cable variants are available. Derating may be applied. 500A continuous, up to 750A with liquid cooled cable <ul style="list-style-type: none"> • 1 x 320kW or 1 x 400kW • 2 x 160kW or 2 x 200kW 300A continuous, up to 500A with non-cooled cable <ul style="list-style-type: none"> • 1 x 320kW or 1 x 400kW • 2 x 160kW or 2 x 200kW 160/240kW option Non-cooled cable variants available, derating may be applied. 300A continuous, up to 500A with non-cooled cable <ul style="list-style-type: none"> • 1 x 160kW or 1 x 240kW • 2 x 80kW or 2 x 120kW |
| | Minimum current | 6 A |
| | Min. Energy for guaranteed accuracy | 3 kWh |
| | Interface compatibility | IEC62196-1 / 3 IEC 61851-1 / 23 / 24 ISO 15118-1 / 2 / 3 DIN 70121 REA document 6-A PTB-A 50.7 PTB A 50.8 |
| Internal precautions | | Residual current detection, insulation monitoring, overcurrent/ overvoltage / undervoltage / short circuit / overheating / overvoltage protection |

5 - USER INTERFACE & AUTHENTICATION

| | |
|---|---|
| Screen | Color TFT LCD (17") |
| User interface | High brightness resistant touchscreen |
| RFID reader module | ISO/IEC14443A/B and ISO/IEC-15693 |
| Payment module (optional) | Options for contactless credit card equipment Please contact the following service providers regarding installation. https://www.payter.com/contact https://www.nayax.com/contact/ |
| DC-MID measuring device (optional) | MID measuring device approved |
| DC-MID measuring device (optional) | Compatibility with German calibration law |

6 - CONNECTIVITY

| | |
|---------------------------|---|
| LAN connection | Ethernet |
| WLAN connection | 2.4GHz/5GHz: 802.11 a/b/g/n/ac |
| Mobile connection | GSM 900/1800 UMTS 900/2100 LTE-Band 1/3/7/8/20/28A |
| OCPP specification | OCPP 1.6 J |

7 - MECHANICAL SPECIFICATIONS

| | | |
|--------------------------------------|---|------|
| Material | Metal plate | |
| Degree of protection | Water and dust protection | IP55 |
| | Impact protection | IK10 |
| Cooling | Cooling air fan | |
| Cable length | CCS: 4.50 m | |
| Cable support system | Optional | |
| Dimensions (product) | 2109 mm (length), 840 mm (width), 1026 mm (depth) | |
| Dimensions (packaged version) | 2300.0 mm(length), 1000 mm (width), 1090 mm (depth) | |
| Weight (product) | 636 kg | |
| Packed weight | 828.5 kg with packaging | |

8 - ENVIRONMENTAL TECHNICAL SPECIFICATIONS

| | | |
|----------------------------|-------------|---|
| Operating Condition | Temperature | -35°C to +50°C (derating is applied at +40°C to +50°C) For products with credit card option - 20°C to +50°C |
| | Humidity | 5 % to 95 % (relative humidity, without condensation) |
| | Altitude | 0 to 2,000 m |



After the product has been supplied with energy at low temperatures, it should wait for the heating element in the charger to activate and the charging process should only be carried out afterwards.

9 - TECHNICAL SPECIFICATIONS OF THE MEASUREMENT CAPSULE









| | |
|---|--|
| Modell | DCBM_N1M_6000C20_0000C00 DCBM_N2M_6000C20_0000C00 |
| Manufacturer | LEM INTERNATIONAL SA |
| Sign of the type test certificate | DE-20-M-PTB-0075 |
| Iref [A] | 120 |
| I_{max} [A] | 600 |
| I_{min} [A] | 6 |
| Meter constant [imp./kwh] | 1000 |
| Un [V] | 150/1.000 V |
| Operating temperature | -25...+70 °C |
| Accuracy class | B |
| Firmware version (measuring device unit) | 2.3.0.1 |
| Firmware version (sensor unit) | 0.1.3.0 |
| Checksum of the firmware (measuring device unit) | 0x7BE605E0439539EECE15E856 |
| Checksum of the firmware (sensor unit) | 0x3CBB |

10 - REQUIRED EQUIPMENT, INSTRUMENTS AND ACCESSORIES

10.1 - INSTALLATION EQUIPMENT, TOOLS AND ACCESSORIES SUPPLIED

| | |
|--------------------------|---|
| Special wrench M50 x M40 |  |
| Flange M12 bolt x4 |  |
| 1 set (x2) of lock keys |  |

10.2 - RECOMMENDED EQUIPMENT AND TOOLS

| | | | |
|---|---|---|---|
|  |  |  |  |
| Ø20 drill bit | Impact drill | PC | Phillips screwdriver |
|  |  |  |  |
| Wrench set | RJ45 Crimpzange | Cat5e or Cat6 Ethernet cable | Hammer |
|  |  |  |  |
| M20 steel expansion bolt x4 | RJ45 plug | Screwdriver T25 | 20 - 200 nm D: 40 mm H: 43 mm |

11 - INSTALLATION OF THE CHARGING STATION

It is recommended that the screws inside the product withstand 240 hours of salt spray testing according to the ASTM B117 method. It is recommended that the screws withstand more than 720 hours outside the product.



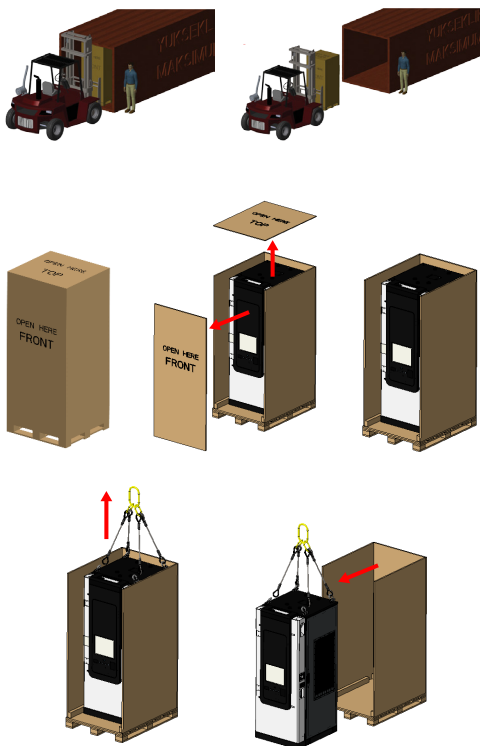
WARNING: RISK OF ELECTRIC SHOCK OR INJURY. DISCONNECT THE CHARGING STATION FROM THE POWER SUPPLY BEFORE CARRYING OUT ANY INSTALLATION STEPS.



ATTENTION: TO AVOID INJURY OR DAMAGE TO THE CHARGING STATION, ENSURE THAT THE INSTALLATION AREA IS SUITABLE FOR THIS PURPOSE AND THAT THE FLOOR CAN WITHSTAND THE WEIGHT OF THE CHARGING STATION.

11.1 - UNPACKING THE CHARGING STATION

Unpack the charging station as shown in the illustration below. Please note that the front and top covers are marked as shown in the illustrations.

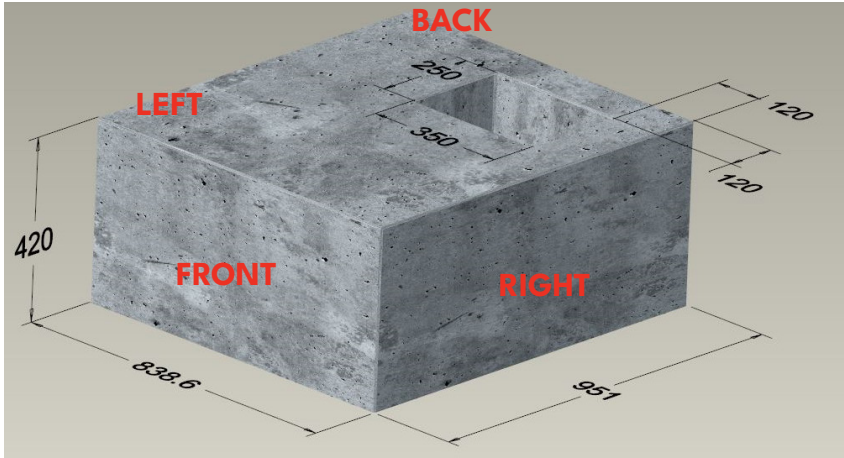


All product images are for illustrative purposes only

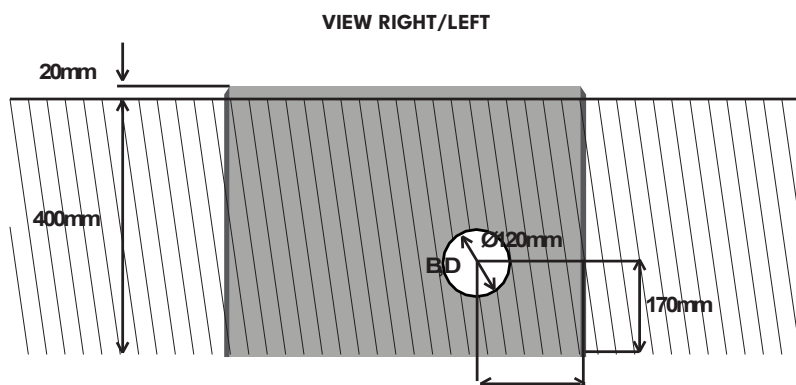
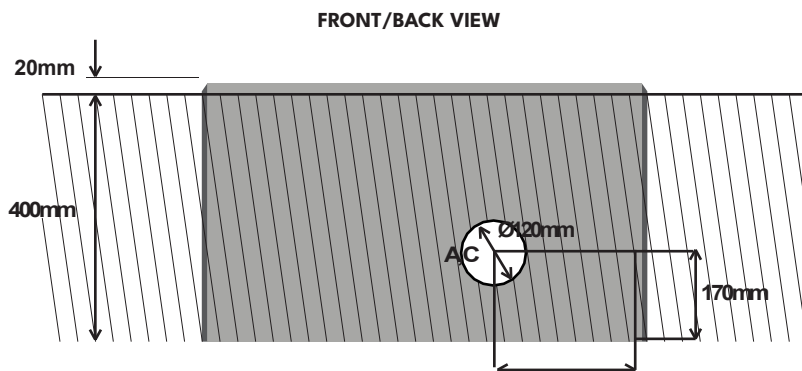
11.2 - FOUNDATION, ALIGNMENT AND PLACEMENT

The dimensions of the foundation are shown below:

CONCRETE FOUNDATION

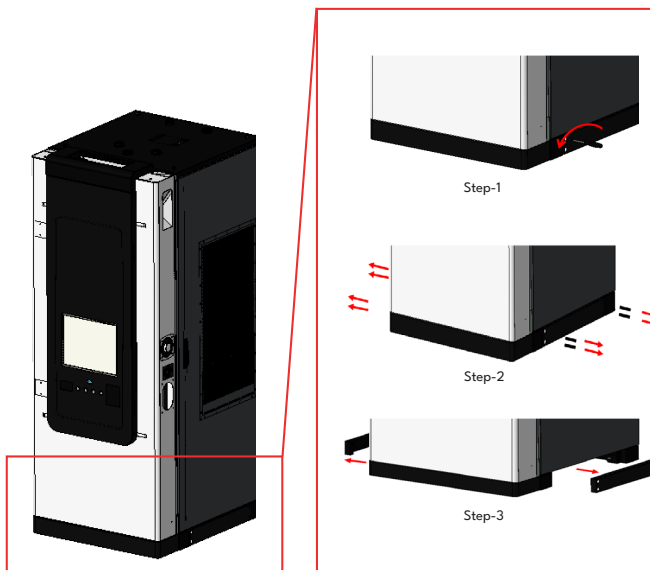


1. Dig a pit in the ground for the foundation according to the dimensions for the concrete foundation shown in figure-.
2. For installation, a minimum distance of 1 meter from the right, left and rear of the device must be maintained.
3. Cut a rectangular opening from top to bottom for cables from the power source ((3P+N+PE and communication) in the concrete foundation; the dimensions and position in the concrete foundation are shown in Figure-XX.
4. Place the cable duct on the concrete foundation. There are 4 cable slot options according to the orientation to the power source. The cable duct can run on the right (A), left (C), front (B) and rear (D) of the concrete foundation. For these 4 options: The position and diameter of the cable duct are shown in Figure-XX.
5. The top of the foundation must be at least 20 cm above the ground.
 1. Place the charging station on the anchor plate as shown in the illustration. Feed the cables through the cable glands.
 2. Attach the charging station as shown in the illustration by connecting the metal holes and nuts on the bottom cover.
 3. Tighten the cable glands.
 4. The base of the charging station should be at least 30 mm above the floor.



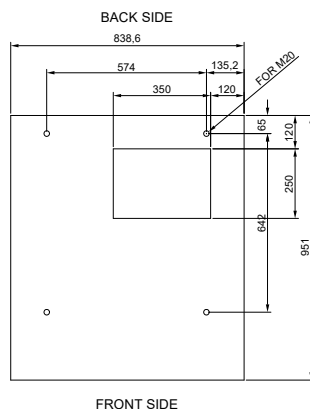
All options for cable ducts A, B, C and D are displayed

6. Open the cover on the right-hand side of the product using the keys supplied by turning the handle anticlockwise at a wide angle.
7. A cable length of 80 cm above the foundation should be available for installation in the housing. Picture below.
8. Drill four holes in the concrete foundation with the dimensions shown in the illustration below and insert the M20x170 expansion bolts into these holes as shown in the illustration below.
9. Remove the side (left and right) plates on the underside by loosening the respective screws.



All product images are for illustrative purposes only

10. Lift the charging station by the eyebolts and place the charging station on the concrete foundation so that the holes in the base of the charger sit exactly on these expansion bolts, as shown in the illustration below. Tighten the expanding bolts with nuts. The suitable expansion bolt type is shown in the illustration below.

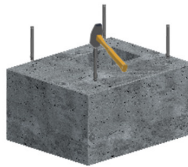




M20



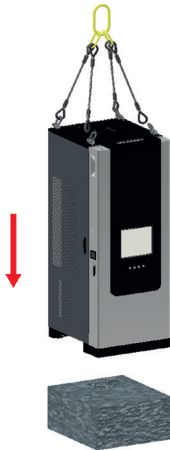
Step 1



Step 2



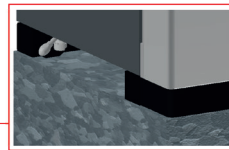
Step 3



Step 4

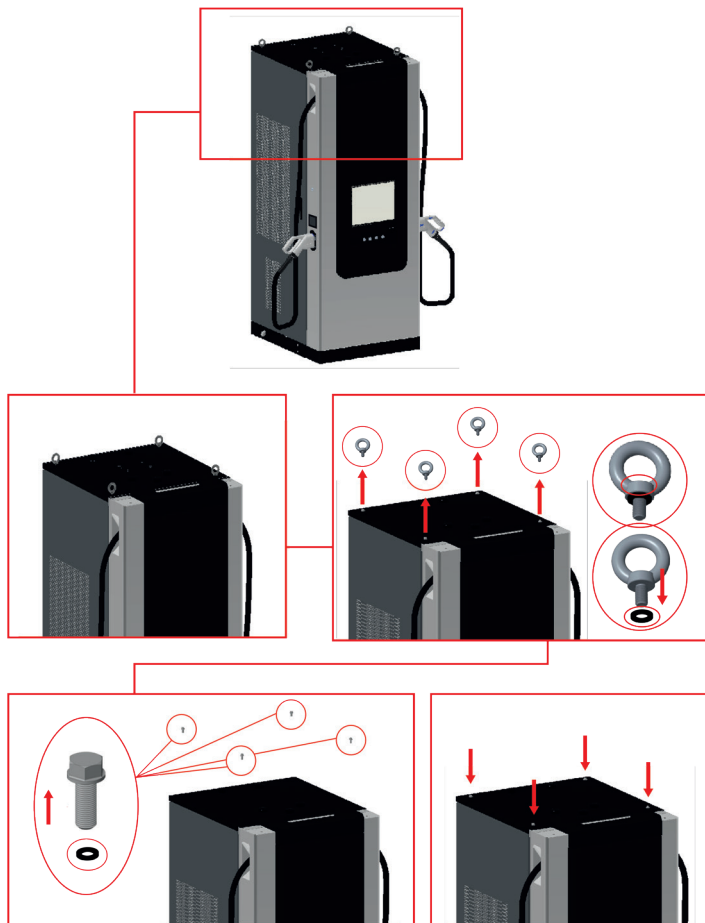


Step 5



All product images are for illustrative purposes only

11. Remove the eyebolts after you have placed the charging station in the correct position. Place lock washers on the bolts.



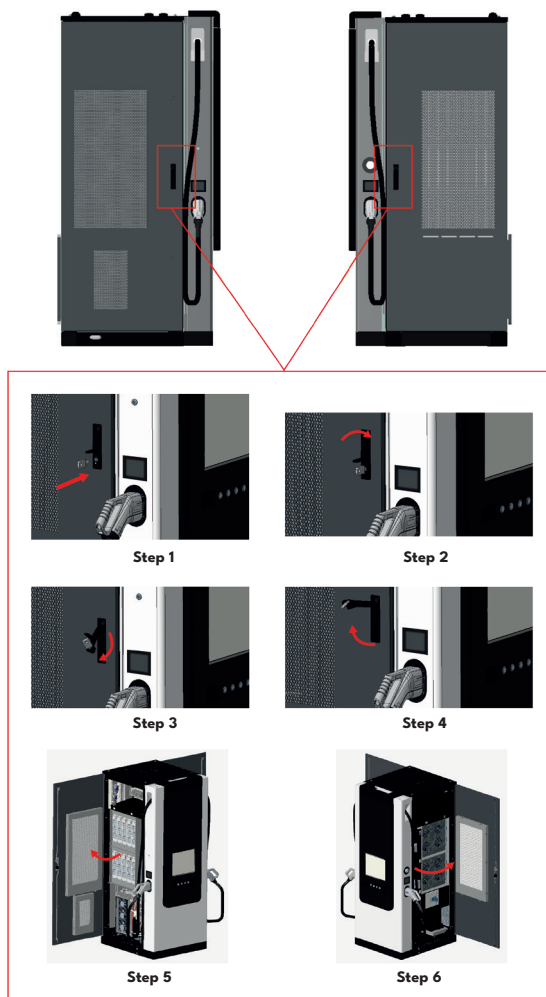
All product images are for illustrative purposes only

You can now continue with the following steps for cable installation.

11.3 - OPENING THE SIDE COVERS

Use the keys supplied to unlock the side covers.

Pull the handle slightly upwards. Turn the handle through the back of the charging station in a wide angle.

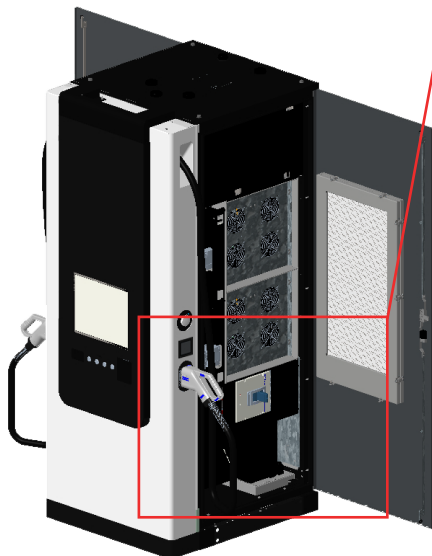


All product images are for illustrative purposes only

11.4 - CABLE INSTALLATION

11.4.1 - OPENING THE SIDE COVER AND CABLE CONNECTION

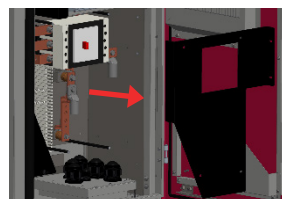
- 1- Open the cover on the right-hand side of the product using the keys supplied by turning the handle anticlockwise at a wide angle.
- 2- Remove the screws and the insulation plate covering the AC power cable in the bottom right corner.



Step.1



Step.2



Step.3

Cable lug positions (320kW/400kW option)

320kW/400kW option:

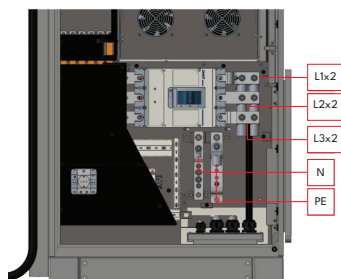
The cable lug positions L1, L2, L3, PE are selected for 185 mm, NoTr for 16 mm cable. The nuts of the cable sleeves are suitable for cable sections of 185 lengths in compliance with the insulation standards.

This device is designed so that cables with low elasticity can be mounted on the busbar conductor with cable lugs, as shown in the illustration. Therefore, the centers of the cable sleeves and the cable lugs are aligned on the same axis (z-axis), as shown in the illustration. Installation must be carried out as shown in the illustration. shown in the illustration.

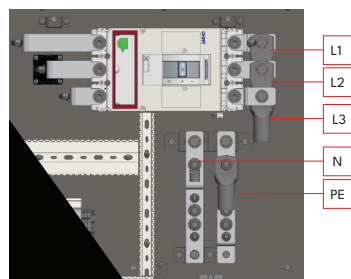
160kW/240kW option:

The cable lug positions L1, L2, L3, PE are selected for 240 mm, Notr for 16 mm cable. The nuts of the cable sleeves are suitable for cable sections of 240 length in compliance with the insulation standards.

This device is designed so that cables with low elasticity can be mounted on the busbar conductor with cable lugs, as shown in the illustration. Therefore, the centers of the cable sleeves and the cable lugs are aligned on the same axis (z-axis), as shown in the illustration. The installation must be carried out as shown in the illustration.



320kW/400kW option



160kW/240kW option

The contact surface of the nuts on the cable sleeves and the cable lugs:

The contact surface of the cable lugs and the cable sleeves are marked brown in the illustration. The mounting surface of the cable lugs corresponds to 92 % of the surface value specified in the data sheet for the cable lug compatible with a cable cross-section.



M10 SKP

- 3-** Pull the cables through the cable sleeves on the base of the charging station.
- 4-** Connect the AC power cables. First connect the "Line PE" cable, then "Line N" and finally the three phase cables ("Line 1", "Line 2", "Line 3") as shown below:
The phase sequence is an anticlockwise rotation.
- 5-** Tighten the cable sleeves with an adjusting wrench. 25 nm.

11.4.2 - SIM CARD CONNECTION

Proceed as described in the section "Opening the side covers" and then insert the micro SIM card into the card slot for mobile network SIM cards, as shown in the illustration below.



All product images are for illustrative purposes only

Positions of the compression end pieces:

All compression end pieces (L1, L2, L3, PE and N) should be selected for a cable cross-section of 70 mm.

This construction is designed for fastening cables with low flexibility to the busbar with crimp shoes, as shown in the illustration. As shown in the illustration, the centers of the cable glands and crimping shoes are therefore on the same axis (Z-axis). The installation should be carried out as shown in the illustration.

Contact surface of the cable gland nuts and compression end pieces:

The surface contact of the compression end pieces and cable glands is highlighted in brown in the illustration. The mounting area of the compression end pieces corresponds to 92 % of the area specified in the compression end piece data sheet, compatible with a 70 mm cable cross-section.

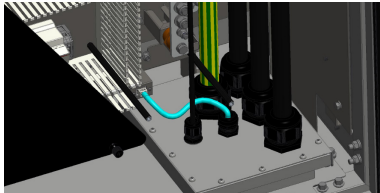
11.5 - COMMISSIONING

11.5.1 - CONNECT OCPP OVER ETHERNET

In order to connect your device to the internet over the cable and make the necessary adjustments, you must first prepare the ethernet cable and plug this cable into the locales that should be on the device.

To establish the relevant connection to DHCP port of the product, open the right cover of the product with the display facing forward. The ethernet cable to be connected can subsequently be routed through the cable gland, as shown in the illustration, and connected to the corresponding port.

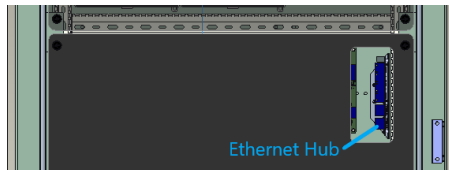
Insert Ethernet cable through the cable gland. Terminate the Ethernet cable with RJ45 terminal and connect the cable to the Ethernet port as shown below.



11.5.2 - CONNECT PC TO THE SAME NETWORK WITH HMI BOARD

In order to access Web Config UI, first you need to connect your PC and EV charger to the same ethernet switch or connect EV charger to your PC directly.

To establish the relevant connection to ethernet switch, open the left cover of the product with the display facing forward.



Power-on the charging station. Default IP address of HMI board is 192.168.0.10. For this reason, you need to give static IP to your PC in the same network with HMI board.

You should assign static IP address to your PC in 192.168.0.0/254 network which means that IP address should be in a range of between 192.168.0.1 and 192.168.0.254.

For example, 192.168.0.11 can be set as an static IP to your PC.

11.5.3 - OPENING WEB CONFIGURATION INTERFACE WITH BROWSER

Open your web browser and type 192.168.0.10 which is IP address of HMI board.

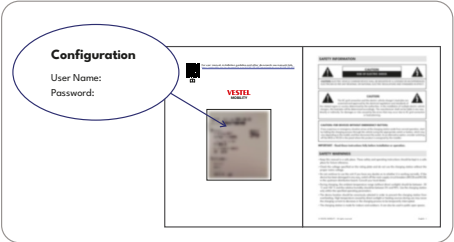
You will see login page on your browser;

Each product has a user name and password set as factory configuration.

In this section you can log in to the Web configuration interface by entering the configuration information printed on the label. User Name and Password informations are located on the label pasted to the Quick Start Guide as shown below.

Only for the first login you will be forced to change your password.

You can change password with Change Password Button in WEBUI login page or Administration Password section in the System Maintenance tab.



Visual representation is provided

Change Password:

If you click the “Change Password Button“ you will be redirected to the Change Password page.

Your password must be minimum 12 maximum 32 character and it contains at least two uppercase letters two lower case letters two number digits and two special characters.

After typing your current password and new password twice, you will be redirected to the login page again to log in with your new password.

CHANGE PASSWORD

Your password must be minimum 12, maximum 32 characters and it contains at least two uppercase letters, two lower case letters, two number digits and two special characters.

User Name:

Current password:

New password:

Confirm new password:

SUBMIT

Back to Login

11.5.4 - WEB CONFIGURATION INTERFACE

You can change the web configuration interface language and log out of the web configuration interface with the buttons in the upper right corner of the page.

| | |
|-----------|---|
| MAIN PAGE | <p>The Main page provides an overview of the key system information and connection status of the EVC device. Below are the descriptions of each displayed parameter:</p> <p>CP Serial Number: Unique serial number of the device. It is used for device authentication and remote management.</p> <p>HMI Software Version: The software version of smart board (HMI) that runs the device's touchscreen interface.</p> <p>Power Board Software Version: The version of the software that controls power management and charging operations of device.</p> <p>PLC Software Version: The software version of power line communication board.</p> <p>VCR Software Version: The software version of the VCR (Voltage Current Resistance) board.</p> <p>HPC Software Version: The software version of the HPC (High Power Charger) control board used in the EV charging system.</p> <p>OCPP Software Version: The version of the Open Charge Point Protocol (OCPP) software, which enables communication with the charging network management system.</p> <p>Duration after Power On: The total time (in hours, minutes, and seconds) that has passed since the device was last powered on. Useful for uptime tracking and performance monitoring.</p> <p>Connection Interface: The current communication method used by device. It can be Ethernet, WLAN (Wi-Fi), or Cellular.</p> <p>OCPP Device ID: Unique identification number used by device when communicating with OCPP server.</p> <p>Connector ID 1 Status: The current status of charging Connector 1 (e.g., Available, Plugged, Charging, Faulted).</p> <p>Connector ID 2 Status: The current status of charging Connector 2 (e.g., Available, Plugged, Charging, Faulted).</p> |
|-----------|---|

11.5.4.1 - GENERAL SETTINGS

| | |
|------------------------------------|--|
| Default Interface Languages | HMI display language and web interface language can be selected from the general settings page. |
| Display Settings | <ul style="list-style-type: none"> • Static - Set brightness/outdoor lighting to a fixed level, options include Low/Medium/High • Sensor Based - Display brightness is changed based on given sensor value thresholds. • Reduced Brightness in Inactive Mode - Sets automatic brightness dimming when the screen is not in use. This option can be enabled or disabled. <p>Minimum Brightness Value - Defines the minimum brightness for inactive mode.</p> <ul style="list-style-type: none"> • Show Charge Point ID - Displays the charge point ID on screen (can be enabled/disabled). |
| Display Logo (Optional) | The user can upload left and right logos to display in the app UI and toggle their visibility using a switch button. |
| Tilt Threshold | <p>The user can change the tilt threshold in angle. The tilt threshold as an angle is set to 30 for all angles by default.</p> <p>Tilt Threshold Range: 12 - 90</p> |
| Display QR Code | The user can update the QR Code Settings for each connector on the device. QR Code can be enabled/disabled and if enabled, a limiting value for the QR Code String can be set. |
| Customer Service Number | You can reach customer service number from WEB UI screen. You can enable or disable it to display on the screen. |
| Timezone | The user can set the timezone. |

11.5.4.2 - OCPP SETTINGS

The required settings for the OCPP connection (activating and deactivating the OCPP connection, entering the connection address, entering the charging station ID, etc.) are made on this page.

Adding a New RFID Card:

In the **Authorization Mode** dropdown menu, select **Authorize with Whitelist** from OCPP Settings tab in the interface. In the **Manage RFID Local List** section, enter the unique ID of the RFID card you want to authorize into the text field.

Once entered, click the **Add** button to include the card into the list. Press the save button to apply the changes.

To apply the update, a **Hard Reset** must be performed. During this process, a confirmation prompt will appear – be sure to confirm the action by selecting **Confirm**.

Once the product restarts, return to the same configuration page and ensure that the newly added card appears in the RFID list.

11.5.4.3 - NETWORK INTERFACES

There are three types of network interfaces in this page; Cellular, Ethernet (LAN), Wi-Fi. Select interfaces' modes as "Enabled" if you want to activate it. You should fill all spaces in suitable formats.

11.5.4.4 - POWER MANAGEMENT

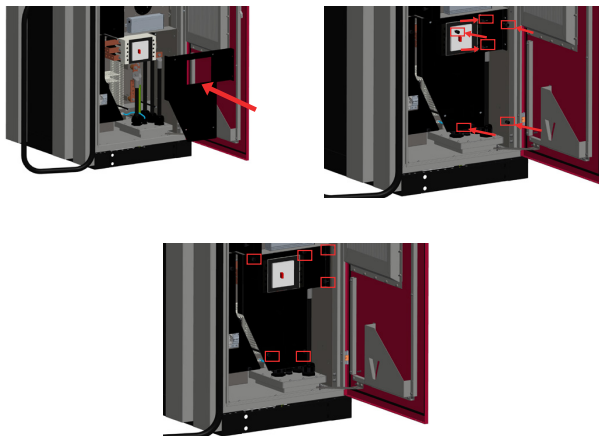
| | |
|------------------------------------|--|
| DC Output Configuration | DC Output Configuration(deprecated-will be renamed as Model Code). |
| Charge Point Maximum Power | Maximum Power value is used to set the maximum output power delivered from charging station. |
| Fail Safe Power | Fail Safe Power Limiting feature is used to limit the station output power when the OCPP Server connection is lost. When feature is enabled, the user can set output power value. The default value is 10 kW. |
| Power Module Configurations | DC power sharing enabled option is used to allow CPO to decide if power sharing will be active for power modules. Example: For a 60kW product which has 2 30kW power modules, if DC Power Sharing Enabled is set to True, 2 connectors will be available for charging at maximum of 30kW output. If it is set to False, Then only 1 connector will be available for charging and while one of the connectors is in charging state, other connector status will be set to Unavailable. |
| Connector Settings | Connector type and corresponding maximum output power is displayed under Connector Settings menu. |

11.5.4.5 - SYSTEM MAINTENANCE

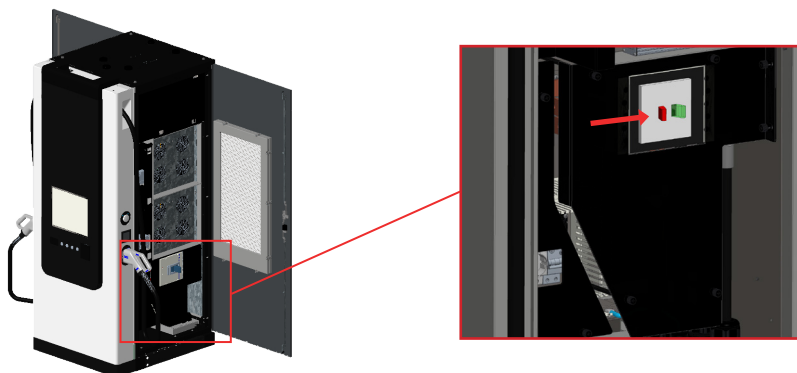
| | |
|---|--|
| Log Files | The logs related to the device can be downloaded from this section. |
| Firmware Updates | The firmware file of device can be uploaded and upgraded. |
| Configuration Backup & Restore | The device-related configurations can be backed up and restored from this tab. |
| System reset | You can proceed to this section to perform Hard Reset and Soft Reset. |
| Administration Password | The administrator password can be changed from this tab. |
| Factory Default Configuration | You can reset your device to its factory settings. |

11.6 - CLOSE COVER

1. Place the side (left and right) panels on the underside back in the intended position and tighten the respective screws.
2. Make sure that no cables or plugs are damaged.
3. Put the insulation plate covering the AC mains cable corner back in place and tighten the screws.



4. Switch on the molded case circuit breaker (MCCB).

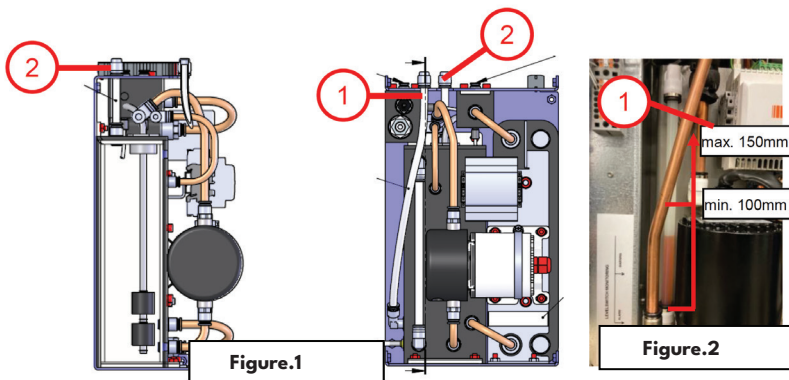


5. Check the coolant level in the cooling unit. (Only for models with liquid-cooled cable) (optional)



Initial commissioning of the cooling unit with installed cables.

Ensure that all pipes, sensors and cables are correctly inserted in accordance with the installation instructions. To ensure an optimum filling process, the coolant temperature should be above 12° C. Two cases are possible for the coolant level.



Case 1: The tank is pre-filled (standard on delivery)

- The tank is pre-filled to operate a cable with a maximum total length of 8 m. The coolant level before connecting the cable is visible in the vent pipe (Figure 1, no. 2).
- Commissioning of the cooling system for 5 min.
- If the coolant level is below the minimum level (Figure 2 no. 1), top up the coolant according to the instructions for case 2.

Case 2: Fill up with coolant until the quantity required for the cooling system is reached.

Intended coolant quantity: 1.1 dl per meter of cable.

- The following must be checked: The coolant level must be as shown in Figure 2 no. 1 (min. 100 mm, max. 150 mm) must be specified.
- Open cap no. 1 and no. 2 (Figure 1, no. 1 and no. 2)
- Open cap no. 1 and no. 2 (Figure 1, no. 1 and no. 2)
- Pipe no. 1 (Figure 1, no. 1) => Fill with coolant
- Pipe no. 2 (Figure 1, no. 2) => vent opening
- The coolant level must be at least 100 mm and a maximum of 150 mm according to the sight tube (Figure 2, No. 1)
- Close cap no. 1 and no. 2 (Figure 1, no. 2)
- Commissioning of the cooling system for 5 min.
- The following must be checked: The coolant level must be as shown in Figure 2 No. 1. If the coolant level is below 100 mm, top up the coolant according to the instructions in case 2.

6. Close the cover on the right-hand side of the product by turning the handle clockwise at a wide angle as shown in the section "Opening the side cover".

12 - CHECKING THE VALIDITY OF THE MEASUREMENT

Data with transparency software

This section deals with billing, the transmission of legally relevant data and the billing procedure in accordance with the German Measurement and Verification Ordinance (MessEV).

With this charging station, the information on the progressive kWh display is shown on the MID display of the meter, which is approved in accordance with calibration law.

If you have used your RFID card to authorize the charging process, you can request the signed measurement data from the operator of your charging station or your electromobility provider.

If you complete the charging process using your credit card, you will find the invoice amount for the charging process and the link to the receipt server (www.evc.cash) on your credit card statement once the charging process has been completed. You can access the website www.evc.cash via a web browser on your smartphone or computer to download the signed data of the transaction of the loading process by entering the last four credit card digits and the date in the mandatory fields.

To better filter the charging transactions, you can also enter optional fields such as city, country or the ID of the charging station.

Search Receipt

Location:

Select Country ▼ Select City ▼

Chargepoint ID:

Date:

mm/dd/yyyy

Last Four Digit of the Credit Card

SEARCH

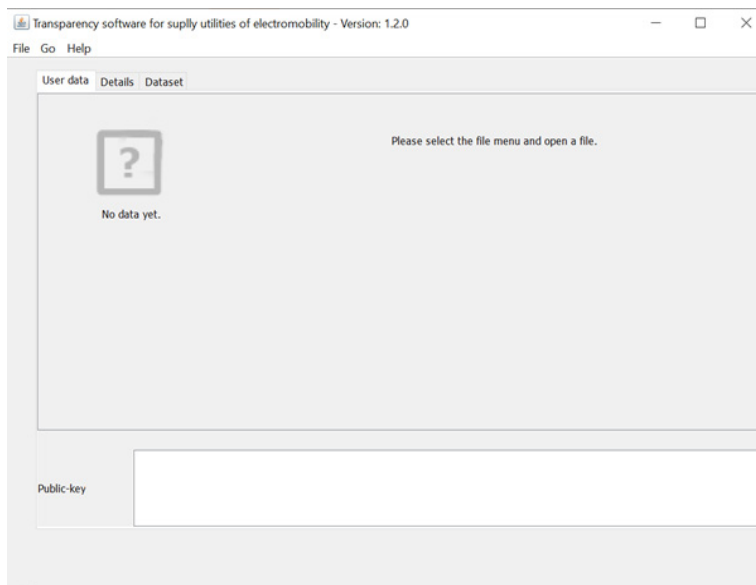
What is transparency software?

You can verify digital signatures with transparency software. Depending on its technical design, a charging station generates digitally signed meter readings for each charging process carried out at this charging station. Using these digital signatures, you can check the measured values with a time delay and thus ensure that no one has manipulated your measured values during transmission to your invoice.

If you want to use the transparency software, you must first download it and then open it on your desktop PC.

You can download the transparency software via the following link. The installation is explained on this website.

https://www.safe-ev.de/en/transparency_software.php



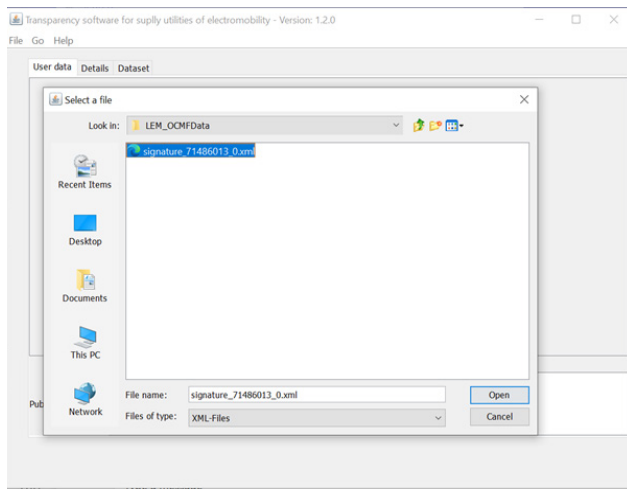
How does the transparency software work?

Transparency software v1.3.0

This software can be used to verify a digital signature. Depending on its technical equipment, a charging station generates a digitally signed meter reading that is linked to the charging station at which an electric vehicle is being charged. With this digital signature, the measured values can be checked with a time delay. As a consumer, you can therefore always be sure that the kWh charged are actually correct and that the measured values can no longer be changed when billing the kWh charged.

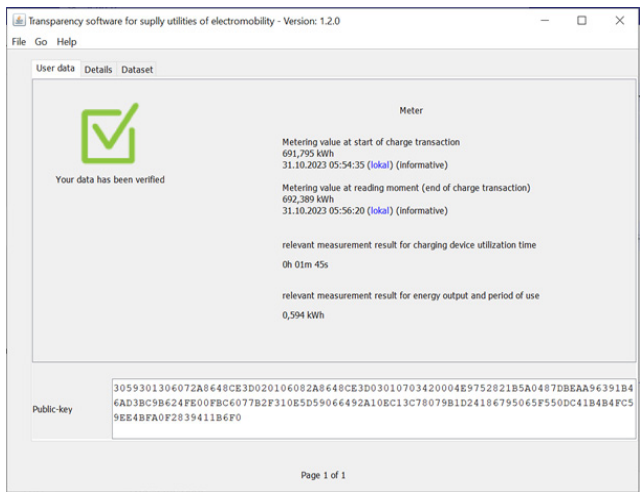
LOADING DIGITAL SIGNATURE DATA

Select the meter readings available to you via the "File"/"Open" function and enter the public key of the charging station.

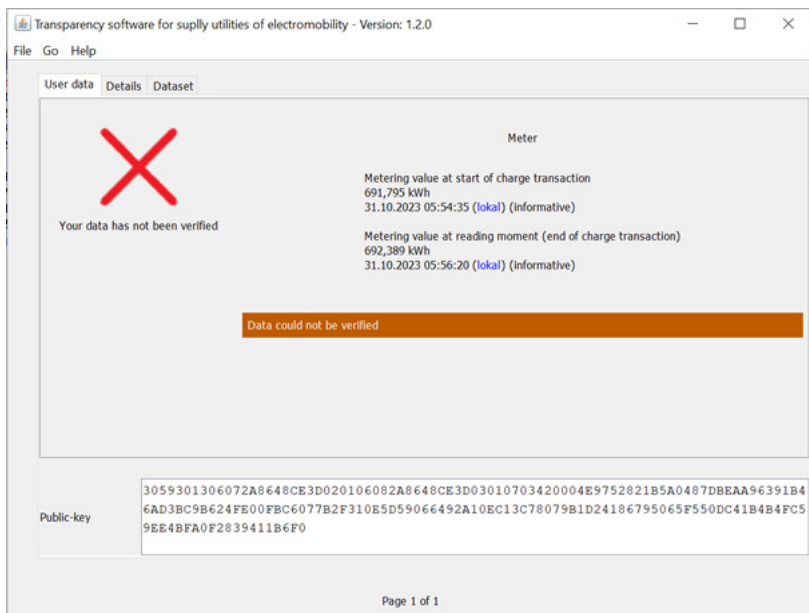


CHECK THE RESULT

Check the result to make sure that the results of the digital signature verification match the information on your invoice or billing document.



If an incorrect public key is entered, the following error message is displayed.



Remote transmission of measurement data to an OCPP backend

The charging station is connected to an OCPP backend and the corresponding signed measurement and log data record is automatically made available to the OCPP backend at the end of a charging process.

Transmission of data records to customers

The transmission of data records to customers is the responsibility of the charging station operator and is not the responsibility of the charging station manufacturer. After the loading process, the signed measurement data records are transferred to a central OCPP system and the end user can access this data via a web interface, email, smartphone app or similar means. The data records are preferably available in .xml format. In the event that you need to verify the charging process data using transparency software, please contact the operator of your charging station or your e-mobility provider to request the signed measurement data.

Verification of the measurement data with the transparency and display software

With the transparency and display software, users can check whether the measurement data originates from a specific charging station and whether its authenticity has been maintained.

The charging station has a public key. The public key is generally accessible and is indicated as a QR code on the type plate of the charging station's measuring unit. The charging station creates a data set with measurement data that is stored in the measuring capsule. The operator of the charging station then creates the invoice based on the signed measurement data record. In

addition to the signed measurement data, the public key must also be provided on the invoice or in a customer portal in a format that is compatible with the transparency and display software.

After receiving the invoice, the consumer can enter the digitally signed measured values together with the public key into the transparency and display software. Verification of the signature gives the consumer the opportunity to check the validity of the measured values. For this purpose, the consumer compares the values shown in the transparency and display software with the invoice contents. Validation of the measurement data record using transparency software ensures that the data record is unaltered and admissible for invoicing.

The transparency and display software checks the following data:

The public key as identifier of the charging station. The public key can also be found on the type plate of the charging station's measuring unit.

Correct measured energy value

Correct user/transaction ID

Checking the signed measurement data set

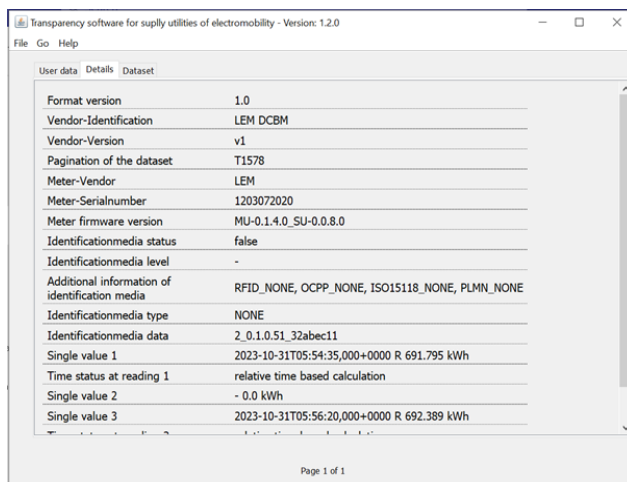
To check the measurement data set:

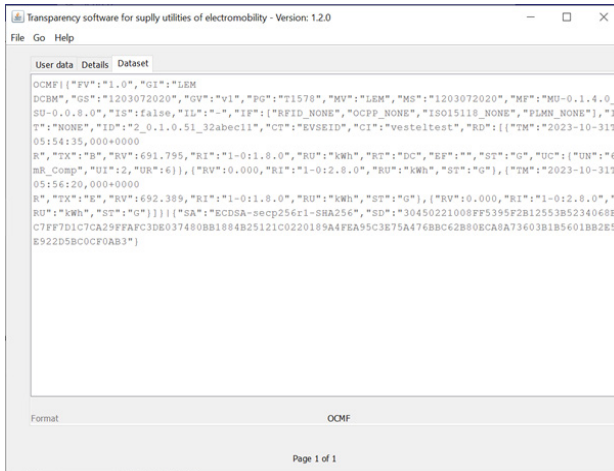
1) Download and install a Java runtime environment (this is available for all operating systems and is usually already pre-installed, e.g. Oracle).

2) Download the transparency and display software from
https://www.safe-ev.de/en/transparency_software.php

3) Enter the following data in the transparency and display software:

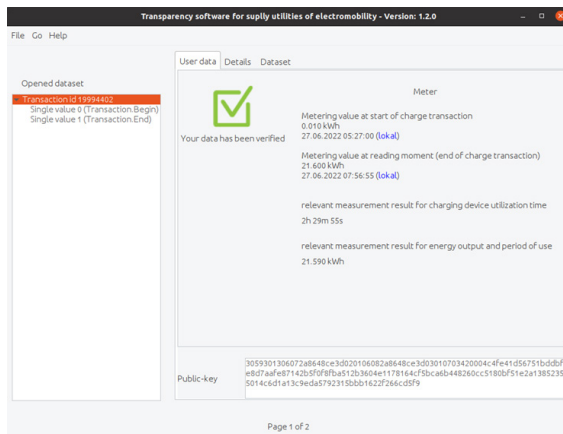
- the signed measurement data set
- the selection of the "OCMF" format
- the public key of the corresponding charging station





4) Once you have entered the required data, you can start the check.

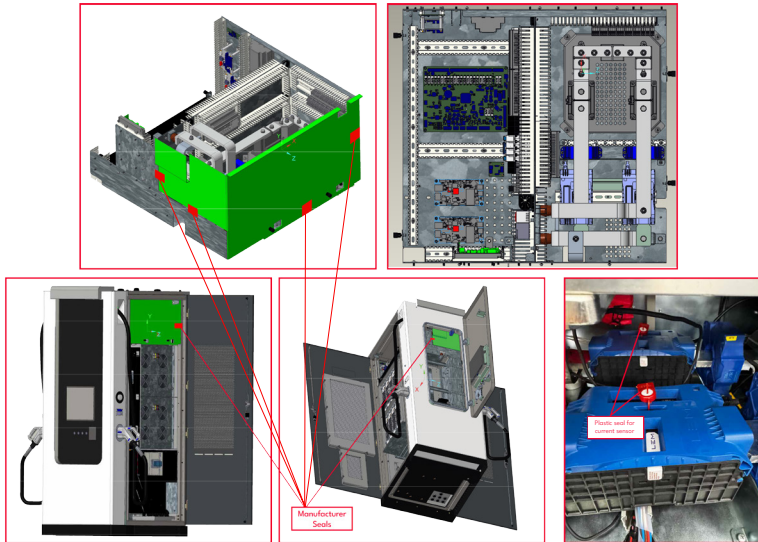
5) Once this check has been completed, it must be checked whether the results of the signature check match the information on the invoice.



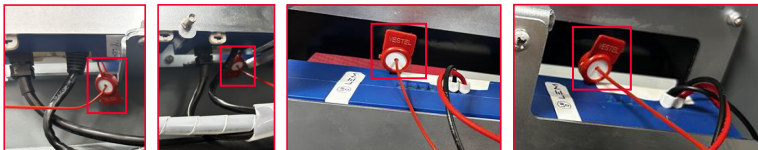
13 - OVERVIEW OF THE CHARGING STATION WITH DESCRIPTION OF THE MANUFACTURER'S/OPERATOR'S SEALS

13.1 - SEALS OF THE MANUFACTURER

During production, the measuring units of the charger are provided with manufacturer seals. The following illustration shows the images of the EVC03 calibration law product seals. The sections circled in red indicate the manufacturer's seal.



SEAL FOR MID METER



Vorderansicht
der Siegel

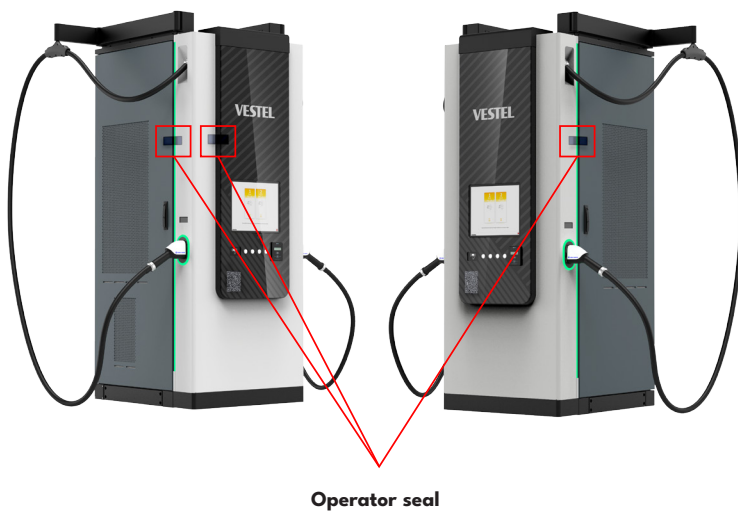
Rückseite
der Siegel



13.2 - RECOMMENDED POSITIONS OF THE OPERATOR SEALS

The recommended place for the operator to seal is as shown in the image below.

The parts circled in red indicate the operator's seal. It is recommended to seal the input terminal after the cable is connected to product the during the electric vehicle charger installation.



14 - LEGAL INFORMATION

14.1 - MEASUREMENT ACCURACY NOTES ACCORDING TO CSA TYPE EXAMINATION CERTIFICATE

I Requirements for the operator of the charging system, which he must fulfill as a necessary prerequisite for proper operation of the charging system.

The operator of the charging device is the user of the measuring device within the meaning of Section 31 of the Measurement and Verification Act.

1. The charging device is only considered to be used as intended and in compliance with calibration law if the meters installed in it are not exposed to ambient conditions other than those for which their type examination certificate was issued.

2. The charging device is only considered to be used as intended and in compliance with calibration law if only the authentication methods listed under point 1.3.2.3.2 of the currently valid BMP of these 6.8 devices are used.

3. When registering the charging points with the Federal Network Agency, the user of this product must also register the public key specified on the charging device for the charging points in their registration form! Without this registration, it is not possible to operate the column in compliance with calibration law. Weblink:

https://www.bundesnetzagentur.de/DE/Sachgebiete/ElektrizitaetundGas/Unternehmen_Institutionen/E-Mobilitaet/start.html

4. The user of this product must ensure that the calibration validity periods for the components in the charging device and for the charging device itself are not exceeded.

5. The user of this product must ensure that charging devices are taken out of operation promptly if operation in compliance with calibration law is no longer possible due to fault or error indications on the display of the human-machine interface relevant to calibration law. The catalog of fault and error messages in these operating instructions must be observed.

6. The User must store the signed data packets read from the loading device - in accordance with the pagination - permanently and without gaps (also) on hardware dedicated to this purpose in his possession or, by corresponding agreement, in the possession of the EMSP or backend system ("dedicated storage"), - and keep them available for authorized third parties (obligation to operate the storage). Permanent means that the data must be stored not only until the conclusion of the business transaction, but at least until the expiry of any statutory appeal periods for the business transaction. No substitute values may be created for billing purposes for data that is not available.

7. The user of this product shall provide an electronic form of a CSA-approved instruction manual to measurement users who receive and use measurements from this product in the course of their business. The user of this product must pay particular attention to the no. II "Requirements for the user of the measured values from the loading device".

8. The user of this product is subject to the notification obligation in accordance with § 32 MessEG (extract):

§ Section 32 Obligation to notify (1) Anyone using new or renewed measuring devices must notify the competent authority in accordance with federal state law no later than six weeks after commissioning...

9. If deemed necessary by authorized authorities, the meter user must provide the complete content of the dedicated local or backend storage at the EMSP or backend system with all data packets of the billing period.

10. The user of this product must ensure that tariff information shown on the info display of the charging device or an informative display of a payment terminal in the case of spot charging corresponds to the tariff information in the calibrated display and the signed data package.

II Requirements for the user of the measured values from the loading device (EMSP)

The user of the measured values must comply with § 33 of the MessEG:

§ 33 MessEG (quote)

§ 33 Requirements for the use of measured values

(1) Values for measured quantities may not be used in commercial or official dealings or for measurements in the

may only be indicated or used in the public interest if a measuring instrument has been used as intended for their determination and the values are attributable to the respective measurement result, unless otherwise specified in the ordinance pursuant to Section 41 number 2. Other federal regulations that serve comparable protection purposes continue to apply.

(2) Anyone using measured values must ensure, as far as possible, that the measuring device meets the legal requirements and must obtain confirmation from the person using the measuring device that they are fulfilling their obligations.

(3) Anyone who uses measured values must

1. to ensure that invoices, insofar as they are based on measured values, are issued by the person for whom the calculations can be easily reproduced to verify the specified measured values. and

2. to provide suitable aids for the purposes mentioned in number 1 if necessary.

For the user of the measured values, this regulation results in the following specific obligations for the use of measured values in compliance with calibration law:

1. The contract between EMSP and the customer must clearly state that only the supply of electrical energy and not the duration of the charging service is the subject of the contract.

2. The time stamps on the measured values originate from a clock in the charging device that is not certified in accordance with measurement and calibration law. They may therefore not be used to calculate a tariff for the measured values.

3. The EMSP must ensure that the customer is automatically sent a receipt of the measurement and the details for determining the transaction after completion of the measurement and at the latest at the time of invoicing, unless the customer expressly waives this. The details for determining the transaction can be as follows:

- a. Name of the EMSP
- b. Start and end time of the charging process
- c. Charged energy in kWh
- d. Credit card number

4. If the customer requests proof of the correct transfer of the measurement results from the charging device to the invoice, the user of the measured values is obliged to provide proof in accordance with MessEG, § 33, para. (3) is obliged to provide this. If the customer requests a trustworthy permanent proof in accordance with Annex 2 10.2 MessEV, the user of the measured values is obliged to supply it to him. The EMSP shall inform its customers of these obligations in an appropriate form.

This can be done in the following ways, for example, depending on the authentication method:

- a. When charging with a continuing obligation via the textual contract
- b. For ad hoc charging using a (contactless) debit card together with the receipt via a short link in the purpose of use in the account statement

5. The EMSP must provide the customer with the billing-relevant data packages automatically after completion of metering and at the latest at the time of invoicing, including signature, as a data file in such a way that they can be checked for falsification using the transparency and display software. The data packets can be made available via channels that are not verified under calibration law in the following ways and depending on the authentication method:

- a. When loading with a continuing obligation via e-mail or access to a backend system
- b. In the case of ad hoc charging by means of a (contactless) debit card via a short link in the purpose of use in the account statement and associated access to a retrieval platform on which the information mentioned under point 3 is requested to determine the transaction, so that the customer receives the permanent proof. Only information that can also be found on the customer's account statement may be requested to determine the transaction.

In addition, the EMSP must provide the customer with the transparency and display software belonging to the charging device to check the data packets for falsification. This can be done by referring to the source of supply in the operating instructions for the customer or through the channels mentioned above.

6. The EMSP must be able to show in a verifiable manner which means of identification was used to initiate the charging process associated with a specific measured value. This means that he must be able to prove that he has correctly assigned the personal identification data to each business transaction and invoiced measured value. The EMSP shall inform its customers of this obligation in an appropriate form.

7. The EMSP may only use values for billing purposes for which data packets are available in any existing dedicated memory in the charging device and/or the memory at the EMSP or backend system. Substitute values may not be created for accounting purposes.

8. The EMSP must make appropriate agreements with the operator of the charging facility to ensure that the data packets used for billing purposes are stored for a sufficient period of time to complete the associated business transactions.

9. The EMSP shall enable the authentication of the copies of the product belonging to these operating instructions used by it by providing suitable means of identification in the event of a justified request for the purpose of carrying out calibrations, diagnostic tests and usage monitoring measures.

10. All of the aforementioned obligations apply to the EMSP as a user of measured values within the meaning of

§ 33 MessEG even if it obtains the measured values from the charging facilities via a roaming service provider.

15 - MAINTENANCE

The device is maintenance-free. The deadlines for the validity of the calibration must be observed for the electricity meter and the charging station.

Conformity with the points listed in the chapters "Model description", "Technical specifications" and "Legal information" must be guaranteed over the entire service life of the product. The user must not exceed the validity period for the calibration of the meter and the charging stations. If the calibration period is exceeded, please contact the manufacturer so that an authorized technical service company can replace the measuring device in the charging station.

16 - LISTE OF PERIODIC MAINTENANCE TASKS

| | Maintenance period (years) | | | | | | | | | |
|--|----------------------------|---|---|---|---|---|---|---|---|----|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Air filter | R | R | R | R | R | R | R | R | R | R |
| Mains plug | I | I | I | I | I | I | I | I | I | I |
| Screen | C | C | C | C | C | C | C | C | C | C |
| Distribution elements (MCCB, MCB, RCCB) | T | T | T | T | T | T | T | T | T | T |
| AC input terminals | T | T | T | T | T | T | T | T | T | T |
| Blower | I | I | I | I | I | I | I | I | I | I |
| DC relay terminals | T | T | T | T | T | T | T | T | T | T |
| DC output cable and connection terminals | T | T | T | T | T | T | T | T | T | T |
| Housing | C | C | C | C | C | C | C | C | C | C |
| Earthing resistance | M | M | M | M | M | M | M | M | M | M |
| Liquid cooling unit | I | I | I | I | I | I | I | I | I | I |
| Liquid of the liquid cooling unit | I | I | I | I | R | I | I | I | I | R |

C : Cleaning

I : Check (check, confirm, clean, tighten or replace if necessary)

M: Fairs

T : Tighten

R : Change

Air filter

Air filters should be changed every year as part of regular maintenance.

Mains plug

All plugs should be checked regularly as part of regular maintenance. If the plug is broken or cracked, it must be replaced. In addition, a test charge should be carried out with all plugs.

Screen

As part of regular maintenance, the screen should be checked by pressing the touchscreen. Its functionality can be checked by pressing all functions on the screen. If the touch functions of the screen are working properly, the screen should be cleaned.

Distribution elements (MCCB, MCB RCCB)

The distributor elements (MCCB, MCB RCCB) should be checked and tightened as part of regular maintenance. They can be tightened to a torque of 13 nm.

AC input terminals

The AC input terminals should be checked and tightened as part of regular maintenance. They should be tightened to 8 nm for M8 screws and 10 nm for M10 screws.

Blower

The fans should be checked regularly as part of regular maintenance. In the event of breakage or damage, the damaged fan must be replaced. If the fans are working properly, a test charge should be carried out. Check whether the fans are rotating during the charging process.

DC relay terminals

The DC relay terminals should be checked and tightened as part of regular maintenance. The tightening process should be carried out at 6.5 nm.

DC output cable and connection terminals

The DC output cable and the terminals should be checked regularly as part of regular maintenance. They must be checked regularly for damage.

Housing

The outer casing should be checked regularly as part of regular maintenance.

Earthing resistance

As part of regular maintenance, routine checks should always be carried out using an insulation measuring device (e.g. from Megger). The voltage between the two stacks should be less than 1V.

Liquid cooling unit **

As part of regular maintenance, a test charge should be carried out with the liquid-cooled plug (gun). During the charging process, ensure that liquid flows out of the lines in the liquid cooling unit after a waiting time of 5 minutes.

Liquid of the liquid cooling unit **

The liquid in the liquid cooling unit should be checked as part of regular maintenance. If there are particles in the liquid, it must be changed. The fluid should also be replaced every 5 years

**** Units are only available for EVC03-HP products. A detailed explanation can be found in the Liquid cooling section of the maintenance manual.**

17 - TECHNICAL DATA OF THE WLAN TRANSMITTER

| Frequency ranges | Max. Output power |
|---------------------------------|-------------------|
| 2400 - 2483.5 MHz (CH1 - CH13) | <100 mW |
| 5150 - 5250 MHz (CH36 - CH48) | <200 mW (*) |
| 5250 - 5350 MHz (CH52 - CH64) | <200 mW (*) |
| 5470 - 5725 MHz (CH100 - CH140) | <200 mW (*) |

(*) '<100 mW' for Ukraine

Country restrictions

This WLAN device is intended for use in homes and offices in all EU countries, Great Britain and Northern Ireland (as well as all countries that follow the relevant EU and/or UK regulations). For the 5.15-5.35 GHz frequency band, the restriction applies to indoor use only in all EU countries, Great Britain and Northern Ireland (as well as all countries that follow the relevant EU and/or UK regulations). Public use is subject to general authorization by the respective service provider

| Country | Restriction |
|--------------------|---|
| Russian Federation | For indoor use only |
| Israel | 5 GHz band only for the range from 5180 MHz to 5320 MHz |

The regulations of the individual countries can change at any time. It is recommended that users check with the relevant authorities for the current status of the regulations in force in the country with regard to 2.4 GHz and 5 GHz LANS.

Vestel Mobilite SAN. VE TİC. A.Ş., hereby declares that the radio equipment type of the EVC complies with EU Directive 2014/53/EU and the UK Radio Equipment Regulations 2017. The full text of the EU Declaration of Conformity can be viewed at the following Internet address: doc.vosshub.com.

VESTEL

MOBILITY



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