autarco

Installation Manual

Wi-Fi stick for Autarco inverters
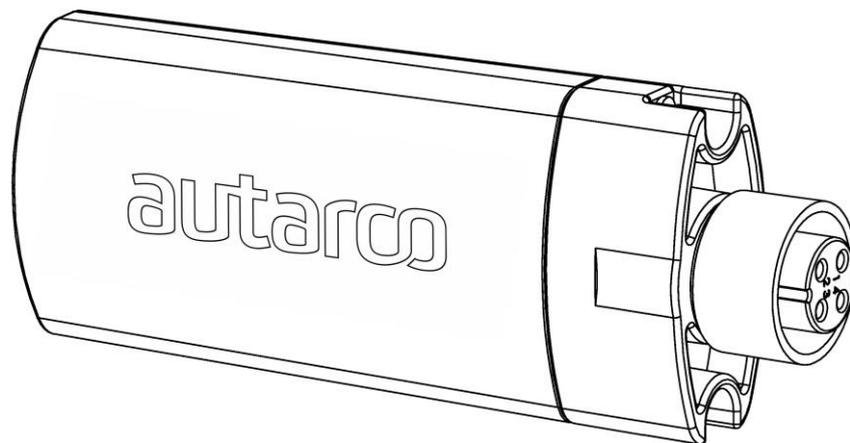
Contact Information

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Other Information

This manual is an integral part of the unit. Please read the manual carefully before installation, operation or maintenance. Keep this manual for future reference.

Product information is subject to change without notice. All trademarks are recognized as the property of their respective owners.

Table of Contents

1. Introduction

1.1 Read this first

The main purpose of this user manual is to provide instructions and detailed procedures for installing, operating, maintaining, and troubleshooting the Autarco Wi-Fi sticks which is used with Autarco inverters. Please keep this user manual available at all times.

1.2 Important symbols:

⚠️ WARNING! Indicates safety instruction, which if not correctly followed, can result in injury or property damages.

1.3 Wi-Fi monitoring connection topography

Local router

https://my.autarco.com
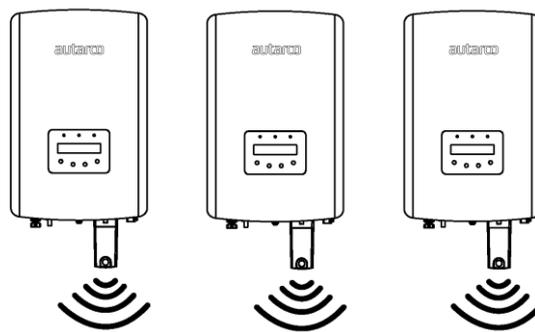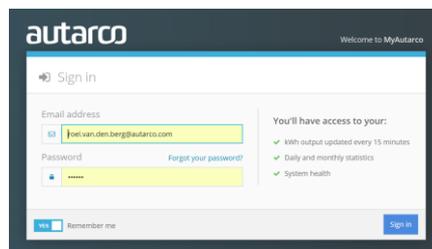
2. Installation

2.1 Install the Wi-Fi stick

Connect the Wi-Fi stick to the corresponding communication interface on the inverter (make sure the four connector pin numbers correspond) and tighten the Wi-Fi stick.

⚠️ WARNING! Never turn the stick itself but only the black ring around the connector. If the stick itself is rotated while it is in the inverter, cables inside the stick are broken and the guarantee is voided.
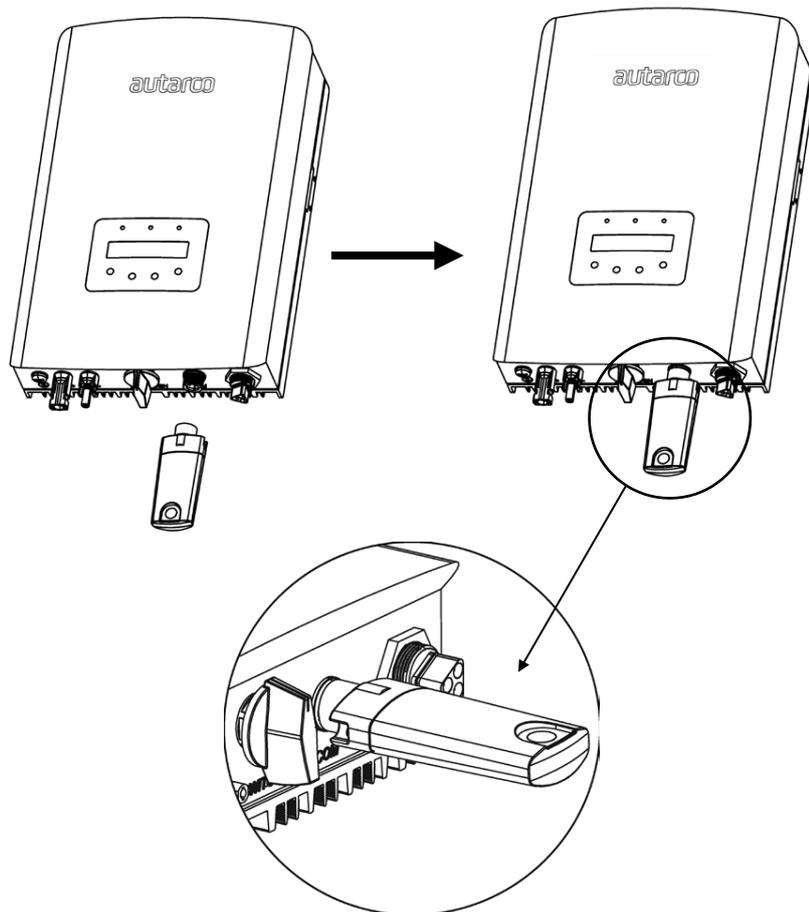
⚠️ WARNING! The device must be kept away from large metal objects and electrical devices with strong magnetic fields, such as microwave oven, refrigerator, cordless phone, concrete wall, PV panel and metal wall, to ensure the communication quality. Communication quality may be affected in lightning storms.

2.2 Configure the Wi-Fi stick

To connect the inverter to your local Wi-Fi router, first look up the WiFi serial number. This is printed on a sticker on the back of the stick:

S/N:501292599

As an **example** we will use Wi-Fi serial number 501292599.

Step 1 — Each Wi-Fi stick creates its own (unsecured) wireless network with network name: AP_<serial number> e.g. "AP_501292599". Using a computer, tablet or mobile phone, connect to this wireless network. Here is an example of the screen in Windows:
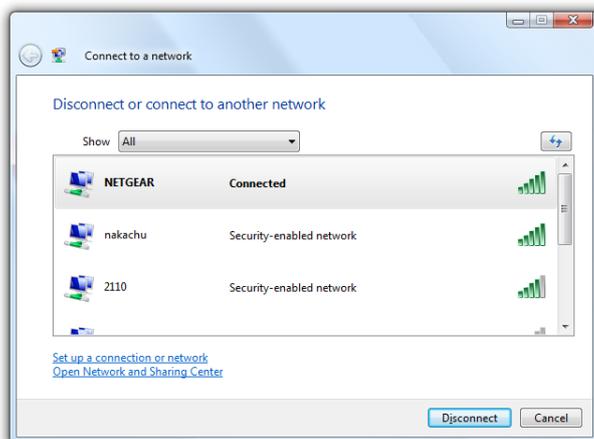
Step 2 — After you are connected to this Wi-Fi network, you enter IP address 10.10.100.254 in any modern web browser:

Step 3 — When prompted for the user name and password use **"admin"** for both.
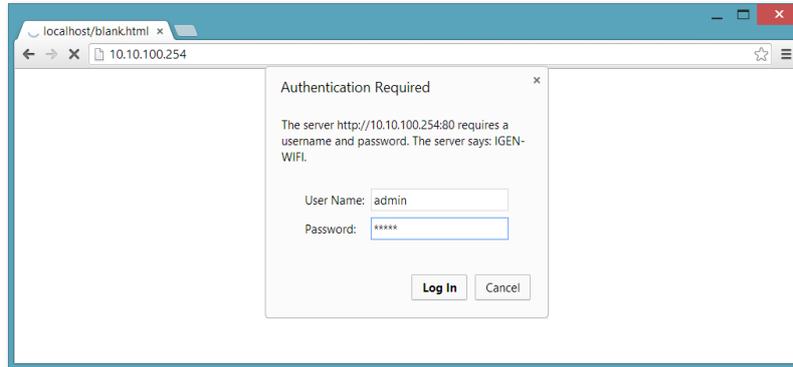
WARNING! Passwords are case sensitive. If using an iPad, iPhone or other tablet device, please ensure that the first character of the password hasn't automatically become uppercase.

Step 4 — Click on the **WIZARD** link in the main menu on the left.
If it's in Chinese please press ENGLISH in the top right corner
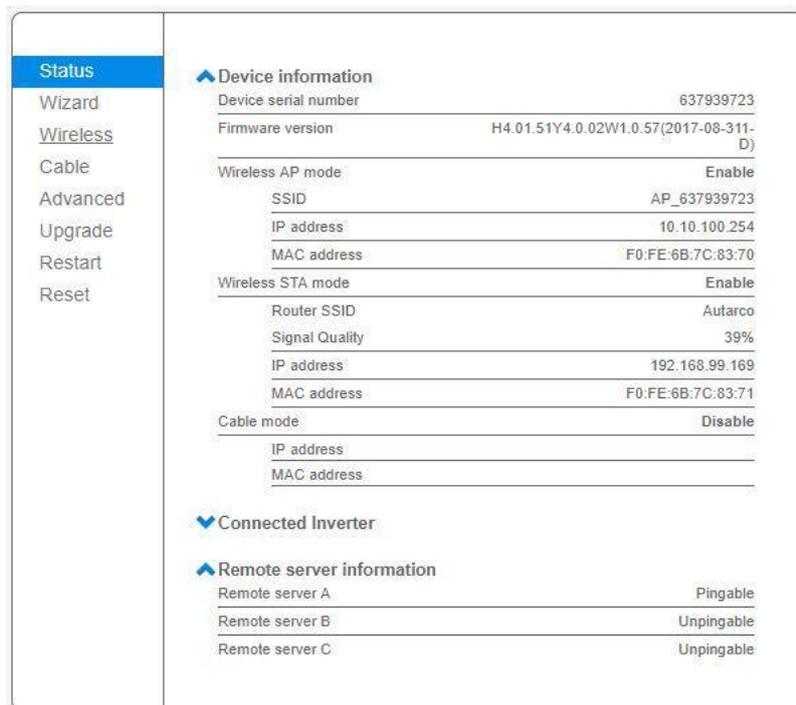
Step 5 — You now see the first step of the wizard procedure to setup your Wi-Fi connection. Click the **START** button.

Step 6 — Click **NEXT** as you're trying to setup a Wireless connection.
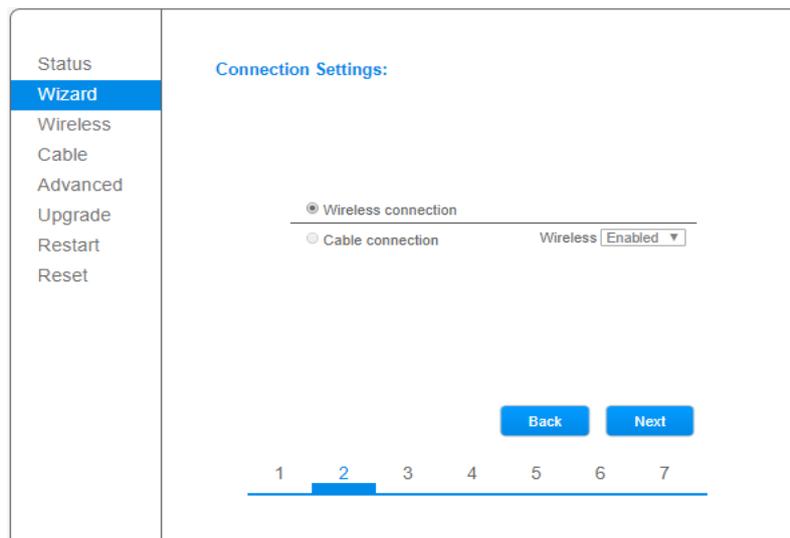
Step 7 — Find the Wi-Fi signal created by your local Wi-Fi router and select it. Click **NEXT** to continue. If you can't find it in the list, click **REFRESH**, ensure the signal is present at the inverter location or enter it manually. The system will read out the encryption method and encryption algorithm for you.

Please take care the inverter is installed within reach of your local WiFi network.

Step 8 — Enter the password to your local Wi-Fi network and click **NEXT**.

⚠ WARNING! Passwords are case sensitive. If using an iPad, iPhone or other tablet device, please ensure that the first character of the password hasn't automatically become uppercase.

Should it not work, please try the following:

- Click BACK and confirm the encryption method and encryption algorithm are correct
- Ensure there are no uncommon symbols in your router Wi-Fi password such as @#$%^&*
- Ensure that your router Wi-Fi channel is set to 1 to 11 (not 12 or 13)
- Make sure the router signal is set to 802.11g or 802.11n, not mixed mode 802.11a/b/g/n
- Make sure "Quality of Service" aka QoS is disabled on router

Step 9 — A) If your local Wi-Fi router is set to assign IP addresses automatically click **NEXT** to continue.
B) If not, disable the top option and enter the next four fields accordingly and click **NEXT** to continue.

Step 10 — You are advised to upgrade the security in step 6 of the wizard and/or change the password. Ideally, you use a WPA2 secured signal, rather than the standard open signal.

Step 11 — Setup is complete. Click **OK** to continue.

Step 12 — Check the Status page to see if the Wi-Fi stick is connected to your local router, that it is given an IP address and that Remote server A is pingable:

CONGRATULATIONS!

Now the inverter is connected to your local Wi-Fi and communicating its output data to our server.

You can access this output data on our monitoring website: http://my.autarco.com.

You will receive your login details after the installer has registered your system with Autarco.

NOTE TO INSTALLER

Before registering this system with Autarco please confirm the following from your customer regarding the creation of their monitoring account and kWh guarantee certificates:

- First name;
- Last name;
- Gender;
- E-mail address;
- Telephone number;
- Exact street address of this system.

3. Troubleshooting

3.1 Checking Internet connectivity

If no output data is shown for your inverter on the Autarco monitoring website, this often indicates a connectivity issue. To check if your inverter is connected correctly with the remote Autarco server:

- Log on to the admin panel. Please refer to the first steps of §2.2 on how to access.
- On the Status tab, click 'Remote server information' down at the bottom of the page.
- If it says 'Remote server is pingable', the inverter has a good connection with the remote server. Please contact Autarco Customer Care by email, with a detailed problem description and the serial numbers of inverter and WiFi stick.
- If it says 'Remote server is not pingable', the WiFi stick has not established Internet connectivity. Please continue with the following troubleshooting steps.

3.2 Signal quality

The most common reason why the WiFi stick may fail to establish a robust connection with the remote Autarco server, is fragile WiFi connectivity with the local router. Check whether the stick gets sufficient signal.

- Log on to the admin panel. Please refer to the first steps of §2.2 on how to access.
- On the Status tab, see 'Signal Quality' under the 'Wireless STA mode' heading.
- If the signal quality is below 30%, install one or more WiFi repeaters between the local router and the inverter.
- Make sure the SSID of the WiFi repeater is different from the SSID of the router, for example by adding "-extended". Hereby you make sure to connect the WiFi stick to the repeater and not directly to the router.
- Follow the instructions in §2.2 after installation of the WiFi repeater

A signal quality of 30% or more is sufficient.

3.3 Local router settings

In case signal quality is sufficient, or you cannot connect to the local WiFi network at all, please check the settings below on the **local router** to secure and optimize WiFi connectivity.

Log on to the router by browsing to the router's IP address using a computer, laptop, tablet or mobile phone connected to the router's wireless network. If you don't know the IP address of the router, please see the following web page:

http://www.computerworld.com/article/2474776/network-security-find-the-ip-address-of-your-home-router.html

WARNING! Autarco does not know and has no way of knowing the router's username and password. Default usernames and passwords depend on the router brand and series.

On the router, make sure the settings are as follows:
- Many routers are configured to use multiple protocols from the WiFi 802.11 family, e.g. b/g/n. This is often called 'mixed mode'. Configure the router to only use 802.11n, or only 802.11g. On some routers, the alternatives are 802.11b/g/n and 802.11b/g; in these cases select the 802.11b/g option (i.e., as "non-mixed" as possible).
- Make sure the Wireless Channel is between 1 and 11.
- Set WiFi encryption to only one encryption type, such as WPA2-Personal or WPA2-PSK. Disable mixed or multiple encryption types.
- The SSID and WiFi password must contain only alphanumeric characters: a-z, A-Z and 0-9. No !@#$%&*()_+-=[]\{}|;:'",./<>? allowed.
- Many routers support Quality-of-Service (QoS). If this option is available, it must be disabled.
- The router should be assigning IP addresses dynamically to connected devices. This is called DHCP. Enable DHCP on the router.
- Some routers require a Region setting to be specified in order to function correctly.

WARNING! Changing some of these routers settings may cause other connected devices such as computers, laptops, tablets or mobile phones to disconnect. Re-connect them using the new settings.