

VESTEL



ELECTRIC VEHICLE CHARGER

User Manual



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SAFETY INFORMATION



CAUTION

RISK OF ELECTRIC SHOCK:



CAUTION: VESTEL 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 mains 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 mains supply connection or load planning.

IMPORTANT - Please read these instructions fully before installing or operating

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 -35°C and $+55^{\circ}\text{C}$ (-25°C and $+50^{\circ}\text{C}$ for RCCB equipped models: EVC04-AC***A-*) 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.

- 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 0,5 m and 1,5 m above ground level.
- Adaptors or conversion adapters are not allowed to be used. Cable extension sets are not allowed to be used.



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.

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.

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 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.

WALL MOUNTING WARNINGS

- Read the instructions before mounting your charging station on the wall.
- Do not install the charging station on a ceiling or inclined wall.
- Use the specified wall mounting screws and other accessories.
- This unit is rated for indoor or outdoor installation. If this unit is mounted outdoors, the hardware for connecting the conduits to the unit must be rated for outdoor installation and be installed properly to maintain the proper IP rating on the unit.

GENERAL INFORMATION

1 - INTRODUCTION OF THE PRODUCT COMPONENTS

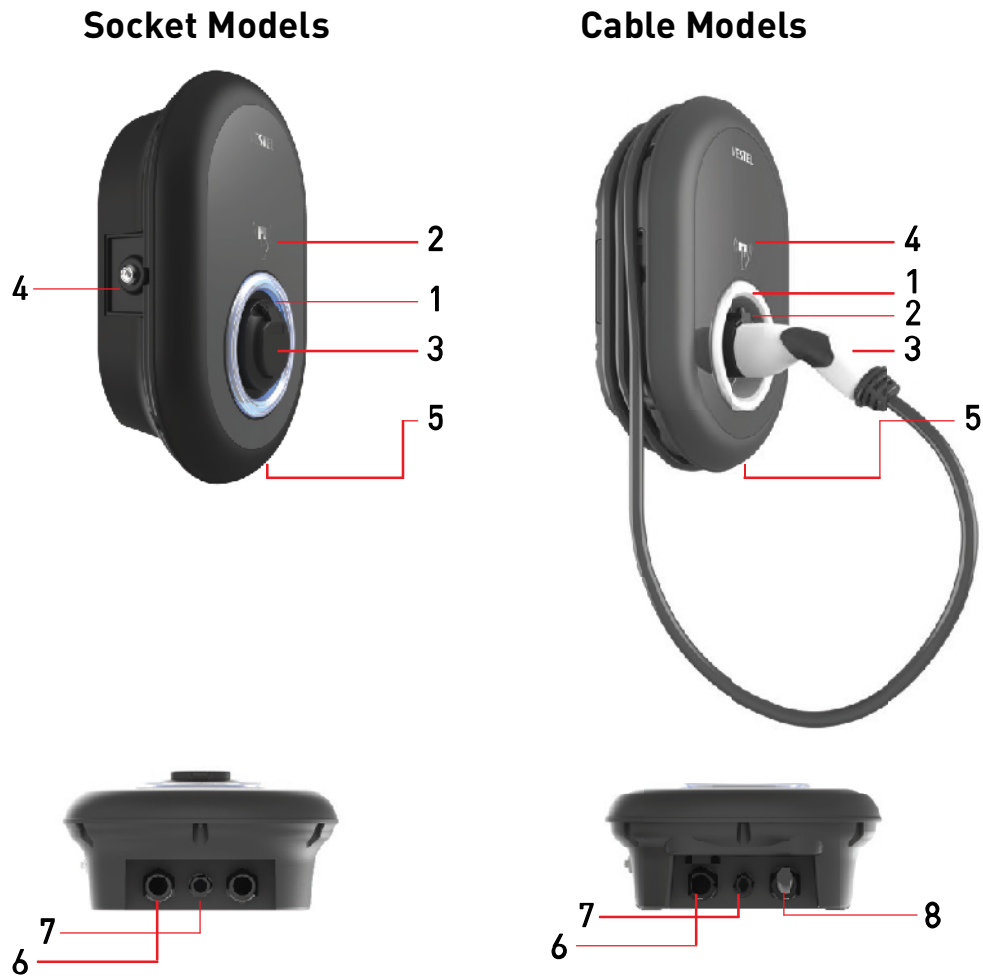


Figure-1

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Socket Models

- 1- Status indicator LED
- 2- RFID Card Reader
- 3- Socket Outlet
- 4- Access cover for residual current device
- 5- Product Label
- 6- Charging station supply inlet gland nut
- 7- Charging station communication cable gland nut

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Cable Models

- 1- Status indicator LED
- 2- Dummy Socket
- 3- Charging Plug
- 4- RFID Card Reader
- 5- Product Label
- 6- Charging station supply inlet gland nut
- 7- Charging station communication cable gland nut
- 8- Charging cable

2 - PLUG CHARGING CABLE

2.1 Socket Model

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

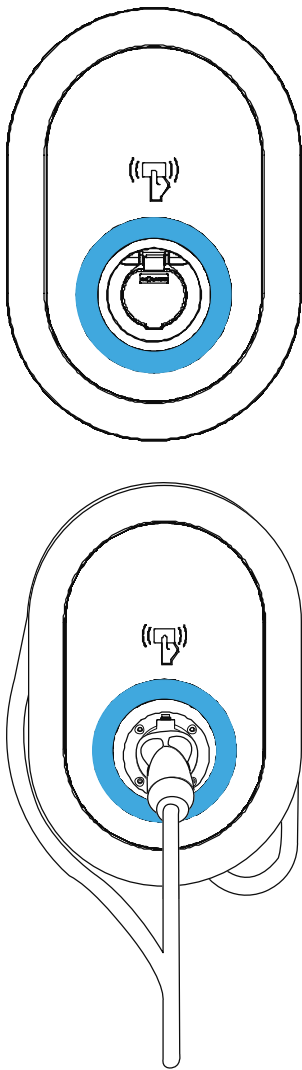


2.1 Cable Model

Press the button on top of the dummy socket in order to release charging plug from the charger, and unplug the charging plug. Then plug the charging plug to the vehicle to start charging.



3 - BEHAVIOUR OF THE STATUS INFORMATION LED



Status of the LED		Status of the Charging Station
	No LED Indication	Charging device is ready to charge.
	Blinks blue in 4 seconds	Electric Vehicle is connected. Charging Station is waiting for RFID card authorisation.
	Green Glowing	Charging is authorized.
	Blue Glowing	Charging in progress
	Constant Blue	Charging suspended or finished
	Constant Red	Fault condition
	Blinks red in 4 seconds	Ventilation required mode
	Blinks purple in 4 seconds	Charging with current limited to 16A due to over temperature
	Constant Purple	Charging not possible due to over temperature or power optimizer current limit is reached or the charger is disabled
	Blinks RED per second in 20 seconds	RFID Config

DESCRIPTION

1 - MODEL DESCRIPTION

Model Name	<p><u>MODEL DESCRIPTION: EVC04-AC**-*</u></p> <p>EVC04 : Electric Vehicle AC Charger (Mechanical Cabinet04)</p> <p>1st Asterisk (*) : Rated Power</p> <p>7 : 7.4kW (1Phase Supply Equipment)</p> <p>11 : 11kW (3Phase Supply Equipment)</p> <p>22 : 22kW (3Phase Supply Equipment)</p> <p>2nd Asterisk (*): 2nd asterisk can include combinations of the following</p> <p>Blank : No RCCB</p> <p>A : Charging unit with TypeA RCCB</p> <p>E : Charging unit with EV / ZE Ready Compliance</p> <p>3rd Asterisk (*) : 3rd asterisk can be one 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>T1P : Case-C Connection with Type-1 plug</p> <p>T1PUL : Case-C Connection with Type-1 plug (UL Approved)</p>
Cabinet	EVC04

2 - MODEL REFERENCES

	Single phase	Three phase	Type 2 socket output	Shuttered type 2 socket output	RCCB Type-A	DC 6mA RCD	Type-2 Attached Cable	Type-1 Attached Cable
EVC04-AC7	x		x			x		
EVC04-AC7A	x		x		x	x		
EVC04-AC7A-T2P	x				x	x	x	
EVC04-AC7A-T2S	x			x	x	x		
EVC04-AC7A-T1P	x				x	x		x
EVC04-AC22		x	x			x		
EVC04-AC22A		x	x		x	x		
EVC04-AC22A-T2P		x			x	x	x	
EVC04-AC22A-T2S		x		x	x	x		

TECHNICAL SPECIFICATIONS

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

Model		EVC04-AC22 Series	EVC04-AC11 Series
IEC Protection class		Class - I	Class - I
Vehicle Interface	Socket Model	Socket TYPE 2 (IEC 62196)	Socket TYPE 2 (IEC 62196)
	Cable Model	5 m Cable with TYPE 2 (IEC 62196) Female Plug	5 m Cable with TYPE 2 (IEC 62196) Female Plug
Voltage and Current Rates		400VAC 50/60 Hz - 3-phase 32A	400VAC 50/60 Hz- 3-phase 16A
AC Maximum Charge Output		22kW	11kW
Idle Power Consumption		3.5W	3.5W
Required Circuit Breaker on AC Mains		4P-40A MCB Type-C	4P-20A MCB Type-C
Required Leakage Current Relay on AC Mains (for products which are not equipped with RCCB Type A)		4P -40A - 30mA RCCB Type-A	4P -20A - 30mA RCCB Type-A
Required AC Mains Cable		5x 6 mm ² (< 50 m) External Dimensions: Ø 15-21 mm	5x4 mm ² (< 50 m) External Dimensions: Ø 15-21 mm

Model		EVC04-AC7 Series
IEC Protection class		Class - I
Vehicle Interface	Socket Model	Socket TYPE 2 (IEC 62196)
	Cable Model	5 m Cable with TYPE 2 (IEC 62196) Female Plug
Voltage and Current Rates		230VAC 50/60 Hz - 1-phase 32A
AC Maximum Charge Output		7.4kW
Idle Power Consumption		3.5W
Required Circuit Breaker on AC Mains		2P-40A MCB Type-C
Required Leakage Current Relay on AC Mains (for products which are not equipped with RCCB Type A)		2P -40A - 30mA RCCB Type-A
Required AC Mains Cable		3x 6 mm ² (< 50 m) External Dimensions: Ø 11-15 mm

AUTHORIZATION

RFID / NFC Module (Only for supporting models)	ISO-14443A/B and ISO-15693 NFC (ISO/IEC 18092 – ISO / IEC 21481)
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MECHANIC SPECIFICATIONS

Material	Plastic
Size Dimensions (Package) Weight AC Mains Cable Dimensions	315 mm (Width) x 460 mm (Height) x 135 mm (Depth) 405 mm (Width) x 530 mm (Height) x 325 mm (Depth) 5 kg for socket model, 8.9kg cable model, with package For 22 kW version Ø 15-21 mm For 11 kW version Ø 15-21 mm For 7.4 kW version Ø 11-15 mm

ENVIRONMENTAL TECHNICAL SPECIFICATIONS

Protection Class	Ingress Protection Impact Protection	IP54 IK10
Usage Conditions	Temperature Humidity Altitude	-35 °C to 55 °C (without direct sunlight) 5% - 95% (relative humidity, no dew) 0 - 4,000m
Storage Conditions	Temperature Humidity Altitude	-40 °C to 80 °C 5% - 95% (relative humidity, no dew) 0 - 5,000m

CHARGING

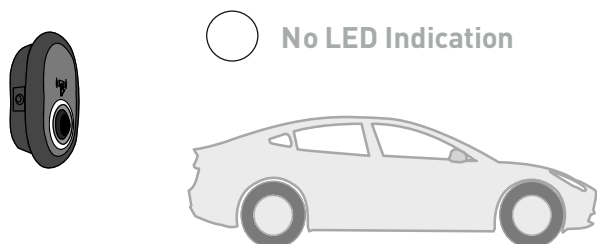
The product works in autostart charging mode by default. A Master RFID card is already registered and provided in the accessories kit.

1 - AUTOSTART CHARGING MODE

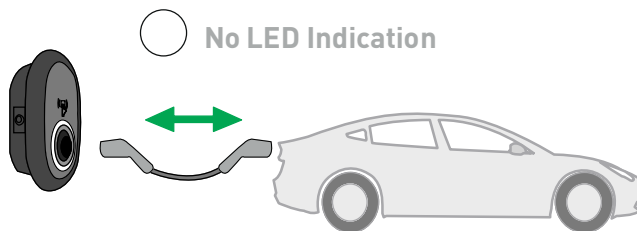
1.1 - SOCKET MODEL

1.1.1 - VEHICLE CONNECTION & CHARGING

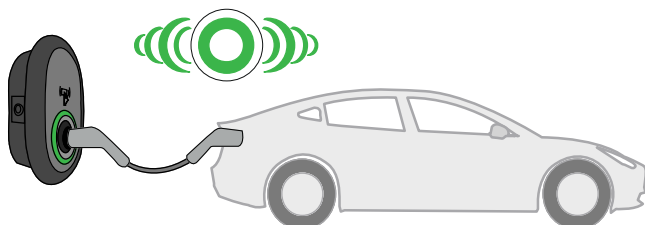
1 - Ensure that your vehicle and the station is ready for charging.



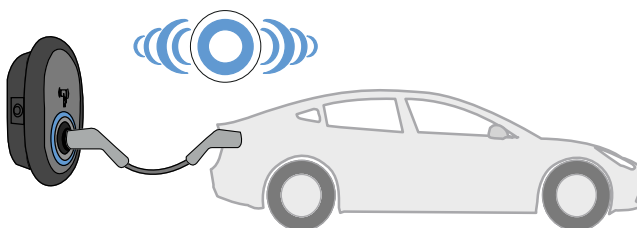
2 - Insert the charging plug to the vehicle inlet and charging station socket outlet.



3 - Insert the charging plug to the vehicle inlet and charging station and status indicator LED glows in green.

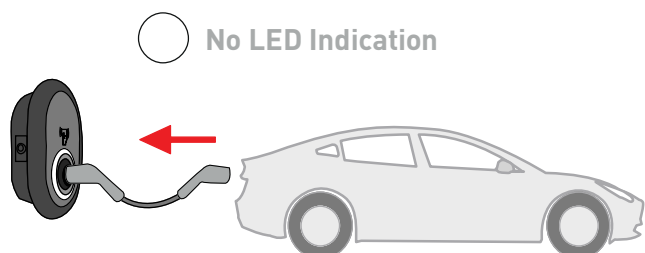


4 - Charging starts automatically, and status indicator LED glows in blue.

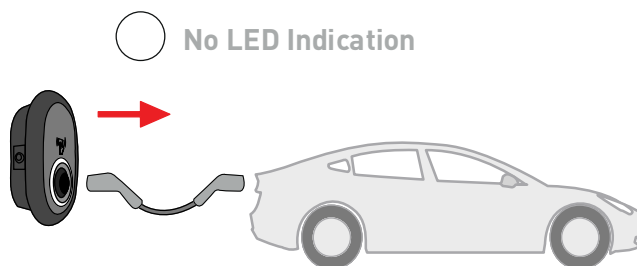


1.1.2 - STOP CHARGING

1- Unplug the charging cable from the vehicle first to stop charging. Do not attempt to remove the plug from the station before unplugging it from the vehicle. Otherwise locking mechanism may get damaged.



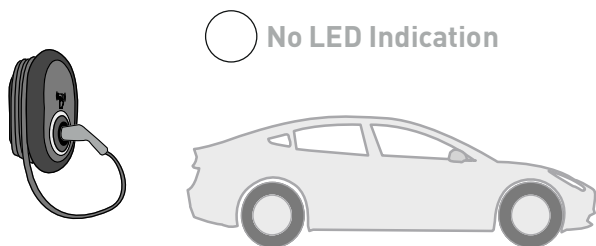
2 - Unplug the charging cable from the station.



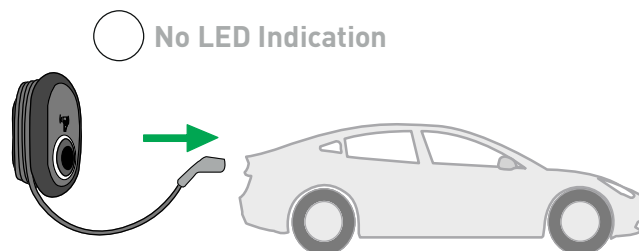
1.2 - CABLE MODEL

1.2.1 - VEHICLE CONNECTION & CHARGING

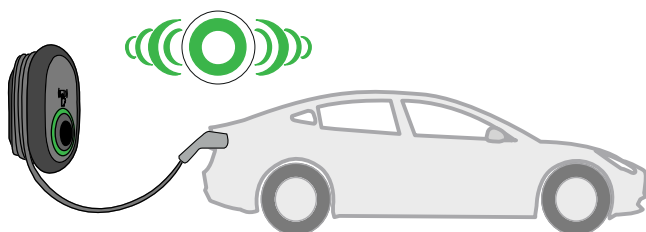
1 - Ensure that your vehicle and the station is ready for charging.



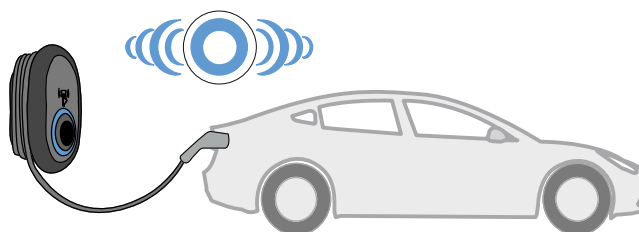
2 - Insert the charging plug to the vehicle inlet and charging station socket outlet.



3 - Insert the charging plug to the vehicle inlet and status indicator LED glows in green.

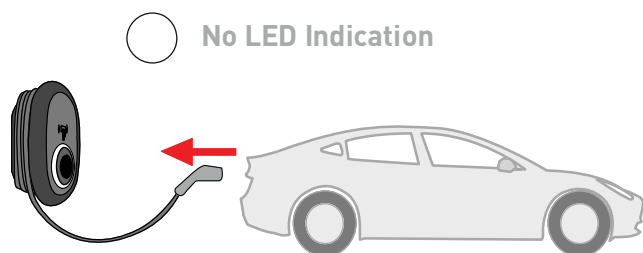


4 - Charging starts automatically, and status indicator LED glows in blue.

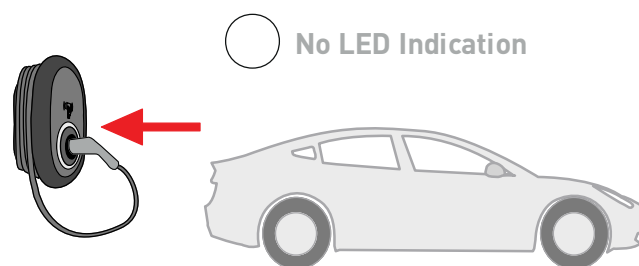


1.2.2 - STOP CHARGING

1 - Unplug the charging cable from the vehicle first to stop charging.



2 - Insert the charging plug to the dummy socket of the station.



2 - AUTHORISED CHARGING MODE (RFID MODE)

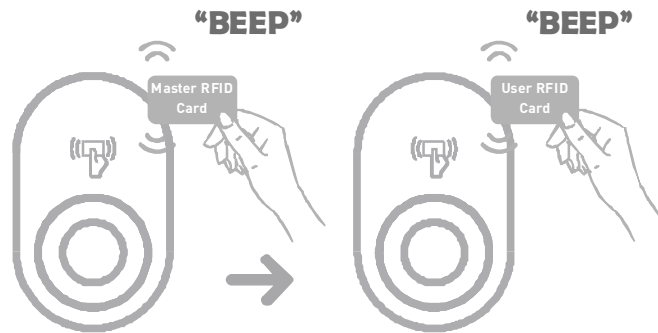
2.1 SETTING UP RFID CARD

If you want to use your station with card authorization, you must follow the steps specified as below.

Warning : Ensure that the plug of the charging station is not connected during RFID card registration and removing steps.

Registering User RFID card;

Tap the master RFID card to the RFID reader. After “BEEP” sound, tap User RFID card to the RFID reader in 10 seconds. Only one User RFID card can be registered after tapping Master RFID card. In this way, you may register User RFID card to the charging station one by one and hear “BEEP” sound confirming the registration. Maximum 20 user cards can be registered to a charging station.



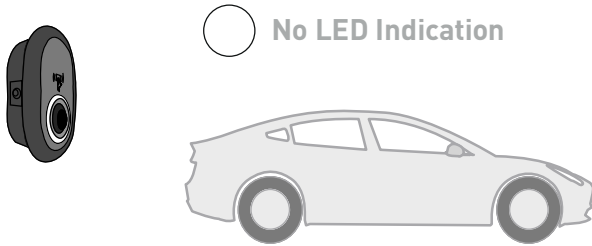
Removing User RFID card;

Removing a user card is similar to registering a user RFID card. If you want to remove an authorized user RFID card from the station, you must tap the User RFID card to the RFID reader in 10 seconds, after tapping a Master RFID card.

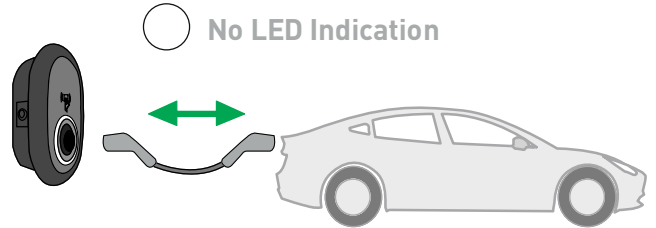
2.2 - SOCKET MODEL

2.2.1 - VEHICLE CONNECTION & CHARGING

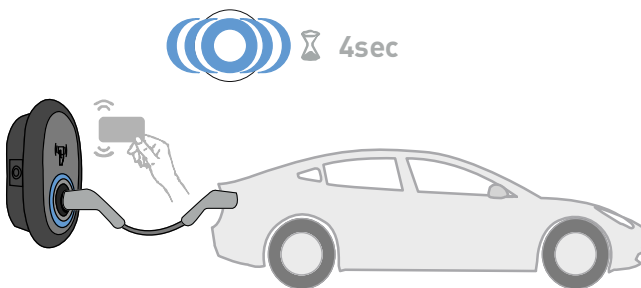
1 - Ensure that your vehicle and the station is ready for charging.



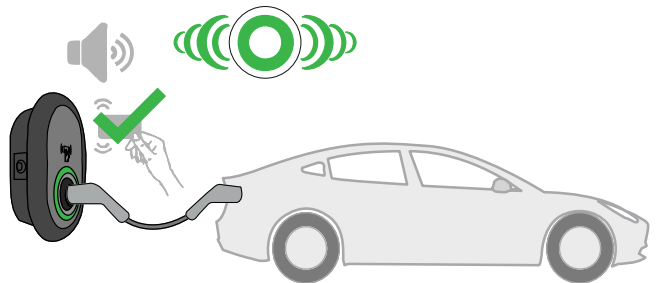
2 - Insert the charging plug to the vehicle inlet and charging station socket outlet.



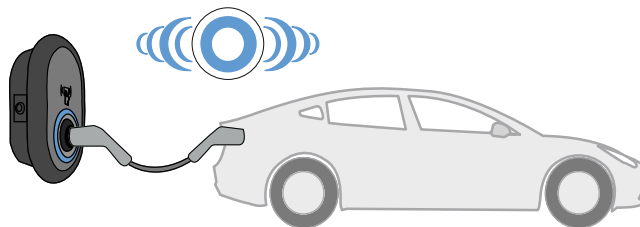
3 - Tap the RFID card to the RFID reader.



4 - You may start charging with a card that has been authorized before.



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

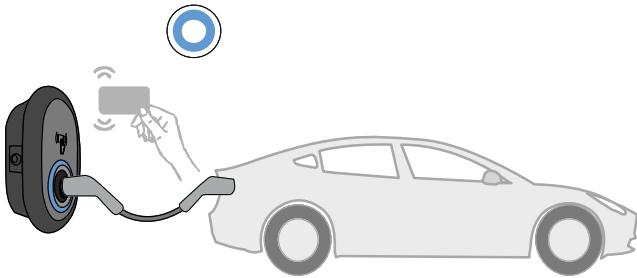


NOTE: Charging operation is rejected by the charging station when you want to start charging with an unauthorized card.

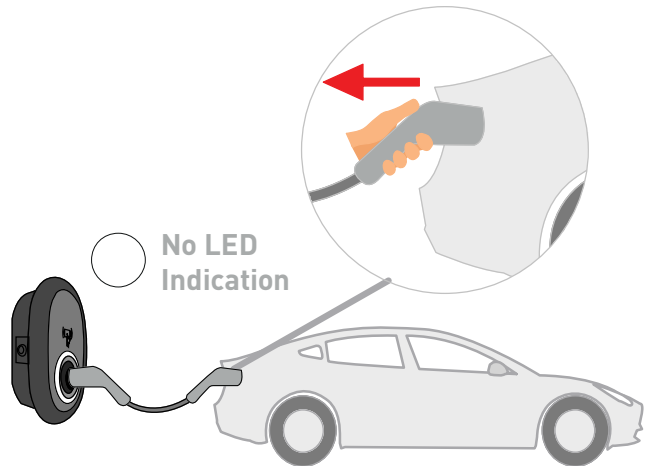
2.2.2 - STOP CHARGING

1- 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 get damaged.

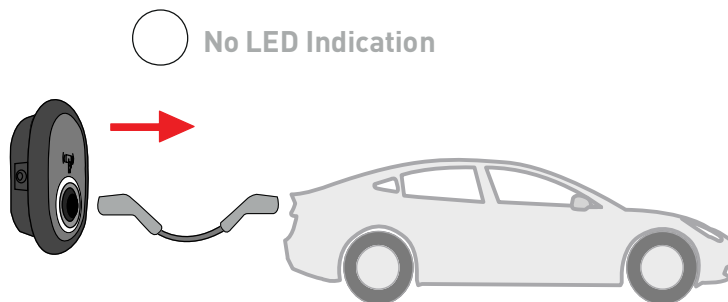
Method1. You can terminate charging by tapping the RFID card that you have started charging before.



Method2. You may stop charging by unplugging the charging from the vehicle first.



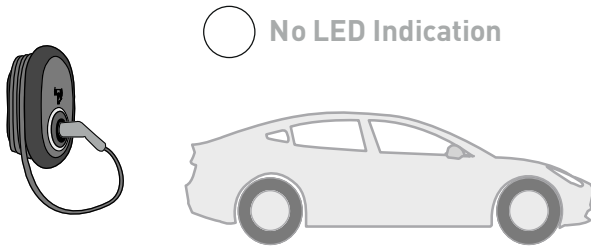
2 - Unplug the charging cable from the station.



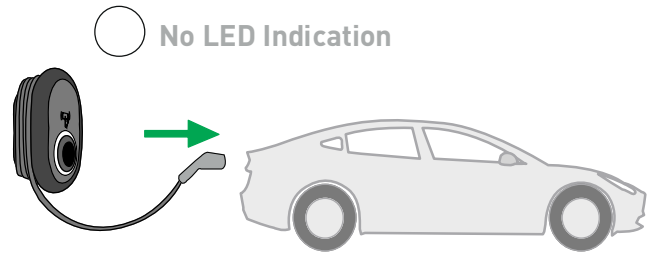
2.3 - CABLE MODEL

2.3.1 - VEHICLE CONNECTION & CHARGING

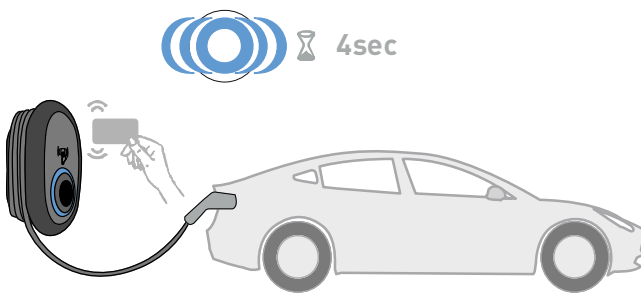
1 - Ensure that your vehicle and the station is ready for charging.



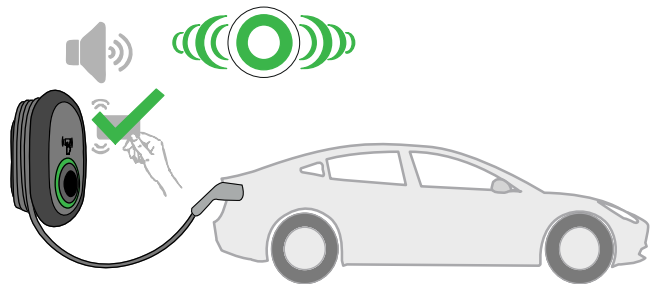
2 - Insert the charging plug to the vehicle inlet.



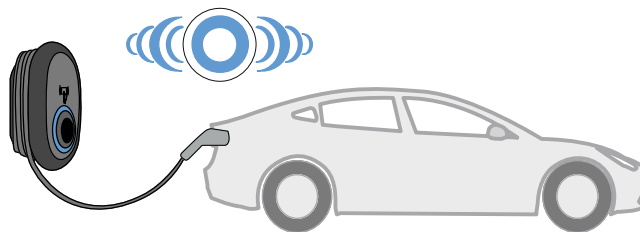
3- Tap the RFID card to the RFID reader.



4- You may start charging with a card that has been authorized before.



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

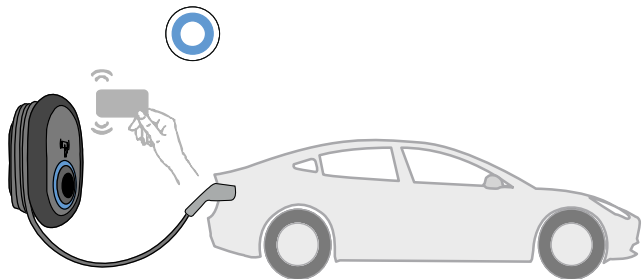


NOTE: Charging operation is rejected by the charging station when you want to start charging with an unauthorized card.

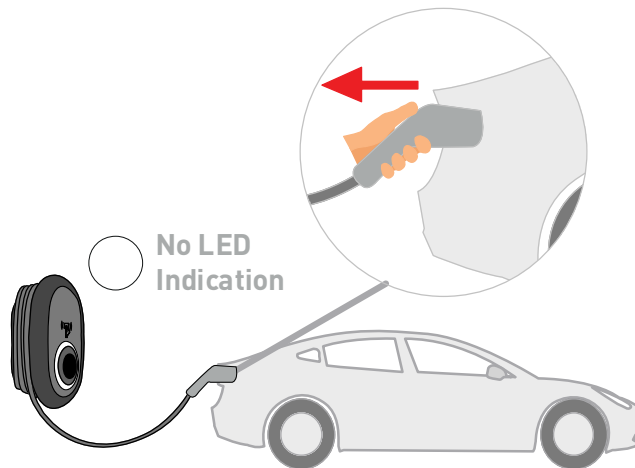
2.3.2 - STOP CHARGING

1- You may follow the alternative methods specified below to stop charging.

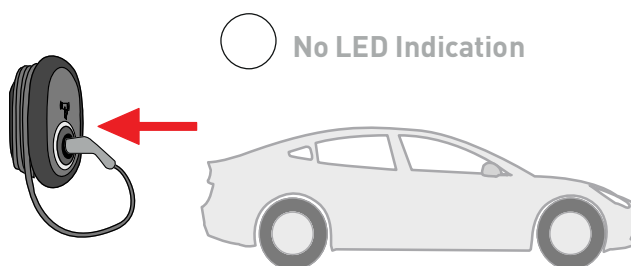
Method1. You can terminate charging by tapping the RFID card that you have started charging before.



Method2. You may stop charging by unplugging the charging from the vehicle first.

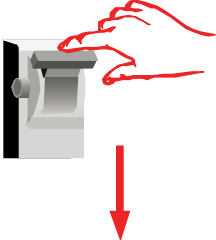
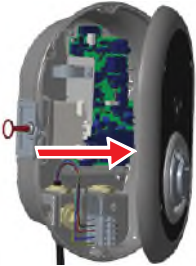
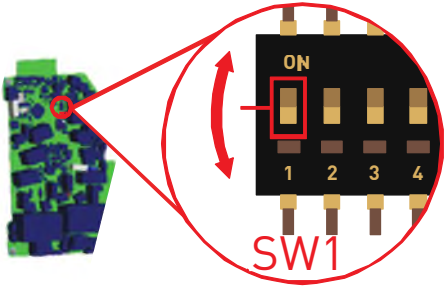
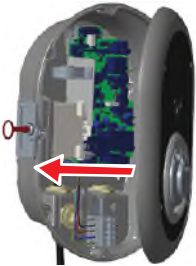
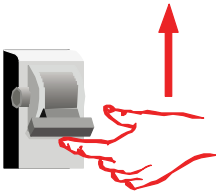
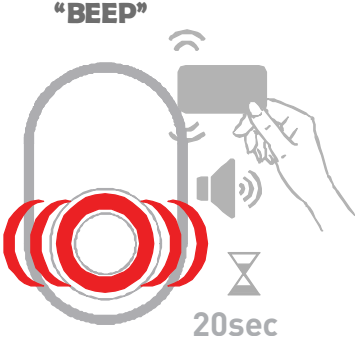


3- Insert the charging plug to the dummy socket of the station.



2.4 LOSS OF MASTER RFID CARD

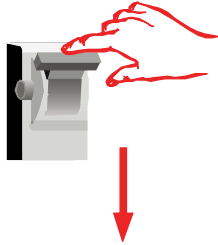
In case of losing the registered Master RFID card, you can register a new Master RFID card by following steps below after ensuring that your vehicle is not connected to the charging station:

<p>1- Turn off the power of your charging station.</p> 	<p>2- Open the product cover as described in the installation manual.</p> 
<p>3- Toggle the position of 1st DIP switch using pointed spudger or a plastic pointed tool. The DIP switch location is as shown in below figure.</p> 	<p>4- Close the product cover as described in the installation manual.</p> 
<p>5- Turn on the power to your charging station. The master and user RFID cards are erased.</p> 	<p>6- The status information LED shall blink in red 20 seconds during new master RFID card registration period. You may register new master RFID card in 20 seconds by tapping your new master RFID card. (If you do not have any card tapped within this period, you won't be able to register user cards and your station will stay in autostart charging mode.) After registering new master RFID card, you can follow the steps in section "Authorised Charging Mode" for adding user RFID cards.</p> 

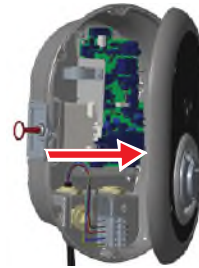
3 - LOCKED CABLE FUNCTION (Model with Socket)

The cable becomes locked and your socket model charging station starts behaving as a cable model.

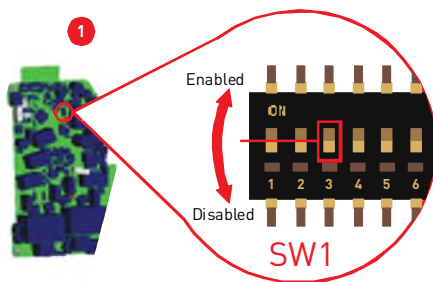
1- Turn off the power of your charging station.



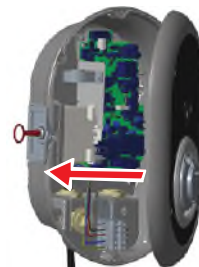
2- Open the product cover as described in the installation manual.



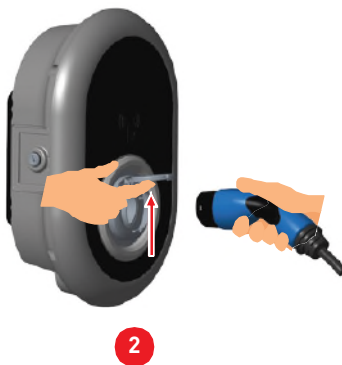
3- To enable locked cable function, toggle DIP switch pin 3 to ON position using pointed spudger or a plastic pointed tool. The DIP switch location is as shown in below figure.



4- Close the product cover as described in the installation manual.

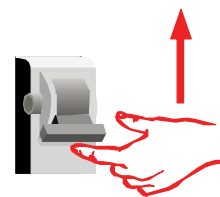


5- Open the front cover of the socket outlet and plug the charging cable to the socket outlet.



6- Turn on the power to your charging station. The cable becomes locked and the charging station starts behaving as a cable model.

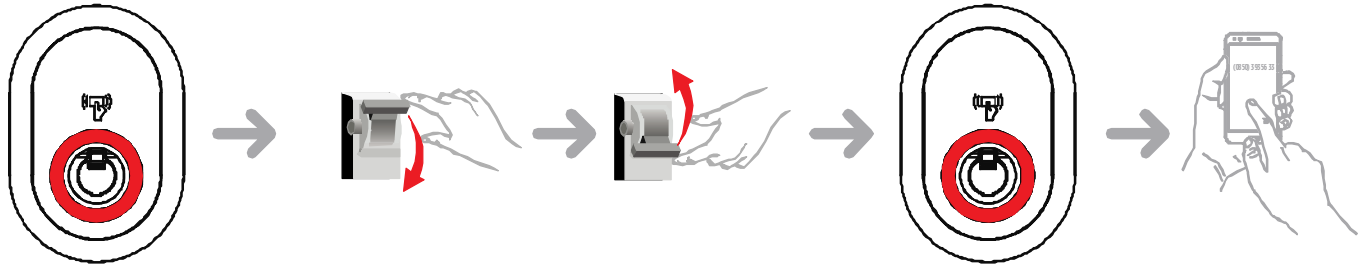
Note : When this function is active (PIN 3 is ON), charging cable cannot be unplugged. When you deactivate this function (PIN 3 is OFF), the plug will be unlocked.






4 - ERROR AND FAULT CONDITIONS

4.1 GENERAL ERROR CONDITION

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



4.2 OTHER ERROR CONDITIONS

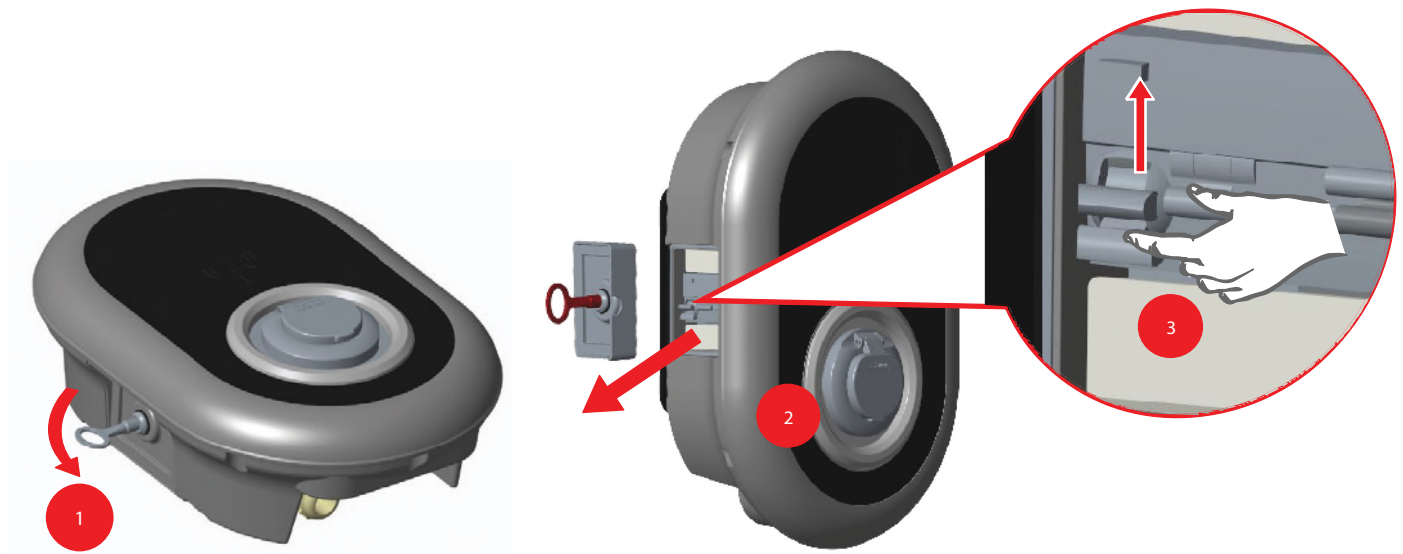
Status Indicator	Problem	Possible Causes	Recommended Solutions
	Constant LED.	AC supply voltage may not be in the range in the operation manual, grounding connection may not be performed and/or phase/neutral connections may be reversed or the charging station may have a fault.	Please ensure that the 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.
	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	The charging plug may not be connected properly to the charging device or the electric vehicle.	Ensure that the charging plug is connected properly on both sides. Please check if your electric vehicle is in charging mode.
	The status information LED blinks in red	You shall see this error notification if your vehicle is equipped with a battery type that requires ventilation.	This charging station is not suitable to charge such vehicles.

4.3 TRIPPING RELAY ON PRODUCTS WITH RESIDUAL CURRENT DEVICE

⚠ CAUTION

TRIPPING OF THE RESIDUAL CURRENT DEVICE

- The residual current device can be seen in the second part of the Figure 3.4. You may access the residual current device by opening the lock which is placed on the side cover as shown in the first part of the figure below. Place and push triangle key on the side cover lock then rotate the key 90 degree counter-clockwise.
- 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 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.



4.4 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, AC power input shall be turned off to reset the charging station from error state.

CLEANING AND MAINTENANCE

DANGER

- Do not wash your electric vehicle charging device while charging your vehicle.
- Do not wash the device with pressurized water.
- Do not use abrasive cloths and detergents.

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

VESTEL

**VESTEL
KOMÜNİKASYON SANAYİ VE TİCARET A.Ş.**

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