| Instruction Manual |

Supplementary User Guide for Wi-Fi Connectivity of AW-SYL-2352

Wi-Fi Module Firmware v1.0.7

Document version 1.0 (Oct 4th, 2022)

⚠ Caution

- This document is a supplementary user guide for the Wi-Fi enabled AW-SYL-2352.
- This document only covers the Wi-Fi connectivity related topics. Please refer to the user's manual for the basic operations of the SYL-2352 PID controllers.
- AW-SYL-2352 is installed with Auber's 2nd generation Wi-Fi module, which requires 2.4 GHz Wi-Fi networks and should be used with the AuberWifi app.

1. Front Panel of AW-SYL-2352

Figure 1. The front panel of an AW-SYL-2352 controller.

The Wi-Fi status indicator is a blue LED indicator located on the top-right corner of the display window.

2. Getting Started

2.1. How to Identify the Status of the Wi-Fi Module

The Wi-Fi Indicator. It is a blue LED indicator located on the top-right corner of the display window. This indicator should light up after the device is powered on.

Connection Status. There are three connection status of the Wi-Fi module:

1) **Pairing**. The blue light blinks rapidly (about 4 times per second). The Wi-Fi module is the pairing-mode, and it should generate a 2.4 GHz Wi-Fi band named as "AuberWifi_" and followed by 12 characters consisted of letters and numbers. This is the MAC address of the Wi-Fi module.
2) **Connecting**. The blue light blinks slowly (about 1 time per second). The Wi-Fi module is trying to connect to the Wi-Fi signal it is instructed to connect to. This can happen right after a user tries to

add the device to the AuberWiFi app, and it can also happen when the device has lost the Wi-Fi connection if the Wi-Fi signal is weak or no long exists.
3) **Connected**. The blue light stays on solid. The Wi-Fi module is connected to the Wi-Fi signal that it is instructed to connect to.

When you receive a new AW-SYL-2352 controller and power it up for the first time, the blue indicator should blink rapidly. If the blue indicator is not blinking rapidly, please see the next section for how to reset the Wi-Fi module to paring mode.

2.2. How to Reset the Wi-Fi Module to Pairing Mode

Increase the current value of parameter **COOL** by "4" to reset the Wi-Fi module to pairing mode. This action will only reset the Wi-Fi module and it will NOT alter the existing value of the **COOL** parameter.

Here is a step-by-step instruction of how to do it on the device:

1) Press and hold the SET key for 2 seconds to bring up the parameter menu.
2) Keep on short-pressing the SET key to scroll down the parameter list till you see **COOL** on the top LED window. The value on the bottom LED window is the current value of the **COOL**. By factory default, this value should be 10. The dot in the lower-right corner should be blinking rapidly.
3) Use the UP arrow key to increase the value by 4 and press the SET key to confirm the change. In this example, increase the value to "14" and press SET key to confirm and go to the next parameter.
4) You can press the A/M key and then press the SET key to exit the menu. Or, you can keep on pressing the SET key till you exit the menu. Or, don't touch any key for 10 seconds to let the device returns to the normal display mode automatically.
5) Now, the blue Wi-Fi status indicator should start blinking rapidly and the Wi-Fi module should be in pairing mode. If you use check the available Wi-Fi signals, you should see a signal called "AuberWifi_xxxxxxxxxxxx".
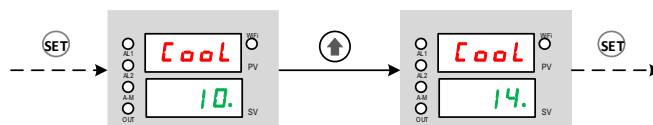

Figure 2. Reset the Wi-Fi module by increasing the COOL value by 4.

3. Adding an AW-SYL-2352 to the AuberWiFi App

Important: The Wi-Fi module in AW-SYL-2352 can only connect to a 2.4 GHz Wi-Fi network. Please make sure your router has a 2.4 GHz Wi-Fi network.

Important: The Wi-Fi name (SSID) and the password should have no space (blank).

3.1. Download and Install the Latest AuberWifi App

Please download the **AuberWifi** app from the Android app store or the iTune store and install it on your phone. Please grant the permission to allow the app to access "File and media" and "Location" while using the app.

3.2. Set the Device to Pairing Mode

Please see the section 2.2 for details.

3.3. Enable the Internet on Your Phone

Please make sure the internet connection on your phone is enabled. You phone should be connected to the wireless router that you want to use for connecting the AW-SYL-2352 controller. Please have the Wi-Fi password ready. You'll need to enter the password during the paring process.

3.4. Add the Device to AuberWifi App

a) Please make sure your phone is connected to a 2.4 GHz Wi-Fi signal from your wireless router. If you have a dual-band router with both 2.4 GHz and 5 GHz Wi-Fi under the same name (SSID), you don't need to worry about which signal your phone is connecting to.

b) Open the AuberWifi App, tap on "add a device" button.

c) The Wi-Fi name (SSID) should have been filled to the first line. Enter the Wi-Fi password and tap on the orange "Connect Device" button.
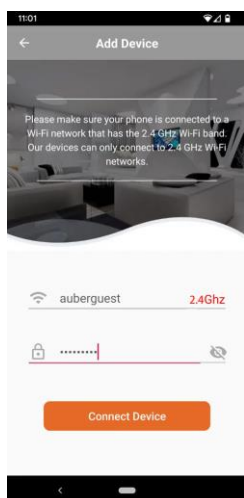

Figure 3. Enter the password and tap the Connect Device button.

d) Please read the pop-up message boxes and tap "CONTINUE". Then, the app will take you to the "Internet" Configuration page on your phone.

e) On the list of available Wi-Fi signals, select the one that starts with "AuberWifi_". This Wi-Fi signal is generated by the Wi-Fi module on AW-SYL-2352 for pairing purpose. No password is needed.
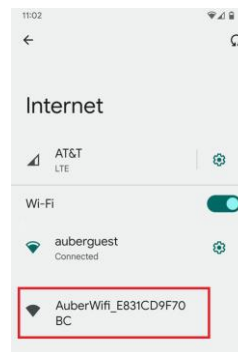

Figure 4. The device will generate a signal with a SSID started with "AuberWifi_".

f) Once your phone is connected to the "AuberWifi_" Wi-Fi signal, it will show that this Wi-Fi signal "can't provide internet".

- *For users of Android phones, please wait for a pop-up message from the notification bar on the top of the screen. The message will remind you that the "AuberWifi_xxxxxxxxxxxx" has no internet access and ask if you want to stay connected. Please select "Yes" to stay connected. Otherwise, your phone will automatically switch to another Wi-Fi signal that may have internet access, which will cause the pairing process to fail.*
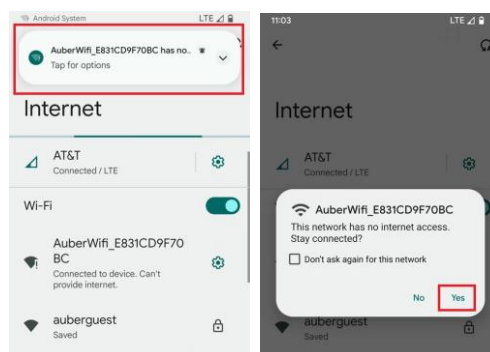

Figure 5. For Android phone users, wait for the system notification, tap on the notification box, and choose Yes to stay connected.

- *For users of iPhones, you won't see this notification unless you wait for a much longer time. So, don't worry about this pop-up message.*

Then, click the "Continue" button on the lower-right corner if you are using an Android phone. Or, simply switch back to the AuberWifi app if you are using an iPhone.
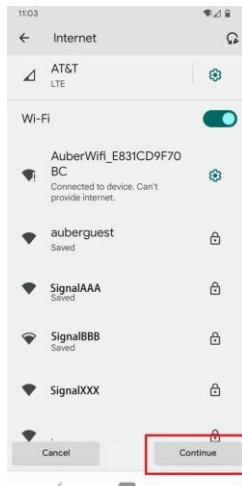
Figure 6. For Android phone users, click the Continue button to go to the next step. Or, simply switch back to the AuberWifi app.

g)   In the AuberWifi app, the next pop-up message box will ask you to confirm that your phone has connected to the "AuberWifi" network generated by the device. Tap CONFIRM to go ahead with the paring process.

h)   Once you tap on the CONFIRM button, the SSID and password will be sent to the Wi-Fi module on the device so that it can log on to your wireless network.

i)   If the pairing process is successful, the app will return to the app's main page and a new AW-SYL-2352 will appear on the list. The blue Wi-Fi indicator will blink slowly for a few seconds and then turn to solid. That means the device has been successfully connected to your router.

j)   If pairing is unsuccessful, the app will remain on the Add Device page. The blue LED may turn to slow-blinking but will not turn to solid. Please try again and make sure you check if the SSID wireless signal is strong enough, if the password is correct, and wait a little bit at step (g) until the "no internet access" notification appears.

4. Accessing Devices from the AuberWifi App

4.1. App Main Page

On the AuberWifi app's main page, you can see a list of devices that has been added to the app, access the devices that are online, add a new device, or access the general app menu.

Here is a screenshot of the app's main page after we add the AW-SYL-2352 to the AuberWifi app in Figure 7.
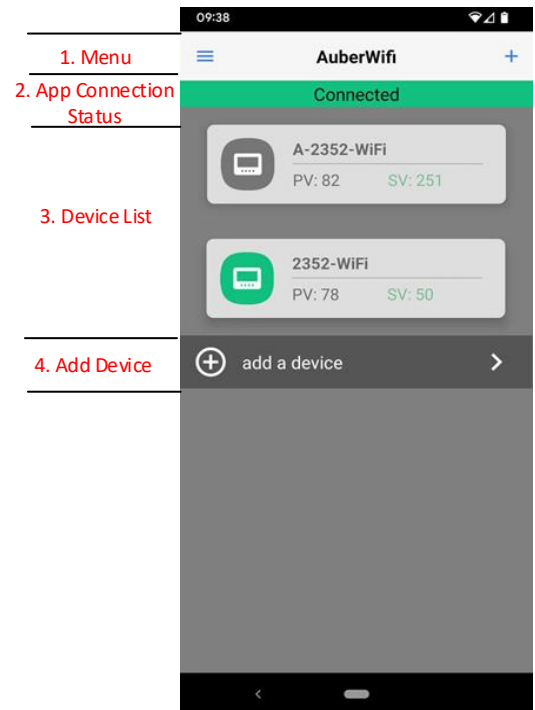

Figure 7. The main page of AuberWifi app.

(1) Menu. This is a general app menu where you can check the app version.

(2) App Connection Status Bar

This status bar ONLY shows the connection status between the app and our cloud server. It does NOT show whether the device is connected to your router or to the internet. When it shows "Connected", it doesn't necessarily mean the device is connected to the internet. When it shows "connecting…", it doesn't necessarily mean the device is offline.

Note: The app's connection status can be affected by a few factors such as the strength and the quality of the Wi-Fi signal that your phone is receiving, the electro-magnetic noise in your environment that affect the wireless connection of your phone, the other tasks or apps that are running on your phone might affect your phone's performance, and the internet traffic between your internet provider to our server. You can try: a) exit the app and re-open it; b) turn off the Wi-Fi connection on your phone and try using the mobile data connection; 3) try a different Wi-Fi network; 4) check if there is any other app could possibly block internet traffic.

(3) Device List

Devices that have been added to the app will appear in the Device List section. When the device is accessible from the app, the icon of the device will appear in green and white. If the device is not accessible from the app, the icon will appear in gray and white color. On this screen shown in Figure 7, the device "A-2352-WiFi" is offline and the device "2352-WiFi" is online.

(4) Add a Device Button

To add a new device, tap this button and start the pairing process.

4.2. Device Main Page

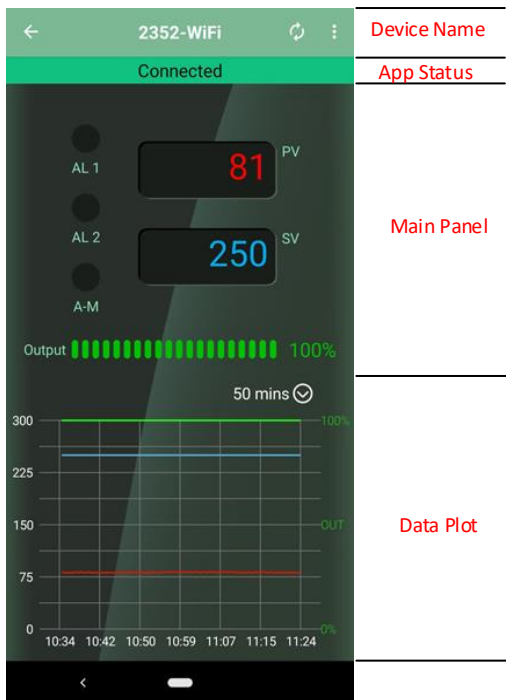A screenshot of the main page of AW-SYL-2352 is shown in Figure 8.

Figure 8. The main page of device AW-SYL-2352.

Main Panel

The device's main page is divided into 2 sections. The top half shows the two display windows and the indicators in a similar way as they appear on the device. The OUT indicator is shown as the Output status Bar.

The Set Value (SV) can only be viewed on this page. To change the SV, please go to the "System Configuration" page by tapping the three-dot menu button on the top-right corner.

Data Plot

The Wi-Fi module will record two sets of data in the past 50 minutes and in the past 3 hours. Each data set has 100 data points, which contains a time stamp, a probe value (PV), a set value (SV), and an output percentage (OUT). A user can select from the dropdown list for "50 mins" or "3 hours" to show the corresponding data plot. To export the data, please go to the "Device" menu page and tap the "Export Data" button.

4.3. Device Menu

Bring up the menu by tapping the three-dot menu button on the top-right corner. The menu has two items: "System Configuration" and "Device".

System Configuration

Most of the parameters on AW-SYL-2352 can be access from the

"System Configuration" menu (see Figure 9(a)).

The first parameter is the Set Value (SV). The rest of the parameters are listed in the same order as they are in the controller's menu system. The **LOCK** and **EP1** to **EP8** are not accessible from the app.

Device

In the Device menu page (see Figure 9(b)), a user can rename the device, check the current firmware version of the Wi-Fi module, export data, and go to our website to download the manual.

To export data, tap on the Export Data tab, the app will prompt you for the next step. The data will be saved as a .CSV file and can be sent as an attachment in an email.

The Wi-Fi communication module on AW-SYL-2352 is capable of over-the-air (OTA) update for its own firmware. When a new firmware version is published to the server, you can tap the "Version" tab to check for firmware upgrade. If the firmware on this module is the latest, tapping on this tab will do nothing.
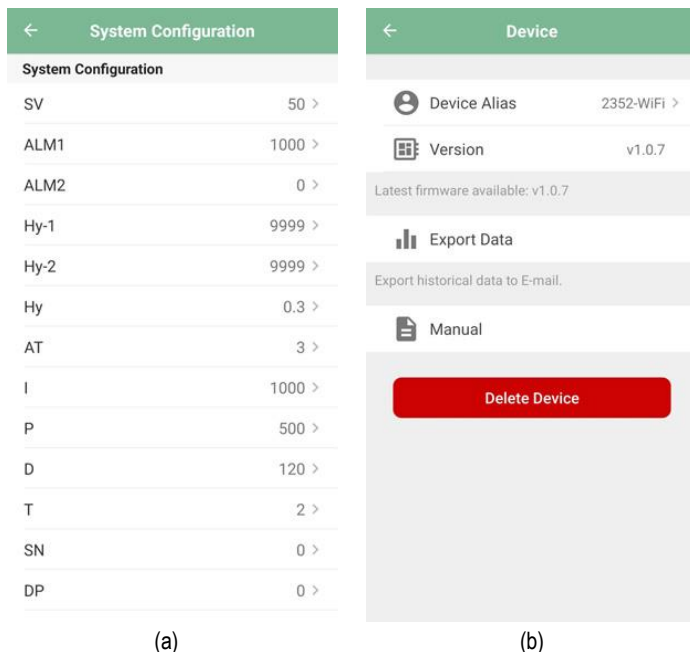

(a)   (b)

Figure 9. (a) The System Configuration menu page. (b) The Device menu page.

(End)

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