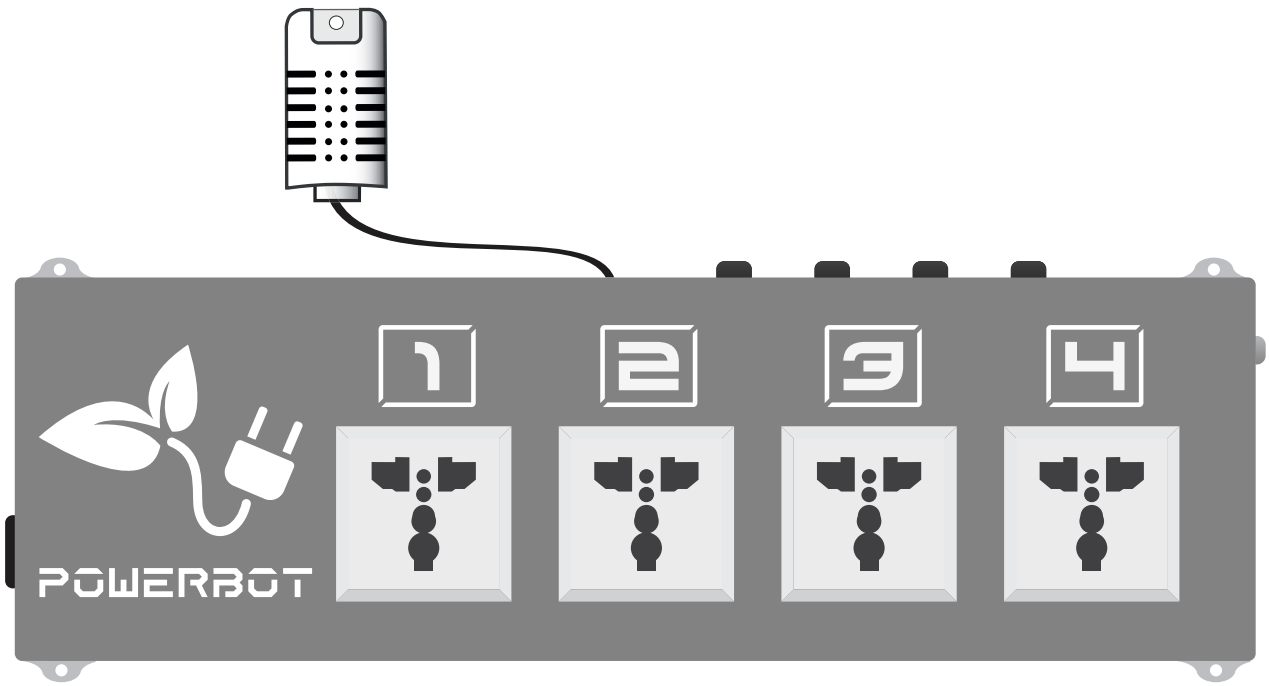
POWERBOT

(HW03, HW04)



INSTALLATION MANUAL

www.opengrow.pt

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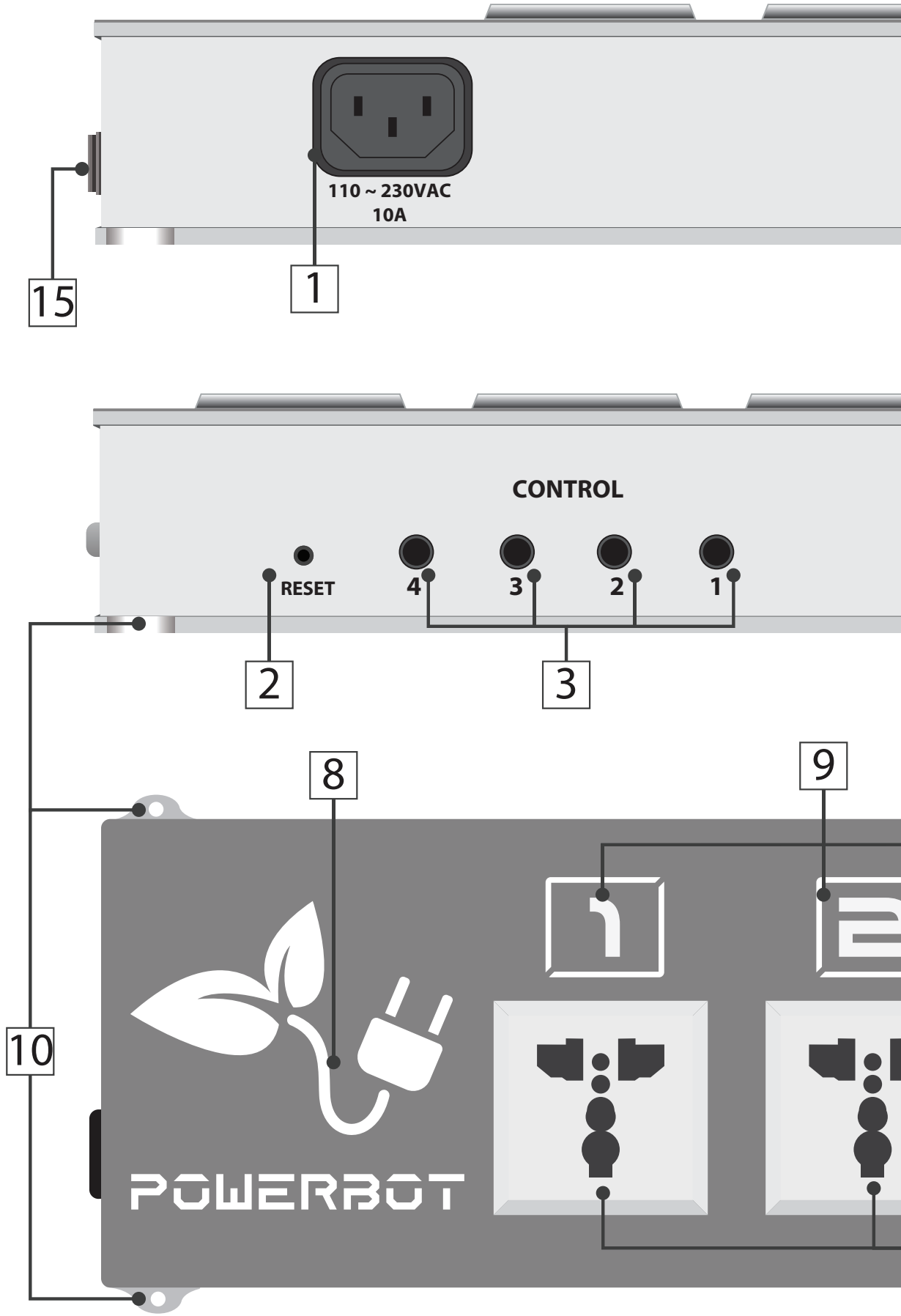

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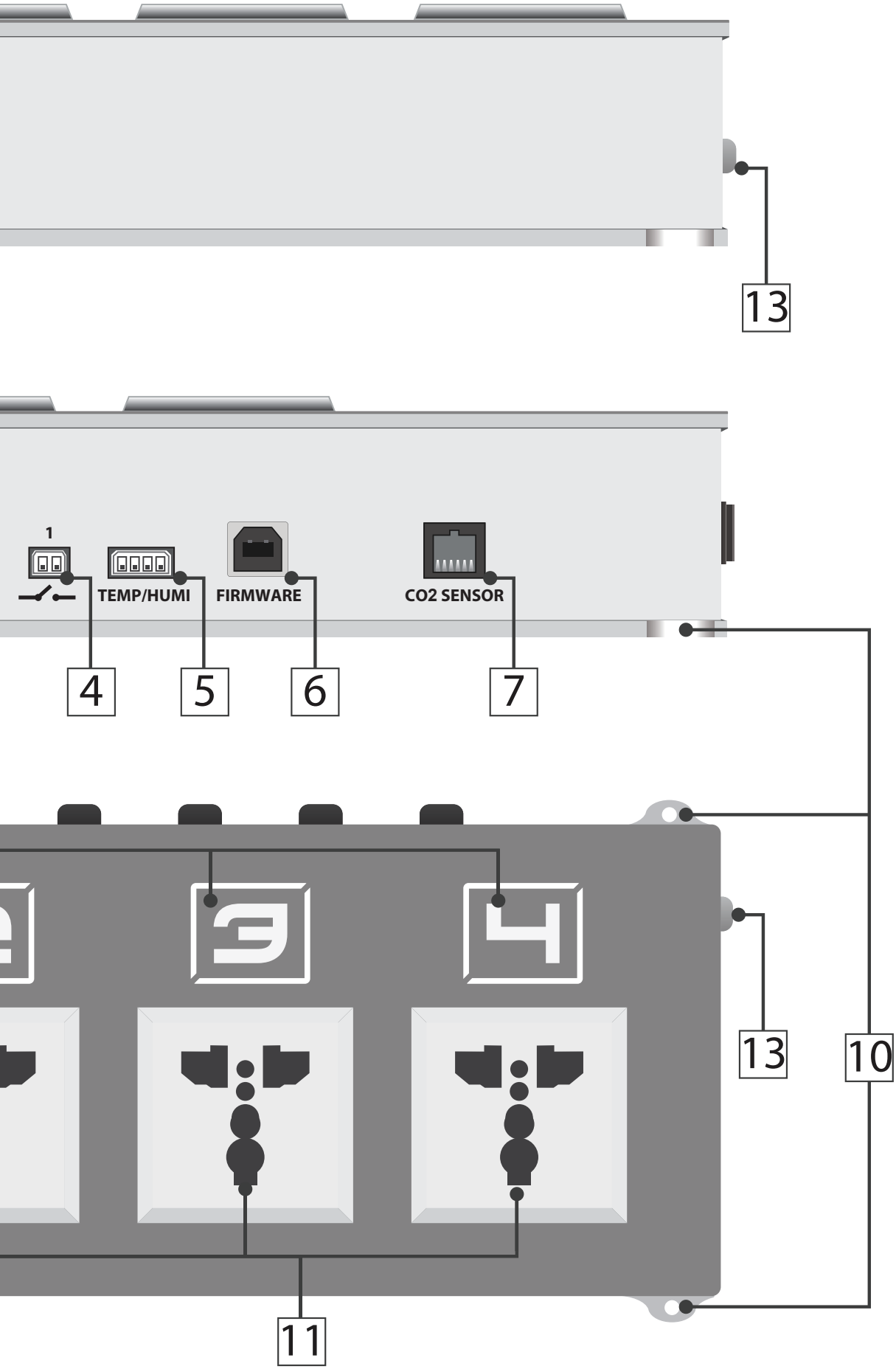
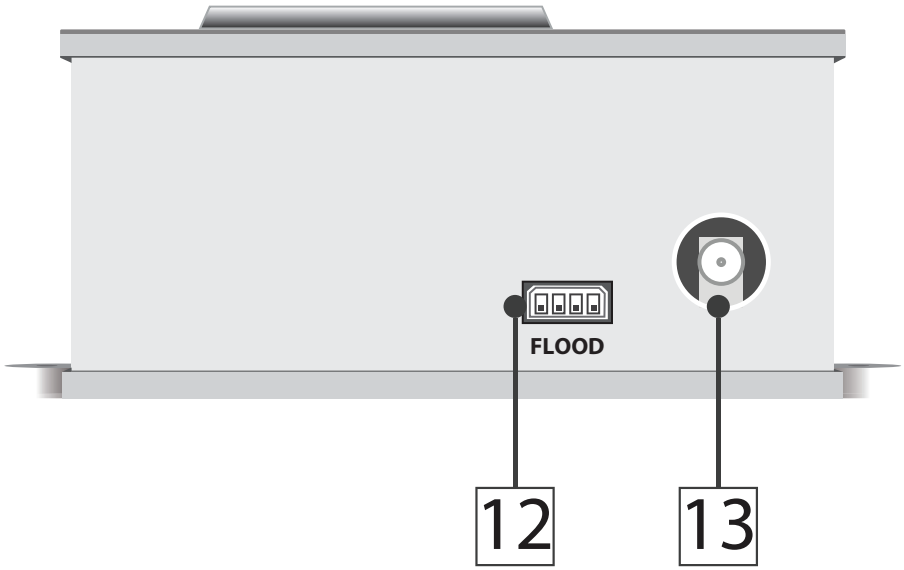
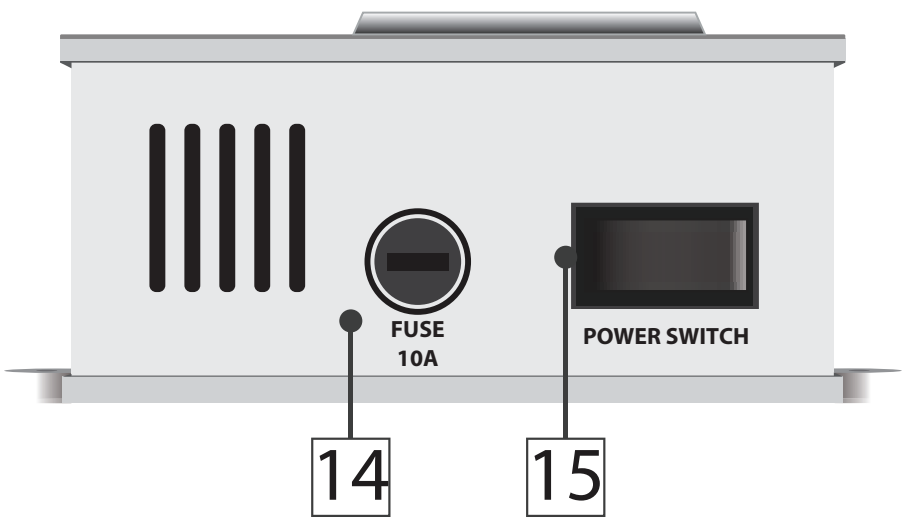
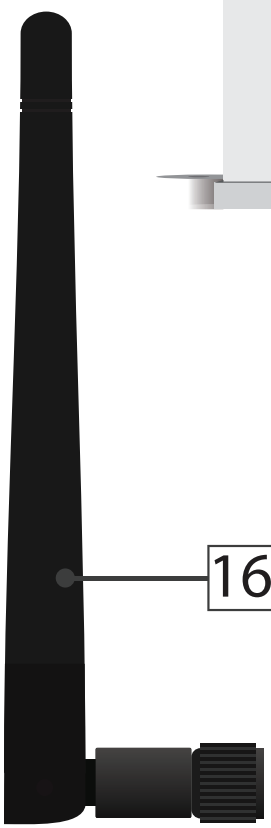
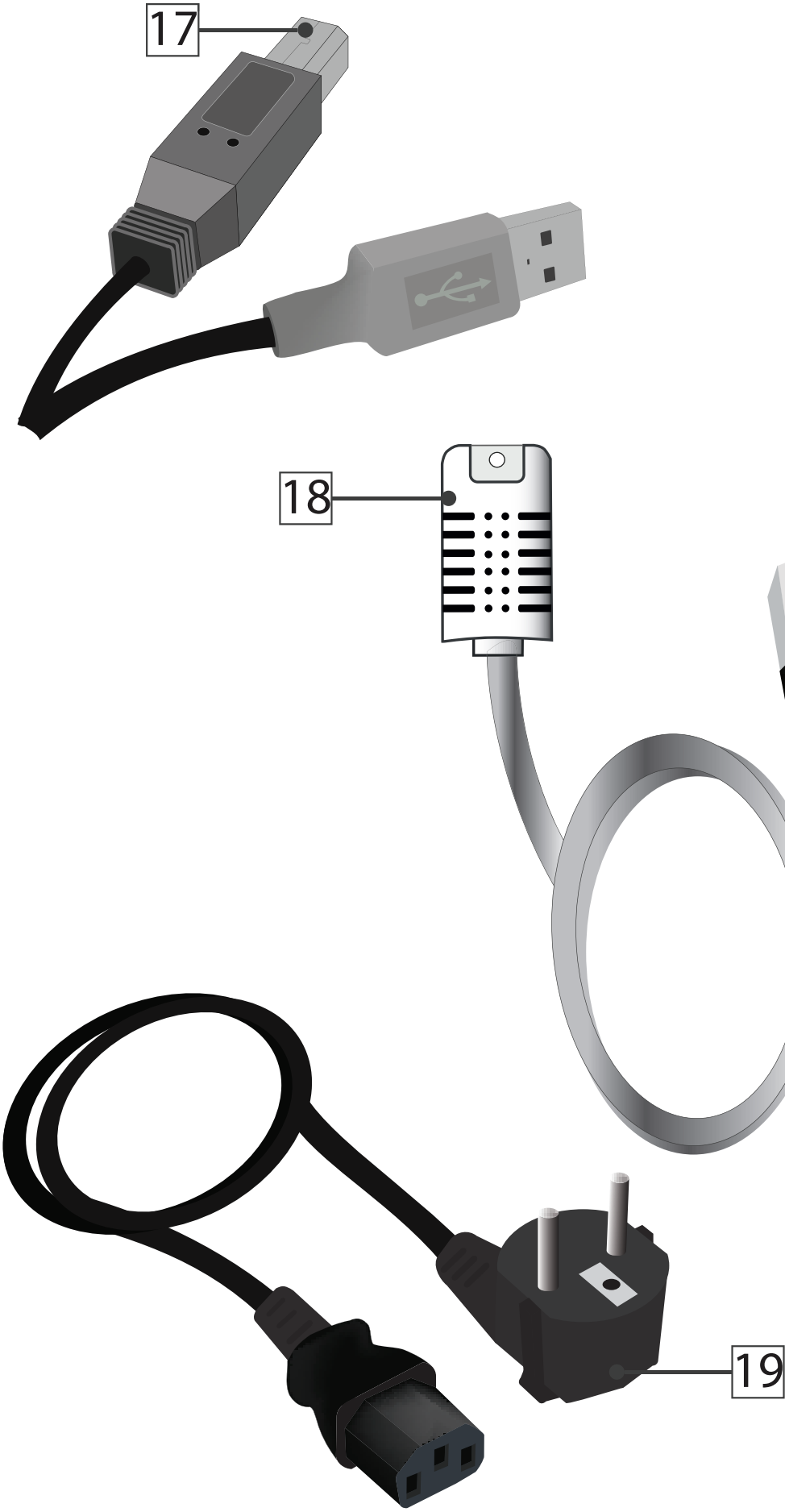

13
1
TEMP/HUMI
FIRMWARE
CO2 SENSOR
4
5
6
7
13
10
11


FLOOD
12
13


FUSE
10A
POWER SWITCH
14
15


16


17
18
19

1 110~230V$_{AC}$ power outlet

2 Module reset button

3 Manual switch buttons

4 External switch input

5 Temperature & humidity sensor outlet

6 Type-B USB outlet (for Firmware update)

7 Multi sensor connection outlet

8 Module status signal LED

9 Output status signal LED

10 Brackets for wall-mounting

11 Universal socket outlet

12 Flood detector outlet

13 RF antenna outlet

14 Protection fuse socket

15 Main power swtich

16 RF communications antenna

17 Type-B USB (for Firmware update)

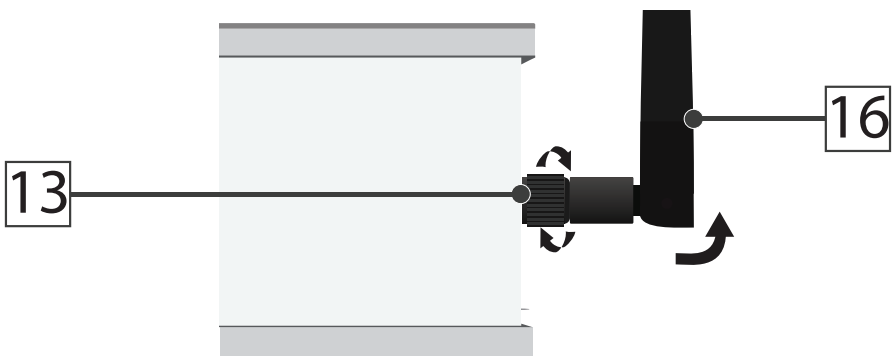
18 Temperature/humidity sensor

19 Power cord 110~230V_{AC} - 10A

INSTALLATION ①

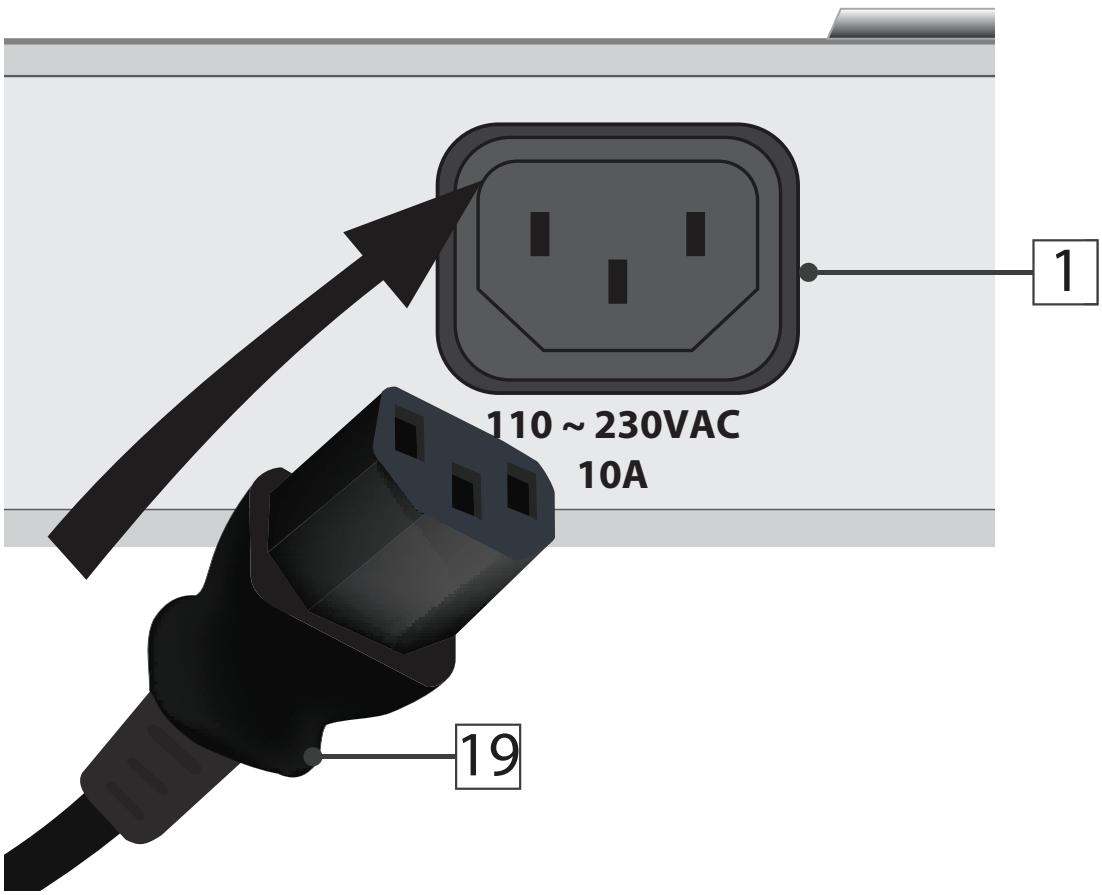
Peripherals connection

Screw the communication antenna (16) into the module port (13). For correct communication, turn the antenna in order to position it vertically according to the direction of the module.

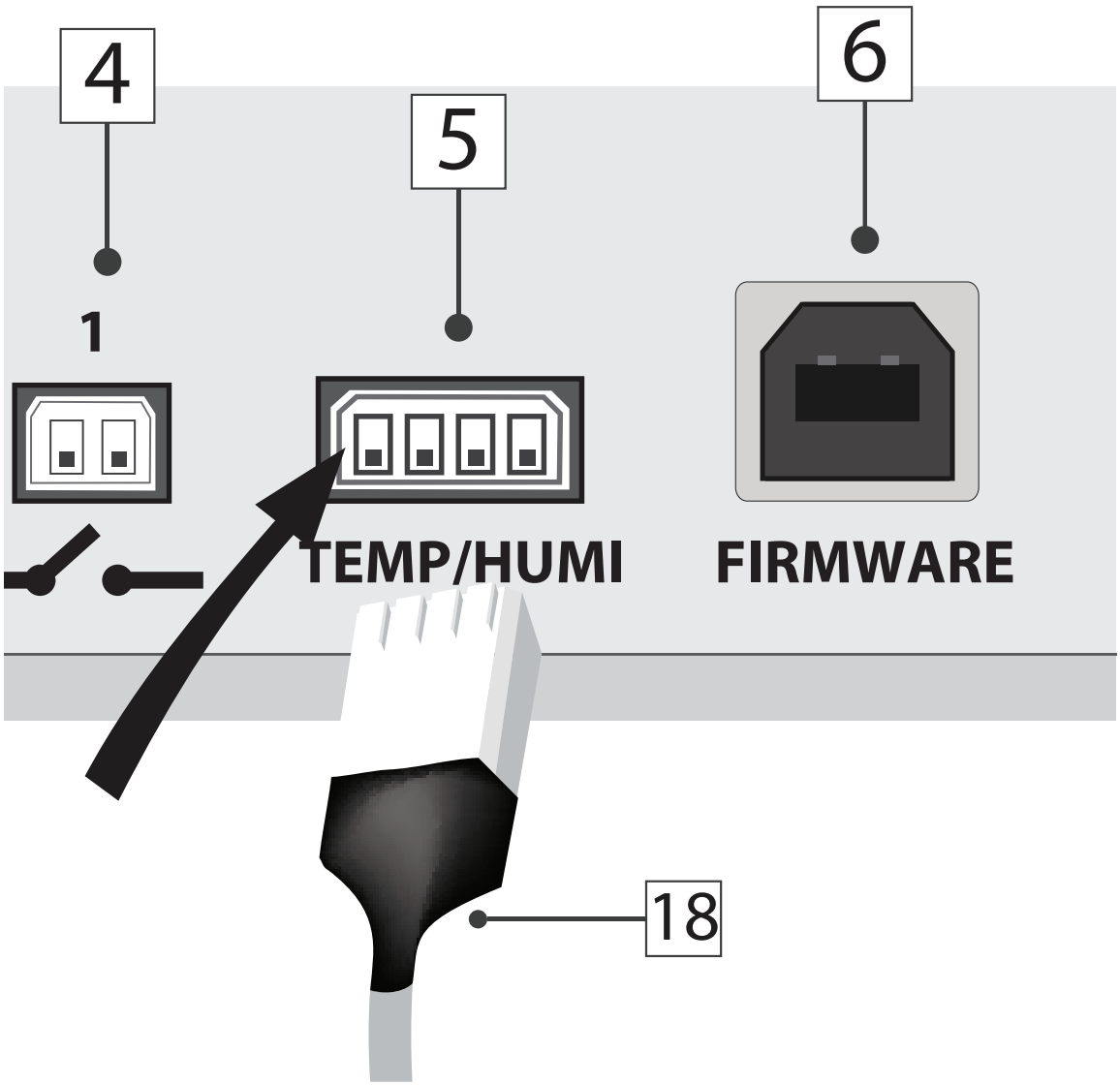


Place the module on a firm surface, far from flood-prone areas. It is recommended that the module be mounted on a wall with the fixing holes on the upper part.

Once the module has been mounted, connect the power cable (19) to the module's power outlet (1) and the other end to a 110~230VAC outlet.



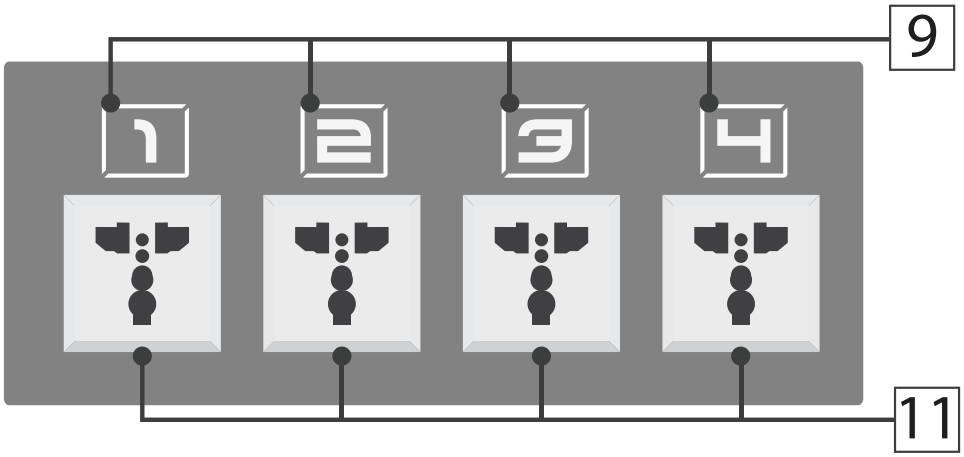
Connect the temperature and humidity sensor (18) to the module's outlet (5).



Place the sensor at the height of the plants where you could monitor the environmental state of the growing area correctly.

Never positon the sensor too close to a light source, wet it, or put it in high (90%~100%) humidity values for a long periods of time, this can damage your sensor.

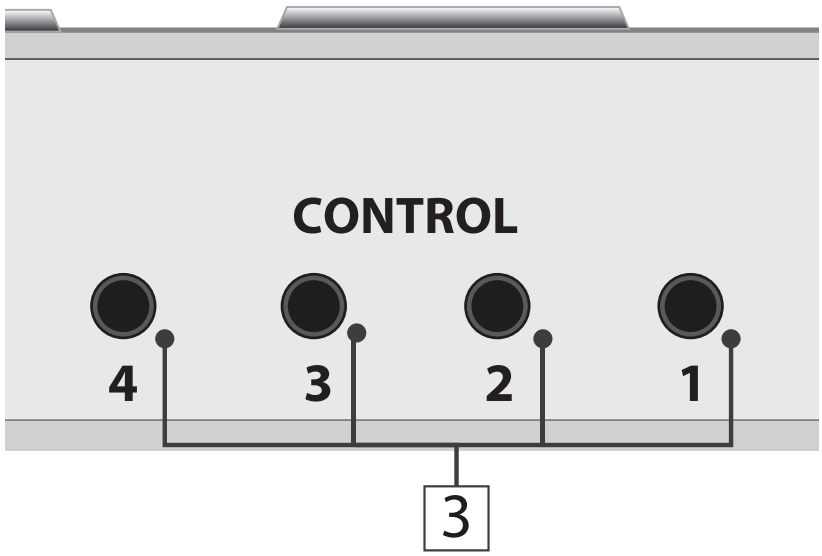
Connect your peripherals to the module's power outlets (11). Each outlet has a identificator and a LED displaying the output state (9). Each output is configurable via software, so you can plug any device to any outlet.



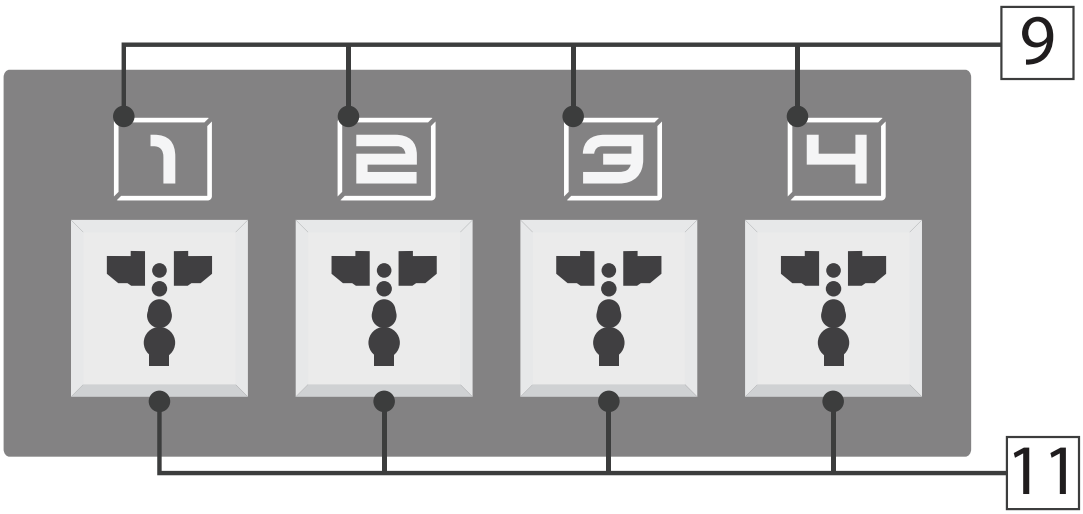
If you connect multiple devices to one outlet, remember **not to surpass the power limits**, which is for each outlet and in total per module:

2300W (230VAC - EU) / 1100W (110VAC - USA)

For manual control, PowerBot includes four push buttons (3), which will enable/disable the respective outlet.



The figures (9) will light up independently, indicating at each moment which outlets are currently active.

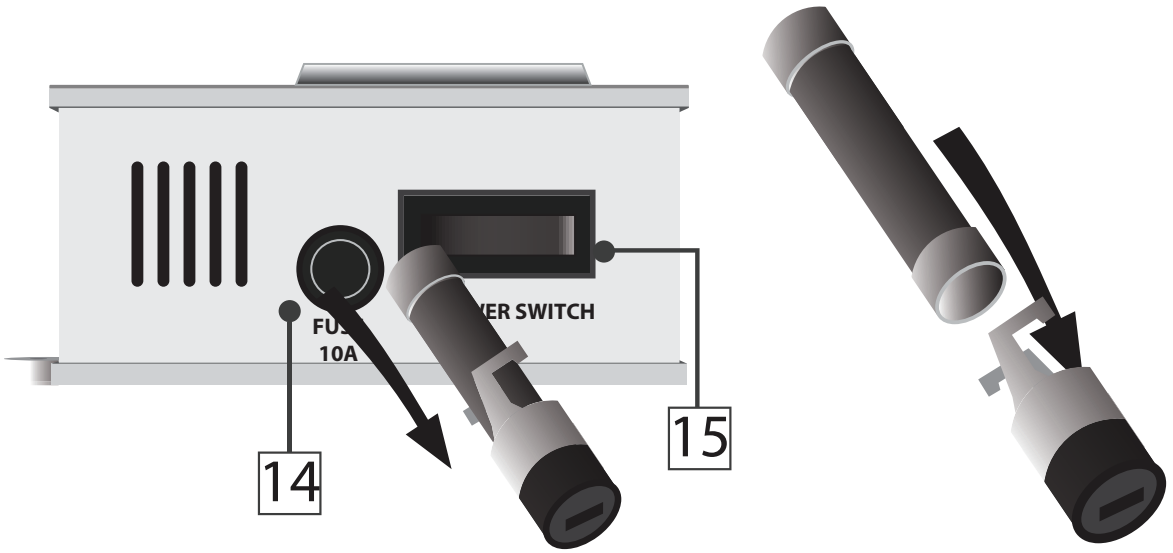


MAINTENANCE ②

Fuse Replacement

Turn off the main power switch (15), remove the module's power cord (19). Never handle the fuse holder while the module is connected to the power.

Push and turn the cover cap of the fuse holder counter-clockwise with the help of a turnscrew and remove the damaged fuse.



Replace the fuse with another with similar features:

10A 250VAC 3AB (EUROPE)
10A 125VAC 3AB (NORTH AMERICA)

Connection to GroNode

Make sure the GroNode is correctly installed and accessible through the GroLab Software, if not follow the instructions provided inside the GroNode's manual.

After installing PowerBot, open the GroLab Software, establish connection with GroNode and then, access **Modules** through the main menu.

Usually 2 or 3 minutes are enough for GroNode to detect a newly installed module. After being detected, it automatically appears in the **Modules** menu under the respective module type section. You can check the list of modules of same type on the right side of this menu.

Note that one GroNode supports a maximum of 4 modules of each type.

Problems or losses in communication

GroNode was designed to communicate with the other modules through radio frequency signals. The range of action is 25 meters (82 feet) indoors and 100 meters (328 feet) outdoors depending on space conditions.

Access the **Modules** menu on the GroLab Software and check if your modules are available. If they aren't available or they are experiencing communication losses, it is possible that you have exceeded the distance between your modules and GroNode.

Inside the **Modules** menu, you can find a wireless signal icon that indicates if the selected module is connected to the GroNode.

NOTICE: Some load-bearing walls and electronic devices may interfere with the signal.

If the problem persists, perform a test run by placing the module next to the GroNode and check the module's communication status through the software. If communication has been successfully re-established, repeat this operation at different distances until you detect the maximum communication distance.

If the module is not found at all, try to cycle the GroNode through all the available communication channels until you find your modules, allowing 3 minutes between channel changes.

To change the communication channel, open the GroLab Software and connect to the GroNode. Inside the **Main Menu (Configurations)**, go to **Settings (GroNode) → General Settings Tab**. Click the button in the lower right corner to enable editing and change the communication channel to the desired channel. To apply the changes, click the green button in the lower right corner.

If after following the previous steps your modules still don't show up on the GroLab Software, please contact our technical support.

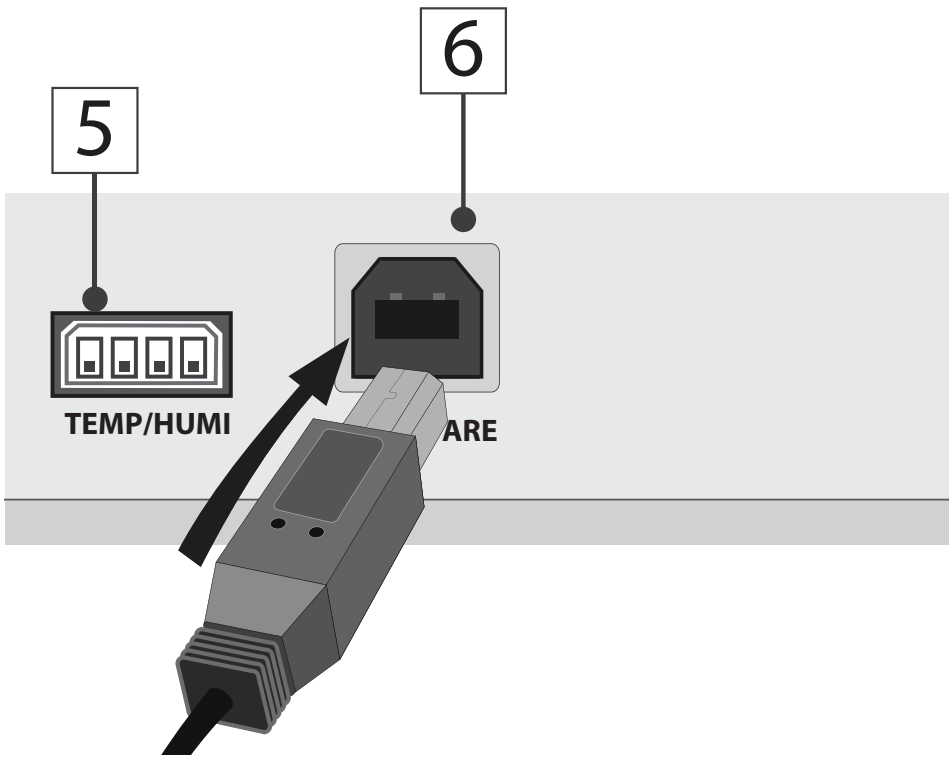
UPDATES ④

Firmware Updates

Keep in mind that some software updates will require updating your devices' Firmware.

All updates will provide crucial improvements, ensuring your system's performance.

Connect the type-B USB cable (17) to your device's USB outlet (6) and follow the instructions indicated in the GroLab Software.



SAFETY INSTRUCTIONS ⑤

The following general safety guidelines are provided to help ensure your own personal safety and protect your product from potential damage.

•Do not attempt to service the product and never disassemble the product. For some products with a user replaceable battery, please read and follow the instructions provided by the installation manual.
•Keep your device away from radiators and heat sources.
•Keep your equipment away from extremely hot or cold temperatures to ensure that it is used within the specified operating range.
•Do not push any objects into the air vents or openings of your equipment. Doing so can cause a fire or electric shock by shorting out interior components.
•Ensure that nothing rests on your equipment's cables and that the cables are not located where they can be stepped on or tripped over.
•Do not spill food or liquids on your equipment.
•Before you clean your equipment, disconnect it from the electrical outlet. Clean your device with a soft cloth lightly dampened with water. Do not use liquids or aerosol cleaners, which may contain flammable substances.
•If your equipment does not operate normally - in particular, if there are any unusual sounds or smells coming from it - unplug it immediately and contact an authorized dealer or the Open Grow support center.
•To help avoid the potential hazard of electric shock, do not connect or disconnect any cables, or perform maintenance or reconfiguration of your equipment during an electrical storm.
•Check the voltage rating before you connect the equipment to an electrical outlet to ensure that the required voltage and frequency match the available power source.
•Also, ensure that your GroLab modules and attached devices are electrically rated to operate with the AC power available in your location.
•Do not plug the equipment power cables into an electrical outlet if the power cable is damaged.
•To prevent electric shock, plug the equipment power cables into properly grounded electrical outlets.
•If you use an extension power cable, ensure that the total ampere rating of the products plugged into the extension power cable does not exceed the ampere rating of the extension cable.

WARRANTY ⑥

Open Grow, LDA, guarantees the purchaser that the product is free from material and/or manufacturing defects. Open Grow, LDA, liability is limited to the repair or replacement of any defective parts. Do not ship directly to Open Grow, LDA, without first consulting with us to verify the procedure that should be followed.

Contact our technical services at **support@opengrow.pt**.

All Open Grow, LDA, products have a 2-year guarantee except for consumables (sensors and/or actuators of any type) and under normal use.

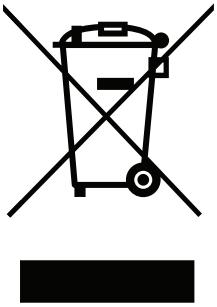
The loss of the “GroNode” module’s internal battery life as a result of its aging is not considered a manufacturing defect. Follow the replacement procedure indicated in the user manual available on your application or request more information from the technical services.

A guarantee claim is non-transferable and only the original purchaser can submit one. To enforce the guarantee the customer must always provide the purchase invoice.

GUARANTEE DISCLAIMER:

Application of the guarantee is excluded should the breakdown of the defective part or parts be a result of the product’s inadequate and/or negligent use. Understood as inadequate and/or negligent use is any use other than the one for which the product is meant and/or that is recommended in the instructions manual, not executing the maintenance operations recommended in the instructions manual, carrying out operations that are different from those mentioned and that compromise the quality of the product, modifications that are not performed by authorized repairers and/or with non-original or non-approved parts.

COMPLIANCE ⑦



This symbol on the product or packaging means that according to local laws and regulations this product should not be disposed of in the household waste but sent for recycling. Please take it to a collection point designated by your local authorities once it has reached the end of its life, some will accept products for free. By recycling the product and its packaging in this manner you help to conserve the environment and protect human health.

This symbol on the product or packaging means that this product is compliant with RoHS Regulations of the European Parliament and Council Directive on the Restrictions of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (2011/65/EU).

This symbol on the product or packaging means that this product is in compliance with the following directives and regulations:

- (2014/53/EU) Radio equipment directive.
- (2011/65/EU) RoHS directive.
- (2014/35/EU) Low voltage directive.
- (2014/30/EU) EMC.

	Frequency Band(s)	Max. Output Power (EIRP)
2.4 G	2.4 - 2.4835 GHz	100 mW

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