VESTEL
MOBILITY

ELECTRIC VEHICLE CHARGER

EVC16 SPICA SERIES

User Manual

CONTENTS

1 - SAFETY INFORMATION

CAUTION

THE RISK OF ELECTRIC SHOCK

CAUTION: THE ELECTRIC VEHICLE CHARGER CAN ONLY BE INSTALLED BY A LICENSED OR EXPERIENCED ELECTRICIAN BY THE ELECTRICAL REGULATIONS AND STANDARDS OF ANY RELATED REGION OR COUNTRY.

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 - Read these instructions fully before installation or operation.

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 proper mains voltage.
- Do not continue to use the unit if you have any doubts as to whether it is working normally. If the device has been damaged in any way, switch off the main supply circuit breakers (MCCB and RCCB) in the upstream distribution board. Consult your local dealer.
- During charging, the ambient temperature range (without direct sunlight) should be between -35 ˚C and +50 ˚C and the relative humidity should be between 5% and 95%. Use the charging station only within the specified operating parameters.
- The device location should be consciously selected in order to prevent the charging station from overheating. High temperature caused by direct sunlight or heating sources during use may cause the charging current to decrease or the charging process to be temporarily interrupted.
- The charging station is made for indoors and outdoors. It can also be used in public open spaces.

- To reduce the risk of fire, electric shock, or product damage, do not expose the unit to heavy rain, snow, lightning storms or other harsh weather conditions. Furthermore, liquids should not be spilled or splashed on the charging station.
- Do not touch the end terminals of the charging station, the electric vehicle connector and other dangerous current parts with sharp metal objects.
- Avoid exposing the unit to heat sources and place it away from flammable, explosive, hard or caustic materials, chemicals or steam.
- Explosion Risk. This equipment contains internal spark or spark-generating parts and must not be exposed to flammable vapours. It should not be placed in lowered or below ground level locations.
- Make sure that the specified Current Switch and RCD are connected to the building mains to prevent the risk of explosion and electric shock.
- The base part of the charging station should be at (or above) ground level.
- Adapters or converter adapters cannot be used. Cable extension sets cannot be used.
- Use this product at an altitude of not more than 2000 meters above sea level.
- Do not place objects containing liquids, such as glasses and bottles, on the product.
- Against the risk of choking, keep the plastic packaging materials out of the reach of babies, small children and pets.
- Do not wash the device with water.
- Do not use abrasive fabrics, wet cloths, alcohol or detergents. Microfiber fabric is recommended.
- Keep the door lock key, which enables the product panel to be opened and prevents access to electrical parts, out of the reach of small children.
- It should be kept in its original box to prevent damage to device components during transport.
- Defects and damages that occur during transportation after the device shipment to the customer are not covered by the warranty.
- The allowed current value of the service socket is a maximum of 10A.
- Please adhere to the rope warnings outlined in the “Basic Alignment and Layout” section, especially when transporting the product.

WARNING : Persons (including children) who are physically, perceptually or mentally incompetent or inexperienced should not use electrical devices without the supervision of a person responsible for their safety.

CAUTION: This vehicle charger is designed only for charging the electric vehicles that do not require ventilation during charging.

1.2 - FIRE FIGHTING INSTRUCTIONS FOR ELECTRIC VEHICLE CHARGING STATION

- Personal Safety: If you observe a fire or notice any danger signs, prioritize your safety above all else. Do not take unnecessary risks.
- Notify Emergency Services Immediately: Contact your local emergency services. Dial the emergency number 998 or 112.
- Stopping the Charging Process: If it is safe, disconnect the charging cable from the vehicle and the charging station.
- Use of Fire Extinguishing Agents: If a fire extinguisher or other firefighting equipment is nearby and you are trained to use it, attempt to extinguish the fire. However, never risk your own safety.
- Avoid Direct Contact with Fire: Do not try to extinguish a fire unless you have the appropriate equipment, training, or knowledge, or if the fire is exceptionally large or dangerous.
- Move Away from the Station: If the fire cannot be controlled or is intensifying, evacuate from the charging station while maintaining a safe distance.
- Avoid Inhaling Smoke: Try to avoid breathing in smoke. If possible, cover your nose and mouth with a damp cloth or clothing.
- Warn Others in the Area: Alert others nearby about the fire hazard and urge them to evacuate the area.
- Wait for Emergency Services: After safely evacuating the area, wait for emergency services to arrive in a secure location.
- Do Not Return to Station Facilities: Do not re-enter the charging station building until emergency services have concluded their operations.
- Reporting the Incident: Contact customer support to report the incident.

Remember, safety is always the top priority. In the event of a fire, always seek guidance from local emergency services and adhere to their instructions.

1.3 - GROUND CONNECTION WARNINGS

- The charging station should be connected to a central grounding system. The grounding conductor entering into the charging station should be connected to the equipment grounding lug inside the charging station. This should be powered by the circuit conductors and connected to the equipment grounding rod or to the guide member at the charging station. Connections to the charging station are in the charge of the installers and purchasers.
- Connect it only to correctly grounded plugs to reduce the risk of electric shock.
- **WARNING :** Make sure that the charging station is permanently and properly grounded during installation and use.

1.4 - POWER CABLES, PLUGS, AND CHARGING CABLE WARNINGS

- Note that the plugs and sockets in the charging station are compatible.
- A damaged charging cable may cause a fire or electrical shock conditions. Do not use this product if the Flexible Charging cable or vehicle cable is worn, has frayed insulation, or shows any different signs of damage.
- Make sure the charging cable is well placed, thus you will not step on and trip over the cable or the cable will not damage or subject to stress.

- Do not forcibly pull on the charging cable or damage the cable with sharp objects.
- Never touch the electric cable/plug or vehicle cable with wet hands as this may cause a short circuit or electric shock.
- To avoid the risk of fire or electric shock, do not use this device with an extension cable. In case of damage to the mains cable or vehicle cable, the cables should be replaced by the manufacturer, service agency or similar qualified persons to prevent any hazards.
- Use appropriate protection while connecting the device to the main power distribution cable.

1.5 - PROTECTIONS REQUIRED BEFORE SYSTEM

- Class I/B Lightning Protection should be connected to the upstream distribution board. It is recommended that the cable length between the charger and the protection device be at least 10m. *The charger is equipped with a Class II/Type C Surge Protective Device (SPD).
- To prevent the residual current, Type A residual current relay with toroidal sensor should be used on the panel before the device. The minimum current sensitivity should be set to 300mA.
- MCCB (Thermal Magnetic Adjustable) should be connected to the upstream distribution box.

Model	CCS	CCS - 2	Power output	Input Voltage	Input AC current	Recommended Section Values L1-L2-L3 (mm2) (Copper Conductor Cable)	Recommended Cross Section Value for Neutral (Copper Conductor Cable)	Recommended Cross Section Value for PE (mm2) (Copper Conductor Cable)
EVC16-DC80CC	40	40	80kW	400V +/- %10	125A +/- %10	50	16	50

Minimum cable cross-sections are provided for maximum AC input current. The final cross-sections of the installation conductors should be calculated by the installer, taking into account the distances and mounting location conditions.

2 - GENERAL SPECIFICATION

Model Name	**EVC16-DC Series (Name Coding: EVC16-DC****)** 1st Asterisk (*) : Rated Power 80 : 80 kW DC Power Output 2nd Asterisk (*) : DC output combination 1 C : CCS Output 3rd Asterisk (*) : DC output combination 2 C : CCS Output 4th Asterisk (*) : MID Meter Option Blank : No DC Meter MID : MID meter -EICH : Eichrecht Meter
Cabinet	EVC16-DC80

3 - TECHNICAL SPECIFICATION

Model		EVC16-DC Series
IEC Protection class		Class - I
IEC EMC Class		IEC 61000-6-3 Class B - Residential (Emission) IEC 61000-6-2 Industrial (Immunity)
Input Rated Voltage and Current Value	**Input Rate**	230/400 Vac ±10% , 50/60 Hz, 125A
	Connection	3L+N+PE (TN,TT)
	Power Factor	> 0.98
	Efficiency	> %95
	Residual Current Protection	230Vac RCBO 1P+N, Type A, 30mA (system)
	Standby Power Consumption	< 80 W
CCS Output - 1	**Max. Power**	80kW . 1 x 80kW . 2 x 40kW
	Voltage Range	200 – 920Vdc
	Maximum Current	266 A . 1 x 80kW 133A . 2 x 40kW
	Interface Compatibility	IEC62196-1 / 3 IEC 61851-1 / 23 / 24 ISO 15118-1 / 2 / 3 DIN 70121
CCS Output - 2	**Max. Power**	80kW . 1 x 80kW . 2 x 40kW
	Voltage Range	200 - 920 Vdc
	Maximum Current	266 A . 1 x 80kW 133 A . 2 x 40kW
	Interface Compatibility	IEC62196-1 / 3 IEC 61851-1 / 23 / 24 ISO 15118-1 / 2 / 3 DIN 70121

4 - USER INTERFACE & AUTHENTICATION

Display	7" Color TFT LCD without Touch Screen (16:9)
User Interface	Illuminated buttons
RFID Reader Module	ISO/IEC 14443A/B and ISO/IEC15693
Payment module (Optional)	Contactless Credit Card kit options
Cable Management	N/A
DC Meter (Optional)	MID meter Certified
Eichrecht Approval (Optional)	Eichrecht conformity for Germany
Plug&Charge	ISO15118

5 - CONNECTIVITY

LAN Connectivity	Ethernet
WLAN Connectivity	802.11 a/b/g/n/ac
Mobile Connectivity	GSM 900/1800 UMTS 900/2100 LTE Band 1/3/7/8/20/28A
OCPP Specification	OCPP 1.6 J

6 - MECHANICAL SPECIFICATIONS

Materiel	Metal Panel	
Protection Degree	Ingress Protection Impact Protection	IP54 IK10
Cooling	Forced Air Cooling Fan	
Cable Length	CCS: 3,5 m CCS: 5,0 m	
Dimensions (Product)	1500 mm (Height) x 650 mm (Width) x 423 mm (Depth)	
Dimensions (Packed version)	1750 mm (Height) 970 mm (Width) 560 mm (Depth)	
Weight (Product)	Net: 202 kg.	
Packed Weight	With Packing : 280 kg	

7 - ENVIRONMENTAL SPECIFICATIONS

Operating Condition	Temperature	-35˚C to + 50 ˚C (Derating is applied over +40˚C to +50 ˚C) For products with credit card option-20˚C to + 50˚C
	Humidity	5% to 95% (Relative humidity, non-condensing)
	Altitude	0 - 2,000m

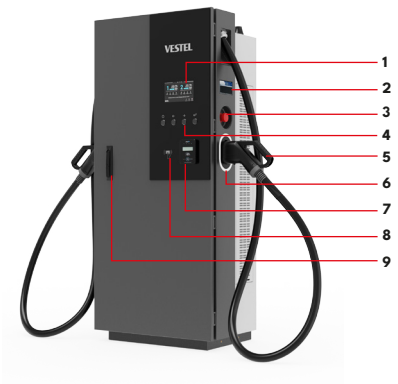
After the product is energized at low temperatures, it should wait for the heater in the charger to activate, and charging should be done after this process.

8 - BEHAVIOR OF STATUS INFORMATION LED

STATUS OF LED		MODE
	Blue and Green Flashes	Initialise EVSE.
	No LED Indicator	Rechargeable.
	Blue Illuminates	Charging.
	Blue Illuminates Steadily	Charging is suspended or finished.
	Red Illuminates Steadily	Error.
	Green Illuminates	Charging process is verified.

9 - GENERAL INFORMATION

9.1 - INTRODUCTION OF THE PRODUCT COMPONENTS



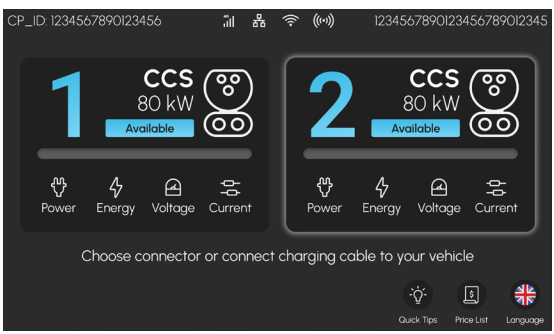
1- Display
2- MID Meter (optional)
3- Emergency Stop Button (optional)
4- Buttons
5- CCS Output Plug
6- LED Indicator
7- Payment Terminal (optional)
8- RFID Card Reader
9- Access Cover for CTB, PLC Card and HMI

All products images are given for representative purpose only.

10 - CHARGING SCENARIOS (INCLUDING ALL SCENARIOS)

Connect the charging cable to the socket plug/pull out the charging plug from the socket plug.

On the main screen located on the charging station screen, you can press the button you want to use or only connect the plug to your vehicle.



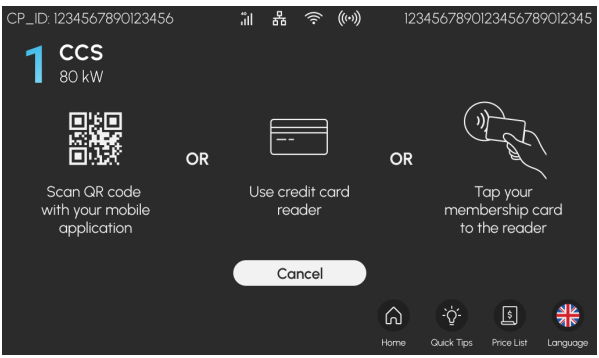
10.1 - DC CCS OUTLET

10.1.1. - VEHICLE CONNECTION AND CHARGING

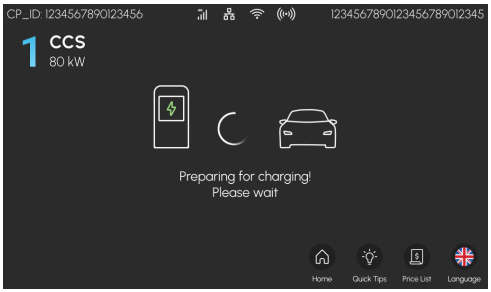
1- Connect the charging cable to the vehicle to start charging

2- Scan your RFID card, QR Code to start charging or the use credit card reader. Credit card reader (optional) appears on the screen when there is a payment module.

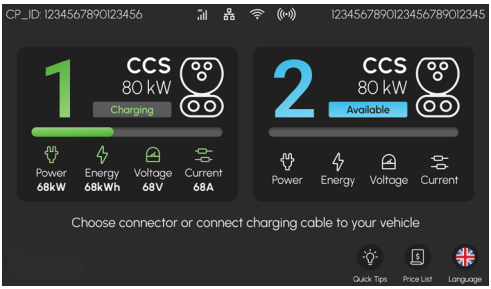
(AutoCharge If it is set in webconfig and vehicle registration is available in the system, charging starts without reading the RFID card)



3- It may take a few seconds for the charging session to start. The charging status can be viewed on the charging page.

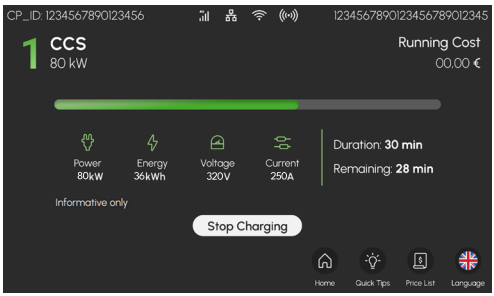


4- While charging, the charging status can be viewed in the main menu.

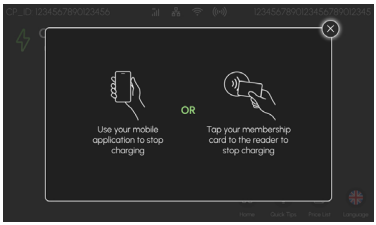


10.1.2 - STOP CHARGING

1- Press the “Stop Charging” button on the screen to stop charging.

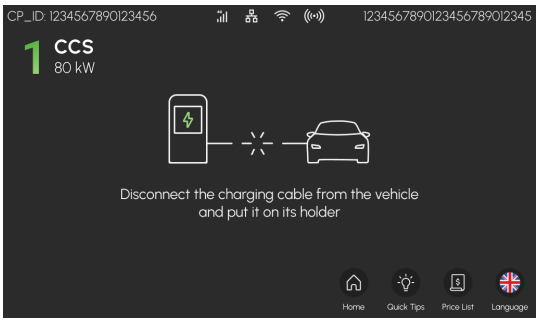


2- Scan your RFID card or the QR Code to stop charging.



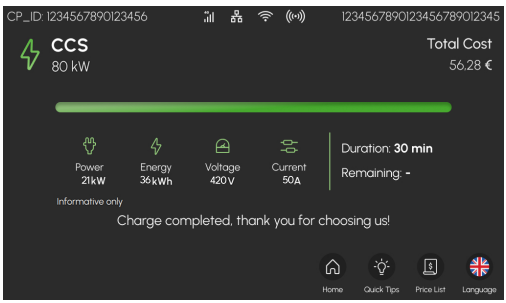
3- Disconnect the charging cable.

After disconnecting, you will be automatically switched to the main screen.



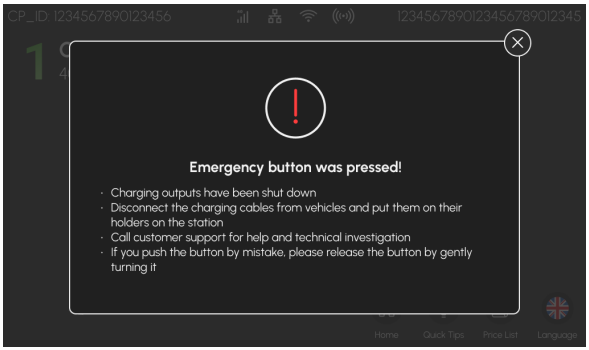
10.1.3 - CHARGING COMPLETED

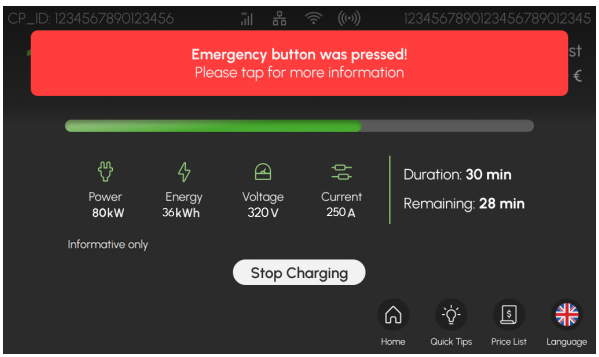
The charging process is successfully completed.



10.2 - EMERGENCY BUTTON (OPTIONAL)

Please follow the screen when the emergency stop is pressed.





All products images are given for representative purpose only.

11 - PRODUCTS WITH CERTIFIED ENERGY METER (OPTIONAL)

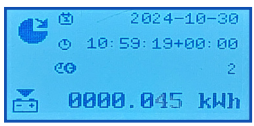
RFID/Autocharge and credit card (optional) authentication methods have different information on the meter display energy register at the beginning of the transaction.

RFID/Autocharge

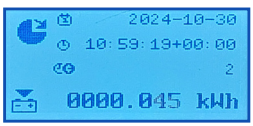
Credit card

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

RFID/Autocharge



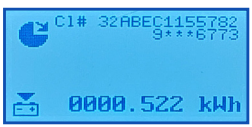
Credit card



Customer RFID/Autocharge ID

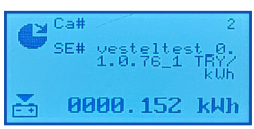
Customer credit card ID

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 charging point ID_Sw-Version_Tariff (chargepointid_Sw version_tariff) with currency

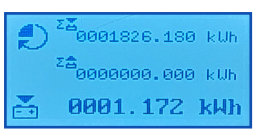
RFID/Autocharge



Credit card

Energy register at the end of the transaction.

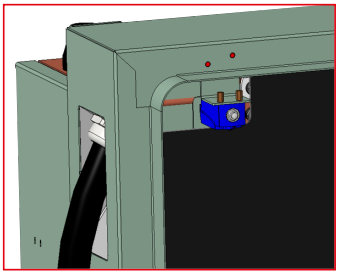
RFID/Autocharge



Credit card

12 - DOOR SWITCH

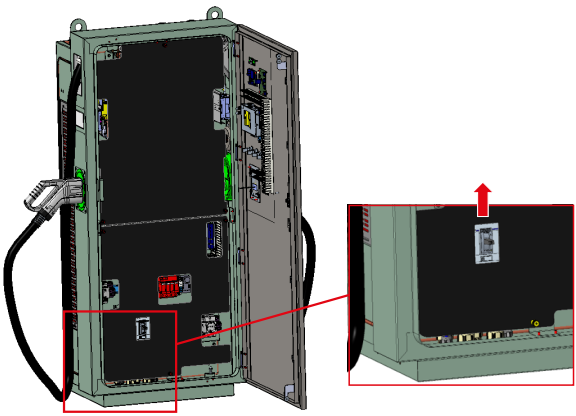
The behavior of the door position can be monitored with 2 different conditions set as normally open or normally closed given via the terminal. When the doors are opened, the breaker can be controlled from the main panel outside the station with a control lead to be taken over the dry contact, and the product enters an out of order state. This information is also transmitted to the service via OCPP.



13 - CIRCUIT BREAKER LOCATIONS FOR CHARGING OUTPUTS

⚠ CAUTION

- To open the front cover, see the “Opening the front covers” section in the product installation manual.
- If the MCCB has been activated only in the versions with CCS output, check the insulation of the related output cable. Then, switch the MCCB on as shown in the figure below.



14 - ERROR AND MALFUNCTION CONDITIONS

There are two types of errors or malfunctions:

- **Common Errors:** This malfunction or error affects all four outputs.
- **Charge Output Errors:** Only one socket or plug is affected by this malfunction or error condition.

14.1 - ERROR CONDITIONS

Problem	Possible Causes	Recommended Solutions
Power Outage	There is a power outage or the mains voltage is not within the specified range.	Check that the input current switches are activated and that the input voltage range and rotation are as specified in the installation manual.
The CCS output is unavailable	RCBO activated	Check the cable insulation first. Switch the RCBO on. (See. “CIRCUIT BREAKER LOCATIONS FOR CHARGING OUTPUTS“ section). Check that the station is functional.
All outputs are unavailable	General error	Please check if there is a power outage. Then check the upstream distribution box current switch. If the outputs are still unavailable, please contact the authorized service.
Fan Failure	Fan malfunctioning.	Check the fans. Remove or clean any elements that may prevent fan blades from spinning.

15 - CLEANING AND MAINTENANCE

⚠ ⚠ DANGER

- Do not clean your electric vehicle charger while charging your vehicle.
- Do not wash the device with water.
- Do not use abrasive cloths and detergents. A microfiber cloth is recommended.

16 - DC DEVICE PERIODIC MAINTENANCE LIST

	Maintenance Period (year)									
	1	2	3	4	5	6	7	8	9	10
Air filters	R	R	R	R	R	R	R	R	R	R
Plugs	I	I	I	I	I	I	I	I	I	I
Display	C	C	C	C	C	C	C	C	C	C
Distribution elements (MCCB, RCBO)	T	T	T	T	T	T	T	T	T	T
AC input terminals	T	T	T	T	T	T	T	T	T	T
DC relay terminals	T	T	T	T	T	T	T	T	T	T
DC output cable and terminals	T	T	T	T	T	T	T	T	T	T
Fan	I	I	I	I	I	I	I	I	I	I
Body	C	C	C	C	C	C	C	C	C	C
Grounding resistance	M	M	M	M	M	M	M	M	M	M

C : Clean

I : Inspect (check, approve, clean, tighten or replace if necessary)

M: Measure

T : Tighten

R : Review

Air filters

Air filters should be replaced every year when going for maintenance.

Plugs

All spark plugs should be checked when going for maintenance. If the plug is broken or cracked, it should be replaced. Furthermore, a charging test should be performed with all Plugs.

Display

During maintenance, the screen should be checked using the physical buttons, as the screen is non-touch. All functions can be controlled through these buttons. If there is no issue with the button operations, the screen should be cleaned.

Distribution elements (MCCB, RCBO)

Distribution elements (MCCB, RCBO) should be checked and tightened when going for maintenance. These elements can be tightened with a screwdriver with a torque of 2 Nm.

AC input terminals

The AC input terminals should be checked and tightened when going for maintenance These terminals should be tightened with a torque of 8 Nm for metric 8 bolts and 10 Nm for metric 10 bolts.

DC relay terminals

DC relay ends should be checked when going for maintenance. Tightening process should be performed with 6.5 Nm.

DC output cable and terminals

DC output cable and terminals should be checked when going for maintenance. They should be checked for any damage.

Fan

Fans should be checked when going for maintenance. In case of any breakage or damage, the damaged fan must be replaced. If there is no problem with the fans, a charging attempt should be made. It should be checked whether the fans rotate during this charging.

Body

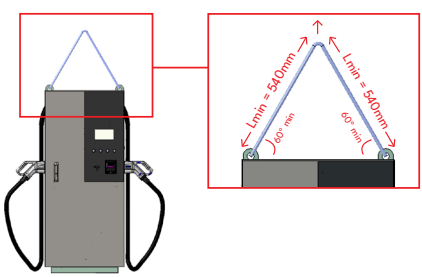
The outer cabinet should be cleaned when going for maintenance.

Grounding resistance

A mechanism for measuring with a megger should be installed when going for maintenance. After the piles are driven, the voltage between the two piles should be less than 1V.

In cases where product transportation is required

During lifting, it is necessary to use 2 ropes of min 540mm (in case of using a single rope of L min=1080mm, the rope must be fixed from the middle lifting part).
During lifting, there should be a minimum angle of 60 degrees at both rope ends as shown in the image. Using a shorter sling will cause damage to the product.



17 - WIRELESS LAN TRANSMITTER SPECIFICATIONS

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 the Ukraine

Country Restrictions

This Wireless LAN equipment is intended for home and office use in all EU countries, the UK and Northern Ireland (and other countries following the relevant EU and/or UK directive). The 5.15 – 5.35 GHz band is restrictions indoor operations only in in all EU countries, the UK and Northern Ireland (and other countries following the relevant EU and/or UK directive). Public use is subject to general authorisation by the respective service provider.

Country	Restriction
Russian Federation	Indoor use only
Israel	5 GHz band only for 5180 MHz-5320 MHz range

The requirements for any country may change at any time. It's recommended that user checks with local authorities for the current status of their national regulations for both 2.4 GHz and 5 GHz wireless LANs.

Hereby, Vestel Mobilite SAN. VE TİC. A.Ş., declares that the radio equipment type EVC is in compliance with Directive 2014/53/EU and Radio Equipment Regulations 2017. The full text of the EU declaration of conformity is available at the following address: doc.vosshub.com.

VESTEL

MOBILITY

VESTEL MOBİLİTE SANAYİ VE TİCARET A.Ş. EGE SERBEST BÖLGE ŞUBESİ

Zafer SB Mah. Ayfer Sok. No:22 İç Kapı No:1 Gaziemir, İzmir/ TÜRKİYE

Telefon (pbx) : 90 (232) 251 72 90 Fax : 90 (232) 251 73 13

Gaziemir V.D. : 837 001 0241