

**VESTEL**  
**MOBILITY**



## **ELECTRIC VEHICLE CHARGER** **EVC08 LIVEO 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 °C and +50 °C without direct sunlight and at a relative humidity of between 5 % and 95 %. Use the charging station only within these specified operating condition.
- 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.

## 1.2 - 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.

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

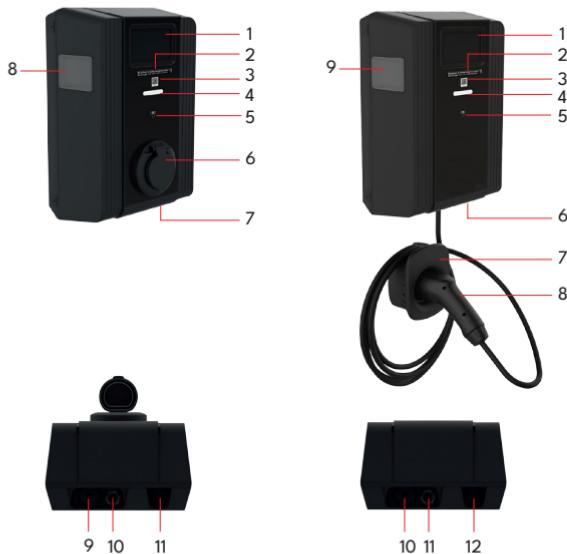
- Be sure that charging cable is Type 2 socket compatible on charging station side.
- A damaged charging cable can cause fire or give you an electric shock. Do not use this product if the flexible Charging cable or vehicle cable is frayed, has broken insulation, or shows any other signs of damage.
- Ensure that the 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.

## 1.4 - 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.

## 2 - GENERAL INFORMATION

### 2.1 - INTRODUCTION OF THE PRODUCT COMPONENTS



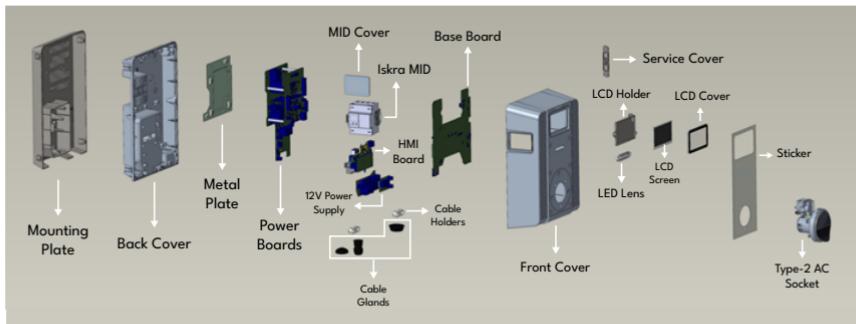
#### EN Socket Models

- 1- Information Display (optional)**
- 2- Informative Display Label**
- 3- User Manual QR Code Label**
- 4- Status indicator LED**
- 5- RFID Card Reader**
- 6- Socket Outlet**
- 7- Product Label**
- 8- Calibration-compliant MID**
- 9- Charging station connection cable union nut**
- 10- Charging station Ethernet connection cable gland nut**
- 11- Out of use**

#### EN Tethered Cable Models

- 1- Information Display (optional)**
- 2- Informative Display Label**
- 3- User Manual QR Code Label**
- 4- Status indicator LED**
- 5- RFID Card Reader**
- 6- Product Label**
- 7- AC Plug Holder**
- 8- Charging Plug**
- 9- Calibration-compliant MID**
- 10- Charging station connection cable union nut**
- 11- Charging station Ethernet connection cable gland nut**
- 12- Charging cable**

## 2.2 - OVERVIEW ILLUSTRATIONS OF CONSTRUCTION



## 2.3 - PUBLIC KEY

A QR code is printed on the front of the meter, which contains the public key in full format.

The signature can be verified by means of a public key.



Public Key Information

Public key (for the measurement capsule, imaged on the type plate of the meter of the charging station in the form of a QR code).

## 2.4 - PLUG CHARGING CABLE

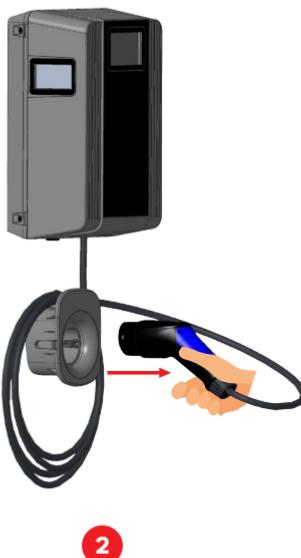
### 2.4.1 - SOCKET EQUIPPED MODEL

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



### 2.4.2 - ATTACHED CABLE MODEL

Press the button on top of the charging plug holder 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.



## 2.5 - BEHAVIOUR OF THE STATUS INFORMATION LED



Status of the LED	Status of the Charging Station
 <small>4 sec</small>	Charging station is starting up / booting.
	Charging device is ready to charge. Finished charging with RFID card
 <small>4 sec</small>	Electric Vehicle is connected. Charging Station is waiting for RFID card authorisation.
	Charging is authenticated.
	Charging in progress
	Charging suspended or finished
	Fault condition
 <small>4 sec</small>	Ventilation required mode
 <small>4 sec</small>	Charging with current limited to 16A due to over temperature
	TIC Communication Error
	Charging not possible due to over temperature or power optimizer current limit is reached or the charger is disabled
	Over Voltage, Under Voltage, Protective Earth Or Phase Reversal Fault, Installation Error
 <small>1 sec</small>	Charging station is reserved. Charging station is waiting for Eco Time interval and Waiting in Peak Hours Mode.
	Firmware update

Status of the LED		Status of the Charging Station
	Blinks red Per second for 60 seconds	Master Card Config mode / Local Card List Reset
	Blinks blue in every 2 secs	Waiting to Tap User RFID card or configure Drive Green from the smartphone
	Blinks green for 2 times	User RFID Card addition to local RFID list
	Blinks red for 2 times	User RFID card removes from local RFID list
	Green Glowing	Authorised RFID Card is tapped while charging cable is connected
	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
	Blinks Green 500msec ON 500msec OFF	Randomized Delay (Only UK)
	Blinks purple 3 seconds OFF 1,2 seconds ON	Master Slave communication failure External meter communication failure
	Constant Purple	Dlm total current limit is reached
	Blue Glowing	G100 State1 and State2
	Constant Purple	G100 State3

### 3 - DESCRIPTION

This product is intended to be used for charging electric vehicles having appropriate charging system according to IEC 61851-1 pilot signal standard. This document describes the specific functions and features of the relevant variants of charging stations and measurement devices for electrical energy in accordance with § 46 of the German Measures and Verification Ordinance (MessEV) including PTB-A 50.7 and PTB REA document 6-A.

Only the following models are certified according to MessEG and MessEV:

EVC08\*-AC\*\*\*EICH-\*

The charging station can be used for billing by the kWh in accordance with German calibration law. You can see the German calibration law, which is described in **Chapter.16**.

<b>Model Name</b>	<p><b>MODEL DESCRIPTION: EVC08*-AC***EICH-*</b></p> <p>EVC08 : Electric Vehicle AC Charger</p> <p>1st Asterisk (*) : Cabinet Type</p> <p>01 : Liveo</p> <p>02 : Newnow</p> <p>2nd Asterisk (*) : Rated Power</p> <p>7 : 7.4 kW (1Phase Supply Equipment)</p> <p>11 : 11 kW (3Phase Supply Equipment)</p> <p>22 : 22 kW (3Phase Supply Equipment)</p> <p>3rd Asterisk (*) can include combinations of the following communication module options. High Secure Smart Board with Ethernet Port, Wi-Fi, RFID and NFC reader are standard equipment for all of the model variants. L and 5G options cannot be selected simultaneously.</p> <p>L : LTE / 3G / 2G module</p> <p>5G : 5G / LTE / 3G module</p> <p>P : ISO 15118 PLC module</p> <p>4th Asterisk (*) can be one of the following:</p> <p>Blank : No Display</p> <p>D : 4.3" TFT color display</p> <p>5th Asterisk (*) can be one of the following:</p> <p>EICH : Charging Unit with Eichrecht Conformity</p> <p>6th 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>
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## 4 - TECHNICAL SPECIFICATION

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

Model	EVC08-AC22 Series	EVC08-AC11 Series	EVC08-AC7 Series	
IEC Protection class	Class - I			
Vehicle Interface	Socket Model	Socket TYPE 2 (IEC 62196)		
	Cable Model	Cable with TYPE 2 ( IEC 62196) Female Plug		
Voltage and Current Rates	230/400V ~ 50 Hz - 3-Phase 32A	230/400V ~ 50 Hz - 3-Phase 16A	230 V ~ 50 Hz - 1-Phase 32A	
Broken PEN Detection Voltage Range (Optional)	<208V , >254V Single/Three phase TN-C-S supplies only			
AC Maximum Charge Output	22kW	11kW	7.4kW	
Built-in Residual Current Sensing module	6mA DC 4P- 40mA AC RCCB Type-A			
Required Circuit Breaker on AC Mains	4P-40A MCB Type-C	4P-20A MCB Type-C	2P-40A MCB Type-C	
Required AC Mains Cable	5x 6 mm <sup>2</sup> (< 50 m) External Dimensions: Ø 18-25 mm	5x4 mm <sup>2</sup> (< 50 m) External Dimensions: Ø 18-25 mm	3x 6 mm <sup>2</sup> (< 50 m) External Dimensions: Ø 13-18 mm	
Required AC Mains Cable (Optional only for France)	5 x 10 mm <sup>2</sup> (< 50 m) External Dimensions: Ø 18-25 mm	5 x 6 mm <sup>2</sup> (< 50 m) External Dimensions: Ø 18-25 mm	3 x 10 mm <sup>2</sup> (< 50 m) External Dimensions: Ø 13-18 mm	

## 5 - CONNECTIVITY

Ethernet	10/100 Mbps Ethernet
Wi-Fi	Wi-Fi 802.11 a/b/g/n/ac
Cellular (Optional)	LTE: B1 (2100 MHz), B3 (1800 MHz), B7 (2600 MHz), B8 (900 MHz), B20 (800 MHz), B28A (700 MHz)  WCDMA: B1 (2100 MHz), B8 (900 MHz)  GSM: B3 (1800 MHz), B8 (900 MHz)

## 6 - OTHER FEATURES (CONNECTED MODELS)

Diagnostics	Diagnostics over OCPP WebconfigUI
Software Update	Remote software update over OCPP WebconfigUI update Remote software update with server

## 7 - AUTHORIZATION

RFID	ISO-14443A/B and ISO-15693
PLUG & CHARGE (Optional)	ISO-15118-2

## 8 - MECHANICAL SPECIFICATIONS

<b>Material</b>	Plastic
<b>Product size</b>	260 mm (Width) x 350 mm (Height) x 158 mm (Depth)
<b>Dimensions (with package)</b>	365 mm (Width) x 495 mm (Height) x 320 mm (Depth) - (cable model) 365 mm x 495 mm x 295 mm - (socket model)
<b>Product weight</b>	5,5 kg for socket equipped model 9 kg for tethered cable model (3 phase) 7,5 kg for tethered cable model (1 phase)
<b>Weight with package</b>	7,6 kg for socket equipped model 12 kg for tethered cable model (3 phase) 10,5 kg for tethered cable model (1 phase)
<b>AC Mains Cable Dimensions</b>	For three-phase models Ø 18-25 mm For one-phase models Ø 13-18 mm
<b>Cable Inlets</b>	AC Mains / Ethernet / Modbus

## 9 - ENVIRONMENTAL TECHNICAL SPECIFICATIONS

<b>Protection Class</b>	Ingress Protection Impact Protection	IP54 IK10
<b>Usage Conditions</b>	Temperature  Humidity  Altitude	-25 °C to 50 °C  5% - 95% (relative humidity, without condensation) 0 - 3,000m

## 10 - TECHNICAL CHARACTERISTICS OF THE MEASURING CAPSULE

Dieses Produkt entspricht dem Standard IEC61851-1 (Ed3.0) für die Verwendung in Modus 3.

<b>Model</b>	WM3M4C
<b>Manufacturer</b>	ISKRA Electronic
<b>Mark of type-examination certificate</b>	DE MTP 20 B 011 M
<b>Iref [A]</b>	5
<b>Imin [A]</b>	0,25
<b>Imax [A]</b>	60
<b>Meter constant [imp./kwh]</b>	1000
<b>Un [V]</b>	3x 230/400V
<b>Frequency [Hz]</b>	50Hz
<b>Temperature range</b>	-25...+70°C
<b>Accuracy class</b>	B
<b>Firmware version</b>	V2.05
<b>Checksum of the firmware</b>	EEC6 6478(Hex)

## 11 - CHARGING

Your charging station is configured to be used in authorized charging mode by default. Check authorized charging mode behavior details in below section.

### 11.1 - STANDALONE USAGE MODES

First usage of “Standalone Usage” mode charger: Your charger’s master RFID card is already registered to your charger and you can find the master RFID card in accessories. When your charger is powered in the first time, it opens in “onboarding” screens as shown figure below. If you do not make any configuration in onboarding screens for 60 seconds and connect your charging cable, your charging station starts in autostart mode automatically.



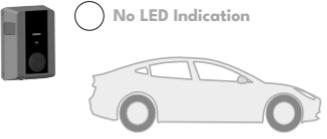
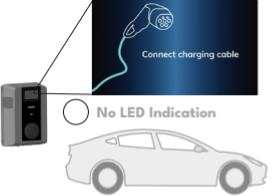
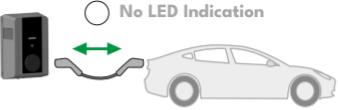
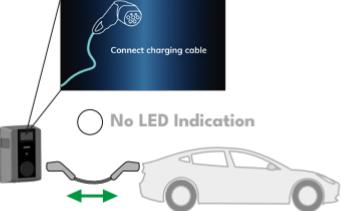
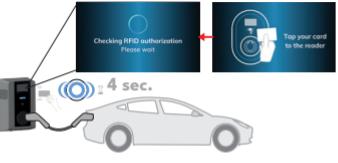
#### 11.1.1 - AUTOSTART CHARGING MODE

Your charging station behaves in autostart charging mode as mentioned below:

- a)** If you do not make any configuration in configuration mode for 60 seconds and connect your charging cable, your charging station starts in autostart mode automatically.
- b)** If you delete the last RFID card from the local RFID card list, then your charger starts to behave as autostart mode.

## 11.1.1.1 - SOCKET EQUIPPED MODEL

### 11.1.1.1 - VEHICLE CONNECTION & CHARGING

Model Without Display	Model With Display
<p><b>1 -</b> Ensure that your vehicle and the station is ready for charging.</p>  <p><b>1 -</b> Ensure that your vehicle and the station is ready for charging.</p>	 <p><b>1 -</b> Ensure that your vehicle and the station is ready for charging.</p>
<p><b>2 -</b> Insert the charging plug to the vehicle inlet and charging station socket outlet.</p>  <p><b>2 -</b> Insert the charging plug to the vehicle inlet and charging station socket outlet.</p>	 <p><b>2 -</b> Insert the charging plug to the vehicle inlet and charging station socket outlet.</p>
<p><b>3- Tap the user RFID card to the reader.</b></p>  <p><b>3- Tap the user RFID card to the reader.</b></p>	 <p><b>3- Tap the user RFID card to the reader.</b></p>

**4-** You may start charging with a card that has been authorized before, if the charging station is in RFID Local List Authorized Mode.

If the charging station is in Accept ALL RFIDs Mode, then you may start charging with any supported RFID card.



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

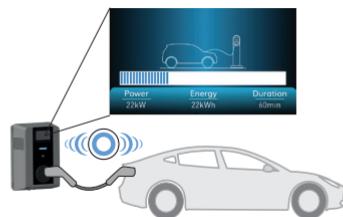


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If the charging station is in Accept ALL RFIDs Mode, then you may start charging with any supported RFID card.



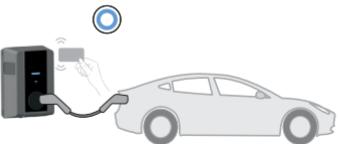
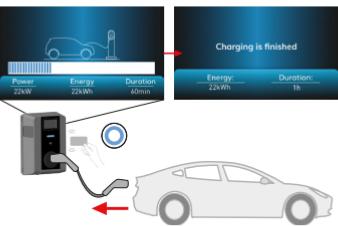
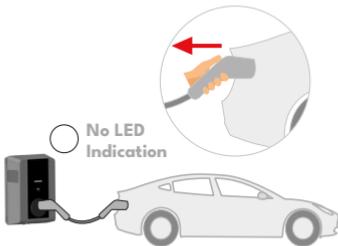
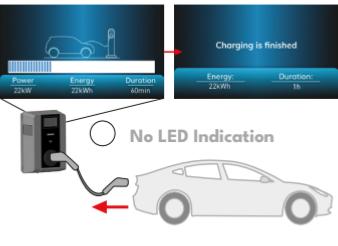
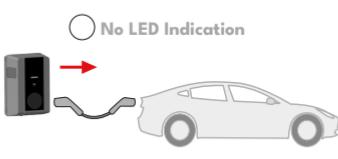
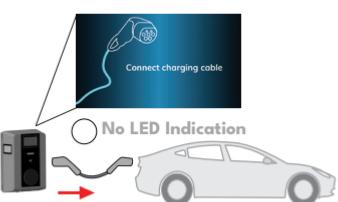
**5 -** Charging starts and status indicator LED glows in blue.



**NOTE :** Charging operation is rejected by the charging station when you want to start charging with an unauthorized card. It takes around one minute to reboot your charging station after it resets.

**All products images are given for as a representative**

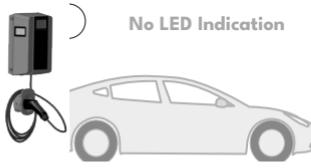
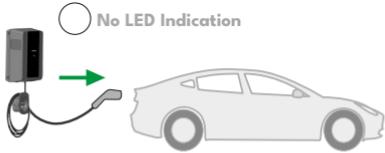
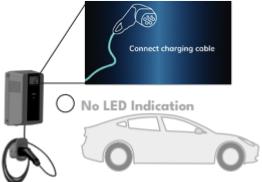
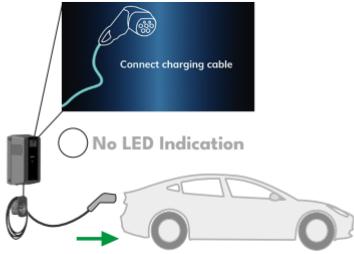
## 11.1.1.1.2 - STOP CHARGING

Model Without Display	Model With Display
<p><b>1-</b> 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.</p> <p><b>Method1.</b> You can terminate charging by tapping the RFID card that you have started charging before.</p> 	<p><b>1-</b> 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.</p> <p><b>Method1.</b> You can terminate charging by tapping the RFID card that you have started charging before.</p> 
<p><b>Method2.</b> You may stop charging by unplugging the charging cable from the vehicle first.</p> 	<p><b>Method2.</b> You may stop charging by unplugging the charging cable from the vehicle first.</p> 
<p><b>2-</b> Unplug the charging cable from the station.</p> 	<p><b>2 -</b> Unplug the charging cable from the station.</p> 

All products images are given for as a representative

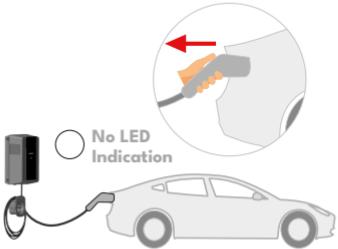
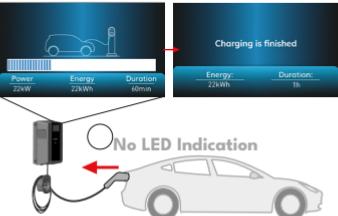
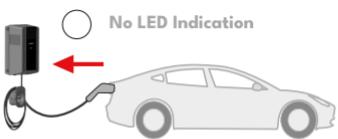
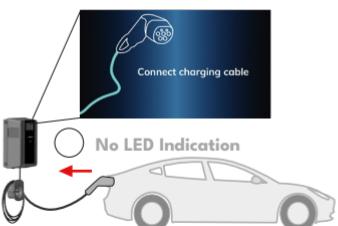
## 11.1.1.2 - ATTACHED CABLE MODEL

### 11.1.1.2.1 - VEHICLE CONNECTION & CHARGING

Model Without Display	Model With Display
<p><b>1 - Ensure that your vehicle and the station is ready for charging.</b></p>  <p><b>2 - Insert the charging plug to the vehicle inlet and charging station socket outlet.</b></p>  <p><b>3 - Charging starts automatically, and status indicator LED glows in blue.</b></p> 	<p><b>1 - Ensure that your vehicle and the station is ready for charging.</b></p>  <p><b>2 - Insert the charging plug to the vehicle inlet and charging station socket outlet.</b></p>  <p><b>3 - Charging starts automatically, and status indicator LED glows in blue.</b></p> 

All products images are given for as a representative

#### 11.1.1.2.2 - STOP CHARGING

Model Without Display	Model With Display
<p><b>1-</b> Unplug the charging cable from the vehicle first to stop charging.</p> 	<p><b>1-</b> Unplug the charging cable from the vehicle first to stop charging.</p> 
<p><b>2 -</b> Insert the charging plug to the charging plug holder of the station.</p> 	<p><b>2 -</b> Insert the charging plug to the charging plug holder of the station.</p> 

**NOTE :** If you delete the last RFID card from the local RFID card list, then your charger starts to behave as autostart mode.

## 11.1.2 - RFID AUTHORIZED MODE

### 11.1.2.1 - REGISTERING USER RFID CARD

In standalone usage mode, the master RFID card is already registered to your charger. If you tap the master RFID card to your charging station when the charging cable is not connected, your charger starts to make broadcasting over Bluetooth and also in the same time you can add user RFID card to the charger's local RFID list. In this period of time, indication LED starts to blink blue for 60 seconds. You can add/delete your user RFID card. If you do not make any configuration in 60 seconds, charging station exists from configuration mode and returns to its previous mode.

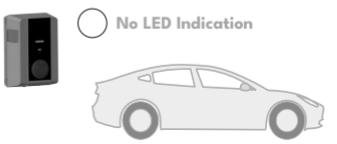
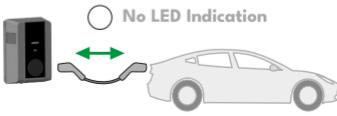
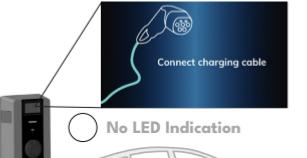
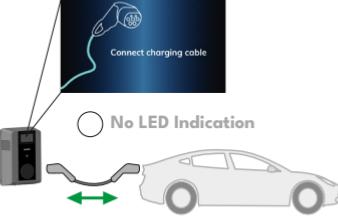
#### 11.1.2.1.1 - ADD/DELETE RFID CARD TO/FROM LOCAL RFID LIST:

As mentioned above, in configuration mode within 60 seconds, if you tap any user RFID card which is not in Local RFID list, it is provided to add to the list. Similarly, if you tap the user RFID card which was already added to the local RFID list before, then it is deleted from the list. If you delete the last RFID card from the local RFID card list, then your charger starts to behave as autostart mode.

## 11.1.2.2 - VEHICLE CONNECTION & CHARGING

### 11.1.2.2.1 - SOCKET EQUIPPED MODEL

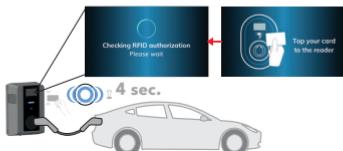
#### 11.1.2.2.1.1 - VEHICLE CONNECTION & CHARGING

Model Without Display	Model With Display
<p><b>1 - Ensure that your vehicle and the station is ready for charging.</b></p>  <p><b>2 - Insert the charging plug to the vehicle inlet and charging station socket outlet.</b></p> 	<p><b>1 - Ensure that your vehicle and the station is ready for charging.</b></p>  <p><b>2 - Insert the charging plug to the vehicle inlet and charging station socket outlet.</b></p> 

**3- Tap the user RFID card to the reader.**



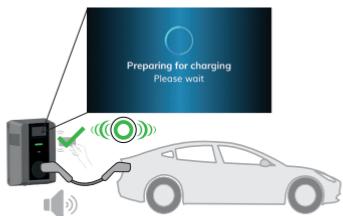
**3- Tap the user RFID card to the reader.**



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



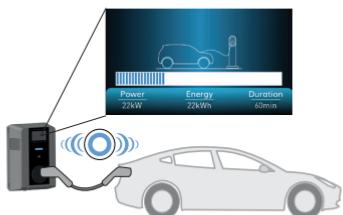
**4- You may start charging with a card that has been authorized before.**



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



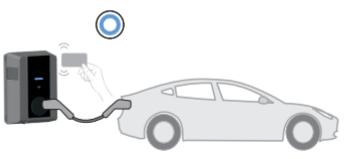
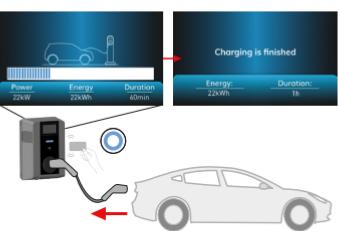
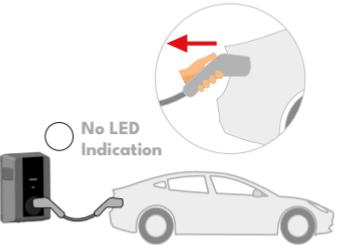
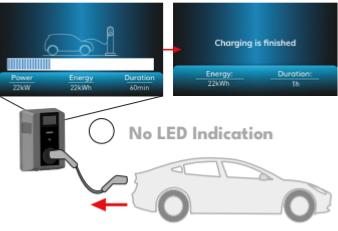
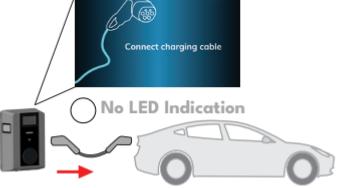
**5 - Charging starts and status indicator LED glows in blue.**



**NOTE :** Charging operation is rejected by the charging station when you want to start charging with an unauthorized card. It takes around one minute to reboot your charging station after it resets.

**All products images are given for as a representative**

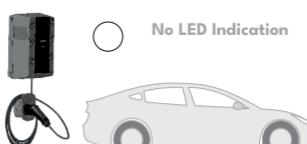
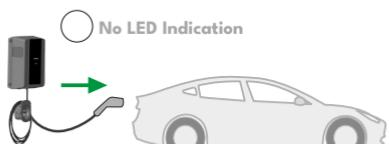
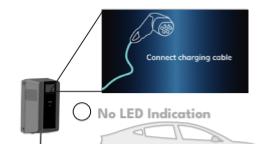
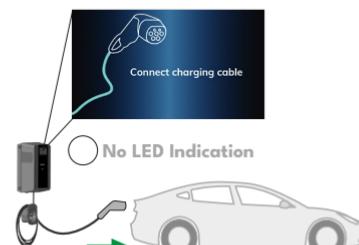
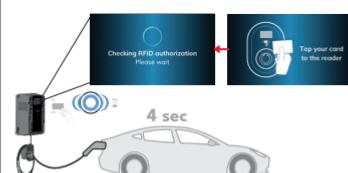
## 11.1.2.2.1.2 - STOP CHARGING

Model Without Display	Model With Display
<p><b>1-</b> 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.</p> <p><b>Method1.</b> You can terminate charging by tapping the RFID card that you have started charging before.</p> 	<p><b>1-</b> 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.</p> <p><b>Method1.</b> You can terminate charging by tapping the RFID card that you have started charging before.</p> 
<p><b>Method2.</b> You may stop charging by unplugging the charging from the vehicle first.</p> 	<p><b>Method2.</b> You may stop charging by unplugging the charging cable from the vehicle first.</p> 
<p><b>2 -</b> Unplug the charging cable from the station.</p> 	<p><b>2 -</b> Unplug the charging cable from the station.</p> 

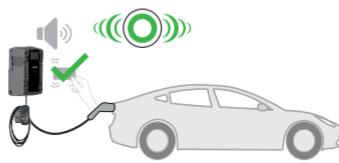
All products images are given for as a representative

## 11.1.2.2.2 - ATTACHED CABLE MODEL

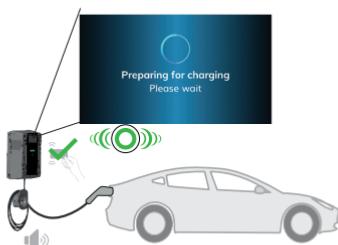
### 11.1.2.2.2.1 - VEHICLE CONNECTION & CHARGING

<p><b>1 - Ensure that your vehicle and the station is ready for charging.</b></p>  <p><b>2 - Insert the charging plug to the vehicle inlet.</b></p>  <p><b>3- Tap the RFID card to the RFID reader.</b></p> 	<p><b>1 - Ensure that your vehicle and the station is ready for charging.</b></p>  <p><b>2 - Insert the charging plug to the vehicle inlet.</b></p>  <p><b>3- Tap the user RFID card to the reader.</b></p> 
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**4- You may start charging with a card that has been authorized before.**



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



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



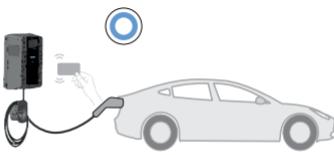
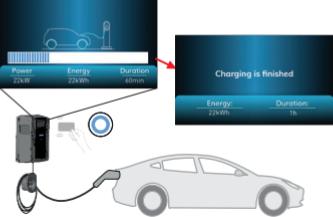
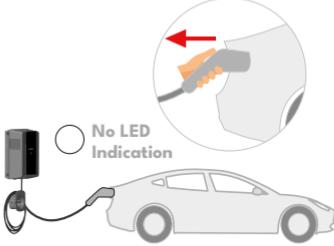
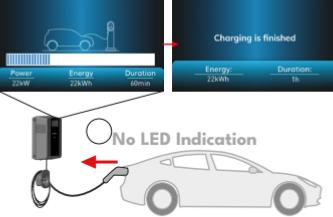
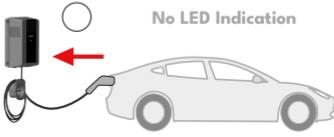
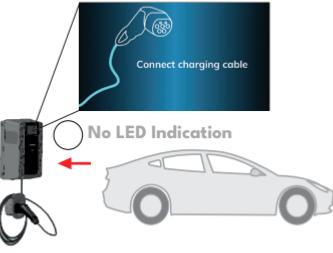
**5 - Charging starts and status indicator LED glows in blue.**



**All products images are given for as a representative**

**NOTE:** Charging operation is rejected by the charging station when you want to start charging with an unauthorized card. It takes around one minute to reboot your charging station after it resets.

## 11.1.2.2.2.2 - STOP CHARGING

Model Without Display	Model With Display
<p><b>1-</b> You may follow the alternative methods specified below to stop charging.</p>	<p><b>1-</b> You may follow the alternative methods specified below to stop charging.</p>
<p><b>Method 1.</b> You can terminate charging by tapping the RFID card that you have started charging before.</p>	<p><b>Method 1.</b> You can terminate charging by tapping the RFID card that you have started charging before.</p>
	
<p><b>Method 2.</b> You may stop charging by unplugging the charging from the vehicle first.</p> 	<p><b>Method 2.</b> You may stop charging by unplugging the charging cable from the vehicle.</p> 
<p><b>2-</b> Insert the charging plug to the dummy socket of the station.</p> 	<p><b>2-</b> Insert the charging plug to the charging plug holder of the station.</p> 

All products images are given for as a representative

### 11.1.3 - SMART APPLICATION AUTHORIZED MODE (Optional with Wi-Fi)

#### 11.1.3.1 - CONFIGURING DRIVE GREEN APPLICATION

In standalone usage mode, the master RFID card is already registered to your charger. If you tap the master RFID card to your charging station when the charging cable is not connected, your charger starts to make broadcasting over Bluetooth. In this period of time, indication LED starts to blink blue for 60 seconds. You can configure Drive Green application from your smartphone in this period of time. If you do not make any configuration in 60 seconds, charging station exits from configuration mode and returns to its previous mode.

#### 11.1.3.2 - DRIVE GREEN CONFIGURATION:

It is waited to start configuration from your smartphone within 60 seconds after the configuration mode starts. If you do not make any configuration in 60 seconds, bluetooth broadcasting finishes and configuration mode ends.

Please download “Drive Green Next” application from Android Play Store or iOS App Store.

You can reach to the application by QR code below.



Open Drive Green Mobile App. You will see selection of different models. To configure your charger, select EVC08 model shown in picture above and click continue button and follow the instructions which are mentioned inside the application in detail to setup the charger and finish the configuration. Please note that after first configuration your EV charger and Mobile Application connect locally via Bluetooth, so you can only monitor and control your charging session when you are near the charging station. If you want to monitor and control your charging station from the Internet remotely, you need to configure Internet connection settings of your EV charger from “Connectivity” tab in “Device Settings” menu. You can either use Ethernet LAN connectivity or WiFi WLAN connectivity option.

### 11.1.3.3 - VEHICLE CONNECTION & CHARGING

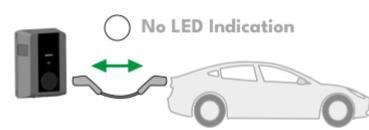
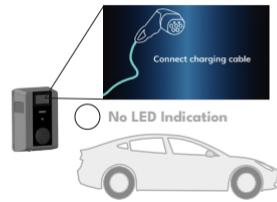
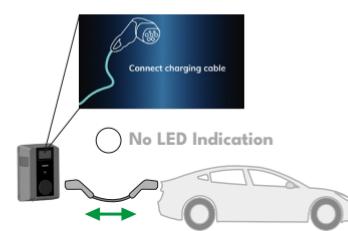
After configuring your charger with smart application, you can control the charger via the application either in autostart mode or in RFID authorised mode. Autostart and RFID authorised modes are explained.

Your charging station behaves in autostart charging mode as mentioned below. But you can continue to control the charger with smart application even it is in autostart charging mode.

- a)** If you do not make any configuration in configuration mode for 60 seconds and connect your charging cable, your charging station starts in autostart mode automatically.
- b)** If you delete the last RFID card from the local RFID card list, then your charger starts to behave as autostart mode.

#### 11.1.3.3.1 - SOCKET EQUIPPED MODEL

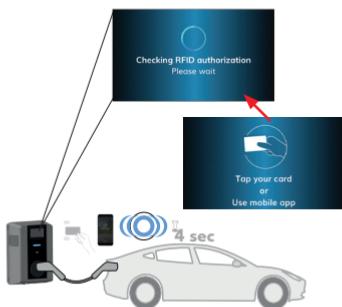
##### 11.1.3.3.1.1 - VEHICLE CONNECTION & CHARGING

Model Without Display	Model With Display
<p><b>1 -</b> Ensure that your vehicle and the station is ready for charging.</p>  <p><b>2 -</b> Insert the charging plug to the vehicle inlet and charging station socket outlet.</p> 	<p><b>1 -</b> Ensure that your vehicle and the station is ready for charging.</p>  <p><b>2 -</b> Insert the charging plug to the vehicle inlet and charging station socket outlet.</p> 

**3- Tap the user RFID reader or press “Charge Now” button from the application.**



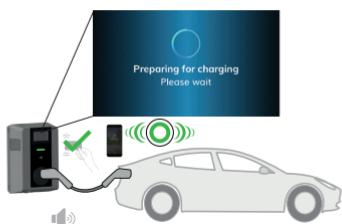
**3- Tap the user RFID reader or press “Charge Now” button from the application.**



**4- You may start charging with a card that has been authorized before or after pressing “Charge Now” button in mobile application.**



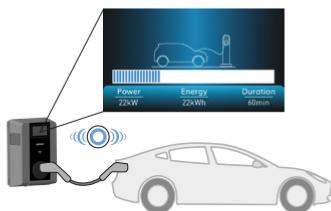
**4- You may start charging with a card that has been authorized before or after pressing “Charge Now” button in mobile application.**



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



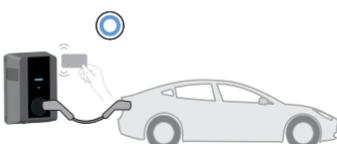
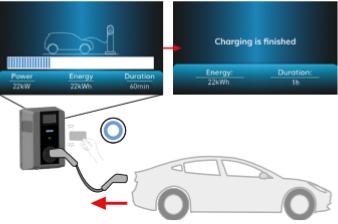
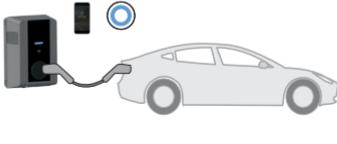
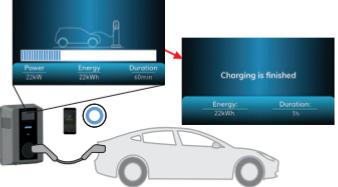
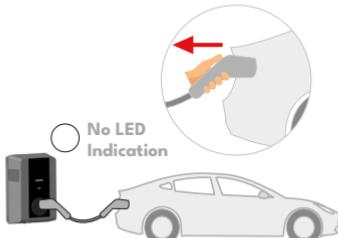
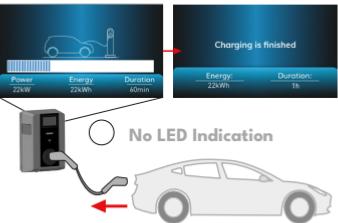
**5 - Charging starts and status indicator LED glows in blue.**



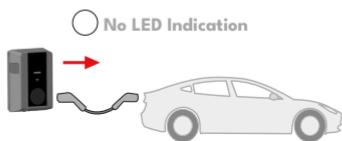
**All products images are given for as a representative**

**NOTE :** Charging operation is rejected by the charging station when you want to start charging with an unauthorized card. It takes around one minute to reboot your charging station after it resets.

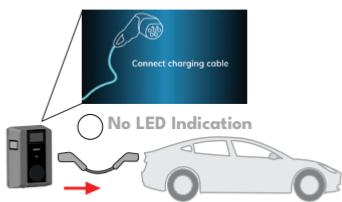
### 11.1.3.3.1.2 - STOP CHARGING

Model Without Display	Model With Display
<p><b>1-</b> 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.</p>	<p><b>1-</b> 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.</p>
<p><b>Method1.</b> You can terminate charging by tapping the RFID card that you have started charging before.</p>	<p><b>Method1.</b> You can terminate charging by tapping the RFID card that you have started charging before.</p>
	
<p><b>Method2.</b> You may stop charging by pressing "STOP" button in mobile application in your smartphone.</p>	<p><b>Method2.</b> You may stop charging by pressing "STOP" button in mobile application in your smartphone.</p>
	
<p><b>Method3.</b> You may stop charging by unplugging the charging from the vehicle first.</p>	<p><b>Method3.</b> You may stop charging by unplugging the charging cable from the vehicle.</p>
	

**2 - Unplug the charging cable from vehicle first and then from your charging station.**



**2 - Unplug the charging cable from vehicle first and then from your charging station.**

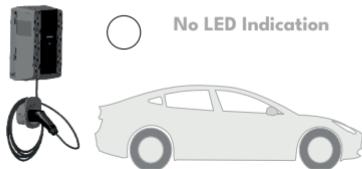


#### 11.1.3.3.2 - ATTACHED CABLE MODEL

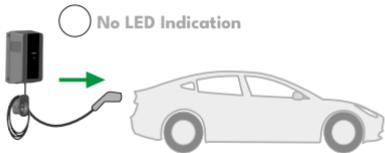
##### 11.1.3.3.2.1 - VEHICLE CONNECTION & CHARGING

###### Model Without Display

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

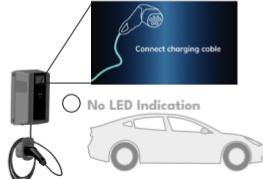


**2 - Insert the charging plug to the vehicle inlet.**

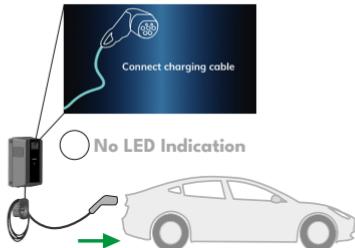


###### Model With Display

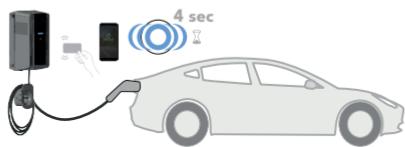
**1 - Ensure that your vehicle and the station is ready for charging.**



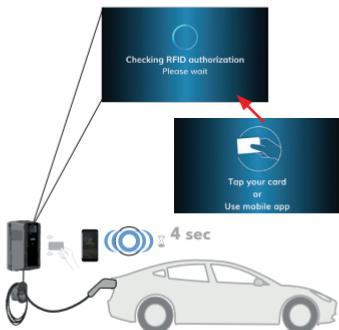
**2 - Insert the charging plug to the vehicle inlet.**



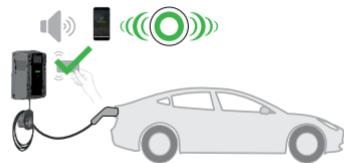
**3- Tap the user RFID reader or press “Charge Now” button from the application.**



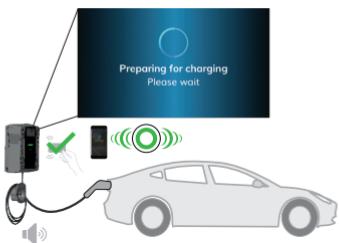
**3- Tap the user RFID reader or press “Charge Now” button from the application.**



**4- You may start charging with a card that has been authorized before or after pressing “Charge Now” button in mobile application.**



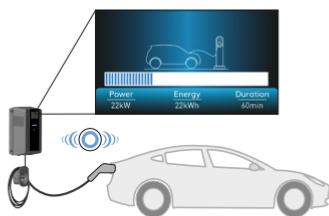
**4- You may start charging with a card that has been authorized before or after pressing “Charge Now” button in mobile application.**



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

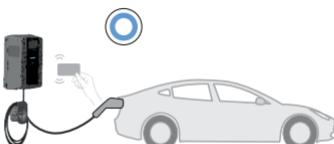
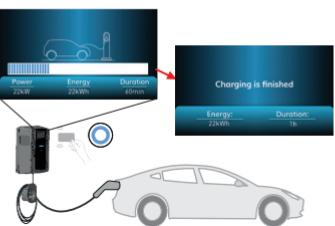
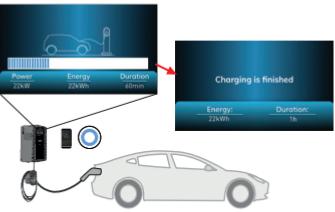
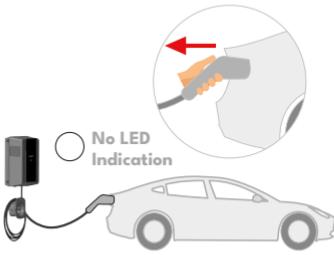
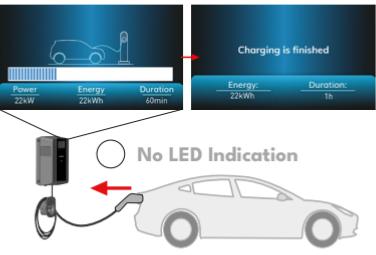


**5 - Charging starts and status indicator LED glows in blue.**

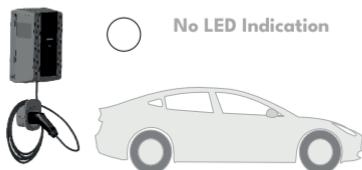


**NOTE:** Charging operation is rejected by the charging station when you want to start charging with an unauthorized card. It takes around one minute to reboot your charging station after it resets.

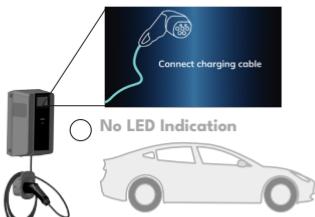
### 11.1.3.3.2.2 - STOP CHARGING

Model Without Display	Model With Display
<p><b>1-</b> You may follow the alternative methods specified below to stop charging.</p> <p><b>Method1.</b> You can terminate charging by tapping the RFID card that you have started charging before.</p>	<p><b>1-</b> You may follow the alternative methods specified below to stop charging.</p> <p><b>Method1.</b> You can terminate charging by tapping the RFID card that you have started charging before.</p>
	
<p><b>Method2.</b> You may stop charging by pressing "STOP" button in mobile application in your smartphone.</p> 	<p><b>Method2.</b> You may stop charging by pressing "STOP" button in mobile application in your smartphone.</p> 
<p><b>Method3.</b> You may stop charging by unplugging the charging from the vehicle first.</p> 	<p><b>Method3.</b> You may stop charging by unplugging the charging cable from the vehicle.</p> 

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



**2- Unplug the charging cable from vehicle and insert the charging plug to the charging plug holder of the station.**



All products images are given for as a representative

#### 11.1.3.4 - APPLICATION MODES

##### 11.1.3.4.1 - ECO CHARGE MODE

Eco Charge mode is a function which the user can set according the peak hours of electricity usage in his/her country and manage the charging periods accordingly. When Eco Charge is activated, charging start and finish intervals can be set.

If the charger starts charging in between the eco time interval set by the user, charging starts and finishes normally. If the charging starts out of eco time interval set by the user, it is waited to be in eco time period to start charging.

Model Without Display	Model With Display
	

- If your charger is RFID authorised, after the charging cable is connected, you need to press "Charge Now" button from the application or tap one of the user card which is authorised. After that it is passed to eco time waiting mode.
- If you need to charge your EV without waiting the eco time interval, you can press to "Charge Now" button in your application for or tap one of authorised RFID user cards for immediate charging start.
- Your charger starts to blink blue-red when it waits the eco-time interval.

- When the charger starts to wait the eco charge interval, in the first 5 minutes, indication LED blinks blue and red colours. After 5 minutes the LED stops blinking blue and red colours. Similarly when the eco charge interval finishes, charging section pauses and indication LED blinks blue and red colours. After 5 minutes, the LED stops blinking.

If you want your electric vehicle to continue charging after Eco Charge interval finishes, you can activate this functionality in the “Schedule Charge” tab in “Continue After Eco Charge” menu.

#### 11.1.3.4.2 - DELAY CHARGE FUNCTION

Your charger has function to start your charging in a delay which you set in the application from your smartphone. To start charging in delay mode;

- After you connect the charging cable and set the delay time period from your application and press “Delay Charge” button, the charger passes to delay time mode, charging cable is locked by the charger and the indication LED starts to blink blue-red.
- In your application screen, you can see that the charging station is in delay charge mode.
- If you want to start immediate charging without waiting the delay time period; even the delay time is active from the application,
  - a)** For RFID authorised mode device, any authorised RFID card tapping or pressing “Charge Now” button from the application can let your charger to start charging immediately.
  - b)** For autostart mode device, pressing charge “Charge Now” button from the application can let your charger to start charging immediately.
- Delay charge screen in your charging station will be as below.
- When the charger is set as delay charging mode, in the first 5 minutes, indication LED blinks blue and red colours. After 5 minutes the LED stops blinking blue and red colours.

Model Without Display	Model With Display
	

#### 11.1.3.4.3 - LOCKABLE CABLE FUNCTION

For socket equipped models, it is possible to fix the charging cable to the charging station by locking the socket interlock permanently. This feature can be activated from lockable cable function in the “Advanced Settings” tab in “Device Settings” menu.

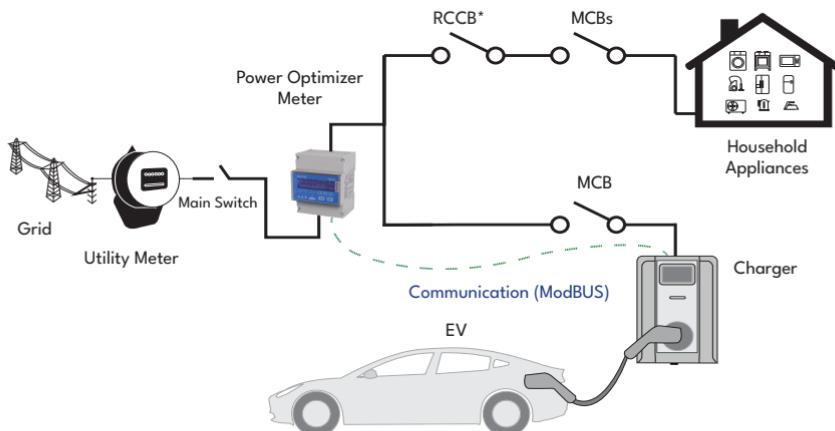
#### 11.1.3.4.4 - MASTER AND USER RFID CARD RESET

Master and user RFID card lists can be cleared in master and user cards menu in “Advanced Settings” tab. When you reset user RFID card list, the charging station may become plug and charge mode according to “Free Charging” setting.

When you reset master RFID card you need to tap new master RFID card to the reader. If you don't tap new master RFID card to the reader in specified time interval, the former master RFID card keeps its validity.

#### 11.1.3.4.5 - POWER OPTIMIZER SETTINGS

This feature is provided with an optional metering accessories which are sold separately. In power optimizer mode, the total current drawn from the main switch of the house by charging station and other household appliances is measured with current sensor integrated to the main power line as show in figure below. Power Optimizer feature and maximum current limit of the main power line of the system is set from “Power Optimizer” setting in “Advanced Settings” tab in “Device Settings” menu.



Visual representation is provided

## 11.1.4 - RFID LOCAL LIST AUTHORIZED MODE & ACCEPT ALL RFIDs MODE

Please check "STANDALONE MODE SETTINGS" in Installation Guide document.

### 11.1.4.1 - SOCKET EQUIPPED MODEL

#### 11.1.4.1.1 - VEHICLE CONNECTION & CHARGING

Model Without Display	Model With Display
<p><b>1 -</b> Ensure that your vehicle and the station is ready for charging.</p> <p>  </p>	<p><b>1 -</b> Ensure that your vehicle and the station is ready for charging.</p> <p>   </p>
<p><b>2 -</b> Insert the charging plug to the vehicle inlet and charging station socket outlet.</p> <p>  </p>	<p><b>2 -</b> Insert the charging plug to the vehicle inlet and charging station socket outlet.</p> <p>   </p>
<p><b>3- Tap the user RFID card to the reader.</b></p> <p>   </p>	<p><b>3- Tap the user RFID card to the reader.</b></p> <p>     </p>

**4-** You may start charging with a card that has been authorized before, if the charging station is in RFID Local List Authorized Mode.

If the charging station is in Accept ALL RFIDs Mode, then you may start charging with any supported RFID card.



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

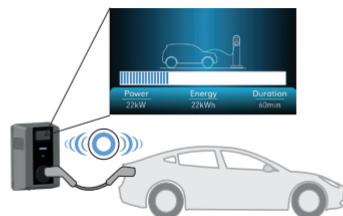


**4-** You may start charging with a card that has been authorized before, if the charging station is in RFID Local List Authorized Mode.

If the charging station is in Accept ALL RFIDs Mode, then you may start charging with any supported RFID card.



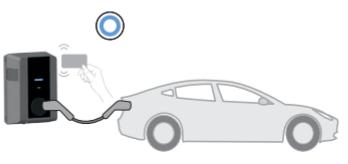
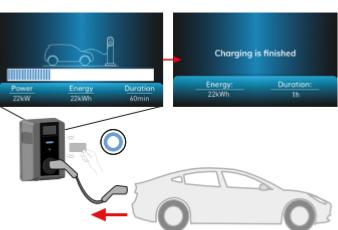
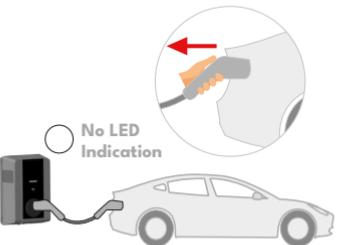
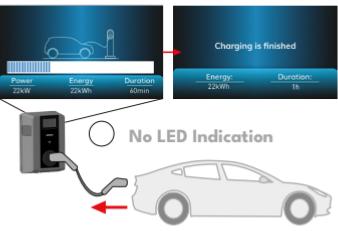
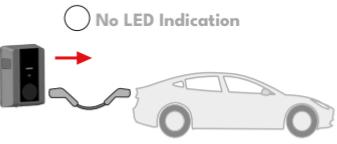
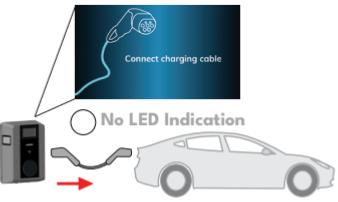
**5 -** Charging starts and status indicator LED glows in blue.



**All products images are given for as a representative**

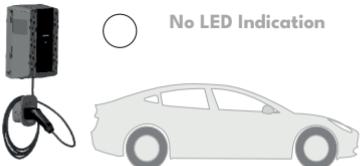
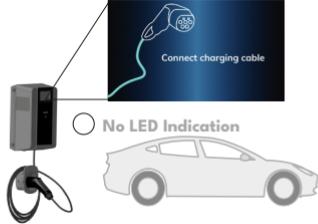
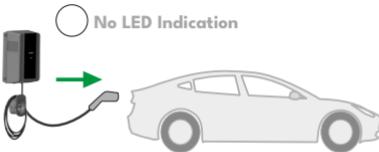
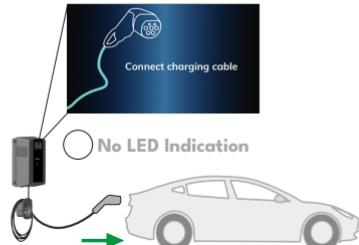
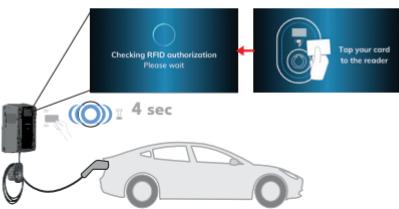
**NOTE :** Charging operation is rejected by the charging station when you want to start charging with an unauthorized card. It takes around one minute to reboot your charging station after it resets.

#### 11.1.4.1.2 - STOP CHARGING

Model Without Display	Model With Display
<p><b>1-</b> 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.</p>	<p><b>1-</b> 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.</p>
<p><b>Method 1.</b> You can terminate charging by tapping the RFID card that you have started charging before.</p>	<p><b>Method 1.</b> You can terminate charging by tapping the RFID card that you have started charging before.</p>
	
<p><b>Method2.</b> You may stop charging by unplugging the charging cable from the vehicle first.</p>	<p><b>Method2.</b> You may stop charging by unplugging the charging cable from the vehicle first.</p>
	
<p><b>2-</b> Unplug the charging cable from the station.</p>	<p><b>2 -</b> Unplug the charging cable from the station.</p>
	

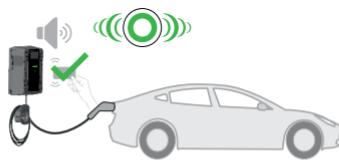
## 11.1.4.2 - ATTACHED CABLE MODEL

### 11.1.4.2.1 - VEHICLE CONNECTION & CHARGING

Model Without Display	Model With Display
<p><b>1 -</b> Ensure that your vehicle and the station is ready for charging.</p> 	<p><b>1 -</b> Ensure that your vehicle and the station is ready for charging.</p> 
<p><b>2 -</b> Insert the charging plug to the vehicle inlet.</p> 	<p><b>2 -</b> Insert the charging plug to the vehicle inlet.</p> 
<p><b>3- Tap the RFID card to the RFID reader.</b></p> 	<p><b>3- Tap the RFID card to the RFID reader.</b></p> 

**4-** You may start charging with a card that has been authorized before, if the charging station is in RFID Local List Authorized Mode.

If the charging station is in Accept ALL RFIDs Mode, then you may start charging with any supported RFID card.

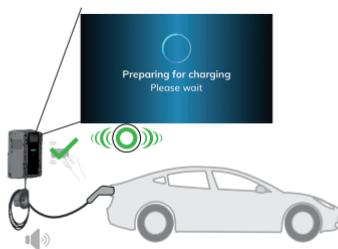


**5 -** Charging starts and status indicator LED glows in blue.

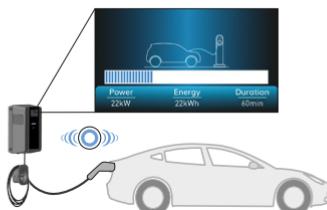


**4-** You may start charging with a card that has been authorized before, if the charging station is in RFID Local List Authorized Mode.

If the charging station is in Accept ALL RFIDs Mode, then you may start charging with any supported RFID card.



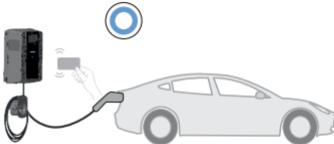
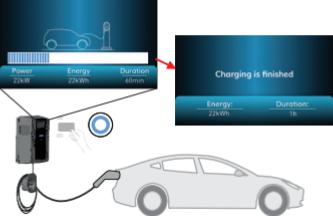
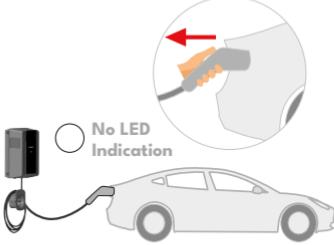
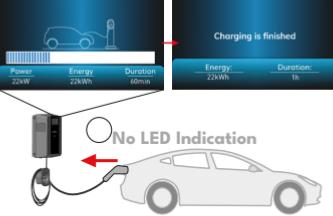
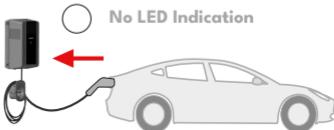
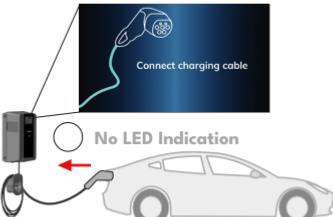
**5 -** Charging starts and status indicator LED glows in blue.



**All products images are given for as a representative**

**NOTE :** Charging operation is rejected by the charging station when you want to start charging with an unauthorized card. It takes around one minute to reboot your charging station after it resets.

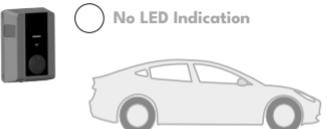
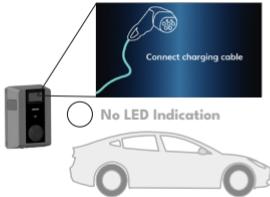
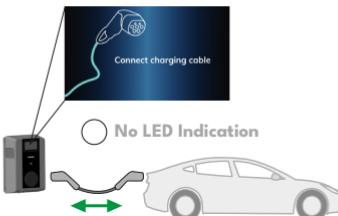
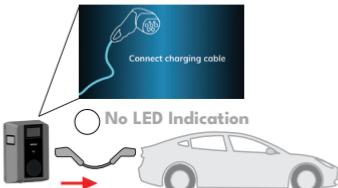
#### 11.1.4.2.2 - STOP CHARGING

Model Without Display	Model With Display
<p><b>1-</b> You may follow the alternative methods specified below to stop charging.</p> <p><b>Method1.</b> You can terminate charging by tapping the RFID card that you have started charging before.</p> 	<p><b>1-</b> You may follow the alternative methods specified below to stop charging.</p> <p><b>Method1.</b> You can terminate charging by tapping the RFID card that you have started charging before.</p> 
<p><b>Method2.</b> You may stop charging by unplugging the charging cable from the vehicle.</p> 	<p><b>Method2.</b> You may stop charging by unplugging the charging cable from the vehicle.</p> 
<p><b>2-</b> Insert the charging plug to the charging plug holder of the station.</p> 	<p><b>2-</b> Insert the charging plug to the charging plug holder of the station.</p> 

## 11.2 - OCPP CENTRAL SYSTEM CONNECTED MODE (Optional)

### 11.2.1 - SOCKET EQUIPPED MODEL

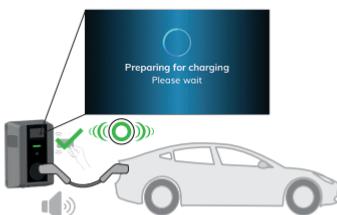
#### 11.2.1.1 - VEHICLE CONNECTION & CHARGING

Model Without Display	Model With Display
<p><b>1 -</b> Ensure that your vehicle and the station is ready for charging.</p> 	<p><b>1 -</b> Ensure that your vehicle and the station is ready for charging.</p> 
<p><b>2 -</b> Insert the charging plug to the vehicle inlet and charging station socket outlet.</p> 	<p><b>2 -</b> Insert the charging plug to the vehicle inlet and charging station socket outlet.</p> 
<p><b>3-</b> Tap the RFID card to the RFID reader you may start charging with a card which is provided by your charging operator.</p> 	<p><b>3-</b> Tap the RFID card to the RFID reader you may start charging with a card which is provided by your charging operator.</p> 

**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.



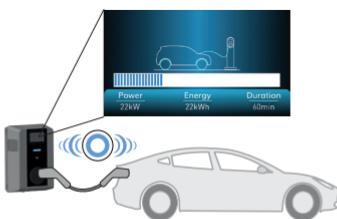
**4-** You may start charging with a card that has been authorized before. If the RFID Card is authorized by OCPP Central System, charging will start.



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



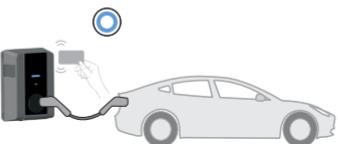
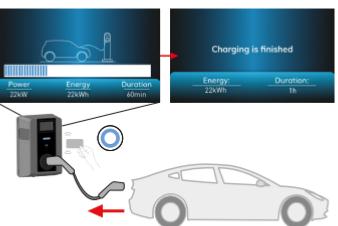
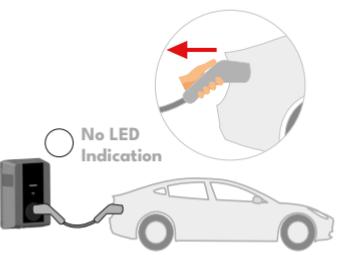
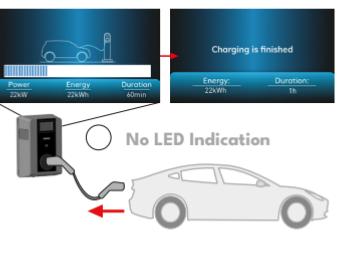
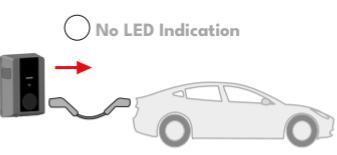
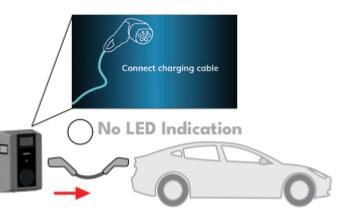
**5 -** Charging starts and status indicator LED glows in blue.



**All products images are given for as a representative**

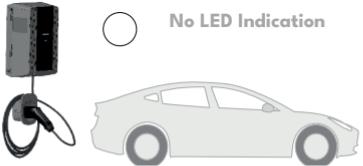
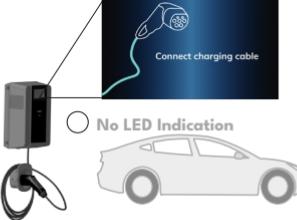
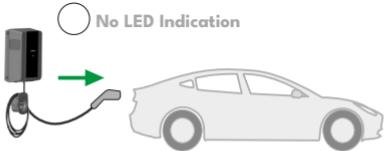
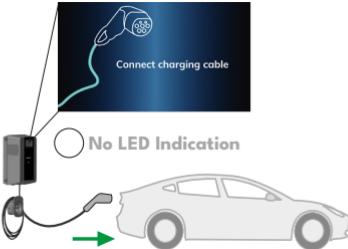
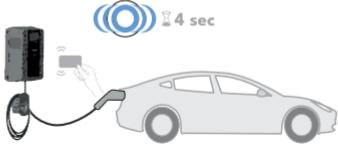
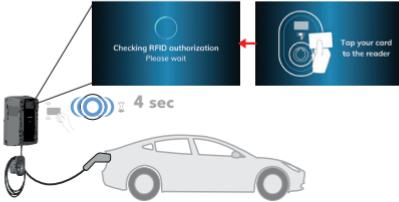
**NOTE :** Charging operation is rejected by the charging station when you want to start charging with an unauthorized card. It takes around one minute to reboot your charging station after it resets.

### 11.2.1.2 - STOP CHARGING

Model Without Display	Model With Display
<p><b>1-</b> 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.</p>	<p><b>1-</b> 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.</p>
<p><b>Method 1.</b> You can terminate charging by tapping the RFID card that you have started charging before.</p>	<p><b>Method 1.</b> You can terminate charging by tapping the RFID card that you have started charging before.</p>
	
<p><b>Method 2.</b> You may stop charging by unplugging the charging from the vehicle first.</p>	<p><b>Method 2.</b> You may stop charging by unplugging the charging cable from the vehicle first.</p>
	
<p><b>2 -</b> Unplug the charging cable from the station.</p> 	<p><b>2 -</b> Unplug the charging cable from the station.</p> 

## 11.2.2 - ATTACHED CABLE MODEL

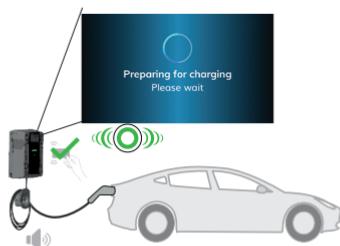
### 11.2.2.1 - VEHICLE CONNECTION & CHARGING

Model Without Display	Model With Display
<p><b>1 -</b> Ensure that your vehicle and the station is ready for charging.</p> 	<p><b>1 -</b> Ensure that your vehicle and the station is ready for charging.</p> 
<p><b>2 -</b> Insert the charging plug to the vehicle inlet.</p> 	<p><b>2 -</b> Insert the charging plug to the vehicle inlet.</p> 
<p><b>3-</b> Tap the RFID card to the RFID reader. You may start charging with a card which is provided by your charging operator.</p> 	<p><b>3-</b> Tap the RFID card to the RFID reader. You may start charging with a card which is provided by your charging operator.</p> 

**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.



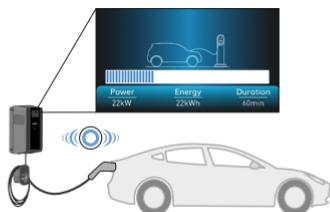
**4-** You may start charging with a card that has been authorized before. If the RFID Card is authorized by OCPP Central System, charging will start.



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



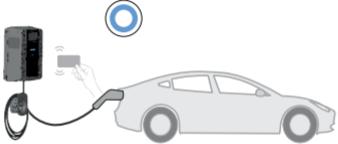
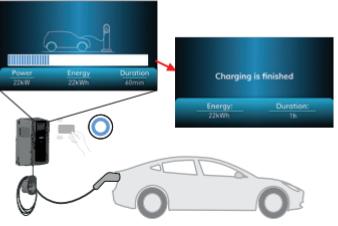
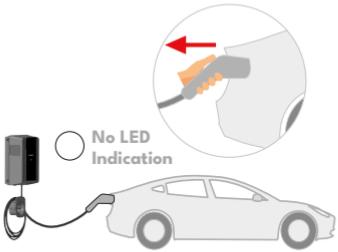
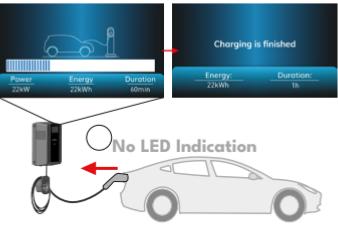
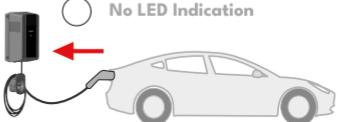
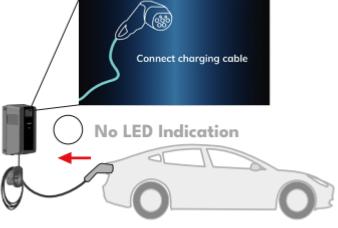
**5 -** Charging starts and status indicator LED glows in blue.



All products images are given for as a representative

**NOTE :** Charging operation is rejected by the charging station when you want to start charging with an unauthorized card. It takes around one minute to reboot your charging station after it resets.

## 11.2.2.2 - STOP CHARGING

Model Without Display	Model With Display
<p><b>1-</b> You may follow the alternative methods specified below to stop charging.</p>	<p><b>1-</b> You may follow the alternative methods specified below to stop charging.</p>
<p><b>Method1.</b> You can terminate charging by tapping the RFID card that you have started charging before.</p>	<p><b>Method1.</b> You can terminate charging by tapping the RFID card that you have started charging before.</p>
	
<p><b>Method2.</b> You may stop charging by unplugging the charging from the vehicle first.</p>	<p><b>Method2.</b> You may stop charging by unplugging the charging cable from the vehicle.</p>
	
<p><b>2-</b> Insert the charging plug to the dummy socket of the station.</p> 	<p><b>2-</b> Insert the charging plug to the charging plug holder of the station.</p> 

All products images are given for as a representative

## 11.2.3 - OCPP 1.6 JSON ADDITIONAL FEATURES

### 11.2.3.1 - RESERVATION FEATURE

Reservation feature allows the user to reserve the charging station for a period of time. During this period:

- The LED will blink in red and blue.
- Only the RFID card that is used for reservation may initiate the charging process. Other cards are rejected.

If charging is not initiated until the reservation period is expired, the LED will switch to "No Light Indication" mode.

Model Without Display	Model With Display
 	 

### 11.2.3.2 - REMOTE CHARGE INITIATION / TERMINATION

This feature is supported by the charging station. If it is also supported by the connected server, then charging process may be initiated/terminated remotely.

### 11.2.3.3 - HARD RESET/ SOFT RESET

If the electric vehicle charging station is not working properly, the service provider may restart the appliance with this feature. There are two types of restart. Software or hardware reset may be selected.

### 11.2.3.4 - UNLOCKING THE SOCKET

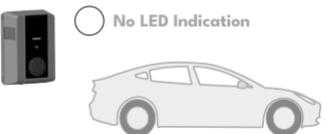
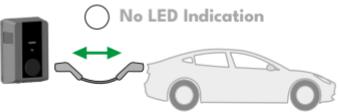
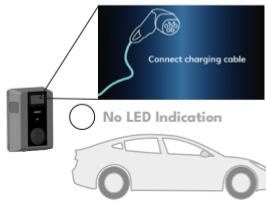
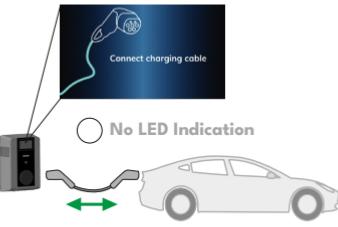
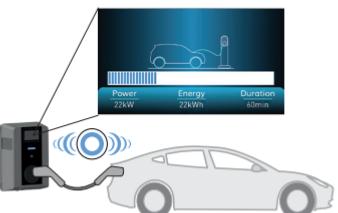
If the charging cable is locked at the station, the service provider may unlock the cable via this feature.

## 11.3 - PLUG & CHARGE (OPTIONAL)

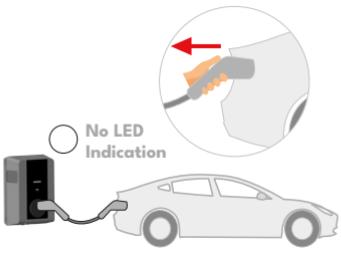
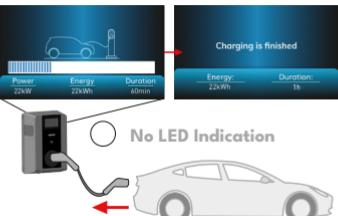
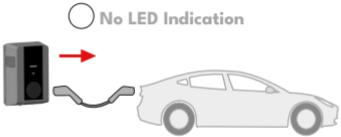
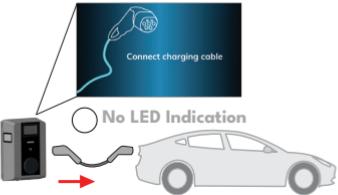
PLUG & CHARGE function is only available with OCPP CENTRAL SYSTEM CONNECTED MODE activated. To charge with PLUG & CHARGE, EV shall also support the PLUG & CHARGE function.

### 11.3.1 - SOCKET EQUIPPED MODEL

#### 11.3.1.1 - VEHICLE CONNECTION & CHARGING

Model Without Display	Model With Display
<p><b>1 - Ensure that your vehicle and the station is ready for charging.</b></p>  <p><b>2 - Insert the charging plug to the vehicle inlet and charging station socket outlet.</b></p>  <p><b>3 - Charging starts and status indicator LED glows in blue.</b></p> 	<p><b>1 - Ensure that your vehicle and the station is ready for charging.</b></p>  <p><b>2 - Insert the charging plug to the vehicle inlet and charging station socket outlet.</b></p>  <p><b>3 - Charging starts automatically, and status indicator LED glows in blue.</b></p> 

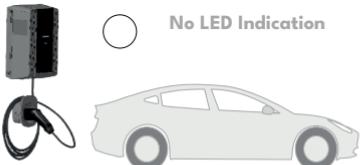
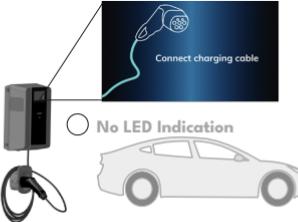
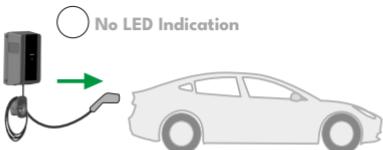
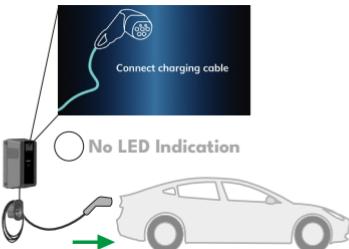
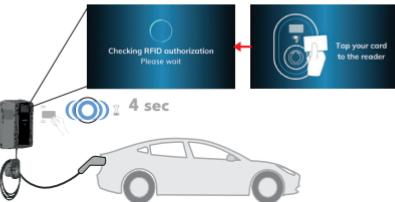
### 11.3.1.2 - STOP CHARGING

Model Without Display	Model With Display
<p><b>1-</b> 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.</p> 	<p><b>1-</b> 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.</p> 
<p><b>2 -</b> Unplug the charging cable from the station.</p> 	<p><b>2 -</b> Unplug the charging cable from the station.</p> 

All products images are given for as a representative

## 11.3.2 - ATTACHED CABLE MODEL

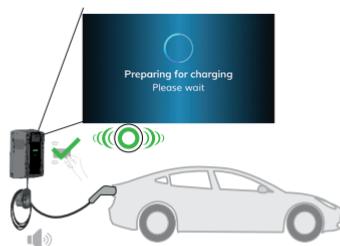
### 11.3.2.1 - VEHICLE CONNECTION & CHARGING

Model Without Display	Model With Display
<p><b>1 -</b> Ensure that your vehicle and the station is ready for charging.</p>  <p>No LED Indication</p>	<p><b>1 -</b> Ensure that your vehicle and the station is ready for charging.</p>  <p>No LED Indication</p>
<p><b>2 -</b> Insert the charging plug to the vehicle inlet.</p>  <p>No LED Indication</p>	<p><b>2 -</b> Insert the charging plug to the vehicle inlet.</p>  <p>No LED Indication</p>
<p><b>3-</b> Tap the RFID card to the RFID reader. You may start charging with a card which is provided by your charging operator.</p>  <p>4 sec</p>	<p><b>3-</b> Tap the RFID card to the RFID reader. You may start charging with a card which is provided by your charging operator.</p>  <p>Top your card to the reader</p> <p>Checking RFID authorization Please wait</p>

**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.



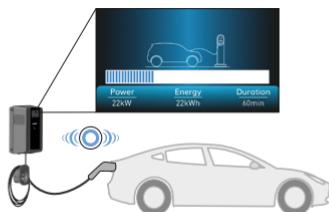
**4-** You may start charging with a card that has been authorized before. If the RFID Card is authorized by OCPP Central System, charging will start.



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

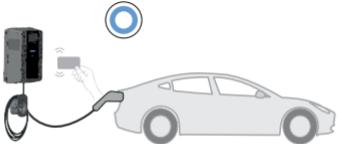
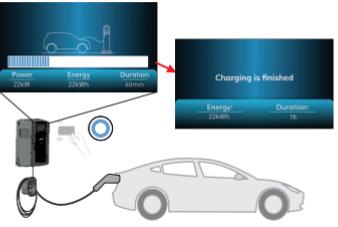
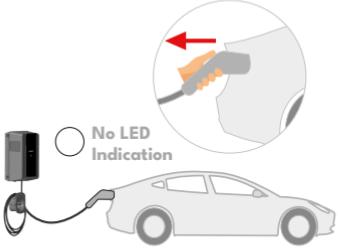
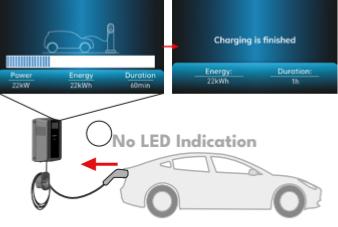
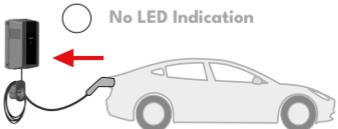
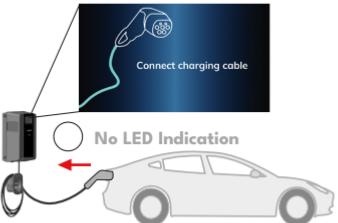


**5 -** Charging starts and status indicator LED glows in blue.



**NOTE :** Charging operation is rejected by the charging station when you want to start charging with an unauthorized card. It takes around one minute to reboot your charging station after it resets.

### 11.3.2.2 - STOP CHARGING

Model Without Display	Model With Display
<p><b>1-</b> You may follow the alternative methods specified below to stop charging.</p> <p><b>Method 1.</b> You can terminate charging by tapping the RFID card that you have started charging before.</p> 	<p><b>1-</b> You may follow the alternative methods specified below to stop charging.</p> <p><b>Method 1.</b> You can terminate charging by tapping the RFID card that you have started charging before.</p> 
<p><b>Method 2.</b> You may stop charging by unplugging the charging from the vehicle first.</p> 	<p><b>Method 2.</b> You may stop charging by unplugging the charging cable from the vehicle.</p> 
<p><b>2-</b> Insert the charging plug to the dummy socket of the station.</p> 	<p><b>2-</b> Insert the charging plug to the charging plug holder of the station.</p> 

## **12 - CHECKING VALIDITY OF MEASUREMENT DATA USING TRANSPARENCY SOFTWARE**

This section is describing charging, transfer of legally relevant data and billing of charging process in accordance with the German Measures and Verification Ordinance (MessEV).

In this charging station, the progressing kWh display information is shown on the display.

### **What is transparency software?**

Transparency software allows you to verify digital signatures. Depending on its technical design, a charging station creates digitally signed meter readings in connection with the charging procedure you are carrying out at the charging station. These digital signatures enable you to check the readings with a time delay so that you can ensure no one has manipulated the readings at any point during their transfer to your invoice.

In order to use the transparency software you must first download and then open it on your desktop PC system.

You can download transparency software from the link below. Installation is explained on this site.

**[https://www.safe-ev.de/en/transparency\\_software.php](https://www.safe-ev.de/en/transparency_software.php)**

### **How does the transparency software work?**

#### **Transparenzsoftware 1.2.0**

With the use of this software, it's possible to verify a digital signature. Depending on the technical setup, a charging station will produce a digitally signed meter reading that is linked to the charging station where an EV is being charged. With this digital signature, you can check the measured values with a delay. In this way, as a consumer, you always know for sure that the charged kWhs are correct and that the measured values can no longer be adjusted when the charged kWhs are invoiced.

## **LOADING DIGITAL SIGNATURE DATA**

Select the meter readings available to you using the 'File' / 'Open' function and enter the charging station's public key.

## **CHECKING THE RESULT**

Check the output as to whether the results of digital signature verification match the information on your invoice or charging receipt.

Transparency software for supply utilities of electromobility - Version: 1.2.0

File Go Help

Opened dataset

- TransactionId:199934402

Single value 0 (Transaction.Begin)  
Single value 1 (Transaction.End)

User data Details Dataset

 Your data has been verified

Meter

Metering value at start of charge transaction  
0.010 kWh  
27.06.2022 05:27:00 (lokal)

Metering value at reading moment (end of charge transaction)  
21.600 kWh  
27.06.2022 07:56:55 (lokal)

relevant measurement result for charging device utilization time  
2h 29m 55s

relevant measurement result for energy output and period of use  
21.590 kWh

Page 1 of 2

If you enter the wrong public key, it will give an error message as below.

Transparency software for supply utilities of electromobility - Version: 1.2.0

File Go Help

User data Details Dataset

 No data yet.

Please select the file menu and open a file.

Public-key

3059301306072a8648ce3d020106082a8648ce3d03010703420004c4fe41d56751bddbe8d7aafe87142b5f0f8ba512b3604e1178164cf5bc6a6b448260cc5180bf51e2a1385235  
5014c6d1a13c9eda5792315bbb1622f266cd5f

The provided public key cannot be decoded.

Page 1 of 2

## **Remote transmission of metering data to a OCPP backend**

Charging station connecting to an OCPP backend, the corresponding signed measurement and log data record is provided to the OCPP backend automatically at the end of a charging session.

### **Forwarding data records to customers**

Forwarding data records to customers is the job of the charge point operator and is not within the scope of influence of the charging station manufacturer. After the charging session, signed metering data records are transmitted to an OCPP central system and this data is available to an end user via web interface, e-mail, smart phone application or similar. ) The data records are preferably in .xml format. If you need to verify the charging session data by using transparency software please request signed measurement data from your charge point operator or e-mobility provider.

### **Verification of measurement data using the transparency and display software**

Using the transparency and display software, users can check whether the measurement data comes from a certain charging station and whether its authenticity has been maintained.

The charging station has a public key. The public key is openly available and indicated on the type plate of measurement unit of the charging station in the form of a QR code. The charging station creates a measurement data record in the measurement capsule. The charge point operator then uses the signed measurement data record to create the bill. Both the signed measurement data and the public key, in a format that is compatible with the transparency and display software, must be provided on the bill or in a customer portal.

After receiving the bill, the consumer can input the digitally signed measured values along with the public key into the transparency and display software. The signature verification enables the consumer to check the validity of the measured values. To do so, the consumer compares the values displayed in the transparency and display software with the contents of the bill. If the measurement record is validated by transparency software , this confirms that the data record was not changed and valid for billing.

The transparency and display software checks the following data:

Public key, as identifier of the charging station. The public key can also be read on the type plate of measurement unit of the charging station.

Correct measured energy value

Correct user/transaction ID

Checking the signed measurement data record

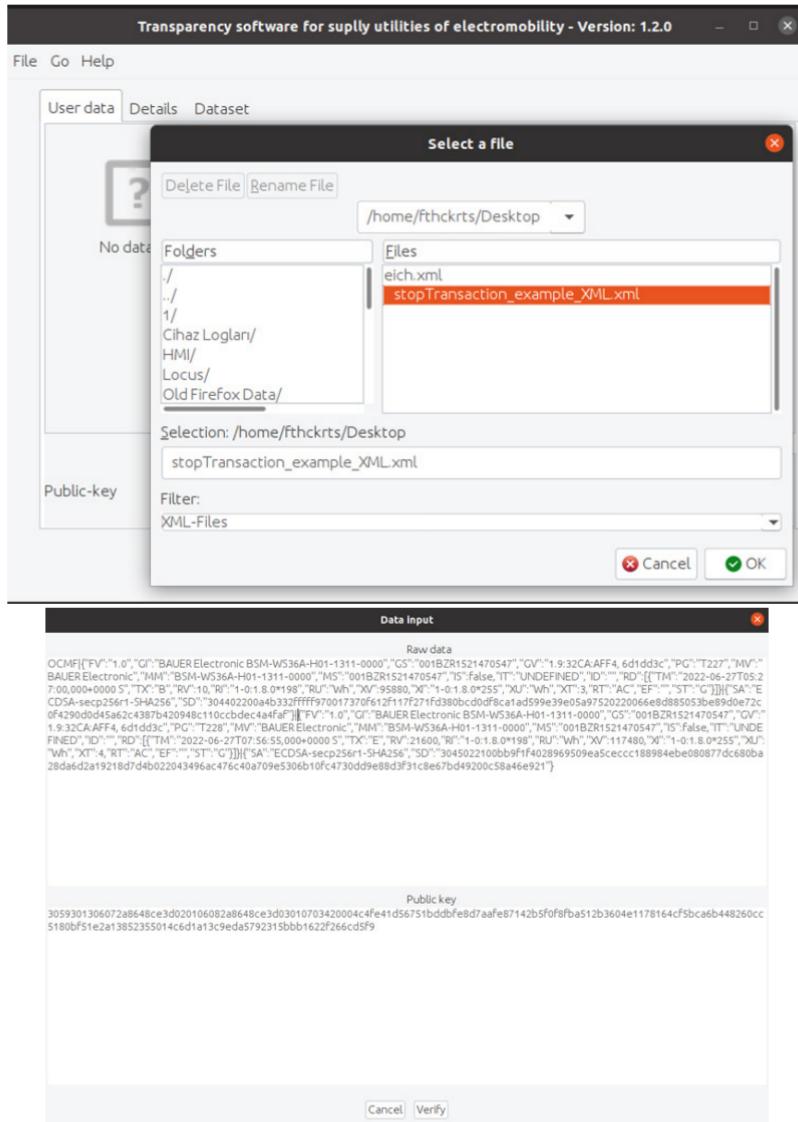
To check the measurement data record, proceed as follows:

**1)** Download and install a Java Runtime Environment (available for all operating systems, usually already present, e.g. Oracle).

**2)** Download the transparency and display software from  
[https://www.safe-ev.de/en/transparency\\_software.php](https://www.safe-ev.de/en/transparency_software.php)

**3)** Input the following data into the transparency and display software:

- Signed measurement data record
- Selection of the “OCMF” format
- Public key of the corresponding charging station



4) After entering the necessary data, the check can be started.

5) After this check is complete, it must be checked whether the results of the signature verification match the information on the bill.

Transparency software for supply utilities of electromobility - Version: 1.2.0

File Go Help

Opened dataset

Transaction id 19994402

Single value 0 (Transaction.Begin)  
Single value 1 (Transaction.End)

User data Details Dataset

 Your data has been verified

Meter

Metering value at start of charge transaction  
0.010 kWh  
27.06.2022 05:27:00 (lokal)

Metering value at reading moment (end of charge transaction)  
21.600 kWh  
27.06.2022 07:56:55 (lokal)

relevant measurement result for charging device utilization time  
2h 29m 55s

relevant measurement result for energy output and period of use  
21.590 kWh

Public-key

3059301306072a8648ce3d020106082a8648ce3d03010703420004c4fe41d56751bddbf  
e8d7aafe87142b5f0fbfa512b3604e1718164cf5bca6b448260cc5180bf51e2a1385235  
5014c6d1a73c9eda5792315bbb1622f266cd5f9

Page 1 of 2

## 13 - LEGAL INFORMATION

### 13.1 - NOTES ON THE CORRECTNESS OF MEASUREMENT ACCORDING TO CSA TYPE EXAMINATION CERTIFICATE

#### **I - Conditions for the operator of the charging device, which must be fulfilled as a necessary prerequisite for the intended operation of the charging device.**

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

1. The charging device is only used in accordance with calibration law and properly used, if the meters installed in it are not exposed to other environmental conditions than those for which their type examination certificate was issued.
2. The charging device is only used in accordance with calibration law and properly used, only if the authentication methods listed under point 1.3.2.3.2 of the currently valid BMP of these 6.8 devices are used.
3. When registering the charging points with the Federal Network Agency, the user of this product must also register the public key specified on the charging device for the charging points in the registration form! Without this registration, the column cannot be operated in accordance with calibration law. Web link: [https://www.bundesnetzagentur.de/DE/Sachgebieten/ElektrizitaetundGas/UNTERNEHMEN\\_INSTITUTIONS/E-Mobilitaet/start.html](https://www.bundesnetzagentur.de/DE/Sachgebieten/ElektrizitaetundGas/UNTERNEHMEN_INSTITUTIONS/E-Mobilitaet/start.html)
4. The user of this product must ensure that the calibration validity periods for the components in the charging device and for the charging device itself are not exceeded.
5. The user of this product must ensure that charging devices are taken out of operation promptly if operation in accordance with calibration law is no longer possible due to fault or error messages on the display of the man-machine interface relevant to calibration law. The catalogue of fault and error messages in these operating instructions must be observed.
6. The user must store the signed data packets read out from the charging device - according to the pagination without gaps and permanently (also) on hardware dedicated to this purpose in his possession or by corresponding agreements in the possession of the EMSP or backend system ("dedicated storage"), - keep it available for authorized third parties (mandatory operation obligation.). Permanently means that the data not only has to be stored until the end of the business transaction, but at least until the expiry of possible statutory appeal periods for the business transaction. No substitute values may be created for billing purposes for data that is not available
7. The user of this product has a user's measured values, the measured values received from them and used in the course of their business, provide an electronic form of a CSA approved instruction manual. In doing so, the user of this product must refer in particular to No. II "Conditions for the user of the measured values from the charging device".
8. The user of this product is subject to the obligation to notify according to § 32 MessEG (excerpt):*§ 32 Obligation to notify (1) Anyone who uses new or renewed measuring devices must notify the competent authority under state law no later than six weeks after commissioning....*
9. Insofar as it is considered necessary by authorized authorities, the complete content of the dedicated local memory or the memory at the EMSP or backend system with all data packages of the billing period must be made available by the meter user.

## **II - Requirements for the user of the measured values from the charging device (EMSP)**

The user of the measured values must observe § 33 of the MessEG:

### **§ 33 MessEG (quote)**

#### **§ 33 Requirements for the use of measured values**

*(1) Values for measurands may be used in commercial or official transactions or for measurements in public interest only if a measuring device was used as intended and the values can be traced back to the respective measurement result, unless otherwise specified in the ordinance pursuant to Section 41 number 2. Other federal regulations that serve comparable protective purposes continue to apply.*

*(2) Anyone who uses measured values must ensure, as far as possible, that the measuring device meets the legal requirements and must have the person using the measuring device confirm that they are fulfilling their obligations.*

*(3) Whoever uses measurements has*

*1. to ensure that invoices, insofar as they are based on measured values, are issued by the person for whom the invoices are determined, traced in a simple way to check specified measured values can be and*

*2. If necessary, provide suitable aids for the purposes specified in number 1*

For the user of the measured values, this regulation gives rise to the following specific obligations regarding the use of measured values in accordance with calibration law:

1. The contract between EMSP and the customer must state unequivocally, that the supply of electrical energy only, and not the duration of the charging service is the subject of the contract.
2. The time stamps on the measured values come from a clock in the charging device that is not certified according to measuring and calibration law. They must therefore not be used to rate the measured values.
3. The EMSP must ensure that the customer is automatically sent a receipt of the measurement and the information on the determination of the business transaction after the measurement has been completed and at the latest at the time of invoicing, unless the customer expressly waives this. The information to determine the business transaction can be the following:
  - a. Name of EMSP
  - b. Start and end time of the loading process
  - c. Charged energy in kWh
  - d. credit card number

4. If the customer requests proof of the correct transfer of the measurement results from the charging device to the invoice, the user of the measurement value is obliged to provide this in accordance with MessEG, § 33, paragraph (3). If the customer requests reliable, permanent proof in accordance with Annex 2 10.2 MessEV, the user of the measured value is obliged to provide this to him. The EMSP must inform its customers about these obligations in an appropriate manner.

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

- a. When loading with a continuing obligation via the textual contract
- b. When loading selectively (ad-hoc loading) via APP or mobile website together with the receipt via email or SMS
- c. In the case of selective loading (ad-hoc loading) using a (contactless) money card together with the receipt for the account statement

5. The EMSP must provide the customer with the billing-relevant data packages automatically after the measurement is complete and at the latest at the time of billing, including the signature, as a data file in such a way that they can be checked for authenticity using the transparency and display software. The data packets can be made available in the following ways and depending on the authentication method via channels that have not been verified under calibration law:
  - a. When loading with a continuing obligation via an email or access to a backend system
  - b. When loading selectively via APP or mobile website via an e-mail or SMS
  - c. When charging selectively using a (contactless) money card via the account statement and the associated access to a backend system
6. The EMSP must be able to show in a verifiable manner which means of identification was used to initiate the charging process associated with a specific measured value. This means that he must be able to prove for every business transaction and billed measured value that he has correctly assigned the personal identification data to them. The EMSP must inform its customers of this obligation in an appropriate manner.
7. The EMSP may only use values for billing purposes for which data packets are available in a dedicated memory that may be available in the charging device and/or the memory at the EMSP or backend system. Substitute values may not be formed for billing purposes.
8. The EMSP must make appropriate agreements with the operator of the charging facility to ensure that the data packets used for billing purposes are stored for a sufficient period of time in order to be able to fully complete the associated business processes.
9. In the event of a justified notification of need for the purpose of carrying out calibrations, diagnostic tests and use monitoring measures, the EMSP must provide suitable means of identification to enable authentication on the copies of the product belonging to these operating instructions used by him.
10. All of the above obligations apply to the EMSP as the user of the measured values within the meaning of § 33 MessEG even if he obtains the measured values from the charging facilities via a roaming service provider.

## 14 - MID METER MODELS (OPTIONAL)

It is possible to view the total active energy on the display of the MID meter (products with MID meter).



## 15 - ERROR AND FAULT CONDITIONS

Due to any fault, in display models, you can see "Out of order!" screen in charging station. The received error code also appears on the display.



### 15.1 - 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.



## 15.2 - 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>

**NOTE :** If you face a configuration problem in configuring your charger and smartphone please be sure that the bluetooth range is less than 10 meters - stay inside the range.

**NOTE :** If you face a Wi-Fi connection problem in controlling the charger please restart your router and check the connections.

### 15.2.1 - ON BOARD TYPE-A RESIDUAL CURRENT DEVICE

The charging station is equipped with a certified on board designed Type-A residual current device that reacts a DC leakage current higher than 6mA or AC leakage current higher than 30mA.

If the charging station goes to error state due to residual current, charging cable must be unplugged from vehicle and then from the charging station to reset this error. If the error state does not resets after unplugging charging cable, please consult to customer care.

## 16 - 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.

## 17 - MAINTENANCE

The device is maintenance-free. The applicable periods for the validity of calibration must be observed for the electricity meter and charging station. Compliance with the points listed under Model Description, Technical Specification, and Legal Information chapters must be guaranteed over the entire service life of the product. The user must not exceed the validity period for calibration both of them the meter and inside the charging stations. When the calibration period is exceeded please contact the manufacturer for changing the meter inside the charging station by an authorized technical services company.

# VESTEL

## MOBILITY



**Hersteller:** VESTEL MOBİLİTE SANAYİ VE TİCARET A.Ş. EGE SERBEST BÖLGE ŞUBESİ  
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<http://vestel-germany.de/de/page/service>