OMICRON ®
IoT solutions

HUMITEMP®

INTERNET OF THINGS INTELLIGENT DEVICE FOR REMOTE MONITORING

For LoRaWan™, Sigfox, and Wi-Fi Networks

Quick Start Guide

Version control

The following table contains the record of changes per manual version.

Version	Date	Description
1.5	20/03/2023	Format change. Extensive revision and correction of content. Technical background information update.
1.6	24/06/2023	Version control implemented. Device image changed.

NOTICE

Read this guide before working with the product. For personal and system safety, and optimal product performance, make sure you thoroughly understand the contents before installing, using, or maintaining this product.

If you encounter a problem with your **Humitemp**®, review the configuration information to verify that your selections are consistent with your application: input configurations; chosen limits; etc. If the problem persists after checking the above, you can have technical assistance at (+57) 3176478281, Monday through Friday, 7:00 a.m. to 5:00 p.m. Eastern Standard Time. You can also write to **solutions@omicroniot.com**, specialized personnel will discuss your application case.

Please have the following information available:

- All Configuration Information.
- All Provided Manuals.
- Device ID and the Parts List provided with the equipment.

Contact Information

To reach the **Humitemp**® manufacturer for commercial information, refer to:

➔ Landline: +57 (604) 2328381
➔ Mobile: +57 (317)4365062
➔ **comercial@omicroning.co**

To reach the **Humitemp**® manufacturer for technical information, refer to

➔ Landline: +57 (604) 2328381
➔ Mobile: +57 (317)6478281
➔ **solutions@omicroniot.com**

Visit us at: **https://omicroniot.com/**

Warning notice standard

This guide contains notices that must be observed in order to ensure personal safety, prevent damage to properties, and guarantee proper installation, use, and maintenance of the equipment. **The notices referring to personal safety or the integrity of the device are highlighted in the guide by an alert symbol**; notes regarding recommendations or complementary information to the topics covered in this guide have no safety alert symbol. The notices shown below are graded according to the previous definitions.

Refer to the safety messages indicated by this standard at the beginning of each section before interacting with the device or its components:

⚠ WARNING

Indicates observations that, if not followed, could cause serious personal injuries, or damages to the device. The information in these tables indicates the risks related to each of the topics covered in this manual.

⚠ CAUTION

Indications on the correct use of the equipment, useful to avoid improper operation.

NOTE:

Recommendations and clarifications to take into account in the different topics covered in the manual.

Contents

⚠ WARNING

Failure to follow safe installation guidelines could result in death or serious injuries.

- **Make sure the Humitemp® is installed by qualified personnel** and in accordance with the applicable practice code.
- Use the device only as specified in this manual. Failure to do so may impair the protection provided by it.
- Inappropriate or incorrect use of the product may result in hazards and application-specific malfunctioning; such as damage to system components, due to incorrect mounting or adjustments.
- Do not perform any services besides those covered in this manual, unless you are qualified.
- Any substitution of non-authorized parts or repair, other than exchanging the sensors is prohibited.
- Unauthorized changes to the product are strictly prohibited as they may unintentionally and unpredictably alter the performance and safety.
- Unauthorized changes that interfere with the integrity of the enclosure or mounting holes, such as making additional perforations, compromise the product integrity and safety. **Equipment ratings and certifications are no longer valid on any products that have been damaged or modified without the prior written permission of Omicron IoT Solutions**. Any continued use of a product that has been damaged or modified without prior written authorization is at the customer's sole risk and expense.

Explosions could result in death or serious injuries.

- Verify that the operating environment of the device is consistent with its environmental specifications.
- **This device is not intended for use in flammable or combustible atmospheres.**

Section 1: Introduction

This Quick Start Guide is designed to start or verify the proper operation of Humitemp® devices. These devices have an internal sensor to measure the Ambient Temperature and Relative Humidity; as well as 2 ports for submersible temperature sensors, or for digital sensors that detect the opening of doors. The information collected by the devices is sent to the Centriomega® remote monitoring IoT platform.

To follow this guide you will need:

- Humitemp®.
- AA batteries (not included)
- Micro USB power cable and 5V voltage adapter.
- A web-enabled device (PC, tablet, smartphone, etc).
- External sensors for the Humitemp® (optional).

This manual is designed for trained personnel. Read it entirely and carefully before installing and setting up the product.

⚠️ **WARNING**

The procedures and instructions in this manual may require special precautions to ensure the safety of the personnel performing the operations. The information that raises potential safety issues is indicated by a warning symbol. Refer to the safety messages listed at the beginning of each section before performing an operation preceded by this symbol.

1.1 Product recycling / disposal

Recycling of device components and packaging should be taken into consideration and disposed of in accordance with local and national legislation/regulations.
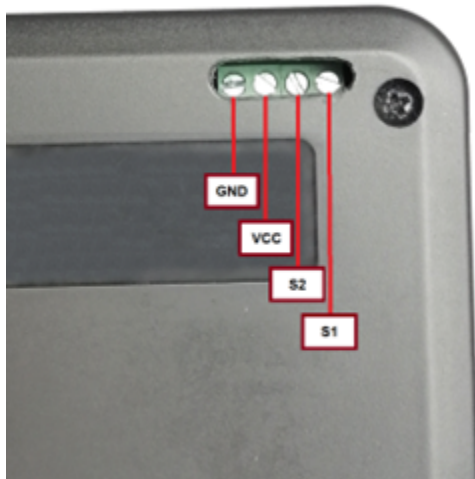
1.2 Storage and transport

The **Humitemp**® is protected by a special packaging during transport and is guaranteed to handle normal loads during transport.

Section 2: Quick Start

2.1 Connect the external sensors

1. Remove approximately 1.5 cm of insulation from the end of the wires of the external sensors to be used, to expose the inner wires. Also, strip approximately 5 mm from each inner wire.

2. Connect the external sensors to the device, according to the following indications:

Wire name	Color
GND	⬛
VCC	🟥
S2	🟨
S1	🟨

Figure 2-1   Pin-out of the Humitemp® sensor port

If you want to connect a sensor to the external port 1, connect its black, red, and yellow wires to GND, VCC, and S1, respectively. Similarly, connect GND, VCC, and S2 to the corresponding colored wires if you wish to connect a sensor to the external port 2.

3. Make sure that the connections made are tight; do not pull sharply on the connected wires, as this may damage the ports of the device.

2.2 Power the device

The Humitemp® is powered by 2 AA batteries (not provided by the manufacturer) or a **MicroUSB power cable.** The batteries are inserted into the battery box at the back of the device. Check that the batteries are inserted correctly according to their polarity and the indications on the box.

2.3 Turn on the device

Once the batteries are charged, or the device is connected to the electrical network, the device will indicate on its display the firmware version it is using, and then it will present the measurements taken by its sensors (internal or external, if enabled); when this is achieved, **the device will be in Normal Operating Status.**

In case the device does not show information on its display, press the button (▽) for 2 seconds to turn it on. The device can also be turned off by pressing the (▽) button for 2 seconds.

2.4 Send data wirelessly

While the device is in Normal Operating State, it will proceed to periodically send the data measured by its enabled sensors (according to the minutes specified by the tPU parameter); via the Sigfox or LoRaWAN™ network (in case the device is not registered in the Sigfox Backend or LoRaWAN™ TTN platform, please refer to section 4 or 5, respectively), or via a Wi-Fi® network (to which you must connect the device following the steps in section 2.4.1 and 2.4.2); to the Centriomega® remote monitoring platform.

NOTE:

In order to be able to connect to a Wi-Fi® network, the device must have an internal communication module that allows it. In case you have not ordered it, you can request it to the manufacturer. Remember that contact information is provided at the beginning of this document.

2.4.1 Enter the service mode

While the device is on, you can force it to enter the Service Mode to configure aspects of the Wi-Fi® network you wish to connect to. **To enter the Service Mode, press the (▽) and (△) buttons simultaneously for 2 seconds.** The device will confirm the entry to the Service Mode by displaying the expression 'rEd' on its screen.

While being in the Service Mode, the Humitemp® device generates a temporary Wi-Fi® network using its built-in Wi-Fi® module, named "IoTDevice_", followed by the device ID (e.g., "IoTDevice_bcddc212345"). **You will need to connect to that network using some device capable of browsing on the Internet** (such as a Smartphone, Tablet, or PC).

Once connected to the network, you should access a page with the IP address: 192.168.4.1 (whose interface is shown in Figure 2-2). It is possible to access the indicated page through any internet browser; there you will find a menu with the buttons "Configure WiFi", and "More Info".
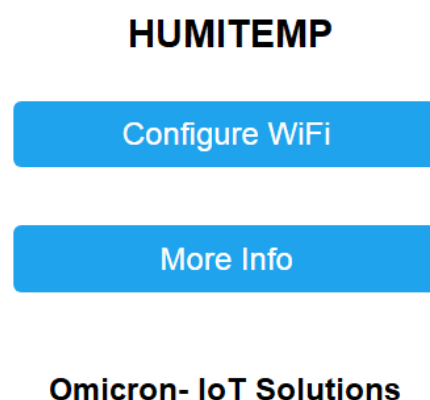
HUMITEMP

Configure WiFi

More Info

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Figure 2-2   Humitemp® General Configuration Page

To exit the Service Mode, press the (▽) and (△) buttons simultaneously until 'rEd' disappears from the display.

2.4.2 Connect the device to a Wi-Fi® Network

To configure the credentials (name and password) of the network that will provide internet access to the **Humitemp**® device, proceed as follows:

1. **On the General Setup Page (Figure 2-2), press the Configure Wi-Fi button** to go to a page where you can see a scan of the Wi-Fi® networks detected by the Humitemp®, two fields to enter data, and two buttons (Save and Scan).

The page that loads after selecting "Configure Wi-Fi", on the Home Page, is presented in the following image:

HUMITEMP

OMICRON1	100%
ConsulsarSAS	94%
MARIAPRECIADO	40%
GUTIERREZ	36%
Agencia De Seguros	28%
HP-Print-16-LaserJet 1102	26%

OMICRON1

password

save

Scan

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Figure 2-3   Humitemp® Wi-Fi® configuration page

2. In the fields at the bottom of the Wi-Fi® setup page (Figure 2-3), **enter the credentials (name and password) of the network to which you wish to connect the Humitemp®**; then press "Save". If you want to connect the device to an open network, you do not need to enter a password.

After pressing the "Save" button, you will see the following page with the message: "Trying to connect your device to the network... Wait 30 seconds and press the button to verify if the WiFi connection was successful".

HUMITEMP CONFIG.

Trying to connect your Device to network...
Wait for 30 seconds and press to view if
WiFi connection was correct

WiFi Results

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Figure 2-4   Waiting page for the connection to the Wi-Fi® network

If the entered credentials are not correct, after pressing the "WiFi Results" button, the following page will appear:

HUMITEMP CONFIG.

!! ERROR: Check Your SSID And Password !!

Back to Home

Figure 2-5   Wi-Fi® configuration page invalid

Otherwise, you will see:

HUMITEMP CONFIG.

!! CORRECT !!
Settings Saved

Back to Home

Figure 2-6   Wi-Fi® configuration page correct

After this, if desired, you can exit the Service Mode as described in 2.4.1.

2.5 Mount the device

1. Attach the device to a flat vertical surface (e.g. a wall). To do this, use the wall mounting accessories supplied with the device.

   It is indispensable to ensure that the device is within the coverage area of the wireless network you are using, so try to place it in a high location where its wireless transmissions will not be obstructed (away from metal surfaces or objects, and away from sturdy objects such as walls or shelves). High locations may also make it easier to check its display.

2. Use the cable clamp and strap supplied with the instrument to secure the external sensor cables as shown in the picture below:

Figure 2-7   Humitemp® wall mounting.

Securing the cables this way prevents the manipulation of the sensors from generating tension or dangerous bending near the connector, which minimizes the risk of them coming out or being damaged; it also allows manipulation of the device to change its batteries or sensors, minimizing the risk of damaging the connections.

3. Install the external sensors where they correspond.

2.6 Login to the Remote Monitoring Platform

To review the data sent to the Centriomega® Remote Monitoring Platform, log in to **iot.omicroning.co** (the login form is displayed below), with the credentials provided by the **Humitemp**® manufacturer:
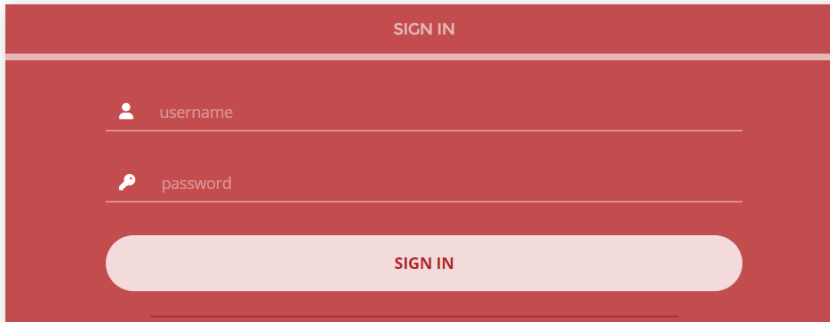

Figure 2-8   Remote Monitoring Platform Login Form

If you don't have the login credentials, please contact the supplier or manufacturer of the device. **Remember that you can find the contact information at the beginning of this document.**

2.7 Review the device dashboard in the Remote Monitoring Platform

After logging into the remote monitoring platform offered by the **Humitemp**® manufacturer, you can review the information sent by your device on its single Dashboard.

To do this, login to the platform, go to 'Dashboards' (1, in Figure 2-9); then enter the list of Dashboards (2, in Figure 2-9) and select the Dashboard with your device ID (3, in Figure 2-9). The unique ID of each device is marked on its back label.
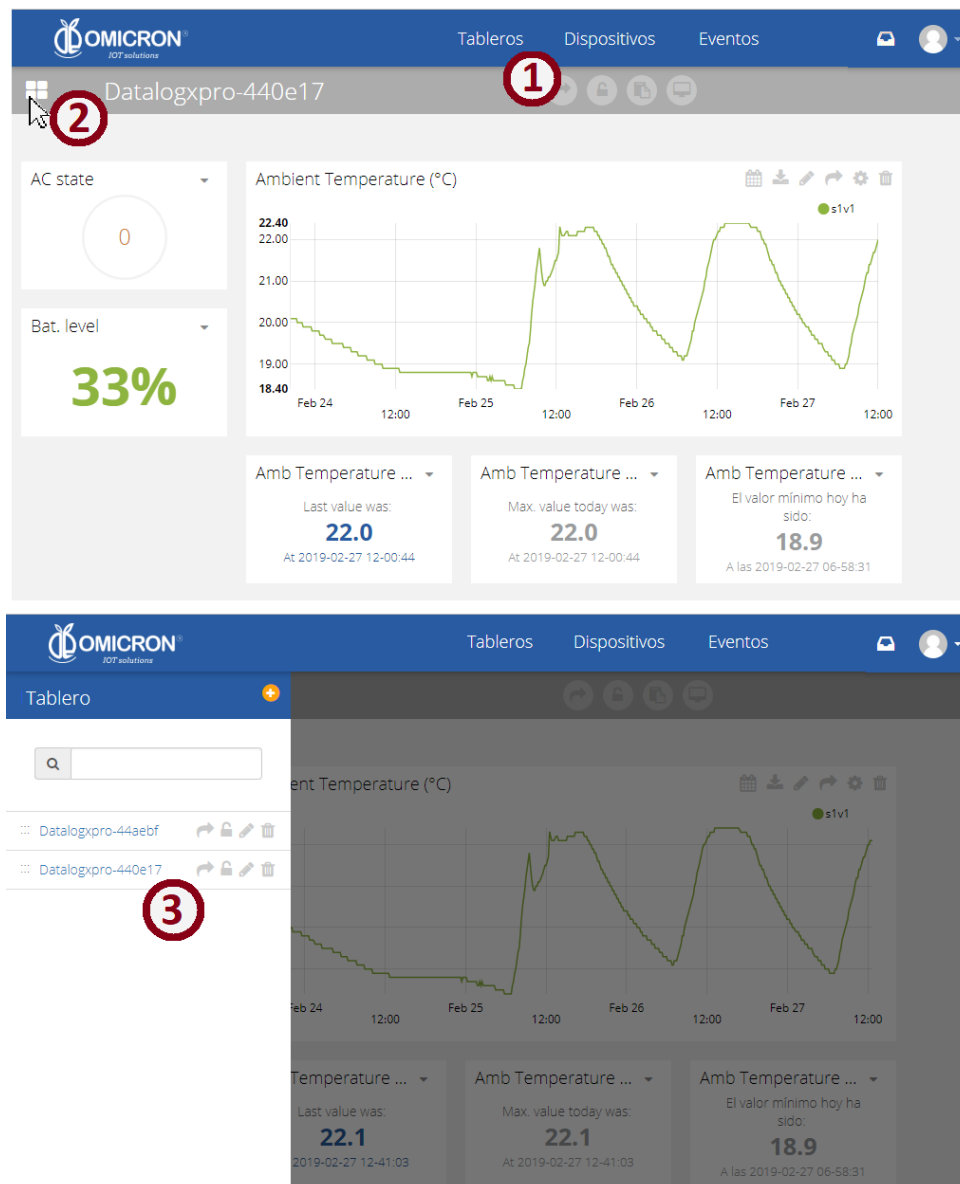

Figure 2-9   Steps to view a specific Board

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