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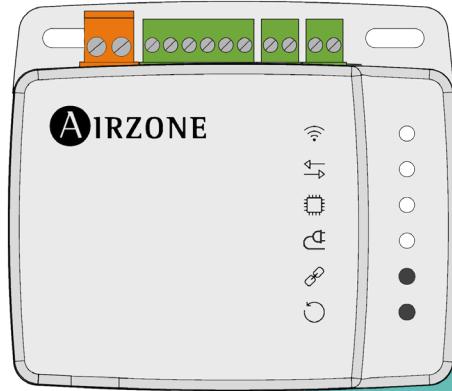


Quick Guide

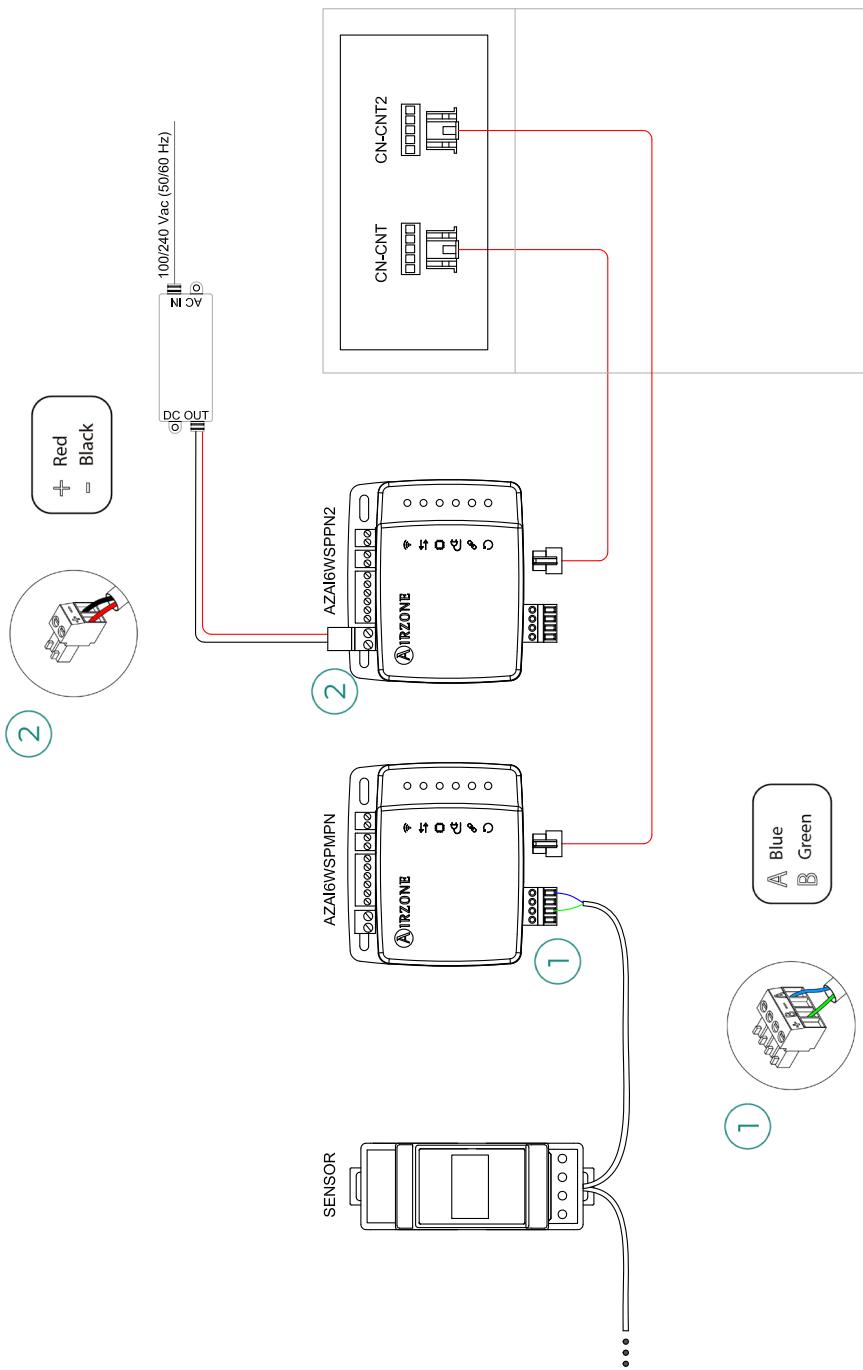
Aidoo Pro Air-to-Water HP meter gateway

Panasonic

For PAW-A2W-EXTMETER
[For AZAI6WSPMPN]



AIRZONE



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Environmental policy

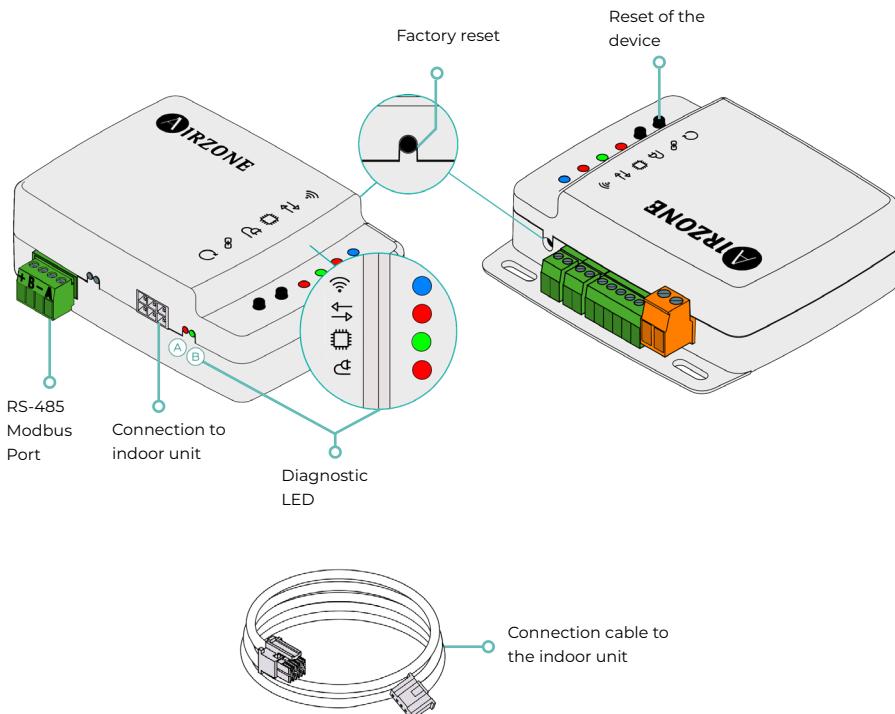


- Never dispose of this equipment with household waste. Electrical and electronic products contain substances that can be harmful to the environment if not properly handled. The crossed-out waste bin symbol indicates separate collection of electrical devices, which must be separated from other urban waste. For correct environmental management, at the end of its useful life the equipment should be taken to the collection centers provided for this purpose.
- The parts that make it up can be recycled. Therefore, please respect the regulations in force regarding environmental protection.
- If you replace the equipment, the original equipment must be returned to your dealer or deposited at a specialized collection center.
- Violations are subject to the penalties and measures stipulated in environmental protection law.

Aidoo Pro Air-to-Water HP meter gateway

Device for integration of metering sensors with Panasonic Aquarea units. Port for integration via Modbus protocol. Control via the “Gateway Setup for Panasonic” App (available for iOS and Android). Wireless connection via Bluetooth. Power supplied through the indoor unit.

DEVICE ELEMENTS

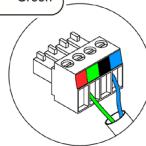


RS-485 Modbus port

Port for establishing [Modbus](#) communication with the sensor network.

The device will work as a Modbus master.

A/BMS+ Blue
B/BMS- Green



Connection to the indoor unit

This terminal allows the device to communicate with the indoor Ait-to-Water HP unit, enabling the following parameters to be written to the Aquarea:

- Current power (W) / Total energy (Wh) consumed by the heat pump.
- Current power (W) / Total energy (Wh) generated in heating production.
- Current power (W) / Total energy (Wh) generated in cooling production.
- Current power (W) / Total energy (Wh) generated in DHW production.
- Current power (W) generated by photovoltaic.
- Current power (W) consumed by the total building.

Factory reset

This button allows you to restore the device to factory settings by pressing it continuously for more than 10 seconds.

Reset of the device

Allows you to reset the device without removing any previously set configuration parameters.

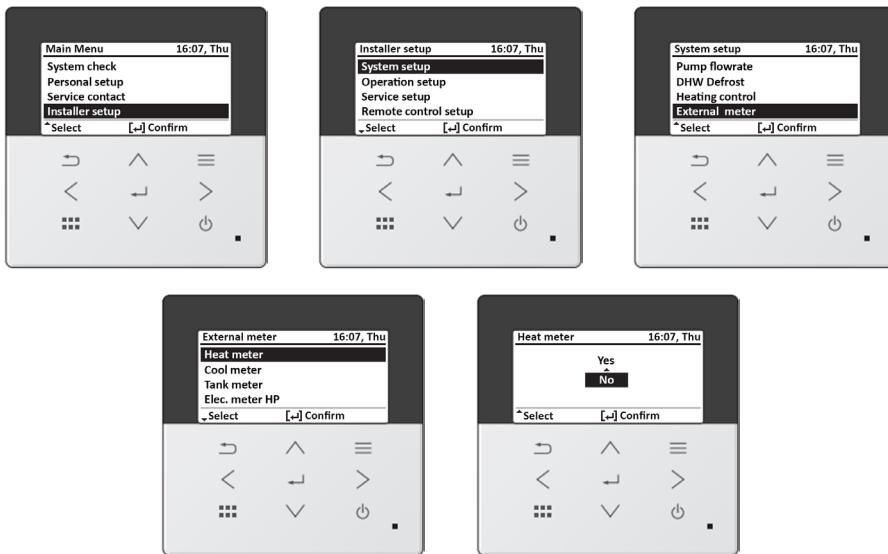
Diagnostic LED

Meaning			
	Microprocessor activity	Blinking	Green
	Power supply	Steady	Red
	Transmission of data to the indoor unit	Blinking	Red
	Reception of data from the indoor unit	Blinking	Green

Panasonic Thermostat Settings

Before configuring the device in the application, it is necessary to configure the Aquarea unit according to the type of installation. To do this, follow these steps:

1. Press the “Menu” button  on the Panasonic thermostat to access the *Main Menu*.
2. Select the “Installer setup” option and press .
3. Select “System setup” and press .
4. Select “External meter” menu.
5. Depending on the type of installation, access the menu of the corresponding meters and select “Yes”.



Issues to be taken into account:

1. The parameters “Elec. meter 1 (PV)”, “Elec. meter 2 (Building)” and “Elec. meter 3 (Reserve)” are reserved for future use (they must not be activated).
2. If communication with the meter gateway is lost, the Aquarea unit will automatically switch the generation/consumption values from the external meter to the internal meter.
3. For further information, please see the user’s manual for your Aquarea unit.

Meter Installation

The following are the possible installation configurations for the heating/cooling meters and the tank, for a single zone with one unit.

For 2-zone systems, the only monitoring option is to use an *L* generation unit with a cooling/heating meter installed between the outdoor and indoor unit. This configuration only shows the total generation for the two zones, not for an individual zone.

K GENERATION

Unit type	Cooling/heating meter	Tank meter	Description	Diagram
Bi-Bloc	Yes ⁽¹⁾	No	-	-
	Yes	Yes	The data obtained from each meter is directly related to the generation of the corresponding mode.	Figure 1
All in One	Yes	No	-	-
	Yes	Yes	-	-

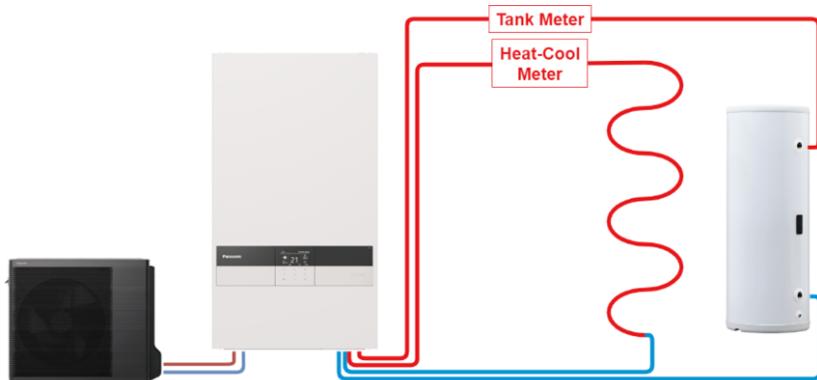


Figure 1

(I) For this configuration, the cooling/heating meter will represent the total generation (cooling, heating and tank).

L GENERATION

Unit type	Cooling/ heating meter	Tank meter	Description	Diagram
Bi-Bloc	Yes	No	The data obtained from the individual meter, depending on the operation mode, is related to the generation of the corresponding mode ⁽¹⁾	Figure 2
	Yes	Yes	The data obtained from each meter is directly related to the generation of the corresponding mode.	Figure 3
All in One	Yes	No	The data obtained from the individual meter, depending on the operation mode, is related to the generation of the corresponding mode ⁽¹⁾	Figure 4
	Yes	Yes	-	-

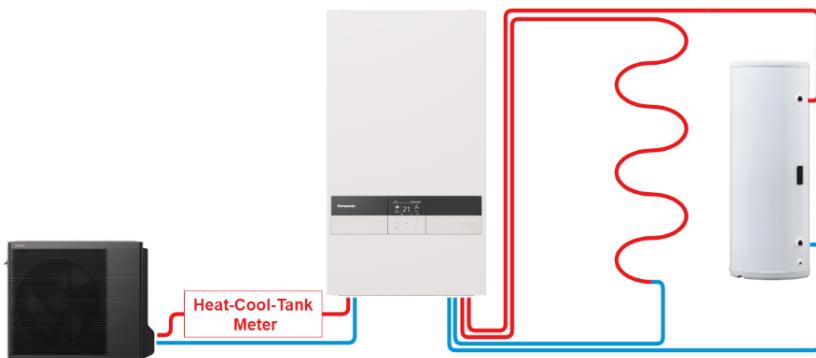


Figure 2

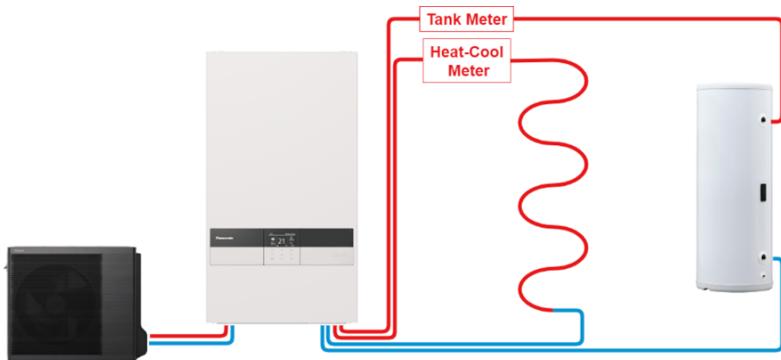


Figure 3

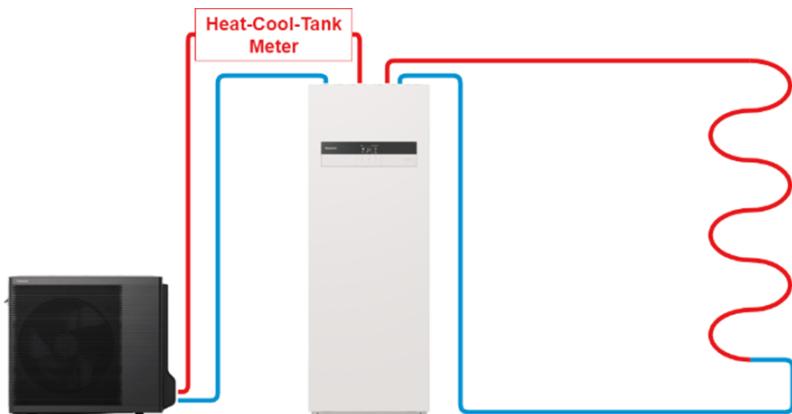


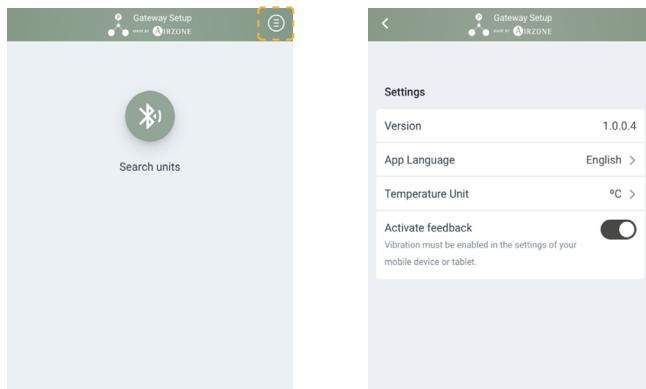
Figure 4

Gateway Setup for Panasonic

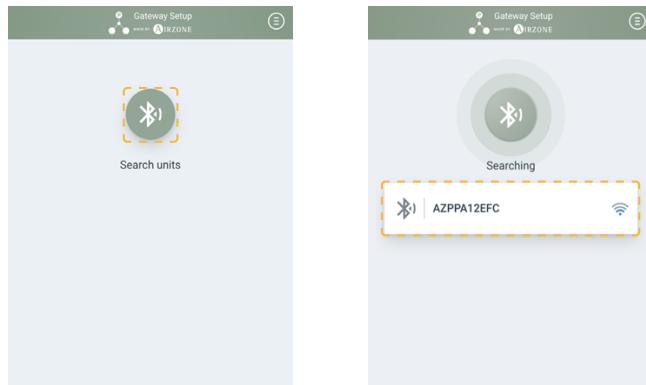
NETWORK SETTINGS

On the main screen of the “Gateway Setup for Panasonic” app, it is possible to select the working language of the application and the temperature units by clicking on the *Settings* button.

- **Version.** Indicates the version of the application.
- **Language.** The app is available in 9 languages (German, Greek, English, Spanish, French, Italian, Polish, Portuguese and Turkish).
- **Units.** Celsius (°C) or Fahrenheit (°F).
- **Feedback activated.** This functionality requires the activation of vibration on the device.



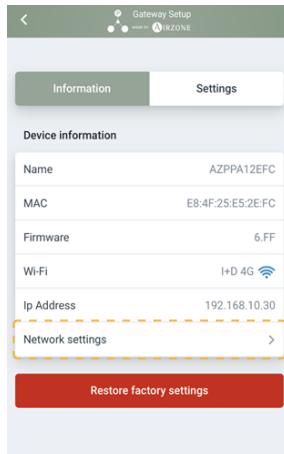
Back on the main screen, tapping on the *Bluetooth* icon starts the search for nearby devices. Select your “Aidoo Pro Air-to-Water HP Meter Gateway” to continue.



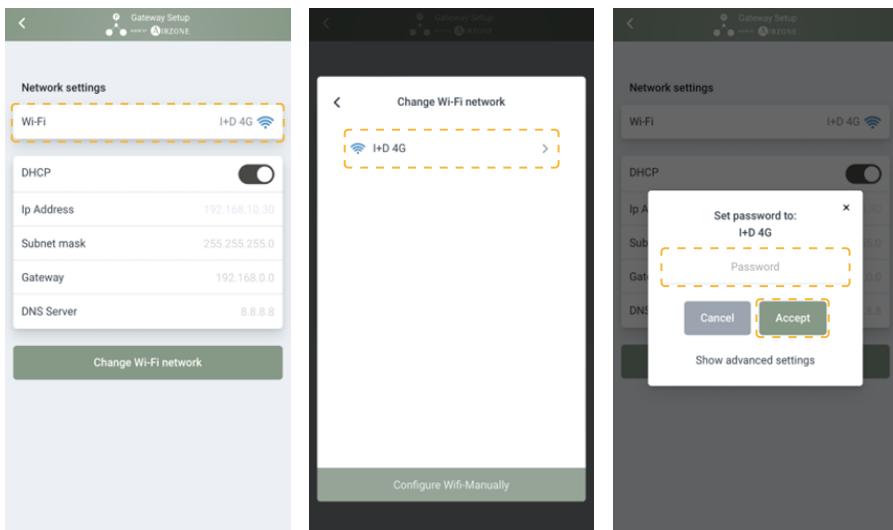
Once the device is selected, the information menu will appear.

- **Name.** Name of the device.
- **MAC.** MAC address of the device.
- **Firmware.** Indicates the version of the device.
- **Wi-Fi.** Network linked to the device.
- **IP address.** Displays the IP address of the device.
- **Network settings.** Allows you to configure the device settings.

Pressing the *Restore factory settings* button will restore the initial values.

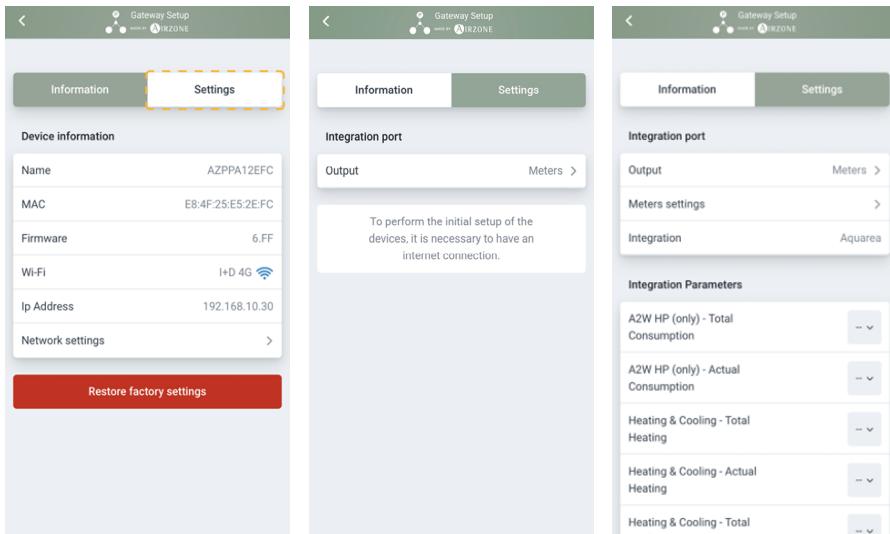


Enter the *Network settings* submenu to change the Wi-Fi network, if necessary.

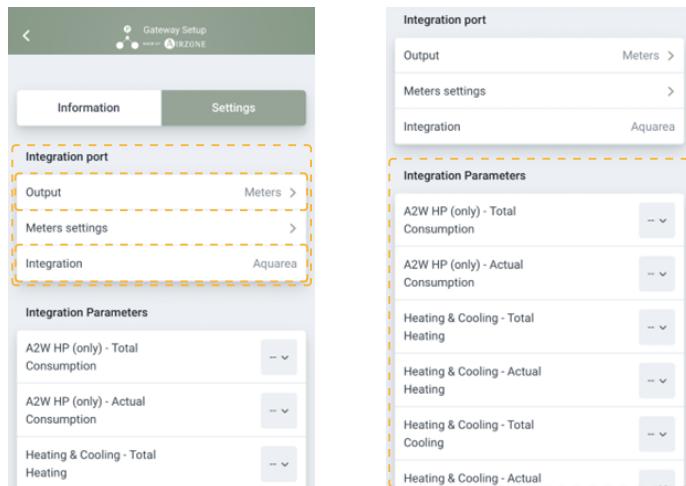


METER SETTINGS

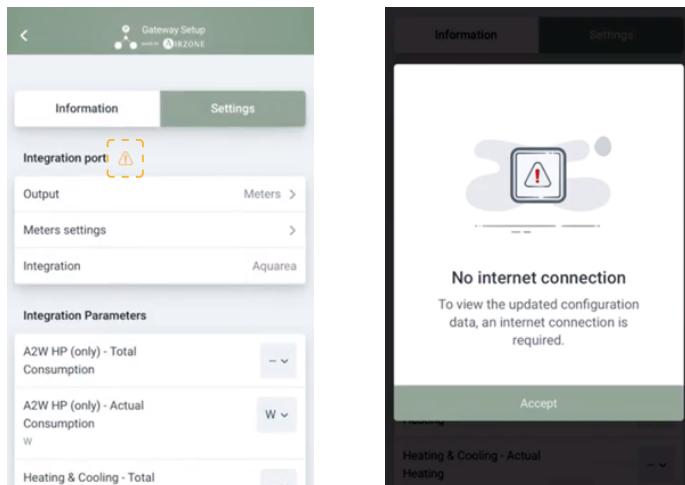
In the settings menu, the information concerning the parameters of the integration port can be viewed. If the application has never been connected to the Internet, the message "To perform the initial set up of the devices, it is necessary to have an internet connection" will be displayed.



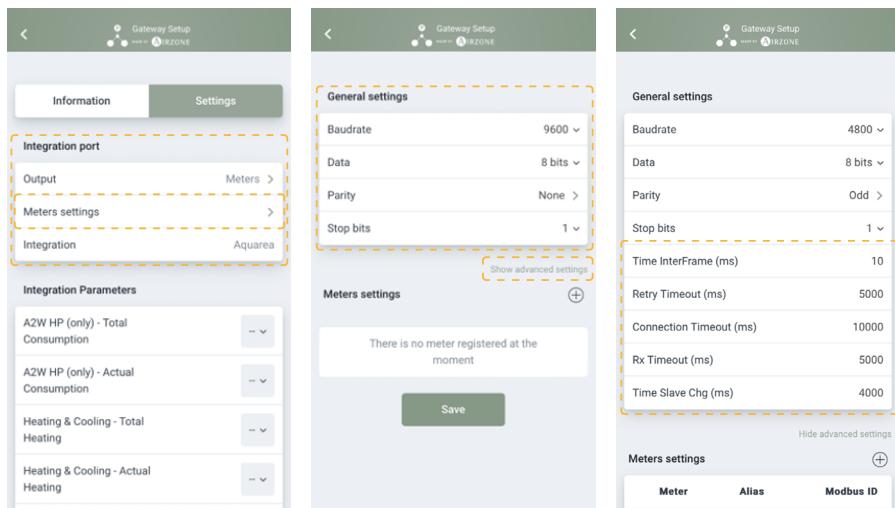
Once the Internet connection is available, the port information and integration parameters are displayed. In the *Integration port* submenu, the Output will be set to "Meters" and the Integration will be set to "Aquarea". In the *Integration Parameters* submenu, the sensors connected to the device are identified.



If the Internet connection is lost, the warning icon will be displayed next to the *Integration port* submenu. By clicking on this icon, a window with information about the error will appear.



Next, access the “Meters settings” menu. In the *General settings* submenu you can configure the general parameters of the sensors/meters. Scroll down the complete submenu to configure the other parameters, if necessary. In addition, from this view you can manage the Modbus network, as well as identify each of the sensors connected to the Aquarea unit.



In "Meters settings", you can add as many sensors as necessary, each with a different "Modbus ID" (this value must be unique). There are two types of meters, preconfigured and customizable. Preconfigured meters offer a set of available measurements ready to use. Customizable meters allow you to configure the sensors manually, defining each measurement with its own settings.

- Preconfigured meters:

General settings

Baudrate	9600
Data	8 bits
Parity	None >
Stop bits	1

Meters settings

Meter	Alias	Modbus ID
Siemens Sentron IEM	A	1

Advanced Settings (A)

Alias	A
Modbus ID	1

Measurements

Active Power L1
Active Power L2
Active Power L3
Total Active Power

- Customizable meters:

Advanced Settings (A)

Alias	A
Modbus ID	1

Measurements

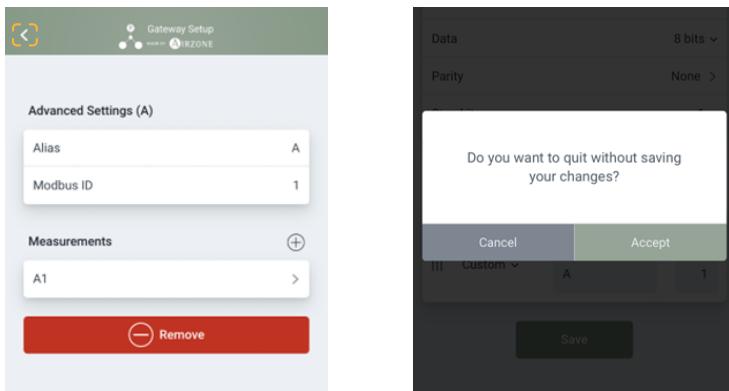
A1

Measurements (A1)

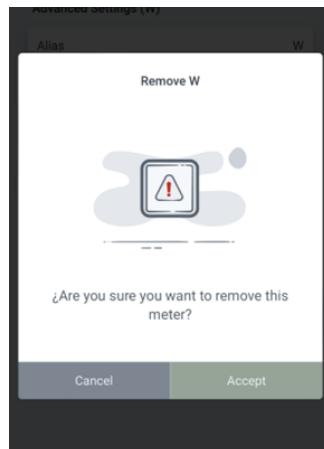
Name	A1
Modbus Register address	13
Size (number of registers)	2
Size of register (bytes)	2
Measurement type	Instant power (W)
Data format	IEEE single precision floating-point
Modbus operating code	Read input logs (4)
Bytes Ordering	BigEndian

Test **Save**

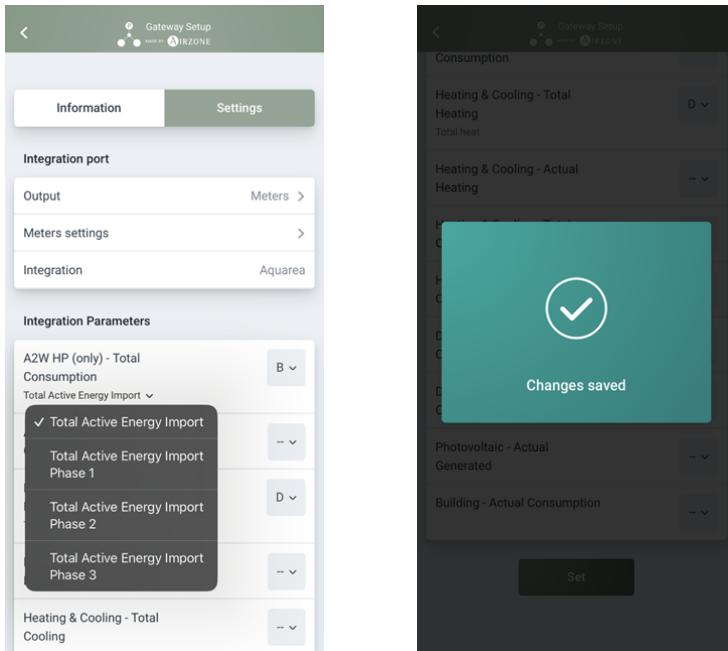
Once the configuration of all sensors/meters has been completed, the settings must be saved. If you exit the settings menu without saving the changes, a warning message will appear to confirm whether you wish to save the changes or not.



If you want to remove a meter, press the “Remove” button. When you do so, the following screen will appear to confirm this action.



Once you have finished configuring all the measurements, from the *Integration* menu, you must associate each parameter of the Aquarea unit with the corresponding sensor to finally send the settings to the Aidoo Pro. Lastly, all the information must be saved so that it is correctly stored in the Aidoo.



Download the Gateway Setup for Panasonic app

Description of parameters

METER SETTINGS PARAMETERS

Field	Description
Type	Meter type: Siemens Sentron iEM, Scheinder Electric 3000 Series, Scheinder Electric iEM 2000, Kamstrup Multical 403 and Custom
Alias	Known or more familiar specified name for sensor or meter given by the user
Modbus ID	Modbus identifier or address set of the meter

CUSTOM MEASURE PARAMETERS

Field	Description
Name	Name of custom measure
Modbus register address	Modbus register address for the data value
Size (number of registers)	Number of registers to read for the data (by the default 2)
Size of register (bytes)	Size of the registers in byte to read the data (by the default 2)
Measurement type	Measure type: Instant power (W), Cooling power (W), Heating power (W), Total consumption energy (W/h), Total cooling energy (W/h), Total heating energy (W/h), Voltage (V), Current (A), Name (UTF8) and Model (UTF8)
Data format	Data format possible: UTF8, float32, UInt64, UInt32, UInt16, Int64, Int32, Int16
Modbus operating code	Modbus operating code: Read maintenance logs (3), Read input logs (4)
Bytes ordering	Bytes data order: Big Endian (most significant byte first) or Little Endian (less byte first)
Multiplication factor	Factor for which the data must be multiplied to be in the base unit system
Multiplication factor register	Register in which is stored the factor multiplication (not always needed)
Mask applied to the register	Mask to apply to register (by default 0xFFFF) (not always needed)

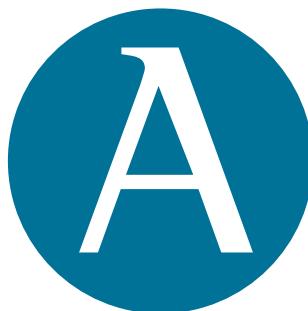
AQUAREA PARAMETERS AND UNITS

Field	Units
A2W HP (only) - Total Consumption	Wh
A2W HP (only) - Actual Consumption	W
Heating & Cooling - Total Heating	Wh
Heating & Cooling - Actual Heating	W
Heating & Cooling - Total Cooling	Wh
Heating & Cooling - Actual Cooling	W
Heating DHW- Total DHW	Wh
Heating DHW- Actual DHW	Wh
Photovoltaic - Actual Generated	W
Building - Actual Consumption	W

GENERAL SETTINGS PARAMETERS

Parameters	Description
Baudrate	Number that measures the speed of data transmission (1920 by default)
Data	Size data: 7 or 8 bits (8 bits by default)
Parity	Whether a data integrity check is included: None, Odd, Even (Odd by default)
Stop bits	The number of stop bits used to mark the end of a frame: 1 or 2 (1 by default)
Time interframe (ms)	Time between frames
Retry timeout (ms)	Time to retry in communications
Connection timeout (ms)	Time in connection
Rx timeout (ms)	Time in reception
Time slave Chg (ms)	Time in change to slave

Panasonic



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