

OPERATORS MANUAL: **INTERNALINK V1** **GREENHOUSE SMART MONITOR**



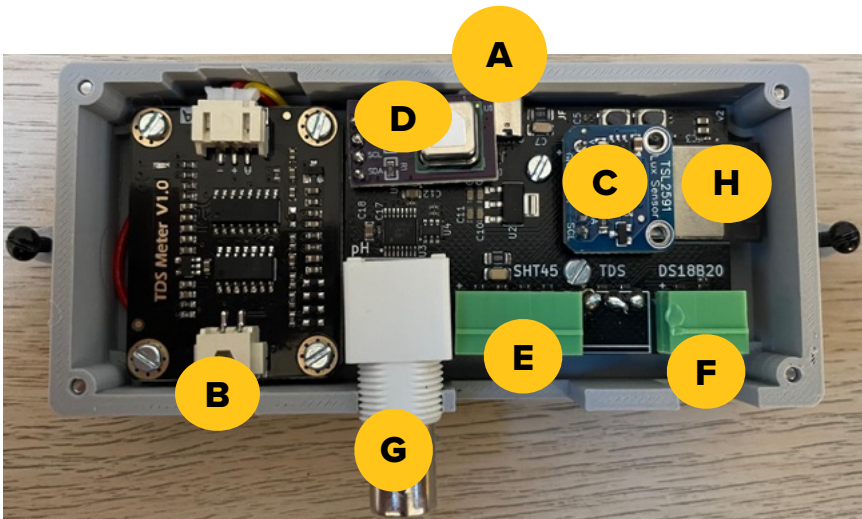
EVOCULTIVA

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COMPONENTS

- A. USB-A to USB-C charging/data cable
- B. TDS meter
- C. TSL2591 (light sensor module)
- D. SCD40 (CO2 sensor module)
- E. SHT40 (temp & humidity sensor)
- F. DS18B20 (water temp module)
- G. pH sensor
- H. ESP32-S3-Mini



INSTALLATION

To start, you need to set up an instance of Home Assistant. If you've purchased an InvernaLink Hub, refer to the installation manual for the InvernaLink Hub first. In the case that you've already got an instance of home assistant up, then we will install the InvernaLink.

1. decide where you want to install the InvernaLink, we recommend you install it close to your nutrient stock tank, in a position safe from being splashed by water. Do not cover the case in order to allow the light reading to function. Do not leave the case outside exposed to direct elements
2. When you've decided where you want it, make sure the case is oriented with the cables facing left and right. Use a marker and mark the two tab holes outside the case. Use these holes as the guide for whatever drilling you need to do, then simply attach the case via the pre drilled tabs
3. Once the case is setup, simply plug in the USB-C charge cable either to the InvernaLink Hub, or to an appropriate USB outlet to power it up You should be able to see a blue LED light up inside the case to indicate there is power.

CONNECTING TO WI-FI AND HOME ASSISTANT

1. Wait 1–2 minutes after powering on.
2. Open Wi-Fi settings on your phone or computer.
3. Connect to the “InvernaLink” network.
4. In a browser (safari, chrome, etc) go to 192.168.4.1
5. Input your home Wi-Fi name and password.
6. InvernaLink will then connect to your home network and shut down its temporary access point. This process might take 1-2 minutes, be patient.
7. Once the InvernaLink is connected to the wifi, go to your home assistant, and look for a new device. and add it to your dashboard as desired.
8. If for any reason the installation does not go smoothly, feel free to contact us on our website and we will help guide you through the installation process.

CONNECTING & DISCONNECTING SENSORS

To ensure safe and reliable operation when connecting or disconnecting sensors, follow these guidelines:

Sensor Lifespan

The light, CO₂, air temp/humidity, and water temp sensors should last for years to come if well taken care of.

The pH sensor is shortest lived, though it self calibrates the life of the sensor assuming it is constantly submerged will be between 6-8 months, after that its accuracy will diminish

the EC sensor should last a few years if you make sure to keep it in good condition (don't allow bacteria and mold to build up on it in order to increase lifespan).

Power Safety

Always disconnect power before connecting or removing any sensors to prevent electrical shorts or damage to internal components.

Avoid touching exposed contacts when the device is powered.

Approved Cables and Ports

Use only the supplied USB-C cable and ensure all connectors are compatible with the InvernaLink system.

For extensions or replacements, use cables and adapters rated for data and power transmission.

Moisture and Corrosion Check

Inspect all sensor connectors and ports for moisture, rust, or corrosion before making any connections.

If any moisture is present, dry thoroughly and clean with isopropyl alcohol if needed before plugging in.

Sensor Handling

Handle sensors by the plastic housing or designated grip areas. Avoid pulling on wires.

Do not bend or stress sensor cables unnecessarily; use strain reliefs if installing in permanent locations.

Connection Order

Connect sensors only after the InvernaLink unit is securely mounted and powered off.

Plug in one sensor at a time and ensure a snug, secure fit. Loose connections may result in faulty readings.

Disconnecting Sensors

To disconnect, gently pull the connector, not the cable, to avoid damaging the wire or port.

Do not twist or force connectors—if resistance is felt, double-check alignment and try again.

After Reconnecting

Once reconnected and powered on, verify that all sensors are being detected correctly in your Home Assistant dashboard or monitoring software.

SAFE OPERATION

To ensure the safe and effective operation of your InvernaLink device, please adhere strictly to the following guidelines:

Environmental Exposure

The InvernaLink is not rated for outdoor or unprotected use.

Do not expose the unit to direct exposed intense sunlight, as intense UV light and heat can accelerate aging.

Avoid rain, humidity, or other moisture sources.

Keep the device away from excessive heat or freezing temperatures.

Exposure to these conditions may cause malfunction or permanent damage. Damage due to environmental misuse is not covered under warranty.

Installation Location

Install the InvernaLink in a dry, well-ventilated space.

Avoid areas near pressurized water, or other fluid hazards.

Mount the unit securely using the provided hardware.

Improper installation can lead to device failure, electrical shock, or injury.

Handling and Supervision

Keep the device out of reach of children and pets.

Do not permit unauthorized persons to operate, handle, or modify the device.

Always supervise use in shared or public settings.

Device Integrity

Inspect the enclosure and cables regularly for:

Physical damage, cracks, signs of water ingress, loose or frayed wires

If damage is suspected, discontinue use immediately and contact EvoCultiva support.

Electrical Safety

Use only the approved USB-C power cable and compatible power supply.

Do not operate the unit with wet hands or in damp environments. Always disconnect power before moving, cleaning, or modifying the device.

Tampering and Modifications

The InvernaLink contains sensitive electronic components.

Do not open the case or make internal modifications unless you are experienced with electronics.

Unauthorized tampering voids the warranty and may cause malfunction, fire risk, or injury.

Liability Disclaimer

EvoCultiva is not liable for any damages, injuries, or losses arising from:

- Misuse
 - Improper installation
 - Unauthorized modifications
 - Failure to follow these safety guidelines
- It is your responsibility to ensure the InvernaLink is used in compliance with local electrical and safety regulations.

SUPPORT AND WARRANTY INFORMATION

Customer Support

Thank you for choosing **EvoCultiva**. We're committed to providing reliable, long-term support for your **InvernaLink** system. If you encounter any issues or have questions about installation, setup, or operation, our support team is ready to help.

Contact Us

- **Phone:** (+34) 628-358-371
- **Website:** www.evocultiva.org/contact

Support hours: Monday to Friday, 9:00 AM – 5:00 PM (Local Time)

Limited Warranty

InvernaLink is backed by a **1-year limited warranty** from the date of purchase. This warranty covers defects in materials or workmanship under normal use and conditions.

Covered under warranty:

- Manufacturing or assembly defects
- Faulty internal components or hardware
- Failures resulting from normal use within operating guidelines

Not covered under warranty:

- Damage from misuse, abuse, or improper installation
- Water damage (unless specified as waterproof)
- Modifications or repairs by unauthorized personnel
- Accidental damage or natural disasters

How to Make a Warranty Claim

To initiate a warranty claim:

1. Contact EvoCultiva Support with a detailed description of the issue.
2. Include proof of purchase (receipt or invoice) and product serial number.
3. Our support team will provide instructions for repair, replacement, or return, if applicable.

Shipping Policy: Return shipping may be the responsibility of the customer unless otherwise stated by EvoCultiva.