

QUICK INSTALLATION GUIDE

BATTERY LITHIUM SERIES 48V 5.1 kWh

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HYBRID INVERTER TURBO ENERGY



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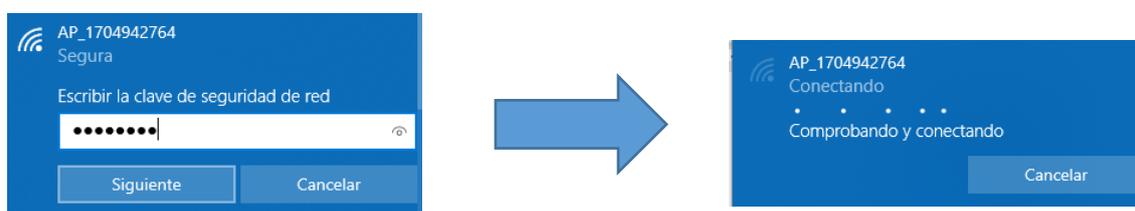


1. TURBO ENERGY HYBRID INVERTER configuration

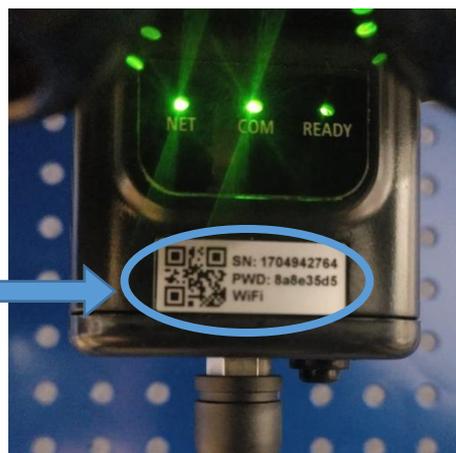
Step 1: Connect to the INVERTER Wi-Fi

Notice: The settings listed below are for Windows and are for reference only. If other operating systems are used, please follow the corresponding procedures.

With an electronic device that has Wi-Fi (PC, Tablet, Smartphone...) the connection with the Wi-Fi of the hybrid inverter (HI) is established. To do this, open the wireless network connection, click on see the available wireless networks and select the one corresponding to the device with which you want to connect.



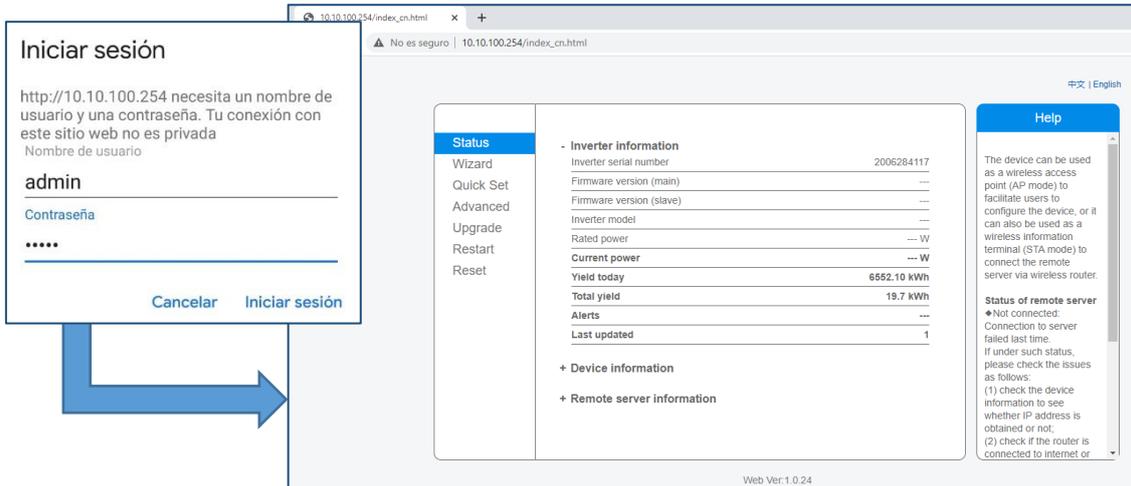
The name of the network to select is AP_ Serial number of the HI. Enter the password that appears in the logger and select the option to connect. The default password for hybrid inverters appears on their label located on the bottom of the device (example photo).



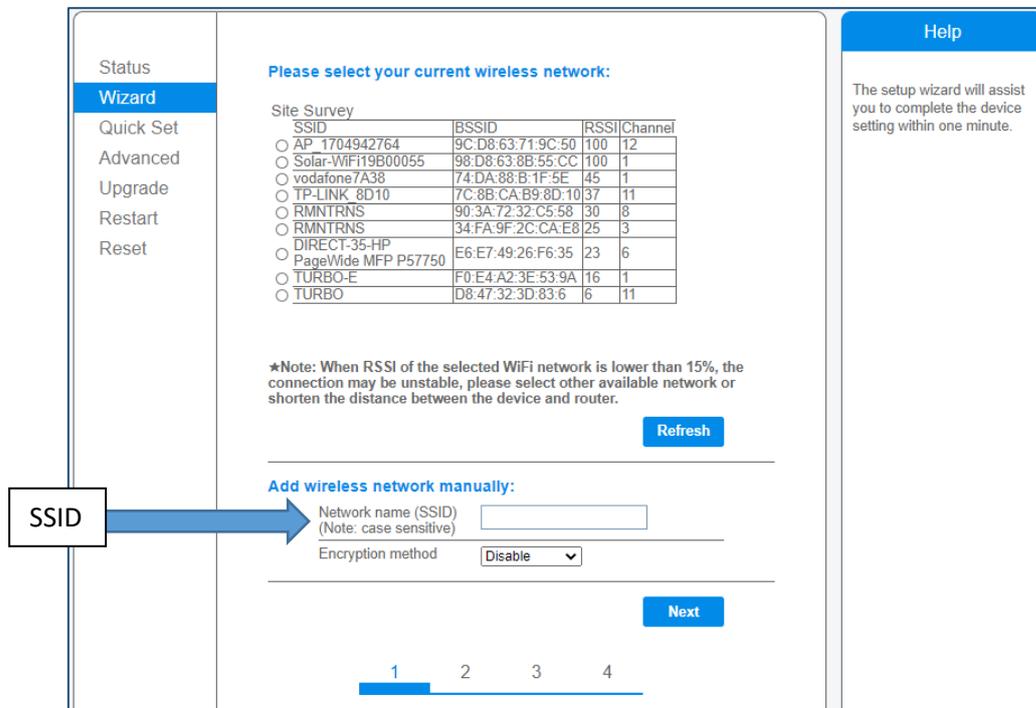
Warning: If the network to be selected is not available in the list of wireless networks, there may be problems in the connection or in the configuration of the recorder. Wait a few minutes to update the list or connect the logger again.

Step 2: Establish connection to the logger

Once connected to Wi-Fi, access the internet from your browser (recommended browsers: Internet Explorer 8+, Google Chrome 15+ and Firefox 10+) and enter the following: 10.10.100.254. Then, write the username and password, both are "admin" by default. Once inside the "Status" page, you can see the general information of the logger.



To continue, follow the quick setup wizard by clicking on "Wizard". Select the wireless network you need to connect to and click "Next".



Notice: If the signal strength (RSSI) of the selected network is <15% with an unstable connection, adjust the router's antenna or use a repeater to improve the signal. The network SSID of the selected router must be less than 30 characters with no blank spaces.

Enter the password of the selected network, select “Enable” to get an IP address automatically, and click “Next”.

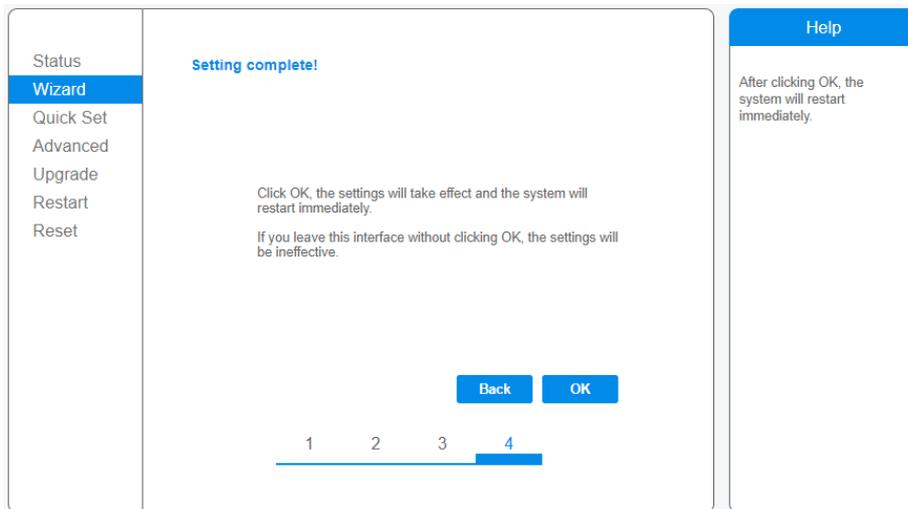
| | | |
|---|---|--|
| <ul style="list-style-type: none"> Status Wizard Quick Set Advanced Upgrade Restart Reset | <p>Please fill in the following information:</p> <p>Password (8-64 bytes) (Note: case sensitive) <input type="text"/></p> <p><input type="checkbox"/> Show Password</p> <p>Obtain an IP address automatically Enable ▼</p> <p>IP address <input type="text"/></p> <p>Subnet mask <input type="text"/></p> <p>Gateway address <input type="text"/></p> <p>DNS server address <input type="text"/></p> <p style="text-align: center;">Back Next</p> <p style="text-align: center;">1 2 3 4</p> | <p style="text-align: center;">Help</p> <p>Most systems support the function of DHCP to obtain IP address automatically. Please select disable and add it manually if your router does not support such function.</p> |
|---|---|--|

Warning: The router password cannot be recognized if it contains any characters such as &, #, % and blanks. If you have entered an invalid password or encryption method, an error message will appear.

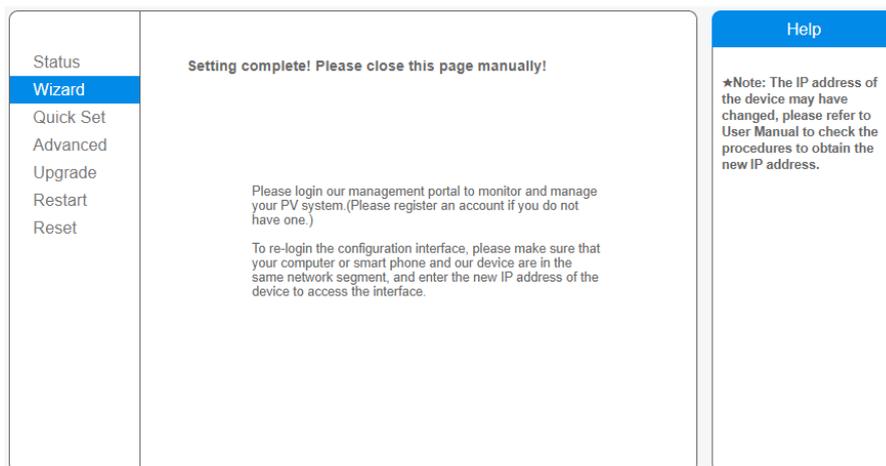
Improve the Wi-Fi security settings by selecting the options listed and clicking “Next”.

| | | |
|---|---|---|
| <ul style="list-style-type: none"> Status Wizard Quick Set Advanced Upgrade Restart Reset | <p>Enhance Security</p> <p>You can enhance your system security by choosing the following methods</p> <p>Hide AP <input checked="" type="checkbox"/></p> <p>Change the encryption mode for AP <input checked="" type="checkbox"/></p> <p>Encryption mode WPA2-PSK ▼</p> <p>Change the user name and password for Web server <input checked="" type="checkbox"/></p> <p>Current user name <input type="text" value="admin"/></p> <p>New user name (Max.15 characters) <input type="text"/></p> <p>Re-enter user name <input type="text"/></p> <p>New password (Max.15 characters) <input type="text"/></p> <p>Re-enter password <input type="text"/></p> <p style="text-align: center;">Back Next</p> <p style="text-align: center;">1 2 3 4</p> | <p style="text-align: center;">Help</p> <p>Change the encryption mode for AP If you set password for the AP network, you will need to enter the password to connect to AP.</p> <p>Change the user name and password for Web server If you change the username and password for the web server, you will need to enter the new username and password to get access to the setting page.</p> |
|---|---|---|

If the setting is successful, you will advance to the next page where you must click “OK” to restart.



If the restart is successful, a message will appear indicating that it was successful, if not, you must refresh the page.



Log back in to the “Status” page after restarting the web page and check the status of the recorder's network connection.

| Status | | Help |
|-----------|--------------------------------------|---|
| Wizard | - Inverter information | <p>The device can be used as a wireless access point (AP mode) to facilitate users to configure the device, or it can also be used as a wireless information terminal (STA mode) to connect the remote server via wireless router.</p> <p>Status of remote server</p> <ul style="list-style-type: none"> ● Not connected: Connection to server failed last time. If under such status, please check the issues as follows: (1) check the device information to see whether IP address is obtained or not. (2) check if the router is connected to internet or not. (3) check if a firewall is set on the router or not. ● Connected: Connection to server successful last time. ● Unknown: No connection to server. Please check again in 5 minutes. |
| Quick Set | Inverter serial number 1911294008 | |
| Advanced | Firmware version (main) --- | |
| Upgrade | Firmware version (slave) --- | |
| Restart | Inverter model --- | |
| Reset | Rated power --- W | |
| | Current power --- W | |
| | Yield today 6553.30 kWh | |
| | Total yield 1722.2 kWh | |
| | Alerts --- | |
| | Last updated 0 | |
| | - Device information | |
| | Device serial number 1704942764 | |
| | Firmware version LSW3_14_FFFF_1.0.40 | |
| | Wireless AP mode Enable | |
| | SSID AP_1704942764 | |
| | IP address 10.10.100.254 | |
| | MAC address 9C:D8:63:71:9C:50 | |
| | Wireless STA mode Enable | |
| | Router SSID TURBO-E | |
| | Signal Quality 1% | |
| | IP address 192.168.8.122 | |
| | MAC address 98:D8:63:71:9C:50 | |
| | - Remote server information | |
| | Remote server A Connected | |
| | Remote server B Not connected | |

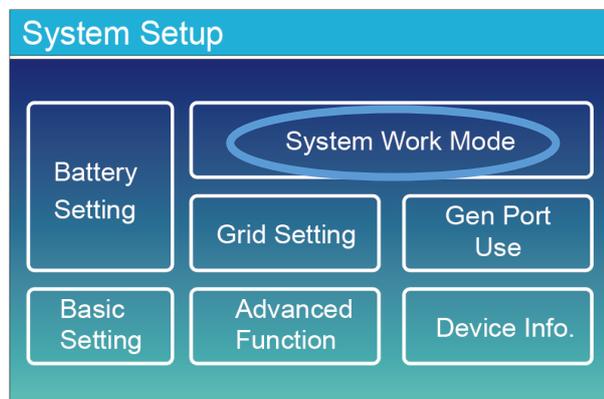
Notice: After completing the network setup, the Wireless AP Mode should be enabled and the information regarding your router will be displayed on the interface automatically. Also, Remote Server A should be connected.

Step 3: Inverter configuration

Once the connection is established, it is necessary to configure the working mode to be used and the type of batteries connected.

To do this, from the inverter display itself, select the configuration option and click on System Work Mode.

Within this tab, the parameters must be adjusted depending on the installation:



| | |
|------------------------|---|
| Work Mode | |
| Selling First | : It means that the excess energy has priority in grid connection. |
| Zero Export To Load | : It means output power according to it consumed by the load. |
| Zero Export To CT | : It means output power according to the CT position. |
| Solar Sell | : It means that the excess solar energy can be integrated into the grid. |
| Max Sell Power 0-8000W | |
| Energy Pattern | |
| BattFirst--- | It means solar power will charge battery first, when battery is full then feed-out power to the Load or Grid. |
| LoadFirst-- | The solar energy will be used to supply the local load first, then to charge the battery. The redundant power will export to the public grid. |

| System Work Mode | | | | | | |
|-------------------------------------|-------------------------------------|--------------------------|------|------|------|--------------------------|
| GM | BU | CH | SOC2 | SOC1 | GPS | Enable |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 10% | 50% | 5000 | <input type="checkbox"/> |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 10% | 10% | 5000 | |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 10% | 10% | 5000 | |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 10% | 10% | 2000 | |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 10% | 10% | 5000 | |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 10% | 10% | 5000 | |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 10% | 10% | 5000 | |

Enable: enables the system to work for time periods

GPS: Grid Peak Shaving. Sets the power limit to be taken from the grid per period.

SOC2: Battery reserve which is never used.

SOC1: Battery reserve used to guarantee the compliance of the power limit from the grid.

Start/End: Start and End hour of each period.

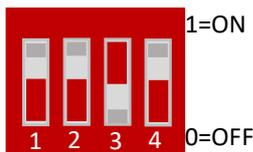
GM(General Mode): System tries to cover consumption with Bat+Sol.

BU(Back-Up Mode): Battery is not discharged to cover demand.

2. LITHIUM SERIES 48V 5.1 kWh BATTERIES configuration

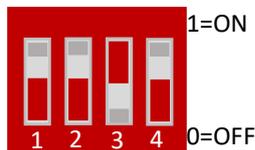
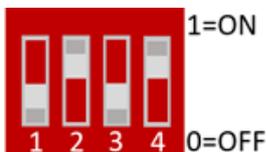
The configuration of the DIPs must be the following:

- One battery:



- Two batteries:

Master batteries: Bottom battery:

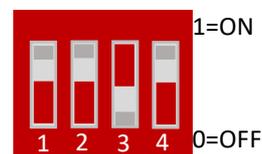
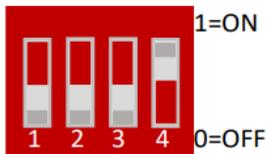
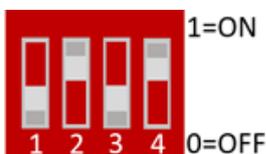


- 3 or more batteries:

Master batteries:

Middle batteries:

Bottom battery:

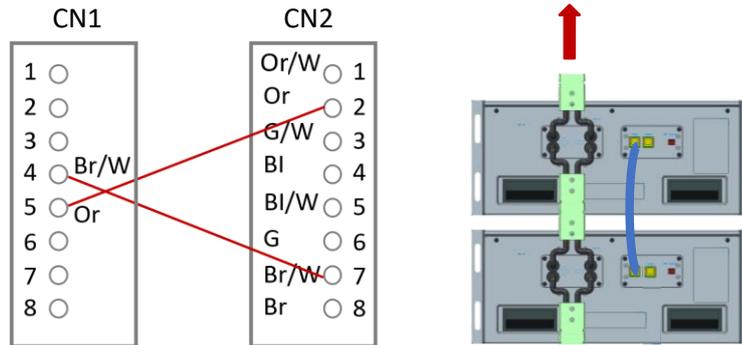


Any changes made to the DIPs must be made with the battery off.

3. WIRING configuration



The cable necessary to make the connection is the **RJ45**. It is a special cable that is made up of 8 smaller cables each with a different color configuration.



| TURBO ENERGY HYBRID INVERTER | CN1 (INVERTER) | | | CN2 (BATTERY) | | |
|------------------------------|----------------|--|--|---------------|-------------|--------------|
| | 1 ① | | | | 1 ① | Orange/White |
| 2 ② | | | | 2 ② | Orange | |
| 3 ③ | | | | 3 ③ | Green/White | |
| 4 ④ | Brown/White | | | 4 ④ | Blue | |
| 5 ⑤ | Orange | | | 5 ⑤ | Blue/White | |
| 6 ⑥ | | | | 6 ⑥ | Green | |
| 7 ⑦ | | | | 7 ⑦ | Brown/White | |
| 8 ⑧ | | | | 8 ⑧ | Brown | |