

Wireless Multi-channel Thermometer and Hygrometer Sensor

Model: WN31/WN31

(with STH35 probe)

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Instruction manuals

<https://www.ecowitt.com/support/download/55>



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Help

Our product is continuously changing and improving, particularly online services and associated applications. To download the latest manual and additional help, please contact our technical support team:

support@ecowitt.com

support.eu@ecowitt.net (EU/UK)

1. Introduction

Thanks for purchasing this WN31/WN31 (with

STH35 probe) wireless thermometer and hygrometer sensor. This device measures temperature and humidity and supports up to 8 channels (one unit for one channel, optional sensors sold separately). The data can be streamed by Wi-Fi Gateway (sold separately), HP2551, WH2680, WN1900 and can be viewed on our WS View Plus mobile application after the Wi-Fi configuration done. To ensure the best product performance, please read this manual and retain it for future reference.

2. Get Started

2.1 Parts List

One Multi-channel Temperature and Humidity
sensor

One User Manual

3. Overview



Figure 1: Multi-channel Thermo-Hygro Sensor

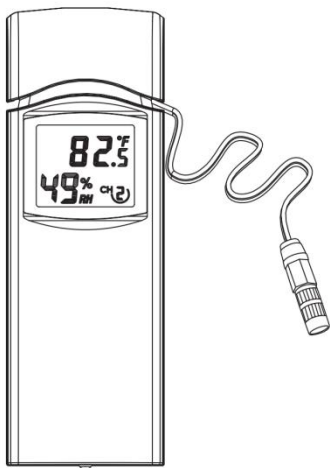


Figure 2: WN31 (with STH35 probe version)

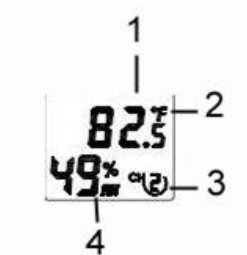


Figure 3: Sensor LCD display

- (1) temperature
- (2) temperature units (°F vs. °C)
- (3) channel number
- (4) relative humidity

4. Setup Guide

4.1 Install batteries

1.Remove the battery door on the back of the transmitter(s) by sliding down the battery door, as shown in Figure 4 .

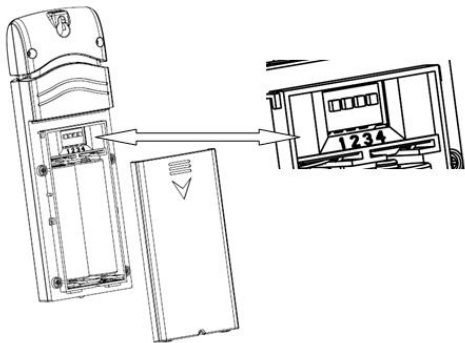


Figure 4: Battery installation

2. Before inserting the batteries, find the dip switches above the battery compartment and set the temperature units and channel number:

Temperature Units: To change the transmitter display units of temperature measure ($^{\circ}\text{F}$ vs. $^{\circ}\text{C}$), change Dip Switch 4, as referenced in Figure 3.

Channel Number: This device supports up to eight sensors. To set each channel number, change Dip Switches 1, 2 and 3, as referenced in Figure 4.



Switch in down position.



Switch in up position.

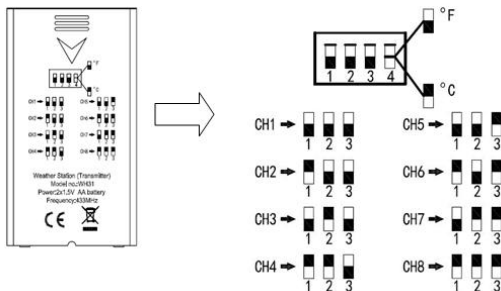


Figure 5: Dip Switch diagram

3. Insert two AA batteries.

4. Verify the correct channel number (CH) and temperature units of measure (°F vs. °C) are on the display.

5. Close the battery door.

Repeat for the additional remote transmitters (sold separately), verifying each remote is on a different channel.

5. Sensor Placement

The best mounting location for the indoor sensor is in a location that never receives direct sunlight, not even through windows. Also, do not install in a location where a nearby radiant heat source (radiator, heaters, etc.) will affect it. Direct sunlight and radiant heat sources will result in inaccurate temperature readings.

The unit is not weatherproof, you should mount the unit under cover (eave or awning or similar). If outdoor mounting is needed, please use an outdoor accessory mounting shield from us:



To mount or hang the unit on a wall or wood beam:

- Use a screw or nail to affix the remote sensor to the wall, as shown on the left side of figure 6, or
- Hang the remote sensor using a string, as shown in right side of figure 6.

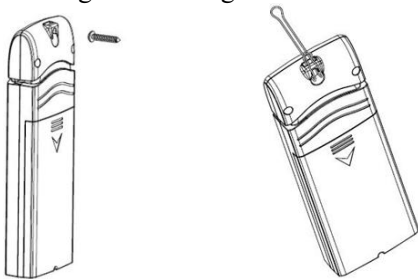


Figure 6: Indoor sensor mounting

Note: Make sure the sensor is mounted vertically and not lying down on a flat surface. This will insure optimum reception. Wireless signals are impacted by distance, interference (other weather stations, wireless phones,

wireless routers, TVs and computer monitors), and transmission barriers, such as walls. In general, wireless signals will not penetrate solid metal and earth (down a hill, for example).

Note: If you want to install the sensor outside, it's recommended to install it inside a solar radiation shield to obtain best accuracy and protection.

6. Setup Guide (using with Wi-Fi gateway)

If you want to view the multi-channel sensor data on your mobile application, you need to pair this device with our Wi-Fi Gateway(sold separately).

6.1 Pair with Gateway

If the gateway has been in operation, and you have never had any WN31 (with STH35 probe) multi-channel temperature and humidity sensor(s) setup before, just power up the sensor(s) and gateway will pick multi-channel temperature and humidity data automatically.

If a WN31 (with STH35 probe) sensor has been hooked on gateway before, and you have a new WN31 (with STH35 probe) sensor to replace the old one, unplug gateway from USB socket and power up again, then the new sensor will be learned and old sensor will be erased.

6.2 Wi-Fi Connection for the Gateway

For this part, please refer to the manual of the GW1100/GW1000 Wi-Fi gateway.

Any question, please contact the customer service.

7. View Online Data on WS View Plus

When the Wi-Fi configuration is done, you can view the local data of your multi temperature and humidity sensor(s) on the WS View Plus application.

Back	Live Data GW1000B-WIFI4716		More
CH1 Temperature		CH1 Humidity	
27.2 °C		58 %	
CH2 Temperature		CH2 Humidity	
29.2 °C		54 %	
CH3 Temperature		CH3 Humidity	
29.2 °C		55 %	
CH4 Temperature		CH4 Humidity	
29.3 °C		53 %	
CH5 Temperature		CH5 Humidity	
29.4 °C		54 %	
CH6 Temperature		CH6 Humidity	
29.2 °C		54 %	
CH7 Temperature		CH7 Humidity	
29.2 °C		53 %	
CH8 Temperature		CH8 Humidity	
29.4 °C		53 %	
Firmware Version			

Here are the differences between WN32/WN32 (with STH35 probe version) and WN31/WN31 (with STH35 probe) sensor:

- 1.WN32/WN32 (STH35 probe) sensor worked as dedicated data for "Outdoor Temperature and Humidity".
- 2.The WN31/WN31 (with STH35 probe) sensor works as "Multi-channel Temperature and Humidity" sensor. And maximum of 8 sensors can be hosted on a same receiver.
- 3.The WN32/WN32 (STH35 probe) sensor data can be hosted on weather underground, while WN31/WN31 (with STH35 probe) data is not supported on WU.

4.Both the WN32/WN32 (STH35 probe) and WN31/WN31 (with STH35 probe) data can be uploaded to <https://www.ecowitt.net>.

8. Specification

Power: 2 AA batteries(not included)

Sensor Size: 123x42x14mm

Frequency: 915/868/433MHz depending on location

(North American: 915MHz; Europe: 868MHz; Other areas: 433MHz)

Temperature range: -40°C – 60°C (14°F - 140°F)

Temperature resolution: 0.1°C , or 0.1°F

Temperature accuracy: $\pm 1^{\circ}\text{C}$ / $\pm 0.2^{\circ}\text{C}$ (Probe version)

Humidity range: 10% ~ 99%

Humidity resolution: 1%

Humidity accuracy: $\pm 5\%$ / $\pm 1.8\%$ (Probe version)

Sensor reporting interval: about 60 seconds

Note: A low battery icon will display on the APP to indicate the battery status of the sensor(s).

9.Warranty Information

We disclaim any responsibility for any technical error or printing error, or the consequences thereof.

All trademarks and patents are recognized.

We provide a 1-year limited warranty on this product against manufacturing defects, or defects in materials and workmanship.

This limited warranty begins on the original date of purchase, is valid only on products purchased, and only to the original purchaser of this product. To receive warranty service, the purchaser must contact us for problem determination and service procedures.

This limited warranty covers only actual defects within the product itself and does not cover the cost of installation or removal from a

fixed installation, normal set-up or adjustments, or claims based on misrepresentation by the seller, or performance variations resulting from installation-related circumstances.