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1. TeltoCharge test plan

Here is provided information, how to correctly test TeltoCharge before or after technical trainings with technician

2. Essential items

To safely test TeltoCharge capabilities it's mandatory to have:

- Safe socket with equipped RCD-B
- Connection wires (1phase or 3phase)
- Application in the phone



- Electrical vehicle or simulator

3. Installation

1) Midplate disconnection

To be able to connect TeltoCharge to the electricity, the first step would be to remove midplate. There you will find 12 knobs that are holding the middle plate. Make sure, that none of the knobs are preventing midplate remove.



2) Wire connection

Everything must be done while the electricity is turned off.

Put wires through the gland (that could be found in the parcel) and connect wires according to the markings below the input point.

If the test will be provided with the Smart Energy meter, RS-485 cable must be connected according to the markings (A and B)

NOTE:

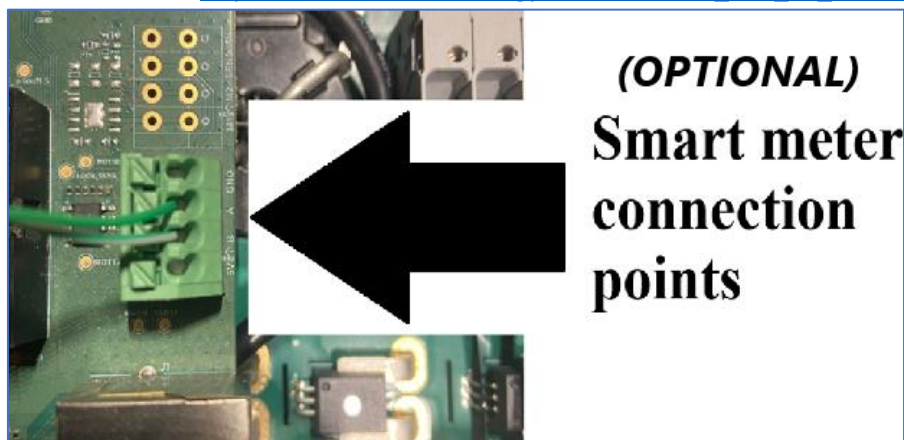
- Every wire has its placement.
- Make sure, that wires are connected correctly.
- Teltocharge will not work if there is no PE connected.



3) Smart meter connection (optional)

To test Teltocharge's Dynamic Load Balancing functionality, it's mandatory to:

- Choose smart meter from the list: https://wiki.teltonika-energy.com/view/Smart_energy_meters
- Connect smart meter using RS485 wire according to the instructions in the wiki page (Example for CARLO GAVAZZI https://wiki.teltonika-energy.com/view/EM_and_ET_models)

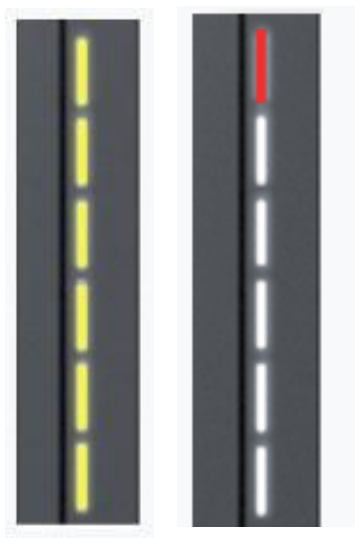


4) Power up

After everything is connected according to the instructions. TeltoCharge could be powered up.

During first 10 seconds, device will show White LEDS rolling from bottom to the top. After that, there are 2 possible outcomes:

- ✓ Yellow LEDs – device is in default parameters
- ✓ First red LED - Device is detecting voltage on the neutral wire. To solve this issue, phase and neutral wires must be switched between.
- ✓ Any other LED behavior is explained here: https://wiki.teltonika-energy.com/view/Troubleshooting_Guide



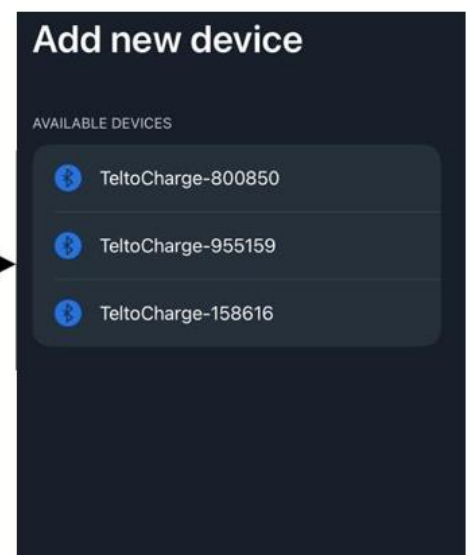
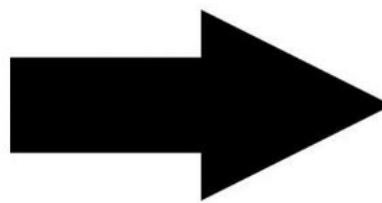
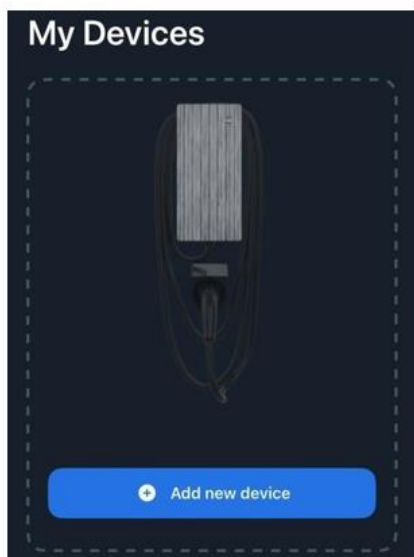
4. Application settings

After device is powered up, it's important to set correct setting for succesfull testing.

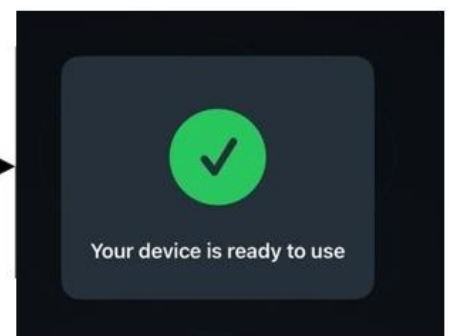
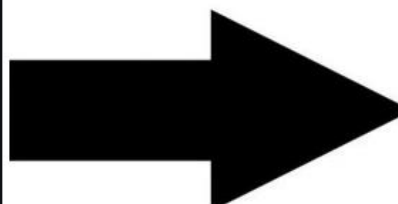
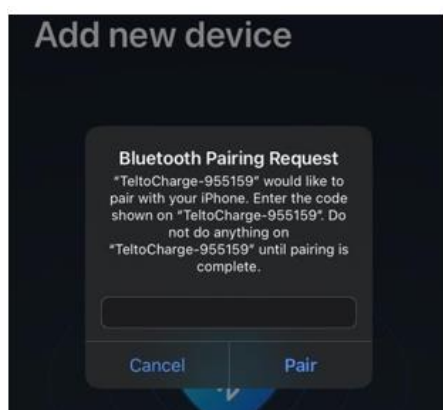
1) Pairing TeltoCharge with the application

For the first step, it's required to pair the charging station with the phone application. To achieve it, it required to:

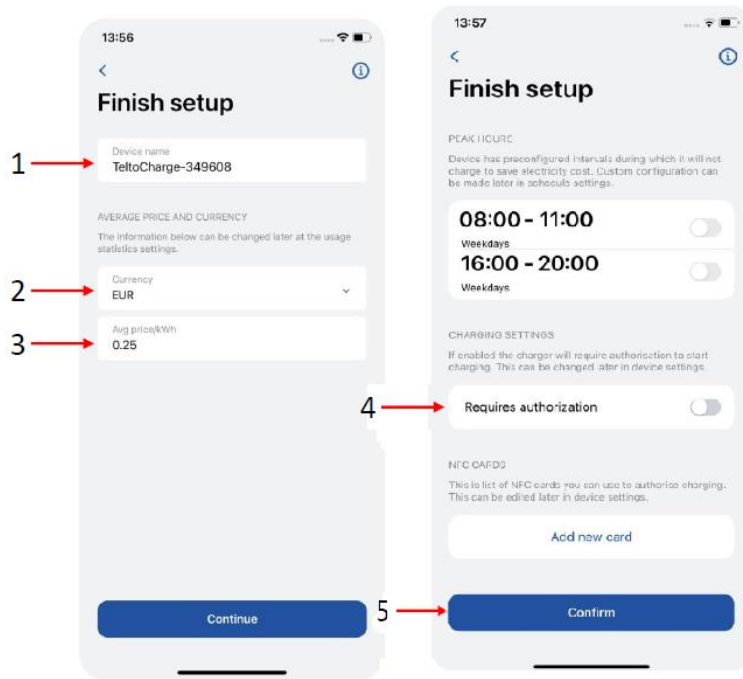
- ✓ Open the Teltonika Energy application
- ✓ Press „add new device“
- ✓ Select the device (it could be found according to the serial number)
- ✓ Provide the PIN code (it's last 6 digits from the sticker)
- ✓ Adjust „Finish setup windows“



*Numbers are last digits of S/N



Pairing Code is **last 6 digits** of the code that is on the sticker



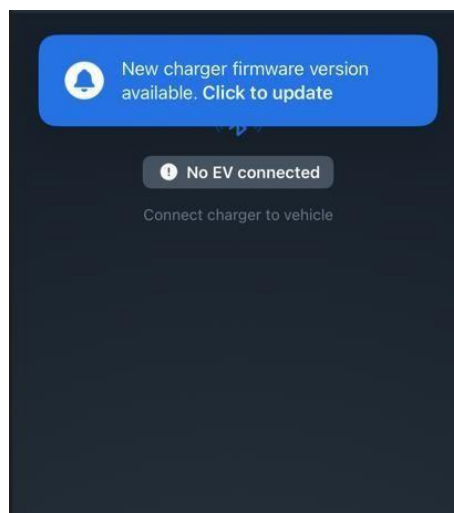
1. Name of the charging station that will be visible only in the phone from where it was set
2. Currency (To add non standard currency select other and name it in 3 letters)
3. Average price
4. Authorization (could be turned on later)
5. After everything is done press „Confirm“

2) „Firmware update“

After finishing setup, user will be transfered to main screen. For all freshly installed charger new update should be available. It will be indicated with a pop-up.

To do the update:

- ✓ Press on the pop-up
- ✓ Update will start automatically
- ✓ After the update charging station will reboot
- ✓ User will be transfered to the Device window
- ✓ To access the device, press on the device as soon as the status will be „available“



3) Installer settings

After the update it's mandatory to change settings in the installer menu to be able to test device's full potential.

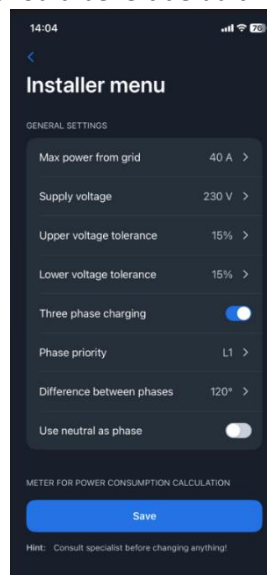
To do it:

- ✓ Go to the „Installer menu“
- ✓ To access security code is 9 digits from the sticker

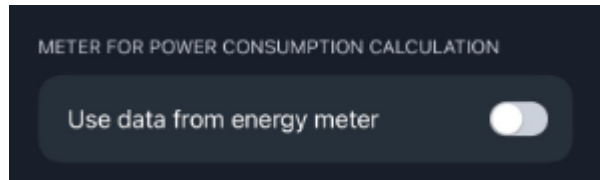


When the access to the installer menu is granted it's recommended to change:

- ✓ General settings:
 - Max power from grid:
 - Without Dynamic Load Balancing - value of circuit breaker
 - With Dynamic Load Balancing – value that's available for whole building
 - Supply voltage – highly recommended to keep 230
 - Upper voltage tolerance – recommended to make it 15%
 - Lower voltage tolerance - recommended to make it 15%
 - Rest of the settings should be left default



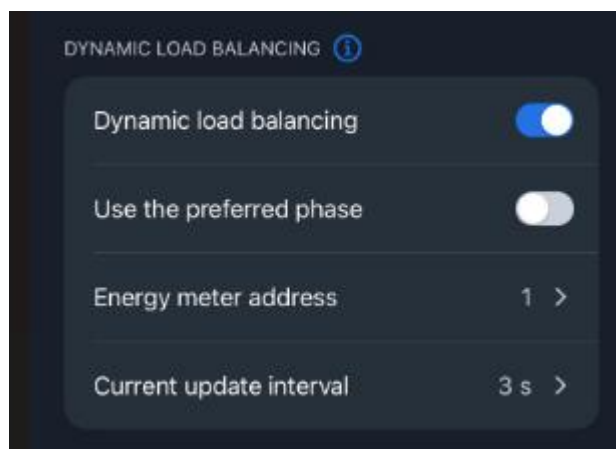
- ✓ Meter for power consumption calculation
 - This setting is not related to the dynamic load balancing
 - This setting must be turned ON only if charging station has separate smart energy meter(not connected with main grid) for MID calculations of charging sessions only



- ✓ General meter settings (If th test will be done with Dynamic Load Balancing)
 - Make sure all the settings are maching with the smart meter's general settings



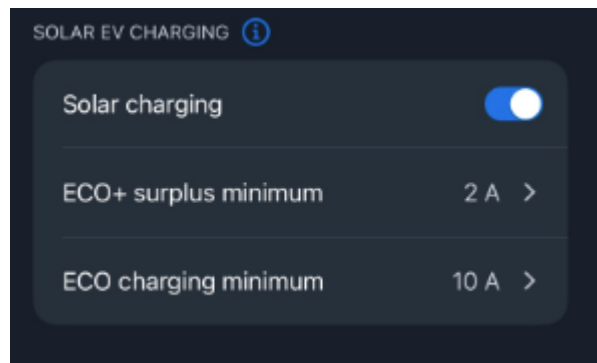
- ✓ Dynamic Load Balancing (optional)
 - Enable
 - „Use preffered phase“ this setting will be afective only if the charging station will be tested with 1 phase EVSE
 - Energy meter Modbus address – make sure this parameter maching with the actual modbus address of smart meter
 - Current update interval – reaction time to adjust current



- ✓ Dynamic Load Managment (OFF)
 - Only used with more than 1 charging station

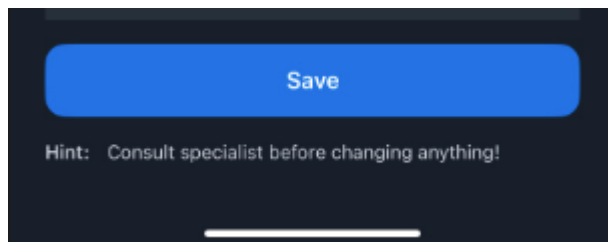
✓ Solar Charging

- Will be effective if there is a possibility to detect negative current (current that's being returned to the grid)
- It will allow to modify 2 settings
- ECO – keep charging value, but use solar energy when it's possible
- ECO+ - start only when the generation/export to the grid is higher than selected number
- SOLAR ONLY – not adjustable mode. Will start charging only when there are more than 6A going back to the grid



✓ Last step

- Press „SAVE“

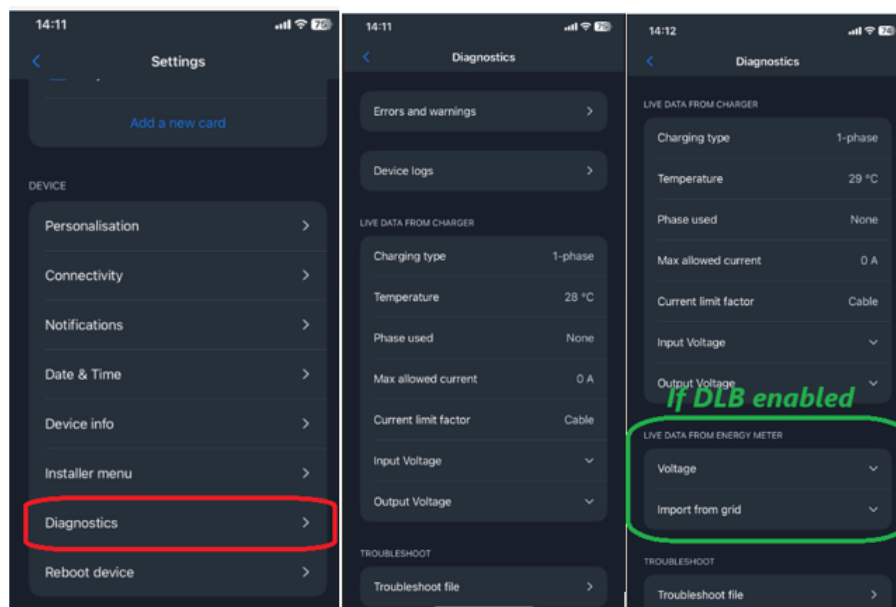


4) Diagnostics / live data from charger

After charging station is configured it's possible to check if everything is working correctly even without EV simulator. To do it, it would require to:

Go to the „Diagnostics“

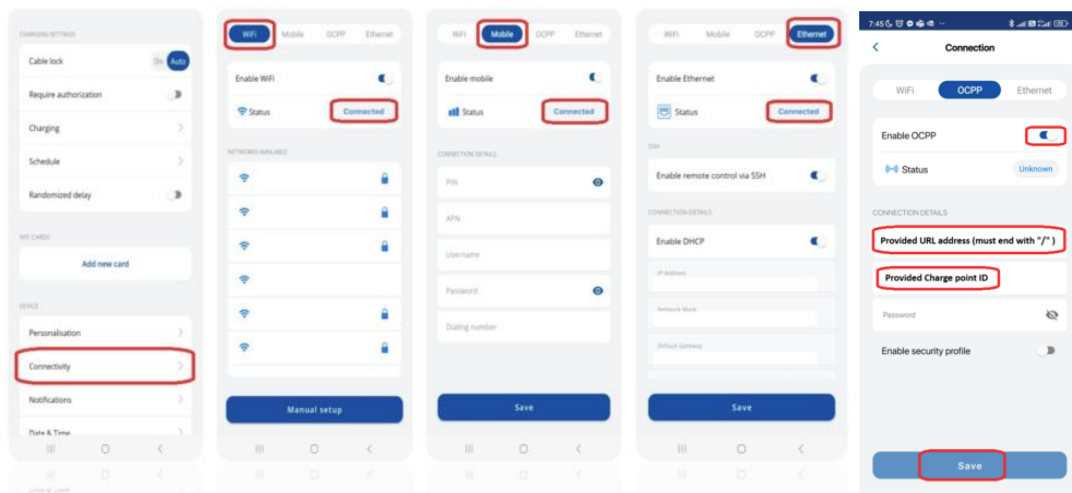
- Here it's possible to see Live data from TeltoCharge and from smart energy meter
- If the Dynamic Load Balancing is disabled „Live data from energy meter“ will be hidden



5. OCPP testing

To test charging station with OCPP software it required to connect TeltoCahrge to selected backend. It could be done in the application:

- Enter „Connectivity“
- Make sure that charger is connected to the internet
- Go to „OCPP“ window
- Write down the URL (URL must end with „/“)
- Write down ChargePointID
- Check the status



More information could be found here: https://wiki.teltonika-energy.com/view/Compatible_Software_Providers_for_OCPP_Integration

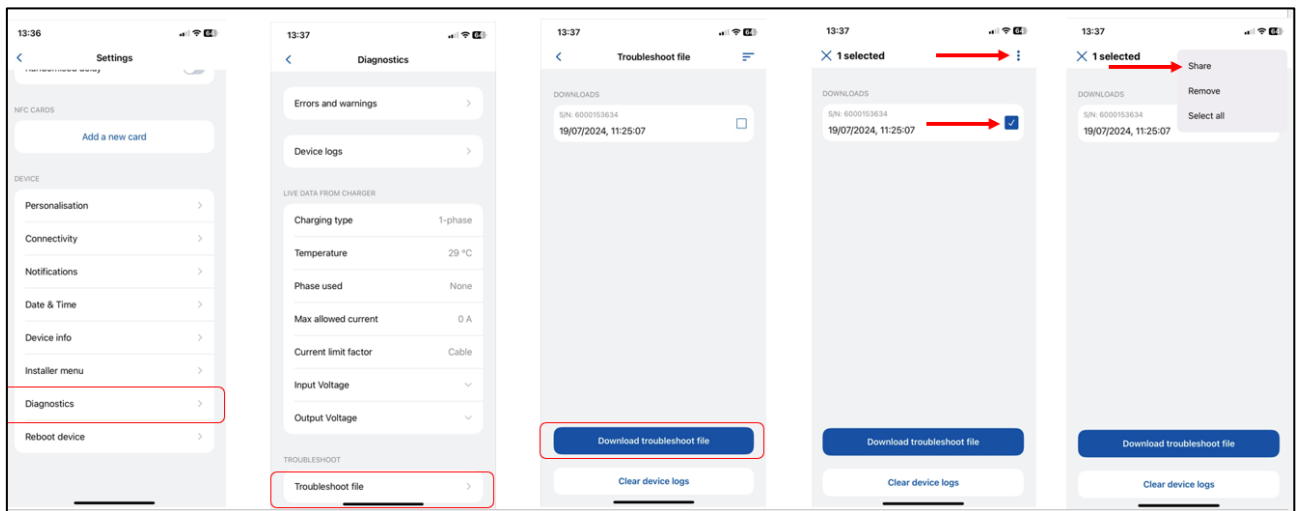
6. Troubleshooting

During the testing some questions or errors could appear. Most of the errors could be solved by setting adjustments.

If the charging station is not acting as it should be, for the Teltonika engineers its important to have a troubleshoot file (as it gives a lot of information about the settings/errors and general information)

To download the troubleshoot:

- Go to the Diagnostics
- At the bottom press Troubleshoot file
- Download the troubleshoot file
- Share it with Teltonika engineers using Helpdesk



More information could be found here: https://wiki.teltonika-energy.com/view/Troubleshooting_Guide