JungleSIM T1H Climate Sensor - User Manual

Setting up, charging and caring for the T1H wireless temperature and humidity sensor

Revision 2 · 2026-10-28

T1H-UM-EN

JungleVault

Revisions

Rev	Date	Changes
2	2026-10-28	Numbered step pictures (black and white, drawn from the case CAD) for setting up (marked R2).
1	2026-10-24	First issue, for sensor module rev 2.0, SHT45 board rev 1.0 and case rev 1.1 (JLC3DP).

Sections changed in a revision carry a bar and the revision number in the left margin: **green** for this revision, grey for earlier ones.

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About this manual

This manual is for the **JungleSIM T1H Climate Sensor** (model T1H, hardware rev 2.0). Read it before you use the sensor and keep it for later. Pass it on if you give the sensor to someone else. The newest version is on thejunglevault.com on the T1H product page.

> **Safety first.** The T1H contains a rechargeable lithium battery. Read the chapter "Safety information", above all the rules for charging.

Item	Details
Manufacturer	JungleVault (Lucas Bohunovsky), Frauenstiftgasse 5/1/11, 1210 Wien, Austria
Contact	contact@thejunglevault.com · thejunglevault.com
Product	JungleSIM T1H Climate Sensor, model T1H
Serial number	on the label on the back (T1H-YYMM-NNN)

Safety information

Intended use

The T1H measures the air temperature and humidity inside a terrarium, paludarium or similar enclosure and sends the readings by radio to a JungleSIM S1M screen module (or C1H control hub). It is made for the warm, humid air of a tropical terrarium and runs on its built-in rechargeable battery. It is meant for indoor use by adults. Any other use is not intended.

Warnings

- **Charging.** Take the T1H **out of the terrarium** to charge it, and charge it only when it is dry. Charge it at room temperature (0 to 45 °C) with a CE-marked 5 V USB power supply that meets EN IEC 62368-1 and a USB-C cable. Do not leave it charging on a soft or flammable surface, and do not charge it unattended for days.
- **Lithium battery.** Do not puncture, crush, open or heat the T1H, and never throw it into a fire. If the case is swollen, hot or smells, stop using it, put it on a non-flammable surface away from anything that can burn, and contact us. Do not use or charge a T1H that has fallen into water.
- **Water.** The T1H is made for humid air and occasional condensation, but it is **not waterproof**. Do not put it under a rain or misting nozzle, in a water feature, or where it lies in water. Mount it with the vents at the bottom.
- **USB-C socket.** Keep the dust plug in the USB-C socket while the T1H is in the terrarium.
- **Heat.** Keep it away from heat lamps, basking spots and heating mats (operating temperature 0 to 40 °C).
- **Magnet.** The T1H holds a strong magnet. Keep it away from pacemakers and other implants (at least 10 cm), from bank cards and from small children, who could swallow loose magnets.
- **Children and animals.** Not a toy. Keep the sensor and its packaging away from small children. Mount it where animals cannot chew on it.
- **Do not open.** Apart from changing the battery as described in "Care and maintenance", there is nothing inside you can service. Do not modify the electronics or the firmware.
- **Radio.** The T1H sends short 2.4 GHz radio messages. Keep it at least 20 cm away from implanted medical devices.

Keeping your animals safe

The S1M uses the T1H's readings to switch heaters, lights and misters. If the battery runs flat, the T1H is moved or a reading goes wrong, the climate may drift.

- Connect heaters through their **own thermostat or a protective thermostat** that cuts them off at a safe maximum temperature, independent of JungleSIM.
- Turn on the **app alerts** (too hot, too cold, sensor lost) and keep the battery charged.
- Check the climate yourself now and then with a second thermometer, especially in the first days.

The T1H at a glance



The T1H from the front: USB-C socket (with its dust plug) on the left, vents at the bottom

- **Sensor chamber** at the bottom, with vents in the bottom and both side walls. The Sensirion SHT45 sensor sits in it, sealed off from the electronics.
- **USB-C socket** on the left side, for charging. A TPU dust plug closes it in the terrarium.
- **Back** with a built-in magnet and two keyholes for mounting.
- **Battery:** rechargeable lithium polymer cell, 500 mAh, inside.



The back: keyholes at the top, the lid with the magnet behind it, two screws at the bottom

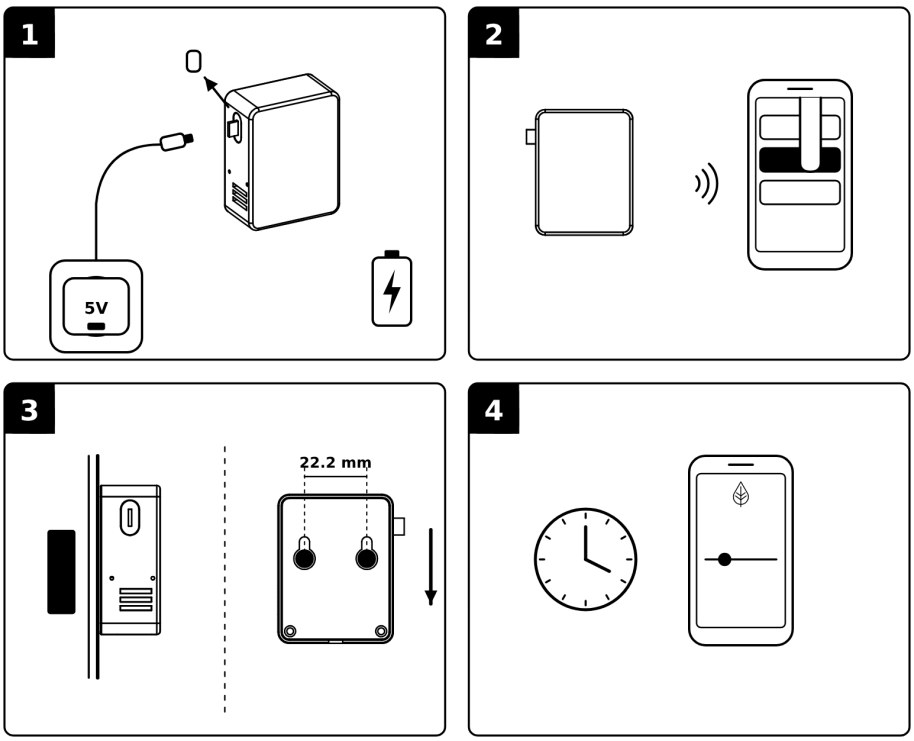
What's in the box

- T1H Climate Sensor with its battery, in its case, dust plug fitted
- This manual (short version) and the safety information sheet

A USB-C cable and power supply are not included. Use a 5 V USB power supply as described under "Warnings".

Setting up

R2



1. Charge it

Charge the T1H fully before the first use (see "Charging"). It may arrive with a low battery.

2. Add it to your S1M

1. Your S1M must be set up and online (see the S1M manual).
2. Wake the T1H: plug it into USB power for a moment, or wait up to two minutes. It sends a reading after every start.
3. In the JungleSIM app open **Settings › Sensors**. The T1H appears under **Found nearby** with its ID (it looks like `aa:bb:cc:dd:ee:ff`). Tap it and give it a name, for example "Tank 1 top".
4. Choose the terrarium it belongs to. Its readings now appear on the S1M and in the app.

The T1H talks to the S1M directly by radio, not through your router. Keep it in the same room as the S1M, ideally within a few metres; walls and metal shorten the range.

3. Mount it in the terrarium

Mount it **vents down**, out of direct spray, sun and heat lamps, at the height whose climate you want to know (usually the middle of the tank, away from the heater).

- **With the magnet (glass tanks):** hold the T1H against the inside of the glass and put a holding magnet (block magnet about 30 x 10 mm) on the outside of the glass behind it. Check that it holds firmly before you let go, and do not use the magnet on a ceiling.
- **With screws (wooden or foam backgrounds):** two stainless steel screws **22.2 mm apart**, level, head 5 to 7 mm across, leave the heads 1 to 1.5 mm out. Hang the T1H on them with its keyholes.

4. Choose the reading interval

In the app under **Settings › Sensors** you can set how often the T1H sends: from 30 seconds to 10 minutes, 2 minutes by default. A longer interval makes the battery last longer.

Everyday use

- The T1H wakes up, measures, sends the reading and sleeps again. You do not need to do anything.
- If the S1M hears nothing from a sensor for 10 minutes or three intervals, the app shows a **sensor lost** alert.
- **Firmware updates** reach the T1H through the S1M by themselves.
- After many days above 80 % humidity the reading can creep up by a few percent. It recovers in drier air (see "Troubleshooting").

Charging

1. Take the T1H out of the terrarium and let it dry if it is wet.
2. Pull out the dust plug and connect a USB-C cable from a 5 V USB power supply.
3. Charging takes about 3 hours from empty. The T1H stops charging by itself when the battery is full.
4. Unplug it, put the dust plug back in and return it to the terrarium.

With a 2-minute interval, a full charge lasts for several months (to be confirmed on the first units; the app will show the battery level once the firmware supports it). The T1H works while it charges.

Care and maintenance

- Wipe the case with a damp cloth. No cleaning agents or solvents: their vapours can upset the humidity sensor. Do not spray anything into the vents.
- Keep the vents free of substrate, moss and spider webs.
- **Battery.** The cell lasts a few hundred charges. When a full charge lasts much less than at the start, or if the case bulges, replace the battery (type LiPo 503035, 3.7 V, 500 mAh, JST PH 2.0 plug, with its own protection; available from us): take out the two screws at the bottom of the back, lever out the lid at the notch, unplug the old cell, plug in the new one (check: red wire to the + mark), and close the lid until both catches click, then screw it in. Take the old cell to a battery collection point.

Troubleshooting

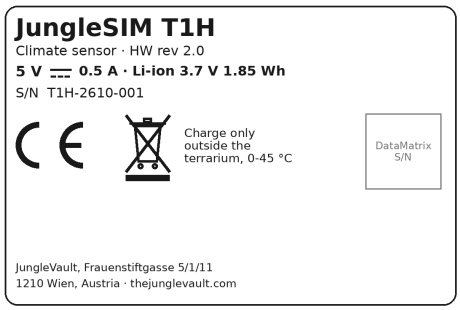
What you see	What to do
The T1H does not appear in the app	Charge it, then unplug it near the S1M; it sends right after starting. Check that the S1M is online.
"Sensor lost"	Charge the battery; move the T1H closer to the S1M or away from metal.
The humidity reads too high for days	Let it dry outside the terrarium for a day; keep it out of direct spray.
A full charge lasts only days	Try another cable and power supply; if the battery is old, replace it.
The case is swollen or hot	Stop using it, put it on a non-flammable surface and contact us.

Technical data

Item	Details
Measurement	Sensirion SHT45: humidity 0 to 100 % RH, typ. ±1.0 % RH; temperature typ. ±0.1 °C
Reading interval	30 s to 10 min (2 min by default), set in the app
Radio	ESP-NOW (IEEE 802.11 based), 2400-2483.5 MHz, to the S1M or C1H
Battery	Lithium polymer, 3.7 V, 500 mAh (1.85 Wh), built-in protection
Charging	5 V DC via USB-C, about 0.25 A, 0 to 45 °C, about 3 h
Size	41.0 x 53.0 x 21.2 mm
Case	PA12 nylon, black; TPU seals
Operating conditions	0 to 40 °C, up to 100 % RH in the terrarium; not waterproof
Storage	-10 to 40 °C, battery half charged for long storage

The full datasheet and the technical drawing are on the product page.

Disposal



The crossed-out wheelie bin means: electrical devices and batteries must not go in household waste. Take the T1H to a collection point for electrical waste (in Austria free of charge at municipal collection points). If you can take the battery out safely (see "Care and maintenance"), take it to a battery collection point separately. Remove the T1H from your app first.

Declaration of conformity and warranty

Hereby, JungleVault declares that the radio equipment type JungleSIM T1H is in compliance with Directive 2014/53/EU. The full text of the EU declaration of conformity is available at: thejunglevault.com (T1H product page, Downloads).

You have the statutory warranty of two years. Contact us at contact@thejunglevault.com with the serial number from the label.