ecowitt®

Thermometer Sensor

Model: WN34D
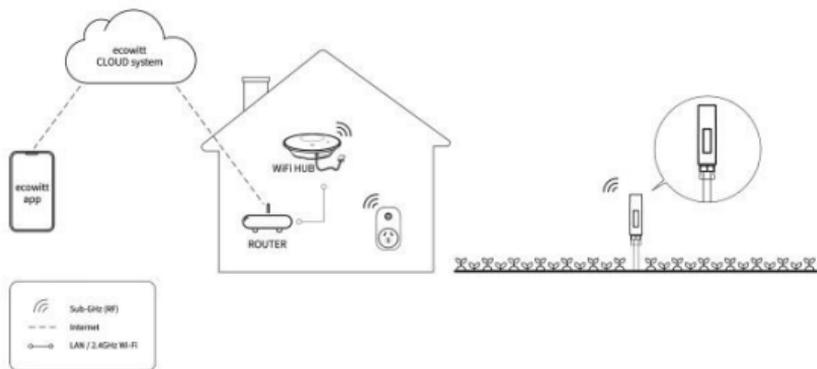

https://s.ecowitt.com/GBTF6X

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1. Ecowitt System Introduction

Figure 1 How Ecowitt System Works

Thanks for purchasing this WN34D temperature sensor.

The WN34D Waterproof Temperature Sensor measures and displays temperature data, which can be viewed on the LCD screen or through the Ecowitt App or WS View Plus app.

The sensor is equipped with a 10 ft cable probe,

making it suitable for a variety of applications such as swimming pools, hot tubs, spas, bath water, and fishponds.

The collected data can be transmitted via an Ecowitt Wi-Fi Gateway or displayed on a compatible receiver console (both sold separately). Once Wi-Fi configuration is completed, data can be viewed in real time through the Ecowitt app, WS View Plus app, or on the receiver console.

To ensure the best product performance, we recommend that you read this manual and keep it for future reference.

General Terms Used in the Manual:

Weather Station: Includes the console and sensors (or sensor array).

Gateway: Also known as a hub, it is a display-less console.

Transmitter: Refers to the sensor.

Receiver: Refers to the console.

RF: Radio frequency.

It refers to the ISM and SRD SUBG (Industrial, Scientific Medical, and Short-Range Devices frequency bands below 1 GHz) for communicating between the gateway and its sensors. This frequency is different from the 4G modem or Wi-Fi working frequency. To avoid interference, ISM/SRD bands are kept separate from 4G frequencies by national regulations. Typical ISM/SRD frequencies are 915 (Americas), 868 (Europe), 433 (worldwide), and 920 (Japan, Korea).

2. Getting Started

2.1 Parts List

| 1 | Thermometer Sensor |
| 1 | Stainless Steel Round |

	HeadScrewφ3.0*15 (Diameter: 3mm) for mounting
1	Stainless Steel Hose Clamp for mounting
1	Stainless Steel Bracket for mounting
1	User Manual

Table 1

2.2 Features

Thermometer Sensor

- Measures temperature with a 1m (3.28ft) cabled sensor.
- Extended wireless range up to 300 feet (100 meters) in open areas.
- Difference from WN34L/WN34S :
  WN34D has wider measurement range and adopts one wire digital sensor technology.
  WN34L/WN34S's temperature measurement range is -40~60 °C (-40~140 °F), while

WN34D's temperature measurement range is -55~125 °C (-67~257 °F).

- Transmits readings every 77 seconds.
- IP66 waterproof.
- LCD display for current reading.

When paired with a GW1100/GW2000 Wi-Fi Gateway:
- View temperature reading on the Live Data page of the WSView Plus app (requires that the gateway and your phone are using the same Wi-Fi network).
- Up to 8 channels supported. Channel names can be edited on the app.
- Battery level information displayed on the WSView Plus App.

When paired with a Weather Station Console (HP2551/HP3500/HP3501):
- View temperature data in real-time on the Display.

- Up to 8 channels supported. Channel names can be edited on the console.

When uploaded to Ecowitt Weather Server:
- View current temperature data, history records and graph on the website.
- Receive email alerts from the server.
- Remote monitoring with smart phone, laptop, or computer by visiting the website.

3. Overview

Figure 2 Thermometer Sensor

3.1 Sensor ID Locating

To find the sensor ID, open the battery cover. The ID is printed on a label inside the battery compartment as illustrated.

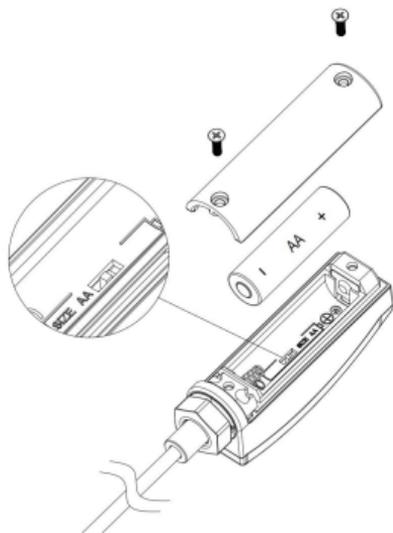We recommend writing down or labeling this ID on the sensor body for easy reference.

Figure 3

3.2 Power On & Unit Selection

Open the battery compartment and insert the batteries to power on the device.
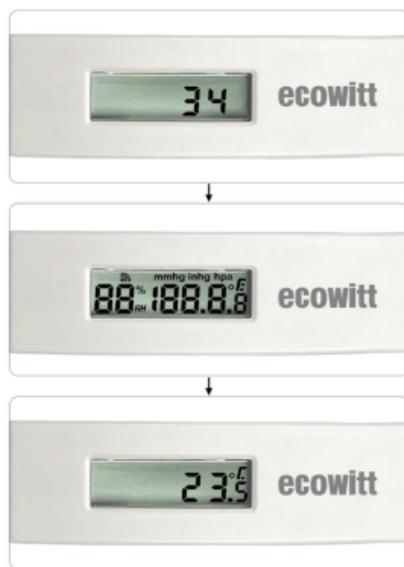
The dip switch inside the battery compartment is used to select the temperature unit (°C/°F). Adjust the switch to your preferred unit before use.

Figure 4

4. Show On Display

Firstly, the display will show version number 34. Secondly, the full display will show for 3 seconds. After that, the display detects the first wave of temperature data.

Figure 5

5. Wi-Fi Connection for the Gateways/Consoles

To view the sensor data on your mobile application and receive email alerts on our weather server, pair this device with our Wi-Fi Gateways or Consoles (each sold separately).

5.1 Pair with the consoles

Compatible consoles:			
Console Model	Picture	Upload data	Display the data
HP2550		✔	✔
HP2560		✔	✔
WN182X		✔	✔

WS38X0		✔	✘
WS39X0		✔	✘
WN1920/1980		✔	✘

Table 2

5.2 Pair with the gateways

Compatible gateways			
GW1100	GW2000	GW1200	GW3000

Table 3

If the gateway has been in operation and you have never had any WN34 sensor setup before, just power up the sensor, and the gateway will pick up the sensor data automatically.

Wi-Fi Connection for the Gateway

For this part, please refer to the GW1100/GW1200/GW2000/GW3000 Wi-Fi gateway manual.

According to the Power-on sequence, each new sensor will be recognized as a new channel. Suppose you prefer to assign a specific channel number to a particular sensor; you can manually input the sensor ID related to that channel number. You may attach a label to the channel on each sensor for distinction.

The channel can be edited both on the app and ecowitt.net (The edited name on the app will not sync to the ecowitt.net website and should be edited

on your device setup page on ecowitt.net separately).

5.3 Replacing the old WN34 sensor

If you want to use a new WN34 sensor to replace the old one (already configured on a specific channel), please try the following:

- Locate the Sensor ID(reference to Section 3.1 Sensor ID Locating)
- Open the Sensor ID page on the Ecowitt app, and find your old sensor ID.
- Power off the old sensor first. Then, power on the new sensor.
- Click Re-register to learn the new sensor, or click the edit button to input the new sensor ID, and click the save button to lock on the latest sensor.

5.4 Device Pairing and Data Display Capabilities

1. When paired with certain consoles (WN1920 / WN1980 / WS3820 / WS3900 / WS3910):

- The sensor data is not displayed on the console screen.

- Data is uploaded directly to the Ecowitt Cloud, where it can be viewed via the online dashboard.

2. When paired with other compatible consoles (HP2550 / HP2560 / WN1820 / WN1821):

- Temperature data can be viewed in real-time directly on the console display.

3. Multi-Channel Support:

- Supports up to 8 channels.
- Channel names can be customized via the console.

6. Cloud Upload and Remote Access

6.1 View Online Data with Ecowitt App

Once successfully connected to the Ecowitt Weather Server:

- Sensor data and battery status are shown on the Ecowitt App dashboard.
- Current readings, history, and graphs are available.
- Remote access is supported via smartphone, laptop, or computer.
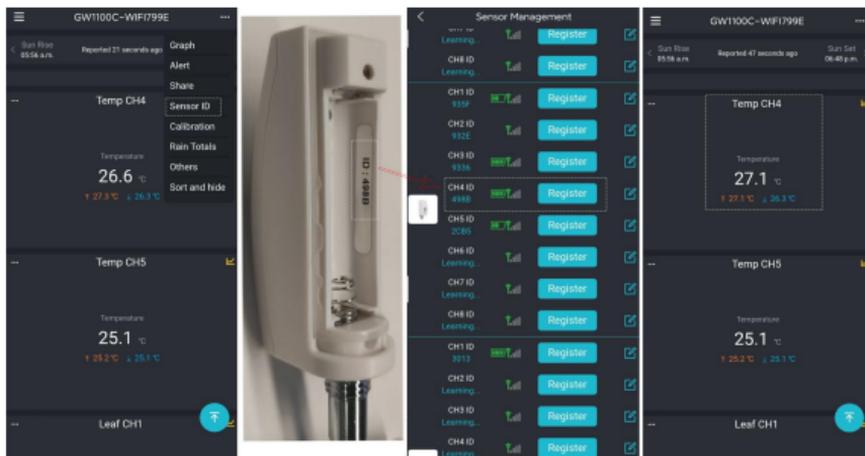
Figure 6

6.2 View Online Data with WSView Plus

When the Wi-Fi configuration is done (to tell the gateway to be hooked to your Wi-Fi network), your sensor data as well as the sensor battery voltage information will be displayed on WSView Plus App at the Live Data page.
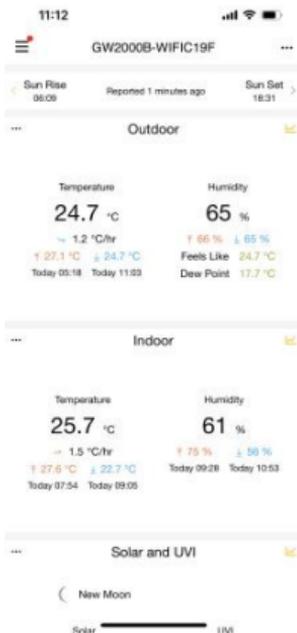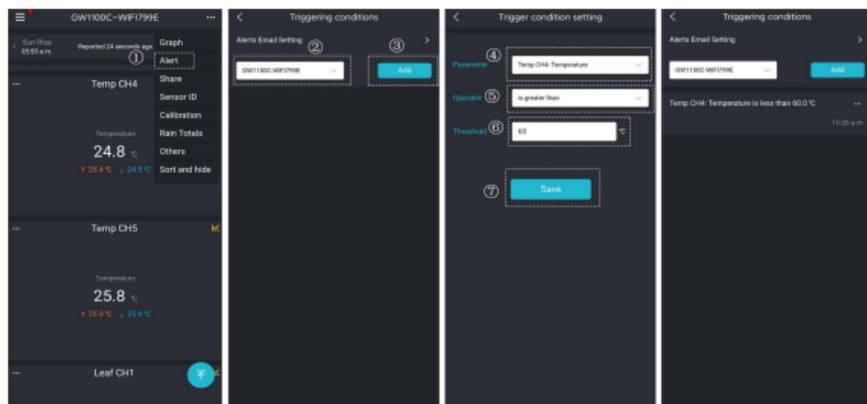
Figure 7

Note: It requires your phone and the gateway must be in the same network when viewing your sensor live data on the WSView Plus app. Live data refers to current data received by the gateway and is not stored on WSView Plus app. However

data is always pushed and saved on www.ecowitt.net cloud (under your registered account, and it can always be accessed via your browser).

6.3 Set Email Alerts

Once your device is successfully added to the Ecowitt Weather server, you may set alerts for the sensor on the website to receive email notifications.

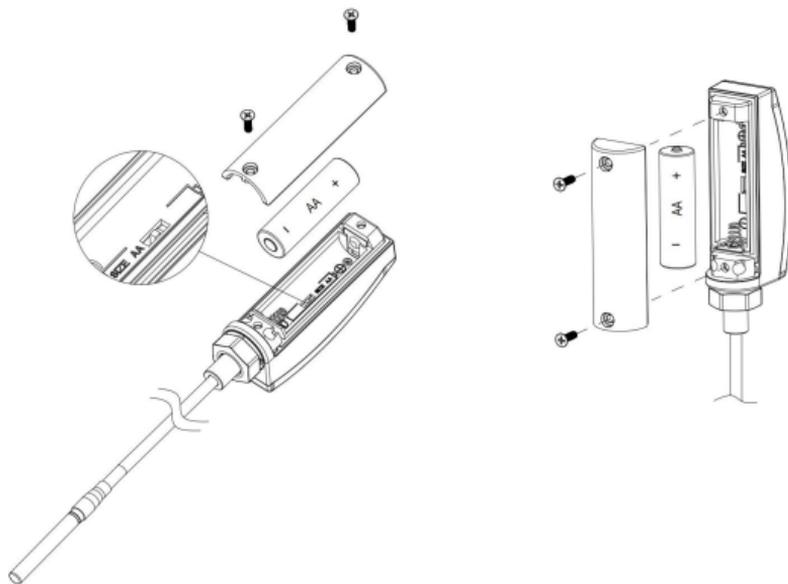Email alerts can be configured and received from the server.

Figure 8

7. Setup Guide

7.1 Installing battery

1. Remove the battery door on the back of the transmitter by removing the screw.


Figure 9 Battery installation

2. Insert one 1.5V AA battery, ensuring correct polarity (flat side toward the spring).

3. The LCD will display temperature immediately and update approximately every 77 seconds.

4. If the screen remains blank, check battery orientation or try resetting. Do not install the battery in reverse.

5. Close the battery compartment and secure it with the screw.

7.2 Sensor Mounting

To mount the unit on a wall or wooden beam:

- Use a screw (Stainless steel round head Screw φ3.0*15) to fix the bracket on the wall, and then insert the probe through the hole of the bracket, as shown on figure 8:
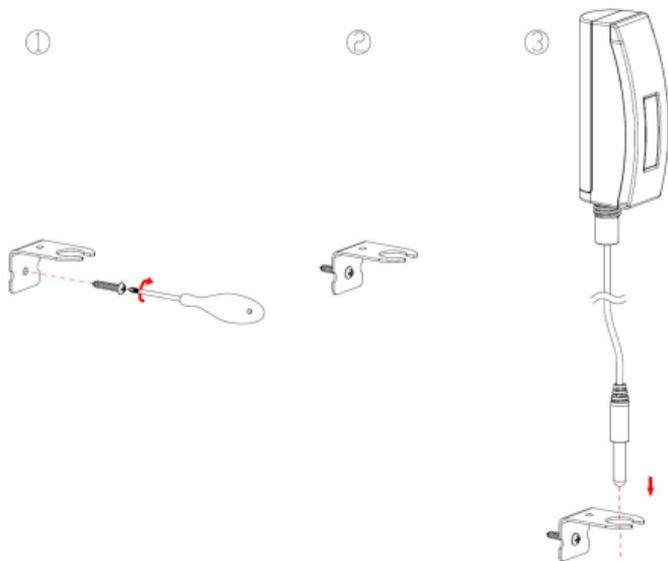
Figure 10 Sensor mounting

Fix the sensor to the bracket with the Hexagon M12 nut and tighten the screw as shown on figure 9: (hand turn the nut until firm, and then use a wrench to turn 1/3 ~ 1/2 turn and no more. Do not over tighten.)
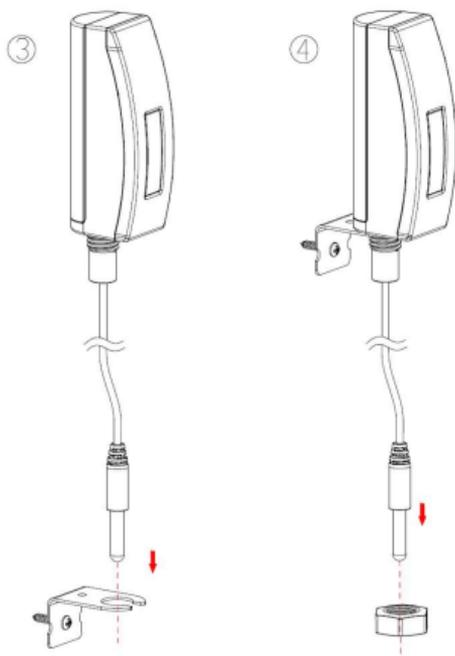
Figure 11 Sensor mounting

To mount the unit to a pole (not included) with the included hose clamp:
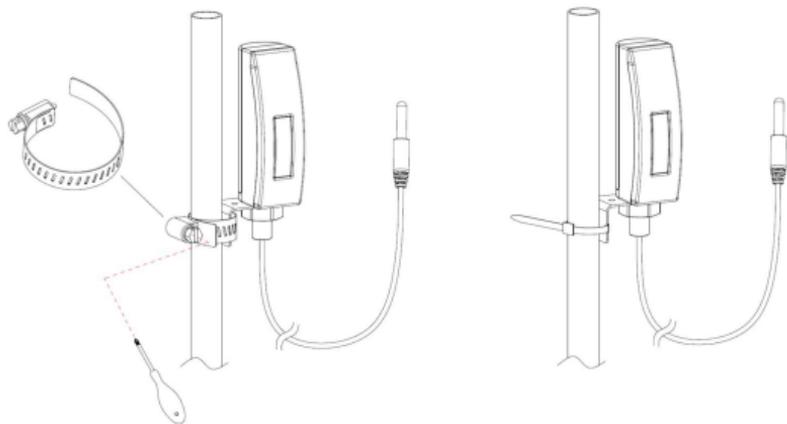
Figure 12 Sensor mounting to pole

Note: Please don't insert the sensor into corrosive liquids or hard rock to avoid any damage.

8. Specifications

Model	WN34D
Name	Multi-Channel thermometer sensor
Probe Dimensions	81.5x36.2x25.3(mm)
Screen Size	32x9.8(mm)
Material of Plastic Casing	ABS
Material of Screen	TN-LCD
Reading Update Interval	About 1 minute
RF Connection Frequency	920/915/868/433MHz (depending on local regulations)
RF Wireless Range	Over 100 meters (in open areas)
Operating Temperature Range of LCD Screen	-10°C to 50°C(14°F to 122°F)
Operating Temperature Range of the Plastic	-40°C to 60°C(-40°F to 140°F)

Casing	
Waterproof Rating	IP66
Power Supply	1 AA Battery (not included)
Battery Life	1 Year

Table 4

9. Warranty & Caution

9.1 Warranty

We disclaim responsibility for any technical error,

 printing error, or the consequences thereof.

All trademarks and patents are recognized.

We provide a 2-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 is only to the original purchaser. The purchaser must contact us for problem determination and service procedures to receive warranty service.

This limited warranty covers only actual defects within the product itself. It does not cover the cost of installation or removal from a fixed installation, standard set-up, or adjustments, claims based on seller misrepresentation, or performance variations resulting from installation-related circumstances.

9.2 FCC

This device complies with part 15 of the FCC Rules. Operation is subject to the following conditions: (1) this device should not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's

authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception,which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
-- Reorient or relocate the receiving antenna.
-- Increase the separation between the equipment and receiver.

-- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.

-- Consult the dealer or an experienced radio/TV technician for help.

To maintain compliance with RF Exposure guidelines, This equipment should be installed and operated with a minimum distance between 20cm of the radiator and your body. Use only the supplied antenna.

IC Caution:

English:

This device contains license-exempt transmitter(s)/receiver(s) that comply with Innovation, Science, and Economic Development Canada's license-exempt RSS(s). Operation is subject to the following two

Conditions:

1. This device may not cause interference.

2. This device must accept any interference, including interference that may cause the undesired operation.

French:

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

1. L'appareil ne doit pas produire de brouillage;
2. L'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Manufacture: Shenzhen Fine Offset Electronics Co., Ltd.
Address: 4/F, Block C, JiuJiu Industrial City, Shajing Town, Baoan District, Shenzhen City, China

10. Contact Us

10.1 After-sales Service

Order Issues:

If you encounter any missing or incorrect shipments of Ecowitt products purchased, please reach out to the

respective platform's customer service from the store where you bought the product for assistance.

Usage Inquiries:

Our product is continuously changing and improving, particularly online services and associated applications. To download the latest manual, and additional help, and for any issues related to product usage feel free to contact our customer support team at support@ecowitt.com. We are committed to providing assistance and resolving any concerns you may have.

10.2 Stay in Touch

Ask questions, watch setup videos, and provide feedback on our social media outlets. Follow Ecowitt on Discord, YouTube, Facebook and Twitter.