



PLANTALYTIX

Fridge Grow 2.0

User manual FG module



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Product

Plantalytix Fridge Grow is a fully automated plant cultivator designed exclusively for growing plants indoors. The entire system consists of the following parts:

- Plantalytix Fridge Grow Module with
 - Integrated Display
 - Adjustable Mounting Bracket
 - CO2 Sensor
 - CO2 Valve
 - Power Connection Cable
 - Temperature and Humidity Sensor
- CO2 Pressure Reducer
- CO2 Bottle Holder
- CO2 Hose
- Wrench for CO2 Bottle
- Circulation Fan with Clip
- 3 Rear Wall Panels (one panel with integrated fan)
- Condensate Tray with Water Hoses and Fitting
- Body (shipped separately)
- Terminal Box
- Accessories:
 - Substrate Living Soil – Dope Lite from Florganics
 - Plant Pots with Cover
 - Saucers for Plant Pots
 - Drying Net
 - Expanded Clay Pellets
 - Sealant
 - Trace Elements

The CO2 bottle is not included. A standard CO2 bottle for soda makers such as Sodastream is recommended. This can then be refilled at any time in appropriate supermarkets.

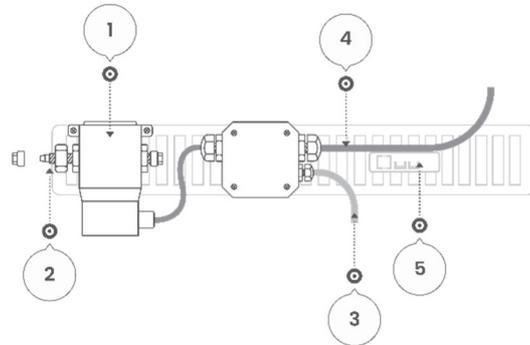
The CO2 bottle is not included. Here, a conventional CO2 bottle is recommended for soda makers such as Sodastream. This can then be refilled at any time in appropriate supermarkets.



Individual components

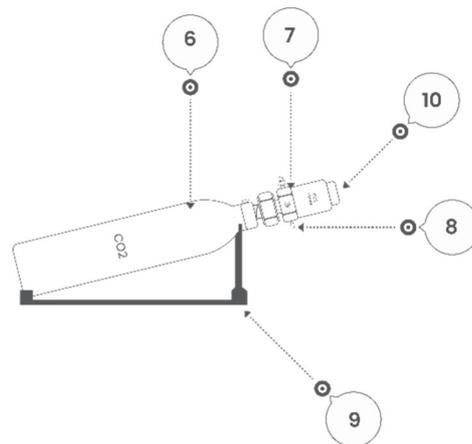
FG module

- 1... CO2 Valve
- 2... CO2 connection inlet
- 3... Sensor Cable
for temperature and humidity
- 4... Power supply
- 5... Fan Connectors



CO2-System

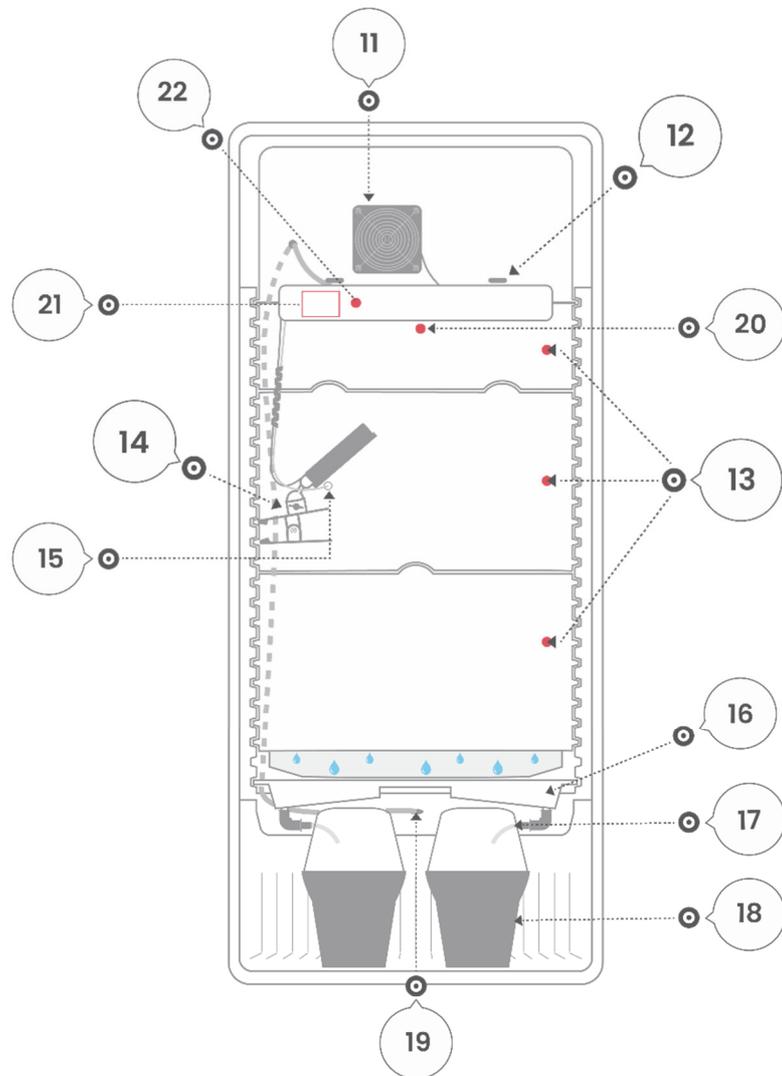
- 6... CO2 cylinder
- 7... Pressure reducer CO2 output
- 8... Fine needle valve (flow rate CO2)
- 9... Bottle cage
- 10... Reducer





System

- 11... Rear wall fan
- 12... Fixing screws module
- 13... Rear panel panels
- 14... Rotary Clip
- 15... Rotary fan
- 16... Condensate Tray
- 17... Water Hose
- 18... Pots
- 19... Condensate Hole
- 20... Hook for drying net
- 21... Display
- 22... Rotary Click Knob





Safety

Intended Use

The product is a plant cultivator for indoor use. It is intended exclusively for the cultivation of plants and must not be used for other purposes.

Foreseeable Misuse

Use the product exclusively for its intended purpose. The following uses are not permitted:

- Outdoor operation
- Operation in humid or wet environments
- Operation under direct sunlight
- Operation in an industrial environment
- Independent modifications or adjustments to hardware or software
- Operation by children or persons with limited physical, sensory, or mental abilities

Safety Instructions

To reduce the risk of injury, death, electric shock, fire, and property damage, always observe the following safety instructions.

Assembly

- All assembly work must only be carried out when unplugged (de-energized).
- Read the instructions very carefully.
- Observe the instructions for unpacking the device.
- When opening the packaging, be careful not to use sharp or pointed objects. Careless opening can lead to damage or injury.
- Do not touch the mains plug with wet hands.
- Only plug the mains plug into an easily accessible socket so that you can quickly disconnect the power cable from the mains in the event of a malfunction.
- Do not leave children alone with the packaging film.
- Connecting the power connection box must only be carried out by qualified personnel.

Commissioning

- Only connect the device if the mains voltage of your socket matches the specification on the device's type plate.
- Do not operate the device if it shows visible damage.
- Ensure that the fans of the insert are not covered.
- Protect all components from moisture.
- The device must not be operated outdoors.
- Operate the device in well-ventilated rooms.
- The device must be positioned at least 10cm away from the wall.
- The device must not be placed next to heaters/stoves.
- Keep the device away from open flames, hot surfaces, water exposure (shower, bathtub, sink, etc.), and direct sunlight.
- Caution: The allowed ambient temperature is 10-35°C.
- Use the device exclusively with a properly installed socket with a reliably connected protective conductor.



- Do not bundle, pull, damage, or modify the mains cable, do not expose it to heat, and do not place heavy objects on it.
- For installation or connecting the power line, absolutely consult qualified personnel.

Installation and Connection of the Terminal Box (see assembly instructions)

Installation must only be carried out by persons with relevant electrotechnical knowledge and experience.

Improper installation endangers:

- your own life;
 - the lives of users of the electrical system.
- With improper installation, you risk serious property damage, e.g., due to fire.
You face personal liability for personal injury and property damage.
Contact an electrical professional
- For installation, the following specific technical knowledge is required:
- the applicable "5 Safety Rules"; Disconnecting, securing against re-connection;
 - Verifying absence of voltage; Earthing and short-circuiting, covering or barricading adjacent live parts;
 - Selection of appropriate tools, measuring devices, and personal protective equipment if necessary;
 - Evaluation of measurement results;
 - Selection of electrical installation material to ensure disconnection conditions;
 - IP protection classes;
 - Installation of electrical installation material;
 - Type of supply network (TN system, IT system, TT system) and the resulting connection conditions (classic earthing, protective earthing, required additional measures, etc.).

Operation

- Ensure that no objects are inserted into the openings/connections.
- The device is only de-energized when the mains plug has been removed from the socket.
- The device must not be operated by children or persons with limited physical, sensory, or mental abilities.
- Ensure that no liquids run over the device.
- Ensure that no liquids run next to the plant pot saucer.
- Keep the user manual.
- If you pass the device on to third parties, be sure to include the user manual.
- Regularly check for liquids behind the condensate tray and remove them.
- For proper operation, it is strongly recommended to use only the included components.
- Under no circumstances look directly into the interior lighting.
- Do not reach into the fans.
- Do not touch the LED lamps.
- Ensure that no body parts are pinched when closing the door.
- Ensure that the device is set up level.
- Place the device on a firm surface and protect it from tipping over or wobbling.
- Regularly clean the device with antibacterial cleaning agents.
- Do not make any changes to the product.
- Seek help from trained professional personnel.
- Adhere to the instructions in the manual and under no circumstances operate other devices inside the plant cultivator.



Cleaning, Maintenance, Servicing

- Before cleaning the device, switch it off and unplug the mains cable from the socket.
- When cleaning, pay attention to hazard warnings and ensure that cleaning agents do not harm people, plants, or plastic parts.
- Do not open the housing and leave repairs to qualified personnel.
- Liability claims and warranty are excluded for independently carried out repairs or improper connection.
- Replace damaged components only with original spare parts.
- If unsuitable cleaning agents are used, the surfaces of the device can be damaged.
- Do not use aggressive cleaning agents or sharp or metallic cleaning objects such as brushes with metal or nylon bristles.
- Regularly free the fans from dust to prevent overheating.
- If the device is not used for a long time, unplug the mains cable from the socket and open the door.
- Do not spray cleaners or similar substances into the interior of the device.
- Before dismantling, the mains cable must be unplugged from the socket.

Behavior in case of emergency

- Unplug the mains plug from the socket.
- Let the device cool down.
- Contact the device manufacturer.

Operator's Duty of Care

For safe operation, the operator of the product must fulfill the following obligations:

- Read and follow the user manual.
- Observe the safety instructions.
- Obtain assistance from qualified personnel when connecting the power line.
- Regular maintenance and care of the device.
- Regular cleaning of the device.

Setup and Assembly

Unpacking the Box and the FG Module

The plant cultivator (large package) and the FG module along with accessories are shipped separately for logistical reasons. During transport, absolutely ensure that the packaging including the contents is not damaged or dropped. Carry the plant cultivator with at least one other person.

Transport the second package carefully and securely as well. Open the boxes very carefully so as not to scratch or damage the device. Keep the packaging for possible returns. Dispose of the packaging material at the designated disposal points.

Setting up the Box

When setting up, ensure that the device has sufficient distance from other surfaces (walls, cabinets, etc.). A minimum distance of 20-30cm is recommended. Absolutely read the safety instructions for the box. Secure the box against tipping over and set it up so that the entire base surface stands stably on a firm and dry surface. Adjust the feet (rotatable) so that the box stands stably and does not wobble. Furthermore, it is important to ensure that the box is "in balance", i.e., straight. A spirit level or similar can be used for this.



CAUTION: The plant cultivator must stand upright for at least 12 hours before the mains plug may be inserted.

Device Assembly

Please read these assembly instructions carefully and follow the instructions as described and in the order given. Failure to do so can result in damage which can significantly impair function. Please read the safety instructions carefully before beginning assembly.

Installation

Before Commissioning

Read all instructions and safety notices carefully and ensure that you have followed all steps exactly according to the instructions. Otherwise, damage, injury, or problems during operation may occur.

After assembly, plug the mains plug into a socket. Observe the specifications regarding mains voltage and the safety instructions. When you plug in the Fridge Grow module or the system, the LED lighting may briefly illuminate. Therefore, never look directly into the LED lamps.

After switching on, the box automatically begins to regulate itself in a defined standard mode. To set your desired climate parameters, you must first set the basic settings. There are 2 options for this:

- Settings directly via the display
- Settings via app or browser (recommended)

Setting up the FG Module and Integrating it into the Home Network

Making Settings Directly via the Display

To use the system, you do not necessarily have to be connected to the internet. All settings can be made "offline" via the display. The current values can also be read from the display. By rotating the rotary-click knob, you can navigate the menu, and by pressing the knob, you confirm the respective input or jump back or into the submenu. Due to the limited size of the display, it can be very difficult for some people to read. In these cases, a magnifying glass or using the app or portal is recommended.

Note: The display has a sleep mode integrated to prevent possible disruptive light. After 30 seconds without interaction, the display will automatically turn completely black. You can reactivate it by rotating or clicking the knob.

CAUTION: Without a connection to the internet, no updates can be received and installed. Furthermore, graphs and recordings can only be accessed via the app or portal (access via browser). It is therefore recommended to connect the FG module to the home network and thus to the internet.

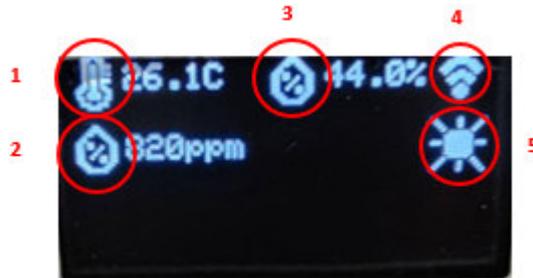
The setting of climate programs and control values is explained in more detail in the cultivation instructions section.



Symbols and their explanation

Depending on the mode, different icons are displayed.

- 1... Temperature
- 2... CO2
- 3... Humidity
- 4... Wi-Fi signal
- 5... Day/Night Cycle



Settings on the display

All settings can also be made via the display.

Attention: Graphs cannot be analyzed via the display. The menu items are displayed differently depending on the respective climate mode (e.g.: Are there no CO2 settings in the drying mode, etc.)

For the correct settings and climate modes, the cultivation recommendation must be used. Below is the maximum number of setting parameters.

- Control mode
- Breeder = incubator
- Greenhouse
- Small Plant
- Big Plant = Large Plants
- Dry = Drying
- Dayrise/Nightfall = light phase day/dark phase night
- Day/Night
- Temperature
- Humidity
- CO2 = CO2
- Max Light = maximum light intensity
- Sunrise/Sunset
- System Time (UTC) = System Time (Central European Time +1h)



System time

The system time is given as UTC. This corresponds to the Coordinated Universal Time and this in turn is the CET (Central European Time Zone +1 hour), which is valid for Germany and Austria, for example.



Attention: If the module has a connection to the Internet, this time does not have to be set separately. In this case, the module gets the time automatically.

Settings via App or Browser

The easiest and most convenient way to operate Fridge Grow is via the app or the portal. Here you can easily set all parameters, analyze graphs over time, and read the current measured values. It is up to you whether you prefer an app or a browser version. You can, for example, use both the app and the portal with your mobile phone. The difference is that the portal can only be used via a browser. The app does not require any other software or app.

Note: To use the app and portal, an internet connection is required. To do this, you must connect Fridge Grow to your home network and absolutely ensure that the connection is good to very good. Internet disconnections can lead to gaps in the recording and long waiting times.

Settings and Operation

For Fridge Grow to be used, the appropriate settings must be made depending on the growth stage. These can be done as described above either directly via the display or via the app/portal. The following section explains the connection with the app/portal. Offline operation (directly via the display) does not require an internet connection.

Connecting to the Portal

Using the portal is not strictly necessary but facilitates work and enables graph analysis. For the measured data to be displayed, Fridge Grow must be connected to the portal. 2 steps are required for this.

1. Connection to the home network
2. Registration on the portal

Connecting to the Home Network

The connection to the home network is necessary to enable communication with the portal. The connection to your home network can be made either via a browser or directly via the display.

Option 1: Connection via Browser

Option 2: Connection via Display

Option 1 (recommended) - Establishing the connection via browser (Smartphone, Tablet, PC,...)

In this case, you first connect a third-party device (smartphone, PC, etc.) to the controller's WLAN. Then the controller is connected to the home network and can subsequently be found in this home network. Data can then be exchanged with the portal via the home network. A browser is a program



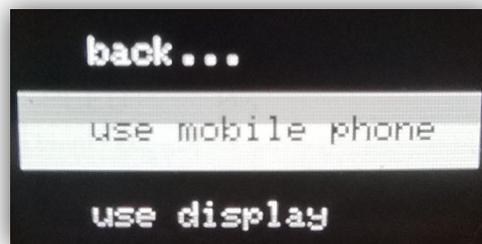
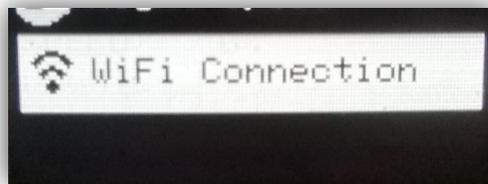
like Firefox, Chrome, Brave, Edge, etc..

Note: If you encounter problems, it may be helpful to switch browsers or turn off any plugins.

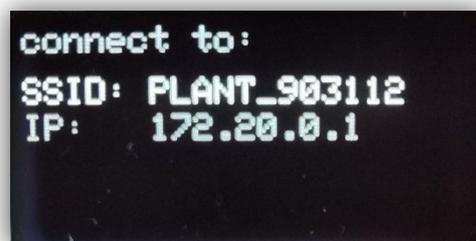
1. Establish a connection to the FG module's WLAN (Accept the WLAN if an error message appears stating that this connection is not connected to the internet).
2. Search for the home network. Connect and enter the password (Caution! Some devices refuse to open the home network search. Check security settings or use another device if you have problems with the home network search).
3. Access the portal at <http://plantalytix-app.com/>.
4. Generate a connection code on the FG module and add a new device with this code in the portal.

Connecting to the Module's WLAN via Browser

In the display menu, go to the WIFI settings and select "use mobile phone".



The controller's Wi-Fi is now displayed. This SSID is unique and is regenerated every time. Turn on the Wi-Fi on the device (e.g. smartphone, laptop, etc.) and look for the Wi-Fi shown on the display. In this case, that would be PLANT_903112. There is no password request.



If the Wi-Fi network is found, press "Connect" and accept messages indicating that no Internet is available with this Wi-Fi network (this message only appears in rare cases). After that, you are directly connected to the module. Now the next step is to connect to the Internet.



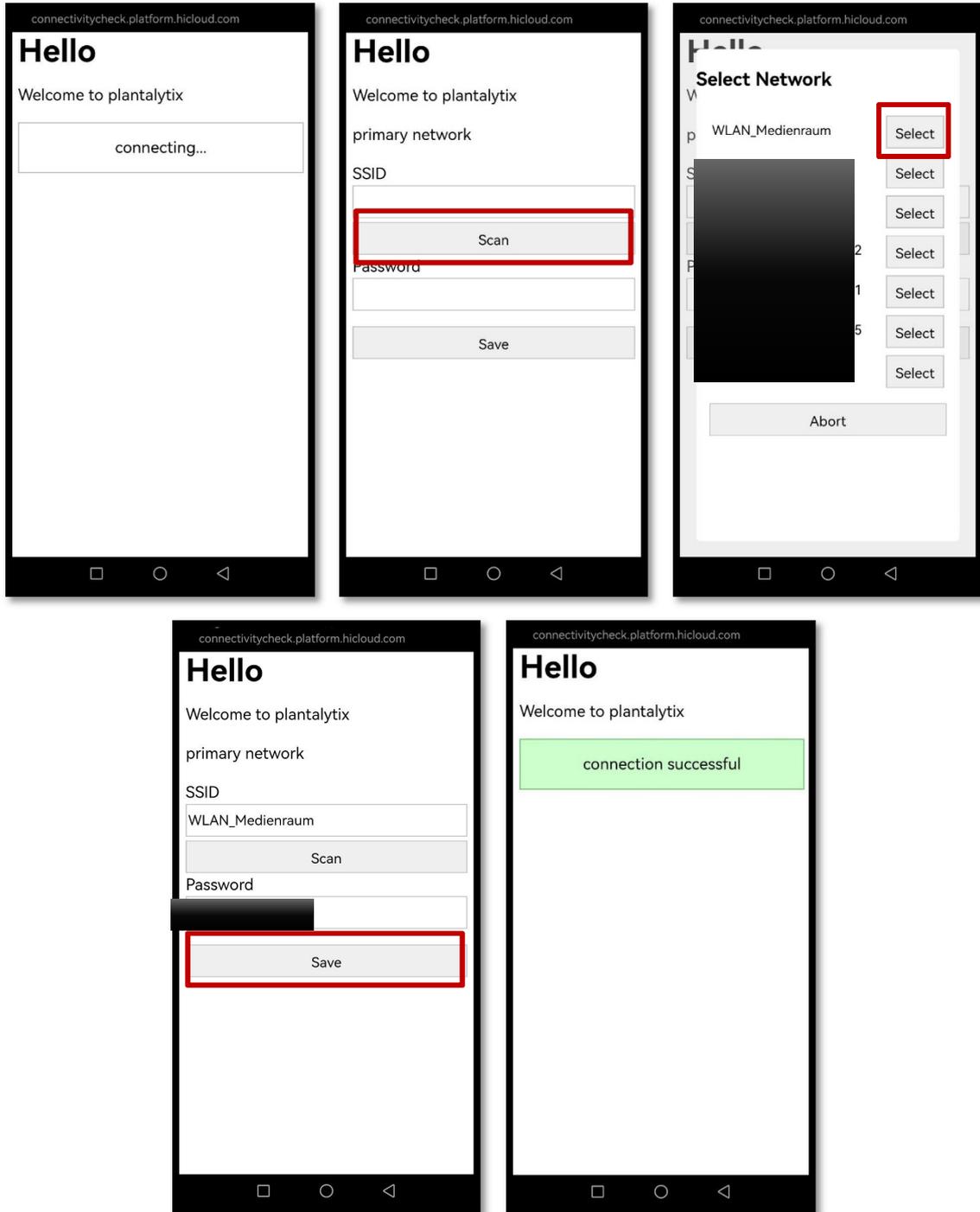
Connect module to the home network (browser)

By default, after connecting to the SSID, i.e. the WLAN of the module, a page opens where the home network (SSID) and password must be entered. Clicking on "Scan" will display all available Wi-Fi networks. Alternatively, the SSID can also be entered manually. Please make sure that the module is located in the reception area of the home network or, if necessary, install a signal amplifier (repeater or similar). For full functionality, it is essential that there is a stable and good signal to the home network or the Internet. Select the home network or enter it manually. If there is no input mask, check the security settings of your device with which you want to integrate the module and use the Mask if necessary. another device.

If you have pressed scan, the corresponding Wi-Fi network will be selected via "Select". The WLAN is then automatically entered in the "SSID" field. Next, the password must be entered and "Save" must be pressed to save.

After that, the FG module tries to connect to the home network and thus to the Internet. If the connection is successful, a green box with "connection successful" will be displayed.

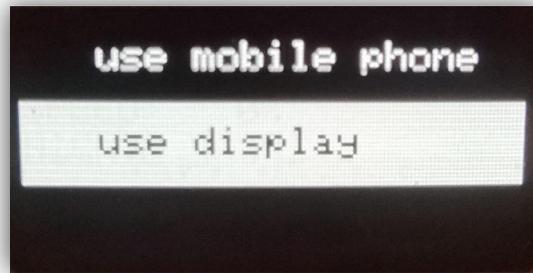
If this is not the case, check the SSID and password again and enter it again. If this step is successful, the FG module is connected to the home network or the Internet and the portal can be used.



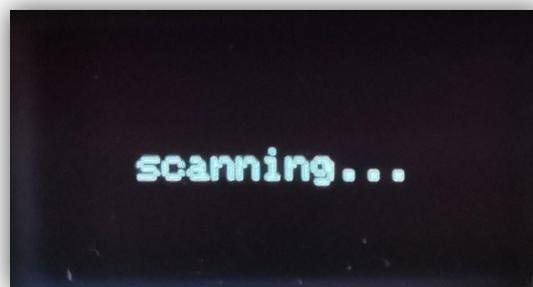
Open the Plantalytix Portal with a device and a browser of your choice at this link: <http://plantalytix-app.com/>



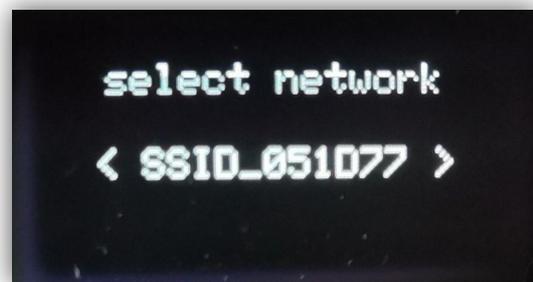
Option 2 - Connect via the display



Once selected, the controller will start searching for Wi-Fi networks.



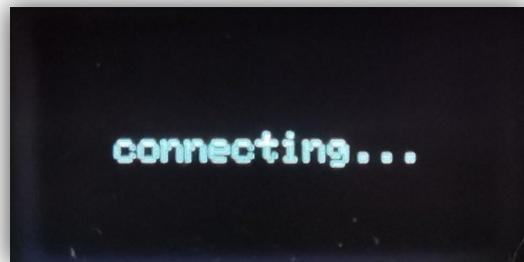
Select your home network and press the rotary knob



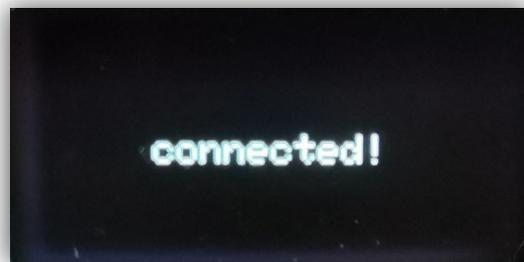
In the next step, you can enter the password via the rotary click button. By pressing the button for a long time, you get to the sub-items "Back" and "Done". Make sure that a connection to the home network is possible and that a good signal arrives at the FG module.



By pressing the button on "Done", the password is taken over and the connection to the network is established. Pressing "Back" deletes the last letter. Be sure to enter the password correctly.



If the connection is successful, "connected!" will be displayed on the display.



Registration on the portal

The portal is used to manage the Plantalytix products and to access the graphs and other features from anywhere. To do this, the module must first be registered (paired) in the portal. In order to be able to log in to the portal, it is essential to connect to the home network in advance.

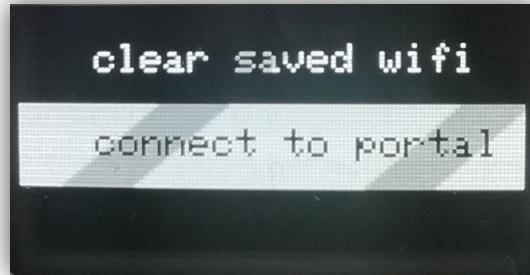
Generate pairing code

To connect to the portal, the module must be connected to the home network. After that, a code is generated via the display. This code, in turn, is entered in the portal and this registers the module in the portal. Several controllers and fans can also be hung in the portal according to the same principle and monitored or controlled. The code is unique and is regenerated every time.

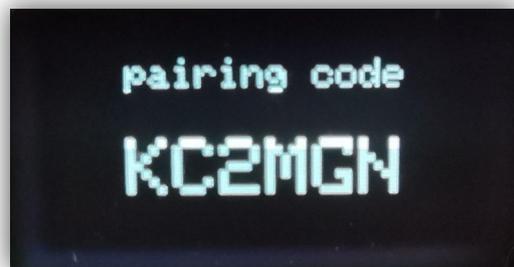
Attention: If there is a problem with registering in the portal, be sure to generate a new code before entering the code in the portal again.



In the menu under WIFI, select "connect to portal".



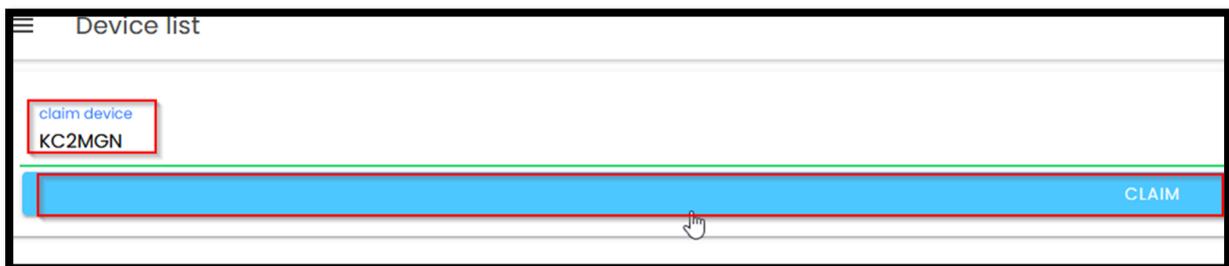
After that, the pairing code will be displayed (the code will be different from the sample image and will be regenerated each time). Write down or memorize the code and enter it into the portal later.



Connecting the FG module to the portal

Go to <http://plantalytix-app.com> and sign in. If you don't have an account yet, be sure to create a new account under "Create Account" and log in.

The generated code must be entered under "claim device" or "pair device". To do this, click in the "claim/pair device" field and enter the code there and press the blue button.

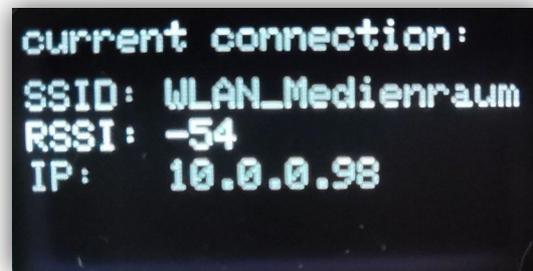
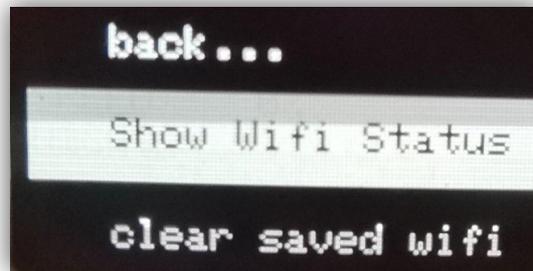


After that, the FG module is displayed directly in the overview and can be controlled or monitored.



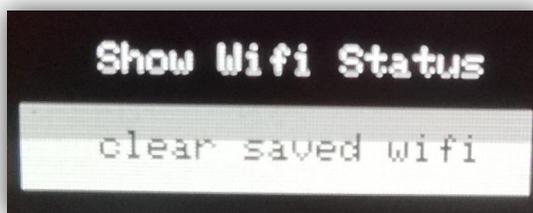
View Wi-Fi status

The Wi-Fi status shows the connected home network and IP address. This can be important if it is not clear whether and with which network you are connected.

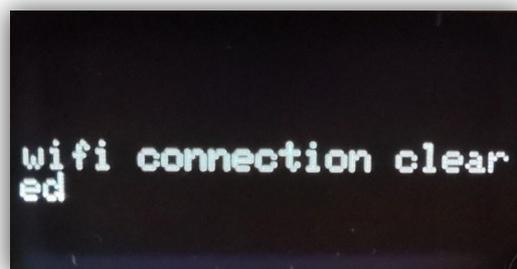


Clear Wi-Fi

This setting deletes the stored Wi-Fi.



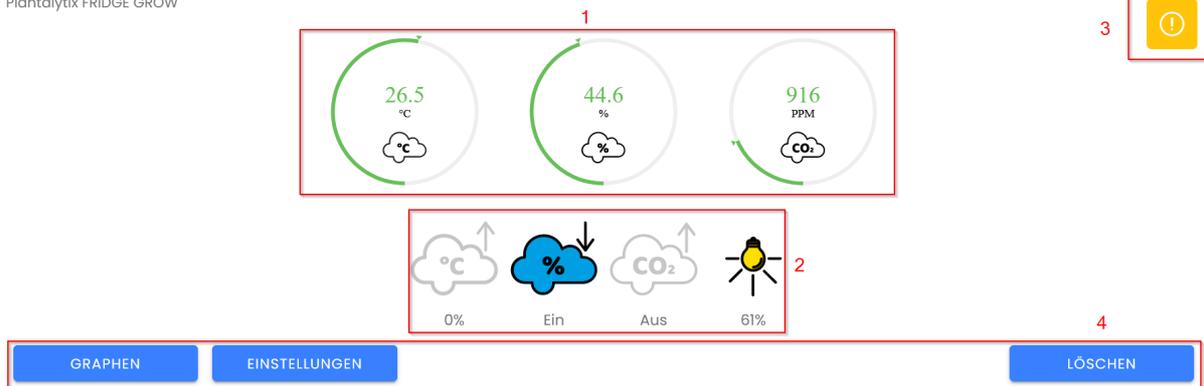
Settings are deleted.





Portal and settings

Plantalytix FRIDGE GROW



- 1... Overview of the traffic light system for temperature, humidity and CO2
- 2... Switching of outputs and components
- 3... Error messages and logs (only for Plantalytix support)
- 4... Navigation

Overview

The current measured values are displayed here. These are updated regularly. Please note that the values do not change to the second. It can therefore happen that it takes a few seconds until the current values are displayed.

Outputs and components

Heating, cooling/dehumidification, CO2 and light are displayed in order. For heating and lighting, only the current percentage is displayed due to the dimming (e.g.: at 61% the lamp is dimmed to 60%). These values adjust automatically and are chosen in such a way that the settings are achieved in the best possible way. CO2 and cooling/dehumidification are only switched on and off.

Attention: These values are NOT displayed up-to-date. It can take up to 4 minutes for the values to update.

Error messages and hints

Various hints and error messages are displayed here. These are primarily used for error analysis by our support team. You don't have to worry if more messages are displayed here. This display may change again at a later date.

Navigation

Here you can switch to the graphs or settings.

Attention: Do not press Delete – here the device will be completely deleted from the overview and must then be reintegrated.



Graphs

The measured values and the components can be displayed here. The period and the displayed parameters can be displayed individually. All you have to do is select the time period and the respective parameters and components in the upper area. The options highlighted in the red rectangle are available for each ad.



Settings

Here you can set the climate settings and light cycle, etc. The values are transferred via Save. If the defaults are overwritten, it automatically switches to a user-defined mode. This remains active until other parameters are saved or a predefined program (working mode) is selected.

Attention: If an air conditioning program or the working mode is selected, the values stored there are transferred back to the parameters.

Licht

Sonnenaufgangsperiode: 15 min

0min 60min

Sonnenuntergangsperiode: 15 min

0min 60min

Maximalleistung: 100 %

0% 100%



Sunrise/sunset determine the time it takes for the lamp to reach full power. Attention: Depending on the conditions, the lamp may not regulate up to 100%. This is desired and ensures more constant temperatures.

The **maximum power** can be reduced if desired. This means that the lamp will not regulate beyond this value.

Technical details

Voltage	[V]	230
Power frequency	[Hz]	50/60
Power consumption	[W]	700
Operating voltage	[V]	12V / 42V
Auxiliary Stresses	[V]	5V / 3.3V

Disposal instructions

Please note the following disposal instructions.

Disposal of packaging

Please dispose of the packaging in an environmentally friendly manner. If you need information about the current disposal routes, please contact your disposal point or municipal disposal facility. Do not leave the packaging and its parts to children under any circumstances. There is an acute risk of suffocation due to foils and/or other packaging materials.

Disposal of Fridge Grow

Before disposal, the box must be switched off and the power cord must be unplugged. This product must not be disposed of with normal household waste at the end of its life, but must be handed in at a collection point for the recycling of electrical and electronic equipment.

Information about the manufacturer

Name: microgreenbox GmbH

Address: Galgenau 39, 4240 Freistadt



PLANTALYTIX

EG-Konformitätserklärung



Der Hersteller / Inverkehrbringer

microgreenbox gmbh

erklärt hiermit, dass folgendes Produkt

Produktbezeichnung: Plantalytix Fridge Grow 2.0

allen einschlägigen Bestimmungen der angewandten Rechtsvorschriften der

**Niederspannungsrichtlinie 2014/35/EU
EMV Richtlinie 2014/30/EU
RoHS-Richtlinie 2011/65/EU**

- einschließlich deren zum Zeitpunkt der Erklärung geltenden Änderungen - entspricht. Die alleinige Verantwortung für die Ausstellung dieser Konformitätserklärung trägt der Hersteller. Diese Erklärung bezieht sich nur auf das Produkt in dem Zustand, in dem es in Verkehr gebracht wurde; vom Endnutzer nachträglich angebrachte Teile und/oder nachträglich vorgenommene Eingriffe bleiben unberücksichtigt.

Folgende harmonisierte Normen wurden angewandt:

EN61000-6-3 (2022)

EN61000-6-1 (2019)

EN55014-1 (2017)

EN55014-2 (1997)

Name der Person, die bevollmächtigt ist, die technischen Unterlagen zusammenzustellen:
Alexander Polivka / Geschäftsführer

Ort: Windhaag bei Freistadt, Marktgasse 1

Datum: 7.5.2024

(Unterschrift)
Alexander Polivka