



**ELECTRIC VEHICLE CHARGER
EVC03 DC SIRIUS SERIES**

User Manual



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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 must be kept in a safe place for future reference.
- Check that the voltage marked on the rating label and do not use charging station without appropriate mains voltage.
- Do not continue to operate the unit if you are in any doubt about it working normally, or if it is damaged in any way - switch off the mains supply circuit breakers (MCCB and RCCB) in upstream distribution panel. Consult your local dealer.
- The ambient temperature range during charging should be between $-35\text{ }^{\circ}\text{C}$ and $+50\text{ }^{\circ}\text{C}$ (without direct sunlight) and at a relative humidity of between 5 % and 95 %. Use the charging station only within these specified operating parameters.
- The device location should be selected to avoid excessive heating of the charging station. High operating temperature caused by direct sunlight or heating sources, may cause reduction of charging current or temporary interruption of charging process.
- The charging station is intended for outdoor and indoor use. It can also be used in public places.

- To reduce the risk of fire, electric shock or product damage, do not expose this unit to severe rain, snow, electrical storm or other severe weathers. Moreover, the charging station shall not be exposed to spilled or splashed liquids.
- Do not touch end terminals, electric vehicle connector and other hazardous live parts of the charging station with sharp metallic objects.
- Avoid exposure to heat sources and place the unit away from flammable, explosive, harsh, or combustible materials, chemicals, or vapors.
- Risk of Explosion. This equipment has internal arcing or sparking parts which should not be exposed to flammable vapors. It should not be located in a recessed area or below floor level.
- To prevent risk of explosion and electric shock, ensure that the specified Circuit Breaker and RCD are connected to building grid.
- Charging Station bottom must be at (or above) the ground level.
- Adaptors or conversion adaptors are not allowed to be used. Cable extension sets are not allowed to be used.
- The allowed current value of the service socket is maximum 10A.



WARNING: Never let people (including children) with reduced physical, sensory or mental capabilities or lack of experience and or knowledge use electrical devices unsupervised.



CAUTION: This vehicle charger unit is intended only for charging electric vehicles not requiring ventilation during charging.

1.2 - INSTRUCTIONS FOR DEALING WITH A FIRE AT CHARGING STATION

- Personal Safety: If you notice a fire or signs of danger, your own safety is the most important. Do not take risks.
- Immediate Notification of Emergency Services: Contact the appropriate emergency services in your region. Dial 998 or 112 the emergency number.
- Discontinuing Charging: If safe to do so, disconnect the charging cable from the vehicle and the charging station.
- Use of Fire Extinguishing Agents: If a fire extinguisher or other fire-fighting equipment is nearby and you are trained to use them, attempt to extinguish the fire. However, never risk your own safety.
- Avoid Direct Contact with the Fire: Do not attempt to extinguish the fire if you do not have the appropriate equipment or knowledge, or if the fire is too large or dangerous.
- Move Away from the Station: If the fire is uncontrolled or growing in strength, move away from the charging station while maintaining a safe distance.
- Avoid Inhaling Smoke: Try to avoid inhaling smoke. If possible, cover your nose and mouth with a damp cloth or clothing.
- Warn Others in the Area: Inform others in the vicinity about the fire hazard and encourage them to leave the area.
- Wait for Emergency Services: After safely leaving the area, wait for the arrival of emergency services at a location that is safe for you.
- No Return to the Station Premises: Do not return to the charging station premises until the emergency services have completed their operation.

- Reporting the Incident: Contact customer support to report the incident.

Remember, safety is paramount. In the event of a fire, always consult with local emergency services and follow their instructions.

1.3 - GROUND CONNECTION WARNINGS

- Charging station must be connected to a centrally grounded system. The ground conductor entering the charging station must be connected to the equipment grounding lug inside the charger. This should be run with circuit conductors and connected to the equipment grounding bar or lead on the charging station. Connections to the charging station are the responsibility of the installer and purchaser.
- To reduce the risk of electrical shock, connect only to properly grounded outlets.
- **WARNING** : Make sure that during installing and using, the charging station is constantly and properly grounded.

1.4 - POWER CABLES, PLUGS and CHARGING CABLE WARNINGS

- Be sure that plugs and sockets are compatible on charging station side.
- A damaged charging cable can cause fire or give you an electric shock. Do not use this product if the flexible Charging cable or vehicle cable is frayed, has broken insulation, or shows any other signs of damage.
- Ensure that the charge cable is well positioned thus; it will not be stepped on, tripped over, or subjected to damage or stress.
- Do not forcefully pull the charge cable or damage it with sharp objects.
- Never touch the power cable/plug or vehicle cable with wet hands as this could cause a short circuit or electric shock.
- To avoid a risk of fire or electric shock, do not use this device with an extension cable. If the mains cable or vehicle cable is damaged it must be replaced by the manufacturer, its service agent, or similarly qualified persons in order to avoid a hazard.
- Use appropriate protection when connecting to the main power distribution cable.

1.5 - REQUIRED UPSTREAM PROTECTIONS

- Class-I/B Lightning Protection must be connected to the upstream distribution panel. Min. cable length between the charger and the protection device recommended to be 10m. *The charger contains Class II/C Type Surge Protector Device (SPD).
- MCCB (Thermic Magnetic Circuit Breaker) must be connected to the upstream distribution board.
- Residual Current Device (Toroid) must be connected to the upstream cabinet.
- A single-pole 32 A MCB must be installed on the Neutral line in the upstream supply cabinet.

Model	Power	Input Voltage	Maximum Input AC current	Recommended Minimum Neutral Conductor Cross-Section (Cu)
EVC03-DC HP160**	160kW	400V (nom.)	247A	16mm ²
		360V (-%10)	274A	
EVC03-DC HP240UP	240kW	400V (nom.)	370A	16mm ²
		360V (-%10)	411A	

- Cable cross-sections must be selected by the installer in accordance with local and international standards, considering the specified maximum AC input current values, minimum allowed input voltage values, installation distances, and mounting location conditions.
- The PE cable cross-section should be at least half of the phase cable cross-section.
- It is recommended to use a CAT6 SFTP Ethernet cable.
- Cables must be suitable for outdoor use.
- Cables must be UV-protected and suitable for installation in underground conduits in compliance with local regulations.
- The AC input cable glands supplied with the product are suitable for cables with diameters in the range of 22–32 mm.

2 - DESCRIPTION

Model Name	<p>EVC3-HP Series (Name Coding: EVC03-HP*****)</p> <p>1st Asterisk (*) : Rated Power 160 : 160 kW DC Power Output (Upgradeable) 240 : 240 kW DC Power Output</p> <p>2nd Asterisk (*) : DC output combination 1 C : CCS Output (Non-cooled cable)</p> <p>3rd Asterisk (*) : DC output combination 2 C : CCS Output (Non-cooled cable)</p> <p>4th Asterisk (*) : Blank : No DC Meter EICH : Eichrecht Meter</p> <p>5th Asterisk (*) : VE : Vestel Edition</p>
Cabinet	EVC03HP240VE

3 - TECHNICAL SPECIFICATIONS

IEC Protection class		Class - I
Power Input	Input Rating	<ul style="list-style-type: none"> • 400 Vac $\pm 10\%$, 50/60 Hz, 370A / phase- (160UP/240 kW option)
	Connection	3P - N - PE (TN-S, TN-C-S or TT)
	Residual Current Monitoring	230Vac RCBO 1P+N, Type A, 30mA-16A (system)
	Power Factor	> 0.99
	Efficiency	> % 95
	Standby Power	< 110W
CCS Output - 1	Max Power	160/240kW options <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	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
	Interface Compliance	IEC 62196-1 / 3 IEC 62196-3-1 IEC 61851-1 / 23 / 24 ISO 15118-1 / 2 / 3 DIN 70121

CCS Output - 2	Max Power	160/240kW options <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	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
	Interface Compliance	IEC 62196-1 / 3 IEC 62196-3-1 IEC 61851-1 / 23 / 24 ISO 15118-1 / 2 / 3 DIN 70121
Internal Protections		Residual current sensing, Insulation monitoring, Over current / Over voltage / Under voltage / Short circuit / Over Temperature / Surge Protection

4 - USER INTERFACE & AUTHENTICATION

Display	17" Color TFT LCD
User Interface	Resistive Touch Screen
RFID Reader Module	ISO-14443A/B and ISO-15693
Payment module (Optional)	Contactless Credit Card kit options Please contact with the following service providers for installation. https://www.payter.com/contact https://www.nayax.com/contact/

5 - CONNECTIVITY

LAN Connectivity	Ethernet
WLAN Connectivity	2.4GHz/5GHz: 802.11 a/b/g/n/ac
Cellular Connectivity	GSM 900/1800 UMTS 900/2100 LTE Band 1/3/7/8/20/28A
OCPP Specification	OCPP 1.6 J

6 - MECHANIC SPECIFICATIONS









Material	Metal Panel	
Protection Degree	Ingress Protection Impact Protection	IP55 IK10
Cooling	Forced Air Cooling Fan	
Cable Length	CCS: 4.50 m CCS: 4.50 m	
Dimensions (Product)	2109 mm (Height) x 840mm (Width) x 1026 mm (Depth)	
Dimensions (with packing)	2300.0 mm (Height) x 1000.0 mm (Width) x 1090.0 mm (Depth)	
Weight (Product)	636 kg	
Weight with Package	828,5 kg with packing	

7 - ENVIRONMENTAL TECHNICAL 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
Storage Condition	Temperature	-40 °C to 80 °C
	Humidity	5% - 95% (relative humidity, non-condensing)

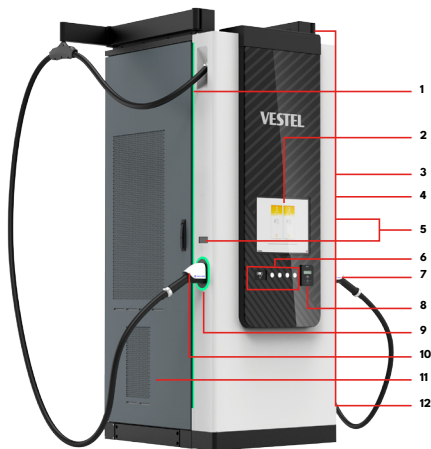
If the product is kept de-energised in a cold environment (till $t < -20^{\circ}\text{C}$), it must be allowed to warm up for a certain period of time before the current is drawn.

8 - BEHAVIOR OF STATUS INFORMATION LED

STATUS OF LED		MODE
	Blue 1-second Blink	When the product is initialized.
	Green Illuminates Steadily	While the product is in standby. (No charge).
	Blue Illuminates Steadily	When the cable is inserted to EV.
	Green flashing Illuminates	In the process until charging starts.
	Charge percentage is according to the number of leds, the top 3 leds blinks.	While Charging.
	Blue Illuminates Steadily	Charging is suspended or finished.
	Red Illuminates Steadily	Error.
	Blue until plug is removed.	Charging is finished.

9 - GENERAL INFORMATION

9.1 - INTRODUCTION OF THE PRODUCT COMPONENTS



- 1-** LED
- 2-** Display
- 3-** Access cover for fan, relay and mains switch
- 4-** Emergency stop button (optional)
- 5-** MID meter (optional)
- 6-** RFID reader, buttons
- 7-** DC-CCS output plug
- 8-** Credit card reader (optional)
- 9-** CCS dummy socket
- 10-** DC-CCS output plug
- 11-** Access cover for CTB, PLC card and HMI, power modules.
- 12-** Cable management (optional)

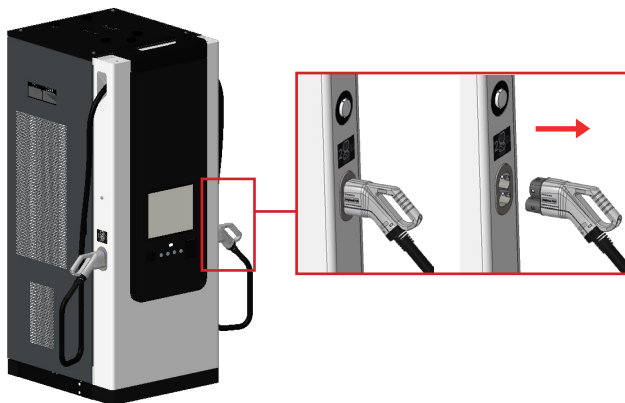
All products' images are given for representative purpose only

9.2 - PLUGGING CHARGING CABLE

Plug/unplug the charging cable to to/from the socket outlet.

9.2.1 - CCS OUTLET

Unplug the charging plug to remove it from the device. Then plug it into the vehicle to start charging.

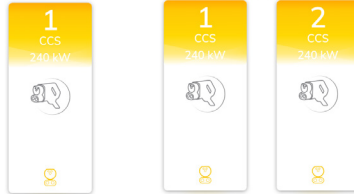


All products' images are given for representative purpose only

10 - CHARGING SCENARIOS (INCLUDES ALL SCENARIOS)

In the main screen on the charging station display, you may either tap the plug you want to use or simply connect that plug to your car.

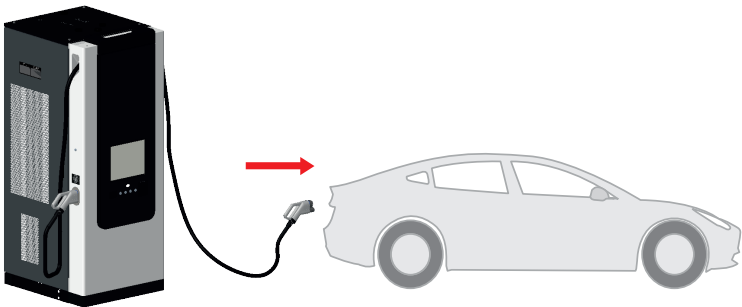
NOTE: The power value in the display image may vary depending on the power version of the product.



10.1 - DC CCS OUTLET

10.1.1 - VEHICLE CONNECTION & CHARGING

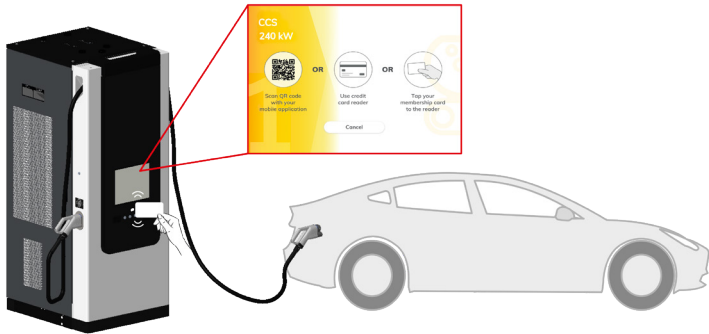
1- Connect charging cable to move to payment screen.



All products' images are given for representative purpose only

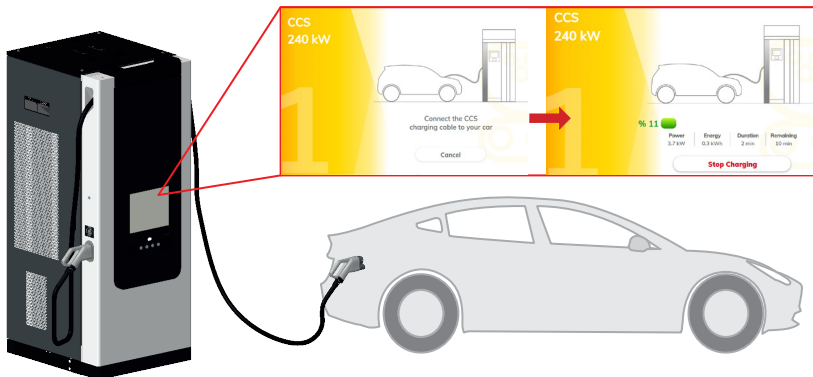
2- Scan your RFID card, QR Code to start charging or the use credit card reader. Credit card reader (optional) appears on the screen when there is a payment module.

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



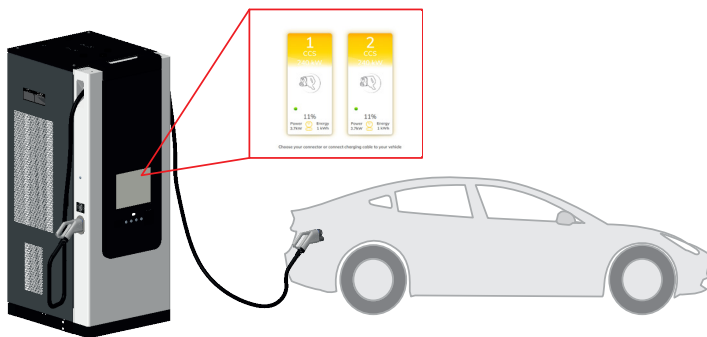
All products' images are given for representative purpose only

3- It may take a few seconds for charging session to start. Charging state can be seen in charging page.



All products' images are given for representative purpose only

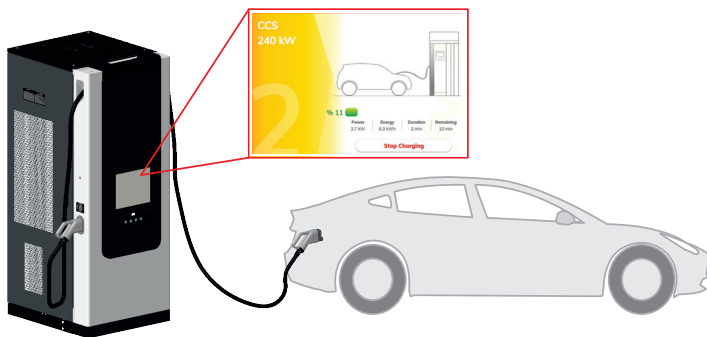
4- While charging, charging state can be seen in the main menu.



All products' images are given for representative purpose only

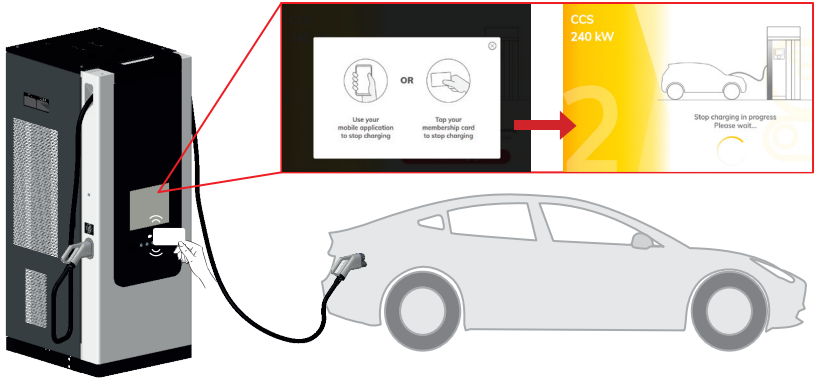
10.1.2 - STOP CHARGING

1- Click "Stop Charging" to end the charging session.



All products' images are given for representative purpose only

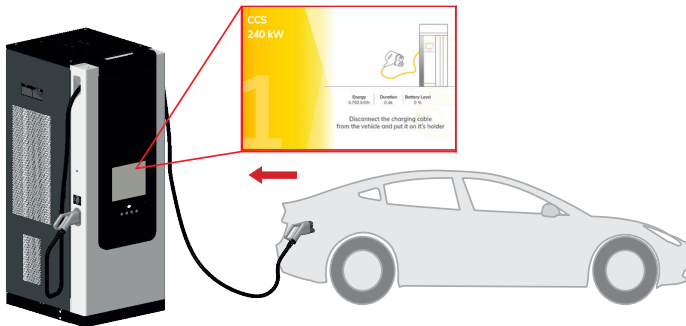
2- Scan your RFID card or scan QR Code to stop charging.



All products' images are given for representative purpose only

3- Disconnect the charging cable.

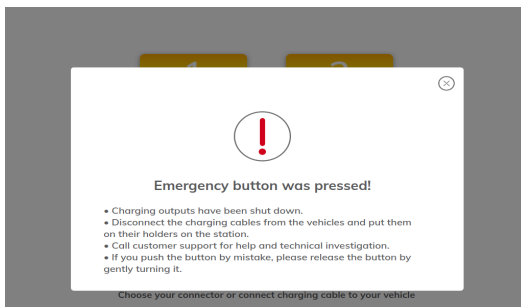
After disconnection, you will automatically move to the main screen.



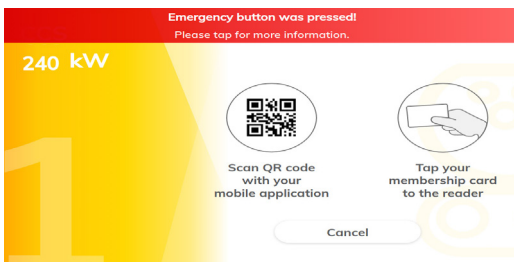
All products' images are given for representative purpose only

10.1.3 - EMERGENCY STOP (OPTIONAL)

Please follow screen when emergency stop pressed.



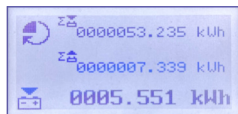
Choose your connector or connect charging cable to your vehicle



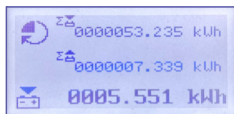
11 - PRODUCTS WITH CERTIFIED ENERGY METER (OPTIONAL)

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

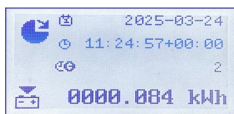


Date and time on site at the beginning of the transaction Total duration of the transaction.

RFID/Autocharge

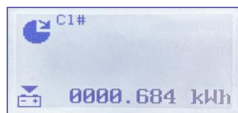


Credit card

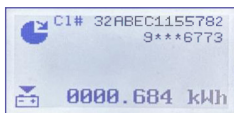


Prefix of the charging station operator, followed by the first 6 digits and the last 4 digits of the credit card ID.

Customer RFID/Autocharge ID

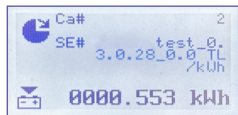


Customer credit card ID

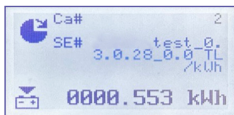


Cable compensation, EVSE identification input and charging point ID_Sw-Version_Tariff (chargepointid_Sw version_tariff) with currency.

RFID/Autocharge

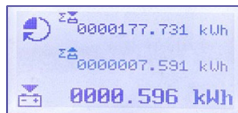


Credit card

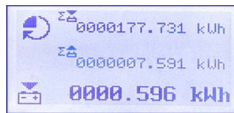


Energy register at the end of the transaction.

RFID/Autocharge

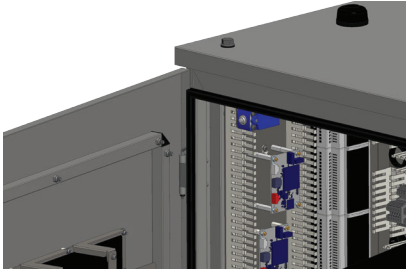


Credit card

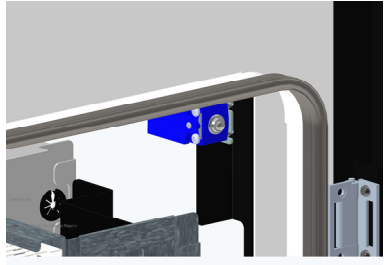


12 - DOOR SWITCH

The behaviour 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 over the main panel outside the station with a control lead to be taken over the dry contact. This information is also transmitted to the service via OCPP.



Side Doors

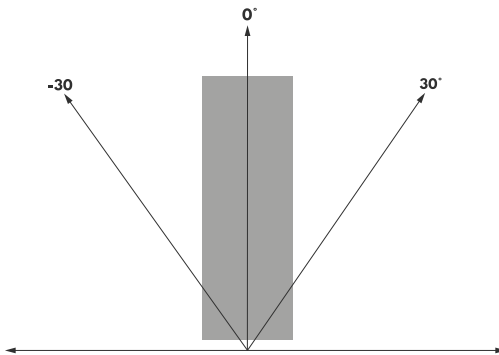


Front Door

13 - TILT SENSOR

If the product reaches the determined tilt angle in forward or reverse direction, the tilt sensor takes the tilt angle information on the OCPP and disables the sockets and prints "Out Of Order" on the screen. But it does not cut the product energy. In this case, the product must be de-energised by the charging station operator from the energy panel to which it is connected.

Note: The tilt angle is 30 degrees by default, but this value can be changed via the WEB UI link.



14 - ERROR AND FAULT CONDITIONS

- There are two type of errors or faults:
- **General Errors:** This fault or error effects all two outputs.
- **Charging Output Errors:** Only one socket or plug effected by this fault or error condition.

14.1 - ERROR CONDITIONS

Problem	Possible Causes	Recommended Solutions
Power Failure	Power outage or the grid voltage is not in specified range.	Check input circuit breakers are not tripped and input voltage range and rotation is as specified in installation guideline.
Fan Failure	Fan malfunctioning.	Check the fans. Remove or clean any elements that may prevent fan blades from spinning.
CCS output unavailable	RCCB is tripped	Check cable isolation first. Turn on RCCB. (See section "CIRCUIT BREAKER LOCATIONS FOR CHARGING OUTPUTS") Check functionality for the station output.
Chademo output unavailable	RCCB is tripped	Check cable isolation first. Turn on RCCB. (See section "CIRCUIT BREAKER LOCATIONS FOR CHARGING OUTPUTS") Check functionality for the station.
All outputs unavailable	General error	Please check if there is a power outage. Then, check the upstream distribution box circuit breaker. If the outputs are still unavailable please contact authorized service.

15 - CLEANING AND MAINTENANCE

DANGER

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

16 - PERIODIC MAINTENANCE LIST

	Maintenance Period (years)									
	1	2	3	4	5	6	7	8	9	10
Air filters	R	R	R	R	R	R	R	R	R	R
Distribution elements (MCCB, MCB, RCCB, RCBO)	T	T	T	T	T	T	T	T	T	T
AC input and relay terminals	T	T	T	T	T	T	T	T	T	T
Fan	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 cables and terminals	T	T	T	T	T	T	T	T	T	T
Cabinet body	C	C	C	C	C	C	C	C	C	C
Grounding 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 cooling unit coolant**	I	I	I	I	R	I	I	I	I	R

C : Clean

I : Inspect (check, confirm, clean, tighten or replace if required)

M : Measure

T : Tighten

R : Replace

Air filters

Air filters must be changed every year when it goes in for servicing.

Distribution elements (MCCB, MCB, RCCB, RCBO)

The relevant section in the service manual must be consulted for the part to be inspected and the required checks and tightening must be done with a torque of 2 Nm for MCB and RCBO's and 25 Nm for MCCB when it goes in for servicing.

AC input and relay terminals

The relevant section in the service manual must be consulted for the part to be inspected and the required checks and tightening must be done when it goes in for servicing. Tightening must be done to 9 Nm for AC Contactors.

M6 bolts must be tightened to 8 Nm, M8 bolts to 20 Nm, M10 bolts to 25 Nm, M12 bolts to 45 Nm

Fan

The fans must be visually inspected when it goes in for servicing. All broken or damaged fans must be replaced. If there is no problem with the fans, run a test charge. Check if the fans spin during this test charge.

DC relay terminals

The relevant section in the service manual must be consulted for the part to be inspected and the required checks and tightening must be done when it goes in for servicing. Tightening must be done to 10 Nm.

DC output cables and terminals

The DC output cables and terminals must be visually checked when it goes in for servicing. Check for loose or broken connections.

M6 bolts must be tightened to 8 Nm, M8 bolts to 20 Nm, M10 bolts to 25 Nm, M12 bolts to 45 Nm.

Cabinet body

The exterior cabinet must be cleaned when it goes in for servicing.

Grounding resistance

A system must be established with the omega just like measuring the ground resistance when it goes in for servicing. After the stakes are driven in, the voltage between the two stakes must be under 1V.

Liquid cooling unit **

Run a test charge with the liquid cooling plug (gun) when it goes in for servicing. The liquid should be seen to be flowing through the pipes on the cooling unit after waiting 5 minutes during the test charge.

Liquid cooling unit coolant**

The coolant in the liquid cooling unit must be checked when it goes in for servicing. If there is any dirt in the coolant, it must be replaced. Other than that, the coolant should be replaced every 5 years.

****Units found exclusively in EVC03 stations. The service manual's section on liquid cooling has a detailed explanation.**

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



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