TROUBLESHOOTING GUIDE FOR ENGINEERS – TECHNICAL VISITS

Thank you for carrying out this Technical Visit on behalf of Wallbox Chargers. In order to provide a satisfactory service please do not leave the customer if they do not understand how the charger and the app works.

We have added in this document information on how to connect the charger to Bluetooth, Wi-Fi, how to set a schedule, lock and unlock the charger, add users and etc.

In case there are problems with the charger or the app in this document we also provided the trouble shooting steps to follow.

IF NO TROUBLESHOOTING RESOLVES THE ISSUE, COMPLETE THE BELOW **BEFORE CALLING** AND HAVE ALL DOCUMENTS READY

- Complete the full checklist.
- Take photos & videos.

Before calling us please also add in the checklist **steps that have been** done.

This will ensure that the call will be efficient and expedite any warranty claim necessary.

How to contact Service for any issue?

Contact us through the app, email, phone, or portal.

+44 20 3318 3779

service@wallbox.com

You can also WhatsApp any media files to +34673308293 *(quote the serial number/case ref)*

BLUETOOTH

If a charger doesn't connect to Bluetooth, a quick solution can always be to restart devices first. Please always make sure you are close to the charger (within 4 meters, but closer is better) and that you have a clear line of sight with the charger.

Be aware that only one phone can be connected at the same time.

Steps that can be done by the user:

Try to reconnect to Bluetooth after every step.

1. Make sure the Bluetooth on the phone is on.
2. Uninstall the app completely and install it again.
3. Please fully restart your phone, and leave the Wi-Fi turned off, with Bluetooth On.
4. Power cycle the charger. Please turn off the power supply to the charger for a minimum of 5 minutes and wait until it's back showing green colour again and try reconnecting.
5. Do a restart through the app.
6. Please try, if possible, to use another phone to connect to Bluetooth.
7. If they are an Android user, then be sure that the Location Permission is accepted or else it won't work.
8. Check the Bluetooth signal emitted from the charger by doing a scan. In both cases you should see the charger as WBXXXXX (being XXXXX the serial number)
0. If Android users, then look for the nearby devices.
1. If iPhone users, then download the app BLE Scanner 4.0.
9. Make a restore through the Wallbox app. Even if the app doesn't connect to Bluetooth in some cases, you can still go to configuration -> installation options and restore.
10. When doing all these steps please take screenshots of the different errors.

Steps that can be done by the installer:

Try to reconnect to Bluetooth after every step.

1. Repeat all steps above just in case.
2. Open the charger and reinsert the Raspberry Pi card, it is the communication card and sometimes does not connect properly (maybe due to transport or movement during installation or charging). The Raspberry Pi card is always in the cover of the charger.

3. Pull out the two metal levers on both sides of the CPU (Raspberry Pi) with your index fingers to unclip the CPU (Raspberry Pi).

4. The CPU (Raspberry Pi) in the unclipped position forms 45º acute angle with the base of the carrier board.

5. Carefully remove the CPU (Raspberry Pi) by gently pulling its top part towards you.

Attaching the CPU (Raspberry Pi)

To attach the CPU (Raspberry Pi) on the Carrier board, perform the following steps:

1. Identify the insertion mark on the edge of the CPU (Raspberry Pi). The CPU (Raspberry Pi) should only be attached by positioning the insertion mark towards the carrier board.

2. Hold the other end of the CPU (Raspberry Pi) and place it on the Carrier Board with a small incline.

3. Gently press down the CPU (Raspberry Pi) so that it clips to the metal levers.

Close the front cover of the charger by performing the steps mentioned in the Attaching the new Carrier board and the front cover section above.

- If charger is a Pulsar Plus: press **SW202** and **SW201(RST)** together, 3 seconds later release **SW201(RST)** and 10 seconds later release **SW202**
- If charger is a Commander 2: press **SW201** and **SW202(RST)** together, 3 seconds later release **SW202(RST)** and 10 seconds later release **SW201**
- If charger is a Copper SB: press **SW201** and **SW202(RST)** together, 3 seconds later release **SW201(RST)** and 10 seconds later release **SW202**

3. With the restore done and before updating it again try to connect to Bluetooth. If that doesn't work, update, and try again.
4. Try to disconnect and connect the Molex cable. It's the flat cable that connects the bottom part with the cover. Be careful when doing so as it is a sensible cable.

   If the issue cannot be resolved, please call the service team, and advise on all the steps done and have the screenshots of the app error displayed.

   Also relay the following information about the phones tried:

   - Phone type: (Android or iPhone).
   - Phone SW version: (Android 8,9,10,11, etc or iOS version).
   - Wallbox app version: Should always be the latest (you can find this info in the Play store or Apple store.
   - Wallbox charger version: Should be the latest if possible (version available in charger info tab in the Wallbox app).

WI-FI

Before everything else:

The wifi strength signal in front of the charger has to be of at least -70 dBm.

Range of possible values of dBm >>> -35 dBm extremely good, -70 dbm minimum our charger will work with, past -71 dBm the charger will not connect or connect and disconnect.

Check the Wi-Fi strength signal by using the special app **Airport Utility** for iPhones:
https://www.youtube.com/watch?v=75Q_v03SKTQ&t=27s

And **Wi-Fi Analiser** for Androids:
https://www.youtube.com/watch?v=HW2b2yB69W8&t=1s

If both the signal strength and distance are correct proceed to the following steps:

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You can easily connect the charger to a Wi-Fi network, or by creating a hotspot on the phone if no networks are available. Here's how to proceed:

1. Make sure you are close to the charger and synchronized via Bluetooth.
2. Press the Configuration button (gear image on the top right).
3. Choose the "connectivity" menu.
4. Click on Wi-Fi and activate it.
5. The list of available networks will then appear.
6. Select the desired network and enter the password.

In case you have available networks nearby but none are visible on the app, please try to create a Hotspot on the phone to see if it appears.

Steps that can be done by the user:

1. Make sure the router is on and working on other devices.
2. Restart the router.
3. Uninstall the app completely and install it again.
4. Please fully restart your phone.
5. Power cycle the charger. Please turn off the power supply to the charger for a minimum of 5 Minutes and wait until it's back showing green colour again and try reconnecting.
6. Do a restart through the app (Configuration-> Advanced Options->Restart).
7. Use the phone as a hotspot and connect the charger to it.
8. Restore the charger through the app and try to connect (Configuration-> Installation Options-> Restore).
9. Update again and try to connect. Update available in Charger Info-> Charger Version-> Update.

Steps that can be done by the installer:

Try to reconnect to Wi-Fi after every step.

1. Do a full power cycle for 10 minutes.
2. Restart the router.
3. Open the charger and reinsert the Raspberry Pi card, it is the communication card and sometimes does not connect properly (maybe due to transport or movement during installation or charging). The Raspberry Pi card is always in the cover of the charger.

3. Pull out the two metal levers on both sides of the CPU (Raspberry Pi) with your index fingers to unclip the CPU (Raspberry Pi).

4. The CPU (Raspberry Pi) in the unclipped position forms 45° acute angle with the base of the carrier board.

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1. Identify the insertion mark on the edge of the CPU (Raspberry Pi). The CPU (Raspberry Pi) should only be attached by positioning the insertion mark towards the carrier board.

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3. Gently press down the CPU (Raspberry Pi) so that it clips to the metal levers.

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If charger is a Commander 2: press **SW201** and **SW202(RST)** together, 3 seconds later release **SW202(RST)** and 10 seconds later release **SW201**

If charger is a Copper SB: press **SW201** and **SW202(RST)** together, 3 seconds later release **SW201(RST)** and 10 seconds later release **SW202**

4. With the restore done and before updating it again try to connect to Wi-Fi, if that doesn't work, update and try again.
5. Try to disconnect and connect the Molex cable. It's the flat cable that connects the bottom part with the cover. Be careful when doing so as it is a sensible cable. Check it for possible damage.

If the issue cannot be resolved, please call the service team, and advise on all the steps done and have the screenshots of the app error displayed.

Also relay the following information about the phones tried:

- Phone type: (Android or iPhone).
- Phone SW version: (Android 8,9,10,11, etc or iOS version).
- Wallbox app version: Should always be the latest (you can find this info in the Play store or Apple store.
- Wallbox charger version: Should be the latest if possible (version available in charger info tab in the Wallbox app).

ETHERNET

Steps that can be done by the user:

1. Make sure that the wifi option is disabled as it can't work with both connections at the same time.
2. Restart the router.
3. Do a restore and try connecting with factory settings.
4. Update it and try connecting. Update available in Charger Info-> Charger Version-> Update.
5. Do a restart through the app. (Configuration-> Advanced Options->Restart).
6. In portal mouse over the connectivity symbol or in App, check connection if ethernet symbol is displayed.
7. How is it installed, with a direct cable from the router to the charger or through other means?

    - In the App, you can see in charger info, the Mac and ethernet information, in case the client has any filter stopping it from working.
    - When using the charger in environments where you have to open ports on the router this can be used in situations with firewalls or Virtual connections.

Either if you're using WiFi or Ethernet connections, the following ports are used:

- Port 80 is used for Updates
- Port 443 is used for Back-end Communication

Steps that can be done by the installer:

1. Restart the router.
2. Connect ethernet cable to charger and check the ethernet port LEDs on charger (flashing green) (take a video).
3. Open the cover and unplug the ethernet cable from it. Also take a clear picture of the connectors on the both sides of the cable. Some ethernet cables have the cables switched in the two ends and will still work on a computer but not on our chargers. The proper order of connection also known as crimping are as it follows in the picture on both ends of the cable.
4. Try that same ethernet cable on another device. Does it work?
5. If not, try with another cable. If it still doesn't work, then it's a problem for the internet provider and the client should contact them.
6. Do a manual restore and try to connect with the factory settings.
7. Update it and try to connect.

If the issue cannot be resolved, please call the service team and advise on all the steps done and have the screenshots of the app error displayed.

Also relay the following information about the phones tried:

- Phone type: (Android or iPhone).
- Phone SW version: (Android 8,9,10,11,etc or iOS version).
- Wallbox app version: Should always be the latest (you can find this info in the Play store or Apple store.
- Wallbox charger version: Should be the latest if possible (version available in charger info tab in the Wallbox app).

4G DONGLE

1. Check if the sim is correctly positioned on the dongle.
2. Make sure the sim has data.
3. Try to insert any user and password if it doesn't work. There are some sims that they are supposed to only need the APN but if you don't add the user and password it doesn't work.

How to contact service for 4G connectivity issue?

Extra information needed before contacting us:

- Type of connection.
- APN, user, password and number.

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- Data provider.
- Dongle brand.
- Screenshot of the 4G screen if it’s clickable.
- Screenshot of the connectivity menu in Bluetooth when it is disconnected.

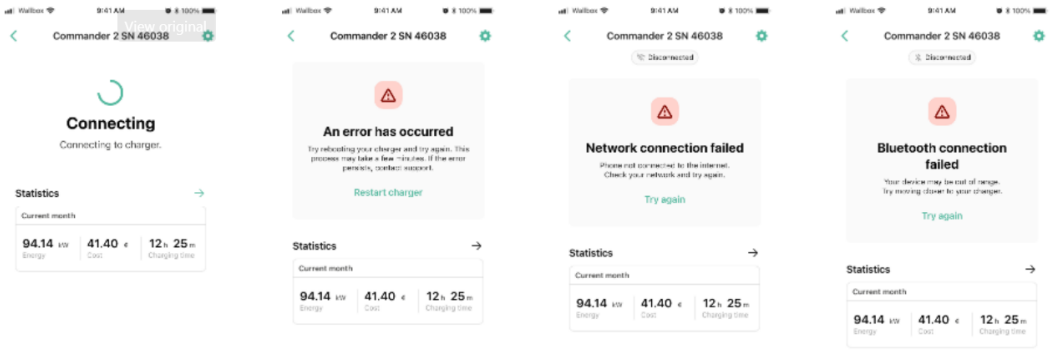
Connectivity examples of pictures:

1. If the charger is **not** found in Bluetooth range and the charger is **not** connected with internet:

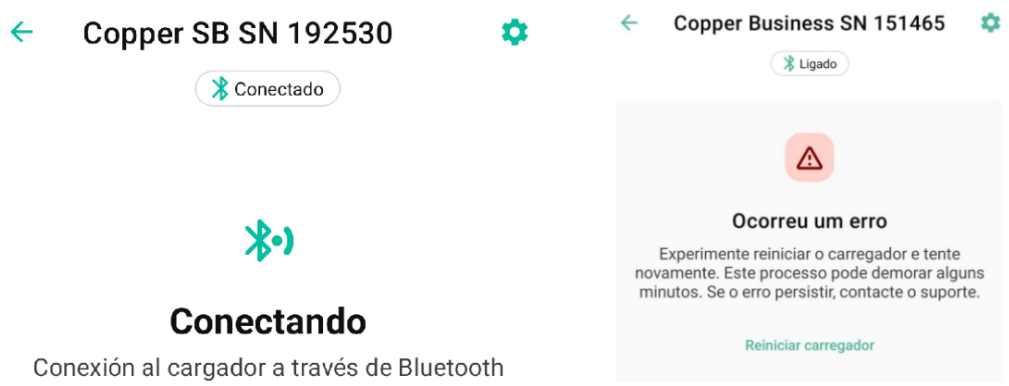
2. If the charger is found in Bluetooth range:

3. If the charger is not found in Bluetooth range, but is connected with internet

When you select the charger in Bluetooth range:



Connected to Bluetooth module, trying to communicate with the Rasp Pi/database



RED HALO/ERROR MODE

Steps that can be done by the user:

To restore the firmware of your Pulsar Plus, please do the following:

Open the Wallbox app next to your charger and synchronize with Bluetooth 100%.

Then on the top right hand side click the gear icon, then on the bottom right select "Installation Options" then at the bottom click "Restore". Follow the pop-ups that appear. Please make sure that you are close to the Pulsar the whole time since it works with Bluetooth. Allow 5-7 minutes for the charger to restore firmware. Some LEDs should start rotating on the charger itself however, please wait for the green halo to come back, which means the charger has been restored.

Steps that can be done by the installer:

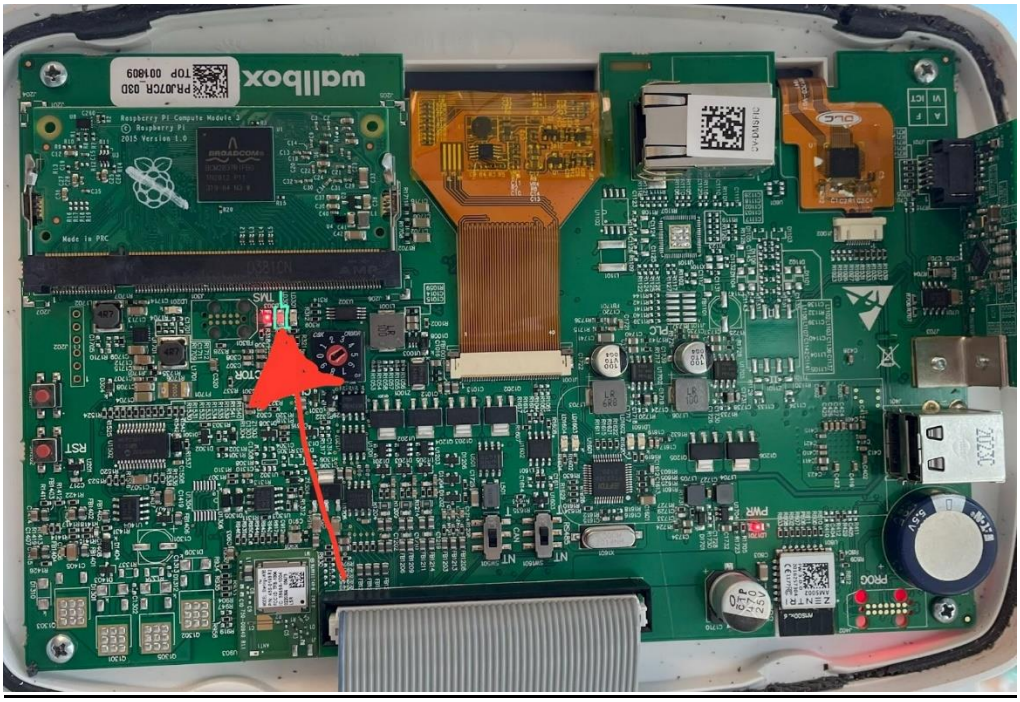
Error LED Code:

Error Control LED 302 is an internal system intended to provide additional information when an error occurs during the development/validation phase without debugging, or even when a malfunctioning happens after SOP.

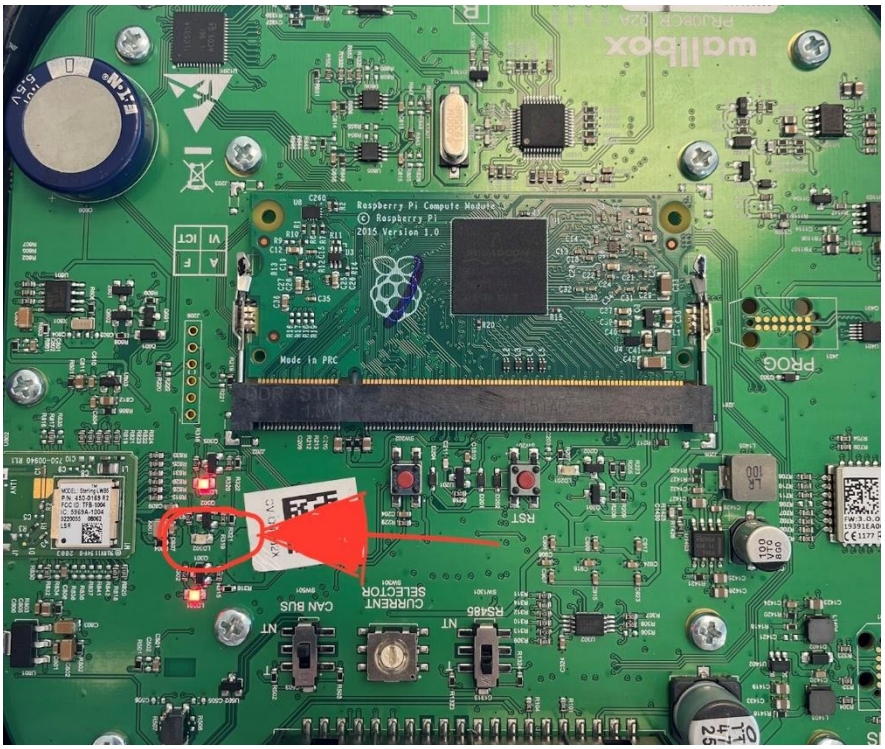
A specific LED (depends on the product/electronic version) blinks a specific number of times to specify what kind of error the system has been affected by.

How to check Error Control LED 302:

- Open the Wallbox with the charger opener card.
- Once you opened the charger check in the inner side of the cover (see image where to find the LED 302).
- Make sure the Molex cable is not disconnected.
- Count number of blinks and record a video, make sure the video is long enough to count all number of blinks (45 second video).



COMMANDER 2



Pulsar Plus

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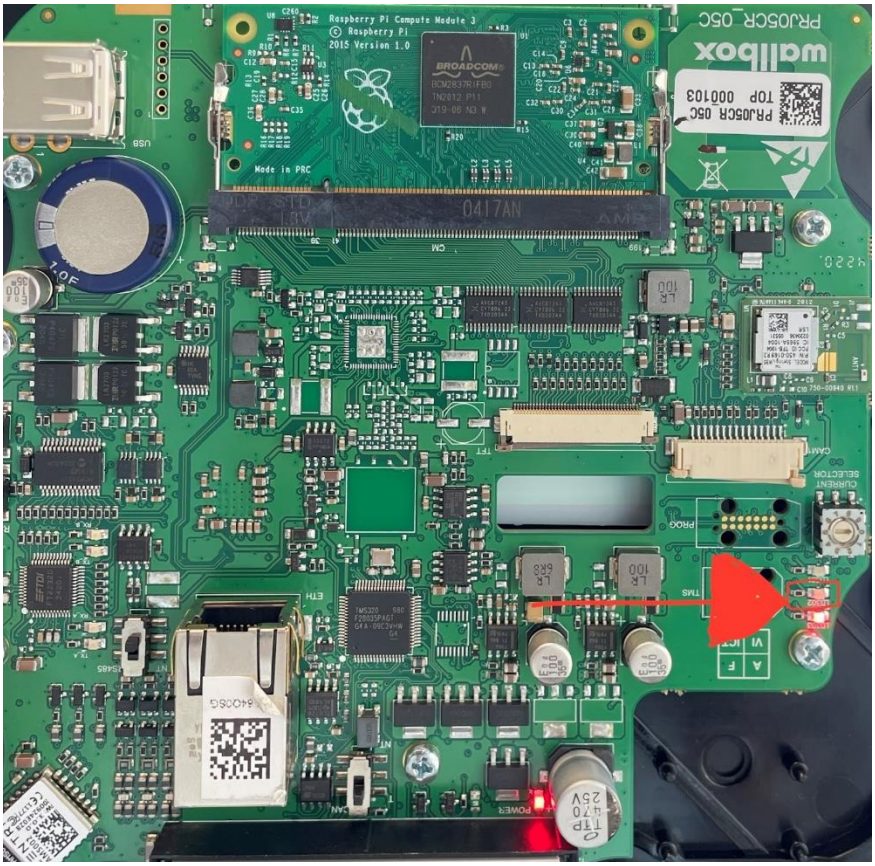

Copper SB

It is important to send us a minimum 1-minute video of LD302 blinking

- Please check the earthing system and the installation itself.
- Manual Restore:
  If charger is a Pulsar Plus: press **SW202** and **SW201(RST)** together, 3 seconds later release **SW201(RST)** and 10 seconds later release **SW202**
  If charger is a Commander 2: press **SW201** and **SW202(RST)** together, 3 seconds later release **SW202(RST)** and 10 seconds later release **SW201**
  If charger is a Copper SB: press **SW201** and **SW202(RST)** together, 3 seconds later release **SW201(RST)** and 10 seconds later release **SW202**
- Take a video of LD302 and send this to us.

Over/Under-Voltage UK?

In cases where a customer with a Pulsar Plus UK calls and has an issue with the charger being in red many times, this can be caused by a genuine overvoltage.

What to check?

- Make sure the charger is updated.
- Connected to Wifi so we can check statistics from our side.

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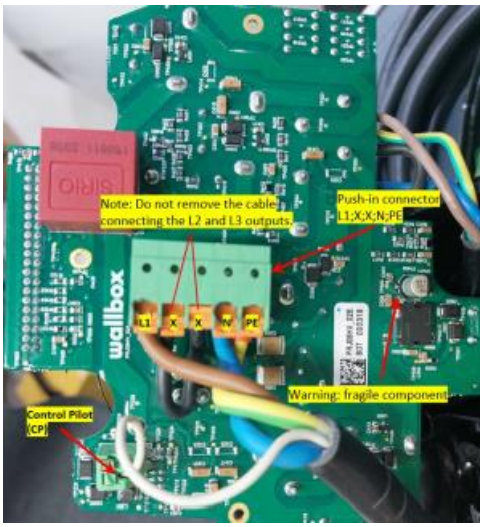


CONSTANT GREEN HALO/NOT CHARGING

1. Manual Restore.
2. Measure CP-PE (12Vdc) On the EV Gun.
3. If no reading, check if the CP cable is attached.

WAITING FOR CAR DEMAND

1. Make sure the EV-gun is properly and firmly connected to the car.
2. Make sure that your charger is connected to Internet and its software is up to date.
3. Make sure that you are running the last myWallbox app version (you can do so by checking your app in the Play Store/App Store of our phone).
4. Make sure that there is no scheduled charge in the myWallbox app or your car system.
5. Close the windows of your car and lock it.
6. Restart the myWallbox app and try to start a charge again.

SCHEDULE CHARGING

1. Check that there are no charges **already scheduled in the car** settings via its control board/App or on any third-party Apps.
2. Make sure your smartphone and your charger **are connected via the myWallbox app using Bluetooth.** You can try to lock/unlock your charger to check if the Bluetooth connection is correctly established.
3. If the EV-gun is connected to your car, unplug it and make sure to **unlock your charger** if it is locked.
4. Delete all the scheduled charges you might have in the myWallbox app.
5. Create a new “test” scheduled charge that should start in the next 5 minutes.
6. Plug your car and wait for the “test” scheduled charge to start.
7. If the issue is fixed, delete the scheduled “test” charge you just created and go ahead with the schedule you need.

HOW TO ADD USERS TO THE CHARGER

If the customer, ask how they can add users:

Please note that only the super admin can invite other admins and users to the Wallbox.

If the customer would like new profiles to be added in myWallbox account, they can do so via the myWallbox portal: **https://my.wallbox.com**.

1. Log into the myWallbox website with your email address and password (same as used in the Wallbox App)

2. Select the Wallbox Space where you want to invite the user, on the top right hand side of the page.
3. Select “Users”, on the left-hand side of the menu.
4. Then on the top right-hand side there is an icon called “Add User”.
5. Then enter the new users’ details as shown in the pop-up message.

   a. Select whether you want them to be a user (with limited access to the charger) or an admin (with more access to the charger).

   b. Identify the charger/s you wish to link to this new user (green: linked, red: not linked).

6. Then click “accept” and an automatic email will be sent to the new guest.
7. Once the new user accepts the invitation and registers with the same email address through the website or App, then they will be linked to that charger.

UPDATE

As some issues might be related to the software or firmware, the update of the charger should always be made before leaving the site.

Please note that to proceed with the update, the charger should be connected to the Internet (Wifi or Ethernet/mobile connectivity for the Copper SB and Commander 2).

Once the charger is online, here’s how you can proceed:

1. Connect to the charger on the app.
2. Press the Configuration button (gear image on the top right).
3. If an update is available, a pop-up message will appear at the bottom.
4. Follow the instructions on the screen and make sure that the cable is not connected to the car.
5. The process can take a few minutes (once the update is complete on the app, leave a few more minutes to the charger to process and restart).

In case the update was not possible update the Wallbox app and try again.

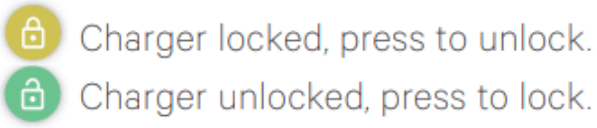
LOCKING THE CHARGER

Lock and unlock the charger is an important tool if the charger is installed in a public space. Locking it avoids that any other people can use the charger. **Only users assigned to the charger and with access to the APP can unlock the charger and start charging.**

To lock and unlock manually:

1. Open the Wallbox APP.
2. Click above the charger picture.
3. Synchronize the charger with Bluetooth.
4. Click on the lock icon above the amps wheel.

The icon will be green if the charger is unlocked and yellow if its locked:



If the charger is locked, the halo would be yellow.

To set up AUTOLOCK:

1. Open the Wallbox APP.
2. Click above the charger picture.
3. Synchronize the charger with Bluetooth.
4. Go to **options > advanced settings.**
5. Activate the auto lock button.
6. Set up the number of seconds after which the charger will lock automatically.

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POWER BOOST

Things to check:

- Suitable Wallbox meter for electric installation (single/ three phase).
- Check address on meter (for PB: 1, for MID: 2).
- RXTX visible in screen (for Carlo Gavazzi).
- Check positioning according to installation manual (position on T RS485).
- STP CAT5E cable between Meter and WB, max 500m long.

- Single wires used on PB modbus connectors, installation according to installation manual.
- Configuration performed via Bluetooth.
- Do not leave a lot of copper visible, only a tiny bit.

Troubleshooting procedures:

- Turn off power on Wallbox and Meter and measure the resistance between D+ and D-
  - 60 Ohm = GOOD (well connected, bridge OK, RS485 on T).
  - 120 Ohm = BAD (check connection and cabling, check RS485 switch position).
  - other = BAD (check each charger, disconnect wires, measure Ohm between D+ and D-).
    - should be 120 Ohm, if RS485 on T.
    - infinite (OL) when RS485 on NT.
    - other = check meter individually, disconnect the D+, D- and GND wires, measure Ohm on the meter between A- and B+, should be 120 Ohm, bridge stays connected as per manual.
- Turn off and on the Wallbox.

- Connect with BLUETOOTH to the charger (make sure to see the Bluetooth symbol when connected).
- See if you can configure Power Boost in configuration->Upgrades->Power Boost.

For remote troubleshooting we need:

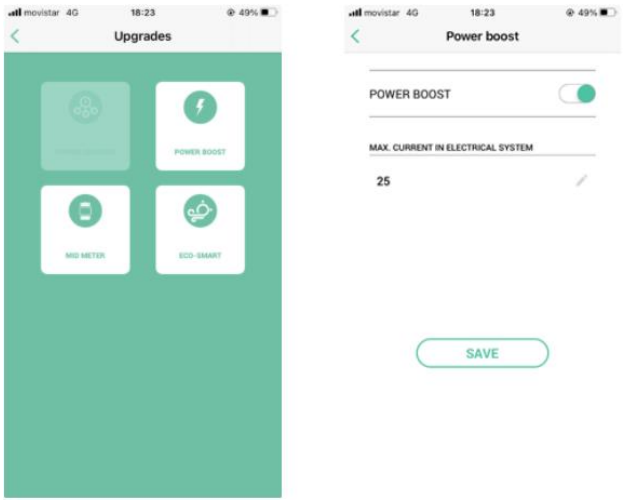
- Serial number.
- Completed charger checklist.
- Clear pictures of:
  - Body,
  - cover inside,
  - Meter connections,
  - close up RS485 switch,
  - PB meter (screen/ wire connection),
  - Measurements.

Good installation of modbus on HV-side

Good installation of meter connections (note RXTX and bridge)

Example meter Ohm measurements

Close up RS485/ CAN bus switches



PB configuration window APP

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POWER SHARING

Things to check:

- State of network:
  - halo lights,
  - App configuration of EACH charger, connect via BLUETOOTH.
    - PRIMARY: Status = primary and paired, number of chargers, Max current per phase(main MCB) and charger.
    - SECONDARY: Status = secondary and paired.
  - Installation:
    - Current selector, 8/9 for primary, 0 for secondary.
    - Ethernet Class 5E no shield, 1 pair, no double wiring, max 250m length.
    - Check each charger hardware config as per installation manual.
    - CAN bus wiring (CAN L to CAN L, CAN H to CAN H) and switches (T for terminating, NT for non-terminating chargers).

Troubleshooting procedures:

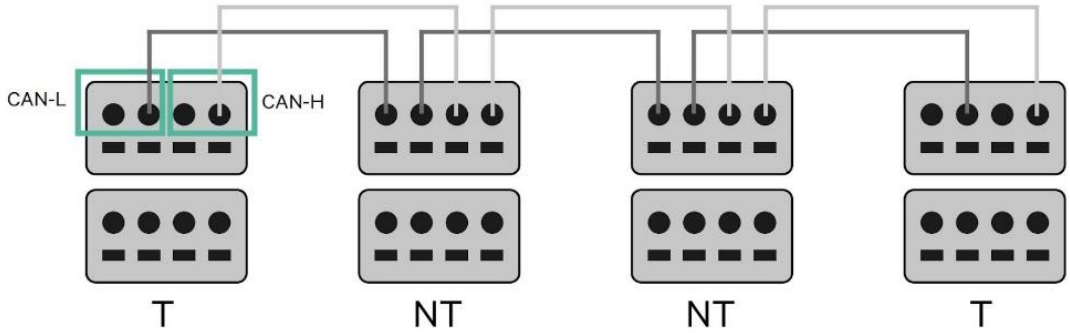
- Turn off power on Wallbox and Meter and measure the resistance between CAN H and CAN L.
  - 60 Ohm = GOOD.
  - 120 Ohm = BAD, check for damage in the wire, check correctly plugged in.
  - other = BAD, remove cables and check CAN sockets on each charger. Measure resistance between CAN H and L.
    - should be 120 Ohm with CAN switch on T, infinite/ OL with CAN switch on NT.
- Restart and reconfigure the network via Bluetooth.

For remote troubleshooting we need:

- Serial Numbers.
- Completed charger checklist.
- Clear pictures of:
  - Body,
  - cover inside,
    - Meter connections,
    - Current selector position,
    - CAN Switch position,
    - Position in the line (T or NT), sketch,
    - filled out installation table.


Terminating charger CAN bus, note single pair cables

Example meter Ohm measurements



CAN Bus installation (outer ones T, inner ones NT)

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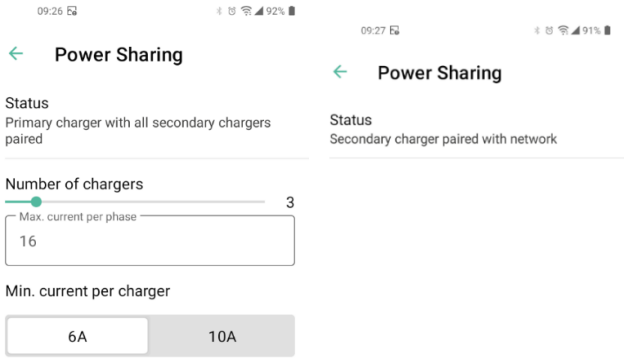
Close up CAN bus switches



PS configuration window APP

	Power sharing installation		Case number				
	Charger Model	Serial Number	Primary/ Secondary on App	Current Selector position	CAN Switch position	RS485 Switch position	Photo number
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							

Power Sharing installation table

MID

Things to check:

- STP CAT5E cable, single wired used.
- Correct positioning after RCD/ MCB of Wallbox.
- Check address of MID meter, has to be 2 for MID.
- Orange light on MID, meaning loss of communication and leading to charging being stopped after a few minutes or kWh.

Troubleshooting procedures:

- Turn off power on Wallbox and Meter and measure the resistance between D+ and D-.
  - 60 Ohm = GOOD, well connected, RS485 on T.
  - 120 Ohm = BAD, check cabling and RS485, move switch from t to NT and back to T, check D+ / D- connections, replace cable if 120 Ohm persists.
  - other = BAD remove cables and check D+ / D- sockets on each charger. Measure resistance between D+ / D-.
    - should be 120 Ohm with CAN switch on T, infinite/ OL with CAN switch on NT.
- Restart and configure the network via Bluetooth.

For remote troubleshooting we need:

- Serial Numbers.
- Completed charger checklist.
- Clear pictures of:
  - Body,
  - cover inside,
    - MID connections and screen.
    - Cable connection to the charger.

MID and POWER BOOST

Things to check:

- STP CAT5E cable, single wired used.
- Correct position after RCD/ MCB of Wallbox.

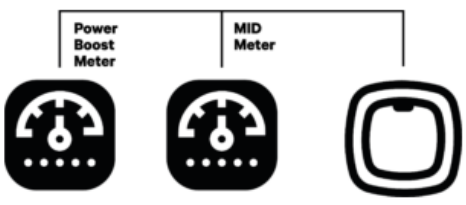
- Bus line installation: place the charger's RS485 switch on the T position. Only the Power Boost meter has to be wired to the RS485 sockets on the charger.
- Two line installation: place the charger's RS485 switch on NT position and wire the termination resistance bridge to both the MID and PB meters.
- In case the PB is a EM112 or EM340, check the address on the meter, should be 2 for MID (1 for PB)
- Orange light on MID, meaning loss of communication and leading to charging being stopped after a few minutes or kWh.

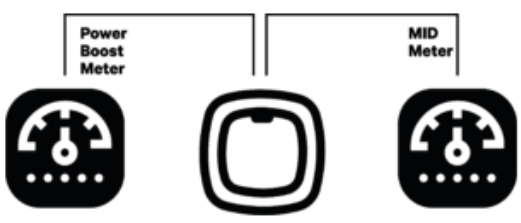
Troubleshooting procedures:

- Turn off power on Wallbox and Meter and measure the resistance between D+ and D-.
  - 60 Ohm = GOOD, well connected, bridge OK, RS485 on T.
  - 120 Ohm = BAD, check cabling and RS485, move switch from t to NT and back to T, check D+ / D- connections, replace cable if 120 Ohm persists.
  - other = BAD remove cables and check D+ / D- sockets on each charger. Measure resistance between D+ / D-.
  - should be 120 Ohm with CAN switch on T, infinite/ OL with CAN switch on NT.
- Restart and configure the network via Bluetooth.

For remote troubleshooting we need:

- Serial Numbers.
- Completed charger checklist.
- Clear pictures of:
  - Body,
  - cover inside,
  - close up pictures of:
  - MID connections and screen
  - Cable connections to the charger
  - close-up of the RS485 switch on each charger
  - Position in the line (T or NT)



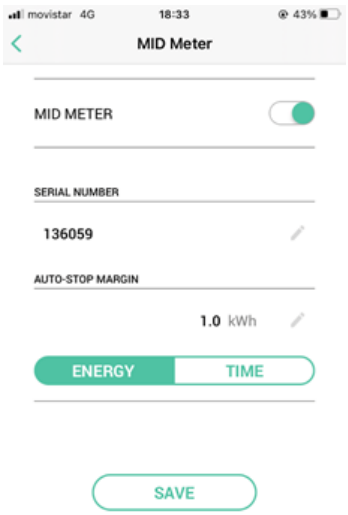


Bus line installation

Two line installation

Checking the MID address on screen

Resistance troubleshooting



Setup on Wallbox App

DYNAMIC POWER SHARING

What is this configuration?

- Combination of power boost and power sharing.

Basic troubleshooting procedures for DPS:

- Power boost troubleshooting must be done.
- Power sharing troubleshooting must be done.
- Extra troubleshooting:
  - The account has to be Standard or Business (coupon DPS home for 2 chargers).
  - The primary charger (current selector on 8/9) must be connected to the power boost.
  - The primary charger must have the RS485 switch on 'T'.
  - The secondary charger(s) must have the RS485 switch on 'NT' and current selector to 0.
  - The CAN BUS switch same disposition as for power sharing (extrems of the connection on 'T' and others on 'NT').
  - We recommend to connect and configure PS and then do the DPS.

For remote troubleshooting we need:

- Completed charger checklist.
- Clear pictures of:
  - Body,
  - cover inside,
  - Meter connections.
  - close up pictures of:
    - Current selector position
    - CAN Switch position
    - Position in the line (T or NT)
- Try to connect the charger online in order to have our database up to date.

ECO-SMART

Compatibility

- COPPER SB : **SW 5.3.9**
- Pulsar Plus : **SW 5.3.14**

  Mobile app: **2.12.0**

WALLBOX SERVICE

Necessary

- Correct installation of the Powerboost.
- Carlo Gavazzi EM112, EM330 or EM340 **PF.B .**
- Inepro PRO2, PRO380, or N1 CT.

Two modes:

Eco : combines the energy from the grid with the surplus of green energy

Surplus >= 2A **460W** in 1-phase **1380W** in 3-phases

Full-Green : uses only the surplus of green energy to charge

Surplus >= 6A **1380W** in 1-phase **4157W** in 3-phases

Good to know:

- Not compatible with PS and DPS at the moment.
- Could discharge the stationary batteries.
- Schedule charges or manual charges override Eco-Smart.
- Not available for Renault ZE ready vehicles.
- The meter is the one deciding if the installation is 1 or 3 phases.

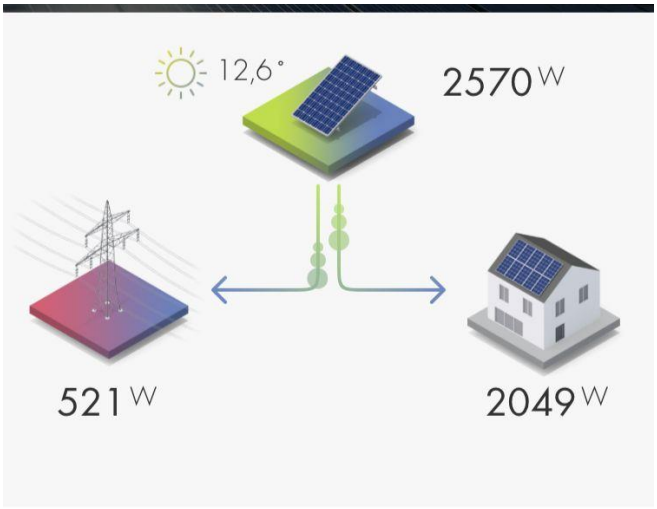
Powerboost meters:

- They need to be version B (PF.B) because these meters are bi-directional, that means the meter knows the direction of the current and will show negative values in case the solar panels are generating more energy than the consumption.
- In order to know if you own a B revision of the Carlo Gavazzi, have a look at the following symbols on the front part of the meter:
- Solar panels should be connected as a normal load after the power meter so that the meter can read any surplus of solar energy, in this case the readings on the meter will go negative.
- For EM112 and EM340 : the LED light in the bottom right corner will be fixed on (orange) whenever there is a surplus of energy, otherwise in case of energy consumption it will blink red.

Troubleshooting:

If eco-smart and Power Boost can't be selected in the app, then follow the normal troubleshooting for Power Boost installations:

- Make sure you have bluetooth connection.
- Check wiring (STP cat 5e, single wires connected in the correct positions).
- Ask for pictures (Body, cover and PB meter).
- Check resistance between D+ and D-.



Eco: Minimize the use of grid power while charging your EV by combining it with any surplus green energy available. Eco mode detects the green energy that is not being used elsewhere in your home in real-time and mixes it with energy from the grid to ensure an efficient charge.

- EcoMode charges when surplus current is >= 2A
- 460W in single phase grids.
- 1380W in three phases grids.

Troubleshooting:

Full-Green: Use exclusively green energy to charge your car. Full-Green mode will detect when there is enough surplus green energy available at your home to meet the minimum requirements needed to power your car. Only then will your car begin charging, meaning every charge is fully green.

- Full Green charges when surplus current is >= 6A
- 1380W in single phase grids.
- 4157W in three phases grids.