



**ELECTRIC VEHICLE CHARGER  
EVC15 VEGA DUAL 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**



AC grid connection and load planning of the electric vehicle charging device shall be reviewed and approved by authorities as specified by the regional or national electric regulations and standards in effect. For multiple electric vehicle charger installations the load plan shall be established accordingly. The manufacturer shall not be held liable directly or indirectly for any reason whatsoever in the event of damages and risks that are borne of errors due to AC grid supply connection or load planning.

## **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 (MCB and RCCB). Consult your local dealer.
- The ambient temperature range should be between  $-25\text{ }^{\circ}\text{C}$  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 conditions.
- 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.

- This device is intended only for charging vehicles not requiring ventilation during charging. This device is not support ventilation.
- To prevent risk of explosion and electric shock, ensure that the specified Circuit Breaker and RCD are connected to building grid.
- The lowest part of the socket-outlet shall be located at a height between 30 mm above ground level.
- Adaptors or conversion adaptors are not allowed to be used. Cable extension sets are not allowed to be used.
- Use this product at an altitude of less than 3000 meters above sea level.
- This charging station is floor mounted.
- Do not place items filled with liquid, such as cups, bottles, etc., on the product.
- Keep the plastic packing materials out of the reach of babies, small children, and pets to avoid the danger of suffocation.
- Do not wash the device with water.
- Do not use abrasive clothes, wet clothes, alcohol, or detergents. A microfiber cloth is recommended.
- It should be kept in its original box in order not to damage the components of the device during transportation.
- Defects and damage that occur during transportation after the delivery of the product to the customer are not covered by the warranty.
- The product should be used under the porch.

“MANUFACTURER DOES NOT WARRANT THAT THE OPERATION OF THE PRODUCT WILL BE UNINTERRUPTED OR ERROR-FREE.”



**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- GROUND CONNECTION WARNINGS

- This product must be connected to a grounded, metal, permanent wiring system. or an equipment-grounding conductor must be run with the circuit conductors and connected to the equipment grounding terminal or lead on the product.
- 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.

### 1.3- POWER CABLES, PLUGS and CHARGING CABLE WARNINGS

- Be sure that charging cable is Type 2 socket 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 charging cable is well positioned thus; it will not be stepped on, tripped over, or subjected to damage or stress.
- Do not forcefully pull the charging 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.

### 1.4 - REQUIRED UPSTREAM PROTECTIONS

- MCCB (Thermic Magnetic Adjustable) must be connected to the upstream distribution box.

Model	AC Socket1	AC Socket2	Power Output	Input Max AC Current	Recommended Cross Section for AC Mains	Required Circuit Breaker
EVC15-AC44	22	22	44 kW	64A	25-35 mm <sup>2</sup>	80A Curve-C

For distances of 50 meters and below, recommended cross section for AC mains can be applicable. For the distances more than 50 meters, the cable section calculation should be made by the electrical installer.

When selecting the installation location, take into consideration the minimum space needed for operating and maintenance. Note that EVC does not have hinges on the maintenance door!

When installing the unit, respect the minimum distances space for maintenance and safety reasons.

Please comply accordingly to your country specifications.

The next picture shows how it should be installed.

- Do not install near areas where water or fluids can penetrate into the unit.
- Do not install the unit in unstable terrain.

## 2 - DESCRIPTION

<p><b>Model Name</b></p>	<p><b>MODEL DESCRIPTION: EVC10-AC****-*</b></p> <p>EVC15 : Electric Vehicle AC Charger (Mechanical Cabinet 10)</p> <p>1st Asterisk (*) : Rated Power</p> <p>22 : 2x11 kW (3Phase Supply Equipment)</p> <p>44 : 2x22 kW (3Phase Supply Equipment)</p> <p>2nd Asterisk (*) can include combinations of the following communication module options. RFID reader is standard equipment for all of the model variants. "S" option must be included for selecting combinations of W,L and P:</p> <p>Blank : No connectivity module except RFID reader</p> <p>S : Smart Board with Ethernet Port</p> <p>W : Wi-Fi module</p> <p>L : LTE / 3G / 2G module</p> <p>P : ISO 15118 PLC module</p> <p>3rd Asterisk (*) can be one of the following:</p> <p>D : 7" TFT color display</p> <p>4th Asterisk (*) can include combinations of the following:</p> <p>A : Charging unit with Type-A RCCB</p> <p>MID : Charging unit with MID Meter</p> <p>-EICH : Charging Unit with Eichrecht Conformity</p> <p>5th Asterisk (*) can be one of the following:</p> <p>Blank : Case-B Connection with normal socket</p> <p>T2S : Case-B Connection with shuttered socket</p> <p>T2P : Case-C Connection with Type-2 plug</p>
<p><b>Cabinet</b></p>	<p>EVC15</p>

### 3 - TECHNICAL SPECIFICATION

This product is compliant to IEC61851-1 (Ed3.0) and IEC61851-21-2 standard for Mode 3 use.

<b>Model</b>	EVC15-AC22 Series	EVC15-AC44 Series
<b>IEC Protection class</b>	Class - I	
<b>Socket Model</b>	2 x Socket TYPE 2 (IEC/EN 62196-1 - IEC/EN 62196-2) 2 x Shutter Socket IEC/EN 62196-1 - IEC/EN 62196-2 Type-2 (Optional)	
<b>Cable Model</b>	2 x Cable with TYPE 2 ( IEC 62196) Female Plug	
<b>Voltage and Current Rated</b>	230/400VAC 50/60Hz-3-phase 16A for 2 outlets, 32A for single outlet	230/400VAC 50/60Hz- 3-phase 32A for 2 outlets
<b>AC Maximum Charge Output</b>	22kW	44kW
<b>Serial Interface</b>	Modbus / M-Bus over RS485	
<b>Power Level Control</b>	WebConfig UI	
<b>Display</b>	7" TFT color display	
<b>MID meter (Optional)</b>	Class B MID meter Eichrecht conformity	
<b>Built-in Residual Current Sensing module</b>	6mA DC	
<b>Built - in RCCB</b>	4P - 20A - 30mA RCCB Type-A	4P-40A - 30mA RCCB Type- A
<b>Built - in MCB</b>	4P- 20A MCB Type-C	4P-40A MCB Type-C
<b>Required AC Mains Cable</b>	Min 5x6 mm <sup>2</sup> (< 50 m)	Min 5x16 mm <sup>2</sup> (< 50 m)

### CONNECTIVITY

<b>Ethernet</b>	10/100 Mbps Ethernet
<b>Wi-Fi</b>	Wi-Fi 802.11 a/b/g/n/ac
<b>Cellular (Optional)</b>	LTE: B1 (2100 MHz), B3 (1800 MHz), B7 (2600 MHz), B8 (900 MHz), B20 (800 MHz) WCDMA: B1 (2100 MHz), B8 (900 MHz) GSM: B3 (1800 MHz), B8 (900 MHz)
<b>Bluetooth</b>	BT 5.1 ; BT 4.2 low energy (Optional)

## WIRELESS LAN TRANSMITTER SPECIFICATIONS

### 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 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 Mobility 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](http://doc.vosshub.com).

## AUTHORIZATION

RFID Reader Module	ISO/IEC 14443A/B and ISO/IEC15693
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## OTHER FEATURES (Connected Models)

Remote Diagnostics	Remote Diagnostics over OCPP
OCPP	OCPP 1.6 JSON
Load Management	Ethernet / Wi-Fi / RS485 OCPP Smart Charging MultiCP Local Load Balancing
Software Update	Remote software update over OCPP WebconfigUI update Remote software update with server

## MECHANICAL SPECIFICATIONS

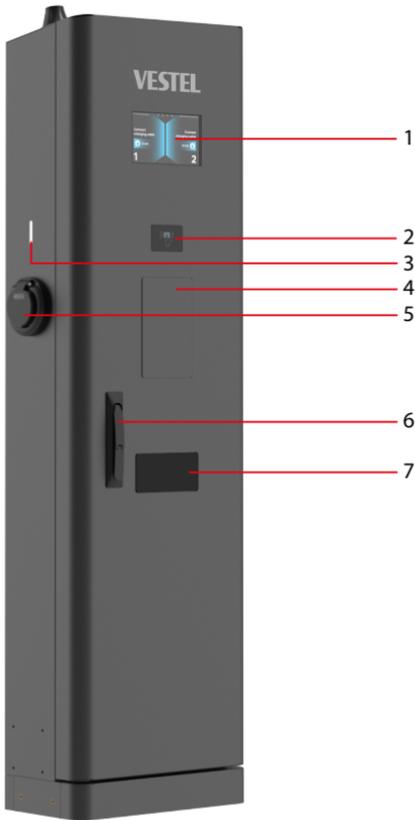
Material	Metal Panel	
Protection Degree	Ingress Protection Impact Protection	IP54 IK10
Dimensions	1363 mm (Height) x 380 mm (Width) x 210 mm (Depth)	
Dimensions (with packing)	1515 mm (Height) x 850 mm (Width) x 630 mm (Depth)	
AC Mains Cable Dimension & Cable Gland Diameters	For 16mm <sup>2</sup> - 35mm <sup>2</sup> AC Mains, suitable cable gland diameter interval is 22mm <sup>2</sup> - 35mm <sup>2</sup>	
Weight	41 kg	
Weight (with packing)	62 kg	

## ENVIRONMENTAL SPECIFICATIONS

Operation Condition	Temperature	-25 °C to + 50 °C
	Humidity	5 % - 95 % (Relative humidity, non-condensing)
	Altitude	0 - 3.000m

## 4 - GENERAL INFORMATION

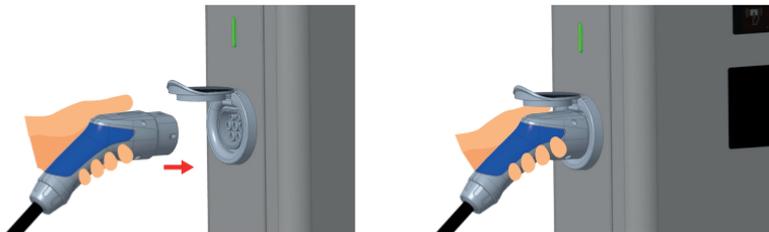
### 4.1 - INTRODUCTION OF THE PRODUCT COMPONENTS



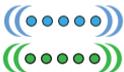
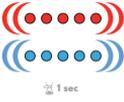
- 1- Display
- 2- RFID Card Reader
- 3- Notification LED
- 4- Payment Terminal Area (Optional)
- 5- AC Type-2 Socket Outlet
- 6- Lock Mechanism
- 7- MID Meter

## 4.2 - PLUGGING CHARGING CABLE

Open the front cover of the available socket outlet and plug the charging cable to the socket outlet.



### 4.3 - BEHAVIOUR OF THE STATUS INFORMATION LED

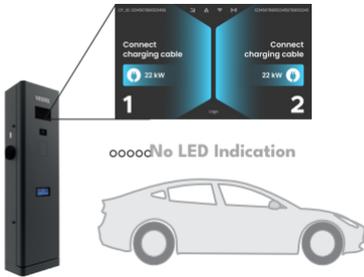
Status of the LED		Status of the Charging Station
	Blinks Blue and Green	Charging station is starting up / booting.
	No LED Indication	Charging device is ready to charge. Finished charging with RFID card
	Blinks blue 2,4 seconds OFF 1,2 seconds ON	Electric Vehicle is connected. Charging Station is waiting for RFID card authorisation.
	Green Glowing	Charging is authenticated.
	Blue Glowing	Charging in progress
	Constant Blue	Charging suspended or finished
	Constant Red	Fault condition
	Blinks red	Ventilation required mode
	Blinks purple	Charging with current limited to 16A due to over temperature
	Blinks purple 2,4 seconds OFF 1,2 seconds ON	TIC Communication Error
	Constant Purple	Charging not possible due to over temperature
		Park Automation System disabled charging
		Charging paused due to power optimizer low current limit or EVC low current limit
	Blinks Red 10 seconds ON 2 seconds OFF	Over Voltage, Under Voltage, Protective Earth Or Phase Reversal Fault, Installation Error
	Blinks red and blue	Charging station is reserved. Charging station is waiting for Eco Time interval and Waiting in Peak Hours Mode.
	Constant Red	Firmware update
	Green Glowing	Authorised RFID Card is tapped while charging cable is connected

Status of the LED		Status of the Charging Station
	Glows green for 30 secs	Authorised RFID Card is tapped while charging cable is not connected
	Blinks red for 3 times	Start/stop charging attempt with unauthorised RFID card
	Constant Yellow	Altered Firmware
	Blinking Yellow	Tamper switch is activated

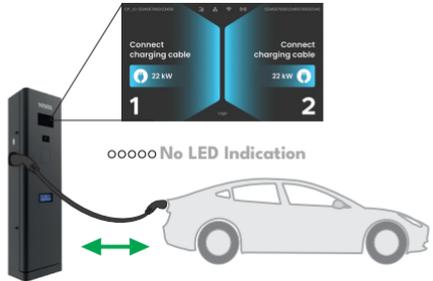
## 5 - CHARGING SCENARIOS

### 5.1 - SINGLE VEHICLE CONNECTION

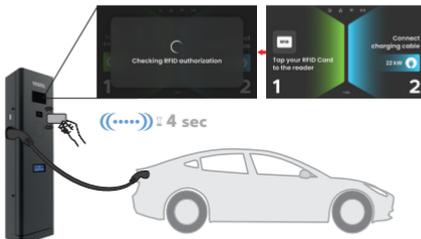
**1 -** Ensure that your vehicle and the station is ready for charging.



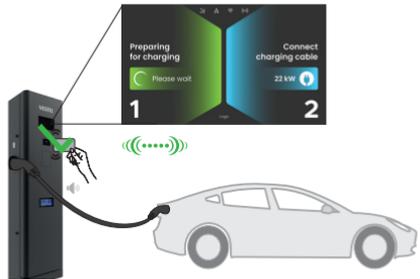
**2 -** Insert the charging plug to the vehicle inlet and charging station socket outlet.



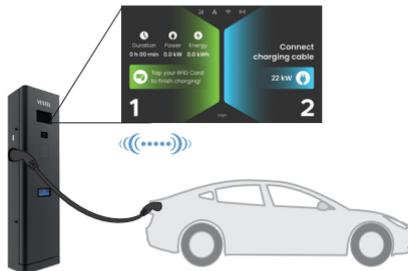
**3.A -** Tap the RFID card to the RFID reader. You may start charging with a card which is provided by your charging operator.



**3.B -** You may start charging with a card that has been authorized before. If the RFID Card is authorized by OCPP Central System, charging will start.



**4 -** Charging starts and status indicator LED glows in blue.

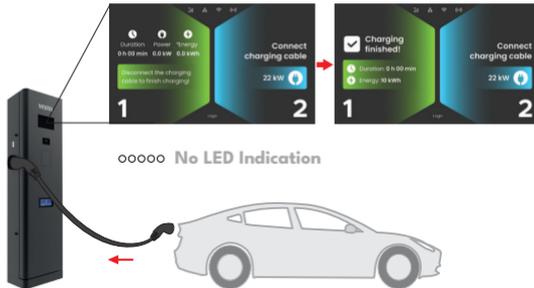
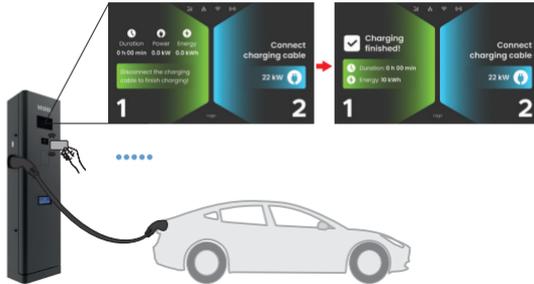


**NOTE :** Charging operation is rejected by the charging station when you want to start charging with an unauthorized card.

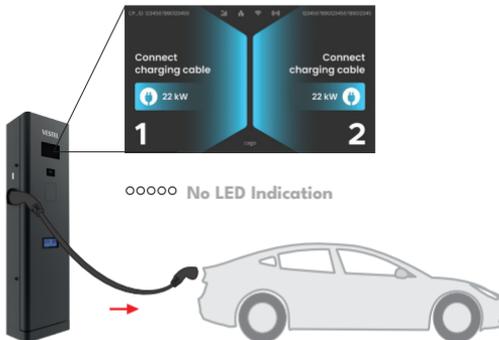
## 5.2 - STOP CHARGING

You may follow the alternative methods specified below to stop charging. **DO NOT ATTEMPT TO UNPLUG THE CHARGING CABLE FROM THE STATION BEFORE STOPPING CHARGING.** OTHERWISE LOCKING MECHANISM MAY BE BROKEN.

- 1 - You can terminate charging by tapping the RFID card that you have started charging before or if your electric vehicle supports stopping charging session from car, you can stop charging session firstly and unplugged your cable from car.



- 2 - Unplug the charging cable from the station.



### 5.3 - SECOND VEHICLE CONNECTION with INDIVIDUAL RFID CARDS

This part explains the usage of second charging outlet of the station in the same time while first outlet has ongoing charging session which is started by tapping different RFID card.

**1 - Ensure that your vehicle and the station is ready for charging.**



**2 - Insert the charging plug to the vehicle inlet and charging station socket outlet.**



**3- Tap the RFID card to the RFID reader. You may start charging with a card which is provided by your charging operator.**



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**4-** You may start charging with a card that has been authorized before. If the RFID Card is authorized by OCPP Central System, charging will start.



**5 -** Charging starts and status indicator LED glows in blue.



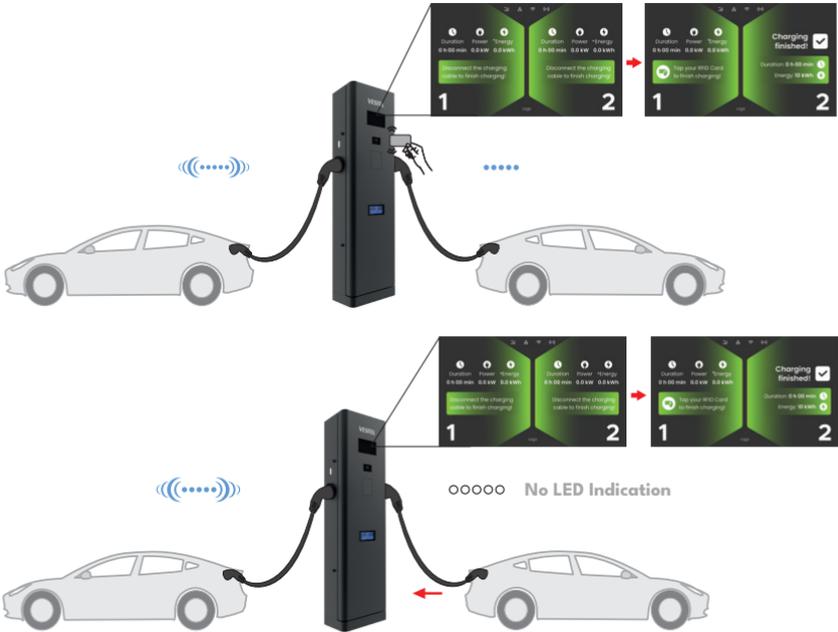
**NOTE :** Charging operation is rejected by the charging station when you want to start charging with an unauthorized card.

**NOTE :** If both outputs of the charging station are plugged and there is no authorization for any plug, if you want to start charging by tapping any authorised RFID card , the station will display a warning on the screen and direct you to remove one of the charging cables and will not start charging. For this reason, in order to start charging from separate sockets, first connect any charging cable and authorise that outlet before connecting the other charging cable.

## 5.4 - STOP CHARGING

You may follow the alternative methods specified below to stop charging. **DO NOT ATTEMPT TO UNPLUG THE CHARGING CABLE FROM THE STATION BEFORE STOPPING CHARGING. OTHERWISE LOCKING MECHANISM MAY BE BROKEN.**

**1 -** Whichever RFID card is used in the selected socket when the charging process is started, the charging process in that socket can be stopped with same RFID card or if your electric vehicle supports stopping charging session from car, you can stop charging session firstly and unplugged your cable from car.



**2 -** Unplug the charging cable from the station.



## 6 - ERROR AND FAULT CONDITIONS

In case of fault, “Out of order” warning is shown on display with error codes.



### 6.1 - GENERAL ERROR CONDITION

If the status information LED is constant red, turn off the charging station from your main box and turn on again. if the LED is still constant red then call an authorized service.



## 6.2 - OTHER ERROR CONDITIONS

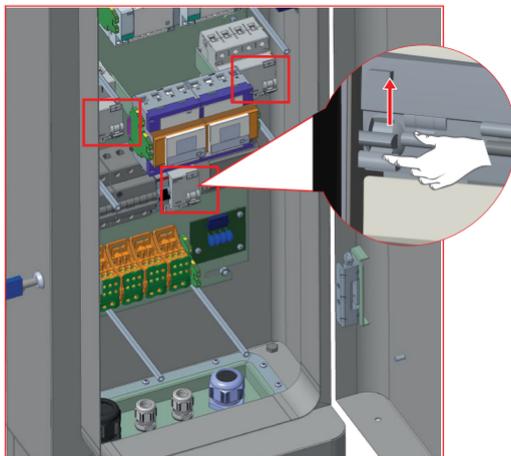
Status Indicator	Problem	Possible Causes	Recommended Solutions
	<p>The status information LED blinks in red. 10 seconds ON 2 seconds OFF</p>	<p>AC supply voltage may not be in the range in the operation manual, grounding connection may not be performed and/or phase/neutral connections may be reversed or the charging station may have a fault.</p>	<p>Please ensure that the voltage is in the specified range and that the grounding connection have been performed. If the button is still solid red, please contact authorized service.</p>
	<p>Even if the status information LED blinks in blue every four seconds, it is not possible to start charging the electric vehicle or to lock the plug in the charging station</p>	<p>The charging plug may not be connected properly to the charging device or the electric vehicle.</p>	<p>Ensure that the charging plug is connected properly on both sides. Please check if your electric vehicle is in charging mode.</p>
	<p>The status information LED blinks in red</p>	<p>You shall see this error notification if your vehicle is equipped with a battery type that requires ventilation.</p>	<p>This charging station is not suitable to charge such vehicles.</p>

## 6.3 - TRIPPING RELAY ON PRODUCTS WITH RCD and MCB

### **⚠ CAUTION**

#### 6.3.1 - TRIPPING THE RESIDUAL CURRENT DEVICE

- To access the RCCB, the front cover and the isolator plate must be opened. **For details, please refer to Installation Guideline section 6.2.**
- Ensure that there is no failure on your vehicle or on the charging plug that may cause a residual current before resetting the tripped residual current device.
- After ensuring that there is no problem on your vehicle or on the charging plug, unplug the charging cable from the charging station. Then reactivate your charging station by resetting the switch as shown in the third part of the figure as shown below.
- If the problem still occurs, contact an authorized service. If the problem is solved, there may be some problem with your vehicle or charging cable. Please contact with your vehicle service.



#### 6.3.2 - DC 6mA LEAKAGE CURRENT SENSOR BEHAVIOR

The charging station is equipped with a DC leakage current sensor that reacts a DC leakage current higher than 6mA.

If the charging station goes to error state due to DC leakage current, charging cable must be unplugged from vehicle and then from the charging station to reset this error.

#### 6.3.3 - TRIPPING THE MCB

As explained in 6.3.1 and after making sure that there is no error, the MCB or fuse tripped in the same way.

## 7 - 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.

Failure to follow these warnings may result in death and serious injuries. Also, it may cause damage to your device.

**VESTEL**

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